





PROFESSIONAL LOUDSPEAKERS www.turbosonicspeakers.com



Our mission: satisfying customers' needs, organizational and production flexibility, continuous aim towards research and innovation. To achieve this difficult target, we are constantly challenging ourselves.

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Company Profile 公司简介 **∢**

Our company Turboonic Acoustics was founded in Guangzhou of China in 2004. Then shifted to a new factory that was bought in Foshan city in 2020.

With Nineteen years of experience, we are specialized in the field of professional loudspeakers design and production.

Our mission: satisfying customers' needs, organizationaland production flexibility, continuous aim towards research and innovation. To achieve this difficult target, we are constantly challenging ourselves.

TurboSonic has a complete line of professional transducers for the most critical professional people. In TurboSonic, every driver is designed through using latest CAD, 3D and FEA modeling techniques. Every electro-acoustic and mechanical performance is simulated and then carefully engineered by a team of engineers who have years of experience in the design and manufacture of power speakers. After prototype finish, Thiele-Small parameter will be measured by advanced laser system and frequency response curve will be tested in the anechoic chamber.

As already mentioned above, our company's growth is the result of an ongoing commitment to achieve complete understanding of client requirements. Design, manufacturing and product quality control systems are all proactively geared towards Customer Satisfaction. The company's mission is to ensure that the five basic features of TurboSonic products are met: Innovation, Technology, Quality, Service and Competitiveness.

Our resolve has never changed. As TurboSonic Team, we are proud to make our contribution in raising your product performances to a higher level. 德韵电声(TurboSonic Acoustics)是一家以 PA扬声器制造为主业,技术开发为核心,集研 发、生产、销售、进出口贸易为一体的创新型电声 企业。

公司成立至今十余年,一直秉承"惟专注,故专 业"的企业精神,依靠科技求发展,在充分引进吸 收国外新材料、先进技术的基础上,不断与多个科 研机构、协力厂商和业内资深人士交流合作,共同 参与新材料的研发,使得公司的技术能力不断提 高,以一流的产品质量和精湛的技术服务深受客户 好评。

公司奉行"科学管理、精心制造、优质服务、追求 卓越"的质量方针,以"真诚合作、互助互利、共 同发展"为宗旨,不断开拓创新,建立全面质量管 理体系,竭诚为您提供高质量、高性价比的产品及 无微不至的售后服务。



Design Philosophy

Continuous research into all aspects of speaker component design ensures that our professional loudspeakers will always provide state-of-the-art performance to satisfy customers' needs.

B Understanding customers' needs

The major component of an audio system is the enjoyment that it transmits to the end-user. For this reason, our R&D team will work with our OEM customers to define the parameters and basic requirements, then to identify the most suitable guidelines of the specific project, either by upgrading an existing prototype or developing a new product.

Design

A loudspeaker is composed of many individual and specific

components. In order toensure an efficient loudspeaker development, our R&D centeris equipped with the advanced Finite Element Analysis (FEA) modeling, Simulation and Design software, as well as design tools such as 3-D CAD for technical drawing.



By using of FEA and Simulation software, electro-acoustic and magnetic performances can be predicted before components and physical prototype are built. At the same time, this step lowers the cost and performance risks associated with prototypes and testing.



Upon completion of the loudspeaker design and simulation phase and verified against the project requirement, the project



pject requirement, the project goes into prototyping phase for real world testing of our technical solutions implemented. The prototypes are made with rapid prototyping techniques, such as laser sintering, to minimize the timing required to acquire the necessary parts, so that

parts very similar to the final ones can be quickly assembled. At this stage, our R&D team also works closely with our

approved suppliers to optimize parts.



Analysis, Acoustic Testing and Listening

The first 'production-like' prototype can then be measured to verify that all electrical and acoustic parameters are comply met the initial design specifications. Reliability problems in the final product can be predicted by the

work-group assigned to the project. In addition, pro-production testing also includes any documented test methods and standards that may exist for the product type. These tests would be repeated for production articles.







In addition to analysis and acoustic testing, sound is evaluated by using instruments and through a series of listening sessions carried out by specially trained engineers and customers. Carefully selected pieces of music are used in order to highlight specific features of the audio system's acoustic performance. Sometimes, the listening tests are also compared with an existing prototype.

Validation Testing

The validation testing is conducted throughout the development process. It is finalized before the product is in production. The goal of the validation testing is to verity the reliability and performance of loudspeakers that may be presented by the product.

TurboSonic has for some time implemented series of routine activities for the validation process of products; these activities include salt fog tests, life tests, power tests, temperature shock, humidity and vibration tests either carried out singularly or combined together.



To further ensure the loudspeaker mechanical design, we apply a series of drop tests according to the unique mechanical properties specific to each project, with various height points for a real-world reflection of product usage simulations. The same drop test techniques are used to verify the adequacy of product packaging materials, which is essential in protecting the products from potential damages during transportation. Only after successful completion of all project tests and validation, the project receives its green light for final design approval.

Manufacturing and Quality Control

The final part of the development process is placing the product into production. For an in-house manufacture, this includes a product assembly plan.

Production processes are verified and optimized through continuous quality control on the production line. All loudspeakers zmanufactured by TurboSonic are fully checked at the end of the assembly line. Loudspeakers are tested individually also using proprietary computerized equipments. Additionally, customer response from use may also point to ways to improve product performance. As long as a product remains in the market, the Product Development Process remains open.

Understanding THIELE-SMALL parameters

The ability to choose the most appropriate loudspeaker for a particular enclosure is directly related to your understanding of the performance data that manufacturers provide with their products. In the early seventies, several technical papers were presented to the AES(Audio Engineering society) that resulted in the development of what we know today as "Thiele–Small Parameters". These papers were authored by A.N. Thiele and Richard H.Small.



Fs	Resonance frequency of the driver's moving mass (in free air).
Re	DC resistance of the voice coil, measured in ohms.
Qms	Mechanical Q of the driver at Fs.
Qes	Electrical Q of the driver at Fs.
Qts	Total Q of the driver at Fs.
Vas	Volume of air equal to the compliance of the driver's suspension.
Vd	Volume displaced by the driver's cone.
Cms	Compliance of the driver's suspension, in meters per Newton (the reciprocal of
	the units stiffness).
BL	The product of magnetic field strength in the voice coil gap (Motor unit strength).
Mms	Moving mass of the diaphragm including air load.
Xmax	Maximum linear peak excursion of voice coil travel.
Sd	Effective surface area of the diaphragm.

Power Handling

The specified Nominal Power Handling on our data sheets is measured according to AES2–2012 standard, which calls for a pink noise signal having a 6dB crest factor and band pass filtering to a decade in the working range of the loudspeaker (for instance, a 50~500 Hz range is typical for woofer testing). The duration of the test is 2 hours, after which the loudspeaker must not have any permanent change in characteristics greater than 10%. The Rated RMS Power is calculated using the minimum electrical impedance value over the operating range of the speaker.

The cone speakers are tested in free air, the compression drivers are tested while coupled to the recommended horn.

Due to the transient character of most musical programs, whose crest factor is commonly above 8–10 dB, it is customary to specify a "Continuous Program Power", double of the Nominal Power Handling, as a recommended amplifier power in order to fully exploit the thermal and mechanical capabilities of the loudspeaker without any clipping in the amplifier stage.

Rated RMS Power is very important to loudspeaker selection. Obviously, you need to choose a loudspeaker that is capable of handling the input power you are going to provide. By the same token, you can destroy a loudspeaker by using too little power. Generally speaking, the number one contributor to a transducer's ability to handle power is its ability to release thermal energy. Those loudspeaker characteristics are affected by several design choices, but most notably voice coil size, magnet size, venting, and the adhesives used in voice coil construction.

Large coil and magnet size provide more area for heat dissipation, while venting allows thermal energy to escape and cooler air to enter the motor structure. Equally important is the ability of the voice coil to handle thermal energy.

Mechanical factors must also be considered when determining power handling. A transducer might be able to handle 1,000 Watts from a thermal perspective, but would fail long before that level was reached from a mechanical issue such as the coil hitting the back-plate, the coil coming out of the gap, the cone buckling from too much outward movement, or the spider bottoming on the top plate. Be sure to consider the suggested usable frequency range and the Xlim parameter in conjunction with the power rating and enclosure design to avoid such failures.

Products Index >>>

NEODYMIUM LF TRANSDUCERS

Model	Туре	Rated Power	Sensitivity	Freq. Range	Voice Coil Diam.	Magnet	EBP	Page
JC6221nd	21" SUBWOOFER	1800 W	97.5 dB	31 ~ 1000 Hz	150mm / 6"	Neo Inside	97	0 1
JC6218nd	18" SUBWOOFER	1300 W	98 dB	30 ~ 1200 Hz	125mm / 5"	Neo Inside	125	0 2
J6318nd/2	18" SUBWOOFER	1500 W	100 dB	31 ~ 1000 Hz	125mm / 5"	Neo Inside	152	03
J6118nd/2	18" SUBWOOFER	1400 W	97 dB	39 ~ 1000 Hz	115mm / 4.5"	Neo Inside	95	04
ND9118s	18" SUBWOOFER	900 W	96 dB	31 ~ 1000 Hz	100mm / 4"	Neo Inside	58	05
ND9315s	15" SUBWOOFER	800 W	98dB	40 ~ 1000 Hz	100mm / 4"	Neo Inside	121	06
ND9415w	15" WOOFER	700 W	97 dB	40 ~ 2500 Hz	100mm / 4"	Neo Inside	122	07
J6115nd	15" WOOFER	600 W	99 dB	37 ~ 2800 Hz	86mm / 3.4"	Neo Inside	122	0 8
ND9015w	15" WOOFER	500 W	99 dB	45 ~ 2900 Hz	76mm / 3"	Neo Inside	112	09
ND9412w	12" WOOFER	550 W	96 dB	61 ~ 2800 Hz	100mm / 4"	Neo Inside	125	10
J6112nd	12" WOOFER	500 W	97 dB	55 ~ 3000 Hz	86mm / 3.4"	Neo Inside	131	11
ND9512m	12" MID-BASS	400 W	101 dB	43 ~ 3000 Hz	76mm / 3"	Neo Ring	343	12
ND9012w	12" MID-BASS	400 W	98.5 dB	44 ~ 3500 Hz	76mm / 3"	Neo Inside	177	13
ND9812	12" WOOFER	500 W	98 dB	59 ~ 3600 Hz	76mm / 3"	Neo Inside	135	14
ND9810	10" MID-BASS	400 W	99 dB	71~4100 Hz	76mm / 3"	Neo Inside	292	15
ND9510m	10" MID-BASS	350 W	99 dB	60 ~ 4300 Hz	76mm / 3"	Neo Ring	360	16
ND9310m/8	10" MID-BASS	400 W	97 dB	63 ~ 4100 Hz	76mm / 3"	Neo Ring	203	17
ND9310m/16	10" MID-BASS	350 W	95 dB	63 ~ 4100 Hz	76mm / 3"	Neo Ring	165	18
ND9010w	10" WOOFER	350 W	96 dB	62 ~ 3500 Hz	76mm / 3"	Neo Ring	213	19
ND9410m/16	10" MID-BASS	300 W	95 dB	65 ~ 4500 Hz	65mm / 2.5"	Neo Inside	112	20
ND9608m/16	8" MID-BASS	300 W	94.5 dB	70 ~ 5000 Hz	65mm / 2.5"	Neo Inside	170	2 1
ND9408m/16	8" MID-BASS	250 W	94 dB	86 ~ 6000 Hz	50mm / 2"	Neo Inside	124	22
ND9208w	8" WOOFER	250 W	95 dB	63 ~ 4000 Hz	50mm / 2"	Neo Ring	237	23
ND9006m	6.5" MIDRANGE	100 W	95 dB	119 ~ 5600 Hz	38mm / 1.5"	Neo Ring	243	24

FERRITE SUBWOOFER, WOOFER, MID-BASS

Model	Туре	Rated Power	Sensitivity	Freq. Range	Voice Coil Diam.	Magnet OD	EBP	Page
JC6221	21" SUBWOOFER	1800 W	97.5 dB	31 ~ 800 Hz	150mm / 6"	330 mm	102	25
21DM2000	21" SUBWOOFER	2000 W	98 dB	36 ~ 800 Hz	150mm / 6"	330 mm	120	26
J6021	21" SUBWOOFER	1500 W	97 dB	29 ~ 1000 Hz	115mm / 4.5"	245 mm	72	27
J6818	18" SUBWOOFER	2000W	97 dB	75 ~ 1000 Hz	150mm / 6"	330 mm	121	28
JC6218	18" SUBWOOFER	1400 W	97 dB	31 ~ 1200 Hz	125mm / 5"	280 mm	110	29
J6618	18" SUBWOOFER	1500 W	98 dB	37 ~ 1000 Hz	125mm / 5"	280 mm	112	30
J6218/2	18" SUBWOOFER	1300 W	98 dB	40 ~ 1000 Hz	125mm / 5"	280 mm	133	31
J6418	18" SUBWOOFER	1300 W	96 dB	41 ~ 1000 Hz	125mm / 5"	253 mm	69	32
J6018/2	18" SUBWOOFER	1400 W	97 dB	31 ~ 1000 Hz	115mm / 4.5"	245 mm	94	33
18DM1200	18" SUBWOOFER	1200 W	99 dB	36 ~ 1000 Hz	100mm / 4"	220 mm	100	34
E2018	18" SUBWOOFER	1200 W	97 dB	32 ~ 1000 Hz	100mm / 4"	245 mm	94	35
S7118	18" SUBWOOFER	800 W	98 dB	32 ~ 1000 Hz	100mm / 4"	220 mm	97	36
M5118/2	18" SUBWOOFER	750 W	97 dB	36 ~ 1000 Hz	100mm / 4"	220 mm	109	37
M5315s	15" SUBWOOFER	800 W	97 dB	40 ~ 1000 Hz	100mm / 4"	220 mm	121	38

FERRITE SUBWOOFER, WOOFER, MID-BASS

Model	Туре	Rated Power	Sensitivity	Freq. Range	Voice Coil Diam.	Magnet OD	EBP	Page
M5115	15" WOOFER	700 W	98 dB	42 ~ 2100 Hz	100mm / 4"	220 mm	150	39
M5415/2	15" WOOFER	800 W	99 dB	40 ~2800 Hz	100mm / 4"	220 mm	129	40
S7315s	15" SUBWOOFER	650 W	96 dB	39 ~ 1000 Hz	91mm / 3.6"	200 mm	90	41
J6015	15" WOOFER	650 W	99 dB	43 ~ 2800 Hz	86mm / 3.4"	190 mm	143	42
15DM550	15" WOOFER	550 W	100 dB	44 ~ 3200 Hz	76mm / 3"	190 mm	122	43
M5215	15" WOOFER	450 W	99 dB	45 ~ 2800 Hz	76mm / 3"	190 mm	109	44
C15-500	15" WOOFER	500 W	99 dB	43 ~ 3000 Hz	76mm / 3"	200 mm	118	45
C15-400	15" WOOFER	400 W	97 dB	38 ~ 3000 Hz	76mm / 3"	190 mm	103	46
15BM350	15" WOOFER	350 W	97.5 dB	38 ~ 3000 Hz	76mm / 3"	180 mm	103	47
U8215	15" WOOFER	500 W	98.5 dB	45 ~ 3000 Hz	76mm / 3"	190 mm	109	48
U8015	15" WOOFER	400 W	99 dB	38 ~ 3000 Hz	76mm / 3"	190 mm	104	49
PS15-76	15" WOOFER	350 W	96 dB	37 ~ 2800 Hz	76mm / 3"	170 mm	79	50
J6212	12" WOOFER	550 W	98.5 dB	55 ~ 2800 Hz	100mm / 4"	220 mm	204	51
J6012/2	12" WOOFER	550 W	97.5 dB	55 ~ 3000 Hz	86mm / 3.4"	190 mm	153	52
RS12-76	12" SUBWOOFER	450 W	94 dB	59 ~ 2900 Hz	76mm/3"	190 mm	123	53
12DM450	12" WOOFER	450 W	98.5 dB	56 ~ 3200 Hz	76mm / 3"	180 mm	165	54
S7012	12" MID-BASS	450 W	97 dB	41 ~ 2700 Hz	76mm / 3"	200 mm	128	55
M5012	12" WOOFER	450 W	98 dB	50 ~ 2700 Hz	76mm / 3"	190 mm	192	56
M5212	12" WOOFER	500 W	97.5 dB	45 ~ 3000 Hz	76mm / 3"	190 mm	153	57
M5612	12" WOOFER	400 W	98 dB	58 ~ 3000 Hz	76mm / 3"	190 mm	168	58
C12-400	12" WOOFER	400 W	97 dB	49 ~ 3500 Hz	76mm / 3"	180 mm	113	59
U8012	12" WOOFER	400 W	97.5 dB	45 ~ 3000 Hz	76mm / 3"	180 mm	128	60
BL12-65	12" WOOFER	350 W	96 dB	50 ~ 2800 Hz	65mm / 2.5"	170 mm	128	61
IS12-65	12" MID-BASS	300 W	96 dB	47 ~ 5100 Hz	65mm / 2.5"	156 mm	104	62
PS12-65	12" MID-BASS	250 W	95 dB	53 ~ 3000 Hz	65mm / 2.5"	156 mm	95	63
J6010	10" MID-BASS	400 W	97 dB	55 ~ 3500 Hz	76mm / 3"	180 mm	187	64
10DM350	10" WOOFER	350 W	96.5 dB	63 ~ 3500 Hz	65mm / 2.5"	156 mm	175	65
M5610	10" MID-BASS	250 W	95.5 dB	57 ~ 4000 Hz	65mm/2.5"	156 mm	139	66
BL10-65	10" WOOFER	300 W	94 dB	61 ~ 4000 Hz	65mm / 2.5"	156 mm	162	67
U8010	10" MID-BASS	280 W	97 dB	55 ~ 3600 Hz	65mm/2.5"	170 mm	162	68
M5010	10" MID-BASS	180 W	95 dB	55 ~ 2800 Hz	50mm / 2"	140 mm	148	69
V3010m/8	10" MID-BASS	300 W	97 dB	60 ~ 4800 Hz	65mm/2.5"	170 mm	212	70
V3010m/16	10" MID-BASS	300 W	96 dB	70 ~ 4800 Hz	65mm / 2.5"	170 mm	139	71
V3410m/16	10" MID-BASS	280 W	95 dB	64 ~ 3500 Hz	65mm / 2.5"	156 mm	123	72
IS10-65	10" MID-BASS	280 W	95 dB	60 ~ 4500 Hz	65mm / 2.5"	156 mm	139	73
PS10-50	10" MID-BASS	150 W	94 dB	52 ~ 2800 Hz	50mm / 2"	145 mm	122	74
V3608m/8	8" WOOFER	250 W	96.5 dB	81~4100 Hz	65mm / 2.5"	156 mm	231	75
V3208m/16	8" MID-BASS	200 W	95 dB	90 ~ 6000 Hz	50mm / 2"	140 mm	144	76
PS08-38	8" MID-BASS	150 W	92 dB	75~6300 Hz	38mm / 1.5"	120 mm	99	77
V3006m/16	6.5" MID-BASS	100 W	93 dB	81~6000 Hz	38mm / 1.5"	115 mm	156	78
R06-25	6.5" WOOFER	50 W	88 dB	50 ~ 4200 Hz	25mm / 1"	90 mm	76	79

MIDRANGE

Model	Туре	Rated Power	Sensitivity	Freq. Range	Voice Coil Diam.	Magnet	EBP	Page
MB06-38	6.5" MIDRANGE	100 W	92 dB	125 ~9000 Hz	38mm / 1.5"	120 mm	127	80
V3005m	5" MIDRANGE	100 W	91 dB	121 ~ 7000 Hz	38mm / 1.5"	100 mm	189	81

NEO LF	FERRITE LF	MIDRANGE	FULLRANGE	COAXIAL	NEO HF	FERRITE HF

FULLRANGE

Model	Туре	Rated Power	Sensitivity	Freq. Range	Voice Coil Diam.	Magnet OD	EBP	Page
FR321	3" FULLRANGE	40 W	88 dB	110 ~ 15kHz	20mm / 0.8"	70 mm	133	82
FC322	3" FULLRANGE	40 W	88.5 dB	138 ~ 20kHz	20mm / 0.8"	70 mm	137	83
FR321nd	3" FULLRANGE	40 W	89 dB	115 ~ 15kHz	20mm / 0.8"	Neo Ring	214	84
FC322nd	3" FULLRANGE	40 W	88.5 dB	138 ~ 20kHz	20mm / 0.8"	Neo Ring	248	85
FR421	4" FULLRANGE	40 W	87 dB	91 ~ 17kHz	20mm / 0.8"	70 mm	83	86
FC422	4" FULLRANGE	40 W	89.5 dB	134 ~ 17kHz	20mm / 0.8"	70 mm	105	87
FR421nd	4" FULLRANGE	40 W	88 dB	90 ~ 17kHz	20mm/0.8"	Neo Ring	118	88
FC422nd	4" FULLRANGE	40 W	91 dB	134 ~ 18.7kHz	20mm / 0.8"	Neo Ring	174	89

COAXIAL

Model	Size	Rated Power	Sensitivity	Freq.Range	Voice Coil Diam.	EBP(LF) Diaphragm(HF)	Page
CX12441	LF:30cm/12"	450W	97dB	50 ~ 3.0K Hz	76mm / 3"	179	90
	HF:44mm/1.7"	60W	106dB	700 ~ 19K Hz	44mm / 1.7"	Polyimide	
CX10442	LF:25cm/10"	250W	95dB	50 ~ 3.5K Hz	65mm / 2.5"	174	91
	HF:44mm/1.7"	50W	102dB	700 ~19K Hz	44mm / 1.7"	PEEK	
CXN1044	LF:250mm/10"	350W	98dB	73~ 4.1K Hz	76mm/3"	228	92
	HF:44mm/1.7"	50W	106dB	800 ~ 19K Hz	34mm / 1.7"	Polyimide	

NEODYMIUM HF DRIVERS

Model	Rated Power	Voice Coil Diameter	Exit Throat Diameter	Sensitivity	Freq.Range	Diaphragm Material	Page
Ndi7409	90W	75mm/3"	38mm/1.7"	109dB	700Hz~18KHz	Titanium	93
NDi6509	75W	65mm/2.5"	38mm/1.5"	108dB	750Hz~18KHz	Titanium	94
NDi4409	50W	44mm/1.7"	25.4mm/1"	106dB	800Hz~19KHz	Polyimide	95
NDi3809	50W	44mm/1.7"	25.4mm/1"	110dB	1200Hz~20KHz	Polyester	96

FERRITE HF DRIVERS

Model	Rated Power	Voice Coil Diameter	Exit Throat Diameter	Sensitivity	Freq.Range	Diaphragm Material	Page
CDi7401	90W	75mm/3"	38mm/1.7"	108dB	500Hz~17KHz	Titanium	97
CDi4401	60W	44mm/1.7"	25.4mm/1"	106dB	900Hz~19KHz	Polyimide	98
CDi4402	50W	44mm/1.7"	25.4mm/1"	105dB	900Hz~19KHz	PEEK	99
CD3401	40W	34mm/1.3"	25.4mm/1"	104dB	1000Hz~20KHz	Titanium	100

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

NEO

HF

JC622Ind



* 21 inch * 1800 Watts KLIPPEL 🔆 97.5 dB 🔆 31 ~ 800 Hz



KEY FEATURES:

- 1 3600 W continuous program power capacity
- 2 97.5dB Sensitivity 1w/1m
- ③ 31Hz ~800Hz frequency response range
- ④ 152mm(6") high temperature inside/outside copper voice coil
- (5) High temperature SH grade neodymium magnet
- 6 Ultra strong carbon cone and dust cap
- ⑦ Silicone double Conex damper
- (8) BL/Re maximized for loaded applications

GENERAL SPECIFICATIONS

530mm / 21inch
8 ohm
1800 Watts
3600 Watts
97.5 dB
31 ~ 800Hz
7.2 ohm
152mm / 6inch
Copper
Glass Fiber
34 mm
2(inside/outside)
14 mm
Cast Aluminum
1.1 T
Neodymium

THIELE - SMALL PARAM	IETERS [®]	i
Resonance frequency	Fs	31 Hz
DC resistance	Re	5.7 ohm
Mechanical factor	Qms	17.5
Electrical factor	Qes	0.321
Total factor	Qts	0.315
Mechanical compliance	Cms	0.068 mm/N
Mechanical resistance of total-driver losses	Rms	4.33 kg/s
Effective Moving Mass	Mms	390 g
Half-space efficiency	Eff	2.4 %
BL Factor	BL	37 T.m
Equivalent Cas air load	Vas	267 liters
Effective piston area	Sd	0.1669 m ²
Max. linear excursion ⁶	Xmax	±13.5 mm
Max. excursion before damage	Xdam	±32 mm
Voice coil inductance(1kHz)	Le	1.85 mH
Efficiency Bandwidth Product	EBP	97

dB

-12

-18 -24

-30

5 Hz

MOUNTING INFORMATION		
Overall Diameter	545 mm	
Bolt Circle Diameter	520 mm	
Bolt Hole Diameter	8.5 mm	
Baffle Cutout Diameter	495 mm	
Overall Depth	251 mm	
Air volume occupied by driver	13 liters	
Net Weight	21 kg	
Shipping Weight	23 kg	
Shipping Box	570x570x290mm	



500

1000

2000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

Vb/Fb=92L/37Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.

50

100

Vb/Fb = 92L/37Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects.

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=190L/30Hz,

Vb/Fb = 190L/30Hz

1

Turbosonic

FERRITE **SUBWOOFER**

FERRITE WOOFER **MID-BASS**

NEO

HF

* 18inch * 1300 Watts

JC62I8nd





KEY FEATURES:

- ① 2600 W continuous program power capacity
- 2 98dB Sensitivity 1w/1m

Basket

Flux Density

Magnet Material

Voice Coil Winding Depth

Number of layers

Magnet gap depth

- ③ 30Hz ~1200Hz frequency response range
- ④ 125mm(5") high temperature inside/outside copper voice coil
- (5) High temperature SH grade neodymium magnet
- 6 Aluminum demodulating ring for lower distortion
- ⑦ Ultra strong carbon cone and dust cap
- 8 Silicone double Conex damper
- (9) BL/Re maximized for loaded applications

GENERAL SPECIFICATIONS		THIELE - SMAI
Nominal Diameter	460mm / 18inch	Resonance frequer
Rated Impedance	8 ohm	DC resistance
Nominal Power handling ¹	1300 Watts	Mechanical factor
Program Power ²	2600 Watts	Electrical factor
Sensitivity(1w/1m) ³	98 dB	Total factor
Frequency Range ^₄	30 ~ 1200Hz	Mechanical complia
Minimum Impedance(Zmin)	6.8 ohm	Mechanical resistance of total-driver losses
Voice Coil Diameter	125mm / 5inch	Effective Moving M
Voice Coil Material	Copper	Half-space efficien
Former Material	Glass Fiber	BL Factor

34 mm

14 mm

1.2 T

2(inside/outside)

Cast Aluminum

Neodymium

LL PARAMETERS⁵ Fs 30 Hz ncy Re 5.4 ohm Qms 14.7 Qes 0 24 0.24 Qts ance Cms 0.097 mm/N Rms 3.65 kg/s Mms 279 g lass Eff 2.4 % су ΒL 35.8 T.m 205 liters Equivalent Cas air load Vas 0 1225 m² Effective piston area Sd

Xmax

Xdam

Le

dB

-12

-18 -24 -30

5 Hz

EBP

±13.5 mm

± 23 mm

1.46 mH

Computer predicted low frequency response⁽⁷⁾

125

Vb/Fb=75L/35Hz

Vb/Fb = 75L/35Hz

Max. linear excursion⁶

Max. excursion before damage

Voice coil inductance(1kHz)

Efficiency Bandwidth Product

MOUNTING INFORMATION		
Overall Diameter	461 mm	
Bolt Circle Diameter	439 mm	
Bolt Hole Diameter	6.5x9.5 mm	
Baffle Cutout Diameter	424 mm	
Overall Depth	228 mm	
Air volume occupied by driver	9.6 liters	
Net Weight	13.5 kg	
Shipping Weight	14.8 kg	
Shipping Box	490x490x255mm	



500

1000

2000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling
- . Sensitivity is measured at 1W input on rated impedance at 1m on axis. 3
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

50

Vb/Fb=47L/42Hz

Vb/Fb = 47L/42Hz

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 2

lurb@soni

FERRITE WOOFER M MID-BASS

NEO

HF

J63I8nd/2 Code:23043



VERIFIED WITH ★ 18 inch ★ 1500 Watts ★ 100 dB ★ 31 ~ 1000 Hz



KEY FEATURES:

- 1 3000 W continuous program power capacity
- 2 High sensitivity: 100dB 1w/1m
- ③ 31Hz ~1000Hz frequency response range
- ④ 125mm(5") inside/outside voice coil for improved power handling and durability
- 5 High temperature SH grade neodymium magnet
- 6 Aluminum demodulating ring for lower distortion

2.2 mH

152

Le

EBP

- ⑦ U-SONIC paper cone
- (8) Silicone double Conex dampers with optimized compliance
- (9) BL/Re maximized for loaded applications

GENERAL SPECIFICATIONS THIELE - SMALL PARAMETERS⁵ Nominal Diameter 460mm / 18inch 31 Hz Resonance frequency Fs Rated Impedance 8 ohm DC resistance Re 5.3 ohm Nominal Power handling 1500 Watts Mechanical factor Qms 14.1 Program Power² 0 17 3000 Watts Electrical factor Qes 0.168 Sensitivity(1w/1m)³ 100 dB Total factor Qts Frequency Range⁴ 31~1000Hz Mechanical compliance Cms 0.104 mm/N Mechanical resistance Minimum Impedance(Zmin) 7.5 ohm Rms 5.1kg/s of total-driver losses Voice Coil Diameter 125mm / 5inch Effective Moving Mass Mms 251 g Voice Coil Material Half-space efficiency Eff 2.1% Copper Former Material **BL** Factor ΒL 39 T.m Glass Fiber Voice Coil Winding Depth 225 liters 25 mm Equivalent Cas air load Vas 0 1238 m² Number of layers Sd 2(inside/outside) Effective piston area Magnet gap depth 14 mm Max. linear excursion Xmax ±9.5mm Basket Cast Aluminum Max. excursion before damage Xdam ±28 mm

Voice coil inductance(1kHz)

Efficiency Bandwidth Product

MOUNTING INFORMATION		
Overall Diameter	461 mm	
Bolt Circle Diameter	439 mm	
Bolt Hole Diameter	6.5x9.5 mm	
Baffle Cutout Diameter	424 mm	
Overall Depth	228 mm	
Air volume occupied by driver	9.6 liters	
Net Weight	13.5 kg	
Shipping Weight	14.8 kg	
Shipping Box	490x490x255mm	



Frequency response measured in a closed enclosure of 600L in an anechoic chamber

1.1 T

Neodymium



NOTES:

1. AES standard

Flux Density

Magnet Material

- 2. Program Power is defined as 3 dB greater than the nominal power handling.
- 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test.
 The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and
- b. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice of Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects 8. Total internal volume of empty box.
 - 3

FERRITE WOOFER

NEO

HF

J6118nd/2 Code:19092



★ 18 inch ★ 1400 Watts ★ 97 dB ★ 39 ~ 1000 Hz



KEY FEATURES:

- 1 2800 W continuous program power capacity
- 2 97dB Sensitivity 1w/1m
- ③ 39Hz ~1000Hz frequency response range
- ④ 4.5" inside/outside voice coil for improved power-handling and durability
- ⑤ Forced air ventilation on U-yoke for minimum power compressoin
- 6 Neodymium magnet allows a very light yet powerful motor assembly
- ⑦ Double silicone spider with optimized compliance
- 8 Ideal for compact subwoofer application

Xdam

Le

dB

-12 -18 -24 -30

5 Hz

Δ

EBP

±28 mm

2.4 mH

Computer predicted low frequency response⁽⁷⁾

95

GENERAL SPECIFICATIONS THIELE - SMALL PARAMETERS⁵ Nominal Diameter 460mm / 18inch Fs 39 Hz **Overall Diameter** Resonance frequency Rated Impedance 8 ohm DC resistance Re 5.4 ohm **Bolt Circle Diameter** Nominal Power handling 1400 Watts Mechanical factor Qms Bolt Hole Diameter 11 Program Power² Electrical factor Qes 0 4 1 2800 Watts 0.39 Sensitivity(1w/1m)³ 97 dB Total factor Qts **Overall Depth** Frequency Range⁴ 39~1000Hz Mechanical compliance Cms 0.06 mm/N Mechanical resistance Minimum Impedance(Zmin) 7.0 ohm Rms 5.5 kg/s Net Weight of total-driver losses Voice Coil Diameter 115mm / 4.5inch Effective Moving Mass Mms 253 g Shipping Weight Voice Coil Material Half-space efficiency Eff 2.0% Shipping Box Copper Former Material Glass Fiber **BL** Factor ΒL 28.8 T.m Voice Coil Winding Depth 137 liters 31 mm Equivalent Cas air load Vas 0 1238 m³ Number of layers Sd 2(inside/outside) Effective piston area Magnet gap depth 14 mm Max. linear excursion Xmax ±11 mm

Max. excursion before damage

Voice coil inductance(1kHz)

Efficiency Bandwidth Product





500

1000

Frequency response measured in a closed enclosure of 600L in an anechoic chamber

Cast Aluminum

Neodymium

1.1 T

NOTES:

Basket

Flux Density

Magnet Material

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling.
- 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 104L/38Hz

 The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.

Fb=104U38Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

FERRITE WOOFER MID-BASS

NEO

HF

ND91185



🔆 18 inch 🔆 900 Watts **★ 31 ~ 1000 Hz ※** 96 dB



KEY FEATURES:

- 1 1800 W continuous program power capacity
- 2 96dB Sensitivity 1w/1m
- 3 31Hz ~1000Hz frequency response range
- ④ 4" inside/outside voice coil

- (5) Double silicone spider with optimized compliance
- 6 Neodymium magnet allows a very light yet powerful motor assembly
- $\ensuremath{\overline{\mathcal{O}}}$ Ventilated voice coil gap for reduced power compression
- 8 Ideal for subwoofer application

EBP

58

GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAM	IETERS	5	M
Nominal Diameter	460mm / 18inch	Resonance frequency	Fs	34 Hz	Ov
Rated Impedance	8 ohm	DC resistance	Re	5.3 ohm	Bo
Nominal Power handling ¹	900 Watts	Mechanical factor	Qms	12	Во
Program Power ²	1800 Watts	Electrical factor	Qes	0.58	Ba
Sensitivity(1w/1m) ³	96 dB	Total factor	Qts	0.55	Ov
Frequency Range⁴	31 ~ 1000Hz	Mechanical compliance	Cms	0.08 mm/N	Air
Minimum Impedance(Zmin)	6.7 ohm	Mechanical resistance of total-driver losses	Rms	4.6 kg/s	Ne
Voice Coil Diameter	100mm / 4inch	Effective Moving Mass	Mms	252 g	Sh
Voice Coil Material	Copper	Half-space efficiency	Eff	1.2%	Sh
Former Material	Glass Fiber	BL Factor	BL	22.3 T.m	
Voice Coil Winding Depth	30 mm	Equivalent Cas air load	Vas	175 liters	
Number of layers	2(inside/outside)	Effective piston area	Sd	0.1219 m ²	
Magnet gap depth	12 mm	Max. linear excursion ⁶	Xmax	±11 mm	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±24 mm	
Flux Density	1.15 T	Voice coil inductance(1kHz)	Le	2 mH	

Efficiency Bandwidth Product

UNTING INFORMATION rall Diameter 461 mm Circle Diameter 439 mm Hole Diameter 6.5x9.5 mm 424 mm e Cutout Diameter rall Depth 212 mm olume occupied by driver 8.3 liters Weight 9.6 kg ping Weight 11 kg 490x490x250mm ping Box

ľurbôsonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dBSF 100. 90. on. Impedance magnitude curve measured in free air

Neodymium



NOTES:

1. AES standard

Magnet Material

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

FERRITE WOOFER **MID-BASS**

KLIPPEL

NEO

HF

* 15 inch * 800 Watts

ND9315s





KEY FEATURES:

- ① 1600 W continuous program power capacity
- 2 98dB sensitivity 1w/1m
- 3 40Hz ~ 1000Hz frequency response range
- ④ 100mm(4") inside/outside winding copper voice coil
- 5 Triple-roll cloth edge with deep corrugations for extended Xmax
- 6 Neodymium magnet allows a very light yet powerful motor assembly
- Corrugated cone geometry
- 8 Ideal for compact bass-reflex subwoofer application

GENERAL SPECIFICATIONS Nominal Diameter 380mm /15inch Rated Impedance 8 ohm Г Nominal Power handling 800 Watts 1600 Watts Program Power² F Sensitivity(1w/1m)³ 98 dB Т Frequency Range⁴ 40~1000Hz Minimum Impedance(Zmin) 6.6 ohm Voice Coil Diameter Е 100mm /4inch Voice Coil Material Copper Former Material Glass Fiber F Voice Coil Winding Depth 25 mm F Number of layers 2(inside/outside) E Magnet gap depth 12 mm Ν Basket Cast Aluminum N Flux Density 1.2 T

THIELE – SMALL PARAMETERS°				
Resonance frequency	Fs	40 Hz		
DC resistance	Re	5.2 ohm		
Mechanical factor	Qms	9.2		
Electrical factor	Qes	0.33		
Total factor	Qts	0.32		
Mechanical compliance	Cms	0.1 mm/N		
Mechanical resistance of total-driver losses	Rms	4.36 kg/s		
Effective Moving Mass	Mms	159 g		
Half-space efficiency	Eff	1.9 %		
BL Factor	BL	24.9 T.m		
Equivalent Cas air load	Vas	102 liters		
Effective piston area	Sd	0.0855 m ²		
Max. linear excursion ⁶	Xmax	± 9 mm		
Max. excursion before damage	Xdam	±25.5mm		
Voice coil inductance(1kHz)	Le	1.4 mH		
Efficiency Bandwidth Product	EBP	121		

dB

-12

-18 -24 -30

5 Hz

MOUNTING INFORMATION		
Overall Diameter	393 mm	
Bolt Circle Diameter	275 mm	
Bolt Hole Diameter	6.5 mm	
Baffle Cutout Diameter	355 mm	
Overall Depth	182 mm	
Air volume occupied by driver	5.3 liters	
Net Weight	8.3 kg	
Shipping Weight	9.4 kg	
Shipping Box	430x430x205mm	



500

1000

2000



Neodymium

NOTES:

1. AES standard

Magnet Material

- 2. Program Power is defined as 3 dB greater than the nominal power handling 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test.

50

Hg is the gap depth.

Vb/Fb = 77L/39Hz

Vb/Fb=77L/39Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

6

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

Vb/Fb=381/47Hz

100

Vb/Fb = 38L/47Hz

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

NEO

HF

ND94I5w



* 15 inch * 700 Watts **★ 40 ~ 2500 Hz** 🔆 97 dB



KEY FEATURES:

- 1 1400 W continuous program power capacity
- 2 97dB sensitivity 1w/1m
- ③ 100mm(4") high temperature inside/outside voice coil with copper clad aluminum wire
- ④ Ventilated voice coil gap for reduced power compression

(5) Neodymium magnet allows a very light yet powerful motor assembly

- 6 Aluminum demodulating ring for low distortion
- ⑦ Weather protected cone for outdoor usage
- 8 Ideal for compact 2 or 3-way systems

GENERAL SPECIFICATIONS

Nominal Diameter	380mm /15inch
Rated Impedance	8 ohm
Nominal Power handling ¹	700 Watts
Program Power ²	1400 Watts
Sensitivity(1w/1m) ³	97 dB
Frequency Range ^₄	40 ~ 2500Hz
Minimum Impedance(Zmin)	7.3 ohm
Voice Coil Diameter	100mm /4inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	22 mm
Number of layers	2(inside/outside)
Magnet gap depth	12 mm
Basket	Cast Aluminum
Flux Density	1.2T
Magnet Material	Neodymium

I HIELE - SIVIALL PARAIVIETERS		
Resonance frequency	Fs	40.5 Hz
DC resistance	Re	5.7 ohm
Mechanical factor	Qms	9.3
Electrical factor	Qes	0.33
Total factor	Qts	0.32
Mechanical compliance	Cms	0.11 mm/N
Mechanical resistance of total-driver losses	Rms	3.9 kg/s
Effective Moving Mass	Mms	142 g
Half-space efficiency	Eff	2.0%
BL Factor	BL	25 T.m
Equivalent Cas air load	Vas	104 liters
Effective piston area	Sd	0.0830 m^2
Max. linear excursion ⁶	Xmax	± 7 mm
Max. excursion before damage	Xdam	±26mm
Voice coil inductance(1kHz)	Le	1.35 mH
Efficiency Bandwidth Product	EBP	122

MOUNTING INFORMATION		
Overall Diameter	393 mm	
Bolt Circle Diameter	375 mm	
Bolt Hole Diameter	6.5 mm	
Baffle Cutout Diameter	355 mm	
Overall Depth	182 mm	
Air volume occupied by driver	5.3 liters	
Net Weight	8.3 kg	
Shipping Weight	9.4 kg	
Shipping Box	430x430x205mm	



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dBSPI 100.0 90.1 80. 70.1 60.0 L 200 20k 100 50 25 Hz 5k 10 Impedance magnitude curve measured in free air



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity

5. T/S parameters measured with laser system BEFORE preconditioning test.

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

FERRITE WOOFER MID-BASS

COAXIAL

NEO

HF

J6115nd



🔆 15 inch 🔆 600 Watts **★ 37 ~ 2800 Hz** 🔆 99 dB



KEY FEATURES:

- ① 1200 W continuous program power capacity
- 2 99dB sensitivity 1w/1m
- ③ 86mm(3.4") inside/outside winding copper clad aluminum voice coil
- ④ Forced air ventilation on U-yoke for minimum power compression ⑤ Neodymium magnet allows a very light yet powerful motor assembly
- 6 Paper cone made in the USA
- ⑦ Ideal for high quality compact 2 or 3-way systems

GENERAL SPECIFICATIONS

Nominal Diameter	380mm /15inch
Rated Impedance	8 ohm
Nominal Power handling ¹	600 Watts
Program Power ²	1200 Watts
Sensitivity(1w/1m) ³	99 dB
Frequency Range ^₄	37 ~ 2800Hz
Minimum Impedance(Zmin)	6.6 ohm
Voice Coil Diameter	86mm /3.4inch
Voice Coil Material	CCAW
Former Material	Polyimide
Voice Coil Winding Depth	16.5 mm
Number of layers	2(inside/outside)
Magnet gap depth	10 mm
Basket	Cast Aluminum
Flux Density	1.2 T
Magnet Material	Neodymium

THILLE SWALL FARAIN		
Resonance frequency	Fs	38 Hz
DC resistance	Re	5.6 ohm
Mechanical factor	Qms	7.8
Electrical factor	Qes	0.31
Total factor	Qts	0.3
Mechanical compliance	Cms	0.18 mm/N
Mechanical resistance of total-driver losses	Rms	3 kg/s
Effective Moving Mass	Mms	98 g
Half-space efficiency	Eff	3.1%
BL Factor	BL	20.4 T.m
Equivalent Cas air load	Vas	187 liters
Effective piston area	Sd	0.0866 m ²
Max. linear excursion ⁶	Xmax	±6 mm
Max. excursion before damage	Xdam	±19mm
Voice coil inductance(1kHz)	Le	1.4 mH
Efficiency Bandwidth Product	EBP	122

dB

-12

-18 -24 -30 -36

5 Hz

MOUNTING INFORMATION			
Overall Diameter	393 mm		
Bolt Circle Diameter	275 mm		
Bolt Hole Diameter	6.5 mm		
Baffle Cutout Diameter	355 mm		
Overall Depth	172 mm		
Air volume occupied by driver	5.2 liters		
Net Weight	6.1 kg		
Shipping Weight	7.2 kg		
Shipping Box	430x430x205mm		



500

1000

2000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 58L/47Hz

Computer predicted low frequency response⁽⁷⁾

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Fb=58L/47H

- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.
 - 8

FERRITE WOOFER MID-BASS

NEO

HF

ND90I5w



★ 15 inch ★ 500 Watts ★ 99 dB ★ 45 ~ 2900 Hz



KEY FEATURES:

- 1 1000 W continuous program power capacity
- 2 99dB sensitivity 1w/1m
- ③ 76mm(3") inside/outside winding copper clad aluminum voice coil
- ④ FEA optimized neodymium magnet assembly allows the highest force factor and excursion capability
- (5) Paper cone made in the USA
- ⁶ Optimized for the use in compact bass reflex enclosure or line array systems

GENERAL SPECIFICATIONS

Nominal Diameter	380mm /15inch
Rated Impedance	8 ohm
Nominal Power handling ¹	500 Watts
Program Power ²	1000 Watts
Sensitivity(1w/1m) ³	99 dB
Frequency Range ^₄	45 ~ 2900Hz
Minimum Impedance(Zmin)	6.7 ohm
Voice Coil Diameter	76mm /3inch
Voice Coil Material	CCAW
Former Material	Glassfiber
Voice Coil Winding Depth	17 mm
Number of layers	2(inside/outside
Magnet gap depth	10 mm
Basket	Cast Aluminum
Flux Density	1.2 T
Magnet Material	Neodymium

THIELE - SMALL PARAMETERS⁵ Fs 46 Hz Resonance frequency DC resistance Re 5.3 ohm Mechanical factor Qms 10.4 0.41 Qes Electrical factor 0.39 Total factor Qts Mechanical compliance Cms 0.13 mm/N Mechanical resistance Rms 2.6 kg/s of total-driver losses Effective Moving Mass Mms 92 g Half-space efficiency Eff 3.4% **BL** Factor ΒL 18.7 T.m Equivalent Cas air load Vas 145 liters 0.0903 m² Effective piston area Sd Max. linear excursion⁶ Xmax ± 6 mm Max. excursion before damage Xdam ±18mm Voice coil inductance(1kHz) 0.99 mH Le EBP Efficiency Bandwidth Product 112

MOUNTING INFORMATION **Overall Diameter** 393 mm **Bolt Circle Diameter** 275 mm Bolt Hole Diameter 65 mm **Baffle Cutout Diameter** 355 mm **Overall Depth** 166 mm Air volume occupied by driver 4.8 liters Net Weight 5.5 kg Shipping Weight 6.6 kg Shipping Box 430x430x205mm Also available in 160hm, data upon request.







NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling.
- 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. T/S parameters measured with laser system BEFORE preconditioning test.
- The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 9

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

NEO

HF

FERRITE HF

ND9412w



* 12 inch * 550 Watts **★ 61 ~ 2800 Hz ♦ 96 dB**



KEY FEATURES:

- ① 1100 W continuous program power capacity
- 2 Sensitivity: 96dB 1w/1m
- ③ 100mm(4") edgewound aluminum voice coil
- ④ Special treatment on cone in house for excellent performance
- 5 Neodymium magnet allows a light yet powerful motor assembly
- ⑥ Optimized for the use in line array systems or compact bass reflex enclosure

Net Weight

Shipping Weight

Shipping Box

Vb/Fb=49L/51Hz

100

GENERAL SPECIFICATIONS

Newsia el Dienseten	200 m m (10 m c h
Nominal Diameter	300mm/12inch
Rated Impedance	16 ohm
Nominal Power handling ¹	550 Watts
Program Power ²	1100 Watts
Sensitivity(1w/1m) ³	96 dB
Frequency Range ^₄	61 ~ 2800Hz
Minimum Impedance(Zmin)	12.7 ohm
Voice Coil Diameter	100mm /4inch
Voice Coil Material	Flat Aluminum
Former Material	Fiberglass
Voice Coil Winding Depth	23 mm
Number of layers	1
Magnet gap depth	12 mm
Basket	Cast Aluminum
Flux Density	1.2 T
Magnet Material	Neodymium

Resonance frequency	Fs	64 Hz	
DC resistance	Re	11 ohm	
Mechanical factor	Qms	14	
Electrical factor	Qes	0.51	
Total factor	Qts	0.49	
Mechanical compliance	Cms	0.07 mm/N	
Mechanical resistance of total-driver losses	Rms	2.39 kg/s	
Effective Moving Mass	Mms	82 g	
Half-space efficiency	Eff	1.6%	
BL Factor	BL	26.9 T.m	
Equivalent Cas air load	Vas	31 liters	
Effective piston area	Sd	0.0552 m ²	
Max. linear excursion ⁶	Xmax	± 8 mm	
Max. excursion before damage	Xdam	±19.5mm	
Voice coil inductance(1kHz)	Le	2.1 mH	
Efficiency Bandwidth Product	EBP	125	

dB

-12 -18 -24

-30 -36

5 Hz

MOUNTING INFORMATION **Overall Diameter** 313 mm Bolt Circle Diameter 294 mm **Bolt Hole Diameter** 6.5 mm 285 mm **Baffle Cutout Diameter Overall Depth** 133 mm Air volume occupied by driver 2.8 liters

lurb@sonic

Also available in 80hm, data upon request.

7.6 kg

8.3 kg

345x345x180mm



500

1000

2000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 49L/51Hz

Computer predicted low frequency response⁽⁷⁾

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

- - 10

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

NEO

HF

J6II2nd







KEY FEATURES:

- ① 1000 W continuous program power capacity
- 2 97dB sensitivity 1w/1m
- ③ 86mm(3.4") inside/outside winding copper clad aluminum voice coil
- ④ Forced air ventilation on U-yoke for minimum power compression ⑤ Neodymium magnet allows a vrey light yet powerful motor assembly
- 6 RDM paper cone, made in USA
- ⑦ Ideal for high quality compact 2 or 3-way systems

GENERAL SPECIFICATIONS

300mm /12inch
8 ohm
500 Watts
1000 Watts
97 dB
55 ~ 3000Hz
6.4 ohm
86mm /3.4inch
CCAW
Polyimide
16.5 mm
2(inside/outside)
10 mm
Cast Aluminum
1.1 T
Neodymium

Resonance frequency	Fs	55 Hz	
DC resistance	Re	5.6 ohm	
Mechanical factor	Qms	18.3	
Electrical factor	Qes	0.42	
Total factor	Qts	0.41	
Mechanical compliance	Cms	0.11 mm/N	
Mechanical resistance of total-driver losses	Rms	1.47 kg/s	
Effective Moving Mass	Mms	77.6 g	
Half-space efficiency	Eff	1.7%	
BL Factor	BL	18.8 T.m	
Equivalent Cas air load	Vas	44 liters	
Effective piston area	Sd	0.0531 m^2	
Max. linear excursion ⁶	Xmax	±6 mm	
Max. excursion before damage	Xdam	±19 mm	
Voice coil inductance(1kHz)	Le	0.96 mH	
Efficiency Bandwidth Product	EBP	131	

dB

-12

-18 -24 -30 -36

5 Hz

MOUNTING INFORMATION		
Overall Diameter	316 mm	
Bolt Circle Diameter	297 mm	
Bolt Hole Diameter	6.5 mm	
Baffle Cutout Diameter	283 mm	
Overall Depth	153 mm	
Air volume occupied by driver	3.1 liters	
Net Weight	5.1 kg	
Shipping Weight	5.8 kg	
Shipping Box	345x345x180mm	

Turb@sonic



500

1000

2000





- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=25L/54H

100

Hg is the gap depth.

Vb/Fb = 25L/54Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

FERRITE WOOFER MID-BASS

NEO

HF

ND9512m



* 12 inch * 400 Watts ★ 101 dB ★ 43 ~ 3000 Hz



KEY FEATURES:

- ① 800 W continuous program power capacity
- 2 High efficiency: 101dB 1w/1m
- ③ Smooth frequency response up to 3kHz
- ④ 76mm(3") aluminum voice coil wounded on Kapton former
- (5) High grade neodymium magnet allows a very light yet powerful motor assembly
- 6 Special treated cloth edge for reducing distortion
- ⑦ Optimized for the use in line array systems or compact reflex enclosure

GENERAL SPECIFICATIONS THIELE – SMALL PARAMETERS		IETERS	ſ	
Nominal Diameter	300mm /12inch	Resonance frequency	Fs	55 Hz
Rated Impedance	8 ohm	DC resistance	Re	5.6 ohm
Nominal Power handling ¹	400 Watts	Mechanical factor	Qms	8.1
Program Power ²	800 Watts	Electrical factor	Qes	0.17
Sensitivity(1w/1m) ³	101dB	Total factor	Qts	0.15
Frequency Range⁴	43 ~ 3000Hz	Mechanical compliance	Cms	0.24 mm/N
Minimum Impedance(Zmin)	7.6 ohm	Mechanical resistance of total-driver losses	Rms	1.84 kg/s
Voice Coil Diameter	76mm /3inch	Effective Moving Mass	Mms	53 g
Voice Coil Material	Aluminum	Half-space efficiency	Eff	5.12%
Former Material	Polyimide	BL Factor	BL	23 T.m
Voice Coil Winding Depth	18 mm	Equivalent Cas air load	Vas	94 liters
Number of layers	2	Effective piston area	Sd	0.0531 m ²
Magnet gap depth	10 mm	Max. linear excursion ⁶	Xmax	±6.5mm
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±16 mm
Flux Density	1.45 T	Voice coil inductance(1kHz)	Le	0.68 mH

Efficiency Bandwidth Product

MOUNTING INFORMATION			
Overall Diameter	316 mm		
Bolt Circle Diameter	297 mm		
Bolt Hole Diameter	6.5 mm		
Baffle Cutout Diameter	283 mm		
Overall Depth	140 mm		
Air volume occupied by driver	3.0 liters		
Net Weight	5 kg		
Shipping Weight	5.7 kg		
Shipping Box	345x345x180mm		
Also available in 160hm, data upon request.			



500

1000

2000

Fb=15L/71Hz

100



Neodymium



1. AES standard

Magnet Material

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Computer predicted low frequency response⁽⁷⁾

343

EBP

dB

-12

-18 -24 -30 -36

12

5 Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

50

Vb/Fb = 15L/71Hz

FERRITE WOOFER MID-BASS

NEO

HF

* 12 inch * 400 Watts

ND90I2w





KEY FEATURES:

- ① 800 W continuous program power capacity
- 2 High efficiency: 98.5dB 1w/1m
- 3 76mm(3") aluminum voice coil wounded on Kapton former
- ④ Vented on former, dual-forced air ventilation magnet system for heat dispersion and minimum power compression
- ⑤ UKM paper cone
- 6 Special treatment on cone in house for excellent performance
- ⑦ high temperature SH grade neodymium magnet; FEA optimized magnetic circuit for the highest force factor
- 8 A ferrite magnet on top of core for heat dispersion and higher flux density
- 9 Optimized for the use in line array or compact bass reflex systems

GENERAL SPECIFICATIONS THIELE - SMALL PARAMETERS⁵ Nominal Diameter 46 Hz 300mm /12inch Resonance frequency Fs Rated Impedance 8 ohm DC resistance Re 5.6 ohm Nominal Power handling 400 Watts Mechanical factor Qms 9.8 Program Power² 0 263 800 Watts Electrical factor Qes 99 dB 0.259 Sensitivity(1w/1m)³ Total factor Qts Frequency Range⁴ 44 ~ 3500Hz Mechanical compliance Cms 0.22 mm/N Mechanical resistance Minimum Impedance(Zmin) 6.8 ohm Rms 1.08 kg/s of total-driver losses Voice Coil Diameter 76mm /3inch Effective Moving Mass Mms 56 g Voice Coil Material CCAW Half-space efficiency Eff 3.2% Former Material Polvimide **BL** Factor ΒL 19.8 T.m Voice Coil Winding Depth 17 5 mm Equivalent Cas air load Vas 91 liters 0.0547 m^2 Number of layers 2 Effective piston area Sd Magnet gap depth 10 mm Max. linear excursion Xmax ±6.5 mm Basket Cast Aluminum Max. excursion before damage Xdam ± 15 mm

Voice coil inductance(1kHz)

Efficiency Bandwidth Product

MOUNTING INFORMATION		
Overall Diameter	316 mm	
Bolt Circle Diameter	297 mm	
Bolt Hole Diameter	6.5 mm	
Baffle Cutout Diameter	283 mm	
Overall Depth	144 mm	
Air volume occupied by driver	2.8 liters	
Net Weight	4.4 kg	
Shipping Weight	5.1 kg	
Shipping Box	345x345x180mm	
Also available in 160hm, data upon request.		







1.2 T

Neodymium

NOTES:

1. AES standard

Flux Density

Magnet Material

- 2. Program Power is defined as 3 dB greater than the nominal power handling
- . Sensitivity is measured at 1W input on rated impedance at 1m on axis 3
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test.

Vb/Fb=26L/57Hz

Vb/Fb = 26L/57Hz

Hg is the gap depth.

Vb/Fb = 35L/51Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

0.86 mH

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=35L/51Hz

177

Le

dB

-12

-18 -24 -30 -36 5 Hz

EBP

13

urbosoni



500

1000

2000

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

NEO

HF

ND9812 PRELIMINARY



* 12 inch * 500 Watts KLIPPEL ※ 98 dB ★ 59 ~ 3600 Hz



KEY FEATURES:

- 1 1000 W continuous program power capacity
- 2 Sensitivity: 98dB 1w/1m
- 3 59 ~ 3600Hz frequency response range
- ④ 76mm(3") high temperature copper clad aluminum voice coil wounded on fiberglass former
- (5) The advanced motor structure is built with an aluminum heat radiator, it also acts as demodulating ring. The structure allows an extreme heat dispersion and a very low distortion figure
- 6 High temperature SH grade neodymium magnet
- ⑦ Optimized for the use in high quality bass reflex systems

GENERAL SPECIFICATIONS

Nominal Diameter	300mm /12inch
Rated Impedance	8 ohm
Nominal Power handling ¹	500 Watts
Program Power ²	1000 Watts
Sensitivity(1w/1m) ³	98 dB
Frequency Range ^₄	59 ~ 3600Hz
Minimum Impedance(Zmin)	6.3 ohm
Voice Coil Diameter	76mm /3inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	18.7 mm
Number of layers	2(inside/outside)
Magnet gap depth	10 mm
Basket	Cast Aluminum
Flux Density	1.2 T
Magnet Material	Neodymium

Resonance frequency	Fs	59.5 Hz
DC resistance	Re	5.4 ohm
Mechanical factor	Qms	19
Electrical factor	Qes	0.44
Total factor	Qts	0.43
Mechanical compliance	Cms	0.12 mm/N
Mechanical resistance of total-driver losses	Rms	1.2 kg/s
Effective Moving Mass	Mms	61 g
Half-space efficiency	Eff	2.3%
BL Factor	BL	16.7 T.m
Equivalent Cas air load	Vas	50 liters
Effective piston area	Sd	0.0552 m^2
Max. linear excursion ⁶	Xmax	± 6.9 mm
Max. excursion before damage	Xdam	±18.7mm
Voice coil inductance(1kHz)	Le	0.72 mH
Efficiency Bandwidth Product	EBP	135

-6

-12

-18 -24 -30 -36

5 Hz

THIELE - CMALL DADAM

MOUNTING INFORMATION **Overall Diameter** 316 mm **Bolt Circle Diameter** 297 mm Bolt Hole Diameter 6.5 mm 283 mm **Baffle Cutout Diameter Overall Depth** 145 mm Air volume occupied by driver 2.8 liters Net Weight 5.4 kg Shipping Weight 6.1 kg Shipping Box 345x345x180mm Also available in 16ohm, data upon request.



1000

500

2000





- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

Vb/Fb=50L/52.5Hz

100

Hg is the gap depth.

Vb/Fb = 50L/52.5Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

KLIPPEL

NEO

HF

* 10 inch * 400 Watts

ND98IO PRELIMINARY





KEY FEATURES:

- 1 800 W continuous program power capacity
- 2 High efficiency : 99dB 1w/1m
- 3 70 ~ 4100Hz frequency response range
- ④ 76mm(3") high temperature copper clad aluminum voice coil wounded on fiberglass former
- ⑤ The advanced motor structure is built with an aluminum heat radiator, it also acts as demodulating ring. The structure allows an extreme heat dispersion and a very low distortion figure
- 6 High temperature SH grade neodymium magnet
- ⑦ Optimized for the use in high quality bass reflex or midrange systems

GENERAL SPECIFICATIONS

Nominal Diameter	250mm /10inch
Rated Impedance	8 ohm
Nominal Power handling ¹	400 Watts
Program Power ²	800 Watts
Sensitivity(1w/1m) ³	99 dB
Frequency Range ^₄	70 ~ 4100Hz
Minimum Impedance(Zmin)	6.3 ohm
Voice Coil Diameter	76mm /3inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	17.2 mm
Number of layers	2(inside/outside)
Magnet gap depth	10 mm
Basket	Cast Aluminum
Flux Density	1.2 T
Magnet Material	Neodymium

I HIELE - SIVIALL FARAIV	EIEKS	
Resonance frequency	Fs	70 Hz
DC resistance	Re	5.3 ohm
Mechanical factor	Qms	16.4
Electrical factor	Qes	0.24
Total factor	Qts	0.24
Mechanical compliance	Cms	0.12 mm/N
Mechanical resistance of total-driver losses	Rms	1.1 kg/s
Effective Moving Mass	Mms	41 g
Half-space efficiency	Eff	2.9%
BL Factor	BL	20.2 T.m
Equivalent Cas air load	Vas	21 liters
Effective piston area	Sd	0.0346 m ²
Max. linear excursion ⁶	Xmax	±6.1mm
Max. excursion before damage	Xdam	±17 mm
Voice coil inductance(1kHz)	Le	0.61 mH
Efficiency Bandwidth Product	EBP	292

dB

-12

-18 -24 -30 -36

5 Hz

MOUNTING INFORMATION			
Overall Diameter	261 mm		
Bolt Circle Diameter	246 mm		
Bolt Hole Diameter	5.5 mm		
Baffle Cutout Diameter	228 mm		
Overall Depth	127 mm		
Air volume occupied by driver	1.9 liters		
Net Weight	4.9 kg		
Shipping Weight	5.4 kg		
Shipping Box	295x295x155mm		
Also available in 160hm, data upon request.			

Turbosonic



500

1000

2000

Vb/Fb=9L/Sealea



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

100

Vb/Fb = 9L/Sealed

Hg is the gap depth.

Vb/Fb = 11L/71Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=11L/71Hz

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

NEO

HF

ND95IOm



🔆 10 inch 🔆 350 Watts **★ 60 ~ 4300 Hz ※ 99 dB**



KEY FEATURES:

- 1 700 W continuous program power capacity
- 2 High efficiency: 99dB 1w/1m
- ③ Smooth frequency response up to 4.3kHz
- ④ 76mm(3") aluminum voice coil wounded on Kapton former
- (5) High grade neodymium magnet allows a very light yet powerful motor assembly
- 6 Special treated cloth edge for reducing distortion
- ⑦ Optimized for the use in line array systems or compact reflex enclosure

GENERAL SPECIFICATIONS THIELE – SMALL I		THIELE - SMALL PARAM	IETERS	5	MO
Nominal Diameter	250mm /10inch	Resonance frequency	Fs	61.5 Hz	Ove
Rated Impedance	8 ohm	DC resistance	Re	5.6 ohm	Bolt
Nominal Power handling ¹	350 Watts	Mechanical factor	Qms	9.3	Bolt
Program Power ²	700 Watts	Electrical factor	Qes	0.17	Baff
Sensitivity(1w/1m) ³	99 dB	Total factor	Qts	0.16	Ove
Frequency Range⁴	60 ~ 4300Hz	Mechanical compliance	Cms	0.16 mm/N	Air vo
Minimum Impedance(Zmin)	7.8 ohm	Mechanical resistance of total-driver losses	Rms	1.7 kg/s	Net
Voice Coil Diameter	76mm /3inch	Effective Moving Mass	Mms	42 g	Ship
Voice Coil Material	Aluminum	Half-space efficiency	Eff	3.7%	Ship
Former Material	Polyimide	BL Factor	BL	23 T.m	Also
Voice Coil Winding Depth	18 mm	Equivalent Cas air load	Vas	28 liters	
Number of layers	2	Effective piston area	Sd	0.0353 m ²	
Magnet gap depth	10 mm	Max. linear excursion ⁶	Xmax	±6.5mm	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±16 mm	
Flux Density	1.45 T	Voice coil inductance(1kHz)	Le	0.6 mH	

Efficiency Bandwidth Product

UNTING INFORMATION rall Diameter 261 mm **Circle Diameter** 246 mm Hole Diameter 5.5 mm 228 mm le Cutout Diameter rall Depth 121 mm olume occupied by driver 2.0 liters Weight 4.6 kg ping Weight 5.1 kg ping Box 295x295x155mm available in 16ohm, data upon request.

lurb@sonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dBSP 100. 90.1 210.0 80.0 40.0 70 60.1 Impedance magnitude curve measured in free air

Neodymium



NOTES:

1. AES standard

Magnet Material

- 2. Program Power is defined as 3 dB greater than the nominal power handling 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

EBP

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

NEO

HF

ND93I0m/8







KEY FEATURES:

- 1 800 W continuous program power capacity
- 2 Sensitivity: 97dB 1w/1m
- 3 63 ~ 4100Hz frequency response range
- ④ 76mm(3") inside/outside winding CCAW voice coil
- (5) SH grade neodymium magnet for increased thermal protection
- 6 Half the weight than a conventional ferrite model
- ⑦ Aluminum demodulating ring for low distortion
- 8 Ideal for mid-bass or line array applications

GENERAL SPECIFICAT	IONS	THIELE – SMALL PARAMETERS ⁵		MOUNTING INFORMATION		
Nominal Diameter	250mm /10inch	Resonance frequency	Fs	63 Hz	Overall Diameter	261 mm
Rated Impedance	8 ohm	DC resistance	Re	5.3 ohm	Bolt Circle Diameter	246 mm
Nominal Power handling ¹	400 Watts	Mechanical factor	Qms	17.8	Bolt Hole Diameter	5.5 mm
Program Power ²	800 Watts	Electrical factor	Qes	0.31	Baffle Cutout Diameter	228 mm
Sensitivity(1w/1m) ³	97 dB	Total factor	Qts	0.30	Overall Depth	115 mm
Frequency Range⁴	63 ~ 4100Hz	Mechanical compliance	Cms	0.14 mm/N	Air volume occupied by driver	1.6 liters
Minimum Impedance(Zmin)	6.4 ohm	Mechanical resistance of total-driver losses	Rms	0.9 kg/s	Net Weight	3.7 kg
Voice Coil Diameter	76mm /3inch	Effective Moving Mass	Mms	45 g	Shipping Weight	4.2 kg
Voice Coil Material	CCAW	Half-space efficiency	Eff	1.9%	Shipping Box	275x275x130mm
Former Material	Glass fiber	BL Factor	BL	17.6 T.m	Also available in 4&16ohr	n, data upon request
Voice Coil Winding Depth	17.2 mm	Equivalent Cas air load	Vas	25 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0353 m ²		約旦
Magnet gap depth	10 mm	Max. linear excursion ⁶	Xmax	± 6.1 mm		
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±15.7mm	and the second	
Flux Density	1.25 T	Voice coil inductance(1kHz)	Le	0.6 mH	13 4 2 16	99 <u>6</u>

Efficiency Bandwidth Product

EBP

dB

-12

-18 -24 -30 -36

5 Hz

203



Neodymium

NOTES:

1. AES standard

Magnet Material

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

- Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects

Vb/Fb = 15L/62Hz



500

1000

2000

Vb/Fb=15L/62Hz

FERRITE SUBWOOFER FERRITE WOOFER MID-BASS

NEO

HF

ND93IOm/I6



★ 10 inch ★ 350 Watts ★ 96 dB ★ 63 ~ 4100 Hz



KEY FEATURES:

- ① 700 W continuous program power capacity
- 2 Sensitivity: 96dB 1w/1m
- ③ 76mm(3") inside/outside winding CCAW voice coil
- ④ A B/L in excess of 24.3 T/m for dynamic voicing
- (5) SH grade neodymium magnet for increased thermal protection
- ⁶ Half the weight than a conventional ferrite model
- $\ensuremath{\overline{\mathcal{O}}}$ Aluminum demodulating ring for low distortion
- 8 Treated cone for water protection
- (9) Ideal for mid-bass or line array applications

GENERAL SPECIFICATIONS THIELE - SMALL PARAMETERS⁵ Nominal Diameter 250mm /10inch Fs 63 Hz Resonance frequency Rated Impedance 16 ohm DC resistance Re 11.6 ohm Nominal Power handling 350 Watts Mechanical factor Qms 9.3 0.38 Program Power² 700 Watts Electrical factor Qes 96 dB 0.37 Sensitivity(1w/1m)³ Total factor Qts Frequency Range⁴ 63~4100Hz Mechanical compliance Cms 0.13 mm/N Mechanical resistance Minimum Impedance(Zmin) 14.2 ohm Rms 1.15 kg/s of total-driver losses Voice Coil Diameter 76mm /3inch Effective Moving Mass Mms 49 g Voice Coil Material CCAW Half-space efficiency Eff 1.42% Former Material Glass fiber **BL** Factor ΒL 24.3 T.m Voice Coil Winding Depth Equivalent Cas air load 22 liters Vas 16.5 mm $0.0353 \,\mathrm{m}^3$ Number of layers Sd 2(inside/outside) Effective piston area Magnet gap depth 10 mm Max. linear excursion⁶ Xmax ± 6 mm Basket Cast Aluminum Max. excursion before damage Xdam ±15.8mm

Voice coil inductance(1kHz)

Efficiency Bandwidth Product

MOUNTING INFORMATION			
Overall Diameter	261 mm		
Bolt Circle Diameter	246 mm		
Bolt Hole Diameter	5.5 mm		
Baffle Cutout Diameter	228 mm		
Overall Depth	115 mm		
Air volume occupied by driver	1.6 liters		
Net Weight	3.7 kg		
Shipping Weight	4.2 kg		
Shipping Box	275x275x130mm		
Also available in 4&80hm, data upon request.			



500

1000

2000

Fb=14L/64Hz



1.25 T

Neodymium

NOTES:

1. AES standard

Flux Density

Magnet Material

- 2. Program Power is defined as 3 dB greater than the nominal power handling
- Sensitivity is measured at 1W input on rated impedance at 1m on axis.
 Frequency range is defined as the band of frequencies delineated by the lower and
- upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 14L/64Hz

0.1 mH

Computer predicted low frequency response⁽⁷⁾

165

Le

dB

-12

-18 -24 -30 -36 5 Hz

EBP

- The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
 - 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 18

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

COAXIAL

NEO

HF

ND90IOw



🔆 10 inch 🔆 350 Watts **★ 62 ~ 3500 Hz ⅔ 96 dB**



KEY FEATURES:

- 1 700 W continuous program power capacity
- 2 Sensitivity: 96dB 1w/1m
- 3 76mm(3") aluminum voice coil wounded on Kapton former
- ④ Vented on former, dual-forced air ventilation magnet system for heat dispersion and minimum power compression
- (5) FEA optimized neodymium magnet assembly allows the highest force factor and excursion capability
- 6 Optimized for the use in line array systems or compact bass reflex enclosure

GENERAL SPECIFICATIONS

Nominal Diameter	250mm /10inch
Rated Impedance	8 ohm
Nominal Power handling ¹	350 Watts
Program Power ²	700 Watts
Sensitivity(1w/1m) ³	96 dB
Frequency Range ^₄	62 ~ 3500Hz
Minimum Impedance(Zmin)	7.8 ohm
Voice Coil Diameter	76mm /3inch
Voice Coil Material	Aluminum
Former Material	Polyimide
Voice Coil Winding Depth	17.5 mm
Number of layers	2
Magnet gap depth	10 mm
Basket	Cast Aluminum
Flux Density	1.2 T
Magnet Material	Neodymium

THIELE - SWALL PARAM	EIERS	
Resonance frequency	Fs	64 Hz
DC resistance	Re	5.6 ohm
Mechanical factor	Qms	11
Electrical factor	Qes	0.3
Total factor	Qts	0.29
Mechanical compliance	Cms	0.15 mm/N
Mechanical resistance of total-driver losses	Rms	1.5 kg/s
Effective Moving Mass	Mms	43 g
Half-space efficiency	Eff	2.1%
BL Factor	BL	18 T.m
Equivalent Cas air load	Vas	28 liters
Effective piston area	Sd	0.0353 m^2
Max. linear excursion ⁶	Xmax	±6.5mm
Max. excursion before damage	Xdam	±15 mm
Voice coil inductance(1kHz)	Le	0.9 mH
Efficiency Bandwidth Product	EBP	213

MOUNTING INFORMATION			
Overall Diameter	261 mm		
Bolt Circle Diameter	246 mm		
Bolt Hole Diameter	5.5 mm		
Baffle Cutout Diameter	228 mm		
Overall Depth	121 mm		
Air volume occupied by driver	1.7 liters		
Net Weight	3.7 kg		
Shipping Weight	4.2 kg		
Shipping Box 295x295x155mm			
Also available in 160hm, data upon request.			

Turb@sonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 50 O dBSPI 100.0 200.0 90.1 150.0 80. 100.0 70.0 -+--60.0 0.0 100 200 Hz 20k 1k 5k 10 Impedance magnitude curve measured in free air



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity

5. T/S parameters measured with laser system BEFORE preconditioning test.

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and
- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.
 - 19

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

COAXIAL

NEO

HF

ND94I0m/I6



🔆 10 inch 🔆 300 Watts **★ 65 ~ 4500 Hz ♦ 95 dB**



KEY FEATURES:

- ① 600 W continuous program power capacity
- 2 High SPL, superb quality sound
- ③ 2.5" pure aluminum voice coil wounded on polyimide former
- ④ Neodymium magnet structure, a very light weight ⑤ Aluminum demodulating ring for low distortion
- 6 Ideal for mid-bass or line array applications

GENERAL SPECIFICATIONS

Nominal Diameter	250mm /10inch
Rated Impedance	8 ohm
Nominal Power handling ¹	300 Watts
Program Power ²	600 Watts
Sensitivity(1w/1m) ³	95 dB
Frequency Range ^₄	65 ~ 4500Hz
Minimum Impedance(Zmin)	14.6 ohm
Voice Coil Diameter	65mm /2.5inch
Voice Coil Material	Pure Aluminum
Former Material	Polyimide
Voice Coil Winding Depth	15 mm
Number of layers	2(inside/outside)
Magnet gap depth	8 mm
Basket	Cast Aluminum
Flux Density	1.3 T
Magnet Material	Neodymium

THIELE - SMALL PARAMETERS			
Resonance frequency	Fs	65 Hz	
DC resistance	Re	12.6 ohm	
Mechanical factor	Qms	5.4	
Electrical factor	Qes	0.58	
Total factor	Qts	0.52	
Mechanical compliance	Cms	0.16 mm/N	
Mechanical resistance of total-driver losses	Rms	2.9 kg/s	
Effective Moving Mass	Mms	38 g	
Half-space efficiency	Eff	1.2%	
BL Factor	BL	18.4 T.m	
Equivalent Cas air load	Vas	27 liters	
Effective piston area	Sd	0.0353 m ²	
Max. linear excursion ⁶	Xmax	± 6 mm	
Max. excursion before damage	Xdam	± 15	
Voice coil inductance(1kHz)	Le	0.84 mH	
Efficiency Bandwidth Product	EBP	112	

dB

-12

-18 -24 -30 -36

5 Hz

MOUNTING INFORMATION **Overall Diameter** 261 mm Bolt Circle Diameter 246 mm Bolt Hole Diameter 5.5 mm 228 mm **Baffle Cutout Diameter Overall Depth** 115 mm Air volume occupied by driver 1.6 liters Net Weight 2.3 kg Shipping Weight 2.8 kg Shipping Box 275x275x130mm Also available in 80hm, data upon request.

lurb@sonic



500

1000

2000

Vb/Fb=14L/Sealed



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 49L/50Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=49L/50Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

100

Vb/Fb = 14L/Sealed

- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 20

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

COAXIAL

NEO

HF

ND9608m/I6



🔆 8 inch 🛛 🔆 300 Watts



KEY FEATURES:

- ① 600 W continuous program power capacity
- 2 94.5dB Sensitivity 1w/1m
- ③ Inverted dust cup for better coupling to a phase plug
- ④ 65mm(2.5") high temperature inside/outside aluminum voice coil
- (5) High grade neodymium magnet system, a very light weight
- 6 Aluminum demodulating ring for low distortion
- $\ensuremath{\overline{\mathcal{O}}}$ Inverted dust cap to minimize the cone distortion and for better
- coupling to a phase plug
- (8) Optimized for the use in line array systems

GENERAL SPECIFICATIONS

Nominal Diameter	200mm /8inch
Rated Impedance	16 ohm
Nominal Power handling ¹	300 Watts
Program Power ²	600 Watts
Sensitivity(1w/1m) ³	94.5 dB
Frequency Range ^₄	70 ~ 5000Hz
Minimum Impedance(Zmin)	15.2 ohm
Voice Coil Diameter	65mm /2.5inch
Voice Coil Material	Pure Aluminum
Former Material	Polyimide
Voice Coil Winding Depth	15 mm
Number of layers	2(Inside/Outside)
Magnet gap depth	8 mm
Basket	Cast Aluminum
Flux Density	1.2T
Magnet Material	Neodymium

THIELE - SMALL PARAMETERS		
Resonance frequency	Fs	70 Hz
DC resistance	Re	12.6 ohm
Mechanical factor	Qms	2.9
Electrical factor	Qes	0.41
Total factor	Qts	0.36
Mechanical compliance	Cms	0.22 mm/N
Mechanical resistance of total-driver losses	Rms	3.7 kg/s
Effective Moving Mass	Mms	24.1 g
Half-space efficiency	Eff	1.4 %
BL Factor	BL	18 T.m
Equivalent Cas air load	Vas	17 liters
Effective piston area	Sd	$0.0238 \ m^2$
Max. linear excursion ⁶	Xmax	± 6 mm
Max. excursion before damage	Xdam	±15mm
Voice coil inductance(1kHz)	Le	0.63 mH
Efficiency Bandwidth Product	EBP	170

dB

-12

-18 -24

-30 -36

5 Hz

MOUNTING INFORMATION		
Overall Diameter	208.5 mm	
Bolt Circle Diameter	196 mm	
Bolt Hole Diameter	5.5 mm	
Baffle Cutout Diameter	187 mm	
Overall Depth	102 mm	
Air volume occupied by driver	1 liter	
Net Weight	2 kg	
Shipping Weight	2.3 kg	
Shipping Box	220x220x110mm	
Also available in 80hm. da	ata upon request.	

Turbosonic



500

1000

2000





- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 10L/73Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=10L/73Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

-50

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

FERRITE **SUBWOOFER**

FERRITE WOOFER MID-BASS

COAXIAL

NEO

HF

ND9408m/16



🔆 8 inch 🔆 250 Watts **★ 86 ~ 6000 Hz** 🔆 94 dB



KEY FEATURES:

- ① 500 W continuous program power capacity
- 2 High SPL, superb quality sound
- ③ Inverted dust cup for better coupling to a phase plug
- ④ 2" copper clad aluminum voice coil wounded on polyimide former
- ⑤ Neodymium magnet system, a very light weight
- 6 Aluminum demodulating ring for low distortion
- ⑦ Ideal for mid-bass or line array applications

GENERAL SPECIFICATIONS

Nominal Diameter	200mm /8inch
Rated Impedance	16 ohm
Nominal Power handling ¹	250 Watts
Program Power ²	500 Watts
Sensitivity(1w/1m) ³	94 dB
Frequency Range ^₄	80 ~ 6000Hz
Minimum Impedance(Zmin)	14.6 ohm
Voice Coil Diameter	50mm /2inch
Voice Coil Material	CCAW
Former Material	Polyimide
Voice Coil Winding Depth	14 mm
Number of layers	2(Inside/Outside)
Magnet gap depth	8 mm
Basket	Cast Aluminum
Flux Density	1.2T
Magnet Material	Neodymium

I FIELE - SWALL PARAWETERS		
Resonance frequency	Fs	86 Hz
DC resistance	Re	12.6 ohm
Mechanical factor	Qms	5.7
Electrical factor	Qes	0.69
Total factor	Qts	0.61
Mechanical compliance	Cms	0.14 mm/N
Mechanical resistance of total-driver losses	Rms	2.3 kg/s
Effective Moving Mass	Mms	24.3 g
Half-space efficiency	Eff	1 %
BL Factor	BL	15.5 T.m
Equivalent Cas air load	Vas	9.2 liters
Effective piston area	Sd	0.0216 m^2
Max. linear excursion ⁶	Xmax	± 6 mm
Max. excursion before damage	Xdam	±14mm
Voice coil inductance(1kHz)	Le	0.87 mH
Efficiency Bandwidth Product	EBP	124

dB

-12

-18 -24 -30 -36

5 Hz

MOUNTING INFORMATION		
Overall Diameter	200 mm	
Bolt Circle Diameter	212 mm	
Bolt Hole Diameter	6.2 mm	
Baffle Cutout Diameter	180 mm	
Overall Depth	95 mm	
Air volume occupied by driver	0.8 liters	
Net Weight	1.5 kg	
Shipping Weight	1.8 kg	
Shipping Box	220x220x110mm	
Also available in 80hm, da	ata upon request.	



500

1000

2000

/b/Fb=8L/Sealed





- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 8L/Sealed

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=25L/63Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

100

Vb/Fb = 25L/63Hz

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

Turb@sonic

FERRITE WOOFER MID-BASS

NEO

HF

ND9208w Code:19102



🔆 8 inch 🔆 250 Watts **★ 63 ~ 4000 Hz** 🔆 95 dB



KEY FEATURES:

- ① 500 W continuous program power capacity
- 2 High sensitivity 95dB/1w/1m
- ③ Extended smooth response up to 4000Hz
- ④ 2" high temperature voice coil

(5) Neodymium magnet system 6 Ideal for line array or 2-way fullrange systems.

GENERAL SPECIFICATIONS		THIELE – SMALL PARAMETERS ⁵			MOUNTING	
Nominal Diameter	200mm /8inch	Resonance frequency	Fs	69 Hz	Overall Diamet	
Rated Impedance	8 ohm	DC resistance	Re	5.3 ohm	Bolt Circle Diar	
Nominal Power handling ¹	250 Watts	Mechanical factor	Qms	5.55	Bolt Hole Diam	
Program Power ²	500 Watts	Electrical factor	Qes	0.29	Baffle Cutout D	
Sensitivity(1w/1m) ³	95 dB	Total factor	Qts	0.27	Overall Depth	
Frequency Range⁴	63 ~ 4000Hz	Mechanical compliance	Cms	0.20 mm/N	Air volume occupi	
Minimum Impedance(Zmin)	6.7 ohm	Mechanical resistance	Rms	2.06 kg/s	Net Weight	
Voice Coil Diameter	50mm /2inch	Effective Moving Mass	Mms	26.3 g	Shipping Weigl	
Voice Coil Material	Copper	Half-space efficiency	Eff	1.5%	Shipping Box	
Former Material	Polyimide	BL Factor	BL	14.5 T.m	Also available i	
Voice Coil Winding Depth	18 mm	Equivalent Cas air load	Vas	13.4 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0219 m ²		
Magnet gap depth	8 mm	Max. linear excursion ⁶	Xmax	±6.5 mm		
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±14 mm		
Flux Density	1.6T	Voice coil inductance(1kHz)	Le	0.54 mH		
Magnet Material	Neodymium	Efficiency Bandwidth Product	EBP	237		

INFORMATION 200 mm ter 212 mm meter 5.5 mm neter 180 mm Diameter 100 mm ed by driver 1 liter 2.4 kg 2.6 kg ht 220x220x110mm in 16ohm, data upon request.



500

1000

2000

Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 150.0 dBSPI 100. 120.0 90.1 80.1 70. 100 60.0 201 Impedance magnitude curve measured in free air

NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 5L/80Hz

Computer predicted low frequency response⁽⁷⁾

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

-50

Vb/Fb=5L/80Hz

100

-6 -12

-18 -24

-30 -36

-42 -48

5 Hz

FERRITE **SUBWOOFER**

FERRITE WOOFER **MID-BASS**

NEO

HF

ND9306m



★ 6.5 inch ★ 100 Watts KLIPPEL 🔆 95 dB 🛛 🔆 119 ∼ 5600 Hz



KEY FEATURES:

GENERAL SPECIFICATIONS

- 1 200 W continuous program power capacity
- 2 High sensitivity 95dB/1w/1m
- 3 119 ~ 5600Hz frequency response range
- ④ 38mm(1.5") CCAW wire wounded on fiberglass

(5) Neodymium magnet system ⑥ Ideal for line array or midrange applications

Nominal Diameter	170mm /6.5inch
Rated Impedance	8 ohm
Nominal Power handling ¹	100 Watts
Program Power ²	200 Watts
Sensitivity(1w/1m) ³	95 dB
Frequency Range ^₄	119 ~ 5600Hz
Minimum Impedance(Zmin)	6.5 ohm
Voice Coil Diameter	38mm /1.5inch
Voice Coil Material	CCAW
Former Material	Fiberglass
Voice Coil Winding Depth	12 mm
Number of layers	2
Magnet gap depth	6 mm
Basket	Cast Aluminum
Flux Density	1.3T

Resonance frequency	Fs	119 Hz
DC resistance	Re	5.4 ohm
Mechanical factor	Qms	15.1
Electrical factor	Qes	0.49
Total factor	Qts	0.47
Mechanical compliance	Cms	0.13 mm/N
Mechanical resistance of total-driver losses	Rms	0.66 kg/s
Effective Moving Mass	Mms	13.3 g
Half-space efficiency	Eff	1.2%
BL Factor	BL	10.6 T.m
Equivalent Cas air load	Vas	3.6 liters
Effective piston area	Sd	0.0137 m ²
Max. linear excursion ⁶	Xmax	±4.5 mm
Max. excursion before damage	Xdam	±9.5 mm
Voice coil inductance(1kHz)	Le	0.29 mH
Efficiency Bandwidth Product	EBP	243

dB

-12 -18 -24 -30 -36

5 Hz

MOUNTING INFORMATION		
Overall Diameter	162 mm	
Bolt Circle Diameter	172 mm	
Bolt Hole Diameter	5 mm	
Baffle Cutout Diameter	147 mm	
Overall Depth	82 mm	
Air volume occupied by driver	0.6 liters	
Net Weight	1.2 kg	
Shipping Weight	1.4 kg	
Shipping Box	172x172x95mm	
Also available in 160hm, data upon request		

Turb@sonic



Vb/Fb=2.6L/Sealed

500

1000

2000



Neodymium

NOTES:

1. AES standard

Magnet Material

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

-50

100

Vb/Fb = 2.6L/Sealed

Hg is the gap depth.

Vb/Fb = 5L/97Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=5L/97Hz

SUBWOOFER

FERRITE

FERRITE WOOFER MID-BASS

NEO

HF

JCe55



* 21 inch * 1800 Watts VERIFIED WITH KLIPPEL



KEY FEATURES:

- ① 3600 W continuous program power capacity
- 2 97.5dB Sensitivity 1w/1m
- ③ 31Hz ~800Hz frequency response range
- ④ 152mm(6") high temperature inside/outside copper voice coil
- ⁽⁵⁾ High grade Y35 ferrite magnet, 30mm in height for longer excursion and higher flux density
- [®] Ultra strong carbon cone and dust cap
- ⑦ Silicone double Conex damper
- ⁽⁸⁾ BL/Re maximized for loaded applications

GENERAL SPECIFICATIONS		
Nominal Diameter	530mm / 21inch	
Rated Impedance	8 ohm	
Nominal Power handling ¹	1800 Watts	
Program Power ²	3600 Watts	
Sensitivity(1w/1m) ³	97.5 dB	
Frequency Range ^₄	31 ~ 800Hz	
Minimum Impedance(Zmin)	7.2 ohm	
Voice Coil Diameter	152mm / 6inch	
Voice Coil Material	Copper	
Former Material	Glass Fiber	
Voice Coil Winding Depth	34 mm	
Number of layers	2(inside/outside)	
Magnet gap depth	14 mm	
Basket	Cast Aluminum	
Flux Density	1.1 T	
Magnet Out Diameter/Wat	330mm / 333oz	

I TIELE - SWALL PARAWETERS		
Resonance frequency	Fs	31 Hz
DC resistance	Re	5.7 ohm
Mechanical factor	Qms	20.7
Electrical factor	Qes	0.31
Total factor	Qts	0.30
Mechanical compliance	Cms	0.066 mm/N
Mechanical resistance of total-driver losses	Rms	3.74 kg/s
Effective Moving Mass	Mms	397 g
Half-space efficiency	Eff	2.5 %
BL Factor	BL	39 T.m
Equivalent Cas air load	Vas	261 liters
Effective piston area	Sd	0.1669 m ²
Max. linear excursion ⁶	Xmax	±13.5 mm
Max. excursion before damage	Xdam	±25 mm
Voice coil inductance(1kHz)	Le	2.1 mH
Efficiency Bandwidth Product	EBP	102

MOUNTING INFORMATION		
Overall Diameter	545 mm	
Bolt Circle Diameter	520 mm	
Bolt Hole Diameter	8.5 mm	
Baffle Cutout Diameter	495 mm	
Overall Depth	227 mm	
Air volume occupied by driver	16.9 liters	
Net Weight	29.4 kg	
Shipping Weight	31.4 kg	
Shipping Box	570x570x270mm	

Turb@sonic



500

1000

2000

Frequency response measured in a bass reflex enclosure in an anechoic chamber Computer predicted low frequency response⁽⁷⁾ 11 dB 320.0 100 Vb/Fb=251L/31Hz 90 240.0 -12 -18 -24 -30 -36 +++++ 5 Hz Impedance magnitude curve measured in free air Vb/Fb = 251L/31Hz

NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- Vb: Net internal volume of box after subtracting the volume of internal objects.

2IDM2000

FERRITE

SUBWOOFER

FERRITE

WOOFER

MID-BASS

MIDRANGE

FULLRANGE



COAXIAL



NEO

HF

FERRITE

HE



KEY FEATURES:

NEO

LE

- 1 4000 W continuous program power capacity
- 2 98dB Sensitivity 1w/1m
- ③ 36Hz ~800Hz frequency response range
- ④ 152mm(6") high temperature inside/outside copper voice coil
- (5) Peak to peak maximum excursion of 62mm
- 6 Double magnets allows a very high force factor and long driver excursion
- ${ar {\Bbb O}}$ Triple Conex dampers to retain good mechanical properties at high power
- (8) BL/Re maximized for loaded applications

GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAM	IETERS	5
Nominal Diameter	530mm / 21inch	Resonance frequency	Fs	36 Hz
Rated Impedance	8 ohm	DC resistance	Re	5.7 ohm
Nominal Power handling ¹	2000 Watts	Mechanical factor	Qms	14.1
Program Power ²	4000 Watts	Electrical factor	Qes	0.301
Sensitivity(1w/1m)3	98 dB	Total factor	Qts	0.295
Frequency Range⁴	36 ~ 800Hz	Mechanical compliance	Cms	0.04 mm/N
Minimum Impedance(Zmin)	7.2 ohm	Mechanical resistance of total-driver losses	Rms	7.5 kg/s
Voice Coil Diameter	152mm / 6inch	Effective Moving Mass	Mms	462 g
Voice Coil Material	Copper	Half-space efficiency	Eff	2.5 %
Former Material	Glass Fiber	BL Factor	BL	43.8 T.m
Voice Coil Winding Depth	34 mm	Equivalent Cas air load	Vas	166 liters
Number of layers	2(inside/outside)	Effective piston area	Sd	0.1676 m ²
Magnet gap depth	14 mm	Max. linear excursion ⁶	Xmax	±13.5 mm
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±31 mm

Voice coil inductance(1kHz)

Efficiency Bandwidth Product

MOUNTING INFORMATION				
Overall Diameter	545 mm			
Bolt Circle Diameter	520 mm			
Bolt Hole Diameter	8.5 mm			
Baffle Cutout Diameter	495 mm			
Overall Depth	234 mm			
Air volume occupied by driver	17.5 liters			
Net Weight	34.4 kg			
Shipping Weight	35.9 kg			
Shipping Box	570x570x270mm			

Turb@sonic



Frequency response measured in a bass reflex enclosure in an anechoic chamber 110 dBSE Impedance magnitude curve measured in free air

1.2 T

330mm / 400oz

Computer predicted low frequency response⁽⁷⁾ dB Vb/Fb=100L/34Hz -12 681/40Hz Vb/Fb -18 -24 -30 -36 5 Hz 50 100 500 1000 2000 Vb/Fb = 100L/40Hz Vb/Fb = 68L/40Hz

NOTES:

1. AES standard

Flux Density

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and
- Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects

2.2 mH

120

Le

EBP

SUBWOOFER

FERRITE

FERRITE WOOFER MID-BASS

NEO

HF

7605



* 21 inch * 1500 Watts **₩ 97 dB ★ 29 ~ 1000 Hz**



KEY FEATURES:

- 1 3000 W continuous program power capacity
- 2 97dB Sensitivity 1w/1m
- 3 29Hz ~1000Hz frequency response range
- ④ 4.5" inside/outside voice coil for improved power-handling and durability
- ⑤ Forced air ventilation on back plate and 15mm top plate for minimum power compression
- ⑥ Dual silicone spiders for improved excursion control and linearity
- ⑦ Ideal for compact subwoofer application

EBP

72

GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAM	IETERS	5	MOUNTING IN
Nominal Diameter	530mm / 21inch	Resonance frequency	Fs	32 Hz	Overall Diameter
Rated Impedance	8 ohm	DC resistance	Re	4.8 ohm	Bolt Circle Diame
Nominal Power handling ¹	1500 Watts	Mechanical factor	Qms	15.3	Bolt Hole Diameter
Program Power ²	3000 Watts	Electrical factor	Qes	0.44	Baffle Cutout Dia
Sensitivity(1w/1m) ³	97 dB	Total factor	Qts	0.43	Overall Depth
Frequency Range⁴	29 ~ 1000Hz	Mechanical compliance	Cms	0.064mm/N	Air volume occupied
Minimum Impedance(Zmin)	6.4 ohm	Mechanical resistance of total-driver losses	Rms	3.6 kg/s	Net Weight
Voice Coil Diameter	115mm / 4.5inch	Effective Moving Mass	Mms	373 g	Shipping Weight
Voice Coil Material	Copper	Half-space efficiency	Eff	1.9%	Shipping Box
Former Material	Glass Fiber	BL Factor	BL	28.8 T.m	
Voice Coil Winding Depth	34 mm	Equivalent Cas air load	Vas	260 liters	
Number of layers	2(inside/outside)	Effective piston area	Sd	0.1706 m ²	
Magnet gap depth	15 mm	Max. linear excursion ⁶	Xmax	±13 mm	19 - 19 - 19 - 19 - 19 - 19 - 19 - 19 -
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±24.5mm	2
Flux Density	1.0 T	Voice coil inductance(1kHz)	Le	2.7 mH	ň

Efficiency Bandwidth Product

FORMATION 550 mm 530 mm eter 9 mm er 508 mm meter 252 mm by driver 16.4 liters 16.5 kg 18.7 kg 570x570x270mm



500

1000

2000

Frequency response measured in a bass reflex enclosure in an anechoic chamber Computer predicted low frequency response⁽⁷⁾ 110 dB dBSF 100.0 200.0 Vb/Fb=265L/29Hz 90.0 150.0 -12 80 100.0 -18 -24 70. -30 5 -36 0.0 60.0 20 208 5 Hz 100 Ha Impedance magnitude curve measured in free air

245mm/190 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 265L/29Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

50

FERRITE HE

J6818 PRELIMINARY

FERRITE

SUBWOOFER

FERRITE

WOOFER

MID-BASS

MIDRANGE

FULLRANGE



COAXIAL

NEO

HF





KEY FEATURES:

- 1 4000 W continuous program power capacity
- 2 98dB Sensitivity 1w/1m
- 3 75Hz ~500Hz frequency response range
- ④ 150mm(6") high temperature inside/outside voice coil
- (5) The use of highly resistant adhesives guarantees optimal cohesion and durability of components
- 6 Double edges and triple dampers for improved power handling
- ⑦ Optimized for the use in very high power subwoofer applications

GENERAL SPECIFICATIONS		THIELE - SMALL PARAMETERS ⁵			MOUNTING INFORMATION	
Nominal Diameter	460mm / 18inch	Resonance frequency	Fs	75 Hz	Overall Diameter	461 mm
Rated Impedance	8 ohm	DC resistance	Re	5.8 ohm	Bolt Circle Diameter	439 mm
Nominal Power handling	2000 Watts	Mechanical factor	Qms	16.0	Bolt Hole Diameter	6.5x9.5 mm
Program Power	4000 Watts	Electrical factor	Qes	0.62	Baffle Cutout Diameter	424 mm
Sensitivity(1w/1m)	98 dB	Total factor	Qts	0.60	Overall Depth	230 mm
Frequency Range	75 ~ 500Hz	Mechanical compliance	Cms	0.013mm/N	Air volume occupied by driver	12.5 liters
Minimum Impedance(Zmin)	7.8 ohm	Mechanical resistance	Rms	10.5 kg/s	Net Weight	29 kg
Voice Coil Diameter	150mm / 6inch	Effective Moving Mass	Mms	356 g	Shipping Weight	30.4 kg
Voice Coil Material	Copper	Half-space efficiency	Eff	1.6 %	Shipping Box	490x490x245mm
Former Material	Glass Fiber	BL Factor	BL	40 T.m		
Voice Coil Winding Depth	31 mm	Equivalent Cas air load	Vas	25 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.1176 m ²		3H 💷
Magnet gap depth	14 mm	Max. linear excursion ⁶	Xmax	±12 mm		
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±27.5 mm		
Flux Density	1.1 T	Voice coil inductance(1kHz)	Le	2.1 mH		
Magnet Out Diameter/Wat	330mm / 333 oz	Efficiency Bandwidth Product	EBP	121	回知道部	1.7

EBP

dB

0

-12

-18 -24 -30 -36

5 Hz

Computer predicted low frequency response⁽⁷⁾

Efficiency Bandwidth Product



330mm / 333 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=57L/58Hz

100

Hg is the gap depth.

Vb/Fb = 57L/58Hz

10

7. Vb: Net internal volume of box after subtracting the volume of internal objects

2000

1000
NEO LF

SUBWOOFER

FERRITE

FERRITE WOOFER **MID-BASS**

NEO

HF

JCe518







KEY FEATURES:

- ① 2800 W continuous program power capacity
- 2 97dB Sensitivity 1w/1m
- ③ 31Hz ~1200Hz frequency response range
- ④ 125mm(5") high temperature inside/outside copper voice coil
- (5) High grade Y35 ferrite magnet, 30mm in height for longer excursion and higher force factor
- ⑥ Ultra strong carbon cone and dust cap
- ⑦ Silicone double Conex damper
- (8) BL/Re maximized for loaded applications

GENERAL SPECIFICAT	THIEL	
Nominal Diameter	460mm / 18inch	Resona
Rated Impedance	8 ohm	DC resi
Nominal Power handling ¹	1400 Watts	Mechar
Program Power ²	2800 Watts	Electric
Sensitivity(1w/1m) ³	97 dB	Total fa
Frequency Range ^₄	31 ~ 1200Hz	Mechar
Minimum Impedance(Zmin)	6.8 ohm	Mechanio of total
Voice Coil Diameter	125mm / 5inch	Effectiv
Voice Coil Material	Copper	Half-spa
Former Material	Glass Fiber	BL Fact
Voice Coil Winding Depth	34 mm	Equival
Number of layers	2(inside/outside)	Effectiv
Magnet gap depth	14 mm	Max. lin
Basket	Cast Aluminum	Max. ex
Flux Density	1.2 T	Voice c
Magnet Out Diameter/Wgt	280mm / 245oz	Efficience

I HIELE - SIVIALL PARAIVI	EIERS	
Resonance frequency	Fs	31 Hz
DC resistance	Re	5.4 ohm
Mechanical factor	Qms	19.7
Electrical factor	Qes	0.28
Total factor	Qts	0.28
Mechanical compliance	Cms	0.092 mm/N
Mechanical resistance of total-driver losses	Rms	2.79 kg/s
Effective Moving Mass	Mms	279 g
Half-space efficiency	Eff	2.0 %
BL Factor	BL	33.2 T.m
Equivalent Cas air load	Vas	196 liters
Effective piston area	Sd	0.1225 m ²
Max. linear excursion ⁶	Xmax	±13.5mm
Max. excursion before damage	Xdam	± 29 mm
Voice coil inductance(1kHz)	Le	1.6 mH
Efficiency Bandwidth Product	EBP	110

dB

0

-12 -18 -24 -30 -36

5 Hz

MOUNTING INFORMATION					
Overall Diameter	461 mm				
Bolt Circle Diameter	439 mm				
Bolt Hole Diameter	6.5x9.5 mm				
Baffle Cutout Diameter	424 mm				
Overall Depth	227 mm				
Air volume occupied by driver	12.5 liters				
Net Weight	21 kg				
Shipping Weight	22.35 kg				
Shipping Box	490x490x245mm				

Turb@sonic



500

1000

2000

Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 100 400.0 300.0 90 5000 1k 2k Hz 5k 10k 204 Impedance magnitude curve measured in free air

NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

50

Vb/Fb=79U35Hz

100

Vb/Fb = 79L/35Hz

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth
- Vb: Net internal volume of box after subtracting the volume of internal objects.

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=157L/29Hz

Vb/Fb = 157L/29Hz

J618

NEO

LE

FERRITE

SUBWOOFER

FERRITE

WOOFER

MID-BASS

TUICIC

MIDRANGE

FULLRANGE

🔆 18 inch 🔆 1500 Watts KLIPPEL **₩ 98 dB ★ 37 ~ 1000 Hz**

COAXIAL

NEO

HE

FERRITE

HF





KEY FEATURES:

- ① 3000 W continuous program power capacity
- 2 98dB Sensitivity 1w/1m
- 3 37Hz ~1000Hz frequency response range
- ④ 125mm(5") inside/outside voice coil for improved power-handling and durability
- (5) High grade Y35 ferrite magnet, 30mm in height for longer excursion and higher force factor
- 6 FEA optimized magnetic circuit
- ⑦ Silicone double Conex damper
- 8 Ideal for high quality loaded subwoofer applications

GENERAL SPECIFICATIONS Nominal Diameter 460mm / 18inch Rated Impedance 8 ohm Nominal Power handling 1500 Watts Program Power 3000 Watts 98 dB Sensitivity(1w/1m) Frequency Range 37~1000Hz Minimum Impedance(Zmin) 6.9 ohm Voice Coil Diameter 125mm / 5inch Voice Coil Material Copper Former Material Glass Fiber Voice Coil Winding Depth 34 mm Number of layers 2(inside/outside) Magnet gap depth 14 mm Basket Cast Aluminum Flux Density 1.2 T Magnet Out Diameter/Wgt 280mm / 245 oz

Resonance frequency	Fs	37 Hz
DC resistance	Re	5.4 ohm
Mechanical factor	Qms	17.6
Electrical factor	Qes	0.334
Total factor	Qts	0.328
Mechanical compliance	Cms	0.061mm/N
Mechanical resistance of total-driver losses	Rms	3.9 kg/s
Effective Moving Mass	Mms	292 g
Half-space efficiency	Eff	2.1 %
BL Factor	BL	33.5 T.m
Equivalent Cas air load	Vas	132 liters
Effective piston area	Sd	0.1237 m ²
Max. linear excursion ⁶	Xmax	±13.5mm
Max. excursion before damage	Xdam	±29 mm
Voice coil inductance(1kHz)	Le	2.1 mH
Efficiency Bandwidth Product	EBP	112

MOUNTING INFORMATION					
Overall Diameter	461 mm				
Bolt Circle Diameter	439 mm				
Bolt Hole Diameter	6.5x9.5 mm				
Baffle Cutout Diameter	424 mm				
Overall Depth	227 mm				
Air volume occupied by driver	12.5 liters				
Net Weight	21 kg				
Shipping Weight	22.35 kg				
Shipping Box	490x490x245mm				

lurb@soni



1000

2000

500

Frequency response measured in a closed enclosure of 600L in an anechoic chamber Computer predicted low frequency response⁽⁷⁾ dE -6 -12 -18 -24 -30 -36 ++++ 5 Hz Impedance magnitude curve measured in free air

NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling
- 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=54L/43Hz

100

Vb/Fb = 54L/43Hz

Hg is the gap depth.

Vb/Fb = 150L/37Hz

Vb/Fb=150L/37Hz

10

7. Vb: Net internal volume of box after subtracting the volume of internal objects

NEO LF

FERRITE **SUBWOOFER** WOOFER MID-BASS

MIDRANGE

FULLRANGE

COAXIAL

NEO

HF

76518/5

FERRITE



🔆 18 inch 🔆 1300 Watts VERIFIED WITH KLIPPEL **♦ 98 dB ★ 40 ~ 1000 Hz**



KEY FEATURES:

- ① 2600 W continuous program power capacity
- 2 98dB Sensitivity 1w/1m
- 3 40Hz ~1000Hz frequency response range
- ④ 125mm(5") inside/outside voice coil for improved power-handling and durability
- (5) Separated dual spiders assembly has a stronger structure and high linearity of movement; aluminum spacer
- 6 FEA optimized magnetic circuit
- ⑦ Increased excursion and power handling over J6218
- 8 Ideal for high quality horn-loaded subwoofer systems

GENERAL SPECIFICAT	IONS	THIELE - S
Nominal Diameter	460mm / 18inch	Resonance fr
Rated Impedance	8 ohm	DC resistance
Nominal Power handling	1300 Watts	Mechanical fa
Program Power	2600 Watts	Electrical fac
Sensitivity(1w/1m)	98 dB	Total factor
Frequency Range	40 ~ 1000Hz	Mechanical c
Minimum Impedance(Zmin)	6.9 ohm	Mechanical resi of total-driver
Voice Coil Diameter	125mm / 5inch	Effective Mov
Voice Coil Material	Copper	Half-space ef
Former Material	Glass Fiber	BL Factor
Voice Coil Winding Depth	26 mm	Equivalent Ca
Number of layers	2(inside/outside)	Effective pist
Magnet gap depth	14 mm	Max. linear e
Basket	Cast Aluminum	Max. excursion
Flux Density	1.16 T	Voice coil ind
Magnet Out Diameter/Wgt	280mm / 205 oz	Efficiency Ban

I TIELE - SIVIALL PARAIVI	THIELE - SWALL PARAWETERS						
Resonance frequency	Fs	40 Hz					
DC resistance	Re	5.5 ohm					
Mechanical factor	Qms	21.2					
Electrical factor	Qes	0.30					
Total factor	Qts	0.30					
Mechanical compliance	Cms	0.062mm/N					
Mechanical resistance of total-driver losses	Rms	2.4 kg/s					
Effective Moving Mass	Mms	252 g					
Half-space efficiency	Eff	2.5 %					
BL Factor	BL	34.0 T.m					
Equivalent Cas air load	Vas	132 liters					
Effective piston area	Sd	0.1225 m ²					
Max. linear excursion ⁶	Xmax	±9.5mm					
Max. excursion before damage	Xdam	±26 mm					
Voice coil inductance(1kHz)	Le	1.7 mH					
Efficiency Bandwidth Product	EBP	133					

dB

0 -6

-12

-18 -24

-30 -36

5 Hz

10

MOUNTING INFORMATION					
Overall Diameter	461 mm				
Bolt Circle Diameter	439 mm				
Bolt Hole Diameter	6.5 mm				
Baffle Cutout Diameter	424 mm				
Overall Depth	217 mm				
Air volume occupied by driver	11.9 liters				
Net Weight	19.2 kg				
Shipping Weight	20.7 kg				
Shipping Box	490x490x245mm				

Turbosonic



500

2000

1000

Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dBSP 100. 901 70. 60.0 100 200 20k 500 1kHz 5k 10 Impedance magnitude curve measured in free air

NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=47L/47Hz

Vb/Fb = 47L/47Hz

Hg is the gap depth.

Vb/Fb = 84L/38Hz

Vb/Fb=84L/38Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

J6418

NEO

LF



FERRITE

SUBWOOFER

FERRITE

WOOFER

MID-BASS

MIDRANGE

FULLRANGE

🔆 18 inch 🔆 1300 Watts **₩ 96 dB ★ 41 ~ 1000 Hz**

COAXIAL

NEO

HF

FERRITE

HF



KEY FEATURES:

- 1 3000 W continuous program power capacity
- 2 96dB Sensitivity 1w/1m
- 3 41Hz ~1000Hz frequency response range
- ④ 125mm(5") inside/outside voice coil for improved power-handling and durability
- (5) Double silicone spiders with optimized compliance
- 6 Waterproof cone treatment

EBP

69

 $\overline{\mathcal{T}}$ Ideal for compact bass-reflex subwoofer or horn-loaded application

GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAM	MOUNTING IN		
Nominal Diameter	460mm / 18inch	Resonance frequency	Fs	41 Hz	Overall Diameter
Rated Impedance	8 ohm	DC resistance	Re	6.0 ohm	Bolt Circle Diame
Nominal Power handling	1300 Watts	Mechanical factor	Qms	13.2	Bolt Hole Diamet
Program Power	2600 Watts	Electrical factor	Qes	0.59	Baffle Cutout Dia
Sensitivity(1w/1m)	96 dB	Total factor	Qts	0.56	Overall Depth
Frequency Range	41 ~ 1000Hz	Mechanical compliance	Cms	0.055mm/N	Air volume occupied
Minimum Impedance(Zmin)	7.5 ohm	Mechanical resistance	Rms	5.3 kg/s	Net Weight
Voice Coil Diameter	125mm / 5inch	Effective Moving Mass	Mms	275 g	Shipping Weight
Voice Coil Material	Copper	Half-space efficiency	Eff	1.3 %	Shipping Box
Former Material	Glass Fiber	BL Factor	BL	27 T.m	
Voice Coil Winding Depth	29 mm	Equivalent Cas air load	Vas	117 liters	
Number of layers	2(inside/outside)	Effective piston area	Sd	0.1238 m ²	
Magnet gap depth	12 mm	Max. linear excursion ⁶	Xmax	±11.5 mm	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±20.5 mm	2
Flux Density	1.0 T	Voice coil inductance(1kHz)	Le	2.3 mH	

Efficiency Bandwidth Product

FORMATION 461 mm 439 mm eter 6.5 mm er 424 mm meter 212 mm by driver 10.1 liters 15.3 kg 16.8 kg 490x490x245mm

lurb@sonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dBSPI 100.0 0.031 90.1 120.0 80 70.1 40.0 60.0 S nn 200 20 100 500 25 Hz 5k 10 Impedance magnitude curve measured in free air

253mm / 155 oz

Computer predicted low frequency response⁽⁷⁾ dB 0 Vb/Fb 235L/32 -12 -18 -24 -30 -36 5 Hz 10 100 500 1000 2000 Vb/Fb = 235L/32Hz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4 upper limits where the output level drops by 10dB below the rated sensitivity
- Frequency range is defined as the band of frequencies delineated by the lower and
- 5. T/S parameters are measured with laser system BEFORE preconditioning test.
 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and
 - Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects



FERRITE

WOOFER

MID-BASS

MIDRANGE

FULLRANGE

🔆 18 inch 🔆 1400 Watts **☀ 97 dB ★ 31 ~ 1000 Hz**

NEO

HF



FERRITE

SUBWOOFER



KEY FEATURES:

NEO

LE

- 1 2800 W continuous program power capacity
- 2 97dB Sensitivity 1w/1m
- 3 31Hz ~1000Hz frequency response range
- ④ 115mm(4.5") inside/outside copper voice coil

⑤ 29 T.m BL

- [®] UKM paper cone, special treated cone for water protection
- ⑦ Dual spiders design with silicon based dampening control
- ⁽⁸⁾ Ideal for 80 to 190 Litres subwoofer cabinets⁽⁸⁾

GENERAL SPECIFICAT	IONS	THIELE – SMALL PARAMETERS ⁵		5	MOUNTING INFORM	IATION
Nominal Diameter	460mm / 18inch	Resonance frequency	Fs	31 Hz	Overall Diameter	466.5 mm
Rated Impedance	8 ohm	DC resistance	Re	5.4 ohm	Bolt Circle Diameter	442 mm
Nominal Power handling ¹	1400 Watts	Mechanical factor	Qms	10	Bolt Hole Diameter	6.5 mm
Program Power ²	2800 Watts	Electrical factor	Qes	0.33	Baffle Cutout Diameter	423 mm
Sensitivity(1w/1m) ³	97 dB	Total factor	Qts	0.32	Overall Depth	215 mm
Frequency Range⁴	31 ~ 1000Hz	Mechanical compliance	Cms	0.105mm/N	Air volume occupied by driver	11 liters
Minimum Impedance(Zmin)	7.3 ohm	Mechanical resistance of total-driver losses	Rms	4.89 kg/s	Net Weight	16 kg
Voice Coil Diameter	115mm / 4.5inch	Effective Moving Mass	Mms	252 g	Shipping Weight	17.5 kg
Voice Coil Material	Copper	Half-space efficiency	Eff	1.94%	Shipping Box	490x490x245mm
Former Material	Glass Fiber	BL Factor	BL	29 T.m		
Voice Coil Winding Depth	32 mm	Equivalent Cas air load	Vas	223 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.1238 m ²	回宿湖	3
Magnet gap depth	15 mm	Max. linear excursion ⁶	Xmax	±12 mm	1226	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±25.5mm		29
Flux Density	1.0 T	Voice coil inductance(1kHz)	Le	1.9 mH	35656	

EBP

dB

-12

-18 -24 -30 -36

5 Hz

94

170L/30H

Computer predicted low frequency response⁽⁷⁾

Efficiency Bandwidth Product



245mm / 190 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

50

Vb/Fb=83L/36Hz

100

Vb/Fb = 83L/36Hz

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- Vb: Net internal volume of box after subtracting the volume of internal objects.

Vb/Fb = 170L/30Hz

Total internal volume of empty box



500

1000

NEO LF

SUBWOOFER MID-BASS

FERRITE WOOFER

NEO

HF

Turb@sonic

18DMI200

FERRITE



🔆 18 inch 🔆 1200 Watts KLIPPEL **★ 99 dB ★ 36 ~ 1000 Hz**



KEY FEATURES:

- 1 2400 W continuous program power capacity
- 2 99dB Sensitivity 1w/1m
- ③ 36Hz ~1000Hz frequency response range
- ④ 100mm(4") inside/outside copper voice coil
- (5) Peak to peak maximum excursion of 58mm
- 6 Double magnets allows a very high force factor and long driver excursion
- ⑦ Ideal for compact vented or bandpass subwoofer usage

GENERAL SPECIFICATIONS		THIELE – SMALL PARAMETERS ⁵			MOUNTING INFORMATION		
Nominal Diameter	460mm / 18inch	Resonance frequency	Fs	36 Hz	Overall Diameter	466.5 mm	
Rated Impedance	8 ohm	DC resistance	Re	5.1 ohm	Bolt Circle Diameter	442 mm	
Nominal Power handling ¹	1200 Watts	Mechanical factor	Qms	26.7	Bolt Hole Diameter	6.5 mm	
Program Power ²	2400 Watts	Electrical factor	Qes	0.36	Baffle Cutout Diameter	423 mm	
Sensitivity(1w/1m) ³	99 dB	Total factor	Qts	0.36	Overall Depth	231 mm	
Frequency Range⁴	36 ~ 1000Hz	Mechanical compliance	Cms	0.077mm/N	Air volume occupied by driver	12 liters	
Minimum Impedance(Zmin)	6.7 ohm	Mechanical resistance of total-driver losses	Rms	2.1 kg/s	Net Weight	17.7 kg	
Voice Coil Diameter	100mm / 4inch	Effective Moving Mass	Mms	243 g	Shipping Weight	19.2 kg	
Voice Coil Material	Copper	Half-space efficiency	Eff	2.1%	Shipping Box	490x490x275mm	
Former Material	Glass Fiber	BL Factor	BL	28.1 T.m			
Voice Coil Winding Depth	36 mm	Equivalent Cas air load	Vas	158 liters			
Number of layers	2(inside/outside)	Effective piston area	Sd	0.1201 m ²	回税税	50	
Magnet gap depth	14 mm	Max. linear excursion ⁶	Xmax	±14.5mm			
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±29 mm		595 595	
Flux Density	1.2 T	Voice coil inductance(1kHz)	Le	2.4 mH	145.55		
Magnet Out Diameter/Wat	220mm / 250 oz	Efficiency Bandwidth Product	EBP	100		11 A A A A A A A A A A A A A A A A A A	

dB

-12

-18 -24 -30 -36

5 Hz

Computer predicted low frequency response⁽⁷⁾

Efficiency Bandwidth Product



220mm / 250 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb = 84L/39Hz

100

500

1000

2000

Hg is the gap depth.

Vb/Fb = 84L/39Hz

- 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 34

ESOI8

NEO

LE

FERRITE

SUBWOOFER

FERRITE

WOOFER

MID-BASS

MIDRANGE

FULLRANGE



COAXIAL

NEO

HF

FERRITE

HE

Turbosonic





KEY FEATURES:

- 1 2400 W continuous program power capacity
- 2 97dB Sensitivity 1w/1m
- ③ 32Hz ~1000Hz frequency response range
- ④ 100mm(4") inside/outside copper voice coil
- (5) Heavy duty Y35 ferrite magnet structure (outer diameter:245mm)
- ⁶ Big damper allows long excursion with linear behavior for large singal
- ⑦ Ideal for high quality bass-reflex system

GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAMETER		5	MOUNTING INFORM	IATION
Nominal Diameter	460mm / 18inch	Resonance frequency	Fs	32 Hz	Overall Diameter	466.5 mm
Rated Impedance	8 ohm	DC resistance	Re	5.3 ohm	Bolt Circle Diameter	442 mm
Nominal Power handling ¹	1200 Watts	Mechanical factor	Qms	20.8	Bolt Hole Diameter	6.5 mm
Program Power ²	2400 Watts	Electrical factor	Qes	0.34	Baffle Cutout Diameter	423 mm
Sensitivity(1w/1m) ³	97 dB	Total factor	Qts	0.33	Overall Depth	211 mm
Frequency Range ^₄	32 ~ 1000Hz	Mechanical compliance	Cms	0.096mm/N	Air volume occupied by driver	11.7 liters
Minimum Impedance(Zmin)	6.8 ohm	Mechanical resistance of total-driver losses	Rms	2.47kg/s	Net Weight	16.7 kg
Voice Coil Diameter	100mm / 4inch	Effective Moving Mass	Mms	254 g	Shipping Weight	18 kg
Voice Coil Material	Copper	Half-space efficiency	Eff	2.1%	Shipping Box	490x490x245mm
Former Material	Glass Fiber	BL Factor	BL	29.1 T.m		
Voice Coil Winding Depth	31 mm	Equivalent Cas air load	Vas	200 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.1213 m ²		31 .
Magnet gap depth	12 mm	Max. linear excursion ⁶	Xmax	±12.5 mm		32
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±26.5 mm		5 M 25 1990 -
Flux Density	1.2 T	Voice coil inductance(1kHz)	Le	1.9 mH	64663	1975 C

EBP

94



Efficiency Bandwidth Product

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity

245mm / 190 oz

5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

回來帶於

500

1000

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- Vb: Net internal volume of box after subtracting the volume of internal objects.
 - 35

S7118

NEO

LF



COAXIAL

NEO

HF

FERRITE

HF

Turb@sonic



FERRITE

SUBWOOFER

FERRITE

WOOFER

MID-BASS

MIDRANGE

FULLRANGE



KEY FEATURES:

- 1 1600W continuous program power capacity
- 2 98dB Sensitivity 1w/1m
- 3 32Hz ~1000Hz frequency response range
- ④ 4" inside/outside voice coil for improved power-handling and durability
- (5) Double silicone spiders with optimized compliance
- 6 Ventilated voice coil gap for reduced power compression
- 7 Ideal for compact bass-reflex subwoofer application

GENERAL SPECIFICATIONS		THIELE – SMALL PARAMETERS ⁵			MOUNTING INFORMATION	
Nominal Diameter	460mm / 18inch	Resonance frequency	Fs	36 Hz	Overall Diameter	461 mm
Rated Impedance	8 ohm	DC resistance	Re	5.2 ohm	Bolt Circle Diameter	439 mm
Nominal Power handling ¹	800 Watts	Mechanical factor	Qms	11.1	Bolt Hole Diameter	6.5x9.5 mm
Program Power ²	1600 Watts	Electrical factor	Qes	0.37	Baffle Cutout Diameter	424 mm
Sensitivity(1w/1m) ³	98 dB	Total factor	Qts	0.36	Overall Depth	197 mm
Frequency Range⁴	32 ~ 1000Hz	Mechanical compliance	Cms	0.10 mm/N	Air volume occupied by driver	9.9 liters
Minimum Impedance(Zmin)	6.1 ohm	Mechanical resistance of total-driver losses	Rms	4.22 kg/s	Net Weight	13 kg
Voice Coil Diameter	100mm / 4inch	Effective Moving Mass	Mms	206 g	Shipping Weight	14.3 kg
Voice Coil Material	Copper	Half-space efficiency	Eff	2.5%	Shipping Box	490x490x245mm
Former Material	Glass Fiber	BL Factor	BL	26 T.m		
Voice Coil Winding Depth	25 mm	Equivalent Cas air load	Vas	200 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.1231 m ²	国の経	SQ.
Magnet gap depth	12 mm	Max. linear excursion ⁶	Xmax	± 9 mm	EXX.	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±22.5mm		302

Le

dB

-12

-18 -24 -30 -36

5 Hz

EBP

1.8 mH

Computer predicted low frequency response⁽⁷⁾

97

Vb/Fb=160L/33Hz

Vb/Fb = 160L/33Hz

Voice coil inductance(1kHz)

Efficiency Bandwidth Product



1.1 T

220mm / 125 oz

NOTES:

1. AES standard

Flux Density

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

50

=96L/38H

100

Vb/Fb = 96L/38Hz

500

1000

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- Vb: Net internal volume of box after subtracting the volume of internal objects.
 - 36



FERRITE

FERRITE



🔆 18 inch 🔆 750 Watts **★** 36 ~ 1000 Hz **ఈ 97 dB**

NEO

HF



KEY FEATURES:

NEO

LF

- 1 1500 W continuous program power capacity
- 2 97dB Sensitivity 1w/1m
- 3 36Hz ~1000Hz frequency response range
- ④ 100mm(4") inside/outside copper voice coil
- ⑤ Vented back plate increases airflow to provide enhanced cooling
- 6 Both side waterproof cone treamment
- $\ensuremath{\overline{\mathcal{O}}}$ Ideal for compact bass-reflex subwoofer application

GENERAL SPECIFICATIONS		THIELE – SMALL PARAMETERS ⁵			MOUNTING INFORMATION		
Nominal Diameter	460mm / 18inch	Resonance frequency	Fs	36 Hz	Overall Diameter	461 mm	
Rated Impedance	8 ohm	DC resistance	Re	5.4 ohm	Bolt Circle Diameter	439 mm	
Nominal Power handling	750 Watts	Mechanical factor	Qms	12.5	Bolt Hole Diameter	6.5x9.5 mi	
Program Power	1500 Watts	Electrical factor	Qes	0.33	Baffle Cutout Diameter	424 mm	
Sensitivity(1w/1m)	97 dB	Total factor	Qts	0.33	Overall Depth	200 mm	
Frequency Range	36 ~ 1000Hz	Mechanical compliance	Cms	0.09 mm/N	Air volume occupied by driver	9.4 liters	
Minimum Impedance(Zmin)	7.4 ohm	Mechanical resistance of total-driver losses	Rms	3.76 kg/s	Net Weight	12.8 kg	
Voice Coil Diameter	100mm / 4inch	Effective Moving Mass	Mms	208 g	Shipping Weight	14.3 kg	
Voice Coil Material	Copper	Half-space efficiency	Eff	2.4%	Shipping Box	490x490x2	
Former Material	Glass Fiber	BL Factor	BL	27.6 T.m			
Voice Coil Winding Depth	25 mm	Equivalent Cas air load	Vas	180 liters			
Number of layers	2(inside/outside)	Effective piston area	Sd	0.1170 m ²	回法院	ЩЦ	
Magnet gap depth	10.7 mm	Max. linear excursion ⁶	Xmax	±9.6 mm		35	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±19.8mm			
Flux Density	1.1 T	Voice coil inductance(1kHz)	Le	2.3 mH	1997 - TA		
Magnet Out Diameter/Wgt	220mm / 125 oz	Efficiency Bandwidth Product	EBP	109	回知論)	0.55	



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters are measured with laser system BEFORE preconditioning test.

Vb/Fb = 146L/35Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=146L/35Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=72L/42Hz

Vb/Fb = 72L/42Hz

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

It Circle Diameter	439 mm
It Hole Diameter	6.5x9.5 mm
ffle Cutout Diameter	424 mm
erall Depth	200 mm
volume occupied by driver	9.4 liters
t Weight	12.8 kg
ipping Weight	14.3 kg
ipping Box	490x490x245mm



500

1000

2000

10

dB

6

0 -6

-12

-18

-24 -30 -36

37

5 Hz

COAXIAL

FULLRANGE

M5315s

NEO

LF

FERRITE

SUBWOOFER

FERRITE

WOOFER

MID-BASS

MIDRANGE

FULLRANGE



🔆 15 inch 🔆 800 Watts **※ 97 dB ★ 40 ~ 1000 Hz**

COAXIAL

NEO

HF



KEY FEATURES:

- ① 1600 W continuous program power capacity
- 2 97dB Sensitivity 1w/1m
- 3 40Hz ~1000Hz frequency response range
- ④ 100mm(4") inside/outside copper voice coil
- (5) Double silicone spiders with optimized compliance
- 6 Triple-roll cloth edge with deep corrugations for extended Xmax
- $\ensuremath{\overline{\mathcal{T}}}$ Corrugated cone geometry

EBP

dB

-12 -18 -24

-30 -36

38

5 Hz

121

Vb/Fb=71L/39Hz

Vb/Fb = 71L/39Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=35L/47Hz

100

Vb/Fb = 35L/47Hz

500

1000

2000

(8) Ideal for compact bass-reflex subwoofer application

GENERAL SPECIFICATIONS		THIELE - SMALL PARAM	THIELE – SMALL PARAMETERS⁵			MOUNTING INFORMATION		
Nominal Diameter	380mm / 15inch	Resonance frequency	Fs	40 Hz	Overall Diameter	393 mm		
Rated Impedance	8 ohm	DC resistance	Re	5.2 ohm	Bolt Circle Diameter	375 mm		
Nominal Power handling	800 Watts	Mechanical factor	Qms	8.7	Bolt Hole Diameter	6.5 mm		
Program Power	1600 Watts	Electrical factor	Qes	0.33	Baffle Cutout Diameter	356 mm		
Sensitivity(1w/1m)	97 dB	Total factor	Qts	0.32	Overall Depth	179 mm		
Frequency Range	40 ~ 1000Hz	Mechanical compliance	Cms	0.095mm/N	Air volume occupied by driver	6.5 liters		
Minimum Impedance(Zmin)	7.5 ohm	Mechanical resistance	Rms	4.74 kg/s	Net Weight	11.7 kg		
Voice Coil Diameter	100mm / 4inch	Effective Moving Mass	Mms	163 g	Shipping Weight	12.7 kg		
Voice Coil Material	Copper	Half-space efficiency	Eff	1.81%	Shipping Box	420x420x205mm		
Former Material	Glass Fiber	BL Factor	BL	25.4 T.m				
Voice Coil Winding Depth	25 mm	Equivalent Cas air load	Vas	95 liters				
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0845 m ²	回殺滅	ii∎		
Magnet gap depth	12 mm	Max. linear excursion ⁶	Xmax	± 9 mm	200 - Carlo -			
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±23mm		EDE -		
Flux Density	1.1 T	Voice coil inductance(1kHz)	Le	2.0 mH	1990 (March 1990)	20		
Magnet Out Diameter/Wat	220mm / 125 oz	Efficiency Bandwidth Product	FBP	121				

Efficiency Bandwidth Product



220mm / 125 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

FERRITE

HE

M5115

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 15 inch 🔆 700 Watts **★ 42 ~ 2100 Hz ₩ 98 dB**



KEY FEATURES:

- ① 1400 W continuous program power capacity
- 2 Sensitivity: 98dB 1w/1m
- (3) 100mm(4") with OFC(Oxygen-free Copper) wire for improved power-handling
- (4) Coating paper cone to improve the optical and acoustic properties
- ^⑤ Reinforced CONEX[®] spider for improved linearity control
- ⑥ Ideal for woofer or extended woofer application

GENERAL SPECIFICATIONS

Nominal Diameter 50	80mm / 15inch
Rated Impedance 8	ohm
Nominal Power handling ¹ 70	00 Watts
Program Power ² 14	400 Watts
Sensitivity(1w/1m) ³ 98	8 dB
Frequency Range ⁴ 42	2 ~ 2100Hz
Minimum Impedance(Zmin) 7.	.5 ohm
Voice Coil Diameter 10	00mm /4inch
Voice Coil Material C	opper
Former Material G	lass Fiber
Voice Coil Winding Depth 2	1 mm
Number of layers 2	
Magnet gap depth 10	0.7 mm
Basket C	ast Aluminum
Flux Density 1.	.05 T
Magnet Out Diameter/Wgt 22	20mm / 125 oz

I TIELE - SIVIALL PARAIVI	EIERS	
Resonance frequency	Fs	45 Hz
DC resistance	Re	5.3 ohm
Mechanical factor	Qms	10
Electrical factor	Qes	0.30
Total factor	Qts	0.29
Mechanical compliance	Cms	0.095 mm/N
Mechanical resistance of total-driver losses	Rms	3.7 kg/s
Effective Moving Mass	Mms	132 g
Half-space efficiency	Eff	3.2%
BL Factor	BL	25.8 T.m
Equivalent Cas air load	Vas	109 liters
Effective piston area	Sd	0.0908 m ²
Max. linear excursion ⁶	Xmax	± 8.5 mm
Max. excursion before damage	Xdam	±21.8mm
Voice coil inductance(1kHz)	Le	1.9 mH
Efficiency Bandwidth Product	EBP	150

dB

-12

-18 -24

-30

-36

5 Hz

	MOUNTING INFORM	ATION
	Overall Diameter	393 mm
	Bolt Circle Diameter	375 mm
	Bolt Hole Diameter	6.5 mm
	Baffle Cutout Diameter	355 mm
	Overall Depth	171 mm
N	Air volume occupied by driver	6.3 liters
	Net Weight	11.6 kg
	Shipping Weight	12.6 kg
	Shipping Box	430x430x205 mm



500

1000

2000





- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 65L/44Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=65L/44Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=34L/56Hz

100

Vb/Fb = 34L/56Hz

- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.
 - 39

HE

M54I5/2

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 15 inch 🔆 800 Watts **★ 40 ~ 2800 Hz ₩ 99 dB**



KEY FEATURES:

- ① 1600 W continuous program power capacity
- 2 Sensitivity: 99dB 1w/1m

GENERAL SPECIFICATIONS

Nominal Diameter

③ 100mm(4") high temperature inside/outsdie voice coil with copper clad aluminum wire

380mm /15inch

④ FEA designed ferrite magnetic

- ⑤ Vented back plate increases airflow to provide enhanced cooling 6 Aluminum demodulating ring reduces distortion and extends high frequency response to 2.8kHz
- 7 Ideal for compact 2 or 3-way systems

Rated Impedance 8 ohm Nominal Power handling 800 Watts Program Power² 1600 Watts Sensitivity(1w/1m)³ 99 dB Frequency Range⁴ 40~2800Hz Minimum Impedance(Zmin) 7.0 ohm

Voice Coil Diameter	100mm /4inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	22 mm
Number of layers	2(inside/outside)
Magnet gap depth	12 mm
Basket	Cast Aluminum
Flux Density	1.1 T
Magnet Out Diameter/Wgt	220mm / 125 oz

THIELE – SMALL PARAMETERS ⁵			
Resonance frequency	Fs	40 Hz	
DC resistance	Re	5.7 ohm	
Mechanical factor	Qms	11.5	
Electrical factor	Qes	0.31	
Total factor	Qts	0.30	
Mechanical compliance	Cms	0.14 mm/N	
Mechanical resistance of total-driver losses	Rms	2.4 kg/s	
Effective Moving Mass	Mms	107 g	
Half-space efficiency	Eff	3.3%	
BL Factor	BL	22.4 T.m	
Equivalent Cas air load	Vas	156 liters	
Effective piston area	Sd	0.0887 m^2	
Max. linear excursion ⁶	Xmax	± 7 mm	
Max. excursion before damage	Xdam	±20mm	
Voice coil inductance(1kHz)	Le	1.5 mH	
Efficiency Bandwidth Product	EBP	129	

MOUNTING INFORMATION				
Overall Diameter	393 mm			
Bolt Circle Diameter	375 mm			
Bolt Hole Diameter	6.5 mm			
Baffle Cutout Diameter	355 mm			
Overall Depth	170 mm			
Air volume occupied by driver	6.5 liters			
Net Weight	11 kg			
Shipping Weight	11.7 kg			
Shipping Box	425x425x215 mm			

Turb@sonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dBSP 100.0 90. 80. 70 ------١ 200 20 Impedance magnitude curve measured in free air



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and
- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

S7315s

NEO

LF

FERRITE

SUBWOOFER

FERRITE

WOOFER

MID-BASS

MIDRANGE

FULLRANGE



🔆 15 inch 🔆 650 Watts **★ 39 ~ 1000 Hz ₩ 96 dB**

COAXIAL

NEO

HF

FERRITE

HE

Turbosonic



KEY FEATURES:

- 1 1300 W continuous program power capacity
- 2 96dB Sensitivity 1w/1m
- ③ 39Hz ~1000Hz frequency response range
- ④ 91mm(3.6") inside/outside copper voice coil
- (5) FEA designed ferrite magnetic
- ⁶ Reinforced CONEX[®] spider for improved linearity control
- $\bar{\mathbb{O}}$ Ideal for compact extended woofer or subwoofer application

GENERAL SPECIFICATIONS		THIELE – SMALL PARAMETERS ⁵			MOUNTING INFORMATION	
Nominal Diameter	380mm / 15inch	Resonance frequency	Fs	39 Hz	Overall Diameter	393 mm
Rated Impedance	8 ohm	DC resistance	Re	5.6 ohm	Bolt Circle Diameter	375 mm
Nominal Power handling	650 Watts	Mechanical factor	Qms	19.5	Bolt Hole Diameter	6.5 mm
Program Power	1300 Watts	Electrical factor	Qes	0.43	Baffle Cutout Diameter	356 mm
Sensitivity(1w/1m)	96 dB	Total factor	Qts	0.42	Overall Depth	170 mm
Frequency Range	39 ~ 1000Hz	Mechanical compliance	Cms	0.12 mm/N	Air volume occupied by driver	6.1 liters
Minimum Impedance(Zmin)	6.8 ohm	Mechanical resistance	Rms	1.47 kg/s	Net Weight	8.8 kg
Voice Coil Diameter	91mm / 3.6inch	Effective Moving Mass	Mms	141 g	Shipping Weight	9.9 kg
Voice Coil Material	Copper	Half-space efficiency	Eff	1.61%	Shipping Box	430x430x205mm
Former Material	Glass Fiber	BL Factor	BL	21 T.m		
Voice Coil Winding Depth	25.5 mm	Equivalent Cas air load	Vas	120 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0845 m ²	回紙橋	清回
Magnet gap depth	10 mm	Max. linear excursion ⁶	Xmax	±10.2 mm		
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±21.2 mm		同時
Flux Density	1.1 T	Voice coil inductance(1kHz)	Le	1.7 mH		

Efficiency Bandwidth Product

EBP

dB

0

-12

-18 -24

-30

-36

5 Hz

90

Vb/Fb=114L/35.5Hz

Computer predicted low frequency response⁽⁷⁾



200mm / 97 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=80L/39Hz

100

Vb/Fb = 80L/39Hz

首時感報

500

1000

2000

Hg is the gap depth.

Vb/Fb = 114L/35.5Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

HF

J6015

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 15 inch 🔆 650 Watts **★ 43 ~ 2800 Hz ₩ 99 dB**



⑤ Dual-forced hyper-venting and 10mm top plate for minimum

6 Ideal for high quality compact 2 or 3-way systems

KEY FEATURES:

- ① 1300 W continuous program power capacity
- 2 Sensitivity: 99dB 1w/1m
- ③ 86mm(3.4") high temperature inside/outsdie voice coil with copper clad aluminum wire
- ④ Paper cone made in USA

GENERAL SPECIFICATIONS

Nominal Diameter	380mm /15inch
Rated Impedance	8 ohm
Nominal Power handling ¹	650 Watts
Program Power ²	1300 Watts
Sensitivity(1w/1m) ³	99 dB
Frequency Range ^₄	43 ~ 2800Hz
Minimum Impedance(Zmin)	6.8 ohm
Voice Coil Diameter	86mm /3.4inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	16.5 mm
Number of layers	2(inside/outside)
Magnet gap depth	10 mm
Basket	Cast Aluminum
Flux Density	1.15 T
Magnet Out Diameter/Wgt	190mm / 95 oz

THIELE - SWALL PARAWETERS			
Resonance frequency	Fs	43 Hz	
DC resistance	Re	5.6 ohm	
Mechanical factor	Qms	7.0	
Electrical factor	Qes	0.3	
Total factor	Qts	0.29	
Mechanical compliance	Cms	0.14 mm/N	
Mechanical resistance of total-driver losses	Rms	3.8 kg/s	
Effective Moving Mass	Mms	99 g	
Half-space efficiency	Eff	3.65%	
BL Factor	BL	22 T.m	
Equivalent Cas air load	Vas	145 liters	
Effective piston area	Sd	0.0866 m ²	
Max. linear excursion ⁶	Xmax	± 6 mm	
Max. excursion before damage	Xdam	± 17.3mm	
Voice coil inductance(1kHz)	Le	1.5 mH	
Efficiency Bandwidth Product	EBP	143	

power compression

MOUNTING INFORMATION		
Overall Diameter	393 mm	
Bolt Circle Diameter	375 mm	
Bolt Hole Diameter	6.5 mm	
Baffle Cutout Diameter	355 mm	
Overall Depth	172 mm	
Air volume occupied by driver	5.6 liters	
Net Weight	7.9 kg	
Shipping Weight	9.1 kg	
Shipping Box	430x430x205 mm	

Turbosonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 120 50 D dBSPI 110.0 120.0 100. 30.0 90.0 80 MINH 70.1 201 20 Impedance magnitude curve measured in free air



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.

5. T/S parameters measured with laser system BEFORE preconditioning test.

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

KLIPPEL

NEO

HF

* 15 inch * 550 Watts

I5DM550

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS



KEY FEATURES:

- ① 1100 W continuous program power capacity
- 2 High sensitivity: 100dB 1w/1m
- ③ 76mm(3") high temperature inside/outsdie voice coil with pure aluminum wire
- (5) Peak to Peak maximum excursion of 50mm
- 6 Aluminum dust cap guarantees great voice coil heat dissipation
- $\overline{\mathcal{T}}$ Double magnets allows a very high force factor and long driver displacement
- 8 Ideal for very compact 2-ways systems

GENERAL SPECIFICATIONS

Nominal Diameter	380mm /15inch
Rated Impedance	8 ohm
Nominal Power handling ¹	550 Watts
Program Power ²	1100 Watts
Sensitivity(1w/1m) ³	100 dB
Frequency Range ^₄	44 ~ 3100Hz
Minimum Impedance(Zmin)	6.5 ohm
Voice Coil Diameter	76mm /3inch
Voice Coil Material	Pure Aluminum
Former Material	Fiber Glass
Voice Coil Winding Depth	18.5 mm
Number of layers	2(inside/outside)
Magnet gap depth	12 mm
Basket	Cast Aluminum
Flux Density	1.2 T
Magnet Out Diameter/Wgt	190mm / 256 oz

I FIELE - SIVIALL FARAIVI	ETERS	
Resonance frequency	Fs	44 Hz
DC resistance	Re	5.5 ohm
Mechanical factor	Qms	17.3
Electrical factor	Qes	0.36
Total factor	Qts	0.35
Mechanical compliance	Cms	0.14 mm/N
Mechanical resistance of total-driver losses	Rms	1.3 kg/s
Effective Moving Mass	Mms	96 g
Half-space efficiency	Eff	2.2%
BL Factor	BL	20.3 T.m
Equivalent Cas air load	Vas	140 liters
Effective piston area	Sd	$0.0855 \ m^2$
Max. linear excursion ⁶	Xmax	±6.2 mm
Max. excursion before damage	Xdam	± 25 mm
Voice coil inductance(1kHz)	Le	0.95 mH
Efficiency Bandwidth Product	EBP	122

dB

0

-12

-18 -24

-30 -36

43

5 Hz

10

MOUNTING INFORMATION			
Overall Diameter	393 mm		
Bolt Circle Diameter	375 mm		
Bolt Hole Diameter	6.5 mm		
Baffle Cutout Diameter	355 mm		
Overall Depth	188 mm		
Air volume occupied by driver	5.4 liters		
Net Weight	10.9 kg		
Shipping Weight	12.3 kg		
Shipping Box	430x430x225 mm		



500

2000

1000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

Vb/Fb = 72L/47Hz

5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test.

Vb/Fb=72L/47Hz

M5215

FERRITE

SUBWOOFER

NEO

LF

🔆 15 inch 🔆 450 Watts KLIPPEL **※ 99 dB ★ 45 ~ 2800 Hz**

NEO

HF



FERRITE WOOFER

MID-BASS



KEY FEATURES:

- ① 900 W continuous program power capacity
- 2 Sensitivity: 99dB 1w/1m
- ③ 76mm(3") high temperature inside/outsdie voice coil with copper clad aluminum wire
- ④ 7DF paper cone, made in USA
- ⑤ M-roll surround and curved cone geometry
- 6 Ideal for high quality compact 2 or 3-way systems

GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAM	IETERS	5	MOUNTING INFORM	1ATION
Nominal Diameter	380mm /15inch	Resonance frequency	Fs	47 Hz	Overall Diameter	393 mm
Rated Impedance	8 ohm	DC resistance	Re	5.6 ohm	Bolt Circle Diameter	375 mm
Nominal Power handling ¹	450 Watts	Mechanical factor	Qms	14	Bolt Hole Diameter	6.5 mm
Program Power ²	900 Watts	Electrical factor	Qes	0.43	Baffle Cutout Diameter	355 mm
Sensitivity(1w/1m) ³	99 dB	Total factor	Qts	0.42	Overall Depth	168 mm
Frequency Range ^₄	45 ~ 2800Hz	Mechanical compliance	Cms	0.13 mm/N	Air volume occupied by driver	5 liters
Minimum Impedance(Zmin)	7 ohm	Mechanical resistance	Rms	1.3 kg/s	Net Weight	8.1 kg
Voice Coil Diameter	76mm /3inch	Effective Moving Mass	Mms	90 g	Shipping Weight	9.2 kg
Voice Coil Material	CCAW	Half-space efficiency	Eff	3.3%	Shipping Box	430x430x205 mm
Former Material	Polyimide	BL Factor	BL	18.4 T.m		
Voice Coil Winding Depth	18 mm	Equivalent Cas air load	Vas	132 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0892 m ²	回新語	第回
Magnet gap depth	10 mm	Max. linear excursion ⁶	Xmax	± 6.5 mm	252	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±18.1 mm		202
Flux Density	1.2 T	Voice coil inductance(1kHz)	Le	0.93 mH	645.423	2 <u>1</u> 2

Efficiency Bandwidth Product



190mm / 78 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

500 1 K

Vb/Fb = 80L/50Hz

Vb/Fb=80L/50Hz

100

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

Vb/Fb = 110L/46Hz



20 K

5 K 10 K

EBP

dE

-6

-12

-18 -24

-30 -36

-42 -48

5 Hz

10

109

Vb/Fb=110L/46H

Computer predicted low frequency response⁽⁷⁾

KLIPPEL

♦ 99 dB

★ 43 ~ 3000 Hz

NEO

HE

🔆 15 inch 🔆 500 Watts

CI5-500

FERRITE

SUBWOOFER

NEO

LE



FERRITE WOOFER

MID-BASS



KEY FEATURES:

- ① 1000 W continuous program power capacity
- 2 Sensitivity: 99dB 1w/1m

GENERAL SPECIFICATIONS

Nominal Diameter

Rated Impedance

Program Power²

Sensitivity(1w/1m)³

Frequency Range⁴

Voice Coil Diameter

Voice Coil Material

Former Material

Number of layers

Magnet gap depth

Basket

Flux Density

Nominal Power handling

Minimum Impedance(Zmin)

Voice Coil Winding Depth

③ 76mm(3") high temperature inside/outside voice coil with copper clad aluminum wire

380mm /15inch

8 ohm

99 dB

6.6 ohm

CCAW

19 mm

10.5 mm

1.2 T

500 Watts

1000 Watts

43~3000Hz

76mm /3inch

Glass Fiber

2(inside/outside)

Cast Aluminum

- (4) Vented back plate increases airflow to provide enhanced cooling ⑤ Treated cone for water protection
- Increased power handling and more mid-high over C15-400
- 7 Ideal for compact 2 or 3-way systems

Fs

Re

Qms

Qes

Qts

Cms

Rms

Mms

Eff

ΒL

Vas

Sd

Le

dB

-12

-18 -24 -30

5 Hz

EBP

Xmax

Xdam

 $0.0855 \,\mathrm{m}^3$

±17.7mm

0.87 mH

Computer predicted low frequency response⁽⁷⁾

118

±7 mm

THIELE - SMALL PARAMETERS

Resonance frequency

Mechanical compliance

DC resistance

Mechanical factor

Mechanical resistance

of total-driver losses

Effective Moving Mass

Half-space efficiency

Equivalent Cas air load

Effective piston area

Max. linear excursion

Max. excursion before damage

Voice coil inductance(1kHz)

Electrical factor

Total factor

BL Factor

	MOUNTING INFORM	1ATION
46 Hz	Overall Diameter	393 mm
5.3 ohm	Bolt Circle Diameter	375 mm
12.3	Bolt Hole Diameter	6.5 mm
0.39	Baffle Cutout Diameter	355 mm
0.38	Overall Depth	169 mm
0.12 mm/N	Air volume occupied by driver	5.8 liters
1.45 kg/s	Net Weight	8.7 kg
98 g	Shipping Weight	9.8 kg
3.1%	Shipping Box	430x430x205 mm
20.2 T.m		
125 liters		



500

1000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling
- . Sensitivity is measured at 1W input on rated impedance at 1m on axis 3
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and
- Hg is the gap depth.

Vb/Fb = 73L/46Hz

- 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 45

Vb/Fb=73L/48Hz

CI5-400

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

★ 15 inch ★ 400 Watts KLIPPEL **♦ 97 dB ★** 38 ~ 3000 Hz

NEO

HF



KEY FEATURES:

- 1 800 W continuous program power capacity
- 2 Sensitivity: 97dB 1w/1m
- 3 76mm(3") inside/outside voice coil with SV-W wire
- (4) Vented back plate increases airflow to provide enhanced cooling
- ⑤ Treated cone for water protection
- 6 Ideal for compact 2 or 3-way systems

GENERAL SPECIFICATIONS THIELE - SMALL PARAMETERS Nominal Diameter 380mm /15inch Rated Impedance 8 ohm Nominal Power handling 400 Watts Program Power² 800 Watts Sensitivity(1w/1m)³ 97 dB

Frequency Range⁴	38 ~ 3000Hz
Minimum Impedance(Zmin)	6.7 ohm
Voice Coil Diameter	76mm /3inch
Voice Coil Material	SV-W(Copper)
Former Material	Glass Fiber
Voice Coil Winding Depth	17.5 mm
Number of layers	2(inside/outside)
Magnet gap depth	9.5 mm
Basket	Cast Aluminum
Flux Density	1.15 T
Magnet Out Diameter/Wgt	190mm / 78 oz

Resonance frequency	Fs	38 Hz
DC resistance	Re	5.6 ohm
Mechanical factor	Qms	15
Electrical factor	Qes	0.37
Total factor	Qts	0.36
Mechanical compliance	Cms	0.17 mm/N
Mechanical resistance of total-driver losses	Rms	1.63 kg/s
Effective Moving Mass	Mms	102 g
Half-space efficiency	Eff	2.6%
BL Factor	BL	19.4 T.m
Equivalent Cas air load	Vas	177 liters
Effective piston area	Sd	0.0855 m^2
Max. linear excursion ⁶	Xmax	± 6.5mm
Max. excursion before damage	Xdam	± 19 mm
Voice coil inductance(1kHz)	Le	1.4 mH
Efficiency Bandwidth Product	EBP	103

dB

-12 -18 -24 -30 -36

5 Hz

MOUNTING INFORMATION		
Overall Diameter	393 mm	
Bolt Circle Diameter	375 mm	
Bolt Hole Diameter	6.5 mm	
Baffle Cutout Diameter	355 mm	
Overall Depth	167 mm	
Air volume occupied by driver	5 liters	
Net Weight	7.3 kg	
Shipping Weight	8.4 kg	
Shipping Box	430x430x205 mm	

Turb@sonic



500

1000

2000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

50

Vb/Fb=70L/44Hz

100

Vb/Fb = 70L/44Hz

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- Vb: Net internal volume of box after subtracting the volume of internal objects.

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=100L/42Hz

Vb/Fb = 100L/42Hz

HF

I5BM350

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 15 inch 🔆 350 Watts ¥ 97.5 dB ¥ 38 ~ 3000 Hz



KEY FEATURES:

- 1 700 W continuous program power capacity
- 2 Sensitivity: 97.5dB 1w/1m
- 338Hz ~ 3000Hz frequency response range
- ④ 76mm(3") voice coil with SV-W(copper round wire)
- (5) Kevlar® impregnated cone with sealed cloth edge to provide outstanding reliability and performance
- 6 Ideal for compact 2 or 3-way systems

GENERAL SPECIFICATIONS			
Nominal Diameter	380mm /15inch		
Rated Impedance	8 ohm		
Nominal Power handling ¹	350 Watts		
Program Power ²	700 Watts		
Sensitivity(1w/1m) ³	97.5 dB		
Frequency Range ^₄	38 ~ 3000Hz		
Minimum Impedance(Zmin)	6.2 ohm		
Voice Coil Diameter	76mm /3inch		
Voice Coil Material	SV-W(Copper)		
Former Material	Aluminum		
Voice Coil Winding Depth	16 mm		
Number of layers	2		
Magnet gap depth	9.5 mm		
Basket	Cast Aluminum		
Flux Density	1.1 T		
Magnet Out Diameter/Wgt	180mm / 68 oz		

THIELE – SMALL PARAMETERS [®]			
Resonance frequency	Fs	38 Hz	
DC resistance	Re	5.0 ohm	
Mechanical factor	Qms	2.6	
Electrical factor	Qes	0.37	
Total factor	Qts	0.32	
Mechanical compliance	Cms	0.16 mm/N	
Mechanical resistance of total-driver losses	Rms	10.2 kg/s	
Effective Moving Mass	Mms	108 g	
Half-space efficiency	Eff	2.4%	
BL Factor	BL	18.8 T.m	
Equivalent Cas air load	Vas	166 liters	
Effective piston area	Sd	0.0866 m ²	
Max. linear excursion ⁶	Xmax	±6 mm	
Max. excursion before damage	Xdam	±15.8	
Voice coil inductance(1kHz)	Le	1.0 mH	
Efficiency Bandwidth Product	EBP	103	

dB

MOUNTING INFORMATION			
389.5 mm			
369 mm			
6.5 mm			
350 mm			
155 mm			
5 liters			
6.8 kg			
7.5 kg			
425x425x215 mm			



500

1000

2000

Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dBSP 100.0 40.0 90. 80. 70. 20 20 Impedance magnitude curve measured in free air

-12 -18 -24 -30 -36 5 Hz Vb/Fb = 65L/44Hz

NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Computer predicted low frequency response⁽⁷⁾

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

50

Vb/Fb=65L/44Hz

- - 47

HF

U8215

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 15 inch 🔆 500 Watts ★ 98.5 dB ★ 45 ~ 3000 Hz



KEY FEATURES:

- ① 1000 W continuous program power capacity
- 2 Sensitivity: 98.5dB 1w/1m
- 3 76mm(3") high temperature inside/outsdie CCAW voice coil ④ 7DF paper cone, made in USA
- ⑤ Unique eight-sided (Octagon) die-cast aluminum basket
- 6 FEA optimized magent system design for low distortion and minimum power compession
- ⑦ Ideal for high quality compact 2 or 3-way systems

GENERAL SPECIFICAT	IONS	THIELE – SMALL P
Nominal Diameter	380mm /15inch	Resonance frequency
Rated Impedance	8 ohm	DC resistance
Nominal Power handling ¹	500 Watts	Mechanical factor
Program Power ²	1000 Watts	Electrical factor
Sensitivity(1w/1m) ³	98 dB	Total factor
Frequency Range⁴	45 ~ 3000Hz	Mechanical compliance
Minimum Impedance(Zmin)	6.7 ohm	Mechanical resistance of total-driver losses
Voice Coil Diameter	76mm /3inch	Effective Moving Mass
Voice Coil Material	CCAW	Half-space efficiency
Former Material	Glass Fiber	BL Factor
Voice Coil Winding Depth	18 mm	Equivalent Cas air load
Number of layers	2(inside/outside)	Effective piston area
Magnet gap depth	10 mm	Max. linear excursion ⁶
Basket	Cast Aluminum	Max. excursion before da
Flux Density	1.2 T	Voice coil inductance(1k
Magnet Out Diameter/Wgt	190mm / 78 oz	Efficiency Bandwidth Prod

THIELE - SWALL PARAW	EIERO	
Resonance frequency	Fs	45 Hz
DC resistance	Re	5.6 ohm
Mechanical factor	Qms	10.5
Electrical factor	Qes	0.41
Total factor	Qts	0.40
Mechanical compliance	Cms	0.14 mm/N
Mechanical resistance of total-driver losses	Rms	2.4 kg/s
Effective Moving Mass	Mms	90 g
Half-space efficiency	Eff	3.3%
BL Factor	BL	18.7 T.m
Equivalent Cas air load	Vas	150 liters
Effective piston area	Sd	$0.0887 \ m^2$
Max. linear excursion ⁶	Xmax	± 6.5 mm
Max. excursion before damage	Xdam	±18.2mm
Voice coil inductance(1kHz)	Le	1.1 mH
Efficiency Bandwidth Product	EBP	109

dB

0

-12 -18 -24 -30 -36

5 Hz

10

MOUNTING INFORMATION				
Overall Diameter	390 mm			
Bolt Circle Diameter	398 mm			
Bolt Hole Diameter	6.5 mm			
Baffle Cutout Diameter	353 mm			
Overall Depth	165 mm			
Air volume occupied by driver	5.7 liters			
Net Weight	8.4 kg			
Shipping Weight	9.5 kg			
Shipping Box	430x430x205 mm			



500

2000

1000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=115L/43Hz

Vb/Fb = 115L/43Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

Vb/Fb=80L/49Hz

Vb/Fb = 80L/49Hz

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

Turb@sonic

U8015

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 15 inch 🔆 400 Watts KLIPPEL **★ 99 dB ★ 38 ~ 3000 Hz**



KEY FEATURES:

- 1 800 W continuous program power capacity
- 2 High sensitivity: 99dB 1w/1m
- 3 Very smooth response up to 3000Hz
- ④ 76mm(3") copper clad aluminum voice coil
- (5) Non pressed cone to supply additional damping
- 6 Unique eight-sided (Octagon) die-cast aluminum basket
- ${f {\Bbb T}}$ FEA optimized magnetic circuit; a colorful aluminum ring on the back plate
- (8) Ideal for compact reflex enclosures and two way systems

GENERAL SPECIFICAT	IONS	THIELE – SMALL PAR
Nominal Diameter	380mm /15inch	Resonance frequency
Rated Impedance	8 ohm	DC resistance
Nominal Power handling ¹	400 Watts	Mechanical factor
Program Power ²	800 Watts	Electrical factor
Sensitivity(1w/1m) ³	99 dB	Total factor
Frequency Range⁴	38 ~ 3000Hz	Mechanical compliance
Minimum Impedance(Zmin)	6.7 ohm	Mechanical resistance of total-driver losses
Voice Coil Diameter	76mm /3inch	Effective Moving Mass
Voice Coil Material	CCAW	Half-space efficiency
Former Material	Glass Fiber	BL Factor
Voice Coil Winding Depth	18.7 mm	Equivalent Cas air load
Number of layers	2	Effective piston area
Magnet gap depth	10 mm	Max. linear excursion ⁶
Basket	Cast Aluminum	Max. excursion before dama
Flux Density	1.15 T	Voice coil inductance(1kHz)

THIELE – SMALL PARAMETERS ⁵					
Resonance frequency	Fs	38.5 Hz			
DC resistance	Re	5.4 ohm			
Mechanical factor	Qms	4.8			
Electrical factor	Qes	0.37			
Total factor	Qts	0.34			
Mechanical compliance	Cms	0.19 mm/N			
Mechanical resistance of total-driver losses	Rms	4.46 kg/s			
Effective Moving Mass	Mms	88.5 g			
Half-space efficiency	Eff	3.2%			
BL Factor	BL	17.7 T.m			
Equivalent Cas air load	Vas	217 liters			
Effective piston area	Sd	0.0892 m^2			
Max. linear excursion ⁶	Xmax	± 7 mm			
Max. excursion before damage	Xdam	±17.4mm			
Voice coil inductance(1kHz)	Le	0.96 mH			
Efficiency Bandwidth Product	EBP	104			

MOUNTING INFORMATION				
Overall Diameter	390 mm			
Bolt Circle Diameter	398 mm			
Bolt Hole Diameter	6.5 mm			
Baffle Cutout Diameter	353 mm			
Overall Depth	165 mm			
Air volume occupied by driver	5.7 liters			
Net Weight	7.1 kg			
Shipping Weight	8.2 kg			
Shipping Box	430x430x205 mm			

Turbosonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dRSE 90 70. 200 Impedance magnitude curve measured in free air

190mm / 78 oz



NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- Vb: Net internal volume of box after subtracting the volume of internal objects.

HF

PSI5-76

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 15 inch 🔆 350 Watts **★ 37 ~ 2800 Hz ₩ 96 dB**



KEY FEATURES:

- 1 700 W continuous program power capacity
- 2 96dB Sensitivity 1w/1m
- ③ 37 ~ 2800Hz frequency response range
- ④ 76mm(3") SV-W voice coil

(5) Superb price/performance ration 6 Ideal for compact 2 or 3-way systems

GENERAL SPECIFICATIONS		THIELE – SMALL PARAMETERS ⁵			MOUNTING INFORMATION		
Nominal Diameter	380mm /15inch	Resonance frequency	Fs	37 Hz	Overall Diameter	387 mm	
Rated Impedance	8 ohm	DC resistance	Re	5.0 ohm	Bolt Circle Diameter	373 mm	
Nominal Power handling ¹	350 Watts	Mechanical factor	Qms	4.1	Bolt Hole Diameter	6.5 mm	
Program Power ²	700 Watts	Electrical factor	Qes	0.47	Baffle Cutout Diameter	355 mm	
Sensitivity(1w/1m) ³	96 dB	Total factor	Qts	0.42	Overall Depth	154 mm	
Frequency Range ⁴	37 ~ 2800Hz	Mechanical compliance	Cms	0.18 mm/N	Air volume occupied by driver	5.4 liters	
Minimum Impedance(Zmin)	5.8 ohm	Mechanical resistance	Rms	5.58 kg/s	Net Weight	5.8 kg	
Voice Coil Diameter	76mm /3inch	Effective Moving Mass	Mms	100 g	Shipping Weight	6.9 kg	
Voice Coil Material	SV-W	Half-space efficiency	Eff	1.8%	Shipping Box	430x430x205mm	
Former Material	Aluminum	BL Factor	BL	15.6 T.m	Also available in 40hm, da	ata upon request.	
Voice Coil Winding Depth	16 mm	Equivalent Cas air load	Vas	180 liters	erra de seu a		
Number of layers	2	Effective piston area	Sd	0.0830 m ²	国際語	変具	
Magnet gap depth	10 mm	Max. linear excursion ⁶	Xmax	± 6.5 mm	10 A	37.7E	
Basket	Pressed Steel	Max. excursion before damage	Xdam	± 15 mm	66.34V		
Flux Density	1.0T	Voice coil inductance(1kHz)	Le	1.17 mH			
Magnet Out Diameter/Wgt	170mm / 60 oz	Efficiency Bandwidth Product	EBP	79	回然論(975.A	





NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5.T/S parameters measured with laser system BEFORE preconditioning test.
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

HF

NEO

HE

76515

FERRITE

SUBWOOFER

NEO

LF

🔆 12 inch 🔆 550 Watts KLIPPEL ¥ 98.5 dB ¥ 55 ~ 2800 Hz



FERRITE WOOFER

MID-BASS



KEY FEATURES:

- ① 1100W continuous program power capacity
- 2 98.5dB sensitivity, 1w/1m
- 3 55~2800Hz frequency response range
- ④ 100mm(4") high temperature CCAW voice coil
- ④ Aluminum demodulating ring for lower distortion
- (5) Heavy duty ferrite magnet for higher power handling and increased force factor
- 6 Ideal for compact 2 or 3-way systems

GENERAL SPECIFICATIONS Nominal Diameter 300mm /12inch Rated Impedance 8 ohm Nominal Power handling 550 Watts Program Power² 1100 Watts Sensitivity(1w/1m)³ 98.5 dB Frequency Range⁴ 55 ~ 2800 Hz Minimum Impedance(Zmin) 7 ohm Voice Coil Diameter 100mm /4inch Voice Coil Material CCAW Former Material Glass Fiber Voice Coil Winding Depth 19.5 mm Number of layers 2(inside/outside) Magnet gap depth 12 mm Basket Cast Aluminum Flux Density 1.1T

THIELE – SMALL PARAMETERS"					
Resonance frequency	Fs	55 Hz			
DC resistance	Re	5.4 ohm			
Mechanical factor	Qms	15.2			
Electrical factor	Qes	0.270			
Total factor	Qts	0.266			
Mechanical compliance	Cms	0.11 mm/N			
Mechanical resistance of total-driver losses	Rms	1.7 kg/s			
Effective Moving Mass	Mms	75 g			
Half-space efficiency	Eff	2.7%			
BL Factor	BL	23.0 T.m			
Equivalent Cas air load	Vas	45 liters			
Effective piston area	Sd	$0.0539 \ m^2$			
Max. linear excursion ⁶	Xmax	±6.8 mm			
Max. excursion before damage	Xdam	±18 mm			
Voice coil inductance(1kHz)	Le	0.83 mH			
Efficiency Bandwidth Product	EBP	204			

MOUNTING INFORMATION			
Overall Diameter	313 mm		
Bolt Circle Diameter	294 mm		
Bolt Hole Diameter	6.5 mm		
Baffle Cutout Diameter	285 mm		
Overall Depth	125 mm		
Air volume occupied by driver	3.6 liters		
Net Weight	11 kg		
Shipping Weight	11.7 kg		
Shipping Box	345x345x170mm		

lurb@sonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber dBSP 100 90. 90 Impedance magnitude curve measured in free air

220mm / 125 oz



NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling
- 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and
- Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects

HF

Turbosonic

76015\5

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 12 inch 🔆 550 Watts KLIPPEL ¥ 97.5 dB ¥ 55 ~ 3000 Hz



KEY FEATURES:

- ① 1100 W continuous program power capacity
- 2 Sensitivity: 97.5dB 1w/1m
- ③ 55~3000Hz frequency response range
- ④ 3.4" inside/outside winding voice coil with CCAW wire

(5) M-roll cloth edge with deep corrugations for extended Xmax. 6 Idea for high quality compact 2 or 3-way systems

GENERAL SPECIFICATIONS		THIELE – SMALL PARAMETERS ⁵			MOUNTING INFORMATION		
Nominal Diameter	300mm /12inch	Resonance frequency	Fs	55 Hz	Overall Diameter	316 mm	
Rated Impedance	8 ohm	DC resistance	Re	5.0 ohm	Bolt Circle Diameter	297 mm	
Nominal Power handling ¹	550 Watts	Mechanical factor	Qms	13.6	Bolt Hole Diameter	6.5 mm	
Program Power ²	1100 Watts	Electrical factor	Qes	0.36	Baffle Cutout Diameter	283 mm	
Sensitivity(1w/1m) ³	97.5 dB	Total factor	Qts	0.35	Overall Depth	145 mm	
Frequency Range ^₄	55 ~ 3000Hz	Mechanical compliance	Cms	0.12 mm/N	Air volume occupied by driver	3.7 liters	
Minimum Impedance(Zmin)	6.3 ohm	Mechanical resistance	Rms	1.78 kg/s	Net Weight	7.4 kg	
Voice Coil Diameter	86mm /3.4inch	Effective Moving Mass	Mms	70 g	Shipping Weight	8.1 kg	
Voice Coil Material	CCAW	Half-space efficiency	Eff	2.2%	Shipping Box	345x345x180mm	
Former Material	Glass Fiber	BL Factor	BL	18.7 T.m			
Voice Coil Winding Depth	17 mm	Equivalent Cas air load	Vas	49 liters			
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0539 m ²		第 回 版	
Magnet gap depth	10 mm	Max. linear excursion ⁶	Xmax	± 6.7 mm			
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±20.5mm			
Flux Density	1.1 T	Voice coil inductance(1kHz)	Le	0.85 mH	19 43 - 2		
Magnet Out Diameter/Wgt	190mm / 95 oz	Efficiency Bandwidth Product	EBP	153	回來設備		



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

100

500

1000

2000

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

NEO LE

SUBWOOFER

FERRITE

FERRITE WOOFER **MID-BASS**

COAXIAL

NEO

HE

RSI2-76



🔆 12 inch 🔆 450 Watts **★ 59 ~ 2900 Hz ఈ 94 dB**



KEY FEATURES:

- 1 900W continuous program power capacity
- 2 94dB sensitivity, 1w/1m
- 3 59~2900Hz frequency response range
- ④ 76mm(3") high temperature copper voice coil
- (5) Heavy duty magnet
- 6 Single roll rubber edge
- \bigcirc Double silicon spiders
- 8 Ideal for compact subwoofer or woofer application

THIELE – SMALL PARAMETERS⁵ **GENERAL SPECIFICATIONS** Nominal Diameter 300mm /12inch Rated Impedance 4 ohm Nominal Power handling 450 Watts Program Power 900 Watts 94 dB Sensitivity(1w/1m) 59 ~ 2900 Hz Frequency Range Minimum Impedance(Zmin) 4 ohm Voice Coil Diameter 76mm /3inch Voice Coil Material Copper Fiber glass Former Material Voice Coil Winding Depth 18 mm 2 Number of layers Magnet gap depth 10 mm

Resonance frequency	Fs	59 Hz
DC resistance	Re	3.2 ohm
Mechanical factor	Qms	11.5
Electrical factor	Qes	0.48
Total factor	Qts	0.46
Mechanical compliance	Cms	0.0682 mm
Mechanical resistance of total-driver losses	Rms	3.4 kg/s
Effective Moving Mass	Mms	105 g
Half-space efficiency	Eff	1.1%
BL Factor	BL	16.2 T.m
Equivalent Cas air load	Vas	26 liters
Effective piston area	Sd	0.0519m ²
Max. linear excursion ⁶	Xmax	± 7 mm
Max. excursion before damage	Xdam	±25mm
Voice coil inductance(1kHz)	Le	0.89 mH
Efficiency Bandwidth Product	EBP	123

dB

-12

-18 -24 -30 -36

5 Hz

verall Diameter olt Circle Diameter olt Hole Diameter	316 mm 297 mm
olt Circle Diameter	297 mm
olt Hole Diameter	
	6.5 mm
affle Cutout Diameter	283 mm
verall Depth	149 mm
volume occupied by driver	3.7 liters
et Weight	8.2 kg
nipping Weight	9 kg
nipping Box	345x345x170mm
	verall Depth volume occupied by driver et Weight hipping Weight hipping Box so available in 80hm, d

lurb@soni



500

1000

2000



Cast Aluminum

190mm / 95 oz

1.2T

NOTES:

Basket

Flux Density

Magnet Out Diameter/Wgt

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling
- Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 33L/49Hz

Computer predicted low frequency response⁽⁷⁾

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

Vb/Fb=33L/49Hz

- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 53

HF

Turbosonic

I2DM450

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS





KEY FEATURES:

- 1 900 W continuous program power capacity
- 2 High sensitivity 98.5dB 1w/1m
- 3 56~3200Hz frequency response ragne
- ④ 3" inside/outside copper clad aluminum voice coil
- (5) Peak to Peak maximum excursion of 44mm
- 6 Aluminum dust cap guarantees great voice coil heat dissipation
- $\overline{\mathcal{O}}$ Double magnets allows a very high force factor and long driver displacement
- 8 Ideal for very compact 2-ways systems

GENERAL SPECIFICATIONS		THIELE - SMALL PARAMETERS ⁵			MOUNTING INFORMATION	
Nominal Diameter	300mm /12inch	Resonance frequency	Fs	56 Hz	Overall Diameter	316 mm
Rated Impedance	8 ohm	DC resistance	Re	5.4 ohm	Bolt Circle Diameter	297 mm
Nominal Power handling ¹	450 Watts	Mechanical factor	Qms	15.5	Bolt Hole Diameter	6.5 mm
Program Power ²	900 Watts	Electrical factor	Qes	0.34	Baffle Cutout Diameter	283 mm
Sensitivity(1w/1m) ³	98.5 dB	Total factor	Qts	0.33	Overall Depth	165 mm
Frequency Range⁴	56 ~ 3200Hz	Mechanical compliance	Cms	0.12 mm/N	Air volume occupied by driver	3.6 liters
Minimum Impedance(Zmin)	6.6 ohm	Mechanical resistance of total-driver losses	Rms	1.1 kg/s	Net Weight	9.5 kg
Voice Coil Diameter	76mm /3inch	Effective Moving Mass	Mms	67.1 g	Shipping Weight	10.5 kg
Voice Coil Material	CCAW	Half-space efficiency	Eff	2.6%	Shipping Box	345x345x200mm
Former Material	Fiber Glass	BL Factor	BL	19.6 T.m		
Voice Coil Winding Depth	18.7 mm	Equivalent Cas air load	Vas	50.6 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0551 m ²	日孫系	۶D
Magnet gap depth	10 mm	Max. linear excursion ⁶	Xmax	±6.8 mm		
Basket	Cast Aluminum	Max. excursion before damage	Xdam	± 22 mm	S. 200	日 12
Flux Density	1.3 T	Voice coil inductance(1kHz)	Le	0.89 mH	i a constanti a	

Efficiency Bandwidth Product

EBP

dB

-12

-18 -24 -30 -36

5 Hz

165

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=30L/59Hz



180mm / 136 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=21.5L/64Hz

Vb/Fb = 21.5L/64Hz

100

自己必要感

500

1000

2000

Hg is the gap depth.

Vb/Fb = 30L/59Hz

- 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 54

HF

S7012

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 12 inch 🔆 450 Watts **₩ 97 dB ★ 41 ~ 2700 Hz**



KEY FEATURES:

- 1 900 W continuous program power capacity
- 2 Sensitivity: 97dB 1w/1m

GENERAL SPECIFICATIONS

- ③ 3" inside/outside winding voice coil with aluminum wire
- ④ Improved heat dissipation via unique basket design and multiple backplate vents
- (5) FEA optimized magnet system design for low distortion and minimum power compression
- 6 Special treatment on cone in house for excellent performance
- ⑦ UK manufactured cone offers increased strength, durability and performance
- 8 Idea for high quality compact 2 or 3-way systems

Nominal Diameter 300mm /12inch Rated Impedance 8 ohm Nominal Power handling 450 Watts Program Power² 900 Watts Sensitivity(1w/1m)³ 97 dB Frequency Range⁴ 41~2700Hz Minimum Impedance(Zmin) 6.7 ohm Voice Coil Diameter 76mm /3inch Voice Coil Material Aluminum Former Material Glass Fiber Voice Coil Winding Depth 19 mm Number of layers 2(inside/outside) Magnet gap depth 10.5 mm

Resonance frequency	Fs	45 Hz
DC resistance	Re	5.4 ohm
Mechanical factor	Qms	8.2
Electrical factor	Qes	0.35
Total factor	Qts	0.34
Mechanical compliance	Cms	0.20 mm/N
Mechanical resistance of total-driver losses	Rms	2.11 kg/s
Effective Moving Mass	Mms	61.8 g
Half-space efficiency	Eff	2.11%
BL Factor	BL	16.3 T.m
Equivalent Cas air load	Vas	86 liters
Effective piston area	Sd	0.0552m ²
Max. linear excursion ⁶	Xmax	± 7 mm
Max. excursion before damage	Xdam	±17.7mm
Voice coil inductance(1kHz)	Le	1.1 mH
Efficiency Bandwidth Product	EBP	128
Mechanical factor Electrical factor Total factor Mechanical compliance Mechanical resistance of total-driver losses Effective Moving Mass Half-space efficiency BL Factor Equivalent Cas air load Effective piston area Max. linear excursion ⁶ Max. excursion before damage Voice coil inductance(1kHz) Efficiency Bandwidth Product	Qms Qes Cms Cms Ems Mms Eff BL Vas Sd Xmax Xdam Le EBP	8.2 0.35 0.20 mm/N 2.11 kg/s 61.8 g 2.11% 16.3 T.m 86 liters 0.0552m ² ± 7 mm ±17.7mm 1.1 mH 128

dB

-12

-18 -24

-30 -36

5 Hz

THIELE - SMALL PARAMETERS

MOUNTING INFORMATION				
Overall Diameter	316 mm			
Bolt Circle Diameter	297 mm			
Bolt Hole Diameter	6.5 mm			
Baffle Cutout Diameter	283 mm			
Overall Depth	145 mm			
Air volume occupied by driver	3.8 liters			
Net Weight	7.7 kg			
Shipping Weight	8.4 kg			
Shipping Box	345x345x180mm			
Also available in 160hm, data upon request.				



500

1000

2000

Vb/Fb=40L/50Hz



Cast Aluminum

200mm / 76 oz

1.15 T

NOTES:

Basket

Flux Density

Magnet Out Diameter/Wgt

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling
- . Sensitivity is measured at 1W input on rated impedance at 1m on axis 3
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5.T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 40L/50Hz

Computer predicted low frequency response⁽⁷⁾

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - - 55

HE

M5012

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

* 12 inch * 450 Watts **★ 50 ~ 2700 Hz ₩ 98 dB**



KEY FEATURES:

- 1 900 W continuous program power capacity
- 2 Sensitivity: 98dB 1w/1m
- 3 76mm(3") high temperature voice coil with flat aluminum wire

④ 7DF paper cone, made in USA 5 Idea for high quality compact 2 or 3-way systems

GENERAL SPECIFICATIONS Nominal Diameter 300mm /12inch

Rated Impedance	6 ohm
Nominal Power handling ¹	450 Watts
Program Power ²	900 Watts
Sensitivity(1w/1m) ³	98dB
Frequency Range ^₄	50 ~ 2700Hz
Minimum Impedance(Zmin)	5.4 ohm
Voice Coil Diameter	76mm /3inch
Voice Coil Material	Flat Aluminum
Former Material	Glass Fiber
Voice Coil Winding Depth	17 mm
Number of layers	1
Magnet gap depth	10 mm
Basket	Cast Aluminum
Flux Density	1.2 T
Magnet Out Diameter/Wgt	190mm / 78 oz

THIELE – SMALL PARAMETERS⁵					
Resonance frequency	Fs	54 Hz			
DC resistance	Re	4.2 ohm			
Mechanical factor	Qms	7.1			
Electrical factor	Qes	0.28			
Total factor	Qts	0.27			
Mechanical compliance	Cms	0.14 mm/N			
Mechanical resistance of total-driver losses	Rms	2.92 kg/s			
Effective Moving Mass	Mms	61 g			
Half-space efficiency	Eff	3.24%			
BL Factor	BL	17.5 T.m			
Equivalent Cas air load	Vas	59 liters			
Effective piston area	Sd	$0.0552m^2$			
Max. linear excursion ⁶	Xmax	± 6 mm			
Max. excursion before damage	Xdam	±18.5mm			
Voice coil inductance(1kHz)	Le	1.1 mH			
Efficiency Bandwidth Product	EBP	192			

dB

0

-12 -18 -24

-30 -36

56

5 Hz

MOUNTING INFORMATION **Overall Diameter** 316 mm **Bolt Circle Diameter** 297 mm **Bolt Hole Diameter** 6.5 mm **Baffle Cutout Diameter** 283 mm **Overall Depth** 145 mm Air volume occupied by driver 3.7 liters Net Weight 7.5 kg Shipping Weight 8.2 kg Shipping Box 345x345x180mm



500

1000

2000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 26L/60Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=26L/60Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=17L/70Hz

Vb/Fb = 17L/70Hz

- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

HF

M5212

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 12 inch 🔆 500 Watts ¥ 97.5 dB ¥ 45 ~ 3000 Hz



KEY FEATURES:

- ① 1000 W continuous program power capacity
- 2 Sensitivity: 97.5dB 1w/1m
- ③ 3" inside/outside winding voice coil with CCAW wire
- ④ Zero Self Noise white damper

- (5) FEA optimized magnet system design for low distortion and minimum power compression
- 6 M-roll cloth edge with deep corrugations for extended Xmax
- ⑦ RMD Paper cone, made in USA
- (8) Idea for high quality compact 2 or 3-way systems

	GENERAL SPECIFICATIONS		THIELE - SMALL P		
	Nominal Diameter	300mm /12inch	Resonance frequency		
	Rated Impedance	8 ohm	DC resistance		
	Nominal Power handling ¹	500 Watts	Mechanical factor		
	Program Power ²	1000 Watts	Electrical factor		
	Sensitivity(1w/1m) ³	97.5 dB	Total factor		
	Frequency Range ⁴	45 ~ 3000Hz	Mechanical compliance		
	Minimum Impedance(Zmin)	6.9 ohm	Mechanical resistance of total-driver losses		
	Voice Coil Diameter	76mm /3inch	Effective Moving Mass		
	Voice Coil Material	CCAW	Half-space efficiency		
	Former Material	Glass Fiber	BL Factor		
	Voice Coil Winding Depth	19 mm	Equivalent Cas air load		
	Number of layers	2(inside/outside)	Effective piston area		
	Magnet gap depth	10.5 mm	Max. linear excursion ⁶		
	Basket	Cast Aluminum	Max. excursion before d		
	Flux Density	1.2 T	Voice coil inductance(1)		
	Magnet Out Diameter/Wgt	190mm / 78 oz	Efficiency Bandwidth Pro		

THIELE - SMALL PARAM	ETERS	
Resonance frequency	Fs	49 Hz
DC resistance	Re	5.3 ohm
Mechanical factor	Qms	9.4
Electrical factor	Qes	0.32
Total factor	Qts	0.31
Mechanical compliance	Cms	0.16 mm/N
Mechanical resistance of total-driver losses	Rms	2.2 kg/s
Effective Moving Mass	Mms	66 g
Half-space efficiency	Eff	2.3%
BL Factor	BL	18.4 T.m
Equivalent Cas air load	Vas	65 liters
Effective piston area	Sd	0.0539 m^2
Max. linear excursion ⁶	Xmax	± 7 mm
Max. excursion before damage	Xdam	±17.7mm
Voice coil inductance(1kHz)	Le	1.1 mH
Efficiency Bandwidth Product	EBP	153

dB

-12 -18 -24

-30

-36

5 Hz

MOUNTING INFORMATION					
Overall Diameter	316 mm				
Bolt Circle Diameter	297 mm				
Bolt Hole Diameter	6.5 mm				
Baffle Cutout Diameter	283 mm				
Overall Depth	145 mm				
Air volume occupied by driver	3.7 liters				
Net Weight	7.7 kg				
Shipping Weight	8.4 kg				
Shipping Box	345x345x180mm				



500

1000

2000

Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dBSP 100.0 90.0 70.1 VIII 60.0 200 500 1k 2k Hz 5k 10k 20k Impedance magnitude curve measured in free air 20 100

NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 40L/50Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=30L/53Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 57

HF

M5612

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 12 inch 🔆 400 Watts KLIPPEL **₩ 98 dB ★ 58 ~ 3000 Hz**



KEY FEATURES:

- 1 800 W continuous program power capacity
- 2 Sensitivity: 98dB 1w/1m
- 3 58~3000Hz frequency response range
- ④ 3" CCAW sandwich voice coil for low power compression
- (5) Non pressed cone to supply additional damping, solid paper dust cap 6 Black Nomex spider
- ⑦ Aluminum Demodulating Ring for lower distortion
- 8 Idea for high quality compact 2 or 3-way systems

GENERAL SPECIFICATIONS		THIELE - SMALL PARAM	IETERS	5	MOUNTING INFORMATION		
Nominal Diameter	300mm /12inch	Resonance frequency	Fs	58 Hz	Overall Diameter	316 mm	
Rated Impedance	8 ohm	DC resistance	Re	5.6 ohm	Bolt Circle Diameter	297 mm	
Nominal Power handling ¹	400 Watts	Mechanical factor	Qms	11.8	Bolt Hole Diameter	6.5 mm	
Program Power ²	800 Watts	Electrical factor	Qes	0.344	Baffle Cutout Diameter	283 mm	
Sensitivity(1w/1m) ³	98 dB	Total factor	Qts	0.336	Overall Depth	145 mm	
Frequency Range⁴	58 ~ 3000Hz	Mechanical compliance	Cms	0.11 mm/N	Air volume occupied by driver	3.7 liters	
Minimum Impedance(Zmin)	6.6 ohm	Mechanical resistance of total-driver losses	Rms	1.5 kg/s	Net Weight	7.8 kg	
Voice Coil Diameter	76mm /3inch	Effective Moving Mass	Mms	65.5 g	Shipping Weight	8.5 kg	
Voice Coil Material	CCAW	Half-space efficiency	Eff	2.55%	Shipping Box	345x345x180mm	
Former Material	Glass Fiber	BL Factor	BL	19.8 T.m			
Voice Coil Winding Depth	18 mm	Equivalent Cas air load	Vas	49 liters			
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0551 m ²		新日	
Magnet gap depth	10.5 mm	Max. linear excursion ⁶	Xmax	± 6.6 mm	22 T	τ. T	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±18.2mm	631266		
Flux Density	1.2 T	Voice coil inductance(1kHz)	Le	0.72 mH	正 在 22		
Magnet Out Diameter/Wgt	190mm / 78 oz	Efficiency Bandwidth Product	EBP	168	回接法律	2023 2023	

dB

-12 -18 -24 -30 -36

5 Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=35L/66Hz

Efficiency Bandwidth Product



190mm / 78 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

100

Vb/Fb = 22L/65Hz

Vb/Fb=22L/65Hz

500

1000

2000

Hg is the gap depth.

Vb/Fb = 35L/66Hz

- 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 58

HF

CI2-400

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

* 12 inch * 400 Watts **ఈ 97 dB ★ 49 ~ 3500 Hz**



KEY FEATURES:

- 1 800 W continuous program power capacity
- 2 97dB 1w/1m sensitivity
- ③ 3" copper clad aluminum voice coil with fiberglass former
- (4) Vented back plate increases airflow to provide enhanced cooling ⑤ Idea for compact 2 way systems

GENERAL SPECIFICATIONS

Nominal Diameter	300mm /12inch
Rated Impedance	8 ohm
Nominal Power handling ¹	400 Watts
Program Power ²	800 Watts
Sensitivity(1w/1m) ³	97 dB
Frequency Range ^₄	49 ~ 3500Hz
Minimum Impedance(Zmin)	6.9 ohm
Voice Coil Diameter	76mm /3inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	17.5 mm
Number of layers	2
Magnet gap depth	9.5 mm
Basket	Cast Aluminum
Flux Density	1.1 T
Magnet Out Diameter/Wgt	180mm / 80 oz

THILLE SWALL FARAIN		
Resonance frequency	Fs	49 Hz
DC resistance	Re	5.3 ohm
Mechanical factor	Qms	13.4
Electrical factor	Qes	0.43
Total factor	Qts	0.42
Mechanical compliance	Cms	0.17 mm/N
Mechanical resistance of total-driver losses	Rms	1.42 kg/s
Effective Moving Mass	Mms	61.3 g
Half-space efficiency	Eff	1.92%
BL Factor	BL	15.3 T.m
Equivalent Cas air load	Vas	71 liters
Effective piston area	Sd	0.0552 m^2
Max. linear excursion ⁶	Xmax	±6.5 mm
Max. excursion before damage	Xdam	±19 mm
Voice coil inductance(1kHz)	Le	1.0 mH
Efficiency Bandwidth Product	EBP	113

dB

-12

-18 -24 -30 -36

5 Hz

MOUNTING INFORMATION		
Overall Diameter	316 mm	
Bolt Circle Diameter	297 mm	
Bolt Hole Diameter	6.5 mm	
Baffle Cutout Diameter	283 mm	
Overall Depth	145 mm	
Air volume occupied by driver	3.6 liters	
Net Weight	6.7 kg	
Shipping Weight	7.4 kg	
Shipping Box	345x345x180mm	

Turbosonic



500

1000

2000

Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dRSE 100 90 ++++ 24 5 204 Impedance magnitude curve measured in free air

NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.

5.T/S parameters measured with laser system BEFORE preconditioning test.

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=70L/45Hz

Vb/Fb = 70L/45Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=44L/51Hz

100

Vb/Fb = 44L/51Hz

- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.
 - 59

Iurb@soni

NEO

HF

U8012

FERRITE

SUBWOOFER

NEO

LF





FERRITE WOOFER

MID-BASS



KEY FEATURES:

- 1 800 W continuous program power capacity
- 2 Sensitivity: 97.5dB 1w/1m
- 3 Very smooth response up to 3000Hz
- ④ 76mm(3") inside/outsdie copper clad aluminum voice coil
- (5) Non pressed cone to supply additional damping
- 6 Unique eight-sided (Octagon) die-cast aluminum basket
- ${f {\Bbb T}}$ FEA optimized magnetic circuit; a colorful aluminum ring on the back plate
- (8) Ideal for compact reflex enclosures and two way systems

GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAM	IETERS	5	MOUNTING INFORM	IATION
Nominal Diameter	300mm /12inch	Resonance frequency	Fs	45 Hz	Overall Diameter	312 mm
Rated Impedance	8 ohm	DC resistance	Re	4.2 ohm	Bolt Circle Diameter	316 mm
Nominal Power handling ¹	400 Watts	Mechanical factor	Qms	12.2	Bolt Hole Diameter	6.5 mm
Program Power ²	800 Watts	Electrical factor	Qes	0.35	Baffle Cutout Diameter	383 mm
Sensitivity(1w/1m) ³	97.5 dB	Total factor	Qts	0.34	Overall Depth	145 mm
Frequency Range⁴	45 ~ 3000Hz	Mechanical compliance	Cms	0.18 mm/N	Air volume occupied by driver	3.6 liters
Minimum Impedance(Zmin)	6.4 ohm	Mechanical resistance	Rms	1.57 kg/s	Net Weight	6.5 kg
Voice Coil Diameter	76mm /3inch	Effective Moving Mass	Mms	67 g	Shipping Weight	7.2 kg
Voice Coil Material	CCAW	Half-space efficiency	Eff	1.9%	Shipping Box	345x345x180 mm
Former Material	Glass Fiber	BL Factor	BL	15.3 T.m		
Voice Coil Winding Depth	19 mm	Equivalent Cas air load	Vas	75.8 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0539 m ²	回統諸	別回
Magnet gap depth	10 mm	Max. linear excursion ⁶	Xmax	± 7.1 mm		224
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±17.3mm		
Flux Density	1.1 T	Voice coil inductance(1kHz)	Le	0.78 mH	E SAN CE	3.90
Magnet Out Diameter/Wat	180mm / 68 oz	Efficiency Bandwidth Product	EBP	128	回於深	0H0

Efficiency Bandwidth Product

EBP

dB

0 -6

-12

-18 -24 -30 -36

5 Hz

10

128

Computer predicted low frequency response⁽⁷⁾



180mm / 68 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

50

Vb/Fb=36L/49.5Hz

100

500

1000

2000

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

Vb/Fb = 36L/49.5Hz

HF

BLI2-65

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

* 12 inch * 350 Watts **★ 50 ~ 2800 Hz ₩ 96 dB**



KEY FEATURES:

- 1 700W continuous program power capacity
- 2 96dB sensitivity, 1w/1m
- ③ 65mm(2.5") copper clad aluminum voice coil with fiberglass former
- ④ FEA optimized magnet system design for lower distortion and minimum power compression
- ⁽⁵⁾ Aluminum demodulating ring for lower distortion
- 6 Ideal for high quality compact 2 or 3-way systems

Computer predicted low frequency response⁽⁷⁾

GENERAL SPECIFICAT	IONS	THIELE – SMALL PARAM	IETERS	
Nominal Diameter	300mm /12inch	Resonance frequency	Fs	51 Hz
Rated Impedance	8 ohm	DC resistance	Re	5.3 ohm
Nominal Power handling ¹	350 Watts	Mechanical factor	Qms	10.5
Program Power ²	700 Watts	Electrical factor	Qes	0.4
Sensitivity(1w/1m) ³	96 dB	Total factor	Qts	0.39
Frequency Range⁴	50 ~ 2800 Hz	Mechanical compliance	Cms	0.14 mm/N
Minimum Impedance(Zmin)	6.7 ohm	Mechanical resistance of total-driver losses	Rms	2.17 kg/s
Voice Coil Diameter	65mm /2.5inch	Effective Moving Mass	Mms	71 g
Voice Coil Material	CCAW	Half-space efficiency	Eff	1.7%
Former Material	Glass Fiber	BL Factor	BL	17.4 T.m
Voice Coil Winding Depth	17 mm	Equivalent Cas air load	Vas	54 liters
Number of layers	4	Effective piston area	Sd	0.0531 m ²
Magnet gap depth	9.5 mm	Max. linear excursion ⁶	Xmax	± 6.3 mm
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±18.2mm
Flux Density	0.9T	Voice coil inductance(1kHz)	Le	1.1 mH
Magnet Out Diameter/Wgt	170mm / 65 oz	Efficiency Bandwidth Product	EBP	128

MOUNTING INFORMATION			
Overall Diameter	322 mm		
Bolt Circle Diameter	303 mm		
Bolt Hole Diameter	6.5 mm		
Baffle Cutout Diameter	288 mm		
Overall Depth	152 mm		
Air volume occupied by driver	3.3 liters		
Net Weight	6 kg		
Shipping Weight	6.7 kg		
Shipping Box	345x345x180mm		



500

1000

2000

Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dBSP 100. 20.0 90.1 80.0 70 60.0 200 Impedance magnitude curve measured in free air

NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 36L/51Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

-50

Vb/Fb=36L/51Hz

100

- - 61

dB

-12

-18 -24

-30 -36

5 Hz

HF

ISI2-65

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 12 inch 🔆 300 Watts **★ 47 ~ 5100 Hz ♦ 96 dB**



KEY FEATURES:

- 1 600 W continuous program power capacity
- 2 96dB Sensitivity 1w/1m
- ③ 47 ~ 5100Hz frequency response range
- ④ CCAW wire wounded on polyimide former for higher SPL
- **⑤** Push terminal
- 6 Copper shorting ring ensures extremely linear impedance and minimized distortion
- ⑦ Ideal for vented enclosure

GENERAL SPECIFICATIONS Nominal Diameter 300mm /12inch

	00011111/12111011
Rated Impedance	8 ohm
Nominal Power handling ¹	300 Watts
Program Power ²	600 Watts
Sensitivity(1w/1m) ³	96 dB
Frequency Range ⁴	47 ~ 5100Hz
Minimum Impedance(Zmin)	7.1 ohm
Voice Coil Diameter	65mm /2.5inch
Voice Coil Material	CCAW
Former Material	Polyimide
Voice Coil Winding Depth	16.2 mm
Number of layers	2
Magnet gap depth	9.5 mm
Basket	Pressed Steel
Flux Density	1.0 T
Magnet Out Diameter/Wgt	156mm / 54 oz

THIELE - SMALL PARAM	ETERS	
Resonance frequency	Fs	47 Hz
DC resistance	Re	5.4 ohm
Mechanical factor	Qms	11.3
Electrical factor	Qes	0.45
Total factor	Qts	0.43
Mechanical compliance	Cms	0.21mm/N
Mechanical resistance of total-driver losses	Rms	1.4 kg/s
Effective Moving Mass	Mms	53 g
Half-space efficiency	Eff	1.9%
BL Factor	BL	13.8 T.m
Equivalent Cas air load	Vas	83 liters
Effective piston area	Sd	0.0531 m ²
Max. linear excursion ⁶	Xmax	± 5.6 mm
Max. excursion before damage	Xdam	±15.6mm
Voice coil inductance(1kHz)	Le	0.47 mH
Efficiency Bandwidth Product	EBP	104

dB

-12

-18 -24

-30 -36

5 Hz

MOUNTING INFORM	IATION	
Overall Diameter	305.5 mm	
Bolt Circle Diameter	294.5 mm	
Bolt Hole Diameter	6.5 mm	
Baffle Cutout Diameter	280.5 mm	
Overall Depth	130 mm	
Air volume occupied by driver	3.1 liters	
Net Weight	4.9 kg	
Shipping Weight	5.6 kg	
Shipping Box	350x350x185 mm	

Turb@sonic



500

1000

2000





- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 55L/48Hz

Computer predicted low frequency response⁽⁷⁾

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

50

Vb/Fb=55L/48Hz

- - 62

HF

Turb@sonic

PSI2-65

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

* 12 inch * 250 Watts **★ 53 ~ 3000 Hz ₩ 95 dB**



KEY FEATURES:

- 1 500 W continuous program power capacity
- 2 95dB Sensitivity 1w/1m
- ③ 53 ~ 3000Hz frequency response range
- ④ 2.5" high temperature voice coil wounded on polyimide former

(5) Pressed paper cone to improve the high frequency response 6 Ideal for compact two-way system or midbass application

GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAM	IETERS	5	MOUNTING INFORM	1ATION
Nominal Diameter	300mm /12inch	Resonance frequency	Fs	56 Hz	Overall Diameter	311 mm
Rated Impedance	8 ohm	DC resistance	Re	5.3 ohm	Bolt Circle Diameter	294 mm
Nominal Power handling ¹	250 Watts	Mechanical factor	Qms	4.1	Bolt Hole Diameter	6.5 mm
Program Power ²	500 Watts	Electrical factor	Qes	0.59	Baffle Cutout Diameter	279 mm
Sensitivity(1w/1m) ³	95 dB	Total factor	Qts	0.51	Overall Depth	125 mm
Frequency Range⁴	53 ~ 3000Hz	Mechanical compliance	Cms	0.11 mm/N	Air volume occupied by driver	2.9 liters
Minimum Impedance(Zmin)	6.3 ohm	Mechanical resistance of total-driver losses	Rms	6.13 kg/s	Net Weight	4.3 kg
Voice Coil Diameter	65mm /2.5inch	Effective Moving Mass	Mms	70 g	Shipping Weight	5 kg
Voice Coil Material	Copper	Half-space efficiency	Eff	1.3%	Shipping Box	345x345x180mm
Former Material	Polyimide	BL Factor	BL	15 T.m	Also available in 40hm, da	ata upon request.
Voice Coil Winding Depth	16 mm	Equivalent Cas air load	Vas	46 liters	100 A.V.A	
Number of layers	2	Effective piston area	Sd	0.0539 m ²	电路线级电	
Magnet gap depth	8 mm	Max. linear excursion ⁶	Xmax	± 6 mm	28 2 Hz	<i>新先</i>
Basket	Pressed Steel	Max. excursion before damage	Xdam	±14.7mm	36.54 S	
Flux Density	1.0T	Voice coil inductance(1kHz)	Le	1.2 mH		ne na Al
Magnet Out Diameter/Wgt	156mm / 50 oz	Efficiency Bandwidth Product	EBP	95	回然得到	975 A



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity

5.T/S parameters measured with laser system BEFORE preconditioning test.

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

NEO HF

Jeoio

NEO

LF

FERRITE

SUBWOOFER



FERRITE WOOFER

MID-BASS

🔆 10 inch 🔆 400 Watts **ఈ 97 dB ★ 55 ~ 3500 Hz**



KEY FEATURES:

- 1 800 W continuous program power capacity
- 2 97 dB Sensitivity 1w/1m
- 3 55Hz ~3500Hz frequency response range
- ④ 3" inside/outside copper clad aluminum voice coi

5	Heavy duty magnet structure
6	Ideal for high quality 2-way systems

S22

GENERAL SPECIFICATIONS		THIELE - SMALL PARAMETER		
Nominal Diameter	250mm /10inch	Resonance frequency	Fs	
Rated Impedance	8 ohm	DC resistance	Re	
Nominal Power handling ¹	400 Watts	Mechanical factor	Qms	
Program Power ²	800 Watts	Electrical factor	Qes	
Sensitivity(1w/1m)3	97 dB	Total factor	Qts	
Frequency Range⁴	55 ~ 3500 Hz	Mechanical compliance	Cms	
Minimum Impedance(Zmin)	6.4 ohm	Mechanical resistance of total-driver losses	Rms	
Voice Coil Diameter	76mm /3inch	Effective Moving Mass	Mms	
Voice Coil Material	CCAW	Half-space efficiency	Eff	
Former Material	Fiberglass	BL Factor	BL	
Voice Coil Winding Depth	15 mm	Equivalent Cas air load	Vas	
Number of layers	2(inside/outside)	Effective piston area	Sd	
Magnet gap depth	10 mm	Max. linear excursion ⁶	Xmax	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	
Flux Density	1.2 T	Voice coil inductance(1kHz)	Le	
Magnet Out Diameter/Wgt	180mm / 80 oz	Efficiency Bandwidth Product	EBP	

esonance frequency	Fs	58 Hz
C resistance	Re	5.6 ohm
echanical factor	Qms	10
ectrical factor	Qes	0.31
otal factor	Qts	0.30
echanical compliance	Cms	0.18 mm/N
echanical resistance of total-driver losses	Rms	1.4 kg/s
fective Moving Mass	Mms	41 g
alf-space efficiency	Eff	1.98%
Factor	BL	16.5 T.m
quivalent Cas air load	Vas	32 liters
fective piston area	Sd	0.0356 m ²
ax. linear excursion6	Xmax	± 5 mm
ax. excursion before damage	Xdam	±16.5mm
pice coil inductance(1kHz)	Le	0.7 mH
ficiency Bandwidth Product	EBP	187

dB

6

0 -6

-12

-18

-24

-30 -36

5 Hz

10

Vb/Fb = 15L/62Hz

MOUNTING INFORMATION			
Overall Diameter	261 mm		
Bolt Circle Diameter	246 mm		
Bolt Hole Diameter	5.5 mm		
Baffle Cutout Diameter	228 mm		
Overall Depth	128 mm		
Air volume occupied by driver	2.0 liters		
Net Weight	6.5 kg		
Shipping Weight	7.1 kg		
Shipping Box	295x295x155mm		



500

2000

1000



NOTES:

- 1. AES standard
- Program Power is defined as 3 dB greater than the nominal power handling.
 Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.

Computer predicted low frequency response⁽⁷⁾

5. T/S parameters are measured with laser system BEFORE preconditioning test.
6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb=15L/62Hz

100

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.
HF

IODM350

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 10 inch 🔆 350 Watts VERIFIED WITH KLIPPEL ★ 96.5 dB ★ 63 ~ 3500 Hz



KEY FEATURES:

- 1 700 W continuous program power capacity
- 2 96.5dB sensitivity 1w/1m
- ③ 63~3500Hz frequency response ragne
- (4) 2.5" inside/outside copper clad aluminum voice coil
- (5) Peak to Peak maximum excursion of 36mm
- 6 Double magnets allows a very high force factor and long driver displacement
- ⑦ Ideal for very compact 2-ways systems

GENERAL SPECIFICATIONS		THIELE - SMALL PARAM	ARAMETERS⁵		MOUNTING INFORMATION		
Nominal Diameter	250mm /10inch	Resonance frequency	Fs	63 Hz	Overall Diameter	261 mm	
Rated Impedance	8 ohm	DC resistance	Re	5.3 ohm	Bolt Circle Diameter	246 mm	
Nominal Power handling ¹	350 Watts	Mechanical factor	Qms	13.1	Bolt Hole Diameter	5.5 mm	
Program Power ²	700 Watts	Electrical factor	Qes	0.36	Baffle Cutout Diameter	228 mm	
Sensitivity(1w/1m) ³	96.5 dB	Total factor	Qts	0.36	Overall Depth	137 mm	
Frequency Range ^₄	63~ 3500Hz	Mechanical compliance	Cms	0.15 mm/N	Air volume occupied by driver	1.9 liters	
Minimum Impedance(Zmin)	6.4 ohm	Mechanical resistance of total-driver losses	Rms	0.89 kg/s	Net Weight	6.4 kg	
Voice Coil Diameter	65mm /2.5inch	Effective Moving Mass	Mms	42.6 g	Shipping Weight	7.0 kg	
Voice Coil Material	CCAW	Half-space efficiency	Eff	1.7%	Shipping Box	295x295x175mm	
Former Material	Fiberglass	BL Factor	BL	15.7 T.m			
Voice Coil Winding Depth	17.5 mm	Equivalent Cas air load	Vas	25.1 liters			
Number of layers	2(Inside/outside)	Effective piston area	Sd	0.0346 m ²	回時時		
Magnet gap depth	8 mm	Max. linear excursion ⁶	Xmax	±6.7 mm			
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±18 mm	18 A 18		
Flux Density	1.3T	Voice coil inductance(1kHz)	Le	0.74 mH	明光版	<u> 2019 00</u>	

Efficiency Bandwidth Product



156mm / 100 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and
- Hg is the gap depth.

EBP

- 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 65



M56IO

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 10 inch 🔆 250 Watts KLIPPEL 🔆 95.5 dB 🔆 57 ~ 4000 Hz



KEY FEATURES:

- 1 500 W continuous program power capacity
- 2 95.5dB sensitivity 1w/1m
- ③ 57~4000Hz frequency response ragne

4 2.5" copper wire, wound on fiberglass former ⑤ Ideal for compact 2-way systems

GENERAL SPECIFICATIONS		THIELE - SMALL PARAM	ETERS ⁵ MOUNTING INFORM		IATION	
Nominal Diameter	250mm /10inch	Resonance frequency	Fs	57 Hz	Overall Diameter	261 mm
Rated Impedance	8 ohm	DC resistance	Re	5.3 ohm	Bolt Circle Diameter	246 mm
Nominal Power handling ¹	250 Watts	Mechanical factor	Qms	13.0	Bolt Hole Diameter	5.5 mm
Program Power ²	500 Watts	Electrical factor	Qes	0.41	Baffle Cutout Diameter	228 mm
Sensitivity(1w/1m) ³	95.5 dB	Total factor	Qts	0.40	Overall Depth	114 mm
Frequency Range⁴	57 ~ 4000Hz	Mechanical compliance	Cms	0.19 mm/N	Air volume occupied by driver	1.8 liters
Minimum Impedance(Zmin)	6.5 ohm	Mechanical resistance	Rms	1.13 kg/s	Net Weight	4.2 kg
Voice Coil Diameter	65mm /2.5inch	Effective Moving Mass	Mms	41.1 g	Shipping Weight	4.7 kg
Voice Coil Material	SV-W(Copper)	Half-space efficiency	Eff	1.4%	Shipping Box	275x275x130mm
Former Material	Fiberglass	BL Factor	BL	13.8 T.m		
Voice Coil Winding Depth	16.2 mm	Equivalent Cas air load	Vas	31.9 liters	回認識	送回
Number of layers	2	Effective piston area	Sd	0.0346 m ²	124.00	104
Magnet gap depth	8 mm	Max. linear excursion ⁶	Xmax	± 6.1 mm	52000	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±14.9mm		
Flux Density	1.1T	Voice coil inductance(1kHz)	Le	0.75 mH		анца Maria
Magnet Out Diameter/Wgt	156mm / 50 oz	Efficiency Bandwidth Product	EBP	139		



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after a 200W AES power preconditioning test and represent the expected long term parameters after a short term of use

500

1000

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- Vb: Net internal volume of box after subtracting the volume of internal objects.
 - 66

HF

BLIO-65

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 10 inch 🔆 300 Watts **★ 61 ~ 4000 Hz ఈ 94 dB**



KEY FEATURES:

- ① 600W continuous program power capacity
- 2 94dB sensitivity, 1w/1m
- ③ 65mm(2.5") copper clad aluminum voice coil with fiberglass former
- ④ FEA optimized magnet system design for lower distortion and minimum power compression
- ⁽⁵⁾ Aluminum demodulating ring for lower distortion
- 6 Ideal for high quality compact 2 or 3-way systems

GENERAL SPECIFICATIONS

Nominal Diameter	250mm /10inch
Rated Impedance	8 ohm
Nominal Power handling ¹	300 Watts
Program Power ²	600 Watts
Sensitivity(1w/1m) ³	94 dB
Frequency Range ⁴	61 ~ 4000 Hz
Minimum Impedance(Zmin)	6.6 ohm
Voice Coil Diameter	65mm /2.5inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	15 mm
Number of layers	4
Magnet gap depth	9.5 mm
Basket	Cast Aluminum
Flux Density	0.8T
Magnet Out Diameter/Wgt	156mm / 52 oz

Resonance frequency	Fs	61 Hz
DC resistance	Re	5.3 ohm
Mechanical factor	Qms	10.7
Electrical factor	Qes	0.38
Total factor	Qts	0.36
Mechanical compliance	Cms	0.16 mm/N
Mechanical resistance of total-driver losses	Rms	1.5 kg/s
Effective Moving Mass	Mms	41 g
Half-space efficiency	Eff	1.68%
BL Factor	BL	15 T.m
Equivalent Cas air load	Vas	29 liters
Effective piston area	Sd	$0.0356 \ m^2$
Max. linear excursion ⁶	Xmax	± 5.5 mm
Max. excursion before damage	Xdam	±17.3mm
Voice coil inductance(1kHz)	Le	1.03 mH
Efficiency Bandwidth Product	EBP	162

dB

-12

-18 -24

-30 -36

5 Hz

MOUNTING INFORMATION				
Overall Diameter	266 mm			
Bolt Circle Diameter	252 mm			
Bolt Hole Diameter	6.5 mm			
Baffle Cutout Diameter	232 mm			
Overall Depth	117 mm			
Air volume occupied by driver	2 liters			
Net Weight	4.9 kg			
Shipping Weight	5.5 kg			
Shipping Box	275x275x145mm			



500

1000

2000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 22L/59Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=22L/59Hz

Vb/Fb=16L/64Hz

100

Vb/Fb = 16L/64Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.
 - 67

U8010

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 10 inch 🔆 280 Watts KLIPPEL **※ 97 dB ★ 55 ~ 3600 Hz**



KEY FEATURES:

GENERAL SPECIFICATIONS

Magnet Out Diameter/Wgt

- 1 560 W continuous program power capacity
- 2 High output, 97dB sensitivity 1w/1m
- ③ Very smooth response up to 2.1kHz
- ④ 65mm(2.5") copper clad aluminum voice coil, wound on fiberglass former
- ⑤ Unique eight-sided (Octagon) die-cast aluminum basket
- 6 FEA optimized magnetic circuit; the colorful aluminum ring on the back for print
- 1 Ideal for compact reflex enclosures and two way systems

Nominal Diameter	250mm /10inch
Rated Impedance	8 ohm
Nominal Power handling ¹	280 Watts
Program Power ²	560 Watts
Sensitivity(1w/1m) ³	97 dB
Frequency Range⁴	55 ~ 3600Hz
Minimum Impedance(Zmin)	6.0 ohm
Voice Coil Diameter	65mm /2.5inch
Voice Coil Material	CCAW
Former Material	Fiberglass
Voice Coil Winding Depth	16 mm
Number of layers	2
Magnet gap depth	8 mm
Basket	Cast Aluminum
Flux Density	1.2T

THIELE - SMALL PARAM	IETERS*	
Resonance frequency	Fs	55 Hz
DC resistance	Re	5.0 ohm
Mechanical factor	Qms	9.0
Electrical factor	Qes	0.34
Total factor	Qts	0.33
Mechanical compliance	Cms	0.22 mm/N
Mechanical resistance of total-driver losses	Rms	1.45 kg/s
Effective Moving Mass	Mms	37.7 g
Half-space efficiency	Eff	1.8%
BL Factor	BL	14.0 T.m
Equivalent Cas air load	Vas	37.6 liters
Effective piston area	Sd	0.0346 m^2
Max. linear excursion ⁶	Xmax	±6.0 mm
Max. excursion before damage	Xdam	±17 mm
Voice coil inductance(1kHz)	Le	0.68 mH
Efficiency Bandwidth Product	EBP	162

dB

-12 -18 -24 -30 -36

> 5 Hz 10

MOUNTING INFORMATION					
Overall Diameter	264 mm				
Bolt Circle Diameter	264 mm				
Bolt Hole Diameter	6.5 mm				
Baffle Cutout Diameter	223 mm				
Overall Depth	114 mm				
Air volume occupied by driver	1.9 liters				
Net Weight	4.8 kg				
Shipping Weight	5.3 kg				
Shipping Box	275x275x130mm				

Turb@sonic





170mm / 60 oz

NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use

Vb/Fb=15L/63Hz

500

Vb/Fb = 15L/63Hz

1 K

5 K 10 K 20 K

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

50 100

Vb/Fb = 26L/56Hz

Computer predicted low frequency response⁽⁷⁾

M5010

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 10 inch 🔆 180 Watts **★ 55 ~ 2800 Hz ☀ 95 dB**

NEO

HF



KEY FEATURES:

- 1 360 W continuous program power capacity
- 2 High sensitivity: 95dB/1w/1m
- 3 55 ~ 2800Hz frequency response range
- (4) 2" copper voice coil wounded on fiberglass former

(5) Semi-pressed paper cone with pressed dust cap 6 Ideal for compact multi-way systems or woofer application

GENERAL SPECIFICATIONS		THIELE - SMALL PARAM	PARAMETERS ⁵ MOUNTING INFORMATIO			IATION
Nominal Diameter	250mm /10inch	Resonance frequency	Fs	58 Hz	Overall Diameter	261 mm
Rated Impedance	8 ohm	DC resistance	Re	5.3 ohm	Bolt Circle Diameter	246 mm
Nominal Power handling ¹	180 Watts	Mechanical factor	Qms	8.6	Bolt Hole Diameter	5.5 mm
Program Power ²	360 Watts	Electrical factor	Qes	0.39	Baffle Cutout Diameter	228 mm
Sensitivity(1w/1m) ³	95 dB	Total factor	Qts	0.37	Overall Depth	113 mm
Frequency Range⁴	55 ~ 2800Hz	Mechanical compliance	Cms	0.20 mm/N	Air volume occupied by driver	1.7 liters
Minimum Impedance(Zmin)	6.5 ohm	Mechanical resistance	Rms	1.5 kg/s	Net Weight	3.5 kg
Voice Coil Diameter	50mm /2inch	Effective Moving Mass	Mms	36.5 g	Shipping Weight	4 kg
Voice Coil Material	Copper	Half-space efficiency	Eff	1.7%	Shipping Box	275x275x130mm
Former Material	Fiberglass	BL Factor	BL	13.5 T.m		
Voice Coil Winding Depth	18 mm	Equivalent Cas air load	Vas	35 liters		
Number of layers	2	Effective piston area	Sd	0.0350 m ²		新日
Magnet gap depth	8 mm	Max. linear excursion ⁶	Xmax	± 6.5 mm		
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±14.3mm		Sie e
Flux Density	1.1T	Voice coil inductance(1kHz)	Le	0.91 mH		S-24

Efficiency Bandwidth Product

EBP

dB

0

-12

-18 -24

-30 -36

5 Hz

10

148

Computer predicted low frequency response⁽⁷⁾



140mm / 45 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 21L/60Hz

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.
 - - 69



500

1000

2000

b=21L/60Hz

Turbosonic

NEO

HF

V30I0m/8

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 10 inch 🔆 300 Watts **ఈ 97 dB ★ 60 ~ 4800 Hz**



KEY FEATURES:

- 1 600 W continuous program power capacity
- 2 High sensitivity 97dB/1w/1m
- 3 Very smooth response up to 4.8k Hz
- (4) 2.5" inside/outside copper clad aluminum voice coil

5	uminum demodulating ring for very low distortio	n
6	eal for mid and mid-bass high loading systems	

				5		
GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAM	IETERS		MOUNTING INFORM	ATION
Nominal Diameter	250mm /10inch	Resonance frequency	Fs	61.7 Hz	Overall Diameter	261 mm
Rated Impedance	8 ohm	DC resistance	Re	5.0 ohm	Bolt Circle Diameter	246 mm
Nominal Power handling ¹	300 Watts	Mechanical factor	Qms	11.5	Bolt Hole Diameter	5.5 mm
Program Power ²	600 Watts	Electrical factor	Qes	0.29	Baffle Cutout Diameter	228 mm
Sensitivity(1w/1m) ³	97 dB	Total factor	Qts	0.29	Overall Depth	115 mm
Frequency Range ^₄	60 ~ 4800Hz	Mechanical compliance	Cms	0.20 mm/N	Air volume occupied by driver	1.9 liters
Minimum Impedance(Zmin)	6.2 ohm	Mechanical resistance of total-driver losses	Rms	1.13 kg/s	Net Weight	5.0 kg
Voice Coil Diameter	65mm /2.5inch	Effective Moving Mass	Mms	33.5 g	Shipping Weight	5.4 kg
Voice Coil Material	CCAW	Half-space efficiency	Eff	2.7%	Shipping Box	275x275x130mm
Former Material	Fiberglass	BL Factor	BL	14.9 T.m	Also available in 16ohm,	data upon request.
Voice Coil Winding Depth	11 mm	Equivalent Cas air load	Vas	34.5 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0353 m ²	里鷸盤	i i i i i i i i i i i i i i i i i i i
Magnet gap depth	8 mm	Max. linear excursion ⁶	Xmax	±4 mm		22
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±12mm		6915 1
Flux Density	1.3T	Voice coil inductance(1kHz)	Le	0.42 mH	1.65.65	
Magnet Out Diameter/Wgt	170mm / 62 oz	Efficiency Bandwidth Product	EBP	212		

EBP

Efficiency Bandwidth Product



170mm / 62 oz



NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system ${\sf BEFORE}$ preconditioning test.
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.
 - - 70

HF

V30I0m/**I6**

FERRITE

SUBWOOFER



FERRITE WOOFER

MID-BASS

🔆 10 inch 🔆 300 Watts **ఈ 96 dB ★ 70 ~ 4800 Hz**



KEY FEATURES:

NEO

LF

- ① 600 W continuous program power capacity
- 2 High sensitivity 96dB/1w/1m
- ③ Very smooth response up to 4.8k Hz
- 4 2.5" inside/outside high temperature aluminum voice coil
- (5) Weather protected cone for outdoor usage
- 6 Aluminum demodulating ring for very low distortion
- $\ensuremath{\overline{\mathcal{O}}}$ Optimized for the use in line array systems

GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAM	IETERS	5	MOUNTING INFORM	IATION
Nominal Diameter	250mm /10inch	Resonance frequency	Fs	72.5 Hz	Overall Diameter	261 mm
Rated Impedance	16 ohm	DC resistance	Re	12.6 ohm	Bolt Circle Diameter	246 mm
Nominal Power handling ¹	300 Watts	Mechanical factor	Qms	14.1	Bolt Hole Diameter	5.5 mm
Program Power ²	600 Watts	Electrical factor	Qes	0.52	Baffle Cutout Diameter	228 mm
Sensitivity(1w/1m) ³	96 dB	Total factor	Qts	0.51	Overall Depth	115 mm
Frequency Range⁴	70 ~ 4800Hz	Mechanical compliance	Cms	0.12 mm/N	Air volume occupied by driver	1.9 liters
Minimum Impedance(Zmin)	14.2 ohm	Mechanical resistance of total-driver losses	Rms	1.32 kg/s	Net Weight	5.0 kg
Voice Coil Diameter	65mm /2.5inch	Effective Moving Mass	Mms	41 g	Shipping Weight	5.4 kg
Voice Coil Material	Pure Aluminum	Half-space efficiency	Eff	1.4%	Shipping Box	275x275x130mm
Former Material	Polyimide	BL Factor	BL	19 T.m	Also available in 80hm, da	ata upon request.
Voice Coil Winding Depth	15 mm	Equivalent Cas air load	Vas	20 liters		
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0353 m ²	回版战	燈里
Magnet gap depth	8 mm	Max. linear excursion ⁶	Xmax	±6 mm		
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±15.5mm		19 A.
Flux Density	1.3T	Voice coil inductance(1kHz)	Le	0.84 mH		(A)
Magnet Out Diameter/Wgt	170mm / 62 oz	Efficiency Bandwidth Product	EBP	139		10-33

Efficiency Bandwidth Product



170mm / 62 oz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. T/S test.

Vb/Fb = 33L/57Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

50

100

1000

2000

500

S	parameters	measured	with las	ser system	BEFORE	Eprecondit	tioning to
~ ~	movimum li	noor ovour	cion ic.	algulated	ac: (Цус	$\Box a)/2 \pm \Box a$	11 whore

EBP

dB

-12

-18 -24

-30 -36

5 Hz

139

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=33L/57Hz

KLIPPEL

♦ 95 dB

NEO

HF

🔆 10 inch 🔆 280 Watts

★ 64 ~ 3500 Hz

V34I0m/I6

FERRITE

SUBWOOFER



FERRITE WOOFER

MID-BASS



KEY FEATURES:

NEO

LF

- 1 560 W continuous program power capacity
- 2 95dB sensitivity 1w/1m

GENERAL SPECIFICATIONS

- ③ 65~3300Hz frequency response ragne
- ④ 2.5" inside/outside copper clad aluminum voice coil

⑤ Y35 high grade ferrite magment

6 Optimized for the use in line array systems or 2-way systems

Nominal Diameter	250mm /10inch
Rated Impedance	8 ohm
Nominal Power handling ¹	280 Watts
Program Power ²	560 Watts
Sensitivity(1w/1m) ³	95 dB
Frequency Range⁴	64 ~ 3500Hz
Minimum Impedance(Zmin)	12.1 ohm
Voice Coil Diameter	65mm /2.5inch
Voice Coil Material	CCAW

Resonance frequency	Fs	64 Hz
DC resistance	Re	10.6 ohm
Mechanical factor	Qms	13.1
Electrical factor	Qes	0.54
Total factor	Qts	0.52
Mechanical compliance	Cms	0.14 mm/N
Mechanical resistance of total-driver losses	Rms	1.32 kg/s
Effective Moving Mass	Mms	43.2 g
Half-space efficiency	Eff	1.2%
BL Factor	BL	18.8 T.m
Equivalent Cas air load	Vas	24.7 liters
Effective piston area	Sd	0.0350m ²
Max. linear excursion ⁶	Xmax	±6 mm
Max. excursion before damage	Xdam	±16.2mm
Voice coil inductance(1kHz)	Le	0.27 mH
Efficiency Bandwidth Product	EBP	123

dB

-12

-18 -24 -30 -36

5 Hz

THIELE - SMALL PARAMETERS

MOUNTING INFORMATIONOverall Diameter261 mmBolt Circle Diameter246 mmBolt Hole Diameter5.5 mmBaffle Cutout Diameter228 mmOverall Depth115 mmAir volume occupied by driver1.8 litersNet Weight4.3 kg

urb@sonic

Also available in 80hm,data upon request.

Shipping Weight

231/644

100

Vb/Fb = 23L/64Hz

Shipping Box

4.7 kg

295x295x155mm



500

1000

2000



Fiberglass

2(Inside/outside)

Cast Aluminum

156mm / 50 oz

15.5 mm

8 mm

1.1T

NOTES:

1. AES standard

Former Material

Number of layers

Magnet gap depth

Basket

Flux Density

Voice Coil Winding Depth

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling.
- 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. Thiele-Small parameters are measured with Klippel DALPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use.

50

- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=42L/50Hz

Vb/Fb = 42L/50Hz

HF

ISIO-65

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 10 inch 🔆 280 Watts **★ 60 ~ 4500 Hz ₩ 95 dB**



KEY FEATURES:

- 1 560 W continuous program power capacity
- 2 95dB Sensitivity 1w/1m
- ③ 60 ~ 4500Hz frequency response range
- ④ CCAW wire wounded on polyimide former for higher SPL
- **5** Push terminal
- 6 Copper shorting ring ensures extremely linear impedance and minimized distortion
- 7 Ideal for vented enclosure

GENERAL SPECIFICATIONS

Nominal Diameter	300mm / 12inch
Rated Impedance	8 ohm
Nominal Power handling ¹	280 Watts
Program Power ²	560 Watts
Sensitivity(1w/1m) ³	95 dB
Frequency Range ^₄	60 ~ 4500Hz
Minimum Impedance(Zmin)	7.2 ohm
Voice Coil Diameter	65mm /2.5inch
Voice Coil Material	CCAW
Former Material	Polyimide
Voice Coil Winding Depth	16.2 mm
Number of layers	2
Magnet gap depth	9.5 mm
Basket	Pressed Steel
Flux Density	1.0 T
Magnet Out Diameter/Wgt	156mm / 54 oz

THIELE – SMALL PARAM	ETERS	
Resonance frequency	Fs	60 Hz
DC resistance	Re	5.4 ohm
Mechanical factor	Qms	10.5
Electrical factor	Qes	0.43
Total factor	Qts	0.41
Mechanical compliance	Cms	0.15mm/N
Mechanical resistance of total-driver losses	Rms	1.6 kg/s
Effective Moving Mass	Mms	45 g
Half-space efficiency	Eff	1.4%
BL Factor	BL	14.8 T.m
Equivalent Cas air load	Vas	28 liters
Effective piston area	Sd	0.0363 m ²
Max. linear excursion ⁶	Xmax	±5.6 mm
Max. excursion before damage	Xdam	±14 mm
Voice coil inductance(1kHz)	Le	0.39 mH
Efficiency Bandwidth Product	EBP	139

MOUNTING INFORMATION **Overall Diameter** 256.3 mm **Bolt Circle Diameter** 244 mm **Bolt Hole Diameter** 5 2 mm 230 mm **Baffle Cutout Diameter Overall Depth** 104.5 mm Air volume occupied by driver 1.8 liters Net Weight 4.8 kg Shipping Weight 5.3 kg Shipping Box 275x275x145 mm

ľurbôsonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dBSP 100. 20.0 90.1 80.0 70 201 208 Impedance magnitude curve measured in free air



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - - 73

NEO HF

PSI0-50

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 10 inch 🔆 150 Watts **ఈ 94 dB ★ 52 ~ 2800 Hz**



KEY FEATURES:

- 1 300 W continuous program power capacity
- 2 94dB Sensitivity 1w/1m
- 3 52 ~ 2800Hz frequency response range
- (4) 2" copper voice coil wounded on fiberglass former

5	Semi-pressed paper cone with pressed dust cap
6	Ideal for compact multi-way systems or woofer application

GENERAL SPECIFICAT	IONS	TH
Nominal Diameter	250mm /10inch	Res
Rated Impedance	8 ohm	DC
Nominal Power handling ¹	150 Watts	Mec
Program Power ²	300 Watts	Elec
Sensitivity(1w/1m) ³	94 dB	Tota
Frequency Range⁴	52 ~ 2800Hz	Mec
Minimum Impedance(Zmin)	6.3 ohm	Mech
Voice Coil Diameter	50mm /2inch	Effe
Voice Coil Material	Copper	Halt
Former Material	Fiberglass	BL F
Voice Coil Winding Depth	18 mm	Equ
Number of layers	2	Effe
Magnet gap depth	8 mm	Мах
Basket	Pressed Steel	Мах
Flux Density	1.1T	Void
Magnet Out Diameter/Wgt	145mm / 42 oz	Effic

THIELE – SMALL PARAMETERS [®]			
Resonance frequency	Fs	55 Hz	
DC resistance	Re	5.3 ohm	
Mechanical factor	Qms	9.9	
Electrical factor	Qes	0.45	
Total factor	Qts	0.43	
Mechanical compliance	Cms	0.24 mm/N	
Mechanical resistance of total-driver losses	Rms	1.22 kg/s	
Effective Moving Mass	Mms	34.9 g	
Half-space efficiency	Eff	1.5%	
BL Factor	BL	11.9 T.m	
Equivalent Cas air load	Vas	42 liters	
Effective piston area	Sd	0.0353 m ²	
Max. linear excursion ⁶	Xmax	± 6.5 mm	
Max. excursion before damage	Xdam	±13.7mm	
Voice coil inductance(1kHz)	Le	1.0 mH	
Efficiency Bandwidth Product	EBP	122	

MOUNTING INFORM	IATION	
Overall Diameter	256.5 mm	
Bolt Circle Diameter	242 mm	
Bolt Hole Diameter	4.8 mm	
Baffle Cutout Diameter	235 mm	
Overall Depth	110 mm	
Air volume occupied by driver	1.9 liters	
Net Weight	3.5 kg	
Shipping Weight	4 kg	
Shipping Box	275x275x130mm	
Also available in 40hm, data upon request.		

Turbosonic



500

1000

2000



NOTES:

- 1. AES standard
- Program Power is defined as 3 dB greater than the nominal power handling.
 Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.

5.T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 38L/51Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=38L/51Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

b/Fb=26L/56Hz

100

Vb/Fb = 26L/56Hz

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

-6 -12

-18 -24

-30 -36

-42 -48

5 Hz

HF

V3608m/8

FERRITE

SUBWOOFER



FERRITE WOOFER

MID-BASS

🔆 8 inch 🛛 🔆 250 Watts VERIFIED WITH KLIPPEL 🔆 96.5 dB 🔆 81 ~ 4100 Hz



KEY FEATURES:

NEO

LF

- 1 500 W continuous program power capacity
- 2 High efficiency: 96.5dB/1w/1m
- 3 81 ~ 4100Hz frequency response range
- ④ 65mm(2.5") high temperature CCAW voice coil
- ⑤ Aluminum demodulating ring for lower distortion
- 6 Waterpoof cone for outdoor usage
- ⑦ Ideal for the use in line array or multi-way systems

GENERAL SPECIFICATIONS

Nominal Diameter	200mm /8inch
Rated Impedance	8 ohm
Nominal Power handling ¹	250 Watts
Program Power ²	500 Watts
Sensitivity(1w/1m) ³	96.5 dB
Frequency Range ^₄	81~4100Hz
Minimum Impedance(Zmin)	6.0 ohm
Voice Coil Diameter	65mm /2.5inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	11 mm
Number of layers	2(insde/outside)
Magnet gap depth	8 mm
Basket	Cast Aluminum
Flux Density	1.15T
Magnet Out Diameter/Wgt	156mm / 50 oz

DC resistanceRe5.0 ohmMechanical factorQms6.4Electrical factorQes0.35Total factorQts0.33Mechanical complianceCms0.16 mm/NMechanical resistance of total-driver lossesRms1.9 kg/sEffective Moving MassMms23.6 gHalf-space efficiencyEff1.7%BL FactorBL13.2 T.mEquivalent Cas air loadVas11 litersEffective piston areaSd0.0222 m²Max. linear excursionXmax±3.5 mmMax. excursion before damageXdam±11 mm	Resonance frequency	Fs	81 Hz
Mechanical factorQms6.4Electrical factorQes0.35Total factorQts0.33Mechanical complianceCms0.16 mm/NMechanical resistance of total-driver lossesRms1.9 kg/sEffective Moving MassMms23.6 gHalf-space efficiencyEff1.7%BL FactorBL13.2 T.mEquivalent Cas air loadVas11 litersEffective piston areaSd0.0222 m²Max. linear excursion for damageXdam±11 mm	DC resistance	Re	5.0 ohm
Electrical factorQes0.35Total factorQts0.33Mechanical complianceCms0.16 mm/NMechanical resistance of total-driver lossesRms1.9 kg/sEffective Moving MassMms23.6 gHalf-space efficiencyEff1.7%BL FactorBL13.2 T.mEquivalent Cas air loadVas11 litersEffective piston areaSd0.0222 m²Max. linear excursion 6Xmax±3.5 mmMax. excursion before damageXdam±11 mm	Mechanical factor	Qms	6.4
Total factorQts0.33Mechanical complianceCms0.16 mm/NMechanical resistance of total-driver lossesRms1.9 kg/sEffective Moving MassMms23.6 gHalf-space efficiencyEff1.7%BL FactorBL13.2 T.mEquivalent Cas air loadVas11 litersEffective piston areaSd0.0222 m²Max. linear excursion 6Xmax±3.5 mmMax. excursion before damageXdam±11 mm	Electrical factor	Qes	0.35
Mechanical compliance Cms 0.16 mm/N Mechanical resistance of total-driver losses Rms 1.9 kg/s Effective Moving Mass Mms 23.6 g Half-space efficiency Eff 1.7% BL Factor BL 13.2 T.m Equivalent Cas air load Vas 11 liters Effective piston area Sd 0.0222 m² Max. linear excursion ⁶ Xmax ±3.5 mm	Total factor	Qts	0.33
Mechanical resistance of total-driver losses Rms 1.9 kg/s Effective Moving Mass Mms 23.6 g Half-space efficiency Eff 1.7% BL Factor BL 13.2 T.m Equivalent Cas air load Vas 11 liters Effective piston area Sd 0.0222 m² Max. linear excursion ⁶ Xmax ±3.5 mm	Mechanical compliance	Cms	0.16 mm/N
Effective Moving MassMms23.6 gHalf-space efficiencyEff1.7%BL FactorBL13.2 T.mEquivalent Cas air loadVas11 litersEffective piston areaSd0.0222 m²Max. linear excursion 6Xmax±3.5 mmMax. excursion before damageXdam±11 mm	Mechanical resistance of total-driver losses	Rms	1.9 kg/s
Half-space efficiencyEff1.7%BL FactorBL13.2 T.mEquivalent Cas air loadVas11 litersEffective piston areaSd0.0222 m²Max. linear excursion ⁶ Xmax±3.5 mmMax. excursion before damageXdam±11 mm	Effective Moving Mass	Mms	23.6 g
BL Factor BL 13.2 T.m Equivalent Cas air load Vas 11 liters Effective piston area Sd 0.0222 m² Max. linear excursion ⁶ Xmax ±3.5 mm Max. excursion before damage Xdam ±11 mm	Half-space efficiency	Eff	1.7%
Equivalent Cas air loadVas11 litersEffective piston areaSd0.0222 m²Max. linear excursion ⁶ Xmax±3.5 mmMax. excursion before damageXdam±11 mm	BL Factor	BL	13.2 T.m
Effective piston area Sd 0.0222 m² Max. linear excursion ⁶ Xmax ±3.5 mm Max. excursion before damage Xdam ±11 mm	Equivalent Cas air load	Vas	11 liters
Max. linear excursion ⁶ Xmax ±3.5 mm	Effective piston area	Sd	0.0222 m^2
Max excursion before damage Xdam +11 mm	Max. linear excursion ⁶	Xmax	±3.5 mm
Max. excursion before damage Adam ITT min	Max. excursion before damage	Xdam	±11 mm
Voice coil inductance(1kHz) Le 0.47 mH	Voice coil inductance(1kHz)	Le	0.47 mH
Efficiency Bandwidth Product EBP 231	Efficiency Bandwidth Product	EBP	231

THIELE - SMALL PARAMETERS

MOUNTING INFORMATION		
Overall Diameter	208.5 mm	
Bolt Circle Diameter	196 mm	
Bolt Hole Diameter	5.5 mm	
Baffle Cutout Diameter	187 mm	
Overall Depth	100 mm	
Air volume occupied by driver	1.3 liters	
Net Weight	4.0 kg	
Shipping Weight	4.4 kg	
Shipping Box	220x220x110mm	
Also available in 160hm, data upon request.		

Turb@sonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 dRSE 100 90 200 20 Impedance magnitude curve measured in free air



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and
- Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects

HF

V3208m/**I6**

FERRITE

SUBWOOFER

FERRITE WOOFER

MID-BASS



* 200 Watts 🔆 8 inch **★ 90 ~ 6000 Hz ☀ 95 dB**



KEY FEATURES:

NEO

LF

- ① 400 W continuous program power capacity
- 2 High sensitivity 95dB/1w/1m
- 3 Very smooth response up to 6k Hz
- ④ 2" inside/outside copper clad aluminum voice coil wounded on polyimide former
- (5) Weather protected cone for outdoor usage
- 6 Aluminum demodulating ring for very low distortion
- $\ensuremath{\overline{\mathcal{O}}}$ Inverted dust cap to minimize the cone distortion and for better coupling to a phase plug
- (8) Optimized for the use in line array or multi-way systems

GENERAL SPECIFICAT	IONS	THIELE - SMALL PARAM	IETERS	5	MO
Nominal Diameter	200mm /8inch	Resonance frequency	Fs	92 Hz	Over
Rated Impedance	16 ohm	DC resistance	Re	12.6 ohm	Bolt
Nominal Power handling ¹	200 Watts	Mechanical factor	Qms	7.3	Bolt
Program Power ²	400 Watts	Electrical factor	Qes	0.64	Baff
Sensitivity(1w/1m) ³	95 dB	Total factor	Qts	0.59	Ove
Frequency Range⁴	90 ~ 6000Hz	Mechanical compliance	Cms	0.15 mm/N	Air vo
Minimum Impedance(Zmin)	14.5 ohm	Mechanical resistance of total-driver losses	Rms	1.62 kg/s	Net
Voice Coil Diameter	50mm /2inch	Effective Moving Mass	Mms	20 g	Ship
Voice Coil Material	CCAW	Half-space efficiency	Eff	1.2%	Ship
Former Material	Polyimide	BL Factor	BL	15.2 T.m	Also
Voice Coil Winding Depth	14 mm	Equivalent Cas air load	Vas	10 liters	
Number of layers	2(inside/outside)	Effective piston area	Sd	0.0222 m ²	
Magnet gap depth	8 mm	Max. linear excursion ⁶	Xmax	±6 mm	
Basket	Cast Aluminum	Max. excursion before damage	Xdam	±16mm	
Flux Density	1.3T	Voice coil inductance(1kHz)	Le	0.98 mH	

Efficiency Bandwidth Product

EBP

144

MOUNTING INFORMATION		
Overall Diameter	200 mm	
Bolt Circle Diameter	212 mm	
Bolt Hole Diameter	5.5 mm	
Baffle Cutout Diameter	180 mm	
Overall Depth	100 mm	
Air volume occupied by driver	1.2 liters	
Net Weight	3.2 kg	
Shipping Weight	3.6 kg	
Shipping Box 220x220x110mm		
Also available in 80hm, data upon request.		

Turbosonic



Frequency response measured in a closed enclosure of 600L in an anechoic chamber 110 an na dBSP 100. 128.0 90.1 0.36 80. 64.0 70.0 60.0 H LI 0.0 200 100 500 2k Hz 5k 10 20 Impedance magnitude curve measured in free air

140mm / 45 oz

Computer predicted low frequency response⁽⁷⁾ dB Vb/Fb=22L/71Hz -12 -18 -24 -30 -36 5 Hz 50 500 1000 2000 Vb/Fb = 33L/57Hz

NOTES:

1. AES standard

Magnet Out Diameter/Wgt

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity

5. T/S parameters measured with laser system BEFORE preconditioning test.

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

HF

PS08-38

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

🔆 8 inch 🔆 150 Watts **★ 75 ~ 6300 Hz ఈ 92 dB**



KEY FEATURES:

- ① 300 W continuous program power capacity
- 2 High efficiency: 92dB 1w/1m
- ③ Extended mid range response up to 6300Hz
- ④ 1.5" copper clad aluminum voice coil, vented on fiberglass former for heat dispersion
- ⑤ Ideal for the use in trolly, conference systems

GENERAL SPECIFICATIONS

Nominal Diameter	200mm /8inch
Rated Impedance	8 ohm
Nominal Power handling ¹	150 Watts
Program Power ²	300 Watts
Sensitivity(1w/1m) ³	92 dB
Frequency Range ^₄	75 ~ 6300Hz
Minimum Impedance(Zmin)	6.2 ohm
Voice Coil Diameter	38mm /1.5inch
Voice Coil Material	CCAW
Former Material	Fiberglass
Voice Coil Winding Depth	12 mm
Number of layers	2
Magnet gap depth	6 mm
Basket	Pressed Steel
Flux Density	1.0T
Magnet Out Diameter/Wgt	120mm / 30 oz

I HIELE - SIVIALL PARAIVI	EIERS	
Resonance frequency	Fs	79 Hz
DC resistance	Re	5.4 ohm
Mechanical factor	Qms	10.9
Electrical factor	Qes	0.84
Total factor	Qts	0.75
Mechanical compliance	Cms	0.17 mm/N
Mechanical resistance of total-driver losses	Rms	1.04 kg/s
Effective Moving Mass	Mms	22.6 g
Half-space efficiency	Eff	0.7%
BL Factor	BL	8.7 T.m
Equivalent Cas air load	Vas	11 liters
Effective piston area	Sd	0.0214 m^2
Max. linear excursion ⁶	Xmax	±4.5 mm
Max. excursion before damage	Xdam	±12
Voice coil inductance(1kHz)	Le	0.56 mH
Efficiency Bandwidth Product	EBP	99

MOUNTING INFORMATION **Overall Diameter** 210.5 mm Bolt Circle Diameter 197.5 mm **Bolt Hole Diameter** 5 2 mm Baffle Cutout Diameter 184 mm **Overall Depth** 92 mm Air volume occupied by driver 1 liter Net Weight 2 kg Shipping Weight 2.4 kg Shipping Box 220x220x110mm Also available in 40hm, data upon request.

lurb@sonic







NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity

5.T/S parameters measured with laser system BEFORE preconditioning test.

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects



FERRITE

SUBWOOFER

FERRITE WOOFER

MID-BASS



🔆 6.5 inch 🔆 100 Watts **★ 81 ~ 6000 Hz ₩ 93 dB**



KEY FEATURES:

NEO

LF

- 1 200 W continuous program power capacity
- 2 93dB Sensitivity 1w/1m

GENERAL SPECIFICATIONS

- ③ 81 ~ 6000Hz frequency response range
- ④ 38mm(1.5") CCAW wire wounded on fiberglass
- (5) FEA optimized magnet system design for lower distortion
- 6 Waterproof cone treatment
- $\ensuremath{\overline{\mathcal{O}}}$ Ideal for the use in 2-way line array as mid-bass or 3-way system as midrange

Nominal Diameter	170mm /6.5inch
Rated Impedance	16 ohm
Nominal Power handling ¹	100 Watts
Program Power ²	200 Watts
Sensitivity(1w/1m) ³	93 dB
Frequency Range⁴	81 ~ 6000Hz
Minimum Impedance(Zmin)	13.1 ohm

Frequency Range⁴	81 ~ 6000Hz
Minimum Impedance(Zmin)	13.1 ohm
Voice Coil Diameter	38mm /1.5inch
Voice Coil Material	CCAW
Former Material	Fiberglass
Voice Coil Winding Depth	11 mm
Number of layers	2
Magnet gap depth	6 mm
Basket	Cast Aluminum
Flux Density	1.1T
Magnet Out Diameter/Wgt	115mm / 28 oz

THIELE – SMALL PARAMETERS⁵		
Resonance frequency	Fs	81 Hz
DC resistance	Re	11.3 ohm
Mechanical factor	Qms	6.5
Electrical factor	Qes	0.52
Total factor	Qts	0.48
Mechanical compliance	Cms	0.27mm/N
Mechanical resistance of total-driver losses	Rms	1.1 kg/s
Effective Moving Mass	Mms	14 g
Half-space efficiency	Eff	0.7%
BL Factor	BL	12.5 T.m
Equivalent Cas air load	Vas	7 liters
Effective piston area	Sd	0.0135 m ²
Max. linear excursion ⁶	Xmax	± 4 mm
Max. excursion before damage	Xdam	±9.5mm
Voice coil inductance(1kHz)	Le	0.64 mH
Efficiency Bandwidth Product	EBP	156

dB

-12

-18 -24

-30 -36

5 Hz

MOUNTING INFORMATION		
Overall Diameter	162 mm	
Bolt Circle Diameter	172 mm	
Bolt Hole Diameter	5 mm	
Baffle Cutout Diameter	147 mm	
Overall Depth	78 mm	
Air volume occupied by driver	0.7 liters	
Net Weight	2.0 kg	
Shipping Weight	2.2 kg	
Shipping Box	172x172x95mm	
Also available in 80hm, data upon request.		

Turbosonic



500

1000

2000

Vb/Fb=2.6L/Sealed





- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 10L/66Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=10L/66Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

100

Vb/Fb = 2.6L/Sealed

- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects
 - 78

HF

Turb@sonic

R06-25

FERRITE

SUBWOOFER

NEO

LF



FERRITE WOOFER

MID-BASS

★ 6.5 inch ★ 50 Watts **★ 50 ~ 4200 Hz ★ 88 dB**



KEY FEATURES:

- ① 100W continuous program power capacity
- 2 88dB sensitivity, 1w/1m
- 3 50Hz ~4200Hz frequency response range

④ 25mm(1") two layers copper voice coil ⑤ PP cone, rubber edge

6 Ideal for bass-reflex systems

GENERAL SPECIFICATIONS

Nominal Diameter	170mm /6.5inch
Rated Impedance	8 ohm
Nominal Power handling ¹	50 Watts
Program Power ²	100 Watts
Sensitivity(1w/1m) ³	88 dB
Frequency Range ^₄	50 ~ 4200 Hz
Minimum Impedance(Zmin)	7.4 ohm
Voice Coil Diameter	25mm /1inch
Voice Coil Material	Copper
Former Material	Aluminum
Voice Coil Winding Depth	11 mm
Number of layers	2
Magnet gap depth	4 mm
Basket	Pressed Steel
Flux Density	1.0T
Magnet Out Diameter/Wgt	90mm / 15 oz

THIELE – SMALL PARAMETERS ⁵		
Resonance frequency	Fs	50 Hz
DC resistance	Re	6.4 ohm
Mechanical factor	Qms	2.2
Electrical factor	Qes	0.67
Total factor	Qts	0.52
Mechanical compliance	Cms	0.71 mm/
Mechanical resistance of total-driver losses	Rms	2.0 mech-
Effective Moving Mass	Mms	14 g
Half-space efficiency	Eff	0.32%
BL Factor	BL	6.5 T.m
Equivalent Cas air load	Vas	17 liters
Effective piston area	Sd	0.0133 m
Max. linear excursion ⁶	Xmax	±4.5 mm
Max. excursion before damage	Xdam	±10.5mm
Voice coil inductance(1kHz)	Le	0.53 mH
Efficiency Bandwidth Product	EBP	76

dB

-36

5 Hz

	MOUNTING INFORMATION		
Ηz	Overall Diameter	159 mm	
ohm	Bolt Circle Diameter	161.5 mm	
	Bolt Hole Diameter	4.9 mm	
7	Baffle Cutout Diameter	145 mm	
2	Overall Depth	71 mm	
1 mm/N	Air volume occupied by driver	0.8 liters	
mech-ohm	Net Weight	0.9 kg	
9	Shipping Weight	1.1 kg	
2%	Shipping Box	175x175x85mm	
T.m	Also available in 40hm, data upon request.		
iters	100 M	NALES .	



500

1000

2000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5.T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 15L/56Hz

Computer predicted low frequency response⁽⁷⁾

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

50

Vb/Fb=15L/56Hz

- - 79

MBO6-38

FERRITE



* 6.5 inch * 100 Watts * 125 ~ 9000 Hz **※ 92 dB**



KEY FEATURES:

- 1 200 W continuous program power capacity
- 2 High efficiency: 92dB 1w/1m
- ③ Extended mid response up to 9kHz
- ④ 1.5" flat copper clad aluminum voice coil
- (5) Copper shorting ring ensures extremely linear impedance and reduced distortion figure
- 6 Ideal for the use in array systems, midrange application

GENERAL SPECIFICATIONS Nominal Diameter 200mm /6.5inch

Rated Impedance	8 ohm
Nominal Power handling ¹	100 Watts
Program Power ²	200 Watts
Sensitivity(1w/1m) ³	92 dB
Frequency Range ^₄	125 ~ 9000Hz
Minimum Impedance(Zmin)	6.4 ohm
Voice Coil Diameter	38mm /1.5inch
Voice Coil Material	Edgewound CCAW
Former Material	Fiberglass
Voice Coil Winding Depth	8 mm
Number of layers	1
Magnet gap depth	6 mm
Basket	Cast Aluminum
Flux Density	1.05 T
Magnet Out Diameter/Wgt	120mm/30 oz

THIELE – SMALL PARAMETERS⁵		
Resonance frequency	Fs	131 Hz
DC resistance	Re	5.4 ohm
Mechanical factor	Qms	3.3
Electrical factor	Qes	1.03
Total factor	Qts	0.78
Mechanical compliance	Cms	0.11 mm/N
Mechanical resistance of total-driver losses	Rms	3.36 kg/s
Effective Moving Mass	Mms	13.5 g
Half-space efficiency	Eff	0.62%
BL Factor	BL	7.65 T.m
Equivalent Cas air load	Vas	2.9 liters
Effective piston area	Sd	0.0139 m ²
Max. linear excursion ⁶	Xmax	±2.5 mm
Max. excursion before damage	Xdam	±6 mm
Voice coil inductance(1kHz)	Le	0.16 mH
Efficiency Bandwidth Product	EBP	127

MOUNTING INFORMATION **Overall Diameter** 162 mm **Bolt Circle Diameter** 172 mm **Bolt Hole Diameter** 5 mm **Baffle Cutout Diameter** 147 mm 78 mm **Overall Depth** Air volume occupied by driver 0.7 liters Net Weight 2.1 kg Shipping Weight 2.3 kg Shipping Box 172x172x95mm

Also available in 160hm, data upon request.



500

1000

2000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 11L/96Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=11L/96Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

Vb/Fb = 5L/Sealed

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

-12

-18 -24

-30 -36 -42 -48

5 Hz



V3005m

NEO

LE

★ 5 inch ★ 100 Watts VERIFIED WITH KLIPPEL **☀ 91 dB ★ 121 ~ 7000 Hz**

NEO

HE





KEY FEATURES:

- 1 200 W continuous program power capacity
- 2 91dB Sensitivity 1w/1m
- ③ Smooth frequency response up to 7000Hz
- ④ 38mm(1.5") CCAW wire wounded on fiberglass
- (5) FEA designed ferrite magnetic provides low harmonic distortion 6 High grade Y35 ferrite magnet
- $\overline{\mathcal{O}}$ Ideal for the use in line array as mid-bass or 3-way system as midrange

GENERAL SPECIFICATIONS Nominal Diameter 127mm /5inch

Rated Impedance	8 ohm
Nominal Power handling ¹	100 Watts
Program Power ²	200 Watts
Sensitivity(1w/1m) ³	91 dB
Frequency Range ⁴	121 ~ 7000Hz
Minimum Impedance(Zmin)	6.8 ohm
Voice Coil Diameter	38mm /1.5inch
Voice Coil Material	CCAW
Former Material	Fiberglass
Voice Coil Winding Depth	9.1 mm
Number of layers	2
Magnet gap depth	6 mm
Basket	Cast Aluminum
Flux Density	1.13T
Magnet Out Diameter/Wgt	100mm / 19 oz

THIELE – SMALL PARAMETERS⁵		
Resonance frequency	Fs	121 Hz
DC resistance	Re	5.8 ohm
Mechanical factor	Qms	6.4
Electrical factor	Qes	0.64
Total factor	Qts	0.58
Mechanical compliance	Cms	0.20mm/N
Mechanical resistance of total-driver losses	Rms	1.03 kg/s
Effective Moving Mass	Mms	8.6 g
Half-space efficiency	Eff	0.6%
BL Factor	BL	7.8 T.m
Equivalent Cas air load	Vas	2.1 liters
Effective piston area	Sd	0.086 m ²
Max. linear excursion ⁶	Xmax	±3 mm
Max. excursion before damage	Xdam	±7 mm
Voice coil inductance(1kHz)	Le	0.43 mH
Efficiency Bandwidth Product	EBP	189

MOUNTING INFORMATION		
Overall Diameter	155 mm	
Bolt Circle Diameter	142 mm	
Bolt Hole Diameter	5 mm	
Baffle Cutout Diameter	122 mm	
Overall Depth	78 mm	
Air volume occupied by driver	0.5 liters	
Net Weight	1.4 kg	
Shipping Weight	1.6 kg	
Shipping Box	145x145x90mm	
Alexander in ACabas data was a success		

lurb@sonic

Also available in 16ohm, data upon request.







NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects.



KEY FEATURES:

- ① 80W continuous program power capacity
- 2 88dB sensitivity, 1w/1m
- 3 20mm(0.8") high temperature CCAW voice coil
- ④ Vented voice coil former increases airflow to provide enhanced cooling
- (5) Shorting copper ring for extended HF response
- 6 Y35 Strontium ferrite magnet
- $\ensuremath{\overline{\mathcal{O}}}$ Strong and light fiberglass cone remains rigid to higher frequencies
- 8 Rubber edge
- 9 Ideal for mini array systems, full range application

GENERAL SPECIFICAT	IONS
Nominal Diameter	80mm /3inch
Rated Impedance	8 ohm
Nominal Power handling ¹	40 Watts
Program Power ²	80 Watts
Sensitivity(1w/1m) ³	88 dB
Frequency Range ^₄	110 ~ 15k Hz
Minimum Impedance(Zmin)	7.3 ohm
Voice Coil Diameter	20mm /0.8inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	6 mm
Number of layers	2
Magnet gap depth	4 mm
Basket	Pressed Steel
Flux Density	1.2T
Magnet Out Diameter/Wgt	70mm / 8 oz

THIELE – SMALL PARAM	IETERS®	
Resonance frequency	Fs	113 Hz
DC resistance	Re	6.4 ohm
Mechanical factor	Qms	3.5
Electrical factor	Qes	0.85
Total factor	Qts	0.68
Mechanical compliance	Cms	0.67 mm/N
Mechanical resistance of total-driver losses	Rms	0.59 kg/s
Effective Moving Mass	Mms	2.9 g
Half-space efficiency	Eff	0.17%
BL Factor	BL	4 T.m
Equivalent Cas air load	Vas	1.03 liters
Effective piston area	Sd	$0.0033 \ m^2$
Max. linear excursion ⁶	Xmax	± 2 mm
Max. excursion before damage	Xdam	±5.5mm
Voice coil inductance(1kHz)	Le	0.1 mH
Efficiency Bandwidth Product	EBP	133

dB

0

-12 -18 -24

-30 -36

5 Hz

10

MOUNTING INFORMATION		
Overall Diameter	93 mm	
Bolt Circle Diameter	84 mm	
Bolt Hole Diameter	5 mm	
Baffle Cutout Diameter	71 mm	
Overall Depth	51 mm	
Air volume occupied by driver	0.14 liters	
Net Weight	0.48 kg / pc	
Shipping Weight	17 kg / 32pcs	
Shipping Box	400*400*145mm	

Turb@sonic



500

2000

1000

Vb/Fb=1.5L/Se



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 1.5L / Sealed

Computer predicted low frequency response⁽⁷⁾

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

-50

100

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.





🔆 3 inch 🛛 🔆 40 Watts VERIFIED WITH KLIPPEL 🔆 88.5 dB 🔆 138 ~ 20k Hz

FERRITE

HF



KEY FEATURES:

- ① 80W continuous program power capacity
- 2 88.5dB sensitivity, 1w/1m
- ③ 20mm(0.8") high temperature CCAW voice coil
- ④ Vented voice coil former increases airflow to provide enhanced cooling
- (5) Shorting copper ring for extended HF response
- 6 Y35 Strontium ferrite magnet
- ${\ensuremath{\overline{\mathcal{T}}}}$ Strong and light fiberglass cone with polycotton edge remains rigid to higher frequencies
- 8 Ideal for mini array systems, full range application

GENERAL SPECIFICAT	IONS
Nominal Diameter	80mm /3inch
Rated Impedance	8 ohm
Nominal Power handling ¹	40 Watts
Program Power ²	80 Watts
Sensitivity(1w/1m) ³	88.5 dB
Frequency Range⁴	138 ~ 20k Hz
Minimum Impedance(Zmin)	7.2 ohm
Voice Coil Diameter	20mm /0.8inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	6 mm
Number of layers	2
Magnet gap depth	4 mm
Basket	Pressed Steel
Flux Density	1.2T
Magnet Out Diameter/Wgt	70mm / 8 oz

THIELE – SMALL PARAMETERS ⁵		
Resonance frequency	Fs	138 Hz
DC resistance	Re	6.4 ohm
Mechanical factor	Qms	5.5
Electrical factor	Qes	1.01
Total factor	Qts	0.85
Mechanical compliance	Cms	0.53 mm/N
Mechanical resistance of total-driver losses	Rms	0.4 kg/s
Effective Moving Mass	Mms	2.5 g
Half-space efficiency	Eff	0.17%
BL Factor	BL	3.7 T.m
Equivalent Cas air load	Vas	0.68 liters
Effective piston area	Sd	$0.0033 \ m^2$
Max. linear excursion ⁶	Xmax	± 2 mm
Max. excursion before damage	Xdam	±5.5mm
Voice coil inductance(1kHz)	Le	0.1 mH
Efficiency Bandwidth Product	EBP	137

dB

0

-6

-12 -18 -24

-30 -36

5 Hz

10

MOUNTING INFORMATION		
Overall Diameter	93 mm	
Bolt Circle Diameter	84 mm	
Bolt Hole Diameter	5 mm	
Baffle Cutout Diameter	71 mm	
Overall Depth	51 mm	
Air volume occupied by driver	0.14 liters	
Net Weight	0.48 kg / pc	
Shipping Weight	17 kg / 32pcs	
Shipping Box	400*400*145mm	



500

2000

1000

Vb/Fb=2.0L/Se

Vb/Fb = 2.0L / Sealed





- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

100

Hg is the gap depth.

Vb/Fb = 2.9L / 101Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=2.9L/101Hz

Turb@sonic

HF

FR32Ind

FERRITE

SUBWOOFER

NEO LF



FERRITE

WOOFER

MID-BASS

🔆 3 inch 🔆 40 Watts 🔆 115 ~ 15k Hz 🔆 89 dB



KEY FEATURES:

- ① 80W continuous program power capacity
- 2 89dB sensitivity, 1w/1m

GENERAL SPECIFICATIONS

- 3 20mm(0.8") high temperature CCAW voice coil
- ④ Vented voice coil former increases airflow to provide enhanced cooling
- (5) Strong and light fiberglass cone remains rigid to higher frequencies 6 Rubber edge
- T High grade neodymium ring allows a high force factor(B) and lighter weight
- (8) Ideal for mini array systems, full range application

Nominal Diameter	80mm /3inch
Rated Impedance	8 ohm
Nominal Power handling ¹	40 Watts
Program Power ²	80 Watts
Sensitivity(1w/1m) ³	89 dB
Frequency Range⁴	115 ~ 15k Hz
Minimum Impedance(Zmin)	7.3 ohm
Voice Coil Diameter	20mm /0.8inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	6 mm
Number of layers	2
Magnet gap depth	4 mm
Basket	Pressed Steel
Flux Density	1.4T
Magnet Out Diameter/Wgt	Neodymium

THIELE – SMALL PARAMETERS ⁵		
Resonance frequency	Fs	118 Hz
DC resistance	Re	6.4 ohm
Mechanical factor	Qms	3.1
Electrical factor	Qes	0.56
Total factor	Qts	0.47
Mechanical compliance	Cms	0.61 mm/N
Mechanical resistance of total-driver losses	Rms	0.7 kg/s
Effective Moving Mass	Mms	2.9 g
Half-space efficiency	Eff	0.3%
BL Factor	BL	5 T.m
Equivalent Cas air load	Vas	1.0 liters
Effective piston area	Sd	0.0033 m^{2}
Max. linear excursion ⁶	Xmax	± 2 mm
Max. excursion before damage	Xdam	± 5.5mm
Voice coil inductance(1kHz)	Le	0.05 mH
Efficiency Bandwidth Product	EBP	214

dB

0

-12 -18 -24

-30 -36

5 Hz

10

MOUNTING INFORMATION		
Overall Diameter	93 mm	
Bolt Circle Diameter	84 mm	
Bolt Hole Diameter	5 mm	
Baffle Cutout Diameter	71 mm	
Overall Depth	47 mm	
Air volume occupied by driver	0.09 liters	
Net Weight	0.22 kg / pc	
Shipping Weight	8.7 kg / 32pcs	
Shipping Box	400*400*145mm	

Turb@sonic



500

2000

1000

Vb/Fb=1.5L/Se



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 1L / Sealed

Computer predicted low frequency response⁽⁷⁾

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

50



NEO LF

MIDRANGE

NEO

HF

FC322nd



FERRITE

WOOFER

MID-BASS

🔆 3 inch 🛛 🔆 40 Watts VERIFIED WITH KLIPPEL 🔆 88.5 dB 🔆 138 ~ 20k Hz



KEY FEATURES:

- ① 80W continuous program power capacity
- 2 89dB sensitivity, 1w/1m
- 3 20mm(0.8") high temperature CCAW voice coil
- ④ Vented voice coil former increases airflow to provide enhanced cooling
- ⑤ Strong and light fiberglass cone with polycotton edge remains rigid to higher frequencies
- $^{(6)}$ High grade neodymium ring allows a high force factor(B) and lighter weight
- 7 Ideal for mini array systems, full range application

GENERAL S	PECI	-ICA I	IONS
	tor		00m

Nominal Diameter	80mm /3inch
Rated Impedance	8 ohm
Nominal Power handling ¹	40 Watts
Program Power ²	80 Watts
Sensitivity(1w/1m) ³	89 dB
Frequency Range ^₄	138 ~ 20k Hz
Minimum Impedance(Zmin)	7.1 ohm
Voice Coil Diameter	20mm /0.8inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	6 mm
Number of layers	2
Magnet gap depth	4 mm
Basket	Pressed Steel
Flux Density	1.4T
Magnet Out Diameter/Wgt	Neodymium

THIELE - SMALL PARAMETERS [®]		
Resonance frequency	Fs	139 Hz
DC resistance	Re	6.4 ohm
Mechanical factor	Qms	5.2
Electrical factor	Qes	0.56
Total factor	Qts	0.51
Mechanical compliance	Cms	0.52 mm/N
Mechanical resistance of total-driver losses	Rms	0.43 kg/s
Effective Moving Mass	Mms	2.52 g
Half-space efficiency	Eff	0.3%
BL Factor	BL	5 T.m
Equivalent Cas air load	Vas	0.67 liters
Effective piston area	Sd	$0.0033 \ m^2$
Max. linear excursion ⁶	Xmax	± 2 mm
Max. excursion before damage	Xdam	± 5.5mm
Voice coil inductance(1kHz)	Le	0.18 mH
Efficiency Bandwidth Product	EBP	248

dB

0

-12 -18

-24

-30 -36

5 Hz

10

MOUNTING INFORMATION		
Overall Diameter	93 mm	
Bolt Circle Diameter	84 mm	
Bolt Hole Diameter	5 mm	
Baffle Cutout Diameter	71 mm	
Overall Depth	47 mm	
Air volume occupied by driver	0.09 liters	
Net Weight	0.22 kg / pc	
Shipping Weight	8.7 kg / 32pcs	
Shipping Box	400*400*145mm	

Turb@sonic



Vb/Fb=1.2L/Sealed

500

2000

1000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

100

Vb/Fb = 1.2L / Sealed

Hg is the gap depth.

Vb/Fb = 1.1L / 110Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=1.1L/110Hz



NEO LF

FERRITE WOOFER MID-BASS

NEO

HF

FR42

🔆 4 inch 🔆 40 Watts 🔆 87 dB 🔆 91 ~ 17k Hz





KEY FEATURES:

- ① 80W continuous program power capacity
- 2 87dB sensitivity, 1w/1m
- 3 20mm(0.8") high temperature CCAW voice coil
- ④ Vented voice coil former increases airflow to provide enhanced cooling
- (5) Shorting copper ring for extended HF response
- 6 Y35 Strontium ferrite magnet
- $\ensuremath{\overline{\mathcal{O}}}$ Strong and light fiberglass cone remains rigid to higher frequencies
- 8 Rubber edge
- 9 Ideal for mini array systems, full range application

GENERAL SPECIFICATIONS

Nominal Diameter	100mm /4inch
Rated Impedance	8 ohm
Nominal Power handling ¹	40 Watts
Program Power ²	80 Watts
Sensitivity(1w/1m) ³	87 dB
Frequency Range ^₄	91 ~ 17k Hz
Minimum Impedance(Zmin)	7.2 ohm
Voice Coil Diameter	20mm /0.8inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	6 mm
Number of layers	2
Magnet gap depth	4 mm
Basket	Pressed Steel
Flux Density	1.2 T
Magnet Out Diameter/Wgt	70mm / 8 oz

THIELE - SMALL PARAM	IETERS'	
Resonance frequency	Fs	92 Hz
DC resistance	Re	6.4 ohm
Mechanical factor	Qms	4.0
Electrical factor	Qes	1.1
Total factor	Qts	0.88
Mechanical compliance	Cms	0.65 mm/N
Mechanical resistance of total-driver losses	Rms	0.66 kg/s
Effective Moving Mass	Mms	4.5 g
Half-space efficiency	Eff	0.18%
BL Factor	BL	3.9 T.m
Equivalent Cas air load	Vas	2.5 liters
Effective piston area	Sd	$0.0053 \ m^2$
Max. linear excursion ⁶	Xmax	± 2 mm
Max. excursion before damage	Xdam	± 5.5mm
Voice coil inductance(1kHz)	Le	0.3 mH
Efficiency Bandwidth Product	EBP	83

dB

0

-12 -18 -24

-30 -36

5 Hz

10

MOUNTING INFORMATION		
Overall Diameter	127 mm	
Bolt Circle Diameter	115 mm	
Bolt Hole Diameter	5 mm	
Baffle Cutout Diameter	103 mm	
Overall Depth	55 mm	
Air volume occupied by driver	0.17 liters	
Net Weight	0.5 kg / pc	
Shipping Weight	14 kg / 24pcs	
Shipping Box	430*340*225mm	



500

2000

1000

Vb/Fb=2.5L/Se



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity

Vb/Fb = 2.5L / Sealed

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

-50

100

- Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects.
 - 86

5. T/S parameters measured with laser system BEFORE preconditioning test.

Computer predicted low frequency response⁽⁷⁾





🔆 89.5 dB 🔆 134 ~ 17k Hz



KEY FEATURES:

- ① 80W continuous program power capacity
- 2 89.5dB sensitivity, 1w/1m
- ③ 20mm(0.8") high temperature CCAW voice coil
- ④ Vented voice coil former increases airflow to provide enhanced cooling
- (5) Shorting copper ring for extended HF response
- 6 Y35 Strontium ferrite magnet
- ${\ensuremath{\overline{\mathcal{T}}}}$ Strong and light fiberglass cone with polycotton edge remains rigid to higher frequencies
- 8 Ideal for mini array systems, full range application

GENERAL SPECIFICAT	IONS
Nominal Diameter	100mm /4inch
Rated Impedance	8 ohm
Nominal Power handling ¹	40 Watts
Program Power ²	80 Watts
Sensitivity(1w/1m) ³	89.5 dB
Frequency Range ^₄	134 ~ 17k Hz
Minimum Impedance(Zmin)	7.1 ohm
Voice Coil Diameter	20mm /0.8inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	6 mm
Number of layers	2
Magnet gap depth	4 mm
Basket	Pressed Steel
Flux Density	1.2 T
Magnet Out Diameter/Wgt	70mm / 8 oz

THIELE – SMALL PARAMETERS ⁵		
Resonance frequency	Fs	134 Hz
DC resistance	Re	6.4 ohm
Mechanical factor	Qms	6.5
Electrical factor	Qes	1.27
Total factor	Qts	1.06
Mechanical compliance	Cms	0.4 mm/N
Mechanical resistance of total-driver losses	Rms	0.46 kg/s
Effective Moving Mass	Mms	3.5 g
Half-space efficiency	Eff	0.29%
BL Factor	BL	3.9 T.m
Equivalent Cas air load	Vas	1.6 liters
Effective piston area	Sd	0.0053 m ²
Max. linear excursion ⁶	Xmax	± 2 mm
Max. excursion before damage	Xdam	± 5.5mm
Voice coil inductance(1kHz)	Le	0.08 mH
Efficiency Bandwidth Product	EBP	105

dB

0

-12 -18 -24 -30 -36

5 Hz

10

Vb/Fb = 6L/119Hz

MOUNTING INFORMATION		
Overall Diameter	127 mm	
Bolt Circle Diameter	115 mm	
Bolt Hole Diameter	5 mm	
Baffle Cutout Diameter	103 mm	
Overall Depth	55 mm	
Air volume occupied by driver	0.17 liters	
Net Weight	0.5 kg / pc	
Shipping Weight	14 kg / 24pcs	
Shipping Box	430*340*225mm	

Turb@sonic



500

2000

1000

Vb/Fb=3.5L/Se

Vb/Fb = 3.5L / Sealed



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.
- 5. Thiele-Small parameters are measured with Klippel DA LPM module after an AES power preconditioning test and represent the expected long term parameters after a short term of use
- 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects.

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=6L/119Hz

HF

FR42Ind

FERRITE

SUBWOOFER

NEO LF



FERRITE

WOOFER

MID-BASS

MIDRANGE

🔆 40 Watts 🔆 4 inch 🔆 88 dB **※** 90 ~ 17k Hz



KEY FEATURES:

- ① 80W continuous program power capacity
- 2 88dB sensitivity, 1w/1m
- 3 20mm(0.8") high temperature CCAW voice coil
- ④ Vented voice coil former increases airflow to provide enhanced cooling
- (5) Strong and light fiberglass cone remains rigid to higher frequencies 6 Rubber edge
- $\ensuremath{\overline{\mathcal{D}}}$ High grade neodymium ring allows a high force factor(B) and lighter weight
- (8) Ideal for mini array systems, full range application.

GENERAL SPECIFICATIONS				
Nominal Diameter	100mm /4inch			
	0.1			

Rated Impedance	8 ohm
Nominal Power handling ¹	40 Watts
Program Power ²	80 Watts
Sensitivity(1w/1m) ³	88 dB
Frequency Range ^₄	90 ~ 16k Hz
Minimum Impedance(Zmin)	6.8 ohm
Voice Coil Diameter	20mm /0.8inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	6 mm
Number of layers	2
Magnet gap depth	4 mm
Basket	Pressed Steel
Flux Density	1.2 T
Magnet Out Diameter/Wgt	Neodymium

THIELE – SMALL PARAM	ETERS	
Resonance frequency	Fs	90 Hz
DC resistance	Re	6.4 ohm
Mechanical factor	Qms	4.0
Electrical factor	Qes	0.76
Total factor	Qts	0.64
Mechanical compliance	Cms	0.69 mm/N
Mechanical resistance of total-driver losses	Rms	0.637 kg/s
Effective Moving Mass	Mms	4.5 g
Half-space efficiency	Eff	0.25%
BL Factor	BL	4.6 T.m
Equivalent Cas air load	Vas	2.7 liters
Effective piston area	Sd	0.0053 m^2
Max. linear excursion ⁶	Xmax	± 2 mm
Max. excursion before damage	Xdam	±5.5mm
Voice coil inductance(1kHz)	Le	0.16 mH
Efficiency Bandwidth Product	EBP	118

dB

0

-12

-18 -24

-30 -36

5 Hz

10

MOUNTING INFORMATION				
Overall Diameter	127 mm			
Bolt Circle Diameter	115 mm			
Bolt Hole Diameter	5 mm			
Baffle Cutout Diameter	103 mm			
Overall Depth	55 mm			
Air volume occupied by driver	0.1 liters			
Net Weight	0.22 kg / pc			
Shipping Weight	6 kg / 24pcs			
Shipping Box	430*340*225mm			



500

2000

1000

Vb/Fb=2,8L/Seal



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test.

Vb/Fb = 7L / 68Hz

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=7L/68Hz

6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

100

Vb/Fb = 2.8L / Sealed

Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects



FC422nd

NEO LF



🔆 4 inch 🛛 🔆 40 Watts VERIFIED WITH KLIPPEL 🔆 91 dB 🔆 134 ~ 18.7k Hz

NEO

HF



KEY FEATURES:

- ① 80W continuous program power capacity
- 2 High sensitivity: 91dB 1w/1m
- (3) 20mm(0.8") high temperature CCAW voice coil
- ④ Vented voice coil former increases airflow to provide enhanced cooling
- ⑤ Strong and light fiberglass cone with polycotton edge remains rigid to higher frequencies
- $^{(6)}$ High grade neodymium ring allows a high force factor(B) and lighter weight
- 7 Ideal for mini array systems, full range application

Nominal Diameter	100mm /4inch
Rated Impedance	8 ohm
Nominal Power handling ¹	40 Watts
Program Power ²	80 Watts
0 11: - 14 - / 4 / 4) 3	

GENERAL SPECIFICATIONS

Naminal Diamator

Program Power ²	80 Watts
Sensitivity(1w/1m) ³	88 dB
Frequency Range ^₄	134 ~ 18.7k Hz
Minimum Impedance(Zmin)	7 ohm
Voice Coil Diameter	20mm /0.8inch
Voice Coil Material	CCAW
Former Material	Glass Fiber
Voice Coil Winding Depth	6 mm
Number of layers	2
Magnet gap depth	4 mm
Basket	Pressed Steel
Flux Density	1.2 T
Magnet Out Diameter/Wgt	Neodymium

THIELE - SMALL PARAM	IE I ERS°	
Resonance frequency	Fs	141 Hz
DC resistance	Re	6.4 ohm
Mechanical factor	Qms	7.5
Electrical factor	Qes	0.81
Total factor	Qts	0.73
Mechanical compliance	Cms	0.36 mm/N
Mechanical resistance of total-driver losses	Rms	0.423 kg/s
Effective Moving Mass	Mms	3.6 g
Half-space efficiency	Eff	0.47%
BL Factor	BL	5.0 T.m
Equivalent Cas air load	Vas	1.4 liters
Effective piston area	Sd	$0.0053 \ m^2$
Max. linear excursion ⁶	Xmax	± 2 mm
Max. excursion before damage	Xdam	±5.5mm
Voice coil inductance(1kHz)	Le	0.17 mH
Efficiency Bandwidth Product	EBP	174

dB

0

-12 -18 -24

-30 -36

5 Hz

10

MOUNTING INFORMATION				
Overall Diameter	127 mm			
Bolt Circle Diameter	115 mm			
Bolt Hole Diameter	5 mm			
Baffle Cutout Diameter	103 mm			
Overall Depth	55 mm			
Air volume occupied by driver	0.1 liters			
Net Weight	0.22 kg / pc			
Shipping Weight	6 kg / 24pcs			
Shipping Box	430*340*225mm			

Turb@sonic



Vb/Fb=2.4L/Sealed

500

2000

1000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and

50

100

Vb/Fb = 2.4L / Sealed

Hg is the gap depth.

Vb/Fb = 4.6L / 103Hz

7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

Vb/Fb=4.6L/103Hz

CXI244I

FERRITE

SUBWOOFER

NEO

LE



FERRITE

WOOFER

MID-BASS

MIDRANGE FULLRANGE





KEY FEATURES:

- 1 800W(LF) +120W(HF) continuous program power capacity
- 2 98dB(LF)+106dB(HF) sensitivity 1w/1m
- ③ 76mm(3") LF inside/outside copper clad aluminum voice coil
- ④ 44mm(1.75") HF edgewound aluminum voice coil
- 5 1" polyimide HF driver directly coupled to the pole piece of the woofer provides excellent response in the mid to high frequencies
- ⑥ Designed for use as stage monitors or as compact bass reflex systems

LF GENERAL SPECIFICATIONS		HF GENERAL SPECIFICATIONS		LF THIELE – SMALL PARAMETERS ⁵		
Nominal Diameter	300mm /12inch	Throat Diameter	25.4mm /1inch	Resonance frequency	Fs	58.5 Hz
Rated Impedance	8 ohm	Rated Impedance	8 ohm	DC resistance	Re	5.6 ohm
Nominal Power handling ¹	400 Watts	Power handling(2k~18kHz)		Mechanical factor	Qms	12.8
Program Power ²	800 Watts	Nominal ¹	60 Watts	Electrical factor	Qes	0.38
Sensitivity(1w/1m) ³	98 dB	Porgram ²	120 Watts	Total factor	Qts	0.37
Frequency Range ⁴	55 - 3000Hz	Sensitivity ³		Mechanical compliance	Cms	0.13 mm/N
Voice Coil Diameter	76mm /3inch	(1w/1m, on axis)	106 dB	Mechanical resistance of total-driver losses	Rms	1.66kg/s
Voice Coil Material	CCAW	Frequency Range ^₄	700~19k Hz	Effective Moving Mass	Mms	58 g
Voice Coil Winding Depth	18 mm	Voice Coil Diameter	44mm /1.7inch	Half-space efficiency	Eff	2.64%
Magnet gap depth	10 mm	Voice Coil Material	Edgewound Aluminum	BL Factor	BL	17.7 T.m
Number of layers	2(inside/outside)	Diaphragm Material	Polyimide	Equivalent Cas air load	Vas	52 liters
Magnet Outer Diameter/Wgt	190mm / 78 oz	Magnet Outer Diamter/Wgt	120mm / 30 oz	Effective piston area	Sd	0.0539 m ²
				Max. linear excursion 6	Xmax	±7.5 mm

MOUNTING INFORMATION					
Overall Diameter	316 mm	Overall Depth	210 mm		
Bolt Circle Diameter	297 mm	Net Weight	10 kg		
Bolt Hole Diameter	6.5 mm	Shipping Weight	11 kg		
Baffle Cutout Diameter	283 mm	Shipping Box	275x275x230mm		





NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- Frequency range is defined as the band of frequencies delineated by the lower and 4 upper limits where the output level drops by 10dB below the rated sensitivity
- dB Vb/Fb=48L/49Hz -12 Vb/Fb=23L/64H -18 -24 -30 -36 5 Hz 50 100 500 1000 2000 Vb/Fb = 48L/49HzVb/Fb = 23L/64Hz
- 5. T/S parameters are measured with Klippel DA LPM module BEFORE preconditioning test 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc



is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects

Computer predicted low frequency response⁽⁷⁾

HF

CXI0442

FERRITE

SUBWOOFER

NEO

LE



FERRITE

WOOFER

MID-BASS

MIDRANGE FULLRANGE

★ 10 " / 1.75 " ★ 250w / 50w



KEY FEATURES:

- 1 500W(LF) +100W(HF) continuous program power capacity
- 2 95dB(LF)+102dB(HF) sensitivity 1w/1m
- 3 65mm(2.5") LF inside/outside copper clad aluminum voice coil
- ④ 44mm(1.75") HF edgewound aluminum voice coil
- (5) 1" PEEK HF driver directly coupled to the pole piece of the woofer provides excellent response in the mid to high frequencies
- [®] Designed for use as stage monitors or as compact bass reflex systems

						DO
LF GENERAL SPECIFICATIONS		HF GENERAL SPECIFICATIONS		LF THIELE - SMALL PARAMETERS		
Nominal Diameter	250mm /10inch	Throat Diameter	25.4mm /1inch	Resonance frequency	Fs	54Hz
Rated Impedance	8 ohm	Rated Impedance	8 ohm	DC resistance	Re	5.6 ohm
Nominal Power handling	250 Watts	Power handling(2k~18kHz)		Mechanical factor	Qms	5.0
Program Power	500 Watts	Nominal ¹	50 Watts	Electrical factor	Qes	0.31
Sensitivity(1w/1m)	95 dB	Porgram ²	100 Watts	Total factor	Qts	0.29
Frequency Range	50 - 3500Hz	Sensitivity ³		Mechanical compliance	Cms	0.23 mm/N
Voice Coil Diameter	65mm /2.5inch	(1w/1m, on axis)	102 dB	Mechanical resistance of total-driver losses	Rms	2.54 kg/s
Voice Coil Material	CCAW	Frequency Range⁴	700~19k Hz	Effective Moving Mass	Mms	37.6 g
Voice Coil Winding Depth	16 mm	Voice Coil Diameter	44mm /1.7inch	Half-space efficiency	Eff	1.9%
Magnet gap depth	8 mm	Voice Coil Material	Edgewound Aluminum	BL Factor	BL	15.2 T.m
Number of layers	2(inside/outside)	Diaphragm Material	PEEK	Equivalent Cas air load	Vas	38.4 liters
Magnet Outer Diameter/Wgt	156mm / 50 oz	Magnet Outer Diamter/Wgt	102mm / 20 oz	Effective piston area	Sd	0.0346 m ²
				Max. linear excursion 6	Xmax	± 6 mm
	MOUNTING	NFORMATION				

Computer pr

dB

-12

-18 -24

-30 -36

5 Hz

MOUNTING INFORMATION				N
Overall Diameter	261 mm	Overall Depth	185 mm	V
Bolt Circle Diameter	246 mm	Net Weight	6.8 kg	F
Bolt Hole Diameter	5.5 mm	Shipping Weight	7.3 kg	_
Baffle Cutout Diameter	228 mm	Shipping Box	275x275x200mm	

	of total-driver losses	RIIIS	2.54 Kg/S
	Effective Moving Mass	Mms	37.6 g
ch	Half-space efficiency	Eff	1.9%
luminum	BL Factor	BL	15.2 T.m
	Equivalent Cas air load	Vas	38.4 liters
DZ	Effective piston area	Sd	0.0346 m ²
	Max. linear excursion 6	Xmax	± 6 mm
	Max.excursion before damage	Xdam	±15mm
	Voice coil inductance	Le1K	0.85 mH
	Efficiency Bandwidth Product	EBP	174
Dmm			
edicted low	frequency response ⁽⁷⁾		

Vb/Fb=14L/63H

100

Vb/Fb = 14L/63Hz

500

1000



NOTES:

- 1. AES standard
- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- 5. T/S parameters measured with laser system BEFORE preconditioning test. 6. The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc

50

Vb/Fb=20L/55Hz

Vb/Fb = 20L/55Hz

is the voice coil depth and Hg is the gap depth. 7. Vb: Net internal volume of box after subtracting the volume of internal objects



★ 10 " / 1.75 " ★ 350w / 50w

FERRITE

HE

CXNIO44

FERRITE

SUBWOOFER

NEO

LE



FERRITE

WOOFER

MID-BASS

MIDRANGE FULLRANGE



KEY FEATURES:

- 1 700W(LF) +100W(HF) continuous program power capacity 2 98dB(LF)+106dB(HF) sensitivity 1w/1m
- 3 76mm(3") LF inside/outside copper clad aluminum voice coil
- ④ 44mm(1.75") HF edgewound aluminum voice coil
- (5) 1" HF driver directly coupled to the pole piece of the woofer provides excellent response in the mid to high frequencies
- (6) Neodymium magnet structure for a high force factor and lighter weight
- ⑦ Designed for use as stage monitors or as compact bass reflex systems

LF GENERAL SPECIFI	CATIONS	HF GENERAL SPECIF	ICATIONS	LF THIELE – SMALL PAR	AMETE	RS
Nominal Diameter	250mm /10inch	Throat Diameter	25.4mm /1inch	Resonance frequency	Fs	73Hz
Rated Impedance	8 ohm	Rated Impedance	8 ohm	DC resistance	Re	5.8 ohm
Nominal Power handling	350 Watts	Power handling(2k~18kHz)		Mechanical factor	Qms	9.0
Program Power	700 Watts	Nominal ¹	50 Watts	Electrical factor	Qes	0.32
Sensitivity(1w/1m)	98 dB	Porgram ²	100 Watts	Total factor	Qts	0.31
Frequency Range	73 - 4100Hz	Sensitivity ³		Mechanical compliance	Cms	0.13 mm/N
Voice Coil Diameter	76mm /3inch	(1w/1m, on axis)	106 dB	Mechanical resistance of total-driver losses	Rms	1.9 kg/s
Voice Coil Material	CCAW	Frequency Range ^₄	800~19k Hz	Effective Moving Mass	Mms	37.6 g
Voice Coil Winding Depth	16.5 mm	Voice Coil Diameter	44mm /1.7inch	Half-space efficiency	Eff	2.7%
Magnet gap depth	10 mm	Voice Coil Material	Edgewound Aluminum	BL Factor	BL	17.6 T.m
Number of layers	2(inside/outside)	Diaphragm Material	Polyimide	Equivalent Cas air load	Vas	23 liters
Magnet Material	Neodymium	Magnet Material	Neodymium	Effective piston area	Sd	0.0360 m ²
				Max. linear excursion 6	Xmax	± 5.8 mm
	MOUNTING	NFORMATION		Max.excursion before damage	Xdam	±15 mm
Overall Diameter	261 mm	Overall Depth	166 mm	Voice coil inductance	Le1K	0.6 mH
Bolt Circle Diameter	246 mm	Net Weight	4.1 kg	Efficiency Bandwidth Product	EBP	228

5.1 kg

275x275x200mm

Shipping Weight

Shipping Box



5.5 mm

228 mm

NOTES:

1. AES standard

Bolt Hole Diameter

Baffle Cutout Diameter

- 2. Program Power is defined as 3 dB greater than the nominal power handling. 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis.
- 4. Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity
- Computer predicted low frequency response⁽⁷⁾ dB Vb/Fb = 18L/73Hz-12 -18 -24 -30 -36 5 Hz 50 100 500 1000 2000 Vb/Fb = 18L/73Hz
- 5. Thiele-Small parameters are measured with Klippel DA LPM module BEFORE preconditioning test.
- The maximum linear excursion is calculated as: (Hvc-Hg)/2+Hg/4 where Hvc is the voice coil depth and Hg is the gap depth.
- 7. Vb: Net internal volume of box after subtracting the volume of internal objects





NDi7409

FERRITE

SUBWOOFER

NEO

LF



FERRITE

WOOFER

MID-BASS

MIDRANGE FULLRANGE

★ 3 inch ★ 90 Watts
★ 109 dB ★ 700 ~ 18k Hz



KEY FEATURES:

- 1.5" exit throat
- (2) 180 W continuous program power handling
- 3 109 dB sensitivity 1w/1m
- T00Hz~18kHz frequency range
- ⑤ Titanium diaphragm

6 75mm(3") edgewound aluminum voice coi

COAXIAL

- O Copper inductance ring for extended HF responsel
- ⑧ Neodymium magnet structure

GENERAL SPECIFICATIONS ¹	
Throat Diameter	38mm /1.5inch
Rated Impedance	8ohm
Power handling(1k~18kHz)	
Nominal ²	90 Watts
Continuous Porgram ³	180 Watts
Sensitivity ^₄	
(1w/1m, on axis, on horn)	109 dB
Frequency Range	700~18k Hz
Minimum Lmpedance(Zmin)	7.8ohm
Voice Coil Diameter	75mm /3inch
Voice Coil Material	Edgewound Aluminum
Voice Coil Former	Kapton
Phase Plug Material	Composite
Diaphragm Material	Titanium
Flux Density	1.9 T
Magnet Material	Neodymium

MOUNTING INFORMATION

Overall Diameter	124 mm
Overall Depth	5 6 mm
Net Weight	2.1 kg

4xM6 holes, 90°on 102mm diameter

NOTES:

- 1. 2 hours test made with continuous pink noise signal (6dB creast factor) within the specified range.
- Continuous Program Power is defined as 3dB greater than the nominal power Handling.
 Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horn
- 3. Sensitivity is measured at 1 w input on rated impedance at 1 m on axis from the mouth of a norn and averaged within the specified range.
- A.Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated. Sensitivity.







LF

MIDRANGE FULLRANGE

NDi6509

★ 2.5 inch ★ 75 Watts ★ 108dB ★ 750 ~ 18k Hz





KEY FEATURES:

- 1.5" exit throat
- (2) 150 W continuous program power handling
- ③ 108 dB sensitivity 1w/1m
- 750Hz~18kHz frequency range

GENERAL SPECIFICATIONS

⑤ Titanium diaphragm

- 6 65mm(2.5") edgewound aluminum voice coi
- $\ensuremath{\overline{\mathcal{O}}}$ Copper inductance ring for extended HF responsel
- ⑧ Neodymium magnet structure

Throat Diameter	38mm /1.5inch
Rated Impedance	8ohm
Power handling(1k~18kHz)	
Nominal ²	75 Watts
Continuous Porgram ³	150 Watts
Sensitivity ⁴	

Sensitivity*	
(1w/1m, on axis, on horn)	108 dB
Frequency Range	750~18k Hz
Minimum Lmpedance(Zmin)	7.7 ohm
Voice Coil Diameter	65mm /2.5inch
Voice Coil Material	Edgewound Aluminum
Voice Coil Former	Kapton
Phase Plug Material	Composite
Diaphragm Material	Titanium
Flux Density	2 T
Magnet Material	Neodymium

MOUNTING INFORMATION

Overall Diameter	115 mm
Overall Depth	45 mm
Net Weight	1.8 kg
AuMO halas 000au 400uuu diamatau	



NOTES:

- 1. 2 hours test made with continuous pink noise signal (6dB creast factor) within the specified range.
- Continuous Program Power is defined as 3dB greater than the nominal power Handling.
 Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horn
- 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horr and averaged within the specified range.

 A.Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated. Sensitivity.







NDi4409

FERRITE

SUBWOOFER

NEO

LF

★ 1.7 inch ★ 50 Watts ★ 106dB ★ 800 ~ 19k Hz



FERRITE

WOOFER

MID-BASS

MIDRANGE FULLRANGE



KEY FEATURES:

- 1 exit throat
- (2) 100 W continuous program power handling
- ③ 106 dB sensitivity 1w/1m
- ④ 800Hz~19kHz frequency range

GENERAL SPECIFICATIONS¹

(5) Polyimide diaphragm

6 44mm(1.7") edgewound aluminum voice coi
 7 Neodymium magnet structure

COAXIAL

Throat Diameter	25.4mm /1inch
Rated Impedance	8ohm
Power handling(1k~18kHz)	
Nominal ²	50 Watts
Continuous Porgram ³	100 Watte

Continuous Porgram ³	100 Watts
Sensitivity ^₄	
(1w/1m, on axis, on horn)	106 dB
Frequency Range	800~19k Hz
Minimum Lmpedance(Zmin)	7.5ohm
Voice Coil Diameter	44mm /1.7inch
Voice Coil Material	Edgewound Aluminum
Voice Coil Former	Kapton
Phase Plug Material	Composite
Diaphragm Material	Polyimide
Flux Density	1.7 T
Magnet Material	Neodymium

MOUNTING INFORMATION

Overall Diameter	85 mm	
Overall Depth	46 mm	
Net Weight	0.9 kg	
2xM6 holes 180°on 76mm diameter		

2xM6 holes, 180°on 76mm diameter

NOTES:

- 1. 2 hours test made with continuous pink noise signal (6dB creast factor) within the specified range.
- Continuous Program Power is defined as 3dB greater than the nominal power Handling.
 Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horn
- Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horn and averaged within the specified range.

 A.Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated. Sensitivity.





NDi3809

FERRITE

SUBWOOFER

NEO

LF



FERRITE

WOOFER

MID-BASS

MIDRANGE FULLRANGE

★ 1.5inch ★ 50 Watts
★ 110dB ★ 1.2k ~ 20k Hz



KEY FEATURES:

- 1 exit throat
- (2) 100 W continuous program power handling
- 3 110 dB sensitivity 1w/1m
- (4) 1.2k ~19kHz frequency range
- (5) Polyester diaphragm

6 38mm(1.5") copper clad aluminum voice coil
 7 Neodymium magnet structure

COAXIAL

GENERAL SPECIFICATIONS ¹	
Throat Diameter	25.4mm /1inch
Rated Impedance	8 ohm
Power handling(1k~18kHz)	
Nominal ²	50 Watts
Continuous Porgram ³	100 Watts
Sensitivity ⁴	
(1w/1m, on axis, on horn)	110 dB
Frequency Range	1200~20k Hz
Minimum Lmpedance(Zmin)	6 ohm
Voice Coil Diameter	38mm /1.5inch
Voice Coil Material	CCAW
Voice Coil Former	Kapton
Phase Plug Material	Aluminum
Diaphragm Material	Polyester

MOUNTING INFORMATION

Overall Diameter	70 mm
Overall Depth	50 mm
Net Weight	0.5 kg
Saraw (25mm / 1, 29inch diamatar)	

Screw (35mm / 1.38inch diameter)

NOTES:

Flux Density Magnet Material

1. 2 hours test made with continuous pink noise signal (6dB creast factor) within the specified range.

2.1 T

Neodymium

- Continuous Program Power is defined as 3dB greater than the nominal power Handling.
 Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horn
- 3. Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a norn and averaged within the specified range.
- A.Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated. Sensitivity.













★ 3 inch ★ 90 Watts
 ★ 108dB ★ 500 ~ 17k Hz

FERRITE

HF



KEY FEATURES:

- 1.5" exit throat
- (2) 180 W continuous program power handling
- 3 108 dB sensitivity 1w/1m
- (4) 500Hz~17kHz frequency range
- ⑤ Titanium diaphragm

- ⑥ 75mm(3") edgewound aluminum voice coil
- ⑦ Aluminum rear cover
- (8) optimized geometry phase plug

	IOA I ONO

Throat Diameter	38mm /1.5inch
Rated Impedance	8ohm
Power handling(1k~18kHz)	
Nominal ²	90 Watts
Continuous Porgram ³	180 Watts
Sensitivity ⁴	
(1w/1m, on axis, on horn)	108 dB
Frequency Range	500~17k Hz
Minimum Lmpedance(Zmin)	7.9ohm
Voice Coil Diameter	75mm /3inch
Voice Coil Material	Edgewound Aluminum
Voice Coil Former	Kapton
Phase Plug Material	Composite
Diaphragm Material	Titanium
Flux Density	1.7 T
Magnet Material/Outer Diameter	Ferrite/170mm

MOUNTING INFORMATION

Overall Diameter	170 mm
Overall Depth	64 mm
Net Weight	4.5 kg

4xM6 holes, 90° on 102mm diameter

NOTES:

- 1. 2 hours test made with continuous pink noise signal (6dB creast factor) within the specified range.
- Continuous Program Power is defined as 3dB greater than the nominal power Handling.
 Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horn
- and averaged within the specified range.
- A.Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.







CDi440

FERRITE

SUBWOOFER

NEO LF



FERRITE

WOOFER

MID-BASS

MIDRANGE FULLRANGE

※ 1.7 inch ※ 60 Watts ※ 106 dB ※ 900 ~ 19k Hz

NEO HF

COAXIAL

FERRITE

HF



KEY FEATURES:

- (1) 1" exit throat
- (2) 120 W continuous program power handling
- ③ 106 dB sensitivity 1w/1m
- ④ 900Hz~19kHz frequency range
- (5) Polyimide diaphragm

- 6 44mm(1.7") edgewound Aluminum voice coil
- ⑦ Aluminum heat sink cover for improved thermal dissipation
- (8) Optimized phase plug helps prevent phase cancellations

GENERAL SPECIFICATIONS

Throat Diameter	25.4mm /1inch
Rated Impedance	8ohm
Power handling(1k~18kHz)	
Nominal ²	60Watts
Continuous Porgram ³	120Watts
Sensitivity ⁴	
(1w/1m, on axis, on horn)	106dB
Frequency Range	900~19k Hz
Minimum Lmpedance(Zmin)	7.6ohm
Voice Coil Diameter	44mm /1.7inch
Voice Coil Material	Edgewound Aluminum
Voice Coil Former	Kapton
Phase Plug Material	Composite
Diaphragm Material	Polyimide
Flux Density	1.7 T
Magnet Material/Outer Diameter	Ferrite/120mm

MOUNTING INFORMATION

Overall Diameter	120mm
Overall Depth	60mm
Net Weight	2.1Kg

2xM6 holes, 180°on 76mm diameter

3xM6 holes, 120°on 57mm diameter

NOTES:

1. 2 hours test made with continuous pink noise signal (6dB creast factor) within the specified range.

- Continuous Program Power is defined as 3dB greater than the nominal power Handling.
 Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horn
- Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a hor and averaged within the specified range.

 A.Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.







CDi4402

FERRITE

SUBWOOFER

FERRITE

WOOFER

MID-BASS

MIDRANGE FULLRANGE



※ 1.3 inch ※ 55 Watts
 ※ 105 dB ※ 900 ~ 19k Hz

NEO HF

COAXIAL

FERRITE

HF



KEY FEATURES:

① 1" exit throat

NEO LF

- 2 110 W continuous program power handling
- 3 105 dB sensitivity 1w/1m
- (4) 900Hz~19kHz frequency range

GENERAL SPECIFICATIONS

(5) PEEK diaphragm

Diaphragm Material

Overall Diameter

Overall Depth

Net Weight

Magnet Material/Outer Diameter

MOUNTING INFORMATION

4xM6 holes, 90° on 76mm diameter

Flux Density

- 6 44mm(1.7") edgewound Aluminum voice coil
- ⑦ Aluminum heat sink cover for improved thermal dissipation
- (8) Optimized phase plug helps prevent phase cancellations

Throat Diameter	25.4mm /1inch
Rated Impedance	8ohm
Power handling(1k~18kHz)	
Nominal ²	55Watts
Continuous Porgram ³	110Watts
Sensitivity ^₄	
(1w/1m, on axis, on horn)	105dB
Frequency Range	900~19k Hz
Minimum Lmpedance(Zmin)	7.6ohm
Voice Coil Diameter	44mm /1.7inch
Voice Coil Material	Edgewound Aluminum
Voice Coil Former	Kapton
Phase Plug Material	Composite

Frequency response curve measured in an anechoic chamber, the driver is mounted to an 80°x50° exponential horn.





NOTES:

1. 2 hours test made with continuous pink noise signal (6dB creast factor) within the specified range.

PEEK

1.5 T

102 mm

64 mm

1.7Kg

Ferrite/102mm

- Continuous Program Power is defined as 3dB greater than the nominal power Handling.
 Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horn
- a. Sensitivity is measured at 1 w input on rated impedance at 1 m on axis from the mouth of a horn and averaged within the specified range.
- A.Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.



SUBWOOFER MI

MIDRANGE FULLRANGE

CD340I

NEO LF



★ 1.3 inch ★ 40 Watts ★ 104 dB ★ 1000 ~ 20k Hz



KEY FEATURES:

- (1) 1" exit throat
- 2 80 W continuous program power handling
- 3 104 dB sensitivity 1w/1m
- ④ 1000Hz~20kHz frequency range

⑤ Titanium diaphragm ⑥ 34mm(37") CCAW voice coil

Throat Diameter	25.4mm /1inch
Rated Impedance	8ohm
Power handling(1k~18kHz) Nominal ²	40Watts
Continuous Porgram ³	80Watts
Sensitivity ^₄	
(1w/1m, on axis, on horn)	104dB
Frequency Range	1000~20k Hz
Minimum Lmpedance(Zmin)	7.0ohm
Voice Coil Diameter	34mm /1.3inch
Voice Coil Material	Aluminum
	Kantan

Voice Coil Material	Aluminum
Voice Coil Former	Kapton
Phase Plug Material	Composite
Diaphragm Material	Titanium
Flux Density	1.4 T
Magnet Material/Outer Diameter	Ferrite/100mm

MOUNTING INFORMATION

Overall Diameter	100mm
Overall Depth	53mm
Net Weight	1.2kg

2xM6 holes, 180°on 76mm diameter

NOTES:

- 1. 2 hours test made with continuous pink noise signal (6dB creast factor) within the specified range.
- Continuous Program Power is defined as 3dB greater than the nominal power Handling.
 Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horn
- Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of a horn and averaged within the specified range.

 A.Frequency range is defined as the band of frequencies delineated by the lower and upper limits where the output level drops by 10dB below the rated sensitivity.










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