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PROFESSIONAL LOUDSPEAKERS
www.beyma.com

21SW1600Nd

LOW FREQUENCY TRANSDUCER
SW1600Nd series

KEY FEATURES

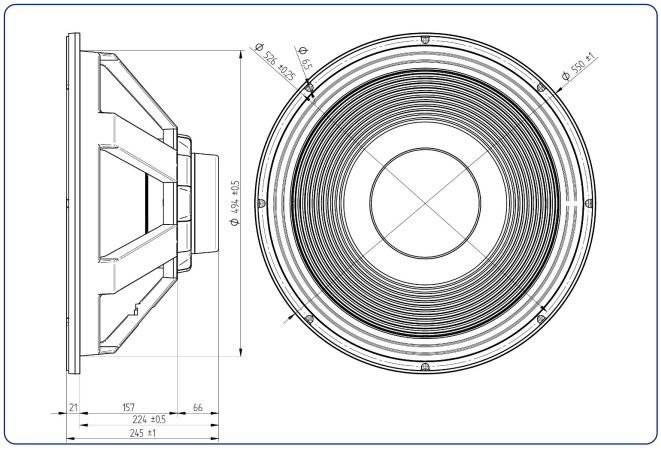
helicex TECHNOLOGY

- HELICEX® cooling technology
- 1600W AES power handling capacity
- High sensitivity: 98dB @ 2.83v
- Low resonant frequency: 33Hz
- Extended controlled displacement: Xmax ± 15 mm
- Massive mechanical displacement capability: Xpp 60mm
- Exclusive NCR membrane (Neck Coupling Reinforcement)
- Designed with MMSS technology
- 5" DUO double inner/outer voice coil winding
- CONEX Spider with Die Cast Aluminum Ring

TECHNICAL SPECIFICATIONS

Nominal diameter	540mm. 21 in.
Rated impedance	8 ohms
Minimum impedance	6.5 ohms
Power capacity*	1600 w AES
Program power	3200 w
Sensitivity	98 dB 2.83v @ 1m @ 2π
Frequency range	25 - 1200 Hz
Maximum Recom. Frequency	200 Hz
Recom. enclosure vol.	100/ 250 l 3.5 / 8.75 ft.^{3}
Voice coil diameter	126 mm. 5 in.
Magnetic assembly weight	7.59 kg. 16.7 lb.
BL factor	32 N / A
Moving mass	0.370 kg.
Voice coil length	35 mm
Air gap height	14 mm
X damage (peak to peak)	60 mm

DIMENSION DRAWINGS



THIELE-SMALL PARAMETERS**

Resonant frequency, fs	33 Hz
D.C. Voice coil resistance, Re	5.3 ohms
Mechanical Quality Factor, Qms	8.37
Electrical Quality Factor, Qes	0.40
Total Quality Factor, Qts	0.38
Equivalent Air Volume to Cms, Vas	268 l
Mechanical Compliance, Cms	62.8 μm / N
Mechanical Resistance, Rms	9.18 kg / s
Efficiency, ηo (%)	2.31
Effective Surface Area, Sd (m²)	0.1734 m²
Maximum Displacement, Xmax* **	15 mm
Displacement Volume, Vd	2514 cm³
Voice Coil Inductance, Le @ 1 kHz	3.7 mH

MOUNTING INFORMATION

Overall diameter	550 mm.	21.65 in.
Bolt circle diameter	526 mm.	20.71 in.
Baffle cutout diameter:		
- Front mount	494 mm.	19.45 in.
- Rear mount	511 mm.	20.12 in.
Depth	245 mm.	9.64 in.
Volume displaced by driver	20 l.	0.7 ft.^{3}
Net weight	14.9 kg.	32.85lb.
Shipping weight	19.1 kg.	42.02 lb.

Notes:

*The power capacity is determined according to AES2-1984 (r2003) standard.
Program power is defined as the transducer's ability to handle normal music program material.

**T-S parameters are measured after an exercise period using a preconditioning power test.
The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the loudspeaker has been working for a short period of time).

***The Xmax is calculated as (Lvc - Hag)/2 + Hag/3.5, where Lvc is the voice coil length and Hag is the air gap height.

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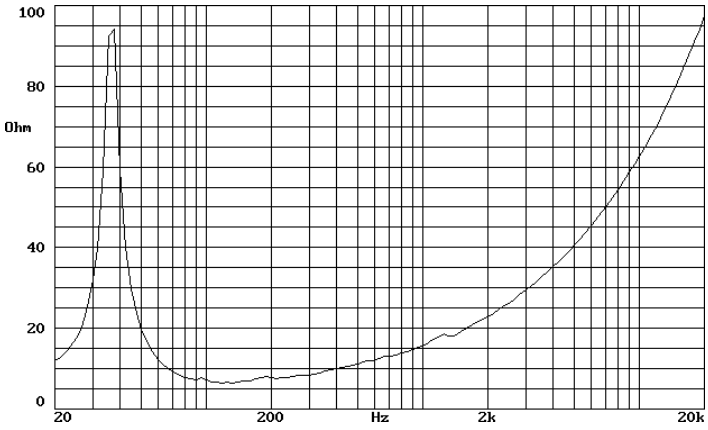
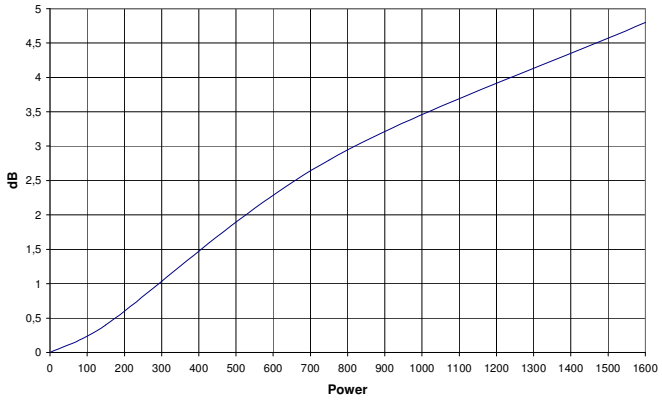
FREE AIR IMPEDANCE CURVE

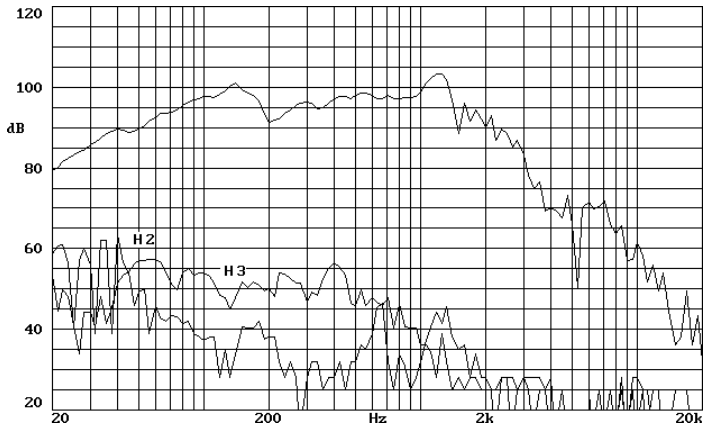


POWER COMPRESSION LOSSES



Note: Power Compression Losses were calculated after 5 minutes period applying a pink noise signal filtered between 25 and 200 Hz.

FREQUENCY RESPONSE AND DISTORTION



Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

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