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PROFESSIONAL LOUDSPEAKERS www.beyma.com

# 21SW1600Nd

#### LOW FREQUENCY TRANSDUCER **Preliminary Data Sheet**

## **KEY FEATURES**

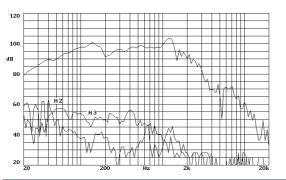


- HELICEX® cooling technology
- 1600W AES power handling capacity
- High sensitivity: 98dB @ 2.83v
- Low resonant frequency: 33Hz •
- Extended controlled displacement: Xmax ± 15 mm •
- Massive mechanical displacement capability: Xpp 60mm •
- Exclusive NCR membrane (Neck Coupling Reinforcement) .
- Designed 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

### FREQUENCY RESPONSE AND DISTORTION



#### **MOUNTING INFORMATION**

Overall diameter	549 mm.	-
Bolt circle diameter	525 mm.	20.66 in.
Baffle cutout diameter:		
- Front mount	491 mm.	19.33 in.
- Rear mount	511 mm.	20.12 in.
Depth	250mm.	9.84 in.
Volume displaced by driver	20 I.	0.7 ft. <sup>3</sup>
Net weight	14.9kg.	32.85lb.
Netes		

Notes:

determined according to AES2-1984 (r2003) st red as the transducer's ability to handle normal n \*The power capacity is a Program power is define

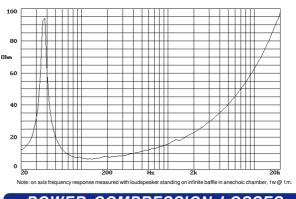
\*\*T-S parameters are measured after an exercise period using a preconditioning power test. The measurements are carried out with a velocity-current laser transducer and will reflect the long term parameters (once the louds has been working for a short period of time)



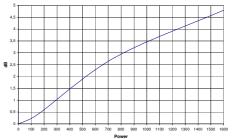
#### THIELE-SMALL PARAMETERS\*\*

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 I
Mechanical Compliance, Cms	62.8 <b>µ</b> m / N
Mechanical Resistance, Rms	9.18 kg / s
Efficiency, ηο (%)	2.31
Effective Surface Area, Sd (m <sup>2</sup> )	0.1734 m <sup>2</sup>
Maximum Displacement, Xmax***	15 mm
Displacement Volume, Vd	2514 cm <sup>3</sup>
Voice Coil Inductance, Le @ 1 kHz	3.7 mH

## FREE AIR IMPEDANCE CURVE



POWER COMPRESSION LOSSES



Power Compression Losses were calculated after 5 minutes period applying a pink noise signal filtered between 25 and 200 Hz. 029