

KEY FEATURES

- High Sensitivity (102 dB 2.83v @ 1m @ 2π) and double cone for an extended bandwidth coverage
- Special treated surround to obtain an extremely linear frequency response
- Short-circuit copper ring for low harmonic distortion and constant impedance modulus
- 2" aluminium voice coil with kapton former
- Designed for high quality full-range reproduction and music instruments reinforcement

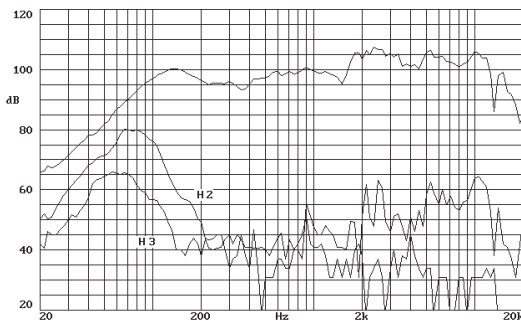


GENERAL DESCRIPTION

This full-range transducer offers two main points of interest: an extremely high sensitivity (102 dB) and an extended frequency response. Both characteristics make it suitable for high quality systems. Moreover, its versatile design allows it to be used as a full-range transducer in guitar or organ amplification or in sound reinforcement systems.

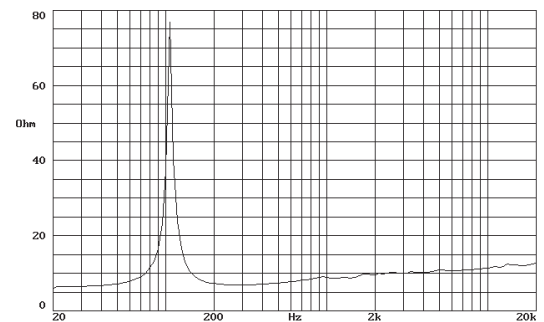
Beyond its frequency response advantages, this loudspeaker offers more: it takes profit of the improvements achieved in our low frequency-high power transducers. Thus, it incorporates a high quality voice coil made of high temperature magnet wire and kapton former. Thanks to this design concept of strength, the 12GA50 reaches a great power handling.

FREQUENCY RESPONSE AND DISTORTION CURVES

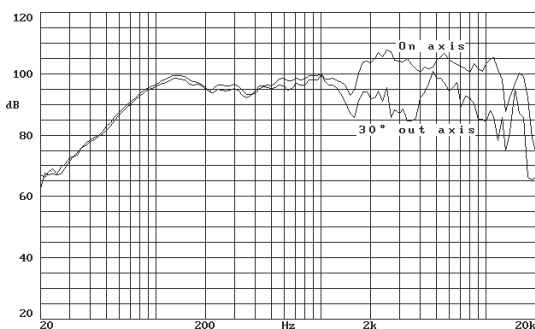


Note: on axis frequency response measured with loudspeaker standing on infinite baffle in anechoic chamber, 1w @ 1m.

FREE AIR IMPEDANCE CURVE



FREQUENCY RESPONSE OUT OF AXIS



TECHNICAL SPECIFICATIONS

Nominal diameter	300 mm. 12 in.
Rated impedance	8 ohms.
Minimum impedance	6.8 ohms.
Power capacity *	250 w AES
Program power	500 w
Sensitivity	102 dB 2.83v @ 1m @ 2π
Frequency range	70 - 18000 Hz
Recom. enclosure vol.	20 / 70 l 0.7 / 2.45 ft. ³
Voice coil diameter	52 mm. 2 in.
Magnetic assembly weight	2.75 kg. 6.1 lb.
BL factor	10 N / A
Moving mass	0.034 kg.
Voice coil length	9 mm.
Air gap height	7 mm.
X damage (peak to peak)	24 mm.

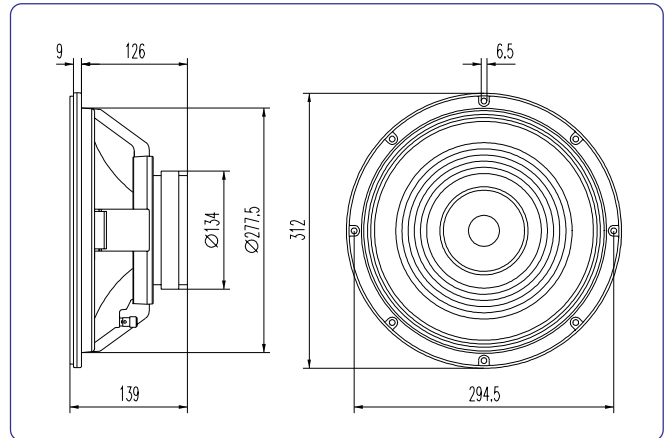
MOUNTING INFORMATION

Overall diameter	312 mm. 12.3 in.
Bolt circle diameter	294.5 mm. 11.6 in.
Baffle cutout diameter:	
- Front mount	277.5 mm. 10.9 in.
- Rear mount	280 mm. 11.02 in.
Depth	139 mm. 5.47 in.
Volume displaced by driver	5.5 l 0.19 ft. ³
Net weight	3.55 kg. 7.81 lb.
Shipping weight	4 kg. 8.81 lb.

THIELE-SMALL PARAMETERS **

Resonant frequency, fs	90 Hz
D.C. Voice coil resistance, Re	6.2 ohms.
Mechanical Quality Factor, Qms	14.8
Electrical Quality Factor, Qes	1.26
Total Quality Factor, Qts	1.16
Equivalent Air Volume to Cms, Vas	34 l
Mechanical Compliance, Cms	87 μm / N
Mechanical Resistance, Rms	1.34 kg / s
Efficiency, ηo (%)	2.1
Effective Surface Area, Sd (m ²)	0.0530 m ²
Maximum Displacement, Xmax	2 mm.
Displacement Volume, Vd	105 cm. ³
Voice Coil Inductance, Le @ 1 kHz	0.6 mH

DIMENSION DRAWINGS



MATERIALS

- **Voice coil:** aluminium wire with high temperature bonding strength. Kapton former, able to withstand high temperatures.
- **Cone:** light and stiff paper cone to provide good mid-frequency response and tweeter cone for extended bandwidth.
- **Surround:** treated paper to mechanically equalize the frequency response.
- **Spider:** cotton spider.
- **Metal parts:** high quality magnetic alloy plates.
- **Basket:** specially designed die cast aluminium basket to avoid disturbing resonances.
- **Magnet:** high Curie temperature ferrite.

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).



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