

Professional Series

Model 2205H/J 380 mm (15 in) Low Frequency Transducer

300 W continuous program

100 mm (4 in) edgewound copper ribbon voice coil

30 - 2000 Hz response

97 dB sensitivity, 1 W, 1 m



Model 2205 is a professional quality low frequency transducer capable of handling great amounts of power with ease. Sensitivity through the midrange is carefully controlled to provide highest possible efficiency without sacrificing bass performance. Because of this design approach, loading of the 2205 is not critical. It performs well in infinite baffles, ported enclosures, or as a horn driver. It is offered in 8 Ω (2205H) and 16 Ω (2205J) impedances for maximum versatility in multiple-transducer arrays.

The JBL 2205 incorporates an integrally-stiffened cone, 100 mm

(4 in) edgewound copper ribbon voice coil, and individually machined magnetic pole pieces and back plate. JBL's unique Symmetrical Field Geometry (SFG) reduces second harmonic distortion to inconsequential levels. Precise assembly tolerances allow long cone travel while maintaining minimal spacing (less than 0.36 mm) between coil and pole pieces. Heat is transferred to the magnetic assembly and rapidly dissipated. Thus, the transducer can handle sustained signals at high power levels without danger of mechanical damage or overheating.

Model 2205H/J Low Frequency Transducer

Architectural Specifications

The low frequency transducer shall have a nominal diameter of 380 mm (15 in), overall depth not greater than 137 mm (5½ in), and weigh at least 10.1 kg (22¼ lb). The frame shall be of cast aluminum to resist deformation, and the magnetic assembly shall utilize a ferrite magnet and produce a symmetrical magnetic field at the voice coil gap. In addition, an aluminum ring encircling the pole piece shall act to reduce flux modulation. The voice coil shall be 100 mm (4 in) in diameter and shall be made of edgewound copper ribbon operating in a magnetic field of not less than 1.2 T (12,000 gauss).

Performance specifications of a typical production unit shall be as follows:

Measured sensitivity (SPL at 1 m [3.3 ft] with 1 W input, warbled 100 - 500 Hz) shall be at least 97 dB on-axis and 95 dB 45° off-axis. As an indication of electromechanical conversion efficiency, the BI factor shall be at least 22.5 T•m. Usable frequency response shall extend from 30 - 2000 Hz. On-axis response, measured at a distance of 1.8 m (6 ft) or more under free field conditions, shall be ±3 dB from 45 to 1500 Hz. Acoustic loading shall further extend the low frequency response. Nominal impedance shall be 8 or 16 ohms. Rated power capacity shall be at least 300 W normal program material.

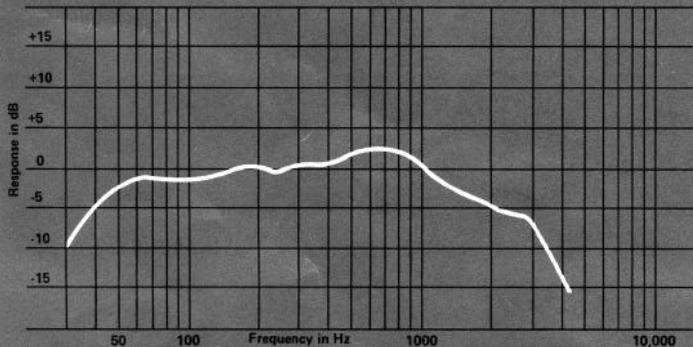
The transducer shall be JBL Model 2205H/J. Other loudspeakers will be considered for equivalency provided that submitted data from a recognized independent test laboratory verify that the above performance specifications are met.

Specifications

Nominal Diameter	380 mm	15 in
Nominal Impedance		
2205H	8 ohms	
2205J	16 ohms	
Power Capacity ¹	300 W continuous program	
Sensitivity ²	97 dB	
Frequency Range	30 Hz to 2 kHz	
Highest Recommended Crossover Frequency	800 Hz	
Nominal Free Air Resonance	30 Hz	
Voice Coil Diameter	100 mm	4 in
Voice Coil Material	Edgewound copper ribbon	
Magnetic Assembly Weight	8.5 kg	18¾ lb
Flux Density	1.2 T (12,000 gauss)	
BI Factor	22.5 T•m	
Recommended Enclosure Volume	170-227 L	6-8 ft ³
Baffle Cutout Diameter		
Front Mount	355 mm	13¾ in
Rear Mount	343 mm	13½ in
Depth	137 mm	5½ in
Net Weight	10.1 kg	22¼ lb
Shipping Weight	11.2 kg	24¾ lb

1. Continuous program power is defined as 3 dB greater than continuous sine wave power (rms). It is a conservative expression of the transducer's ability to handle normal speech and music program material.

2. The sensitivity rating of JBL low frequency loudspeakers is based on a signal warbled from 100 to 500 Hz, rather than the conventional 1 kHz single frequency test signal, since they are normally used below 800 Hz. Usable sensitivity of the 2205 may, therefore, be substantially greater than that of loudspeakers with higher published ratings.



Frequency response contour of the 2205 in a closed box of 170 L (6 ft³) internal volume. Measured response of a typical production unit, including all peaks and dips, does not deviate more than 2 dB from the above curve. Additional acoustic loading (passive radiator or port) will further extend bass response.

JBL

Professional Division

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