

FC104 Series

4" High-Compliance Loudspeaker with Transformer



FC104T

(Shown with Transformer. Bracket is not supplied unless transformer version is ordered.)

Applications

Utilize AVLELEC 4" high-compliance loudspeaker Model FC104 for voice transmission, music and signal reproduction in commercial, industrial and institutional applications of all kinds, especially those where a high performance loudspeaker is required and wide dispersion is demanded.

General Description

This compact, full-range, 4" (127 mm) loudspeaker is equipped with a damped, high-compliance cone which provides excellent low frequency reproduction and smooth extended response. Model FC104 also offers a wide dispersion angle which reduces the number of loudspeakers necessary to achieve total coverage in low-level distribution systems. The 10 watt, 8Ω model (w/o transformer) offers a frequency response range of 150 Hz – 17 kHz, sensitivity of 94 dB (1 W / 1 M) and a dispersion angle of 135° (-6 dB, 2 kHz octave band). The unit contains a 10 oz (283 g) ceramic magnet with a flux density of 10,500 gauss. Loudspeaker is available with three different factory installed line matching transformers to meet a variety of project requirements. A dual-purpose bracket securely mounts the transformer in a low profile position and enables torsion spring mounting found on many AVLELEC baffles. (Bracket not included on base model FC104.) For additional information on AVLELEC Transformer models, refer to #SL1-1369.

Features

- Industry Standard, 10 watt, 4" High-Compliance Loudspeaker
- Offers Proven Performance with Wide-Angle Sound Dispersion
- Efficient Wide-Range Frequency Response
- Versatile 8 watt, 70.7V (25V / 70.7V with model LT-87) Transformer with taps from .5 – 8 watts
- Ideal for Public Address and Background Music Installations
- Mounts In a Large Selection of AVLELEC 4" Enclosures and Baffles

Base Speaker Specifications

Speaker Size	4" (127 mm) (5" E.I.A. Standard)
Speaker Type	High Compliance
Power Rating	10 watts Program
Frequency Response	150 Hz – 17 kHz (± 5 dB)
Magnet, Ceramic	10 oz. (283 g)
Resonance	101 Hz
Voice Coil Impedance	8Ω
Voice Coil Diameter	1" (25 mm)
Flux Density	10,500 Gauss
Depth (w/o Transformer)	2¼" (57 mm)
Sensitivity (Peak)	94 dB (1W / 1M)
Dispersion	135° (-6 dB, 2 kHz Octave Band)

FC104-T70

Transformer Model	LT-70
Primary Voltage	70.7V
Transformer Freq. Resp.	100 Hz – 10 kHz (±1.5 dB)
Primary Taps	.5, 1, 2, & 5 watts
Secondary Impedance	8Ω
Insertion Loss (Max)	1.5 dB
Core Size	½" x ⅝" (13 mm x 16 mm)
Power Rating	5 watts

FC104T72

Transformer Model	LT-72
Primary Voltage	25V / 70.7V
Transformer Freq. Resp.	100 Hz – 10 kHz (±1.5 dB)
Primary Taps	.5, 1, 2, & 4 watts
Secondary Impedance	8Ω
Insertion Loss (Max)	1.5 dB
Core Size	½" x ⅝" (13 mm x 16 mm)
Power Rating	4 watts

FC104T

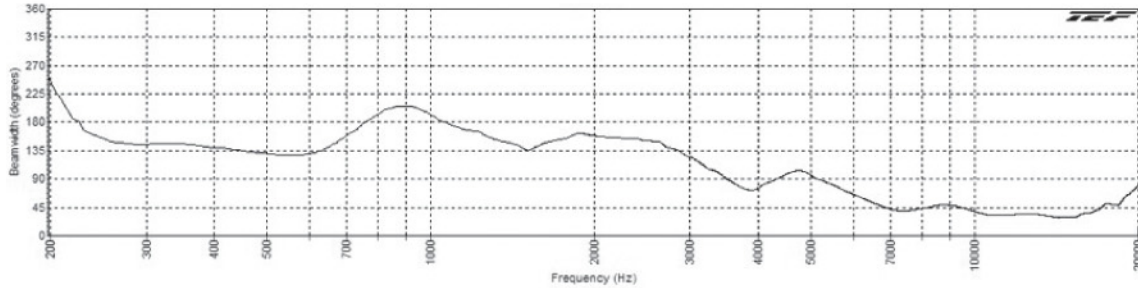
Transformer Model	LT-87*
Primary Voltage	70.7V
Transformer Freq. Resp.	50 Hz – 15kHz ±1.5dB
Primary Taps	.5, 1, 2, 4, & 8 watts
Secondary Impedance	4Ω & 8Ω
Insertion Loss (Max)	.6 dB
Core Size	1" x ¾" (25 mm x 19 mm)
Power Rating	8 watts

*FC104T includes a special version of Model HT87 transformer that includes a .5 Watt tap.

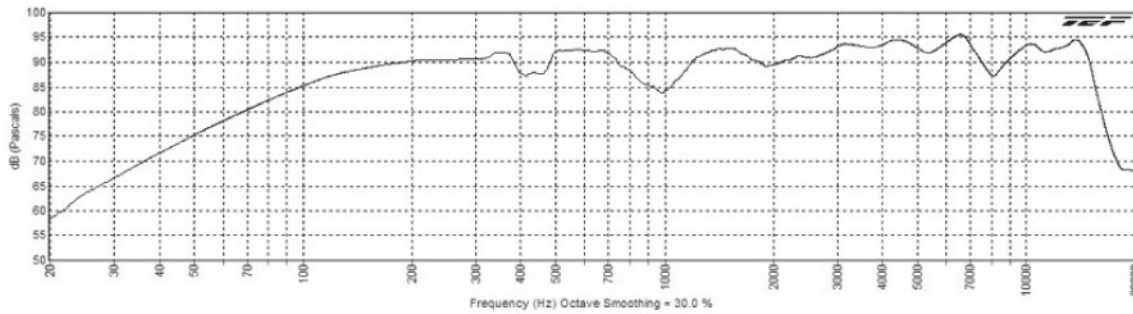
Architect & Engineer Specifications

Unit shall be AVLELEC 4" diameter loudspeaker Model FC104 or loudspeaker / transformer Model _____. Loudspeaker shall be listed by Underwriters Laboratories (UL 1480 General Signaling) to U.S. and Canadian safety standards. The cone shall be the damped, high-compliance type. Base unit (without transformer) shall have a smooth extended frequency response over a range of 150 Hz – 17 kHz and a power rating of not less than 10 watts program. The dispersion angle shall be 135° (-6 dB, 2 kHz octave band). The magnet shall be a 10 oz. (283g) ceramic type

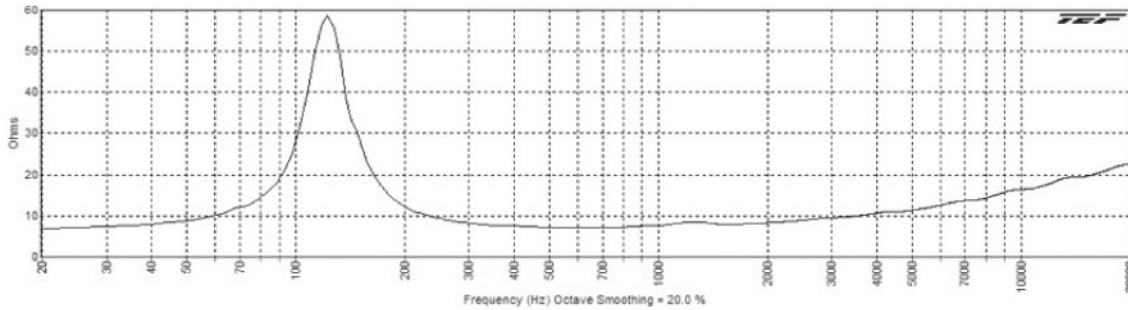
providing the 1" (25 mm) voice coil to operate in a magnetic field of at least 10,500 gauss. Voice coil impedance shall be 8 ohms. Sensitivity shall be 94 dB (measured at 1 W / 1 M input). Free-air resonance shall be 101 Hz. Transformer primary voltage shall be ____ (25V, 70.7V, 100V) with a frequency response range of _____ and power taps at ____ watts. Insertion loss shall not exceed ____dB. The maximum depth of the loudspeaker (Not including transformer) shall not exceed 2 1/4" (57 mm). Unit shall be used in conjunction with AVLELEC baffle Model _____ and Enclosure Model _____.



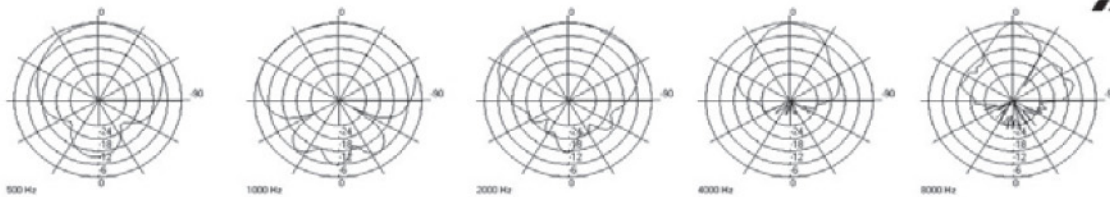
FC104 Beamwidth (-6dB)



FC104 Frequency Response



FC104 Impedance (Ohms) vs. Frequency



FC104 Polars (Normalized to Zero on Axis) (-6dB)