

FE103A-VB | Fostex

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FE Alnico Series

10cm / 4" Alnico full range







The traditional full range FE series now features alnico magnets, with a 10cm regular model available.

Since the introduction of the FE103 full range speaker unit in 1964, the FE series has featured ferrite magnets, with the exception of limited editions. This series employs premium alnico magnets, highly regarded by audiophiles. While preserving the traditional FE sound—vibrant, bright, and transparent—it delivers richly expressive, dynamic, smooth, and pleasant high-quality reproduction. The "A" Series, featuring alnico magnets and joining Fostex's proud full-range tradition, presents a special regular lineup of 8cm and 10cm models. These models maximize the potential of Alnico magnets through cutting-edge technology.

Features

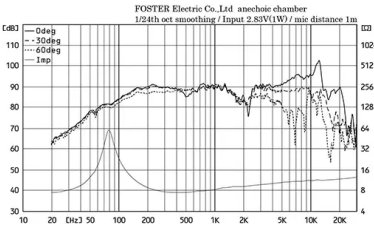
- **Alnico Magnet Implementation**
For the first time in the regular FE series, we've adopted the renowned alnico magnet, celebrated for its expressive and pleasant sound quality. Additionally, copper caps placed on the pole pieces within the magnetic circuit reduce current distortion. This lowers distortion in the drive system, further enhancing clarity in the mid-to-high frequencies.
- **Double-Layer Paper Cone**
The cone paper utilizes a double-layer construction of ES cone, featuring fine, flexible fibers and high density. This achieves enhanced rigidity and internal damping while maintaining light weight. The base layer primarily uses long-fiber pulp, providing high rigidity and internal damping through its high-bulk structure. The surface layer incorporates short-fiber pulp, increasing the propagation speed on the cone surface. This enables reproduction of bright, taut midrange tones while delivering crisp, well-defined highs and rich, full bass.
*Two-layer paper (Patented) is our proprietary technology, a manufacturing method where a single diaphragm is formed from two layers—a base layer and a surface layer—through a two-stage paper-forming process.
- **Reduced midrange distortion via eyelet-less design**
The weight of the eyelet added to the diaphragm caused uneven weight distribution. This induced unequal division resonance in addition to the circular vibration modes inherent to cone-shaped diaphragms, contributing to midrange distortion. Eliminating the eyelet reduces harmonic distortion in the midrange.
- **Pocket Neck Damper**
To achieve the aforementioned eyelet-less design while enabling three-point bonding—where the voice coil, damper, and cone paper are bonded on the same circumference—the pocket neck damper method is employed.
- **Gold-Plated Terminals**
The input terminals utilize low-loss, gold-plated Faston 205-type connectors. This ensures reliable speaker cable connection while preventing sound quality degradation.

Specifications

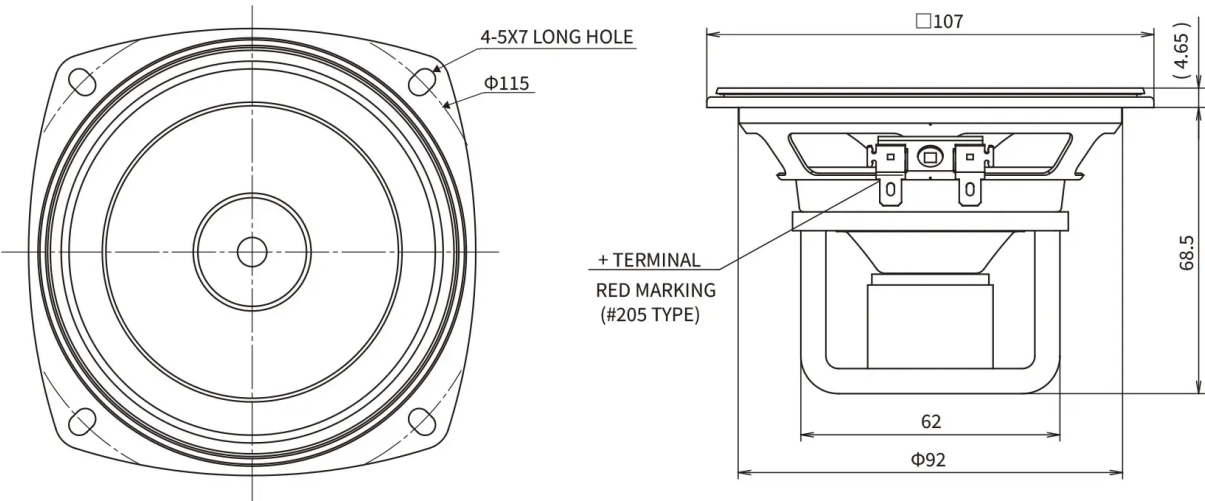
Main Specifications

Electrical Parameters	
Nominal Impedance	8.0 ohm
Re	6.7 ohm
Le	0.1 mH
fs (Fo)	85 Hz
Mechanical Parameters	
MMS (Mo)	2.66 g
CMS	1.27 mm/N
Bl	3.97 N/A
Loss Factors	
Qms	5.82
Qes	0.6
Qts (Qo)	0.55
Other Parameters	
SPL (1m/1W)	87.5 dB
Equivalent Diaphragm Radius (a)	40.0 mm
Rated Input	5 watts
Overall Diameter	□107 mm
Voice Coil Diameter	20 mm
Reproduction Frequency Response	Frequency response to 20 kHz
Vas	4.55 L
Baffle Hole Diameter	Φ93 mm
Magnet Weight	102 g
Weight	600 g
Recommended Enclosure Method	Bass reflex
Accessories	Wood screws ×4, washers ×4, gasket ×1, safety precautions

Frequency response



External Dimensions



Support

You can download various product materials.
You need Adobe Acrobat Reader to view PDF files.

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