M5a Bass-Midrange

Extremely rigid Aluminum/Magnesium cone;
Specially made high loss rubber surround;
Shielded double magnet system;
High power handling Kapton® voice coil former;
Air transparent spider;
High density aluminum die-cast basket;
Symmetric Motor Drive (SMD) technology.

The design of the M5a has been optimized for an extended and dynamic bass reproduction in small vented systems. Midrange clarity and accuracy is remarkable. The M5a utilizes our unique one-piece aluminum/magnesium composite cone. The cone's superior rigidity provides for dynamic and accurate reproduction of transient attacks. This contributes to a more naturally dynamic sound. The back of the cone is hand coated with a special dampening compound to further maximize performance stability and control of structural resonances. The high temperature voice coil former and SV wire, air transparent spider and venting of the coil allow for good power handling. Using Finite Element Analysis simulation, we optimized the complete magnet structure and specifically shaped the pole piece to achieve symmetric flux distribution along the travel path of the voice coil. This design approach provides better driving force linearity. It considerably reduces voice coil inductance modulation and DC offset of the moving system at high power levels. The result is much less distortion and more effective voice coil cooling.

The massive aluminum die-cast basket has been developed to minimize parasitic structural resonances. A shielded magnet structure allows the M5a to be easily incorporated into audio/video applications. The driver may be used in a small closed box as a midrange unit in a three-way system and the good extension (50 Hz) in a vented enclosure allows for use in a two-way two-driver or MTM configured system. Incorporated into the Diva line of loudspeakers manufactured by Swans the M5a earned the Exceptional Value Award at The Home Entertainment Show 2000. Recommended crossover frequency region for a two-way system design is 2-5 kHz.

Products Graph:

Frequency Response (Magnify)
Impedance (Magnify)
Mechanical Drawing (Magnify)

M5a Bass-Midrange
Nominal Impedance (Z)(Ω) : 8
Resonance Frequency (Fs)(Hz) : 48
Nominal Power Handling (Pnom)(W) : 35
Max Power Handling (Pmax)(W) : 70
Sensitivity (2.83V/1m)(dB) : 87
Weight (M)(Kg) : 1.6
VC Diameter (mm) : 25
DC (Re)(O) : 6.5
VC Length (H)(mm) : 10.4
VC Former : SV
VC Frame : Kapton
Magnet System : Shielded
Magnet former : Ferrite
Force Factor (BL)(TM) : 7.6
Gap Height (He)(mm) : 5.0
Linear Excursion (Xmax)(mm) : 2.7
Suspension Compliance (Cms)(uM/N) : 1038
Mechanical Q (Qms) : 6.71
Electrical Q (Qes) : 0.36
Total Q (Qts) : 0.34
Moving Mass (Mms)(g) : 10.8
Effective Piston Area (Sd)(m2) : 0.0087
Equivalent Air Volume (Vas)(L) : 11.2
Cabinet Type : Vented
Recommended Box Volume(Vb)(L) : 10
Tuning Frequency(Fb)(Hz) : 50
-3dB Cut-Off Frequency(F3)(Hz) : 48

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