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M₅a

M5a Bass-Midrange



In 1999, Swans manufactured M5N woofer with original and beautiful appearance, which is suitable for digital audio and sound signal linear loudspeaker system, which is dynamic and with low

distortion. This design has laid another landmark of Swans loudspeaker.

-Advanced alloy (magnesium and aluminum) cone, coated with special damping material

-Optimum recovery CONEX supporting system, having very good stiffness and dynamic stability, improving the acoustic features of the speakers.

-High power handling, heat-resistant Kapton?voice coil former and heat-resistant SV voice coil wire

-Finite Element Analysis for shielded magnetic system with long-throw linear excursion design
-Hi-Vi Symmetric Motor Drive (SMD) technology makes the voice coil into a symmetrical driving magnetic field, thus acquiring symmetrical driving force, reducing the mutual modulation of voice coil inductance and back electromotive force, improving the controllability of the speakers, achieving low distration degrees. distortion degree

-Finite Element Analysis for high density aluminum frame, prevents the parasitic structural resonances
-Using leading technology of Small/Thiele parameters

The design of the MSa has been optimized for an extended and dynamic bass reproduction in small vented systems. Midrange clarity and accuracy is remarkable. The MSa 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

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

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

Specifications

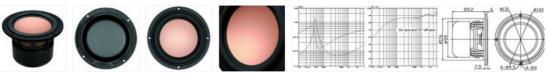
General Data Nominal Power Handling (Pnom)(W) 35 Max Power Handling (Pmax)(W) 70 Sensitivity (2.83v/1m)(dB) 87 Weight (M)(Kg) 1.6 **Electrical Data** Nominal Impedance $(Z)(\Omega)$ 8 DC (Re)(Ω) 6.5 Voice Coil and Magnet Parameters VC Diameter (mm) 25 VC Length (H)(mm) 10.4 VC Former SV VC Frame Kapton Magnet System Shielded Magnet Former Ferrite Force Factor (BL)(N/A) 7.6 Gap Height (He)(mm) 5 Linear Excursion (Xmax)(mm) 2.7 T-S Parameters 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

Pictures of M5a

Effective Piston Area (Sd)(m2)

Equivalent Air Volume (Vas)(L)

Resonance Frequency (Fs)(Hz)



0.0087

11.2

50