

HD1040

Ferrite High Frequency Driver

Key Features

- 107 dB SPL 1W / 1m average sensitivity
- 1 inch exit throat
- 44 mm (1 3/4 inch) voice coil diameter
- 80 Watt continuous program power handling
- Treated polyethylene diaphragm
- Patented phase plug design



General Description

The HD1040 has been designed for use in high quality audio systems. With a 1-inch exit throat, the HD1040 has been developed to match the XT1086 constant directivity horn.

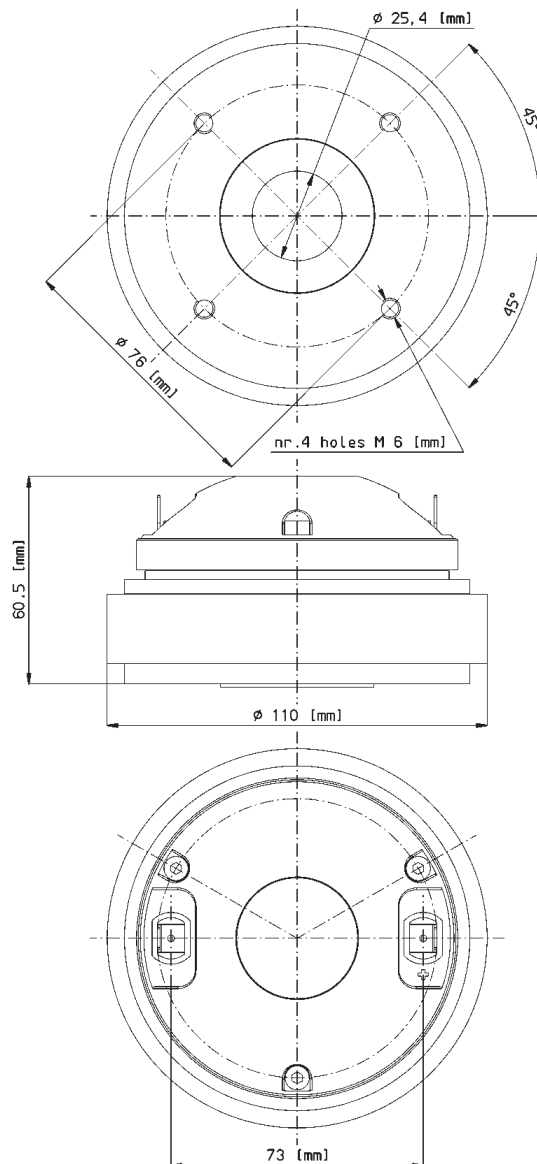
Equipped with unique Phase Plug architecture (Patent n. WO 2004/040942), the HD1040 has been designed to give high level manufacturing consistency and smooth coherent wave front at the horn entrance across the whole working frequency range. The phase plug with its short openings and high flare rate value assures low distortion and demonstrates remarkable improvements in mid-high frequency reproduction.

The greatest innovation in the HD1040 is the new diaphragm assembly made from proprietary treated Polyethylene material. Thanks to its superior diaphragm dimensional stability (160°C), the HD1040 is able to maintain constant behaviour during its whole working life. Moreover, this particular material with its very high value of elasticity modulus, (50% more than standard Mylar and 100% more than polyimide film) is capable of superior transient and intermodulation distortion response. The flat suspension shape is designed to maintain low stiffness and low mid band distortion and response.

An edge-wound aluminum voice coil wound on proprietary treated Nomex completes the diaphragm assembly. Thanks to its physical properties, the proprietary treated Nomex former shows a 30% higher value of tensile elongation at a working operative temperature, (200°C) when compared to Kapton. This feature enables proper energy transfer control from the voice coil to the dome in real working conditions. Moreover, this proprietary former material is suitable for use in damp and wet environments.

The HD1040's powerful ceramic magnet assembly has been designed to obtain 16KGauss in the gap within a compact ferrite motor structure.

0421081040 8 Ohm



FERRITE HF DRIVERS

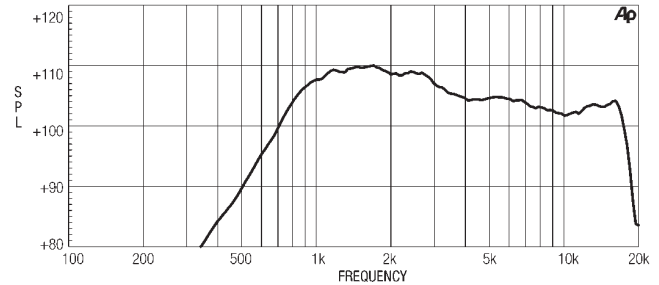
GENERAL SPECIFICATIONS

THROAT DIAMETER	25,4 mm (1 in)
RATED IMPEDANCE	8 ohm
DC RESISTANCE	5,3 Ohm
MINIMUM IMPEDANCE	7 Ohm at 4000Hz
POWER HANDLING	
CONTINUOUS PINK NOISE (1)	40W above 1,6 kHz
CONTINUOUS PROGRAM (2)	80W above 1,6 kHz
SENSITIVITY(1W@1M) (3)	107 dB
FREQUENCY RANGE	1600Hz ÷ 20kHz
RECOMM. XOVER FREQUENCY	1600Hz (12dB/oct slope)
DIAPHRAGM MATERIAL	Treated polyethylene
VOICE COIL DIAMETER	44,4mm (1 3/4 in)
VOICE COIL WINDING MATERIAL	Edge-wound aluminum
MAGNET MATERIAL	Ferrite
FLUX DENSITY	1,6 T
BL FACTOR	7,4 N/A
POLARITY	Positive voltage on + terminal gives positive pressure in the throat

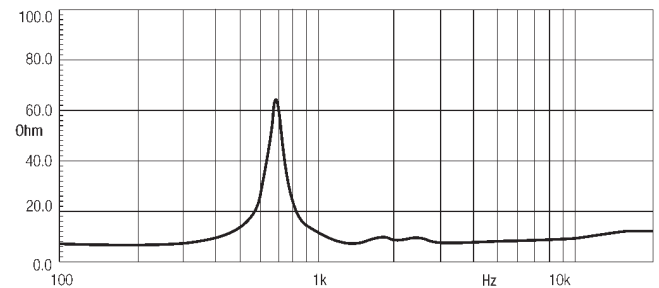
MOUNTING INFORMATION

Overall diameter	110 mm (4,3 in)
Mounting holes diameter	4 M6 holes 90° at Ø 76 mm (3 in)
Bolt circle diameter	76 mm (3 in)
Total depth	60,5 mm (2,38 in)
Net weight	1,8 Kg (4 lb)
Shipping weight	1,9 Kg (4,22 lb)
CardBoard Packaging dimensions	110x110x63 mm (4,3x4,3x2,5 in)

HD1040 MEASURED WITH 1W INPUT ON RATED IMPEDANCE AT 1M DISTANCE ON XT1086 HORN MOUTH AXIS



FREE AIR IMPEDANCE MAGNITUDE CURVE



NOTES

- (1) Continuous pink noise power rating is tested with a pink noise input having a 6 dB crestfactor for two hours duration within the specified range. Power calculated on minimum impedance.
- (2) Program Power is defined as 3 dB greater than a continuous pink noise but with 50% duty cycle.
- (3) Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of XT1086 averaged between 1kHz and 4 kHz.

Eighteen Sound engages in research and product improvement. New materials and design refinements can be introduced into existing products without notice.