

# HD1040

## Key Features

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

## High Frequency Driver



## General Description

The HD1040 one inch exit high frequency compression driver has been designed for use in high quality audio systems.

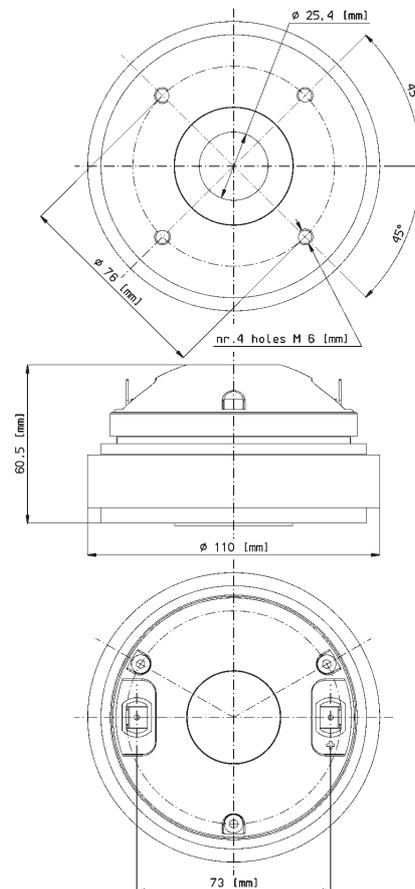
Equipped with proprietary Phase Plug architecture, the HD1040 has been designed to give high level manufacturing consistency and smooth coherent wave front at the horn entrance across the whole working frequency range. The phase plug with its short openings and high flare rate value assures low distortion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

The HD1040 diaphragm assembly is made by proprietary treated Polyethylene material. Thanks to its superior diaphragm dimensional stability (160°C), the polyethylene shows 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 powerful ceramic magnet assembly has been designed to obtain 16 KGauss in the gap within a compact ferrite motor structure.

0421081040 8 Ohm  
0421061040 16 Ohm



FERRITE HF DRIVERS

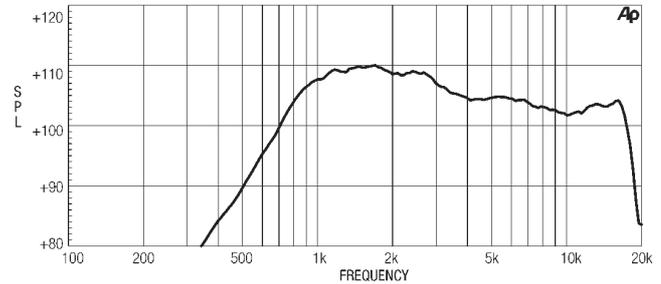
### GENERAL SPECIFICATIONS

THROAT DIAMETER	25,4 mm (1 in)
RATED IMPEDANCE	8 ohm
DC RESISTANCE	5,3 Ohm
MINIMUM IMPEDANCE	7 Ohm at 4000Hz
AES POWER (1)	40 W above 1,6 kHz
PROGRAM POWER (2)	80 W 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	44,4 mm (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

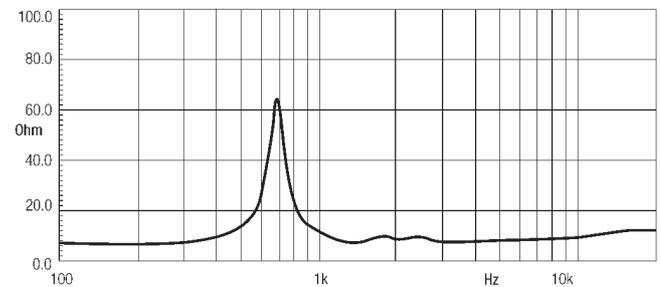
### MOUNTING INFORMATIONS

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) AES power rating is tested with a pink noise input having a 6 dB crest factor for two hours duration within the specified range. Power calculated on minimum impedance.
- (2) Program power rating is defined as 3 dB greater than AES rating, and is a conservative expression of the transducer ability to handle music program material.
- (3) Sensitivity is measured at 1W input on rated impedance at 1m on axis from the mouth of XT1086 horn, 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.