

1/8-inch Prepol., Pressure Microphone Type 40DD

Product Data and Specifications

Typical applications

- *Sound-pressure measurements*
- *High-frequency measurements*
- *Very high level pressure measurements*
- *Impulse-noise measurements*

The G.R.A.S. Microphone Type 40DD (Fig. 1) is a 1/8-inch pressure microphone with a wide frequency response (see Fig. 2) and a large dynamic range.

Its tiny physical size (see Fig. 1) reduces to a minimum the effects of diffractions and reflections created by its presence in the sound field. This allows it to be used for measuring very-high frequency sounds without disturbing the sound field.

Its low sensitivity makes it ideal for high-level measurements. This, combined with its wide frequency response, make it also well suited for impulse-noise measurements.

The Type 40DD must be used with an adapter (RA0063 or RA0082 - both available from G.R.A.S.) for mounting 1/8-inch microphones onto 1/4-inch preamplifiers.



Fig. 1 1/8-inch Pressure Microphone Type 40DD (inset shows true size)

G.R.A.S. 1/4-inch CCP Preamplifiers Types 26CC, 26CB, (see separate data sheets) are available for use with the Type 40DD when fitted with an adapter RA0063 or RA0082. The mounting thread (5.7 mm - 60 UNS-2) is compatible with other available makes of similar microphone preamplifiers.

Non-corrosive, stainless materials are used in manufacturing these microphones to enable them to withstand rough handling and corrosive environments.

All G.R.A.S. microphones are guaranteed for 5 years and are individually checked and calibrated before leaving the factory. An individual calibration chart is supplied with each microphone.

Specifications

Nominal open-circuit sensitivity: at 250Hz. 0.7 mV/Pa	Upper limit of dynamic range: 3% distortion 174 dB re. 20 µ Pa
Frequency response: ±1.0 dB. 10 Hz - 30 kHz ±2.0 dB 6.5 Hz - 80 kHz ±3.0 dB 6.5 Hz - 140 kHz	Lower limit of dynamic range: Thermal noise. 40 dBA re. 20 µ Pa
Polarization voltage: 0V	Nominal cartridge capacitance: 3 pF
	Resonant frequency: 90° phase shift 160 kHz ...continued overleaf

G.R.A.S.
Sound & Vibration

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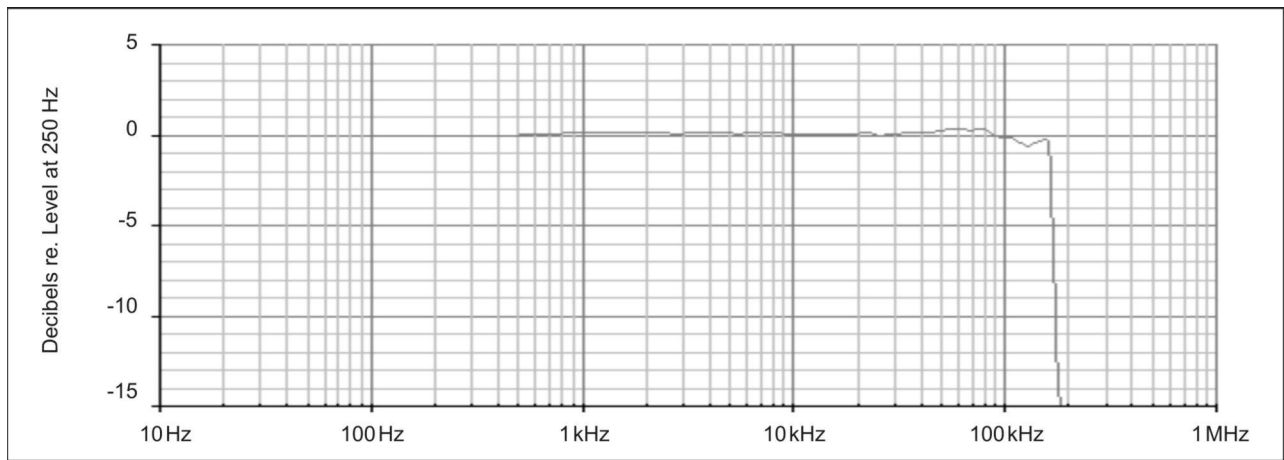


Fig. 2 Typical frequency response for Type 40DD (without protection grid)

Specifications (continued)

Effective front volume: Nominal at 250 Hz 0.1 mm ³	Dimensions (with protection grid): Length: 6.7 mm Diameter: 3.5 mm
Static-pressure coefficient: 250 Hz at 25 °C -0.01 dB/kPa	(without protection grid): Length: 6.1 mm Diameter: 3.2 mm
Influence of axial vibration: for 1 m/s ² 59 dB re. 20 μ Pa	Diameter (diaphragm ring): 3.0 mm
Temperature range: -40 °C to +120 °C	Threads: Protection Grid: M 3.175 x 0.2 Preamplifier Mounting: M 3 x 0.25
Mean temperature coefficient: -10 °C to +50 °C 0.01 dB/°C	Weight: 1.5 g
Venting: Rear vented	

G.R.A.S. Sound & Vibration reserves the right to change specifications and accessories without notice

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