



MMA275 1/2-inch Pressure-field Microphone

Features:

- 1/2-inch pressure-field microphone
- Sensitivity (@250 Hz): 40 mV/Pa (-28 dB re 1V/Pa)
- Frequency response: 100 Hz ~ 5 kHz (± 2 dB)
50 Hz ~ 10 kHz (± 3 dB)
- Dynamic range: 32 dBA ~ 132 dB
- Polarization Voltage: 0V (prepolarized)
- Pressure equalization: front-vented
- Optional phase-matching
- Built-in preamplifier with ICCP power supply
- Optional TEDS (IEEE.1451.4)



Applications:

- Low-cost microphone
- Array applications such as near-field acoustic holography (NAH), beamforming, etc.
- Product quality inspection of production line

Introduction

MMA275 is the 1/2-inch pressure-field microphone developed by BSWA. It is suitable for pressure-field environments such as in cavity, near a hard reflective surface, or installed flush with a hard surface. It doesn't require external polarization voltage and equipped with built-in ICCP power supply preamplifier (optional TEDS).

MMA275 is front-vent and can measure the sound pressure level up to 132 dB in the frequency range of 50 Hz ~ 10 kHz (± 3 dB).

MMA275 is suitable for applications which need a large number of microphones with critical cost requirements, such as array applications including near-field acoustic holography (NAH), beamforming, etc.

BSWA can perform phase-matching of microphones before delivery for the users who have phase requirements. If the phase is not required when ordering, the microphone phase will not be tested and matched.

Moreover, the optional TEDS function support data acquisition equipment to read microphone information directly, including microphone model, serial number, sensitivity, etc. BSWA microphone supports the IEEE 1451.4 standard. The v0.9 version is used by default to be compatible with more data acquisition equipment. The v1.0 version can also be selected according to user requirements.

Each MMA275 is supplied with an individual calibration data chart including sensitivity, frequency response and so on.

Specifications

Sound Field	Pressure-field
Diameter	1/2"
Sensitivity@250 Hz (mV/Pa) (± 2 dB)	40 (-28 dB re 1V/Pa)
Frequency Response (Hz)	100 ~ 5 k (± 2 dB), 50 ~ 10 k (± 3 dB)
Dynamic Range (dBA ~ dB)	32 ~ 132
Self-generated Noise (dBA)	32
Maximum Sound Pressure Level (dB)	132 (3% distortion)

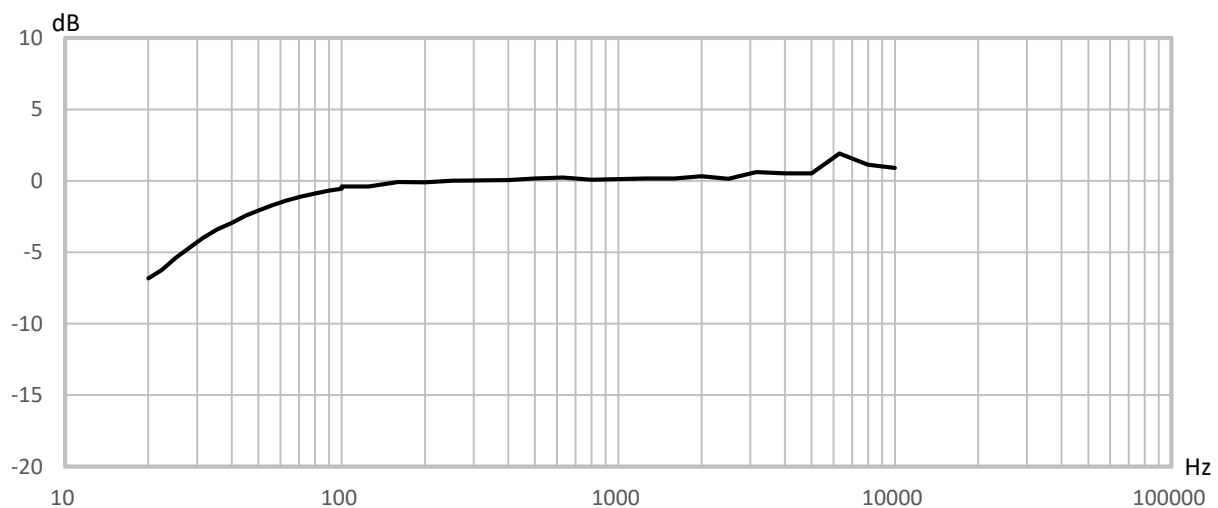


Pressure Equalization Vent	Front-vented
Preamplifier	Built-in
Maximum Output Voltage (Vp) ¹	±8
Output Impedence (Ω)	<30
Power Supply	ICCP (2mA ~ 20mA, 4mA typical)
Operating Temperature Range (°C)	-10 ~ 50
Operating Humidity Range (%RH)	0 ~ 90
Dimension (mm)	Ø13.2 × 50.6
Output Connector	Coaxial Lemo connector
Weight (g)	23
TEDS	Optional, IEEE 1451.4 compliant (default v0.9, optional v1.0)

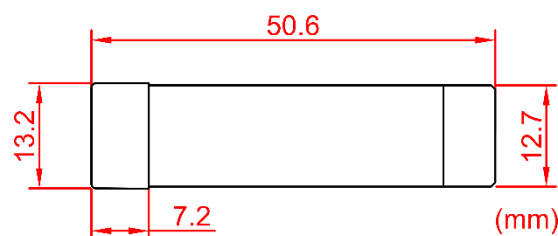
Note 1: Guaranteed by the circuit design, the actual maximum output voltage is determined by the sensitivity and the maximum sound pressure level.

Note: Unless specified otherwise, all values were measured at 23 °C, 101.3 kPa, 50 %RH by using 3 meters coaxial cable and 4 mA / 24 V power supply.

Typical Frequency Response



Dimension



BSWA Technology Co., Ltd. Room 1003, North Ring Center, No.18 Yumin Road, Xicheng District, Beijing 100029, China • Tel: 86-10-5128 5118 • Fax: 86-10-8225 1626 • E-mail: info@bswa.com.cn • URL: www.bswa-tech.com

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