



MP231 1/2-inch Free-field Microphone

Features:

- 1/2-inch free-field microphone
- Sensitivity (@250 Hz) :40 mV/Pa (-28 dB re 1V/Pa)
- Frequency response: 3 Hz ~ 20 kHz (± 2 dB)
- Dynamic range: 17 dBA ~ 146 dB
- Polarization voltage: 0V (prepolarized)
- Pressure equalization: rear-vented
- Suitable for 1/2-inch preamplifier with ICCP power supply



Applications:

- High-precision general purpose acoustic measurements.
- Premium sound level meters

Introduction

MP231 is the 1/2-inch free-field microphone developed by BSWA. It is suitable for measurement in free-field and semi free-field environments with minimal sound reflection. It is prepolarized microphone without external polarization voltage, and suitable for ICCP powered MA231 preamplifier (optional TEDS).

MP231 is rear-vented and can measure the sound pressure level up to 146 dB in the frequency range of 3 Hz ~ 20 kHz.

MP231 is suitable for high-precision universal acoustic measurement and can also be used with sound level meters.

MP231 can choose a preamplifier with TEDS to 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's requirements.

Each MP231 is supplied with an individual calibration data chart including sensitivity, frequency response and so on.

Specifications

Sound Field	Free-field
Diameter	1/2"
Class (IEC61672)	Class 1
Open-circuit Sensitivity@250 Hz (mV/Pa) (± 2 dB)	40 (-28 dB re 1V/Pa)
Polarization Voltage	0 V (Prepolarized)
Frequency Response (Hz) (± 2 dB)	3 ~ 20 k
Dynamic Range (dBA ~ dB) ¹	17 ~ 146
Cartridge Thermal Noise (dBA)	17
Maximum Sound Pressure Level (dB) (3% distortion) ¹	146



Capacitance (pF)		16
Equivalent Air Volume@250 Hz (mm ³)		46
Pressure Equalization Vent		Rear vented
Operating Temperature Range (°C)		-30 ~ 80
Operating Humidity Range (%RH)		0 ~ 98
Temperature Coefficient (250 Hz) (dB/°C)		-0.02
Pressure Coefficient (250 Hz) (dB/kPa)		-0.01
Influence of Humidity (dB)		<0.1
Standard		IEC 61094-4 Type WS2F
Dimensions (mm)	with Grid	Ø13.2 × 17.2
	without Grid	Ø12.7 × 16.1
Mounting Thread for Preamplifier		11.7 mm-60 UNS
Weight (g)		8.8
Suitable Preamplifier		MA231 (Optional TEDS, IEEE 1451.4 v0.9 / v1.0)

Note 1: the maximum sound pressure level will reduce to 136 dB with MA231 preamplifier.

Typical Frequency Response

