



MP241 1/2-inch Free-field Microphone

Features:

- 1/2-inch free-field microphone
- Sensitivity (@250 Hz) :17.8 mV/Pa (-35 dB re 1V/Pa)
- Frequency response: 8 Hz ~ 10 kHz (± 1 dB)
6.3 Hz ~ 20 kHz (± 2 dB)
- Dynamic range: 21 dBA ~ 158 dB
- Polarization voltage: 0V (prepolarized)
- Pressure equalization: side-vented
- Suitable for 1/2-inch preamplifier with ICCP power supply
- Optional TEDS (IEEE.1451.4)



Applications:

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

Introduction

MP241 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 MA231A preamplifier (optional TEDS).

MP241 is side-vented and can measure the sound pressure level up to 158 dB in the frequency range of 6.3 Hz ~ 20 kHz.

MP241 has a redesigned microphone structure with nickel metal diaphragm and high nickel alloy housing with the same expansion coefficient, which can effectively improve the temperature stability of the microphone and have excellent corrosion resistance.

MP241 is suitable for high-precision universal acoustic measurement and can also be used with sound level meters.

MP241 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 MP241 is supplied with an individual calibration data chart including sensitivity, frequency response and so on.

Specifications

Sound Field	Free-field
Diameter	1/2"
Open-circuit Sensitivity@250 Hz (mV/Pa) (± 2 dB)	17.8 mV/Pa (-35 dB re 1V/Pa)
Polarization Voltage	0 V (Prepolarized)
Frequency Response (Hz)	8 ~ 10 k (± 1 dB), 6.3 ~ 20 k (± 2 dB)



Dynamic Range (dBA ~ dB) ¹	21 ~ 158
Cartridge Thermal Noise (dBA)	21
Maximum Sound Pressure Level (dB) (3% distortion) ¹	158
Capacitance (pF)	14.5
Equivalent Air Volume@250 Hz (mm ³)	11
Pressure Equalization Vent	Side-vented
Operating Temperature Range (°C)	-30 ~ 80
Operating Humidity Range (%RH)	0 ~ 95
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 × 13.7
without Grid	Ø12.7 × 12.6
Mounting Thread for Preamplifier	11.7 mm-60UNS
Weight (g)	6.2
Suitable Preamplifier	MA231A
TEDS	Optional, IEEE 1451.4 compliant (default v0.9, optional v1.0)

Note 1: the maximum sound pressure level will reduce to 144 dB with MA231A preamplifier.

Typical Frequency Response

