



## MP253 1/2-inch Pressure-field Microphone

### Features:

- 1/2-inch pressure-field microphone
- Sensitivity (@250 Hz): 50 mV/Pa (-26 dB re 1 V/Pa)
- Frequency response: 8 Hz ~ 10 kHz ( $\pm 2$  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

### Introduction

**MP253** is the 1/2-inch pressure-field microphone developed by BSWA. It is suitable for the pressure field environments such as in a cavity, near a hard reflective surface, or installed flush with a hard surface. It is prepolarized microphone without external polarization voltage, and suitable for ICCP powered MA231 preamplifier (optional TEDS).

**MP253** is rear-vented and can measure the sound pressure level up to 146 dB in the frequency range of 8 Hz ~ 10 kHz.

**MP253** is suitable for high-precision universal acoustic measurement and it 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 MP253 is supplied with an individual calibration data chart including sensitivity, frequency response and so on.

### Specifications

Sound Field	Pressure-field
Diameter	1/2"
Open-circuit Sensitivity@250 Hz (mV/Pa) ( $\pm 2$ dB)	50 (-26 dB re 1 V/Pa)
Polarization Voltage	0 V (Prepolarized)
Frequency Response (Hz) ( $\pm 2$ dB)	8 ~ 10 k
Dynamic Range (dBA ~ dB) <sup>1</sup>	17 ~ 146
Cartridge Thermal Noise (dBA)	17
Maximum Sound Pressure Level (dB) (3% distortion) <sup>1</sup>	146
Capacitance (pF)	16
Equivalent Air Volume@250 Hz (mm <sup>3</sup> )	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 WS2P	
Dimensions (mm)	with Grid	Ø13.2 × 17.2
	without Grid	Ø12.7 × 16.1
Mounting Thread for Preampfier	11.7 mm-60 UNS	
Weight (g)	8.8	
Suitable Preampfier	MA231 (Optional TEDS, IEEE 1451.4 v0.9 / v1.0)	

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

## Typical Frequency Response

