



PCB® Acoustic Products

Engineered Faster than
the Speed of Sound

Highlights

- Operating temperature to +120 °C (+250 °F)
- Operates from ICP® sensor power
- Low noise floor
- Wide frequency range
- System sensitivity guaranteed within +/- 1.7 dB
- Temperature range eliminates the need for high-priced probe microphones
- ½" package with BNC connectors
- Competitively priced, best value on the market

Applications

- Engine analysis
- Manifold testing
- Transfer path analysis
- General acoustic testing in high temperature applications
- Exhaust pipes
- HVAC tests



An experienced engineer understands the value of looking at all components within a test and measurement system. It is not just the specifications of the microphone or preamplifier alone, but how they work together. How important is having a great microphone design alone, if it is limited by the specifications of the preamplifier? PCB® has been one of the top names in sensors for decades. We understand applications. PCB® designed the specifications of the microphones and preamplifiers to both work seamlessly to maximize the applications available for the combination.

With this in mind, PCB® is proud to introduce the Industry Exclusive Model HT378B02. The preamplifier was designed with the microphone in mind. Not just to work with the microphone, but to complement it. This microphone and preamplifier combination can be operated in +120 °C applications. An educated end-user is our best customer.

See why users worldwide, from the top names in Automotive, Aerospace, Defense, Universities, Computers, Consultants and Appliances, trust PCB® acoustic products with their important high accuracy tests and have made us one of the fastest growing acoustic sensor manufacturers in the world. Model HT378B02 is TEDS compliant to IEEE 1451.4



HT378B02

High Temperature Acoustic Measurement Model Number HT378B02			
Nominal Diameter	1/2" 12.5 mm	Polarization Voltage	0 Volts (Prepolarized Style)
Response Characteristic	Free-Field	Constant Current Excitation	2-10 mA, ICP® Sensor Power
Open Circuit Sensitivity at 250 Hz (+/- 1.7 dB)	50 mV/Pa	Operating Temperature - Microphone	-40 to +250 °F -40 to +120 °C
Frequency Range (+/- 1 dB)	5 Hz to 10 kHz	Operating Temperature - Preamplifier	-40 to +250 °F -40 to +120 °C
Frequency Range (+/- 2 dB)	3.15 Hz to 20 kHz	Operating Temperature - System	-40 to +250 °F -40 to +120 °C
Lower Limiting Frequency (-3dB point)	1Hz to 2.4 Hz	Connector	BNC
Dynamic Range (3% Distortion Value)	146 dB [1]	Size (Diameter x Length, with Grid cap)	0.52" x 3.88" 13.2 mm x 98 mm
Dynamic Range at Nominal Sensitivity	135 dB [1]	Microphone Component	377B20
Noise Floor (Cartridge Thermal Noise)	17 dBA [1] [2]	Preamplifier Component	HT426E01
Excitation Voltage	20 to 32 VDC	Warranty	Total Customer Satisfaction (TCS)
Notes:			
[1] re 20 µV [2] 4.9 Vrms, minimum 7 Vpk			



General Purpose Acoustic Measurement Model Numbers 378B02 & 378B20



Highlights

- Low noise floor
- Operating temperature to +80 °C (+176 °F)
- Operates from ICP® sensor power
- System sensitivity guaranteed within +/- 1.7 dB
- Competitively priced, best value on the market

Model 378B02 Applications


- Pass-by
- Brake noise
- Engine noise
- Environmental testing
- Anechoic chamber test and general purpose acoustic testing

Model 378B20 Applications

- Automotive and Aerospace cabin testing
- Reverb chamber tests
- Church and hall tests
- Environmental testing
- General noise testing

Our most experienced users know the importance of all of the related components within a test and measurement system. This is why PCB® has designed the products to complement each other. Our microphone and preamplifier mated systems allow for the widest temperature and frequency ranges to be tested. Models 378B02 and 378B20 are TEDS compliant to IEEE 1451.4, and are backed by our "No Risk" Total Customer Satisfaction Guarantee.

General Purpose Acoustic Measurement

TEDS CIRCUITRY COMPATIBLE			
System Model Number	378B02	378B20	
Nominal Diameter	1/2" 12.5 mm	1/2" 12.5 mm	
Response Characteristic	Free-Field	Random Incidence	
Open Circuit Sensitivity at 250 Hz (+/- 1.7 dB)	50 mV/Pa	50 mV/Pa	
Frequency Range (+/- 1 dB)	5 Hz to 10 kHz	5 Hz to 6.3 kHz	
Frequency Range (+/- 2 dB)	3.15 Hz to 20 kHz	3.15 Hz to 12.5 kHz	
Lower Limiting Frequency (-3 dB point)	1 Hz to 2.4 Hz	1Hz to 2.4 Hz	
Dynamic Range (3% Distortion Value)	146 dB [1]	146 dB [1]	
Dynamic Range at Nominal Sensitivity	135 dB [1]	135 dB [1]	
Noise Floor (Cartridge Thermal Noise)	16 dBA [1] [2]	16 dBA [1] [2]	
Excitation Voltage	20 to 32 VDC	20 to 32 VDC	
Polarization Voltage	0 Volts (Prepolarized Style)	0 Volts (Prepolarized Style)	
Constant Current Excitation	2-20 mA, ICP® Sensor Power	2-20 mA, ICP® Sensor Power	
Operating Temperature - Microphone	-40 to +250 °F -40 to +120 °C	-40 to +250 °F -40 to 120 °C	
Operating Temperature - Preamplifier	-40 to +176 °F -40 to +80 °C	-40 to +176 °F -40 to +80 °C	
Operating Temperature - System	-40 to +176 °F -40 to +80 °C	-40 to +176 °F -40 to +80 °C	
Connector	BNC	BNC	
Size (Diameter x Length, with Grid cap)	0.52" x 3.38" 13.2 mm x 86 mm	0.52" x 3.38" 13.2 mm x 86 mm	
Microphone Component	377B02	377B20	
Preamplifier Component	426E01	426E01	
Warranty	Total Customer Satisfaction (TCS)	Total Customer Satisfaction (TCS)	
Notes:			
[1] re 20 µV [2] 4.9 Vrms, minimum 7 Vpk			



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AS9100:2004 CERTIFIED ■ ISO 9001:2000 CERTIFIED ■ A2LA ACCREDITED to ISO 17025

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PCB Piezotronics Test & Measurement Acoustic products consists of microphones, preamplifiers, and accessories for noise testing, pressure mapping, holography, NVH, beamforming, arrays and general sound measurements. Additional Test & Measurement products include pressure, force, load, strain, torque, acceleration, shock, vibration, and electronics. PCB® products are used for product design and development, consumer product testing, quality assurance, civil structure monitoring, research and development, education and engineering applications. All products are backed by our **Total Customer Satisfaction** policy, which guarantees your satisfaction or your money refunded.

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