High Temperature Probe Microphone and Preamplifier

Recommended for testing sound pressure measurements in high temperature environments and confined areas.

Applications

- Exhaust testing for Automotive & Aerospace
- Testing in confined areas
- Speaker diaphragm testing
- Acoustic impedance measurements
- Telephone analysis
- Musical instrument analysis
- Leak detection in Industrial Settings

Features

- Sensitivity: 2.15 mV/Pa
- Frequency: 2 Hz – 20 kHz
- Cartridge noise: 45 dBA
- Max amplitude: 164 dB
- Temperature: -40 to +800°C
- Polarization: prepolarized (0V)
- Small form factor

Microphone Components and Performance

Model 377B26 is comprised of a 1/4” (6mm) prepolarized microphone and preamplifier within a protective housing that incorporates an impedance tube to minimize reflections and ensure accuracy. The probe comes with a 20mm, 40mm, 80mm and 160mm stainless steel tips; each acting as a low pass filter. The shorter tips will have the highest frequency capability. The longer tips allow for temperatures up to 800 ºC. Also included are a heat sink and a flexible probe tip. The 377B26 with a high dynamic range capability (164 dB) in combination with high temperature capability make it an excellent choice for exhaust testing.

Polarization Voltage (0V)

PCB® is the inventor of ICP® technology which is the very same technology modern prepolarized microphones are designed around. Model 377B26 operates on this very same ICP® sensor power, or any 2-20 mA constant current supply. This modern design is preferred for portable measurements or operation in high humidity applications. Design advantages include the ability to use coaxial cables as well as interchangeability with other ICP® sensors (accelerometers, pressure sensors, strain gages, etc.) resulting in set-up time savings and low channel cost.
Specifications - 1/4" Pressure Field Microphone Model 377B26

<table>
<thead>
<tr>
<th>Acoustic</th>
<th>377B26</th>
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<tbody>
<tr>
<td>Nominal Microphone Diameter</td>
<td>1/4&quot; (6mm)</td>
</tr>
<tr>
<td>Polarization Voltage</td>
<td>0V (prepolarized)</td>
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<tr>
<td>Open Circuit Sensitivity (at 250 Hz)</td>
<td>2.15 mV/Pa</td>
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<tr>
<td>Open Circuit Sensitivity (re 1 V/Pa)</td>
<td>-54 dB (+/- 3 dB)</td>
</tr>
<tr>
<td>Frequency range (20mm tip (+/- 3 dB))</td>
<td>2 to 20,000 Hz</td>
</tr>
<tr>
<td>Distortion Limit (3% distortion)</td>
<td>164 dB</td>
</tr>
<tr>
<td>Cartridge Thermal Noise</td>
<td>45 dB(A)</td>
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</tbody>
</table>

Environmental

<table>
<thead>
<tr>
<th>Operating Temperature Range (40, 80 and 160 mm Probe Tip)</th>
<th>-40 to +1472 °F</th>
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<tbody>
<tr>
<td></td>
<td>-40 to +800 °C</td>
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Physical

| Housing Size (Diameter x Height)                 | 0.50" x 4.4"  |
| Weight                                            | 1.8 oz (51gms)  |
| Mating Cable Connectors                           | BNC            |

Supplied Accessories:

- 012A10 - Coaxial cable, 10-ft, BNC to BNC plug
- 100-1129-30 - File
- 100-11599-90 - Grease
- 51606-02 - Heat sink, probe removal tool
- 51607-01 - Calibration adapter for metal probe
- 51607-02 - Calibration adapter for flexible probe
- 53434-01 - 20mm probe tip
- 53434-02 - 40mm probe tip
- 53434-03 - 80mm probe tip
- 53434-04 - 160mm probe tip
- 54073-01 - Cleaning tube
- 55103-01 - Pliers, tip trim tool
- 55454-01 - Flexible tubing
- 55455-01 - Flexible probe tip
- 56508-01 - Calibration coupler
- ACS-42 - microphone and preamplifier system calibration

Optional Accessories:

- CAL200 – Handheld calibrator
- CAL250 – Handheld calibrator

PCB Piezotronics Test & Measurement

Acoustic products consist 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.

Visit www.pcb.com to locate your nearest sales office.

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