



MODEL 378A04

LOW NOISE MICROPHONE

- Prepolarized (0V) design
- Low 6.5 dB(A) noise floor (5.5 dB(A) typical)
- High sensitivity: 450 mV/Pa

TYPICAL APPLICATIONS

- Computer disk drive testing
- Electric vehicle sound quality
- Environmental noise monitoring
- White goods noise source location
- Sound power measurements

STANDARDS COMPLIANCE

- Calibration reference microphone traceable to NIST, PTB or DFM National Labs
- PCB calibration service accredited to ISO 17025, ANSI-Z540.3 by A2LA or ILAC



USE OF MODEL 378A04

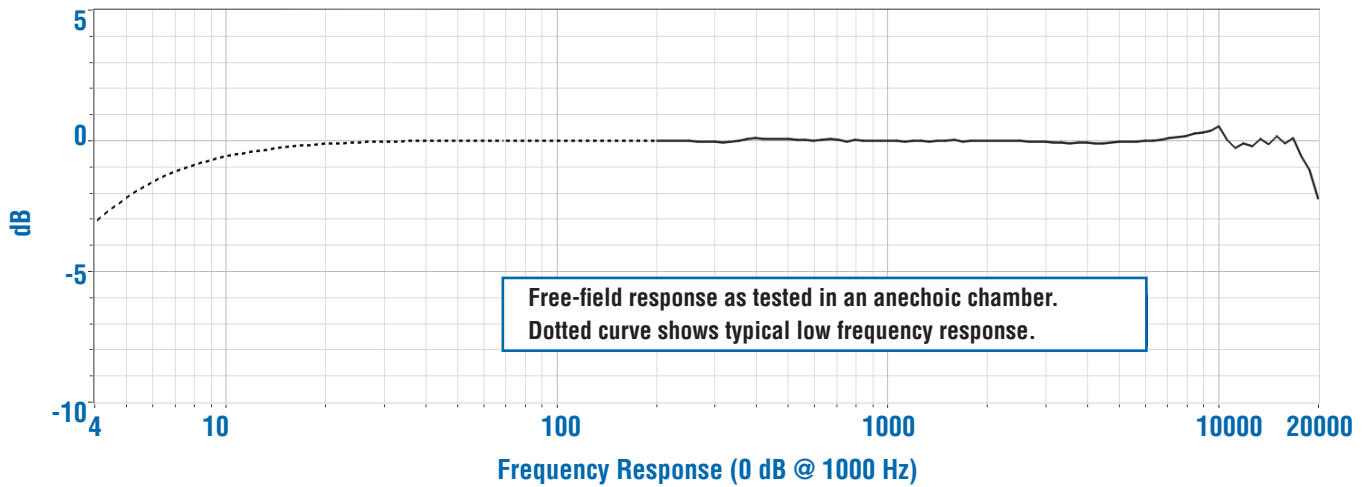
Model 378A04 is a matched system that is comprised of a premium high sensitivity microphone and a low noise preamplifier that contains a built-in filter that enables the free-field response to remain flat over a wide frequency range. The system requires a minimum of 4 mA and measures to 6.5 dB(A) (5.5 dB(A) typical) within a cost efficient, prepolarized (0V) design.

POLARIZATION VOLTAGE – ICP® (0V) PREPOLARIZED

PCB® is the inventor of ICP® sensor power technology. All manufacturers of IEC 61094-4 compliant prepolarized (0V) microphones use the technology that PCB developed. Prepolarized microphones operate on 2-20 mA constant current supply and use coaxial cables resulting in significant per channel cost savings over the PCB 200V models. Other ICP® compatible sensors such as accelerometers, force, strain, and pressure sensors use the same power supplies and cables as prepolarized microphones, further reducing set-up time and initial investment costs.

PCB® QUALITY COMMITMENT

PCB is uniquely equipped with a state of the art, CNC machining facility, allowing control over quality, pricing, and delivery. Investments in clean rooms, anechoic, and environmental test chambers, combined with our rigorous testing and aging process, ensures our products will survive in demanding environmental conditions. PCB has the industry's best 5-year warranty with a "Total Customer Satisfaction" policy.



| 378A04 PREPOLARIZED FREE-FIELD LOW NOISE MICROPHONE SYSTEM | | |
|--|----------------------|-------------------------------|
| Nominal Microphone Diameter | in (mm) | 1/2 (12) |
| Sensitivity at 1000 Hz (± 2 dB) | mV/Pa (dB re 1 V/Pa) | 450 (-7) |
| Frequency Range (± 4 dB) | Hz | 5 - 20,000 |
| Frequency Range (± 2 dB) | Hz | 10 - 16,000 |
| Inherent Noise | dB[A] re 20 µPa | 5.5 |
| Harmonic Distortion Limit: 3% | dB[A] re 20 µPa | 80 |
| Harmonic Distortion Limit: 3% (<5 kHz) | dB re 20 µPa | 100 |
| Maximum Sound Pressure Level | dB re 20 µPa | 130 |
| Environmental Specifications | | |
| Operating Temperature Range | °F (°C) | -40 to +176 (-40 to +80) |
| Temperature Coefficient | dB / °C | 0.009 |
| Static Pressure Coefficient | dB / kPa | -0.013 |
| Humidity Coefficient | dB / %RH | +/- 0.001 |
| Electrical Specifications | | |
| Polarization Voltage | V | 0 |
| Constant Current Excitation | mA | 4 - 20 |
| Physical Specifications | | |
| Size (Diameter x Length with Grid) | in (mm) | 0.52 x 4.02 (13.2 x 102.1) |
| Connector | Coaxial | BNC Jack |

* all specifications typical unless otherwise noted

OPTIONAL ACCESSORIES

- **079A06** – 1/2" microphone windscreen
- **079A11** – 1/2" microphone holder
- **079A15** – tripod microphone stand with boom arm
- **079B16** – miniature microphone stand
- **079A18** – clamp on flexible extension arm
- **079C23** – microphone holder with swivel mount
- **079A44** – extension arm for flexible clamp
- **CAL200** – handheld calibrator
- **ACS-156** – microphone calibration