



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

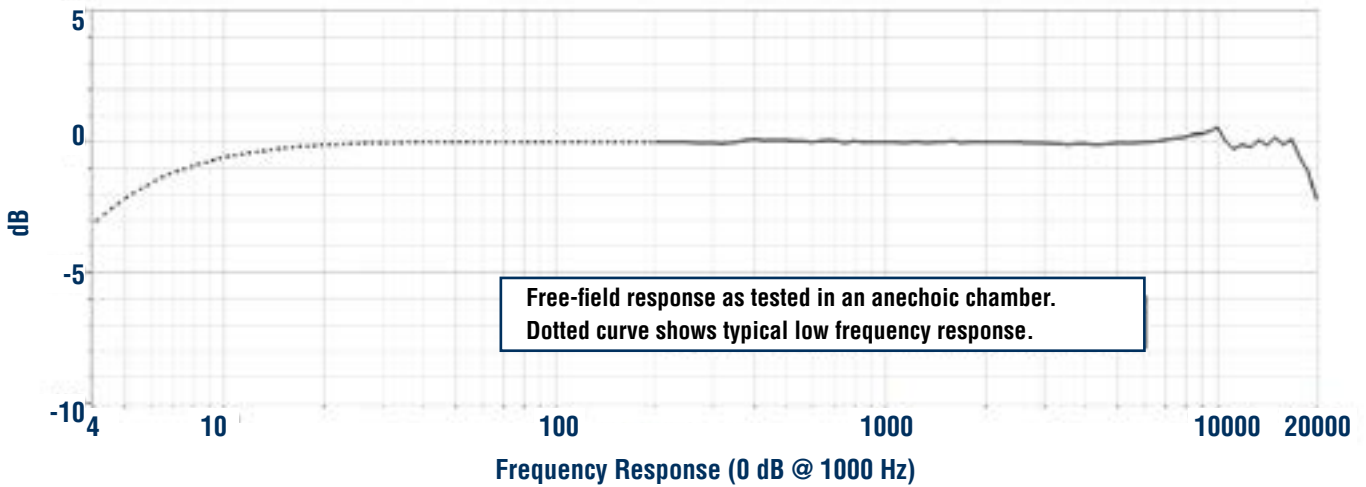
Model 378A04 is a matched system that is comprised of a premium high sensitivity microphone and a low noise preamplifier that contains a built-in filter that enables the free-field response to remain flat over a wide frequency range. The system requires a minimum of 4 mA and measures to 6.5 dB(A) (5.5 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 ( $\pm 2$ dB)	mV/Pa (dB re 1 V/Pa)	450 (-7)
Frequency Range ( $\pm 4$ dB)	Hz	5 - 20,000
Frequency Range ( $\pm 2$ dB)	Hz	10 - 16,000
Inherent Noise	dB[A] re 20 $\mu$ Pa	5.5
Harmonic Distortion Limit: 3%	dB[A] re 20 $\mu$ Pa	80
Harmonic Distortion Limit: 3% (<5 kHz)	dB re 20 $\mu$ Pa	100
Maximum Sound Pressure Level	dB re 20 $\mu$ Pa	130
Environmental Specifications		
Operating Temperature Range	$^{\circ}$ F ( $^{\circ}$ C)	-40 to +176 (-40 to +80)
Temperature Coefficient	dB / $^{\circ}$ 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



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Hochwertige Messtechnik und Beratung aus einer Hand



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MTS Sensors, a division of MTS Systems Corporation (NASDAQ: MTSC), vastly expanded its range of products and solutions after MTS acquired PCB Piezotronics, Inc. in July, 2016. PCB Piezotronics, Inc. is a wholly owned subsidiary of MTS Systems Corp.; IMI Sensors and Larson Davis are divisions of PCB Piezotronics, Inc.; Accumetrics, Inc. and The Modal Shop, Inc. are subsidiaries of PCB Piezotronics, Inc.