



MODEL 378C20

1/2" PREPOLARIZED RANDOM INCIDENCE MICROPHONE



- Sensitivity: 50 mV/Pa (± 1.5 dB)
- Frequency: 3.75 Hz – 16 kHz (± 2 dB)
- Dynamic range: 16 dB(A) – 137 dB

TYPICAL APPLICATIONS

- Cabin measurements
- Environmental testing
- Room acoustics
- Tests within reverb chambers

STANDARDS COMPLIANCE

- IEC 61094-4 WS2D compliant, and designed to be used in an IEC 61672 Class 1 compliant system for sound level meter use
- 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 378C20

Model 378C20 is a 1/2 in (12 mm) prepolarized random incidence response microphone and preamplifier combination. The 378C20 has a low noise floor and flat response in diffuse field applications where low sound pressure levels need to be measured accurately in the presence of acoustic reflections.

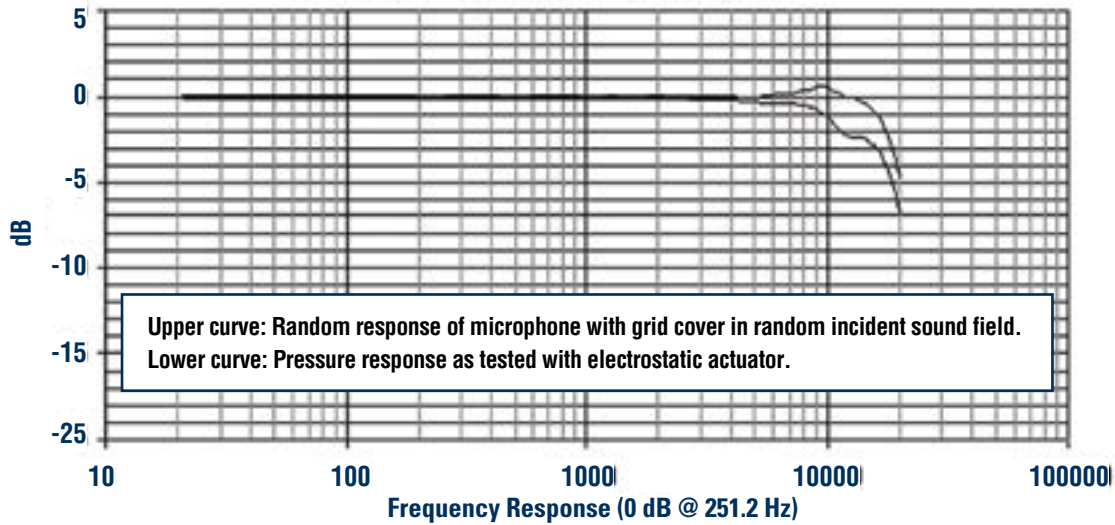
Acoustic pressure waves may be altered by objects in the sound field including the microphone itself. The 378C20 corrects for its own presence, providing more accurate measurements within a diffuse field.

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.



378C20 PREPOLARIZED RANDOM INCIDENCE MICROPHONE SYSTEM		
Nominal Microphone Diameter	in (mm)	1/2 (12)
Sensitivity at 250 Hz (± 1.5 dB)	mV/Pa (dB re 1 V/Pa)	50 (-26)
Frequency Range (± 2 dB)	Hz	3.75 - 16,000
Cartridge Thermal Noise (Microphone)	dB[A] re 20 μ Pa	14
Inherent Noise with 426E01 Preamp	dB[A] re 20 μ Pa	16
Harmonic Distortion Limit: 3%	dB re 20 μ Pa	146
Distortion Limit with 426E01 Preamp	dB re 20 μ Pa	137
Environmental Specifications		
Operating Temperature Range Microphone	$^{\circ}$ F ($^{\circ}$ C)	-40 to +248 (-40 to +120)
Operating Temp. with 426E01 Preamp	$^{\circ}$ F ($^{\circ}$ C)	-40 to +176 (-40 to +80)
Operating Temp. with HT426E01 Preamp	$^{\circ}$ F ($^{\circ}$ C)	-40 to +248 (-40 to +120)
Electrical Specifications		
Polarization Voltage	V	0
Constant Current Excitation	mA	2 - 20
Physical Specifications		
Size (Diameter x Length with Grid)	in (mm)	0.52 x 3.62 (13.2 x 91.9)
Connector	Coaxial	BNC Jack

* all specifications typical unless otherwise noted

OPTIONAL ACCESSORIES

- 426A13 – 1/2" short preamplifier
- 426A10 – 1/2" preamplifier with 20 Hz high pass filter
- 426A11 – 1/2" preamplifier with gain and filter switches
- HT426E01 – 1/2" preamplifier, high temperature (125° C)
- 079A06 – windscreen for 1/2" microphones
- 079A11 – 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
- CAL200 – handheld calibrator
- ACS-63 – microphone system calibration



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PCB Piezotronics, Inc. is a designer and manufacturer of microphones, vibration, pressure, force, torque, load, and strain sensors, as well as the pioneer of ICP® technology used by design engineers and predictive maintenance professionals worldwide for test, measurement, monitoring, and control requirements in automotive, aerospace, industrial, R&D, military, educational, commercial, OEM applications, and more. With a worldwide customer support team, 24-hour SensorLineSM, and a global distribution network, PCB® is committed to Total Customer Satisfaction. Visit www.pcb.com for more information. PCB Piezotronics, Inc. is a wholly owned subsidiary of MTS Systems Corporation. Additional information on MTS can be found at www.mts.com.

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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.