Model 378A21 is an industry exclusive, 1⁄2 in (12 mm), prepolarized, random incidence response microphone and preamplifier combination. Designed to measure beyond the 20 kHz maximum frequency of the human hearing range, the 378A21 has a flat response in diffuse field applications where high frequencies need to be accurately measured in the presence of acoustic reflections. The 378A21 has the ability to measure to 25 kHz (±2 dB) and to 150 dB in a cost effective, 1⁄2 in package while maintaining a low 22 dBA noise floor.

Acoustic pressure waves may be altered by objects in the sound field including the microphone itself. The 378A21 corrects for its own presence, providing 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.

**378A21 PREPOLARIZED RANDOM INCIDENCE MICROPHONE SYSTEM**

- Nominal Microphone Diameter: in (mm) 1/2 (12)
- Sensitivity at 250 Hz (± 2 dB): mV/Pa (dB re 1 V/Pa) 12.6 (-38)
- Frequency Range (± 2 dB): Hz 4 - 25,000
- Cartridge Thermal Noise (Microphone): dB[A] re 20 μPa 20
- Inherent Noise with 426E01 Preamp: dB[A] re 20 μPa 22
- Harmonic Distortion Limit: % 3%
- Distortion Limit with 426E01 Preamp: dB re 20 μPa 162

**Environmental Specifications**

- Operating Temperature Range Microphone: °F (°C) -40 to +248 (-40 to +120)
- Operating Temp. with 426E01 Preamp: °F (°C) -40 to +176 (-40 to +80)
- Operating Temp. with HT426E01 Preamp: °F (°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 3.47 (13.2 x 88.3)
- Connector: Coaxial BNC Jack

* all specifications typical unless otherwise noted

**OPTIONAL ACCESSORIES**

- 426A13 – low profile short preamplifier
- HT426E01 – 1/2" preamplifier, high temperature (125° C)
- 079A06 – 1/2" microphone windshield
- 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
- 079A42 – 1/2" right angle adapter
- 079A44 – extension arm for flexible clamp
- CAL200 – handheld calibrator
- ACS-63 – microphone system calibration

PCB PIEZOTRONICS
AN AMPHENOL COMPANY

3425 Walden Avenue, Depew, NY 14043 USA

pcb.com | info@pcb.com | 800 828 8840 | +1 716 684 0001

© 2021 PCB Piezotronics - all rights reserved. PCB Piezotronics is a wholly-owned subsidiary of Amphenol Corporation. Endevco is an assumed name of PCB Piezotronics of North Carolina, Inc., which is a wholly-owned subsidiary of PCB Piezotronics, Inc. Accumetrics, Inc. and The Modal Shop, Inc. are wholly-owned subsidiaries of PCB Piezotronics, Inc. IMI Sensors and Larson Davis are Divisions of PCB Piezotronics, Inc. Except for any third party marks for which attribution is provided herein, the company names and product names used in this document may be the registered trademarks or unregistered trademarks of PCB Piezotronics, Inc., PCB Piezotronics of North Carolina, Inc. (d/b/a Endevco), The Modal Shop, Inc. or Accumetrics, Inc. Detailed trademark ownership information is available at www.pcb.com/trademarkownership.

TM-AC-378A21-1021