CONSTRUCTION & AGRICULTURAL VEHICLE TESTING & DEVELOPMENT
THE TOUGHEST SENSORS FOR TOUGHEST ENvironments

PCB® offers a wide selection of products with reliable accuracy for testing in the extreme environments experienced by off highway vehicles. From one extreme to the other, we can provide sensors for your toughest equipment in the most challenging conditions no matter if they are baking in the desert sun, freezing in the arctic winter, or mired in mud at a construction site.

ELECTRICALLY ISOLATED ACCELEROMETERS

As equipment, drivetrains, and electric powertrains become increasingly advanced, more and more electronic systems are added to the vehicles to increase safety and performance. The additional electronics can potentially cause interference while testing the equipment. PCB® has developed special electrically isolated accelerometers to avoid electrical noise in your measurements.

**GROUND ISOLATED HIGH TEMP MINIATURE TRIAXIAL ACCELEROMETERS**

**MODEL HTJ356B01**
- Sensitivity: (±20%) 5 mV/g
- Measurement Range: ±1000 g pk
- Frequency Range: (±5%) 2 to 8000 Hz
- Weight: 0.04 oz (1.0 gram)

**GROUND ISOLATED TRIAXIAL ACCELEROMETERS**

**MODEL J356A03/NC**
- Sensitivity: (±20%) 10 mV/g
- Measurement Range: ±500 g pk
- Frequency Range: (±5%) 2 to 8000 Hz

**GROUND ISOLATED TRIAXIAL ACCELEROMETER WITH TEDS**

**MODELS J356A43, J356A44, J356A45**
- Sensitivities Available From: (±10%) 10 mV/g to 100 mV/g
- Measurement Range Available From: ±500 g pk (±4905 m/s² pk) to ±50 g pk (±490 m/s² pk)
- Frequency Range: (±5%) 0.7 to 7000 Hz

**GROUND ISOLATED MINIATURE TRIAXIAL ACCELEROMETERS**

**MODEL 354B04, 354B05**
- Sensitivity: (±20%) 10 mV/g or 100 mV/g
- Measurement Range: ±500 g pk or ±50 g pk
- Frequency Range: (±5%) 2 to 10000 Hz

**ACCELEROMETER, ICP®, TRIAXIAL**

**MODEL 356A15**
- Sensitivity: (±10%) 100 mV/g (10.2 mV/(m/s²))
- Measurement Range: ±50 g pk (±490 m/s² pk)
- Frequency Range: (±5%) 2 to 5000 Hz

**ACCELEROMETER, ICP®, TRIAXIAL**

**MODEL 356A19**
- Sensitivity: (±10%) 10 mV/g (1.02 mV/(m/s²))
- Measurement Range: ±500 g pk (±4905 m/s² pk)
- Frequency Range: (±5%) 1 to 13000 Hz
ICP® microphones are used to measure sound pressure levels inside cabs, measure pass-by noise levels, confirm equipment conforms and meet the multitude of different safety and engineering standards present in the industry today.

**1/2” WATER AND DUST RESISTANT ICP® MICROPHONE SYSTEM**  
MODEL 130A24  
- IP55 Rated for harsh environments  
- Frequency Range: 20 Hz - 16000 Hz  
- Dynamic Range: 30 dBA – 143 dB  
- TEDS Compliant

**1/2” PREPOLARIZED FREE-FIELD MICROPHONE**  
MODEL 378B02  
- Sensitivity: 50 mV/Pa (± 1.5 dB)  
- Frequency Range: 3.75 Hz – 20 kHz (± 2 dB)  
- Dynamic Range: 15.5 dBA – 137 dB  
- TEDS Compliant

**1/4” FREE-FIELD ICP® ARRAY MICROPHONE SYSTEM**  
SERIES 130F  
- Low noise floor: 24 dBA  
- Frequency Range: 10 Hz - 20000 Hz (+/- 4 dB)  
- Integral preamplifier & various connector options  
- TEDS Compliant

**ICP® ELECTRET SURFACE MICROPHONE**  
MODEL 130B40  
- Sensitivity: 8.5 mV/Pa  
- Dynamic Range: 32 dBA – 143 dB  
- Low profile 1/8” (3mm) height to minimize wind noise

**ICP® PROBE MICROPHONE**  
MODEL 377B26  
- Sensitivity: 2.15 mV/Pa  
- Temperature Range: -40 to +800 °C  
- Dynamic Range: 44 dBA – 165 dB

**INNOVATION**
PCB® series 3711F, 3713F, 3741F, and 3743F DC response sensors are used to measure low frequency motion down to zero hertz. These accelerometers are used in applications with low frequency and amplitude requirements, as well as road load data acquisition (RLDA), drivability, ride and handling, and vehicle performance testing. Each series includes a full scale measurement range from ±2g to ±200g and features low spectral noise with high resolution. DC response sensors feature gas-damped silicon MEMS sensing elements for uniform, repeatable performance and high frequency overload protection.

**SINGLE-ENDED MEMS ACCELEROMETERS**
SERIES 3711F & 3713F

- Sensitivities: 6.75 mV/g to 675 mV/g (±3%)  
- Measurement Ranges: ±2 g pk to ±200 g pk  
- Frequency response from 0 Hz up to 2500 Hz (±10%)  
- Case isolated, hermetically sealed titanium housing  
- Available with integral cable or multi-pin, threaded electrical connector  
- Available in single-axis or triaxial configurations

**DIFFERENTIAL OUTPUT, SINGLE AXIS MEMS ACCELEROMETERS**
SERIES 3741F

- Sensitivities: 13.5 mV/g to 1350 mV/g (±3%)  
- Measurement Ranges: ±2 g pk to ±200 g pk  
- Frequency response from 0 Hz up to 2500 Hz (±10%)  
- Ground isolated, hard-anodized aluminum housing  
- Integral, 4-conductor shielded cable

**DIFFERENTIAL OUTPUT, TRIAXIAL MEMS DC ACCELEROMETERS**
SERIES 3743F

- Sensitivities: 13.5 mV/g to 1350 mV/g (±3%)  
- Measurement Ranges: ±2 g pk to ±200 g pk  
- Frequency response from 0 Hz up to 2500 Hz (±10%)  
- Case isolated, hermetically sealed titanium housing  
- 9-Pin threaded electrical connector
PCB’s high temperature accelerometers utilize proprietary piezoelectric crystals for optimal performance and the best accuracy in high temperature environments. The UHT-12™ crystal has better resolution and thermal performance than any accelerometer on the market today. It features a sensitivity that remains more consistent over a wide temperature change and the absence of pyroelectric noise spikes up to 1200 °F (649 °C).

**HIGH TEMPERATURE ACCELEROMETERS**

**CHARGE OUTPUT UHT-12™ ACCELEROMETER**  
MODEL 357E92

- Sensitivity: (±10%) 2.3 pC/g  
- Measurement Range: ±1000 g pk  
- Frequency Range: (±5%) 3000 Hz  
- Temperature Range: -67 to 1200 °F (-55 to 649 °C)

**MINIATURE CHARGE OUTPUT UHT-12™ ACCELEROMETER**  
MODEL 357A63

- Sensitivity: (±10%) 0.53 pC/g  
- Measurement Range: ±5000 g pk  
- Frequency Range: (±10%) 10000 Hz  
- Temperature Range: -65 to 900 °F (-54 to 482 °C)

**UHT-12™ LOW THERMAL COEFFICIENT ICP® TRIAXIAL ACCELEROMETER**  
MODEL 339A30

- Sensitivity: (±10%) 10 mV/g  
- Measurement Range: ±500 g pk  
- Frequency Range: (±5%) 2 to 8000 Hz  
- Temperature Range: -65 to 325 °F (-54 to 163 °C)

**TRIAXIAL ICP® ACCELEROMETER**  
MODEL HT356A02

- Sensitivity: (±10%) 10 mV/g  
  (1.02 mV/(m/s²))  
- Measurement Range: ±500 g pk  
  (±4900 m/s² pk)  
- Frequency Range: (±5%) 5000 Hz  
- Temperature Range: -65 to +250 °F (-54 to +121 °C)

**TRIAXIAL LIGHTWEIGHT MINIATURE ICP® ACCELEROMETER**  
MODEL HT356B01

- Sensitivity: 5 mV/g  
- Measurement Range: 1000 g  
- Frequency Range: (±5%) 8000 Hz  
  (y or z axis), 5000 Hz (x axis)  
- Temperature Range: -65 to +356 °F (-54 to +180 °C)

**UHT-12™ LOW THERMAL COEFFICIENT ICP® TRIAXIAL ACCELEROMETER**  
MODEL 339B32

- Sensitivity: (±10%) 10 mV/g  
- Measurement Range: ±500 g pk  
- Frequency Range: (±5%) 2 to 10000 Hz  
- Temperature Range: -65 to 325 °F (-54 to 163 °C)
LOW THERMAL COEFFICIENT ICP® TRIAXIAL ACCELEROMETER WITH TEDS
MODEL TLD339A34
Sensitivity: (±10%) 50 mV/g
Measurement Range: ±100 g pk
Frequency Range: (±5%) 2 to 5000 Hz
Temperature Range: -65 to 325 °F (-54 to 163 °C)

LOW THERMAL COEFFICIENT ICP® TRIAXIAL ACCELEROMETER WITH TEDS
MODEL TLD339A36
Sensitivity: (±10%) 10 mV/g
Measurement Range: ±500 g pk
Frequency Range: (±5%) 2 to 5000 Hz
Temperature Range: -65 to 325 °F (-54 to 163 °C)

HIGH TEMPERATURE ICP® TRIAXIAL ACCELEROMETER
MODEL HT356A33
Sensitivity: (±10%) 10 mV/g
Measurement Range: ±500 g pk
Frequency Range: (±5%) 2 to 10000 Hz
Temperature Range: -65 to 325 °F (-54 to 163 °C)

HIGH TEMPERATURE ICP® TRIAXIAL ACCELEROMETER
MODEL HT356A43
Sensitivity: (±10%) 50 mV/g
Measurement Range: ±100 g pk
Frequency Range: (±5%) 1.6 to 7000 Hz
Temperature Range: -65 to 325 °F (-54 to 163 °C)

UHT-12™ LOW THERMAL COEFFICIENT ICP® TRIAXIAL ACCELEROMETER
MODEL 339B31
Sensitivity: (±10%) 10 mV/g
Measurement Range: ±500 g pk
Frequency Range: (±5%) 2 to 8000 Hz
Temperature Range: -65 to 356 °F (-54 to 180 °C)

UHT-12™ LOW THERMAL COEFFICIENT ICP® TRIAXIAL ACCELEROMETER WITH TEDS
MODEL TLD339A37
Sensitivity: (±10%) 100 mV/g
Measurement Range: ±50 g pk
Frequency Range: (±5%) 0.3 to 4000 Hz
Temperature Range: -65 to 356 °F (-54 to 180 °C)

HIGH TEMPERATURE ICP® TRIAXIAL ACCELEROMETER WITH TEDS
MODEL HT356A44
Sensitivity: (±10%) 10 mV/g
Measurement Range: ±500 g pk
Frequency Range: (±5%) 1.6 to 7000 Hz
Temperature Range: -65 to 325 °F (-54 to 163 °C)

HIGH TEMPERATURE ICP® TRIAXIAL ACCELEROMETER
MODEL HT356A44
Sensitivity: (±10%) 50 mV/g
Measurement Range: ±100 g pk
Frequency Range: (±5%) 12 to 7000 Hz
Temperature Range: -65 to 325 °F (-54 to 163 °C)
PCB® load cells feature advanced structural design, making them extremely durable, perfect for vehicle life cycle testing and structural testing. The TORKDISC® torque sensor system is designed for vehicle applications requiring in-line rotary torque measurements such as drive line measurements, while our force sensors are excellent for automotive fatigue testing applications.

### ROD END LOAD CELL
**MODEL 1381-04A**
- Measurement Range: 20 k lb (89 kN)
- Sensitivity: 2.00 mV/V
- 50% static overload protection

### ICP® FORCE SENSOR
**MODEL 208C03**
- Measurement Range: 500 lb (2,224 kN) Compression/Tension
- Height: 0.625 in (15.88 mm)
- Low Frequency Response: (-5%) 0.0003 Hz

### S-TYPE LOAD CELL
**MODEL 1631-01C**
- Measurement Range: 500 lb (2,224 N)
- Size: Height: 3.0 in (76.2 mm)
- 10 ft - Integrated Cable

### ROTARY TORQUE SENSOR
**MODEL 3125-01A**
- Measurement Range: 5,000 in-lb (565 N-m)
- Mounting: Keyed shaft
- Maximum Speed: 7,900 RPM

### TORKDISC® TELEMETRY SYSTEM
**MODEL 5302D-02A**
- Measurement Range: 5,000 in-lb (565 Nm)
- Maximum Speed: 15,000 RPM
- 16 Bit Telemetry

### REACTION TORQUE SENSOR
**MODEL 2302-02A**
- Measurement Range: 20,000 lbf-in (2,259 Nm)
- 50% static overload protection
- 5 in (127 mm) diameter steel flange

### GENERAL PURPOSE LOW PROFILE LOAD CELL
**SERIES 1200**
- Measurement Range: 500 to 50k lbf (2200 to 220k N)
- English and Metric sizes
- PT and PC connector styles

### PEDAL FORCE TRANSDUCER
**MODEL 1515-110-03A**
- Measurement Range: 300 lbf (1,334 Nm)
- Sensitivity: 2.00 mV/V
- Height: 0.84 in (21.4 mm)

### STRAIN SENSOR
**MODEL 740B02**
- Sensitivity: 50 mV/µε
- Measurement Range: 100 pk µε
- Frequency Range: 0.5 to 100,000 Hz
- Temperature Range: -65 to +250 °F (-53 to +121 °C)