



MODELS
354B04 & 354B05

CASE ISOLATED TRIAxIAL ICP[®] ACCELEROMETERS WITH TEDS

- Case isolated titanium housing reduces noise caused by high magnetic fields
- Low outgassing and hermetically sealed for use under a vacuum
- Thru-hole mount with supplied mounting screws¹
- TEDS 1.0, IEEE 1451.4 enabled

¹ Glue mount is also possible without the need for an isolation layer

CE



FEATURING EXPANDED FREQUENCY RANGE UP TO 10,000 HZ

PCB[®] is launching new models 354B04 and 354B05 accelerometers with extended upper frequency limit of 10,000 Hz at 5% deviation. They utilize ceramic sensing elements in a shear arrangement, offering high output and low noise for excellent signal to noise ratio. Their case-isolated design with titanium housing provides ruggedness and reduces noise with much improved longevity over use of non-isolated accelerometers with insulated coatings or polyimide tape. Integrated ICP[®] electronics provide a low impedance voltage output capable of being transmitted over long cable lengths. The thru-hole, hermetically sealed housing installs with a single fastener, allowing 360 degree rotation to align specific axes. Output is through a ¼-28 four pin connector wired for TEDS IEEE 1451.4 enabled for easy tracking and record keeping.

TYPICAL APPLICATIONS

- Vibration measurements in the presence of electrical noise
- Flight and ground vibration testing
- Environmental Stress Screening (ESS)
- Modal analysis

SPECIFICATIONS				
Model	354B04		354B05	
	English:	SI:	English:	SI:
Performance				
Sensitivity ($\pm 5\%$)	10 mV/g	1.02 mV/(m/s ²)	100 mV/g	10.2 mV/(m/s ²)
Measurement Range	± 500 g pk	$\pm 4,905$ m/s ² pk	± 50 g pk	± 491 m/s ² pk
Frequency Range ($\pm 5\%$)	0.4 to 10,000 Hz			
Resonant Frequency	≥ 25 kHz			
Broadband Resolution (1 to 10000 Hz)	0.0005 g rms	0.005 m/s ² rms	0.0003 g rms	0.003 m/s ² rms
Non-Linearity [Typical]	$\leq 1\%$			
Transverse Sensitivity	$\leq 5\%$			
Environmental				
Overload Limit (Shock)	$\pm 5,000$ g pk	$\pm 49,050$ m/s ² pk	$\pm 5,000$ g pk	$\pm 49,050$ m/s ² pk
Temperature Range (Operating)	-65 to +200 °F	-54 to +93 °C	-65 to +200 °F	-54 to +93 °C
Base Strain Sensitivity	0.004 g/ $\mu\epsilon$	0.04 (m/s ²)/ $\mu\epsilon$	0.003 g/ $\mu\epsilon$	0.03 (m/s ²)/ $\mu\epsilon$
Electrical				
Excitation Voltage	24 to 30 VDC			
Constant Current Excitation	2 to 20 mA			
Output Impedance	≤ 100 Ohm			
Output Bias Voltage	8 to 12 VDC			
Spectral Noise (1 Hz)	170 $\mu\text{g}/\sqrt{\text{Hz}}$	1668 ($\mu\text{m}/\text{sec}^2$)/ $\sqrt{\text{Hz}}$	170 $\mu\text{g}/\sqrt{\text{Hz}}$	1668 ($\mu\text{m}/\text{sec}^2$)/ $\sqrt{\text{Hz}}$
Spectral Noise (10 Hz)	25 $\mu\text{g}/\sqrt{\text{Hz}}$	245 ($\mu\text{m}/\text{sec}^2$)/ $\sqrt{\text{Hz}}$	25 $\mu\text{g}/\sqrt{\text{Hz}}$	245 ($\mu\text{m}/\text{sec}^2$)/ $\sqrt{\text{Hz}}$
Spectral Noise (100 Hz)	8 $\mu\text{g}/\sqrt{\text{Hz}}$	78 ($\mu\text{m}/\text{sec}^2$)/ $\sqrt{\text{Hz}}$	8 $\mu\text{g}/\sqrt{\text{Hz}}$	78 ($\mu\text{m}/\text{sec}^2$)/ $\sqrt{\text{Hz}}$
Spectral Noise (1 kHz)	6 $\mu\text{g}/\sqrt{\text{Hz}}$	59 ($\mu\text{m}/\text{sec}^2$)/ $\sqrt{\text{Hz}}$	6 $\mu\text{g}/\sqrt{\text{Hz}}$	59 ($\mu\text{m}/\text{sec}^2$)/ $\sqrt{\text{Hz}}$
Spectral Noise (10 kHz)	4 $\mu\text{g}/\sqrt{\text{Hz}}$	39 ($\mu\text{m}/\text{sec}^2$)/ $\sqrt{\text{Hz}}$	4 $\mu\text{g}/\sqrt{\text{Hz}}$	39 ($\mu\text{m}/\text{sec}^2$)/ $\sqrt{\text{Hz}}$
Electrical Isolation (Case)	$> 10^8$ Ohm			
Physical				
Sensing Element	Ceramic / Annular Shear			
Housing Material	Titanium			
Sealing	Hermetic			
Weight	0.51 oz	14.5 gm	0.51 oz	14.5 gm
Electrical Connector	1/4-28 4-Pin			
Supplied Accessories	Quantity 1 of each of the following: Model O81A105 Mounting screw (6-32 x 1/2 in) Model M081A103 Mounting screw and washer, (M3 x 0.5) Model O39A22 Allen wrench for 6-32 screw Model M039A22 Allen Wrench for M3 screw			

RECOMMENDED CABLES:



Model 010G

General purpose, 10-foot and 20-foot, 1/4-28 four socket plug to triple splice 3 BNC plugs



Model 078G

Rugged, flexible, 10-foot and 20-foot, 1/4-28 four socket plug to triple splice 3 BNC plugs



Model 034W10

4-conductor, shielded, 10-foot, 1/4-28 four socket plug to triple splice 3 BNC plugs

Special Low Outgassing Cables also available.

