



SERIES 339A

# ACCELEROMETERS WITH EXCELLENT THERMAL STABILITY



- Temperature coefficient as low as 0.005% / °F (0.009% / °C)
- 10 mV/g, 50 mV/g, and 100 mV/g sensitivities
- Measurement frequency to 10 kHz at ± 5%
- Operating temperature from -100 to +356 °F (-73 to +180 °C)
- Titanium housed and hermetically sealed
- Available in stud, adhesive, and through hole mounting configurations
- Models TLD339A34 & TLD339A36 feature TEDS - Climatic Chamber Testing

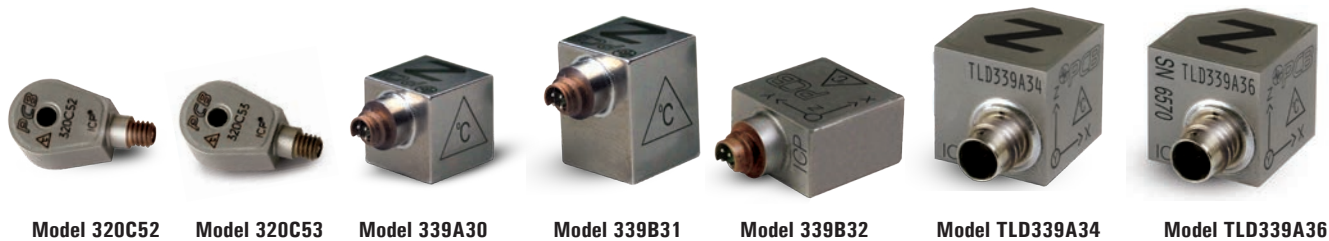
## TYPICAL APPLICATIONS

- Powertrain Development & NVH
- Vehicle Systems NVH
  - Underhood
  - Exhaust
  - Brake
- Component and System Performance
  - Vehicle Road Load & Durability
  - Climatic Chamber Testing

## FOR POWERTRAIN TESTING

PCB® single and triaxial ICP® accelerometers are designed with a low temperature coefficient, wide operating temperature range, and good broadband measurement resolution, making them ideal for powertrain development and powertrain NVH applications, or for any vibration measurement requiring tight control of amplitude sensitivity over a wide thermal gradient. With a temperature coefficient as low as 0.005% / °F (0.009% / °C), these titanium housed and hermetically sealed units have a 10 mV/g to 100 mV/g sensitivities, a measurement frequency to 10 kHz, and an operating temperature range from -100 to +356 °F (-73 to +180 °C). To alleviate the effects of high frequency overloads caused by metal-to-metal inputs, a low pass filter has been incorporated in all models, ensuring accurate data in the frequency range of interest. These sensors provide precision amplitude data for test applications with large thermal shifts such as powertrain vibration testing, powertrain NVH, certain vehicle systems NVH tests, road load data acquisition, and durability testing in climatic chambers. Sensors are available in stud, adhesive and through hole mounting configurations.

As with all PCB instrumentation, these sensors are complemented with toll-free applications assistance, 24-hour technical support, and are backed by a no-risk policy that guarantees total customer satisfaction or your money refunded.



SPECIFICATIONS							
Model Number	320C52	320C53	339A30	339B31	339B32	TLD339A34 [1]	TLD339A36 [1]
<b>Performance</b>							
Measurement Range	± 500 g pk	± 5,000 g pk	± 500 g pk	± 500 g pk	± 500 g pk	± 100 g pk	± 500 g pk
Sensitivity	10 mV/g	1 mV/g	10 mV/g	10 mV/g	10 mV/g	50 mV/g	10 mV/g
Broadband Resolution	0.004 g rms	0.04 g rms	0.008 g rms	0.008 g rms	0.003 g rms	0.005 g rms	0.003 g rms
Frequency Range (± 5 %)	1 to 10 kHz	1 to 5 kHz	2 to 8 kHz	2 to 8 kHz	2 to 10 kHz	2 to 5 kHz	2 to 5 kHz
Resonant Frequency (x or y axis)	≥ 50 kHz	≥ 50 kHz	≥ 25 kHz	≥ 50 kHz	≥ 45 kHz	≥ 35 kHz	≥ 35 kHz
Resonant Frequency (z axis)	—	—	≥ 55 kHz	—	≥ 45 kHz	—	—
Non-Linearity	≤ 1 %	≤ 1 %	≤ 0.5 %	≤ 0.5 %	≤ 0.5 %	≤ 1 %	≤ 1 %
Transverse Sensitivity	≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %
<b>Environmental</b>							
Overload Limit (Shock)	± 5000 g pk	± 10,000 g pk	± 5000 g pk	± 5000 g pk	± 5000 g pk	± 5000 g pk	± 5000 g pk
Temperature Coefficient of Sensitivity	-100 to +325 °F (-73 to +163 °C)	-100 to +325 °F (-73 to +163 °C)	-65 to +325 °F (-54 to +163 °C)	-65 to +356 °F (-54 to +180 °C)	-65 to +325 °F (-54 to +163 °C)	-65 to +325 °F (-54 to +163 °C)	-65 to +325 °F (-54 to +163 °C)
Acceleration Sensitivity	≤ 0.005 %/°F (≤ 0.009 %/°C)	≤ 0.005 %/°F (≤ 0.009 %/°C)	≤ 0.011 %/°F (≤ 0.020 %/°C)	≤ 0.012 %/°F (≤ 0.022 %/°C)	≤ 0.011 %/°F (≤ 0.020 %/°C)	≤ 0.03 %/°F (≤ 0.06 %/°C)	≤ 0.03 %/°F (≤ 0.06 %/°C)
<b>Electrical</b>							
Excitation Voltage	19 to 30 VDC	19 to 30 VDC	18 to 30 VDC	18 to 30 VDC	18 to 30 VDC	21 to 30 VDC	21 to 30 VDC
Constant Current Excitation	2 to 20 mA	2 to 20 mA	2 to 20 mA	2 to 20 mA	2 to 20 mA	2 to 20 mA	2 to 20 mA
Spectral Noise (10 Hz)	150 µg/√Hz	1,500 µg/√Hz	500 µg/√Hz	560 µg/√Hz	178 µg/√Hz	400 µg/√Hz	250 µg/√Hz
Spectral Noise (100 Hz)	50 µg/√Hz	500 µg/√Hz	200 µg/√Hz	150 µg/√Hz	48 µg/√Hz	100 µg/√Hz	50 µg/√Hz
Spectral Noise (1000 Hz)	25 µg/√Hz	250 µg/√Hz	100 µg/√Hz	60 µg/√Hz	25 µg/√Hz	50 µg/√Hz	20 µg/√Hz
<b>Physical</b>							
Housing Material	Titanium	Titanium	Titanium	Titanium	Titanium	Titanium	Titanium
Sealing	Hermetic	Hermetic	Hermetic	Hermetic	Hermetic	Hermetic	Hermetic
Size (H x L x W) in (mm)	0.23 x 0.65 x 0.38 (5.84 x 16.4 x 9.6)	0.23 x 0.65 x 0.3 (5.84 x 16.4 x 9.6)	0.4 in Cube (10.2 mm Cube)	0.4 x 0.4 x 0.4 (10.2 x 10.2 x 10.2)	0.28 x 0.47 x 0.47 (7.0 x 12.0 x 12.0)	0.55 x 0.80 x 0.55 (14.0 x 23.3 x 14.0)	0.55 x 0.80 x 0.55 (14.0 x 23.3 x 14.0)
Weight	1.85 gm	1.85 gm	4.0 gm	4.2 gm	3.6 gm	10.5 gm	10.5 gm
Electrical Connector	5-44 Coaxial	5-44 Coaxial	8-36 4-Pin	1/4-28 4-Pin	8-36 4-Pin	1/4-28 4-Pin	1/4-28 4-Pin
Mounting	Through Hole	Through Hole	Adhesive	5-40 Stud	Adhesive	5-40 Stud	5-40 Stud
<b>Notes</b>							
[1] TEDS Capable of Digital Memory and Communication compliant with IEEE1451.4							



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