

Model Number <b>3501B1220KG</b>	<b>PIEZORESISTIVE ACCELEROMETER</b>	Revision: C ECN #: 47477
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	<u>ENGLISH</u>	<u>SI</u>	
<b>Performance</b>			
Sensitivity(± 50 %)(at 10 VDC excitation)	0.010 mV/g	0.001 mV/(m/s <sup>2</sup> )	[1]
Sensitivity	0.001 mV/V/g	0.0001 mV/V/(m/s <sup>2</sup> )	
Measurement Range	± 20 kg	± 196,100 m/s <sup>2</sup> pk	
Frequency Range(± 1 dB)	0 to 10,000 Hz	0 to 10,000 Hz	
Resonant Frequency	>60 kHz	>60 kHz	
Damping Ratio	5 % Critical	5 % Critical	[5]
Non-Linearity(per 10,000 g (98,100 m/s <sup>2</sup> ))	≤ 1 %	≤ 1 %	
Transverse Sensitivity	≤ 3 %	≤ 3 %	
<b>Environmental</b>			
Overload Limit(Shock)	± 60,000 g pk	± 588,000 m/s <sup>2</sup> pk	[4]
Overload Limit(Mechanical Stops)	≥ 30 kg	≥ 294,200 m/s <sup>2</sup> pk	
Temperature Range(Operating)	-65 to 250 °F	-54 to 121 °C	
Temperature Coefficient of Sensitivity	-0.11 %/°F	-0.20 %/°C	[5]
Zero g Offset Temperature Shift	± 10 mV	± 10 mV	[6]
Base Strain Sensitivity	0.10 g/µε	0.98 (m/s <sup>2</sup> )/µε	[5]
Magnetic Sensitivity	10 µg/gauss	0.98 (m/s <sup>2</sup> )/Tesla	[5]
<b>Electrical</b>			
Excitation Voltage(Maximum)	15.0 VDC	15.0 VDC	
Current Consumption	<3 mA	<3 mA	
Input Resistance(± 2000 Ohm)	6000 Ohm	6000 Ohm	[1]
Output Resistance(± 2000 Ohm)	6000 Ohm	6000 Ohm	[1]
Offset Voltage	-40 to +40 mVDC	-40 to +40 mVDC	[1]
Settling Time	0.01 sec	0.01 sec	[2]
Electrical Isolation(Case)	≥ 10 <sup>7</sup> Ohm	≥ 10 <sup>7</sup> Ohm	[3]
<b>Physical</b>			
Sensing Element	Piezoresistive MEMS	Piezoresistive MEMS	
Sensing Geometry	Full Active	Full Active	
Housing Material	Titanium	Titanium	
Sealing	Epoxy	Epoxy	
Size (Hex x Height)	3/8 in x .50 in	3/8 in x 12.7 mm	
Weight(without cable)	0.088 oz	2.5 gm	[5]
Electrical Connector	Integral Cable	Integral Cable	
Electrical Connection Position	Side	Side	
Cable Type	096 4-cond silicone jacket	096 4-cond silicone jacket	
Cable Termination	Pigtail Ends	Pigtail Ends	
Cable Length	10 ft	3.05 m	
Mounting	Integral Stud	Integral Stud	
Mounting Thread	1/4-28 Male	1/4-28 Male	

<b>OPTIONAL VERSIONS</b>		
Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.		
<b>M</b> - Metric Mount		
Mounting Thread	M6 x 0.75 Male	M6 x 0.75 Male

<b>NOTES:</b>	
[1]	Verified with test data provided on supplied calibration certificate.
[2]	Settling Time is the maximum time after power-up for the Offset Voltage to be within +/-2% of Measurement Range output of the final offset value. Mounting surface must be at thermal equilibrium.
[3]	Individually tested to ensure compliance with specified value.
[4]	Half-sine pulse duration, ≥ 20 µsec.
[5]	Typical.
[6]	-65 to +250 °F, ref. 75 °F (-54 to +121 °C, ref. 24 °C)
[7]	See PCB Declaration of Conformance PS151 for details.

<b>SUPPLIED ACCESSORIES:</b>	
Model ACS-62 Shock Pulse Calibration of single axis piezoresistive shock accelerometer to maximum amplitude of 5k g, 10.0 VDC excitation	

Entered: LK	Engineer: JS	Sales: RWM	Approved: JJB	Spec Number:
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All specifications are at room temperature unless otherwise specified.  
In the interest of constant product improvement, we reserve the right to change specifications without notice.

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