


Model Number 3501A2020KG		HIGH AMPLITUDE MEMS SHOCK ACCELEROMETER		Revision: NR ECN #:
Performance	ENGLISH	SI		OPTIONAL VERSIONS
Sensitivity(± 50 %)(at 10 VDC excitation)	0.010 mV/g	0.001 mV/(m/s ²)	[1]	Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.
Sensitivity	0.001 mV/V/g	0.0001 mV/V/(m/s ²)		
Measurement Range	± 20 kg	± 196,100 m/s ² 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	[4]	
Non-Linearity	± 1 %	± 1 %		
Transverse Sensitivity	≤ 3 %	≤ 3 %		
Environmental				
Overload Limit(Shock)	± 60,000 g pk	± 588,000 m/s ² pk	[3]	
Overload Limit(Mechanical Stops)	≥ 30 kg	≥ 294,200 m/s ² pk		
Temperature Range(Operating)	-65 to 250 °F	-54 to 121 °C		
Temperature Coefficient of Sensitivity	-0.11 %/°F	-0.20 %/°C	[4]	
Zero g Offset Temperature Shift	± 10 mV	± 10 mV	[5]	
Base Strain Sensitivity	0.10 g/µε	0.98 (m/s ²)/µε	[4]	
Magnetic Sensitivity	10 µg/gauss	0.98 (m/s ²)/Tesla	[4]	
Electrical				
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(at 10 VDC excitation)	-40 to +40 mVDC	-40 to +40 mVDC	[1]	
Settling Time	0.01 sec	0.01 sec	[2]	
Physical				
Sensing Element	Piezoresistive MEMS	Piezoresistive MEMS		
Sensing Geometry	Full Active	Full Active		
Housing Material	Ceramic	Ceramic		
Sealing	Epoxy	Epoxy		
Size (Height x Length x Width)	0.085 in x 0.236 in x 0.138 in	2.16 mm x 6.00 mm x 3.50 mm	[4]	
Weight	0.005 oz	0.15 gm		
Electrical Connector	Solder Tabs	Solder Tabs		
Mounting	Surface Mount	Surface Mount		
<i>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.</i>				
NOTES:				
[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] Half-sine pulse duration, ≥ 20 µsec.				
[4] Typical.				
[5] -65 to +250 °F, ref. 75 °F (-54 to +121 °C, ref. 24 °C)				
SUPPLIED ACCESSORIES:				
Model ACS-62 Shock Calibration of Piezoresistive High Amplitude Accelerometers				
Entered: <i>Jot</i>	Engineer: <i>JCF</i>	Sales: <i>MFG</i>	Approved: <i>EB</i>	Spec Number:
Date: <i>11-13-09</i>	Date: <i>11-12-09</i>	Date: <i>11-12-09</i>	Date: <i>11-13-09</i>	43076
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