Model Number 3501A1220KG

HIGH AMPLITUDE MEMS SHOCK ACCELEROMETER

Revision: B

ECN #: 32776

Performance	<u>ENGLISH</u>	SI				
Sensitivity(± 50 %)(at 10 VDC excitation)	0,010 mV/g	0.001 mV/(m/s ²)	[1]			
	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	[5]			
Non-Linearity	± 1 %	± 1 %				
Transverse Sensitivity	≤ 3 %	≤ 3 %				
Environmental						
Overload Limit(Shock)	± 60,000 g pk	± 588,000 m/s² pk	[4][3]			
(Mechanical Stops)	≥ 30 kg	≥ 294,200 m/s² 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/s²)/με	[5]			
Magnetic Sensitivity	10 μg/gauss	0.98 (m/s²)/Tesla	[5]			
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	-40 to +40 mVDC	-40 to +40 mVDC	[1]			
Settling Time	0.01 sec	0.01 sec	[2]			
Electrical Isolation(Case)	≥ 10 ⁸ ohm	≥ 10 ⁸ ohm	[3]			
Physical						
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 x50 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	034 4-cond Shielded	034 4-cond Shielded				
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				
All specifications are at room temperature unless of	otherwise specified.					
In the interest of constant product improvement, we reserve the right to change specifications without notice.						

OPTIONAL VERSIONS

Optional versions have identical specifications and accessories as listed for the standard model except where noted below. More than one option may be used.

M - Metric Mount

Mounting Thread

M6 x 0.75 Male

M6 x 0.75 Male

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] Individually tested to ensure compliance with specified value.
- [4] Half-sine pulse duration, ≥ 20 µsec.
- 51 Typical.
- [6] -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: ##	Engineer:7	Sales RWM	Approved: 🦰	Spec Number:
Date:4-23-10	Date: 4-19-10	Date: 4-1910	Date: 4-2270	43078



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