

Model Number 3503A1160KG	TRIAxIAL HIGH AMPLITUDE MEMS SHOCK ACCELEROMETER				Revision: B ECN #: 47458
Performance	ENGLISH	SI			OPTIONAL VERSIONS
Sensitivity(± 50 %)(at 10 VDC excitation)	0.003 mV/g	0.0003 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	0.0003 mV/V/g	0.00003 mV/V/(m/s ²)	[7]		
Measurement Range	± 60 kg	± 588,400 m/s ² pk			
Frequency Range(± 1 dB)	0 to 10,000 Hz	0 to 10,000 Hz			
Resonant Frequency	≥ 120 kHz	≥ 120 kHz			
Damping Ratio	2 % Critical	2 % Critical	[5]		
Non-Linearity(per 10,000 g (98,100 m/s ²))	± 1 %	± 1 %			
Transverse Sensitivity	≤ 3 %	≤ 3 %			
Environmental					
Overload Limit(Shock)	± 80,000 g pk	± 784,532 m/s ² pk	[4]		
Overload Limit(Mechanical Stops)	≥ 80 kg	≥ 782,534 m/s ² pk			
Temperature Range(Storage)	-65 to 250 °F	-54 to 121 °C			
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	0.3 g/με	2.94 (m/s ²)/με	[5]		
Electrical					
Excitation Voltage(Maximum)	15.0 VDC	15.0 VDC			
Current Consumption	<12 mA	<12 mA			
Input Resistance(± 700 Ohm)	2000 Ohm	2000 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 ⁷ Ohm	≥ 10 ⁷ Ohm	[3]		
Physical					
Sensing Element	Piezoresistive MEMS	Piezoresistive MEMS			
Sensing Geometry	Full Active	Full Active			
Housing Material	Titanium	Titanium			
Sealing	Epoxy	Epoxy			
Size (Height x Length x Width)	0.25 in x 0.47 in x 0.47 in	6.35 mm x 11.81 mm x 11.81 mm			
Weight(without cable)	0.1 oz	2.83 gm	[5]		
Electrical Connector	Integral Cable	Integral Cable			
Electrical Connection Position	Side	Side			
Cable Type	8-Cond., shielded, silicone jacket	8-Cond., shielded, silicone jacket			
Cable Termination	Pigtail Ends	Pigtail Ends			
Cable Length	10 ft	3.05 m			
Mounting	Through Holes (2)	Through Holes (2)			
Mounting Torque	6 to 8 in-lb	68 to 90 N-cm			
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.					
[5] Typical.					
[6] -65 to +250 °F, ref. 75 °F (-54 to +121 °C, ref. 24 °C)					
[7] Sensitivity is proportional to excitation voltage, and at other excitation values, sensitivity can be predicted from the 10VDC calibrated value with a small (<~.5%) increase in uncertainty.					
[8] See PCB Declaration of Conformance PS153 for details.					
SUPPLIED ACCESSORIES:					
Model 081B114 Mounting Hardware (1)					
Model ACS-62T Shock Pulse Calibration of triaxial piezoresistive shock accelerometer to maximum amplitude of 5k g, 10 VDC excitation (1)					
Entered: LK	Engineer: LAB	Sales: RWM	Approved: NJF	Spec Number:	
Date: 12/4/2017	Date: 12/4/2017	Date: 12/4/2017	Date: 12/4/2017	66350	
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3425 Walden Avenue, Depew, NY 14043					