

Model Number
3703G3FD3G

TRIAxIAL CAPACITIVE ACCELEROMETER

Revision H
ECN #: 18958

Performance

Sensitivity ($\pm 5\%$)	1000 mV/g	SI	[4]
Measurement Range	± 3 g pk	102 mV/(m/s ²)	
Frequency Range ($\pm 5\%$)	0 to 100 Hz	± 29 m/s ² pk	
Frequency Range ($\pm 10\%$)	0 to 150 Hz	0 to 100 Hz	
Resonant Frequency	>400 Hz	0 to 150 Hz	
Phase Response (10 Hz)	$< 3^\circ$	>400 Hz	
Damping Ratio	85 % Critical	$< 3^\circ$	
Broadband Resolution (0.5 to 100 Hz)	30 μ g rms	85 % Critical	[2]
Non-Linearity	$\leq 1\%$	295 μ m/s ² rms	[2]
Transverse Sensitivity	$\leq 3\%$	$\leq 1\%$	[5]
		$\leq 3\%$	[6]

Environmental

Overload Limit (Shock)	± 2000 g pk	± 19600 m/s ² pk	
Temperature Range (Operating)	-40 to +185 °F	-40 to +85 °C	
Temperature Range (Storage)	-85 to +250 °F	-65 to +121 °C	
Temperature Coefficient of Sensitivity	$\leq 0.051\%$ /°F	$\leq 0.091\%$ /°C	[3]
Zero g Offset Temperature Coefficient	≤ 0.003 g/°F	≤ 0.055 m/s ² /°C	[3]
Base Strain Sensitivity	0.0002 g/ μ e	0.002 (m/s ²)/ μ e	[2]
Magnetic Sensitivity	25 equiv. μ g/gauss	2.4 (m/s ²)/Tesla	[2]

Electrical

Excitation Voltage	16 to 30 VDC	16 to 30 VDC	
Current Consumption	< 30 mA	< 30 mA	
Output Impedance	≤ 50 ohm	≤ 50 ohm	
Offset Voltage (0 g)	± 200 mVDC	± 200 mVDC	[1]
Spectral Noise (1 Hz)	15 μ g/ \sqrt Hz	145 (μ m/s ²)/ \sqrt Hz	[2]
Spectral Noise (10 Hz)	4 μ g/ \sqrt Hz	39 (μ m/s ²)/ \sqrt Hz	[2]
Spectral Noise (100 Hz)	1 μ g/ \sqrt Hz	10 (μ m/s ²)/ \sqrt Hz	[2]
Electrical Isolation (Base)	$> 10^8$ ohm	$> 10^8$ ohm	[2]

Physical

Housing Material	Titanium	Titanium	
Sealing	Hermetic	Hermetic	
Size (Length x Width x Height)	1.1 in x 1.1 in x 1.1 in	28 mm x 28 mm x 28 mm	
Weight	2.7 oz	78.1 gm	
Electrical Connector	9-Pin	9-Pin	
Electrical Connection Position	Side	Side	
Mounting Thread	10-32 Female	10-32 Female	



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. ICP® is a registered trademark of PCB group, Inc.

Optional Versions (Optional versions have identical specifications and accessories as listed for standard model except where noted below. More than one option maybe used.)
HT - High temperature, extends normal operation temperatures
 Temperature Range (Operating) -40 to +250 °F -40 to +121 °C

Notes
 [1] Offset tolerance is based on 10 ft of 037 test cable.
 [2] Typical.
 [3] Valid from 70°F to 185°F [21°C to 85°C]
 [4] Measured at 30 Hz, 1 grms.
 [5] Zero-based, least-squares, straight line method.
 [6] Transverse sensitivity is typically $\leq 1.5\%$
 [7] See PCB Declaration of Conformance PS027 for details.

Supplied Accessories
 080A190 Adhesive Mounting Base ()
 081A05 Mounting stud, 10-32 to 10-32 x 0.27" long, BeCu (H900), no shoulder ()
 ACS-11T NIST traceable amplitude response calibration from 0.5 Hz to upper point. (1)
 M081A05 Mounting Stud 10-32 to M6 x 0.75 x 0.27" long BeCu (H900), no shoulder (1)

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