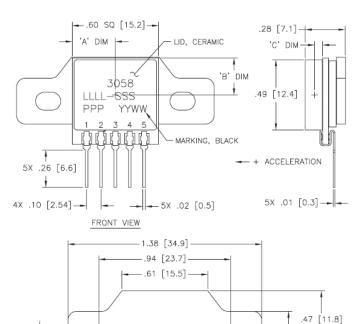






# dimensions



# **MODEL 3058A ACCELEROMETER**

## **SPECIFICATIONS**

- Piezoresistive MEMS
- **◆** DC Response, Gas Damped
- Screw Mounted
- **◆** Integral Temp Compensation

**The Model 3058A** is a silicon MEMS accelerometer with integral temperature compensation. The accelerometer is packaged on a ceramic substrate with a metal bracket which can be used to bolt the sensor to the mounting location. The accelerometer is offered in ranges from ±2g to ±100g range and provides a flat frequency response to minimum 1500Hz. The silicon MEMS sensor is gas damped and incorporates over-range stops for high-g shock protection.

For a similar accelerometer designed for adhesive mounting, see the model 3052A.

### **FEATURES**

- Bolt Mounted
- ±1.0% Non-Linearity
- ◆ 0 to +50°C Temp Compensation
- Built-in Over-range Stops
- Low Power Consumption

#### **APPLICATIONS**

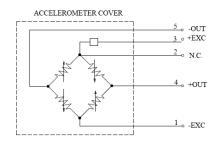
- Vibration & Shock Monitoring
- Motion Control
- Impact & Shock Testing
- Transportation Measurements
- Embedded Applications
- Machinery

.32 [8.1]

SUBSTRATE, CERAMIC, .04 [1.0] THK

5X EDGE CLIP

2X .125 x .175 SLOT [3.18 x 4.44]



REAR VIEW

.16 [4.1]

# PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 80Hz and 5Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice.

Parameters DYNAMIC	.0		110	100	150	1100	Notes
Range (g) Sensitivity (mV/g) <sup>1</sup> Frequency Response (Hz) Natural Frequency (Hz) Non-Linearity (%FSO)	±2 8.0-16.0 0-150 700 ±1.0	±5 4.8-7.2 0-250 800 ±1.0	±10 2.4-3.6 0-350 1000 ±1.0	±20 1.2-1.8 0-550 1500 ±1.0	±50 0.48-0.72 0-1000 4000 ±1.0	±100 0.24-0.36 0-1300 6000 ±1.0	@5Vdc Excitation ±5%
Transverse Sensitivity (%) Damping Ratio Shock Limit (g)	<3 0.7 3000	<3 0.7 3000	<3 0.7 3000	<3 0.7 3000	<3 0.6 5000	<3 0.5 5000	<1 Typical
ELECTRICAL Zero Acceleration Output (mV) Excitation Voltage (Vdc) Input Impedance (Ω) Output Impedance (Ω)	±2 2.7 to 12 1200-6500 1200-6500 >100 10 Isolated from Mounting Surface						Differential
Insulation Resistance (M $\Omega$ ) Residual Noise ( $\mu V$ RMS) Ground Isolation							@50Vdc Maximum
ENVIRONMENTAL Thermal Zero Shift (%FSO/°C) Thermal Sensitivity Shift (%/°C) Operating Temperature (°C) Compensated Temperature (°C) Storage Temperature (°C) Humidity	±0.060 ±0.060 -40 to +125 0 to +50 -40 to +125 Epoxy Sealed, IP61						0 to +50°C 0 to +50°C
PHYSICAL Case Material Weight (grams) Mounting	Aluminum Flange, Ceramic Cover 4.5 2x #4-40 Mounting Screws						

<sup>&</sup>lt;sup>1</sup> Output is ratiometric to excitation voltage

Mounting Torque

Calibration supplied:CS-SENS-0100NIST Traceable Amplitude Calibration at 100HzOptional accessories:121Three Channel DC Signal Conditioner Amplifier140AAuto-Zero Inline Amplifier

6 lb-in (0.7 N-m)

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#### **MODEL 3058A ACCELEROMETER**

### **ORDERING INFO**

PART NUMBERING Model Number+Range+Electrical Connection

3058A-GGG-P

I I\_\_\_\_\_Electrical Connection (P=pins)
I\_\_\_\_\_Range (010 is 10g)

Example: 3058A-010-P

Model 3058A, 10g, Pins





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