



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Model 3022 Accelerometer



Piezoresistive MEMS
DC Response
Circuit Board Mountable
Low Cost

The **Model 3022** is a silicon MEMS accelerometer in a Wheatstone bridge configuration. The accelerometer is packaged on a ceramic substrate with an epoxy sealed ceramic cover and is designed for adhesive mounting. The accelerometer is offered in ranges from $\pm 2g$ to $\pm 200g$ range and provides a flat frequency response to minimum 2000Hz. The silicon MEMS sensor is gas damped and incorporates over-range stops for high-g shock protection.

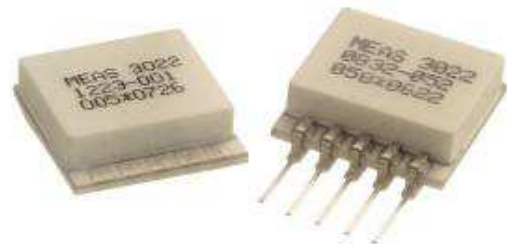
For a similar accelerometer designed for bolt mounting, see the [Model 3028](#).

FEATURES

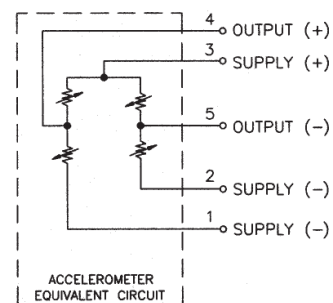
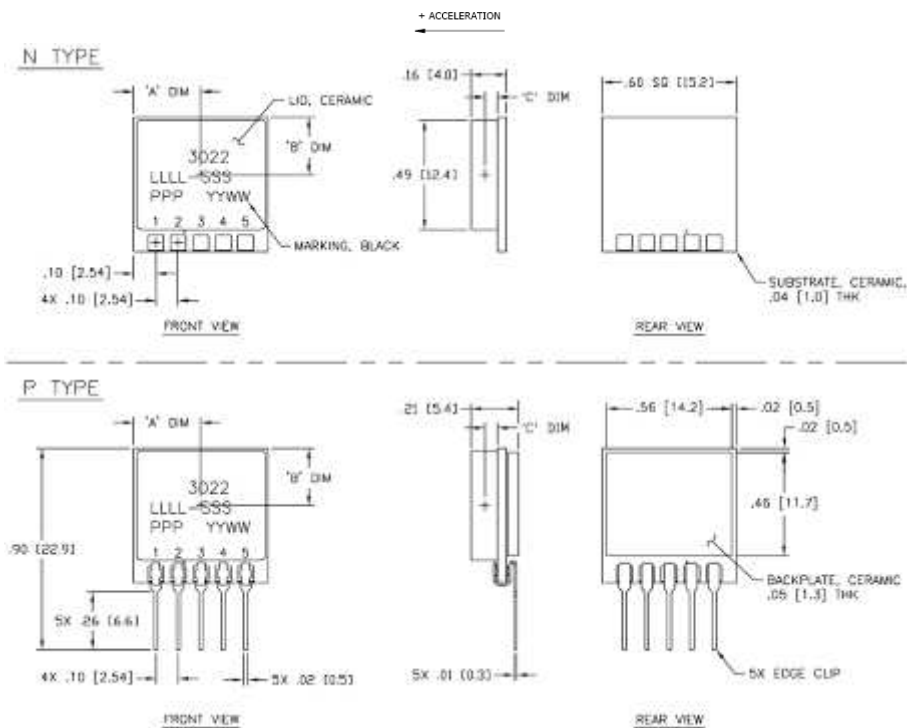
- Adhesive Mounted
- $\pm 0.5\%$ Non-linearity
- Open Wheatstone Bridge
- DC Response
- Gas Damping
- Built-in Overrange Stops
- Low Power Consumption

APPLICATIONS

- Vibration & Shock Monitoring
- Motion Control
- Impact & Shock Testing
- Modal Analysis
- Embedded Applications
- Machinery



Dimensions



Model 3022 Accelerometer

Performance Specifications

All values are typical at +24°C, 100Hz and 5Vdc excitation unless otherwise stated. Measurement Specialties reserves the right to update and change these specifications without notice. Measurement Specialties' family of [DC Response Embedded Accelerometers](#) are used for vibration/shock monitoring, structural analysis, motion control, impact testing, and transportation study. These MEMS sensors feature internal gas damping and outstanding shock survivability.

Parameters								Notes
DYNAMIC								
Range (g)	±2	±5	±10	±20	±50	±100	±200	
Sensitivity (mV/g) ¹	8.0-20.0	6.0-15.0	3.0-6.0	1.5-3.0	0.6-1.5	0.3-0.6	0.15-0.3	@5Vdc Excitation
Frequency Response (Hz)	0-150	0-250	0-400	0-600	0-1000	0-1500	0-2000	±5%
Natural Frequency (Hz)	700	800	1000	1500	4000	6000	8000	
Non-Linearity (%FSO)	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	±0.5	
Transverse Sensitivity (%)	3	3	3	3	3	3	3	
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	0.6	
Shock Limit (g)	5000	5000	5000	5000	5000	5000	5000	
ELECTRICAL								
Zero Acceleration Output (mV)	±25	±25	±25	±25	±25	±25	±25	Differential
Excitation Voltage (Vdc)	2 to 10	2 to 10	2 to 10	2 to 10	2 to 10	2 to 10	2 to 10	
Input Resistance (Ω)	2500-6500	2500-6500	2500-6500	2500-6500	2500-6500	2500-6500	2500-6500	
Output Resistance (Ω)	2500-6500	2500-6500	2500-6500	2500-6500	2500-6500	2500-6500	2500-6500	
Insulation Resistance (MΩ)	>100	>100	>100	>100	>100	>100	>100	@50Vdc
Residual Noise (μV RMS)	10	10	10	10	10	10	10	Maximum
Ground Isolation	Isolated from Mounting Surface							
ENVIRONMENTAL								
Thermal Zero Shift (%FSO/°C)	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	Typical
Thermal Sensitivity Shift (%/°C)	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	Typical
Operating Temperature (°C)	-40 to +125							
Compensated Temperature (°C)	Not Compensated							See Note 2
Storage Temperature (°C)	-40 to +125							
PHYSICAL								
Case Material	Ceramic							
Weight (grams)	3.1							
Mounting	Adhesive or solder							

¹ Output is ratiometric to excitation voltage

² Order model 3022-XXX-10254 for temperature compensation resistor values included in the calibration certificate.

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Ordering Info

PART NUMBERING Model Number+Range+Electrical Connection

3022-GGG-P

| |
 | | Electrical Connection (P=pins, N=solder pads)
 | Range (010 is 10g)

Example: 3022-010-P
Model 3022, 10g, Pins