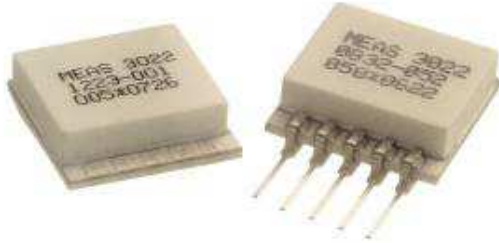
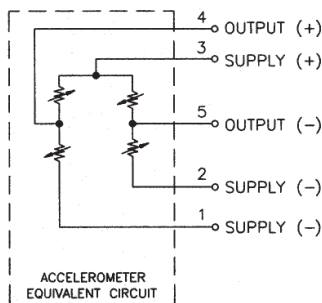
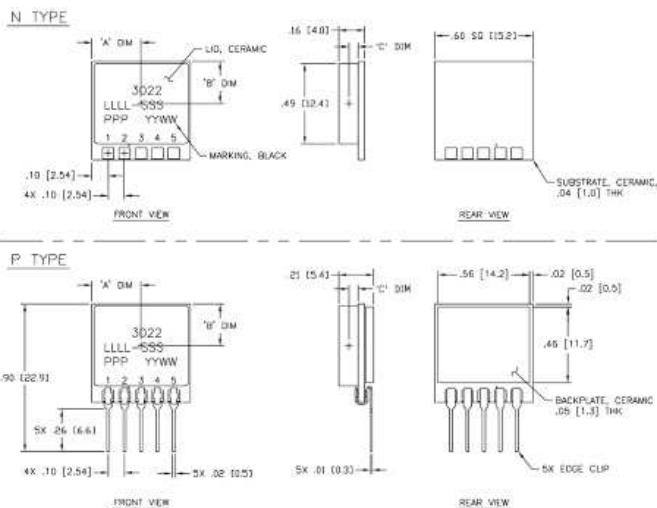


MODEL 3022 ACCELEROMETER



DIMENSIONS



SPECIFICATIONS

- 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

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

	±2	±5	±10	±20	±50	±100	±200	Notes
Range (g)								
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 Exc.
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)	2000	2000	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.

Optional accessories:	121	Three Channel DC Differential Amplifier
	140	Auto-Zero Inline Amplifier

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.

ORDERING INFORMATION

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

NORTH AMERICA

Measurement Specialties, Inc.,
a TE Connectivity Company
1000 Lucas Way
Hampton, VA 23666
Sales and Customer Service
Tel: +1-800-745-8008 or
+1-757-766-1500
Fax: +1-757-766-4297
t&m@meas-spec.com

EUROPE

MEAS France SAS
a TE Connectivity Company
26 Rue des Dames
F78340 Les Clayes-sous-Bois
France
Sales and Customer Service
Tel: +33 (0) 1 79 33 00
Fax: +33(0)1 34 81 03 59
t&m@meas-spec.com

ASIA

Measurement Specialties (China), Ltd.,
a TE Connectivity Company
No. 26 Langshan Road
Shenzhen High-Tech Park (North)
Nanshan District, Shenzhen 518057
China
Sales and Customer Service
Tel: +86 755 3330 5088
Fax: +86 755 3330 5099
t&m@meas-spec.com

TE.com/sensorsolutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.