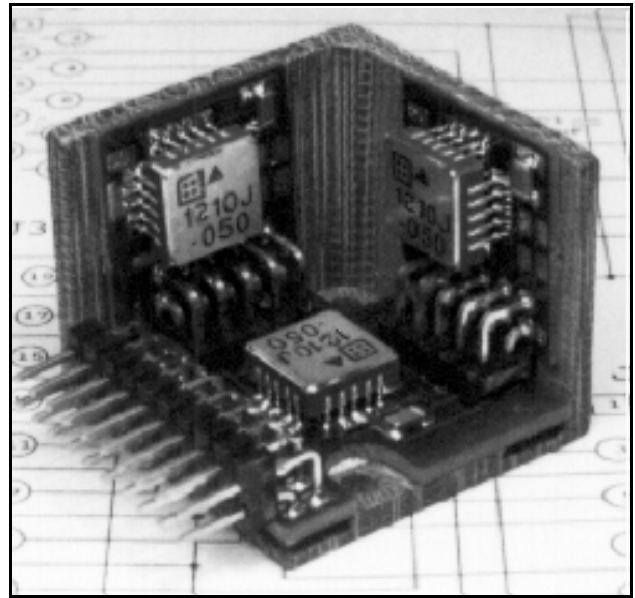




- 3 Axis Acceleration Sensing
- Contains 3 Model 1210 Capacitive Micromachined Accelerometers
- Built-in Nitrogen Damping
- ±4V Differential & .5V to 4.5V Single Ended Outputs
- Low Cost Open Frame Design
- -40 to +85°C Operation
- +5 V DC, 21 mA Power (typical)
- Responds to DC & AC Acceleration
- Non Standard Ranges Available
- No External Reference Voltage Required
- Serialized for Traceability



**DESCRIPTION** The Model 2412 is a three axis, open frame accelerometer assembly for use in zero to medium frequency instrumentation applications. It contains three Model 1210 analog capacitive accelerometers orthogonally mounted on a phenolic frame. Overall size is 1.2" x 1.2" x 1.0", weight is 16 grams, and it is easily mounted via two #4 (or M3) screws (not included). An optional calibration test sheet (2412-TST) is also available which lists the measured bias, operating current and frequency response.

**OPERATION** The Model 2412 accelerometer produces three individual analog outputs which can be used either in differential or single ended modes referenced to +2.5 volts. The voltage of each output is proportional to the orthogonal component of the applied acceleration. The Model 2412 operates with a single +5 volt power supply and generates its own +2.5 volt reference with an on-board resistive divider. The three sensitive axes are perpendicular to the bottom of each of the individual accelerometer packages, with positive acceleration defined as a force pushing on the bottom of the package.

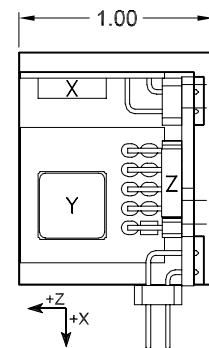
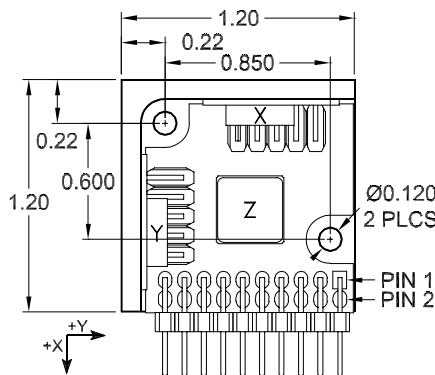
**ORDERING INFORMATION**

Full Scale Acceleration	Model Number
± 5 G	2412-005
± 10 G	2412-010
± 25 G	2412-025
± 50 G	2412-050
± 100 G	2412-100

**PERFORMANCE** Operating current is three times the current specified on the Model 1210 data sheet. Bias Calibration Error is derated from the model 1210 accelerometer to 1.5% typical and 3% max. For all other performance data, absolute maximum ratings and detailed descriptions of the AOP, AON and DV signals, please refer to Silicon Designs' Model 1210 data sheet.

MOUNTS VIA TWO #4 (or M3) SCREWS.

CONNECTION IS VIA STANDARD 20 CONDUCTOR RIBBON CABLE (0.05" CENTERS) & CONNECTOR (0.10" CENTERS).



ACTUAL SIZE

# Model 2412 Triaxial Analog Accelerometer Module

## PIN CONNECTIONS

PIN #	PIN NAME	SIGNAL DESCRIPTION
1	-	(no connection)
3	-	(no connection)
5	-	(no connection)
7	-	(no connection)
9	AONZ	Negative Analog Output (Z-Axis)
11	GND	Shield Ground
13	AOPX	Positive Analog Output (X-Axis)
15	AONY	Negative Analog Output (Y-Axis)
17	GND	Shield Ground
19	DV	Deflection Voltage (test) input

PIN #	PIN NAME	SIGNAL DESCRIPTION
2	GND	Shield Ground
4	GND	Shield Ground
6	GND	Shield Ground
8	GND	Shield Ground
10	AOPZ	Positive Analog Output (Z-Axis)
12	AONX	Negative Analog Output (X-Axis)
14	GND	Shield Ground
16	AOPY	Positive Analog Output (Y-Axis)
18	VDD	+5 Volt DC power
20	+2.5V	2.5 Volt Reference *

\* NOTE: The +2.5V reference is generated on-board and is supplied to pin 20 as a reference for single ended connections.

