



MEMS Based Smart Accelerometer (Analog Output)



PRODUCT DESCRIPTION:

MEMS based Capacitive Accelerometer measures acceleration along a single axis. MEMS die changes its capacitance when acceleration is applied. Signal conditioner IC converts capacitance change to voltage. Calibrated analog output is provided in the range of 0.5V to 4V. Both MEMS die and CMOS signal conditioner IC are hermetically packaged in a single 44 pin MCM CLCC package. Option of uncommitted Pt based temperature sensor (PRT) within same transducer package.

Transducer is calibrated for gain and offset. Transducer comes with pre programmed calibration coefficients, loaded into EEPROM. Transducer provides corrected output voltage.

FEATURES:

- Full Scale Ranges : $\pm 5g$, $\pm 10g$, $\pm 25g$, $\pm 50g$, $\pm 100g$
- Supply Voltage: 4.75V to 5.25V.
- Temperature Range : -40°C to 85°C
- Transducer Package : 44-Pin CLCC
- Package Size: 16 mm x 16 mm x 2.8 mm

Product Specification		
S.No.	Parameters	Specification
1	Full Scale Ranges	$\pm 5g$, $\pm 10g$, $\pm 25g$, $\pm 50g$, $\pm 100g$
2	Supply Voltage	4.75V to 5.25V
3	Typical Supply Current	3mA
4	Scale Factor	400mV/g to 20mV/g
5	Sensor Output	0.5V to 4.0V
6	Bias	<10 mV
7	Bias Stability	<0.1% FSO
8	Bias TC	0.1% FSO/ $^{\circ}\text{C}$
9	Sensitivity TC	0.015% FSO / $^{\circ}\text{C}$
10	Frequency Bandwidth	up to 2000Hz
11	Temperature Range	-40°C to 85°C
12	Resolution	<0.1% FSO
13	Linearity	<0.1% FSO