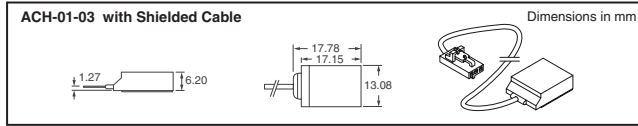


Accelerometer

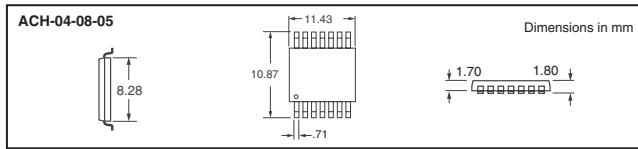


The ACH-01 Accelerometer is a robust, general purpose, linear single axis accelerometer featuring buffered electronic output.

Specifications: • Sensitivity: 10mV/g • Lower Frequency Limit (-3dB): 2Hz • Upper Frequency Limit (+3dB): 20kHz • Dynamic Range: ±150g • Linearity: 0.1% • Resonant Frequency: 35kHz • Operating Temperature: -40°C ~ 85°C • Maximum Shock Level: 1000g

Description	Digi-Key Part No.	Price Each			MSI Part No.
		1	10	100	
ACH-01-03 Sensor Accelerometer with 40" Single Coax Cable and Female Connector	MSP1001-ND	24.38	19.50	13.65	1-1001220-0
ACH-01-04 Sensor Accelerometer with Wires	MSP1002-ND	30.00	24.00	16.80	1-1001497-0

3-Axis Accelerometer/Shock Sensor



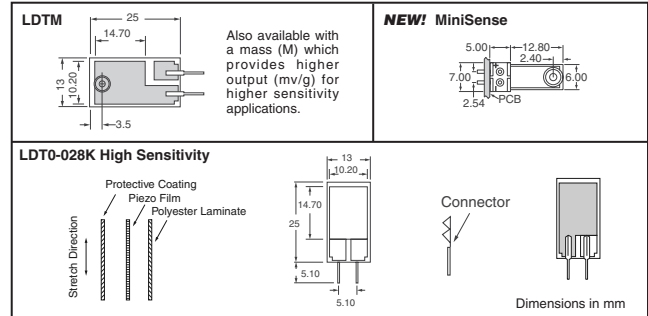
The ACH-04-08-05 accelerometer/shock sensor contains three piezoelectric sensing elements oriented to measure acceleration in three orthogonal, linear axes. "Internal JFET's provide for a low impedance, buffered output with a wide variety of possible application specific signal conditioning circuitry. It can be used in a wide range of applications including motion measurement and control systems, speaker feedback systems, vibration switches, shipment monitor and material handling systems, security systems, computer input/output devices and data loggers."

Specifications: • Sensitivity: 1.8mV/g Typical • Frequency Limit (±3dB): .35-5kHz • Dynamic Range: ±250g • Linearity: 0.1% • Resonant Frequency: 9.2kHz • Operating Temperature: -40°C ~ 85°C • Maximum Shock Level: 1000g

Description	Digi-Key Part No.	Price Each			MSI Part No.
		1	10	100	
ACH-04-08-05 — Surface Mount 3-Axis Sensor Accelerometer	MSP1004-ND	31.25	25.00	17.50	0-1003800-5
ACH-04-08-05 PCB — Surface Mount 3-Axis Sensor Accelerometer with PCB	MSP1005-ND	50.00	43.75	35.00	0-1005685-1

LDT Vibration Sensor

Typically, a 0.005" (125µm) polyester layer is laminated to a 28µm piezo film element. When used in a "bending" mode, laminated film elements develop much higher voltage output when flexed than non-laminated elements. The piezo film is off the neutral axis in the laminate, and is strained more when flexed.



Description	Cap (nF)	Digi-Key Part No.	Price Each			MSI Part No.
			1	10	100	
LDT0-028K, with Solder Tabs	.500	MSP1006-ND	1.20	.90	.50	1002794-0
LDTM-028K, with Mass and Solder Tabs	.420	MSP1007-ND	2.00	1.50	.83	0-1005447-1
MiniSense 100 (Horizontal)	—	MSP6914-ND NEW!	3.00	2.25	1.25	1005939-1
MiniSense 100 (Vertical)	—	MSP6915-ND NEW!	3.00	2.25	1.25	1005940-1

Amplifier Box

For use with ACH-01-03 and ACH-01-04

Characteristics: • Gain: 10X • Power Supply: 9V Battery • Supply Current: 4.0mA • Input Interface: FET for ACH-01 • Output Impedance: 100Ω • Output Connector: BNC

Description	Digi-Key Part No.	Price Each			MSI Part No.
		1	10	100	
IB-ACH-01 — Amplifier Box	MSP1003-ND	92.50	77.50	67.50	0-1003058-0

Basic Design Kit

This kit demonstrates the use of MSI piezo film sensors as microphones, speakers, switches and acoustic pickups. All components and film samples in the kit can be used for experimentation. **Kit includes:** Seven sensor elements, one piezo cable, one PCB for ACH-04-08, application/instruction specs, and technical manual.

Description	Digi-Key Part No.	Price Each	MSI Part No.
Basic Design Kit	MSP1010-ND	113.75	0-1004308-0

Accelerometers and Inclinometers

VTI Technologies is a forerunner in motion and pressure sensors and the world's leading designer and producer of acceleration sensors. VTI develops and produces silicon based capacitive sensors with unique 3D-MEMS (MicroElectroMechanical System) technology, with application areas in acceleration, inclination, shock, vibration and pressure measurement.

Fig. 1

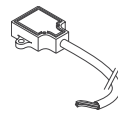


Fig. 2

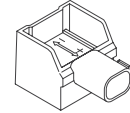


Fig.	Description	Supply Voltage	Current Consumption	Measuring Range	Sensitivity	Frequency Response	Temperature Range	Package	Digi-Key Part No.	1	Price Each	10	25	Tape and Reel Size	Reel Pricing*	VTI Part No.
Inclinometer																
—	Single Output, 1g	4.75-5.25V	2.5mA	±90°	2V/g	8-28Hz	-55°C ~ 125°C	8-DIL SMD	551-1005-1-ND	50.76	48.23	45.82	100	3942.00	—	SCA61T-FA1H1G
—	Single Output, 0.5g	4.75-5.25V	2.5mA	±30°	4V/g	8-28Hz	-55°C ~ 125°C	8-DIL SMD	551-1004-1-ND	50.76	48.23	45.82	100	3942.00	—	SCA61T-FAH11G
—	Dual Output, 0.5g	4.75-5.25V	4mA	±30°	4V/g	8-28Hz	-55°C ~ 125°C	12-DIL SMD	551-1002-1-ND	65.88	62.59	59.46	100	5184.00	—	SCA100T-D01
—	Dual Output, 1g	4.75-5.25V	4mA	±90°	2V/g	8-28Hz	-55°C ~ 125°C	12-DIL SMD	551-1003-1-ND	65.88	62.59	59.46	100	5184.00	—	SCA100T-D02
—	Single Output, 0.26g	4.75-5.25V	3.8mA	±15°	16V/g	8-28Hz	-55°C ~ 125°C	12-DIL SMD	551-1000-1-ND	65.88	62.59	59.46	100	5184.00	—	SCA103T-D04
—	Single Output, 0.5g	4.75-5.25V	3.8mA	±30°	8V/g	8-28Hz	-55°C ~ 125°C	12-DIL SMD	551-1001-1-ND	65.88	62.59	59.46	100	5184.00	—	SCA103T-D05
Accelerometer																
—	Dual Output	4.75-5.25V	5mA	±1.7g	1.2V/g	50±30Hz	-55°C ~ 125°C	12-DIL SMD	551-1007-1-ND	47.52	45.15	42.89	100	3564.00	—	SCA1000-D01
—	Dual Output	4.75-5.25V	5mA	±1.7g	1.2V/g	50±30Hz	-55°C ~ 125°C	12-DIL SMD	551-1008-1-ND	57.24	54.38	51.66	100	4428.00	—	SCA1020-D02
—	Single Output	4.75-5.25V	2mA	±0.5g	4V/g	18±10Hz	-55°C ~ 125°C	8-DIL SMD	551-1009-1-ND	45.36	43.10	40.94	600	14904.00	—	SCA610-CAH11G
—	Single Output	4.75-5.25V	2mA	±1g	2V/g	18±10Hz	-55°C ~ 125°C	8-DIL SMD	551-1010-1-ND	45.36	43.10	40.94	600	14904.00	—	SCA610-CA1H1G
—	Single Output	4.75-5.25V	2mA	±1.5g	1.333V/g	50±30Hz	-55°C ~ 125°C	8-DIL SMD	551-1011-1-ND	37.80	34.02	32.32	600	11664.00	—	SCA610-C2H11A
—	Single Output	4.75-5.25V	2mA	±1.7g	1.2V/g	50±30Hz	-55°C ~ 125°C	8-DIL SMD	551-1012-1-ND	37.80	34.02	32.32	600	11664.00	—	SCA610-C28H1A
—	Single Output	4.75-5.25V	2mA	±1.7g	1.2V/g	50±30Hz	-55°C ~ 125°C	8-DIL SMD	551-1013-1-ND	43.20	41.04	38.99	600	14580.00	—	SCA620-CF8H1A
Stand Alone Inclinometer and Accelerometer																
1	Single Axis	7-20V	5mA	±30°	70mV/°	18Hz	—	Module	551-1019-ND	108.00	91.80	78.84	—	—	—	SCA111T-D02
	Dual Axis	7-20V	5mA	±90°	35mV/°	18Hz	—	Module	551-1017-ND	132.30	108.00	91.80	—	—	—	SCA121T-D03
	Dual Axis	7-20V	5mA	±30°	70mV/°	18Hz	—	Module	551-1018-ND	132.30	108.00	91.80	—	—	—	SCA121T-D07
	Single Axis	7-35V	20mA	±30°	0.035°/LSB	10-28Hz	—	Module	551-1016-ND	182.25	155.25	135.00	—	—	—	SCA115T-D03
	Dual Axis	7-35V	20mA	±90°	0.07°/LSB	10-28Hz	—	Module	551-1014-ND	216.00	183.60	162.01	—	—	—	SCA125T-D06
	Dual Axis	7-35V	20mA	±30°	0.035°/LSB	10-28Hz	—	Module	551-1015-ND	216.00	183.60	162.01	—	—	—	SCA125T-D08
2	Stand Alone Single	4.5-5.5V	2mA	±2g	1V/g	45Hz	—	Module	551-1024-ND	64.80	52.92	44.28	—	—	—	SCA220-CA2H11G
	Dual Axis Subassembly	7-28V	4.5mA	±10°	200mV/°	1-3Hz	—	PC Board	551-1020-ND	94.50	78.30	67.50	—	—	—	SCL1700-D01
—	4 Channel Sensor - Demo Kit	—	—	±1g	On Board	Up to 300Hz	—	Demo Kit	551-1006-ND	486.00	—	—	—	—	—	DEMO KIT

* For Tape and Reel part number, change 1-ND to 2-ND.

More Product Available Online: www.digikey.com

Toll-Free: 1-800-344-4539 • Phone: 218-681-6674 • Fax: 218-681-3380