

4-Zone Mouse Sensor Data Sheet

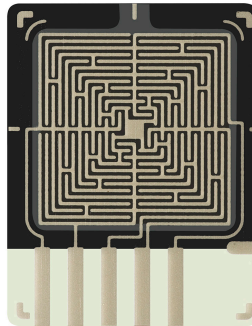
4-Zone FSR® and USB Microcontroller

Features and Benefits

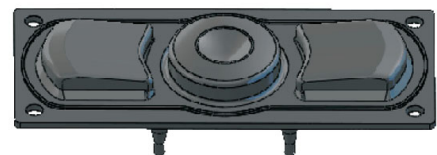
- Low current use
- Fully configurable user control
- Ultra-thin mounting profile

Description

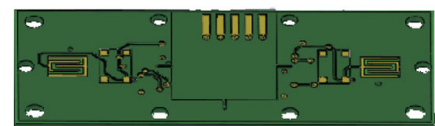
The 4-Zone Force Sensing Resistor® (FSR®) paired with a suitable actuator can be implemented as a finger-actuated "mouse" pointing module. This pointing module provides accurate 360-degree mouse control. Users control direction by applying pressure in the direction of the desired movement and adjust speed by altering the amount of pressure on the device.



Example Keypad



4 Zone Sensor



PCBA



Controller IC

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Device Characteristics

Mass	
Sensor	1.0 grams or less
Sensor and Controller IC	15 grams or less
Operating Temperature Performance	Functional before, during, and after exposure to the below conditions
Cold Dry	-25°C <=5%RH for 96 hours
Cold Humid	10°C 95%RH for 96 hours
Hot Dry	70°C <=10%RH for 96 hours
Hot Humid	70°C 95% RH for 96 hours
Storage Temperature Performance	Functional after 96 hours of exposure to the below conditions
Cold Dry	-40°C <=5%RH
Hot Dry	85°C <=10%RH
Hot Humid	85°C 95%RH
Thermal Shock	Functional after 20 cycles of -40°C to 85°C with a 30 minute dwell time and 5 minute transitions
Sensor Lifetime Durability, when actuated with a MicroModule Keypad	>3.5 million actuations with 500g at 4Hz
Mechanical Shock	Comparable to MIL-STD-202, 80G accelerated in 11 msec
Mechanical Vibration	Comparable to MIL-STD-202, Method 204, Condition A
EMI - Sensor	Generates no EMI
ESD - Sensor	Not ESD sensitive
EMC - Controller IC	Passes IEC61000-4-4 test at 4KV
UL	All materials UL grade 94 V-1 or better
RoHS	Compliant

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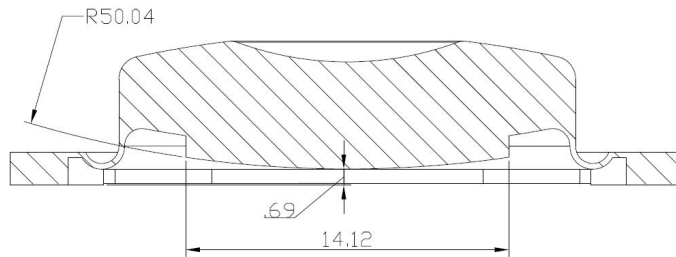
Recommended Adhesives

- 3M 9403/9705 Adhesive Transfer Tape
- 3M 7303 Head-Bondable Adhesive Tape

Application Information

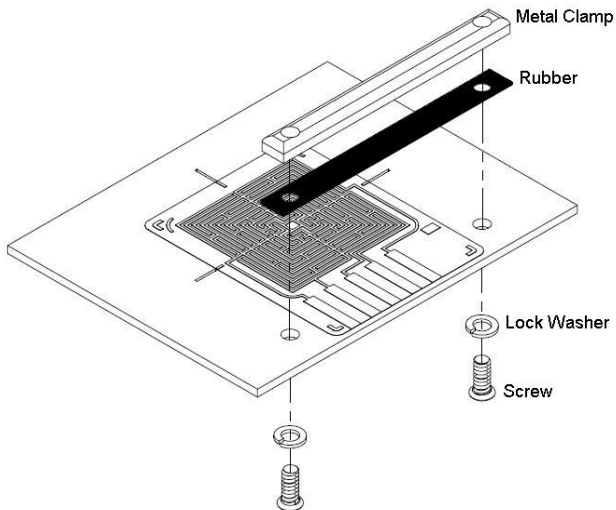
Actuator

The actuator is vital to the correct operation of the 4-Zone sensor. For a CAD model of a recommended actuator visit our website at www.interlinkelectronics.com/Support



Mounting Recommendations

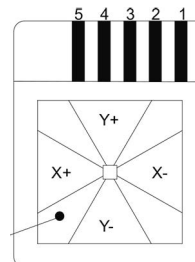
A constant mechanical clamp force is recommended.



Pin Out

PIN OUT	
PIN#	REF
1	X-
2	Y+
3	C
4	X+
5	Y-

TRANSITION ZONE



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Orderable Part Numbers

Hardware Development Kit, 54-00016

This Hardware Development Kit includes:

- MicroModule Demo with USB Cable (Qty. 1)
- Programmed Microchip PIC18F14K50 Microcontroller (Qty. 5)
- 4-Zone Mouse Sensor, Square (Qty. 5)
- 4-Zone Mouse Sensor, Square with conductive adhesive (Qty. 5)
- 4-Zone Mouse Sensor, Square with tail and solder tabs (Qty. 5)
- USB Flash drive with product literature (Qty. 1)

4-Zone USB Microcontroller,

PIC18F14K50, PN 54-00005

4-Zone Mouse Sensor, Square, PN

34-00002

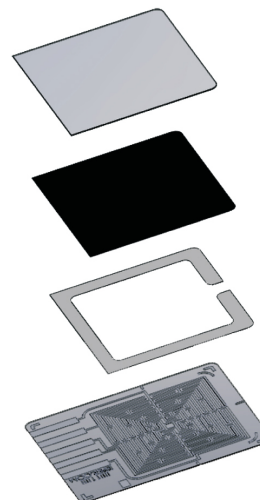
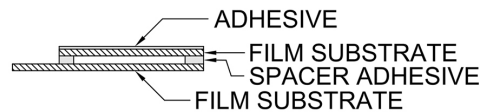
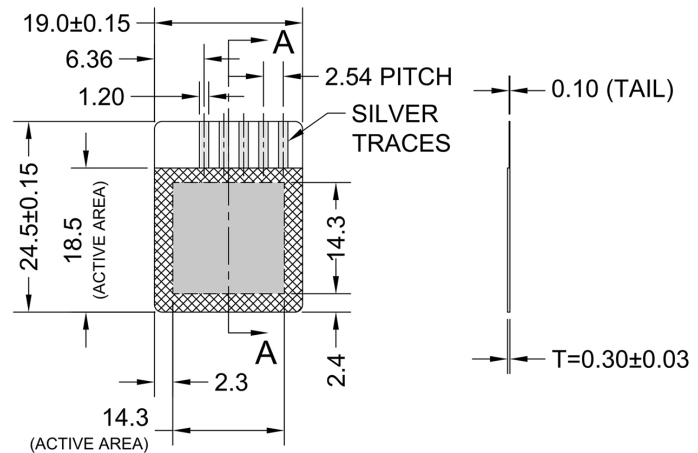
4-Zone Mouse Sensor, Square with

conductive adhesive, PN 30-79069

4-Zone USB Microcontroller,

PIC18F14K50 High Temperature, PN

24-00178



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