

4-Zone Mouse Sensor Data Sheet

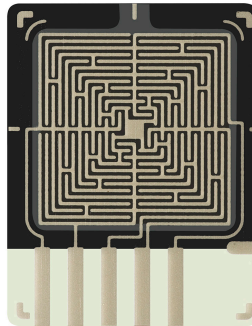
4-Zone FSR® and USB Microcontroller

Features and Benefits

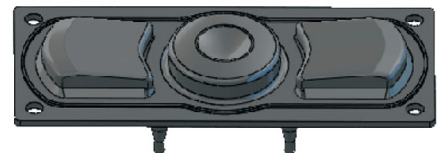
- Low current use
- Fully configurable user control
- Ultra-thin mounting profile

Description

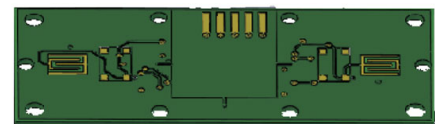
The 4-Zone Force Sensing Resistor® (FSR®) paired with a suitable actuator can be implemented as a finger-actuated "mouse" pointing module. This pointing module provides accurate 360-degree mouse control. Users control direction by applying pressure in the direction of the desired movement and adjust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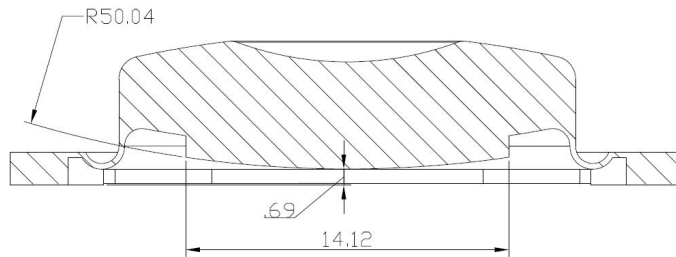
Recommended Adhesives

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

Application Information

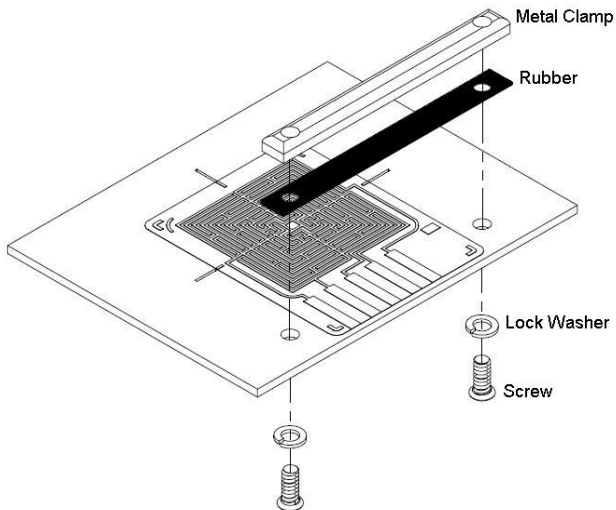
Actuator

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

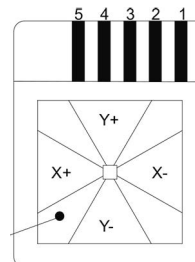
A constant mechanical clamp force is recommended.



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

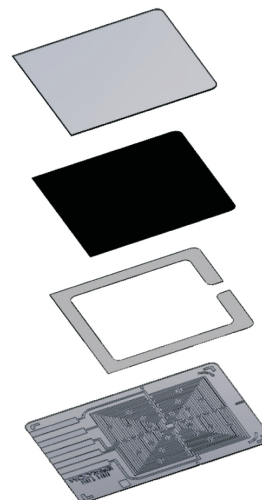
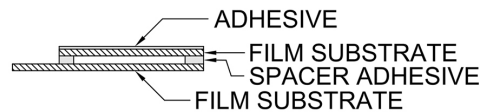
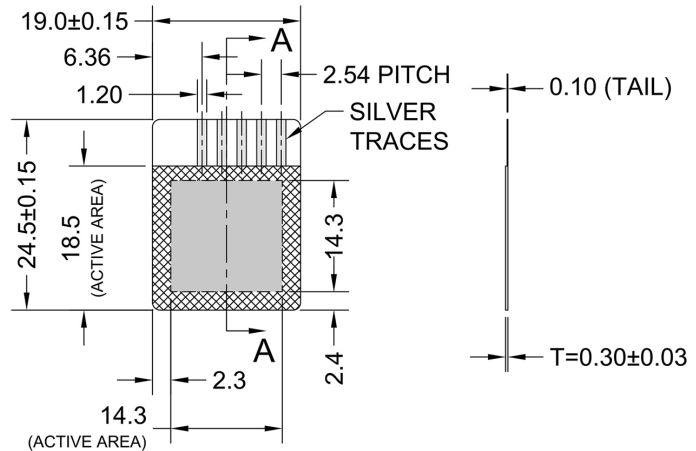
4-Zone Mouse Sensor, Square with

conductive adhesive, PN 30-79069

4-Zone USB Microcontroller,

PIC18F14K50 High Temperature, PN

24-00178



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