

# 4-Zone Mouse Sensor Data Sheet

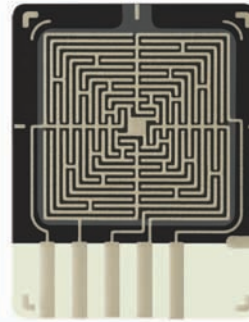
4-Zone FSR® and USB Microcontroller

## Features and Benefits

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

## Description

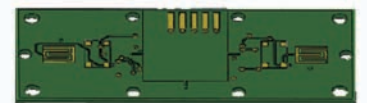
The 4-Zone Force Sensing Resistor® (FSR®) paired with a suitable actuator can be implemented as a finger-actuated “mouse” pointing module. This pointing module provides accurate 360-degree mouse control. Users control direction by applying pressure in the direction of the desired movement and adjust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



Example Keypad



4 Zone Sensor



PCBA



Controller IC



P/N: 94-00021 Rev. D

## 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

4-Zone FSR® and USB Microcontroller

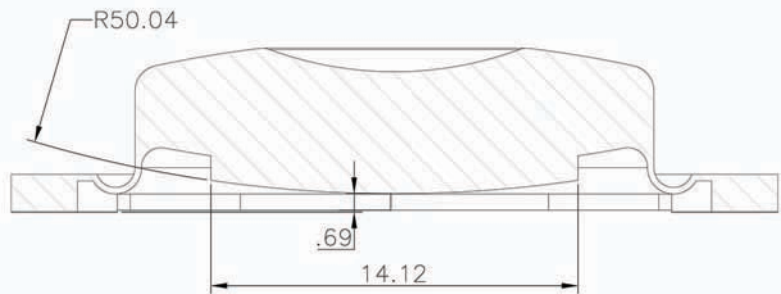
**Recommended Adhesives**

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

**Application Information**

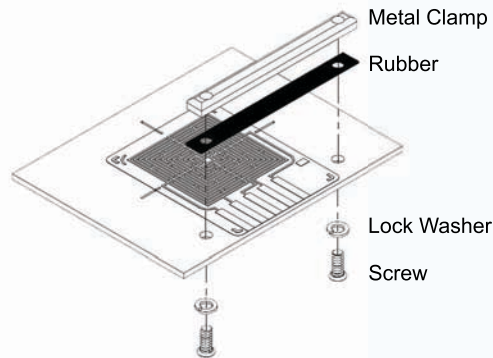
**Actuator**

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](http://www.interlinkelectronics.com/Support)

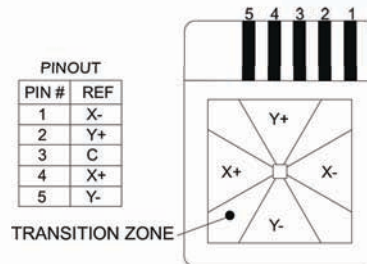


**Mounting Recommendations**

A constant mechanical clamp force is recommended.



**Pin Out**



4- Zone FSR® and USB Microcontroller

Orderable Part Numbers

**Hardware Development Kit, 54-00016**

This Hardware Development Kit includes:

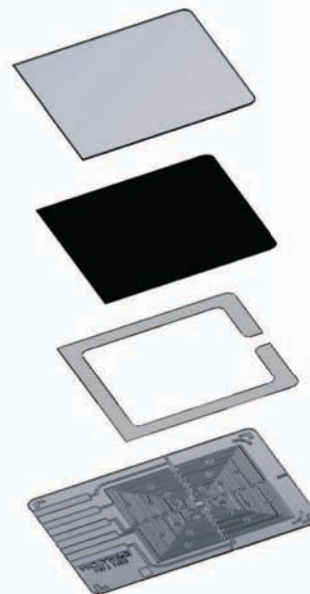
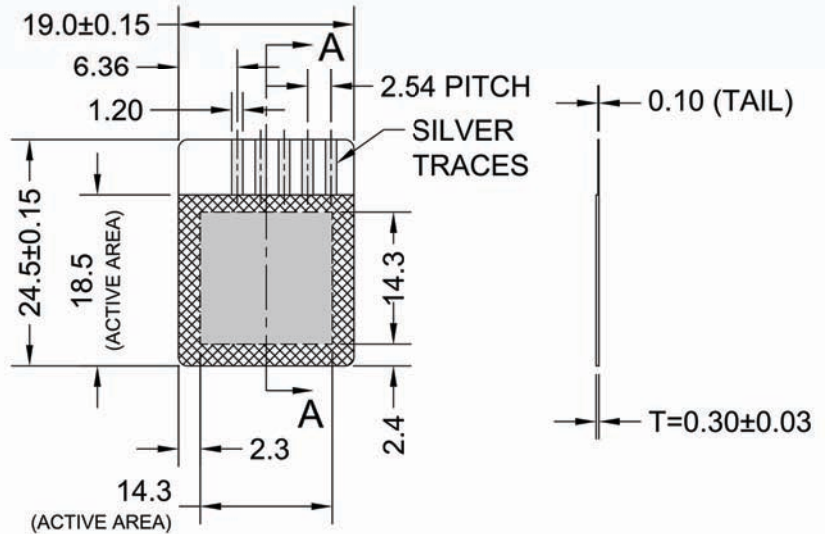
- MicroModule Demo with USB Cable (Qty. 1)
- Programmed Microchip PIC18F14K50 Microcontroller (Qty. 5)
- 4-Zone Mouse Sensor, Square (Qty. 5)
- 4-Zone Mouse Sensor, Square with conductive adhesive (Qty. 5)
- 4-Zone Mouse Sensor, Square with tail and solder tabs (Qty. 5)
- USB Flash drive with product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