

4-Zone Mouse Sensor Data Sheet

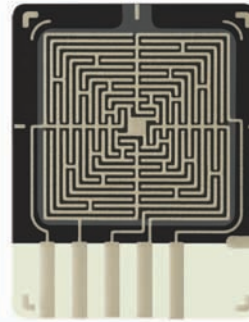
4-Zone FSR® and USB Microcontroller

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

Embrace the Power of Sensor Technologies

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

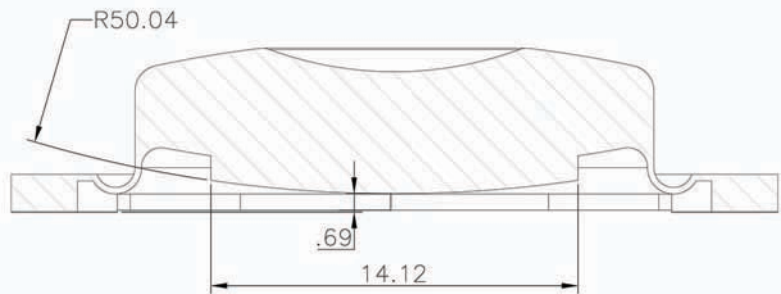
Recommended Adhesives

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

Application Information

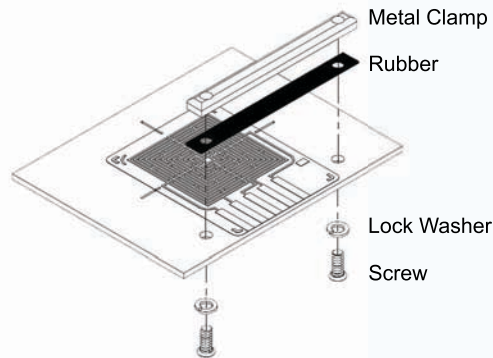
Actuator

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

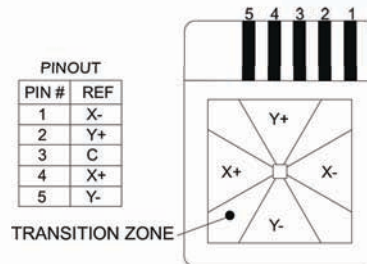


Mounting Recommendations

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:

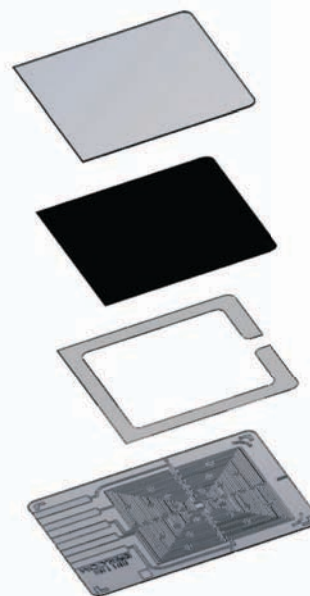
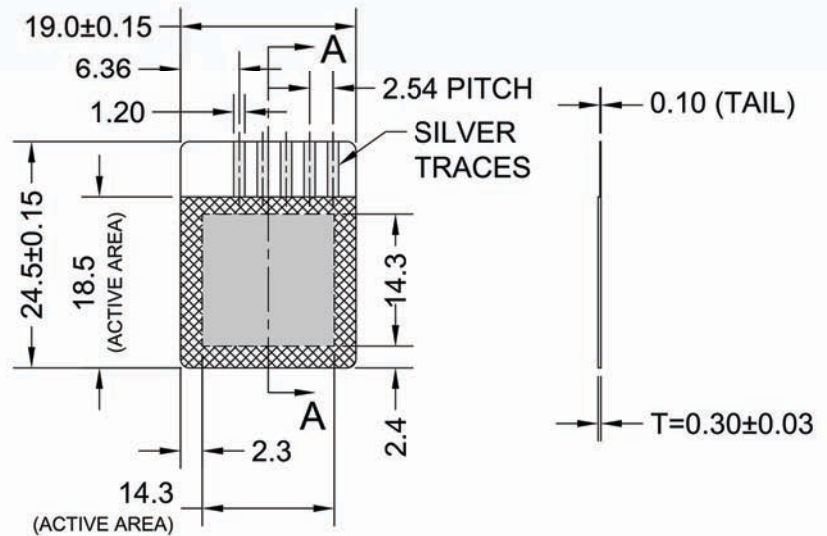
- MicroModule Demo with USB Cable (Qty. 1)
- Programmed Microchip PIC18F14K50 Microcontroller (Qty. 5)
- 4-Zone Mouse Sensor, Square (Qty. 5)
- 4-Zone Mouse Sensor, Square with conductive adhesive (Qty. 5)
- 4-Zone Mouse Sensor, Square with tail and solder tabs (Qty. 5)
- USB Flash drive with product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