

Flexible Film Pressure Sensor

SPF03-120 Product Datasheet



1. Product Introduction

The SPF03-120 is a flexible thin film force sensor with a length of 120 CM. When the external pressure is detected by the sensor, the resistance of the sensing material will change according to the pressure, and it will be converted into an electrical signal output through a simple test circuit. This product is suitable for use in larger smart health monitoring products, such as smart mattresses, pads etc., for off bed detection.

This flexible film pressure sensor has high sensitivity, fast response speed, and flexible design, and can easily adapt to the inner surfaces of complex flat or curved structures.

2. Sensor Characteristics

Designed and developed specifically for touch pressure sensing solutions; high sensitivity, respond to pressure below 50 gf (guaranteed 50 gf); flexible and resistant to gentle bending, fast response time, long life time, good durability, low power consumption, high impedance in standby mode; customizable sensor shape; customizable sensor range and response point.

3. Product Description

3.1 Technical parameters

Table 1

Range	5000 gf
Thickness	0.30-0.35 mm
Response Point	10-50 gf
Repeatability	±15% (50% load)
Consistency	±15% (same batch number)
Durability	>1 million times
Initial resistance	<1 KΩ (no load)
Response time	<5 ms
Test voltage	Typical value 3.3 V
Operating temperature	<60°C
Electromagnetic Interference	Not generate
Electrostatic discharge	Not generate

3.2 Product dimension (unit: mm)

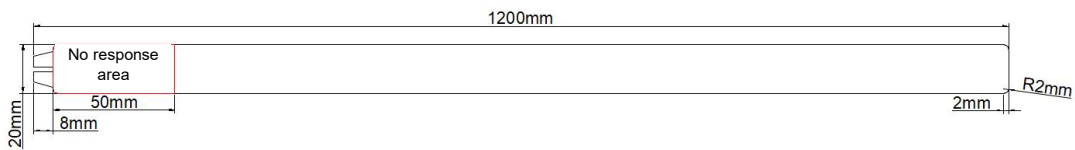


Figure 1: Sensor dimensions

3.3 Force Sensitivity

Table 2

Pressure (gf)	Conductivity
< 50	No conduction
> Range threshold	Continuity

Note: The threshold of the pressure sensor is related to many factors, such as contact area, test instrument, etc.

4. Precautions:

1. Using the sensor beyond the range will reduce the sensor performance or even damage the sensor.
2. When using the sensor, try to make the load even and avoid sharp objects directly contacting the sensor surface;

3. Force sensitive characteristics are for reference only.

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