

# **Flexible film pressure sensor**

**PN:RKF03**



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<http://rainbowsensor.cn>

## **1. Product introduction**

Pressure-sensitive touch is a new type of touch control that is different from traditional touch control. It can accurately detect the amount of pressure applied while providing precise positioning of the touch pressure point, which can provide a multi-dimensional information portal for human-computer interaction; Compared with capacitive touch control, it can effectively solve the problems of false touch and ineffective touch with wet hands.

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

## **2. Features**

Designed and developed specifically for touch pressure sensing solutions; high sensitivity, can respond to pressures below 10 gf; flexible and resistant to bending; based on flexible nanomaterials, response time is less than 5 ms; long life, can withstand repeated presses more than 1 million times; Low power consumption, close to open circuit state when standby; customizable sensor shape; customizable sensor range and lowest response point.

## **3. Application**

Pressure perception, human-computer interaction, intelligent robots, electronic medical equipment, wearable devices, physiological health testing

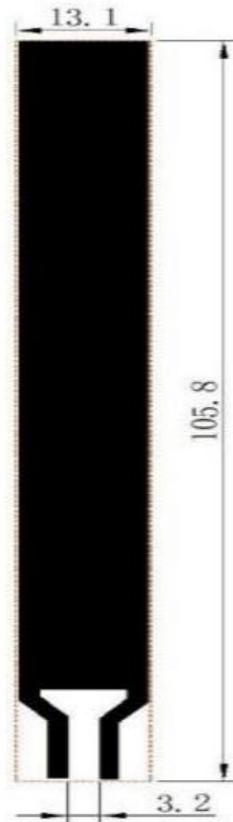
## 4. Product description

### 4.1 Technical index

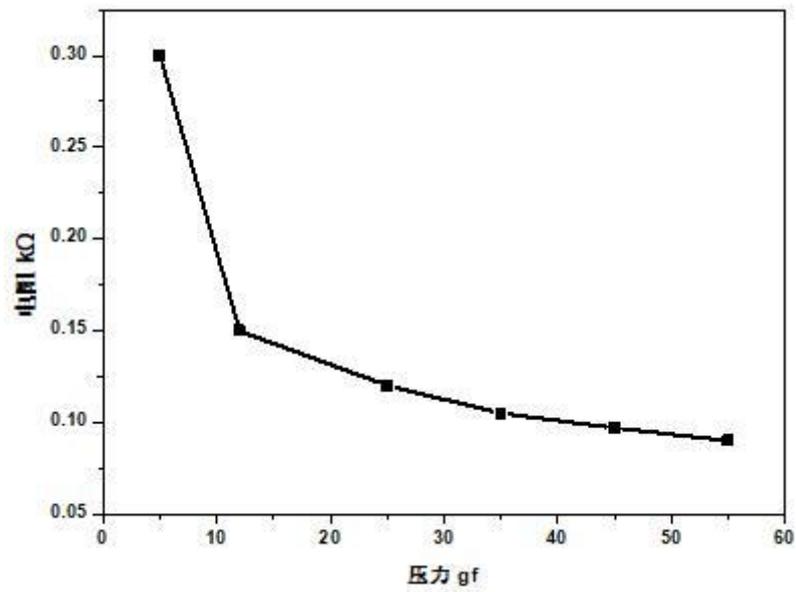
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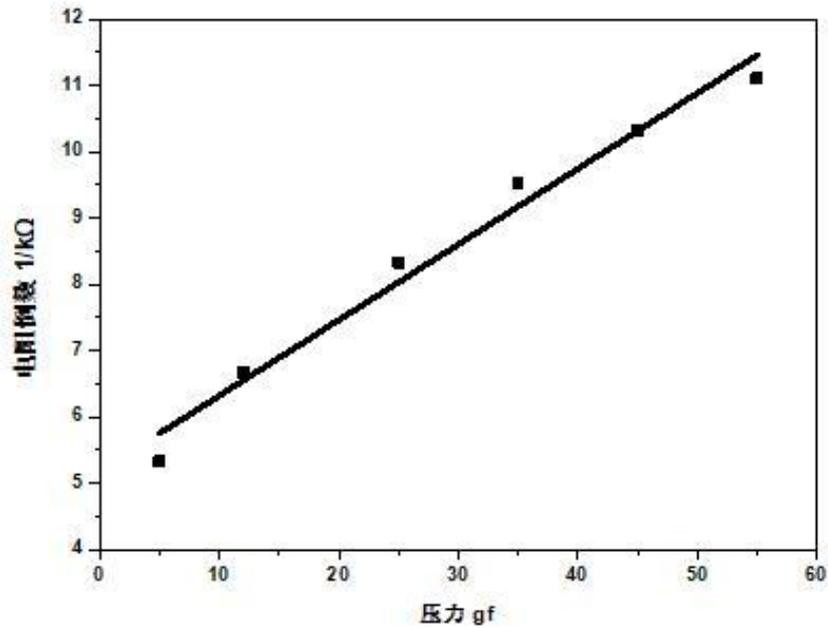
Range	5-60 gf
thickness	0.4 mm
dimension	See size chart
Response point	<5 gf
Repeatability	+15% (50% load)
consistency	+15% (same batch number)
Linearity	R <sup>2</sup> >0.98
Durability	>1 million times
Initial resistance	>1 K $\Omega$ (no load)
Response time	<5 ms
Test voltage	Typical value 3.3 V
Operating temperature	<60°C
Electromagnetic interference	No
Electrostatic discharge	Not sensitive

## 4.2 Product size



## 4.3 Force sensitive characteristics





Note: The output resistance of the pressure sensor is related to many factors, such as contact area, test equipment, etc. The chart data provided above is for reference only. It is recommended that users perform calibration according to actual application scenarios to obtain more accurate measurement results.

## Precaution

1. Over-range use of the sensor will reduce the performance of the sensor or even damage the sensor;
2. When in use, the load is applied to the sensor as evenly as possible to avoid direct contact with the surface of the sensor by sharp objects;
3. The force-sensitive characteristic curve is for reference only.