Force sensor

Force Sensor

Features

☑ **Small Footprint and Low Profile**
  User design flexibility by small package.

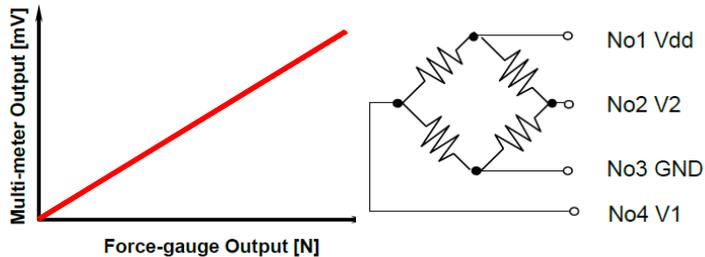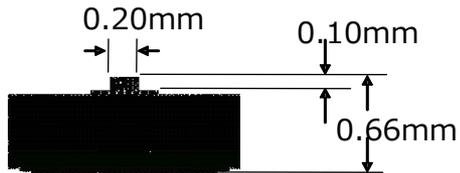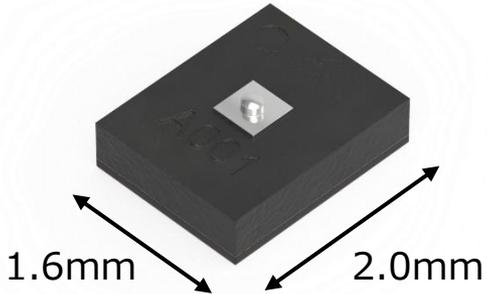☑ **High Sensitivity and High Linearity**
  Precisely detect micro force less than 0.01 N.

☑ **High Durability**
  No characteristics change after 1 million cycles.

Force Sensor SMD type

Standard Product

HSFPAR003A

1.6mm   2.0mm

0.20mm   0.10mm   0.66mm

Multi-meter Output [mV]

Force-gauge Output [N]

No1 Vdd
No2 V2
No3 GND
No4 V1

Features
- Small foot print
- High sensitivity, good linearity
- High reliability

Specifications

Bridge Resistance	[kOhm]	5.5
Measurement Range	[N]	8
Supply Voltage	[V]	1.5~3.6
Sensitivity	[mV/V/N]	3.7
Linearity	[%FS]	< 2
Offset	[mV/V]	-4
Operating Life Time	[Cycles]	Min 1 million(@8N)
Destroyed force	[N]	40

Applications
Stylus pen.
Pressure detection Switch.

Force sensor SMD

Standard Product

HSFPAR004A

2.0mm

1.6mm

0.40mm

0.66mm

Multi-meter Output [mV]

Force-gauge Output [N]

No1 Vdd
No2 V2
No3 GND
No4 V1

Features
• Small footprint
• High sensitivity, good linearity,
• High reliability
• Zero stroke
• No affect of outer magnetic and electric field

Specifications

Bridge Resistance	[kOhm]	5.5
Measurement Range	[N]	8
Supply Voltage	[V]	1.5~3.6
Sensitivity	[mV/V/N]	2.3
Linearity	[%FS]	< 2
Offset	[mV/V]	-2.6
Operating Lifetime	[Cycles]	Min 1 million(@8N)
Destroyed force	[N]	55

Applications
・Stylus pen.
・Pressure detection Switch.

Force sensor SMD

HSFPAR007A

1.5mm
0.85mm

φ0.40mm
0.10mm
0.68mm

Multi-meter Output [mV]

No1 V1
No2 Vdd
No3 V2
No4 GND

Force-gauge Output [N]
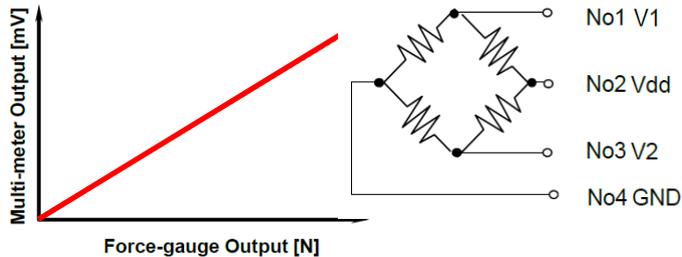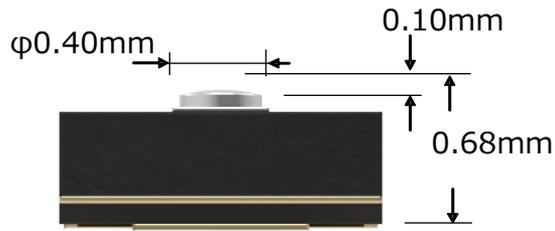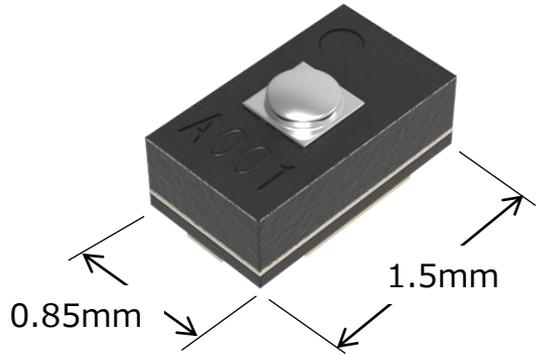
Features
• Small footprint
• High sensitivity, good linearity,
• High reliability
• Zero stroke
•No affect of outer magnetic and electric field

Specifications

Bridge Resistance	[kOhm]	5.5
Measurement Range	[N]	8
Supply Voltage	[V]	1.5~3.6
Sensitivity	[mV/V/N]	2.5
Linearity	[%FS]	< 2
Offset	[mV/V]	-2.6
Operating Lifetime	[Cycles]	Min 1 million(@8N)
Destroyed force	[N]	55

Applications
・Stylus pen.
・Pressure detection Switch.

Force sensor with FPC

Standard Product

HSFPAR303A

2.6mm

11.6mm

4.0mm

0.30 ±0.06

2.057

0.20 ±0.03

Road

Protect
over load

*Please push by the flat one
that is wider than the case.

Force

Rubber spring

Force sensor Counterforce Case

Force

Insert Force sensor
（ **HSFPAR003A** ）
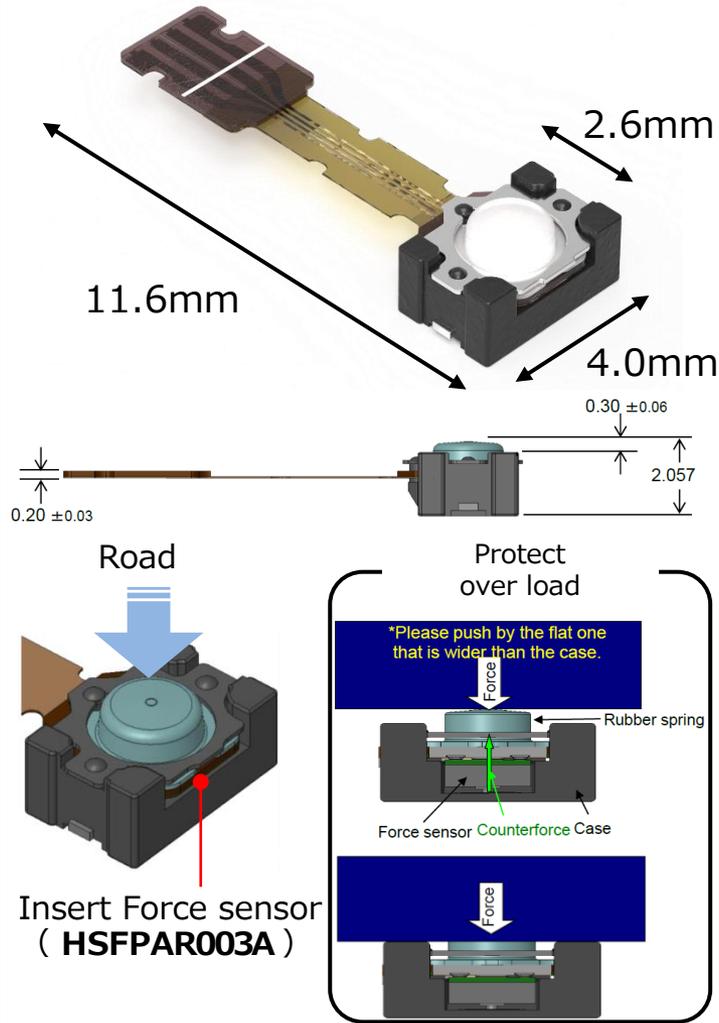
Features
- •Small outline module
- •High sensitivity & good linearity
- •Over load stopper

Specifications

Item	Unit	Specifications
Measurement range	[N]	7
VDD	[V]	1.5 ～ 3.6
Sensitivity	[mV/V/N]	3.7
Linearity	[%FS]	<3
Dynamic impact resistance	[N]	200（0.8msec）

Applications
・Stylus pen
・Small robot
　　road detect　etc.