

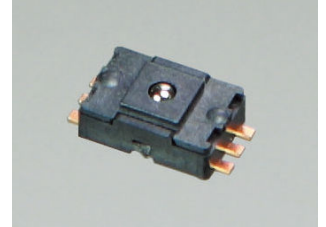


## Model No. HFD-500S

Utilizing long home-nurtured silicon micro-machining technology as core technology, we made it possible to precisely detect micro force less than 1N, which otherwise can not be achieved with conventional method.

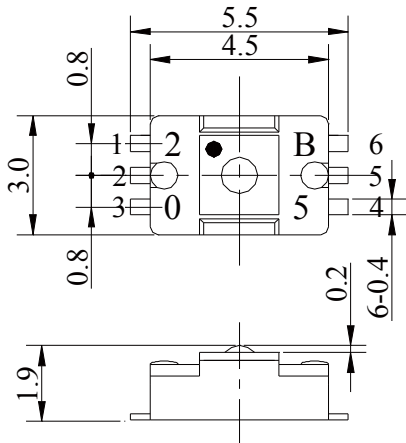
### ■ Features

- Small size Low profile
- Outline dimension 5.5 × 3.0 × 1.9mm
- Capable of Micro-Force Detection with High Sensitivity, High Precision
- High durability, Life cycle 1 million cycles or more



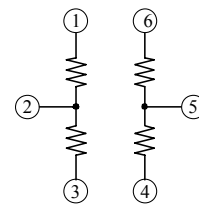
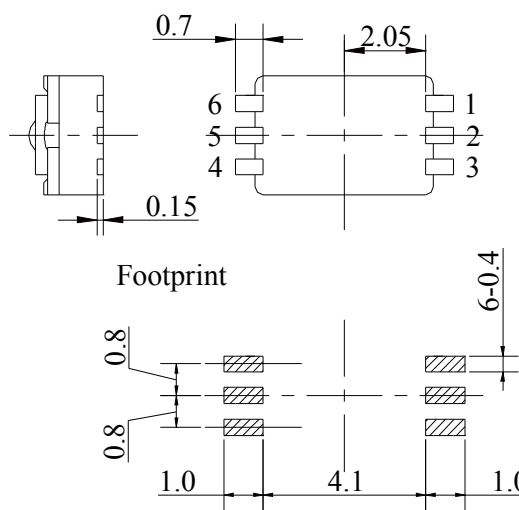
Model No. HFD-500S

### ■ Outline Dimension



Unit : mm

Typical tolerance : ±0.1



#### Terminal

①	Vcc
②	+OUTPUT
③	GND
④	GND
⑤	-OUTPUT
⑥	Vcc

### ■ Specification

#### 1. Maximum Absolute Rating

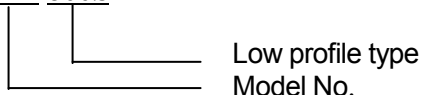
Item	Rating	Unit	Remark
Applicable force	10	N	
Supply Voltage	5.5	Vdc	
Storage Temperature Range	-40 ~ +85	°C	
Operating Temperature Range	-20 ~ +60	°C	

#### 2. Rating (Vcc=2.8Vdc, Ta=25°C)

Item	Rating			Unit	Remark
	Min.	Typ.	Max.		
Operating Force Range	0	-	10	N	
Supply Voltage	-	2.8	-	Vdc	
Bridge Resistance	18	25	32	kΩ	
Offset Voltage	-10	-	10	mV	
Full Scale Span	120	130	140	mV	
Sensitivity	-	13	-	mV/N	
Linearity	-3	-	3	%FS	FS=Full Scale Span
Offset Temp. Characteristics	-5	-	5	mV	ΔI from +25°C
Sensitivity Temp. Characteristics	-0.1	-	0	mV/N/°C	-20 ~ +60°C

### ■ Model Designation

HFD-500S



Model No. HFD-20N-A01

Utilizing long home-nurtured silicon micro-machining technology as core technology, we made it miniaturized and possible to precisely detect micro force.

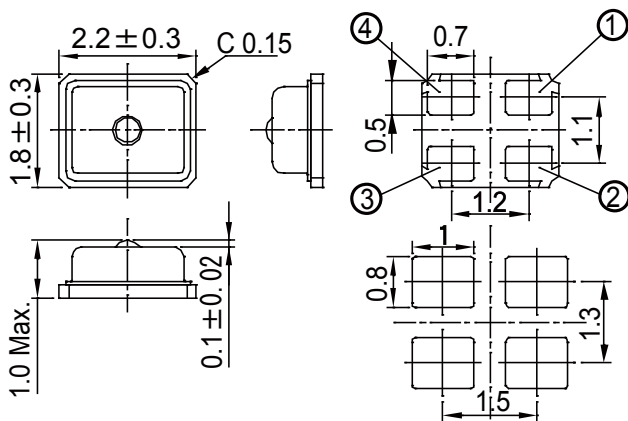
### ■ Features

- Small size, Low profile package size 2.8 × 1.8 × t1.0mm Max.
- Capable of Micro-Force Detection with High Sensitivity, High Precision
- High durability, Repetitive Force more than 1 million cycles



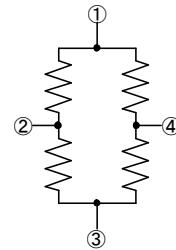
Model No. HFD-20N-A01

### ■ Outline Dimension



Unit : mm

Typical tolerance : ±0.1



Internal Circuit

	Terminal
①	Vcc
②	+OUTPUT
③	GND
④	-OUTPUT

### ■ Specification

#### 1. Maximum Absolute Rating

Item	Rating	Unit	Remark
Supply Voltage	5.5	Vdc	
Storage Temperature Range	-40 ~ +85	°C	
Operating Temperature Range	-20 ~ +60	°C	
Destructive Force	-20 ~ +60	°C	Static force durability
Reflow Temperature	250	°C	60sec or less at 230°C or more, 2 times Max.
	10	sec	

#### 2. Rating (Vcc=2.8Vdc, Ta=25°C)

Item	Rating			Unit	Remark
	Min.	Typ.	Max.		
Operating Force Range	0	-	20	N	
Supply Voltage	-	3	-	Vdc	
Bridge Resistance	3.5	5	6.5	kΩ	
Offset Voltage	-10	-	10	mV	When 0[N] was applied
Full Scale Span	280	300	320	mV	When 20[N] was applied
Sensitivity	-	13	-	mV/N	
Linearity	-3	-	3	%FS	FS=Full Scale Span
Offset Temp. Characteristics	-5	-	5	mV	Δ from +25°C
Sensitivity Temp. Characteristics	-0.1	-	0	mV/N/°C	-20 ~ +60°C