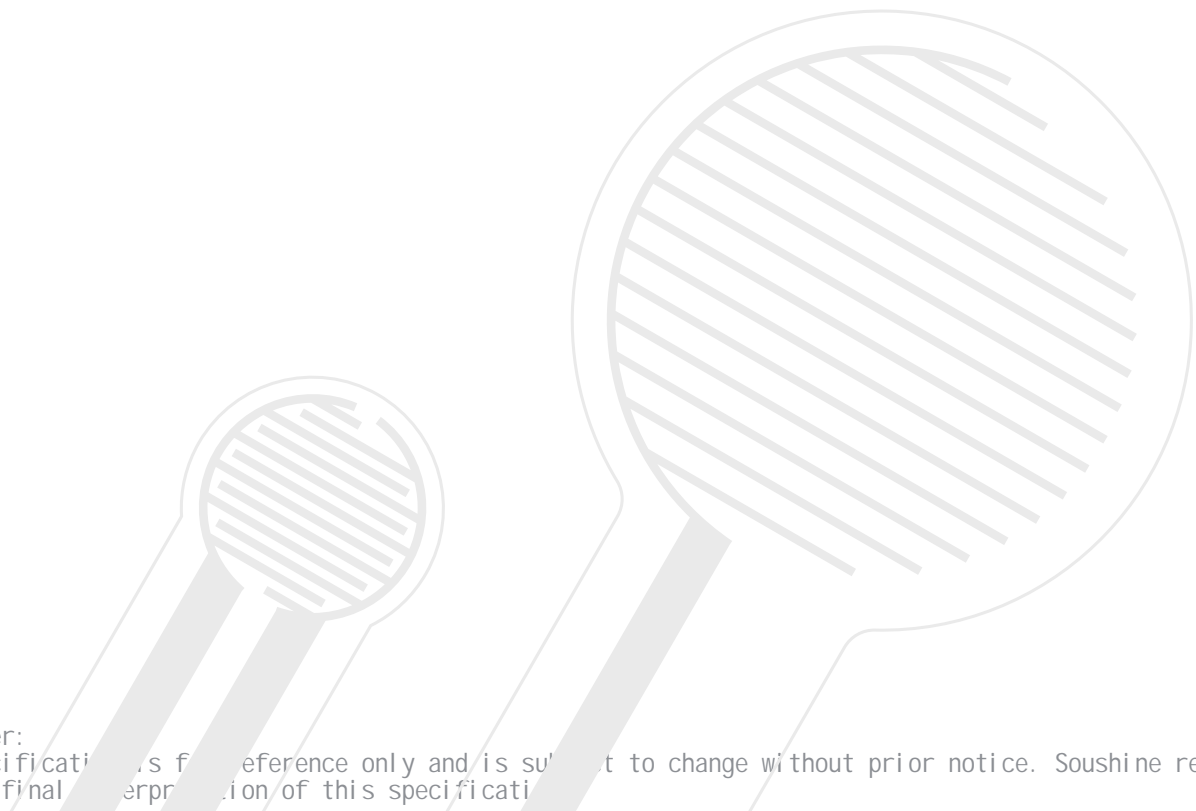


Standard pressure sensor

FSR-400 Series



Disclaimer:
This specification is for reference only and is subject to change without prior notice. Soushine reserves the right of final interpretation of this specification.

Catalogue

Single point pressure sensor

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Pressure potentiometer

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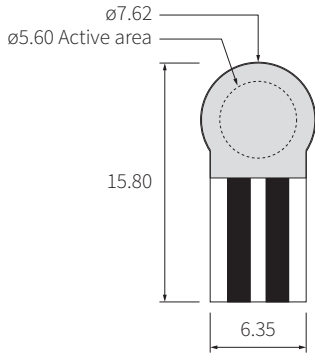
Planar single point induction potentiometer

FSR-800	Page 15
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FSR-400

Data sheet



Active area	ø5.60mm	Active printing area	0.25mm
Thickness	0.325 / 0.250mm	Active printing pitch	0.50mm
Model	Shunt	Spacer height	0.125 / 0.050mm
Width	7.62mm	Tail length	9.00mm
Length	15.80mm	Tail width	6.35mm

Connection

FSR-400A



FSR-400B

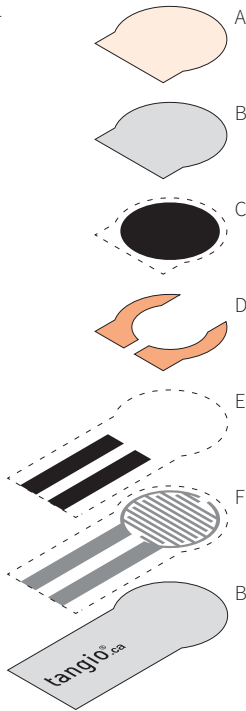


FSR-400C



Stacked view

- A Adhesive
- B PET
- C FSR
- D Spacer
- E Carbon paste
- F Conductive silver ink



Parameter of Apparatus

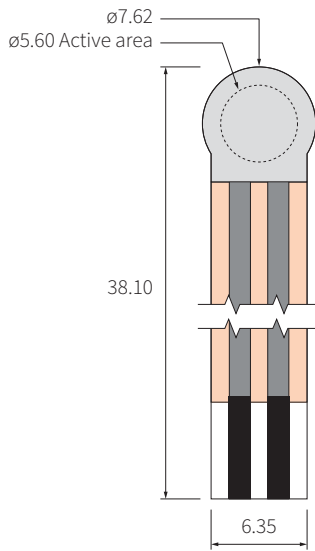
Test Characteristics Description Feedback

Minimum press force	10M ohms	< 30g / < 10g
Pressure range	Linear LOG region	< 5kg
Pressure response drift	1KG in 48 hours	< 2%
Repeat on one point	Press 100 times with 1 kg	2%
Repeat on one area	100 sensors in the same batch	+/- 4%
Storage temperature	-20° , 250 Hours	8%
High-temperature storage	85° , 250 hours	4%
High humidity storage	85° & 85% humidity, 250 hours	8%
High humidity storage	1KG pressure with 3HZ	7%
Hysteresis quality	Press 100 times with 1 kg	5%
Hysteresis quality	100 cycles at 0.5 kg	-20 to +85°C

Device characteristics and mechanical data stated in orange text refer to TPE-500s. All values typical, and quoted at 10N applied force unless otherwise stated. Force dependent on actuation interface, mechanics, and measurement electronics.

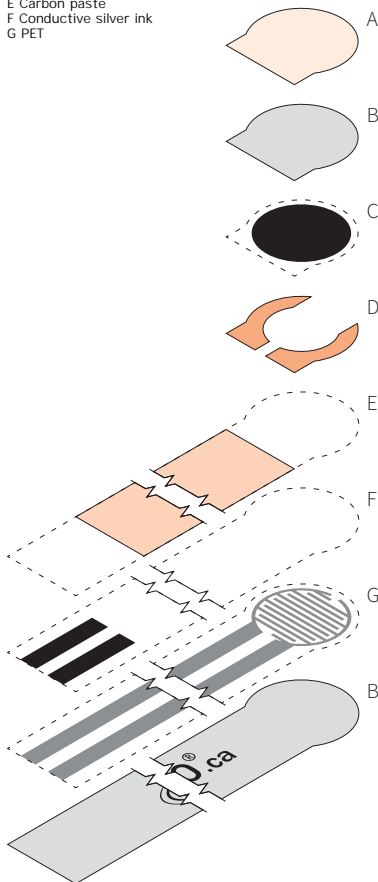
Force Sensing Resistor

FSR-401



Stacked view

- A Adhesive
- B PET
- C FSR
- D Spacer
- E Carbon paste
- F Conductive silver ink
- G PET



Data sheet

Active area	ø5.60mm	Active printing width	0.25mm
Thickness	0.325 / 0.250mm	Active printing pitch	0.50mm
Model	Shunt	Spacer Height	0.125 / 0.050mm
Width	7.62mm	Tail length	30.00mm
Length	38.10mm	Tail width	6.35mm

Connection

FSR-401A



FSR-401B



FSR-401C



Parameter of Apparatus

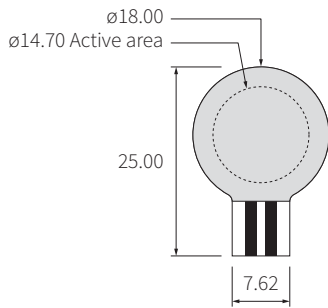
Test Characteristics	Description	Feedback
Minimum press force	10M ohms	< 30g / < 10g
Pressure range	Linear LOG region	< 5kg
Pressure response drift	1KG in 48 hours	< 2%
Repeat on one point	Press 100 times with 1 kg	2%
Repeat on one area	100 sensors in the same batch	+/- 4%
Storage temperature	-20° , 250 Hours	8%
Storage temperature	85° , 250 Hours	4%
High humidity storage	85° & 85% humidity, 250 hours	8%
Press frequency persistence	1KG pressure with 3HZ	7%
Hysteresis quality	Press 100 times with 1 kg	5%
Hysteresis quality	100 cycles at 0.5 kg	-20 to +85°C

Device characteristics and mechanical data stated in orange text refer to TPE-501s.

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependent on actuation interface, mechanics, and measurement electronics.

FSR-402

Data sheet



Active area	14.70mm	Active printing width	0.25mm
Thickness	0.375mm	Active printing pitch	0.50mm
Model	Shunt	Spacer Height	0.125mm
Width	18.00mm	Tail length	9.00mm
Length	25.00mm	Tail Width	7.62mm

Connection

FSR-402A



FSR-402B

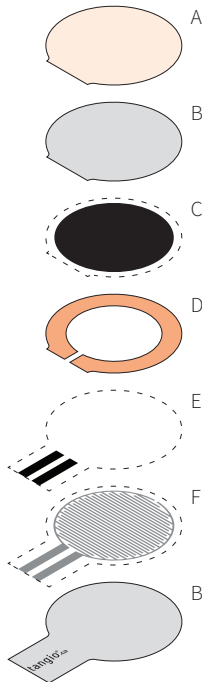


FSR-402C



Stacked view

- A Adhesive
- B PET
- C FSR
- D Spacer
- E Carbon paste
- F Conductive silver ink



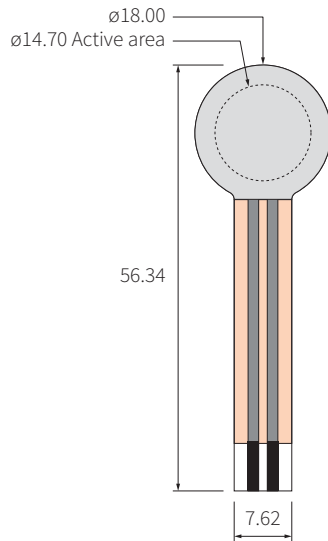
Parameter of Apparatus

Test Characteristics	Description	Feedback
Minimum press force	10M ohms	< 15g
Pressure range	Linear LOG region	Up to 5kg
Pressure response drift	1KG in 48 hours	< 1%
Repeat on one point	Press 100 times with 1 kg	2%
Repeat on one area	100 sensors in the same batch	+/- 4%
Storage temperature	-20° , 250 Hours	7%
High-temperature storage	85° , 250 hours	3%
High humidity storage	85° & 85% humidity, 250 hours	12%
Press frequency persistence	1KG pressure with 3HZ	3%
Hysteresis quality	Press 100 times with 1kg	5%
Operating temperature	100 cycles at 0.5 kg	-20 to +85°C

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependent on actuation interface, mechanics, and measurement electronics.

Force Sensing Resistor

FSR-403



Data sheet

Active area	14.70mm	Active printing width	0.25mm
Thickness	0.375mm	Active printing pitch	0.50mm
Model	Shunt	Spacer Height	0.125mm
Width	18.00mm	Tail length	38.00mm
Length	56.34mm	Tail width	7.62mm

Connection

FSR-403A



FSR-503B

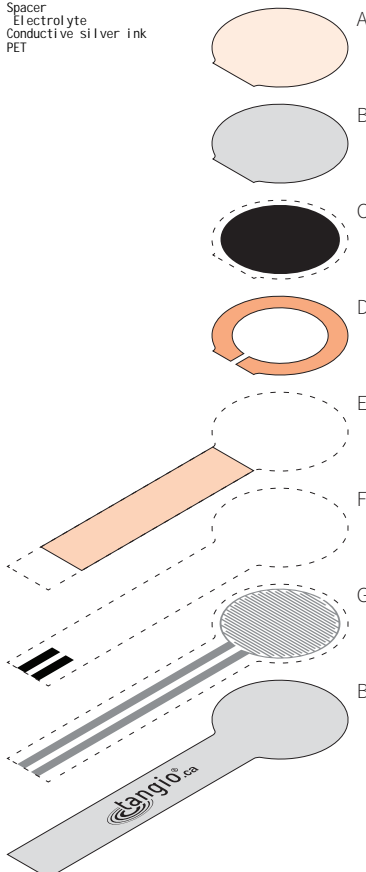


FSR-403C



Stacked view

- A Adhesive
- B PET
- C FSR
- D Spacer
- E Electrolyte
- F Conductive silver ink
- G PET

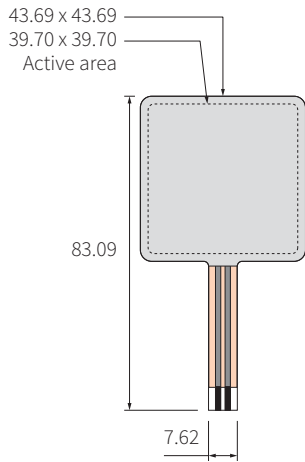


Parameter of Apparatus

Test Characteristics	Description	Feedback
Minimum press force	10Mohms	< 15g
Pressure range	Linear LOG region	Up to 5kg
Pressure response drift	1KG in 48 hours	< 1%
Repeat on one point	Press 100 times with 1 kg	2%
Repeat on one area	100 sensors in the same batch	+/- 4%
Storage temperature	-20° , 250 Hours	7%
High-temperature storage	-20° , 250 Hours	3%
High humidity storage	85° & 85% humidity, 250 hours	12%
Press frequency persistence	1KG pressure with 3HZ	3%
Hysteresis quality	Press 100 times with 1 kg	5%
Operating temperature	100 cycles at 0.5 kg	-20 to +85°C

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependent on actuation interface, mechanics, and measurement electronics.

FSR-406



Data sheet

Active area	39.70 x 39.70mm	Active printing width	0.25mm
Thickness	0.375mm	Active printing pitch	0.50mm
Model	Shunt	Spacer Height	0.125mm
Width	43.69mm	Tail length	39.40mm
Length	83.09mm	Tail width	7.62mm

Connection

FSR-406A



FSR-406B

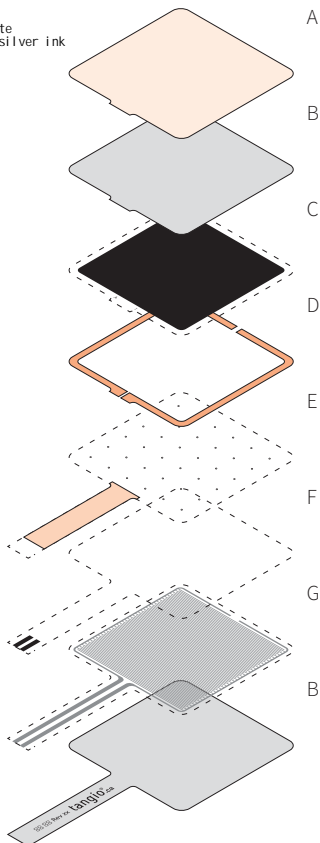


FSR-406C



Stacked view

- A Adhesive
- B PET
- C FSR
- D Spacer
- E Carbon paste
- F Conductive silver ink
- G PET



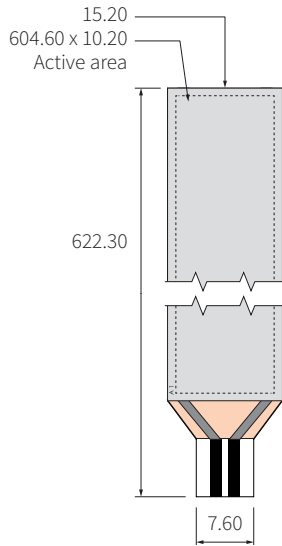
Parameter of Apparatus

Test Characteristics	Description	Feedback
Minimum press force	10M ohms	< 20g
Pressure range	Linear LOG region	Up to 5kg
Pressure response drift	1KG in 48 hours	< 2%
Repeat on one point	Press 100 times with 1 kg	2%
Repeat on one area	100 sensors in the same batch	+/- 4%
Storage temperature	-20° , 250 Hours	8%
High-temperature storage	85° , 250 hours	4%
High humidity storage	85° & 85% humidity, 250 hours	8%
Press frequency persistence	1KG pressure with 3HZ	7%
Hysteresis quality	Press 100 times with 1 kg	5%
100 cycles at 0.5 kg	100 cycles at 0.5 kg	-20 to +85°C

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependant on actuation interface, mechanics, touch location, and measurement electronics.

Force Sensing Resistor

FSR-408



Data sheet

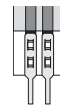
Active area	604.60 x 10.20mm	Active printing width	0.25mm
Thickness	0.375mm	Active printing pitch	0.50mm
Model	Shunt	Spacer Height	0.125mm
Width	15.20mm	Tail length	12.70mm
Length	622.30mm	Tail width	7.60mm

Connection

FSR-408A



FSR-408B

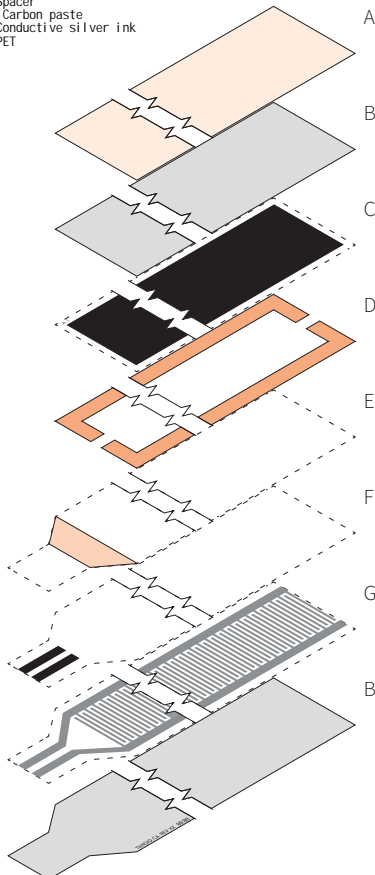


FSR-408C



Stacked view

- A Adhesive
- B PET
- C FSR
- D Spacer
- E Carbon paste
- F Conductive silver ink
- G PET



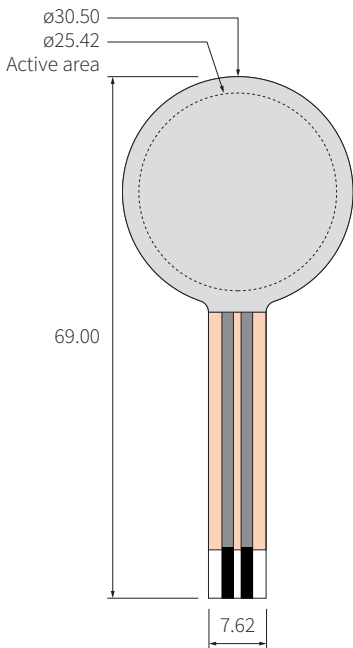
Parameter of Apparatus

Test Characteristics	Description	Feedback
Minimum press force	10M ohms	< 20g
Pressure range	Linear LOG region	Up to 5kg
Pressure response drift	1KG in 48 hours	< 1%
Repeat on one point	Press 100 times with 1 kg	2%
Repeat on one area	100 sensors in the same batch	+/- 4%
Storage temperature	-20° , 250 Hours	7%
High-temperature storage	85° , 250 hours	3%
High humidity storage	85° & 85% humidity, 250 hours	12%
Press frequency persistence	1KG pressure with 3HZ	12%
Hysteresis quality	Press 100 times with 1 kg	5%
Operating temperature	100 cycles at 0.5 kg	-20 to +85°C

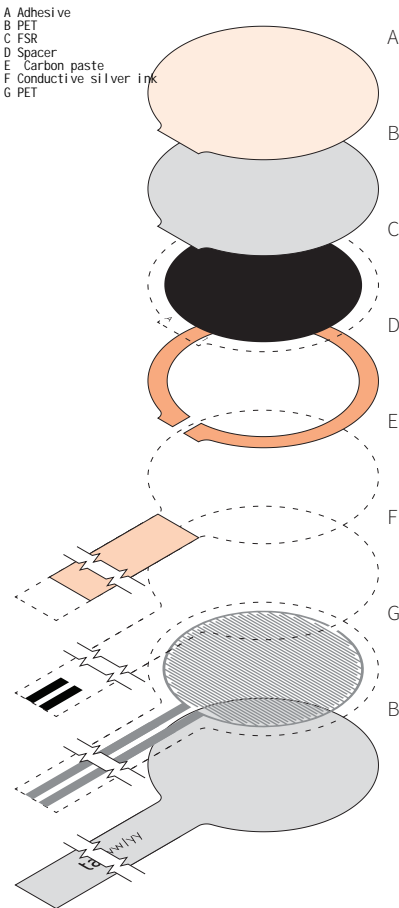
Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependent on actuation interface, mechanics, and measurement electronics.

Force Sensing Resistor

FSR-410



Stacked view



Data sheet

Active area	ø25.42mm	Active printing width	0.25mm
Thickness	0.425mm	Active printing pitch	0.50mm
Model	Shunt	Spacer Height	0.125mm
Width	30.50mm	Tail length	38.00mm
Length	69.00mm	Tail width	7.62mm

Connection

FSR-410A



FSR-410B



FSR-410C

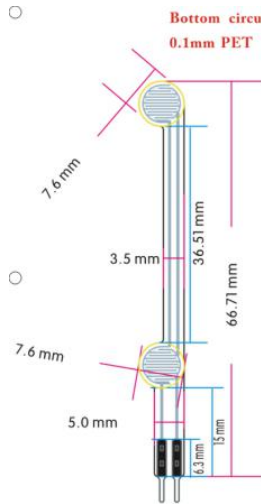


Parameter of Apparatus

Test Characteristics	Description	Feedback
Minimum press force	10M ohms	< 10g
Pressure range	Linear LOG region	Up to 5kg
Pressure response drift	1KG in 48 hours	< 1%
Repeat on one point	Press 100 times with 1 kg	2%
Repeat on one area	100 sensors in the same batch	+/- 4%
Storage temperature	-20° , 250 Hours	7%
High-temperature storage	85° , 250 Hours	3%
High humidity storage	85° & 85% humidity, 250 hours	8%
Press frequency persistence	1KG pressure with 3HZ	3%
Hysteresis quality	Press 100 times with 1 kg	5%
Operating temperature	Press 100 times with 1 kg	-20 to +85°C

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependent on actuation interface, mechanics, and measurement electronics.

Force Sensing Resistor CFS-3651-000



Data sheet

Active area	ø5.60mm	Active printing width	0.25mm
Thickness	0.375mm	Active printing pitch	0.50mm
Model	Shunt	Spacer Height	0.125mm
Width	7.62mm	Tail length	15.00mm
Length	66.71mm	Tail width	5.00mm

Connection

NH-CFSA



NH-CFSB



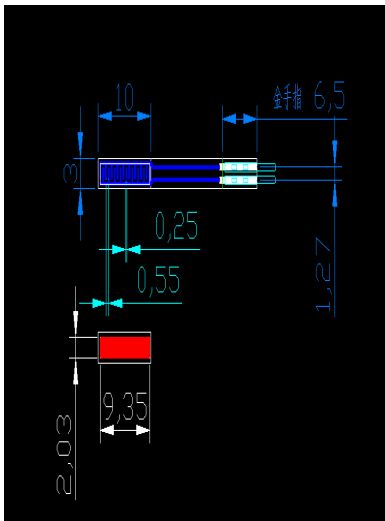
NH-CFSC



Parameter of Apparatus

Characteristics	Description	Feedback
Minimum press force	10M ohms	< 20g On average, 100 samples were taken at a time
Pressure range	Linear LOG region	< 5kg Pressure values exceeding the upper limit require custom sensors and drive methods
Pressure response drift	1KG in 48 hours	< 3% Record time each time
Repeat on one point	Press 100 times with 1 kg	5% 1 standard deviation/mean
Repeat on one area	100 sensors in the same batch	+/- 10% 1 standard deviation/mean
Storage temperature	-20 ° 250 Hours	7% Average resistance changes per 5 sensors
High-temperature storage	85 ° 250 Hours	6% Average resistance changes per 5 sensors
High humidity storage	85° &85% humidity, 250 hours	12% Average resistance changes per 5 sensors
Press frequency persistence	1KG pressure with 3HZ	12% Average resistance changes per 4 sensors
Hysteresis quality	Press 100 times with 1 kg	5% Average resistance change per 100 samples
Operating temperature	100 cycles at 0.5 kg	-20 to +85°C

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependent on actuation interface, mechanics, and measurement electronics.



Data sheet

Active area	10.00mmx3.00mm	Active printing width	0.25mm
Thickness	0.325 / 0.250mm	Active printing pitch	0.55mm
Model	Shunt	Spacer Height	0.125 / 0.050mm
Width	3.00mm	Tail length	20.00mm
Length	30.50mm	Tail width	3.00mm

Connection

NH-103A-50



NH-103B-50



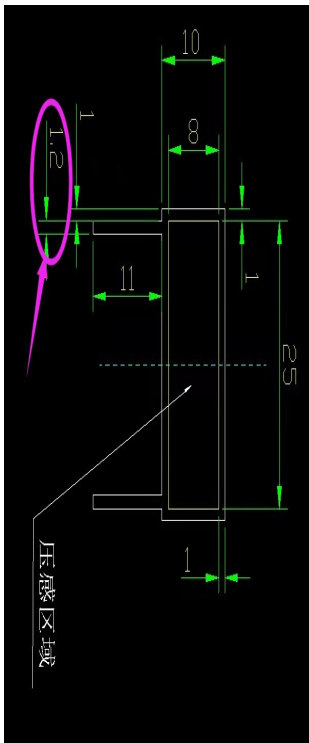
NH-103C-50



Parameter of Apparatus

Characteristics	Description	Feedback
Minimum press force	10M ohms	<30g / <10g
Pressure range	Linear LOG region	< 5kg
Pressure response drift	1KG in 48 hours	< 20%
Repeat on one point	Press 100 times with 1 kg	20%
Repeat on one area	100 sensors in the same batch	+/- 20%
Storage temperature	-20° , 250 Hours	20%
High-temperature storage	85° , 250 hours	20%
High humidity storage	85° & 85% humidity, 250 hours	20%
Press frequency persistence	1KG pressure with 3HZ	20%
Hysteresis quality	Press 100 times with 1 kg	20%
Operating temperature	100 cycles at 0.5 kg	-20 to +85°C

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependent on actuation interface, mechanics, and measurement electronics.



Data sheet

Active area	8.00 x 25.00mm	Active printing width	0.25mm
Thickness	0.375mm	Active printing pitch	0.50mm
Model	Shunt	Spacer Height	0.125mm
Width	21.00mm	Tail length	11.00mm
Length	27.00mm	Tail width	1.20mm

Connecti on

NH-2710A-50



NH-2710B-50



NH-2710C-50

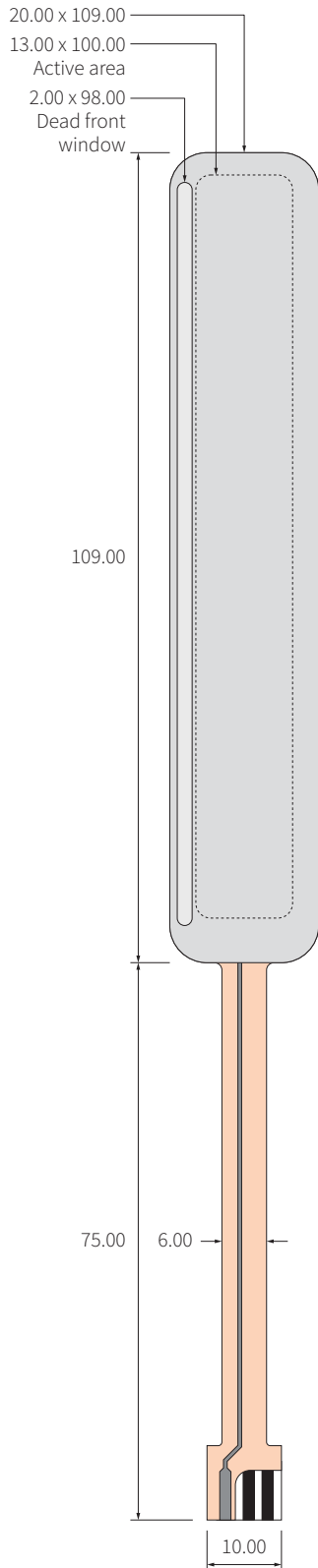


Parameter of Apparatus

Characteristics	Description	Feedback
Minimum press force	10M ohms	< 20g
Pressure range	Linear LOG region	Up to 5kg
Pressure response drift	1KG in 48 hours	< 1%
Repeat on one point	Press 100 times with 1 kg	2%
Repeat on one area	100 sensors in the same batch	+/- 4%
Storage temperature	-20° , 250 Hours	7%
High-temperature storage	85° , 250 hours	3%
High humidity storage	85° & 85% humidity, 250 hours	12%
Press frequency persistence	1KG pressure with 3HZ	12%
Hysteresis quality	Hysteresis quality	5%
Operating temperature	100 cycles at 0.5 kg	-20° to +85°

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependent on actuation interface, mechanics, and measurement electronics.

FSR-420

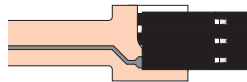


Data sheet

Active area	13.00 x 100.00mm	Active printing width	0.25mm
Thickness	0.375mm	Active printing pitch	0.50mm
Model	Thru	Spacer height	0.125mm
Width	20.00mm	Tail length	75.00mm
Length	184.00mm	Tail width	10.00mm

Connection

FSR-420C

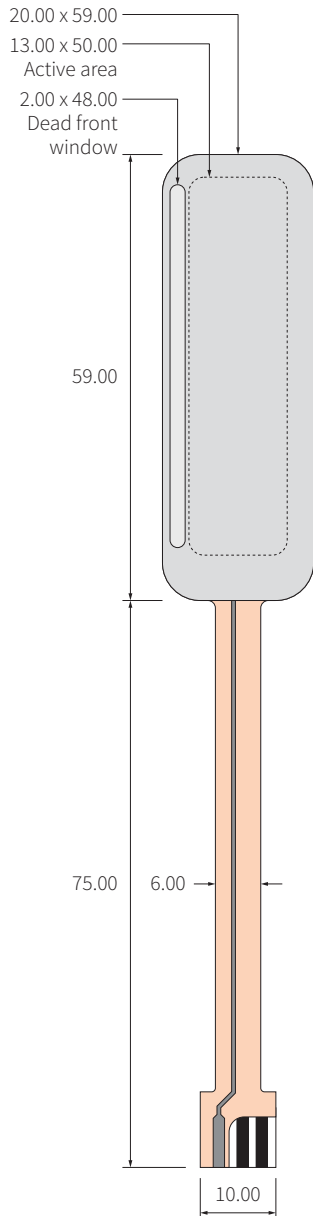


Parameter of Apparatus

Characteristics	Description	Feedback
Minimum press force	10M ohms	< 20g
Pressure range	Linear LOG region	Up to 1kg
Pressure response drift	1KG in 48 hours	< 2%
Repeat on one point	Press 100 times with 1 kg	5%
Repeat on one area	100 sensors in the same batch	+/- 10%
Storage temperature	-20° , 250 Hours	2%
High-temperature storage	85° , 250 hours	9%
High humidity storage	85° & 85% humidity, 250 hours	10%
Press frequency persistence	1KG pressure with 3HZ	4%
Hysteresis quality	Press 100 times with 1 kg	5%
Operating temperature	100 cycles at 0.5 kg	-20 to +60°C
Linear resistance	Pin 1 and pin 2	1.25k +/- 15%

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependant on actuation interface, mechanics, touch location, and measurement electronics.

FSR-421

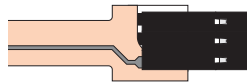


Data sheet

Active area	13.00 x 50.00mm	Active printing pitch	0.25mm
Thickness	0.375mm	Active printing pitch	0.50mm
Model	Thru	Spacer height	0.125mm
Width	20.00mm	Tail length	75.00mm
Length	134.00mm	Tail width	10.00mm

Connection

FSR-421C

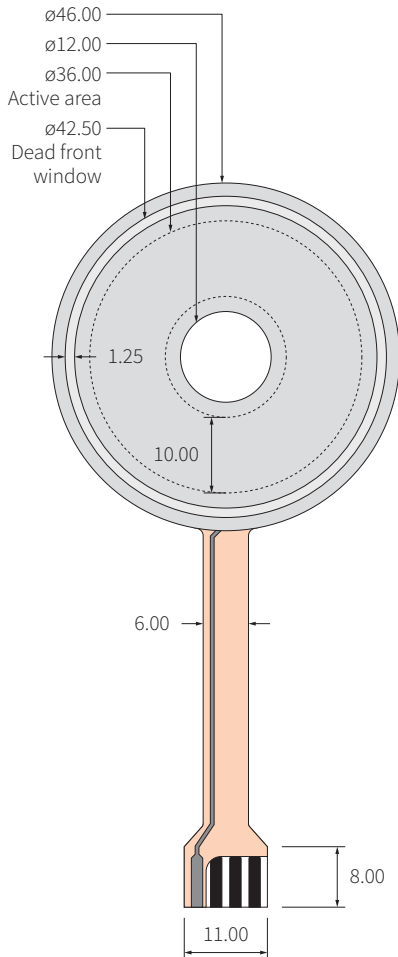


Parameter of Apparatus

Characteristics	Description	Feedback
Minimum press force	10M ohms	< 20g
Pressure range	Linear LOG region	Up to 1kg
Pressure response drift	1KG in 48 hours	< 2%
Repeat on one point	Press 100 times with 1 kg	5%
Repeat on one area	100 sensors in the same batch	+/- 10%
Storage temperature	-20° , 250 Hours	2%
High-temperature storage	85° , 250 hours	9%
High humidity storage	85° & 85% humidity, 250 hours	10%
Press frequency persistence	1KG pressure with 3HZ	4%
Hysteresis quality	Press 100 times with 1 kg	5%
Operating temperature	Press 100 times with 1 kg	-20 to +60°C
Linear resistance	Pin 1 and Pin 2	0.76k +/- 15%

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependant on actuation interface, mechanics, touch location, and measurement electronics.

FSR-430

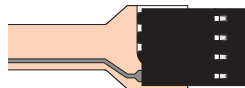


Data sheet

Active area	ø16.00 / ø36.00mm	Active printing width	0.25mm
Thickness	0.375mm	Active printing pitch	0.50mm
Model	Thru	Spacer Height	0.125mm
Width	46.00mm	Tail length	49.80mm
Length	95.80mm	Tail length	11.00mm

Connection

FSR-430C



Parameter of Apparatus

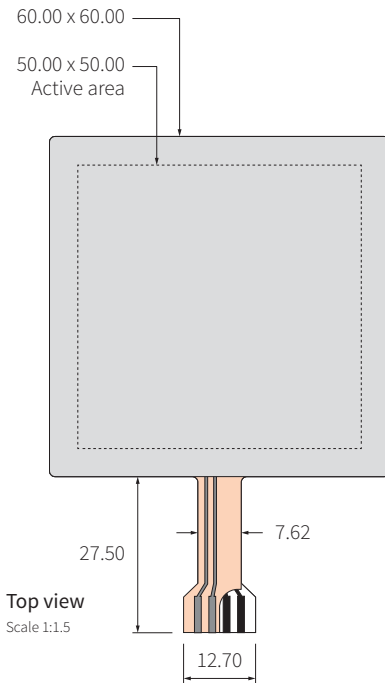
Characteristics	Description	Feedback
Minimum press force	10M ohms	< 20g
Pressure range	Linear LOG region	Up to 1kg
Pressure response drift	1KG in 48 hours	< 2%
Repeat on one point	Press 100 times with 1 kg	5%
Repeat on one area	100 sensors in the same batch	+/- 10%
Storage temperature	-20 °, 250 Hours	2%
High-temperature storage	85 °, 250 Hours	9%
High humidity storage	85° & 85% humidity, 250 hours	10%
Press frequency persistence	1KG pressure with 3HZ	4%
Hysteresis quality	Press 100 times with 1 kg	5%
Operating temperature	100 cycles at 0.5 kg	-20 to +60°C
Linear resistance	Pin 1 and Pin 2	+/- 15%

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependant on actuation interface, mechanics, touch location, and measurement electronics.

3D Single-Touch Trackpad

FSR-800

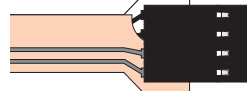
Data sheet



Active area	50.00 x 50.00mm	Width	60.00mm
Thickness	0.85mm	Length	87.50mm
Spacer Height	0.225mm	Tail length	9.00mm
Model	Thru	Tail width	7.62mm

Connection

FSR-400C



Parameter of Apparatus

Characteristics	Description	Feedback
Minimum press force	10M ohms	< 20g
Pressure range	Linear LOG region	Up to 1kg
Pressure response drift	1KG in 48 hours	< 2%
Repeat on one point	Press 100 times with 1 kg	5%
Repeat on one area	100 sensors in the same batch	+/- 10%
Storage temperature	-20° , 250 Hours	5%
High-temperature storage	85° , 250 Hours	1%
High humidity storage	85° & 85% humidity, 250 hours	5%
Press frequency persistence	1KG pressure with 3HZ	4%
Hysteresis quality	Press 100 times with 1 kg	5%
Operating temperature	100 cycles at 0.5 kg	-20 to +60°C
Linear resistance	Resistance between pins 1, 2, 3 and 4	300Ω +/- 15%

Note: All values typical, and quoted at 10N applied force unless otherwise stated. Force dependent on actuation interface, mechanics, and measurement electronics.

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