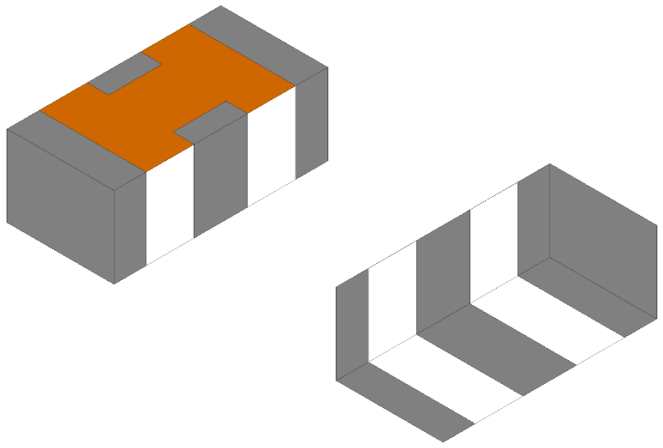
1.81 GHz Low Pass Filter

- 1710 - 1910 MHz pass band
- Optimal for DECT, cellular LTE bands, 5G NR
- SMD, EIA 0402 (1.0 x 0.5 x 0.38 mm)
- 3W Max. power rating
- RoHS compliant



General Specifications[1] [2]

Insertion Loss (dB)	1710 - 1910 MHz		0.5 Max.
Return Loss (dB)	1710 - 1910 MHz	10.9 Min.	
Attenuation (dB)	3420 - 3820 MHz	20 Min.	
	5130 - 5730 MHz	20 Min.	

Maximum Ratings

Power Capacity (W)	3 Max. (CW)
Operating Temperature (°C)	-40 to +85
Recommended Storage Conditions post-installation (°C)	-40 to +85
Recommended Storage Conditions and Period for Unused T&R Product	45% - 75% RH +5 to +35 °C 18 Months Max.

[1] Typical value represents average measurement at 25°C. Min./Max. values represent measurements over specified operating temperature.
[2] General specifications measured on Johanson's evaluation board P/N 1810LP07A0200001CE1.

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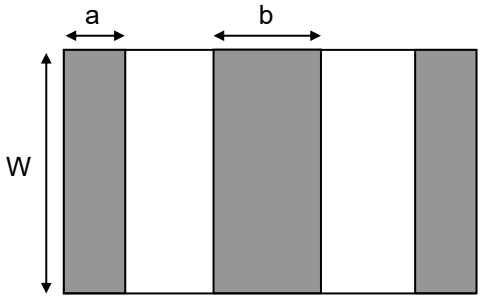
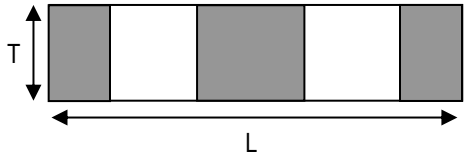
Mechanical Dimensions

	Inches			Millimeters		
L	0.039	±	0.002	1.0	±	0.05
W	0.020	±	0.002	0.5	±	0.05
T	0.015	±	0.002	0.38	±	0.05
a	0.006	±	0.004	0.15	±	0.10
b	0.010	±	0.004	0.25	±	0.10

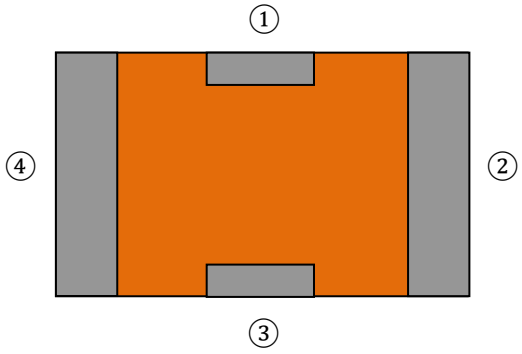
Bottom view



Side view



Top view



Terminal Configuration[3]

Pin Number	Function
1	GND
2	INPUT/OUTPUT
3	GND
4	INPUT/OUTPUT

[3] The termination type is Nickel Tin. Go to: https://www.johansontechnology.com/ipcsoldering-profile for Typical Soldering Profile.

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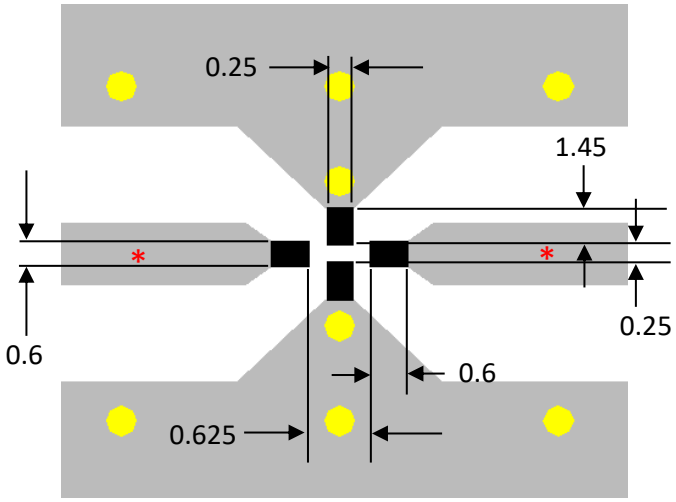
Recommended PCB Configuration

Note: Mount device with colored mark facing up.



Units in mm

Solder Resist

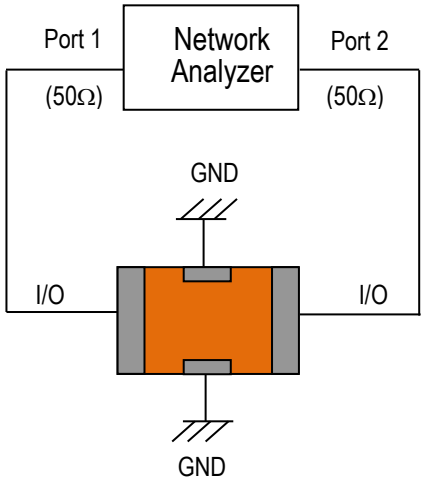
Land

Through-hole (ϕ 0.35)

* Transmission line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

If you'd like the CAD PCB layout or have any questions,
contact our application engineers at https://www.johansontechnology.com/ask-a-question

Measuring Diagram



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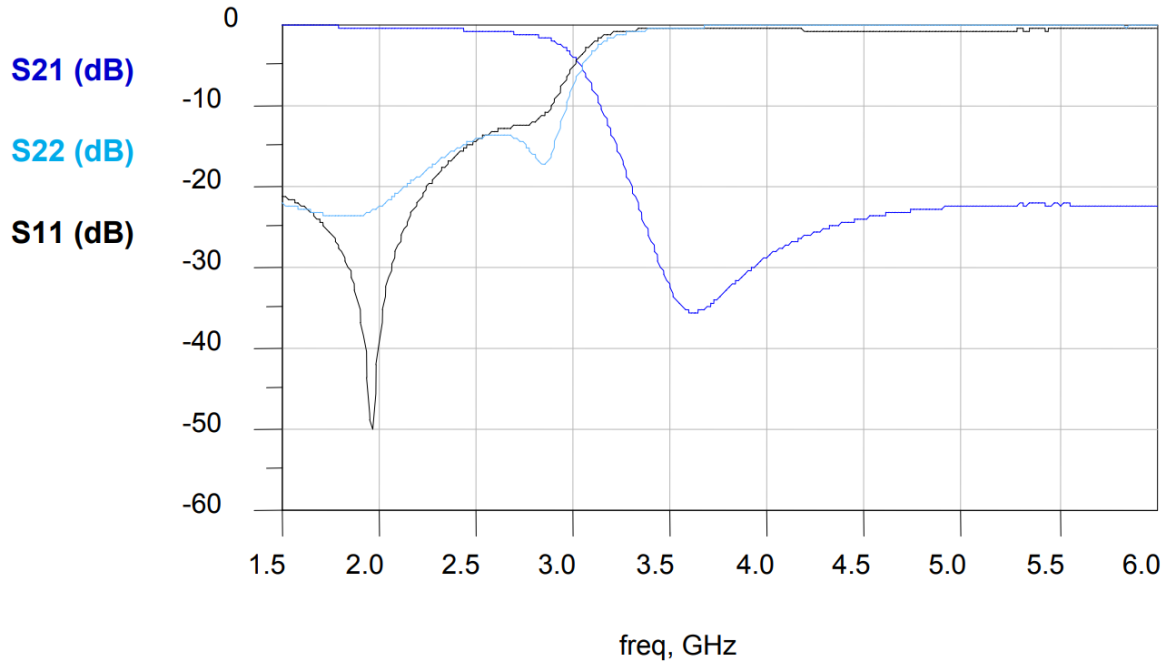
RF Measurement (T = 25°C)

Insertion Loss, Return Loss



S-parameter and layout file available upon request. Please contact us at https://www.johansontechnology.com/ask-a-question

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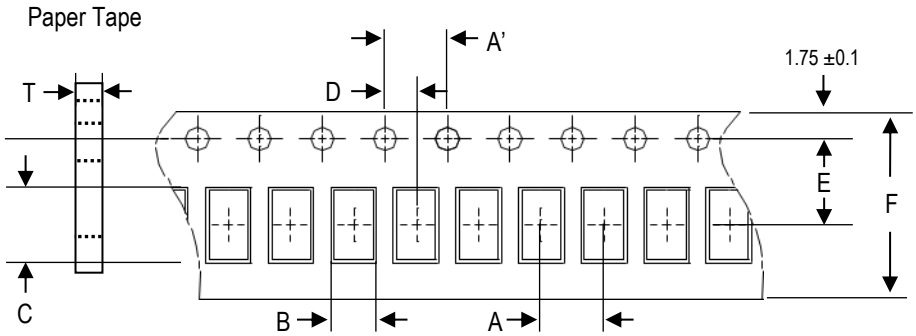
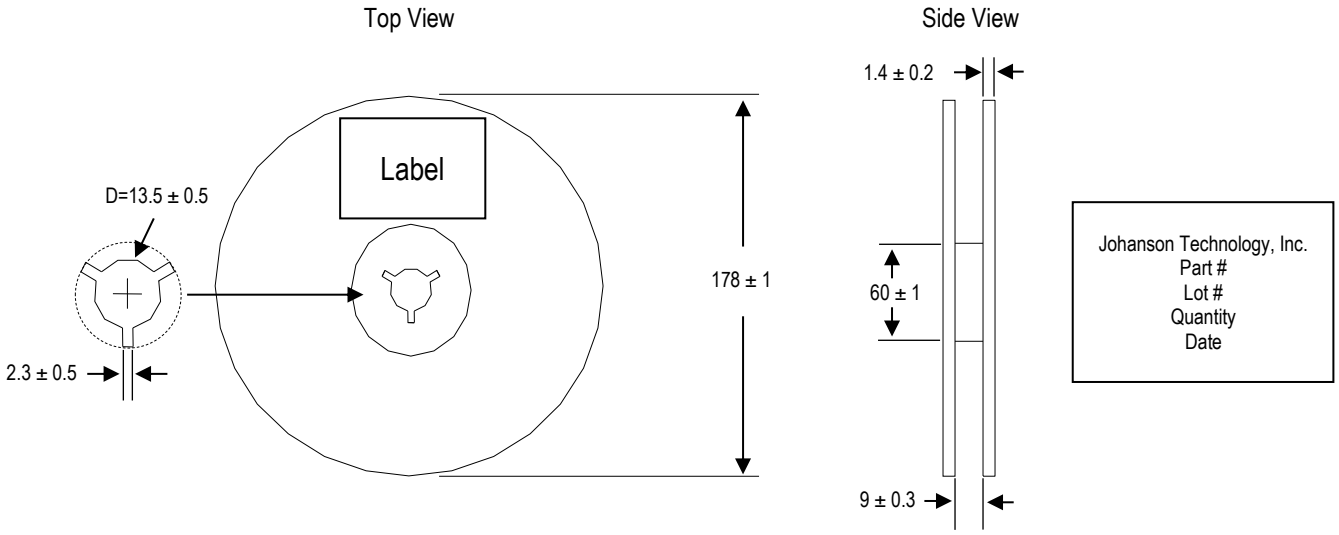
Tape and Reel Specification (Units in mm)

Tape Dimensions

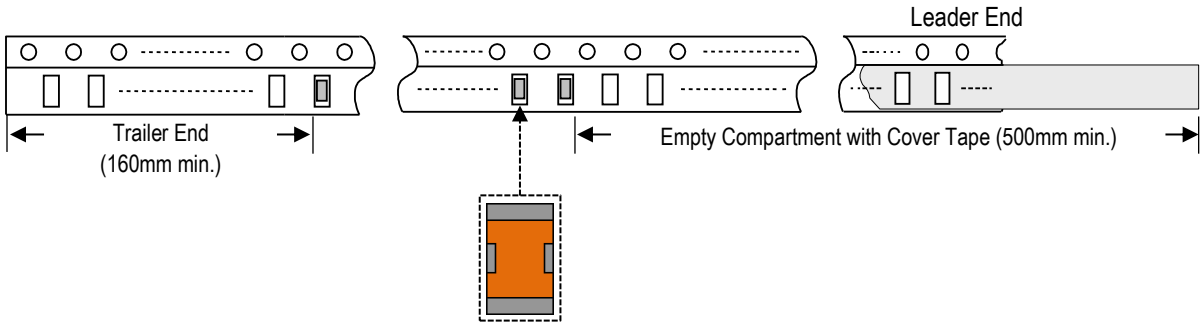


A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
2.0 ±0.05	4.0±0.1	0.62 ±0.03	1.12 ±0.03	2.0 ±0.05	3.5 ±0.05	8.0 ±0.1	0.45 ±0.03	10,000 pcs.	Paper

Reel Dimensions



Leader and Trailer Dimensions



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Orderable Part Numbers

Packaging Style	Part Number	Termination
Bulk (loose pcs.)	1810LP07A0200001B	Nickel Tin
T & R (7" Reel Paper Tape)	1810LP07A0200001T (Qty: 10,000 pcs/reel)	
Evaluation Board with 2 SMA Connectors	1810LP07A0200001CE1	

Important Links

1810LP07A0200001T Product Page

More Low Pass Filters

Antenna Tuning, Optimization, and Validation Services

Soldering Information

MSL Information

Packaging Information

Recommended Storage Condition and Max Shelf Life

RoHS Compliance

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