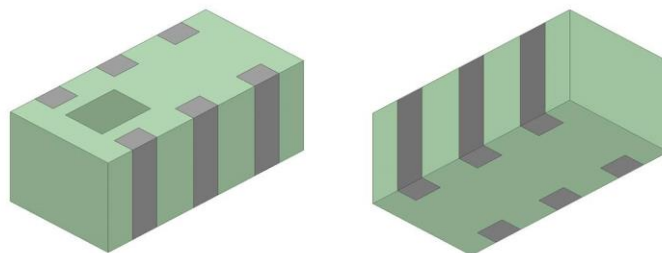




1224/1572 MHz GNSS Diplexer

- 1164-1285 & 1539-1606 MHz operational bands
- Multi-band GNSS applications
- SMD, EIA 0805
- RoHS compliant



General Specifications¹

Passband Frequency (MHz)	1164 - 1285	1539 - 1606
Insertion Loss (dB)	1.0 Max	1.0 Max
Return Loss (dB)	10 Min.	10 Min.
Group Delay Ripple (ns)	1.0 Max	1.0 Max
Isolation (dB)	20 Min.	20 Min.
Attenuation (dB)	20 Min. @1539 – 1606 MHz	20 Min. @1164 – 1285 MHz

Maximum Ratings

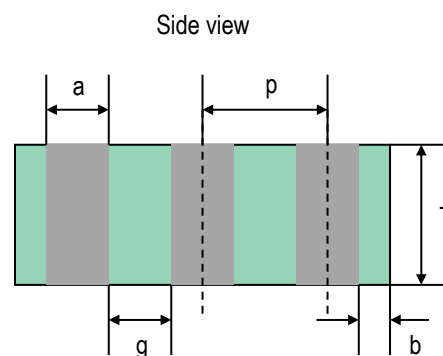
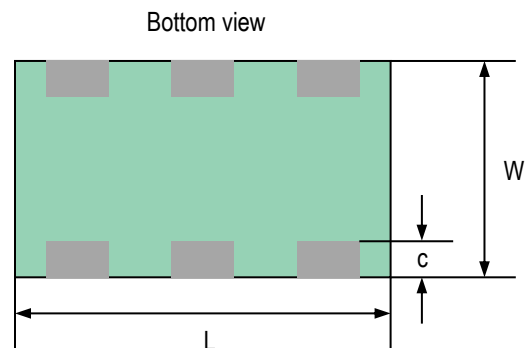
Power Capacity (W)	1 Max. (CW)
Operating Temperature (°C)	-40 to +105
Recommended Storage Conditions post-installation (°C)	-40 to +105
Recommended Storage Conditions and Period for Unused T&R Product	45% - 75% RH +5 to +35 °C 18 Months Max.

¹ General specifications measured on Johanson's evaluation board P/N 1224DP15A1572001CE1.



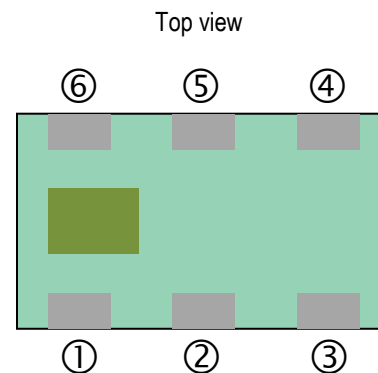
Mechanical Dimensions

	Inches			Millimeters		
L	0.079	±	0.006	2.00	±	0.15
W	0.047	±	0.006	1.20	±	0.15
T	0.035	±	0.004	0.90	±	0.10
a	0.012	±	0.006	0.30	±	0.15
b	0.008	±	0.006	0.20	±	0.15
c	0.012	±	0.006	0.30	±	0.15
g	0.014	±	0.006	0.35	±	0.15
p	0.026	±	0.006	0.65	±	0.15



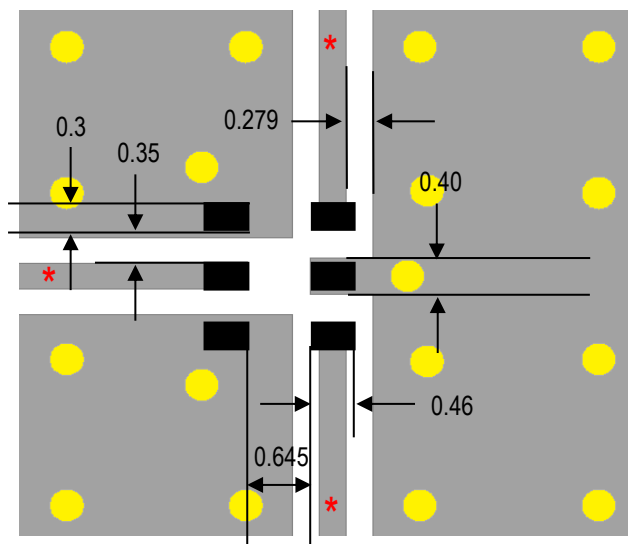
Terminal Configuration²

Pin Number	Function
1	GND
2	Common Port
3	GND
4	Lower Freq. Port
5	GND
6	Higher Freq. Port



² The termination type is Nickel Tin. Go to: <https://www.johansontechnology.com/tech-notes/typical-soldering-profile-ipc> for Typical Soldering Profile.

Recommended PCB Layout



Units in mm

Solder Resist

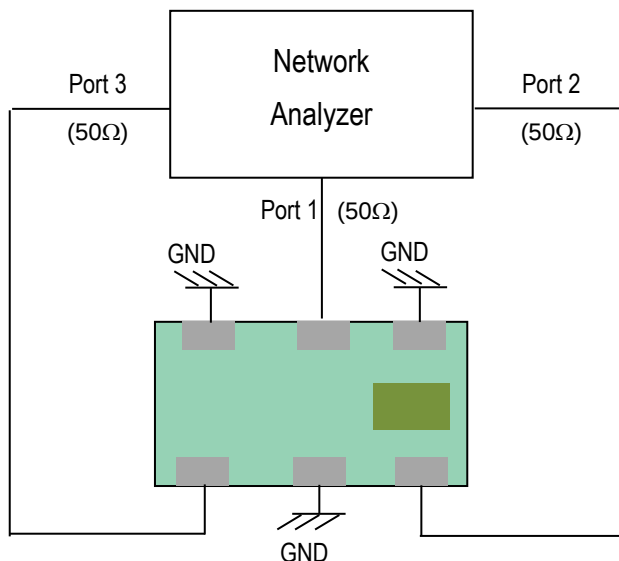
Land

Through-hole ($\phi 0.35$)

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

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

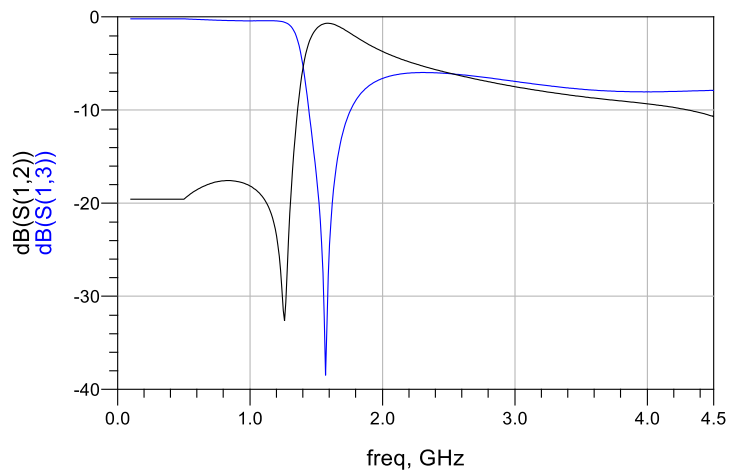
Measuring Diagram



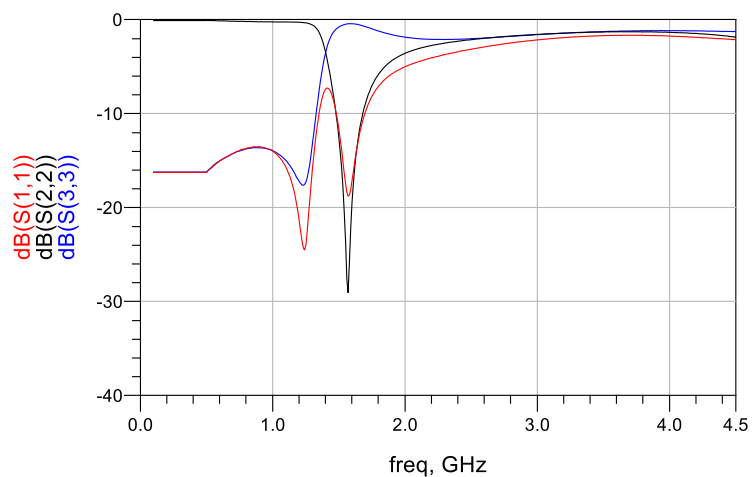


RF Measurements (T = 25°C)

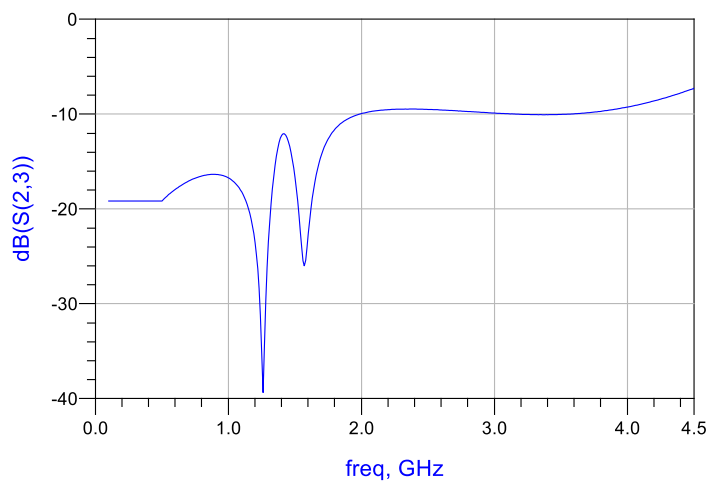
Insertion Loss and Attenuation



Return Loss

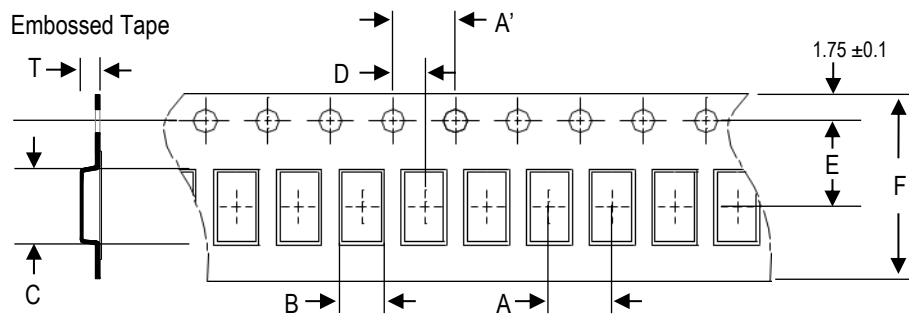


Isolation



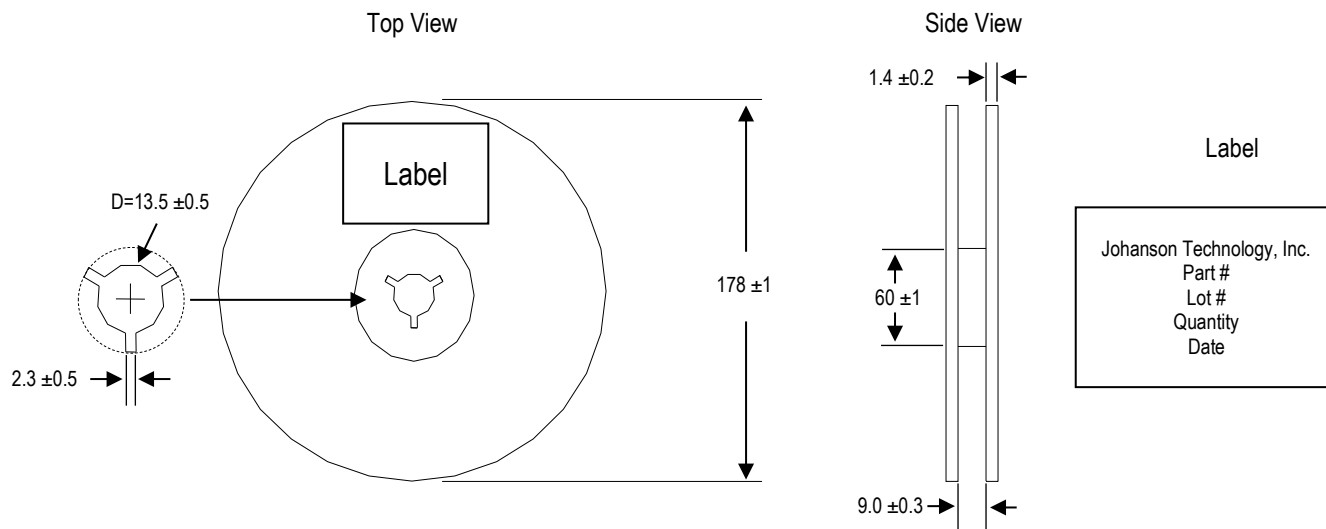
Tape and Reel Specification (Units in mm)

Tape Dimensions

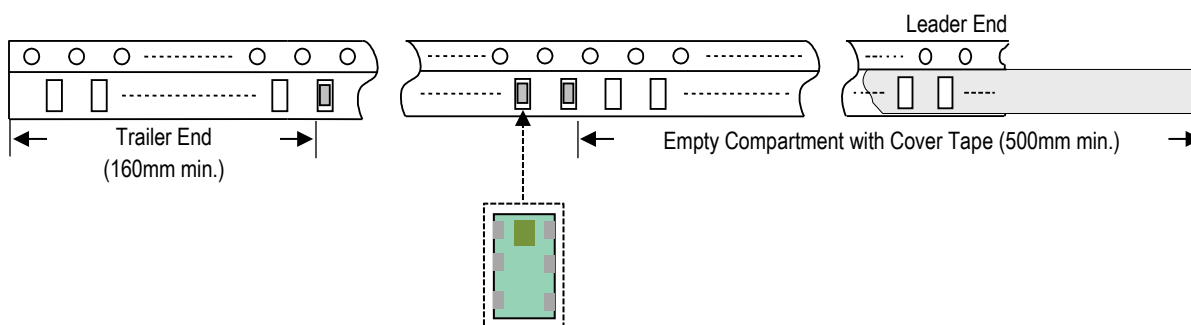


A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
4.0 ±0.1	4.0 ±0.1	1.35 ±0.05	2.15 ±0.05	2.0 ±0.05	3.5 ±0.1	8.0 ±0.1	1.0 ±0.05	4,000pcs.	Plastic (Embossed)

Reel Dimensions



Leader and Trailer Dimensions



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[BD0810N50100AHF](#) [DC0710J5005AHF](#) [DC2327J5005AHF](#) [X3C19F1-20S](#) [XC3500P-20S](#) [CDBLB455KCAX39-B0](#) [PD0922J5050D2HF](#)
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[SF2240E](#) [SF2307D](#)