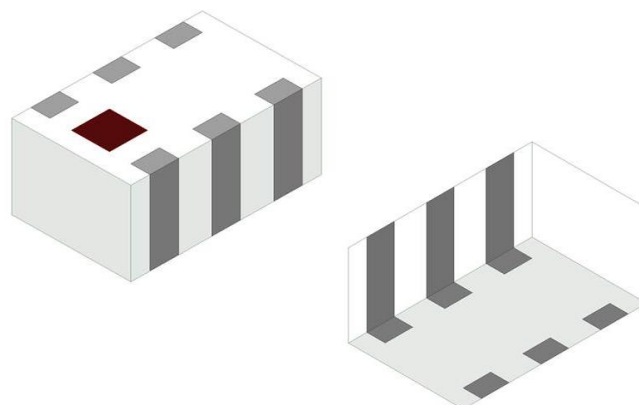


1600 / 2450 / 5450 MHz RF Diplexer

- 1550 - 1610 / 2400 – 2500 / 4900 - 6000 MHz operational bands
- GNSS, WiFi, Bluetooth, 5 GHz UNII Bands
- SMD, EIA 0603
- RoHS compliant



General Specifications^{1 2}

Passband Frequency (MHz)	1550 - 1580	1594 - 1610	2400 - 2500	4900 - 6000
Insertion Loss (dB)	0.47 Typ. / 0.6 Max.	0.54 Typ. / 0.7 Max.	0.57 Typ. / 0.7 Max.	0.43 Typ. / 0.6 Max.
Return Loss (dB)	9.5 Min.	9.5 Min.	9.5 Min.	9.5 Min.
Attenuation (dB)	12 Min. @2400 - 2500 MHz		20 Min. @1550 - 1610 MHz	
	12 Min. @4900 – 6000 MHz			

Maximum Ratings

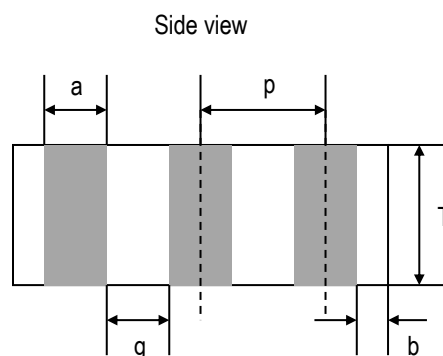
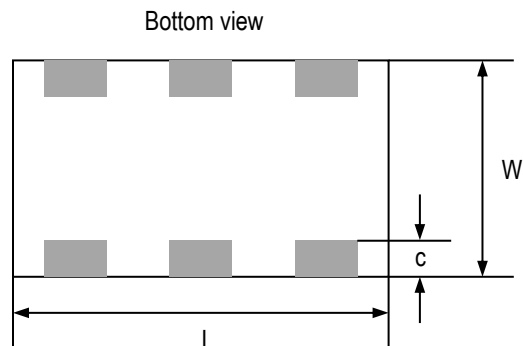
Power Capacity (W)	2 Max. (CW)
Operating Temperature (°C)	-40 to +85
Recommended Storage Conditions post-installation (°C)	-40 to +85
Recommended Storage Conditions and Period for Unused T&R Product	45% - 75% RH +5 to +35 °C 18 Months Max.

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 1600DP14B2450001CE1.

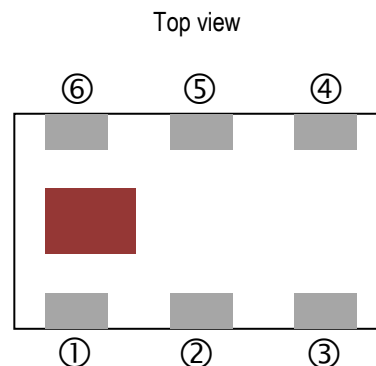
Mechanical Dimensions

	Inches			Millimeters		
L	0.063	±	0.004	1.60	±	0.10
W	0.031	±	0.004	0.80	±	0.10
T	0.024	±	0.004	0.60	±	0.10
a	0.008	±	0.004	0.20	±	0.10
b	0.008	+0.004/-0.006		0.20	+0.1/-0.15	
c	0.006	±	0.004	0.15	±	0.10
g	0.012	±	0.004	0.30	±	0.10
p	0.020	±	0.002	0.50	±	0.05



Terminal Configuration³

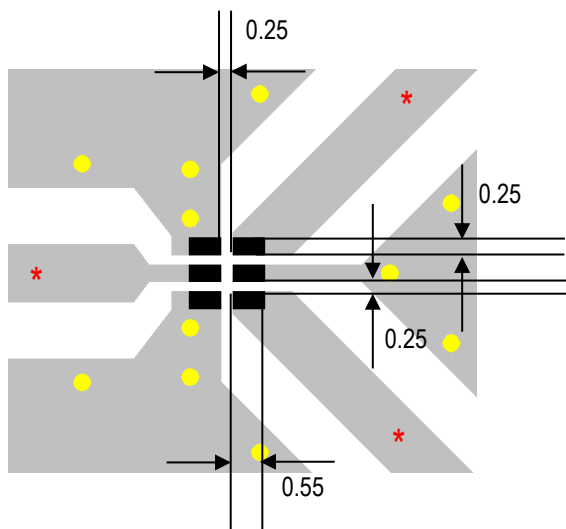
Pin Number	Function
1	Lower Freq. Port
2	GND
3	Higher Freq. Port
4	GND
5	Common Port
6	GND



³ 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


Note: Mount device with colored mark facing up.



Units in mm

 Solder Resist

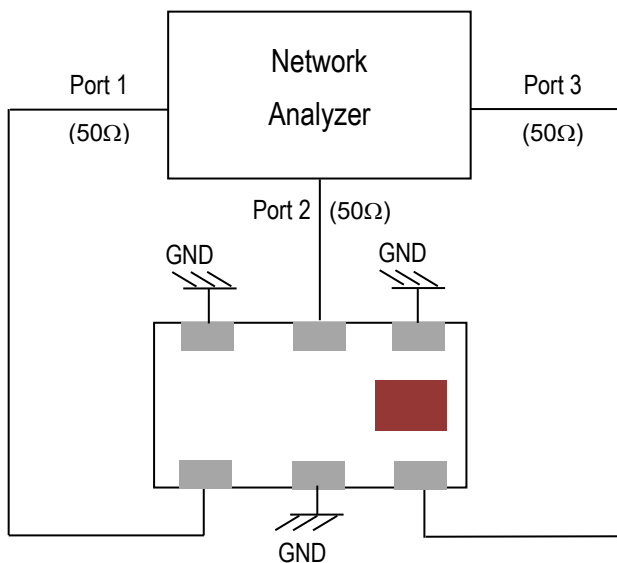
 Land

 Through-hole (ϕ 0.35)

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

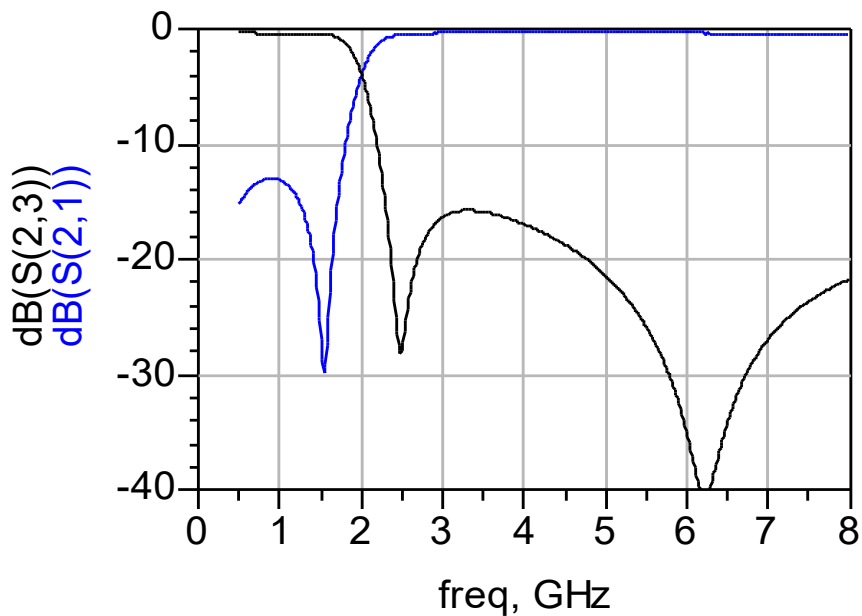
If you would like the CAD PCB layout or have any technical questions, please contact our application engineers at <https://www.johansontechnology.com/ask-a-question>

Measuring Diagram

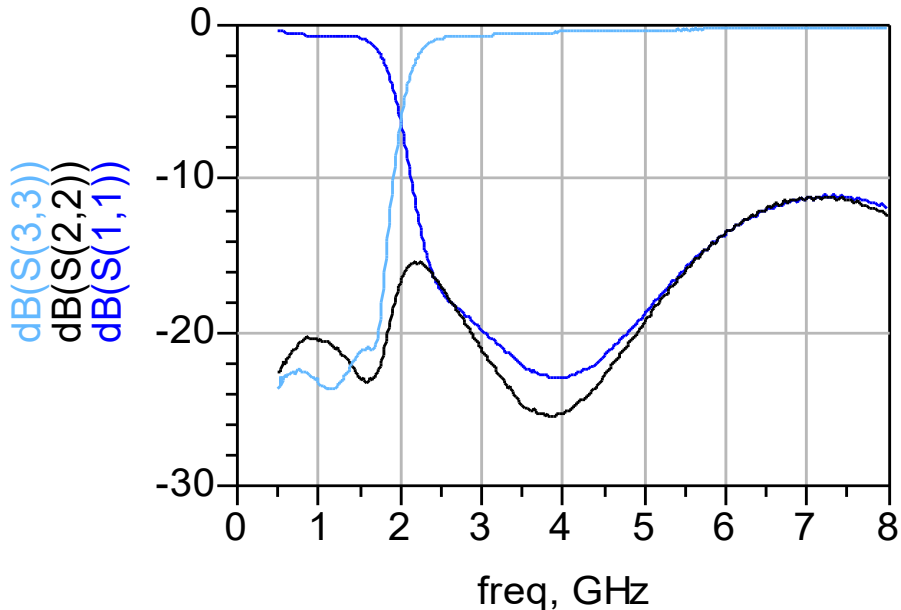


RF Measurements (T = 25°C)

Insertion Loss and Attenuation



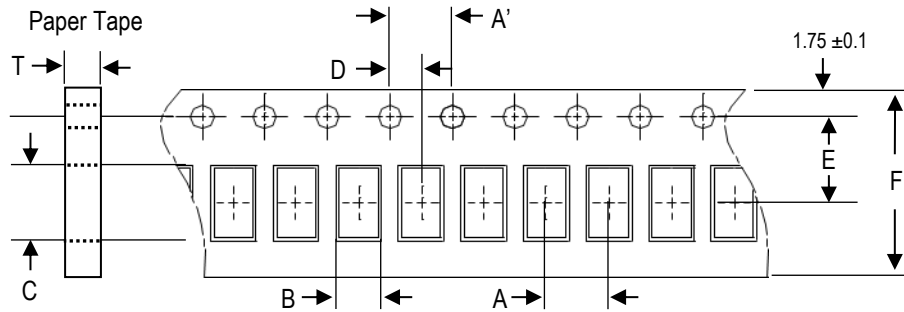
Return Loss



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

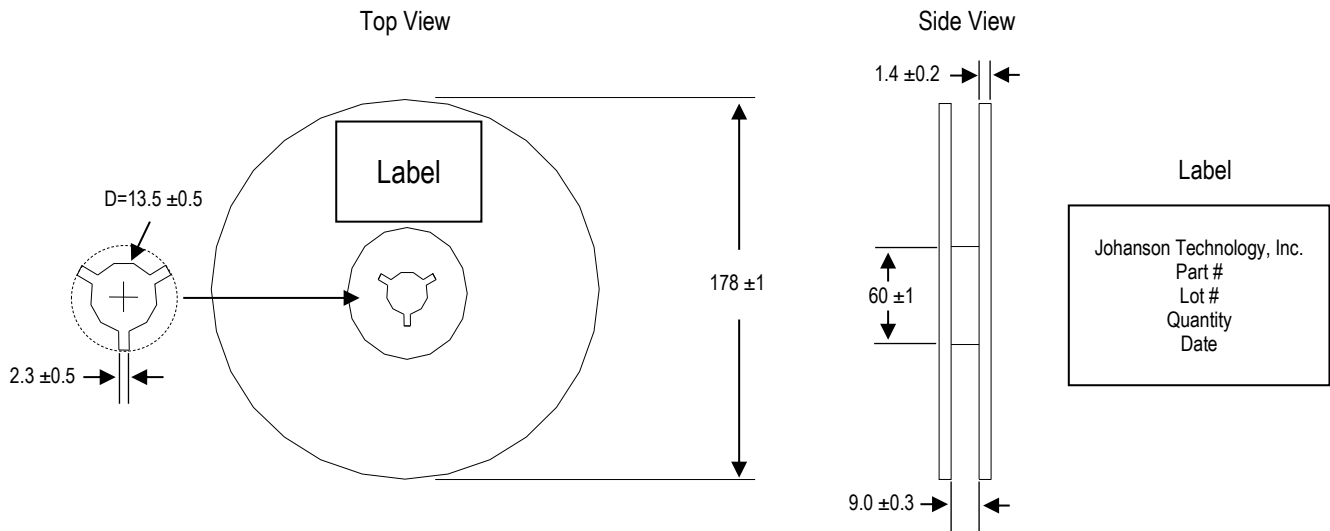
Tape and Reel Specification (Units in mm)

Tape Dimensions

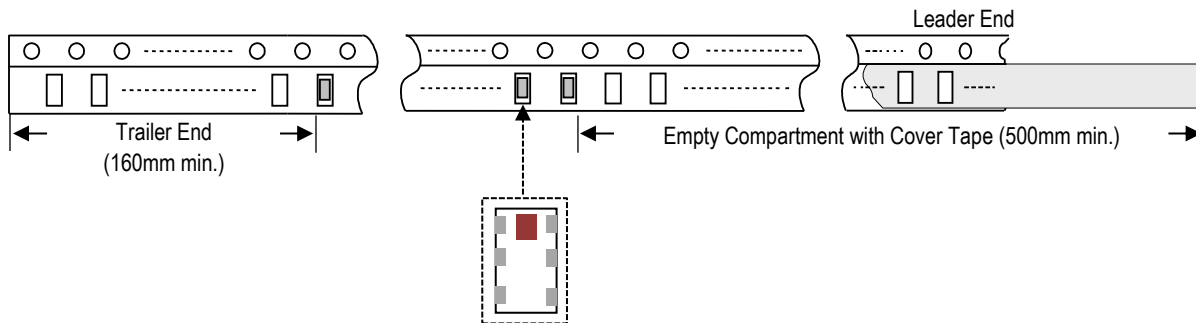


A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
4.0 ±0.1	4.0 ±0.1	1.10 ±0.1	1.92 ±0.1	2.0 ±0.1	3.5 ±0.1	8.0 ±0.1	0.75 ±0.05	4,000pcs	Paper

Reel Dimensions



Leader and Trailer Dimensions



Orderable Part Numbers

Packaging Style	Part Number	Termination
Bulk (loose pcs.)	1600DP14B2450001B	Nickel Tin
T & R (7" Reel Paper Tape)	1600DP14B2450001T (Qty: 4,000 pcs/reel)	
Evaluation Board with 3 SMA Connector	1600DP14B2450001CE1	

Important Links

[1600DP14B2450001T Product Page](#)

[More RF Diplexers](#)

[Soldering Information](#)

[MSL Information](#)

[Packaging Information](#)

[Recommended Storage Condition and Max Shelf Life](#)

[RoHS Compliance](#)

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