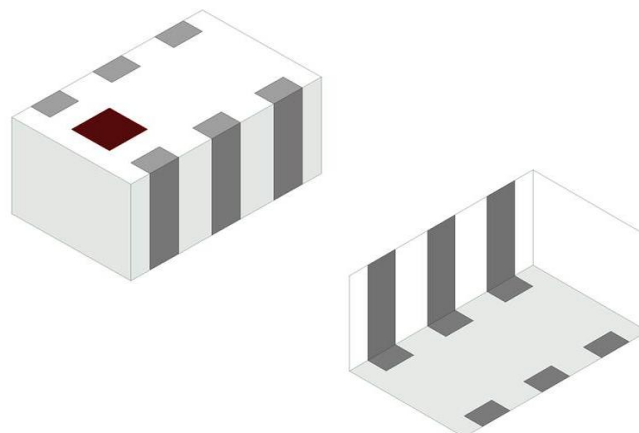


1407 / 2450 MHz RF Diplexer

- 824 - 1990 / 2400 - 2500 MHz operational bands
- Sub-GHz ISM, LTE, WiFi, Bluetooth, Zigbee, etc.
- SMD, EIA 0805
- RoHS compliant



General Specifications^{1 2}

Passband Frequency (MHz)	824 - 1990	2300 - 2700
Insertion Loss (dB)	0.6 Max. @824 - 960 MHz	2.0 Max. @2400 - 2500 MHz
Return Loss (dB)	1.0 Max. @1710 - 1880 MHz	9.5 Min. @2400 - 2500 MHz
Attenuation (dB)	1.5 Max. @1990 MHz	9.5 Min. @2400 - 2500 MHz
	9.5 Min. @824 - 2025 MHz	20 Min. @824 - 1990 MHz
	15 Min. @2400 - 2500 MHz	

Maximum Ratings

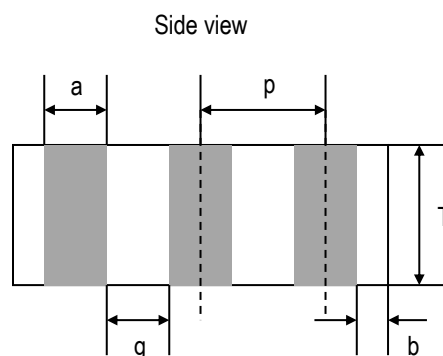
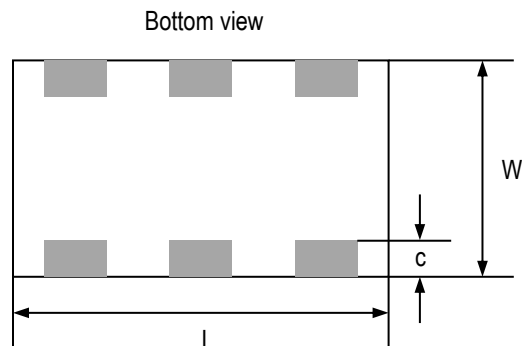
Power Capacity (W)	2 Max. (CW)
Operating Temperature (°C)	-40 to +85
Recommended Storage Conditions post-installation (°C)	-40 to +85
Recommended Storage Conditions and Period for Unused T&R Product	45% - 75% RH +5 to +35 °C 18 Months Max.

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 1407DP15A2450001CE1.

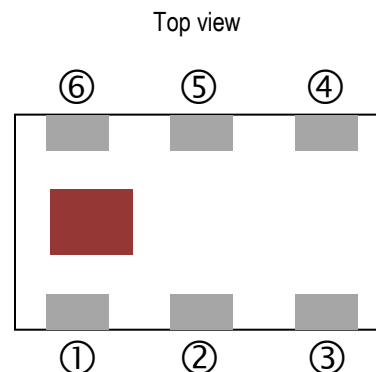
Mechanical Dimensions

	Inches			Millimeters		
L	0.079	±	0.004	2.00	±	0.10
W	0.049	±	0.004	1.25	±	0.10
T	0.037	±	0.004	0.95	±	0.10
a	0.012	±	0.004	0.30	±	0.10
b	0.008	±	0.004	0.20	±	0.10
c	0.012	+0.004/-	0.008	0.30	+0.1/-	0.2
g	0.014	±	0.004	0.35	±	0.10
p	0.026	±	0.002	0.65	±	0.05



Terminal Configuration³

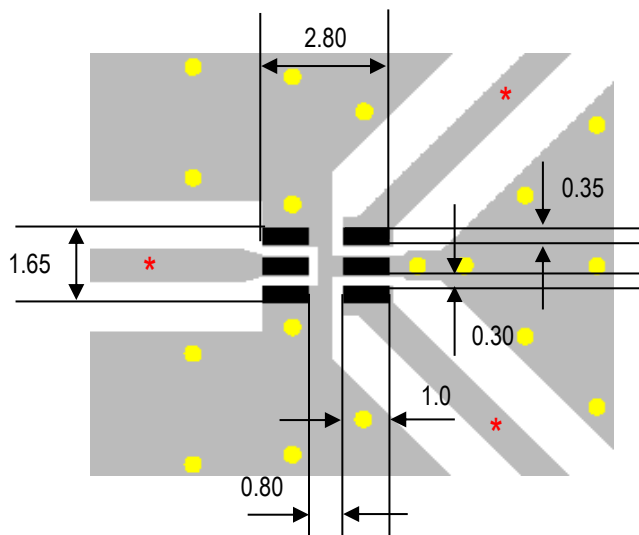
Pin Number	Function
1	Higher Freq. Port
2	GND
3	Lower Freq. Port
4	GND
5	Common Port
6	GND



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

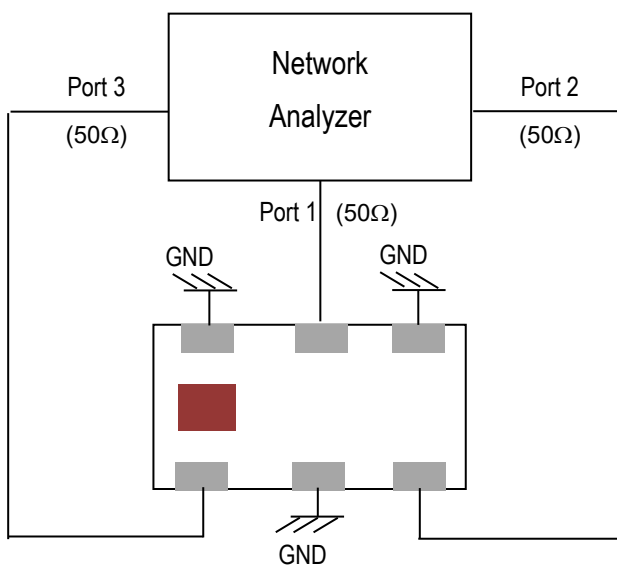
 Land

 Through-hole (ϕ 0.35)

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

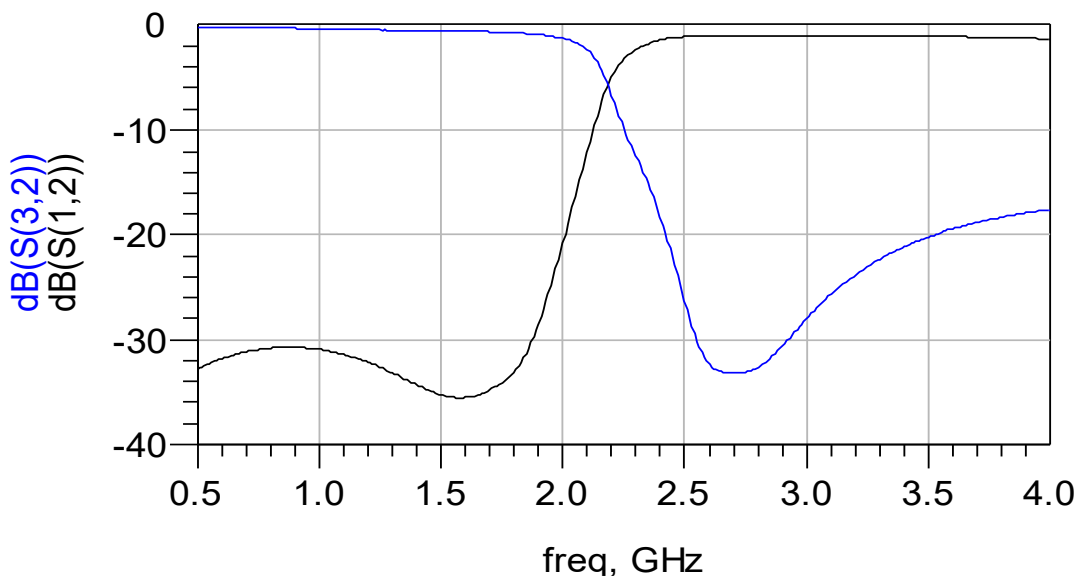
If you would like the CAD PCB layout or have any technical questions, please contact our application engineers at <https://www.johansontechnology.com/ask-a-question>

Measuring Diagram

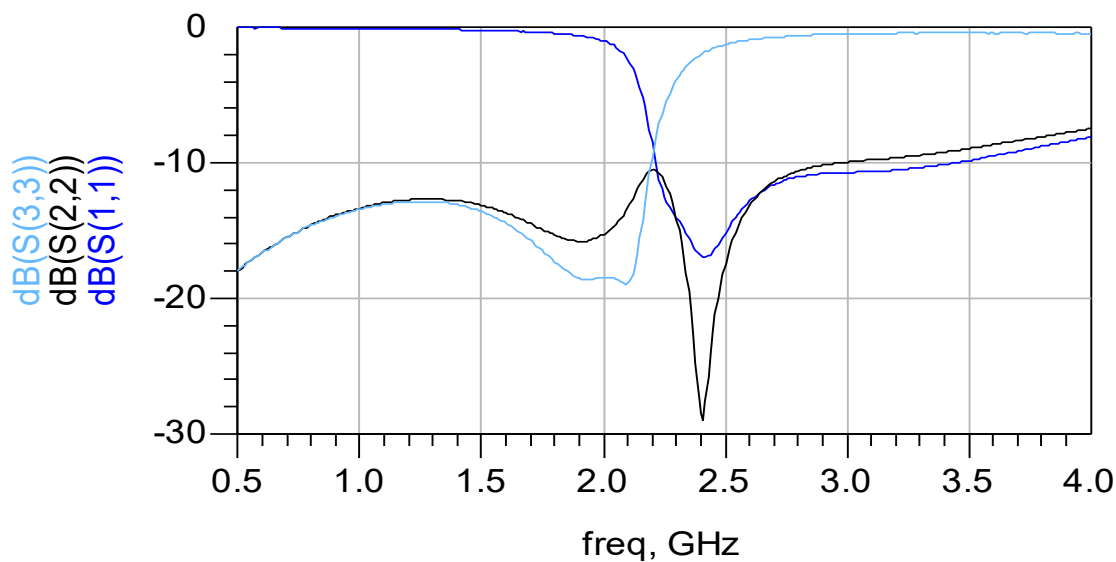


RF Measurements (T = 25°C)

Insertion Loss and Attenuation



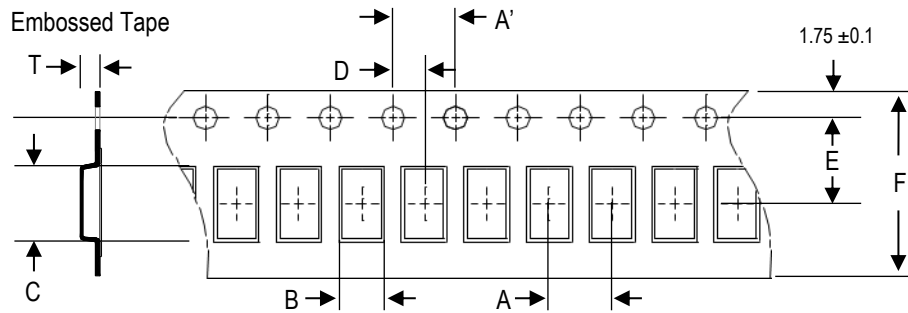
Return Loss



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

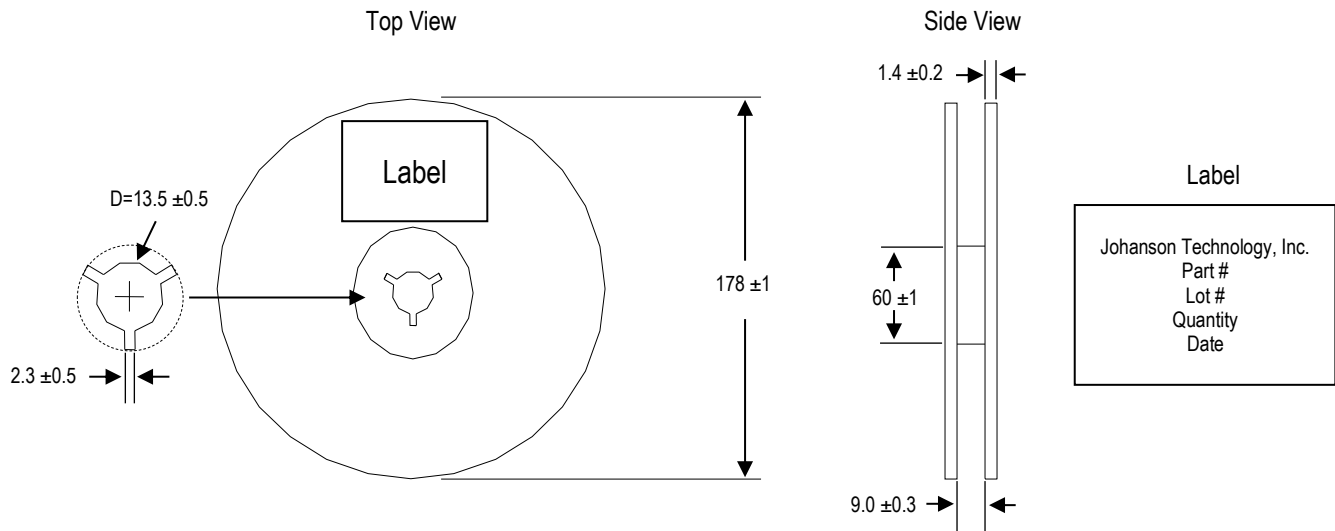
Tape and Reel Specification (Units in mm)

Tape Dimensions

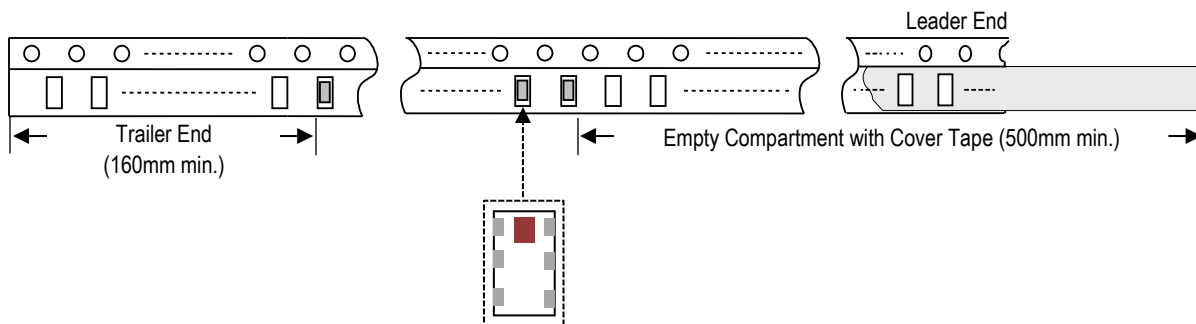


A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
4.0 ±0.1	4.0 ±0.1	1.35 ±0.05	2.15 ±0.05	2.0 ±0.05	3.5 ±0.1	8.0 ±0.1	1.08 ±0.05	4,000 pcs	Plastic (Embossed)

Reel Dimensions



Leader and Trailer Dimensions



Orderable Part Numbers

Packaging Style	Part Number	Termination
Bulk (loose pcs.)	1407DP15A2450001B	Nickel Tin
T & R (7" Reel Embossed Tape)	1407DP15A2450001E (Qty: 4,000 pcs/reel)	
Evaluation Board with 3 SMA Connector	1407DP15A2450001CE1	

Important Links

[1407DP15A2450001E Product Page](#)

[More RF Diplexers](#)

[Soldering Information](#)

[MSL Information](#)

[Packaging Information](#)

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

[RoHS Compliance](#)

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