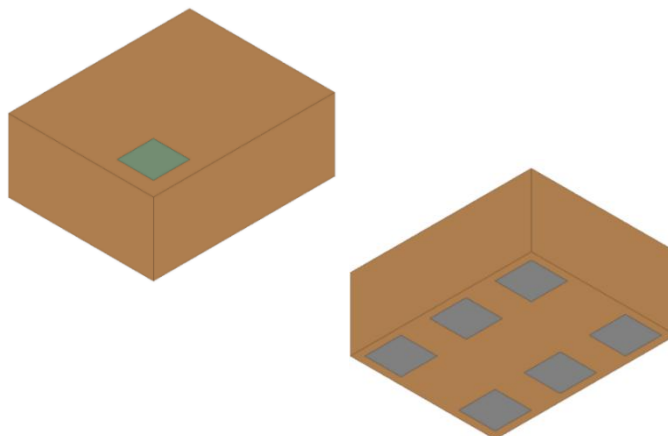


2450 / 5400 MHz RF Diplexer

- 2400 - 2500 / 4900 - 5950 MHz operational bands
- WiFi, Bluetooth, 5GHz UNII Bands
- SMD, EIA 1008
- RoHS compliant



General Specifications^{1 2}

Passband Frequency (MHz)	2400 - 2500	4900 - 5950
Insertion Loss (dB)	1.0 Max	1.2 Max
Return Loss (dB)	9.5 Min.	9.5 Min.
Attenuation (dB)	15 Min. @1550 - 1610 MHz	30 Min. @2400 - 2500 MHz
	10 Min. @3105 MHz	15 Min. @3105 MHz
	12 Min. @4900 - 5950 MHz	15 Min. @9800 - 11900 MHz
Isolation (dB)	32 Min. @2400 - 2500 MHz	20 Min. @4900 - 5950 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 ³	45% - 75% RH +5 to +35 °C 18 Months Max.

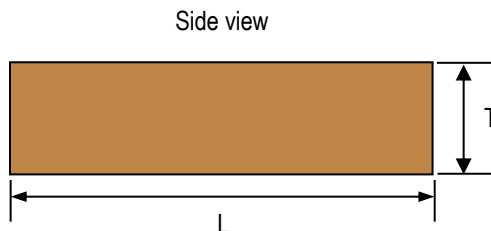
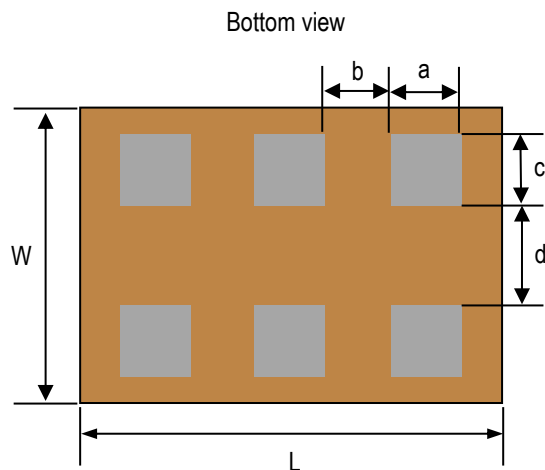
¹ Typical value represents average measurement at 25°C. Min./Max. values represent measurements over specified operating temperature.

² General specifications measured on Johanson's evaluation board P/N 2450DP39K5400001CE1.

³ 18 months max. in vacuum sealed bag and 1 week after opened. Please keep unused parts in vacuum sealed bags. For more info go to <https://www.johansontechnology.com/silverleads-profile>.

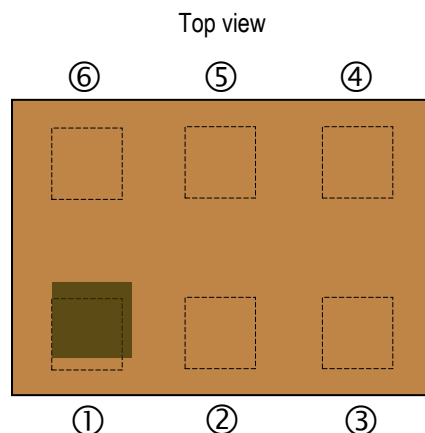
Mechanical Dimensions

	Inches			Millimeters		
L	0.098	±	0.008	2.50	±	0.20
W	0.079	±	0.008	2.00	±	0.20
T	0.039		Max.	1.00		Max.
a	0.020	±	0.004	0.50	±	0.10
b	0.016	±	0.004	0.40	±	0.10
c	0.020	±	0.004	0.50	±	0.10
d	0.031	±	0.006	0.80	±	0.15



Terminal Configuration⁴

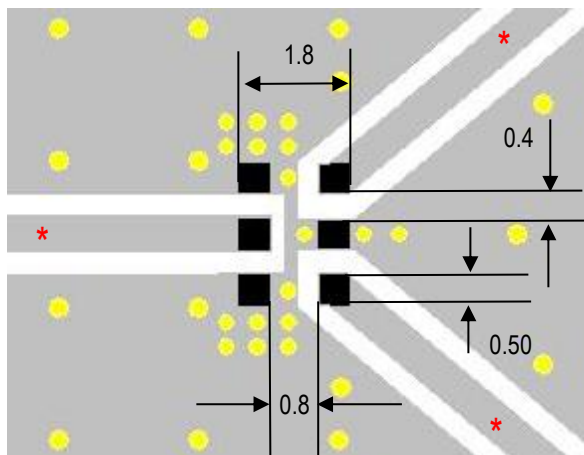
Pin Number	Function
1	GND
2	Common Port
3	GND
4	Higher Freq. Port
5	GND
6	Lower Freq. Port






⁴ The termination type is Silver. Go to <https://www.johansontechnology.com/tech-notes/silver-leaded-components-soldering-profile> for Typical Soldering Profile. SAC 305 solder paste recommended.

Recommended PCB Layout

Note: Mount device with colored mark facing up.



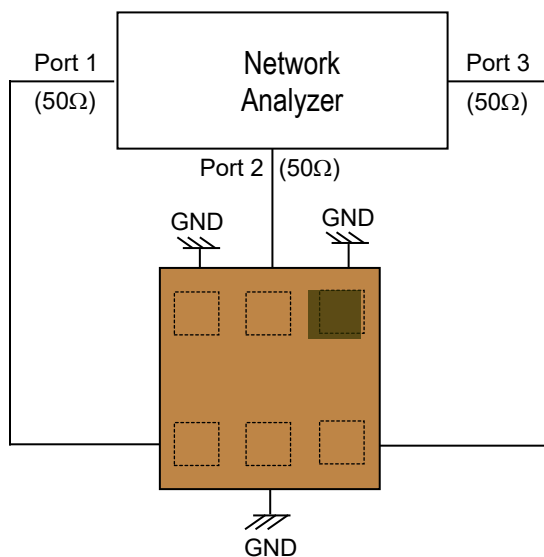
Units in mm

-  Solder Resist
-  Land
-  Through-hole (ϕ 0.25)

* Transmission line width should be designed to match 50Ω 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>

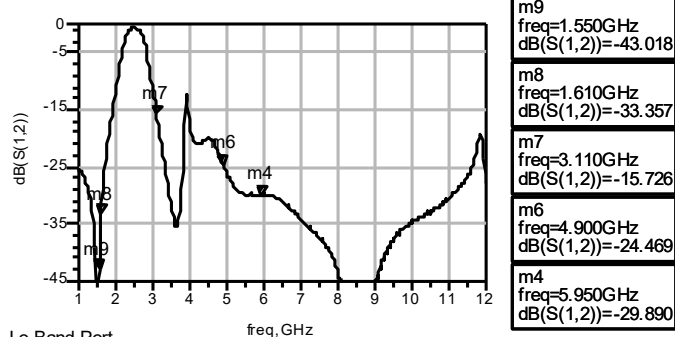
Measuring Diagram



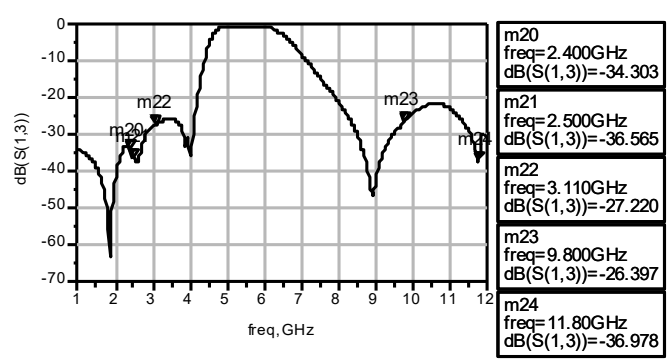
RF Measurements (T = 25°C)

Insertion Loss and Attenuation

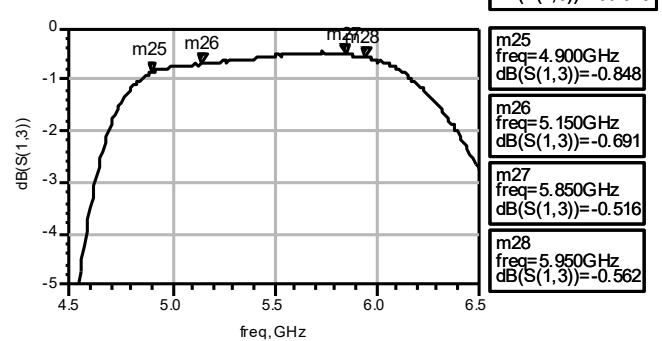
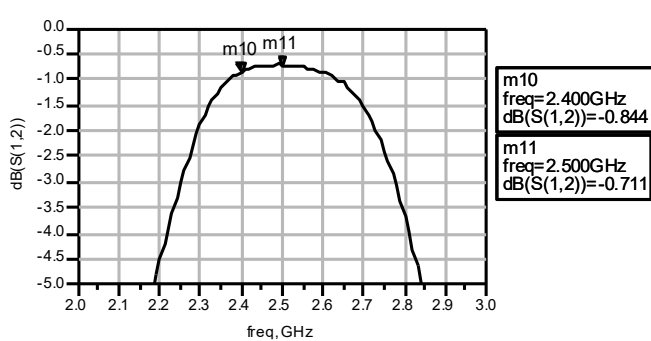
Lo-Band Port



Hi-Band Port

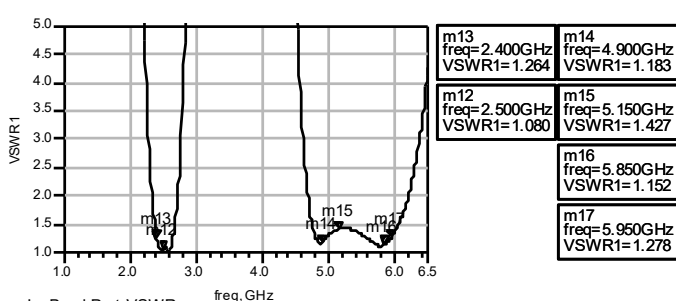


Lo-Band Port

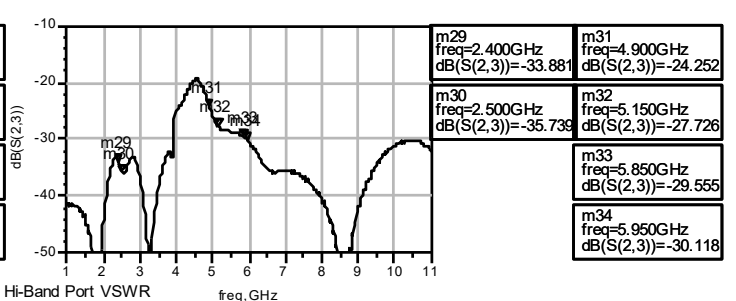


VSWR and Isolation

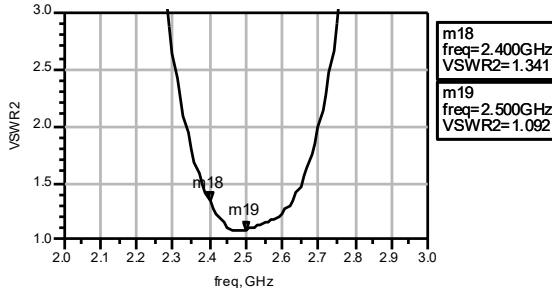
Common Port VSWR



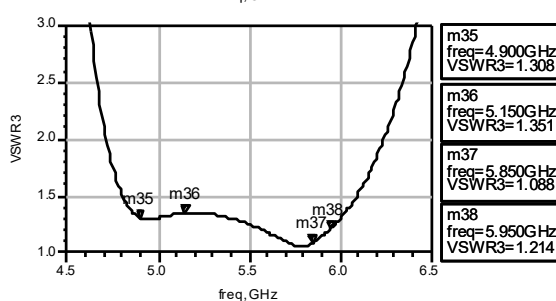
Isolation



Lo-Band Port VSWR



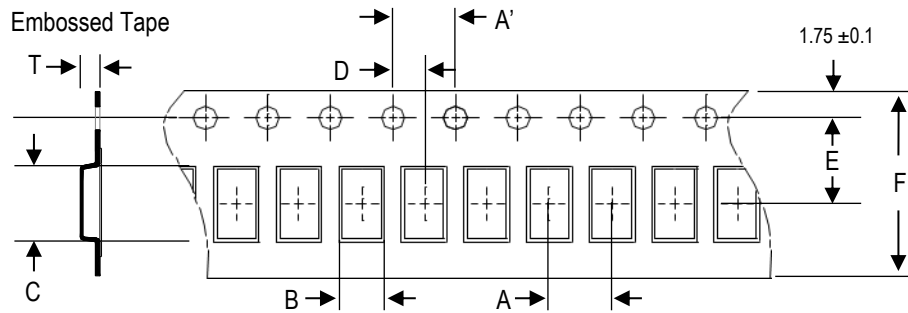
Hi-Band Port VSWR



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

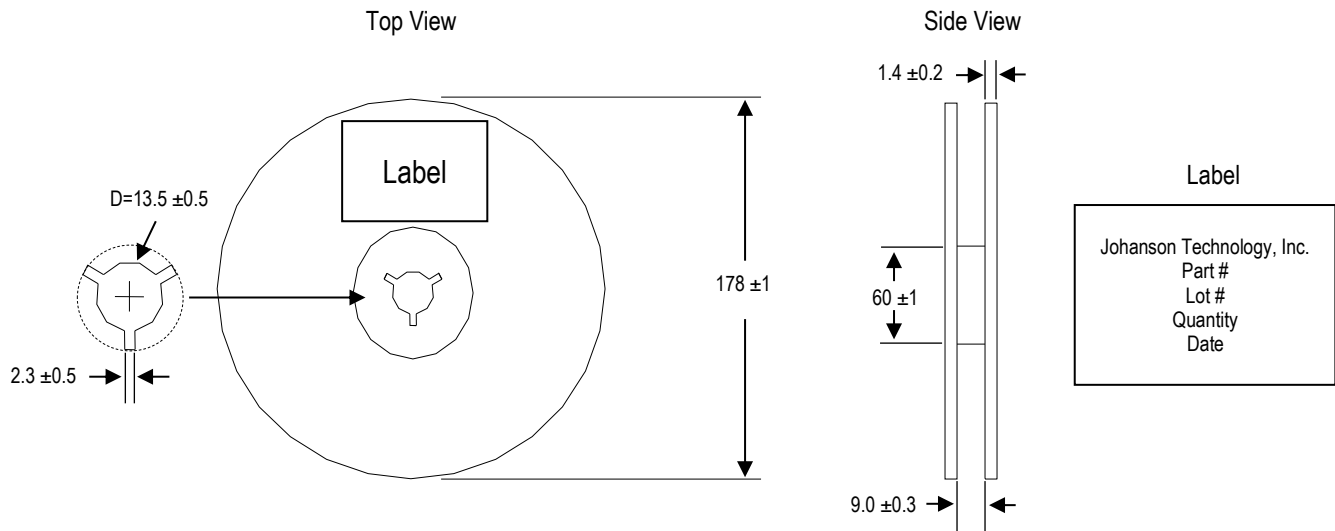
Tape and Reel Specification (Units in mm)

Tape Dimensions

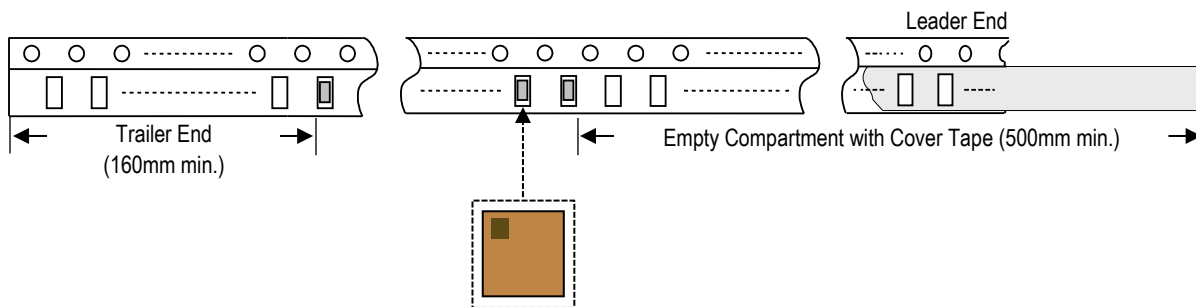


A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
4.0 ±0.1	4.0 ±0.1	2.35 ±0.1	2.8 ±0.1	2.0 ±0.1	3.5 ±0.1	8.0 ±0.1	1.15 ±0.1	3,000 pcs	Plastic (Embossed)

Reel Dimensions



Leader and Trailer Dimensions



Orderable Part Numbers

Packaging Style	Part Number	Termination
Bulk (loose pcs.)	2450DP39K5400001B	Silver
T & R (7" Reel Embossed Tape)	2450DP39K5400001E (Qty: 3,000 pcs/reel)	
Evaluation Board with 3 SMA Connector	2450DP39K5400001CE1	

Important Links

[2450DP39K5400001E Product Page](#)

[More RF Diplexers](#)

[Soldering Information](#)

[MSL Information](#)

[Packaging Information](#)

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

[RoHS Compliance](#)

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