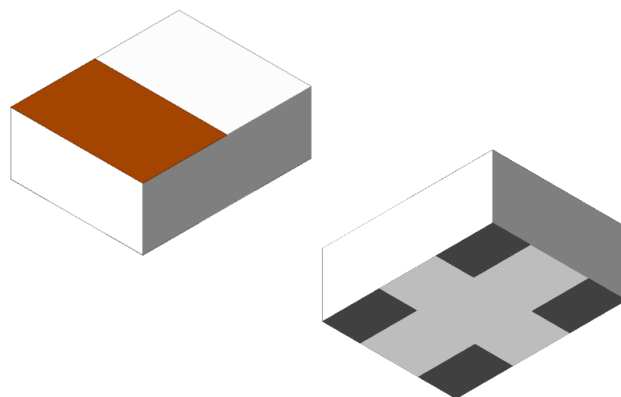


## 2.4 GHz Filter, Impedance-matched to Nordic nRF5340-CLAA

- 2400 - 2482 MHz passband
- Low loss and high attenuation for bands outside passband
- For Mobile wireless applications, including GSM/WCDMA/LTE phones, etc.
- Micro SMD, EIA 0202 size
- Operation up to 105°C (Commercial)



### General Specifications<sup>1</sup>

Passband Frequency (MHz)	2400 - 2482
Impedance, transceiver side ( $\Omega$ )	Impedance match to nRF5340-CLAA
Impedance, antenna side ( $\Omega$ )	50
Insertion Loss (dB)	0.7 Max. @25°C 0.85 Max. @-40 to +105°C
Return Loss (dB)	10 Min.
<b>Attenuation</b>	
Frequency Range (MHz) Attenuation (dB)	4800 - 4964 30 Min.
Frequency Range (MHz) Attenuation (dB)	5150 - 6425 28 Min.
Frequency Range (MHz) Attenuation (dB)	7200 - 7446 35 Min.
Frequency Range (MHz) Attenuation (dB)	9600 - 9928 30 Min.
Frequency Range (MHz) Attenuation (dB)	12000 - 12410 40 Min.
Frequency Range (MHz) Attenuation (dB)	13840 - 17840 20 Min.
Frequency Range (MHz) Attenuation (dB)	14400 - 14892 30 Min.

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

**General Specifications (continued)**

Frequency Range (MHz)	16800 - 17374
Attenuation (dB)	30 Min.
Frequency Range (MHz)	17500 - 20000
Attenuation (dB)	27 Min.

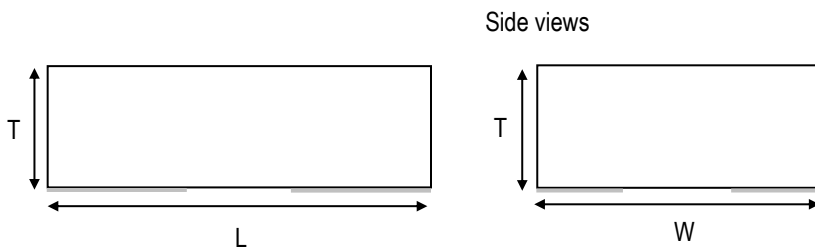
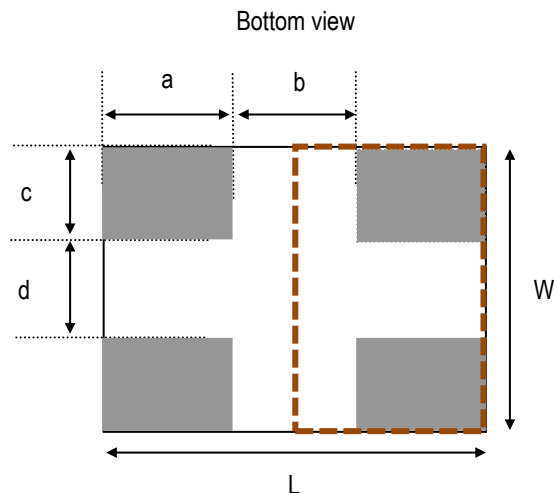
**Maximum Ratings**

Power Capacity (W)	3 Max. (CW)
Operating Temperature (°C)	-40 to +105
Recommended Storage Conditions Post-installation (°C)	-40 to +85
Recommended Storage Conditions and Period for Unused T&R Product <sup>2</sup>	45% - 75% RH +5 to +35 °C 18 Months Max.

<sup>2</sup> 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>.

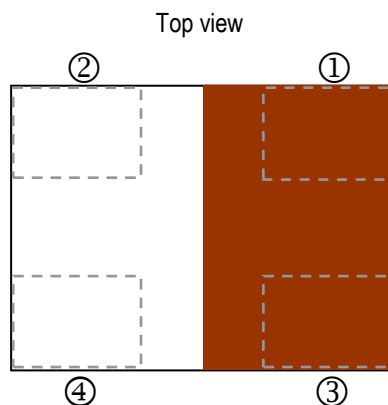
**Mechanical Dimensions**

	Inches		Millimeters	
<b>L</b>	0.027	Max.	0.675	Max.
<b>W</b>	0.021	Max.	0.53	Max.
<b>T</b>	0.010	Max.	0.25	Max.
<b>a</b>	0.009	+0.004/-0.002	0.225	+0.1/-0.05
<b>b</b>	0.008	+0.004/-0.002	0.20	+0.1/-0.05
<b>c</b>	0.006	+0.004/-0.002	0.15	+0.1/-0.05
<b>d</b>	0.008	+0.004/-0.002	0.20	+0.1/-0.05



**Terminal Configuration<sup>3</sup>**

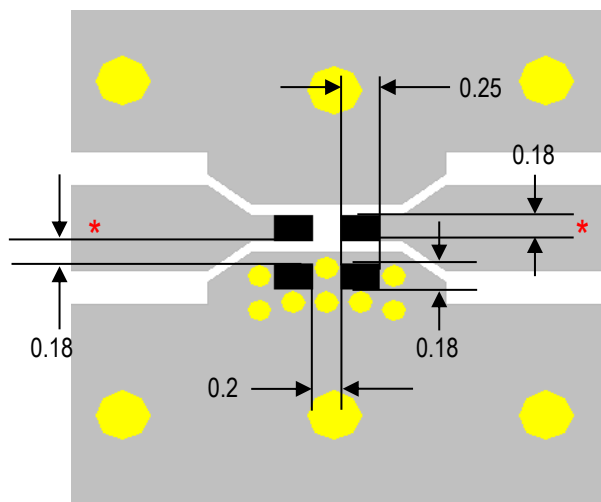
Pin Number	Function
1	INPUT/OUTPUT
2	INPUT/OUTPUT
3	GND
4	GND






<sup>3</sup> The termination type is Silver. Go to: <https://www.johansontechnology.com/ipcsoldering-profile> for Typical Soldering Profile. The recommended solder paste type is SAC305.

**Recommended PCB Layout**

Note: Mount device with colored mark facing up.



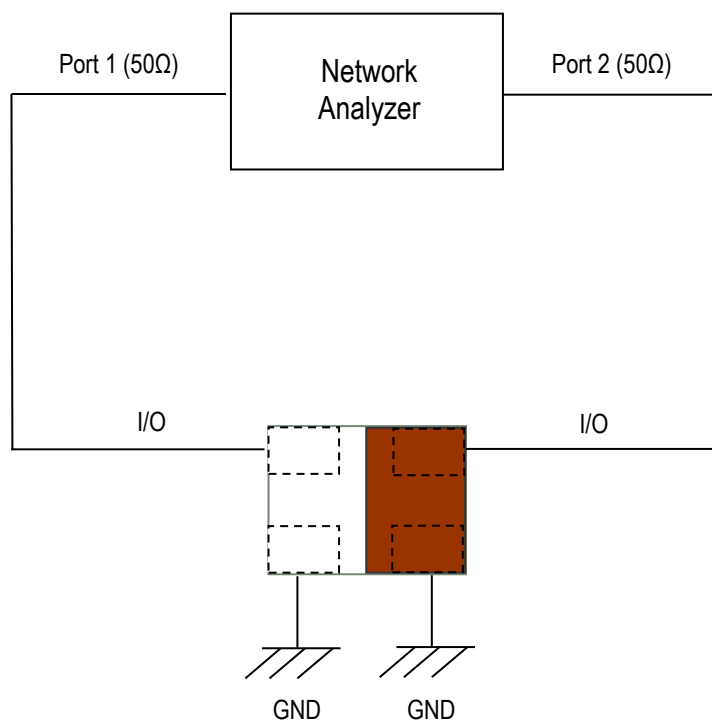
Units in mm

-  Solder Resist
-  Land
-  Through-hole ( $\phi 0.15/\phi 0.35$ )

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

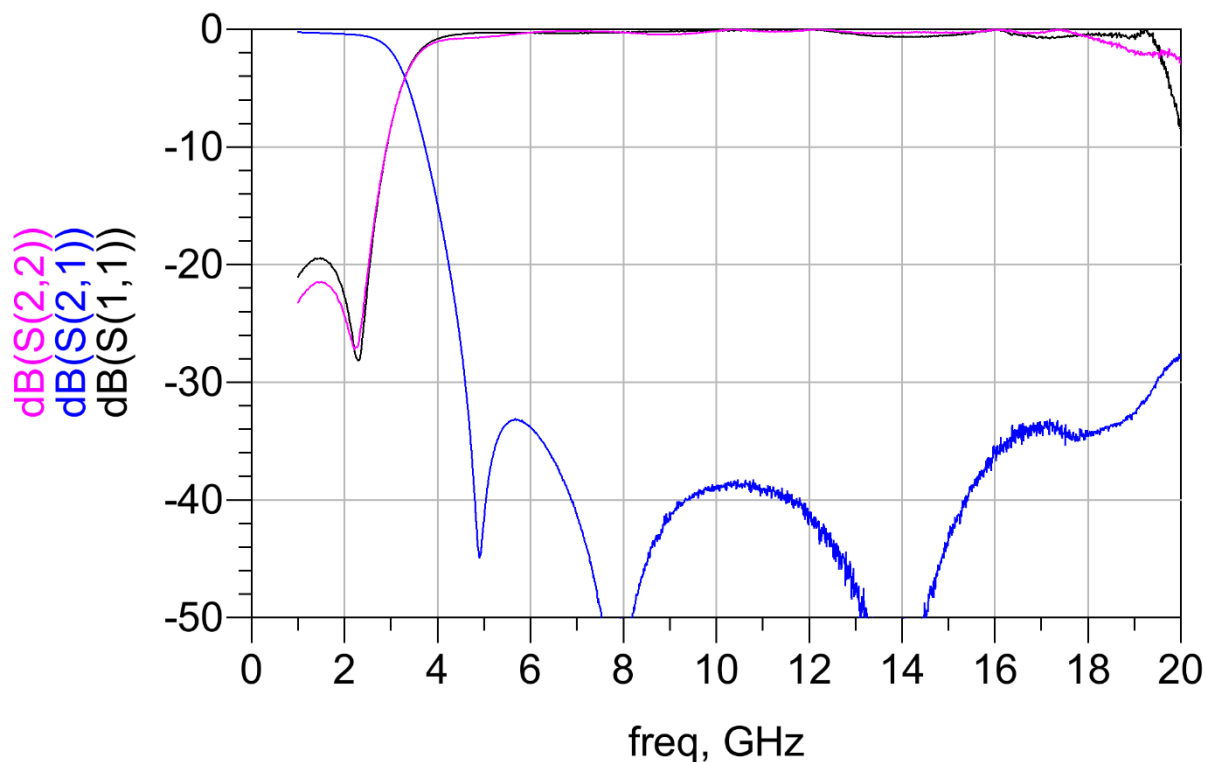
If you'd like the CAD PCB layout or have any questions, contact our application engineers at <https://www.johansontechnology.com/ask-a-question>

**Measuring Diagram**



**RF Measurement (T = 25°C)**

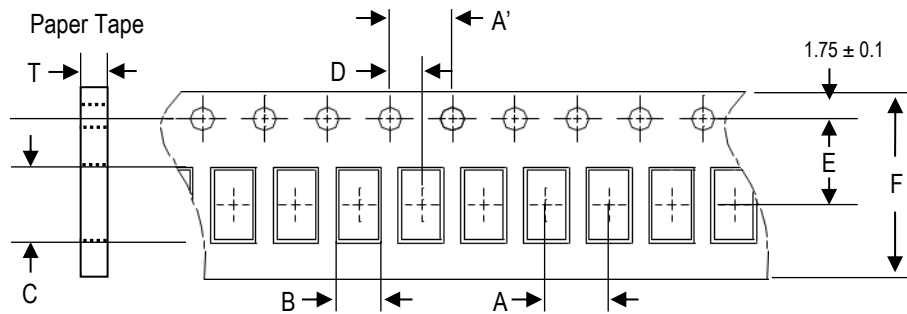
Insertion Loss, Return Loss, Attenuation



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

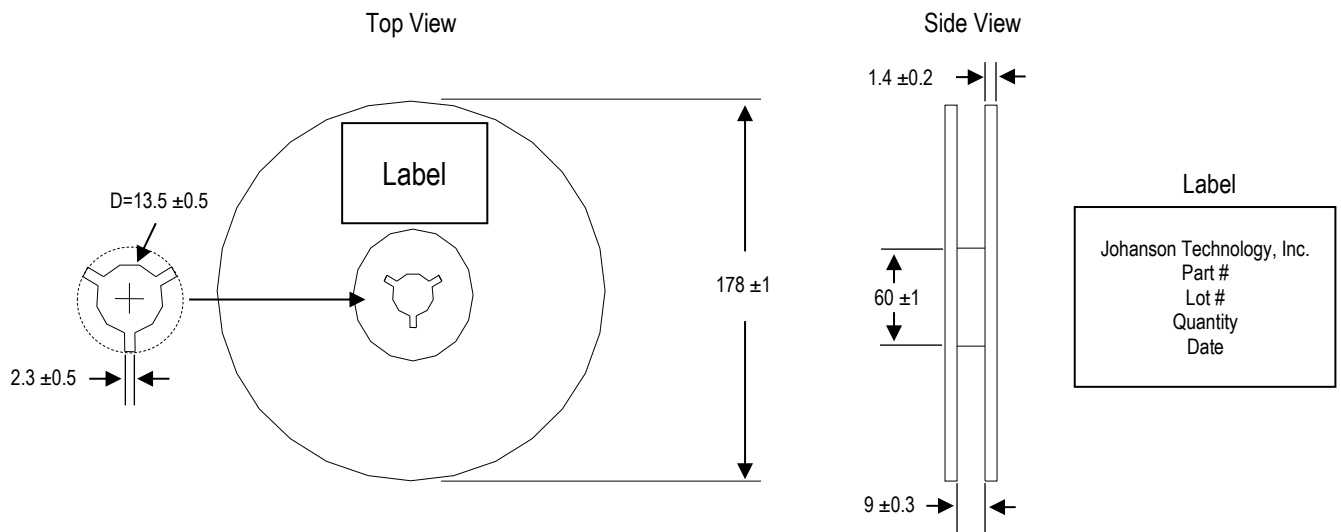
**Tape and Reel Specification (Units in mm)**

**Tape Dimensions**

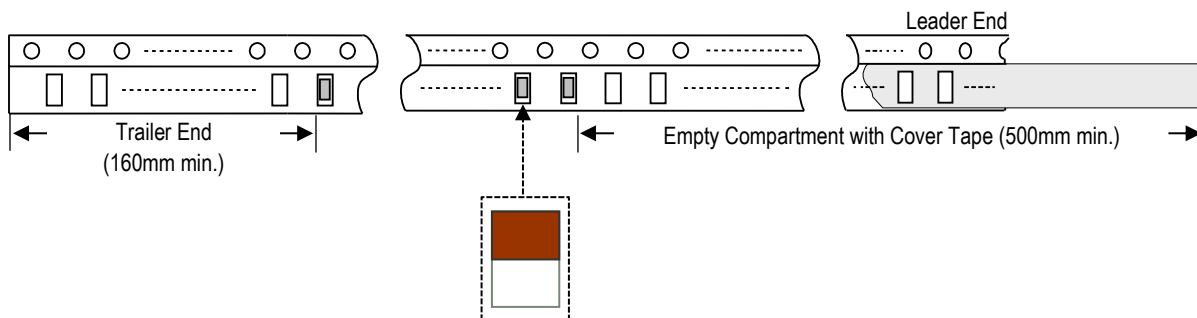


A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
2.0 ±0.05	4.0 ±0.1	0.58 ±0.03	0.78 ±0.03	2.0 ±0.05	3.5 ±0.05	8.0 ±0.2	0.33 ±0.03	10,000 pcs.	Paper

**Reel Dimensions**



**Leader and Trailer Dimensions**



**Orderable Part Number**

Packaging Style	Part Number	Termination
Bulk (loose pcs.)	2450FM05A0045001B	Silver
T & R (7" Reel Paper Tape)	2450FM05A0045001T (Qty: 10,000 pcs./reel)	

**Important Links**

[2450FM05A0045001T Product Page](#)

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[2.4GHz Antennas](#)

[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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