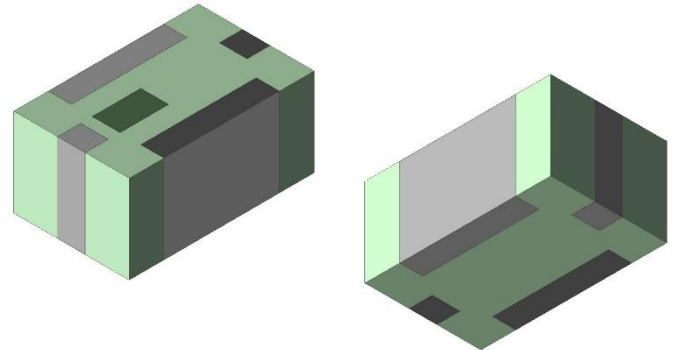


## 7.24 GHz Band Pass Filter, UWB

- 6240 - 8240 MHz passband
- High attenuation for bands outside passband
- Low loss and high out-of-band selectivity
- SMD, EIA 0805
- RoHS compliant and AEC-Q200 Qualified



### General Specifications<sup>1 2</sup>

Impedance ( $\Omega$ )	6240 - 8240 MHz		50
Insertion Loss (dB)	6240 - 8240 MHz	1.8 Typ.	2.5 Max.
Return Loss (dB)	6240 - 8240 MHz	11 Typ.	10 Min.
Group Delay (ns)	6240 - 8240 MHz	0.8 Typ.	3.0 Max.
Group Delay Ripple (ns)	6240 - 8240 MHz	0.5 Typ.	1.0 Max.
Attenuation (dB)	DC - 5200 MHz	38 Typ.	35 Min.
	2400 - 2500 MHz	43 Typ.	35 Min.
	5200 - 5860 MHz	19 Typ.	15 Min.
	9000 - 9500 MHz	28 Typ.	10 Min.
	9500 - 18000 MHz	32 Typ.	30 Min.

### Maximum Ratings

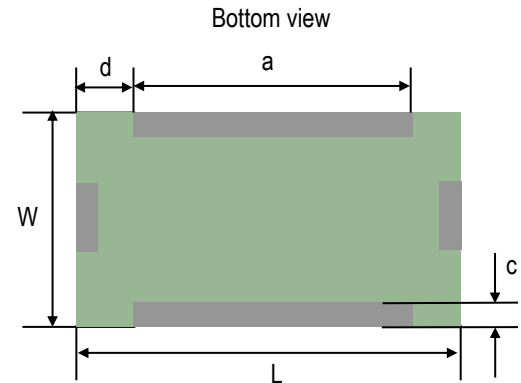
Power Capacity (W)	3 Max. (CW)
Operating Temperature ( $^{\circ}\text{C}$ )	-40 to +105
Recommended Storage Conditions post-installation ( $^{\circ}\text{C}$ )	-40 to +105
Recommended Storage Conditions and Period for Unused T&R Product	45% - 60% RH +5 to +35 18 Months Max.

<sup>1</sup> Typical value represents average measurement at 25 $^{\circ}\text{C}$ . Min./Max. values represent measurements over specified operating temperature.

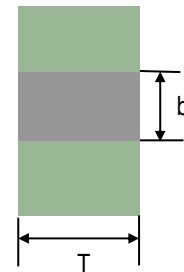
<sup>2</sup> General specifications measured on Johanson's evaluation board P/N 7240BP15B2000001CE1.

**Mechanical Dimensions**

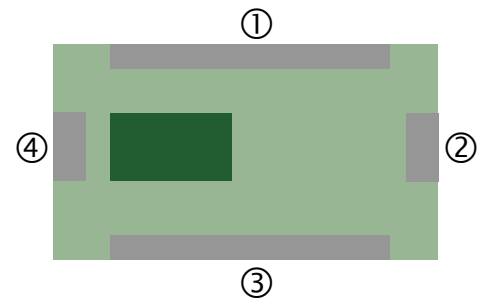
	Inches			Millimeters		
<b>L</b>	0.079	±	0.006	2.00	±	0.15
<b>W</b>	0.049	±	0.004	1.25	±	0.10
<b>T</b>	0.037	±	0.004	0.95	±	0.10
<b>a</b>	0.049	±	0.006	1.25	±	0.15
<b>b</b>	0.012	±	0.006	0.30	±	0.15
<b>c</b>	0.010	±	0.006	0.25	±	0.15
<b>d</b>	0.014	±	0.006	0.35	±	0.15



Side view



Top view



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

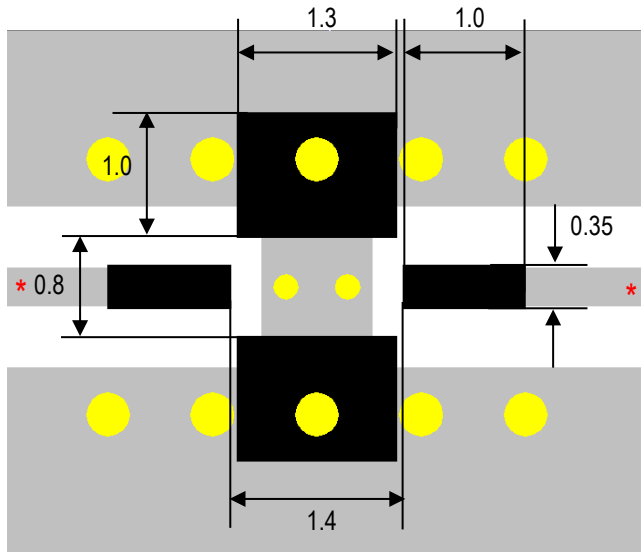
Pin Number	Function
1	GND
2	INPUT/OUTPUT
3	GND
4	INPUT/OUTPUT

<sup>3</sup> The termination type is Nickel Tin. Go to: <https://www.johansontechnology.com/ipcsoldering-profile> for Typical Soldering Profile.



**Recommended PCB Layout**

Note: Mount device with colored mark facing up.



Units in mm

Solder Resist

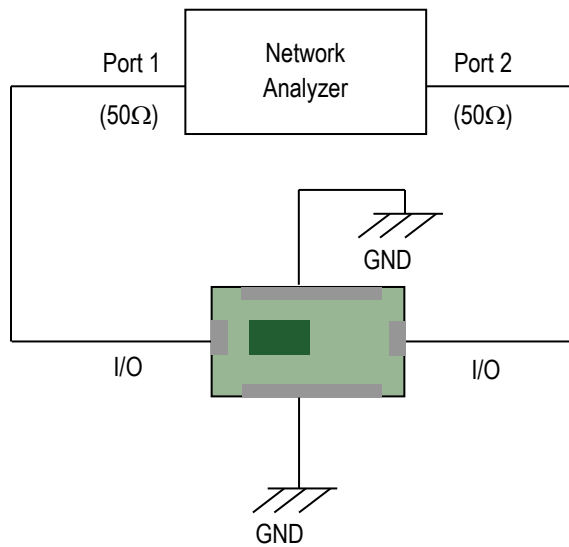
Land

Through-hole ( $\phi 0.2/\phi 0.35$ )

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

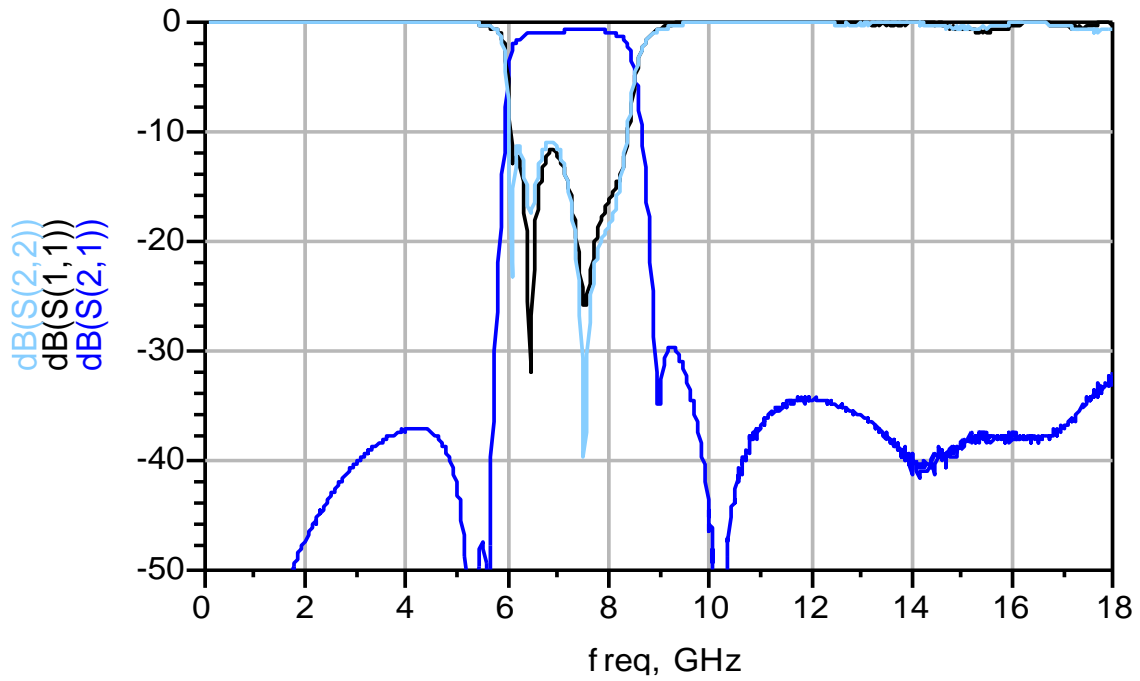
If you'd like the CAD PCB layout or have any questions, contact our application engineers at <https://www.johansontechnology.com/ask-a-question>

**Measuring Diagram**

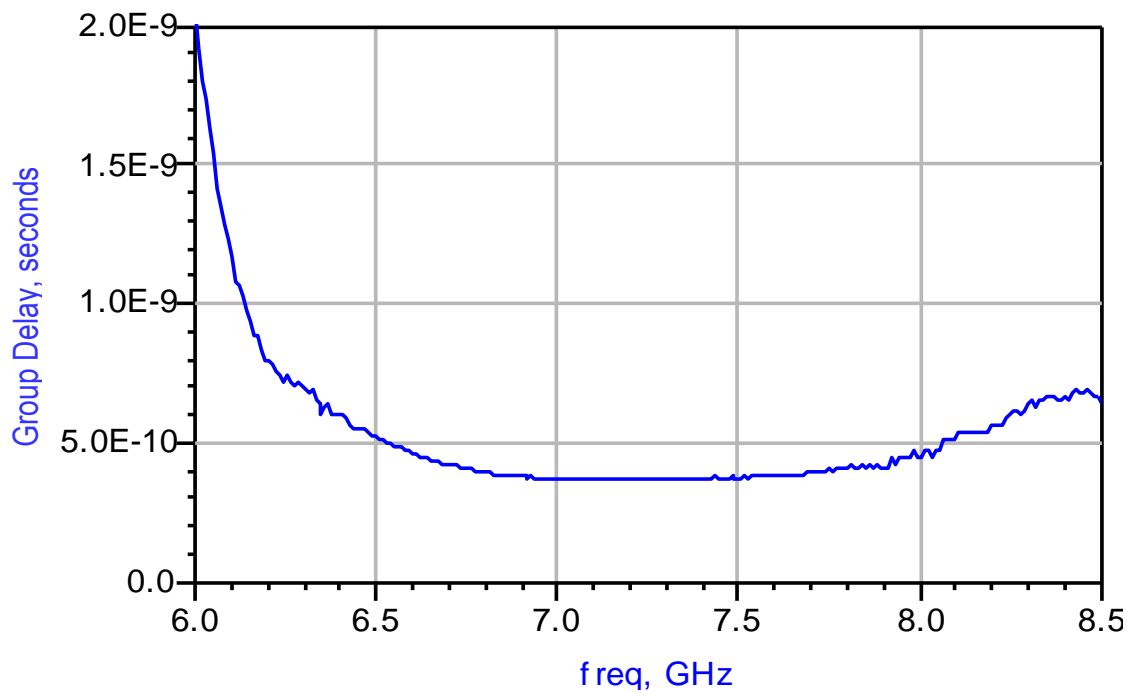


**RF Measurement (T = 25°C)**

Insertion Loss, Return Loss, Attenuation



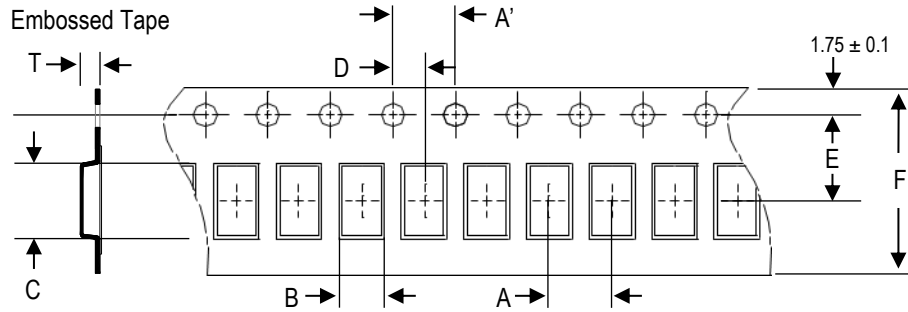
**Group Delay**



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

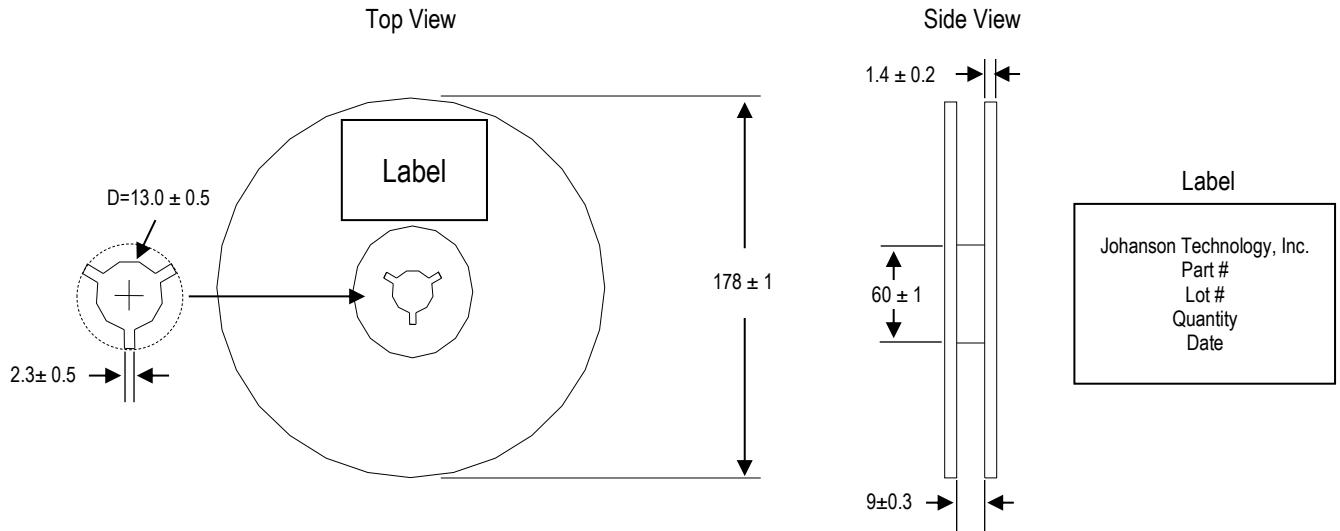
**Tape and Reel Specification (Units in mm)**

**Tape Dimensions**

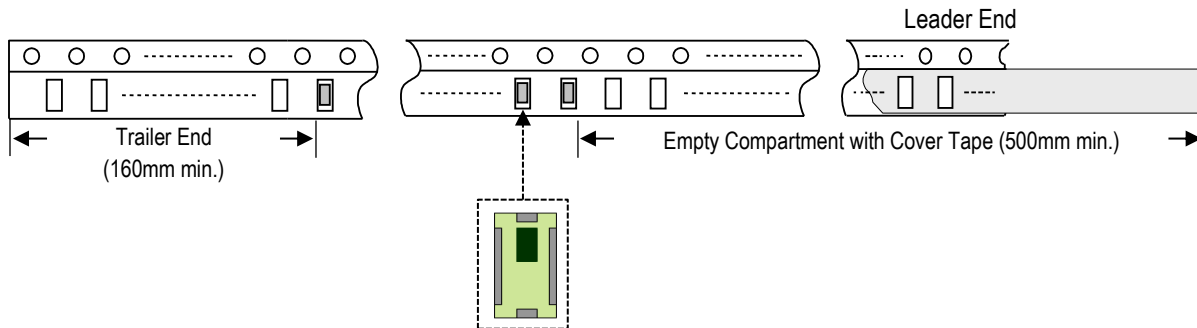


A	A'	B	C	D	E	F	T	Quantity/reel	Tape material
4.0±0.1	4.0±0.1	1.35±0.05	2.15±0.05	2.0±0.05	3.5±0.1	8.0±0.1	1.08±0.05	4,000pcs.	Plastic (Embossed)

**Reel Dimensions**



**Leader and Trailer Dimensions**



**Orderable Part Number**

Packaging Style	Part Number	Termination
Bulk (loose pcs.)	7240BP15B2000002B	Nickel Tin
T & R (7" Reel Embossed Tape)	7240BP15B2000002E (Qty: 4,000 pcs/reel)	
Evaluation Board with 2 SMA Connectors	7240BP15B2000001CE1	

**Important Links**

[7240BP15B2000002E Product Page](#)

[More Band Pass Filters](#)

[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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