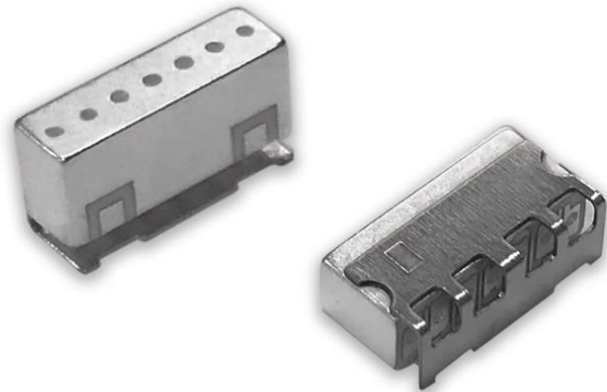


## 5.5 GHz WiFi 6E/7 Coexistence Filter

- Dielectric Resonator Type Filter
- 5150 - 5835 MHz pass band
- Low insertion loss
- High attenuation of WiFi 6 GHz band
- 1W power capacity
- SMD type (9.4 x 5.6 x 3.0 mm)
- -40°C to +100°C operating temperature range
- RoHS compliant



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

Insertion Loss (dB)	5150 - 5750 MHz	1.3 Typ.	2.0 Max.
	5750 - 5835 MHz	2.0 Typ.	2.5 Max.
Return Loss (dB)	5150 - 5750 MHz	12 Typ.	10 Min.
	5750 - 5835 MHz		
Ripple (dB)	5150 - 5750 MHz	1.1 Typ.	1.8 Max.
	5750 - 5835 MHz	1.2 Typ.	
Attenuation (dB)	0 - 2500 MHz		50 Min.
	2500 - 4000 MHz		40 Min.
	5945 - 5995 MHz		45 Min.
	6095 - 7125 MHz		53 Min.

### Maximum Ratings

Power Capacity (W)	1 Max. (CW)
Operating Temperature (°C)	-40 to +100
Recommended Storage Conditions post-installation (°C)	-40 to +100
Recommended Storage Conditions and Period for Unused T&R Product <sup>3</sup>	45% - 75% RH +5 to +35 °C 6 Months Max.

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

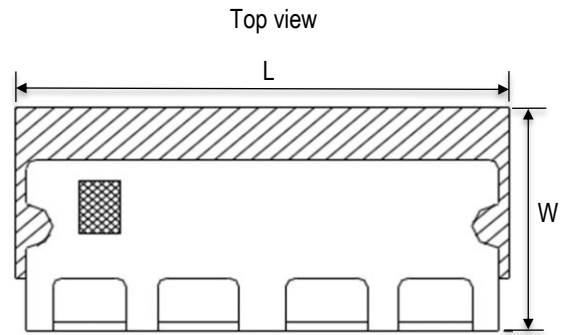
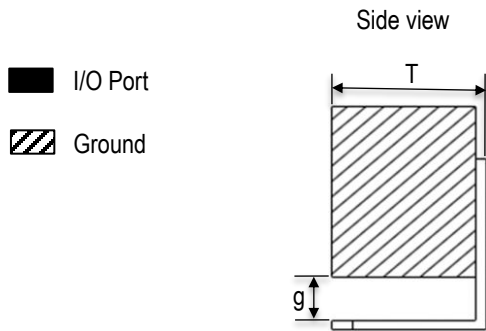
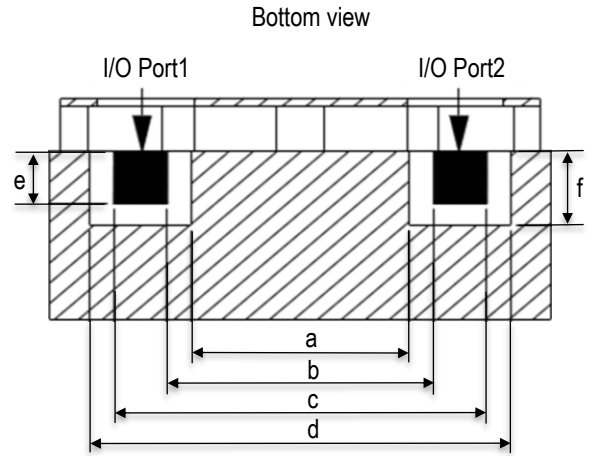
<sup>2</sup> General specifications measured on Johanson's evaluation board P/N 5492BP49A0685001CE1.

<sup>3</sup> 6 months max. in vacuum sealed bag and 1 week after opened. Please keep unused parts in vacuum sealed bags. If products are stored for more than 6 months, check for possible degradation in solderability. Please confirm solderability and characteristics of the products regularly.



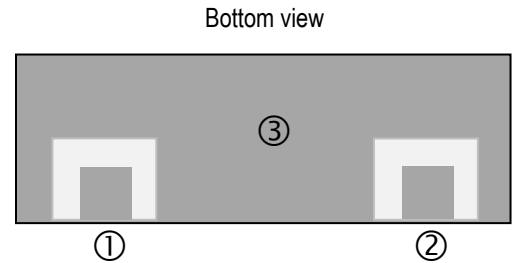
**Mechanical Dimensions**

	Inches			Millimeters		
<b>L</b>	0.370	±	0.008	9.40	±	0.2
<b>W</b>	0.220		Max.	5.60		Max.
<b>T</b>	0.118	±	0.008	3.00	±	0.2
<b>a</b>	0.161	±	0.008	4.10	±	0.2
<b>b</b>	0.197	±	0.008	5.00	±	0.2
<b>c</b>	0.276	±	0.008	7.00	±	0.2
<b>d</b>	0.311	±	0.008	7.90	±	0.2
<b>e</b>	0.045	±	0.008	1.15	±	0.2
<b>f</b>	0.065	±	0.008	1.65	±	0.2
<b>g</b>	0.039	±	0.008	1.00	±	0.2



**Terminal Configuration<sup>4</sup>**

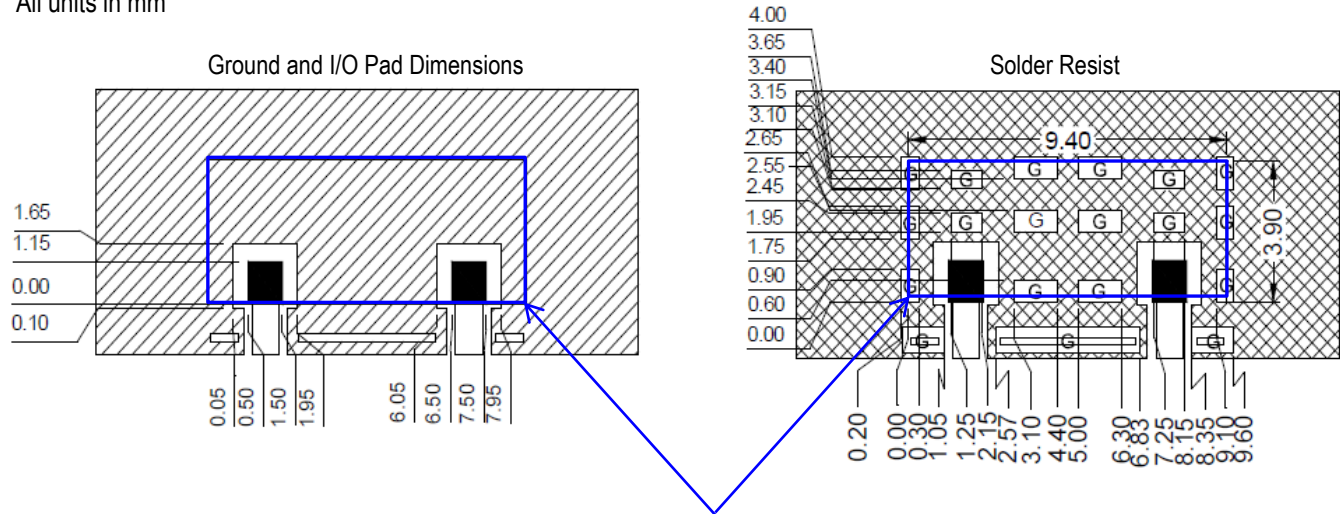
Pin Number	Function
1	INPUT/OUTPUT
2	INPUT/OUTPUT
3	GND







<sup>4</sup> The termination type is Nickel Tin. Go to: <https://www.johansontechnology.com/ipcsoldering-profile> for Typical Soldering Profile.

**Recommended PCB Layout**

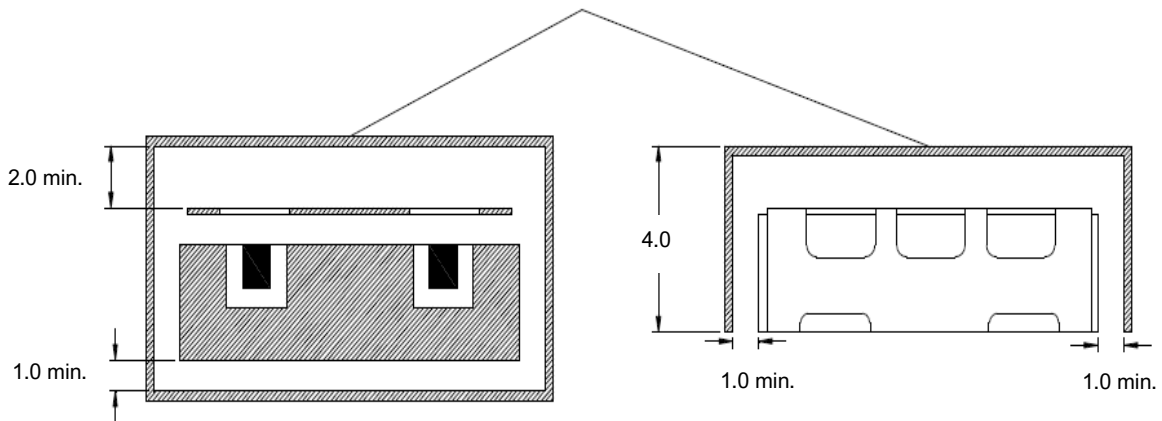
All units in mm



Blue rectangle represents the filter mounted onto PCB.

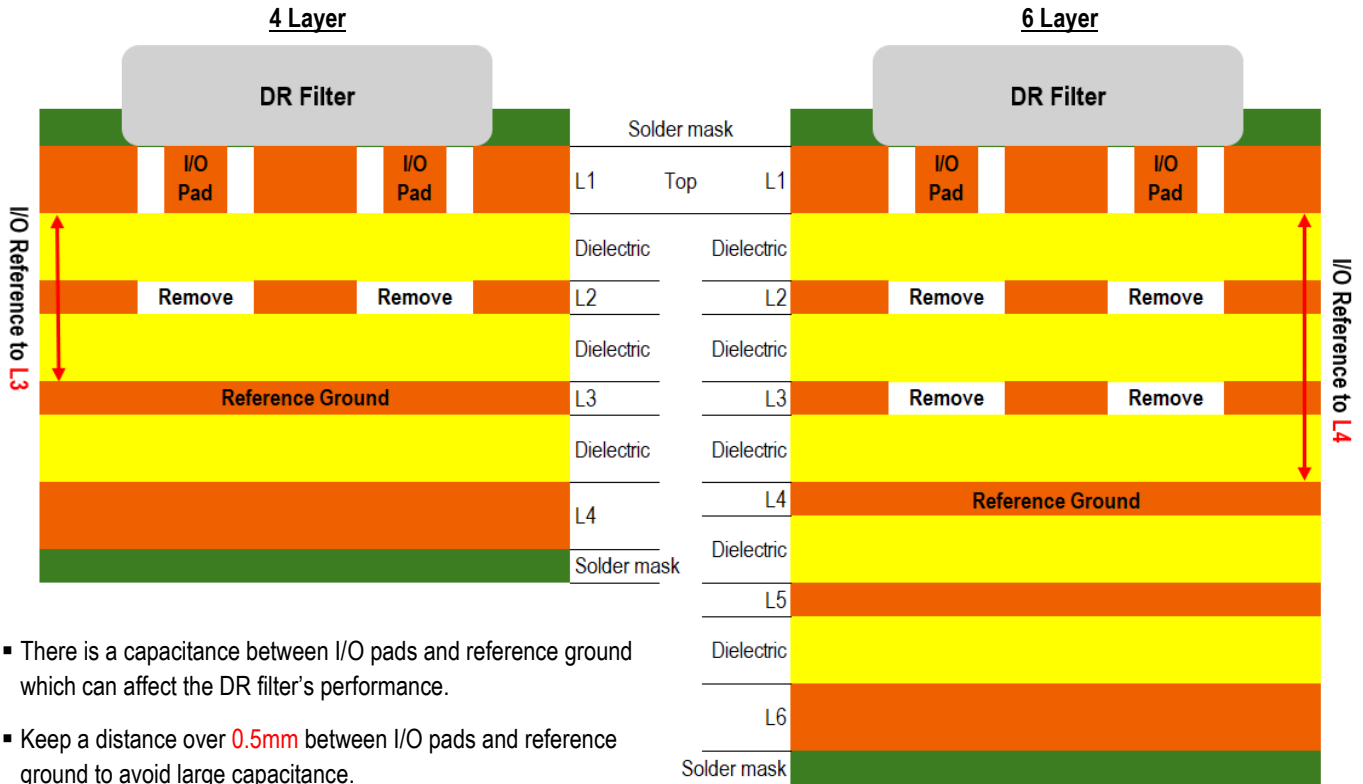
-  I/O (Solder land)
-  Ground
-  Solder Resist Mask
-  Ground Pad

**Shielding case**

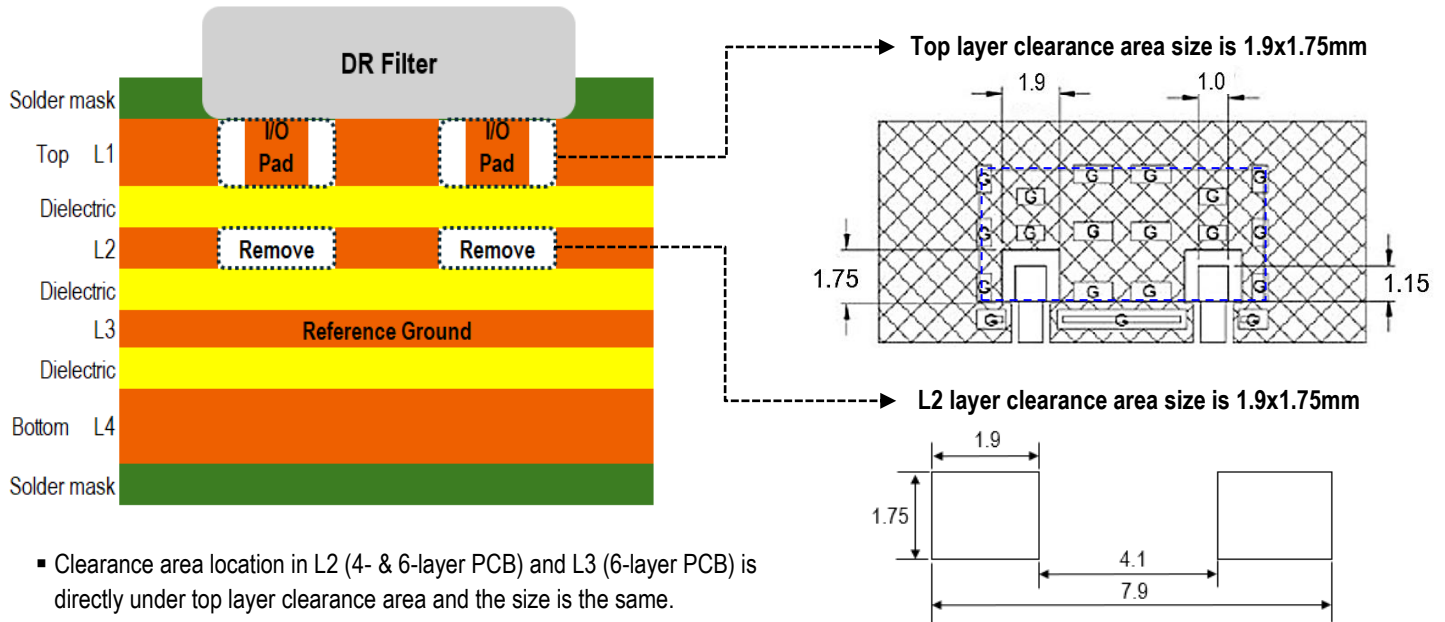


If you'd like the CAD PCB layout or have any questions, contact our application engineers at <https://www.johansontechnology.com/ask-a-question>

**PCB Layers**



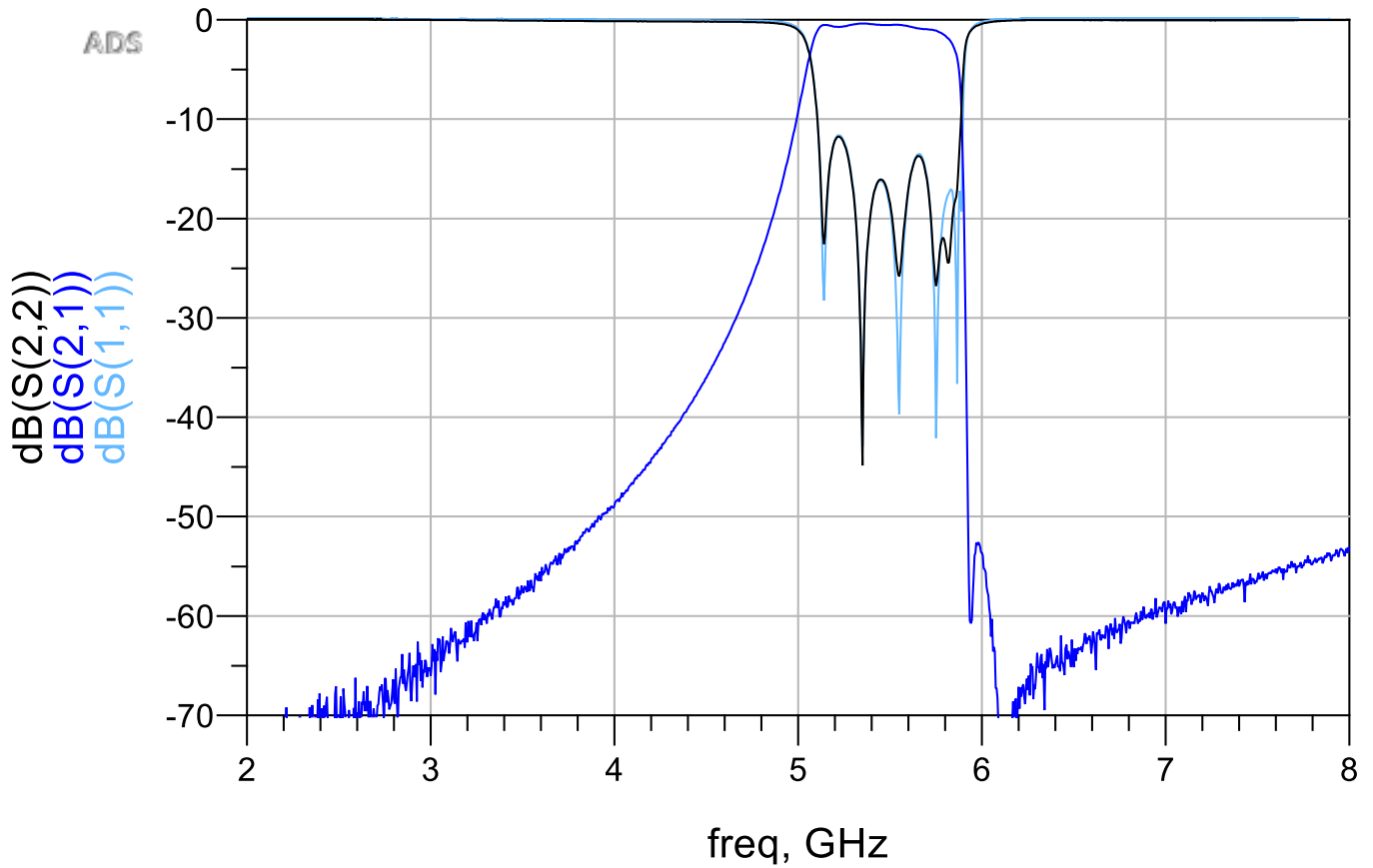
- There is a capacitance between I/O pads and reference ground which can affect the DR filter's performance.
- Keep a distance over **0.5mm** between I/O pads and reference ground to avoid large capacitance.



- Clearance area location in L2 (4- & 6-layer PCB) and L3 (6-layer PCB) is directly under top layer clearance area and the size is the same.
- Reference ground under DR filter should avoid fragmented plane.

**RF Measurement (T = 25°C)**

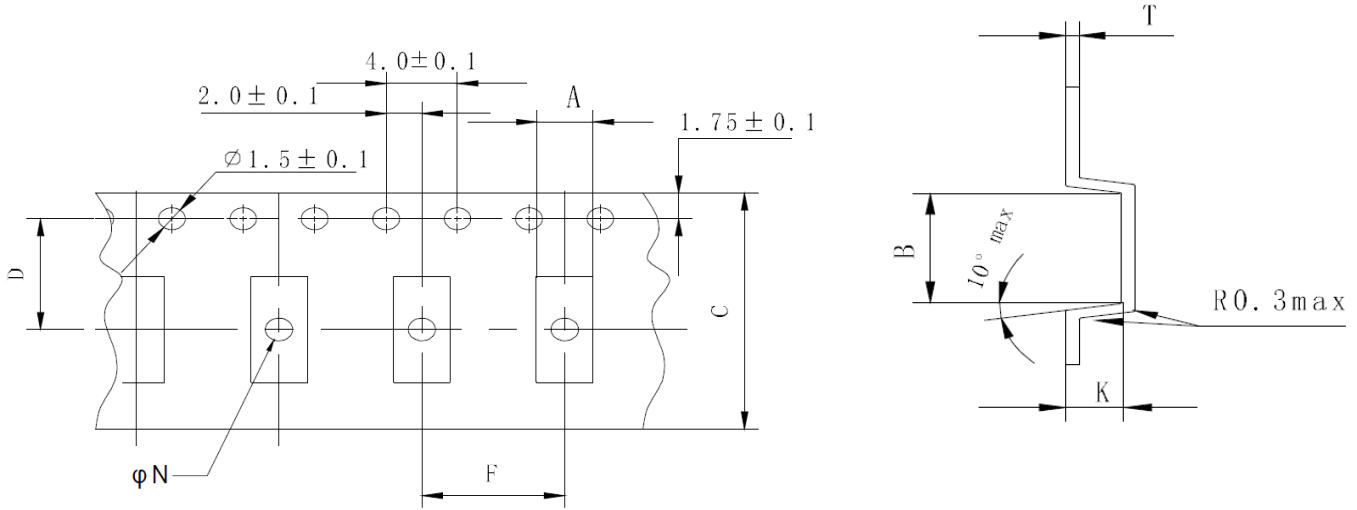
Insertion Loss, Return Loss



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

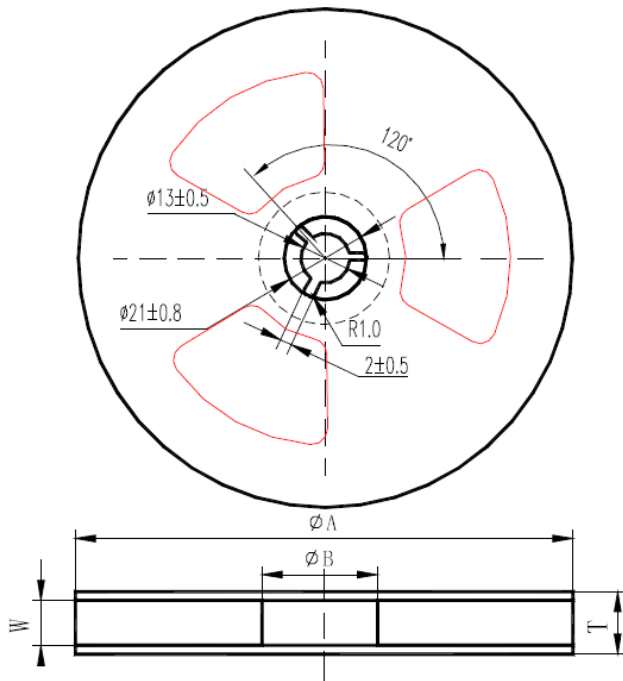
**Tape and Reel Specification (Units in mm)**

**Tape Dimensions**



A	B	C	D	F	K	T	$\phi N$	Quantity/reel	Tape material
5.7±0.2	10.0±0.2	24.0±0.2	11.5±0.15	12.0±0.1	3.3±0.1	0.40±0.05	1.55±0.05	1,500pcs.	Plastic (Embossed)

**Reel Dimensions**



**Label**

Johanson Technology, Inc. Part # Lot # Quantity Date
--

$\phi A$	$\phi B$	W	T
330±3	80 Min.	24 Min.	26 Min.

**Ordering Information**

Packaging Style	Part Number	Termination
Bulk (loose pcs.)	5492BP49A0685001B	Nickel Tin
T & R (13" Reel Embossed Tape)	5492BP49A0685001U (Qty: 1,500 pcs./reel)	
Evaluation Board with 2 SMA Connectors	5492BP49A0685001CE1	

**Important Links**

[5492BP49A0685001U Product Page](#)

[More Band Pass Filters](#)

[Antenna Tuning, Optimization, and Validation Services](#)

[Soldering Information](#)

[MSL Information](#)

[Packaging Information](#)

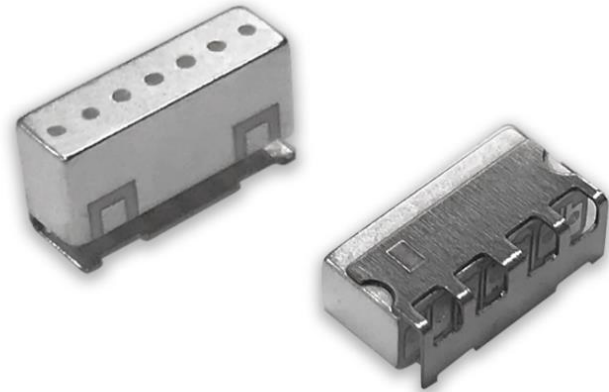
[Recommended Storage Condition and Max Shelf Life](#)

[RoHS Compliance](#)

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## 6.5 GHz WiFi 6E/7 Coexistence Filter

- Dielectric Resonator Type Filter
- 5925 - 7125 MHz pass band
- Low insertion loss
- High attenuation of Wi-Fi 5 GHz band
- 1W power capacity
- SMD type (9.4 x 4.6 x 3.0 mm)
- -40°C to +100°C operating temperature range
- RoHS compliant



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

Insertion Loss (dB)	5925 - 5945 MHz	3.3 Typ.	4.0 Max.
	5945 - 5955 MHz	2.6 Typ.	3.0 Max.
	5955 - 7125 MHz	2.3 Typ.	2.7 Max.
Return Loss (dB)	5925 - 5945 MHz	11 Typ.	10 Min.
	5945 - 5955 MHz		
	5955 - 7125 MHz		
Ripple (dB)	5925 - 5955 MHz	1.8 Typ.	2.0 Max.
	5955 - 6095 MHz		2.2 Max.
	6095 - 7125 MHz		2.5 Max.
Attenuation (dB)	500 - 5640 MHz	50 Min.	
	5640 - 5835 MHz	45 Min.	

### Maximum Ratings

Power Capacity (W)	1 Max. (CW)
Operating Temperature (°C)	-40 to +100
Recommended Storage Conditions post-installation (°C)	-40 to +100
Recommended Storage Conditions and Period for Unused T&R Product <sup>3</sup>	45% - 75% RH +5 to +35 °C 6 Months Max.

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

<sup>2</sup> General specifications measured on Johanson's evaluation board P/N 6525BP49A1200001CE1.

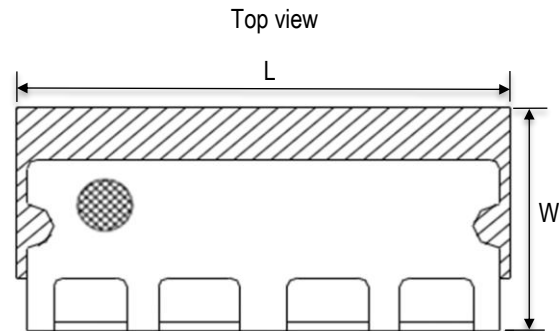
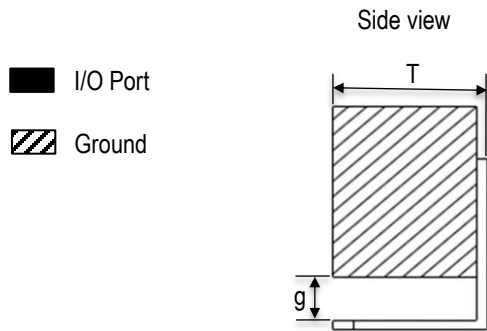
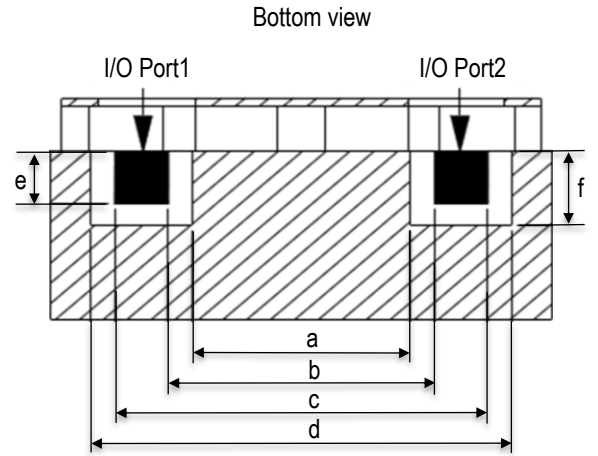
<sup>3</sup> 6 months max. in vacuum sealed bag and 1 week after opened. Please keep unused parts in vacuum sealed bags. If products are stored for more than 6 months, check for possible degradation in solderability. Please confirm solderability and characteristics of the products regularly.





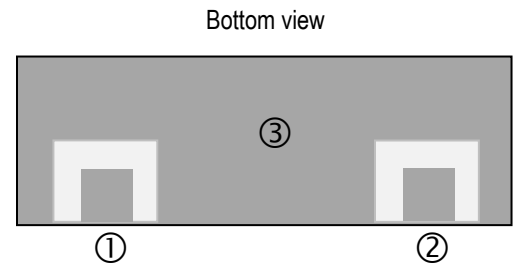
**Mechanical Dimensions**

	Inches			Millimeters		
<b>L</b>	0.370	±	0.008	9.40	±	0.2
<b>W</b>	0.181		Max.	4.60		Max.
<b>T</b>	0.118	±	0.008	3.00	±	0.2
<b>a</b>	0.161	±	0.008	4.10	±	0.2
<b>b</b>	0.197	±	0.008	5.00	±	0.2
<b>c</b>	0.276	±	0.008	7.00	±	0.2
<b>d</b>	0.311	±	0.008	7.90	±	0.2
<b>e</b>	0.045	±	0.008	1.15	±	0.2
<b>f</b>	0.065	±	0.008	1.65	±	0.2
<b>g</b>	0.039	±	0.008	1.00	±	0.2



**Terminal Configuration<sup>4</sup>**

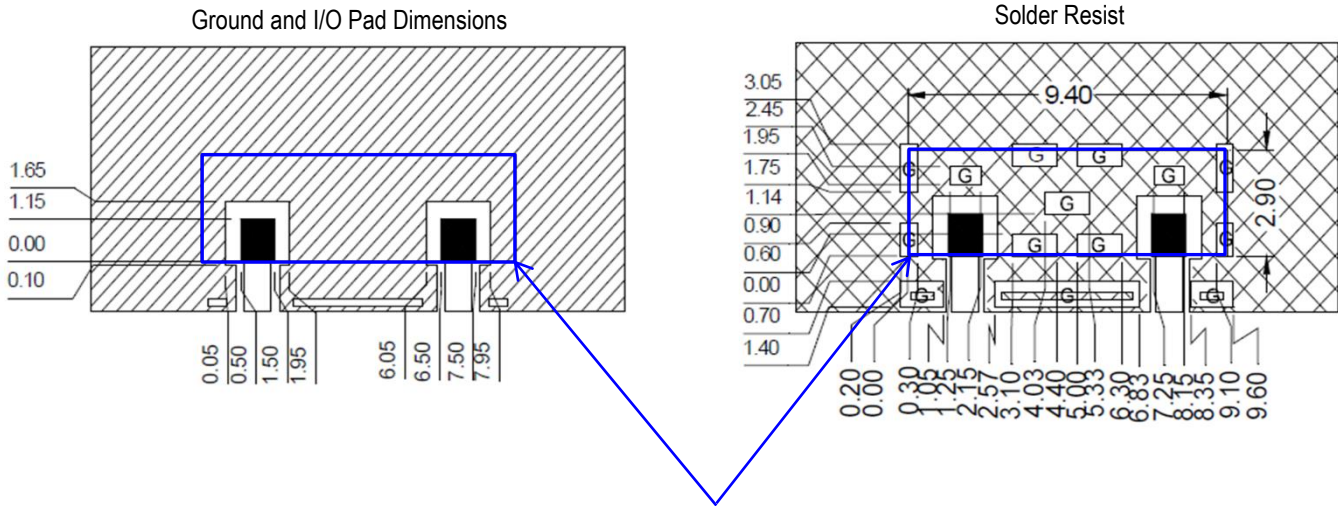
Pin Number	Function
1	INPUT/OUTPUT
2	INPUT/OUTPUT
3	GND







<sup>4</sup> The termination type is Nickel Tin. Go to: <https://www.johansontechnology.com/ipcsoldering-profile> for Typical Soldering Profile.

**Recommended PCB Layout**

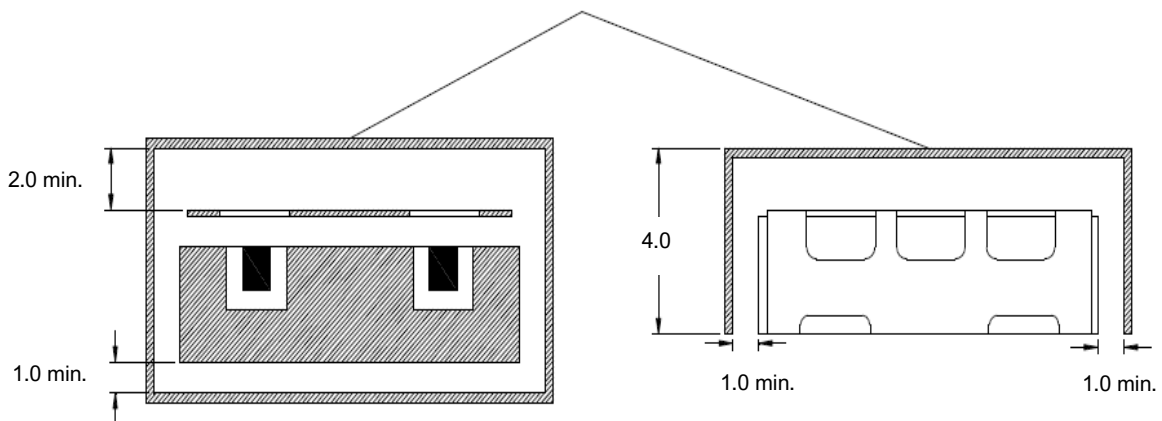
All units in mm



Blue rectangle represents the filter mounted onto pattern

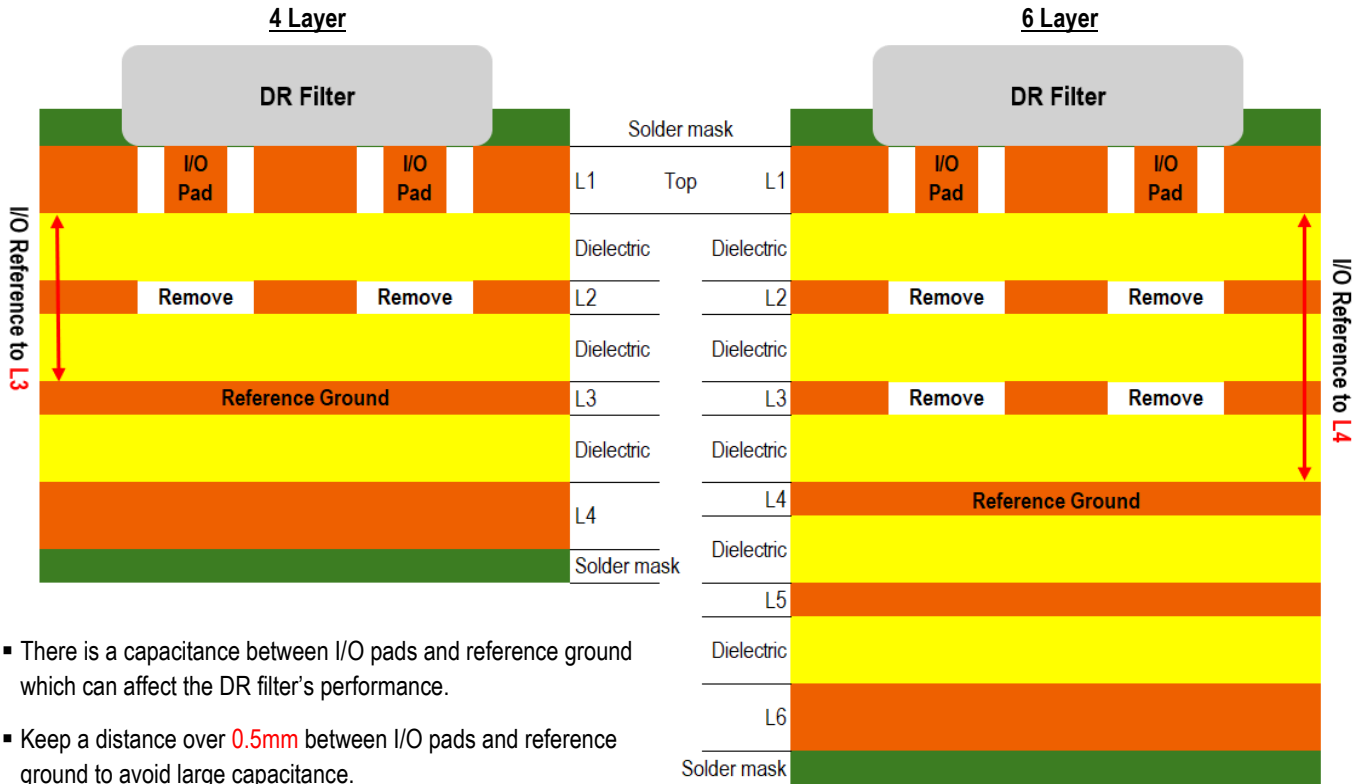
-  I/O (Solder land)
-  Ground
-  Solder Resist Mask
-  Ground Pad

**Shielding case**

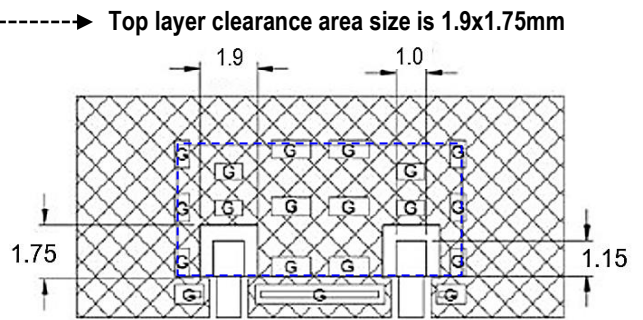
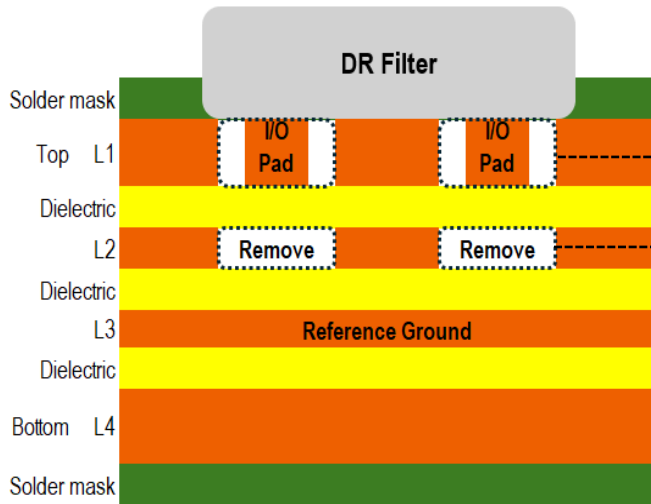


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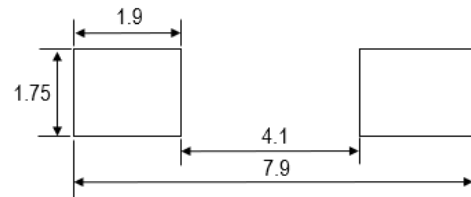
**PCB Layers**



- There is a capacitance between I/O pads and reference ground which can affect the DR filter's performance.
- Keep a distance over **0.5mm** between I/O pads and reference ground to avoid large capacitance.



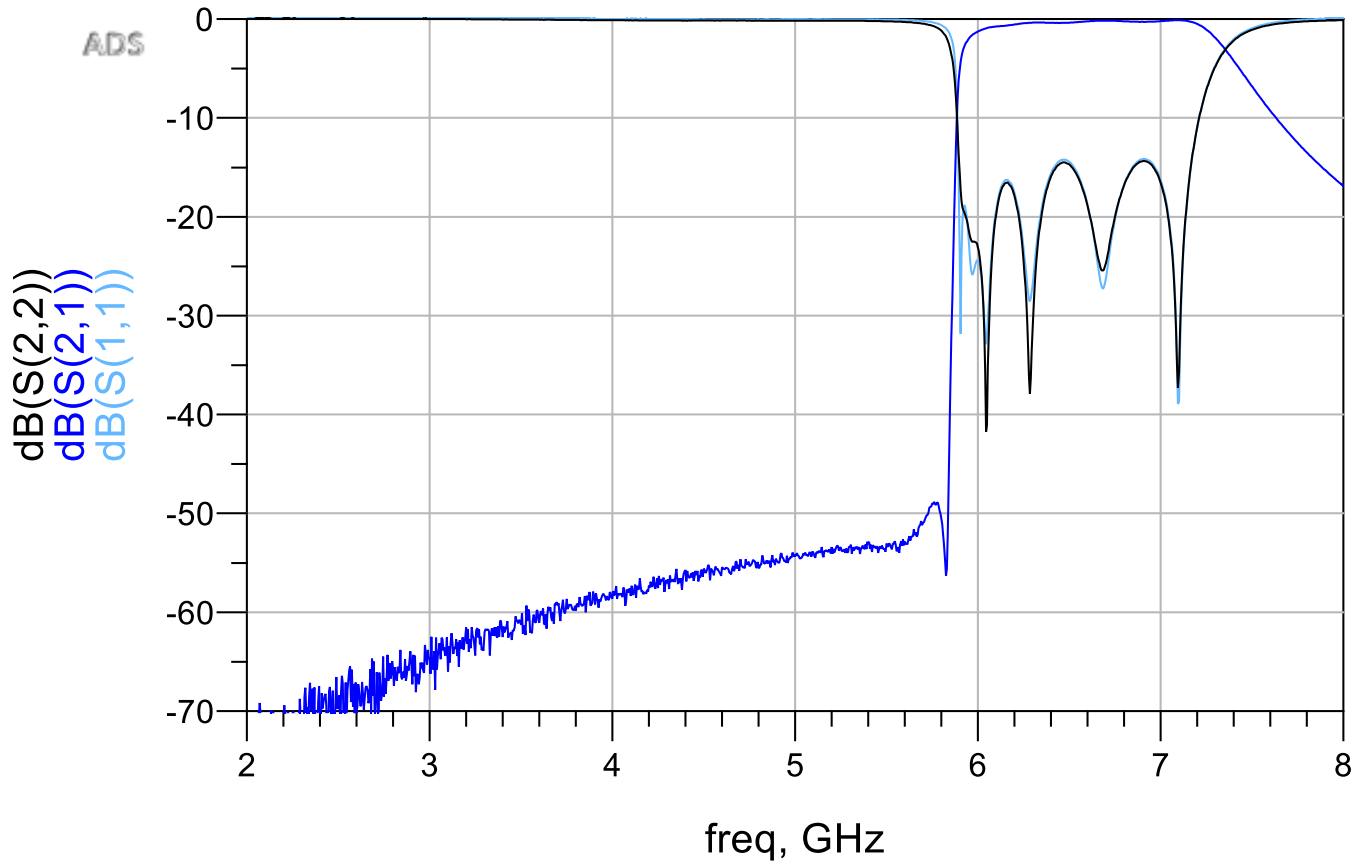
**L2 layer clearance area size is 1.9x1.75mm**



- Clearance area location in L2 (4- & 6-layer PCB) and L3 (6-layer PCB) is directly under top layer clearance area, and the size is the same.
- Reference ground under DR filter should avoid fragmented plane.

**RF Measurement (T = 25°C)**

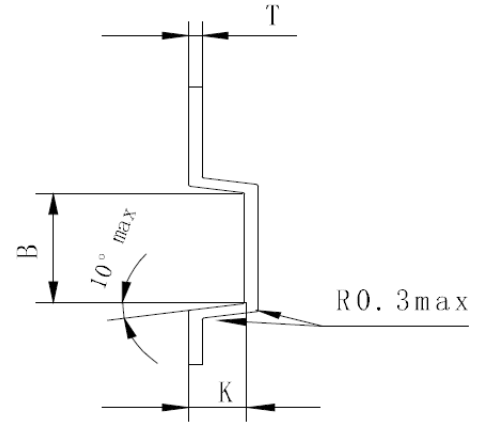
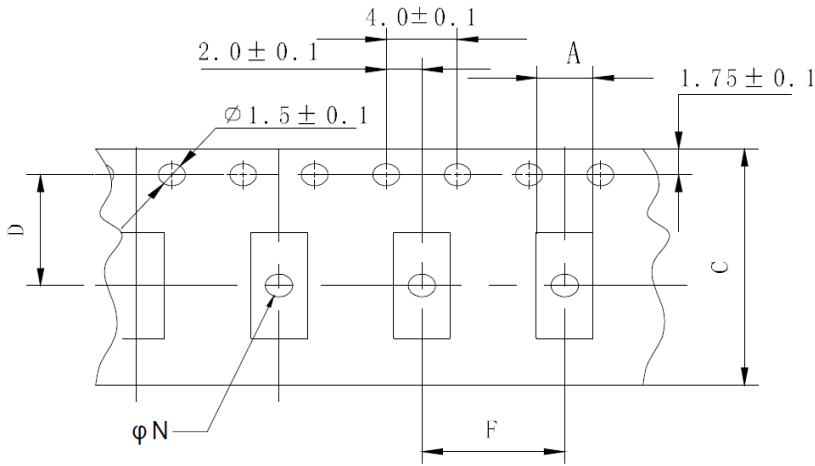
Insertion Loss, Return Loss



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

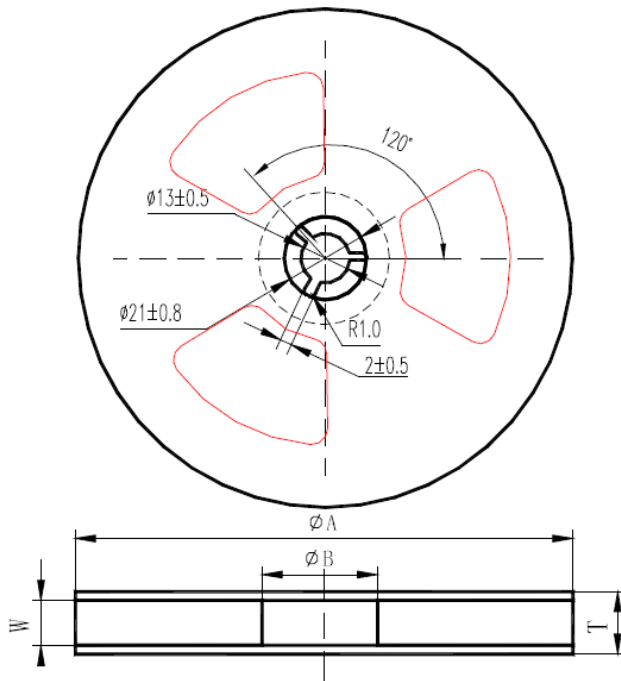
**Tape and Reel Specification (Units in mm)**

**Tape Dimensions**



A	B	C	D	F	K	T	$\phi N$	Quantity/reel	Tape material
5.7±0.2	10.0±0.2	24.0±0.2	11.5±0.15	12.0±0.1	3.3±0.1	0.40±0.05	1.55±0.05	1,500pcs.	Plastic (Embossed)

**Reel Dimensions**



**Label**

Johanson Technology, Inc. Part # Lot # Quantity Date
--

$\phi A$	$\phi B$	W	T
330±3	80 Min.	24 Min.	26 Min.

**Ordering Information**

Packaging Style	Part Number	Termination
Bulk (loose pcs.)	6525BP49A1200001B	Nickel Tin
T & R (13" Reel Embossed Tape)	6525BP49A1200001U (Qty: 1,500 pcs./reel)	
Evaluation Board with 2 SMA Connectors	6525BP49A1200001CE1	

**Important Links**

[6525BP49A1200001U Product Page](#)

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