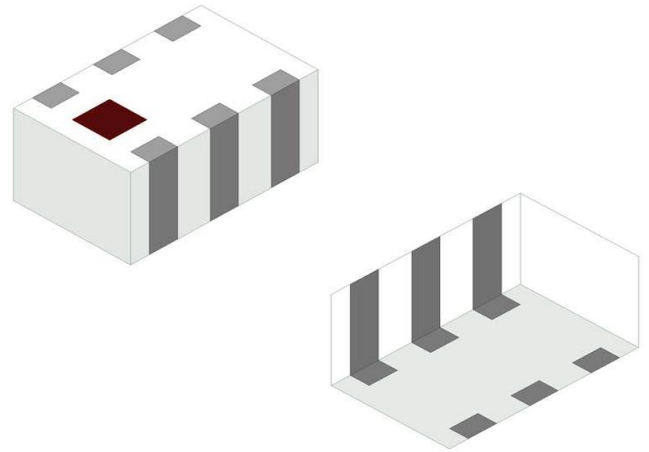


## 2.45 GHz Low Pass Filter

- 2.4 - 2.5 GHz passband
- Fit for wireless communication systems
- Low insertion loss
- SMD, EIA 0603
- RoHS compliant



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

|                     |                 |                                      |
|---------------------|-----------------|--------------------------------------|
| Insertion Loss (dB) | 2400 - 2500 MHz | 0.5 Max. (+85°C)<br>0.7 Max (+105°C) |
| Return Loss (dB)    | 2400 - 2500 MHz | 14 Min.                              |
| Attenuation (dB)    | 4800 - 5000 MHz | 35 Min.                              |
|                     | 7200 - 7500 MHz | 25 Min.                              |

### Maximum Ratings

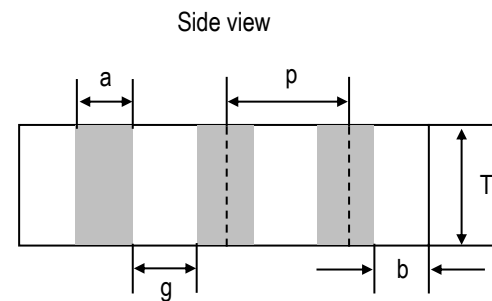
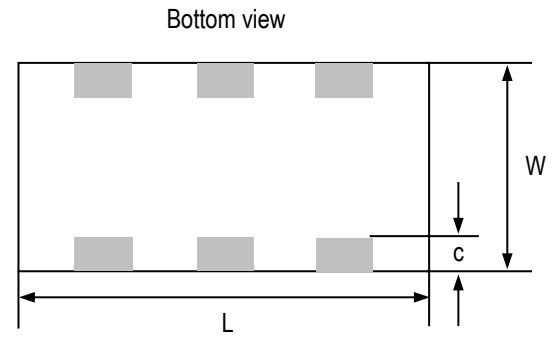
|  |  |
|--|--|
| Power Capacity (W)   | 3 Max. (CW)                                    |
| Operating Temperature (°C)                                       | -40 to +105                                    |
| Recommended Storage Conditions post-installation (°C)            | -40 to +105                                    |
| Recommended Storage Conditions and Period for Unused T&R Product | 45% - 75% RH<br>+5 to +35 °C<br>18 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 PN 2450LP14B0100001CE1.

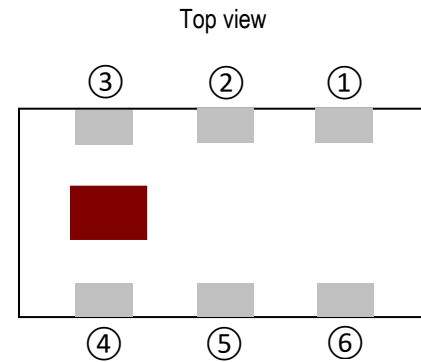
**Mechanical Dimensions**

|          | Inches |               |       | Millimeters |             |      |
|----------|--------|---------------|-------|-------------|-------------|------|
| <b>L</b> | 0.063  | ±             | 0.004 | 1.60        | ±           | 0.10 |
| <b>W</b> | 0.031  | ±             | 0.004 | 0.80        | ±           | 0.10 |
| <b>T</b> | 0.024  | ±             | 0.004 | 0.60        | ±           | 0.10 |
| <b>a</b> | 0.008  | ±             | 0.004 | 0.20        | ±           | 0.10 |
| <b>b</b> | 0.008  | +0.004/-0.006 |       | 0.20        | +0.10/-0.15 |      |
| <b>c</b> | 0.006  | ±             | 0.004 | 0.15        | ±           | 0.10 |
| <b>g</b> | 0.012  | ±             | 0.004 | 0.30        | ±           | 0.10 |
| <b>p</b> | 0.020  | ±             | 0.002 | 0.50        | ±           | 0.05 |



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

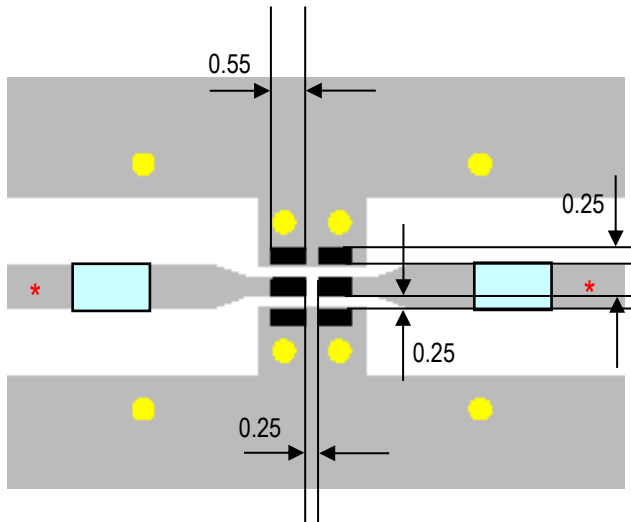
| Pin Number | Function     |
|------------|--------------|
| 1          | GND          |
| 2          | INPUT/OUTPUT |
| 3          | GND          |
| 4          | GND          |
| 5          | INPUT/OUTPUT |
| 6          | GND          |







<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.



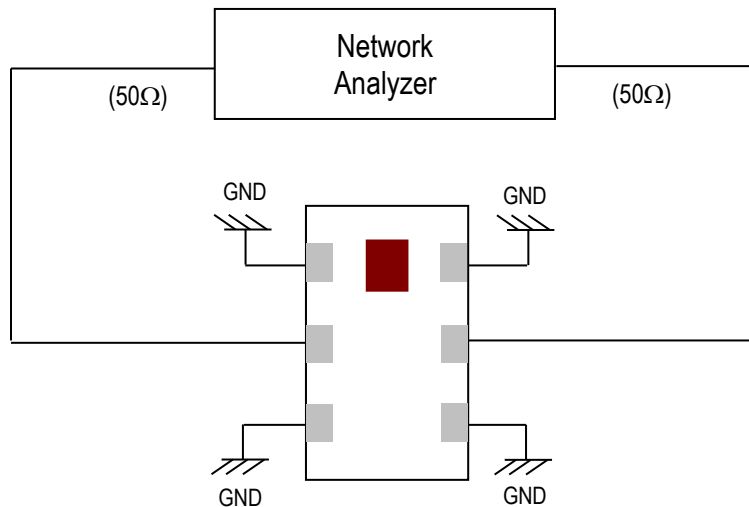
Units in mm

-  Solder Resist
-  Land
-  Through-hole ( $\phi 0.35$ )
-  DC Blocking Capacitor: 10pF (connected in series at each In/Out Port)

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

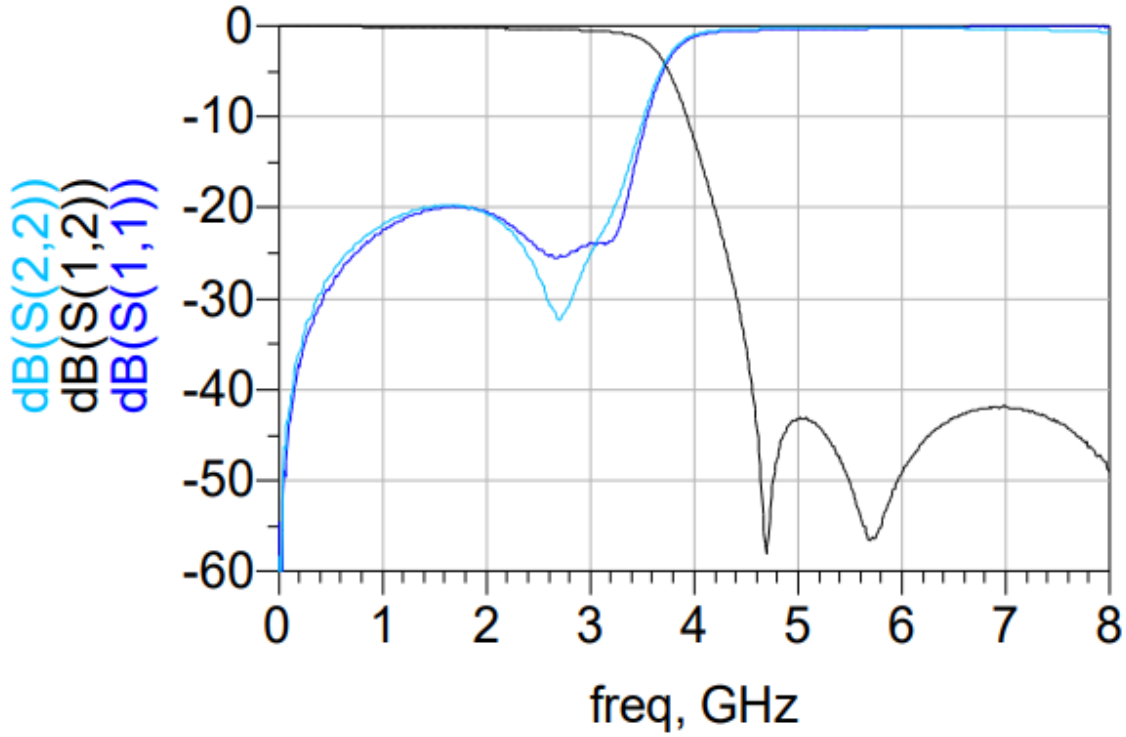
If you'd like the CAD PCB layout or have any questions, contact our application engineers at <https://www.johansontechnology.com/ask-a-question>

**Measuring Diagram**



**RF Measurement (T = 25°C)**

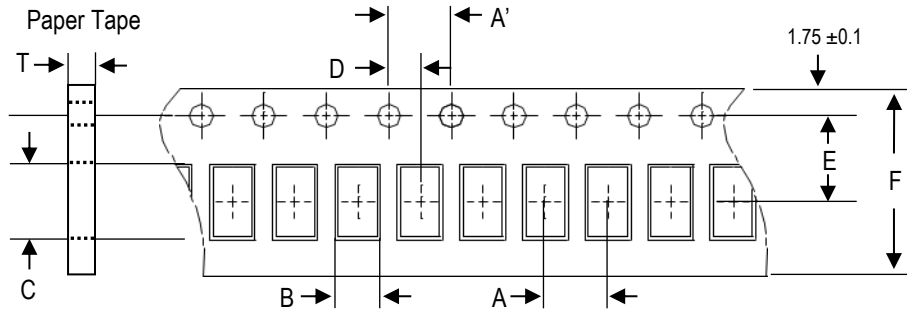
**Insertion Loss, Return Loss and Attenuation**



S-parameter, layout files and complimentary design review available upon request. Contact our application engineers at <https://www.johansontechnology.com/ask-a-question>

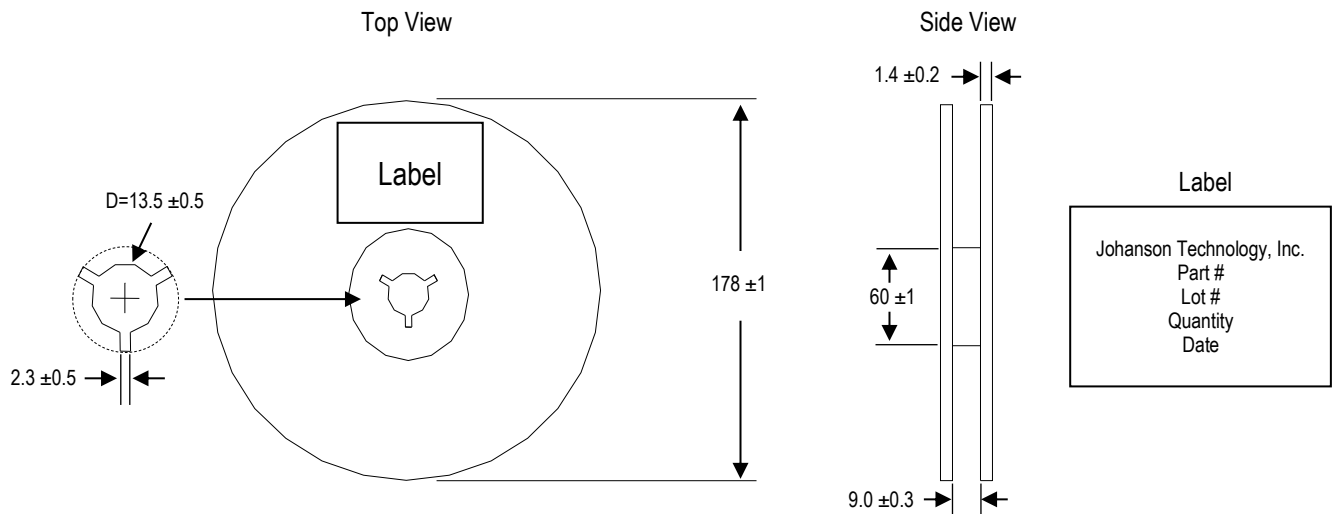
**Tape and Reel Specifications (Units in mm)**

**Tape Dimensions**

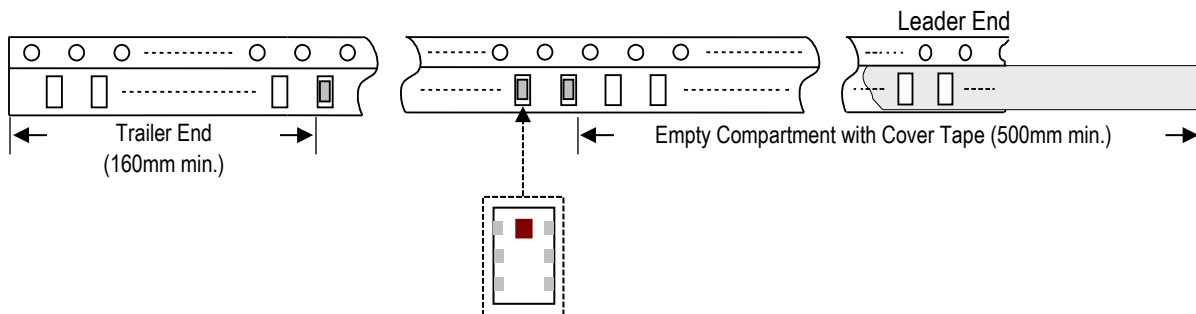


| A        | A'       | B        | C         | D        | E        | F        | T          | Quantity/reel | Tape material |
|----------|----------|----------|-----------|----------|----------|----------|------------|---------------|---------------|
| 4.0 ±0.1 | 4.0 ±0.1 | 1.1 ±0.1 | 1.92 ±0.1 | 2.0 ±0.1 | 3.5 ±0.1 | 8.0 ±0.1 | 0.75 ±0.05 | 4,000 pcs.    | Paper         |

**Reel Dimensions**



**Leader and Trailer Dimensions**



**Orderable Part Numbers**

| Packaging Style                       | Part Number                              | Termination |
|---------------------------------------|--|-------------|
| Bulk (loose pcs.)                     | 2450LP14B0100001B                        | Nickel Tin  |
| T & R (7" Reel Paper Tape)            | 2450LP14B0100001T (Qty: 4,000 pcs./reel) |             |
| Evaluation Board with 2 SMA Connector | 2450LP14B0100001CE1                      |             |

**Important Links**

[2450LP14B0100001T Product Page](#)

[More Low 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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