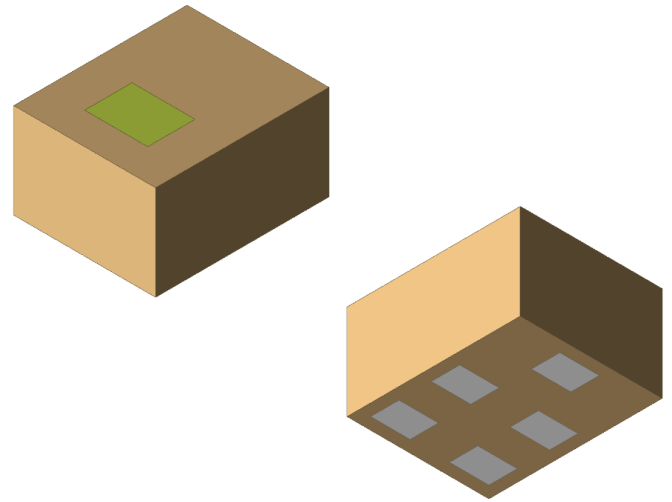


2.45 GHz Band Pass Filter

- 2400 - 2500 MHz pass band
- Optimal for Bluetooth, WiFi, Zigbee, ANT+, Channel Sounding, ISM, MIMO, PDoA, AoA, Thread
- Low insertion loss
- SMD, EIA 0504, 1.4x1.1x0.6 mm (LxWxT)
- Operating temperature up to +105°C
- RoHS compliant



General Specifications¹

| | | | |
|---------------------|-----------------|-----------|-----------------------------------|
| Insertion Loss (dB) | 2400 - 2500 MHz | 0.95 Typ. | 1.0 Max. @25°C 1.2 Max. @105°C |
| Return Loss (dB) | 2400 - 2500 MHz | 14 Typ. | 10 Min. |
| Attenuation (dB) | 50 - 960 MHz | 34 Typ. | 15 Min. |
| | 1710 - 1990 MHz | 15 Typ. | 10 Min. |
| | 3600 MHz | 16.5 Typ. | 15 Min. |
| | 4800 - 5000 MHz | 33 Typ. | 30 Min. |
| | 5000 - 7200 MHz | 31 Typ. | 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 ² | 45% - 75% RH +5 to +35 °C 18 Months Max. |

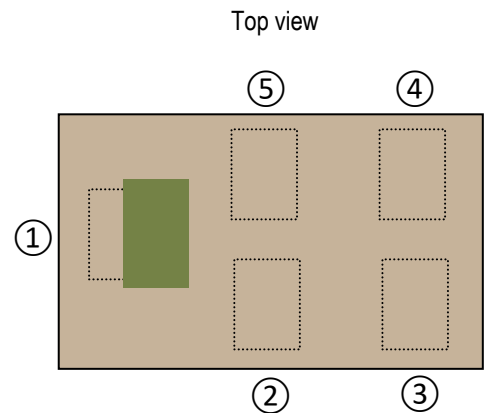
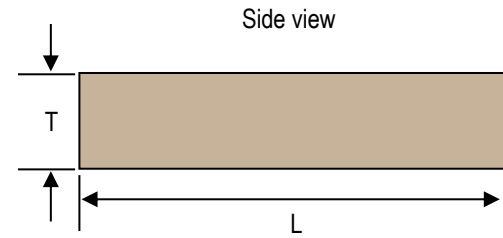
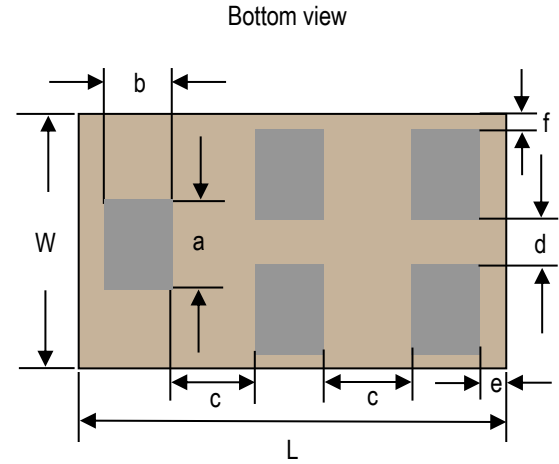
¹ General specifications measured on Johanson's evaluation board P/N 2450BP08A0100001CE1.

² 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/tech-notes/silver-leaded-components-soldering-profile>.



Mechanical Dimensions

| | Inches | | | Millimeters | | |
|----------|--------|---|-------|-------------|---|------|
| L | 0.055 | ± | 0.006 | 1.40 | ± | 0.15 |
| W | 0.043 | ± | 0.006 | 1.10 | ± | 0.15 |
| T | 0.024 | | Max. | 0.60 | | Max. |
| a | 0.013 | ± | 0.004 | 0.325 | ± | 0.10 |
| b | 0.010 | ± | 0.004 | 0.25 | ± | 0.10 |
| c | 0.010 | ± | 0.002 | 0.25 | ± | 0.05 |
| d | 0.010 | ± | 0.002 | 0.25 | ± | 0.05 |
| e | 0.003 | ± | 0.003 | 0.075 | ± | 0.08 |
| f | 0.004 | ± | 0.003 | 0.10 | ± | 0.08 |



Terminal Configuration³

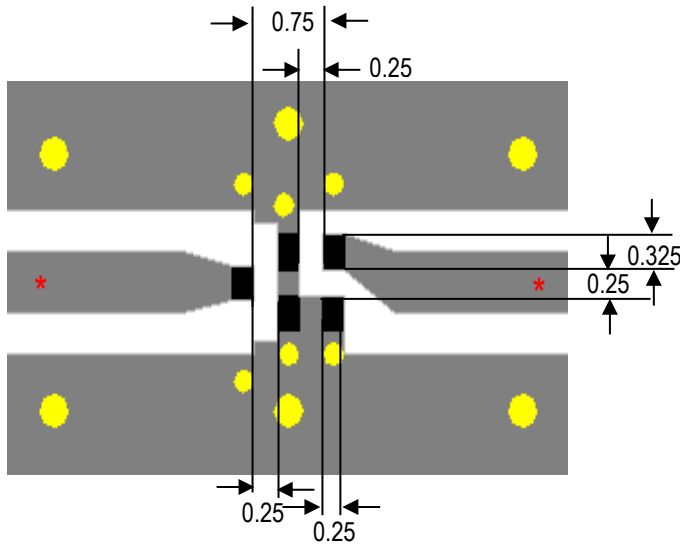
| Pin Number | Function |
|------------|----------|
| 1 | INPUT |
| 2 | GND |
| 3 | GND |
| 4 | OUTPUT |
| 5 | GND |

³ The termination type is Silver. Go to: <https://www.johansontechnology.com/ipcsoldering-profile> for Typical Soldering Profile. SAC 305 solder paste recommended.



Recommended Mounting Configuration

Note: Mount device with colored mark facing up.



Units in mm

Solder Resist

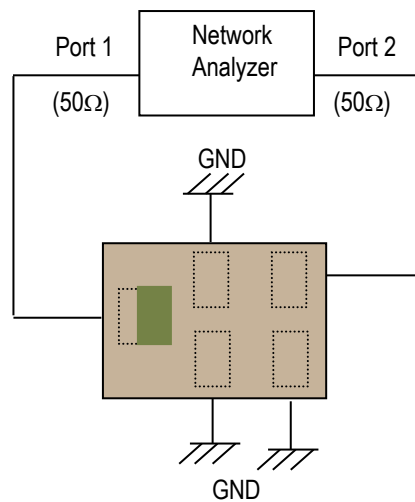
Land

Through-hole (ϕ 0.2, 0.35)

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

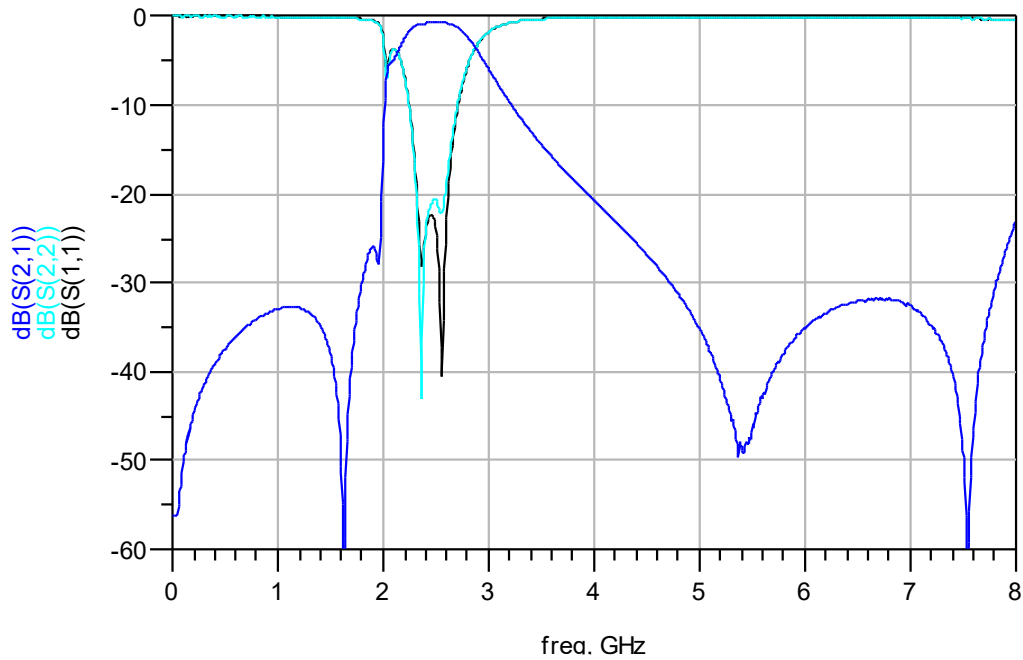
If you'd like the CAD PCB layout or have any questions, contact our application engineers at <https://www.johansontechnology.com/ask-a-question>

Measuring Diagram



RF Measurement (T = 25°C)

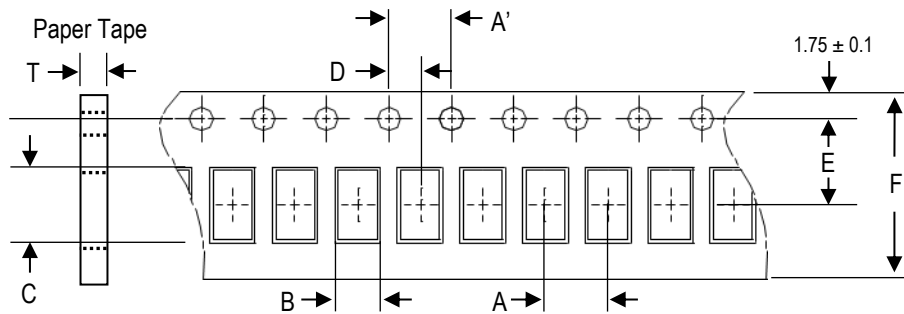
Insertion Loss, Return Loss



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

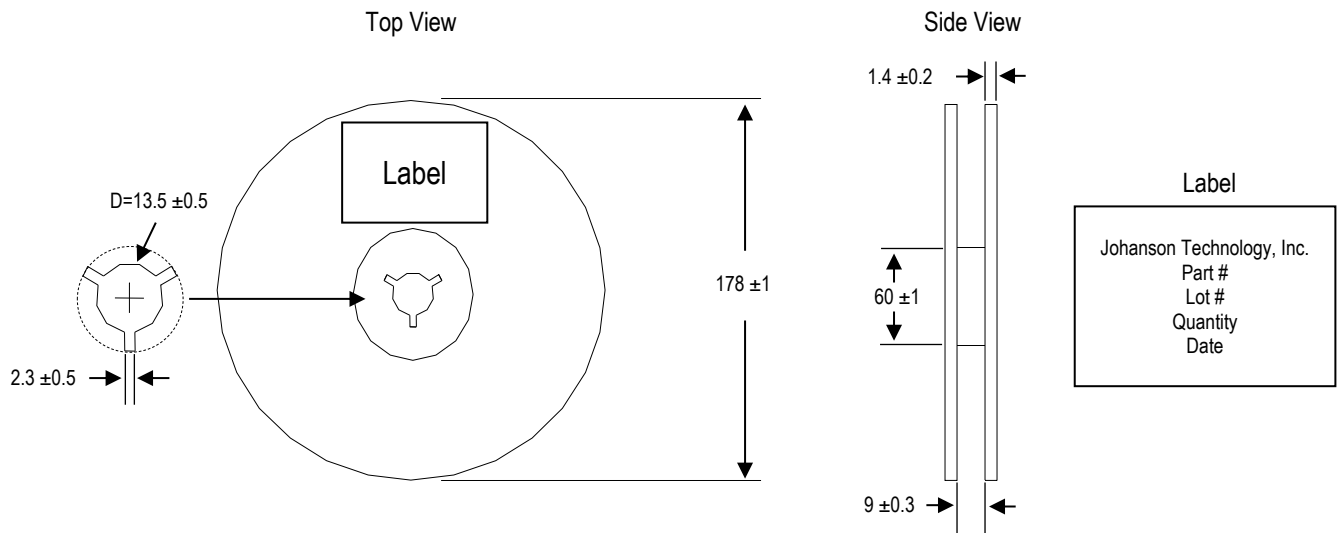
Tape and Reel Specification (Units in mm)

Tape Dimensions

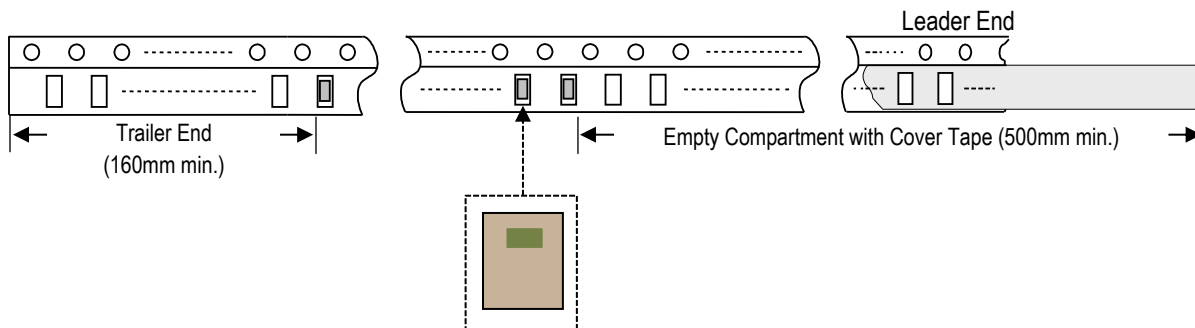


| A | A' | B | C | D | E | F | T | Quantity/reel | Tape material |
|-----------|-----------|-------------|-------------|------------|------------|-----------|-------------|---------------|---------------|
| 4.0 ± 0.1 | 4.0 ± 0.1 | 1.36 ± 0.05 | 1.65 ± 0.05 | 2.0 ± 0.05 | 3.5 ± 0.05 | 8.0 ± 0.1 | 0.75 ± 0.05 | 4,000 pcs. | Paper |

Reel Dimensions



Leader and Trailer Dimensions



Orderable Part Numbers

| Packaging Style | Part Number | Termination |
|--|---|-------------|
| Bulk (loose pcs.) | 2450BP08A0100001B | Silver |
| T & R (7" Reel Paper Tape) | 2450BP08A0100001T (Qty: 4,000 pcs/reel) | |
| Evaluation Board with 2 SMA Connectors | 2450BP08A0100001CE1 | |

Important Links

[2450BP08A0100001T 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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