

DATA SHEET

TT49767E-TR: 1434 MHz Ceramic Filter

Applications

- L-band applications
- Portable transceivers for both military and homeland security radio communications

Features

- Surface mount design
- 166 MHz bandwidth
- Wide operating temperature range
- Light weight
- Smaller profile compared to a typical ceramic design
- Easy drop-in solution
- Quick turnaround on new designs
- RoHS-compliant
- Available in various frequencies

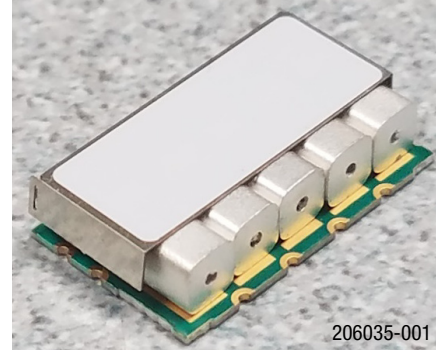


Figure 1. TT49767E-TR External View

Description

Skyworks, through its wholly owned subsidiary, Trans-Tech, offers a family of ultra-small profile filters available in surface-mount technology (SMT) designs. We can design and manufacture filters from 200 MHz to 8 GHz, with power handling ability up to 10 W, continuous wave (CW). We also offer rapid response times on all filter design requirements.

The small-profile ceramic filters offer customers the option to go with a lighter weight, and reduced X-Y-Z dimensions as solutions to their requirements.

These ceramic filter solutions allow design flexibility beyond traditional ceramic styles.



Skyworks Green™ products are compliant with all applicable legislation and are halogen-free. For additional information, refer to *Skyworks Definition of Green™*, document number SQ04-0074.

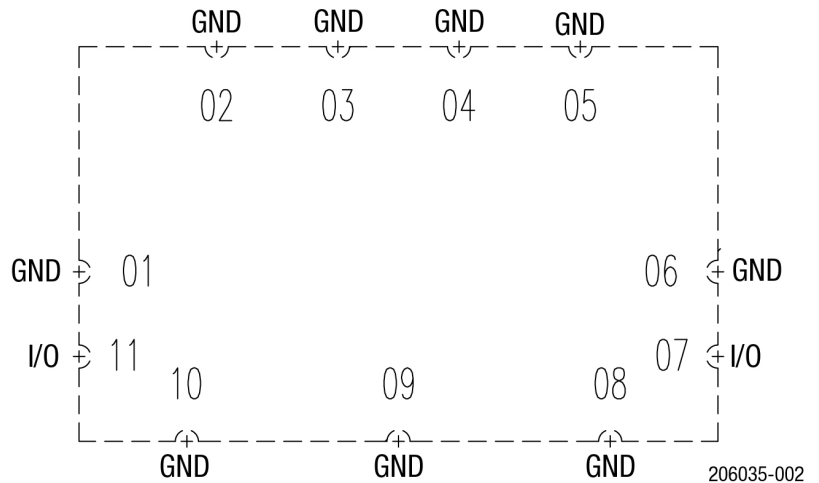


Figure 2. TT49767E-TR Pin Out (Bottom View)

Table 1. TT49767E-TR Signal Pin Description

| Pin | Name | Function |
|----------------------------|------|-----------------------------|
| 1, 2, 3, 4, 5, 6, 8, 9, 10 | GND | Castellations are RF ground |
| 7, 11 | I/O | Input / Output |

Table 2. TT49767E-TR Absolute Maximum Ratings (Tc = 25 °C, Unless Otherwise Noted)¹

| Parameter | Symbol | Minimum | Maximum | Units |
|---|------------------|---------|---------|-------|
| RF CW input power, IO, IO | P _{IN} | | 15 | W |
| Storage Temperature Range | T _{STG} | -40 | +85 | °C |
| Maximum Junction temperature | T _J | | N/A | |
| Electrostatic discharge: Charged device model (MDM), Class C3 Human Body model (HBM), Class 2 | ESD | | N/A | V |

¹ Exposure to maximum rating conditions for extended periods may reduce device reliability. There is no damage to device with only one parameter set at the limit and all other parameters set at or below their nominal value. Exceeding any of the limits listed here may result in permanent damage to the device.

Table 3. TT49767E-TR Electrical Specifications¹

| Parameter | Symbol | Test Condition | Minimum | Typical | Maximum | Units |
|-----------------------|----------------|----------------|---------|---------|---------|-------|
| Center frequency | f ₀ | | | 1434 | | MHz |
| Poles | | | | 5 | | |
| Bandwidth | BW | | | F0 ± 83 | | MHz |
| Insertion loss | IL | IL @ BW | | | 1.3 | dB |
| Return loss | RL | RL @ BW | | 15 | | dB |
| Out of band rejection | | @ 1209 MHz | 45 | | | dBc |
| | | @ 1659 MHz | 31 | | | |
| Impedance | | | | 50 | | Ω |

¹ Performance is guaranteed only under the conditions listed in this table.

Typical Performance Characteristics

(Tc = 25 °C, Characteristic Impedance (Zo) = 50 Ω)

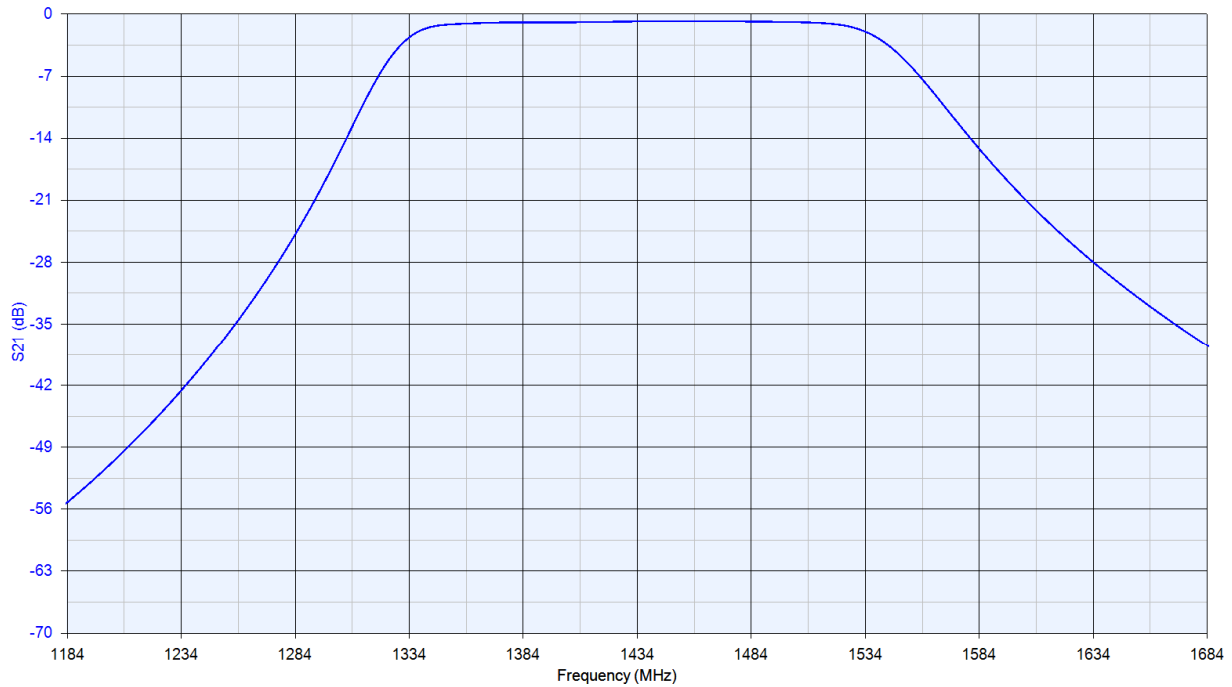


Figure 3. TT49767E-TR Insertion Loss vs Frequency

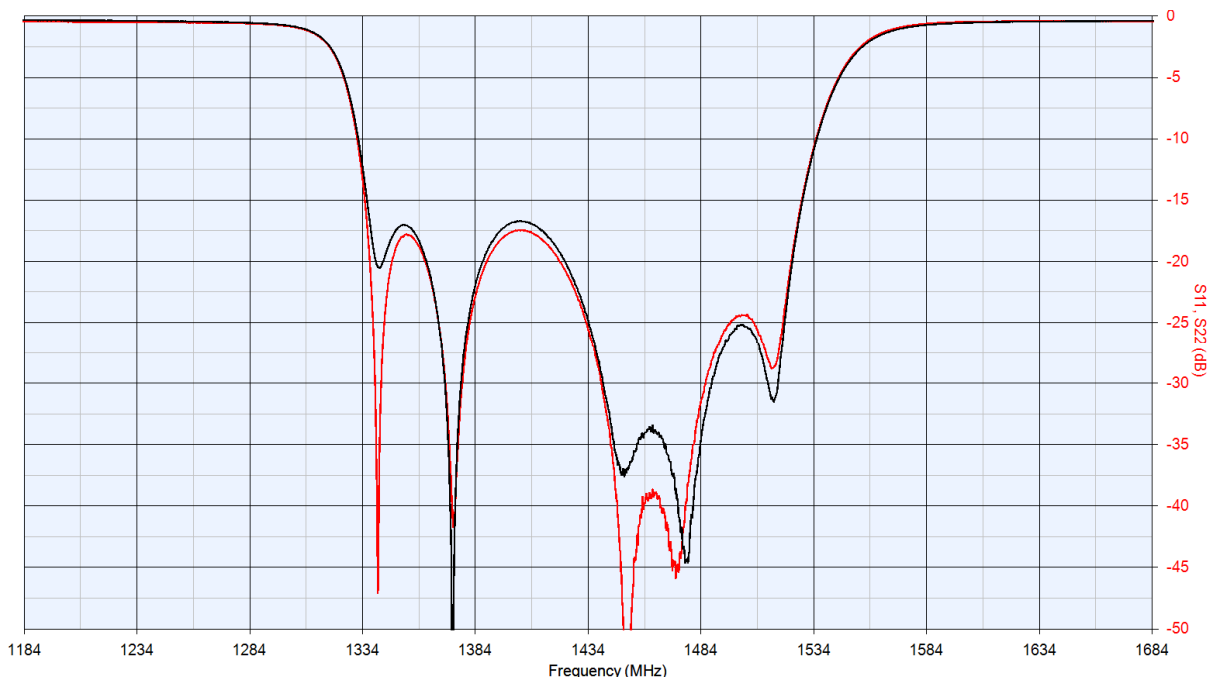


Figure 4. TT49767E-TR Return Loss vs Frequency

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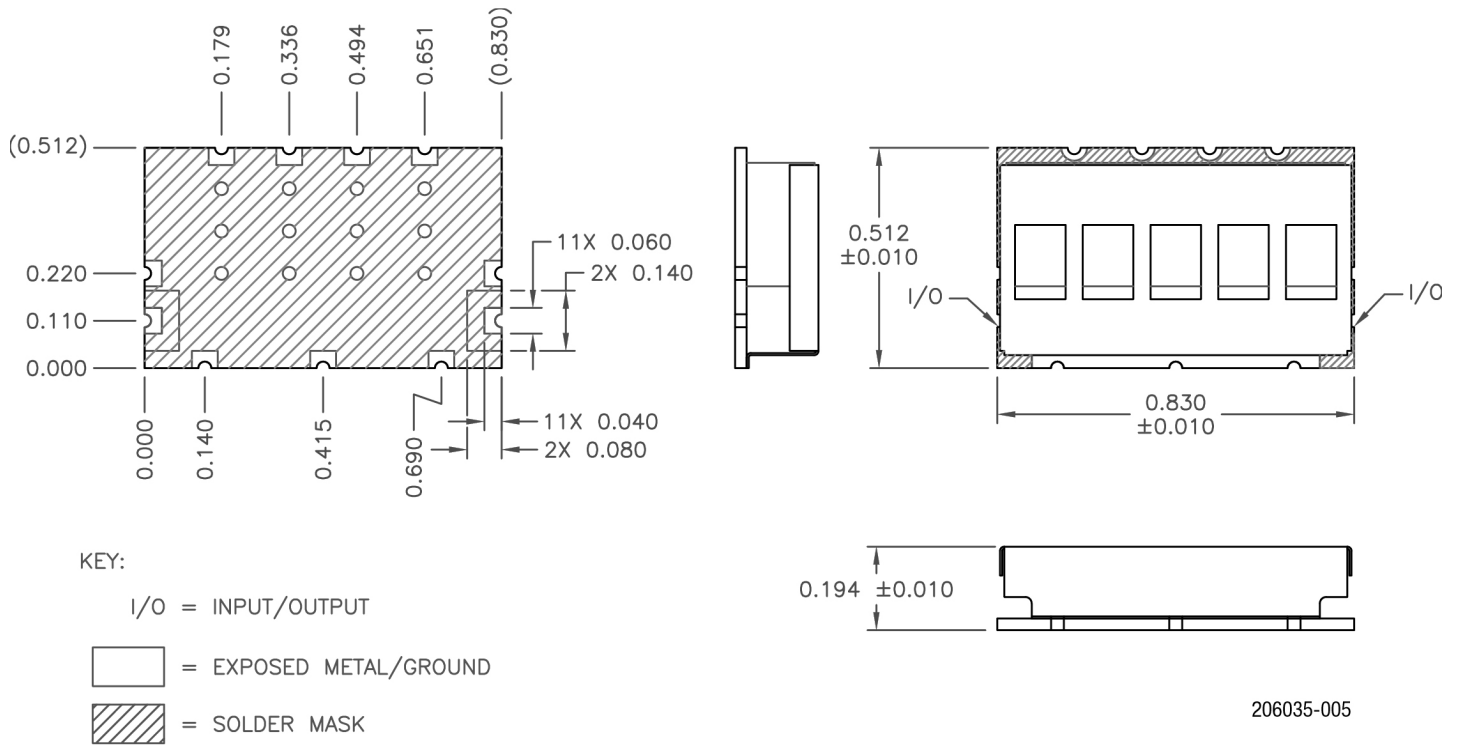
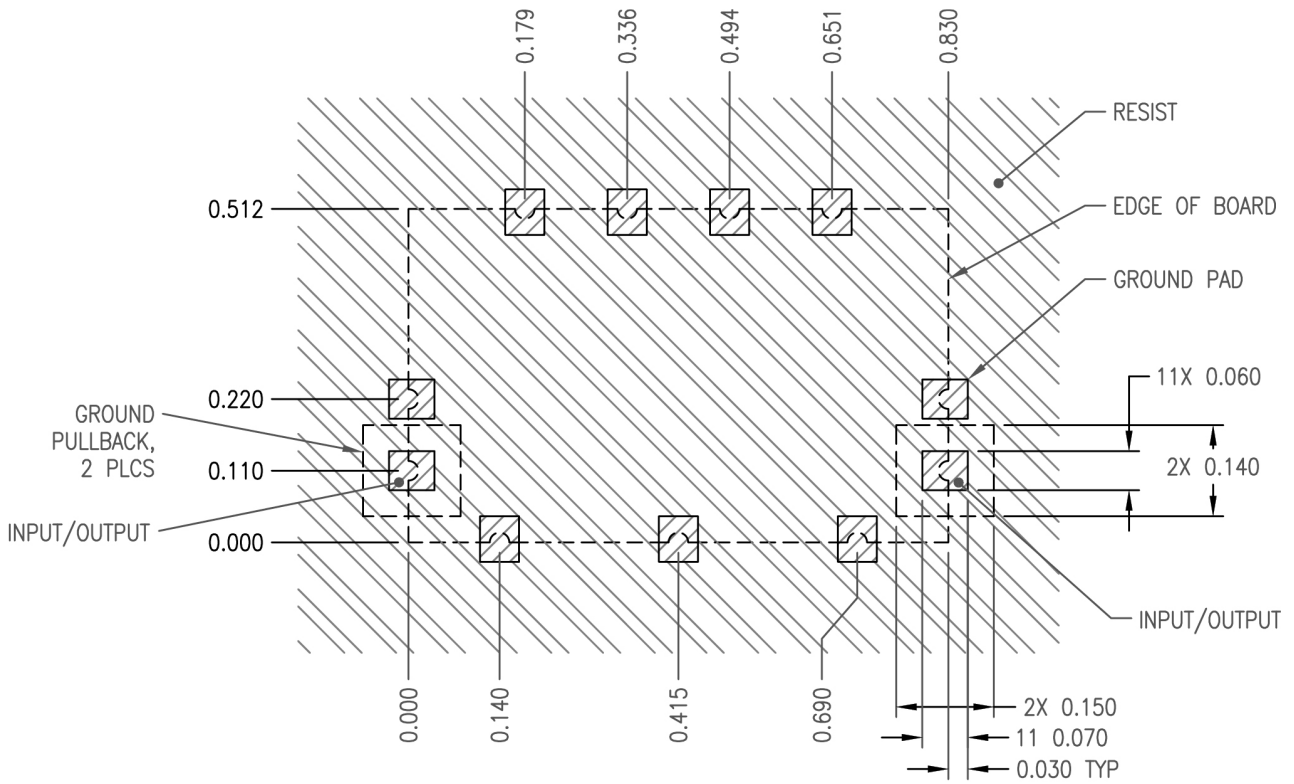



Figure 5. TT49767E-TR Package Dimensions



KEY:

I/O = INPUT/OUTPUT

 = EXPOSED METAL/GROUND

 = SOLDER MASK

206035-006

Figure 6. TT49767E-TR PCB Layout Footprint

Ordering Information

| Part Number | Product Description |
|-------------|----------------------------|
| TT49767E-TR | 1434 MHz RF Ceramic Filter |

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