
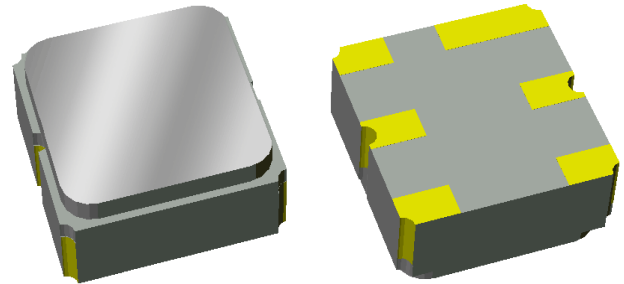


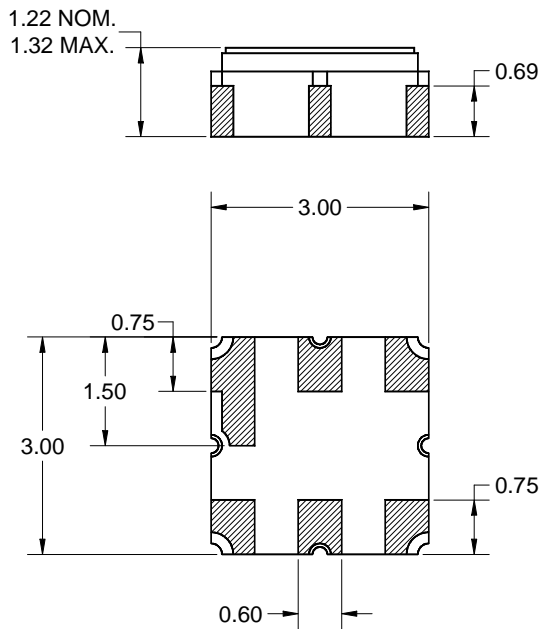
Features

- For Base Station applications
- Usable bandwidth 60 MHz
- Low loss
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



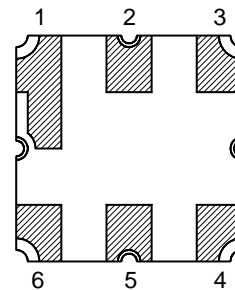
Package

Surface Mount 3.00 x 3.00 x 1.22 mm
 SMP-12



Pin Configuration

Bottom View



| Pin No. | Description |
|---------|-------------|
| 2 | Input |
| 5 | Output |
| 1,3,4,6 | Case Ground |

Dimensions shown are nominal in millimeters
 All tolerances are ± 0.15 mm except overall
 length and width ± 0.10 mm

Body: Al_2O_3 ceramic
 Lid: Kovar, Ni plated
 Terminations: Au plating 0.5 - 1.0 μ m,
 over a 2 - 6 μ m Ni plating

Electrical Specifications ⁽¹⁾

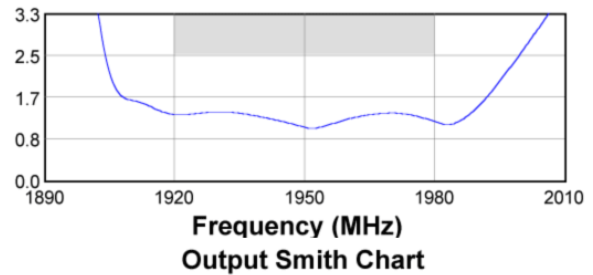
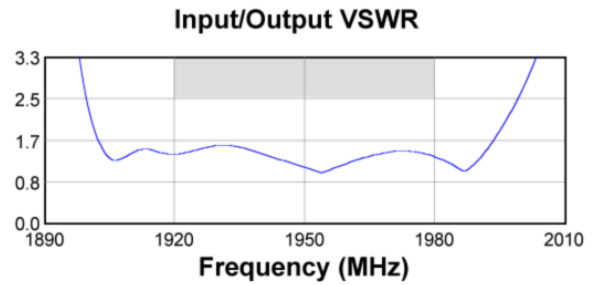
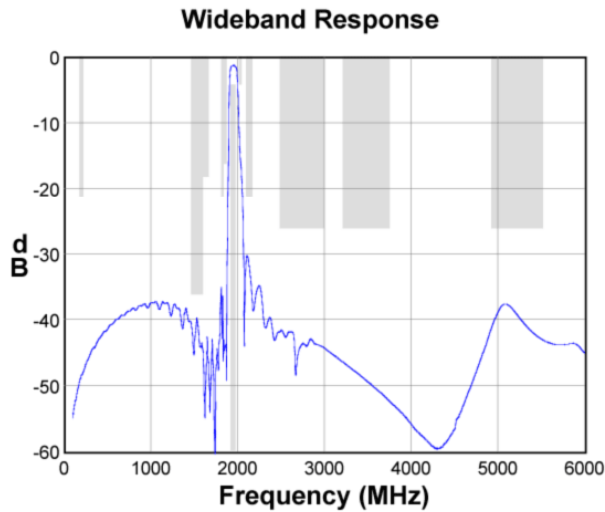
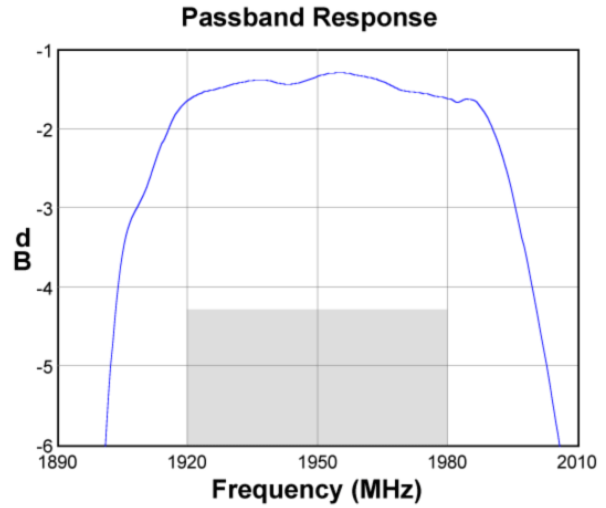
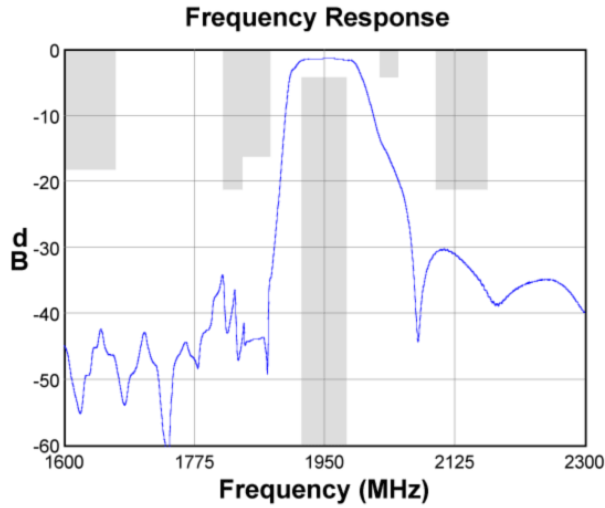
Specified Temperature Range: ⁽²⁾ -30 to +85 °C

| Parameter ⁽³⁾ | Minimum | Typical ⁽⁴⁾ | Maximum | Unit |
|---|---------|------------------------|---------|--------|
| Center Frequency | - | 1950 | - | MHz |
| Maximum Insertion Loss | - | 1.8 | 3 | dB |
| Amplitude Variation 1920 – 1980 MHz | - | 0.45 | 1.6 | dB p-p |
| Amplitude Variation(over any 5MHz band) 1920 – 1980 MHz | - | 0.25 | 0.8 | dB p-p |
| Phase Ripple 1920 – 1980 MHz | - | 16 | 30 | deg |
| Absolute Delay 1920 – 1980 MHz | - | 11 | 50 | ns |
| Group Delay Variation 1920 – 1980 MHz | - | 6 | 30 | ns p-p |
| Relative Attenuation ⁽⁵⁾ | | | | |
| 180 – 220 MHz | 20 | 49 | - | dB |
| 1470 – 1500 MHz | 35 | 44.5 | - | dB |
| 1500 – 1540 MHz | 35 | 40.5 | - | dB |
| 1540 – 1570 MHz | 35 | 42 | - | dB |
| 1570 – 1601 MHz | 35 | 45.5 | - | dB |
| 1601 – 1670 MHz | 17 | 42 | - | dB |
| 1814 – 1840 MHz | 20 | 33 | - | dB |
| 1840 – 1878 MHz | 15 | 35.5 | - | dB |
| 2025 – 2050 MHz | 3 | 11.5 | - | dB |
| 2100 – 2170 MHz | 20 | 28 | - | dB |
| 2490 – 3000 MHz | 25 | 44 | - | dB |
| 3213 – 3755 MHz | 25 | 51.5 | - | dB |
| 4925 – 5527 MHz | 25 | 41.5 | - | dB |
| Input/Output VSWR 1920 – 1980 MHz | - | 1.5 | 2.5 | - |
| Source Impedance (single-ended) ⁽⁶⁾ | - | 50 | - | Ω |
| Load Impedance (single-ended) ⁽⁶⁾ | - | 50 | - | Ω |

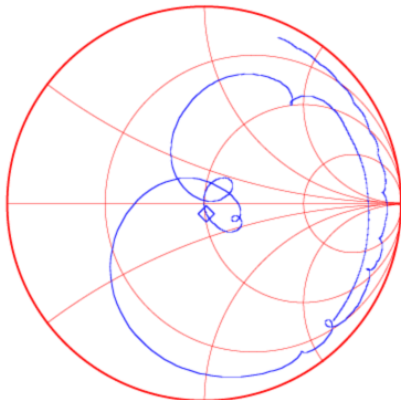
Notes:

1. All specifications are based on the TriQuint test circuit shown on page 4
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. Typical values are based on average measurements at room temperature
5. Relative to minimum insertion loss
6. This is the optimum impedance in order to achieve the performance shown

Typical Performance (at room temperature)

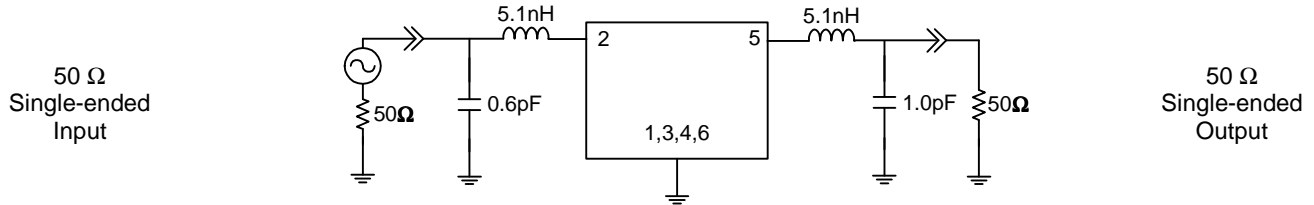


Input Smith Chart



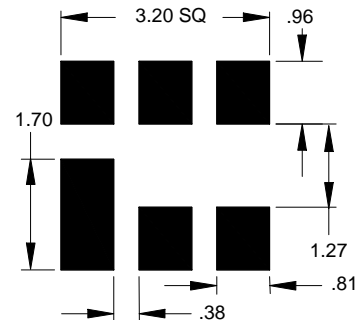
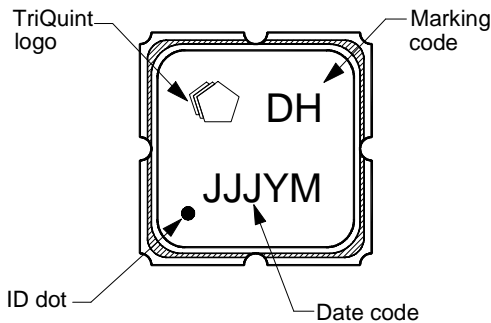
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics



Marking

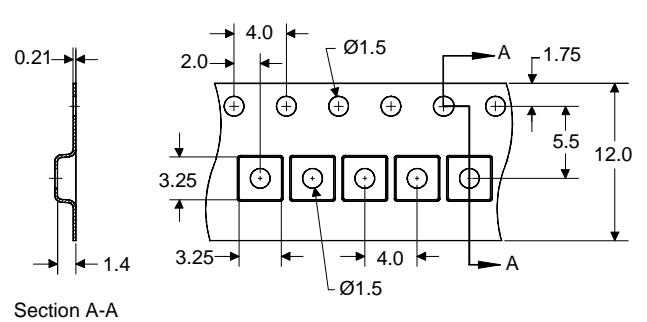
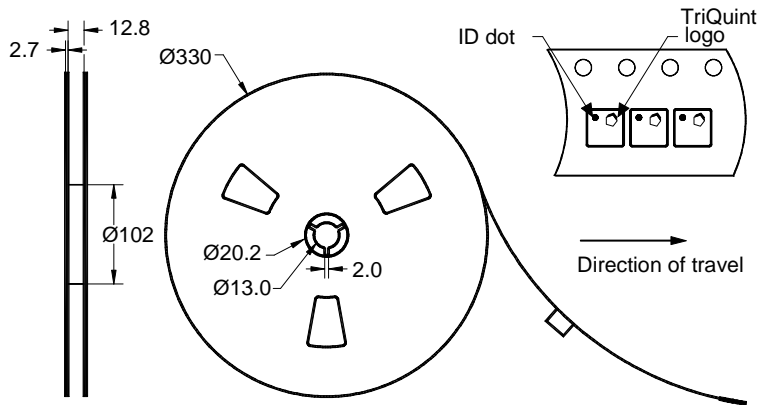
PCB Footprint



The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) M = manufacturing site code

This footprint represents a recommendation only
Dimensions shown are nominal in millimeters

Tape and Reel



Dimensions shown are nominal in millimeters
Packaging quantity: 5000 units/reel

Maximum Ratings


| Parameter | Symbol | Minimum | Maximum | Unit |
|---|------------------|---------|---------|------|
| Operating Temperature Range | T | -30 | +85 | °C |
| Storage Temperature Range | T _{stg} | -40 | +85 | °C |
| DC voltage on any port (instantaneous only) | - | - | +5 | V |
| Input Power ⁽¹⁾ | P _{in} | - | +22 | dBm |

Note:


1. Input Power is targeted for an applied CW modulated RF signal at 55 °C for 125 hours

Important Notes

Warnings

- Electrostatic Sensitive Device (ESD) 
- Avoid ultrasonic exposure

RoHS Compliance

- This product complies with EU directive 2002/95/EC (RoHS) 

Solderability

- Compatible with JESD22-B102, Pb-free process, 260C peak reflow temperature ([see soldering profile](#))

Links to Additional Technical Information

[PCB Layout Tips](#)

[Qualification Flowchart](#)

[Soldering Profile](#)

[S-Parameters](#)

[RoHS Information](#)

[Other Technical Information](#)

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