
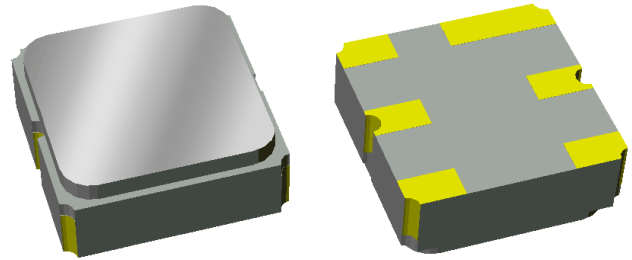


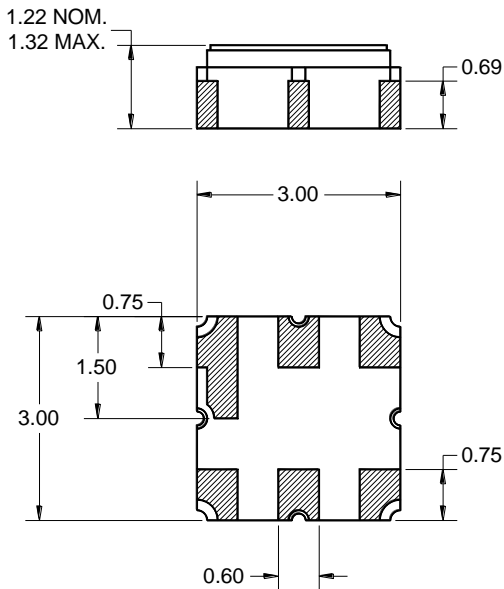
Features

- 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

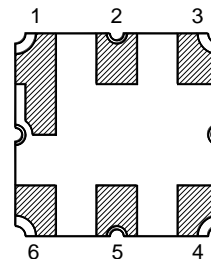


Dimensions shown are nominal in millimeters
All tolerances are ± 0.15 mm except overall
length and width ± 0.10 mm

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

Pin Configuration

Bottom View



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

Electrical Specifications ⁽¹⁾

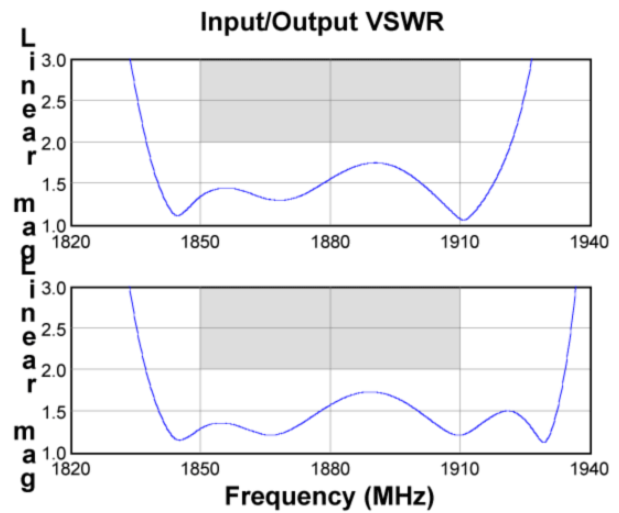
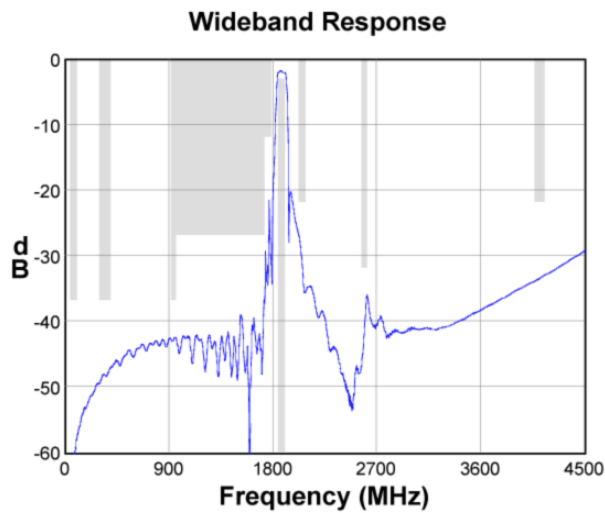
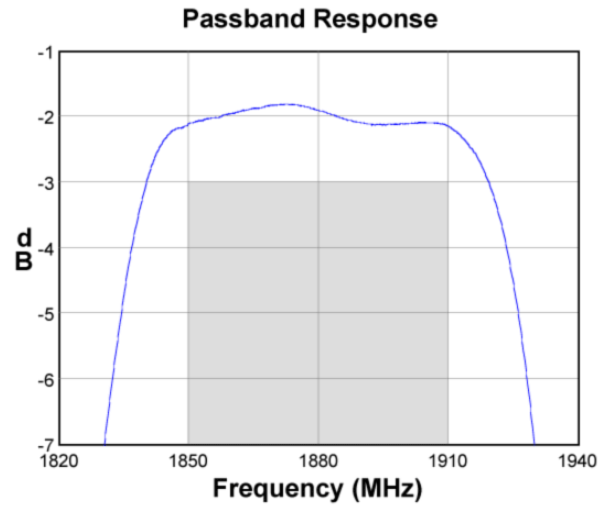
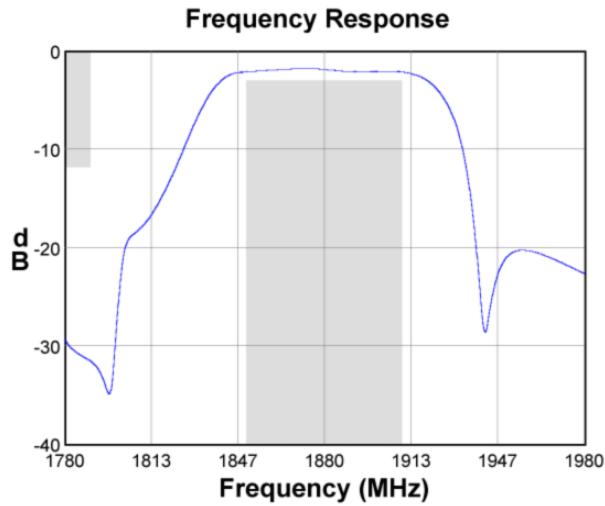
Operating Temperature Range: ⁽²⁾ -30 to +85 °C

| Parameter ⁽³⁾ | Minimum | Typical ⁽⁴⁾ | Maximum | Unit |
|--|---------|------------------------|---------|--------|
| Center Frequency | - | 1880 | - | MHz |
| Maximum Insertion Loss 1850 – 1910 MHz | - | 2.3 | 3.0 | dB |
| Amplitude Variation 1850 – 1910 MHz | - | 0.5 | 1.2 | dB p-p |
| Amplitude Variation over any 5MHz window 1850 – 1910 MHz | - | 0.2 | 0.8 | dB p-p |
| Absolute Group Delay 1850 – 1910 MHz | - | 10.0 | 30 | ns |
| Group Delay Variation 1850 – 1910 MHz | - | 7.7 | 25 | ns p-p |
| Phase Ripple 1850 – 1910 MHz | - | 12.0 | 30 | ° p-p |
| Relative Attenuation ⁽⁵⁾ | | | | |
| 50 – 110 MHz | 35 | 55.5 | - | dB |
| 300 – 400 MHz | 35 | 45.0 | - | dB |
| 920 – 965 MHz | 35 | 41.0 | - | dB |
| 965 – 1300 MHz | 25 | 40.5 | - | dB |
| 1300 – 1635 MHz | 25 | 37.0 | - | dB |
| 1635 – 1665 MHz | 25 | 37.7 | - | dB |
| 1665 – 1730 MHz | 25 | 34.7 | - | dB |
| 1730 – 1790 MHz | 10 | 19.7 | - | dB |
| 2030 – 2090 MHz | 20 | 25.2 | - | dB |
| 2573 – 2621 MHz | 30 | 34.2 | - | dB |
| 4074 – 4162 MHz | 20 | 31.0 | - | dB |
| 4791 – 4879 MHz | 18 | 23.0 | - | dB |
| Input/Output VSWR 1850 – 1910 MHz | - | 1.75 | 2:1 | - |
| Source Impedance (single-ended) ⁽⁶⁾ | - | 50 | - | Ω |
| Load Impedance (single-ended) ⁽⁶⁾ | - | 50 | - | Ω |

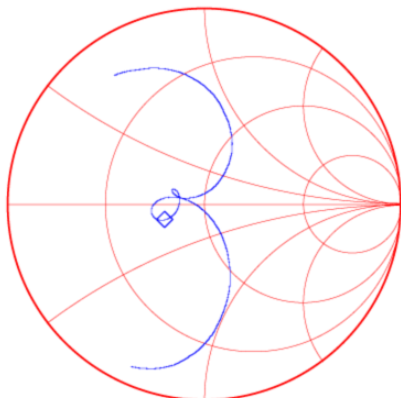
Notes:

1. All specifications are based on 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 on pcb at room temperature, unless otherwise noted
5. Relative to Maximum Insertion loss in passband
6. This is the optimum impedance in order to achieve the performance shown

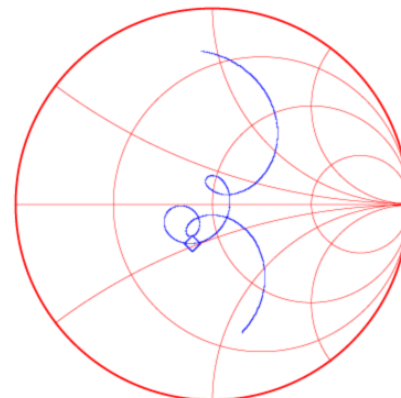
Typical Performance (at +25°C)



Input Smith Chart

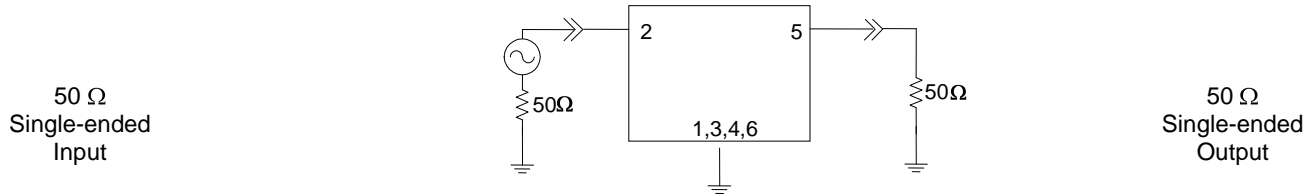


Output Smith Chart

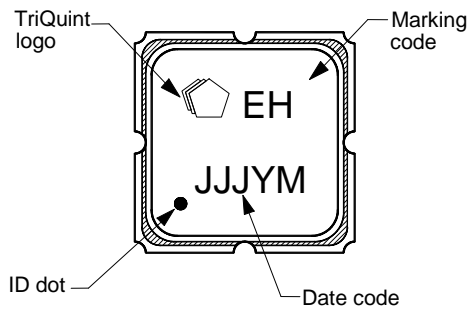


Matching Schematics

Actual matching network values to be determined

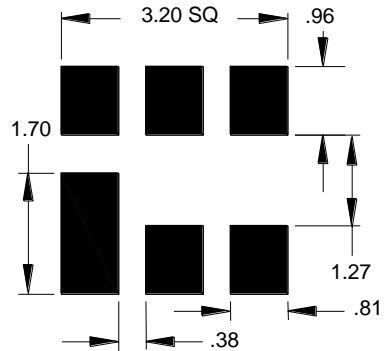


Marking



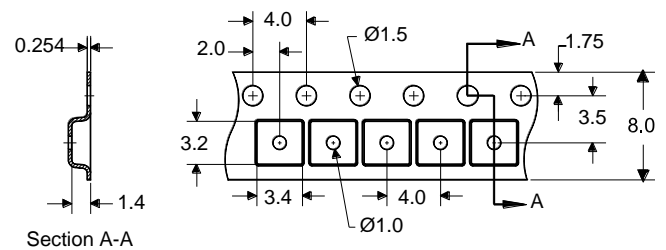
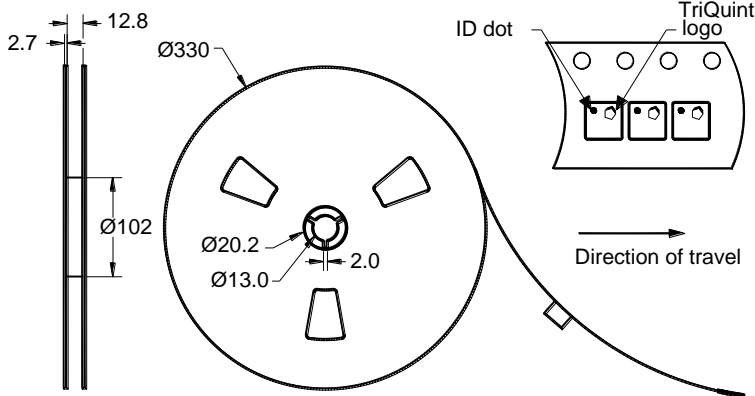
The date code consists of: JJJ = Julian day, Y = last digit of year, M = manufacturing site code

PCB Footprint



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 |
| 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 JEDEC J-STD-020C **Pb-free** process, **260°C** peak reflow temperature

Links to Additional Technical Information

[PCB Layout Tips](#)

[Qualification Flowchart](#)

[Soldering Profile](#)

[S-Parameters](#)

[RoHS Information](#)

[Other Technical Information](#)

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