
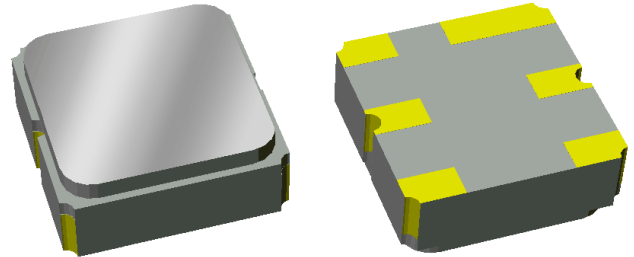


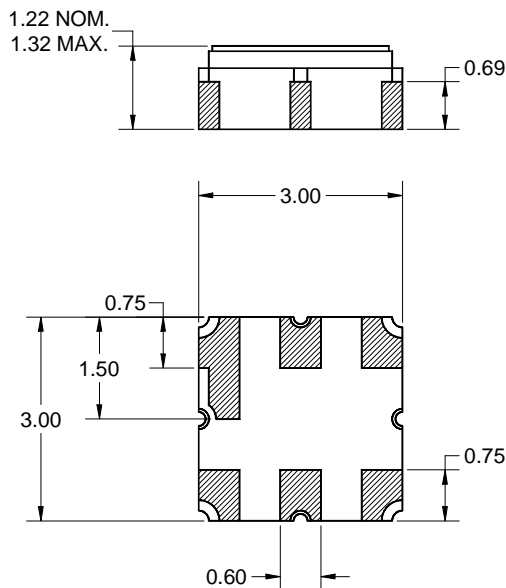
Features

- Usable bandwidth 35 MHz
- For GSM-900 base station applications
- Low loss
- High Attenuation
- Single-ended operation
- No impedance matching required for operation at 50 Ω
- 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-12A

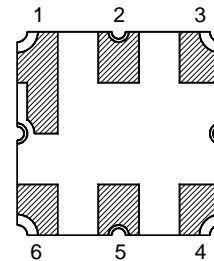


Dimensions shown are nominal in millimeters
All tolerances are ± 0.15 mm except overall
length and width ± 0.10 mm

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⁾

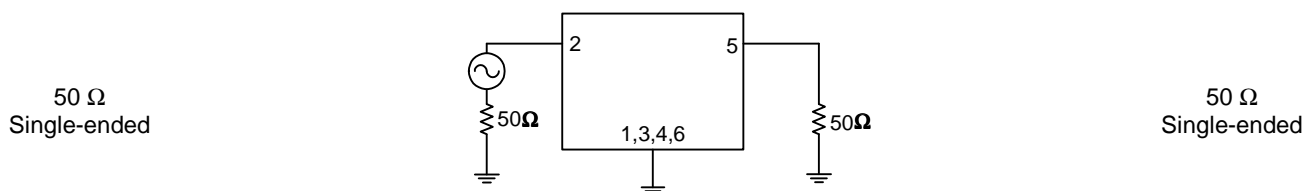
Operating Temperature Range: ⁽²⁾ -40 to +85 °C

| Parameter ⁽³⁾ | Minimum | Typical ⁽⁴⁾ | Maximum | Unit |
|--|---------|------------------------|---------|--------|
| Center Frequency | - | 897.5 | - | MHz |
| Maximum Insertion Loss 880 - 915 MHz | - | 1.5 | 2.25 | dB |
| Absolute Attenuation | | | | |
| 738 - 773 MHz | 40 | 45 | - | dB |
| 773 - 836 MHz | 20 | 25 | - | |
| 836 - 860 MHz | 17 | 20 | - | |
| 930 - 935 MHz | 15 | 18 | - | |
| 935 - 960 MHz | 15 | 18 | - | |
| 960 - 1000 MHz | 20 | 24 | - | |
| Amplitude Variation ⁽⁵⁾ 880 - 915 MHz | - | 0.5 | 1.3 | dB p-p |
| Input/Output VSWR 880 - 915 MHz | - | 1.8:1 | 2:1 | dB |
| RF Power Handling ⁽⁶⁾ | - | - | 17 | dBm |
| Load /Source Impedance ⁽⁷⁾ | - | 50 | - | Ω |

Notes:

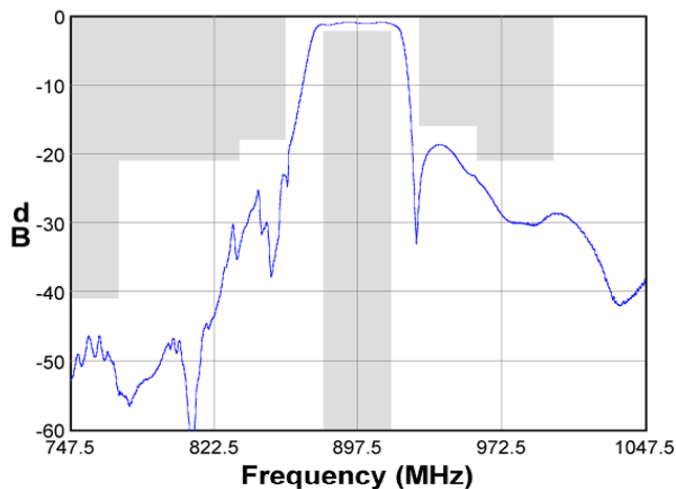
1. All specifications are based on TriQuint test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. Typical values are based on average measurements at room temperature
5. Describes the total variation over the defined frequency range
6. Power handling is targeted for an applied CW modulated RF signal at 55 °C for 10,000 hours. The filter is also able to sustain an instantaneous 20dBm signal without decay
7. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

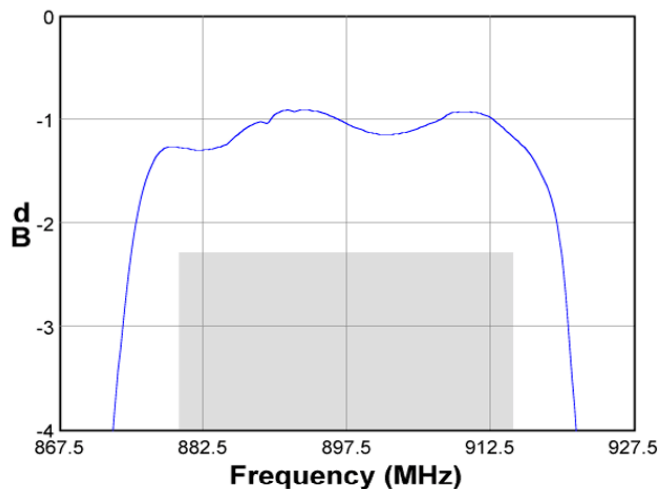


Typical Performance (at room temperature)

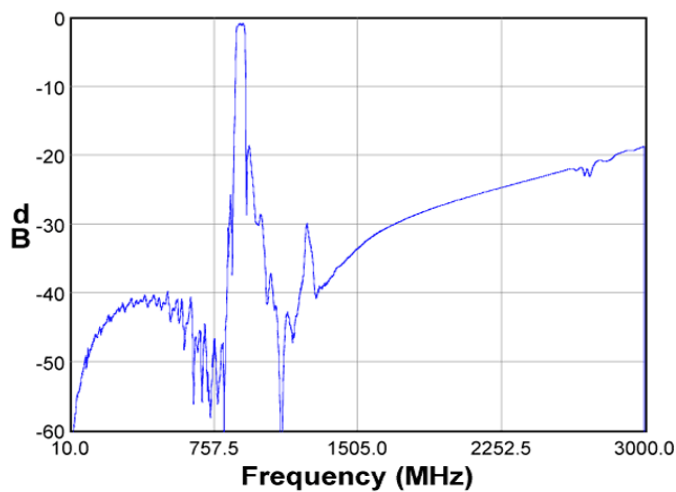
Frequency Response



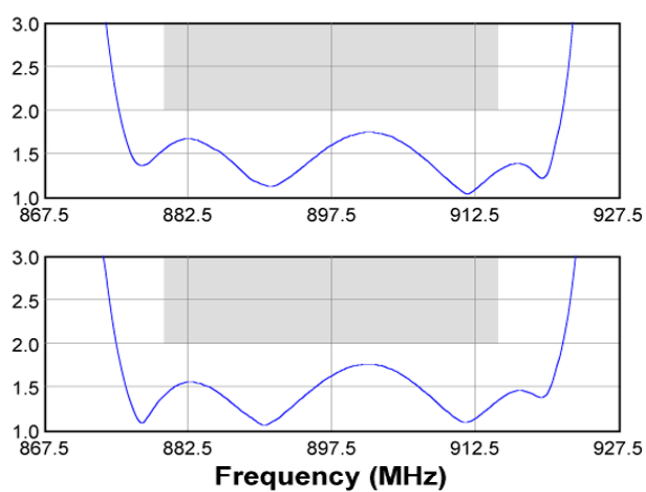
Passband Response



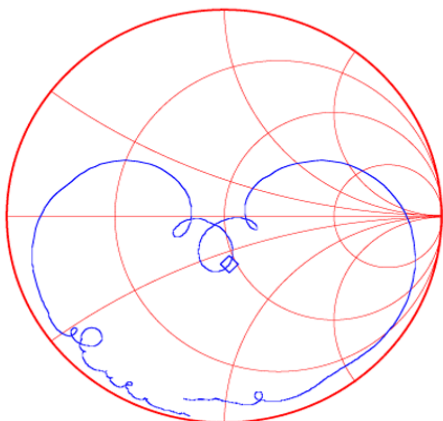
Wideband Response



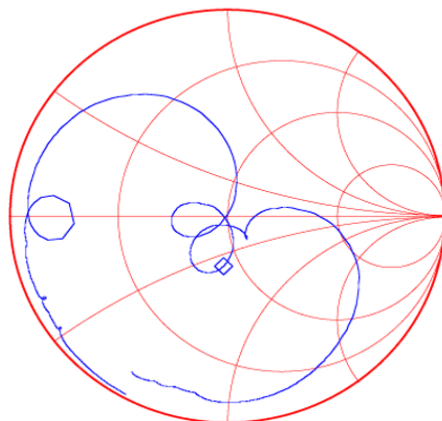
Input/Output VSWR



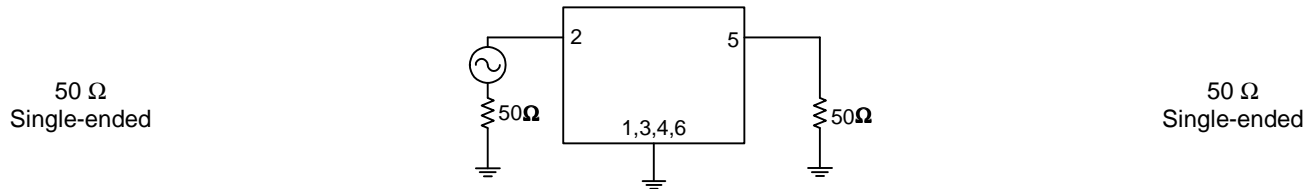
Input Smith Chart



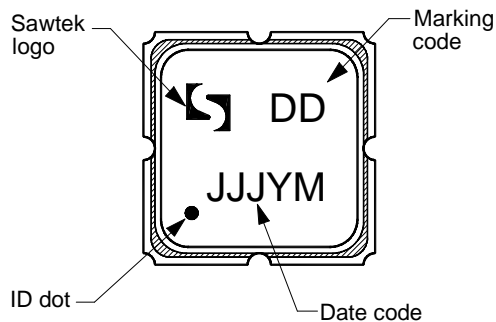
Output Smith Chart



Matching Schematics

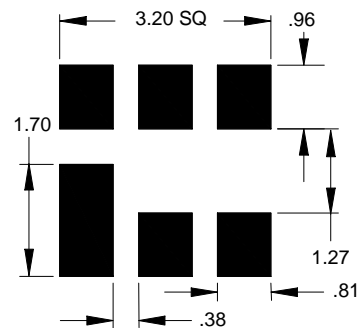


Marking



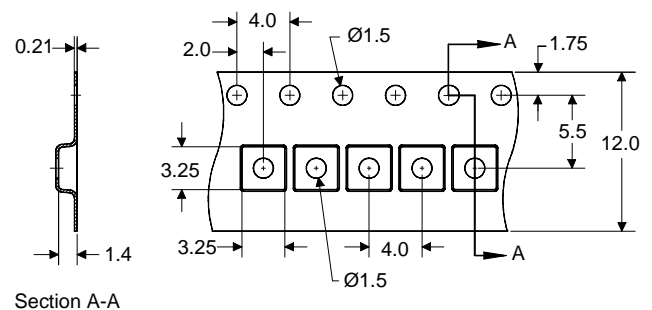
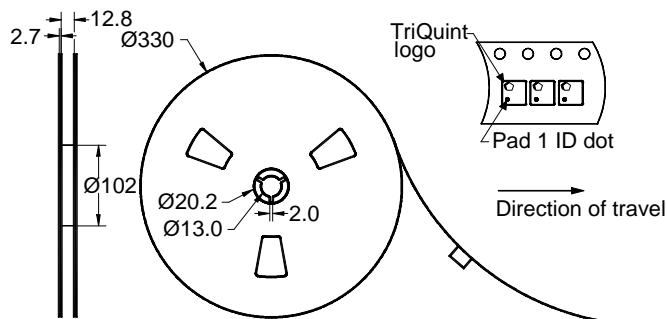
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

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 | -40 | +85 | °C |
| Storage Temperature Range | T _{stg} | -40 | +85 | °C |

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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