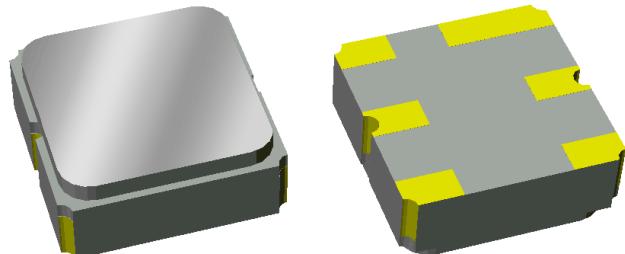


## Features

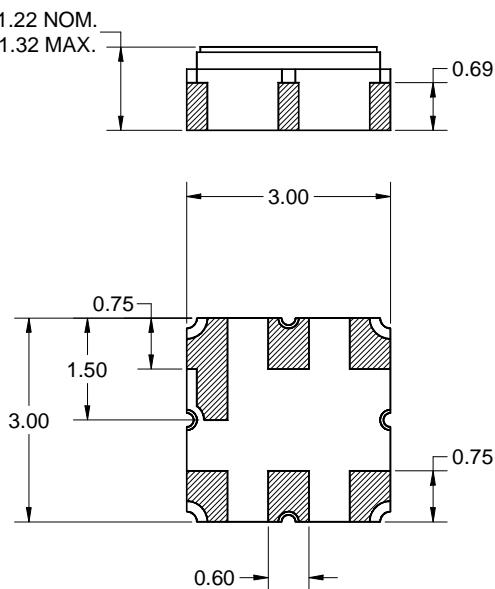
- Usable bandwidth 35 MHz
- For GSM-900 base station applications
- Low loss
- High Attenuation
- Single-ended operation
- No impedance matching required for operation at  $50\ \Omega$
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



## Package

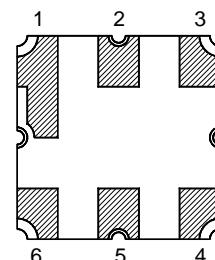
Surface Mount 3.00 x 3.00 x 1.22 mm

SMP-12A



## 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  $\pm 0.15\text{mm}$  except overall  
length and width  $\pm 0.10\text{mm}$

Body:  $\text{Al}_2\text{O}_3$  ceramic  
Lid: Kovar, Ni plated  
Terminations: Au plating 0.5 - 1.0  $\mu\text{m}$ ,  
over a 2 - 6  $\mu\text{m}$  Ni plating

**Electrical Specifications <sup>(1)</sup>**

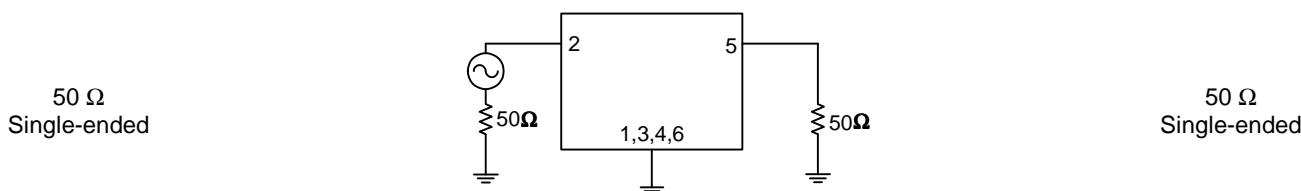
**Operating Temperature Range:** <sup>(2)</sup> -40 to +85 °C

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

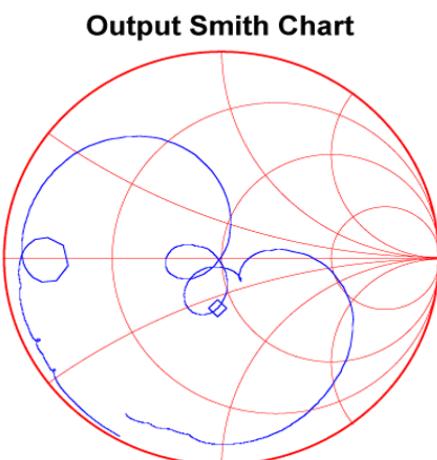
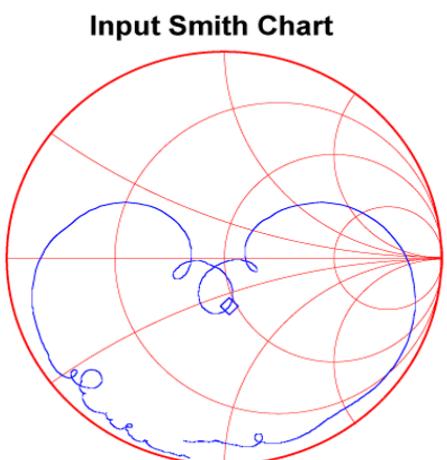
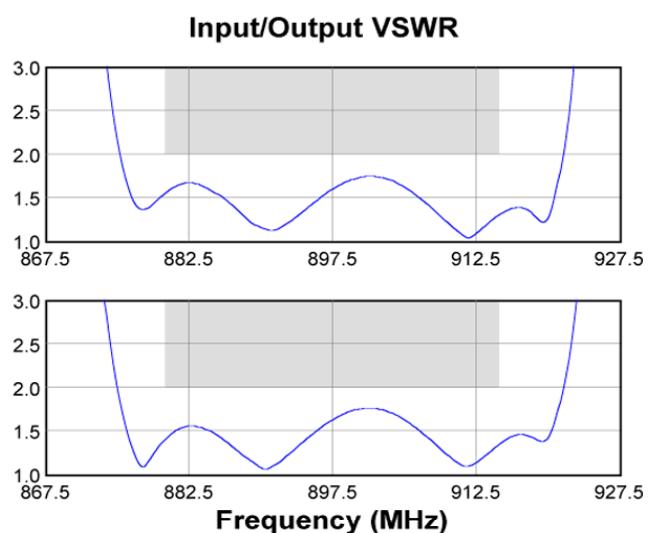
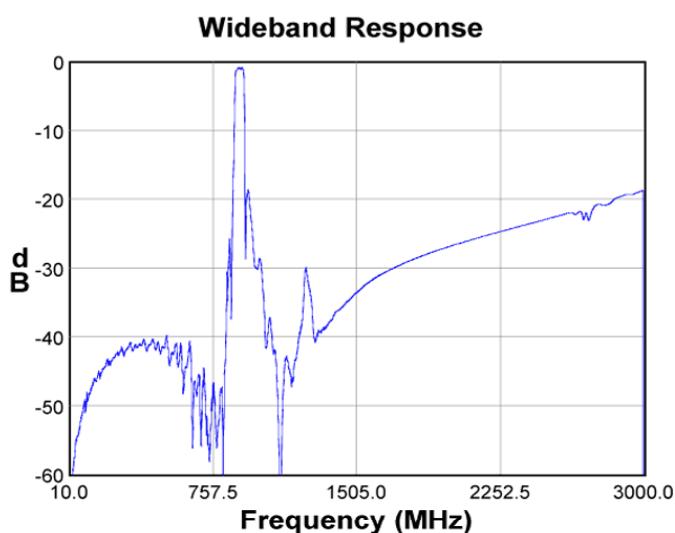
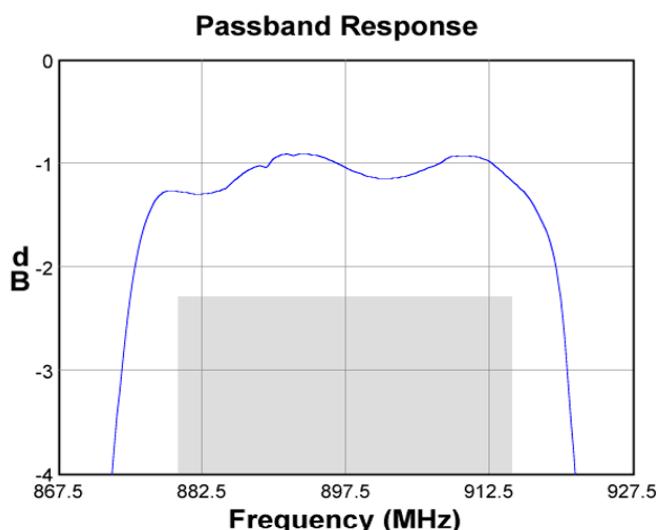
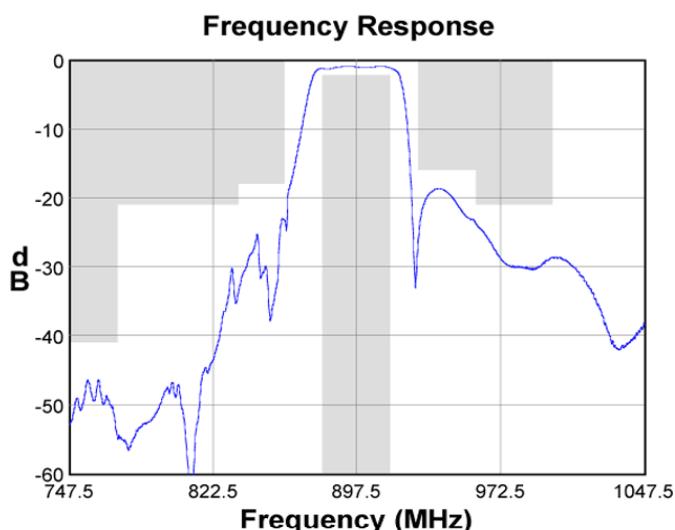
**Notes:**

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

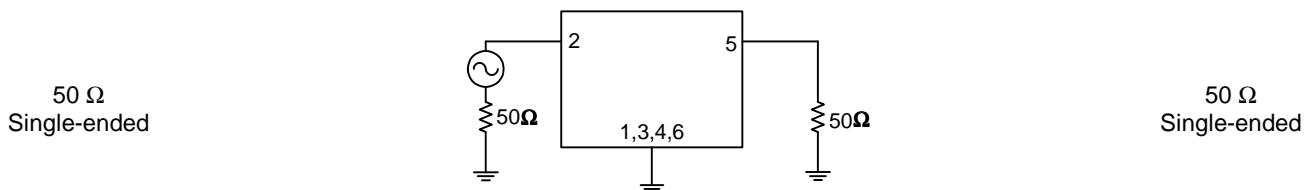
**Test Circuit:**



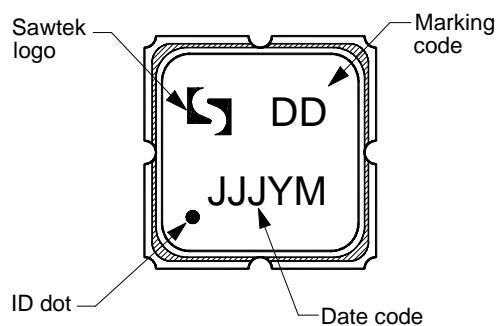
**Typical Performance (at room temperature)**



## Matching Schematics

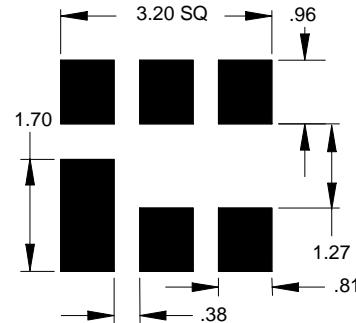


## Marking



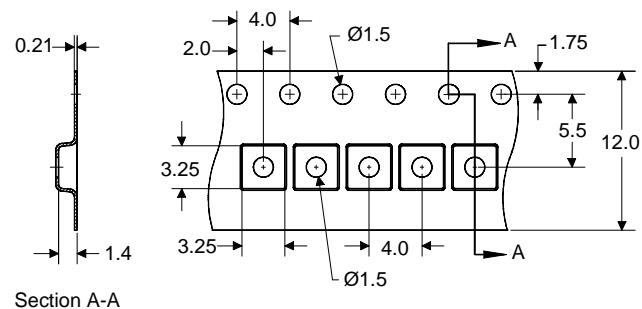
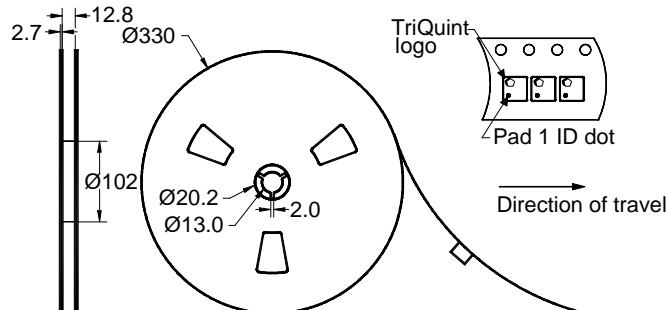
The date code consists of: JJJ = Julian day,  
Y = last digit of year, M = manufacturing site code

## 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 <sub>stg</sub>	-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](#)

TriQuint's liability is limited only to the Surface Acoustic Wave (SAW) component(s) described in this data sheet. TriQuint does not accept any liability for applications, processes, circuits or assemblies, which are implemented using any TriQuint component described in this data sheet.

## Contact Information

**TriQuint**   
SEMICONDUCTOR  
PO Box 609501  
Orlando, FL 32860-9501  
USA

Phone: +1 (407) 886-8860  
Fax: +1 (407) 886-7061  
Email: [info-product@tqs.com](mailto:info-product@tqs.com)  
Web: [www.triquint.com](http://www.triquint.com)

Or contact one of our worldwide  
Network of [sales offices](#),  
[Representatives](#) or [distributors](#)