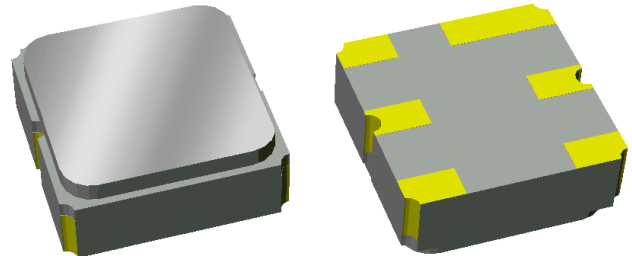


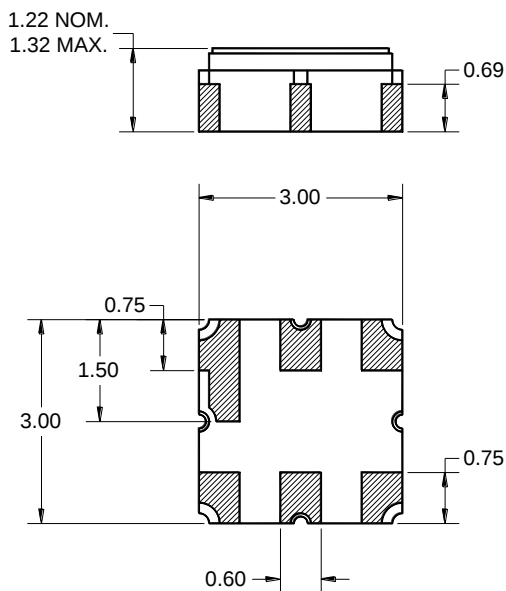
Features

- For base station applications
- Usable bandwidth of 10 MHz
- Low Loss
- High attenuation
- Single-ended operation at 50 Ω
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



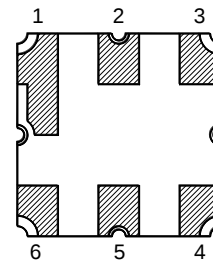
Package

Surface Mount 3.00 x 3.00 x 1.22 mm
SMP-12A



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⁾

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

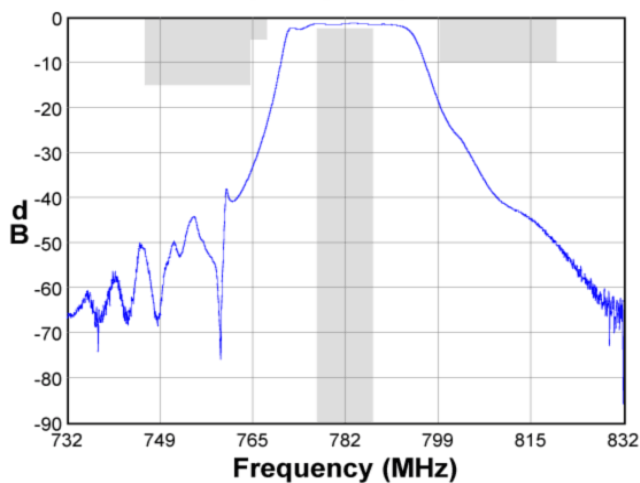
Parameter ⁽³⁾	Minimum	Typical ⁽⁴⁾	Maximum	Unit
Center Frequency	-	782	-	MHz
Maximum Insertion Loss 777-787 MHz	-	1.52	2.5	dB
Amplitude Variation ⁽⁵⁾ 777-787 MHz	-	0.28	1.1	dB p-p
Amplitude Ripple (any 5 MHz in Pass band) ⁽⁵⁾ 777-787 MHz	-	0.22	0.6	dB p-p
Amplitude Ripple ⁽⁵⁾ 777-787 MHz	-	0.2	0.8	dB p-p
Phase Ripple 777-787 MHz	-	6.7	20	deg p-p
Group Delay Ripple 777-787 MHz	-	21	30	ns p-p
Absolute Delay 777-787 MHz	-	56	-	ns
Stop band Attenuation ⁽⁶⁾				
70 - 120 MHz	50	79	-	dB
430 - 470 MHz	40	79	-	dB
591 - 614 MHz	35	70	-	dB
746 - 765 MHz	15	27	-	dB
765 - 768 MHz	5	22	-	dB
799 - 820 MHz	10	22	-	dB
843 - 857 MHz	40	61	-	dB
1005 -1026 MHz	35	59	-	dB
1688 -1711 MHz	45	55	-	dB
2010 -2052 MHz	30	56	-	dB
2922 -2964 MHz	20	68	-	dB
Input/Output VSWR ⁽⁵⁾ 777 - 787 MHz	-	1.56	2.0	-
Source Impedance: (single-ended) ⁽⁷⁾	-	50	-	Ω
Load Impedance: (single-ended) ⁽⁷⁾	-	50	-	Ω

Notes:

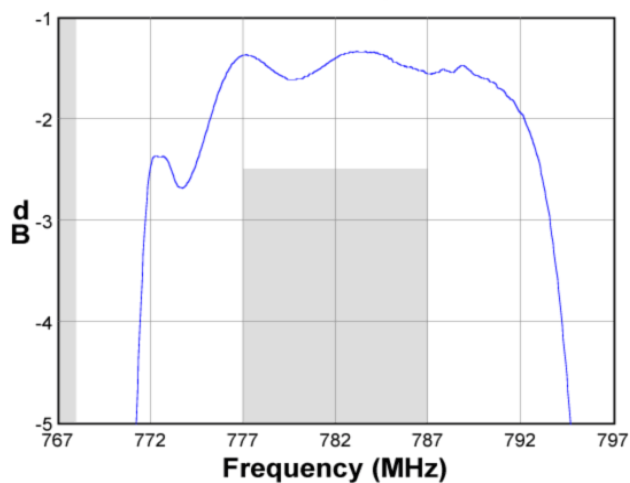
1. All specifications are based on the TriQuint test circuit shown on page 4.
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations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

Typical Performance (at room temperature)

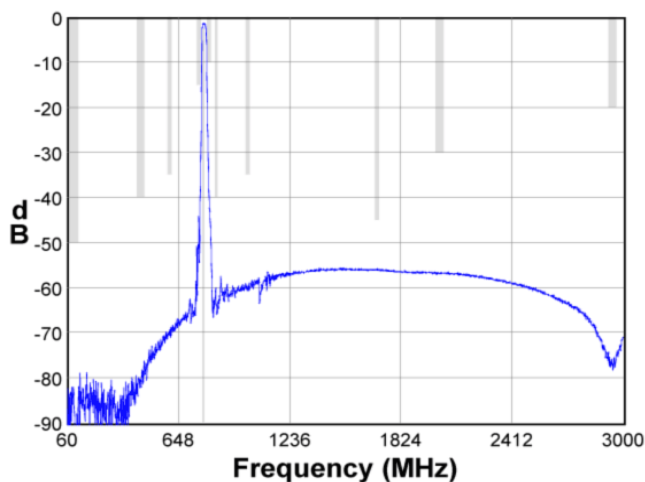
Frequency Response



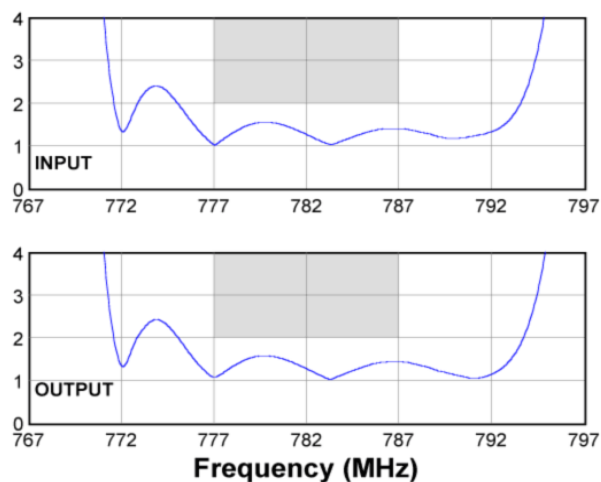
Passband Response



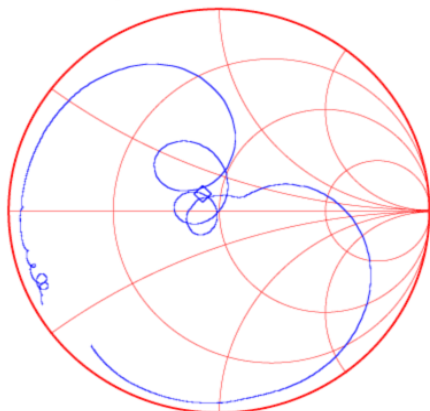
Wideband Response



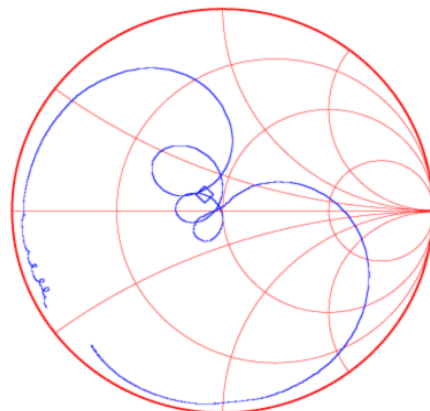
VSWR Response



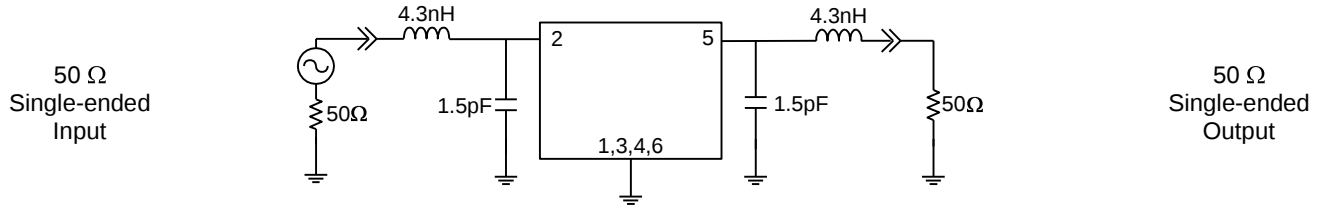
Input Smith Chart



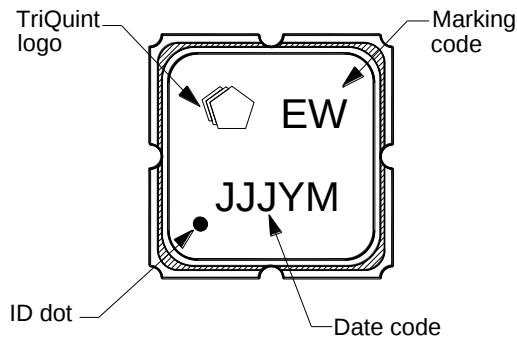
Output Smith Chart



Matching Schematics

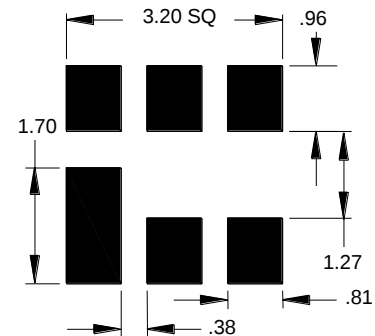


Marking



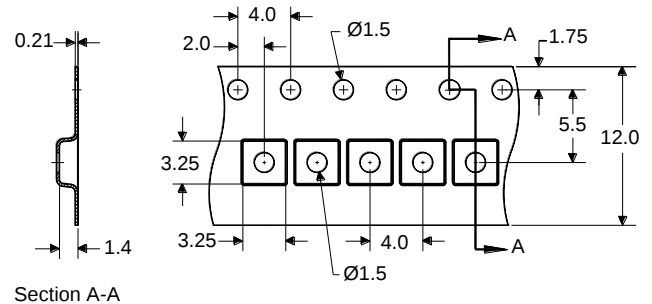
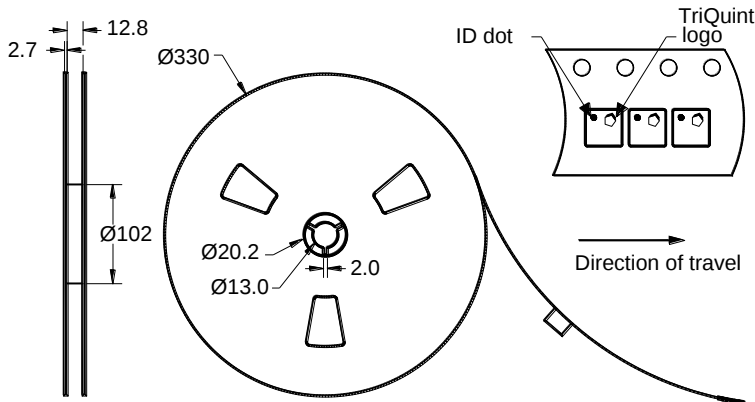
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

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	-30	+85	°C
Storage Temperature Range	T _{stg}	-40	+85	°C
DC voltage on any port (instantaneous only)	-	-	+5 V	V
Input Power	P _{in1}	-	+22	dBm

Notes:

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 ([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



PO Box 609501
Orlando, FL 32860-9501
USA

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

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