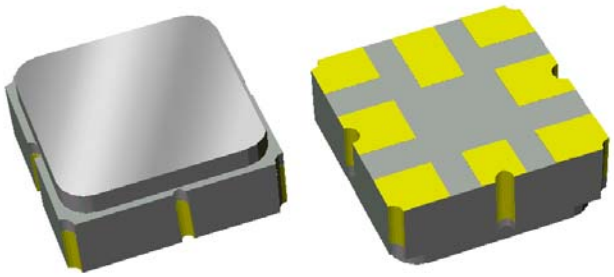
TriQuint SEMICONDUCTOR

Preliminary Data Sheet

Part Number 856365
1216 MHz SAW Filter

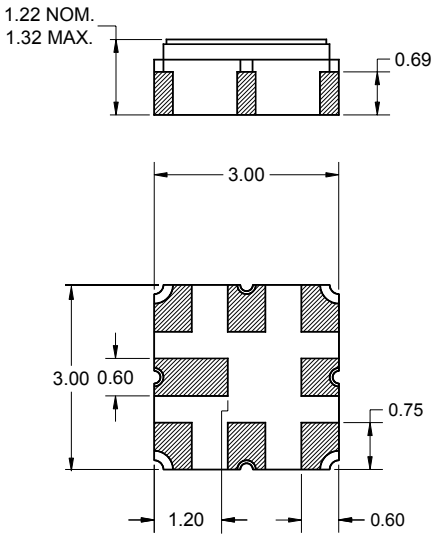
Features

- For broadband applications
- Usable bandwidth of 8 MHz
- Low loss
- High attenuation
- No impedance matching required for operation at 200 Ω
- Balanced 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

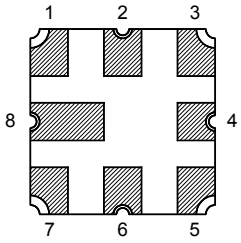


Dimensions shown are nominal in millimeters
All tolerances are ±0.15mm except overall length and width ±0.10mm

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

Pin Configuration

Bottom View



Pin No.	Description
1	Input
2	Input return
5	Output
6	Output return
3,4,7,8	Ground

© 8-06 TriQuint Semiconductor, Inc.

Preliminary Data Sheet

Electrical Specifications [1]

Operating Temperature Range: [2] +35 to +75 °C

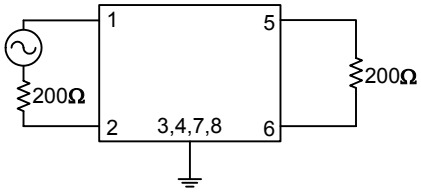
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	1216	-	MHz
Maximum Insertion Loss				
1212 - 1220 MHz	-	3.75	4.5	dB
12 dB Bandwidth [4]	-	23.1	24	MHz
Stopband Rejection [4]				
500 - 1122 MHz	50	72	-	dB
1122 - 1136 MHz	60	75	-	dB
1136 - 1152 MHz	50	57	-	dB
1280 - 2000 MHz	44	63	-	dB
Amplitude Ripple				
1212 - 1220 MHz (over any 6MHz)	-	0.29	1.0	dB
Group Delay Ripple				
1212 - 1220 MHz	-	15	25	ns
Source Impedance [5]	-	200	-	Ω
Load Impedance [5]	-	200	-	Ω

Notes:

1. All specifications are based on the 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. Referenced to insertion loss at center frequency
5. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

200 Ω
Balanced

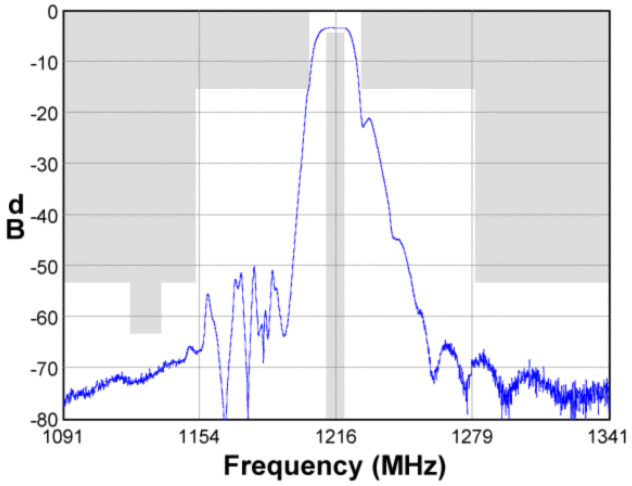


No impedance matching required

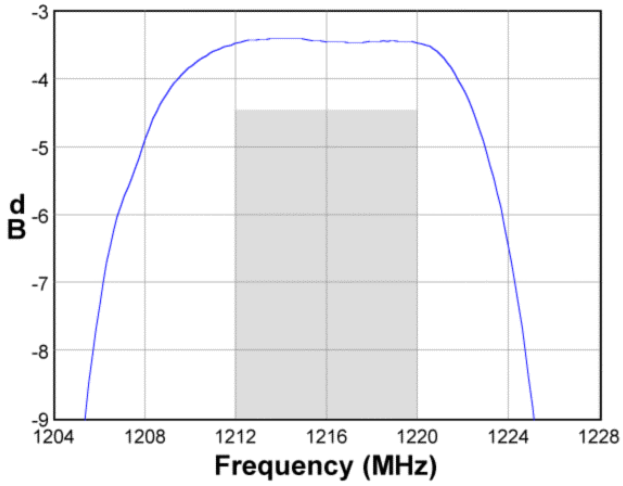
 © 8-06 TriQuint Semiconductor, Inc.

Typical Performance (at +25°C)

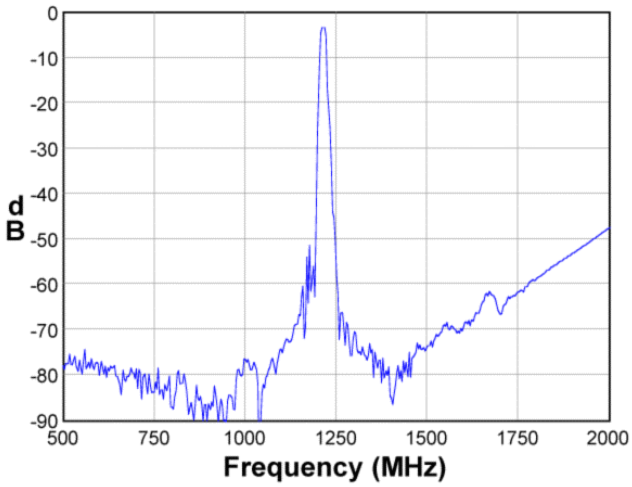
Frequency Response



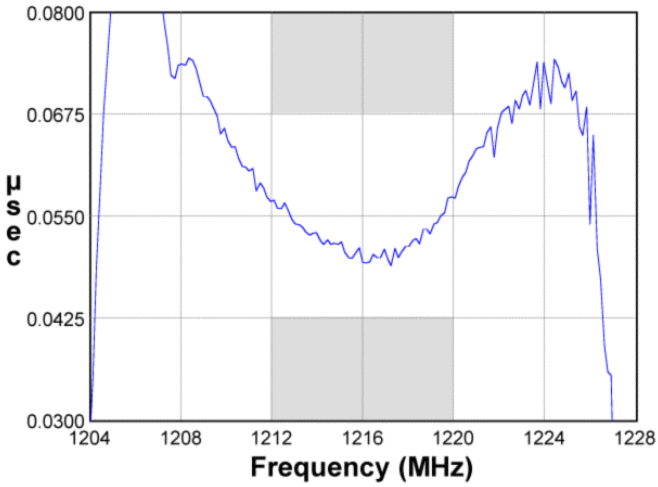
Passband Response



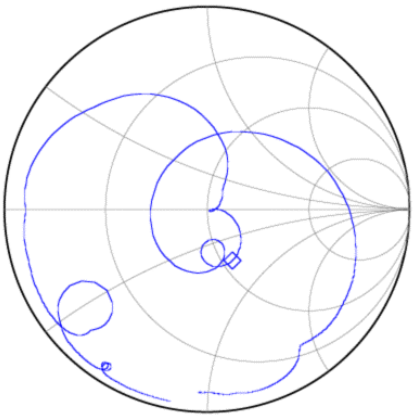
Wideband Response



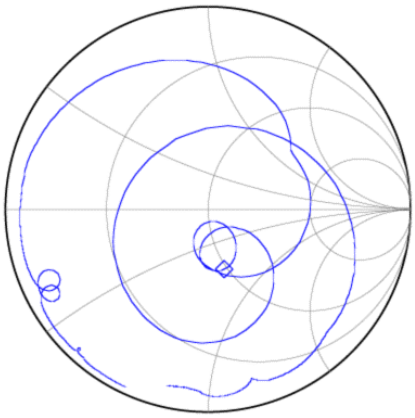
Group Delay Ripple



Input Smith Chart



Output Smith Chart

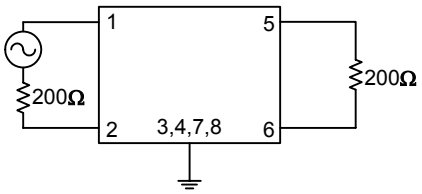


 © 8-06 TriQuint Semiconductor, Inc.

Preliminary Data Sheet

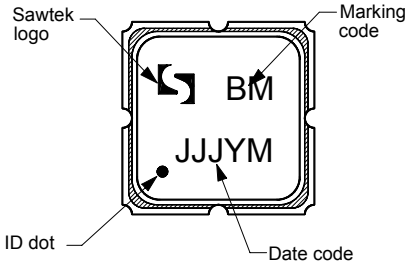
Matching Schematics

200 Ω
Balanced



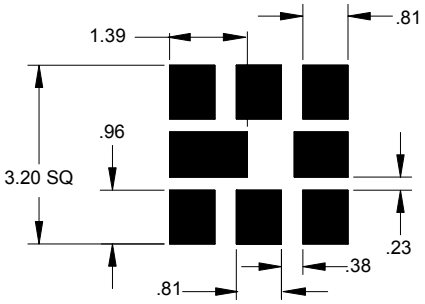
No impedance matching required

Marking



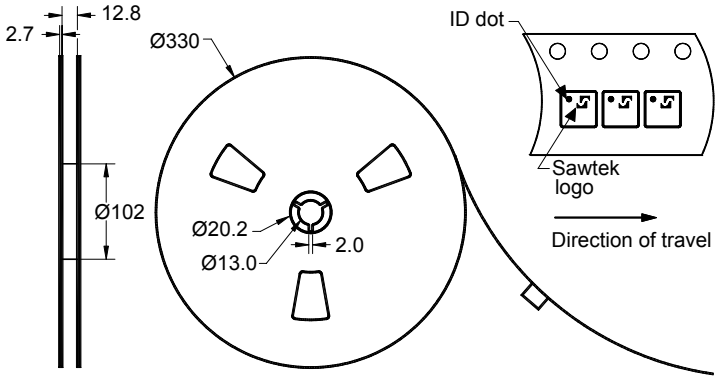
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

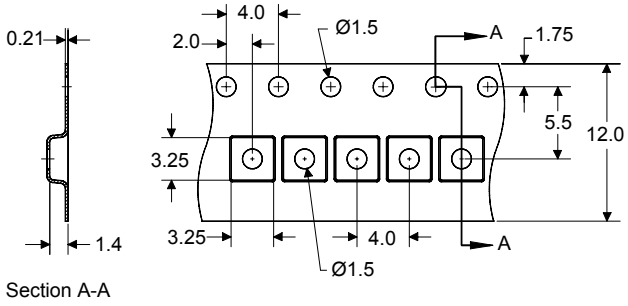
PCB Footprint



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

© 8-06 TriQuint Semiconductor, Inc.

TriQuint SEMICONDUCTOR

Preliminary Data Sheet

Part Number 856365

1216 MHz SAW Filter

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	+35	+75	°C
Storage Temperature Range	T_{stg}	+35	+75	°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 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

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
Web: www.triquint.com

Or contact one of our worldwide Network of sales offices, Representatives or distributors