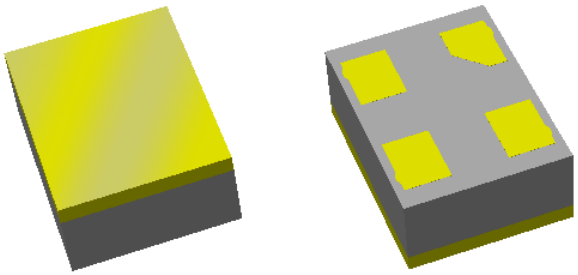
TriQuint SEMICONDUCTOR

Data Sheet

Part Number 856963
875 MHz SAW Filter

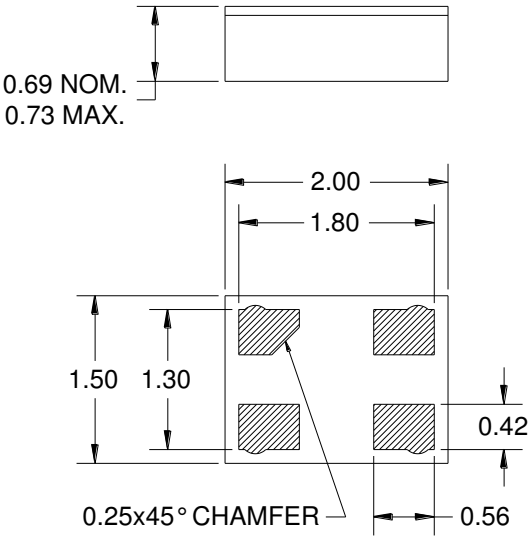
Features

- For ISM Band applications
- Usable bandwidth 10 MHz
- Low loss
- Single-ended operation
- Chip Scale Package (CSP)
- Hermetic
- **RoHS** compliant (2002/95/EC), **Pb**-free



Package

Surface Mount 2.00 x 1.50 x 0.69 mm
CSP-8A

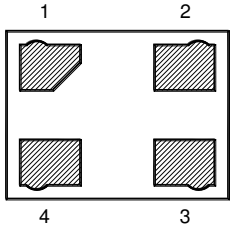


Dimensions shown are nominal in millimeters
All tolerances are ±0.10mm

Body: Al_2O_3 ceramic
Lid: *Kovar* or *Alloy 42*, *Au* over *Ni* plated
Terminations: *Au* plating 0.5 - 1.0μm,
over a 2 - 6μm *Ni* plating

Pin Configuration

Bottom View



Pin No.	Description
1	Input
3	Output
2,4	Case ground

Electrical Specifications [1]

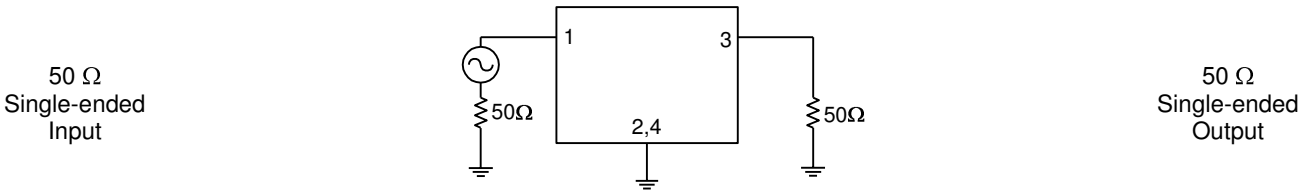
Operating Temperature Range: [2] -40°C to +85 °C

Parameter [3]	Minimum	Typical [4]	Maximum	Unit
Center Frequency	-	875	-	MHz
Maximum Insertion Loss				
870 – 880 MHz	-	1.8	3	dB
Absolute Attenuation [5]				
10 – 810 MHz	40	52	-	dB
810 – 848 MHz	35	42	-	dB
924 – 960 MHz	35	48	-	dB
960 – 1110 MHz	40	52	-	dB
1110 – 3000 MHz	30	39	-	dB
Amplitude Variation				
870 – 880 MHz	-	0.15	1.0	dB p-p
Group Delay Variation				
870 – 880 MHz	-	8	50	ns p-p
Input/Output Return Loss				
870 – 880 MHz	10	14	-	dB
Source Impedance (single-ended) [6]	-	50	-	Ω
Load Impedance (single-ended) [6]	-	50	-	Ω

Notes:

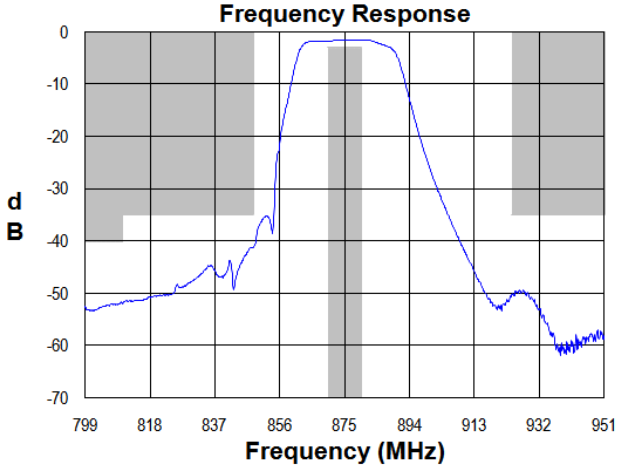
1. All specifications are based on the test circuit below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. Typical values are based on average measurements at room temperature
5. Relative to zero dB
6. This is the optimum impedance in order to achieve the performance

Test Circuit:

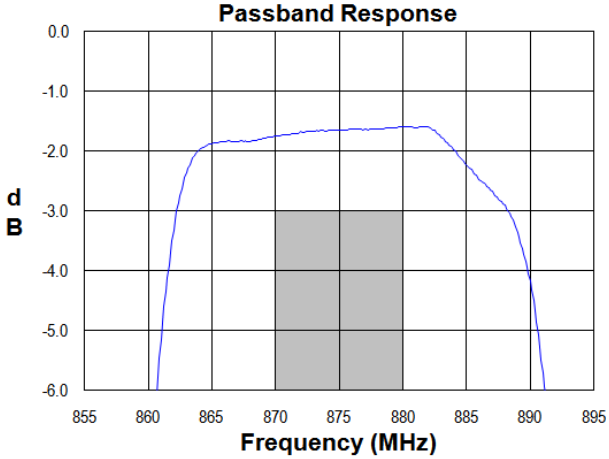


Typical Performance (at room temperature)

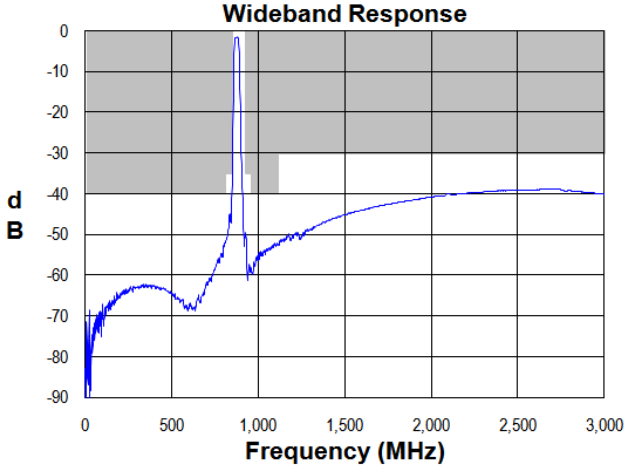
Frequency Response



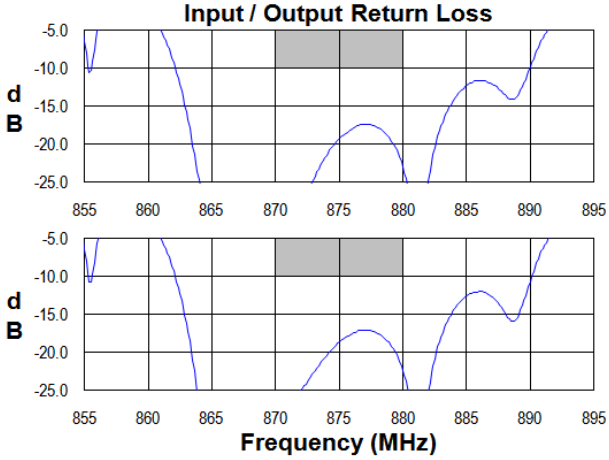
Passband Response



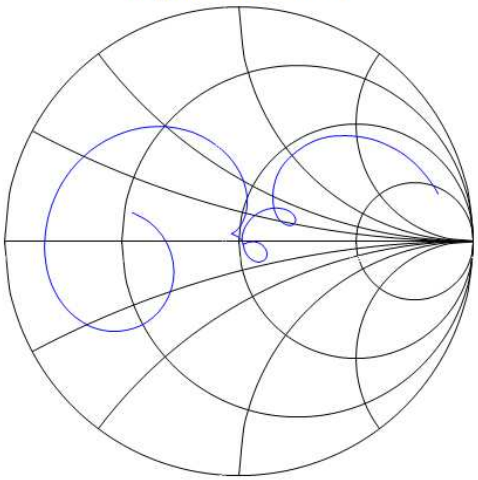
Wideband Response



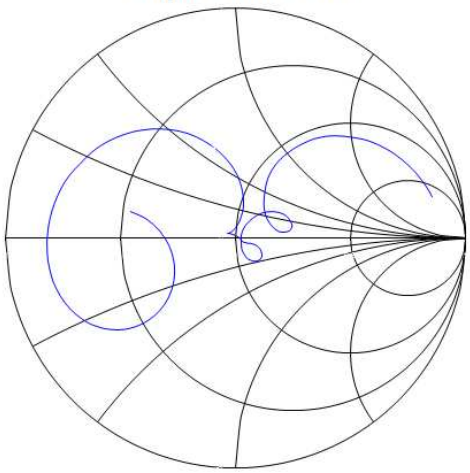
Input / Output Return Loss



Input Smith Chart

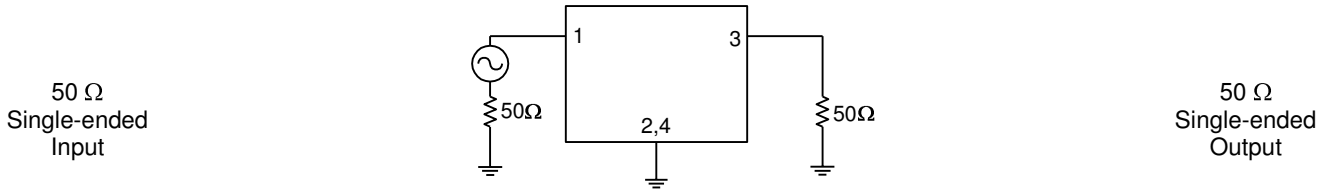


Output Smith Chart

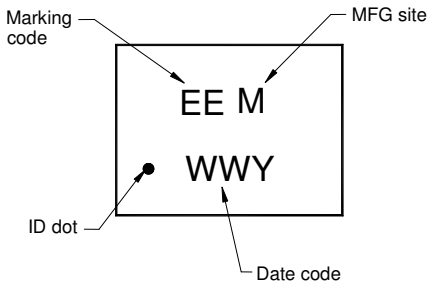


Part Number 856963
875 MHz SAW Filter

Matching Schematics

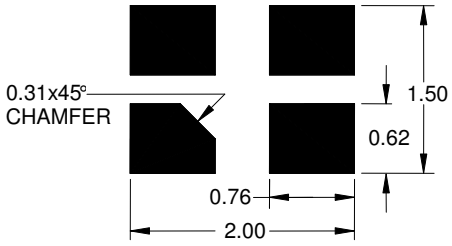


Marking



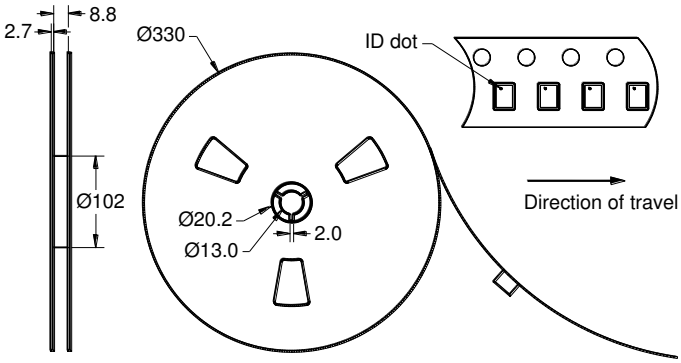
The date code consists of: WW = 2 digit week,
Y = last digit of year, M = manufacturing site code

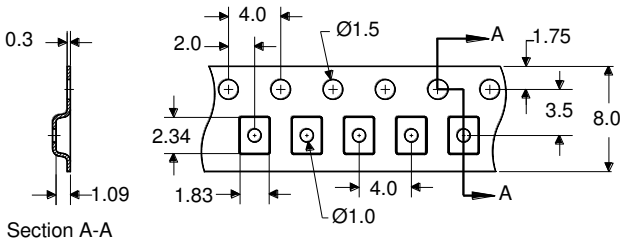
PCB Footprint



This footprint represents a recommendation only
Dimensions shown are nominal in millimeters

Tape and Reel





Dimensions shown are nominal in millimeters
Packaging quantity: 10000 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 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

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