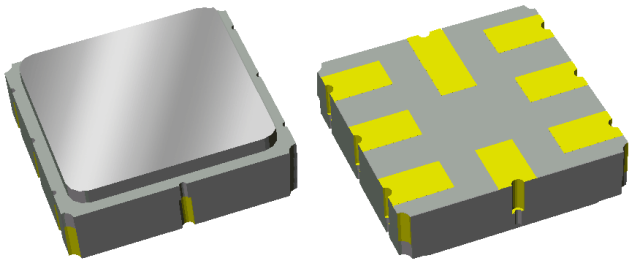
TriQuint SEMICONDUCTOR

Data Sheet

Part Number 856690
756 MHz SAW Filter

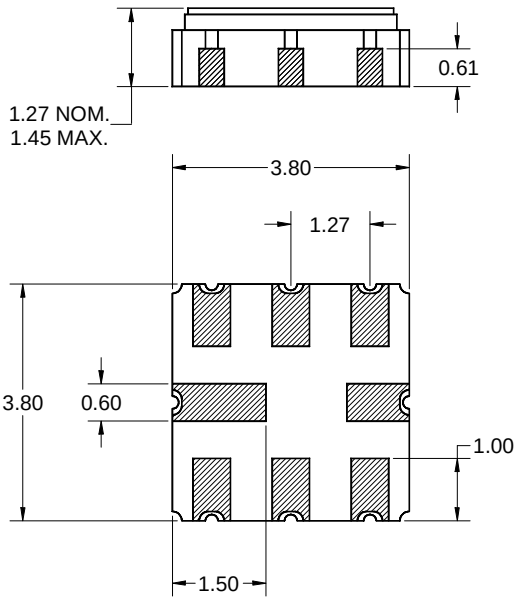
Features

- For WiMAX applications
- Usable bandwidth 10 MHz
- Typical bandwidth of 18.5 MHz
- Low loss
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- **RoHS** compliant (2002/95/EC), **Pb**-free



Package

Surface Mount 3.80 x 3.80 x 1.27 mm
SMP-15

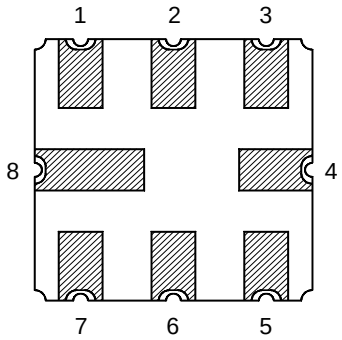


Dimensions shown are nominal in millimeters
All tolerances are ±0.15mm except overall length and width ±0.10mm

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



Single-ended Configuration

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

Electrical Specifications [1]

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

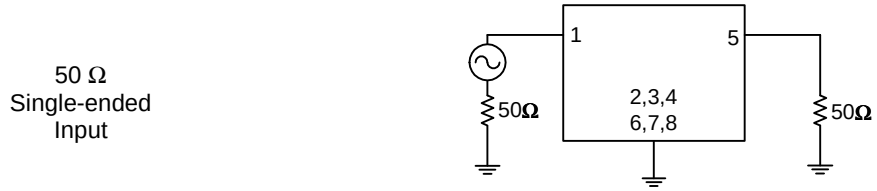
Parameter [3]	Minimum	Typical [4]	Maximum	Unit
Center Frequency	-	756	-	MHz
Minimum Insertion Loss	-	1.9	2.5	dB
Lower 1 dB Band Edge [5]	-	746.7	751.0	MHz
Upper 1 dB Band Edge [5]	761.0	765.3	-	MHz
1 dB Bandwidth	-	18.5	-	
Amplitude Variation				
751 – 761 MHz	-	0.1	1.0	dB p-p
Group Delay Variation				
751 – 761 MHz	-	12	50	ns p-p
Absolute Attenuation [5]				
10 – 700 MHz	45	55	-	dB
700 – 727 MHz	30	39	-	dB
727 – 742 MHz	5	14	-	dB
770 – 805 MHz	4	11	-	dB
805 – 825 MHz	30	53	-	dB
825 – 1000 MHz	45	50	-	dB
Temperature Coefficient of Frequency	-	-38	-	ppm/°C
Source Impedance (single-ended) [6]	-	50	-	Ω
Load Impedance (single-ended) [6]	-	50	-	Ω

Notes:

1. All specifications are based on the 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. Relative to minimum insertion loss
6. This is the optimum impedance in order to achieve the performance shown

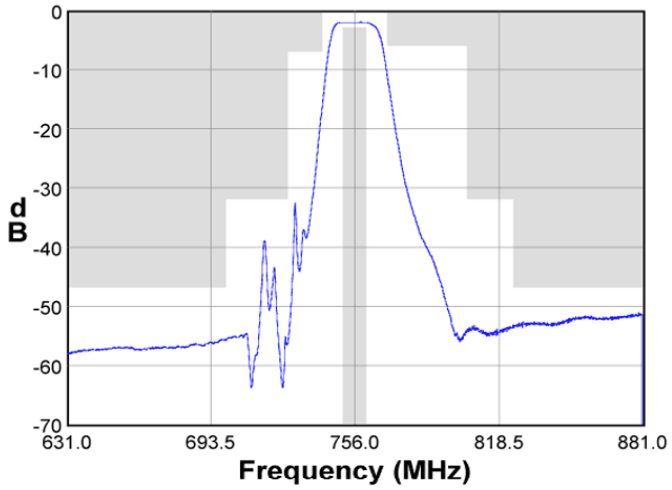
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

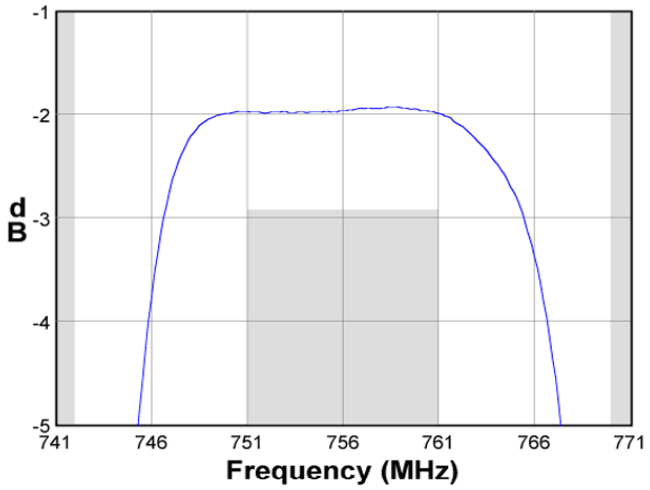


Typical Performance (at room temperature)

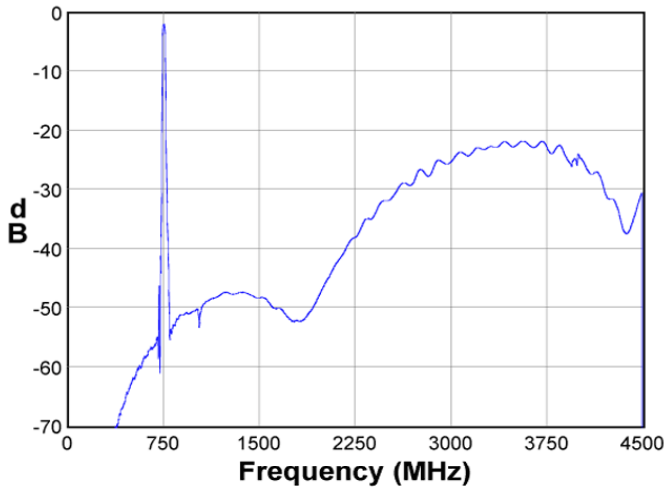
Frequency Response



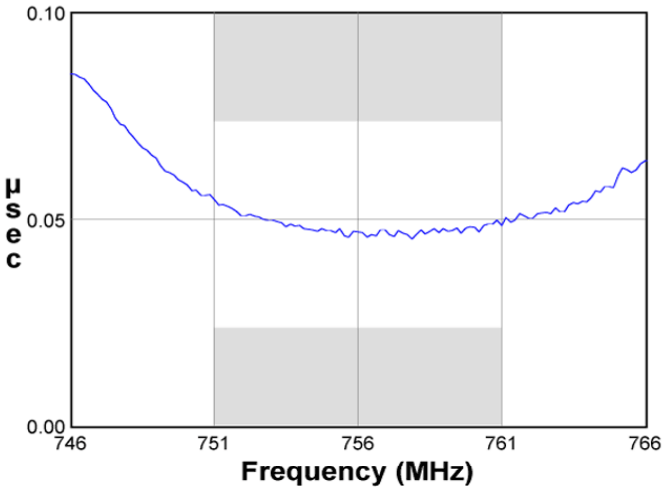
Passband Response



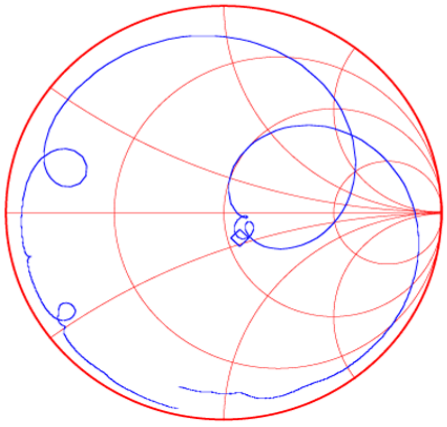
Wideband Response



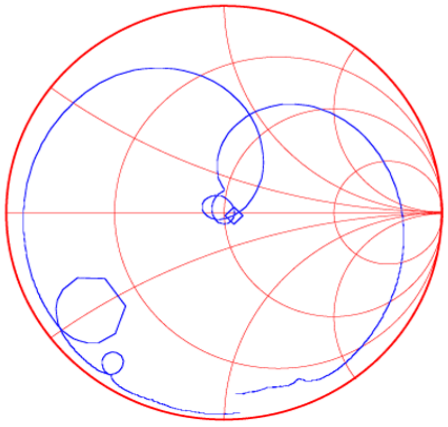
Group Delay Response



Input Smith Chart



Output Smith Chart



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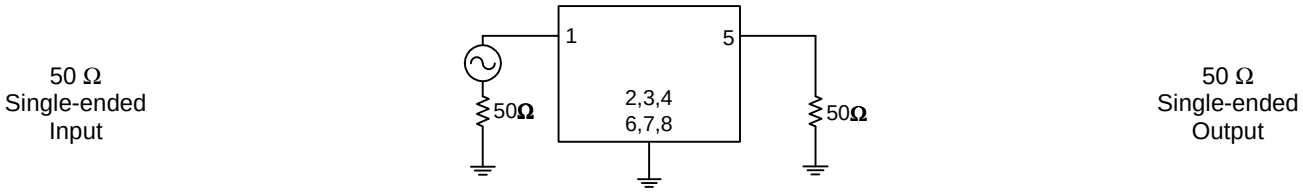
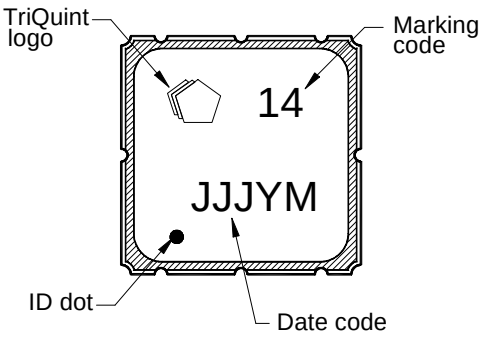
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

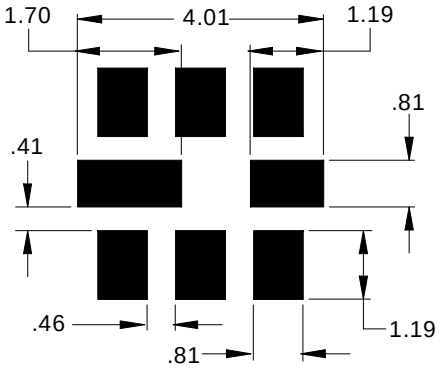


Marking



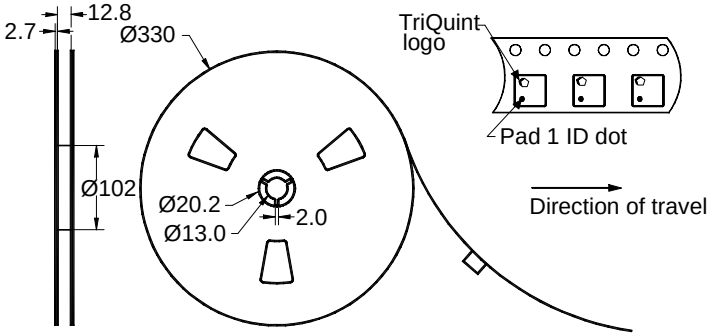
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

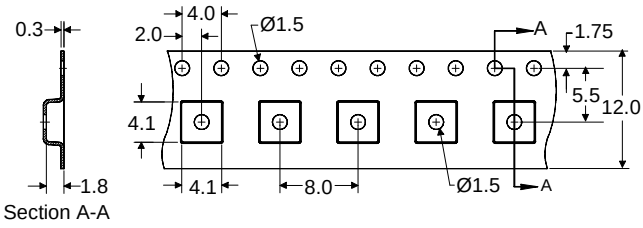
PCB Footprint



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

Tape and Reel





Dimensions shown are nominal in millimeters
Packaging quantity: 4000 units/reel

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Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-40	+85	^{o}C
Storage Temperature Range	T_{stg}	-40	+85	^{o}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

Contact Information

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