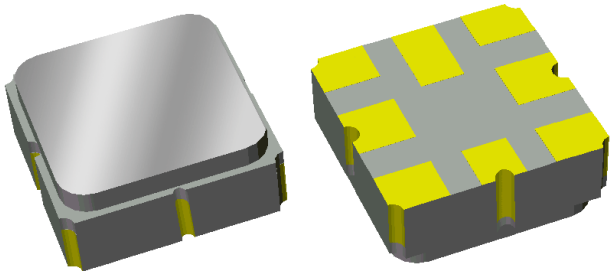
TriQuint SEMICONDUCTOR

Data Sheet

Part Number 856330
1086 MHz SAW Filter

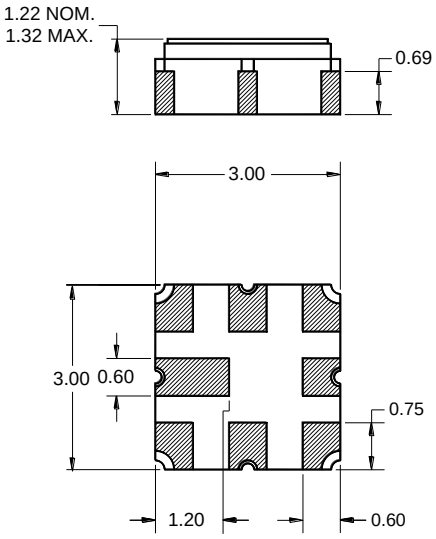
Features

- For broadband access applications
- Usable bandwidth 10 MHz
- High attenuation
- No impedance matching required for operation at 200 Ω
- Balanced operation
- Ceramic Surface Mount Package (SMP)
- Small size



Package

Surface Mount 3.00 x 3.00 x 1.22 mm

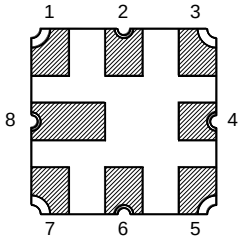


Dimensions shown are nominal in millimeters
All tolerances are ±0.15mm except overall length and width ±0.10mm

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	Case ground

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Electrical Specifications [1]

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

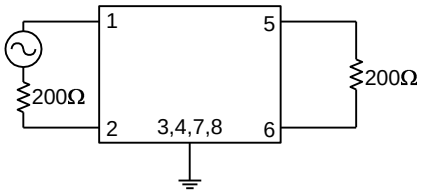
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	1086	-	MHz
Maximum Insertion Loss				
1081 - 1091 MHz	-	4	5	dB
1.5 dB Bandedges				
Lower Bandedge	-	1073	1081	MHz
Upper Bandedge	1091	1099		
Amplitude Ripple [4]				
1081 - 1091 MHz	-	0.3	1.0	dB
Stopband Rejection (Test Fixture)				
500 - 988 MHz	50	65	-	dB
988 - 1002 MHz	52.5	70	-	dB
1038 - 1046 MHz	40	55	-	dB
1156 - 1600 MHz	40	60	-	dB
4167 - 4168 MHz	35	40	-	dB
Stopband Rejection (PCB) [5]				
988 - 1002 MHz	61	71	-	dB
Group Delay Ripple				
1081 - 1091 MHz	-	20	-	ns
Source Impedance [6]	-	200	-	Ω
Load Impedance [6]	-	200	-	Ω

Notes:

1. All specifications are based on the test circuit shown below. Testing is carried out using test fixture 971748, test data sheet 122288-02, to equipment specification 100221.
2. In production, devices will be tested at room temperature in a TriQuint test fixture 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. Maximum peak to adjacent valley over the defined frequency range.
5. This value is correlated to the test specification of 52.5 dB on the TriQuint production test fixture.
6. This is the optimum impedance in order to achieve the performance shown.

Test Circuit:

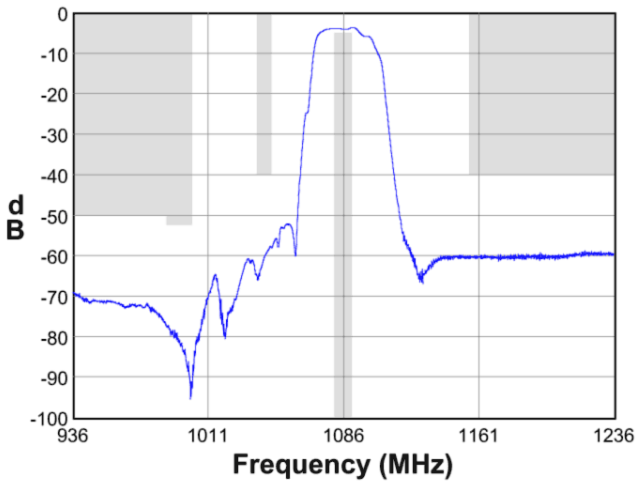
200 Ω Balanced



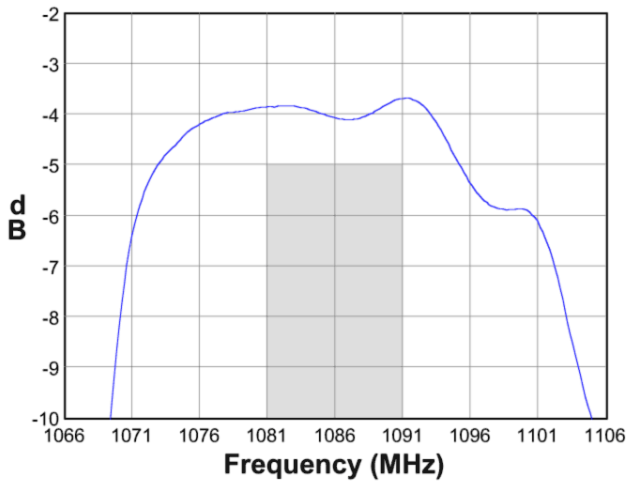
200 Ω Balanced

Typical Performance (at +25°C)

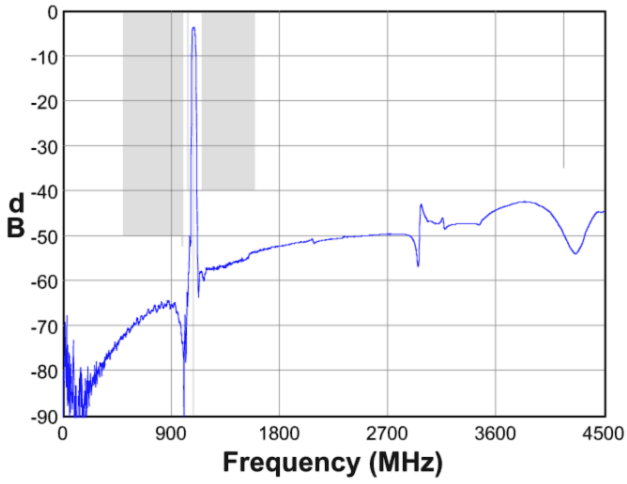
Frequency Response



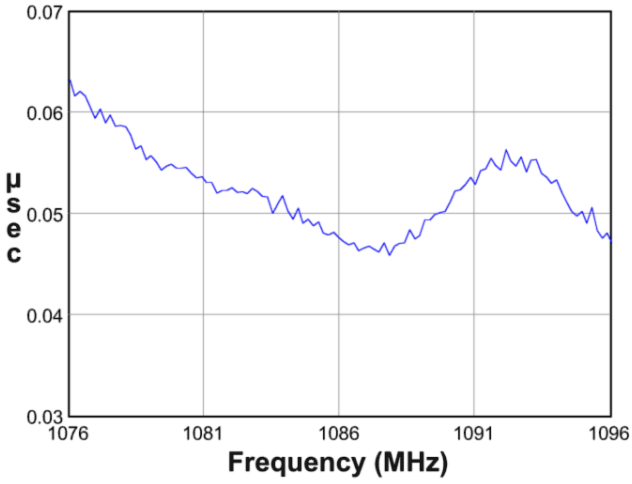
Passband Response



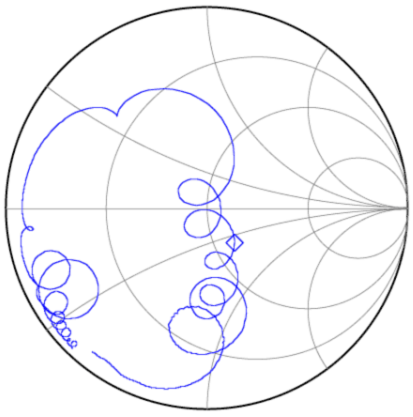
Wideband Response



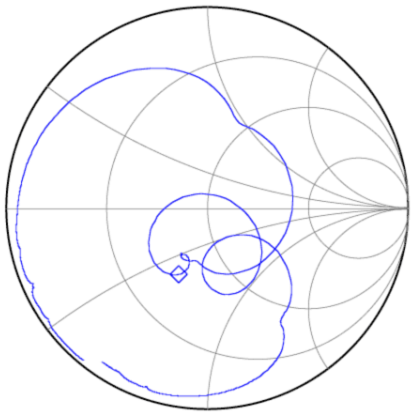
Group Delay



Input Smith Chart



Output Smith Chart



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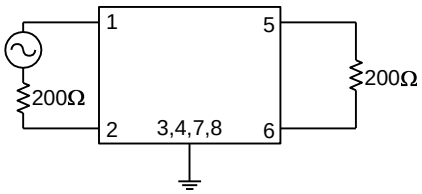
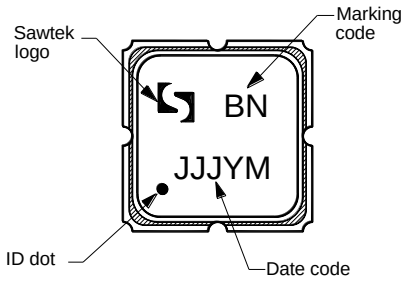
Matching Schematics

200 Ω
Balanced



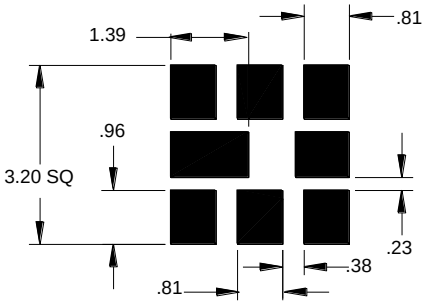
200 Ω
Balanced

Marking



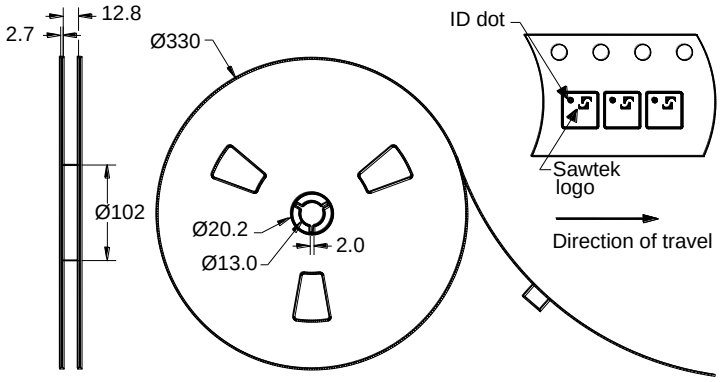
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

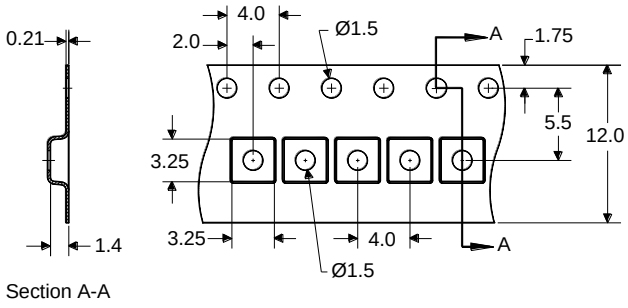
PCB Footprint



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

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Maximum Ratings

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

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 | Other Technical Information

Contact Information

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