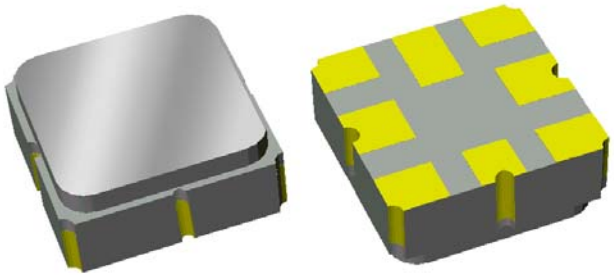
SAWTEK a TriQuint company

Preliminary Data Sheet

Part Number 856298
1220 MHz SAW Filter

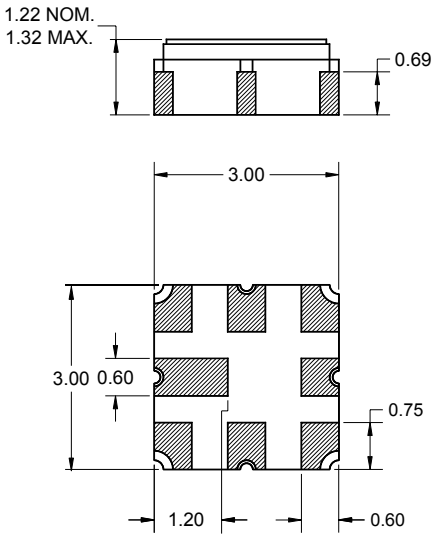
Features

- For broadband access applications
- Usable bandwidth 10 MHz
- Low loss
- 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

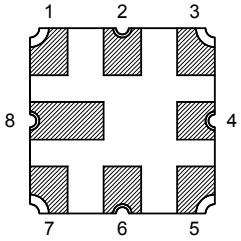


Dimensions shown are nominal in millimeters
All tolerances are ±0.15mm except overall length and width ±0.10mm

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 return
6	Output
3,4,7,8	Case Ground

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Electrical Specifications [1]

Operating Temperature Range: [2] -10 to +70 °C

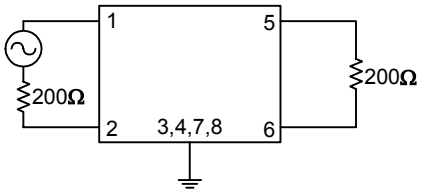
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	1220	-	MHz
Maximum Insertion Loss				
1215 - 1225 MHz	-	4.5	5.5	dB
Lower 1.5 dB Bandedge [4]	-	1209.5	1215	MHz
Upper 1.5 dB Bandedge	1225	1230.5	-	MHz
Stopband Rejection [4]				
500 - 1152 MHz	55	60	-	dB
1152 - 1190 MHz	30	55	-	dB
1250 - 1288 MHz	30	55	-	dB
1288 - 2000 MHz	55	50	-	dB
Amplitude Ripple [5]				
1215 - 1225 MHz	-	0.5	1.5	dB
Group Delay Ripple [5]				
1215 - 1225 MHz	-	30	-	ns
Source Impedance [6]	-	200	-	Ω
Load Impedance [6]	-	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. All attenuation measurements will be referenced the insertion loss at center frequency
5. Maximum peak to adjacent valley measured over the defined range
6. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

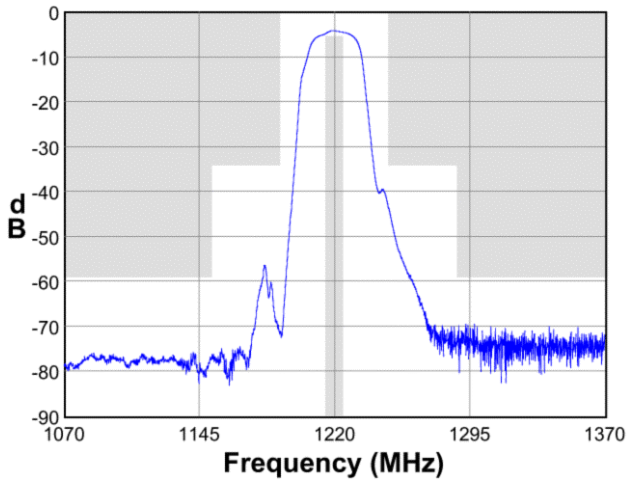
200 Ω
Balanced



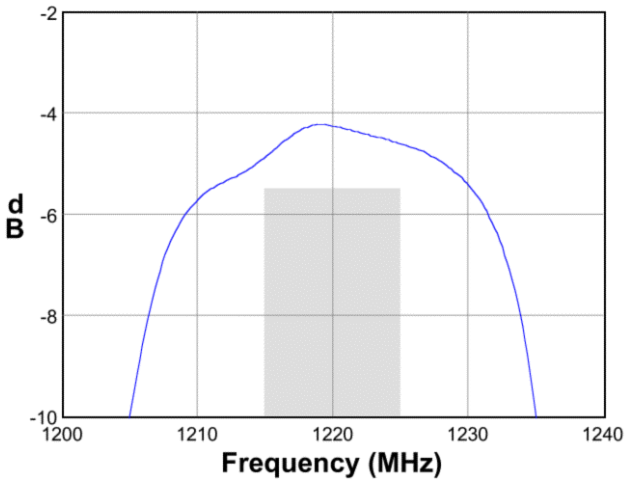
No impedance matching required

Typical Performance (at +25°C)

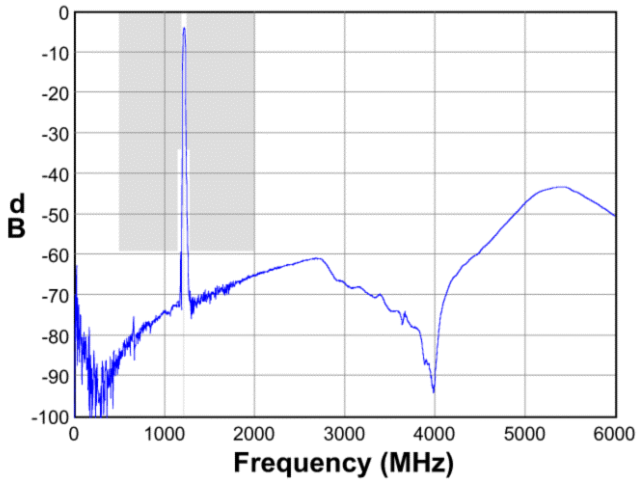
Frequency Response



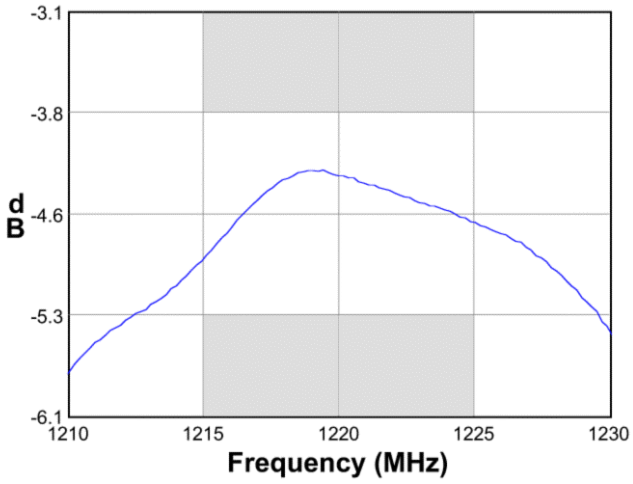
Passband Response



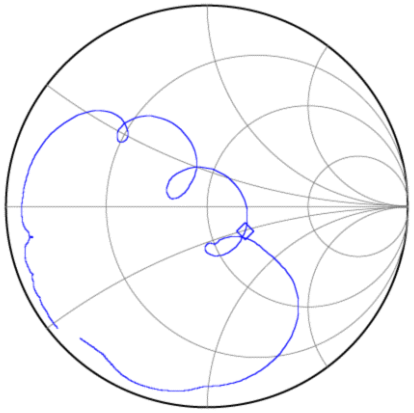
Wideband Response



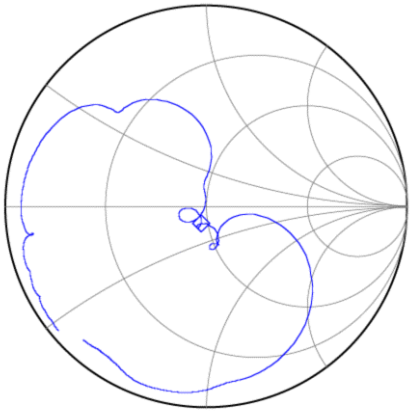
Amplitude Ripple



Input Smith Chart



Output Smith Chart



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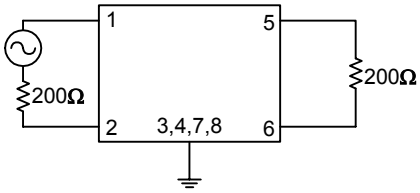
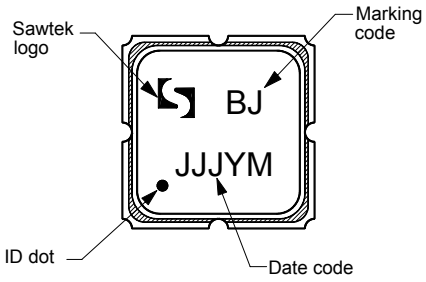
Matching Schematics

200 Ω
Balanced



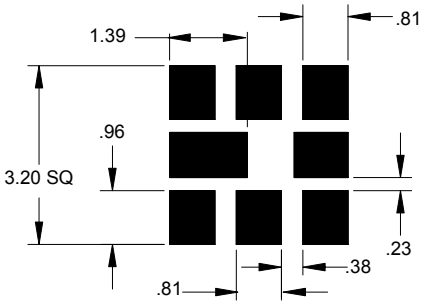
No impedance matching required

Marking



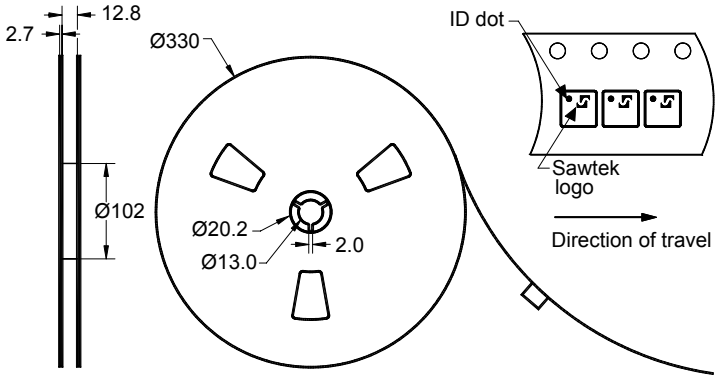
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

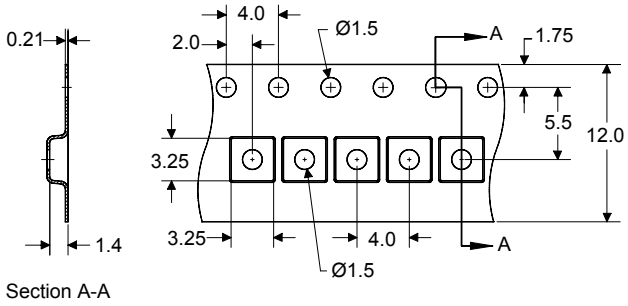
PCB Footprint



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

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Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-10	+70	°C
Storage Temperature Range	T_{stg}	-40	+85	°C

Warnings

- Electrostatic Sensitive Device (ESD) 
- Avoid ultrasonic exposure

Links to Additional Technical Information

PCB Layout Tips | Qualification Flowchart | Soldering Profile

S-Parameters | Other Technical Information

Contact Information

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