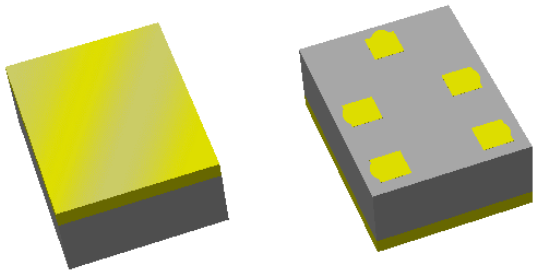
SAWTEK a TriQuint company

Preliminary Data Sheet

Part Number 856326
1575.42 MHz SAW Filter

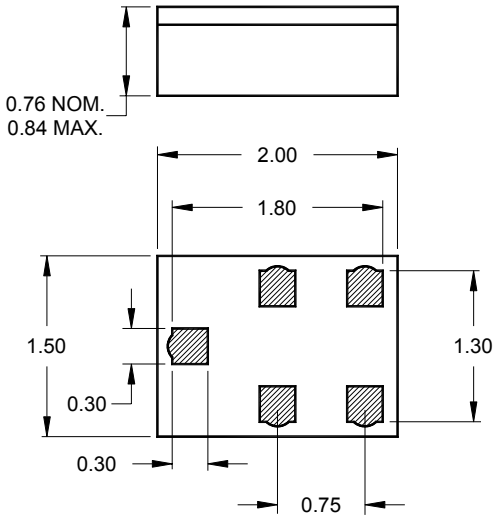
Features

- For GPS applications
- Usable bandwidth 2 MHz
- 0.53 dB typical insertion loss
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Chip Scale Package (CSP)
- Ceramic surface mount package
- Hermetic



Package

Surface Mount 2.00 x 1.50 x 0.76 mm

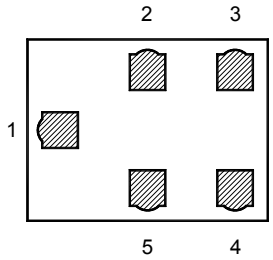


Dimensions shown are nominal in millimeters
All tolerances are ±0.10mm

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	Output
4	Input
3	Ground
2,5	Case ground

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Electrical Specifications [1]

Operating Temperature Range: [2] -30 to +85 °C

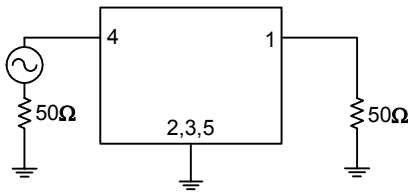
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	1575.42	-	MHz
Maximum Insertion Loss [4]				
1574.42 - 1576.42 MHz	-	0.53	0.8	dB
Amplitude Ripple				
1574.42 - 1576.42 MHz	-	0.02	0.3	dB p-p
Absolute Attenuation				
500 - 680 MHz	14.5	16.5	-	dB
680 - 894 MHz	13.5	15.5	-	dB
894 - 1500 MHz	13.5	15.2	-	dB
1650 - 2800 MHz	14.5	16.5	-	dB
2800 - 4000 MHz	16	19.8	-	dB
4000 - 4250 MHz	15	25.9	-	dB
4250 - 5250 MHz	14	26.4	-	dB
5250 - 6000 MHz	15	23.5	-	dB
Input/Output VSWR [4]				
1574.42 - 1576.42 MHz	-	1.2	1.5	-
Source Impedance [5]	-	50	-	Ω
Load Impedance [5]	-	50	-	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. Excluding losses due to PCB
5. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

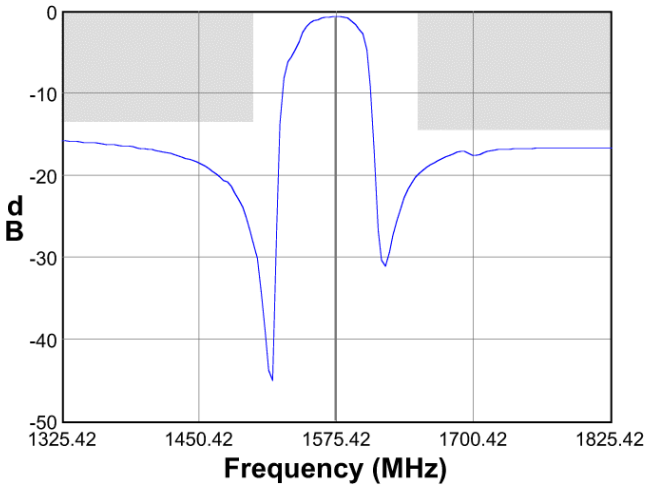
50 Ω
Single-ended



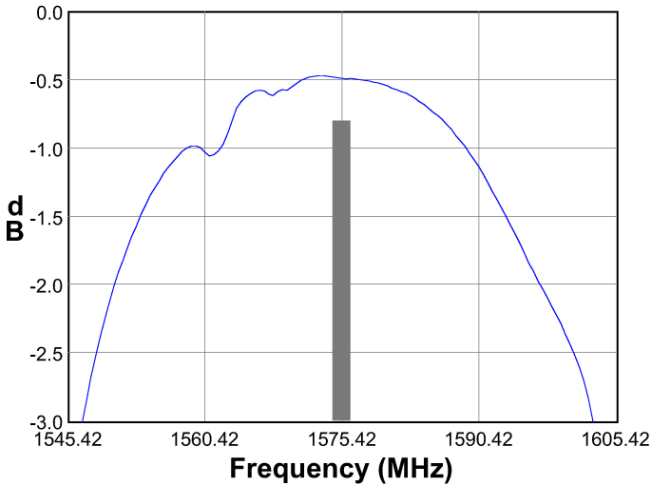
No impedance matching required

Typical Performance (at +25°C)

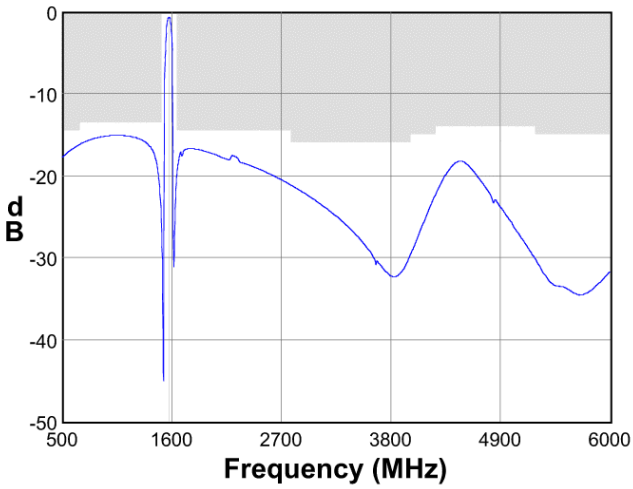
Frequency Response



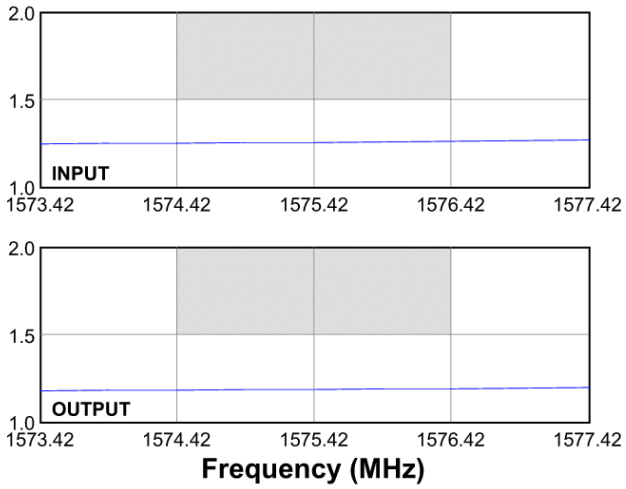
Passband Response



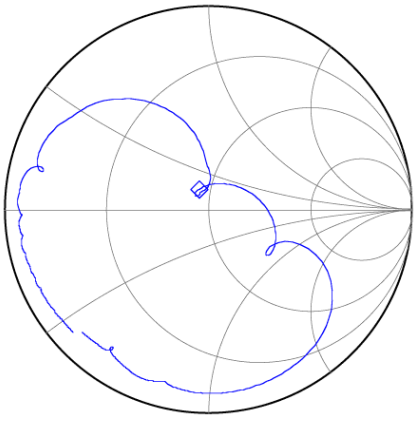
Wideband Response



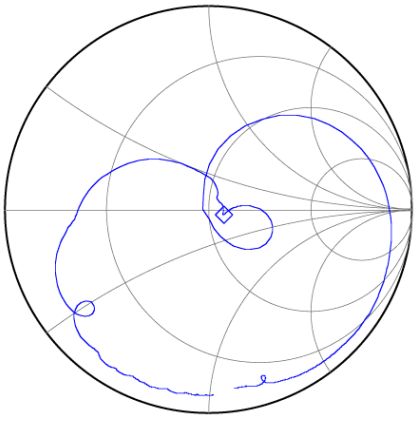
Input/Output VSWR



Input Smith Chart

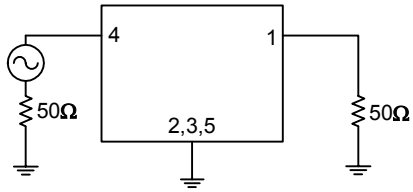


Output Smith Chart



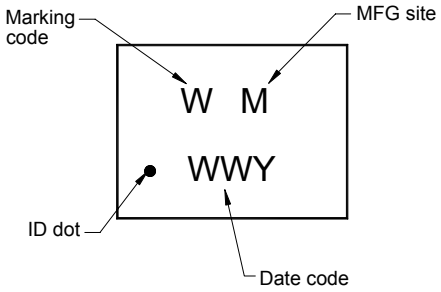
Matching Schematics

50 Ω
Single-ended



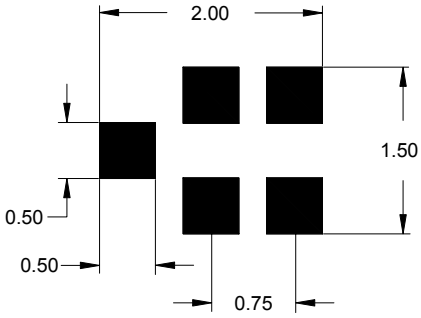
No impedance matching required

Marking



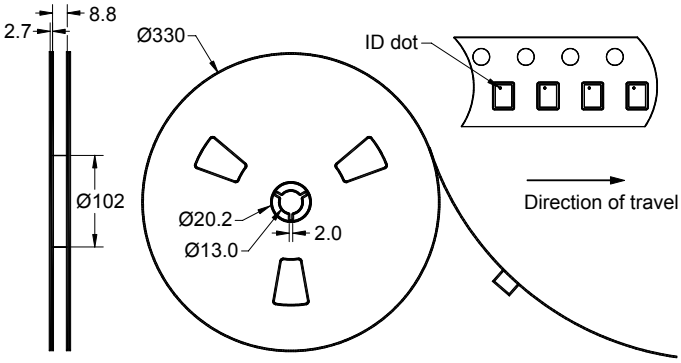
The date code consists of: WW = 2 digit week,
Y = last digit of year, M = manufacturing site code

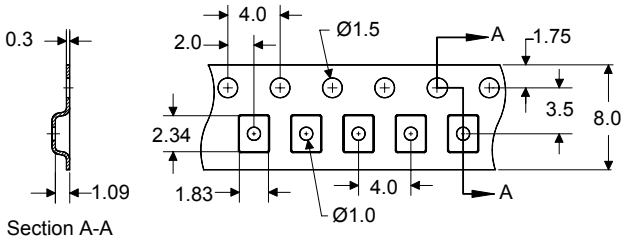
PCB Footprint



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	-30	+85	°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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