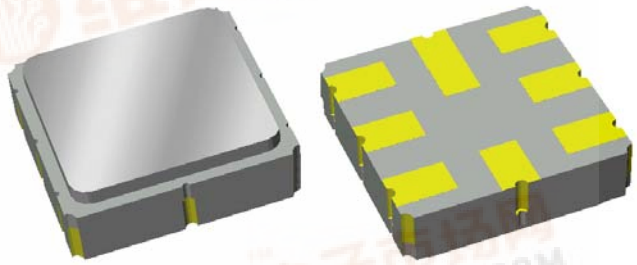
SAWTEK a TriQuint company

Part Number 856187
374 MHz SAW Filter

Preliminary Data Sheet

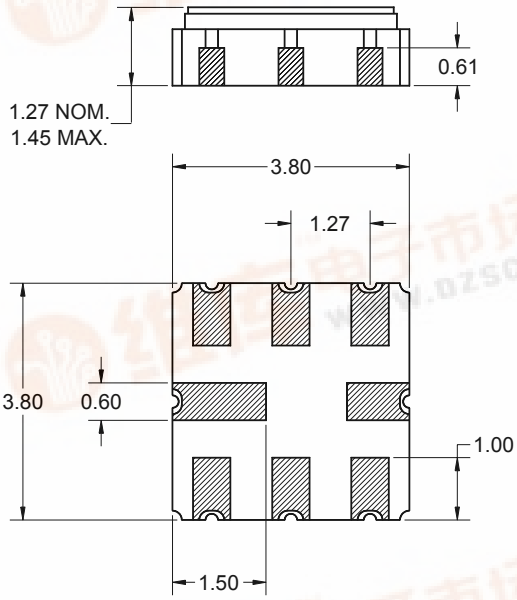
Features

- For WLAN applications
- Usable bandwidth of 17 MHz
- Low loss
- High attenuation
- Single-ended or balanced operation
- Ceramic Surface Mount Package (SMP)
- Small size



Package

Surface Mount 3.80 x 3.80 x 1.27 mm

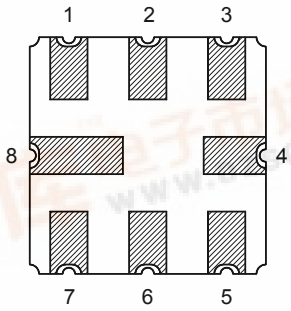


Dimensions shown are nominal in millimeters
All tolerances are ±0.15mm except overall length and width ±0.10mm

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]

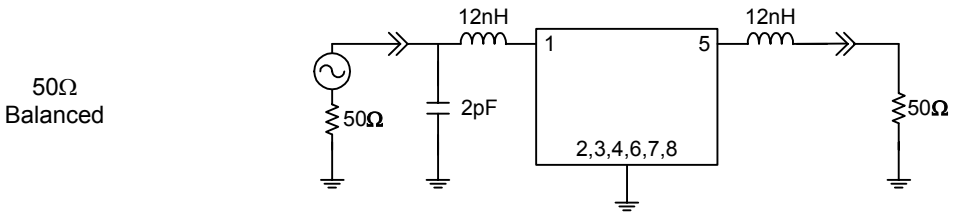
Operating Temperature Range: [2] -10 to +80 °C

Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency, f_0	-	374	-	MHz
Minimum Insertion Loss	-	3.0	5.0	dB
Lower 3 dB Bandedge	-	362	365.5	MHz
Upper 3 dB Bandedge	382.5	386	-	MHz
Absolute Attenuation				
10 - 345 MHz	55	60	-	dB
345 - 355 MHz	50	55	-	dB
355 - 359 MHz	44	50	-	dB
392.5 - 397 MHz	35	40	-	dB
397 - 410 MHz	45	50	-	dB
410 - 600 MHz	55	60	-	dB
Amplitude Variation				
367 - 381 MHz	-	1.0	1.5	dB p-p
Group Delay Variation				
367 - 381 MHz	-	100	150	nsec p-p
Source Impedance [4]	-	50	-	Ω
Load Impedance [4]	-	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. This is the optimum impedance in order to achieve the performance shown
5. Sawtek's production specifications reflect the typical performance in a 50 ohm single-ended system. This filter can be used in both single-ended and/or differential modes at each port. In addition, similar performance can be achieved in source and load impedances ranging from 50 to 750 ohms.

Test Circuit:



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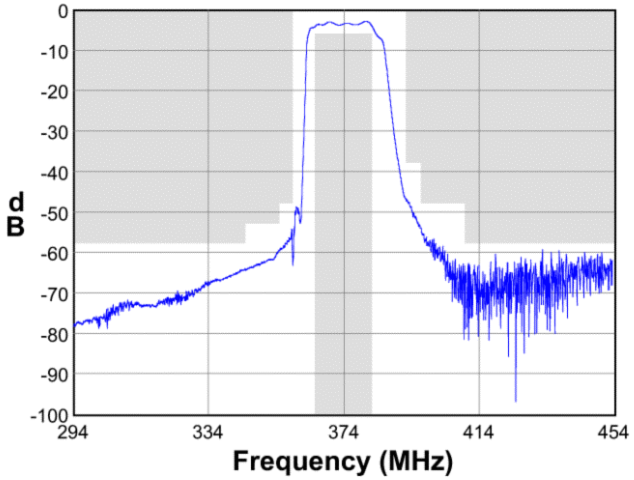
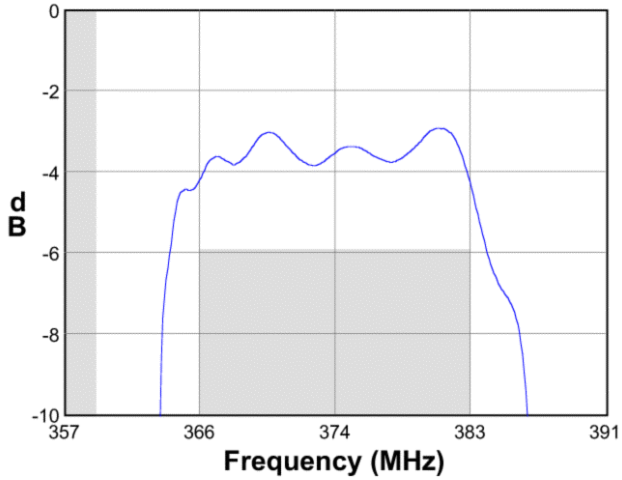
Typical Performance (at +25°C)

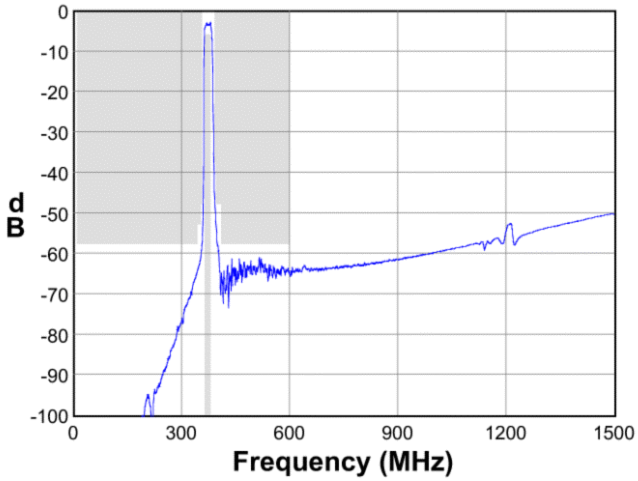
Frequency Response



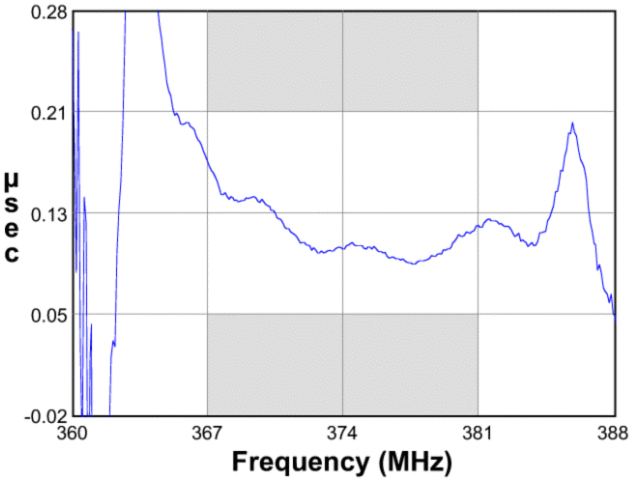
Passband Response



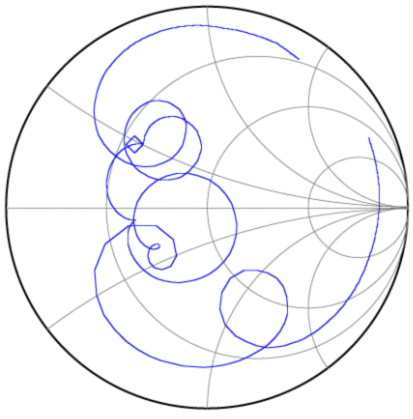
Wideband Response



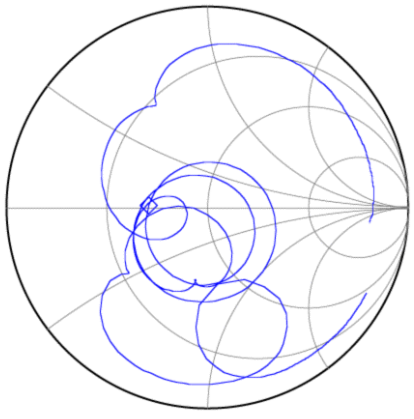
Group Delay Variation



Input Smith Chart



Output Smith Chart



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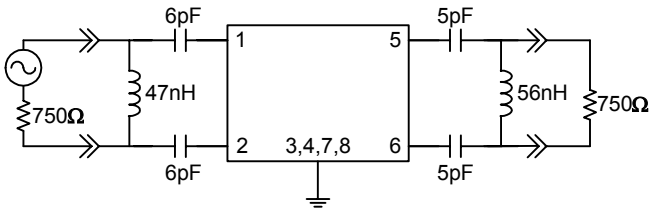
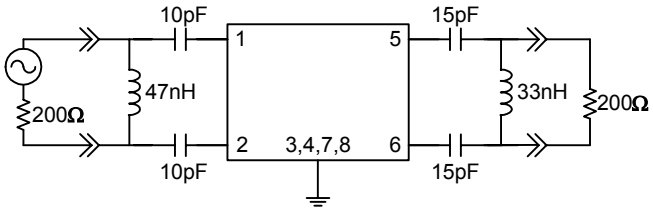
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

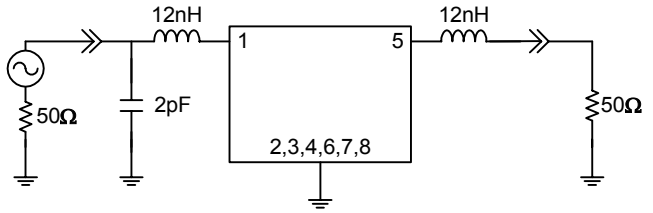
750Ω Balanced



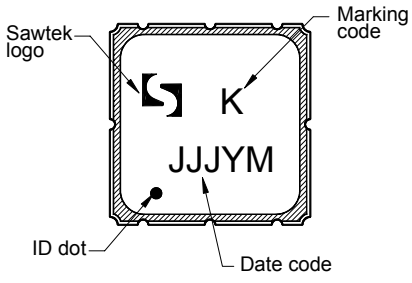
200Ω Balanced



50Ω Single-ended

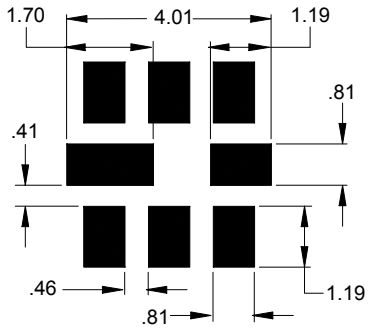


Marking



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

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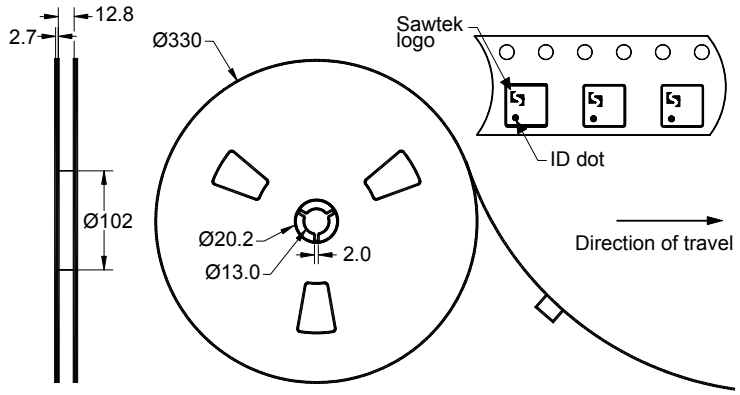
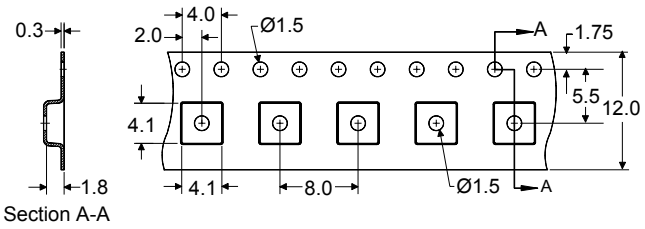
Tape and Reel





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

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-10	+80	°C
Input Power (1)	P_{in}	-	+7.5	dBm

Notes:

1. CW at Fo = 374 MHz for 10,000 hours

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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