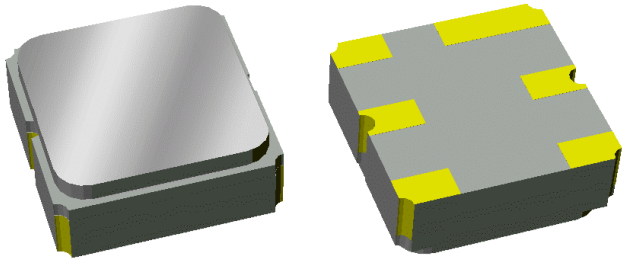
SAWTEK a TriQuint company

Data Sheet

Part Number 855860
1842.5 MHz SAW Filter

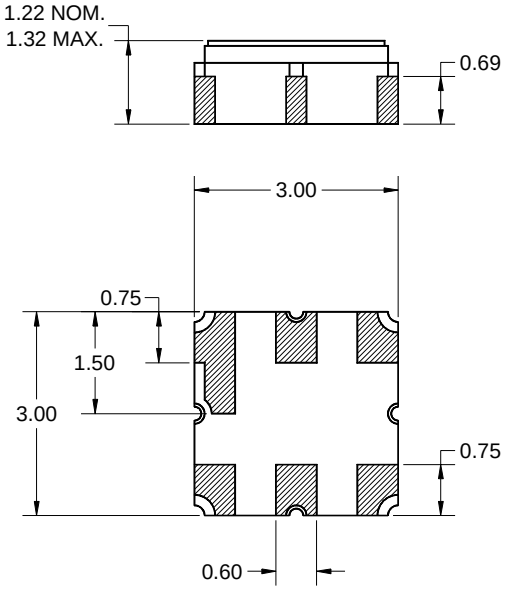
Features

- For DCS applications
- Usable bandwidth 75 MHz
- Low loss
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size



Package

Surface Mount 3.00 x 3.00 x 1.22 mm

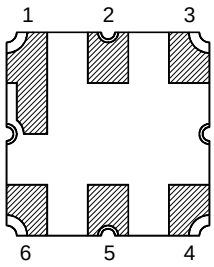


Dimensions shown are nominal in millimeters
All tolerances are ±0.15mm except overall length and width ±0.10mm

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
2,5	Input/Output
1,3,4,6	Case ground

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Electrical Specifications [1]

Operating Temperature Range: [2] -20 to +70 °C

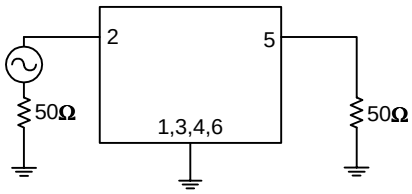
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	1842.5	-	MHz
Maximum Insertion Loss				
1805 - 1815 MHz (+15 to +70 °C)	-	2.8	3.3	dB
1805 - 1815 MHz (-20 to +15 °C)	-	-	3.7	dB
1815 - 1870 MHz	-	1.9	3	dB
1870 - 1880 MHz	-	2.1	3.6	dB
Absolute Attenuation				
10 - 1720 MHz	20	23	-	dB
1720 - 1765 MHz	25	29	-	dB
1765 - 1785 MHz	8	23	-	dB
1920 - 1980 MHz	15	27	-	dB
1980 - 2410 MHz	17	24	-	dB
2410 - 3120 MHz	20	24	-	dB
3120 - 4000 MHz	17	25	-	dB
Input/Output Return Loss				
1805 - 1880 MHz	6	9.2	-	dB
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

Test Circuit:

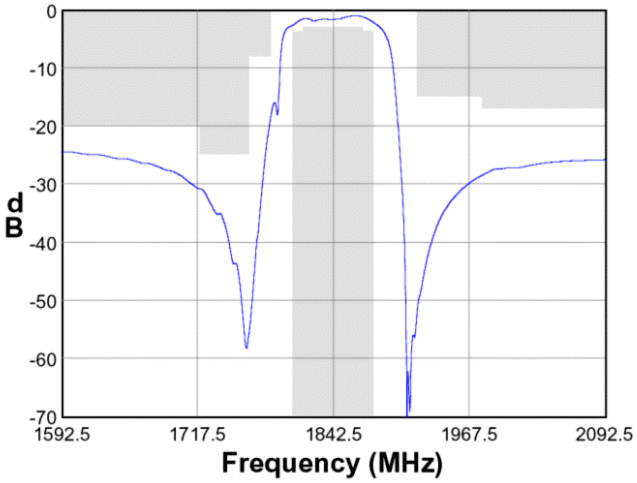
50 Ω
Single-ended



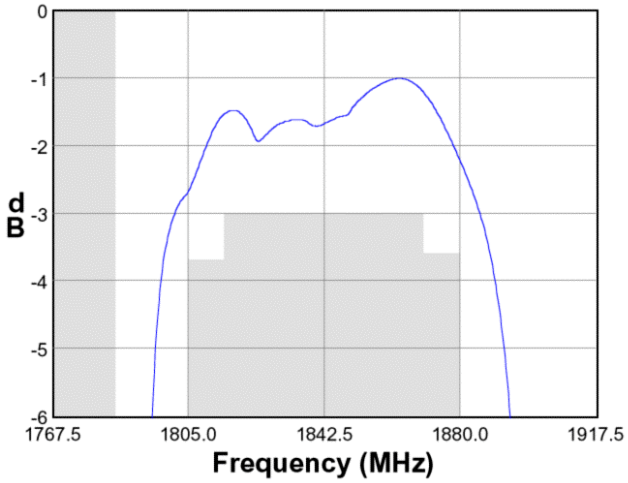
No impedance matching required

Typical Performance (at +25°C)

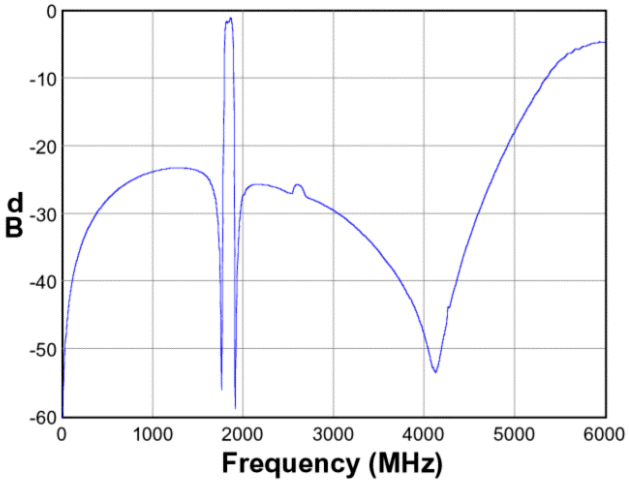
Frequency Response



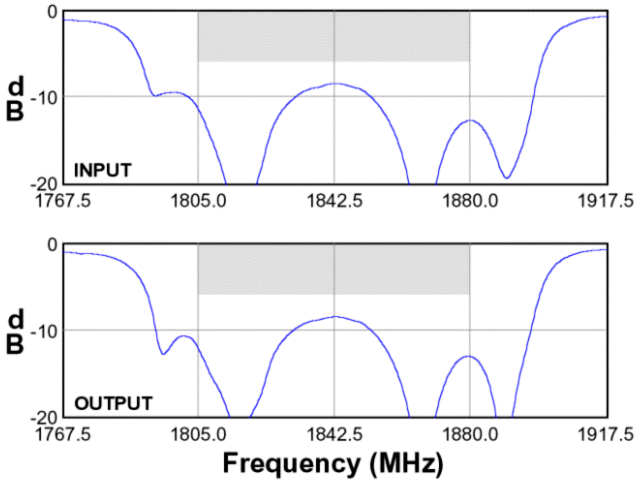
Passband Response



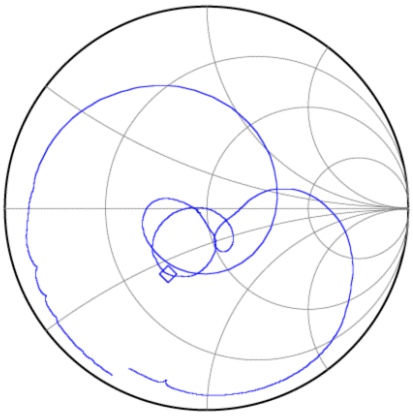
Wideband Response



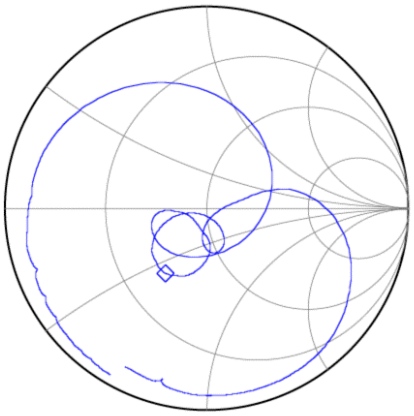
Input/Output Return Loss



Input Smith Chart



Output Smith Chart



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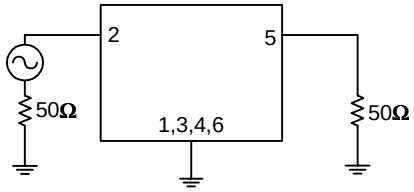
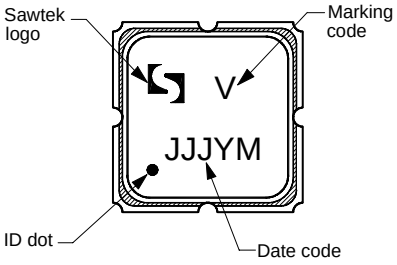
Matching Schematics

50 Ω
Single-ended



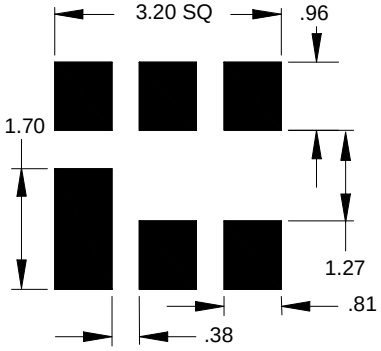
No impedance matching required

Marking



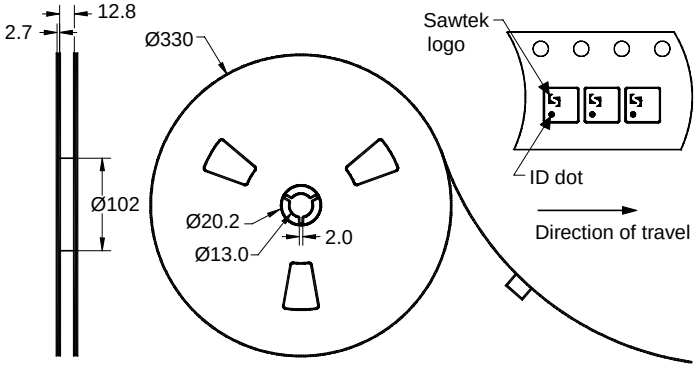
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

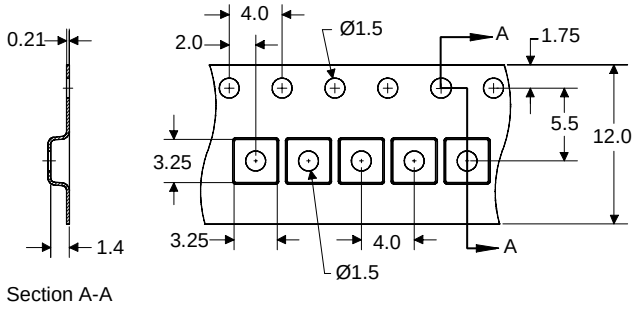
PCB Footprint



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	-20	+70	^{o}C
Storage Temperature Range	T_{stg}	-40	+85	^{o}C
RF Power	P_{in}	-	+13	dBm

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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Or contact one of our worldwide Network of sales offices, Representatives or distributors