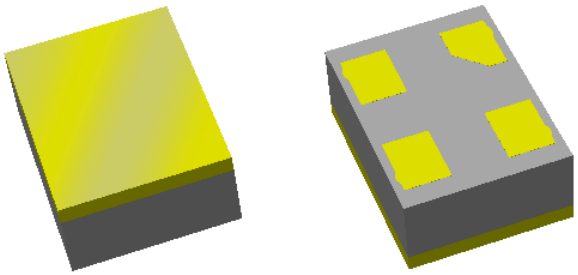
Part Number 856244
1880 MHz SAW Filter

Data Sheet

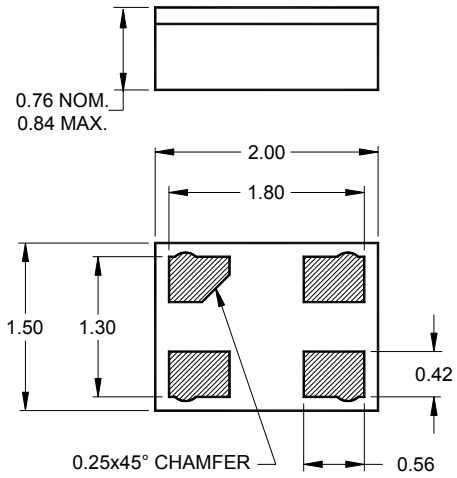
Features

- Usable bandwidth 60 MHz
- High Rx attenuation
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Chip Scale Package (CSP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free



Package

Surface Mount 2.00 x 1.50 x 0.76 mm

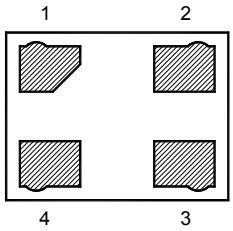


Dimensions shown are nominal in millimeters
All tolerances are ±0.10mm

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	Input
3	Output
2,4	Case ground

Electrical Specifications [1]

Operating Temperature Range: [2] +25 °C

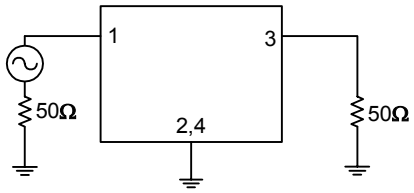
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	1880	-	MHz
Maximum Insertion Loss				
1850 - 1909.4 MHz	-	2.8	3.1	dB
Passband Variation				
1850 - 1909.4 MHz	-	0.9	1.5	dB p-p
Absolute Attenuation				
DC - 1770 MHz	30	34	-	dB
1770 - 1825 MHz	21	24	-	dB
1930 - 1990 MHz	38	44	-	dB
1990 - 2500 MHz	35	45	-	dB
2500 - 3820 MHz	25	30	-	dB
3820 - 6000 MHz	15	22	-	dB
Input/Output Return Loss				
1850 - 1909.4 MHz	8	10	-	dB
Optimal Source Impedance [4]	-	50	-	Ω
Optimal Load Impedance [4]	-	50	-	Ω

Notes:

1. All specifications are based on the test circuit shown below
2. This specification is valid for room temperature only. The specification over the full temperature range(s) is available on the next page(s)
3. Electrical margin has been built into the design to account for the variations due to 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

Electrical Specifications [1]

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

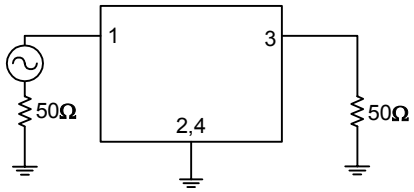
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	1880	-	MHz
Maximum Insertion Loss				
1850 - 1909.4 MHz	-	3.1	3.9	dB
Passband Variation				
1850 - 1909.4 MHz	-	0.8	2	dB p-p
Absolute Attenuation				
DC - 1770 MHz	30	34	-	dB
1770 - 1825 MHz	14	20	-	dB
1930 - 1990 MHz	28	44	-	dB
1930.625 - 1990 MHz	35	44	-	dB
1990 - 2500 MHz	35	45	-	dB
2500 - 3820 MHz	25	30	-	dB
3820 - 6000 MHz	15	22	-	dB
Input/Output Return Loss				
1850 - 1909.4 MHz	8	10	-	dB
Optimal Source Impedance [4]	-	50	-	Ω
Optimal 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:

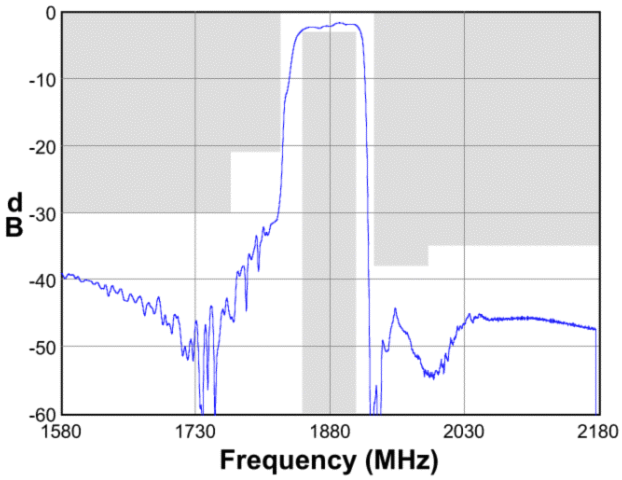
50 Ω
Single-ended



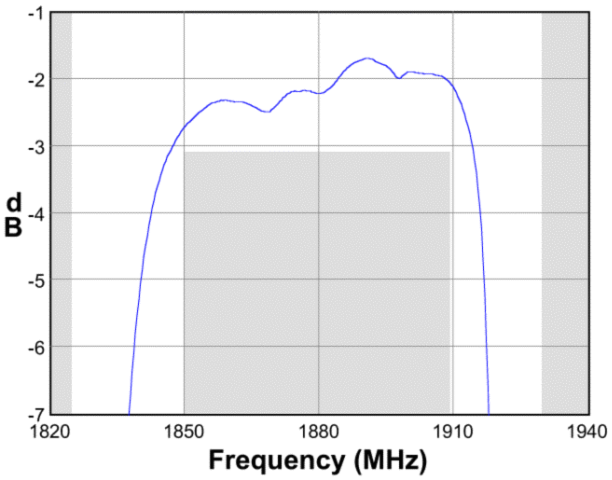
No impedance matching required

Typical Performance (at +25°C)

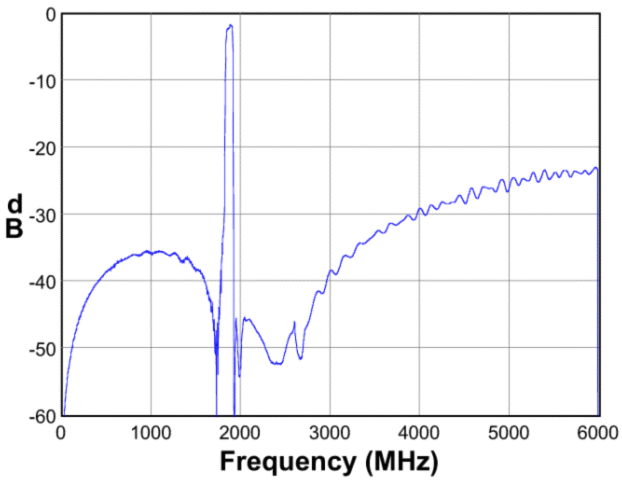
Frequency Response



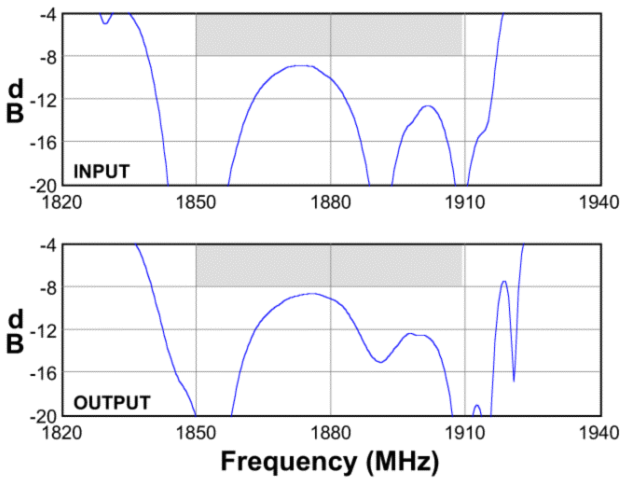
Passband Response



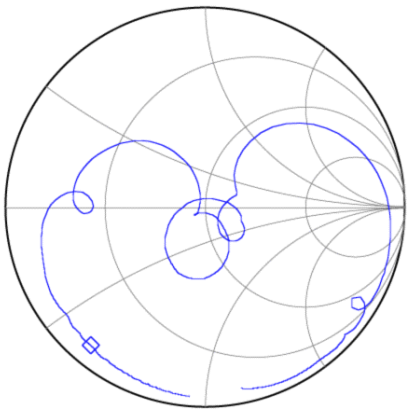
Wideband Response



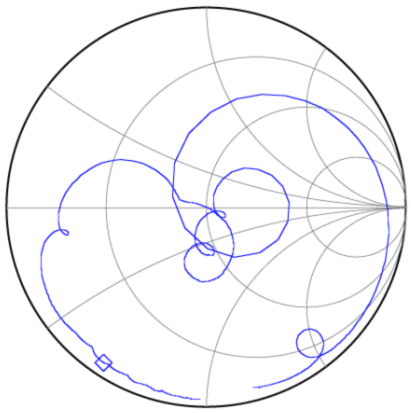
Return Loss



Input Smith Chart



Output Smith Chart



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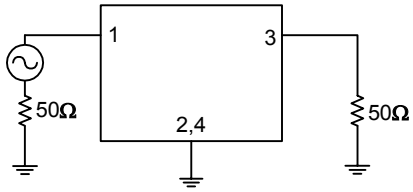
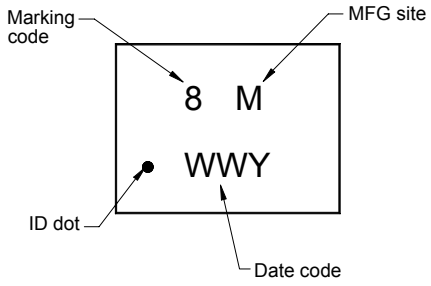
Matching Schematics

50 Ω
Single-ended



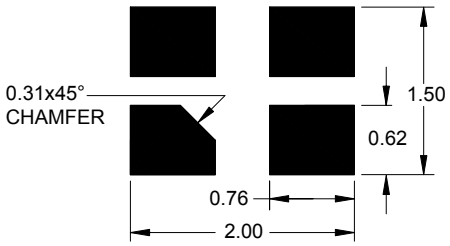
No impedance matching required

Marking



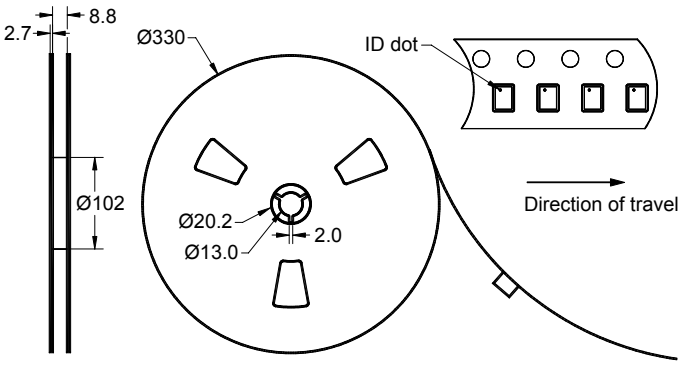
The date code consists of: WW = 2 digit week,
Y = last digit of year, M = manufacturing site code

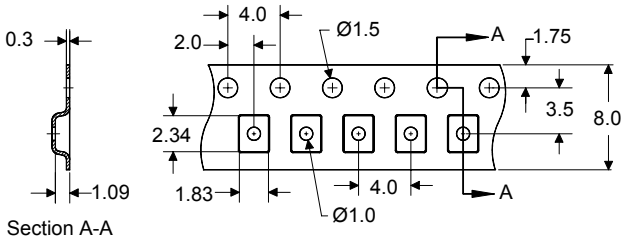
PCB Footprint



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

SAWTEK a TriQuint company

Data Sheet

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Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-30	+85	°C
Storage Temperature Range	T_{stg}	-40	+85	°C

Important Notes

Warnings
- Electrostatic Sensitive Device (ESD)
- Avoid ultrasonic exposure

RoHS Compliance
- This product complies with EU directive 2002/95/EC (RoHS)

Solderability
- Compatible with JEDEC J-STD-020C **Pb**-free process, **260°C** peak reflow temperature (see soldering profile)

Links to Additional Technical Information

PCB Layout Tips | Qualification Flowchart | Soldering Profile

S-Parameters | RoHS information | Other Technical Information

Contact Information

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Web: www.sawtek.com

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