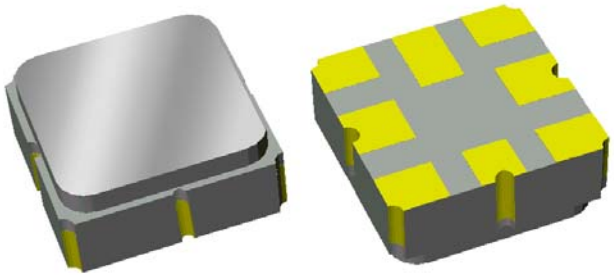
SAWTEK a TriQuint company

Preliminary Data Sheet

Part Number 856183
1220 MHz SAW Filter

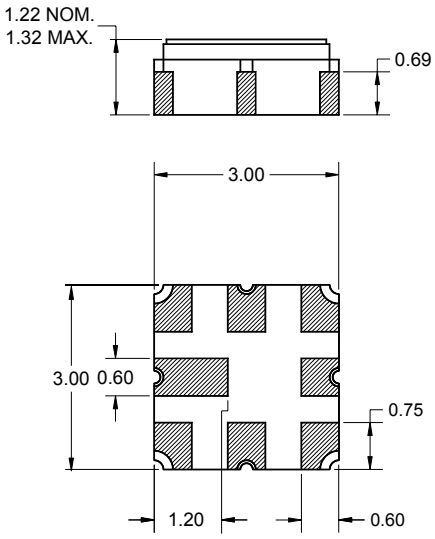
Features

- For cable tuner applications
- Usable bandwidth 8 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

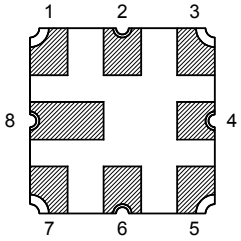


Dimensions shown are nominal in millimeters
All tolerances are ±0.15mm except overall length and width ±0.10mm

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

SAWTEK a TriQuint company

Preliminary Data Sheet

Part Number 856183
1220 MHz SAW Filter

Electrical Specifications [1]

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

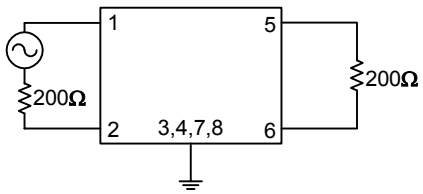
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	1220	-	MHz
Maximum Insertion Loss				
1216 - 1224 MHz	-	4.5	5.0	dB
Lower 1.5 dB Bandedge [4]	-	1212.5	1216	MHz
Upper 1.5 dB Bandedge [4]	1224	1227.5	-	MHz
Stop Band Rejection [4]				
500 - 1140 MHz	55	60	-	dB
1140 - 1160 MHz	50	55	-	dB
1160 - 1190 MHz	45	52	-	dB
1245 - 1260 MHz	20	25	-	dB
1260 - 2000 MHz	55	60	-	dB
Amplitude Ripple [5]				
1216 - 1224 MHz	-	1	1.5	dB
Group Delay Ripple [5]				
1216 - 1224 MHz	-	15	-	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 to the insertion loss at center frequency
5. Total variation measured over the defined frequency range
6. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

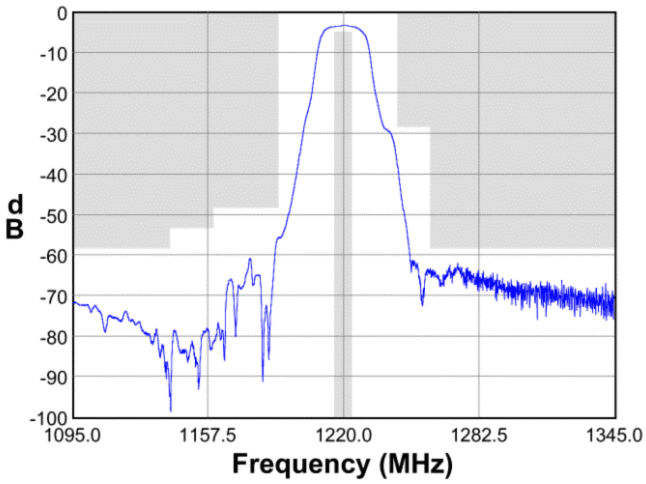
200 Ω
Balanced



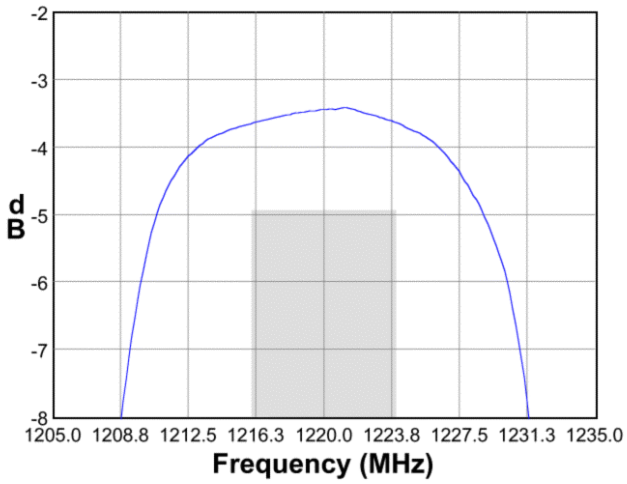
No impedance matching
required in a 200 Ω system

Typical Performance (at +25°C)

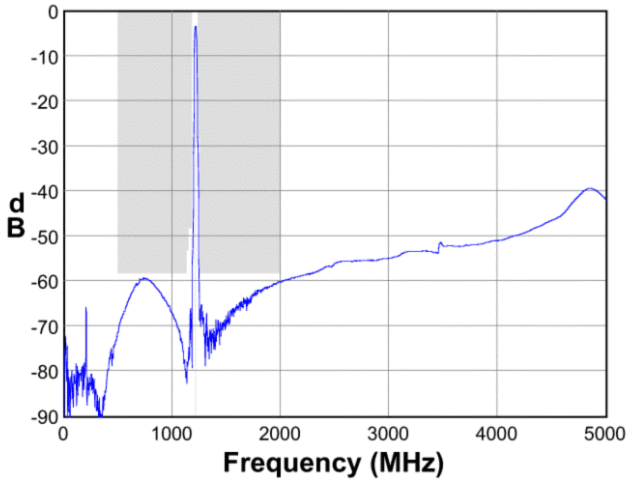
Frequency Response



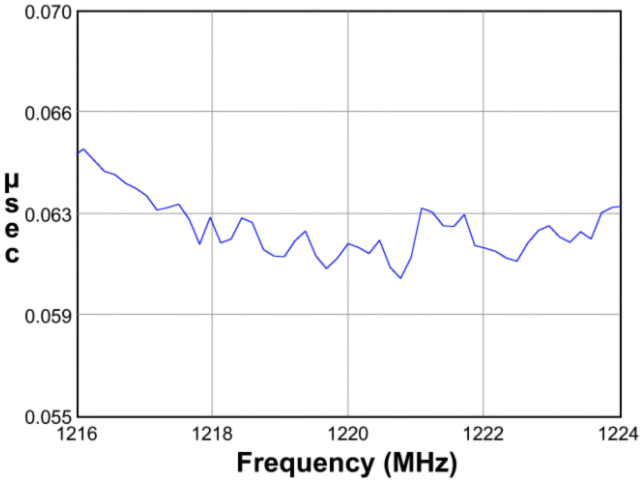
Passband Response



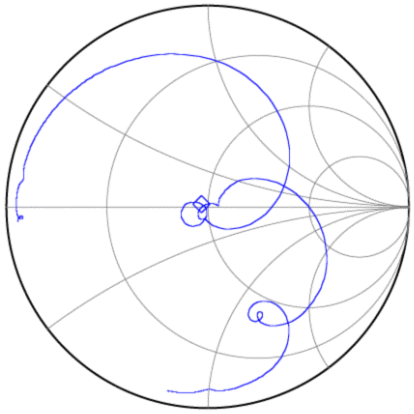
Wideband Response



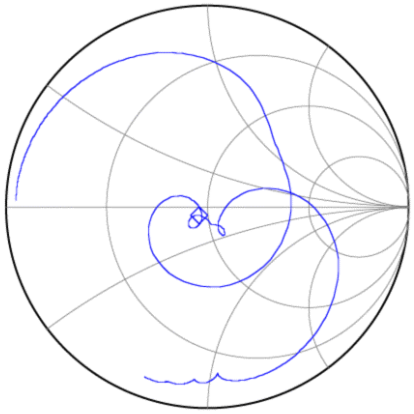
Group Delay Variation



Input Smith Chart

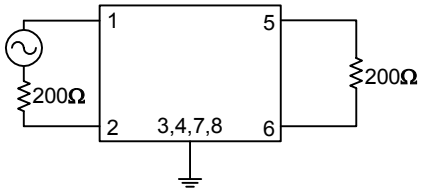


Output Smith Chart



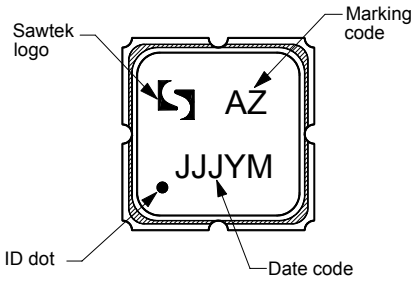
Matching Schematics

200 Ω
Balanced



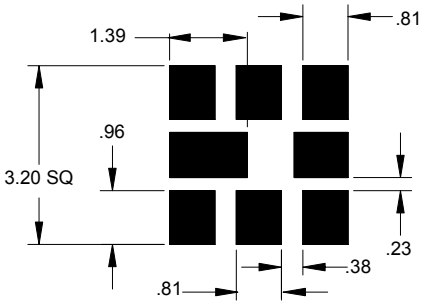
No impedance matching
required in a 200 Ω system

Marking



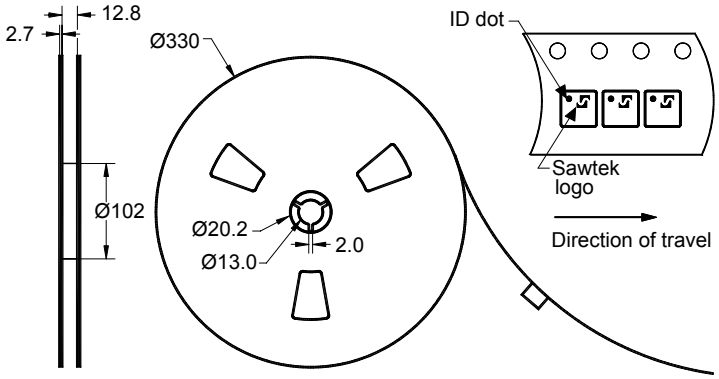
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

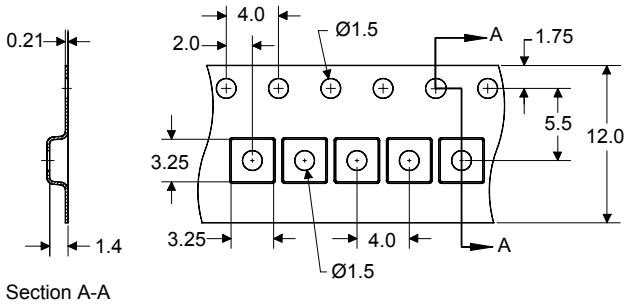
PCB Footprint



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

Preliminary Data Sheet

Part Number 856183
1220 MHz SAW Filter

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

Sawtek's liability is limited only to the Surface Acoustic Wave (SAW) component(s) described in this data sheet. Sawtek does not accept any liability for applications, processes, circuits or assemblies which are implemented using any Sawtek component described in this data sheet.

Contact Information

PO Box 609501
Orlando, FL 32860-9501
USA

Phone: +1 (407) 886-8860
Fax: +1 (407) 886-7061
Email: custservice@sawtek.com
Web: www.sawtek.com

Or contact one of our worldwide network of sales offices, representatives or distributors