

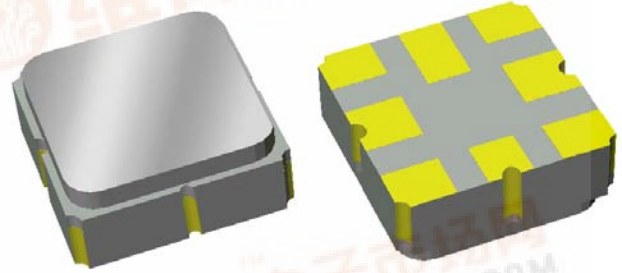


Part Number 856183
1220 MHz SAW Filter

Preliminary Data Sheet

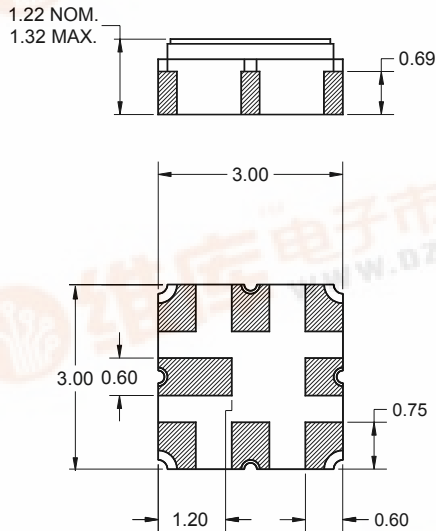
Features

- 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



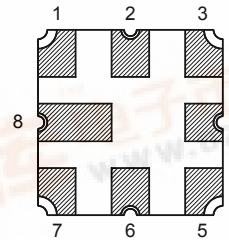
Package

Surface Mount 3.00 x 3.00 x 1.22 mm



Pin Configuration

Bottom View



Pin No.	Description
1	Input
2	Input return
5	Output
6	Output return
3,4,7,8	Case Ground

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



Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ -10 to +70 °C

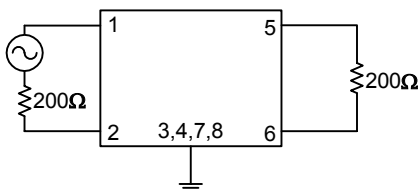
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1220	-	MHz
Maximum Insertion Loss 1216 - 1224 MHz	-	4.5	5.0	dB
Lower 1.5 dB Bandedge ⁽⁴⁾	-	1212.5	1216	MHz
Upper 1.5 dB Bandedge ⁽⁴⁾	1224	1227.5	-	MHz
Stop Band Rejection ⁽⁴⁾				
500 - 1140 MHz	55	60	-	dB
1140 - 1160 MHz	50	55	-	dB
1160 - 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:

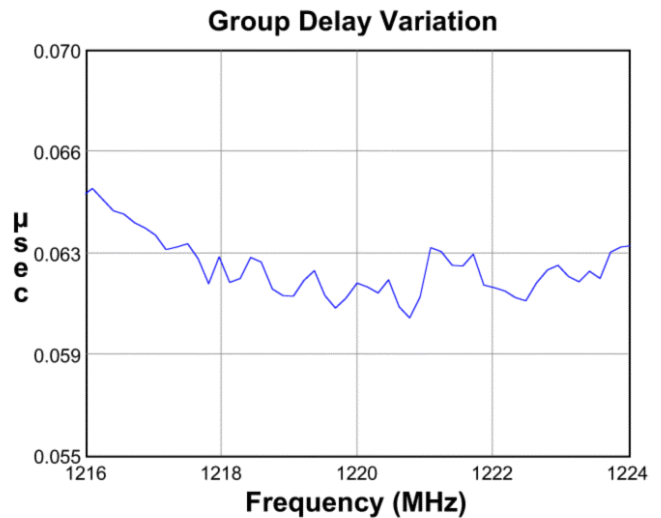
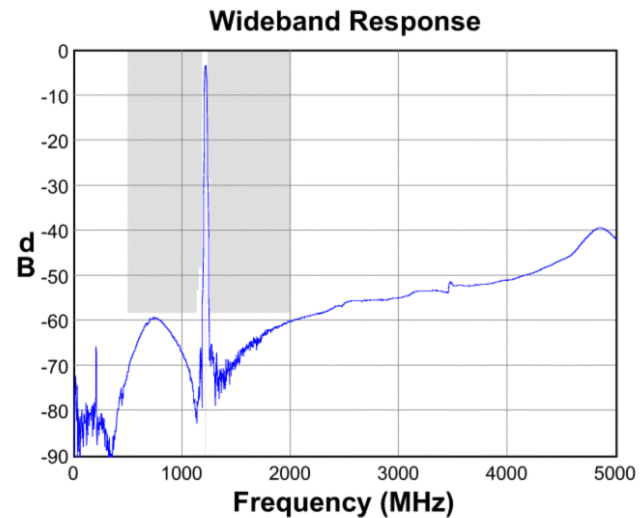
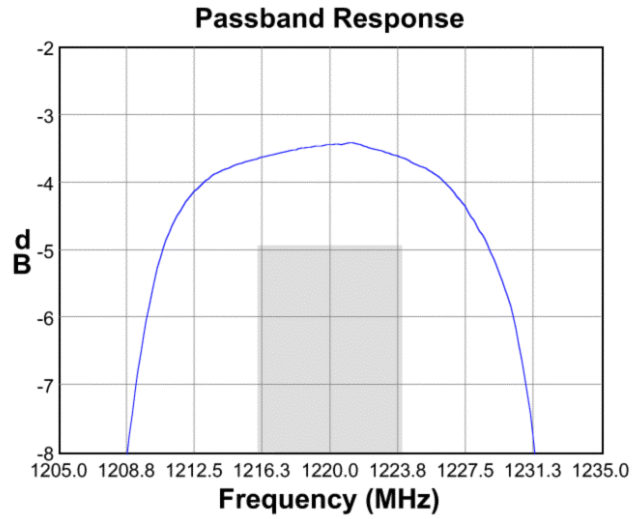
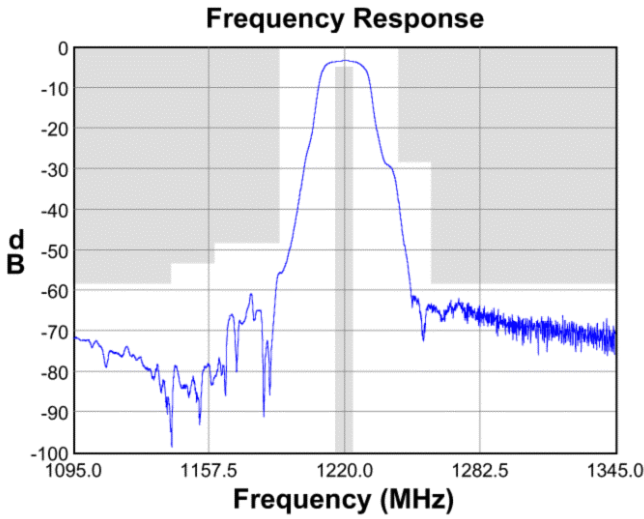
200 Ω
Balanced



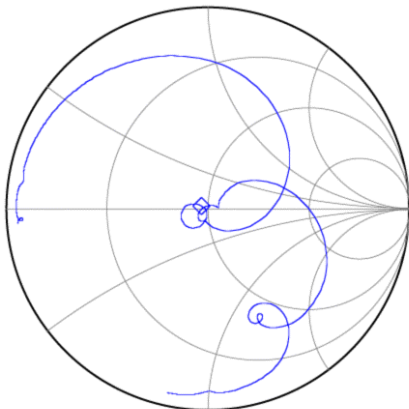
No impedance matching
required in a 200 Ω system

Preliminary Data Sheet

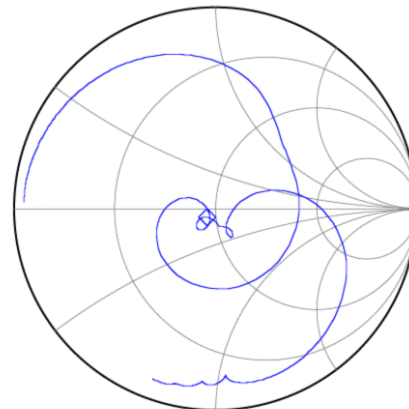
Typical Performance (at +25°C)



Input Smith Chart



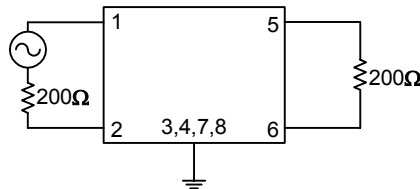
Output Smith Chart



Preliminary Data Sheet

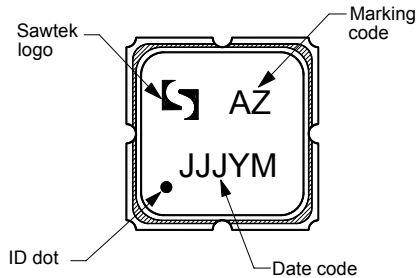
Matching Schematics

200 Ω
Balanced



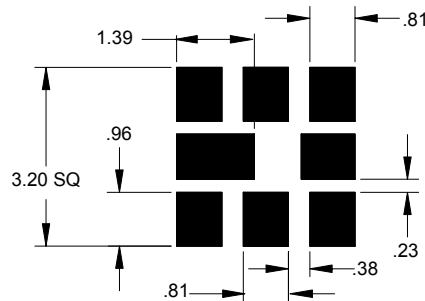
No impedance matching
required in a 200 Ω system

Marking



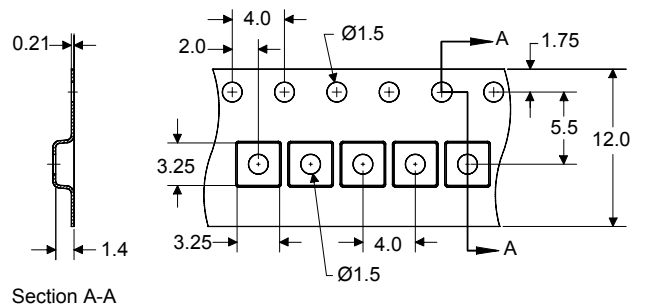
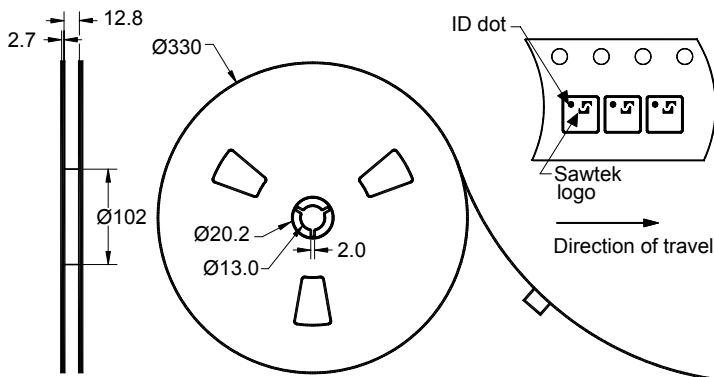
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

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

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](#)

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