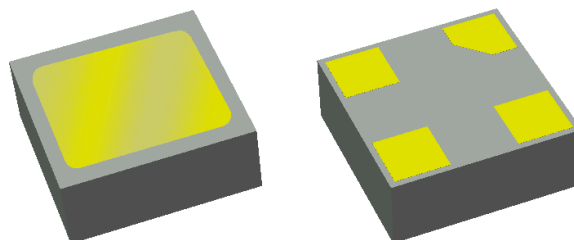


Preliminary Data Sheet

Part Number 856166
2441.75 MHz SAW Filter

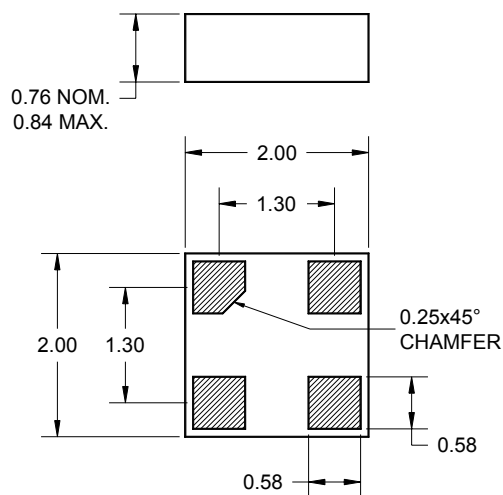
Features

- For ISM applications (such as Bluetooth and WLAN)
- Usable bandwidth 83.5 MHz
- Typical 5dB bandwidth 130 MHz
- Low loss
- Single-ended operation
- No impedance matching required for operation at 50 Ω
- Ceramic Surface Mount Package (SMP)
- Small size



Package

Surface Mount 2.00 x 2.00 x 0.76 mm

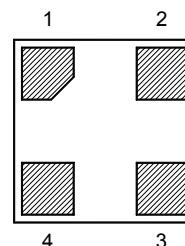


Dimensions shown are nominal in millimeters
All tolerances are ± 0.10 mm

Body: Al_2O_3 ceramic
Lid: Kovar or Alloy 42, Au over Ni plated
Terminations: Au plating 0.5 - 1.0 μ m,
over a 2 - 6 μ m Ni plating

Pin Configuration

Bottom View



Pin No.	Description
1	Input
3	Output
2,4	Case ground

Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ 0 to +60 °C

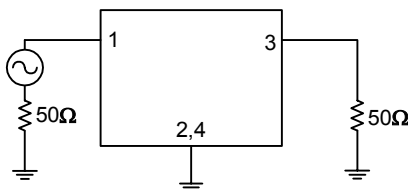
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	2441.75	-	MHz
Maximum Insertion Loss 2400 - 2483.5 MHz	-	3.00	4.5	dB
Absolute Attenuation				
0.3 - 500 MHz	20	29	-	dB
500 - 1000 MHz	20	26	-	dB
1000 - 1700 MHz	18	24	-	dB
1700 - 2200 MHz	15	22	-	dB
2700 - 3100 MHz	15	23	-	dB
3100 - 4000 MHz	15	26	-	dB
4000 - 5000 MHz	15	26	-	dB
Passband Ripple 2400 - 2483.5 MHz	-	1.4	2.5	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

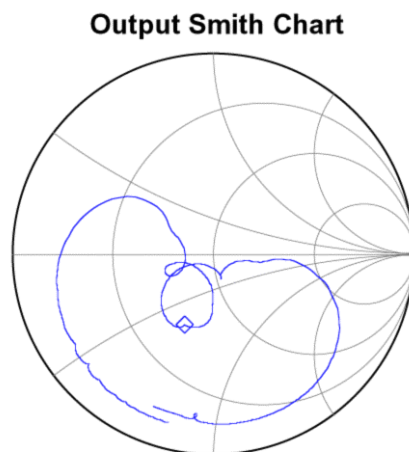
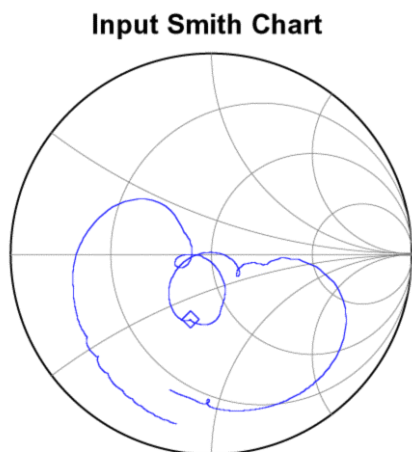
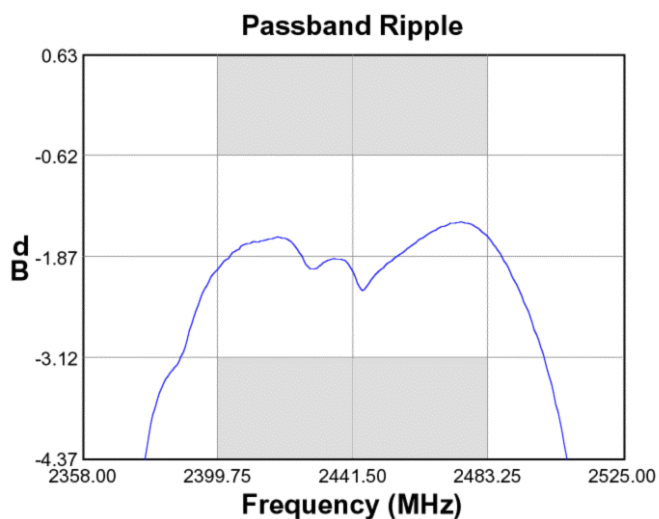
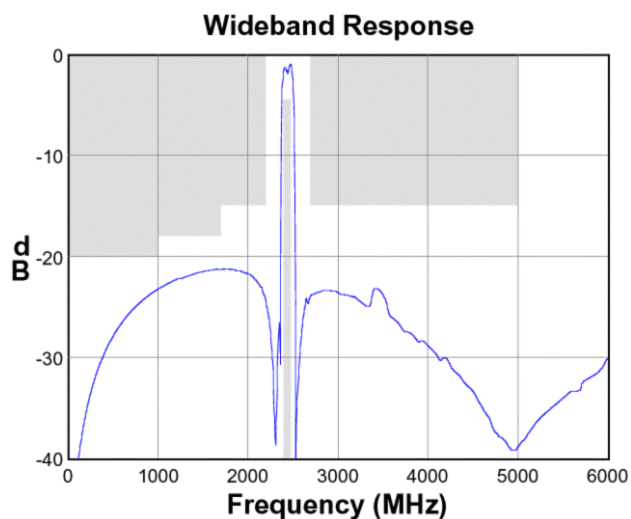
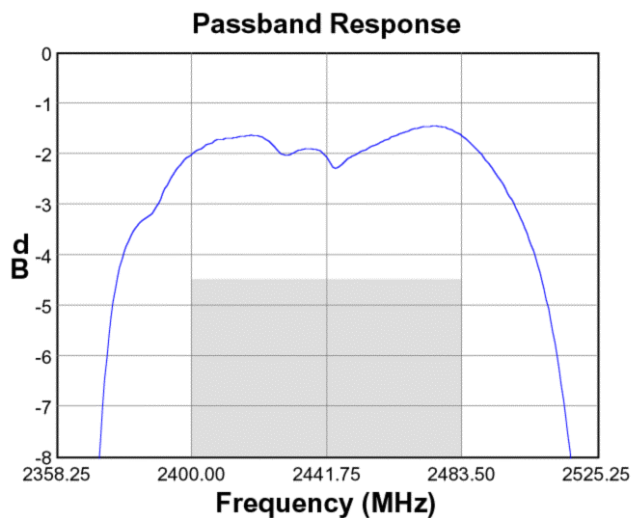
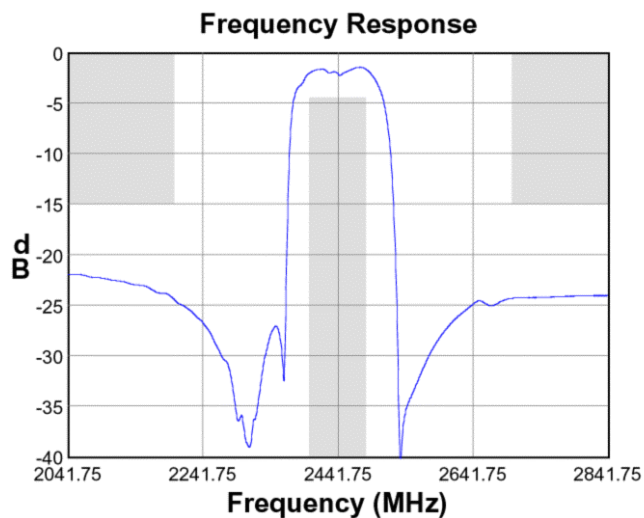
Test Circuit:

50 Ω
Single-ended



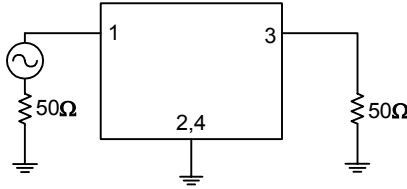
No impedance matching
required

Typical Performance (at +25°C)



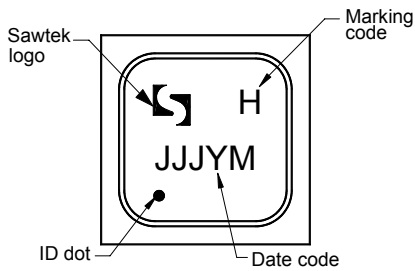
Matching Schematics

50 Ω
Single-ended



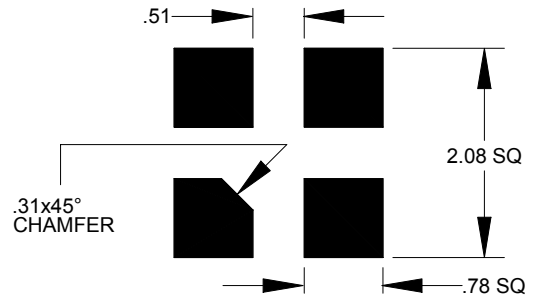
No impedance matching
required

Marking



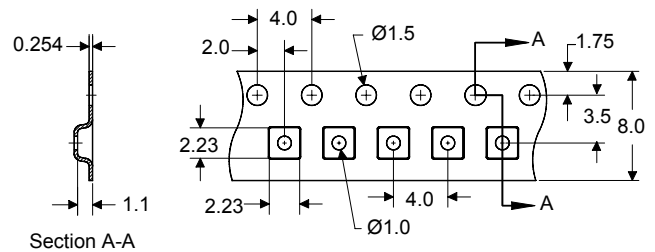
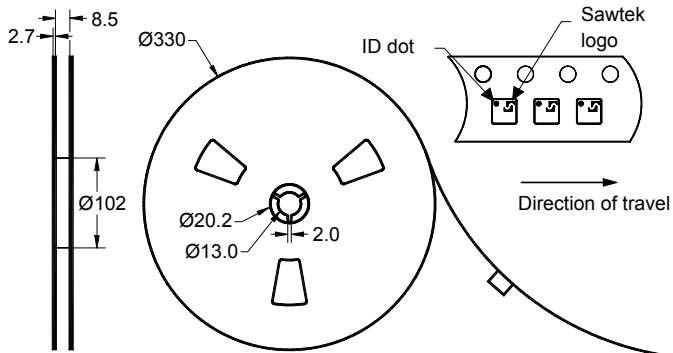
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

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: 10000 units/reel

Preliminary Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	0	+60	°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](#)