



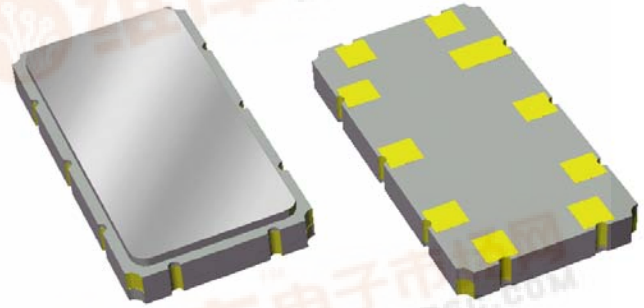
Part Number 856270

350 MHz SAW Filter

Preliminary Data Sheet

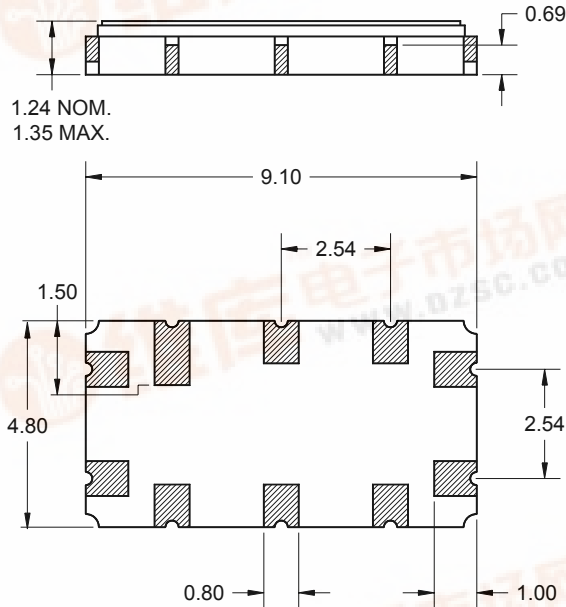
Features

- For wireless broadband applications
- Usable bandwidth 2.6MHz
- Low loss
- High attenuation
- Single ended operation
- Ceramic Surface Mount Package (SMP)
- Small size



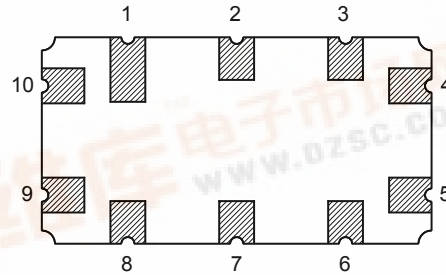
Package

Surface Mount 9.10 x 4.80 x 1.24 mm



Pin Configuration

Bottom View



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

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

Body: Al_2O_3 ceramic
 Lid: Kovar, Ni plated

Terminations: Au plating 0.5 - 1.0 μ m,
 over a 2 - 6 μ m Ni plating



Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

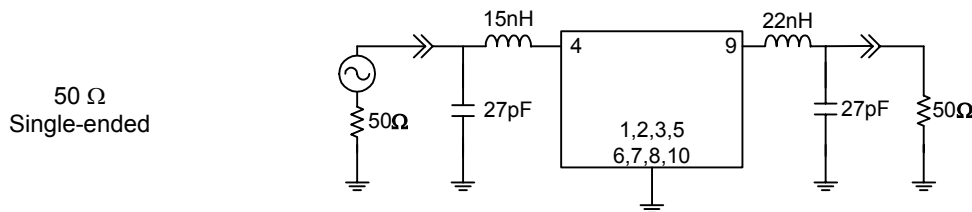
Operating Temperature Range: ⁽²⁾ 0 to +70 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	349	350	351	MHz
Insertion Loss at 350 MHz ⁽⁴⁾	-	9.8	13	dB
3 dB Bandwidth	2.6	3.0	-	MHz
Relative Attenuation ⁽⁴⁾				
10.0 - 347.8 MHz	45	52	-	dB
347.0 - 347.8 MHz	27	28	-	dB
347.8 - 348.3 MHz	5	6	-	dB
351.7 - 352.2 MHz	5	6	-	dB
352.2 - 353.0 MHz	27	28	-	dB
353.0 - 1000 MHz	45	52	-	dB
Group Delay Variation				
349 - 351 MHz (any 500 kHz channel)	-	85	100	nsec
Optimal Source Impedance ⁽⁵⁾	-	50	-	Ω
Optimal Load Impedance ⁽⁵⁾	-	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. Reference to insertion loss at 350MHz
5. This is the optimum impedance in order to achieve the performance shown

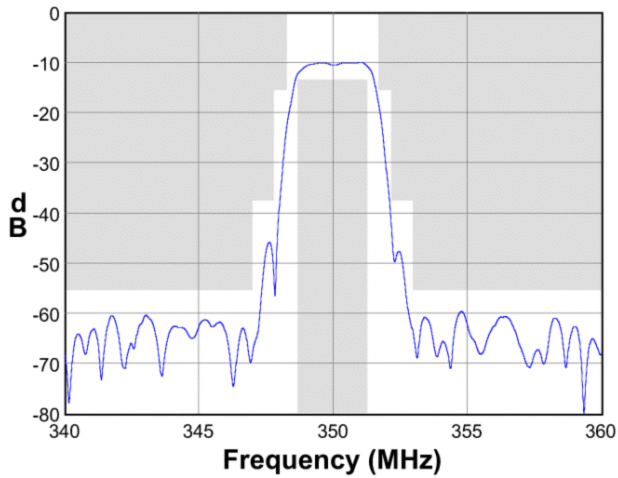
Test Circuit:



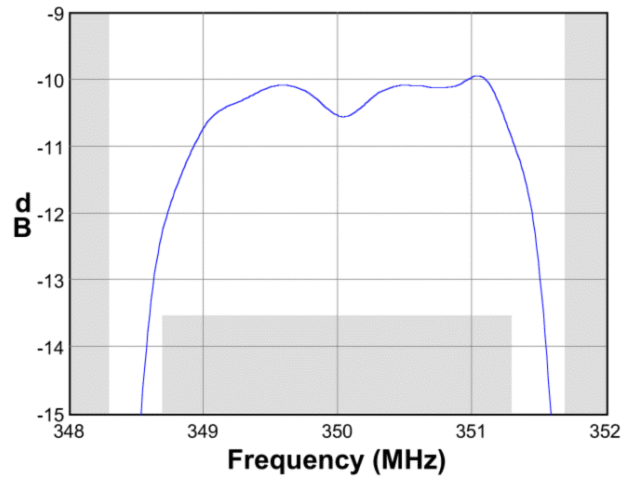
Preliminary Data Sheet

Typical Performance (at +25°C)

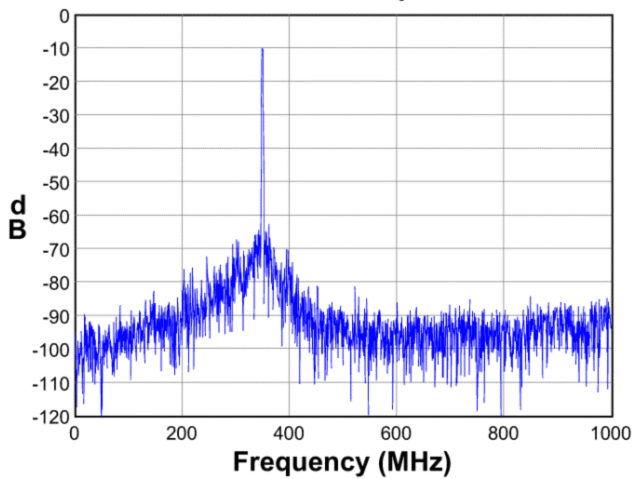
Frequency Response



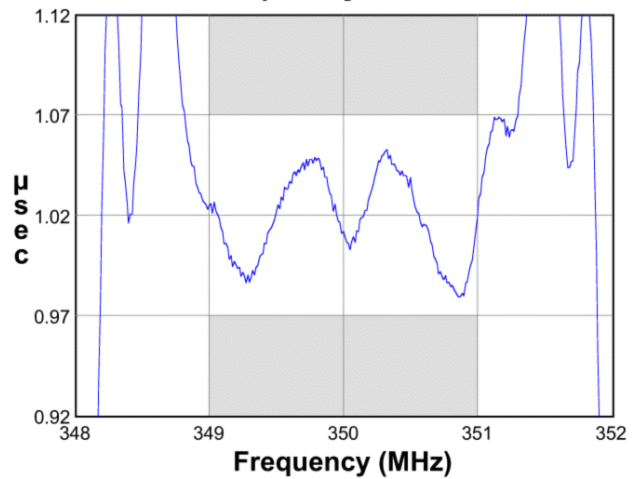
Passband Response



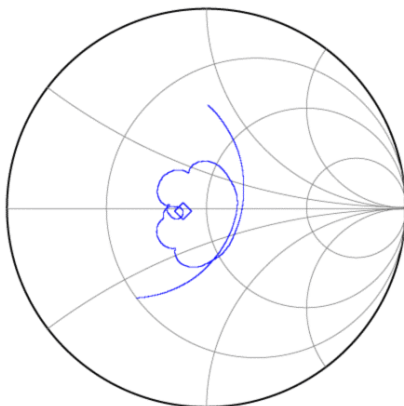
Wideband Response



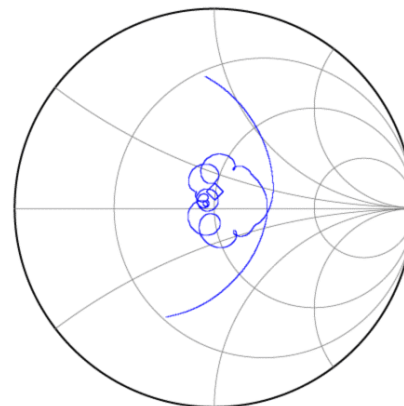
Group Delay Variation



Input Smith Chart



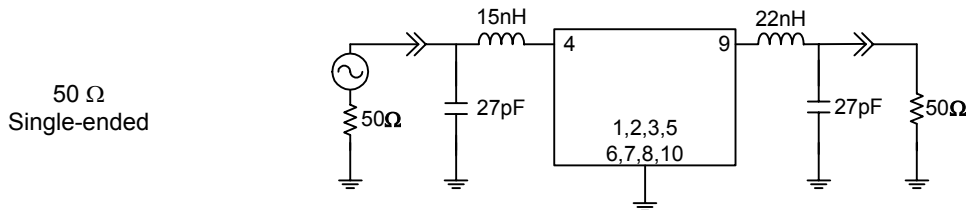
Output Smith Chart



Preliminary Data Sheet

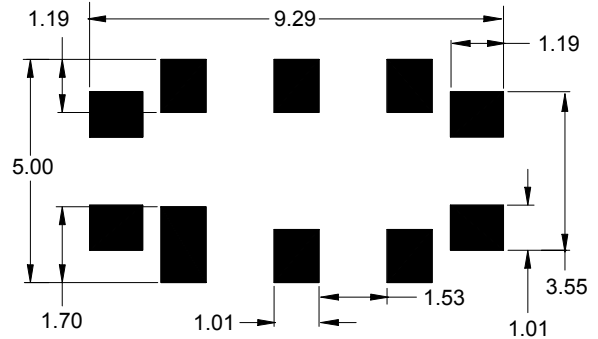
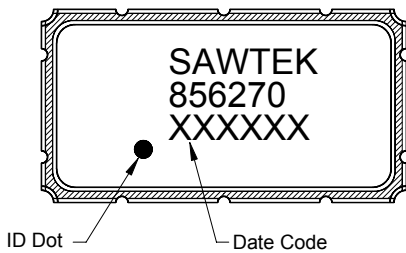
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics



Marking

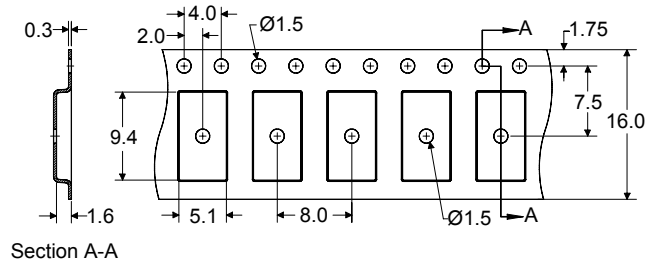
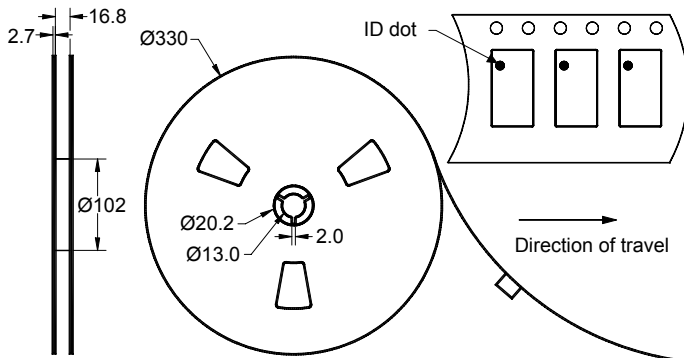
PCB Footprint



The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

This footprint represents a recommendation only
Dimensions shown are nominal in millimeters

Tape and Reel




Dimensions shown are nominal in millimeters
Packaging quantity: 4000 units/reel

Preliminary Data Sheet

Maximum Ratings

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