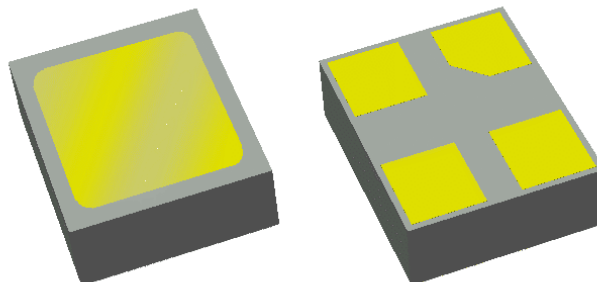


Preliminary Data Sheet

Part Number 856049
1575.42 MHz SAW Filter

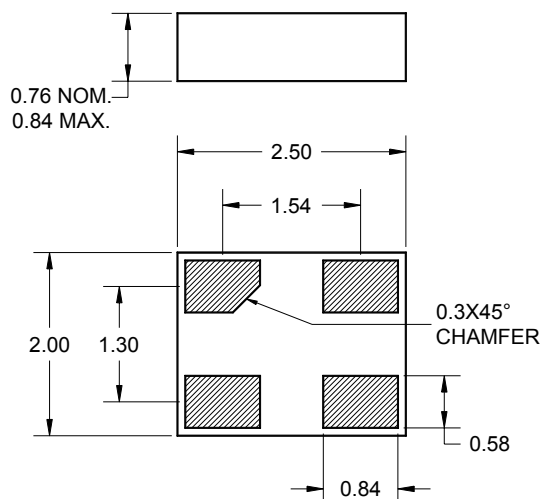
Features

- For GPS applications
- Usable bandwidth 2.0 MHz
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size



Package

Surface Mount 2.50 x 2.00 x 0.76 mm

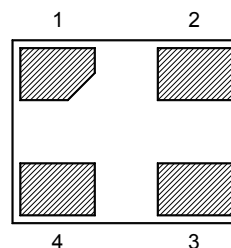


Dimensions shown are nominal in millimeters
All tolerances are ± 0.10 mm

Body: Al_2O_3 ceramic
Lid: Kovar, 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
1,3	Input/output
2,4	Case ground

Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ -30 to +70 °C

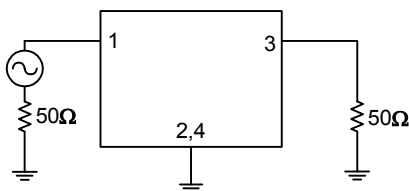
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1575.42	-	MHz
Insertion Loss 1574.42 - 1576.42 MHz	-	2.5	3.5	dB
Absolute Rejection				
50 - 1535 MHz	35	41	-	dB
1625 - 1630 MHz	30	52	-	dB
1630 - 2500 MHz	35	43	-	dB
2500 - 3000 MHz	32	36	-	dB
3000 - 3500 MHz	25	30	-	dB
Input/Output Return Loss	10	13	-	dB
Propagation Delay Time	-	32	50	ns
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



Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ -30 to +80 °C

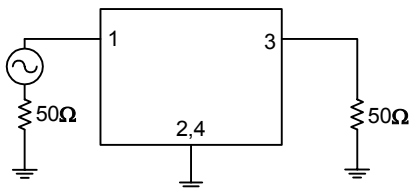
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1575.42	-	MHz
Insertion Loss 1574.42 - 1576.42 MHz	-	2.5	3.6	dB
Absolute Rejection				
50 - 1535 MHz	35	41	-	dB
1625 - 1630 MHz	30	52	-	dB
1630 - 2500 MHz	35	43	-	dB
2500 - 3000 MHz	32	36	-	dB
3000 - 3500 MHz	25	30	-	dB
Input/Output Return Loss	10	13	-	dB
Propagation Delay Time	-	32	50	ns
Source Impedance: ⁽⁴⁾	-	50	-	Ω
Load Impedance: ⁽⁴⁾	-	50	-	Ω

Notes:

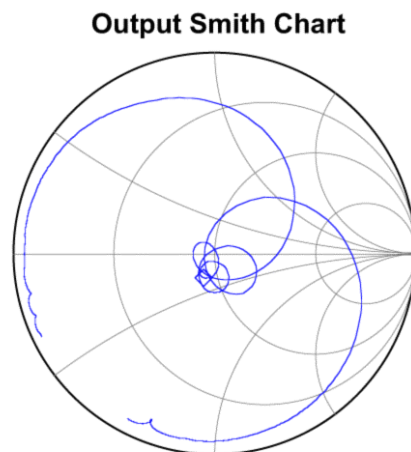
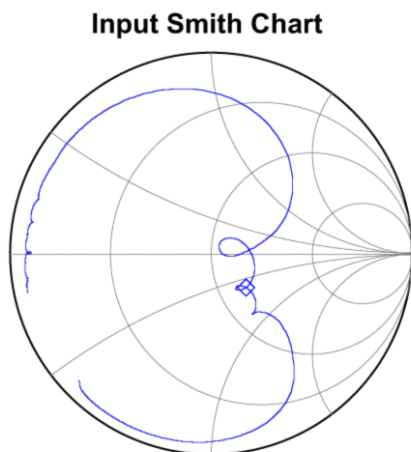
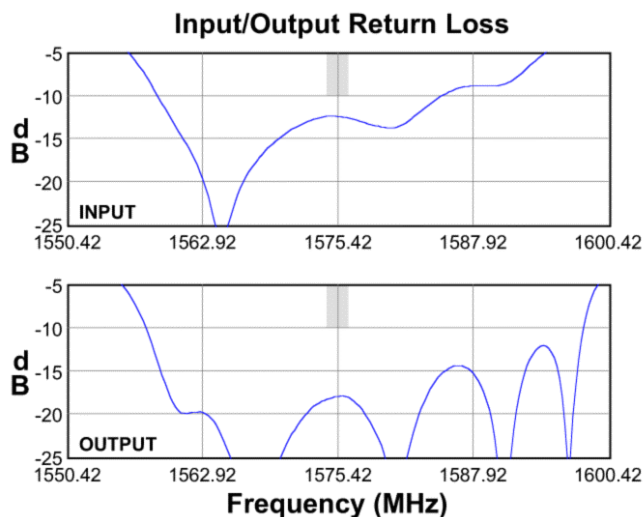
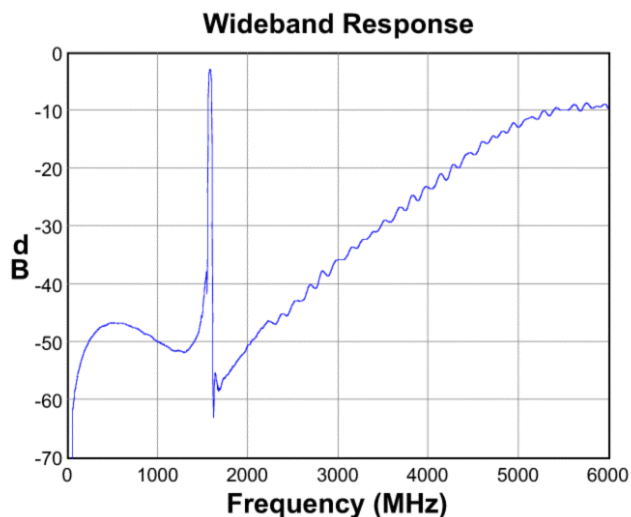
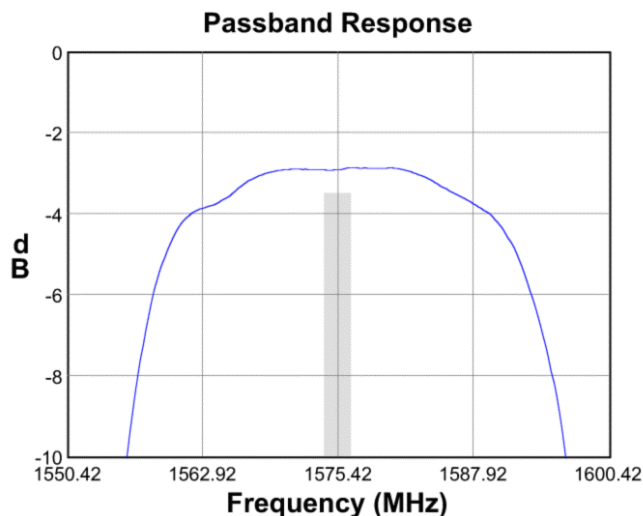
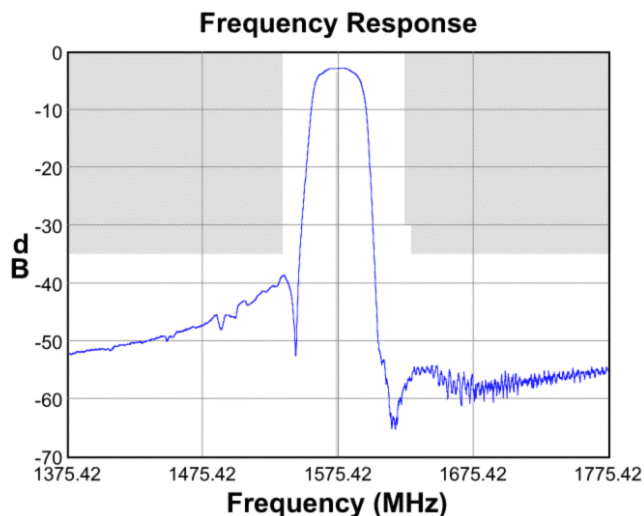
5. All specifications are based on the test circuit shown below
6. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
7. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
8. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

50 Ω
Single-ended

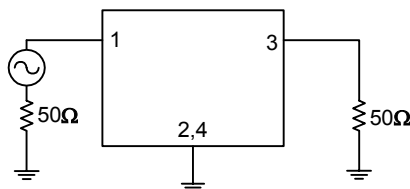


Typical Performance (at +25°C)

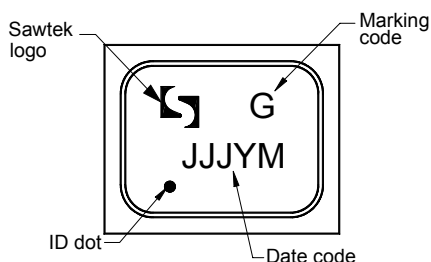


Matching Schematics

50 Ω
Single-ended

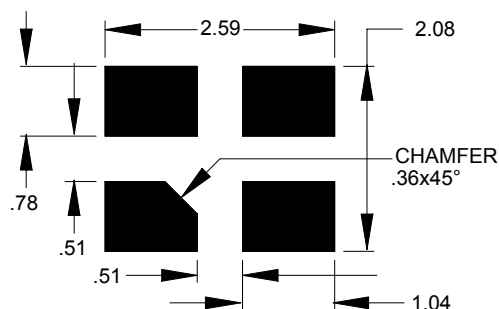


Marking



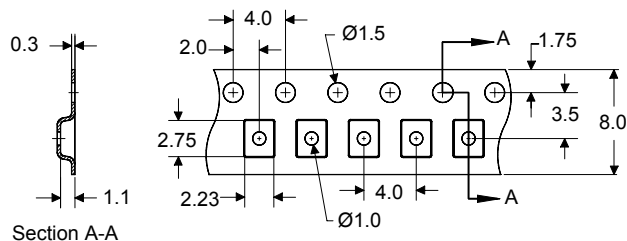
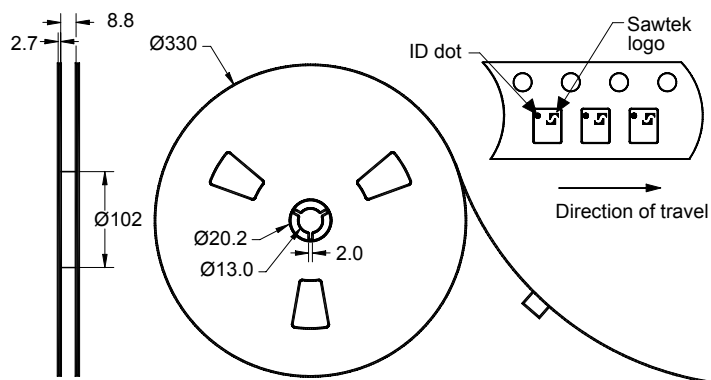
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

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	-30	+80	°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](#)

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](#)