




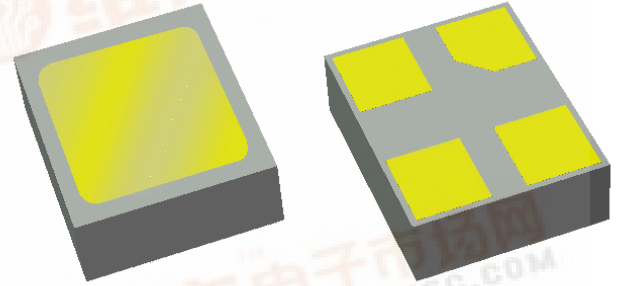
Part Number 856042

1575.42 MHz SAW Filter

Data Sheet

Features

- For GPS applications
- Usable bandwidth 2.0 MHz
- Low loss
- High attenuation
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Flip Chip Package (FCP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 

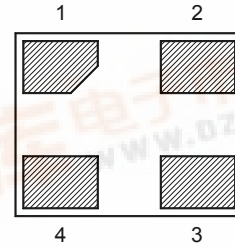
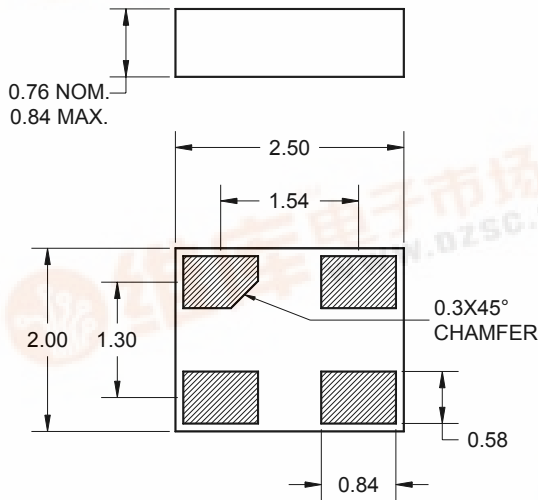


Package

Surface Mount 2.50 x 2.00 x 0.76 mm

Pin Configuration

Bottom View



| Pin No. | Description |
|---------|--------------|
| 1,3 | Input/output |
| 2,4 | Case ground |

Dimensions shown are nominal in millimeters
All tolerances are $\pm 0.10\text{mm}$

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



Data Sheet

Electrical Specifications ⁽¹⁾

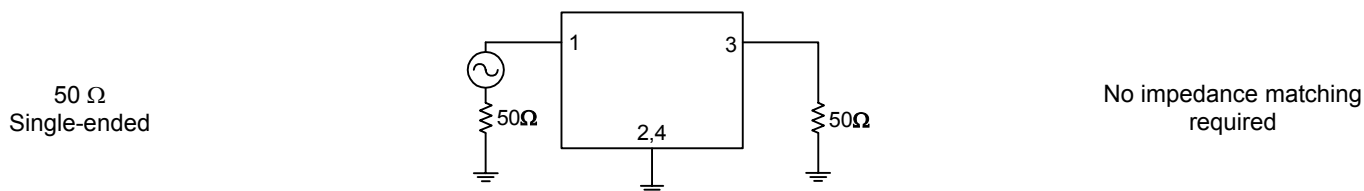
Operating Temperature Range: ⁽²⁾ -30 to +85 °C

| Parameter ⁽³⁾ | Minimum | Typical | Maximum | Unit |
|--|---------|---------|---------|--------|
| Center Frequency | - | 1575.42 | - | MHz |
| Insertion Loss 1574.42 - 1576.42 MHz | - | 1.1 | 1.8 | dB |
| Absolute Rejection | | | | |
| DC - 960 MHz | 35 | 37 | - | dB |
| 1200.00 - 1360 MHz | 35 | 42 | - | dB |
| 1360.00 - 1522.42 MHz | 20 | 33 | - | dB |
| 1628.42 - 1750.00 MHz | 20 | 42 | - | dB |
| 1750.00 - 1800.00 MHz | 25 | 49 | - | dB |
| 1800.00 - 1990.00 MHz | 35 | 40 | - | dB |
| 1990.00 - 2500.00 MHz | 30 | 33 | - | dB |
| Absolute Attenuation 1208.22 MHz | 50 | 60 | - | dB |
| Amplitude Ripple 1574.42 - 1576.42 MHz | - | 0.1 | 0.7 | dB p-p |
| Input/Output Return Loss 1574.42 - 1576.42 MHz | 10 | 20 | - | dB |
| Propagation Delay Time | - | 25 | 50 | nsec |
| Source Impedance ⁽⁴⁾ | - | 50 | - | Ω |
| Load Impedance ⁽⁴⁾ | - | 50 | - | Ω |

Notes:

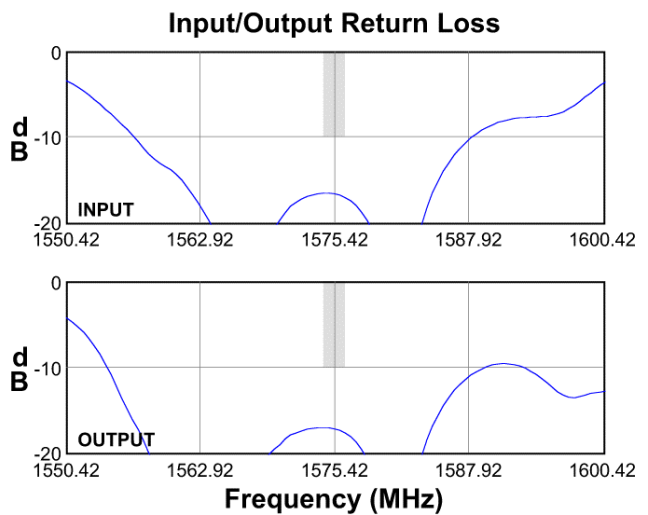
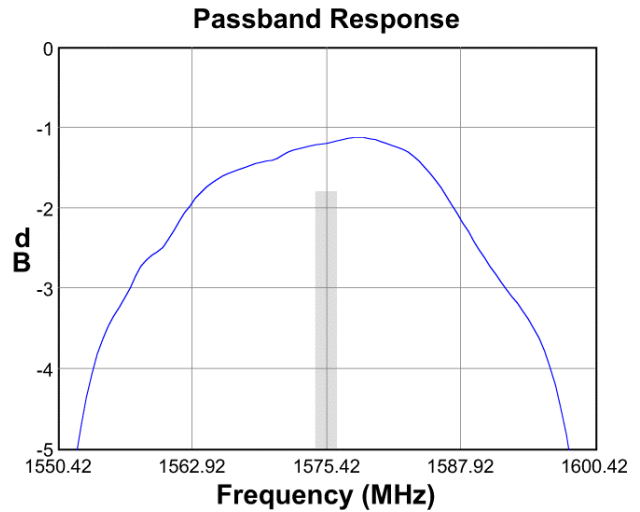
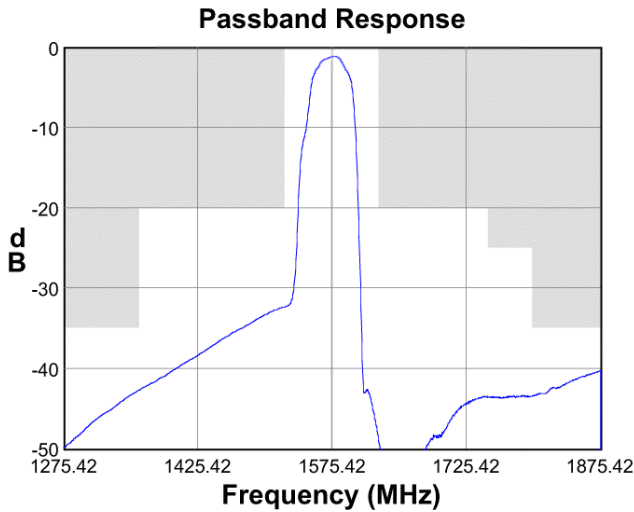
1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature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

Test Circuit:

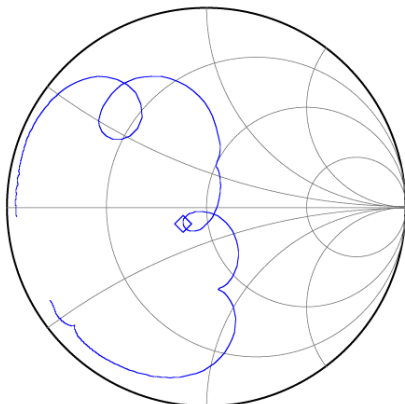


Data Sheet

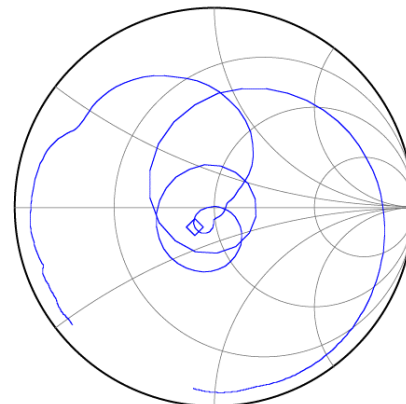
Typical Performance (at +25°C)



Input Smith Chart



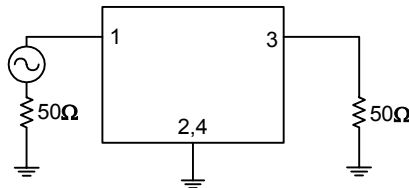
Output Smith Chart



Data Sheet

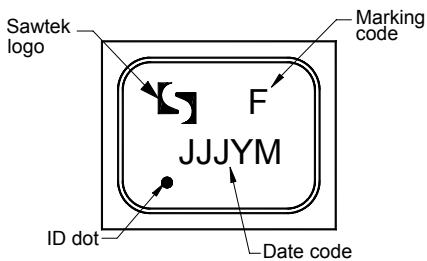
Matching Schematics

50 Ω
Single-ended

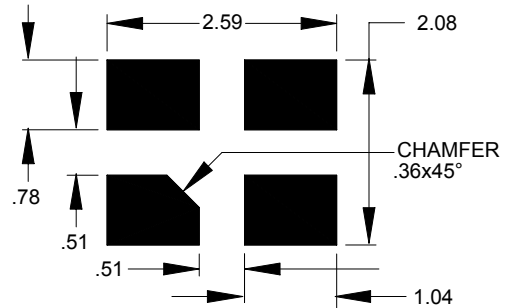


No impedance matching required

Marking **PCB Footprint**

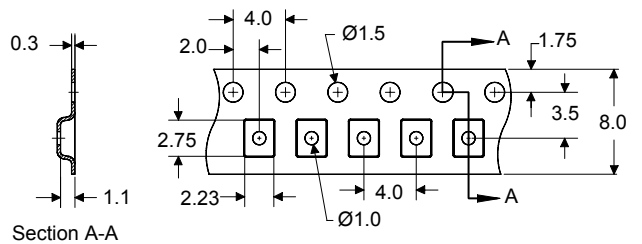
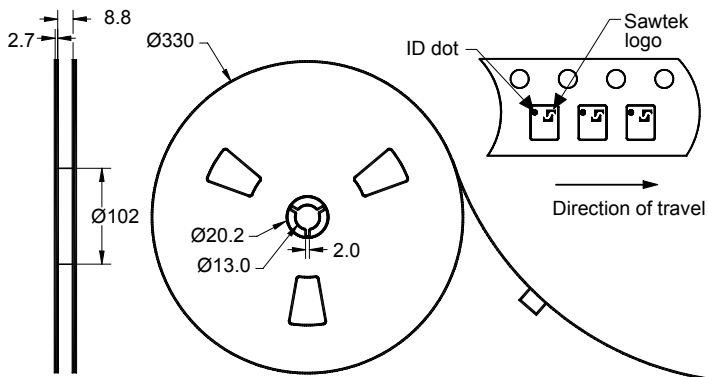


The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code



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


Data Sheet

Maximum Ratings


| Parameter | Symbol | Minimum | Maximum | Unit |
|-----------------------------|------------------|---------|---------|------|
| Operating Temperature Range | T | -30 | +85 | °C |
| Storage Temperature Range | T _{stg} | -40 | +85 | °C |

Important Notes

Warnings

- Electrostatic Sensitive Device (ESD) 
- Avoid ultrasonic exposure

RoHS Compliance

- This product complies with EU directive 2002/95/EC (RoHS) 

Solderability

- Compatible with JEDEC J-STD-020C **Pb-free** process, **260°C** peak reflow temperature ([see soldering profile](#))

Links to Additional Technical Information

[PCB Layout Tips](#)

[Qualification Flowchart](#)

[Soldering Profile](#)

[S-Parameters](#)

[RoHS information](#)

[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](#)