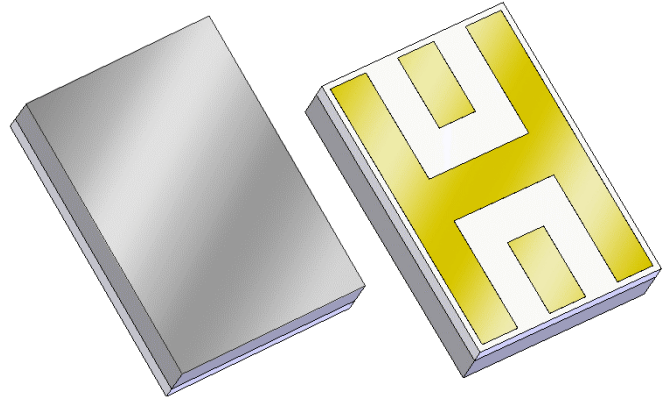


Features

- For GPS applications
- Usable bandwidth of 20 MHz
- Single-ended operation
- Ceramic Surface Mount Package
- This part number is a replacement for part number SMR-1575-45
- Hermetic

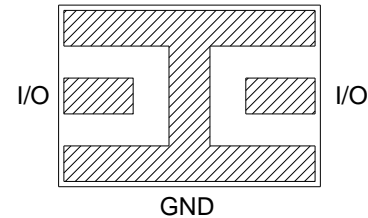
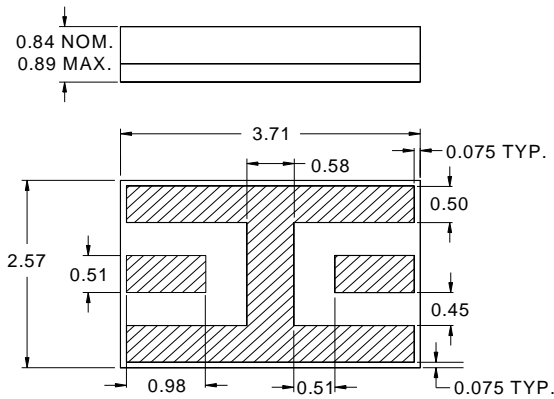


Package

Surface Mount 3.71 x 2.57 x 0.84 mm

Pin Configuration

Bottom View



Pin No.	Description
I/O	Input/Output
GND	Ground

Overall width, length, and thickness are the only critical dimensions. All other dimensions are for reference only.

Dimensions shown are nominal in millimeters
All tolerances are $\pm 0.13\text{mm}$ except overall length and width $\pm 0.25\text{mm}$

Body: *Sapphire*
Package: *Alumina*
Terminations: *Au* plating 0.5 - 2.5 μm ,
over a 2.0 - 6.0 μm *Ni* plating

Electrical Specifications ⁽¹⁾

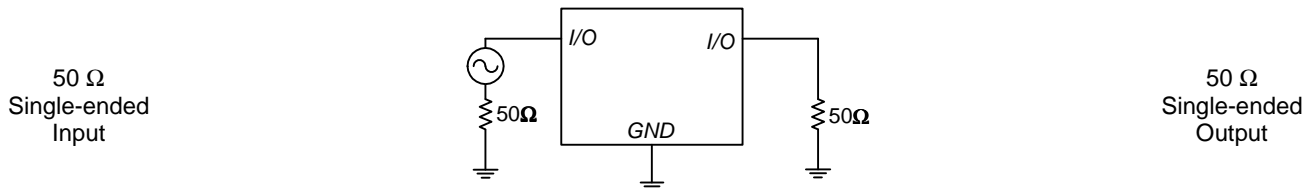
Operating Temperature Range: ⁽²⁾ -40 to +85 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1575.42	-	MHz
Insertion Loss at Fo	-	-	4.0	dB
Lower 3 dB Center Frequency ⁽⁴⁾	1572.42	-	-	MHz
Upper 3 dB Center Frequency ⁽⁴⁾	-	-	1578.42	MHz
3 dB Bandwidth ⁽⁴⁾	20	-	28	MHz
40 dB Bandwidth ⁽⁴⁾	-	-	60	MHz
Source Impedance	-	50	-	Ω
Load Impedance	-	50	-	Ω

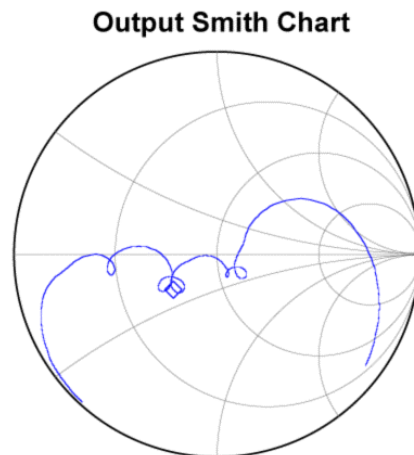
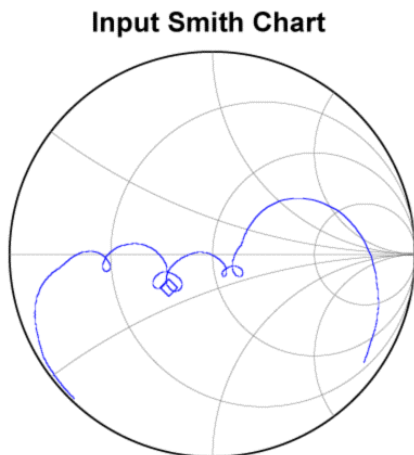
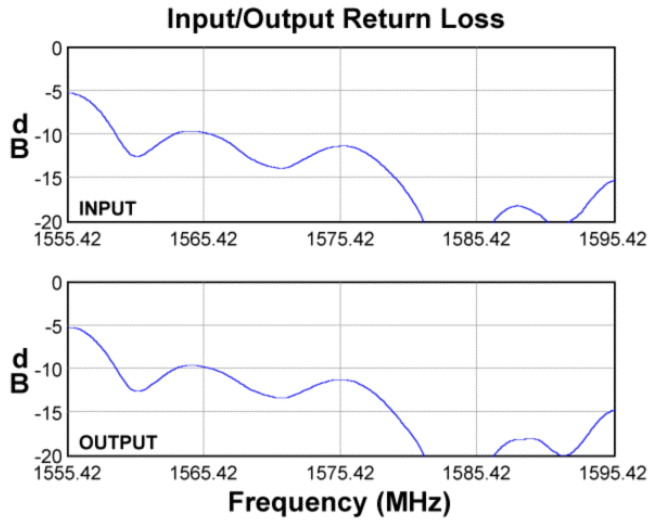
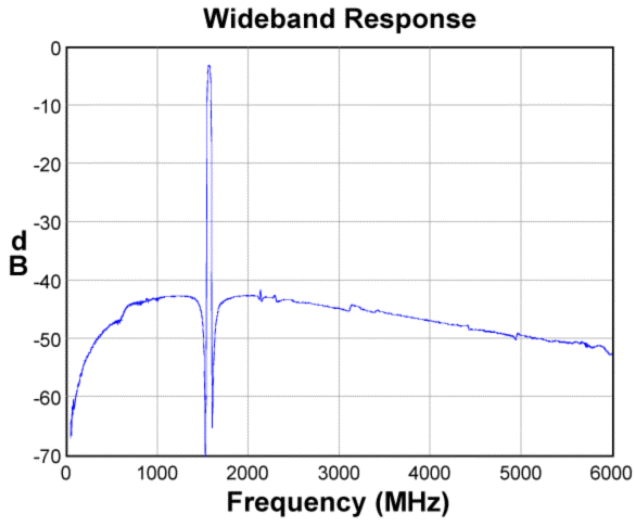
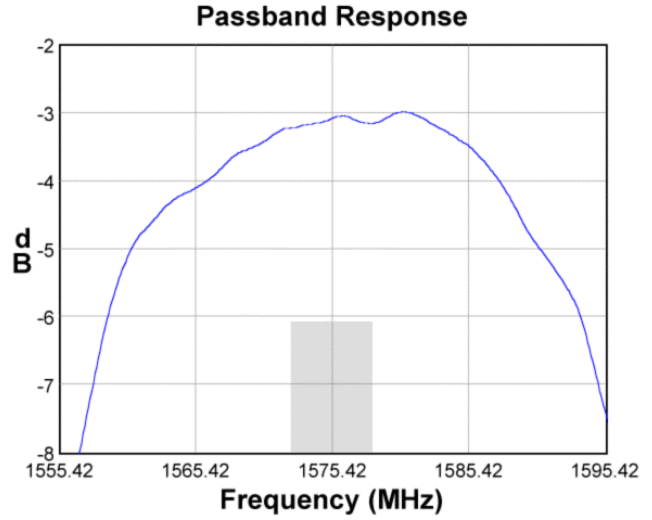
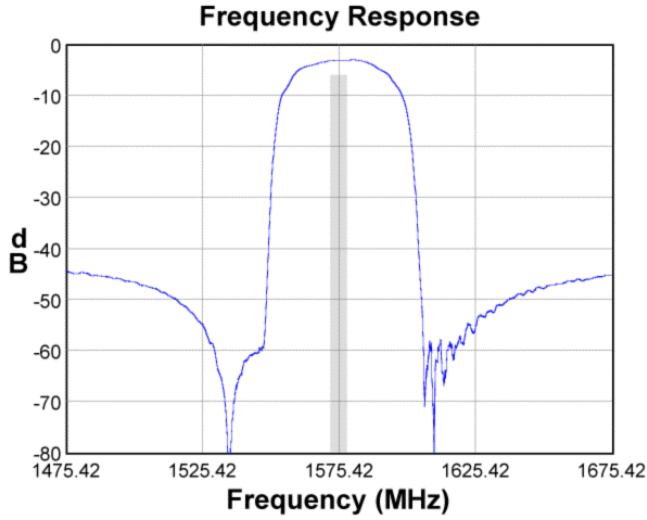
Notes:

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. Referenced to the insertion loss at center frequency

Test Circuit:

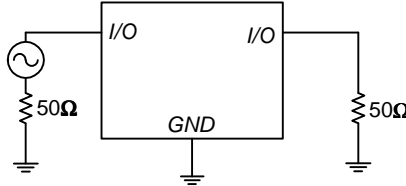


Typical Performance (at +25°C)



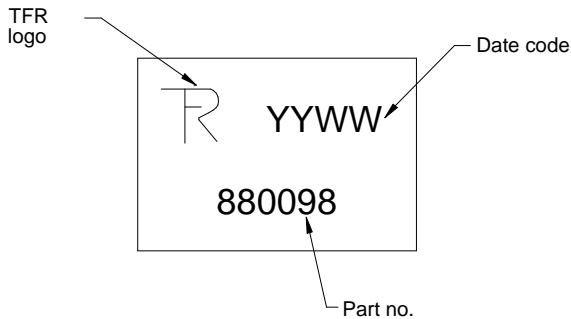
Matching Schematics

50 Ω
Single-ended
Input

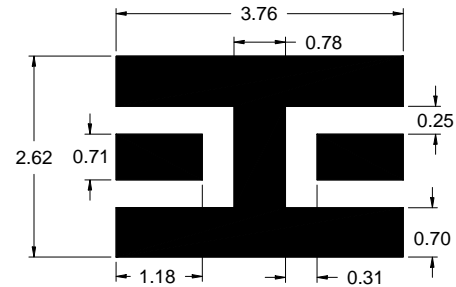


50 Ω
Single-ended
Output

Marking PCB Footprint



The date code consists of: YY = last digit of year,
WW = 2 digit week



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

Tape and Reel

Tape and Reel available upon request
EIA-481

Tinning available per J-STD-001

ROHS compliant (no tinning)
DFARS compliant

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-40	+85	°C
Storage Temperature Range	T _{stg}	-55	+100	°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 Bulk Acoustic Wave (BAW) 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.

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