
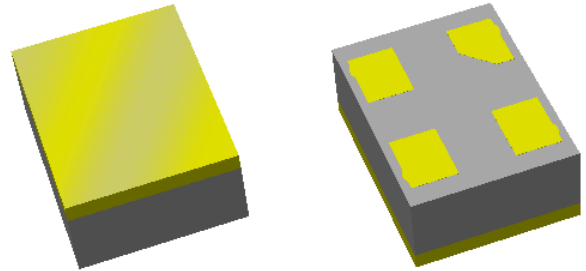


# Data Sheet

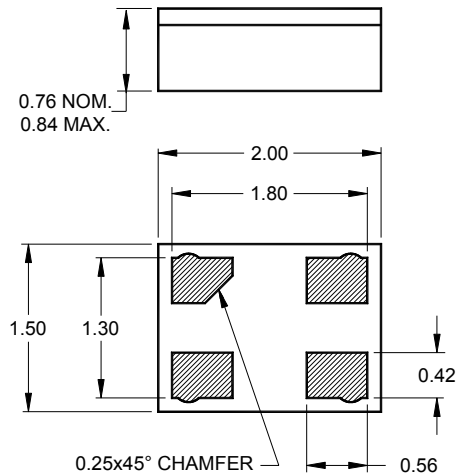
## Features

- For GPS applications
- Usable bandwidth 2 MHz
- Very Low loss
- Single-ended operation at 50 Ω
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Chip Scale Package (CSP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



## Package

Surface Mount 2.00 x 1.50 x 0.76 mm

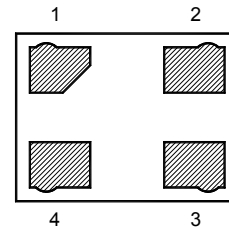


Dimensions shown are nominal in millimeters  
 All tolerances are ±0.10mm

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

## Pin Configuration

Bottom View



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

# Data Sheet

## Electrical Specifications <sup>(1)</sup>

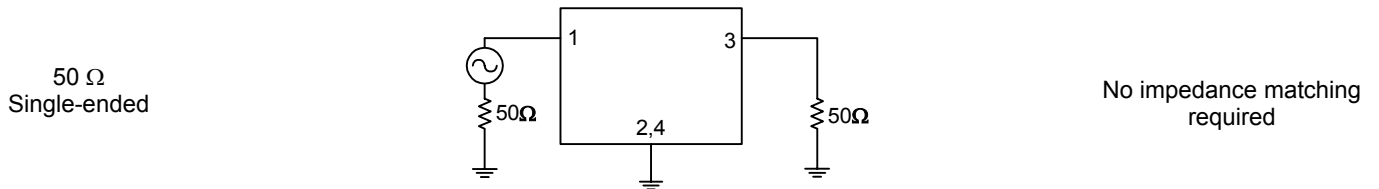
Operating Temperature Range: <sup>(2)</sup> -30 to +85 °C

Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
<b>Center Frequency</b>	-	1575.42	-	MHz
<b>Insertion Loss</b> 1574.42 - 1576.42 MHz	-	0.78	1.4	dB
<b>Absolute Attenuation</b>				
0 - 824 MHz	30	35	-	dB
824 - 849 MHz	32	35	-	dB
849 - 1475 MHz	30	35	-	dB
1475 - 1522.42 MHz	25	33	-	dB
1628.42 - 1750 MHz	25	37	-	dB
1750 - 1800 MHz	32	36	-	dB
1800 - 1850 MHz	32	36	-	dB
1850 - 1910 MHz	32	37	-	dB
1910 - 1990 MHz	32	38	-	dB
1990 - 3000 MHz	30	40	-	dB
3000 - 4000 MHz	20	25	-	dB
4000 - 6000 MHz	17	22	-	dB
<b>Passband Variation</b> 1574.42 - 1576.42 MHz	-	0.1	0.5	dB p-p
<b>Input/Output Return Loss</b> 1574.42 - 1576.42 MHz	10	18	-	dB
<b>Source Impedance</b> <sup>(4)</sup>	-	50	-	Ω
<b>Load Impedance</b> <sup>(4)</sup>	-	50	-	Ω

**Notes:**

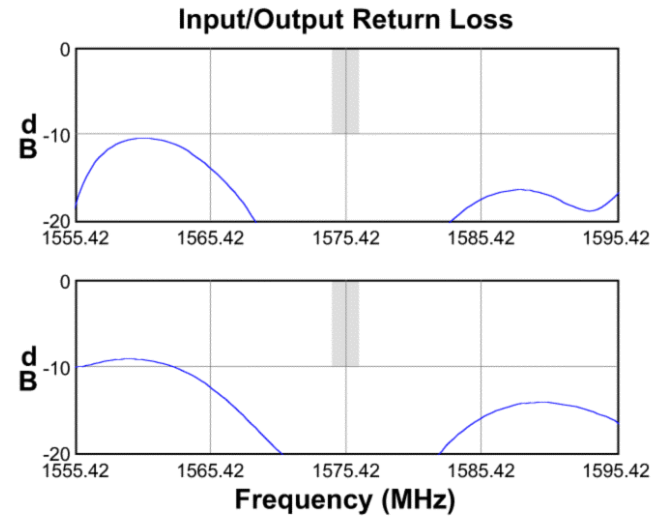
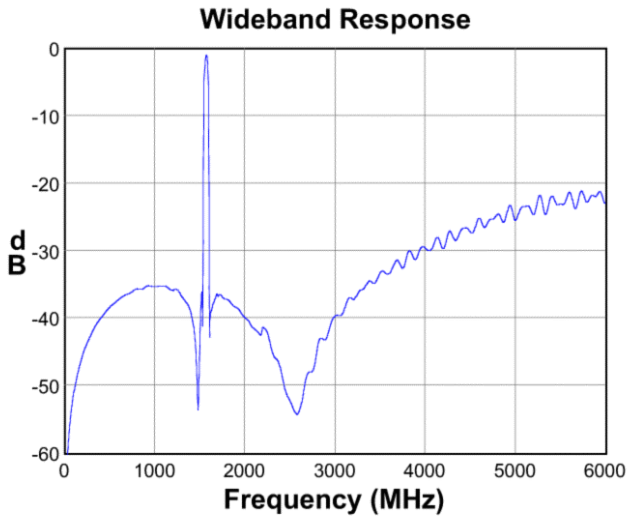
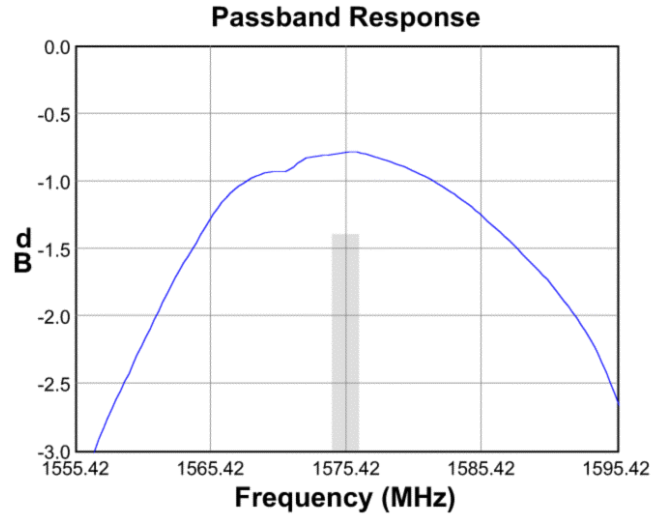
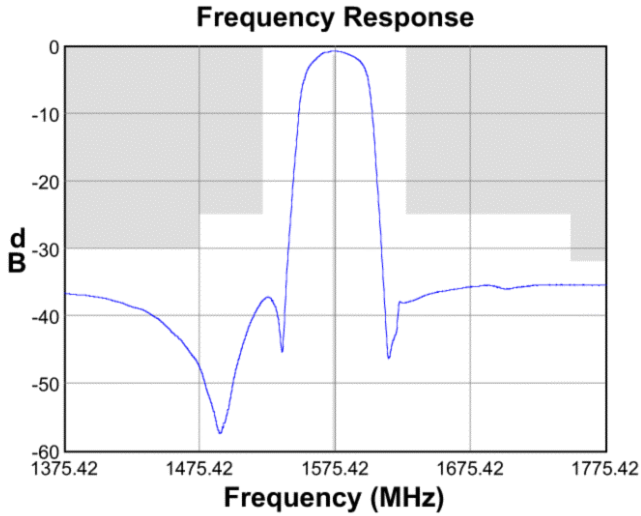
1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature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

**Test Circuit:**

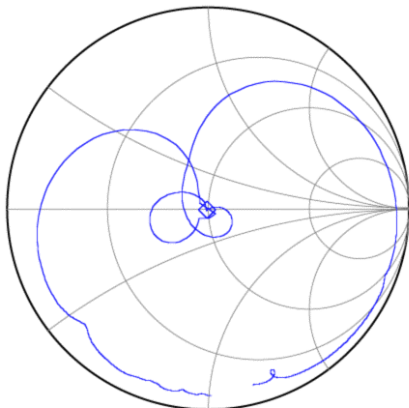


**Data Sheet**

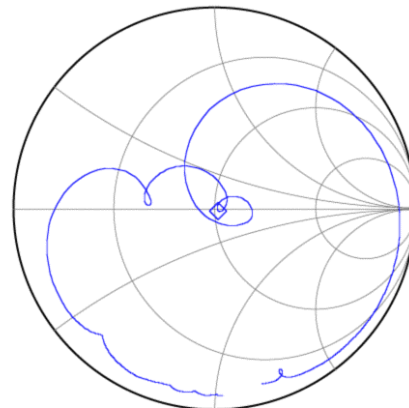
**Typical Performance (at +25°C)**



**Input Smith Chart**



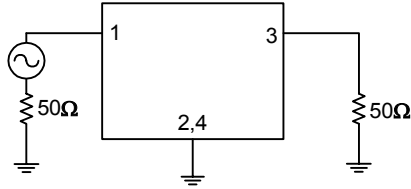
**Output Smith Chart**



**Data Sheet**

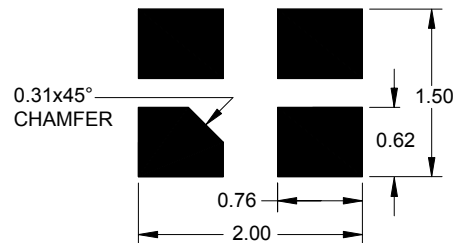
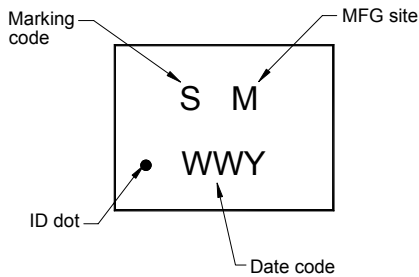
**Matching Schematics**

50 Ω  
Single-ended



No impedance matching required

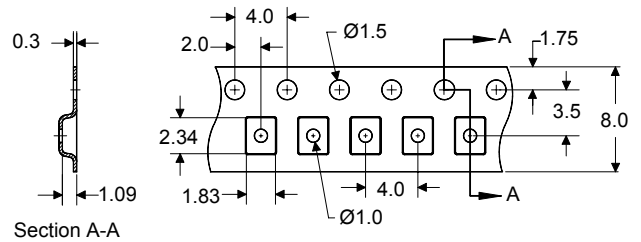
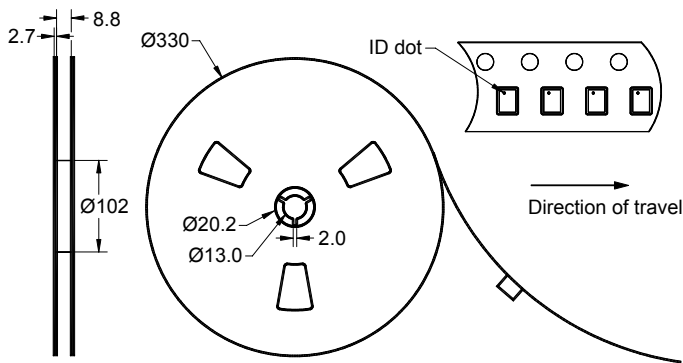
**Marking PCB Footprint**



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 <sub>stg</sub>	-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](#)

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