
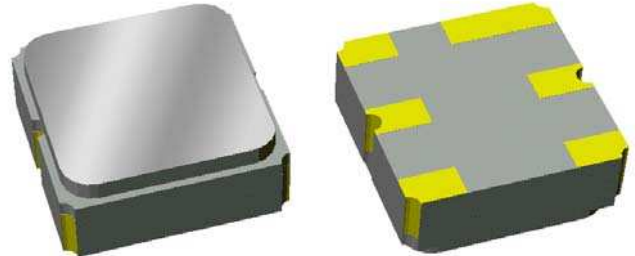


# Data Sheet

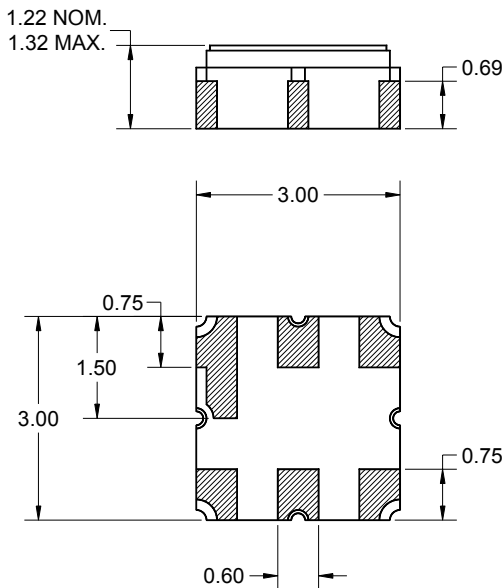
## Features

- For PCS applications
- Usable bandwidth 60 MHz
- Low Loss
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



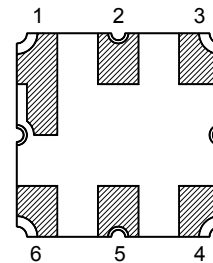
## Package

Surface Mount 3.00 x 3.00 x 1.22 mm



## Pin Configuration

Bottom View



Pin No.	Description
2,5	Input/Output
1,3,4,6	Case ground

Dimensions shown are nominal in millimeters  
 All tolerances are  $\pm 0.15$ mm except overall  
 length and width  $\pm 0.10$ mm

Body:  $Al_2O_3$  ceramic  
 Lid: Kovar, Ni plated  
 Terminations: Au plating 0.5 - 1.0 $\mu$ m,  
 over a 2 - 6 $\mu$ m Ni plating

# Data Sheet

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

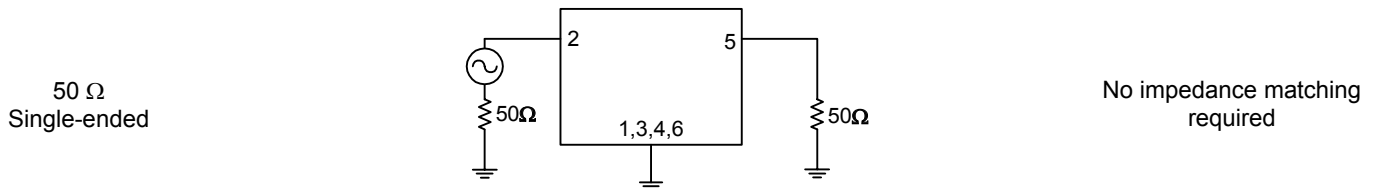
Operating Temperature Range: <sup>(2)</sup> -40 to +85 °C

Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
<b>Center Frequency</b>	-	1880	-	MHz
<b>Maximum Insertion Loss</b> 1850 - 1910 MHz	-	2.4	4	dB
<b>In Band Ripple</b> 1850 - 1910 MHz	-	0.5	2.5	dB p-p
<b>Absolute Attenuation</b>				
DC - 1660 MHz	20	40	-	dB
1660 - 1721 MHz	30	42	-	dB
1721 - 1800 MHz	20	28	-	dB
1930 - 1990 MHz	7	20	-	dB
2000 - 2040 MHz	25	36	-	dB
2040 - 2480 MHz	31	36	-	dB
3700 - 3820 MHz	25	48	-	dB
<b>Input/Output Return Loss</b> 1850 - 1910 MHz	7.4	10	-	dB
<b>Source Impedance <sup>(4)</sup></b>	-	50	-	$\Omega$
<b>Load Impedance <sup>(4)</sup></b>	-	50	-	$\Omega$

### Notes:

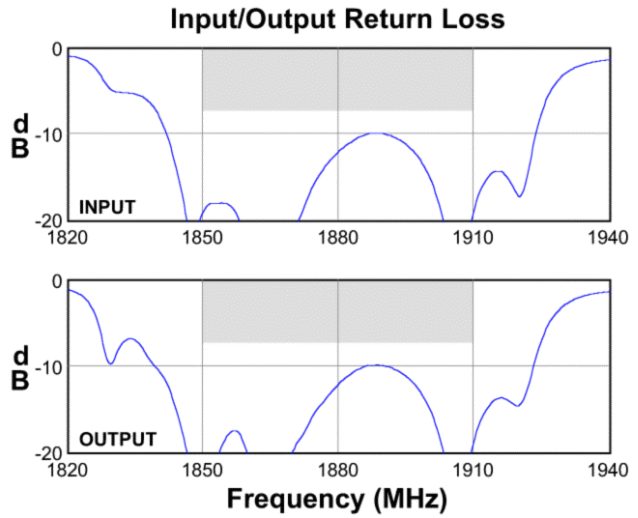
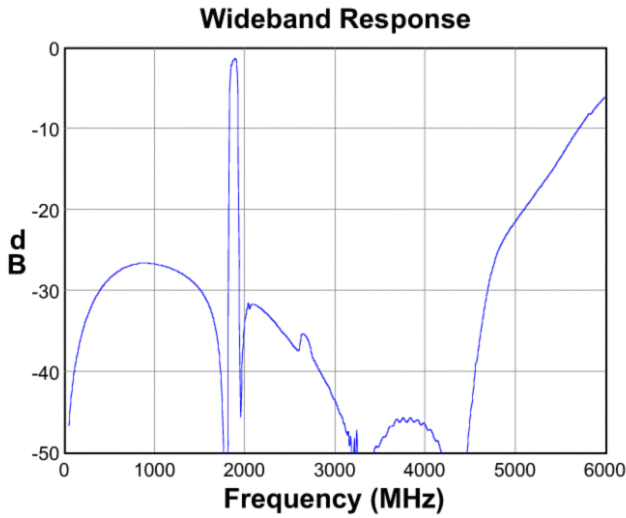
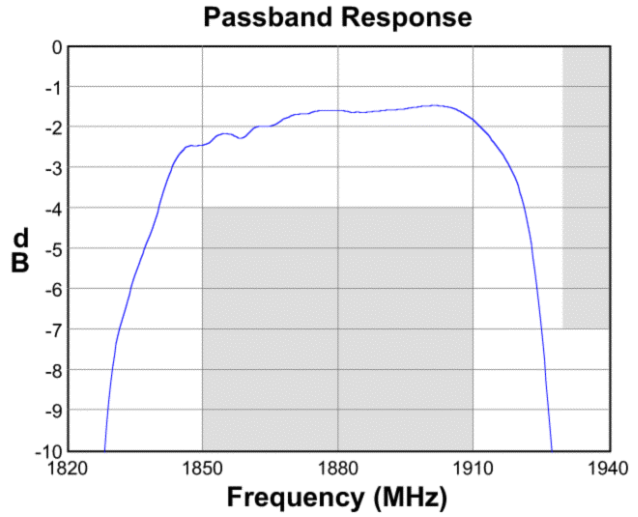
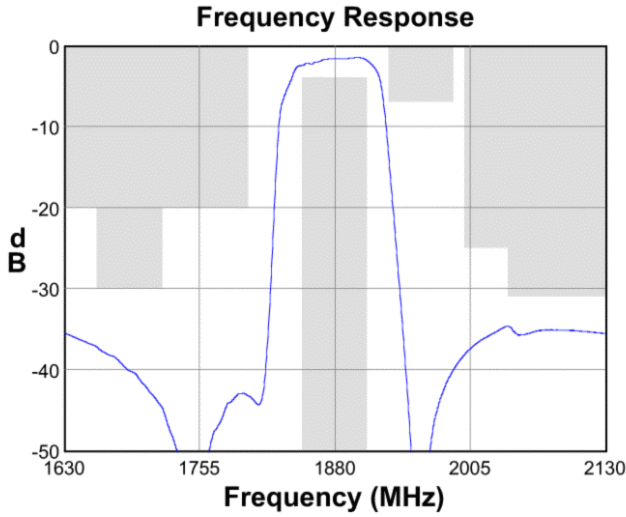
1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature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

### Test Circuit:

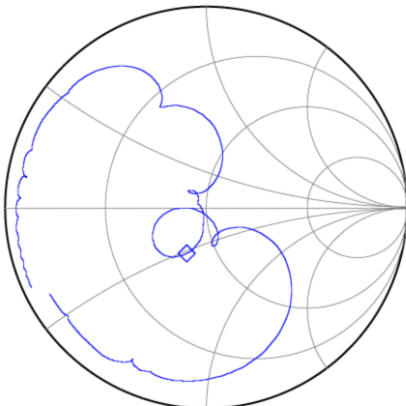


**Data Sheet**

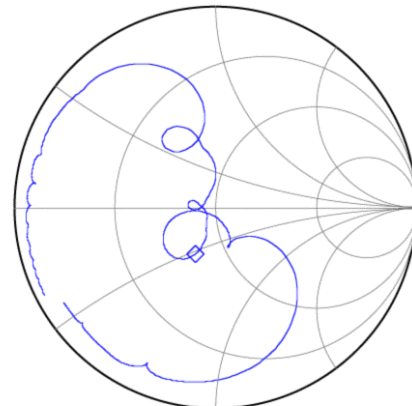
**Typical Performance (at +25°C)**



**Input Smith Chart**



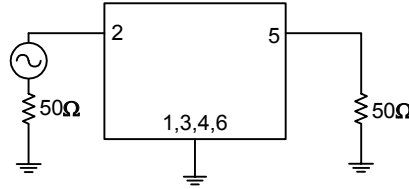
**Output Smith Chart**



**Data Sheet**

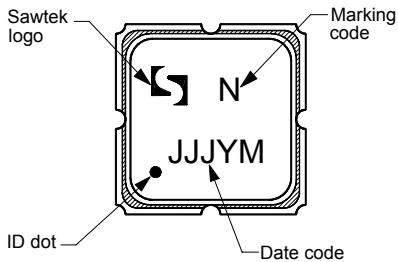
**Matching Schematics**

50 Ω  
Single-ended



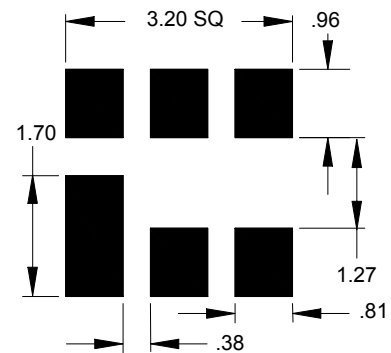
No impedance matching  
required

**Marking**



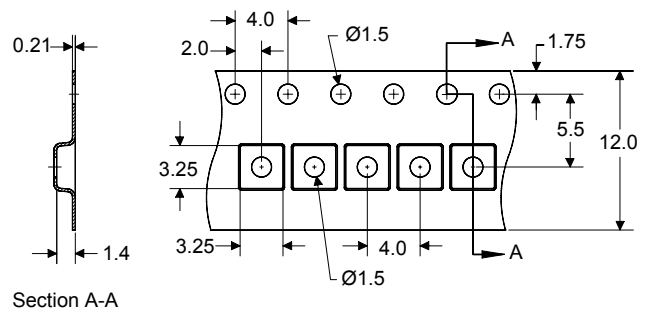
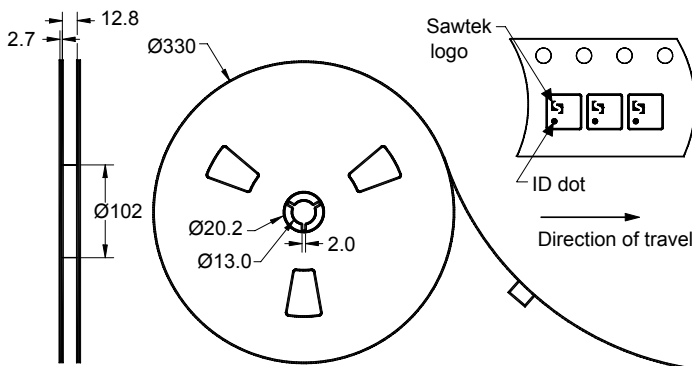
The date code consists of: JJJ = Julian day,  
Y = last digit of year, M = manufacturing site code

**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


# Data Sheet

## Maximum Ratings


Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-40	+85	°C
Storage Temperature Range	T <sub>stg</sub>	-40	+85	°C
RF Power	P <sub>in</sub>	-	+10	dBm

## 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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