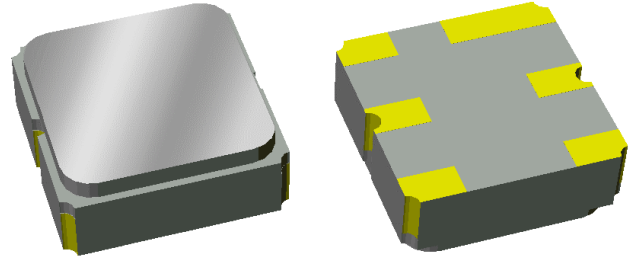


# Preliminary Data Sheet

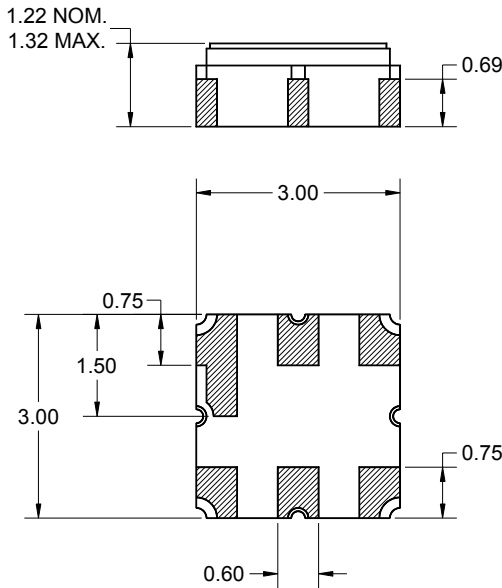
## Features

- For ISM band applications (such as Bluetooth and WLAN)
- Usable bandwidth 83.5 MHz
- High attenuation
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size



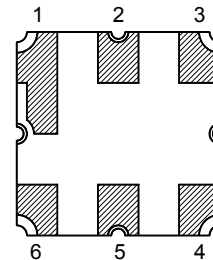
## Package

Surface Mount 3.00 x 3.00 x 1.22 mm



## Pin Configuration

Bottom View



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

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

Body:  $\text{Al}_2\text{O}_3$  ceramic  
 Lid: Kovar, Ni plated  
 Terminations: Au plating 0.5 - 1.0  $\mu\text{m}$ ,  
 over a 2 - 6  $\mu\text{m}$  Ni plating

# Preliminary Data Sheet

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

Operating Temperature Range: <sup>(2)</sup> 0 to +60 °C

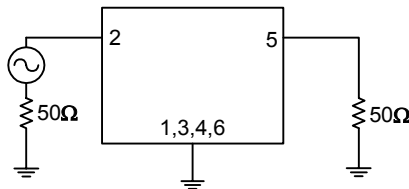
Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
<b>Center Frequency</b>	-	2441.8	-	MHz
<b>Maximum Insertion Loss</b> 2400 - 2483.5 MHz	-	2.76	5.0	dB
<b>Absolute Attenuation</b>				
0.3 - 500 MHz	25	34	-	dB
500 - 1000 MHz	20	29	-	dB
1000 - 1700 MHz	20	26.8	-	dB
1700 - 2200 MHz	20	26.9	-	dB
2700 - 3100 MHz	20	30.5	-	dB
3100 - 4000 MHz	20	31.8	-	dB
4000 - 5000 MHz	10	20	-	dB
<b>Input VSWR</b> 2400 - 2483.5 MHz	-	2.75	4.55:1	Ratio
<b>Output VSWR</b> 2400 - 2483.5 MHz	-	2.68	5.7:1	Ratio
<b>Passband Ripple</b> 2400 - 2483.5 MHz	-	1.2	2.5	dB p-p
<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:**

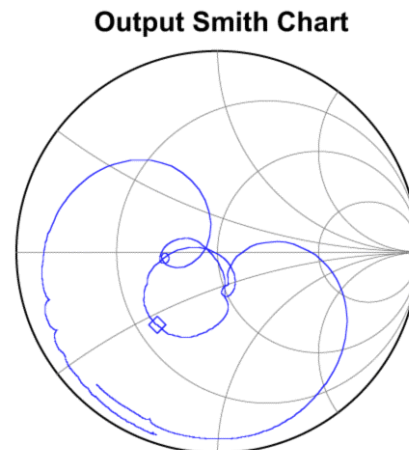
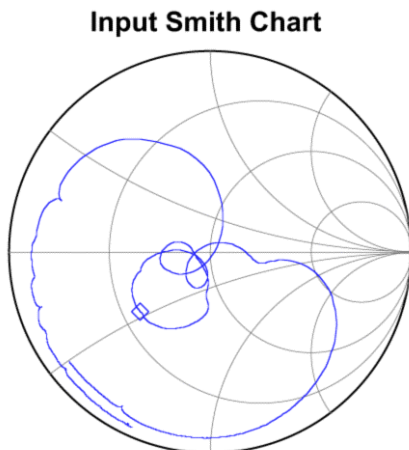
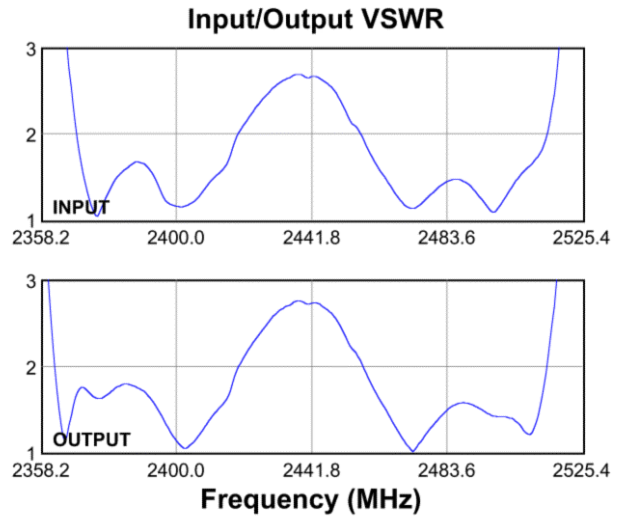
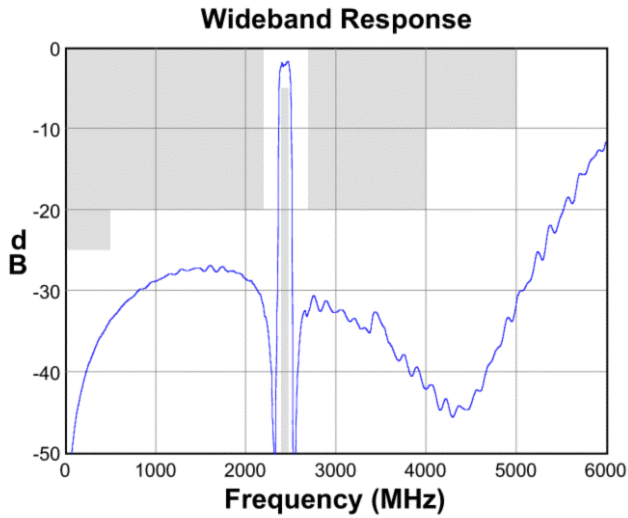
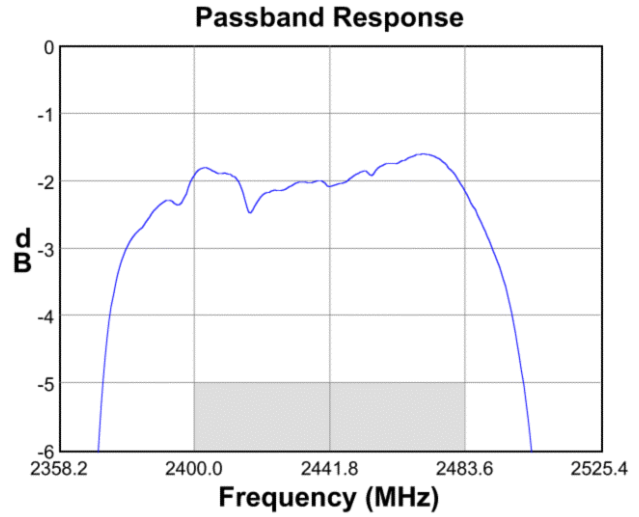
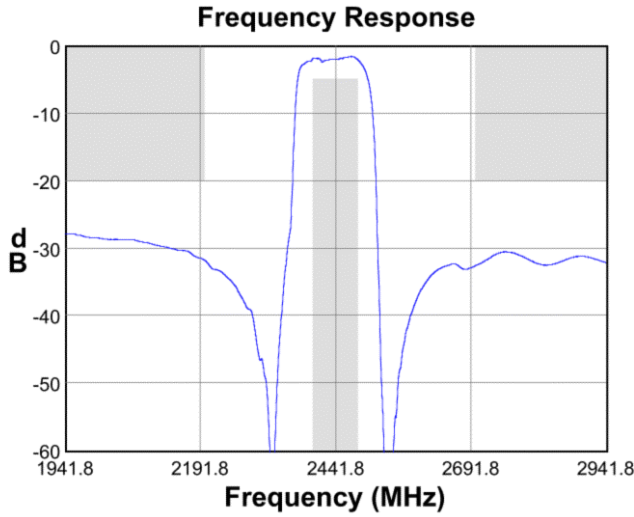
50 Ω  
Single-ended



No impedance matching required

**Preliminary Data Sheet**

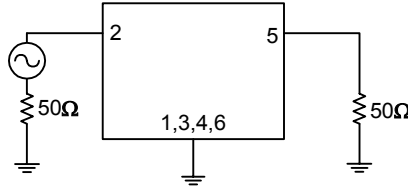
**Typical Performance (at +25°C)**



**Preliminary Data Sheet**

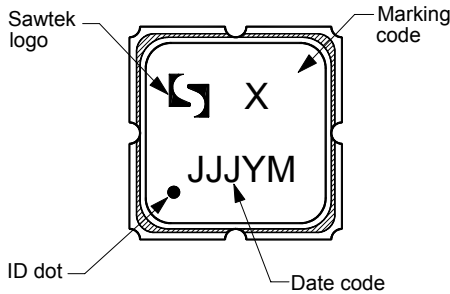
**Matching Schematics**

50 Ω  
Single-ended

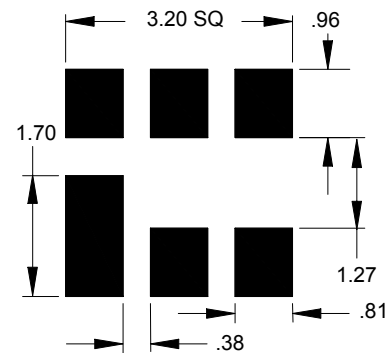


No impedance matching required

**Marking PCB Footprint**

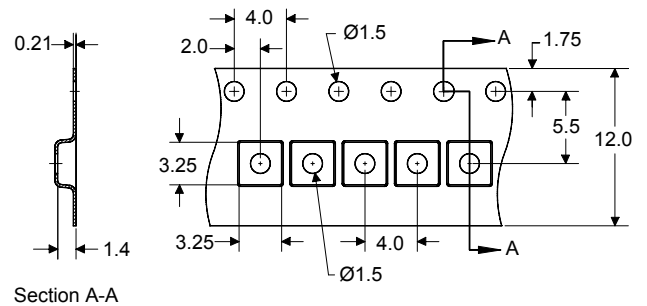
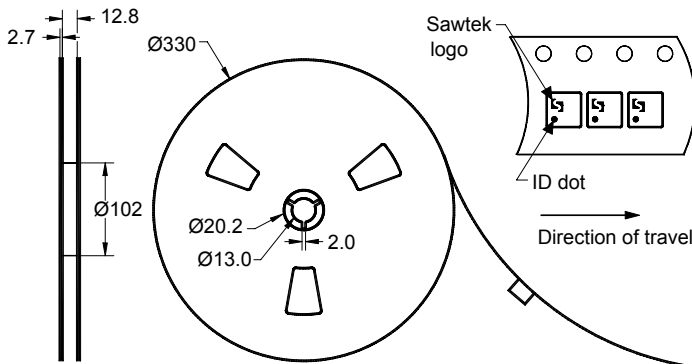


The date code consists of: JJJ = Julian day,  
Y = last digit of year, M = manufacturing site code



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

**Tape and Reel**




Dimensions shown are nominal in millimeters  
Packaging quantity: 5000 units/reel

# Preliminary Data Sheet

## Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	0	+60	°C
Storage Temperature Range	T <sub>stg</sub>	-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](#)

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[representatives or distributors](#)