
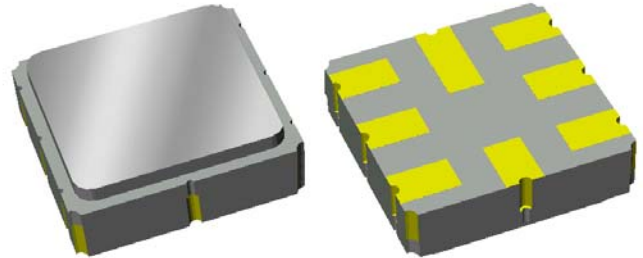


# Preliminary Data Sheet

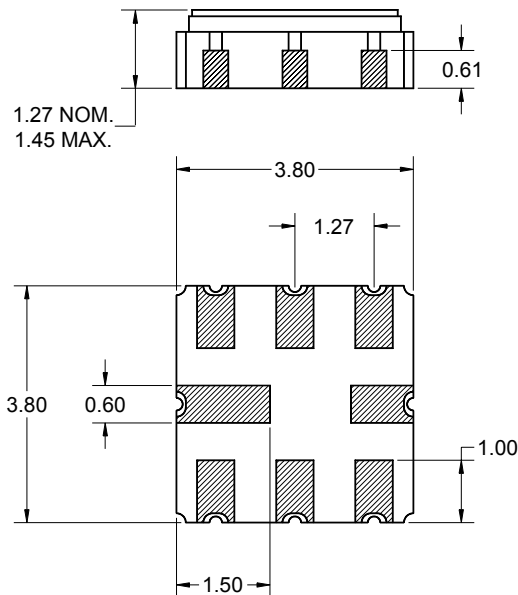
## Features

- Usable bandwidth of 4 MHz
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



## Package

Surface Mount 3.80 x 3.80 x 1.27 mm

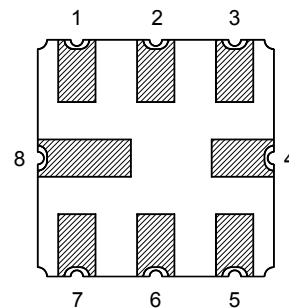


Dimensions shown are nominal in millimeters  
 All tolerances are  $\pm 0.15$ mm except overall  
 length and width  $\pm 0.10$ mm

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

## Pin Configuration

Bottom View



Pin No.	Description
2	Output
3	Output Return
6	Input
7	Input Return
1,4,5,8	Case ground

# Preliminary Data Sheet

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

Temperature Range: <sup>(2)</sup> -30 to +70 °C

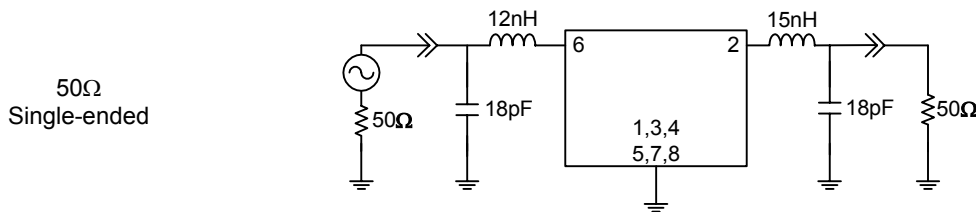
Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
Center Frequency, $f_0$	-	380	-	MHz
Insertion Loss at 380 MHz	-	9.5	11	dB
3 dB Bandwidth	4.8	7.3	-	MHz
Passband Ripple <sup>(4)</sup> 378.1 - 381.9 MHz	-	0.65	1.5	dB p-p
Phase Linearity 378 - 382 MHz	-	1.1	4	deg RMS
Relative Attenuation 360 - 373 MHz	28	38	-	dB
387 - 400 MHz	28	36	-	dB
Source Impedance: <sup>(5)</sup>	-	50	-	$\Omega$
Load Impedance: <sup>(5)</sup>	-	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. Passband ripple is the worst case peak to adjacent valley over a frequency range defined by the measured roll off at the passband edges
5. This is the optimum impedance in order to achieve the performance shown

### Test Circuit:

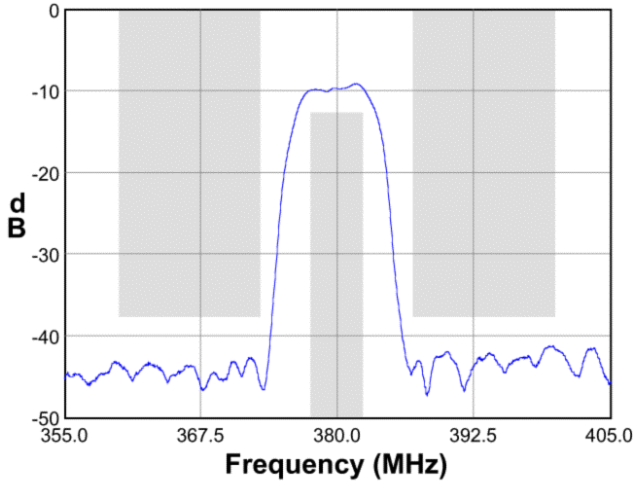
Actual matching values may vary due to PCB layout and parasitics



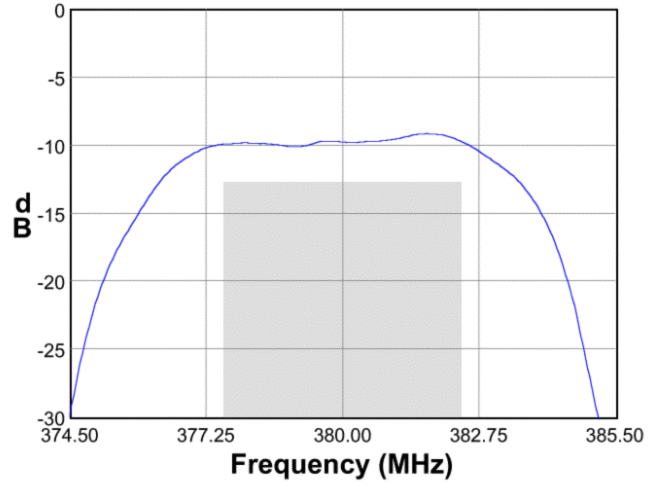
**Preliminary Data Sheet**

**Typical Performance (at +25°C)**

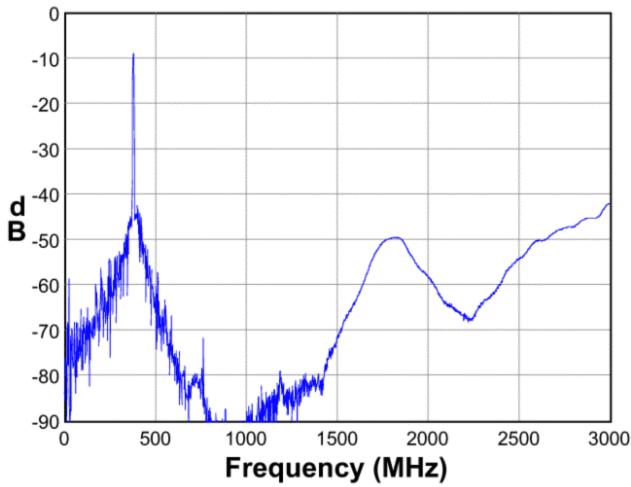
**Frequency Response**



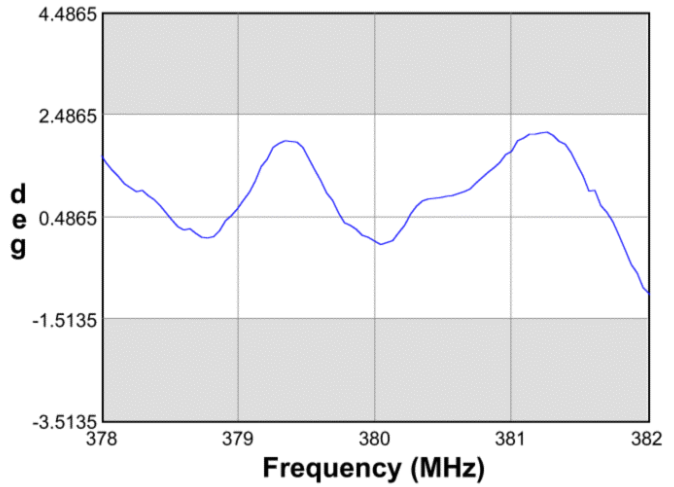
**Passband Response**



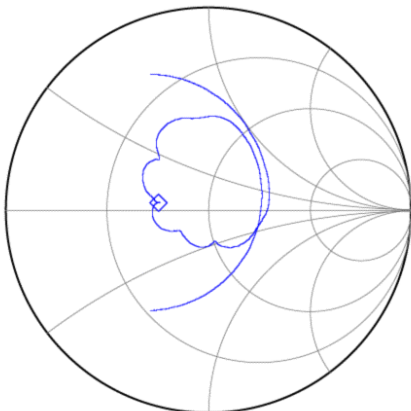
**Wideband Response**



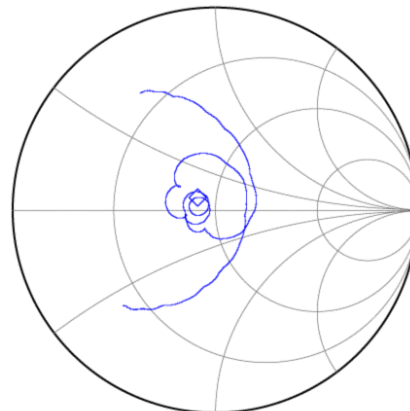
**Phase Linearity**



**Input Smith Chart**



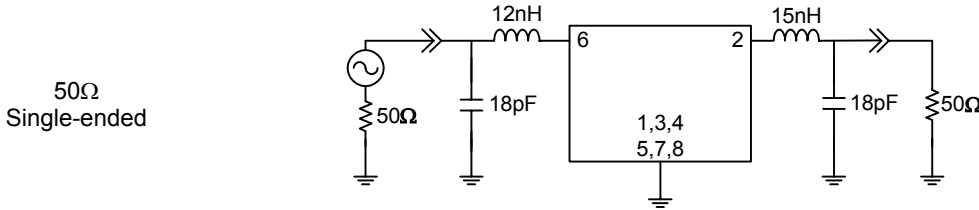
**Output Smith Chart**



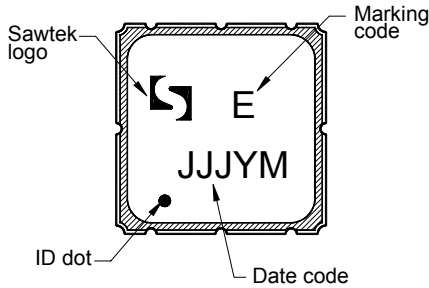
**Preliminary Data Sheet**

**Matching Schematics**

Actual matching values may vary due to PCB layout and parasitics

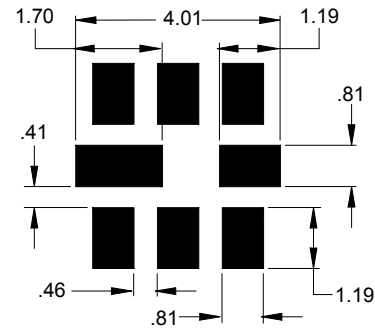


**Marking**



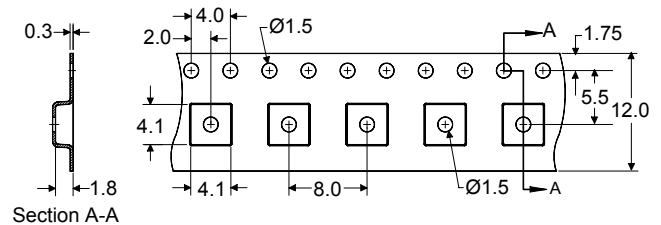
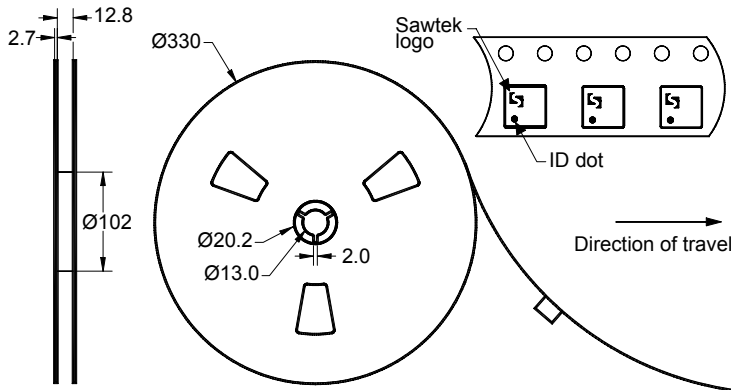
The date code consists of: JJJ = Julian day,  
Y = last digit of year, M = manufacturing site code

**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: 4000 units/reel


# Preliminary Data Sheet

## Maximum Ratings


Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-30	+70	°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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