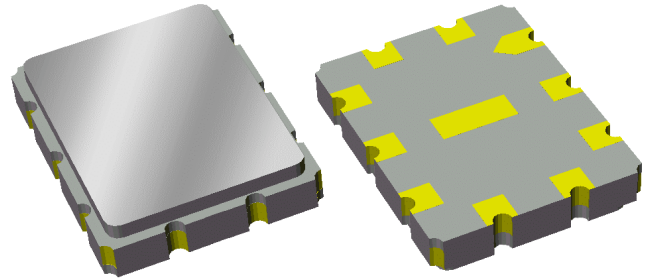


**Data Sheet**

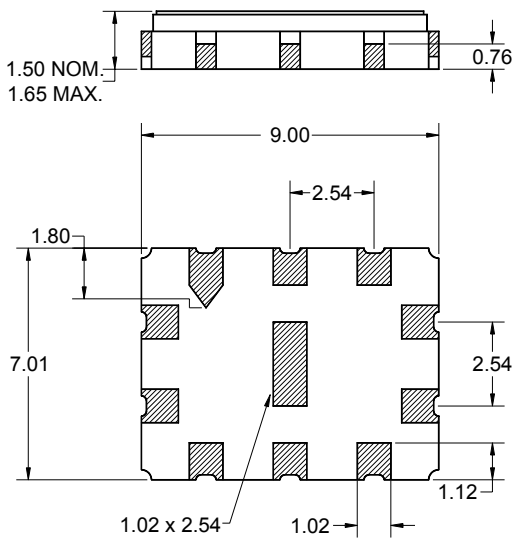
**Features**

- For broadband applications
- Usable bandwidth 1 MHz
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size



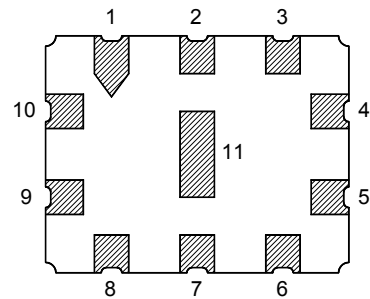
**Package**

Surface Mount 9.00 x 7.01 x 1.50 mm



**Pin Configuration**

Bottom View



Pin No.	Description
4	Output
5	Output return
9	Input
10	Input return
1,2,3,6	Case ground
7,8,11	Case ground

Dimensions shown are nominal in millimeters  
All tolerances are  $\pm 0.15$ mm except overall  
length and width  $+0.10$ mm/ $-0.15$ 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>      -10 to +65 °C

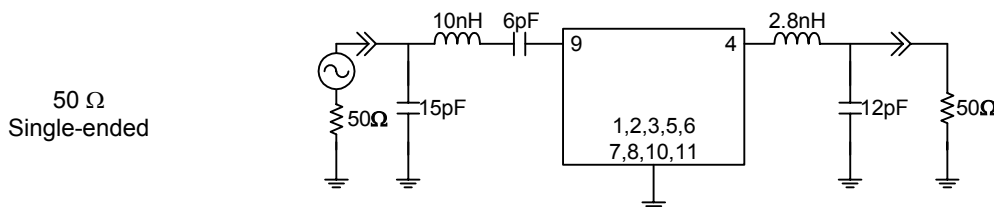
Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
<b>Center Frequency</b>	-	549.5	-	MHz
<b>Insertion Loss at 549.5 MHz</b>	-	11.6	13	dB
<b>Lower 1 dB Bandwidth <sup>(4)</sup></b>	-	548.73	549	MHz
<b>Upper 1 dB Bandwidth</b>	550	550.41	-	MHz
<b>3 dB Bandwidth <sup>(4)</sup></b>	-	1.99	2.2	MHz
<b>Lower 40 dB Bandwidth <sup>(4)</sup></b>	547.4	547.83	-	MHz
<b>Upper 40 dB Bandwidth</b>	-	551.08	551.6	MHz
<b>Amplitude Variation</b> 549 - 550 MHz	-	0.5	1	dB p-p
<b>Phase Ripple <sup>(5)</sup></b> 549 - 550 MHz	-	0.81	5	deg p-p
<b>Group Delay Ripple</b> 549 - 550 MHz	-	80	150	ns
<b>Absolute Attenuation</b> 10 - 250 MHz	50	70	-	dB
250 - 536.5 MHz	40	49	-	dB
536.5 - 547.4 MHz	40	43	-	dB
551.6 - 562.5 MHz	37	40	-	dB
562.5 - 2000 MHz	40	50	-	dB
<b>Input/Output VSWR</b> 549 - 550 MHz	-	1.3:1	2:1	-
<b>Source Impedance: <sup>(6)</sup></b>	-	50	-	Ω
<b>Load Impedance: <sup>(6)</sup></b>	-	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. Relative to insertion loss at 549.5 MHz
5. Sliding aperture of 0.2 MHz
6. This is the optimum impedance in order to achieve the performance shown

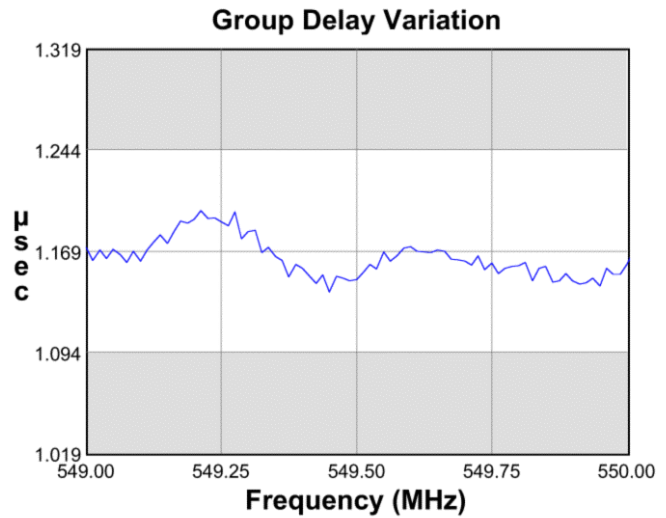
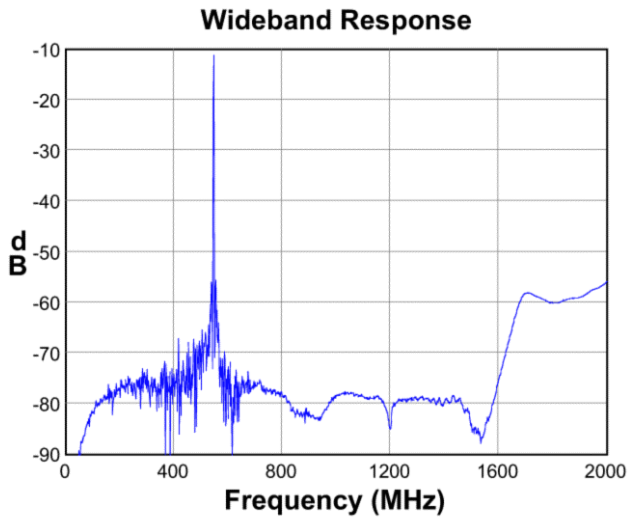
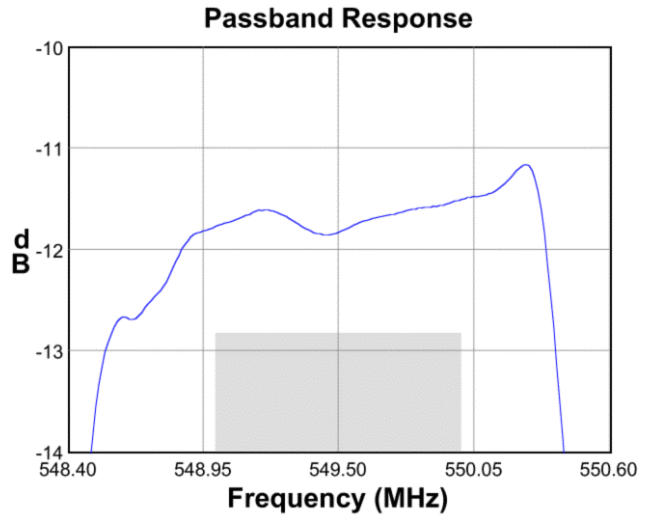
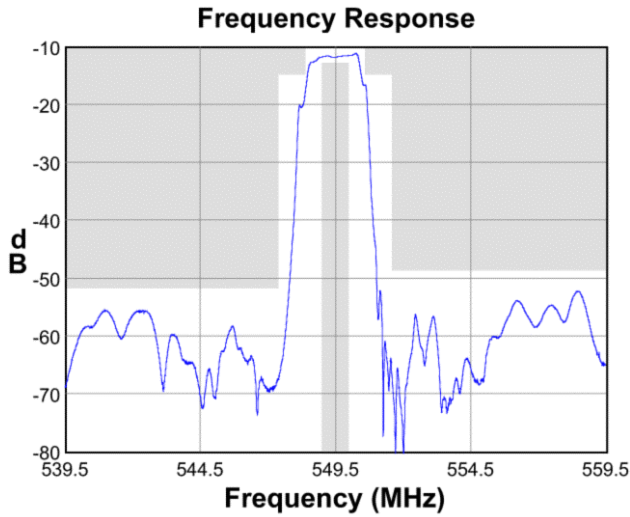
### Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

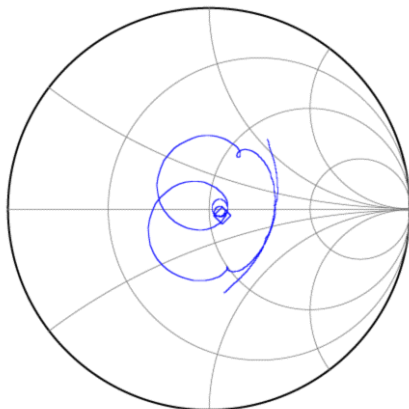


**Data Sheet**

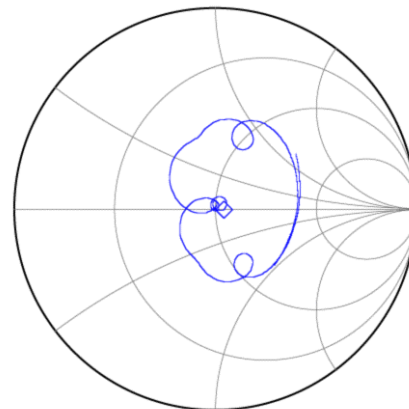
**Typical Performance (at +25°C)**



**Input Smith Chart**



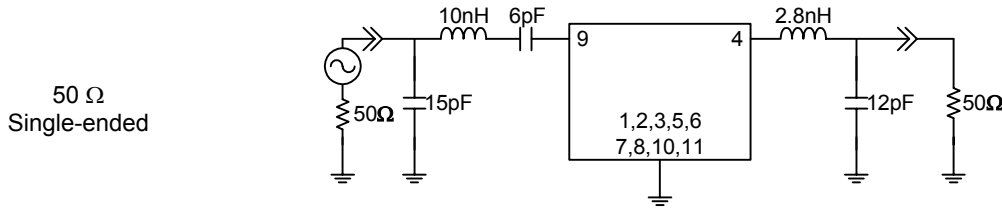
**Output Smith Chart**



**Data Sheet**

**Matching Schematics**

Actual matching values may vary due to PCB layout and parasitics

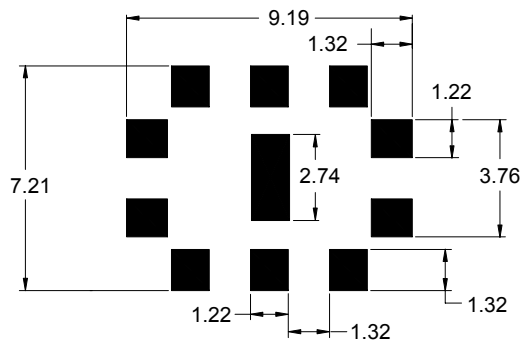


**Marking**



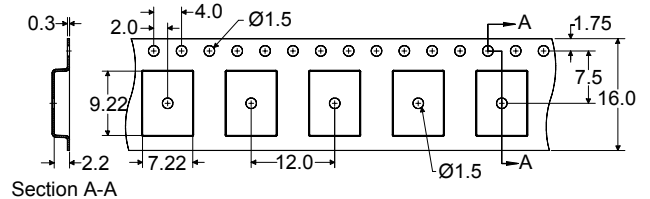
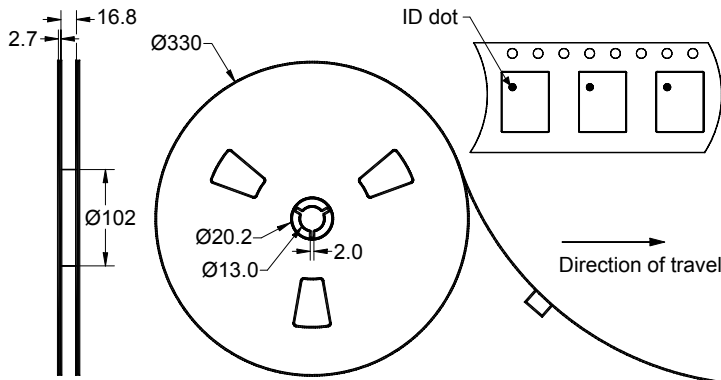
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

**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: 2000 units/reel

# Data Sheet

## Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-10	+65	°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](#)

## Contact Information



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