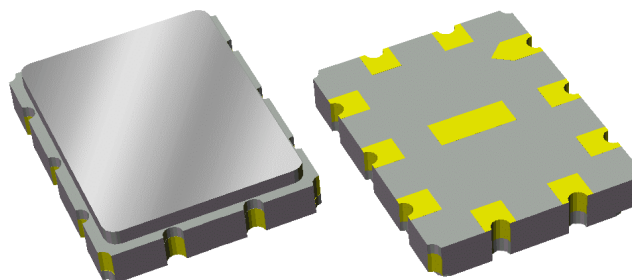


Data Sheet

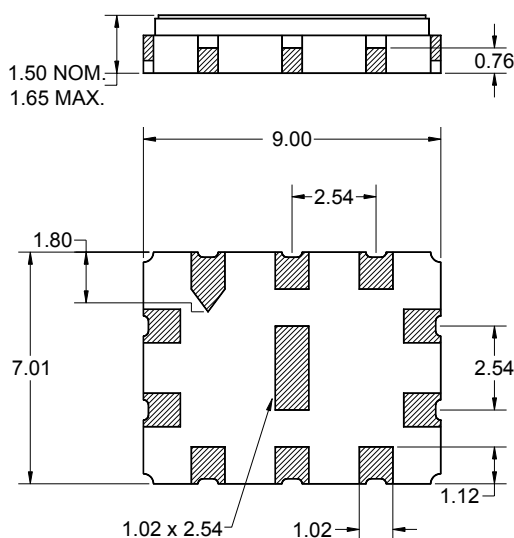
Features

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



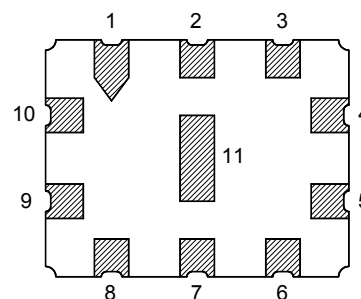
Package

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 ± 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 μ m,
over a 2 - 6 μ m Ni plating

Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ -10 to +65 °C

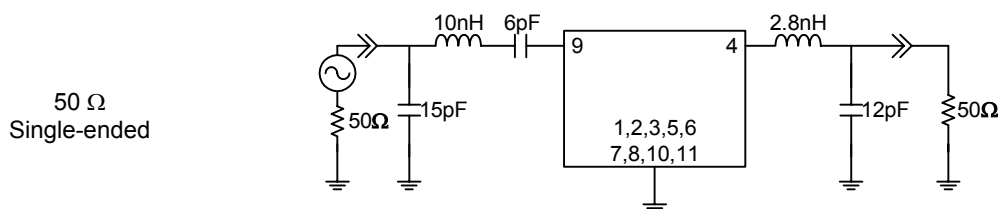
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	549.5	-	MHz
Insertion Loss at 549.5 MHz	-	11.6	13	dB
Lower 1 dB Bandwidth ⁽⁴⁾	-	548.73	549	MHz
Upper 1 dB Bandwidth	550	550.41	-	MHz
3 dB Bandwidth ⁽⁴⁾	-	1.99	2.2	MHz
Lower 40 dB Bandwidth ⁽⁴⁾	547.4	547.83	-	MHz
Upper 40 dB Bandwidth	-	551.08	551.6	MHz
Amplitude Variation 549 - 550 MHz	-	0.5	1	dB p-p
Phase Ripple ⁽⁵⁾ 549 - 550 MHz	-	0.81	5	deg p-p
Group Delay Ripple 549 - 550 MHz	-	80	150	ns
Absolute Attenuation 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
Input/Output VSWR 549 - 550 MHz	-	1.3:1	2:1	-
Source Impedance: ⁽⁶⁾	-	50	-	Ω
Load Impedance: ⁽⁶⁾	-	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

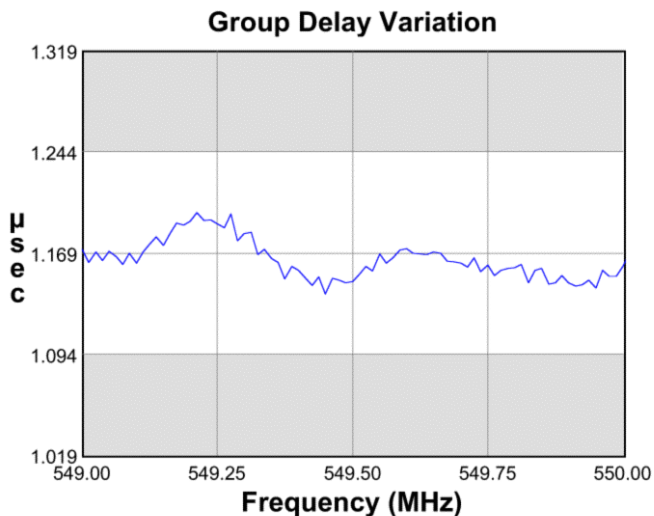
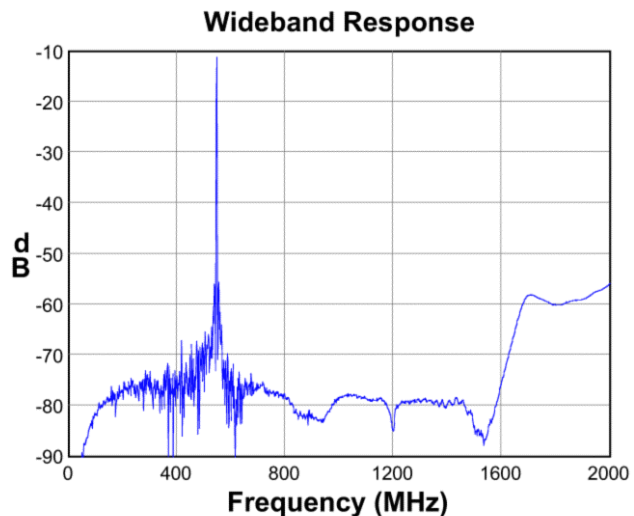
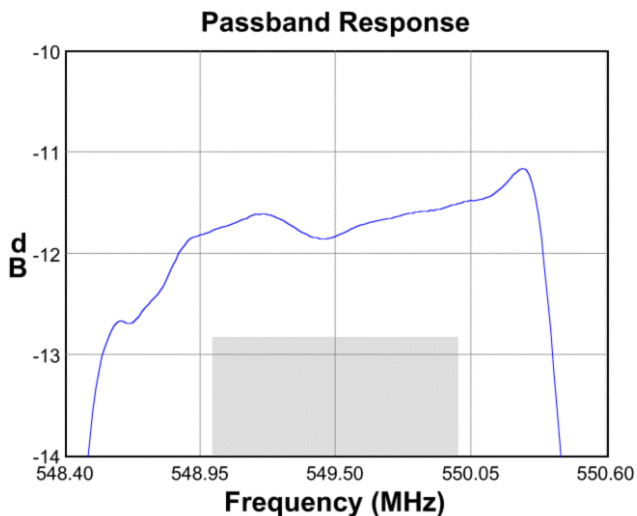
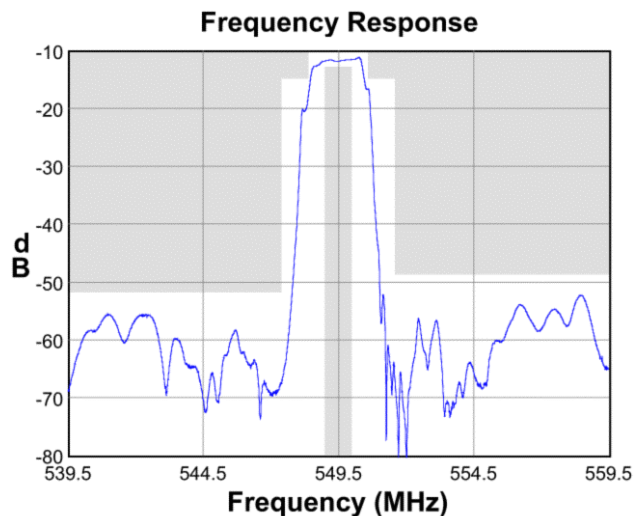
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

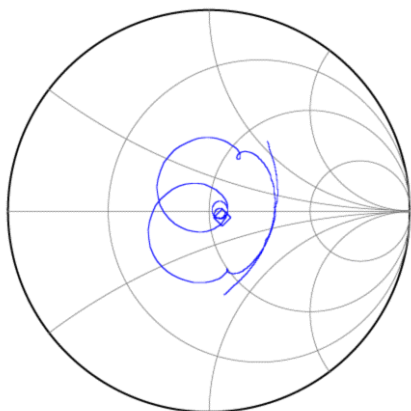


Data Sheet

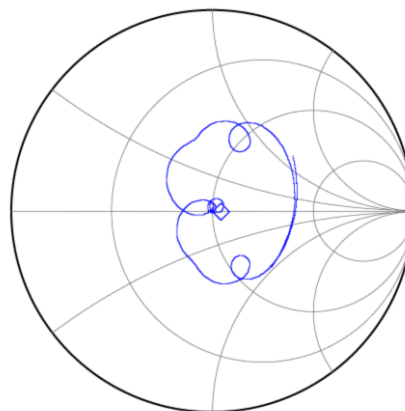
Typical Performance (at +25°C)



Input Smith Chart



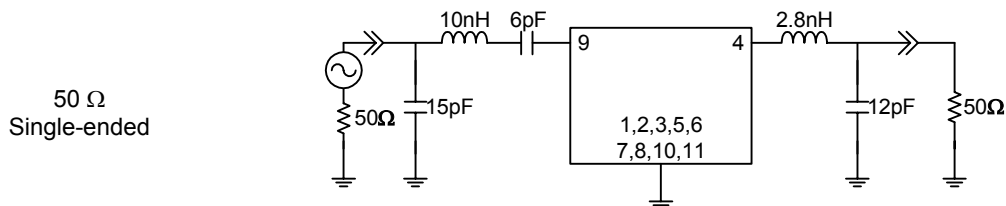
Output Smith Chart



Data Sheet

Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

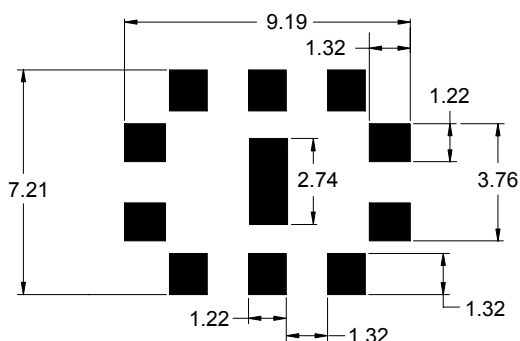


Marking



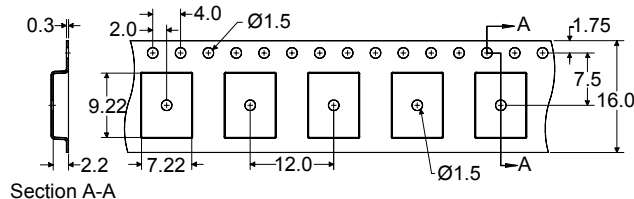
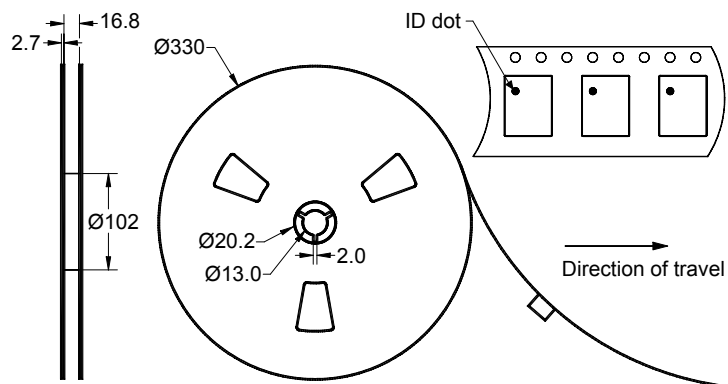
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

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 _{stg}	-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



PO Box 609501
Orlando, FL 32860-9501
USA

Phone: +1 (407) 886-8860
Fax: +1 (407) 886-7061
Email: custservice@sawtek.com
Web: www.sawtek.com

Or contact one of our worldwide
Network of [sales offices](#),
[Representatives or distributors](#)