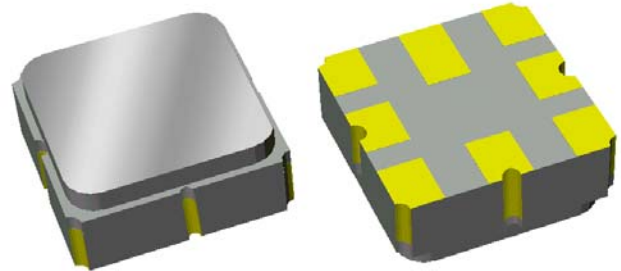


# Data Sheet

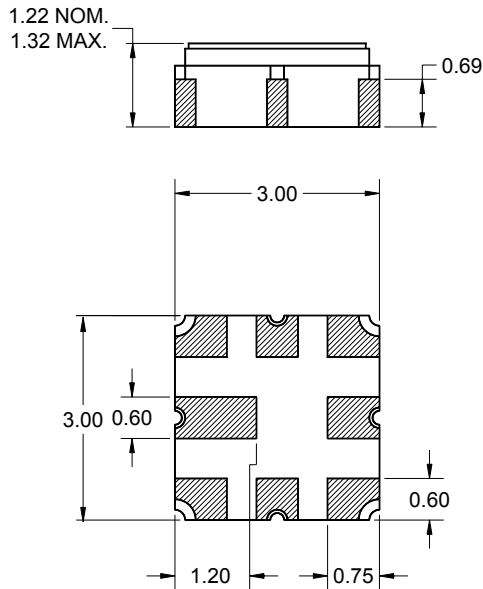
## Features

- For broadband access applications
- Usable bandwidth 10 MHz
- High attenuation
- No impedance matching required for operation at 200 Ω
- Balanced operation
- Ceramic Surface Mount Package (SMP)
- Small size



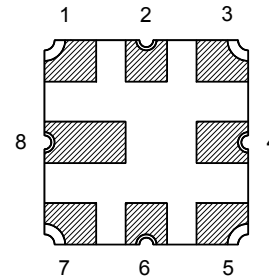
## Package

Surface Mount 3.00 x 3.00 x 1.22 mm



## Pin Configuration

Bottom View



Pin No.	Description
1	Input
3	Balanced input
5	Balanced output
7	Output
2,4,6,8	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

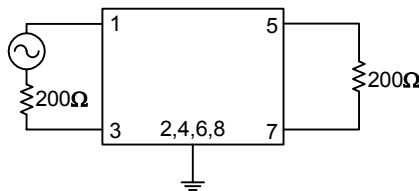
Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
<b>Center Frequency</b>	-	1086	-	MHz
<b>Maximum Insertion Loss</b> 1081 - 1091 MHz	-	4	5	dB
<b>1.5 dB Bandedges</b> Lower Bandedge Upper Bandedge	- 1091	1076.5 1095.5	1081	MHz
<b>Amplitude Ripple <sup>(4)</sup></b> 1081 - 1091 MHz	-	0.75	1.0	dB
<b>Stopband Rejection (Test Fixture)</b> 500 - 988 MHz 988 - 1002 MHz 1038 - 1046 MHz 1156 - 1600 MHz	50 52.5 40 40	55 55 40 40	- - - -	dB dB dB dB
<b>Group Delay Ripple</b> 1081 - 1091 MHz	-	20	-	ns
<b>Source Impedance <sup>(5)</sup></b>	-	200	-	$\Omega$
<b>Load Impedance <sup>(5)</sup></b>	-	200	-	$\Omega$

### Notes:

- All specifications are based on the test circuit shown below. Testing is carried out using test fixture 971748, test data sheet 122288-02, to equipment specification 100221.
- In production, devices will be tested at room temperature in a Sawtek test fixture to a guardbanded specification to ensure electrical compliance over temperature.
- Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances.
- Maximum peak to adjacent valley over the defined frequency range.
- This is the optimum impedance in order to achieve the performance shown.

### Test Circuit:

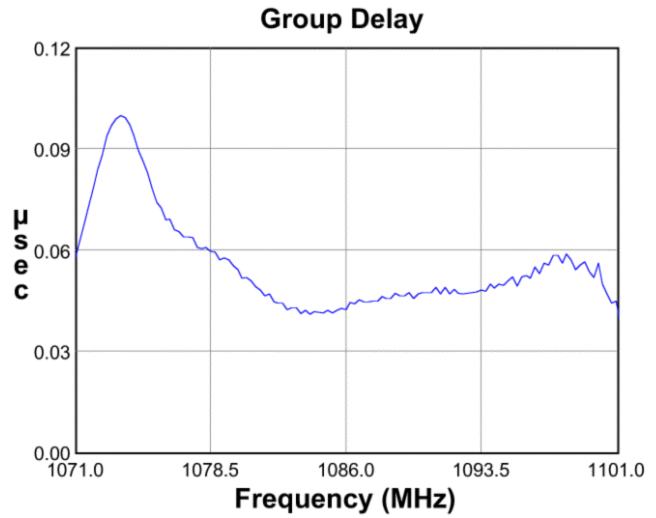
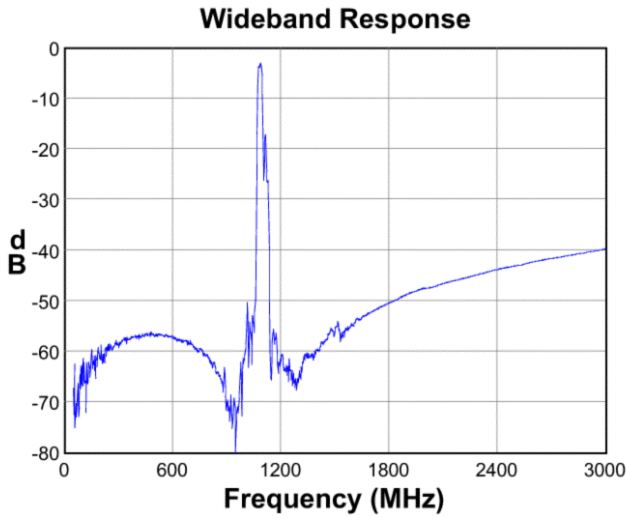
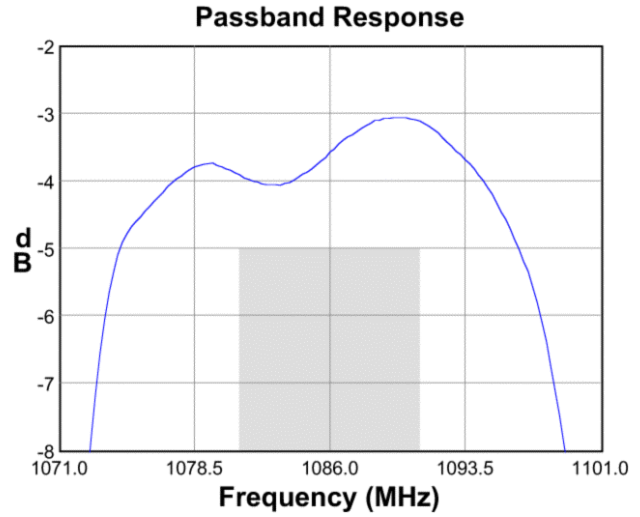
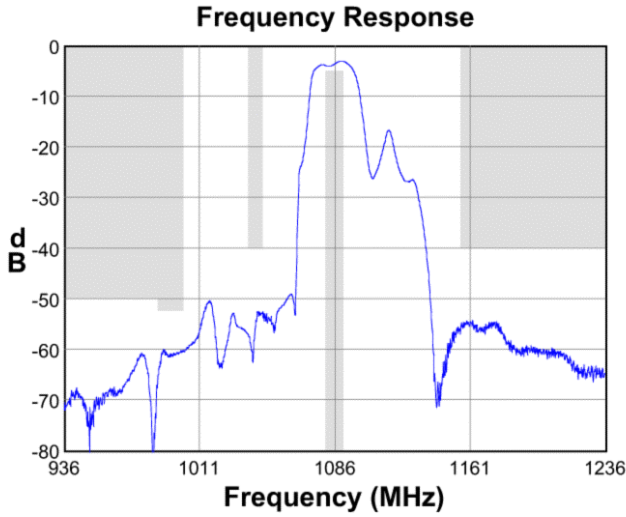
200  $\Omega$   
Balanced



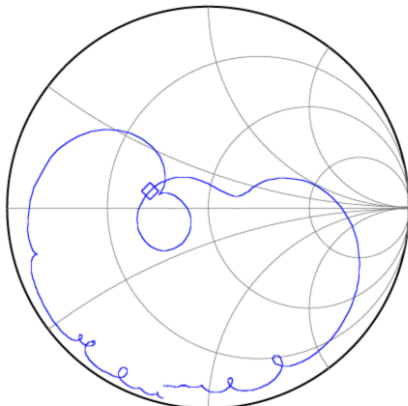
No impedance matching  
required

**Data Sheet**

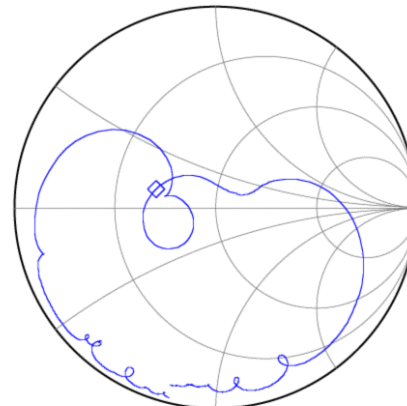
**Typical Performance (at +25°C)**



**Input Smith Chart**



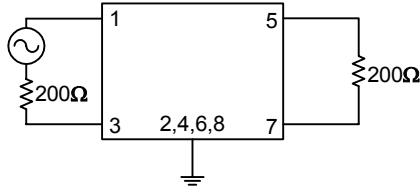
**Output Smith Chart**



**Data Sheet**

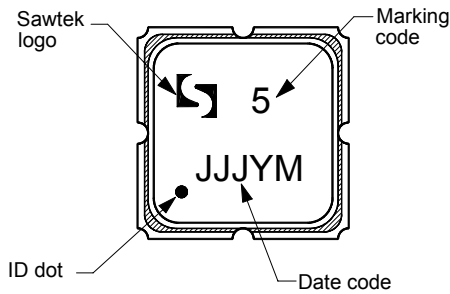
**Matching Schematics**

200 Ω  
Balanced



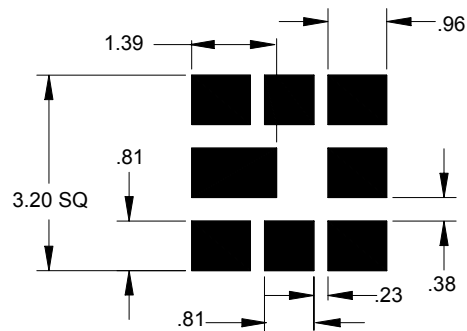
No impedance matching required

**Marking**



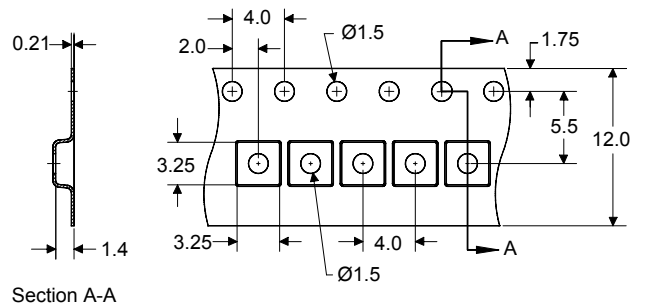
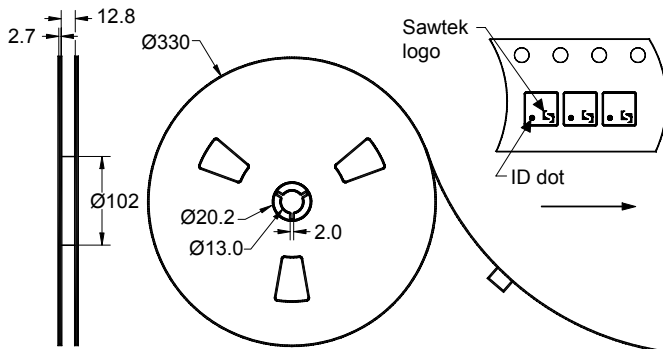
The date code consists of: JJJ = Julian day,  
Y = last digit of year, M = manufacturing site code

**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

### 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](#)

Sawtek's liability is limited only to the Surface Acoustic Wave (SAW) component(s) described in this data sheet. Sawtek does not accept any liability for applications, processes, circuits or assemblies which are implemented using any Sawtek component described in this data sheet.

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