

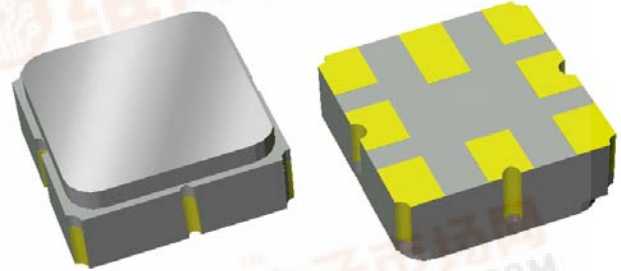


**Part Number 855964**  
**1086 MHz SAW Filter**

**Data Sheet**

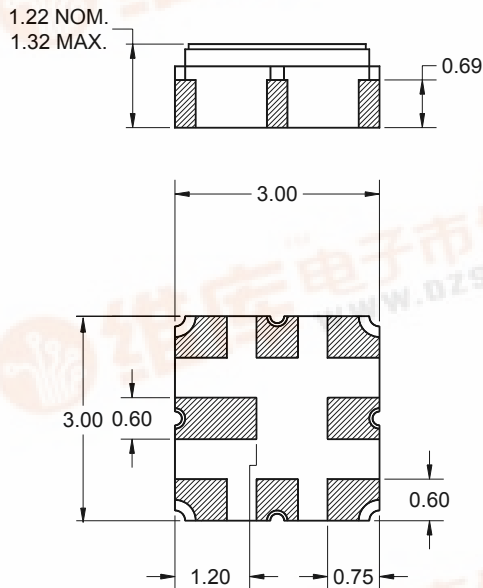
**Features**

- 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



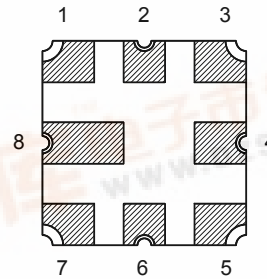
**Package**

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  $\pm 0.15\text{mm}$  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



# Data Sheet

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

Operating Temperature Range: <sup>(2)</sup> -40 to +85 °C

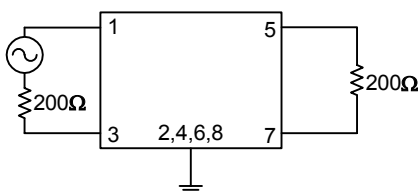
Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
<b>Center Frequency</b>	-	1086	-	MHz
<b>Maximum Insertion Loss</b> 1081 - 1091 MHz	-	4	5	dB
<b>1.5 dB Bandedges</b>				
Lower Bandedge	-	1076.5	1081	MHz
Upper Bandedge	1091	1095.5		
<b>Amplitude Ripple <sup>(4)</sup></b> 1081 - 1091 MHz	-	0.75	1.0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

### Notes:

1. 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.
2. In production, devices will be tested at room temperature in a Sawtek test fixture 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. Maximum peak to adjacent valley over the defined frequency range.
5. This is the optimum impedance in order to achieve the performance shown.

### Test Circuit:

200 Ω  
Balanced

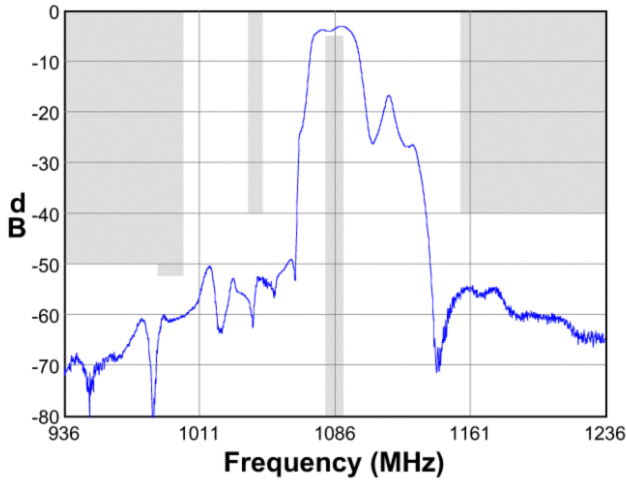


No impedance matching  
required

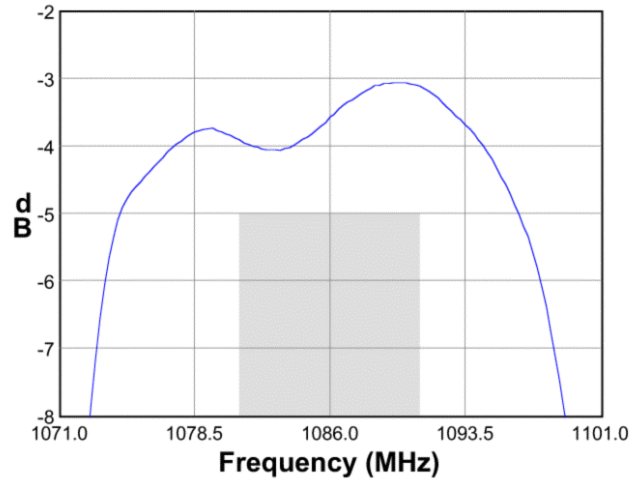
**Data Sheet**

**Typical Performance (at +25°C)**

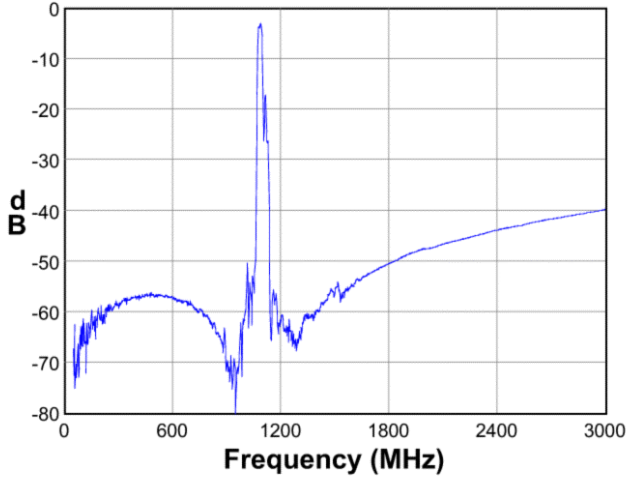
**Frequency Response**



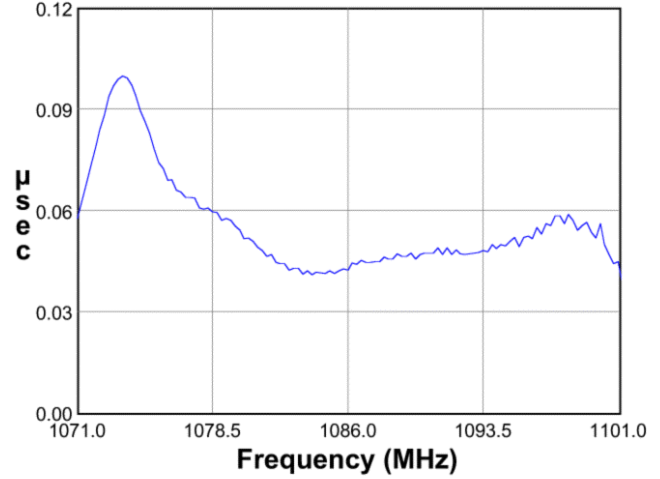
**Passband Response**



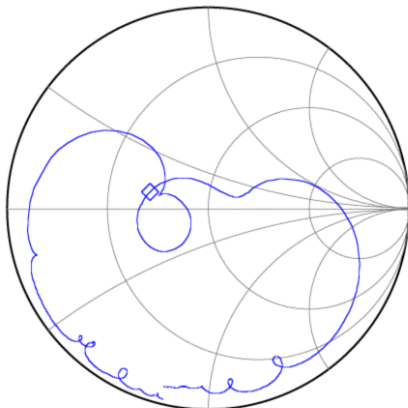
**Wideband Response**



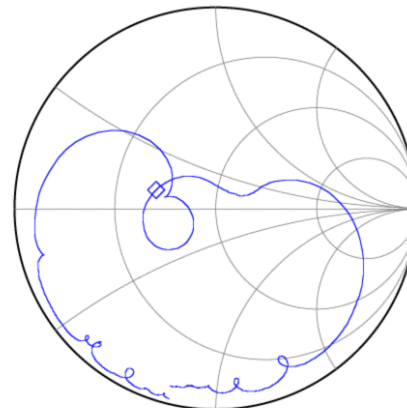
**Group Delay**



**Input Smith Chart**



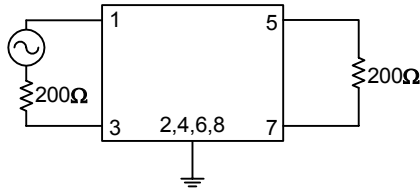
**Output Smith Chart**



**Data Sheet**

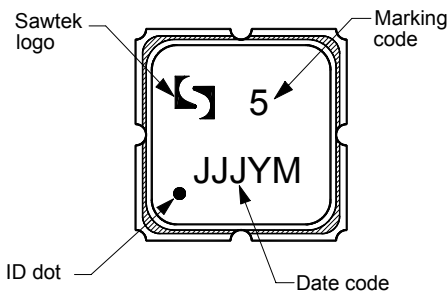
**Matching Schematics**

200 Ω  
Balanced

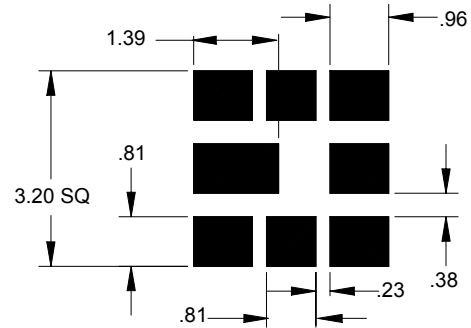


No impedance matching required

**Marking PCB Footprint**

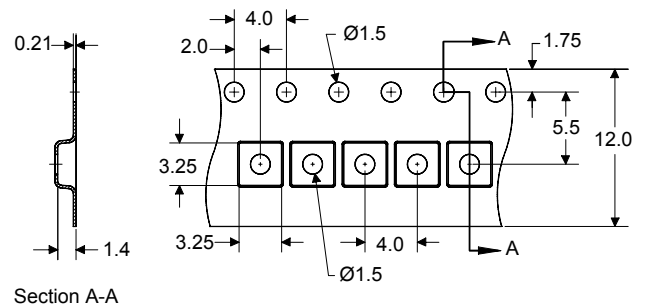
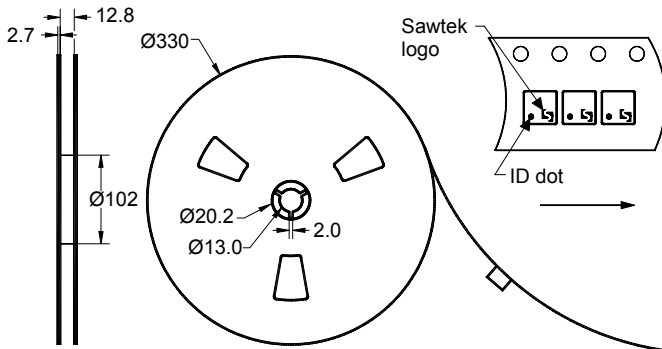


The date code consists of: JJJ = Julian day,  
Y = last digit of year, M = manufacturing site code



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

# 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](#)

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