
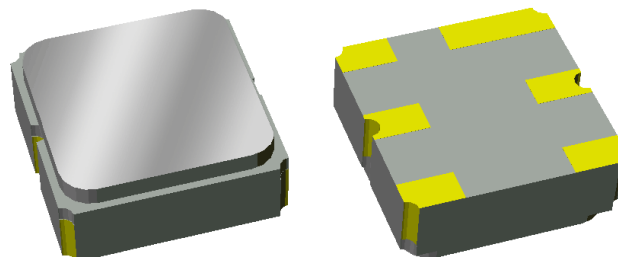


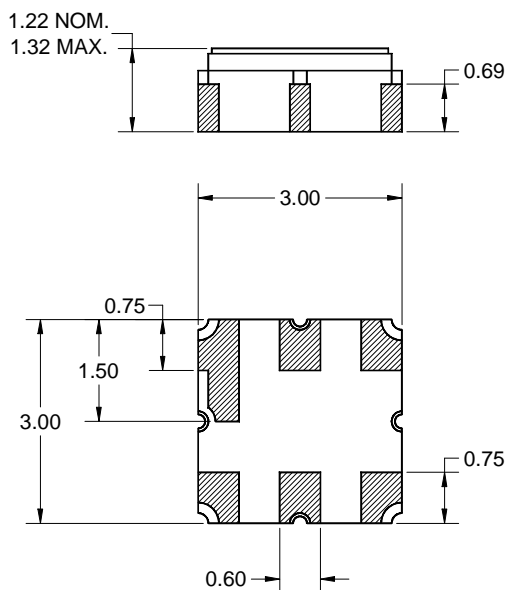
## Features

- Usable bandwidth 5 MHz
- High attenuation
- No impedance matching required for operation at 50  $\Omega$
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



## Package

Surface Mount 3.00 x 3.00 x 1.22 mm  
SMP-12

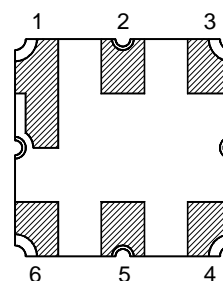


Dimensions shown are nominal in millimeters  
All tolerances are  $\pm 0.15$ mm except overall  
length and width  $\pm 0.10$ mm

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



### Single-ended Configuration

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

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

Operating Temperature Range: <sup>(2)</sup> -55 to +85 °C

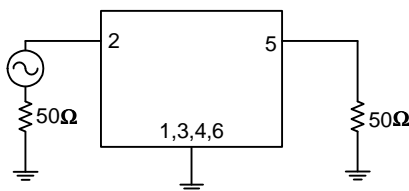
Parameter <sup>(3)</sup>	Minimum	Typical <sup>(4)</sup>	Maximum	Unit
<b>Center Frequency</b>	-	810	-	MHz
<b>Maximum Insertion Loss</b> 807.5 - 812.5 MHz	-	4.6	5.5	dB
<b>Amplitude Ripple <sup>(5)</sup></b> 807.5 - 812.5 MHz	-	0.7	1.0	dB
<b>Group Delay Variation</b> 807.5 - 812.5 MHz	-	88	150	ns
<b>Absolute Attenuation</b>				
10 - 770 MHz	50	54	-	dB
770 - 793 MHz	30	48	-	dB
793 - 795 MHz	20	41	-	dB
795 - 797 MHz	10	32	-	dB
823 - 825 MHz	10	32	-	dB
825 - 827 MHz	20	41	-	dB
827 - 850 MHz	30	48	-	dB
850 - 1500 MHz	50	54	-	dB
1500 - 2500 MHz	35	38	-	dB
<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 TriQuint 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. Typical values are based on average measurements at room temperature
5. Amplitude ripple is defined as the worst case difference between the peak and adjacent valley within the defined frequency points
6. This is the optimum impedance in order to achieve the performance shown

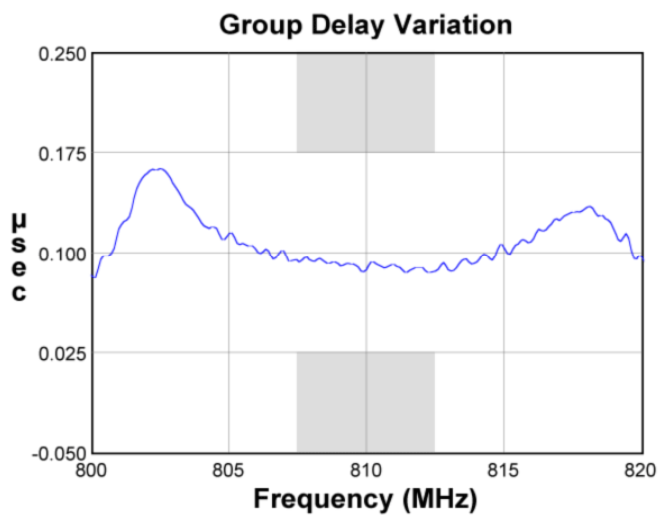
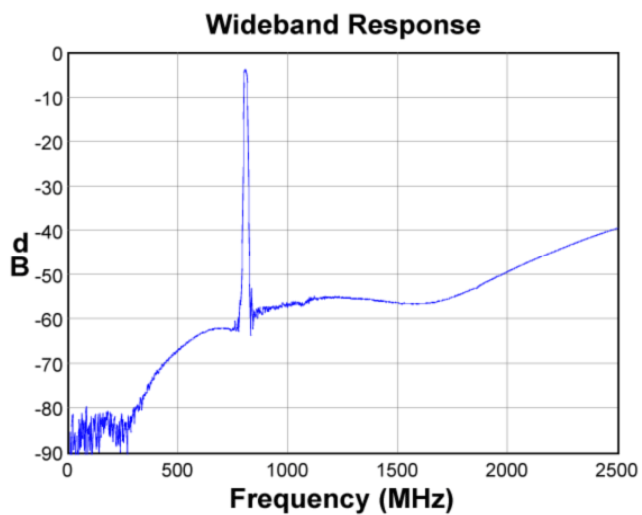
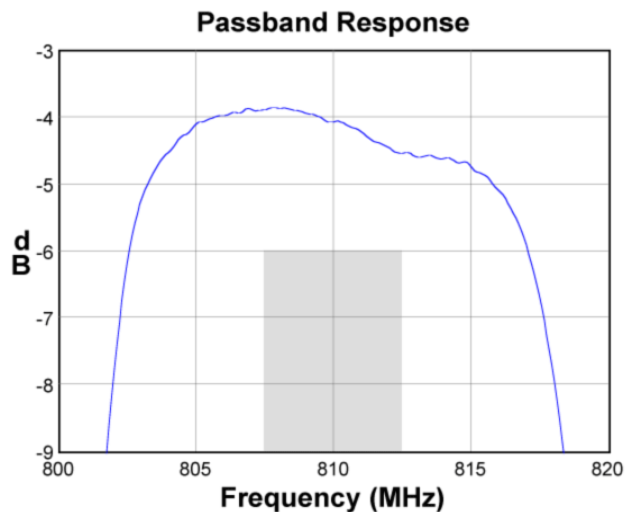
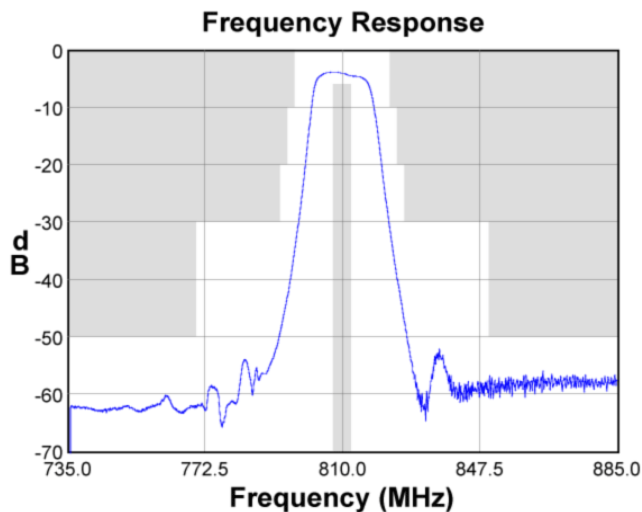
**Test Circuit:**

50 Ω  
Single-ended  
No impedance matching  
required

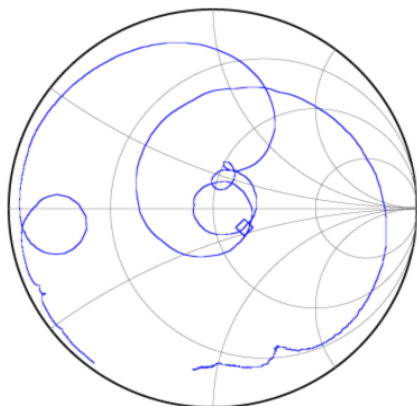


50 Ω  
Single-ended  
No impedance matching  
required

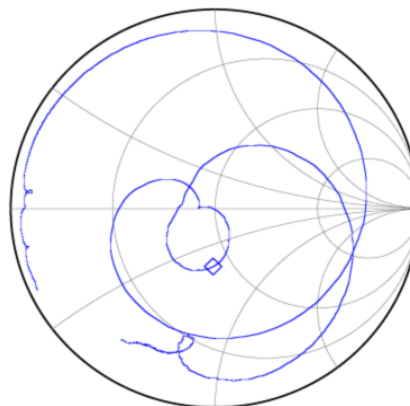
**Typical Performance (at room temperature)**



**Input Smith Chart**

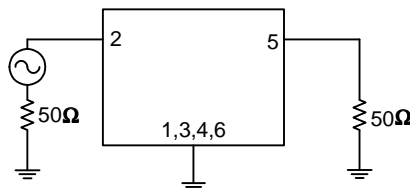


**Output Smith Chart**



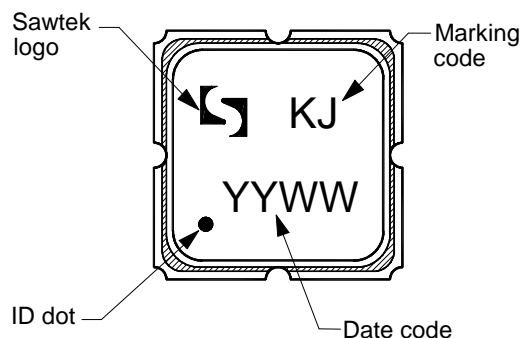
**Matching Schematics**

50 Ω  
Single-ended  
No impedance  
matching required



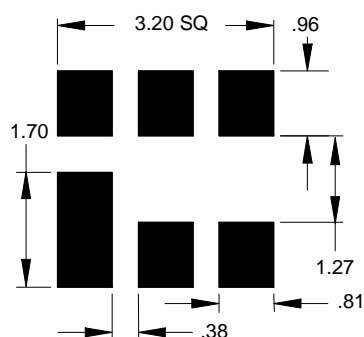
50 Ω  
Single-ended  
No impedance matching  
required

**Marking**



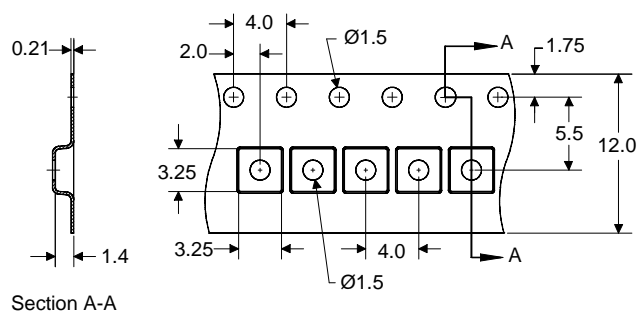
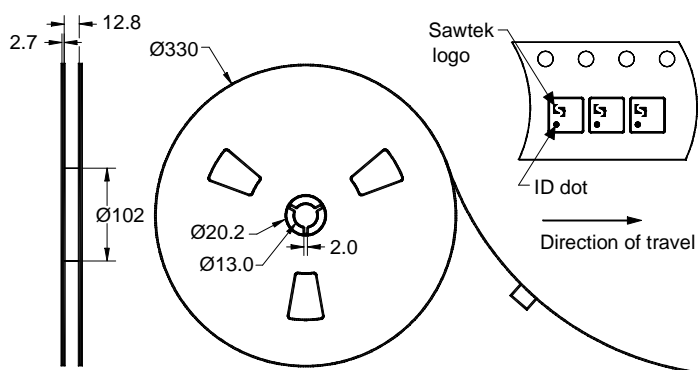
The date code consists of: YY = last 2 digits of year,  
WW = work week

**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

### Maximum Ratings


Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-55	+85	°C
Storage Temperature Range	T <sub>stg</sub>	-55	+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 JESD22-B102, Pb-free process, 260C 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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