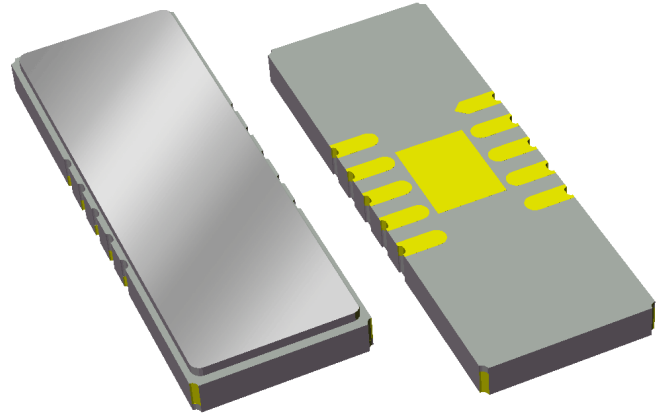


## Features

- For medical applications
- Usable bandwidth 0.3 MHz
- High attenuation)
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- RoHS compliant (2002/95/EC), **Pb-free**



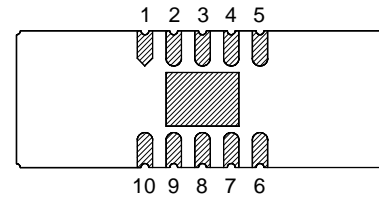
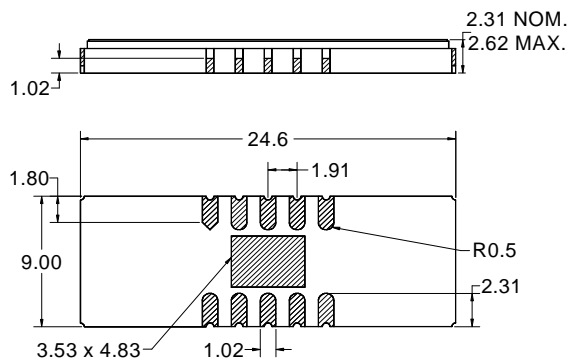
## Package

Surface Mount 24.6 x 9.00 x 2.31 mm

## Pin Configuration

Bottom View

This package includes a center pad.  
Soldering of the center pad to PCB is not recommended and not required.



### Single-ended Configuration

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

Dimensions shown are nominal in millimeters  
All tolerances are  $\pm 0.15$ mm except overall  
length  $\pm 0.20$ mm and width  $+0.13/-0.20$ 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

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

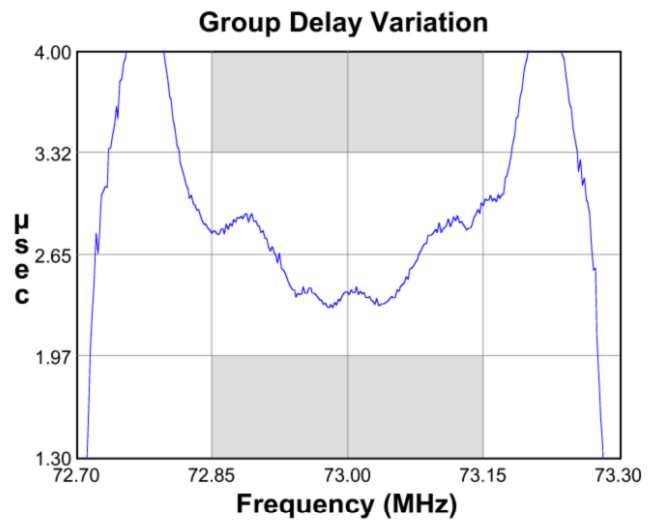
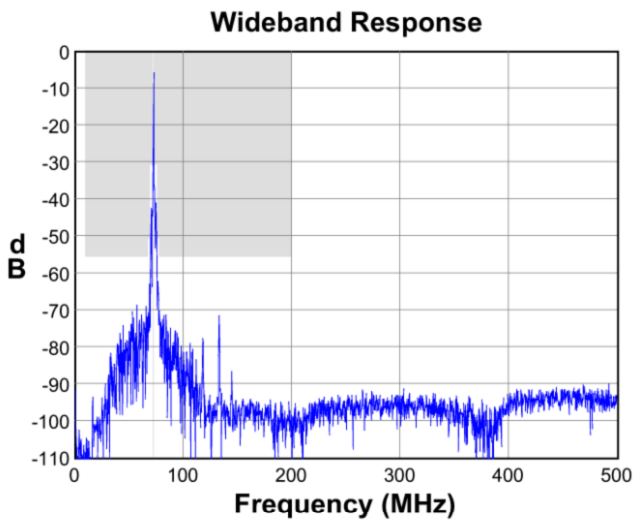
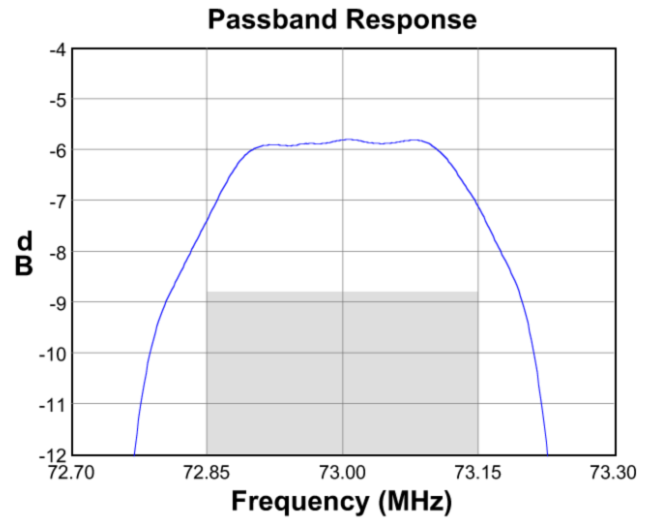
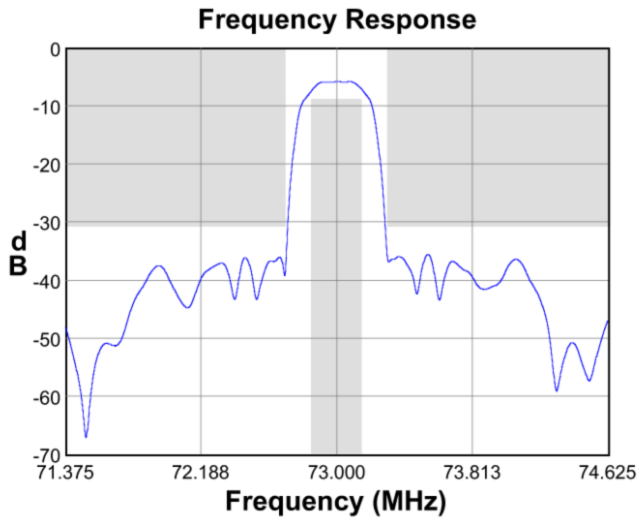
Operating Temperature Range: <sup>(2)</sup> 0 to +55 °C

Parameter <sup>(3)</sup>	Minimum	Typical <sup>(4)</sup>	Maximum	Unit
Center Frequency <sup>(5)</sup>	-	73	-	MHz
Minimum Insertion Loss	-	6	7	dB
Lower 3 dB Band Edge <sup>(6)</sup>	-	72.812	72.850	MHz
Upper 3 dB Band Edge <sup>(6)</sup>	73.150	73.192	-	MHz
Lower 25 dB Band Edge <sup>(6)</sup>	72.695	72.710	-	MHz
Upper 25 dB Band Edge <sup>(6)</sup>	-	73.295	73.305	MHz
Gaussian Ripple <sup>(7)</sup> 72.85 – 73.15 MHz	-	0.76	1.10	dB
Group Delay at Center Frequency <sup>(8)</sup>	-	2.5	-	μsec
Group Delay Variation <sup>(8)</sup> 72.85 – 73.15 MHz	-	0.665	1.350	μsec p-p
Stopband Rejection <sup>(6)</sup> 10.0 – 68.0 MHz	50	59.3	-	dB
68.0 – 69.9 MHz	45	53.7	-	dB
76.1 – 78 MHz	45	55.2	-	dB
78.0 – 200 MHz	50	61.8	-	dB
Input VSWR 72.85 – 73.15 MHz	-	1.9:1	2.5:1	-
Output VSWR 72.85 – 73.15 MHz	-	1.8:1	2:1	-
Triple Transit Suppression	21	23.06	-	dB
Input Power (Dwell time of 5 seconds max)	-	-	+10	dBm
Source Impedance (single-ended) <sup>(9)</sup>	-	50	-	Ω
Load Impedance (single-ended) <sup>(9)</sup>	-	50	-	Ω

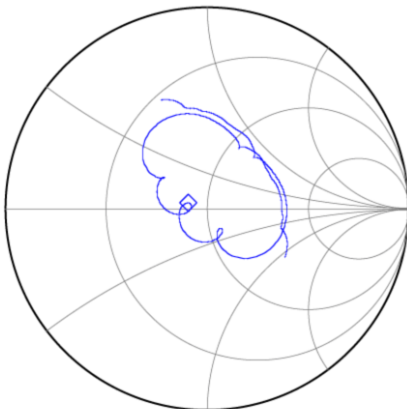
**Notes:**

1. All specifications are based on the TriQuint test circuit shown on page 4
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. Center frequency is measured as the average of the upper and lower 3 dB bandedges, measured from minimum insertion loss
6. Rejection measurements are referenced from minimum insertion loss
7. Gaussian ripple is defined as the total deviation from an ideal Gaussian filter
8. Group delay variation is the total peak to peak variation over the given frequency range
9. This is the optimum impedance in order to achieve the performance shown

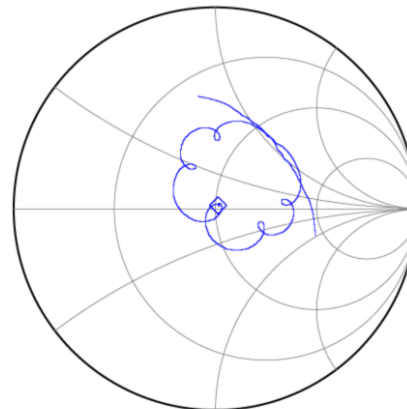
**Typical Performance (at room temperature)**



**Input Smith Chart**

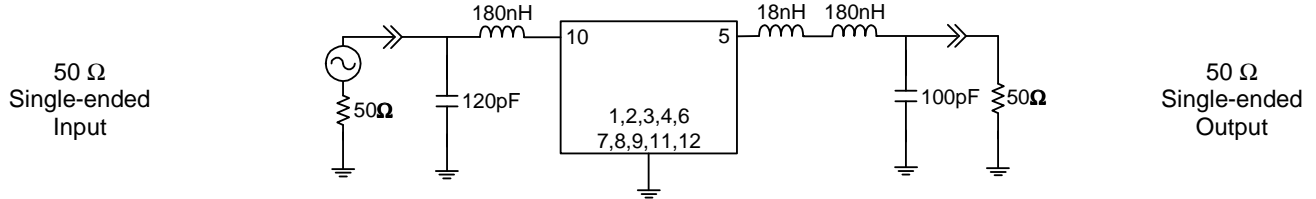


**Output Smith Chart**

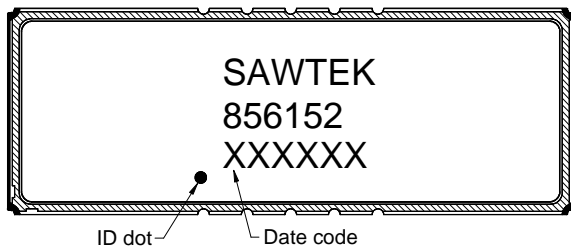


**Matching Schematics**

Actual matching values may vary due to PCB layout and parasitics

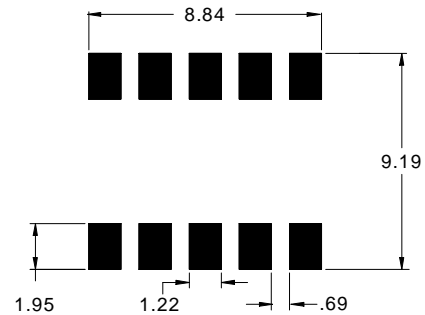


**Marking**



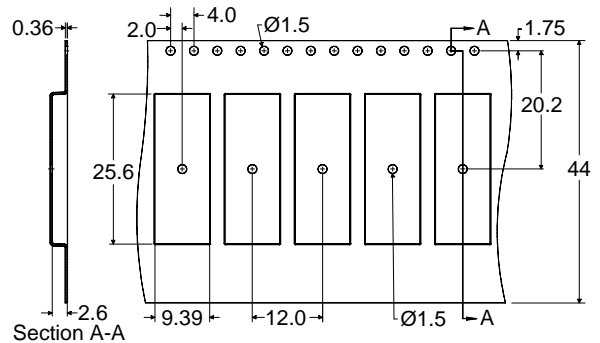
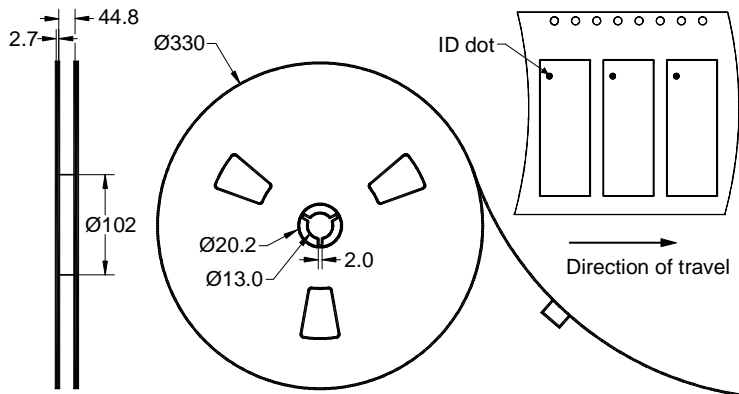
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

**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: 1000 units/reel

### Maximum Ratings


Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	0	+55	°C
Storage Temperature Range	T <sub>stg</sub>	-40	+85	°C
Input Power	P <sub>in</sub>	-	+10	dBm

### 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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