
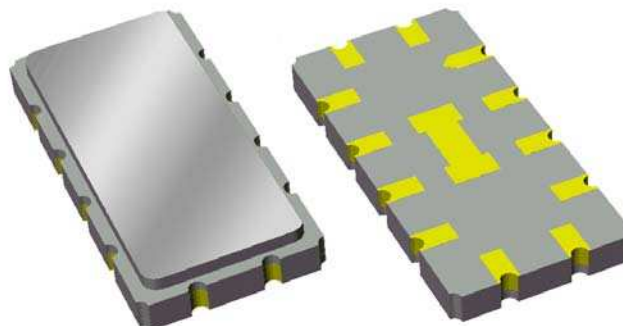


Data Sheet

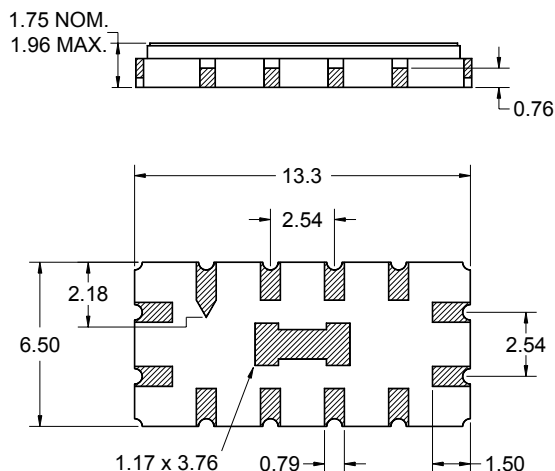
Features

- For 2 Carrier WCDMA applications
- Usable bandwidth 10 MHz
- Low loss
- High attenuation
- Designed to minimize EVM
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



Package

Surface Mount 13.30 x 6.50 x 1.75 mm

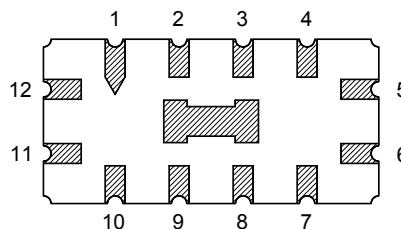


Dimensions shown are nominal in millimeters
All tolerances are ± 0.15 mm except overall
length and width ± 0.10 mm

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

Pin Configuration

Bottom View



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

Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ -30 to +80 °C

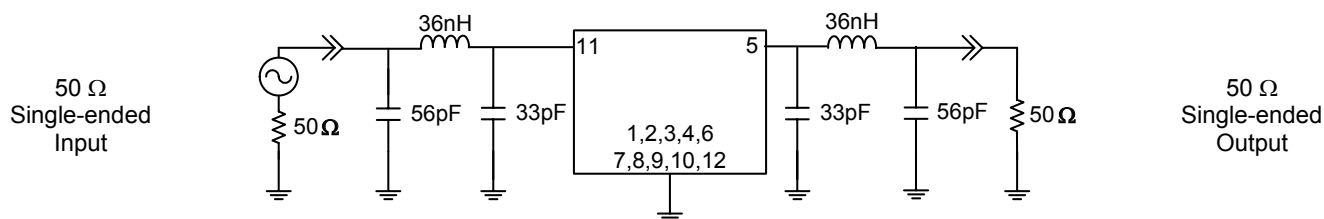
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	140	-	MHz
Insertion Loss at 140 MHz	-	9.2	10.5	dB
Lower 1 dB Bandedge ⁽⁴⁾	-	134.270	135.5	MHz
Upper 1 dB Bandedge	144.5	146.090	-	MHz
Lower 3 dB Bandedge ⁽⁴⁾	-	133.97	135.0	MHz
Upper 3 dB Bandedge	145.0	146.33	-	MHz
35 dB Bandwidth	-	14.33	16.0	MHz
Amplitude Ripple ⁽⁵⁾ 135.5 - 144.5 MHz	-	0.2	0.8	dB p-p
Absolute Group Delay 135.5 - 144.5 MHz	-	1.08	1.1	μs
Group Delay Variation 135.5 - 144.5 MHz	-	45	100	ns
Phase Linearity 135.5 - 144.5 MHz	-	3.4	8.0	deg
Input and Output VSWR 135.5 - 144.5 MHz	-	1.8	2.5	-
Relative Attenuation ⁽⁴⁾ 40.0 - 110.0 MHz	55	69.6	-	dB
110.0 - 125.0 MHz	42	53.5	-	dB
125.0 - 131.2 MHz	37	49.1	-	dB
148.8 - 155.0 MHz	37	46.2	-	dB
155.0 - 170.0 MHz	42	55.6	-	dB
170.0 - 240.0 MHz	55	71.3	-	dB
Source/Load Impedance ⁽⁶⁾	-	50	-	Ω

Notes:

1. All specifications are based on the TriQuint test reference system
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 center frequency
5. Amplitude Ripple is defined as the worse peak to adjacent valley within defined frequency points
6. This is the optimum impedance in order to achieve the performance shown

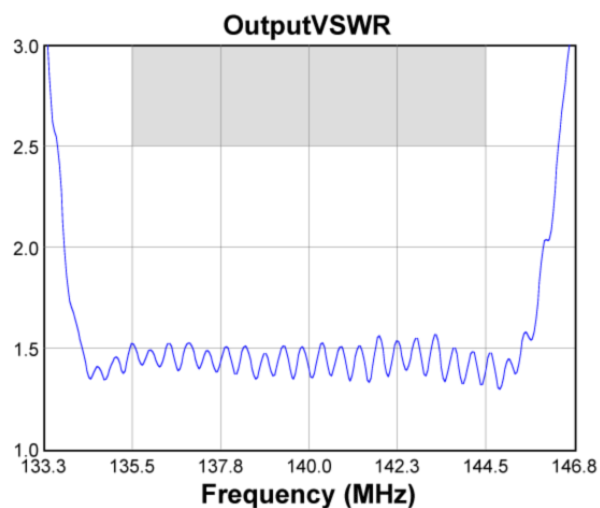
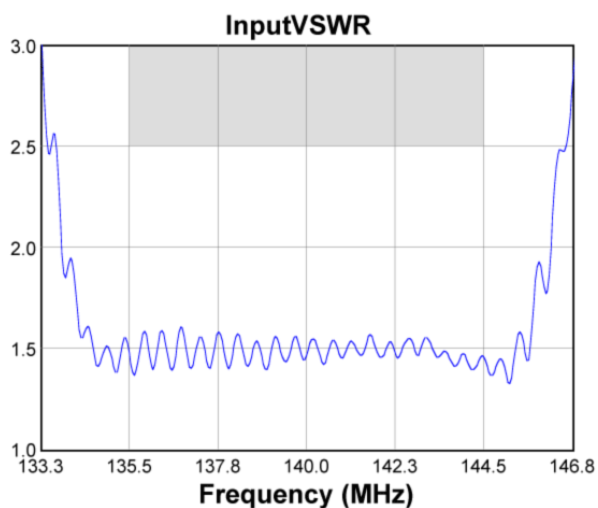
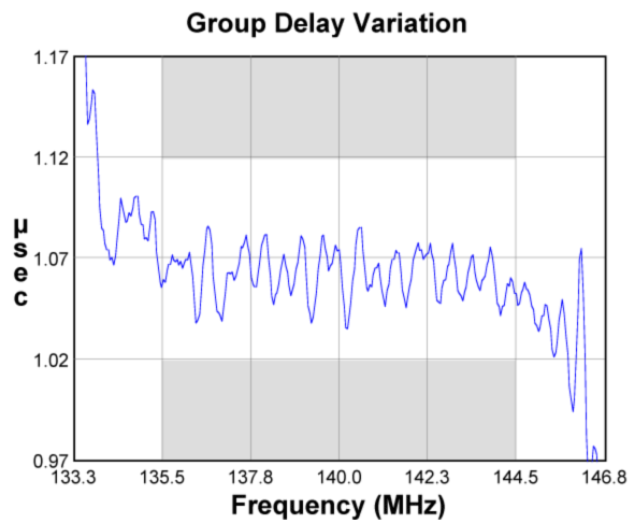
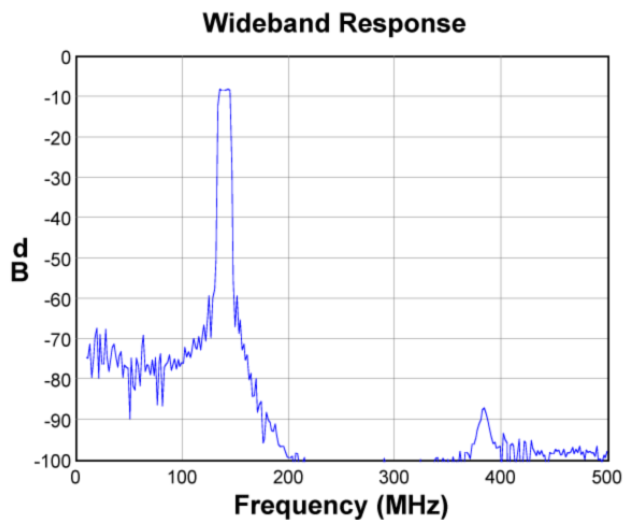
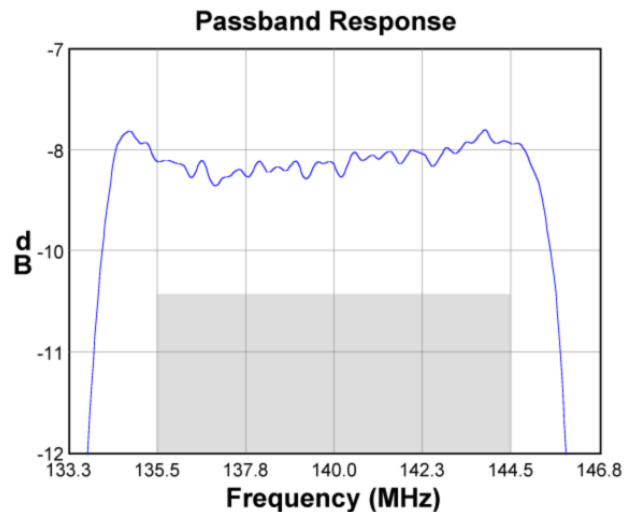
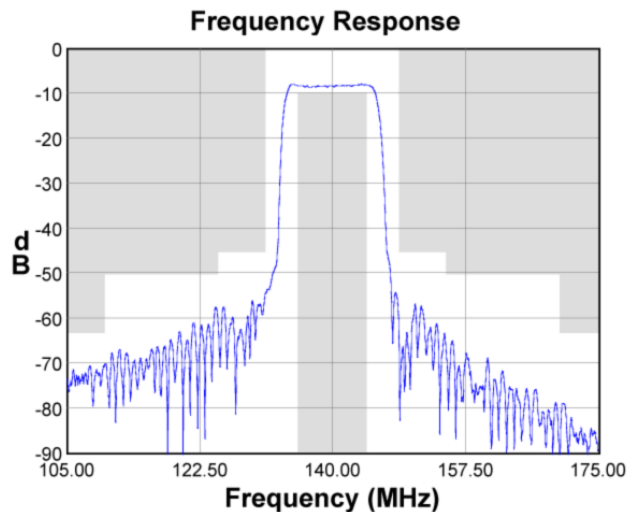
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics



Data Sheet

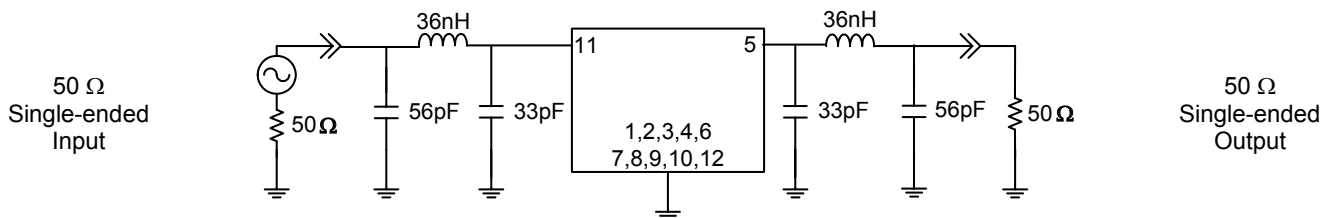
Typical Performance (at +25°C)



Data Sheet

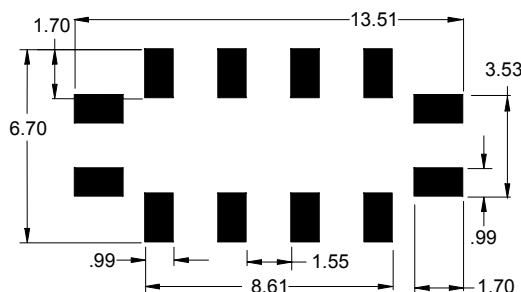
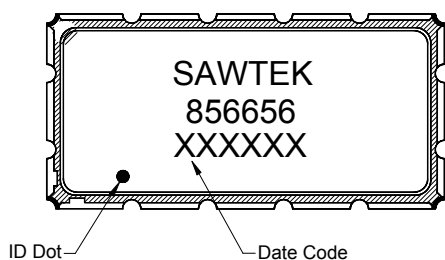
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics



Marking

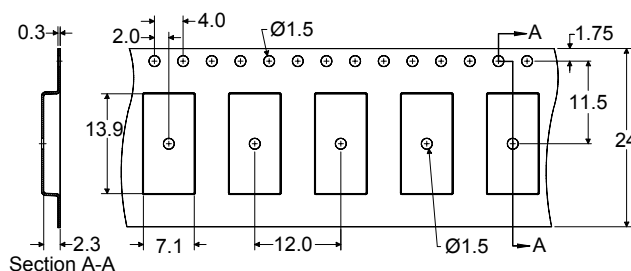
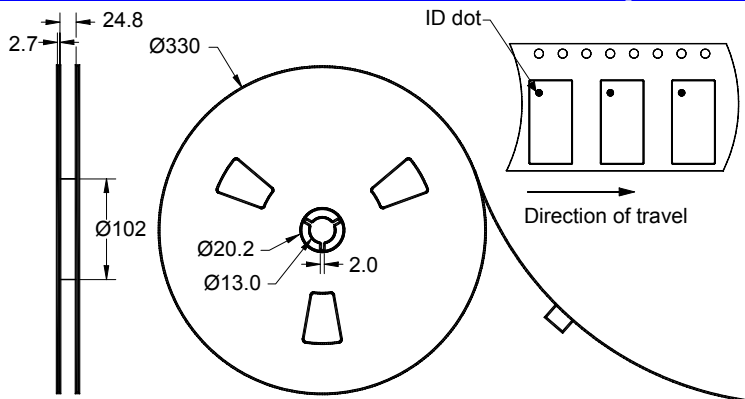
PCB Footprint



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

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	-25	+80	°C
Storage Temperature Range	T _{stg}	-40	+85	°C
Power Handling ⁽¹⁾	P _{in}	-	+15	°C


1. Device is measured for equivalent 10K hours @ 55 °C (CW Signal)

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 JEDEC J-STD-020C **Pb-free** process, **260°C** 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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