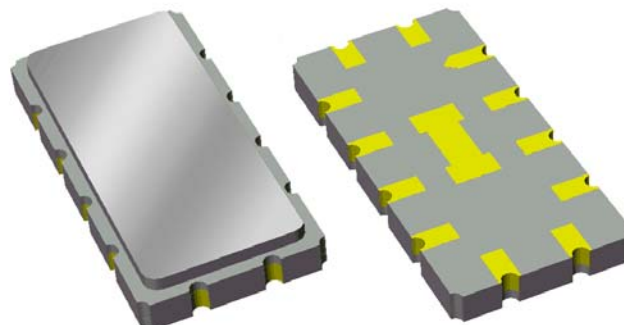


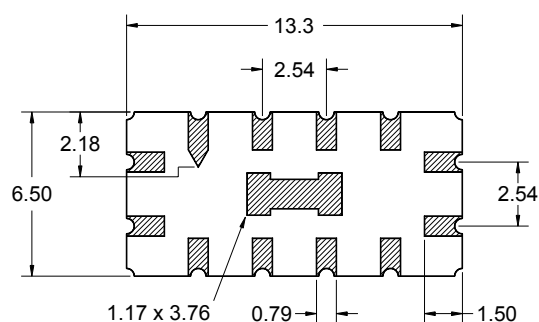
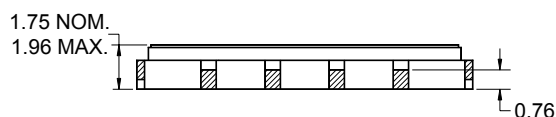
Features

- For multi carrier WCDMA applications
- Usable 1.0 dB bandwidth of 18.4 MHz
- Low loss
- High Attenuation
- Single-ended operation, 50 Ω
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



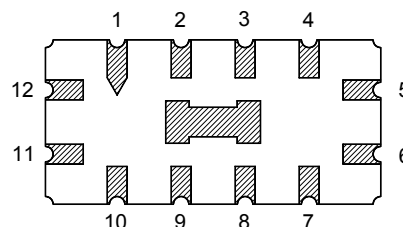
Package

Surface Mount 13.30 x 6.50 x 1.75 mm



Pin Configuration

Bottom View



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

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

Data Sheet

Electrical Specifications ⁽¹⁾

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

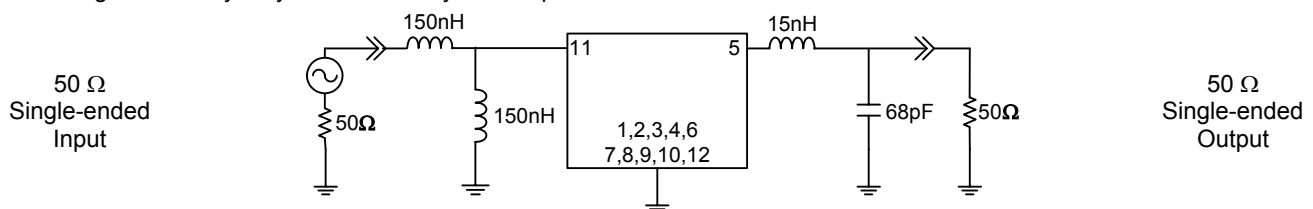
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency, f_o	-	140	-	MHz
Insertion Loss @ f_o	-	9.3	11	dB
1.0 dB Bandwidth ⁽⁴⁾	-	20.7	-	MHz
Lower 1.0 dB Bandedge	-	129.7	130.8	MHz
Upper 1.0 dB Bandedge	149.2	150.4	-	MHz
3.0 dB Bandwidth ⁽⁴⁾	-	21.6	-	MHz
Lower 3.0 dB Bandedge	-	129.3	130.2	MHz
Upper 3.0 dB Bandedge	149.8	150.9	-	MHz
35 dB Bandwidth ⁽⁴⁾	-	24.4	-	MHz
Lower 35 dB Bandedge	126.8	128.0	-	MHz
Upper 35 dB Bandedge	-	152.4	153.2	MHz
Passband Ripple ⁽⁵⁾ Over the 1 dB bandwidth	-	0.5	0.8	dB
Group Delay Ripple 130.8 - 149.2 MHz	-	100	150	nsec
Absolute Delay	-	1	-	µsec
Relative Attenuation ⁽⁴⁾				
10 - 90 MHz	35	55	-	dB
90 - 120 MHz	40	53	-	dB
120 - 126.8 MHz	35	45	-	dB
153.2 - 160 MHz	35	39	-	dB
160 - 190 MHz	40	49	-	dB
190 - 800 MHz	35	58	-	dB
Input VSWR 130.8 - 149.2 MHz	-	2.0	2.5	-
Output VSWR 130.8 - 149.2 MHz	-	1.8	2.3	-
Source/Load Impedance ⁽⁶⁾	-	50	-	Ω

Notes:

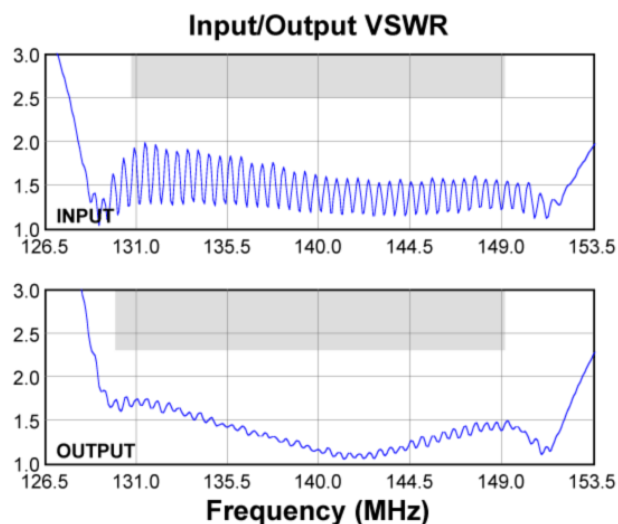
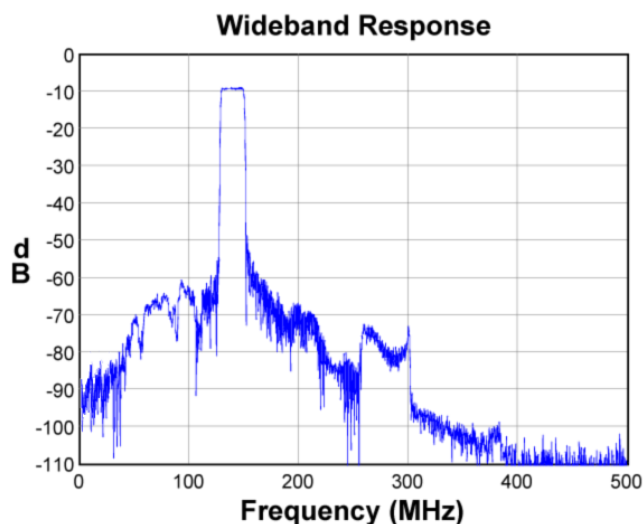
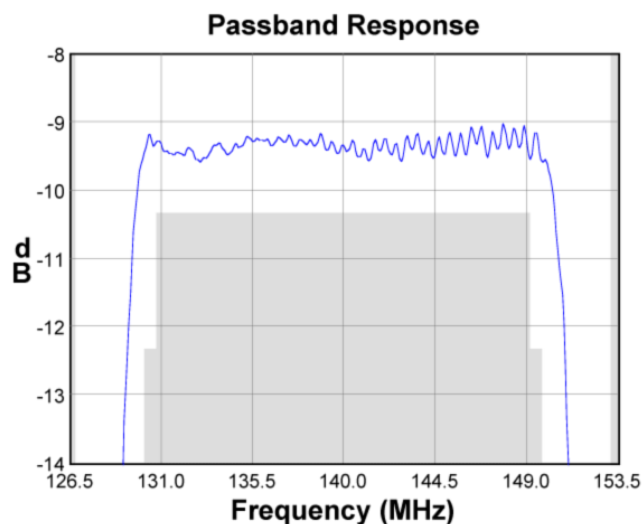
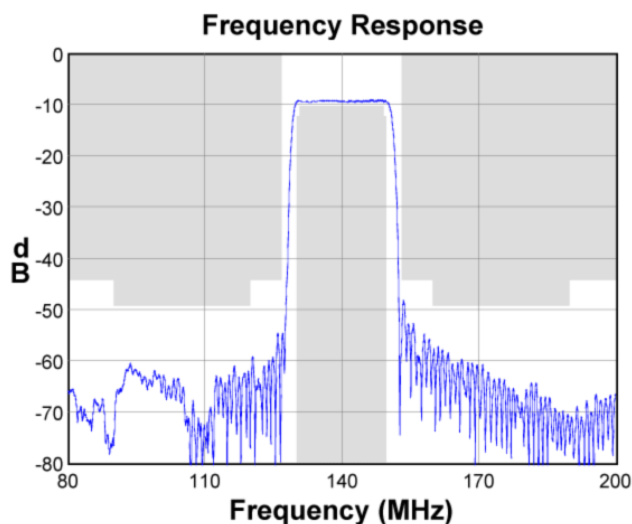
1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to manufacturing tolerances
4. All attenuation measurements are referenced from loss at f_o
5. Describes the maximum peak to adjacent valley variation over the passband (not including roll-off).
6. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

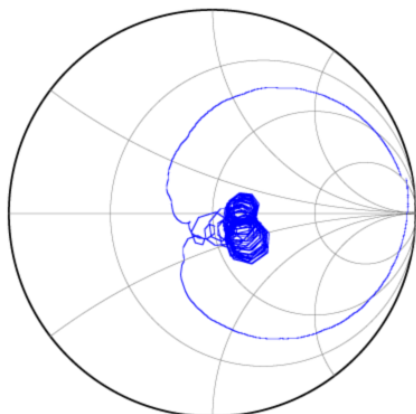
Actual Matching values may vary due to PCB layout and parasitics



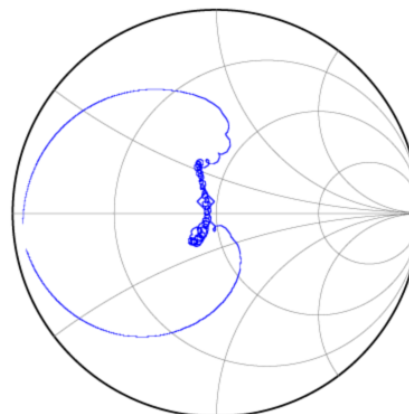
Typical Performance (at +25°C)



Input Smith Chart

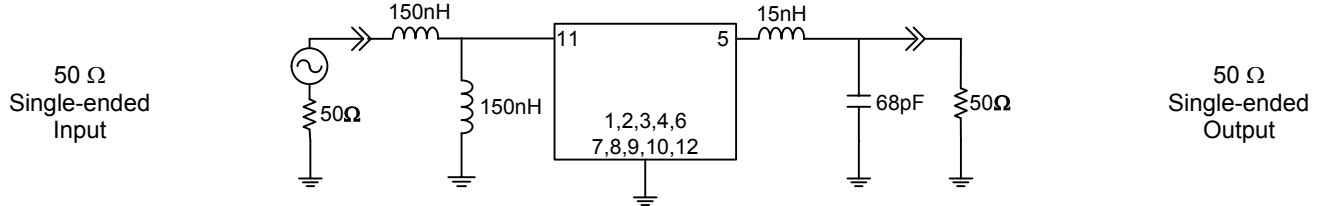


Output Smith Chart

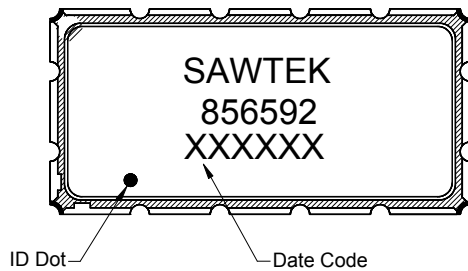


Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

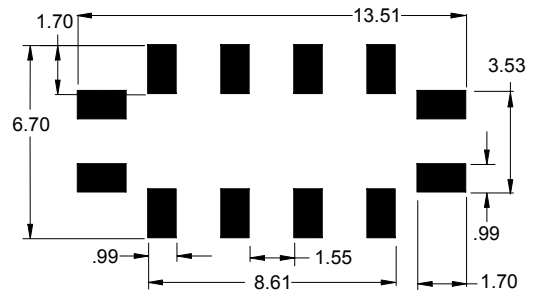


Marking



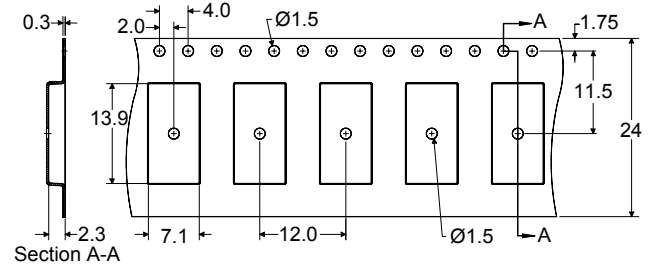
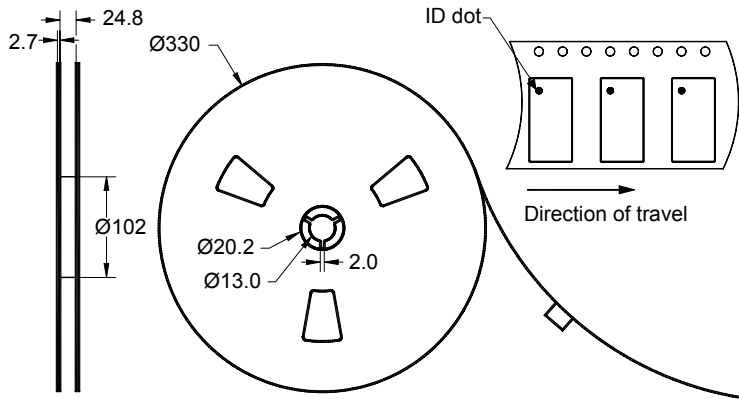
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

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: 2000 units/reel

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-30	+80	°C
Storage Temperature Range	T _{stg}	-40	+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 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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Contact Information



PO Box 609501
Orlando, FL 32860-9501
USA

Phone: +1 (407) 886-8860
Fax: +1 (407) 886-7061
Email: info-product@tqs.com
Web: www.triquint.com

Or contact one of our worldwide
Network of [sales offices](#),
[Representatives or distributors](#)