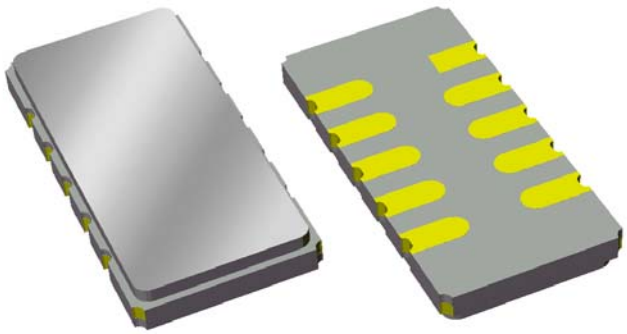
SAWTEK a TriQuint company

Data Sheet

Part Number 855992
240 MHz SAW Filter

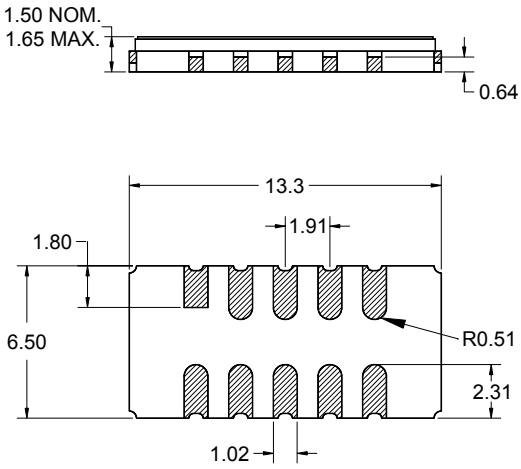
Features

- For WCDMA basestation IF applications
- Usable bandwidth of 3.6 MHz
- Low loss
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size



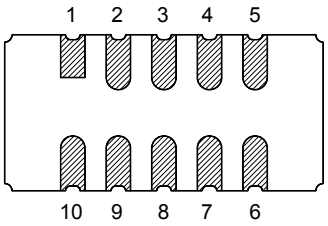
Package

Surface Mount 13.30 x 6.50 x 1.50 mm



Pin Configuration

Bottom View



Pin No.	Description
5	RF output
10	RF input
1,6	Ground
2,3,4	Case ground
7,8,9	Case ground

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

Body: Al_2O_3 ceramic
Lid: *Kovar*, *Ni* plated
Terminations: *Au* plating 0.5 - 1.0μm, over a 2 - 6μm *Ni* plating

Electrical Specifications [1]

Operating Temperature Range: [2] -10 to +85 °C

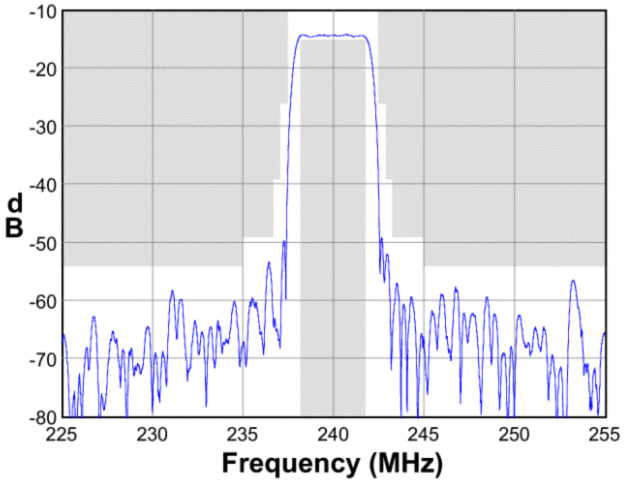
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency, f_0	-	240	-	MHz
Insertion Loss at Minimum	12.5	14.3	16.5	dB
Maximum Insertion Loss				
238.2 - 241.8 MHz	12.5	14.8	16.5	dB
Lower 1 dB Point [4]	-	238.10	238.2	MHz
Upper 1 dB Point [4]	241.8	241.94	-	MHz
Amplitude Variation				
238.2 - 241.8 MHz	-	0.5	1	dB p-p
Group Delay				
238.2 - 241.8 MHz	1.59	1.69	1.79	μsec
Group Delay Ripple				
238.2 - 241.8 MHz	-	0.060	0.15	μsec
Phase Ripple				
238.2 - 241.8 MHz	-	2	6	deg p-p
Minimum Rejection				
170 - 235 MHz	40	45	-	dB
245 - 310 MHz	40	42	-	dB
Attenuation				
236.70 MHz	35	49	-	dB
237.07 MHz	25	58	-	dB
237.50 MHz	12	28	-	dB
242.50 MHz	12	22	-	dB
242.93 MHz	25	42	-	dB
243.30 MHz	35	49	-	dB
Input/Output VSWR				
238.2 - 241.8 MHz	-	1.5:1	2.0:1	Ratio
Source Impedance: [5]	-	50	-	Ω
Load Impedance: [5]	-	50	-	Ω

Notes:

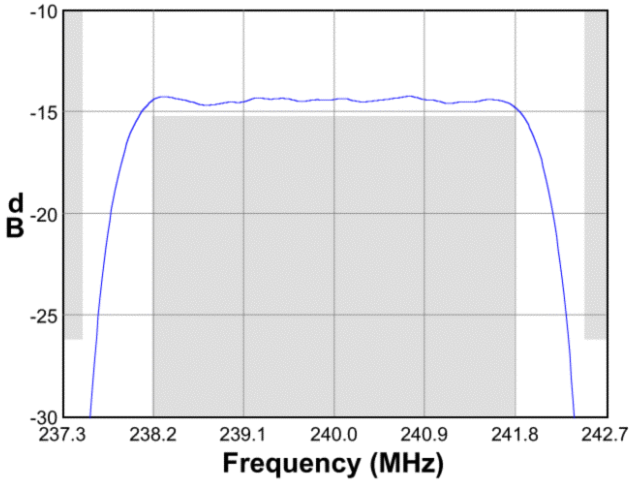
1. All specifications are based on the test circuit shown on page 4
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. Relative to minimum insertion loss
5. This is the optimum impedance in order to achieve the performance shown

Typical Performance (at +25°C)

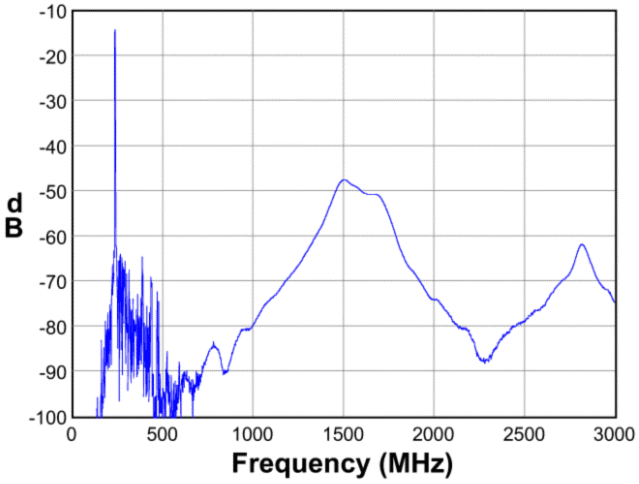
Frequency Response



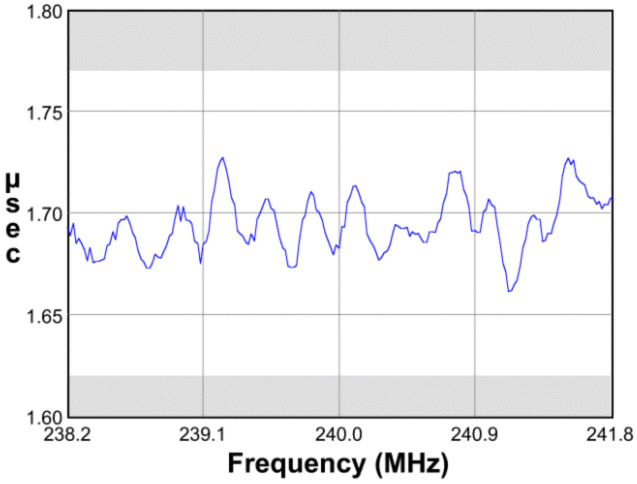
Passband Response



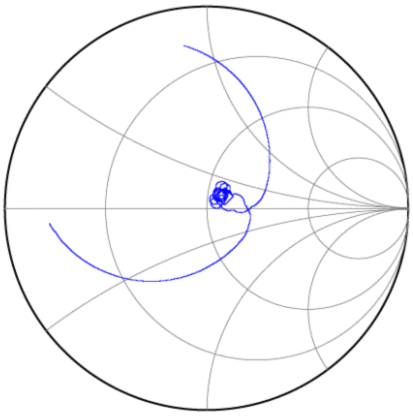
Wideband Response



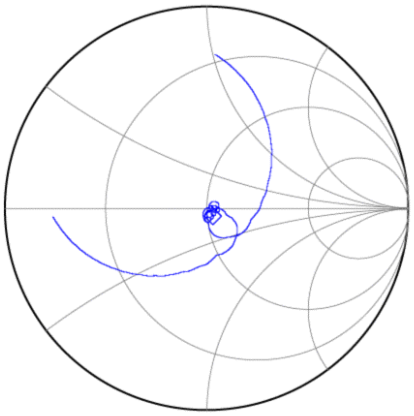
Group Delay Variation



Input Smith Chart



Output Smith Chart



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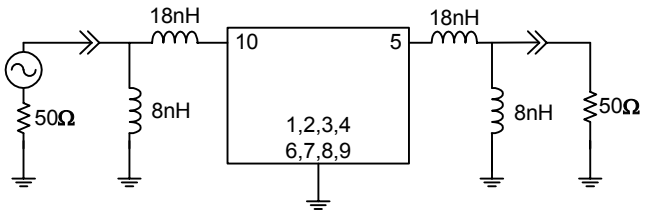
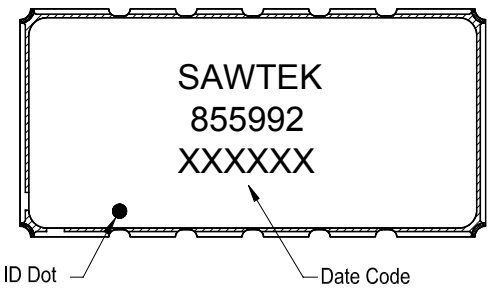
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

50Ω
Single-ended

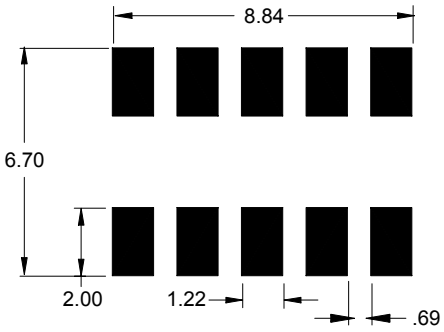


Marking



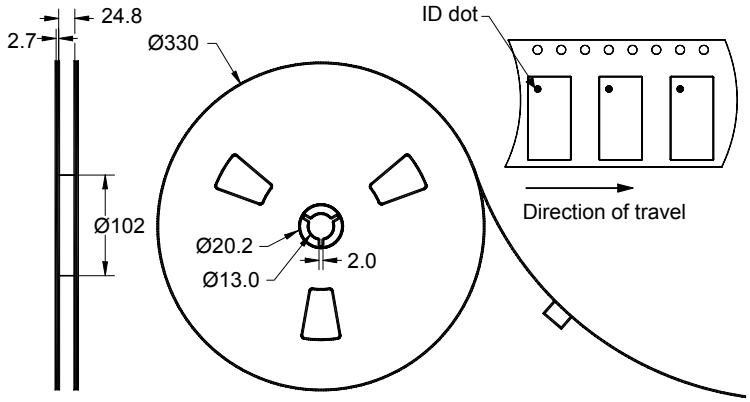
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

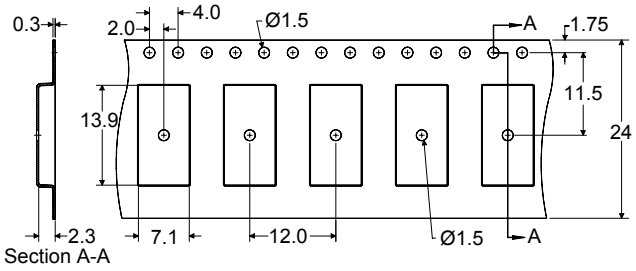
PCB Footprint



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

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Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-10	+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

Contact Information

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