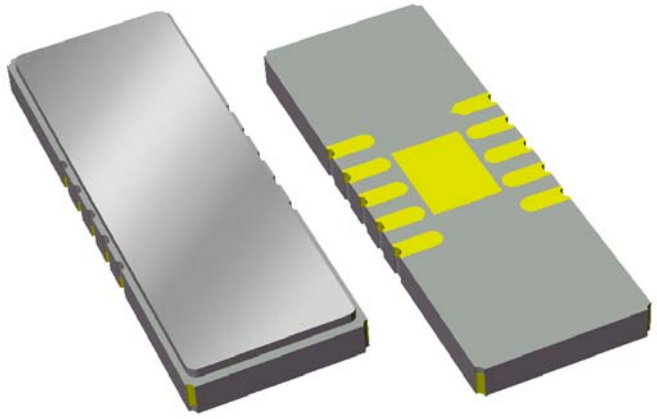
SAWTEK a TriQuint company

Data Sheet

Part Number 855735
70 MHz SAW Filter

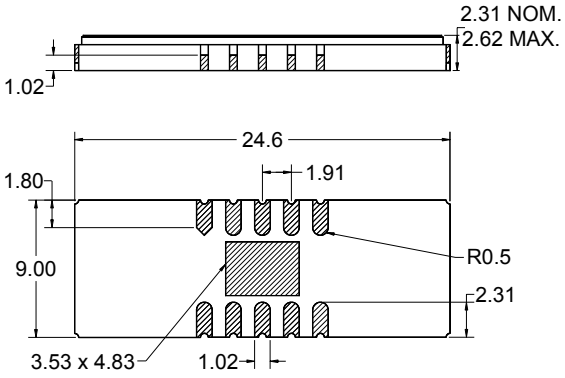
Features

- For broadband applications
- Typical 3 dB bandwidth of 0.31 MHz
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Replaces Sawtek P/N 851541 (BW 3dB=0.25 MHz)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free



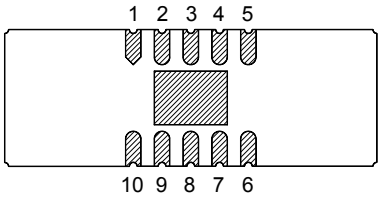
Package

Surface Mount 24.60 x 9.00 x 2.31 mm



Pin Configuration

Bottom View



Pin No.	Description
1	Input return
5	Output
6	Output return
10	Input
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 +0.13mm/-0.20mm

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

SAWTEK a TriQuint company

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Electrical Specifications [1]

Operating Temperature Range: [2] 0 to +70 °C

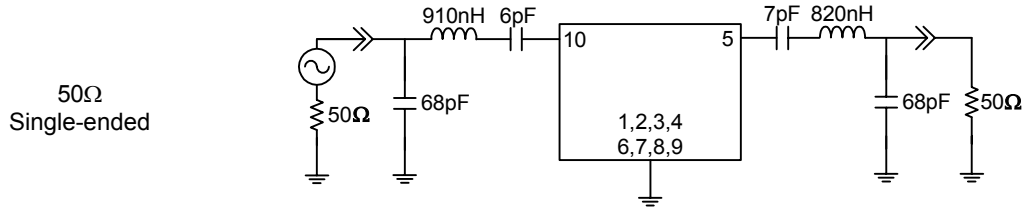
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	70	-	MHz
Minimum Insertion Loss	-	16.36	20	dB
Lower 1 dB Bandedge [4]	-	69.90	69.935	MHz
Upper 1 dB Bandedge	70.065	70.09	-	MHz
Lower 3 dB Bandedge [4]	-	69.84	69.87	MHz
Upper 3 dB Bandedge	70.13	70.16	-	MHz
Lower 40 dB Bandedge [4]	69.5	69.56	-	MHz
Upper 40 dB Bandedge	-	70.46	70.5	MHz
Amplitude Variation 69.935 - 70.065 MHz	-	0.42	1	dB
Phase Linearity 69.935 - 70.065 MHz	-	0.84	3	deg
Group Delay Variation 69.935 - 70.065 MHz	-	249.70	470	nsec
Absolute Delay	-	3.19	-	µsec
Relative Attenuation[4]				
10 - 68 MHz	50	69	-	dB
72 - 80 MHz	40	52	-	dB
80 - 135 MHz	50	64.5	-	dB
135 - 145 MHz	40	49.5	-	dB
145 - 200 MHz	50	63		
Source Impedance: [5]	-	50	-	Ω
Load Impedance: [5]	-	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 temperature drift and manufacturing tolerances
4. All attenuation measurements are measured relative to minimum insertion loss
5. This is the optimum impedance in order to achieve the performance shown

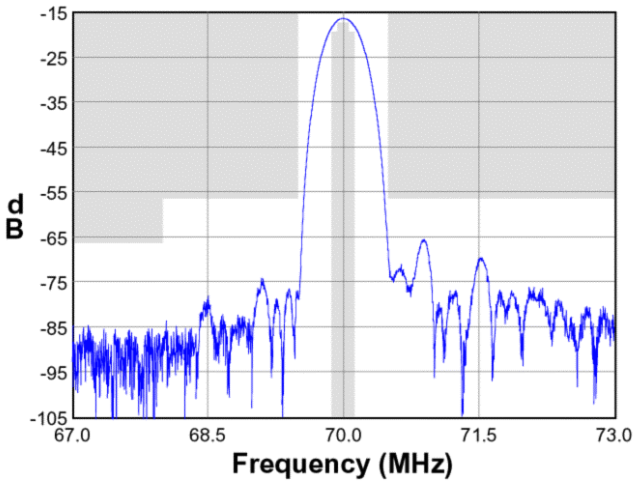
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

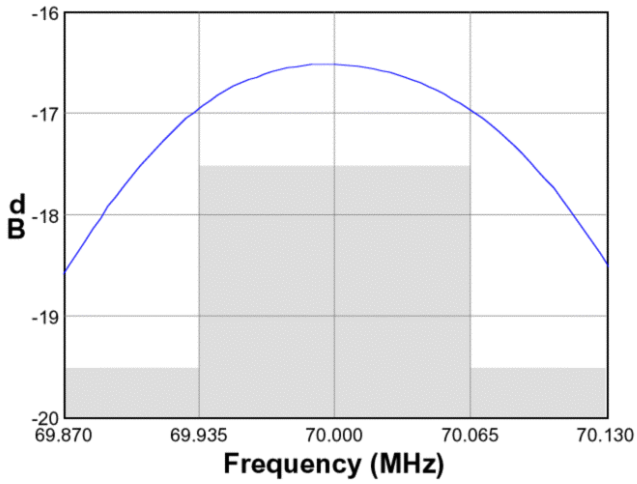


Typical Performance (at +25°C)

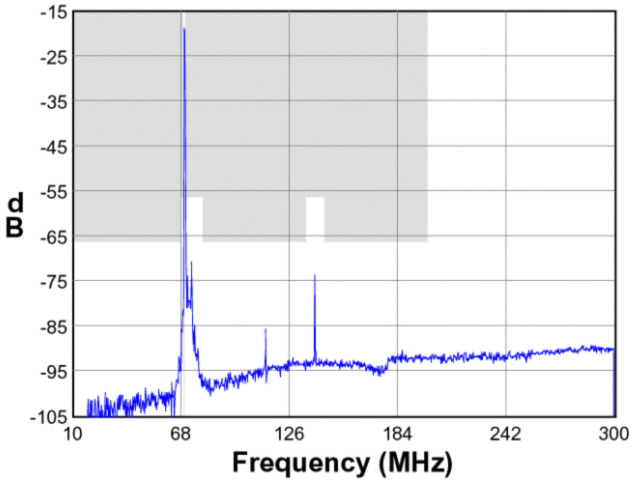
Frequency Response



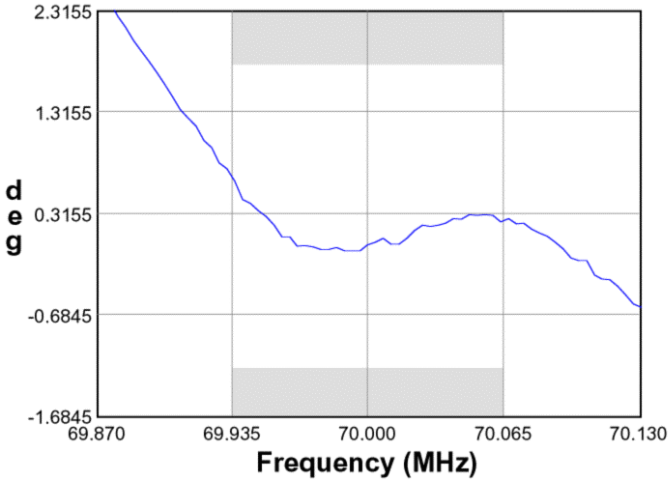
Passband Response



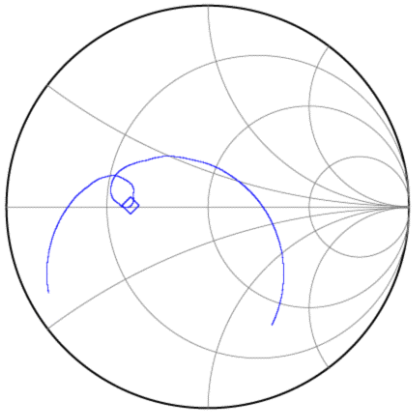
Wideband Response



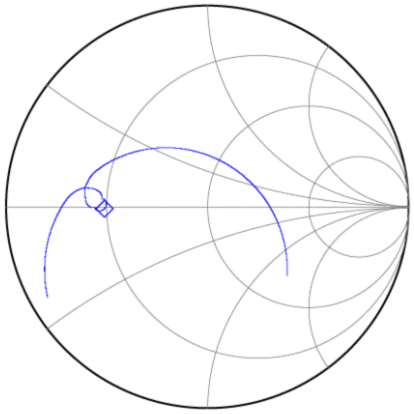
Phase Linearity



Input Smith Chart



Output Smith Chart



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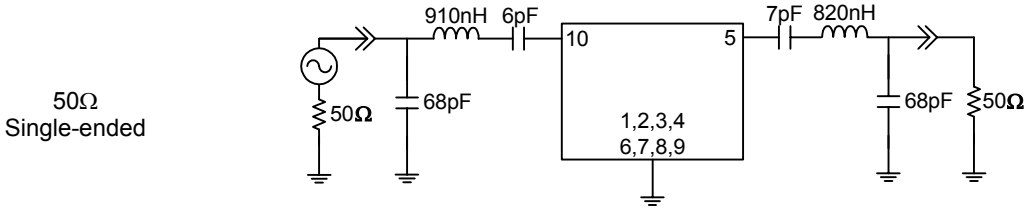
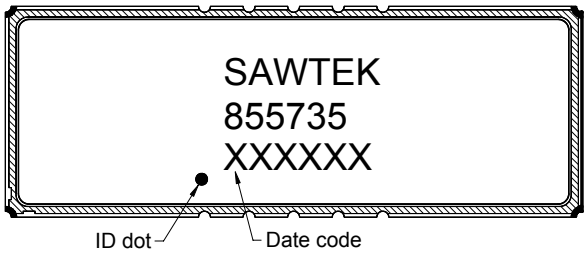
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

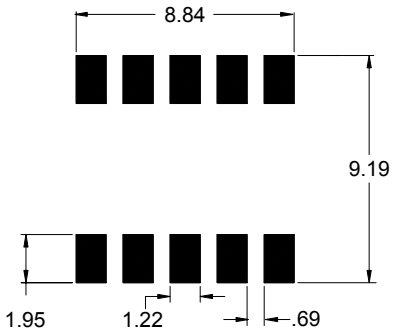


Marking



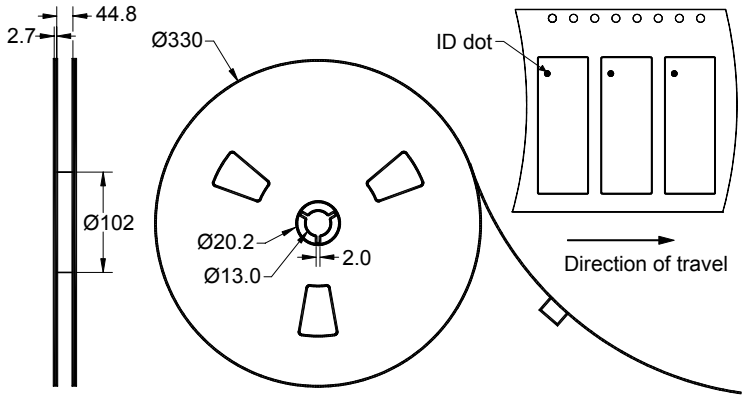
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

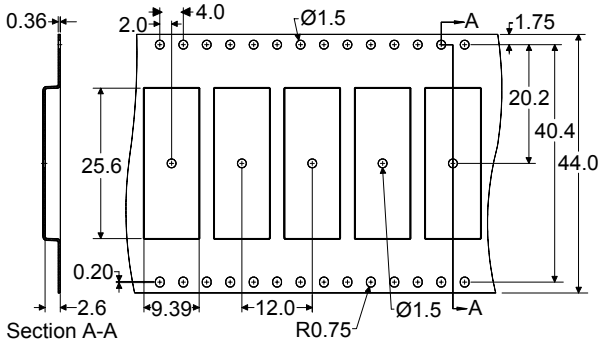
PCB Footprint



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

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Maximum Ratings

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating Temperature Range	T	0	+25	+70	°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

Contact Information

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Or contact one of our worldwide Network of sales offices, representatives or distributors