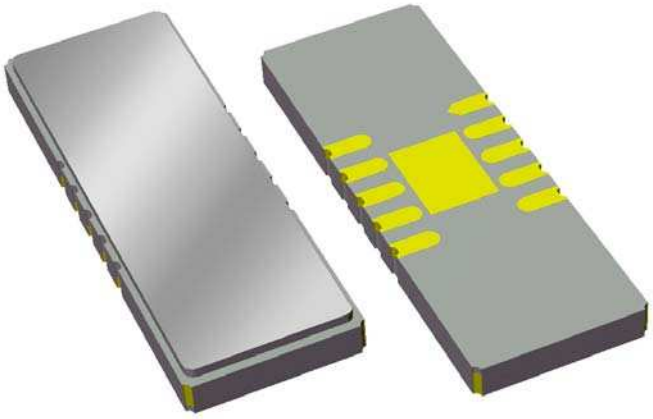
SAWTEK a TriQuint company

Data Sheet

Part Number 855737
70 MHz SAW Filter

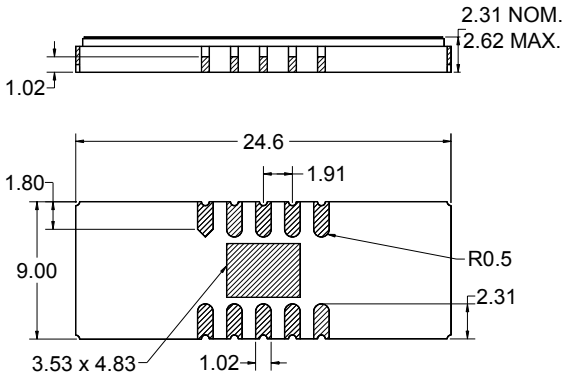
Features

- For broadband applications
- Typical 3dB bandwidth of 1 MHz
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Replaces Sawtek P/N 851544 (BW 3dB=1 MHz)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free



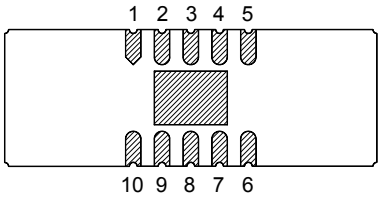
Package

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 ±0.20mm and width +0.13/-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

Data Sheet

Part Number 855737
70 MHz SAW Filter

Electrical Specifications [1]

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

Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	70	-	MHz
Minimum Insertion Loss	-	22.2	23	dB
Lower 1 dB Bandedge [4]	-	69.47	69.54	MHz
Upper 1 dB Bandedge	70.46	70.50	-	MHz
Lower 3 dB Bandedge [4]	-	69.37	69.41	MHz
Upper 3 dB Bandedge	70.59	70.62	-	MHz
Lower 40 dB Bandedge [4]	68.91	68.95	-	MHz
Upper 40 dB Bandedge	-	71.06	71.09	MHz
Amplitude Variation 69.54 - 70.46 MHz	-	0.55	1	dB p-p
Phase Linearity 69.54 - 70.46 MHz	-	2.2	5	deg p-p
Group Delay Variation 69.54 - 70.46 MHz	-	100	190	nsec
Relative Attenuation [4]				
10 - 68.5 MHz	48	53	-	dB
68.5 - 68.91 MHz	40	45	-	dB
71.09 - 75 MHz	40	45	-	dB
75 - 110 MHz	50	55	-	dB
110 - 122 MHz	35	37	-	dB
122 - 135 MHz	36	40	-	dB
135 - 200 MHz	50	65	-	dB
Source Impedance [5]	-	50	-	Ω
Load Impedance [5]	-	50	-	Ω
Substrate Material	-	Quartz	-	-

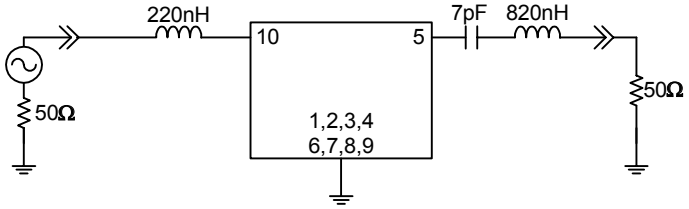
Notes:

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:

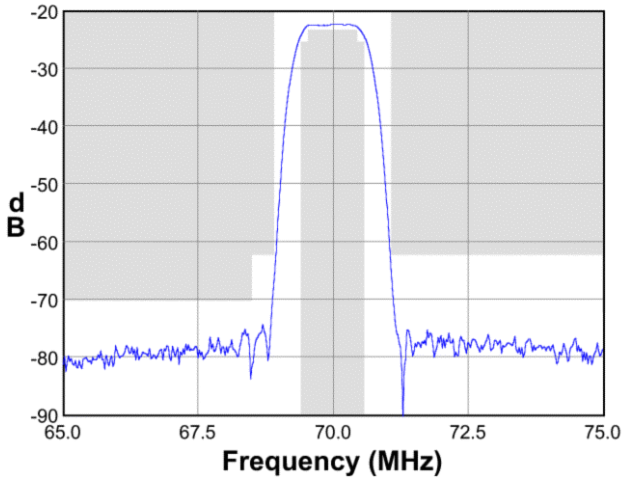
Actual matching values may vary due to PCB layout and parasitics

50 Ω
Single-ended

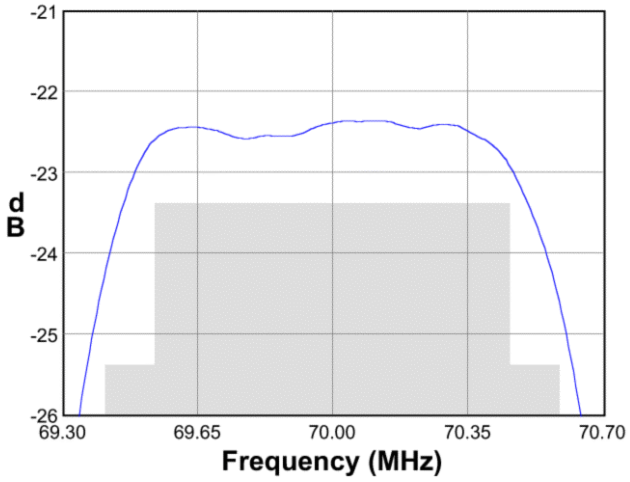


Typical Performance (at +25°C)

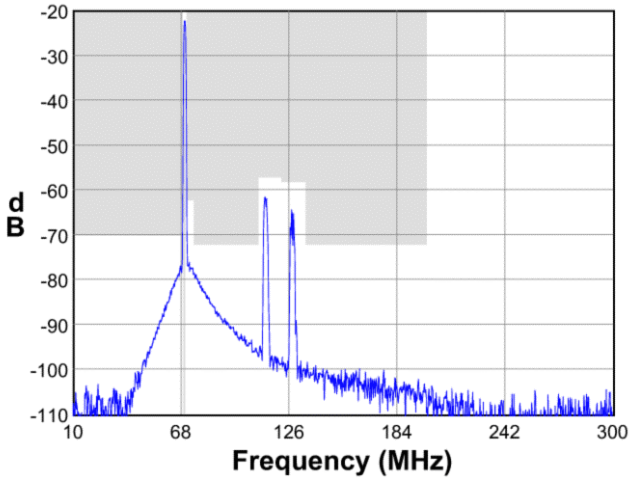
Frequency Response



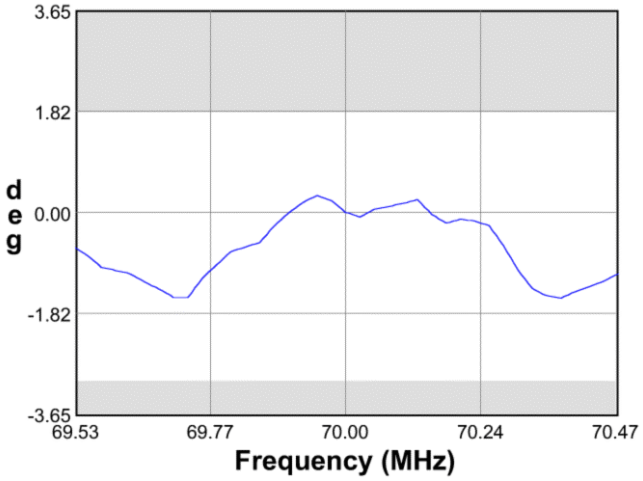
Passband Response



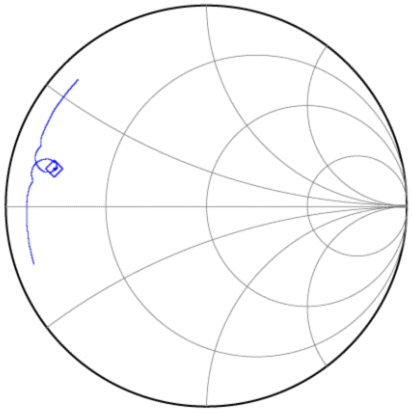
Wideband Response



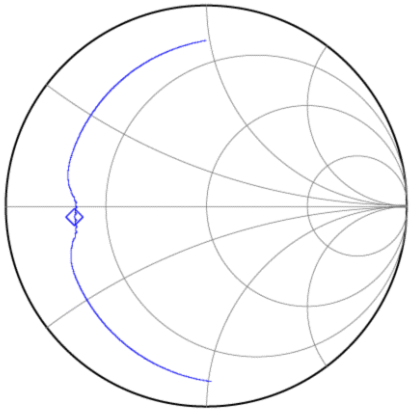
Phase Linearity



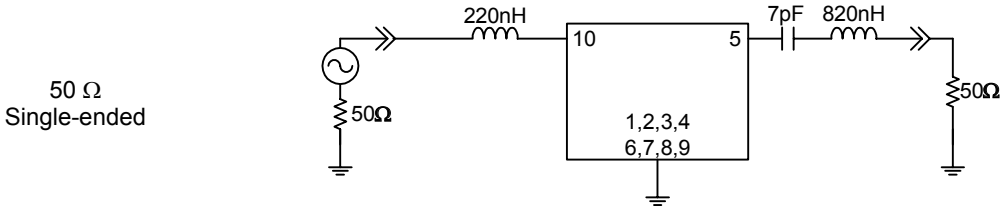
Input Smith Chart



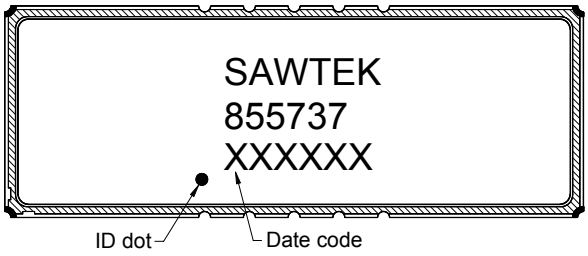
Output Smith Chart



Matching Schematic

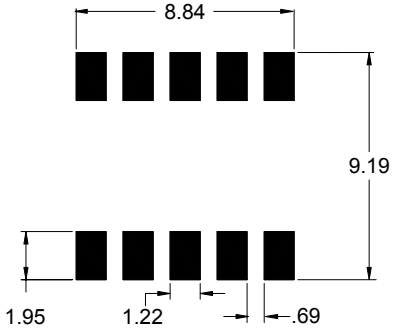


Marking



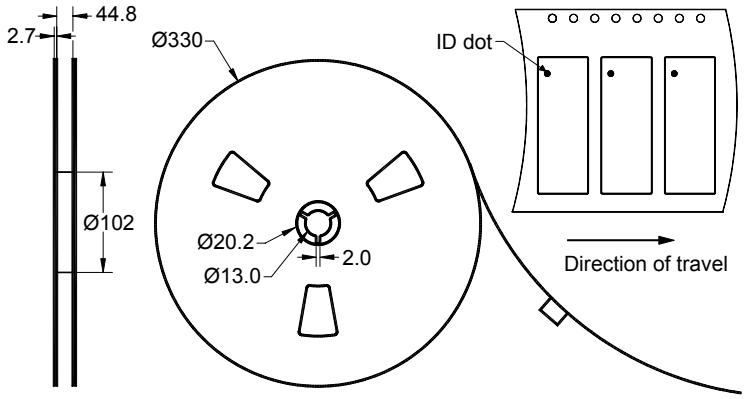
Date code is the day of the current year in Julian format, last digit of the year, and hour of the day

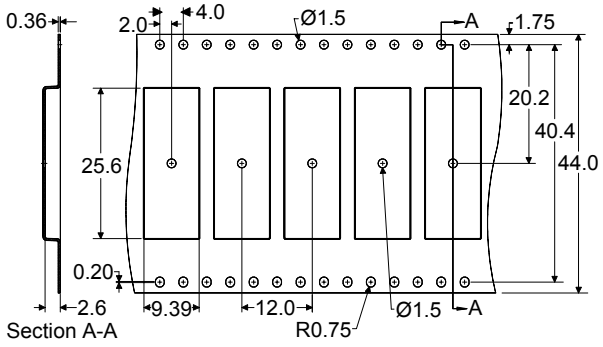
PCB Footprint



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

Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	0	+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

SAWTEK a TriQuint company
PO Box 609501
Orlando, FL 32860-9501
USA

Phone: +1 (407) 886-8860
Fax: +1 (407) 886-7061
Email: custservice@sawtek.com
Web: www.sawtek.com

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