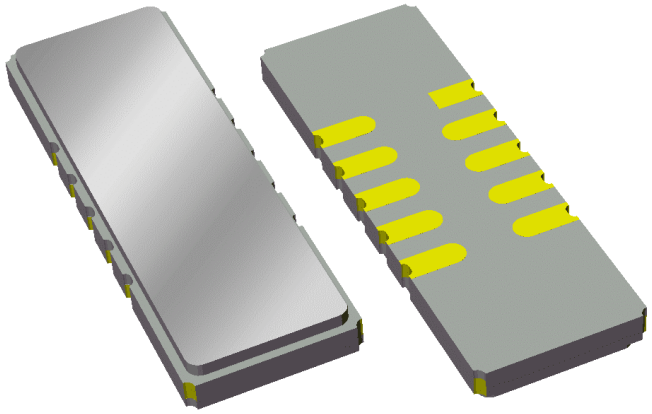
SAWTEK a TriQuint company

Preliminary Data Sheet

Part Number 855740
70 MHz SAW Filter

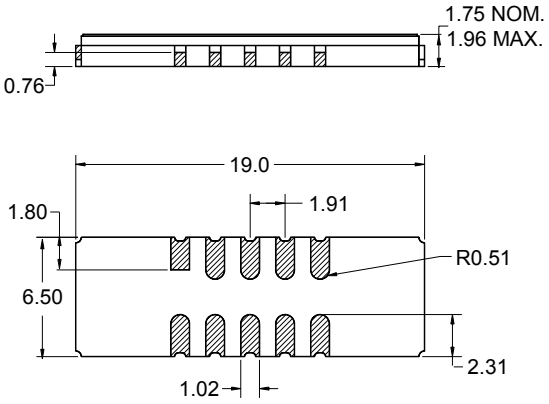
Features

- For broadband applications
- Typical 3 dB bandwidth of 2.7 MHz
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size
- Replaces Sawtek P/N 851547 (BW 3dB=2.5 MHz)



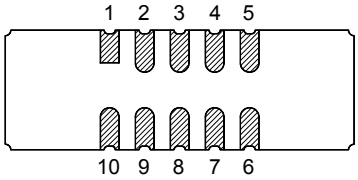
Package

Surface Mount 19.00 x 6.50 x 1.75 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 +0.15mm/-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] 0 to +70 °C

Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	70	-	MHz
Minimum Insertion Loss	-	20.25	21.25	dB
Lower 1 dB Bandedge [4]	-	68.8	68.9	MHz
Upper 1 dB Bandedge	71.1	71.2	-	MHz
Lower 3 dB Bandedge [4]	-	68.65	68.75	MHz
Upper 3 dB Bandedge	71.25	71.35	-	MHz
Lower 40 dB Bandedge [4]	67.9	67.99	-	MHz
Upper 40 dB Bandedge	-	71.95	72.2	MHz
Amplitude Variation 68.9 - 71.1 MHz	-	0.7	1	dB
Phase Linearity 68.9 - 71.1 MHz	-	2	3.75	deg
Group Delay Variation 68.9 - 71.1 MHz	-	90	125	nsec
Absolute Delay	-	2.3	-	μsec
Relative Attenuation [4]				
10 - 67.5 MHz	50	58	-	dB
72.5 - 125 MHz	50	55	-	dB
125 - 150 MHz	30	35	-	dB
150 - 200 MHz	50	60	-	dB
Source Impedance: [5]	-	50	-	Ω
Load Impedance: [5]	-	50	-	Ω
Substrate Material	-	$LiTaO_3$	-	-
Temperature Coefficient of Frequency	-	-23	-	ppm/°C

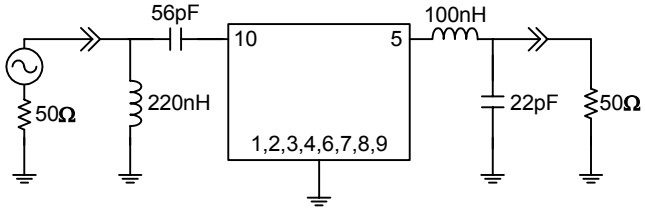
Notes:

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:

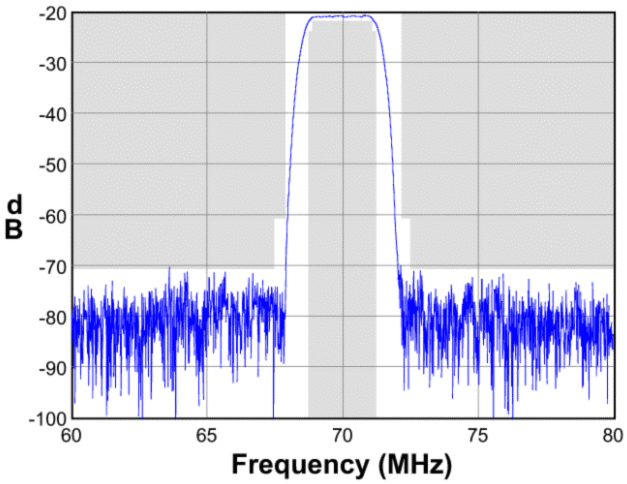
Actual matching values may vary due to PCB layout and parasitics

50Ω
Single-ended

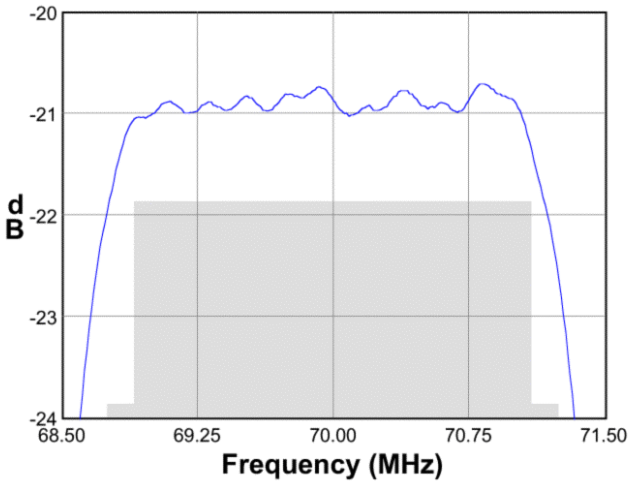


Typical Performance (at +25°C)

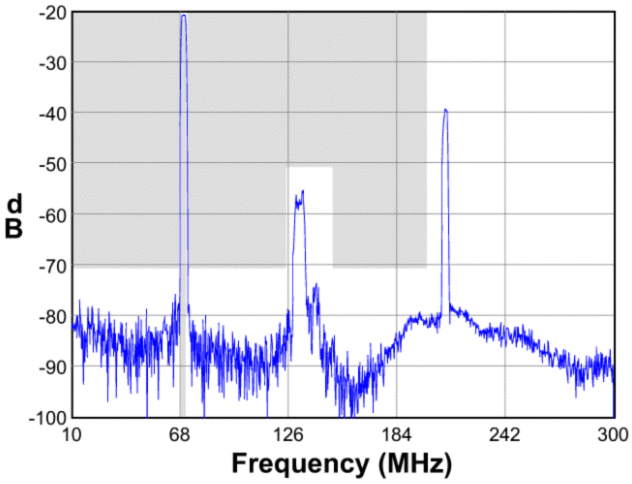
Frequency Response



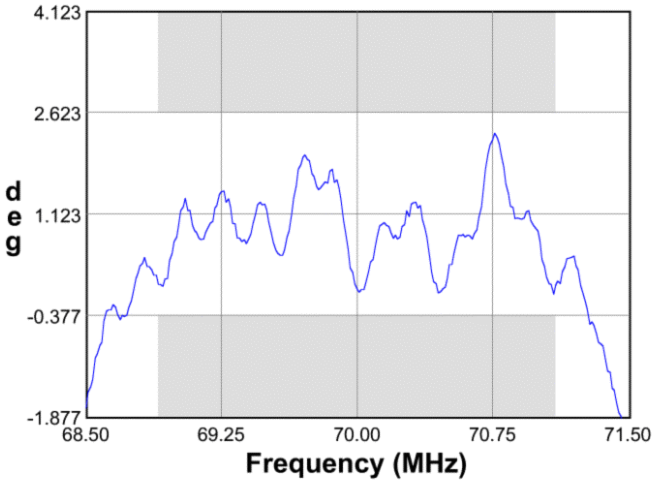
Passband Response



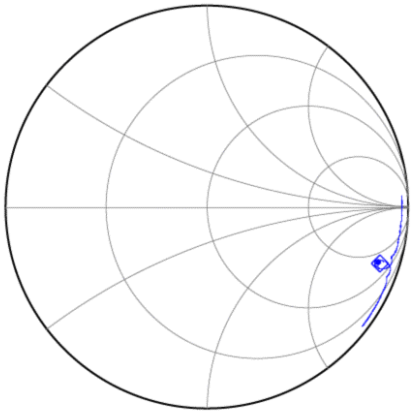
Wideband Response



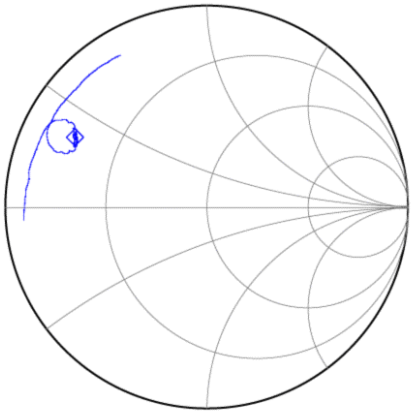
Phase Linearity



Input Smith Chart

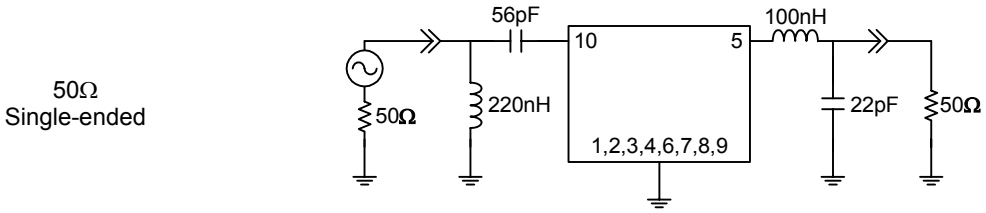


Output Smith Chart

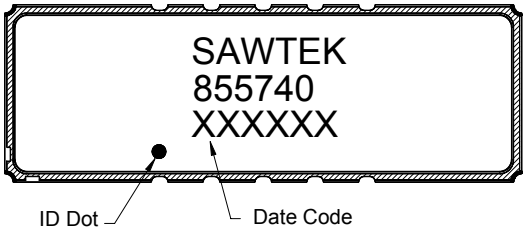


Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

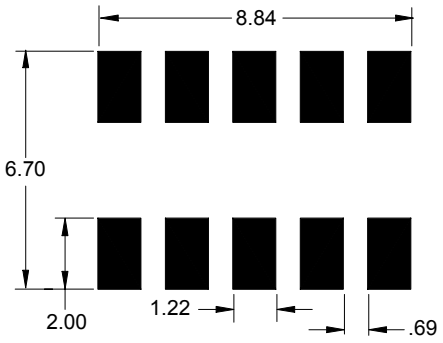


Marking



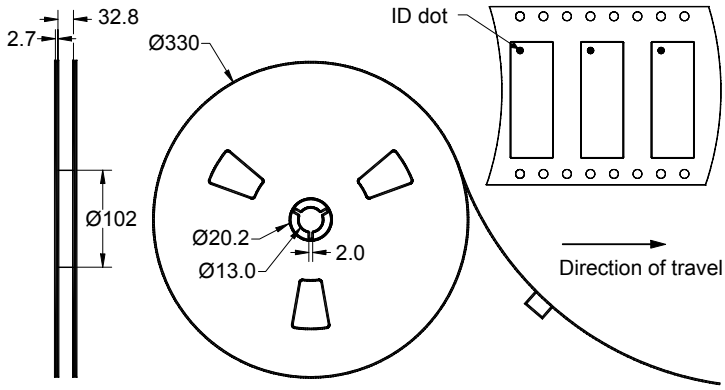
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

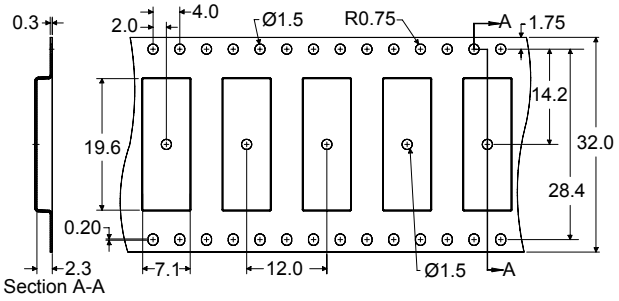
PCB Footprint



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

SAWTEK a TriQuint company

Preliminary Data Sheet

Part Number 855740
70 MHz SAW Filter

Maximum Ratings

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating Temperature Range	T	0	+25	+70	°C
Storage Temperature Range	T_{stg}	-40	-	+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

Sawtek's liability is limited only to the Surface Acoustic Wave (SAW) component(s) described in this data sheet. Sawtek does not accept any liability for applications, processes, circuits or assemblies which are implemented using any Sawtek component described in this data sheet.

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