

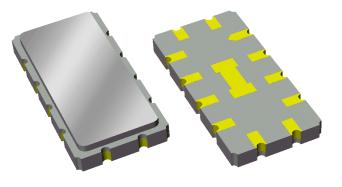
Part Number 854680 70 MHz SAW Filter

Features

- For multiple applications
- Usable bandwidth 40 MHz
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free (Pb)

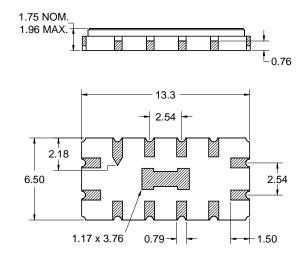
Package Surface Mount 13.30 x 6.50 x 1.75 mm

SMP-53A



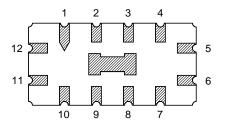
Pin Configuration

Bottom View



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

Body: *Al*₂*O*₃ ceramic Lid: *Kovar, Ni* plated Terminations: *Au* plating 0.5 - 1.0μm, over a 2 - 6μm *Ni* plating



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



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Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾

0 to +70 °C

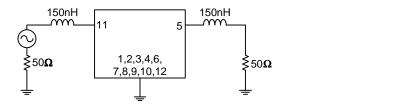
Parameter ⁽³⁾	Minimum	Typical ⁽⁴⁾	Maximum	Unit
Center Frequency	69.8	70	70.2	MHz
Insertion Loss at 70 MHz	-	21.5	22	dB
2dB Bandwidth	39.4	39.7	-	MHz
3dB Bandwidth	40	40.35	-	MHz
40dB Bandwidth	-	47.25	48.25	MHz
Passband Ripple	-	-	-	-
52 – 88 MHz	-	1.1	2	dB
Phase Linearity (90% of the 3dB bandwidth)	-	10	13	deg
Group Delay Variation (90% of the 3dB bandwidth)	-	50	90	ns
Absolute Delay	-	1.08	-	μs
Temperature Coefficient	-	-94	-	ppm/°C
Source/Load Impedance ⁽⁵⁾	-	50	-	Ω

Notes:

- 1. All specifications are based on Triquint 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. Typical values are based on average measurements at room temperature
- 5. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

 50Ω Single-ended

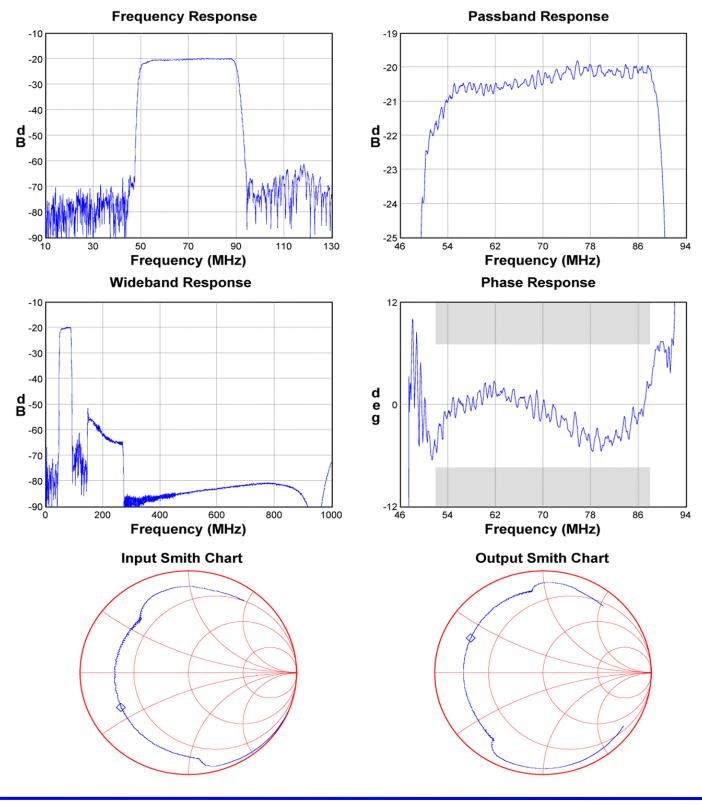


 $50 \ \Omega$ Single-ended



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Typical Performance (at room temperature)

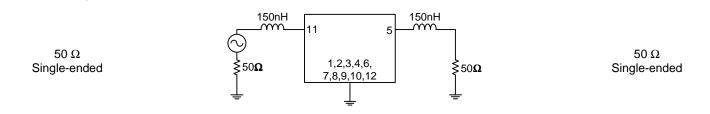






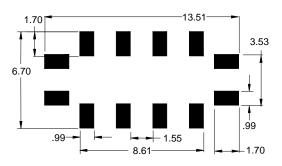
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics



Marking

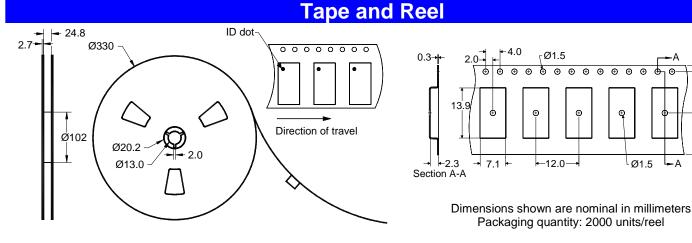
SAWTEK 854680 XXXXXX ID Dot-Date Code



PCB Footprint

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

This footprint represents a recommendation only Dimensions shown are nominal in millimeters



1.75

11.5

24



Maximum Ratings						
Parameter	Symbol	Minimum	Maximum	Unit		
Operating Temperature Range	Т	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) (Pb) •



Solderability

Compatible with JEDEC J-STD-020C Pb-free process, 260℃ peak reflow temperature (see soldering profile) •

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PCB Layout Tips

Qualification Flowchart

Soldering Profile

S-Parameters

RoHS Information

Other Technical Information

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

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