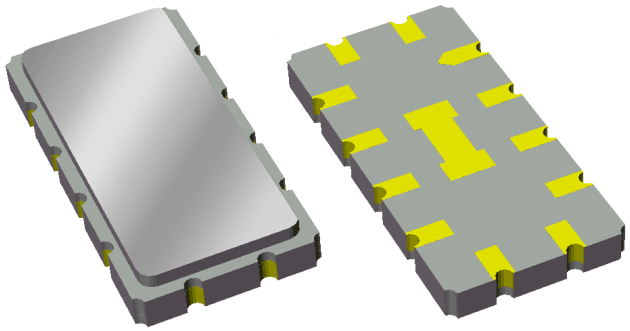
TriQuint SEMICONDUCTOR

Data Sheet

Part Number 855659
110.592 MHz SAW Filter

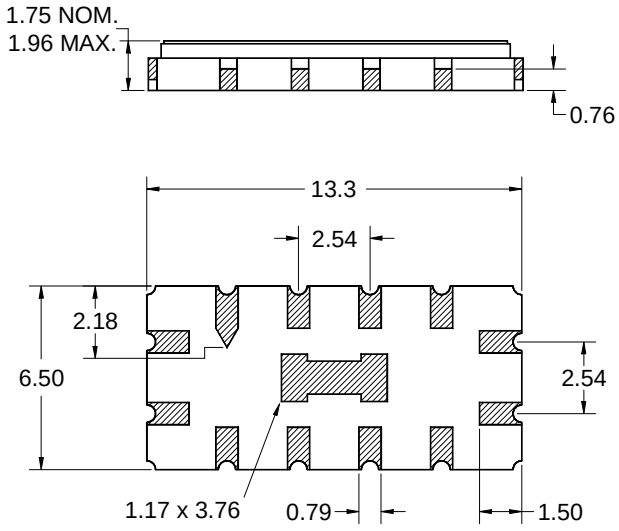
Features

- For Broadband applications
- Usable bandwidth 1.0 MHz
- Low loss
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- **RoHS** compliant (2002/95/EC), **Pb**-free



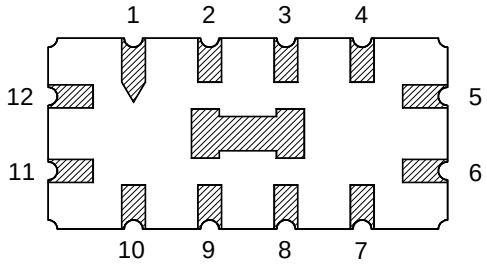
Package

Surface Mount 13.30 x 6.50 x 1.75 mm
SMP-53



Pin Configuration

Bottom View



Single-ended Configuration

Pin No.	Description
11	Input
5	Output
1,4,6,7,10,12	Ground
2,3,8,9	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] -40 to +85 °C

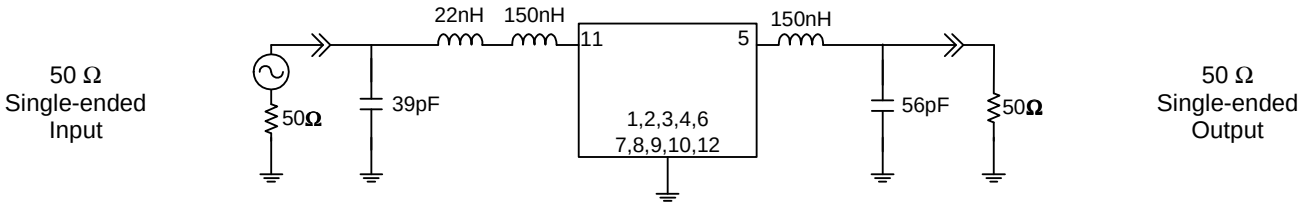
Parameter [3]	Minimum	Typical [4]	Maximum	Unit
Center Frequency	-	110.592	-	MHz
Insertion Loss at 110.592 MHz	4.70	6.52	7.70	dB
3 dB Bandwidth [5]	-	0.79	1.0	MHz
Lower 30 dB Band Edge [5]	109.292	-	-	MHz
Upper 30 dB Band Edge [5]	-	-	111.892	MHz
Lower 40 dB Band Edge [5]	108.192	-	-	MHz
Upper 40 dB Band Edge [5]	-	-	112.992	MHz
Passband Ripple 110.442 – 110.742 MHz	-	0.25	0.6	dB p-p
Group Delay Variation 110.392 – 110.792 MHz	-	100	150	ns p-p
Triple Transit Suppression	32	38	-	dB
Source Impedance (single-ended) [6]	-	50	-	Ω
Load Impedance (single-ended) [6]	-	50	-	Ω

Notes:

1. All specifications are based on the 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. Relative to insertion loss at center frequency
6. This is the optimum impedance in order to achieve the performance shown

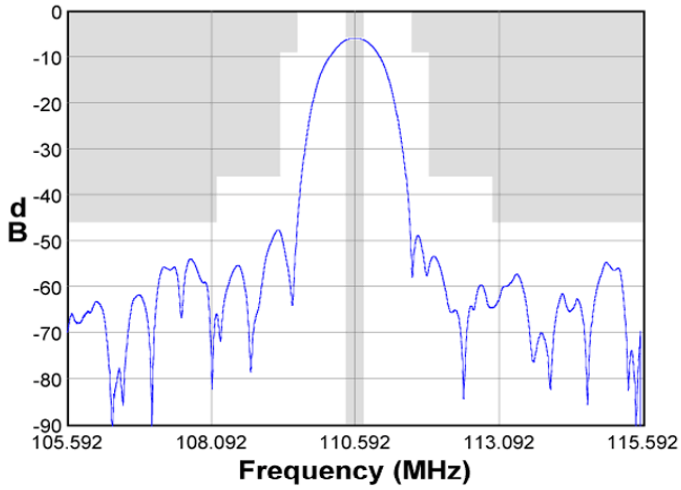
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

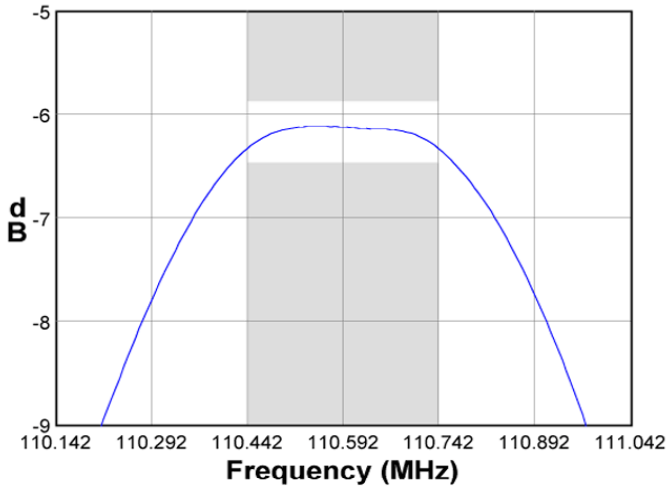


Typical Performance (at room temperature)

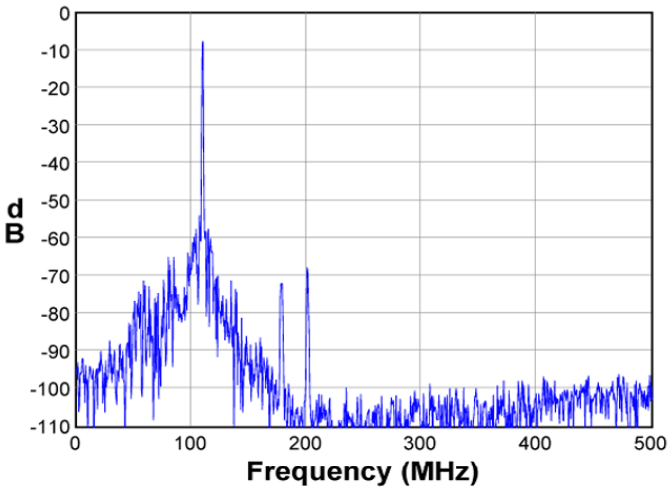
Frequency Response



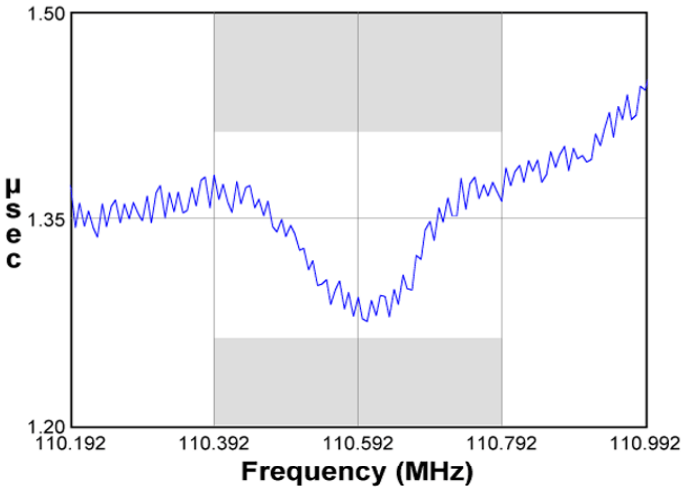
Passband Response



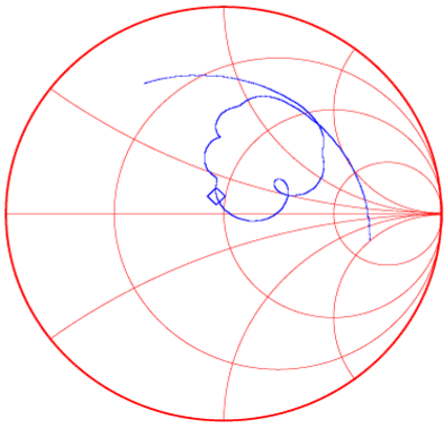
Wideband Response



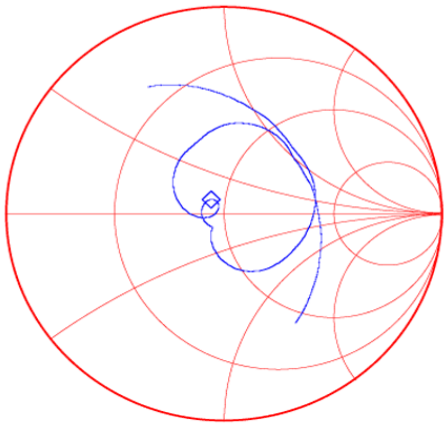
Group Delay Variation



Input Smith Chart



Output Smith Chart



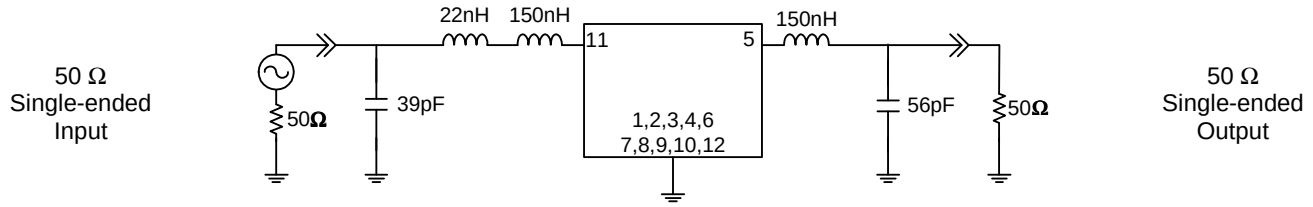
TriQuint SEMICONDUCTOR

Data Sheet

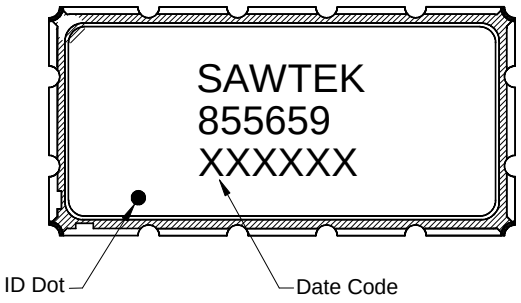
Part Number 855659
110.592 MHz SAW Filter

Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

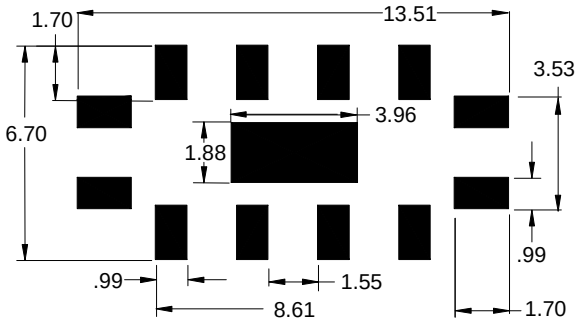


Marking



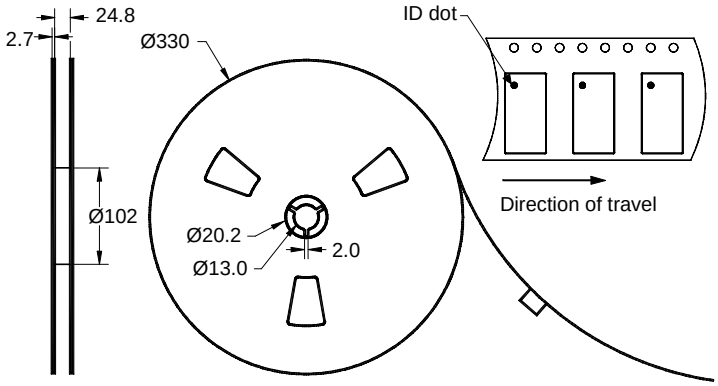
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

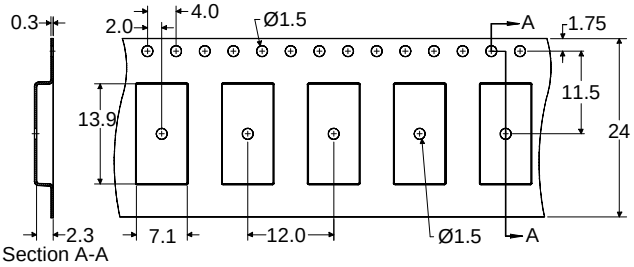
PCB Footprint



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

TriQuint SEMICONDUCTOR

Data Sheet

Part Number 855659
110.592 MHz SAW Filter

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-40	+85	^{o}C
Storage Temperature Range	T_{stg}	-40	+85	^{o}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 JESD22-B102, Pb-free process, 260C 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

TriQuint SEMICONDUCTOR
PO Box 609501
Orlando, FL 32860-9501
USA

Phone: +1 (407) 886-8860
Fax: +1 (407) 886-7061
Email: info-product@tqs.com
Web: www.triquint.com

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