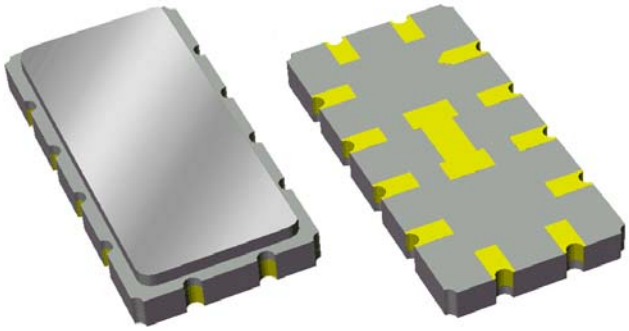
SAWTEK a TriQuint company

# Data Sheet

# Part Number 854927
# 140 MHz SAW Filter

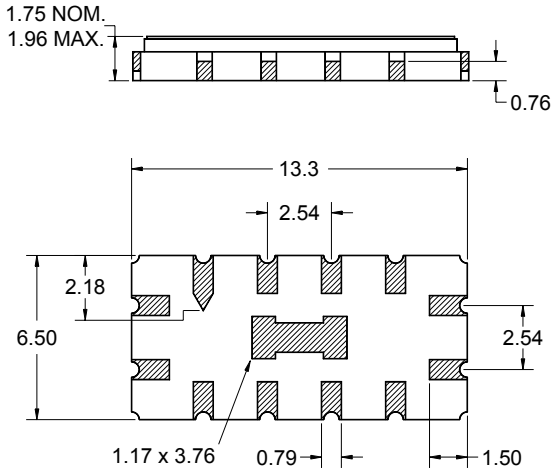
## Features

- Usable bandwidth of 32 MHz
- Typical 3 dB bandwidth of 33.4 MHz
- Low loss
- High attenuation
- Single-ended operation, 50Ω
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free



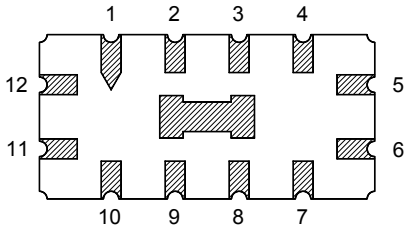
## Package

Surface Mount 13.30 x 6.50 x 1.75 mm




## Pin Configuration

Bottom View




| Pin No. | Description |
|---|---|
| 5 | Output |
| 11 | Input |
| 6,12 | Ground |
| 1,2,3,4 | Case Ground |
| 7,8,9,10 | 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:** [2] +25 °C

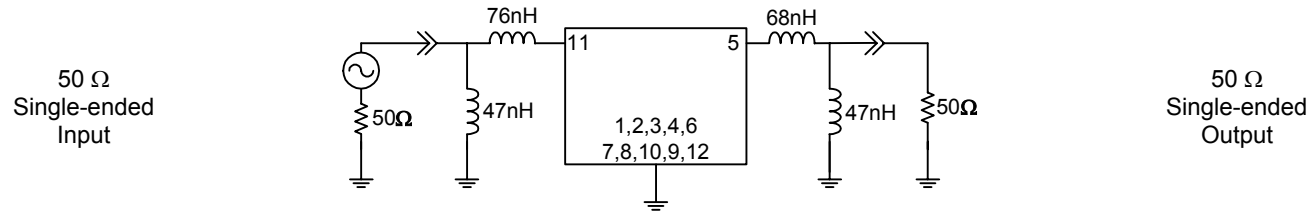
| Parameter | Minimum | Typical | Maximum | Unit |
|---|---|---|---|---|
| **Center Frequency** | - | 140 | - | MHz |
| **Insertion Loss at $F_O$** | - | 11.5 | 13 | dB |
| **1 dB Bandwidth** | 30 | 32 | - | MHz |
| **3 dB Bandwidth** | 32 | 33.4 | - | MHz |
| **35 dB Bandwidth** | - | 38 | 44 | MHz |
| **Passband Ripple** 127.2 - 152.8 MHz | - | 0.55 | 1.2 | dB |
| **Phase Linearity** 127.2 - 152.8 MHz | - | 6.1 | 14 | deg |
| **Group Delay Variation** 127.2 - 152.8 MHz | - | 45 | 120 | nsec |
| **Absolute Delay** | - | 0.75 | - | µsec |
| **Temperature Coefficient** | - | -94 | - | ppm/ °C |
| **Source Impedance** [3] | - | 50 | - | Ω |
| **Load Impedance** [3] | - | 50 | - | Ω |

**Notes:**

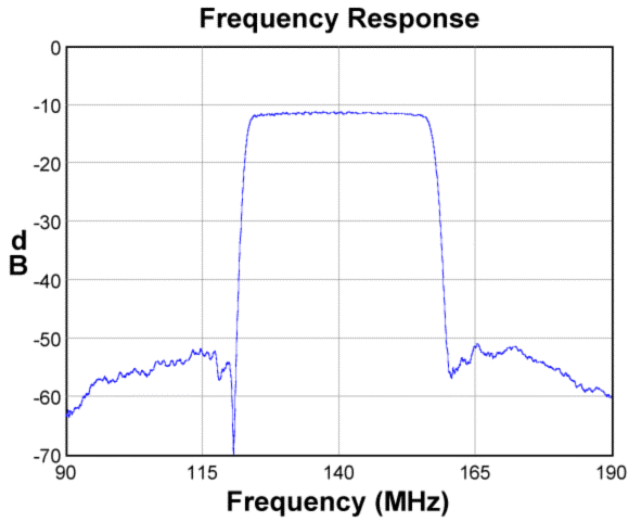
1. All specifications are based on the test circuit shown below
2. All specifications are tested at room temperature only
3. This is the optimum impedance in order to achieve the performance shown

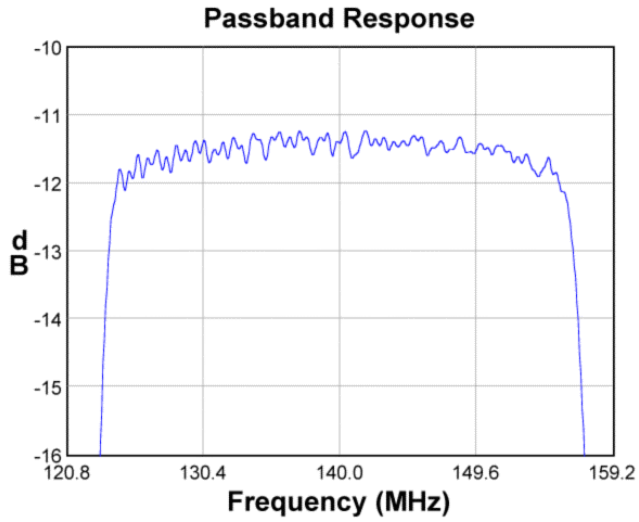
**Test Circuit:**

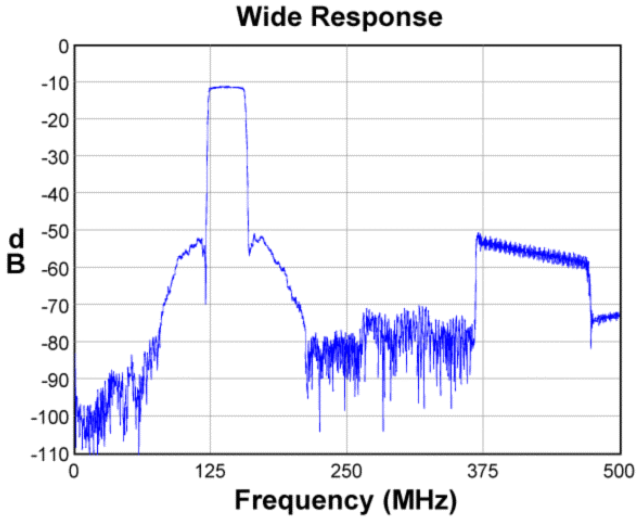
Actual matching values may vary due to PCB layout and parasitics

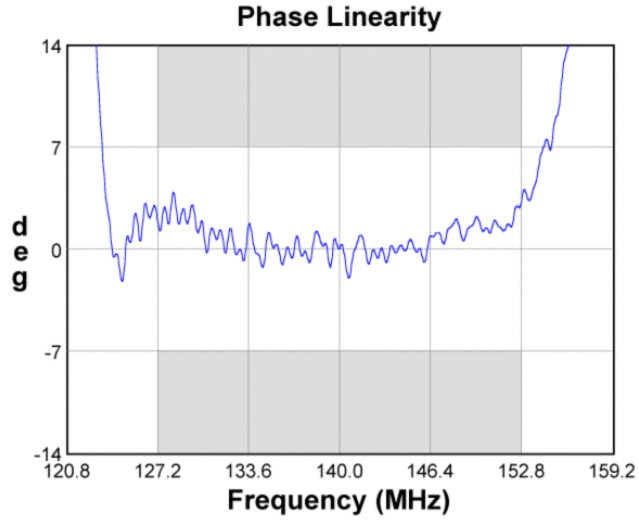


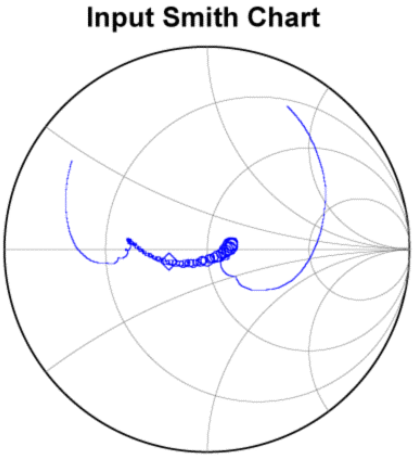
## Typical Performance (at +25°C)

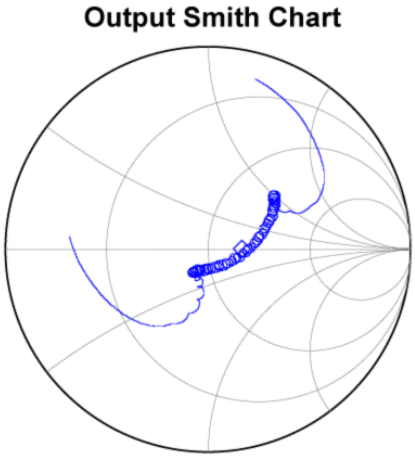


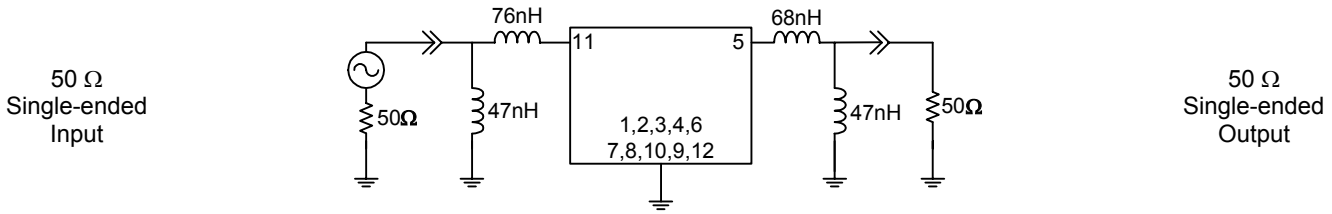



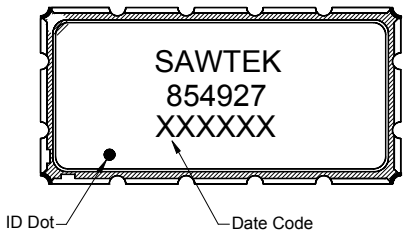



## Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

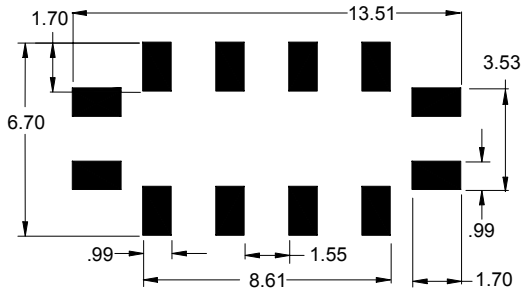



## Marking



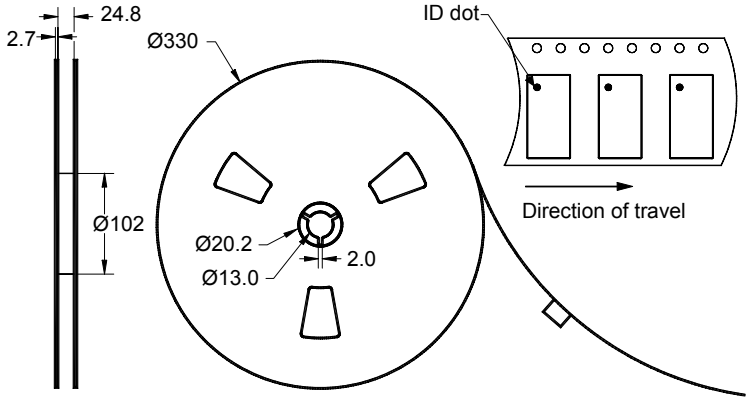

The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

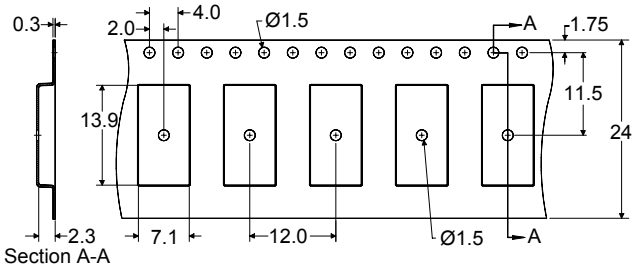
## PCB Footprint




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

## Maximum Ratings

| Parameter | Symbol | Minimum | Maximum | Unit |
|---|---|---|---|---|
| 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

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