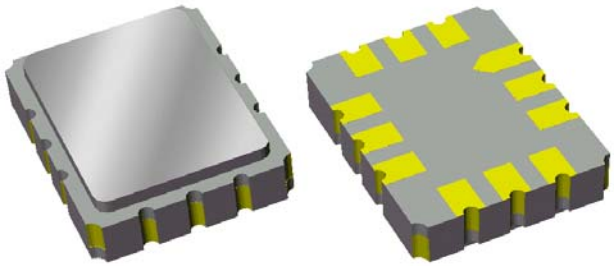
SAWTEK a TriQuint company

Data Sheet

Part Number 855271
479.75 MHz SAW Filter

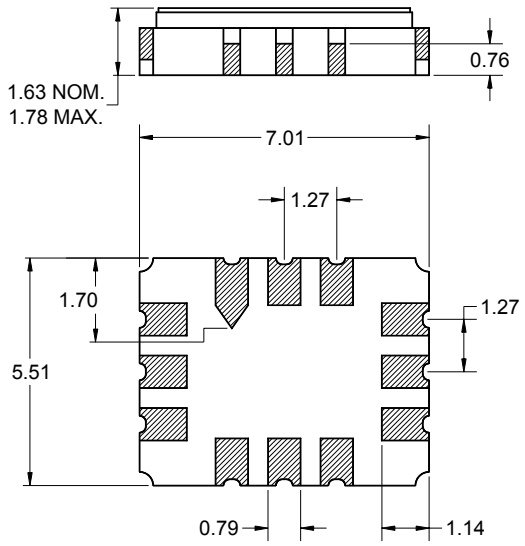
Features

- Usable bandwidth of 9 MHz
- High attenuation
- Single-ended operation at 50Ω
- Ceramic Surface Mount Package (SMP)
- Small size



Package

Surface Mount 7.01 x 5.51 x 1.63 mm

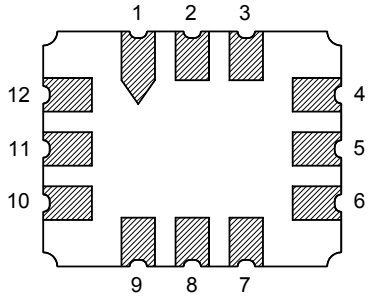


Dimensions shown are nominal in millimeters
All tolerances are ±0.15mm except overall length and width ±0.13mm

Body: Al_2O_3 ceramic
Lid: *Kovar*, *Ni* plated
Terminations: *Au* plating 0.5 - 1.0μm, over a 2 - 6μm *Ni* plating

Pin Configuration

Bottom View



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

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Electrical Specifications (1,2,3)

Parameter (4)	Minimum	Typical	Maximum	Unit
Center Frequency	-	479.75	-	MHz
Insertion Loss	-	19.5	22	dB
3 dB Bandwidth (5)	9	11.7	-	MHz
35 dB Bandwidth (5)	-	19.9	22	MHz
Passband Variation (6)	-	0.38	1	dB p-p
Group Delay Variation 475.25 - 484.25 MHz	-	26	50	nsec
Source Impedance (7)	-	50	-	Ω
Load Impedance (7)	-	50	-	Ω
Temperature Coefficient (3)	-	-23	-	ppm/ °C
Substrate Material	-	$LiTaO_3$	-	-

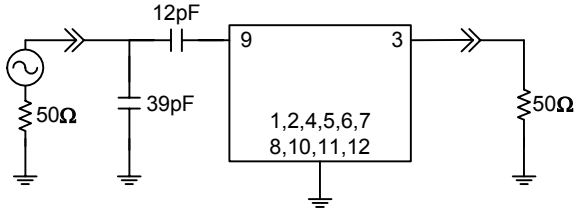
Notes:

1. All specifications are based on the test circuit shown below
2. This specification is valid for room temperature only
3. Device will function over an operating temperature of -40 to 85 °C, but may not meet the above ambient specification. Insertion loss and frequency shift performance will change over temperature. See coefficient of temperature for frequency shift estimation.
4. Electrical margin has been built into the design to account for the variations due to manufacturing tolerances
5. Referenced to insertion loss at 479.75 MHz
6. Referenced to 100% of 1dB bandwidth
7. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

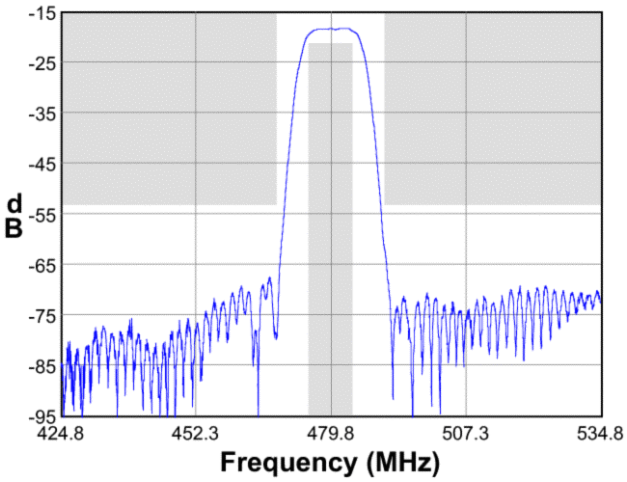
Actual matching values may vary due to PCB layout and parasitics

50 Ω
Single-ended

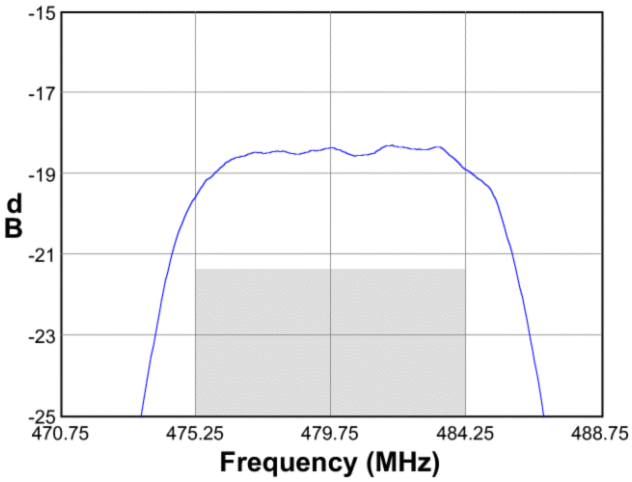


Typical Performance (at +25°C)

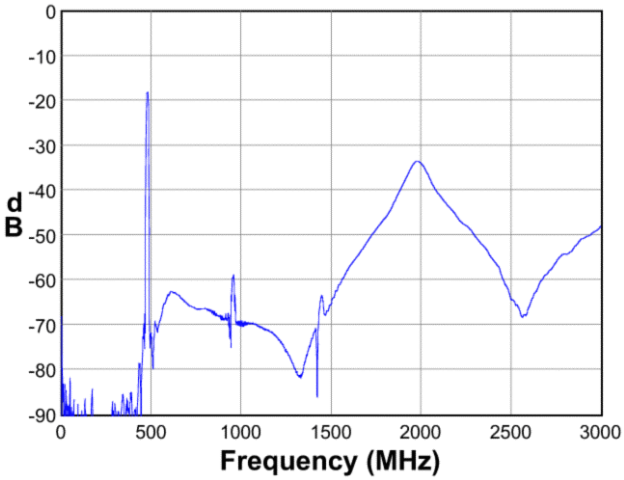
Frequency Response



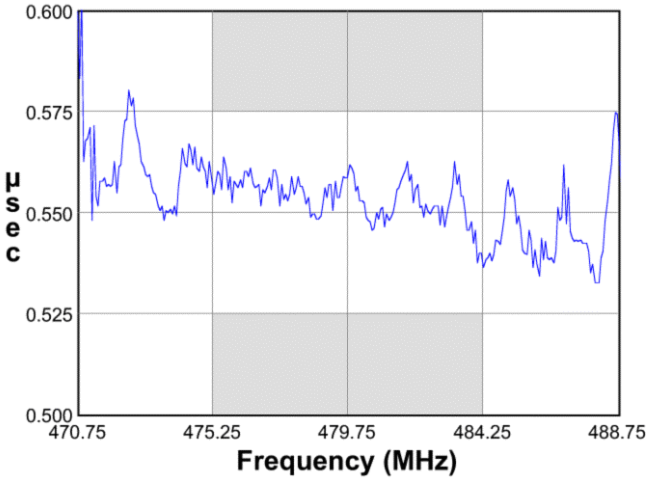
Passband Response



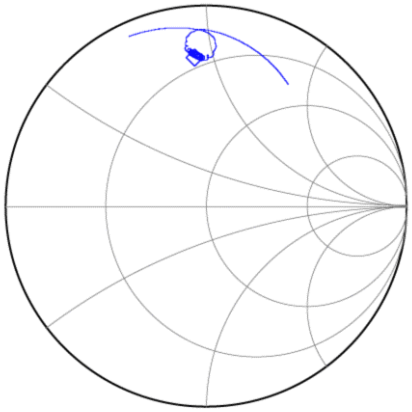
Wideband Response



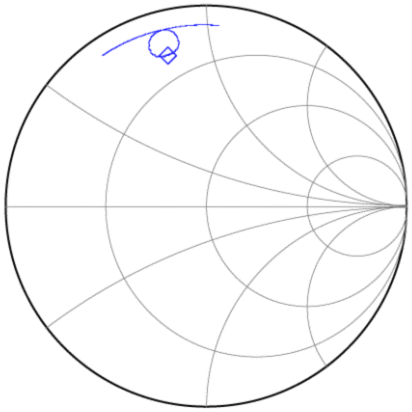
Group Delay Variation



Input Smith Chart

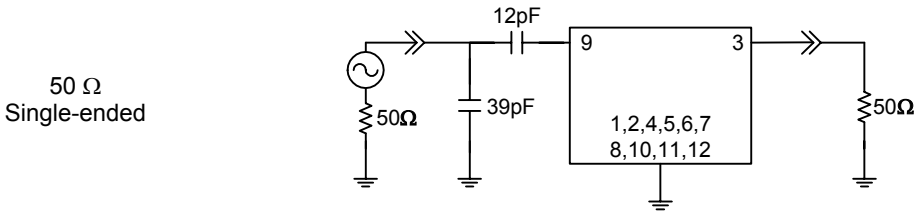


Output Smith Chart

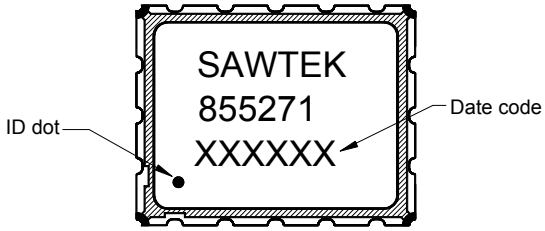


Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

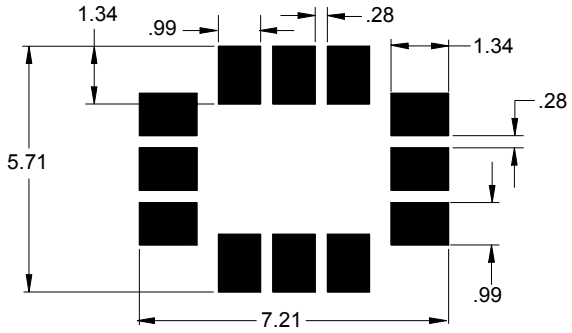


Marking



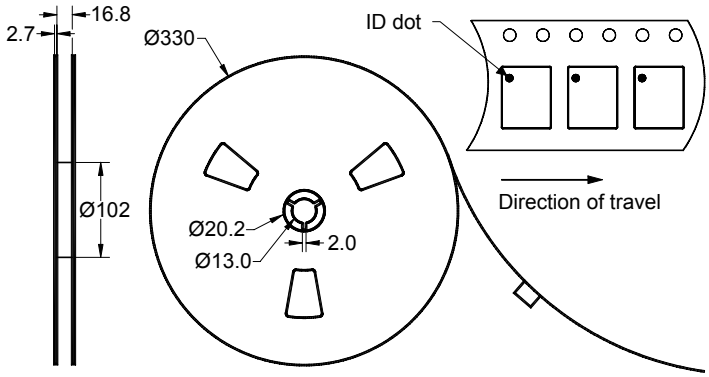
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

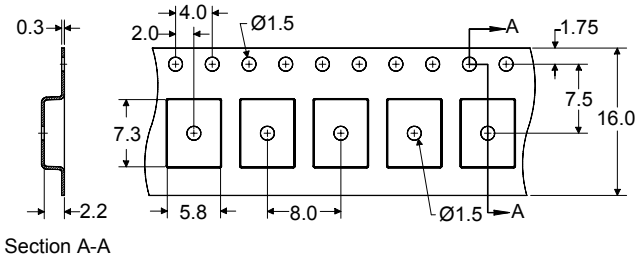
PCB Footprint



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

Tape and Reel





Dimensions shown are nominal in millimeters
Packaging quantity: 3000 units/reel

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Part Number 855271
479.75 MHz SAW Filter

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-40	+85	°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

Contact Information

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