TriQuint SEMICONDUCTOR

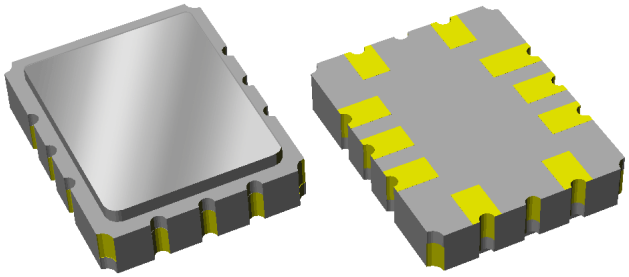
Data Sheet

Part Number 856623

464 MHz SAW Filter

Features

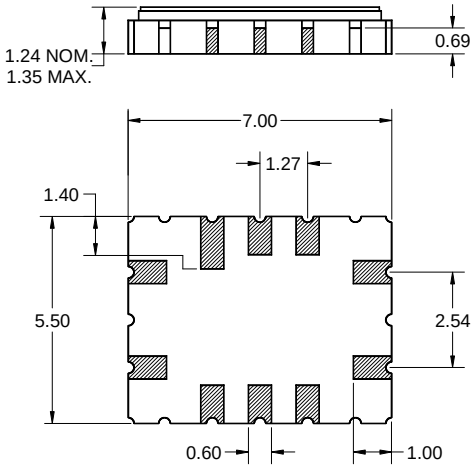
- For WiMAX applications
- Usable bandwidth 3.15 MHz
- Low Loss
- High attenuation
- Impedance matching required
- Balanced operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free



Package

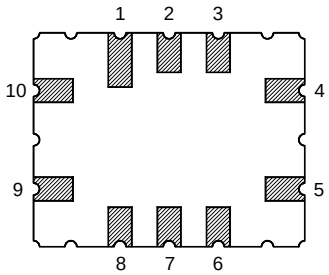
Surface Mount 7.00 x 5.50 x 1.24 mm

SMP-28C



Pin Configuration

Bottom View



Pin No.	Description
9	Input +
10	Input -
4	Output +
5	Output -
1,2,3	Case ground
6,7,8	Case ground

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

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Electrical Specifications [1]

Operating Temperature Range: [2] -40 to +85 °C

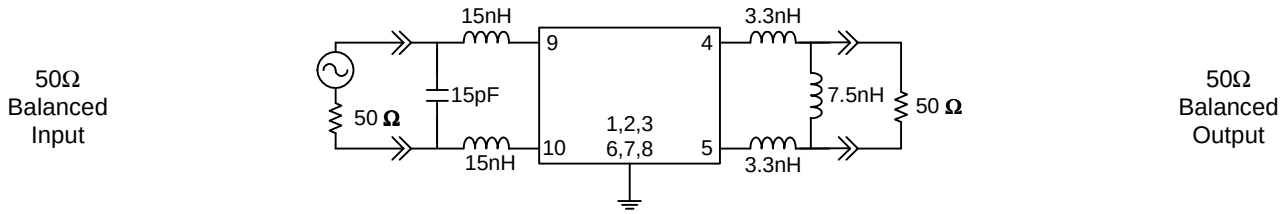
Parameter [3]	Minimum	Typical [4]	Maximum	Unit
Center Frequency	-	464	-	MHz
Insertion Loss at minimum	-	10.6	12	dB
1 dB bandwidth	3.15	3.5	3.75	MHz
Amplitude Variation				
462.425 - 465.575 MHz	-	0.5	1.0	dB
Group Delay Variation				
462.425 - 465.575 MHz	-	95	150	ns
Absolute Attenuation [5]				
264 - 368 MHz	50	59	-	dB
368 - 417 MHz	50	53	-	dB
417 - 449 MHz	40	50	-	dB
449 - 460.5 MHz	35	37	-	dB
467.5 - 479 MHz	35	38	-	dB
479 - 656 MHz	40	47	-	dB
656 - 664 MHz	55	80	-	dB
Input/Output Return Loss				
462.425 - 465.575 MHz	10	16	-	dB
Source Impedance (balanced) [6]	-	50	-	Ω
Load Impedance (balanced) [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 minimum insertion loss
6. This is the optimum impedance in order to achieve the performance shown

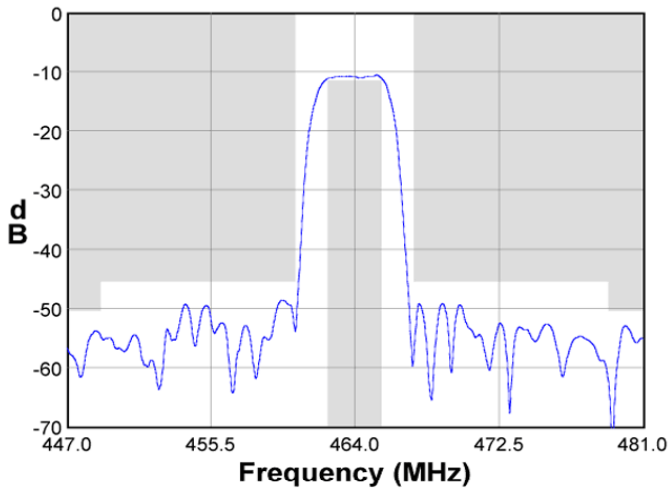
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

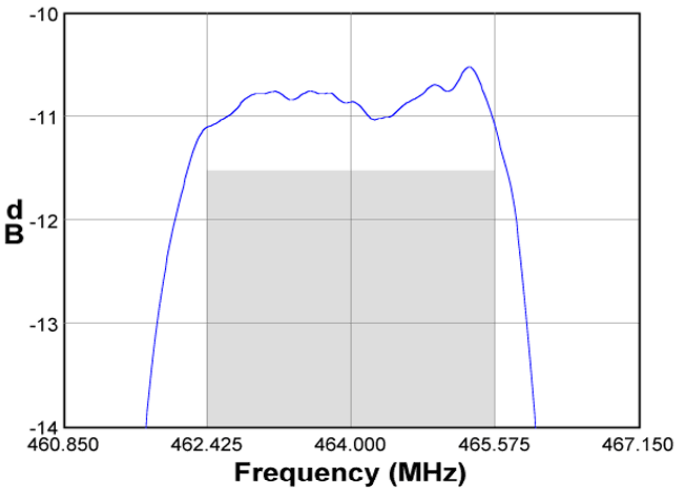


Typical Performance (at room temperature)

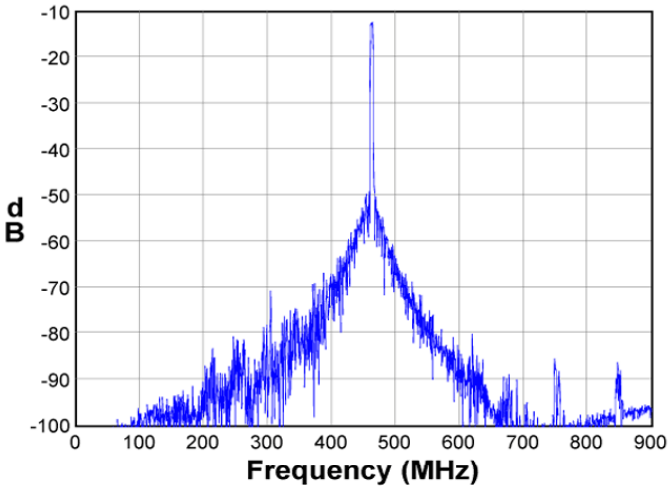
Frequency Response



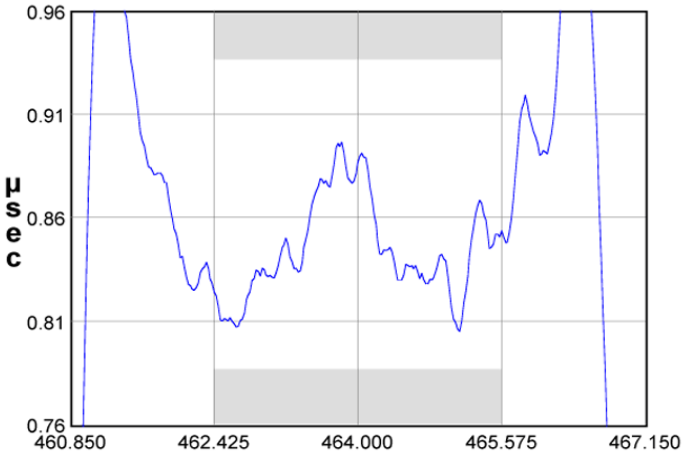
Passband Response



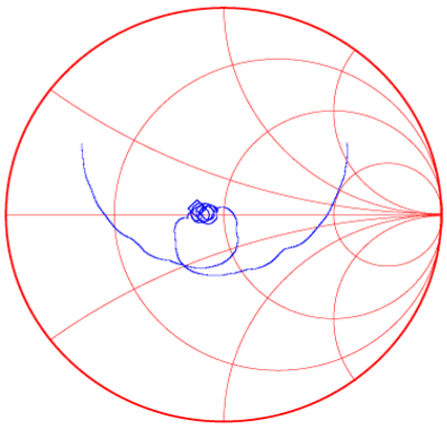
Wideband Response



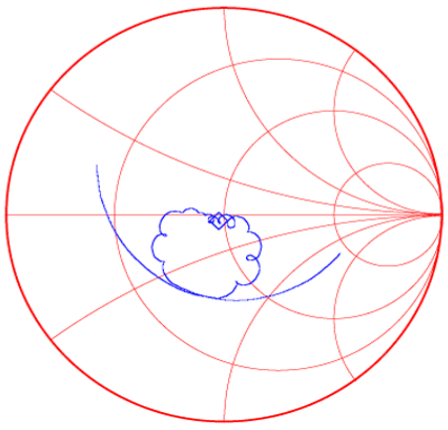
Group Delay Response



Input Smith Chart



Output Smith Chart



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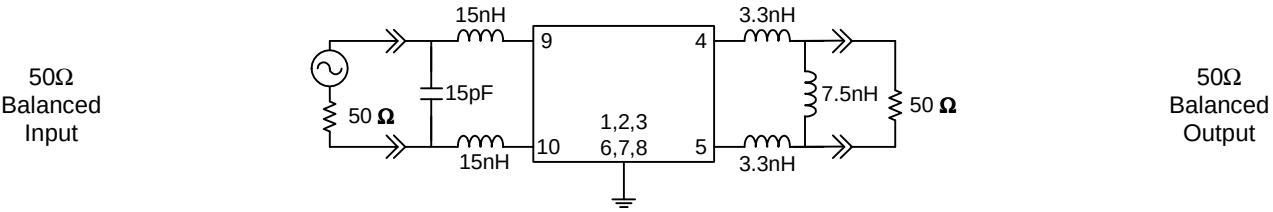
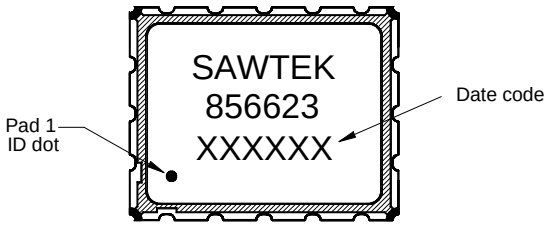
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

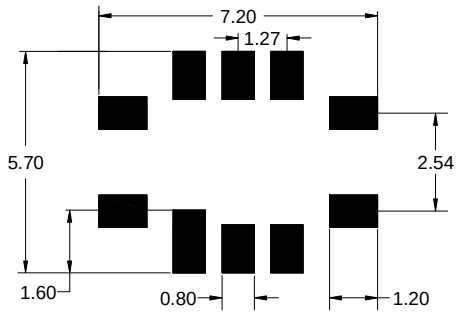


Marking



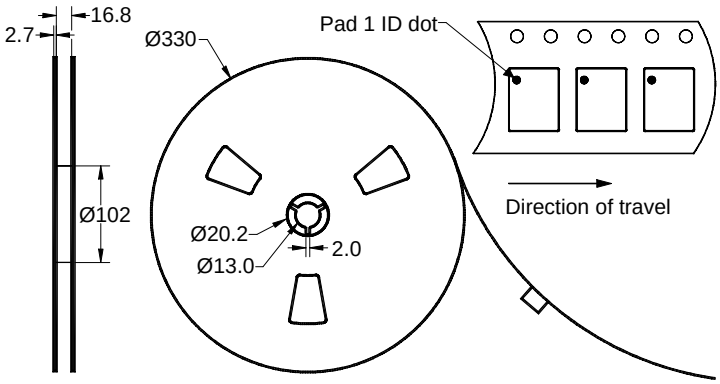
7The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

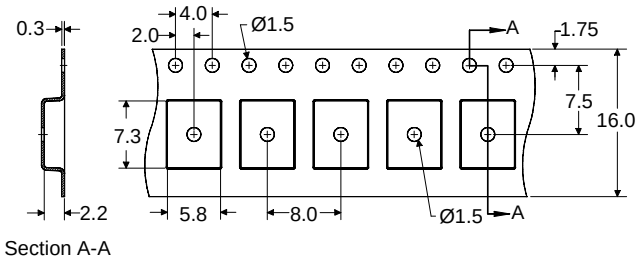
PCB Footprint



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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Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-40	+85	°C
Storage Temperature Range	T_{stg}	-45	+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℃** 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

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