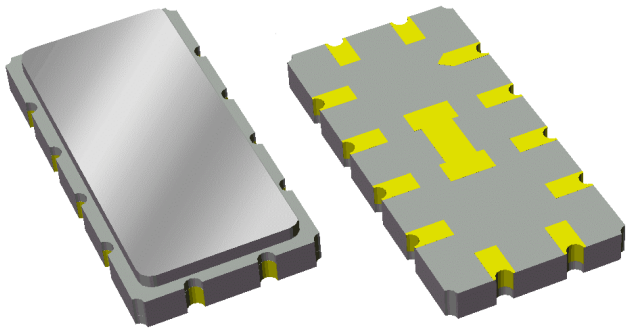
SAWTEK a TriQuint company

Preliminary Data Sheet

Part Number 855530
380 MHz SAW Filter

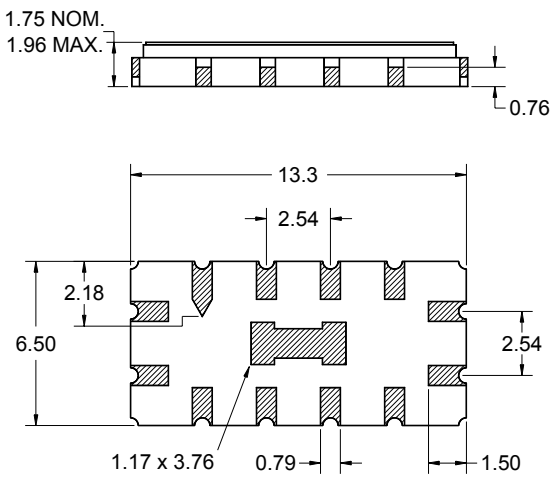
Features

- For WCDMA BTS applications
- Usable bandwidth 4.2 MHz
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size



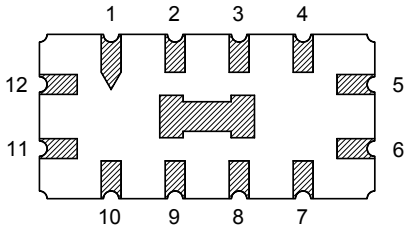
Package

Surface Mount 13.30 x 6.50 x 1.75 mm



Pin Configuration

Bottom View



Pin No.	Description
5	Output
11	Input
1,2,3,4,6	Case ground
7,8,9,10,12	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] 0 to +70 °C

Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	380	-	MHz
Insertion Loss at 380 MHz	-	15.4	17	dB
Lower 1.5 dB Point [4]	-	377.65	377.9	MHz
Upper 1.5 dB Point [4]	382.1	382.26	-	MHz
Lower 10 dB Point [4]	376.75	377.16	-	MHz
Upper 10 dB Point [4]	-	382.85	383.25	MHz
Lower 20 dB Point [4]	376.35	376.92	-	MHz
Upper 20 dB Point [4]	-	383.13	383.65	MHz
Lower 30 dB Point [4]	375.85	376.76	-	MHz
Upper 30 dB Point [4]	-	383.4	384.15	MHz
Passband Ripple 377.9 - 382.1 MHz	-	0.29	1	dB p-p
Group Delay 377.9 - 382.1 MHz	1.291	1.297	1.303	µsec
Group Delay Variation 377.9 - 382.1 MHz	-	36	100	nsec
Source Impedance [5]	-	50	-	Ω
Load Impedance [5]	-	50	-	Ω

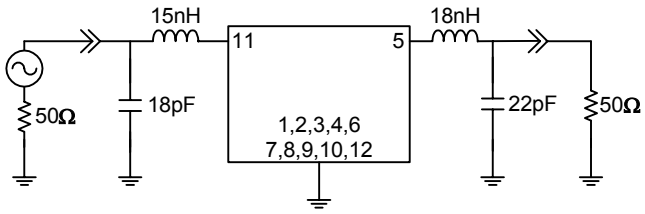
Notes:

1. All specifications are based on the 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. Relative to insertion loss at 380 MHz
5. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

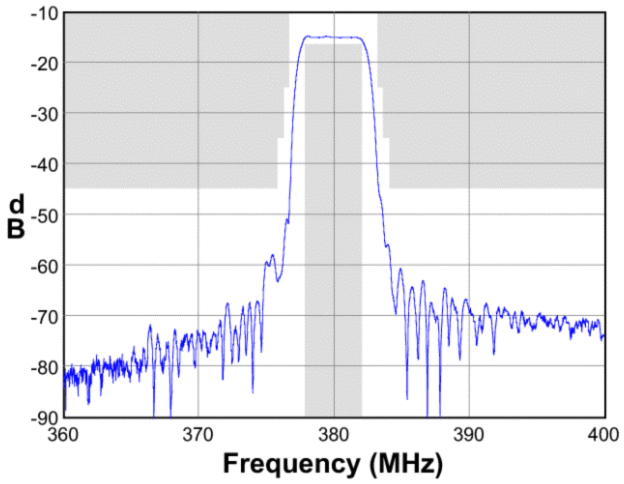
Actual matching values may vary due to PCB layout and parasitics

50 Ω
Single-ended

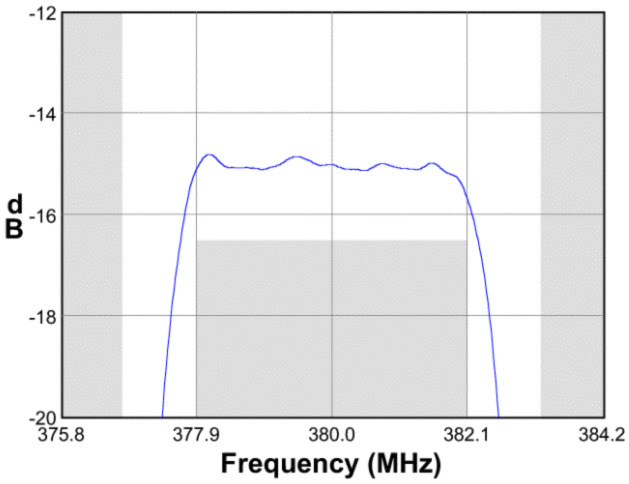


Typical Performance (at +25°C)

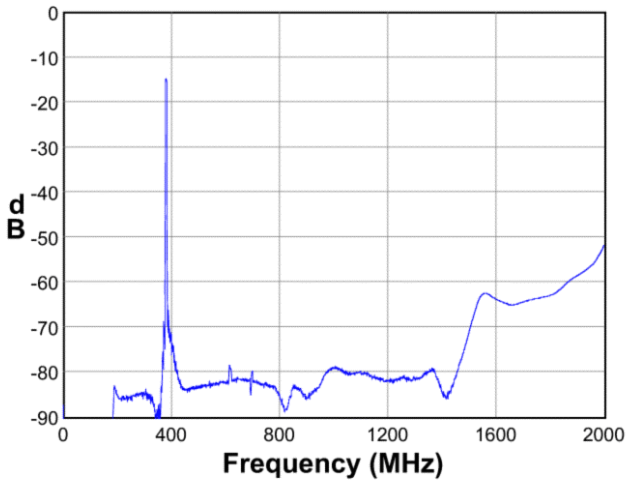
Frequency Response



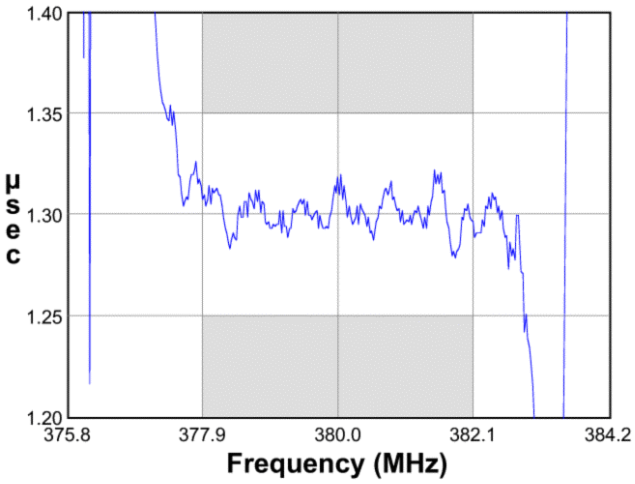
Passband Response



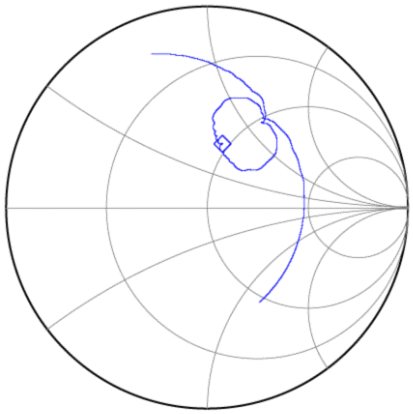
Wideband Response



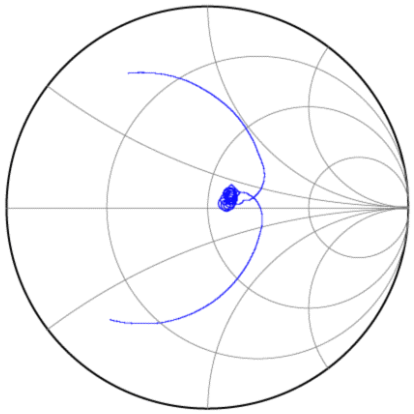
Group Delay Variation



Input Smith Chart



Output Smith Chart



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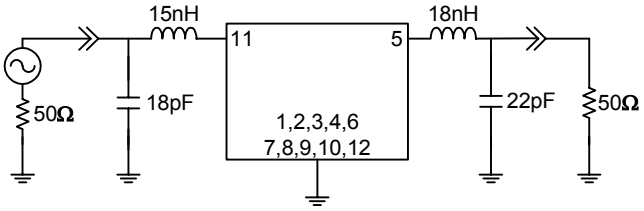
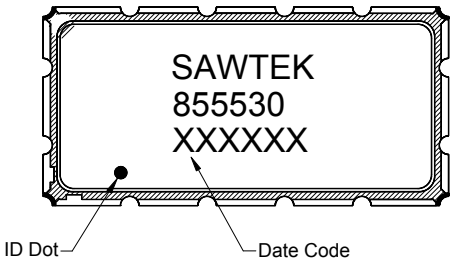
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

50 Ω
Single-ended

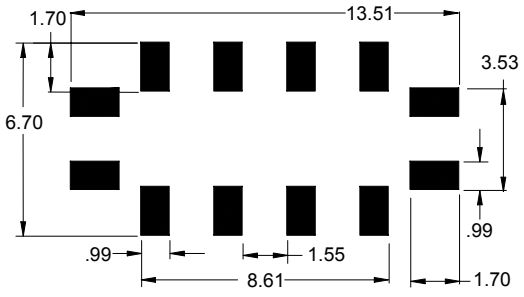


Marking



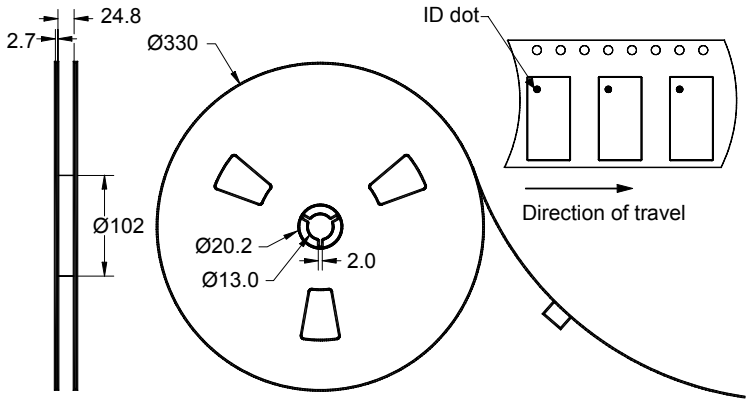
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

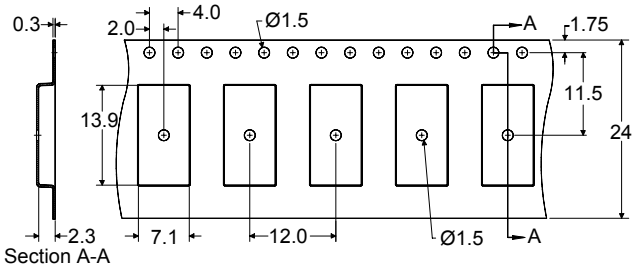
PCB Footprint



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

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Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	0	+70	°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

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

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