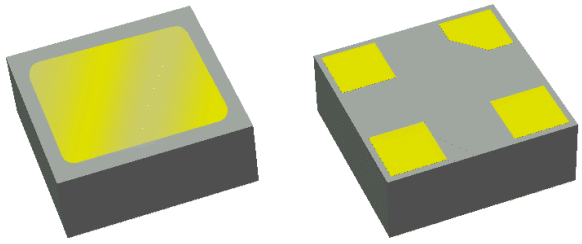
SAWTEK a TriQuint company

Data Sheet

Part Number 856083
1855 MHz SAW Filter

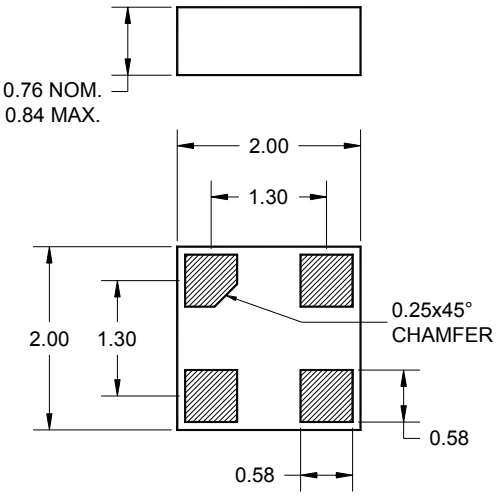
Features

- For Korean PCS applications, Rx
- Usable bandwidth 30 MHz
- Low loss
- High attenuation
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size



Package

Surface Mount 2.00 x 2.00 x 0.76 mm

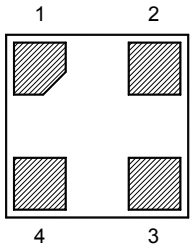


Dimensions shown are nominal in millimeters
All tolerances are ±0.10mm

Body: Al_2O_3 ceramic
Lid: *Kovar* or *Alloy 42*, *Au* over *Ni* plated
Terminations: *Au* plating 0.5 - 1.0μm,
over a 2 - 6μm *Ni* plating

Pin Configuration

Bottom View



Pin No.	Description
1	Input
3	Output
2,4	Case ground

Electrical Specifications [1]

Operating Temperature Range: [2] -30 to +85 °C

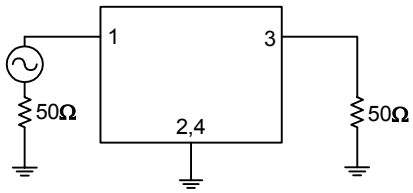
Parameter [3]	Minimum	Typical	Maximum	Unit
Center Frequency	-	1855	-	MHz
Insertion Loss				
1840 - 1870 MHz	-	1.6	2.5	dB
Amplitude Ripple				
1840 - 1870 MHz	-	0.2	1	dB p-p
Absolute Attenuation				
1440 - 1470 MHz	30	38	-	dB
1750 - 1780 MHz	25	31	-	dB
1930 - 1960 MHz	35	45	-	dB
2240 - 2270 MHz	30	35	-	dB
Input/Output VSWR				
1840 - 1870 MHz	-	1.6:1	2:1	dB
Source Impedance: [4]	-	50	-	Ω
Load Impedance: [4]	-	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. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

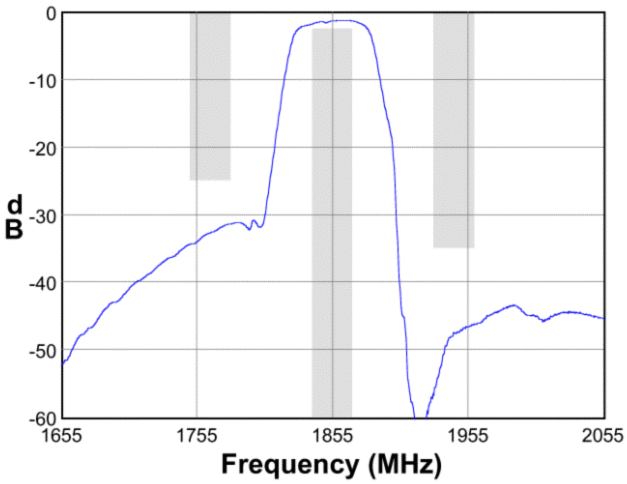
50 Ω
Single-ended



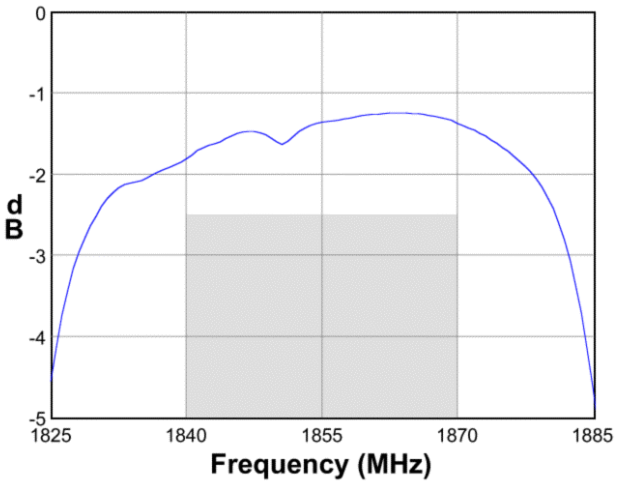
No impedance matching required

Typical Performance (at +25°C)

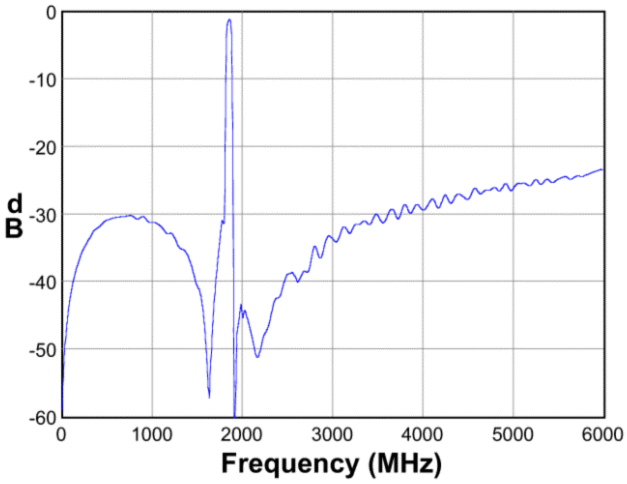
Frequency Response



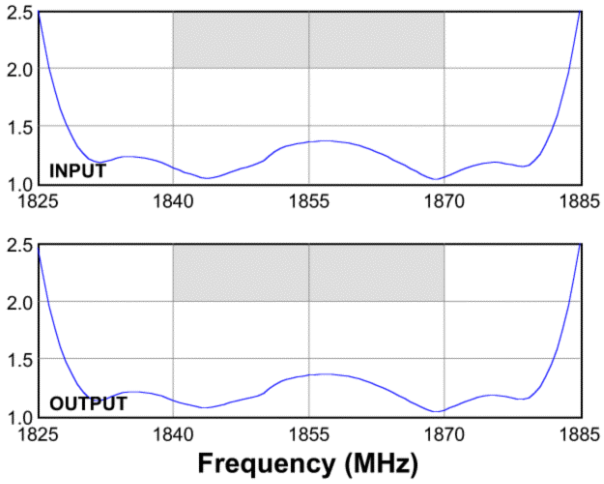
Passband Response



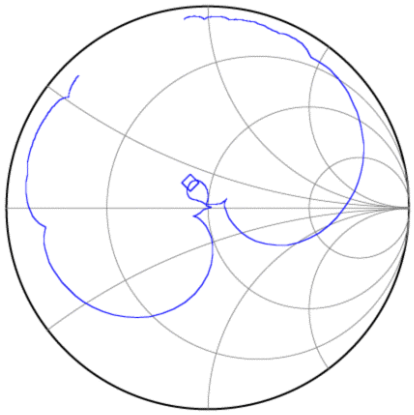
Wideband Response



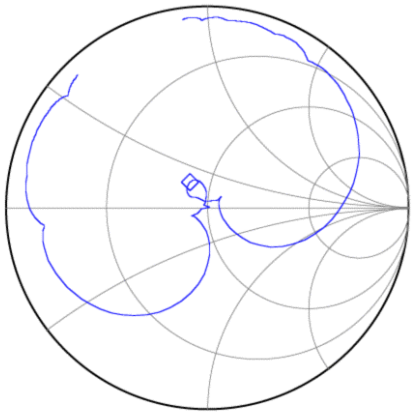
Input/Output VSWR



Input Smith Chart



Output Smith Chart



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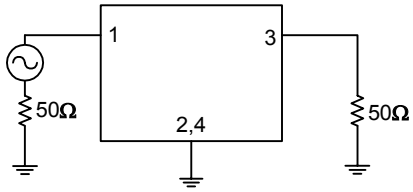
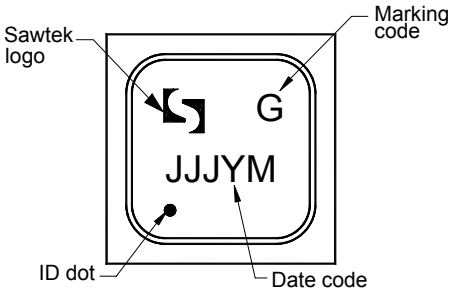
Matching Schematics

50 Ω
Single-ended



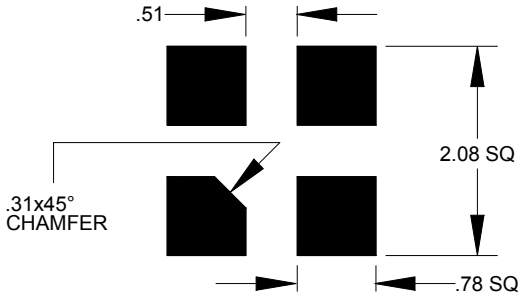
No impedance matching required

Marking



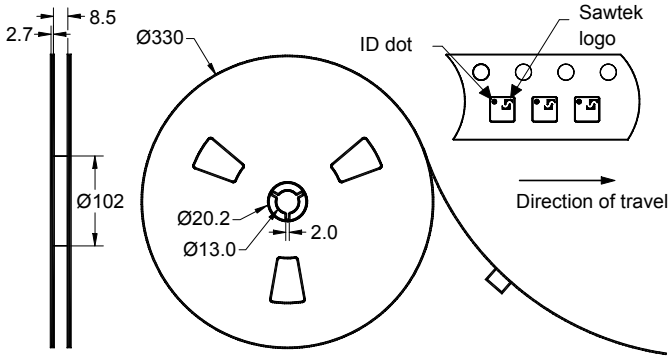
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

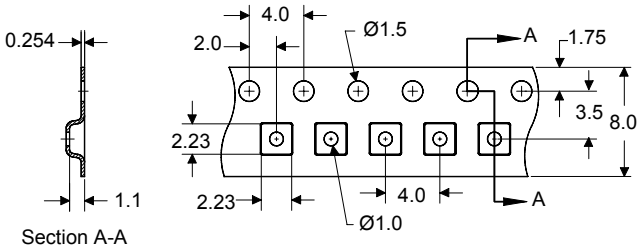
PCB Footprint



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

Tape and Reel





Dimensions shown are nominal in millimeters
Packaging quantity: 10000 units/reel

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Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-30	+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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