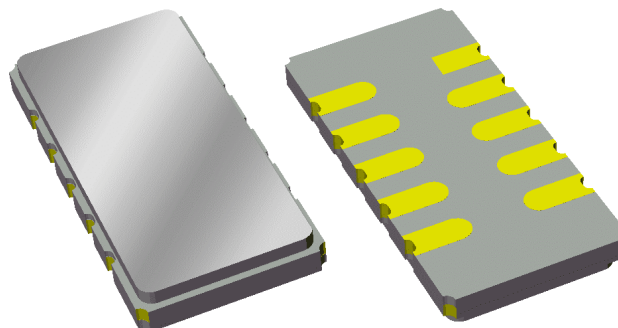


Preliminary Data Sheet

Part Number 856066
140 MHz SAW Filter

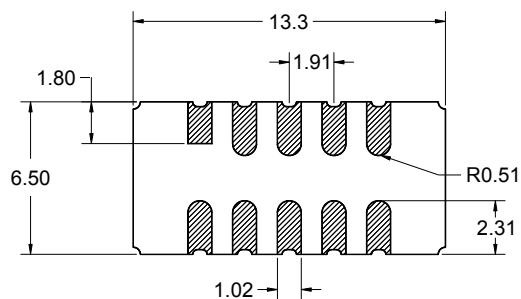
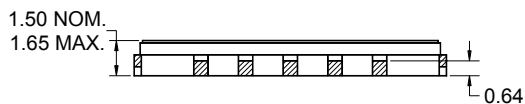
Features

- For broadband applications
- Typical 3 dB bandwidth of 6.2 MHz
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size
- Replaces Sawtek P/N 851913 (BW 3dB=6.0 MHz)



Package

Surface Mount 13.30 x 6.50 x 1.50 mm

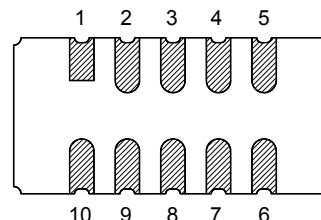


Dimensions shown are nominal in millimeters
All tolerances are ± 0.15 mm except overall
length and width ± 0.10 mm

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

Pin Configuration

Bottom View



Pin No.	Description
5	RF output
10	RF input
1,6	Ground
2,3,4	Case ground
7,8,9	Case ground

Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ 0 to +70 °C

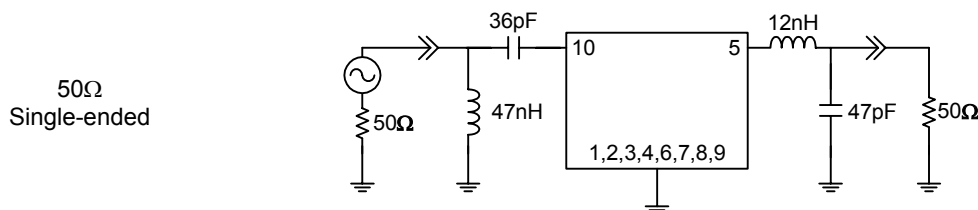
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	140	-	MHz
Minimum Insertion Loss	-	23	24.5	dB
Lower 1 dB Bandedge ⁽⁴⁾	-	137.1	137.28	MHz
Upper 1 dB Bandedge	142.72	142.9	-	MHz
Lower 3 dB Bandedge ⁽⁴⁾	-	136.9	137	MHz
Upper 3 dB Bandedge	143	143.1	-	MHz
Lower 40 dB Bandedge ⁽⁴⁾	135.83	136	-	MHz
Upper 40 dB Bandedge	-	144	144.17	MHz
Amplitude Variation 137.28 - 142.72 MHz	-	0.5	0.9	dB
Phase Linearity 137.28 - 142.72 MHz	-	2.0	3.0	deg
Group Delay Variation 137.28 - 142.72 MHz	-	45	70	nsec
Absolute Delay	-	1.6	-	μsec
Relative Attenuation ⁽⁴⁾ 15 - 135 MHz	50	60	-	dB
145 - 350 MHz	50	60	-	dB
Source Impedance ⁽⁵⁾	-	50	-	Ω
Load Impedance ⁽⁵⁾	-	50	-	Ω
Substrate Material	-	LiTaO ₃	-	-
Temperature Coefficient of Frequency	-	-23	-	ppm/°C

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. All attenuation measurements are measured relative to minimum insertion loss
5. This is the optimum impedance in order to achieve the performance shown

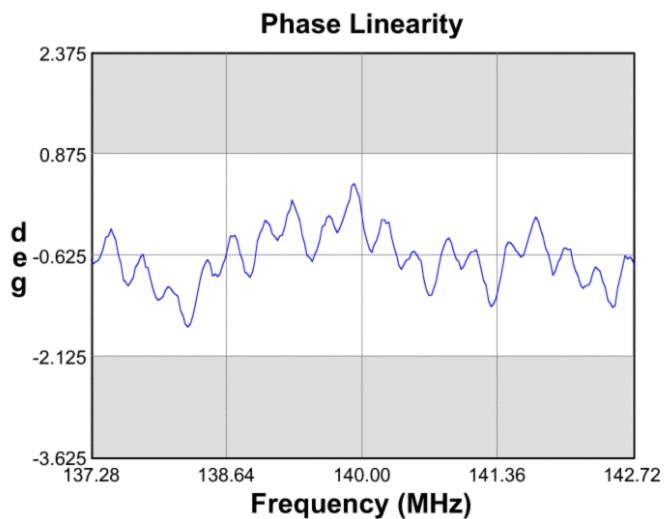
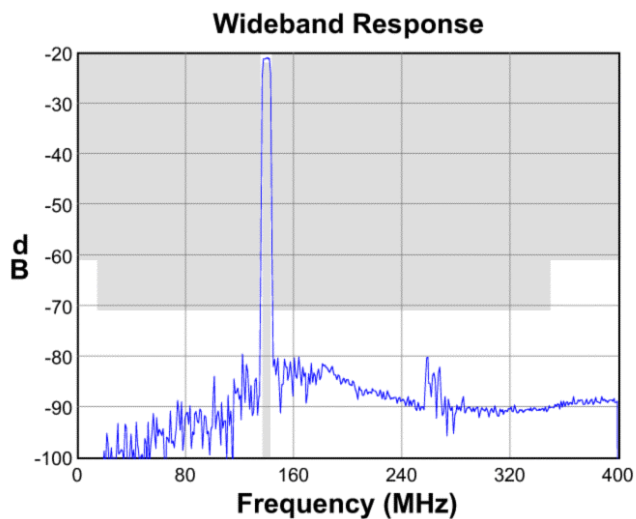
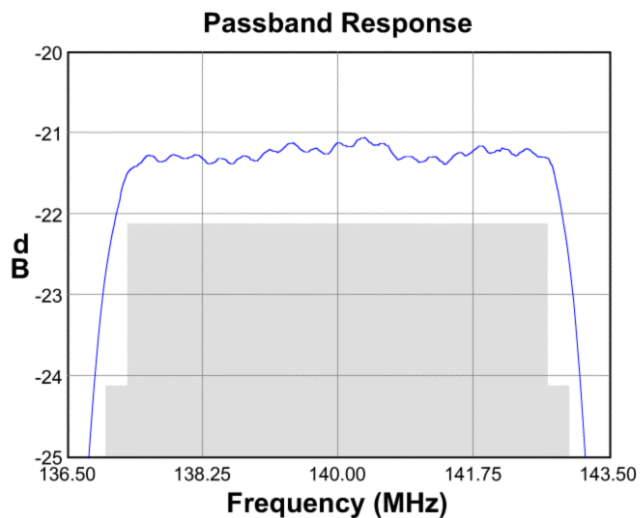
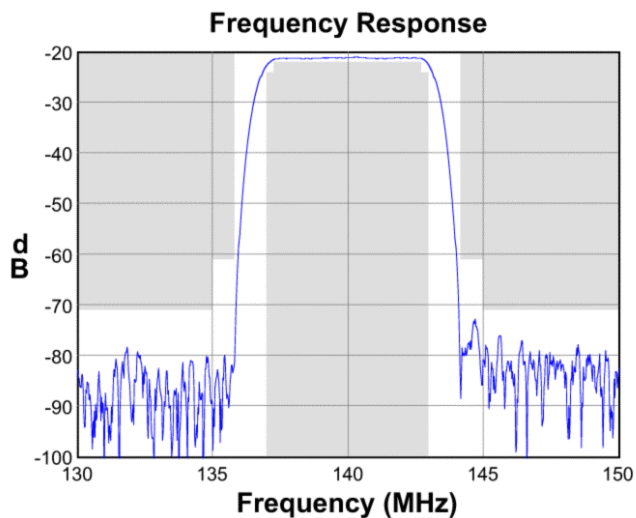
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

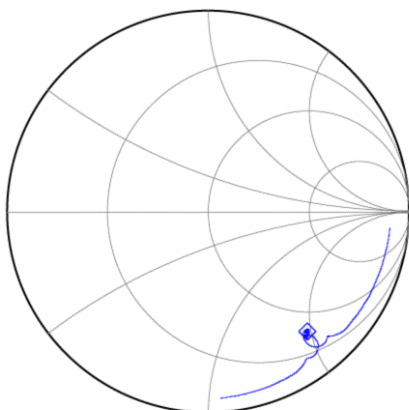


Preliminary Data Sheet

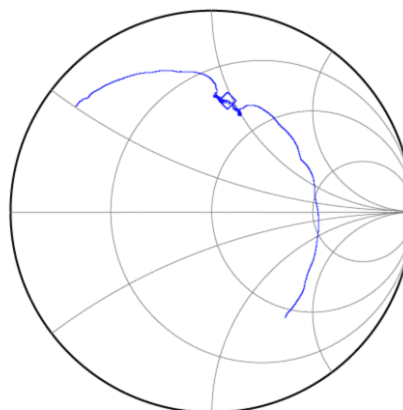
Typical Performance (at +25°C)



Input Smith Chart



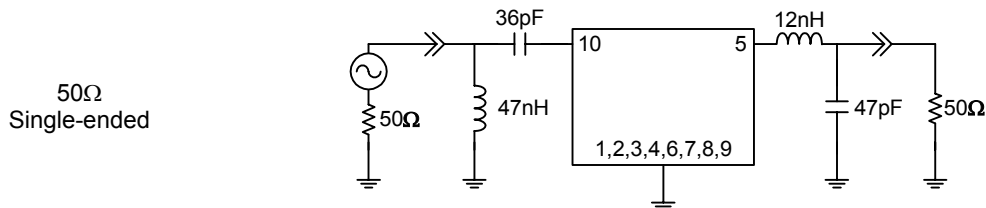
Output Smith Chart



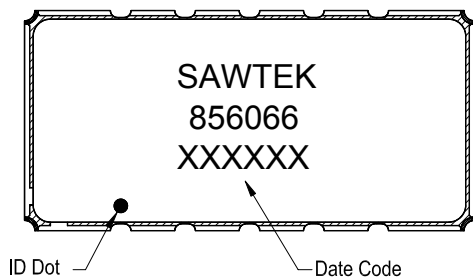
Preliminary Data Sheet

Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

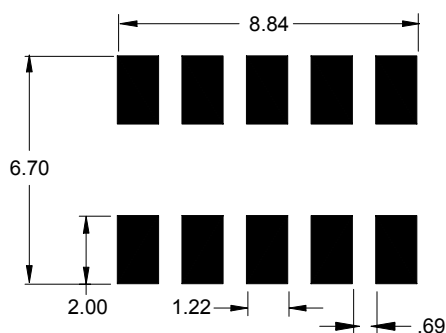


Marking



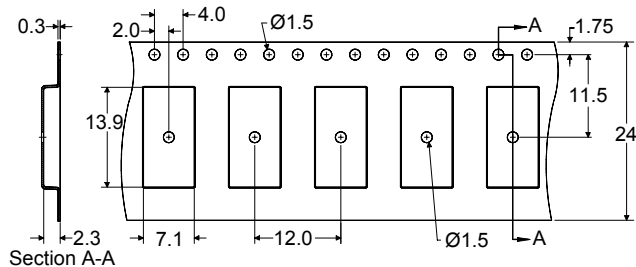
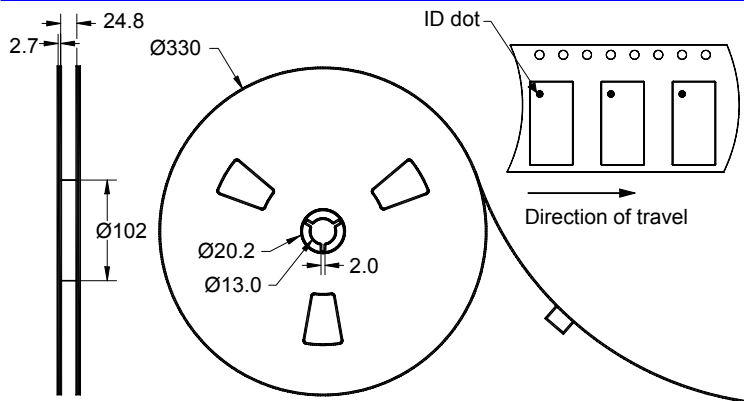
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

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

Preliminary Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating Temperature Range	T	0	+25	+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](#)

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[representatives or distributors](#)