



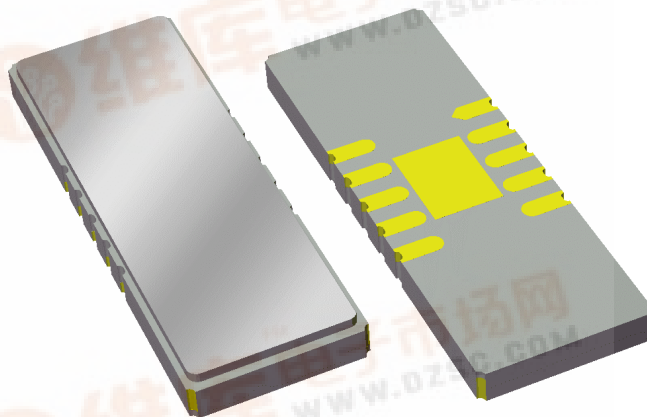
Part Number 855738

70 MHz SAW Filter

Data Sheet

Features

- For broadband applications
- Typical 3dB bandwidth of 1 MHz
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Replaces Sawtek P/N 851545 (BW 3dB=1.5 MHz)

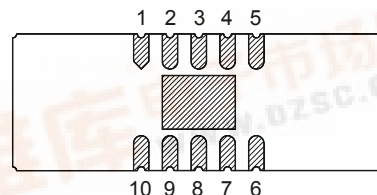
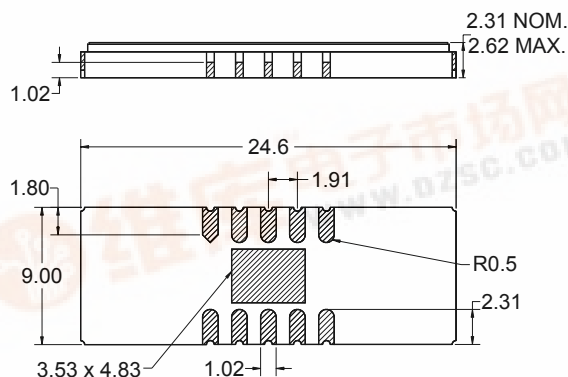


Package

Surface Mount 24.60 x 9.00 x 2.31 mm

Pin Configuration

Bottom View



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

Dimensions shown are nominal in millimeters
All tolerances are ± 0.15 mm except overall length ± 0.20 mm and width $+0.13/-0.20$ 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



Data Sheet

Electrical Specifications ⁽¹⁾

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

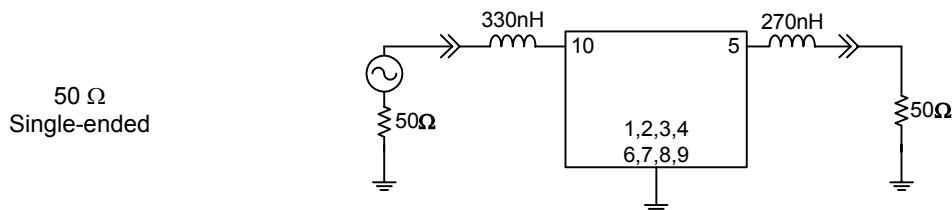
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	70	-	MHz
Minimum Insertion Loss	-	21.6	23	dB
Lower 1 dB Bandedge ⁽⁴⁾	-	69.30	69.35	MHz
Upper 1 dB Bandedge	70.65	70.70	-	MHz
Lower 3 dB Bandedge ⁽⁴⁾	-	69.18	69.22	MHz
Upper 3 dB Bandedge	70.78	70.81	-	MHz
Lower 40 dB Bandedge ⁽⁴⁾	68.71	68.74	-	MHz
Upper 40 dB Bandedge	-	71.26	71.29	MHz
Amplitude Variation 69.35 - 70.65 MHz	-	0.64	1	dB p-p
Phase Linearity 69.35 - 70.65 MHz	-	2.4	5	deg p-p
Group Delay Variation 69.35 - 70.65 MHz	-	97	200	nsec
Relative Attenuation ⁽⁴⁾				
10 - 68 MHz	50	64	-	dB
72 - 110 MHz	50	60	-	dB
110 - 118 MHz	30	35	-	dB
118 - 124 MHz	50	66	-	dB
124 - 133 MHz	30	37	-	dB
133 - 200 MHz	50	66	-	dB
Source Impedance ⁽⁵⁾	-	50	-	Ω
Load Impedance ⁽⁵⁾	-	50	-	Ω
Substrate Material	-	Quartz	-	-

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

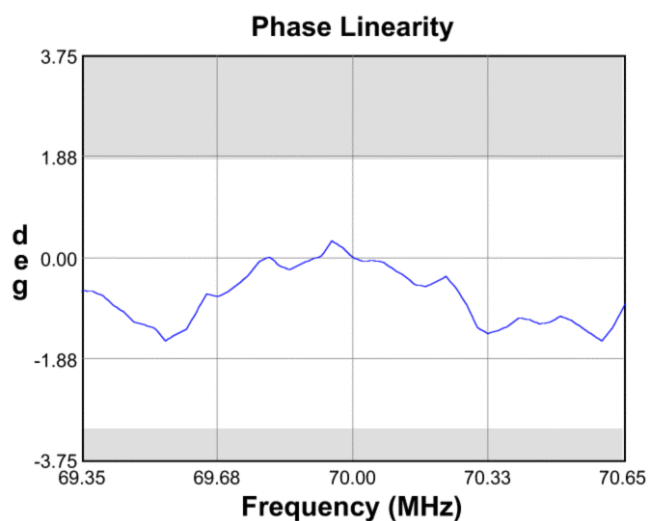
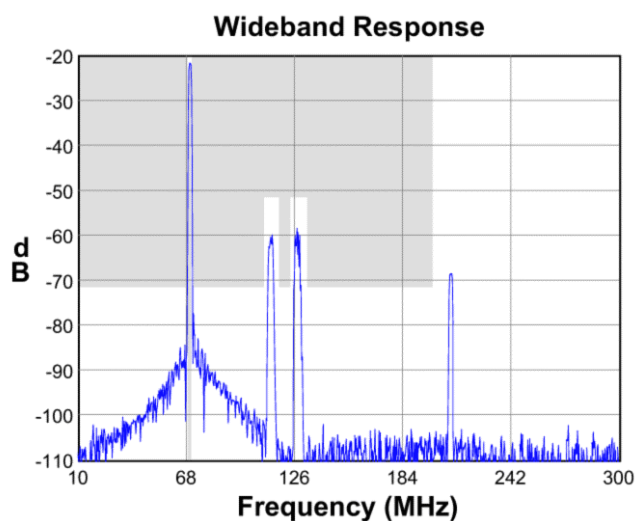
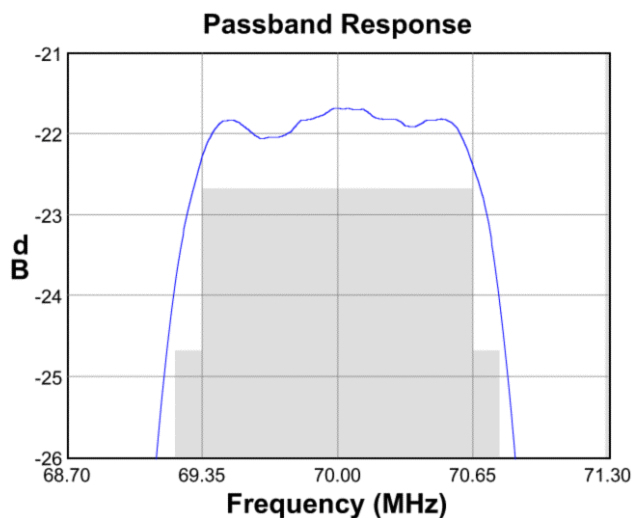
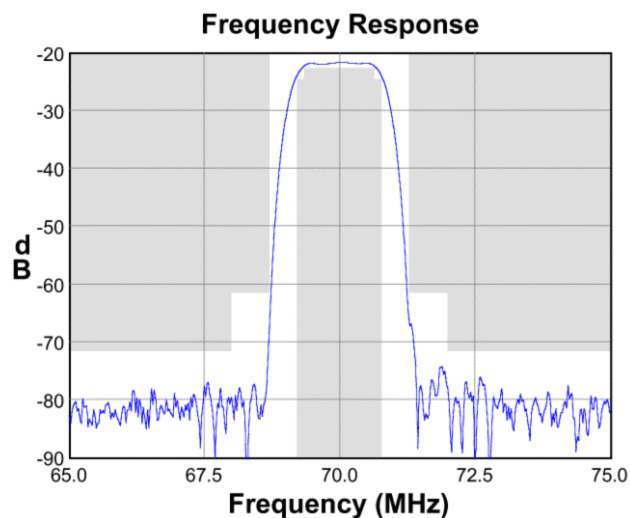
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

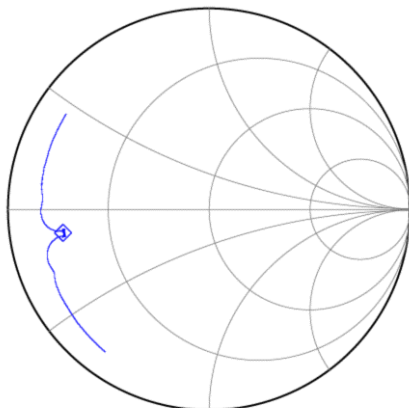


Data Sheet

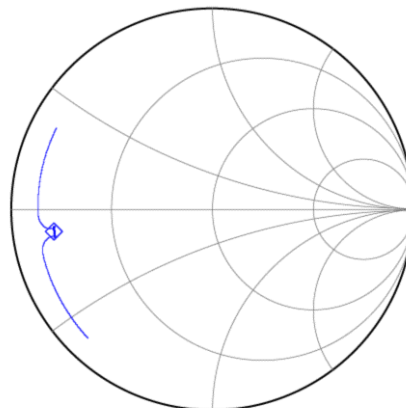
Typical Performance (at +25°C)



Input Smith Chart

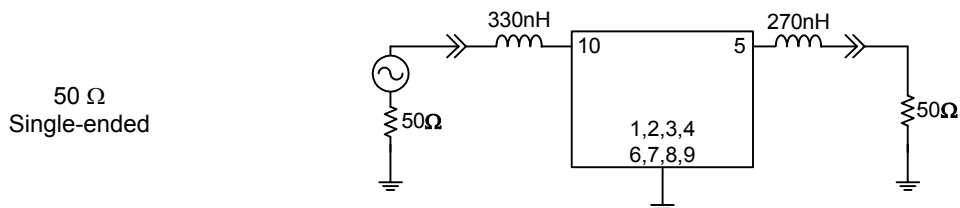


Output Smith Chart

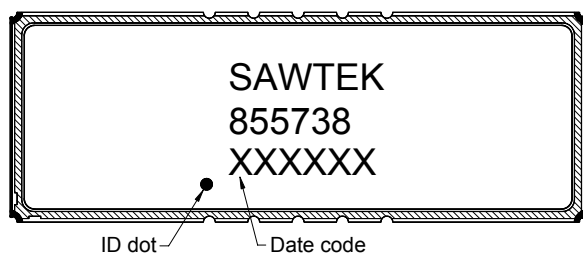


Data Sheet

Matching Schematics

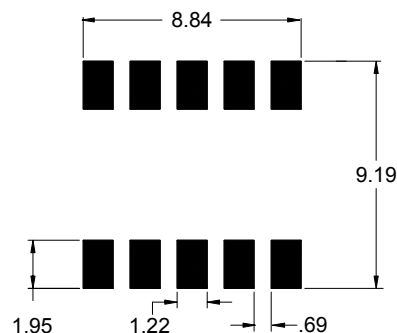


Marking



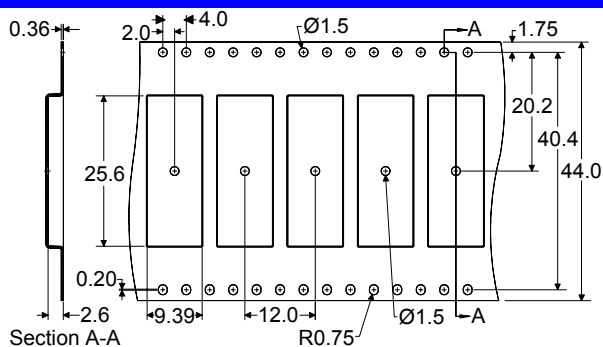
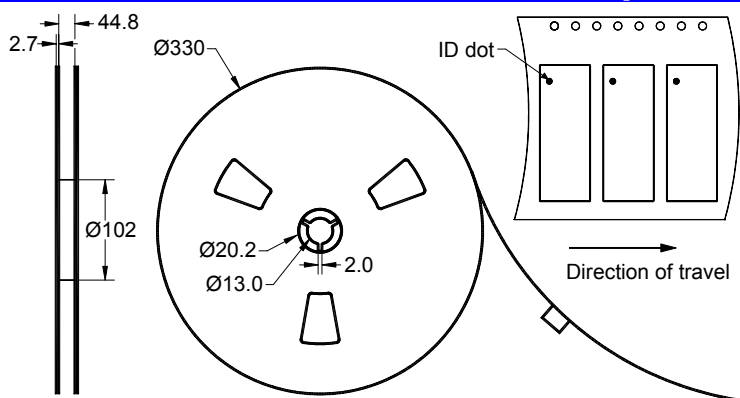
Date code is the day of the current year in Julian format, last digit of the year, and hour of the day

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: 1000 units/reel

Data Sheet

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](#)

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