

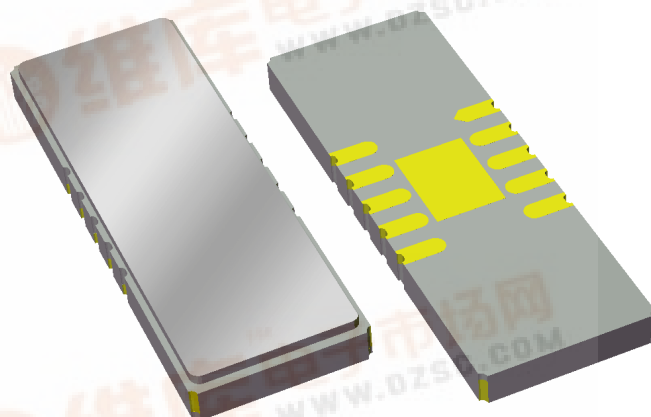


Preliminary Data Sheet

Part Number 855736
70 MHz SAW Filter

Features

- For IF applications
- Typical 3 dB bandwidth of 0.7 MHz
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Replaces Sawtek P/N 851542 (BW 3dB = 0.5 MHz)

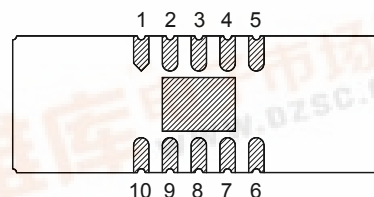
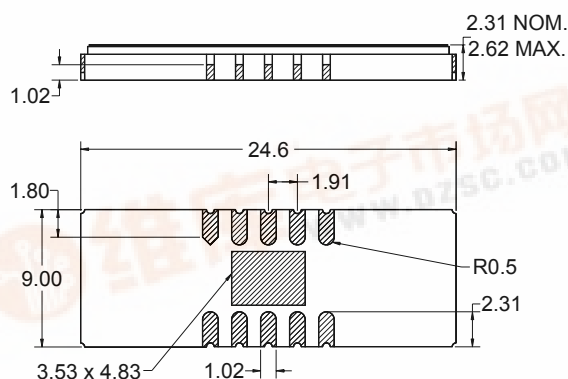


Package

Surface Mount 24.60 x 9.00 x 2.31 mm

Pin Configuration

Bottom View



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

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



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Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾

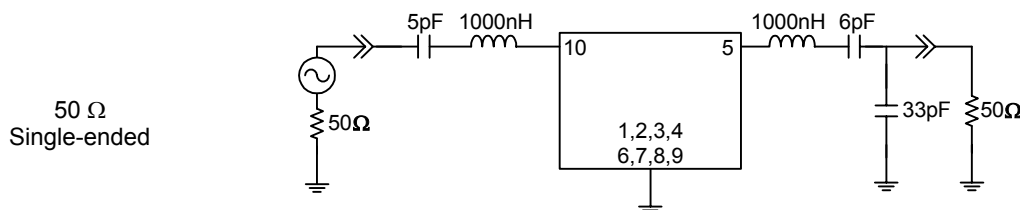
0 to +70 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	70	-	MHz
Minimum Insertion Loss	-	21.3	22	dB
Upper 1 dB Point ⁽⁴⁾	70.155	70.205	-	MHz
Lower 1 dB Point ⁽⁴⁾	-	69.795	69.845	MHz
Upper 3 dB Point ⁽⁴⁾	70.31	70.35	-	MHz
Lower 3 dB Point ⁽⁴⁾	-	69.65	69.69	MHz
Upper 40 dB Point ⁽⁴⁾	-	70.815	70.836	MHz
Lower 40 dB Point ⁽⁴⁾	69.165	69.185	-	MHz
Absolute Attenuation				
10 - 68 MHz	60	62	-	dB
72 - 85 MHz	45	55	-	dB
85 - 108 MHz	60	62	-	dB
108 - 140 MHz	50	55	-	dB
140 - 200 MHz	60	62	-	dB
Amplitude Variation 69.85 - 70.15 MHz	-	0.8	1	dB p-p
Phase Ripple 69.85 - 70.15 MHz	-	1.2	3	deg p-p
Group Delay Variation 69.85 - 70.15 MHz	-	100	200	nsec p-p
Source Impedance: ⁽⁶⁾	-	50	-	Ω
Load Impedance: ⁽⁶⁾	-	50	-	Ω

Notes:

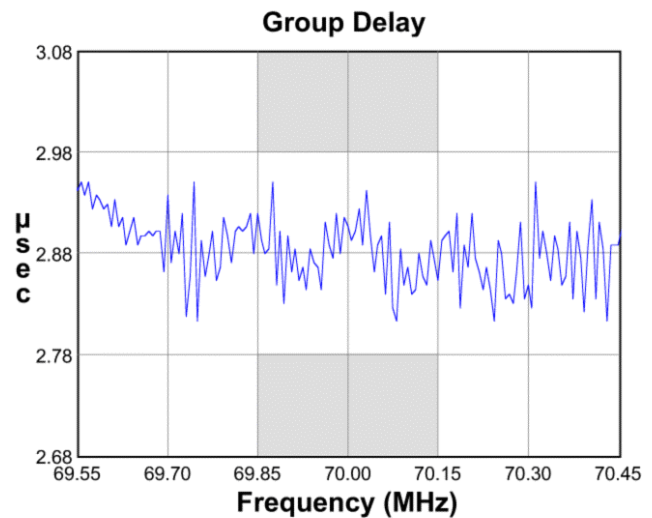
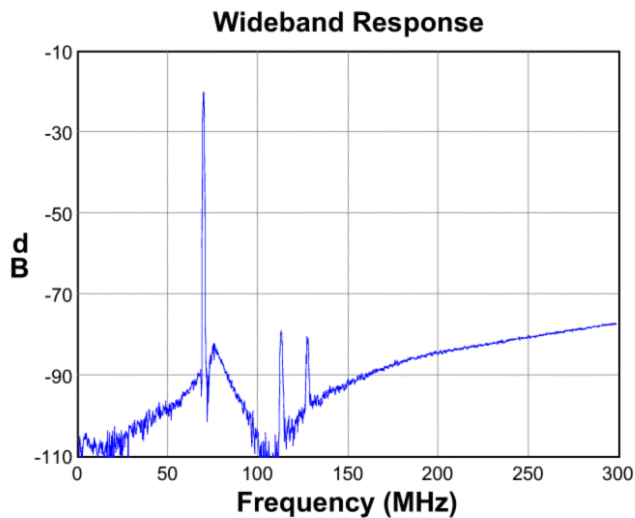
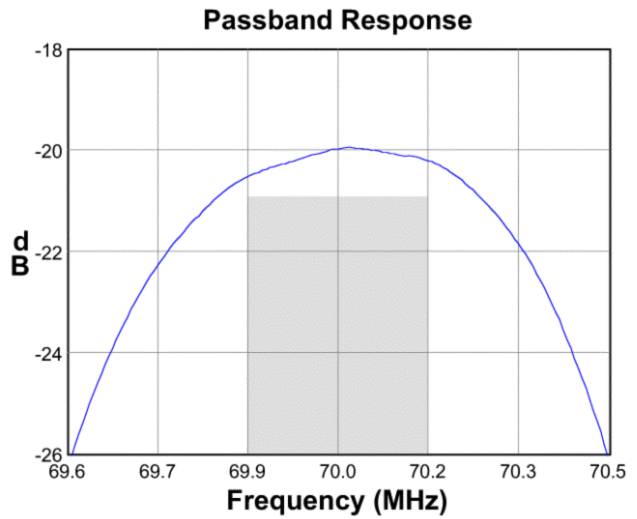
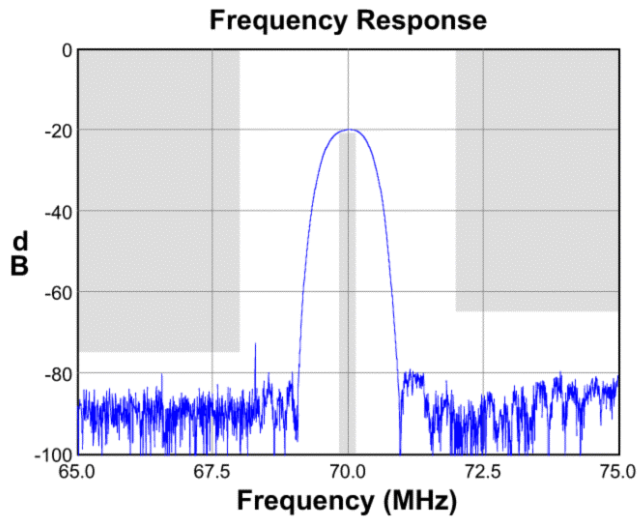
1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. 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:

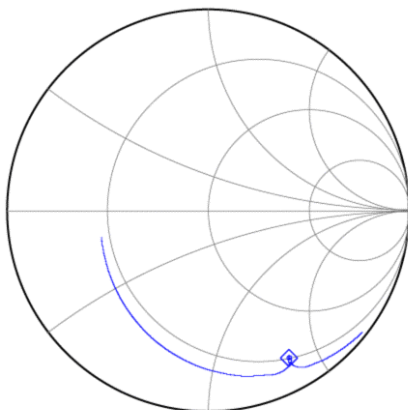


Preliminary Data Sheet

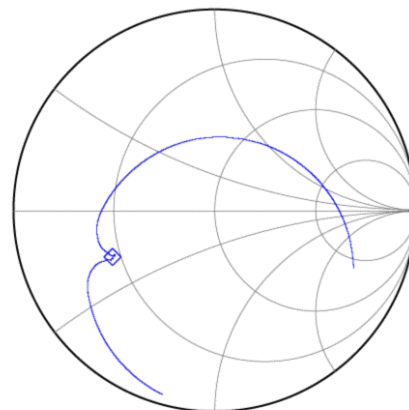
Typical Performance (at +25°C)



Input Smith Chart



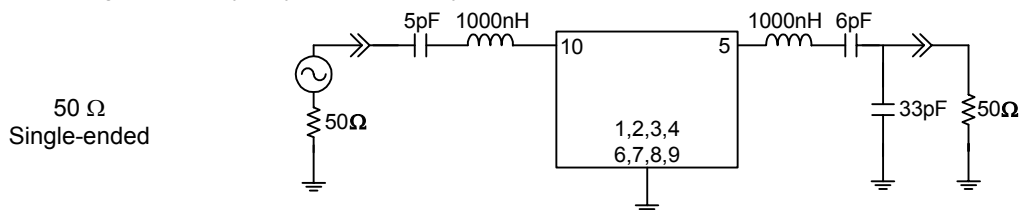
Output Smith Chart



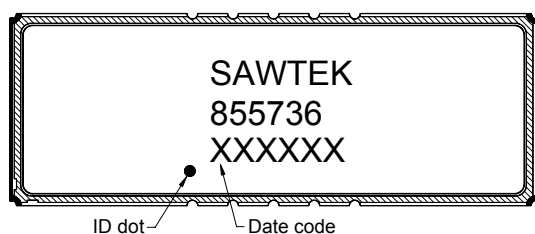
Preliminary Data Sheet

Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

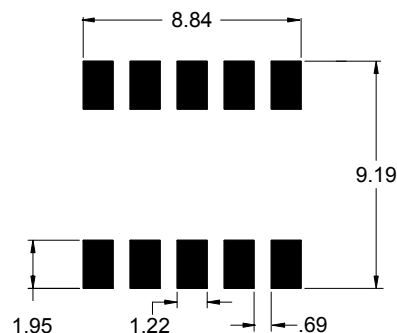


Marking



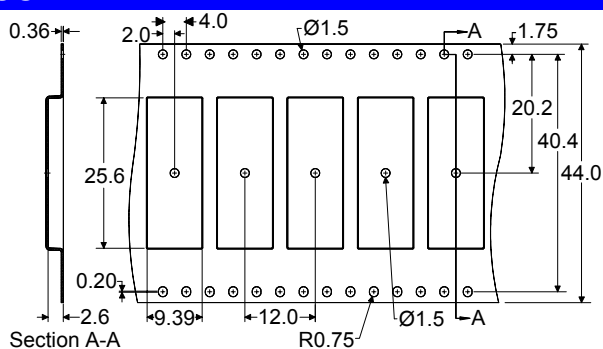
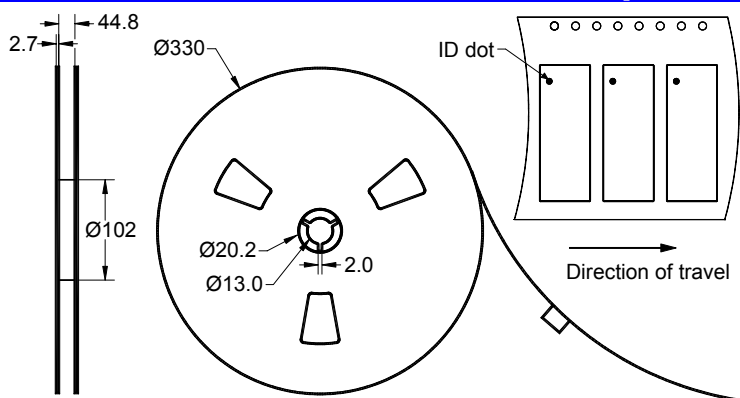
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

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: 1000 units/reel

Preliminary Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	0	+70	°C
Storage Temperature Range	T _{stg}	-40	+85	°C
RF Power	P _{in}	-	+10	dBm

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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