

SAW Filter 307.20MHz

Model: TB1052A

Part No: MP03853

Rev No:1

A. MAXIMUM RATING:

Electrostatic Sensitive Device

1. Operating temperature range: -40°C to 85°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level: 18 dBm
4. Maximum DC Voltage: 10V

B. CHARACTERISTICS:

Ambient Temperature: 25°C

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	307.2	-
Insertion Loss IL	dB	-	16.8	18.5
1.0dB Band Width	MHz	62.0	65.0	-
3dB Band Width	MHz	65.0	67.8	-
Amplitude Ripple Fc ± 27MHz	dB	-	0.5	1.0
Group Delay Ripple Fc ± 27MHz	ns	-	29	100
Absolute Group Delay at Fc	us	-	0.4	1.0
Attenuation (Reference level from minimum Insertion loss)				
100MHz ~ 214MHz	dB	45	55	-
214MHz ~ 257.2MHz	dB	20	55	-
357.2MHz ~ 400MHz	dB	20	55	-
400MHz ~ 600MHz	dB	45	55	-
600MHz ~ 1000MHz	dB	40	65	-
Temperature Coefficient	ppm/°C	-	-94	-
Source Impedance	Ohm	-	200	-
Load Impedance	Ohm	-	50	-

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C. FREQUENCY CHARACTERISTICS:

1. Narrow band Response: (span 400MHz)

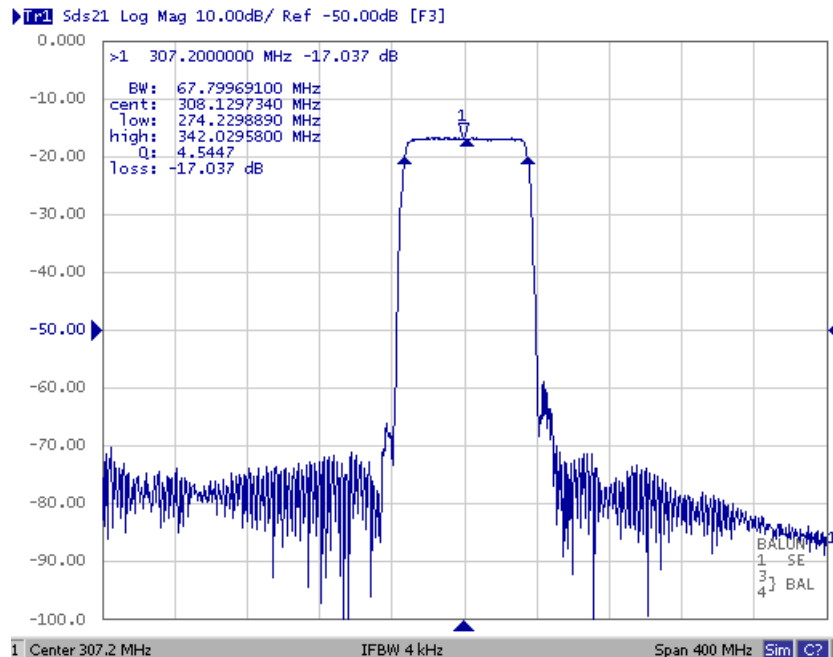


Fig. 1: Horizontal: 40MHz/Div, Vertical: 10dB/Div

2. Pass band Response and Group Time Delay response:

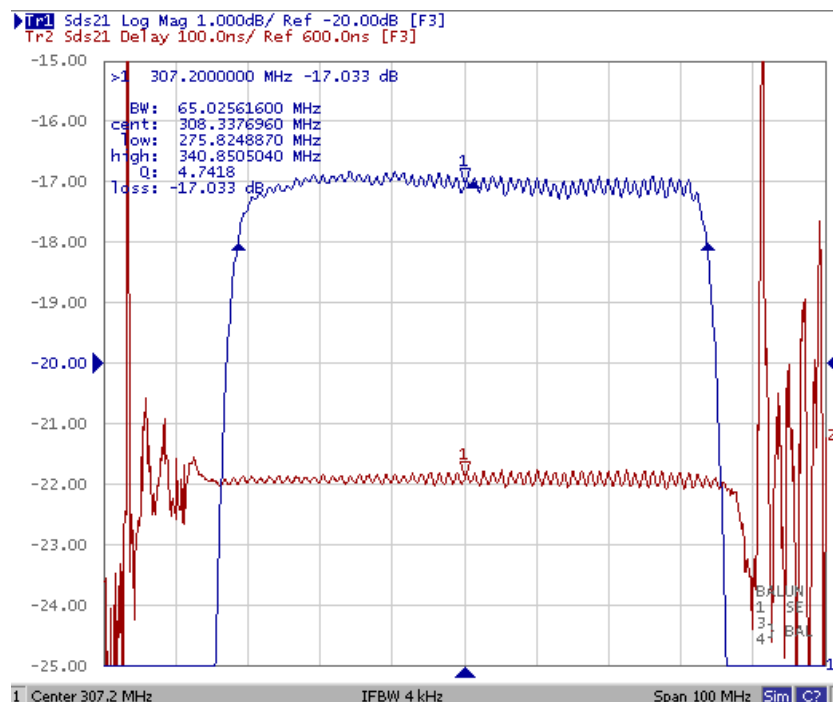
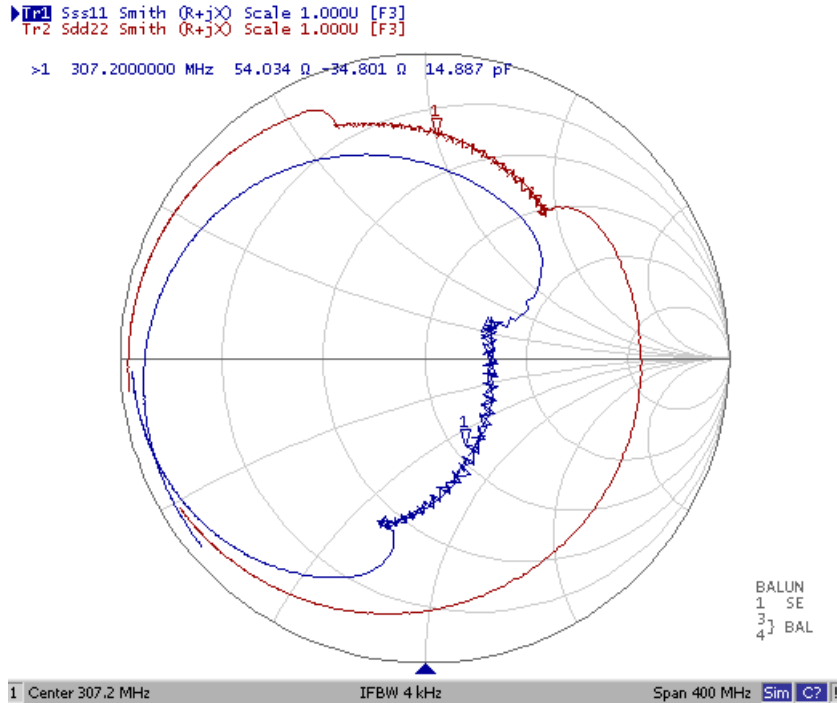


Fig. 2: Horizontal: 10MHz/Div, Vertical: 1dB/Div, Vertical: 100ns/Div

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3. Smith Chart:



4. Wide band Response:

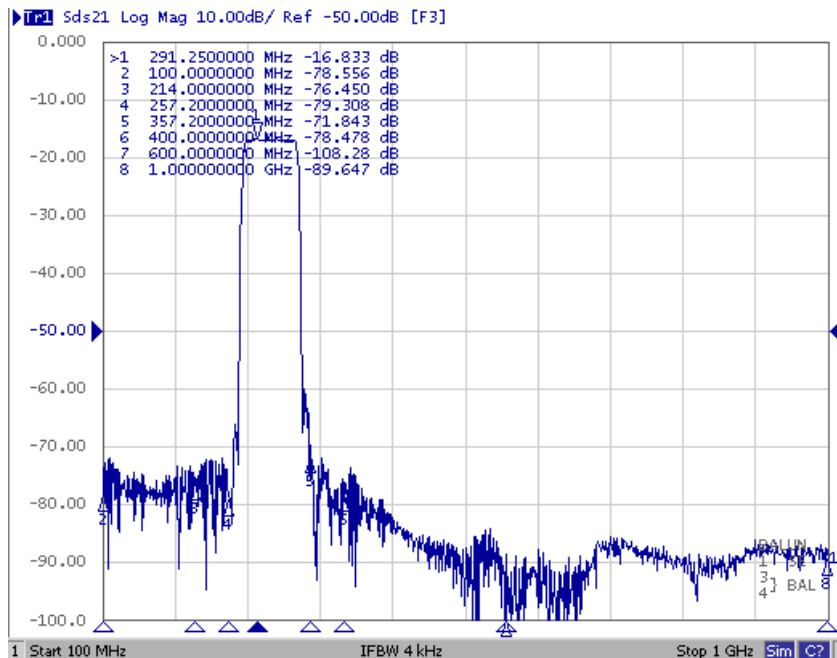
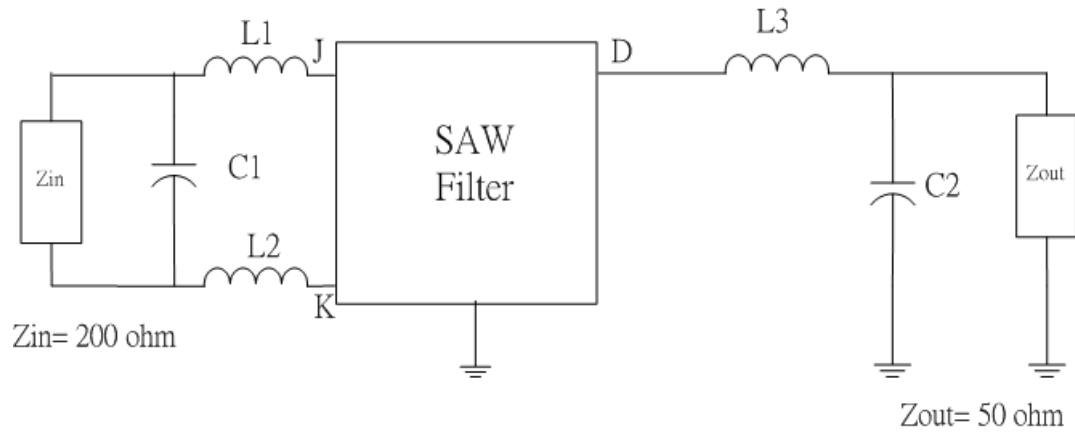


Fig. 4: Horizontal: 90MHz/Div, Vertical: 10dB/Div

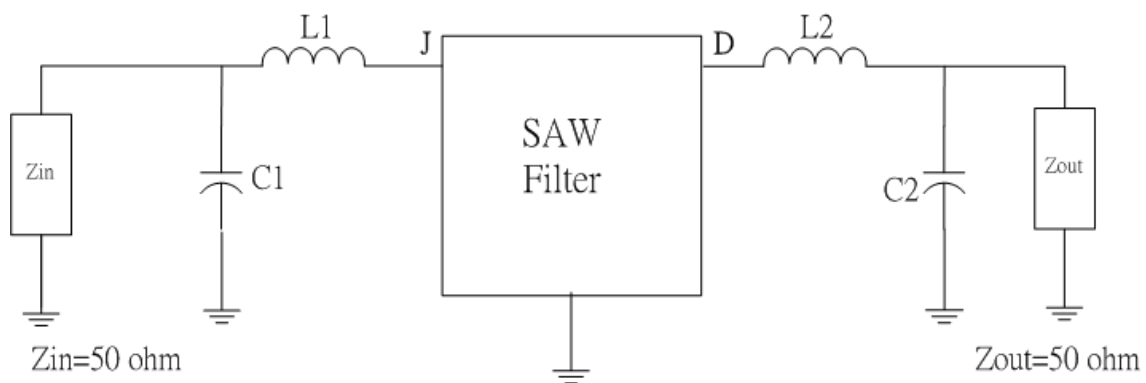
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D. MATCHING CIRCUIT:



$L1 = L2 = 15\text{nH}$ $L3 = 10\text{nH}$ $C1 = 4.7\text{pF}$ $C2 = 22\text{pF}$

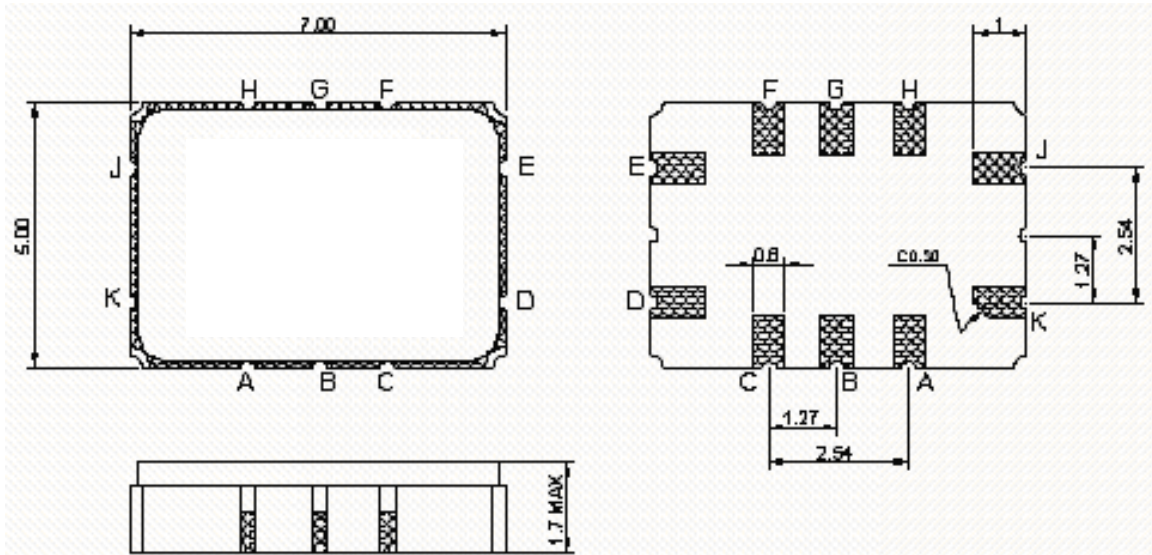


$L1 = 10\text{nH}$ $L2 = 10\text{nH}$ $C1 = 15\text{pF}$ $C2 = 18\text{pF}$

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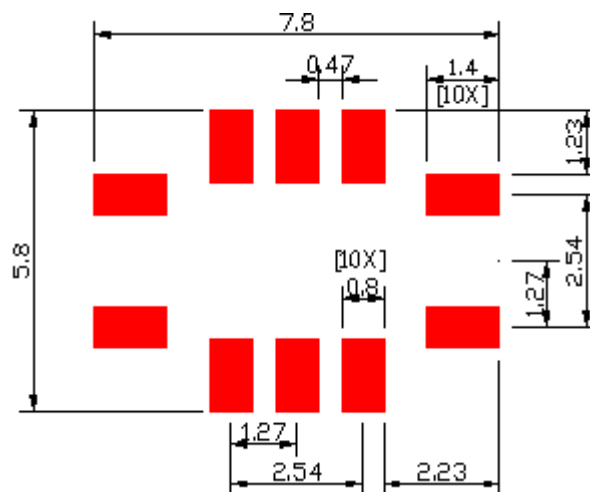
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E. OUTLINE DRAWING:



- J: RF input
 - K: RF balance input or to be ground
 - D: RF output
 - E: RF output ground
 - A, B, C, F, G, H: Ground
- Unit: mm

F. PCB FOOTPRINT:

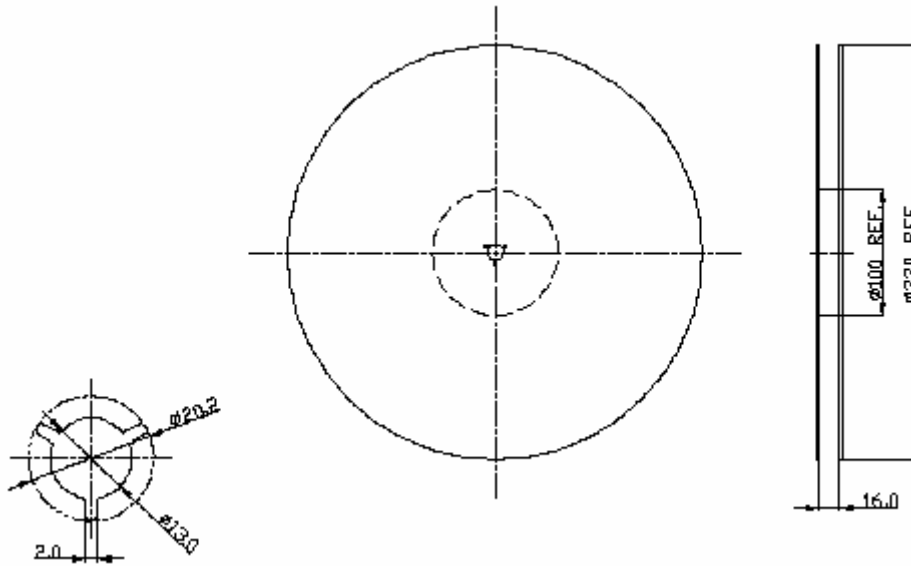


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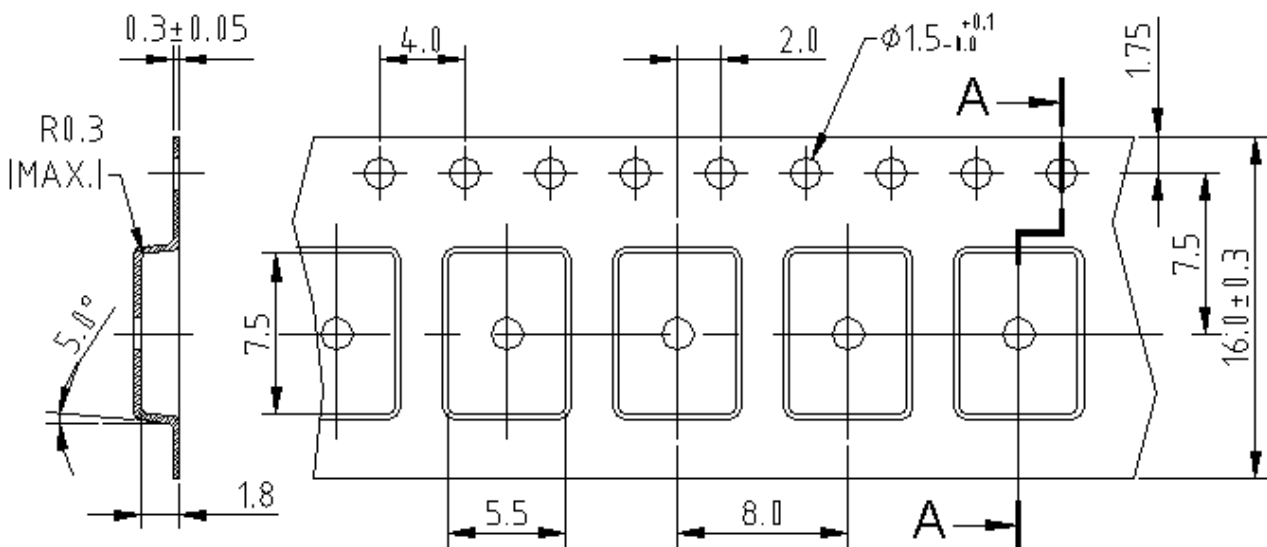
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G. PACKING:

1. Reel Dimension



2. Tape Dimension



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H. RECOMMENDED REFLOW PROFILE:

