

**SAW Filter 168.0MHz**  
**Part No: MP02660**

**Model: TB0727A**  
**Rev No: 2**

**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: 10dBm
4. Maximum DC Voltage: 10V

**B. CHARACTERISTICS:**

Ambient Temperature: 25°C

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	168	-
Insertion Loss IL	dB	-	12.2	13.5
-1dB BW	MHz	-	20.9	-
-3dB BW	MHz	20	22.4	-
Upper -35dB Band edge	MHz	-	181.7	183
Lower -35dB Band edge	MHz	153	155.1	-
Passband ripple at Fc ±8MHz	dB	-	0.4	1.0
Group delay ripple at Fc ±8MHz	ns	-	35	160
Absolute delay	us	-	0.85	1.0
Temperature Coefficient	ppm/°C	-	-72	-
Source / Load Impedance	Ohm	-	50	-

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**C. FREQUENCY CHARACTERISTICS:**

1. S21 Response: (span 180MHz)

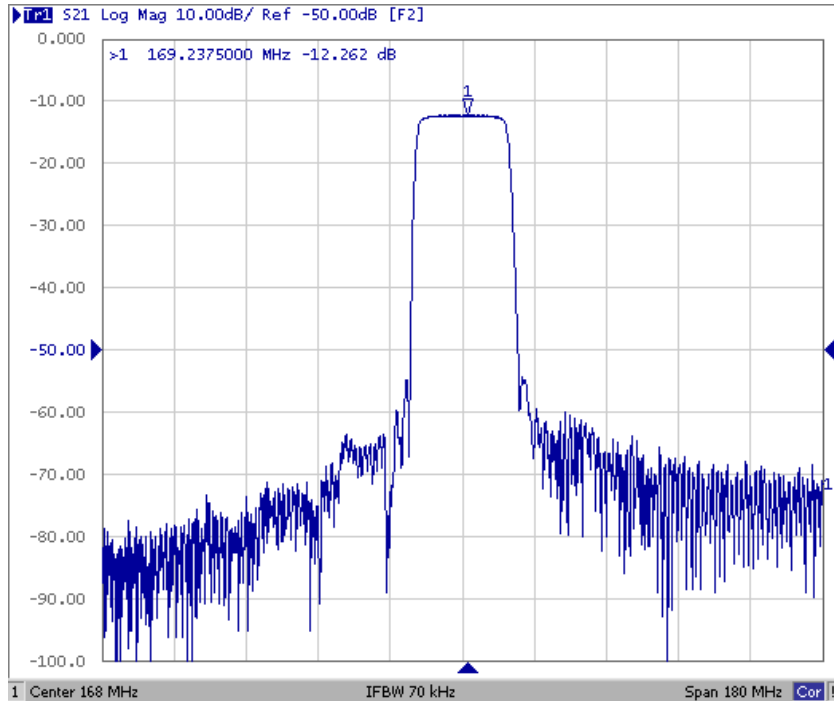


Fig 1: Horizontal: 18MHz / Div, Vertical: 10dB / Div

2. Pass band Response:

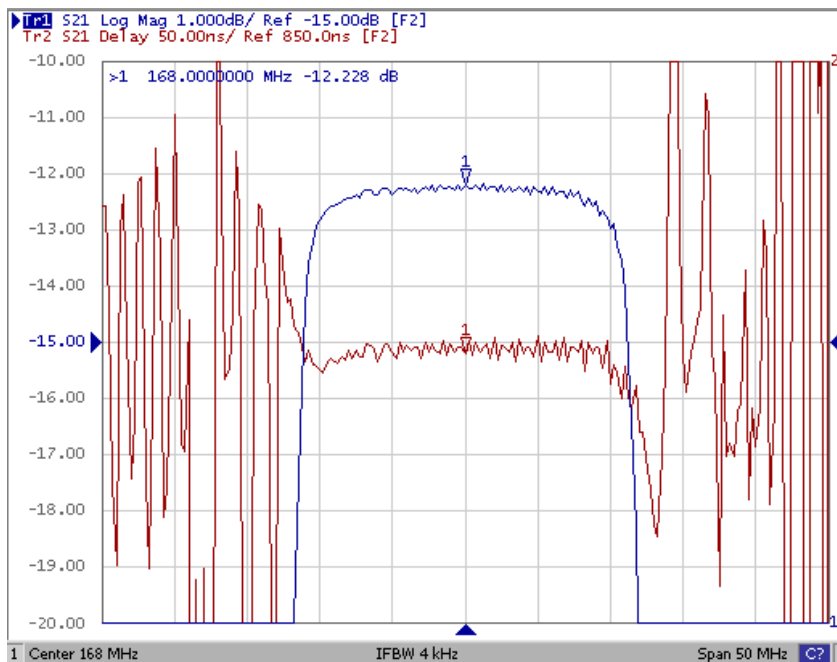
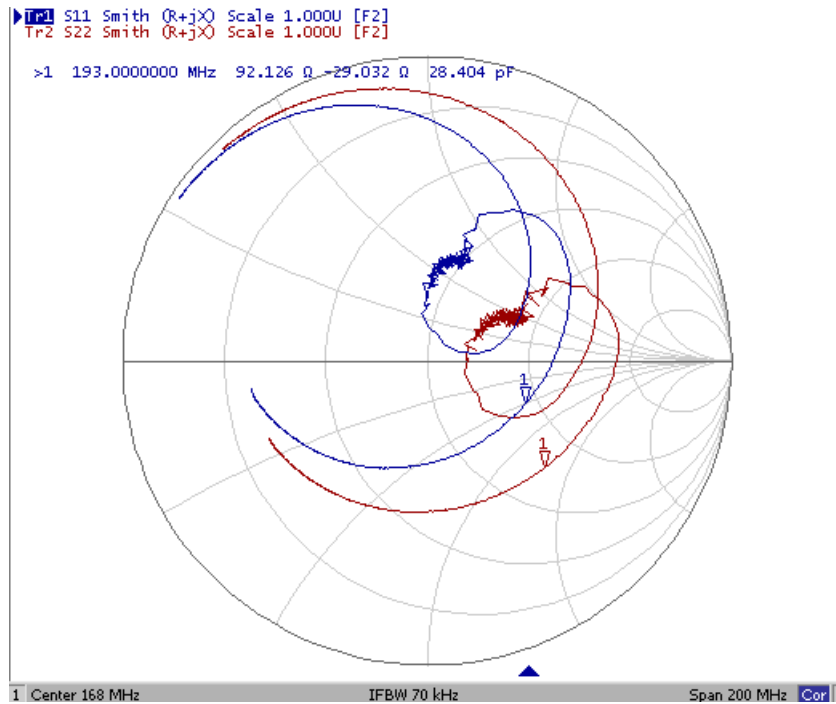


Fig 2: Horizontal: 5MHz / Div, Vertical: 1dB / Div, Vertical: 50ns / Div

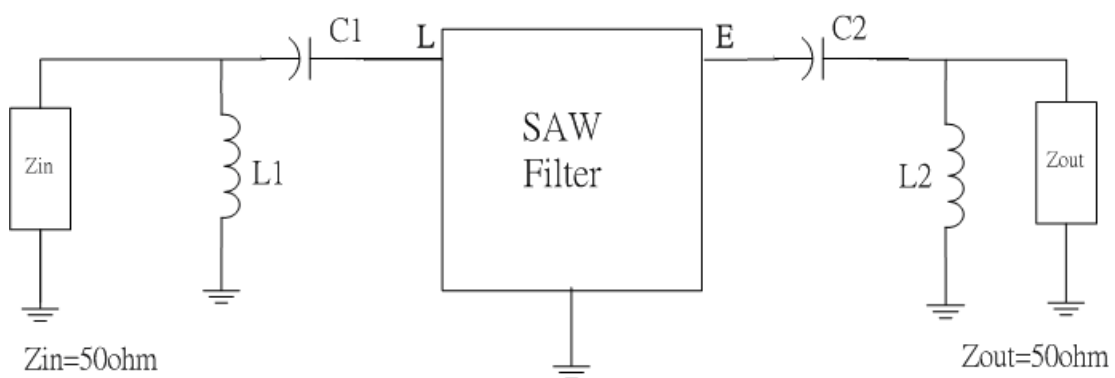
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3. Smith chart:



**D. MATCHING CIRCUIT:**

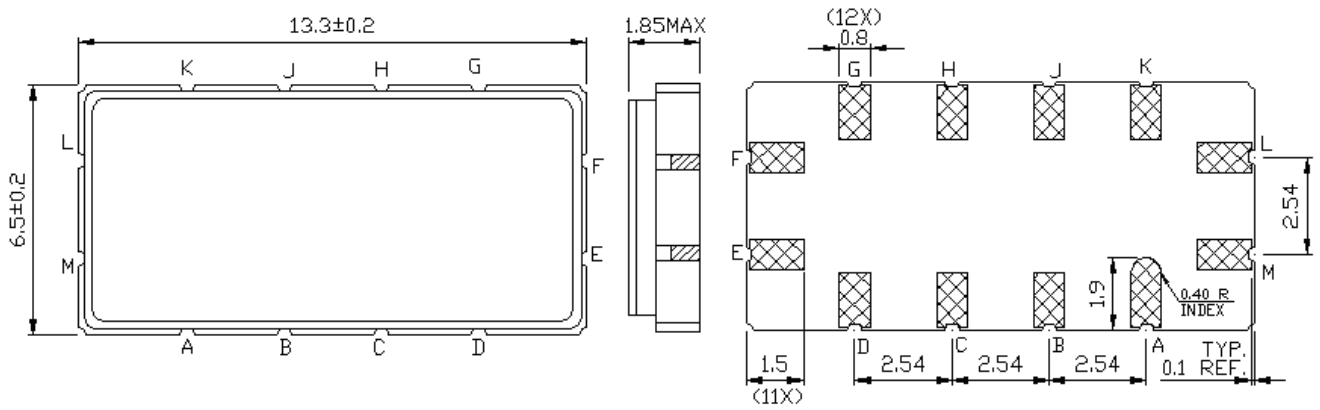


$L1 = 27\text{nH}, L2 = 39\text{nH}, C1 = 82\text{pF}, C2 = 82\text{pF}$

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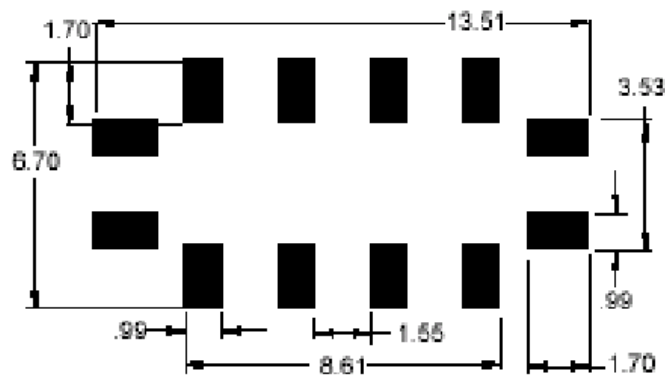
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**E. OUTLINE DRAWING:**



L: RF Input  
 E: RF Output  
 A, B, C, D, F, G, H, J, K, M: Ground  
 Unit: mm

**F. PCB FOOTPRINT:**



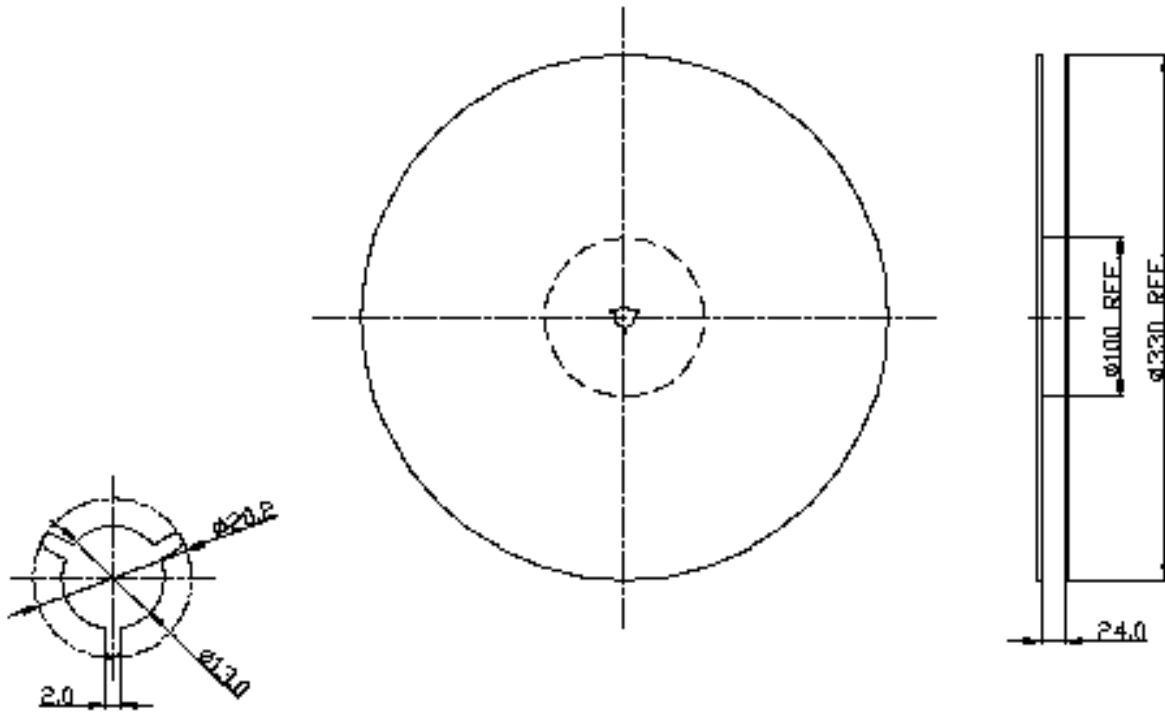
Unit: mm

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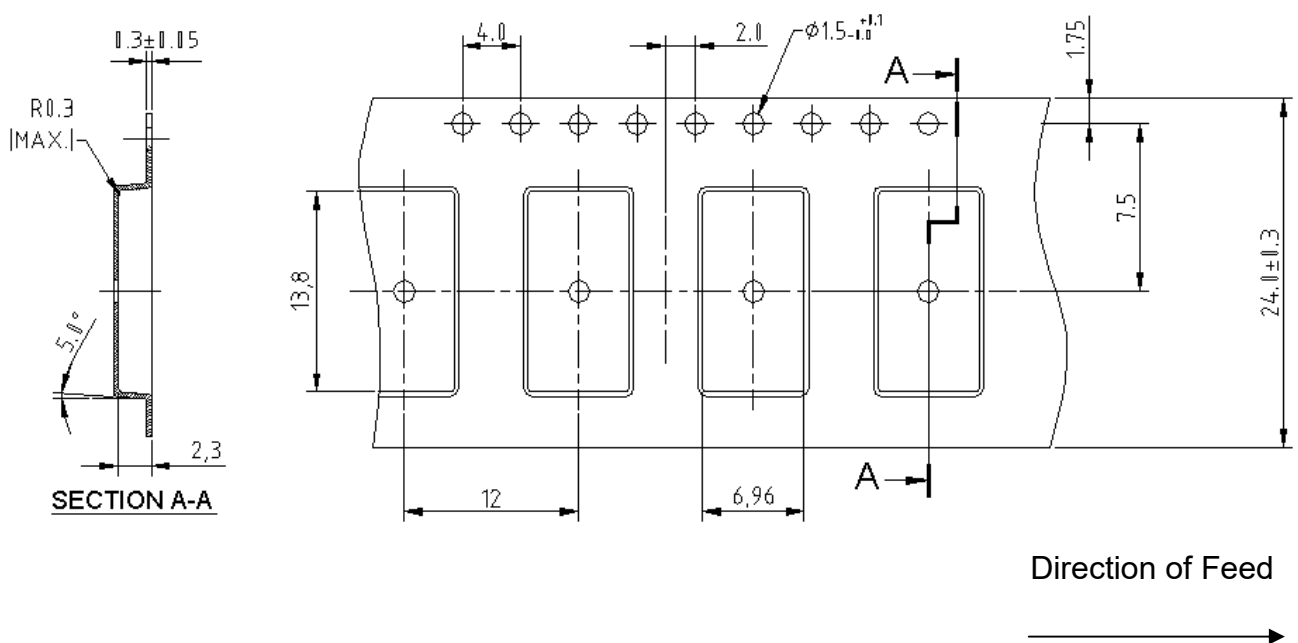
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**G. PACKING:**

1. Reel Dimensions



2. Tape Dimensions



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**H. RECOMMENDED REFLOW PROFILE:**

1. Preheating shall be fixed at 150 ~ 180°C for 60 ~ 90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50 ~ 80 seconds and at 260°C +0/-5°C peak (20 ~ 40 sec).
4. Time: 2 times.

