

**SAW Filter 138.240MHz**  
**Part No: MP03454**

**Model: TB0695A**  
**Rev No: 1**

**A. MAXIMUM RATING:**

1. Operating temperature range: -10°C to 80°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level: 10dBm
4. Maximum DC Voltage: 10V

**B. CHARACTERISTICS:**

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	138.24	-
Insertion Loss IL	dB	-	22	24
Upper -1dB frequency	MHz	176.24	177.731	-
Lower -1dB frequency	MHz	-	97.77	100.24
Upper -35dB frequency	MHz	-	183.4	186.0
Lower -35dB frequency	MHz	90.0	93.9	-
Ultimate rejection	dB	34	45	
Passband Ripple to 1dB frequencies	dB	-	1.0	1.5
Temperature Coefficient	ppm/°C	-	-72	-
Source Impedance (Balanced)	Ω	-	50	-
Load Impedance (Balanced)	Ω	-	50	-

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**C. FREQUENCY CHARACTERISTICS:**

1. Wide band Response: (span 600MHz)

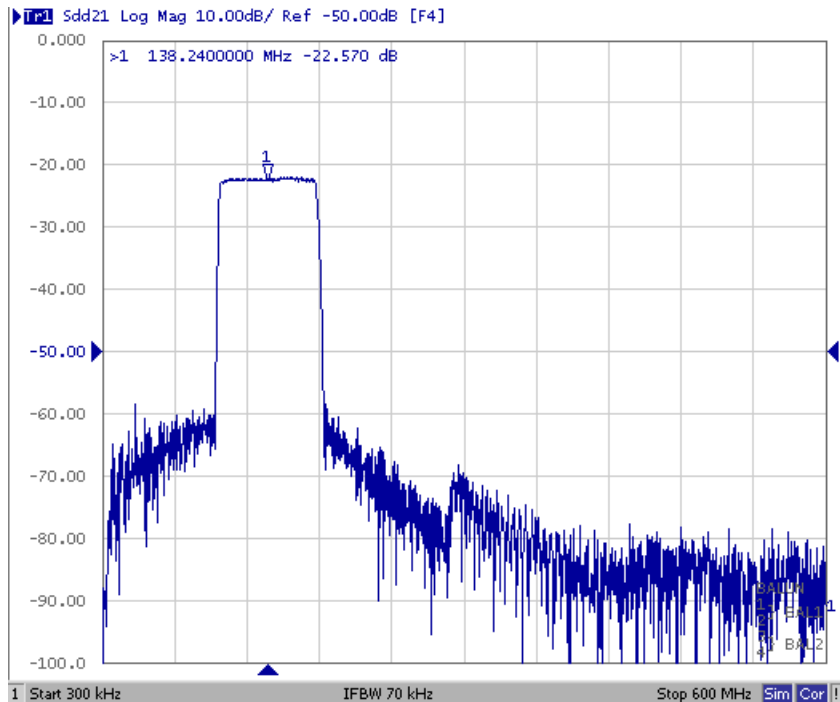


Fig. 1. Horizontal: 60MHz/Div, Vertical: 10dB/Div

2. Pass band Response and Group Time Delay response:

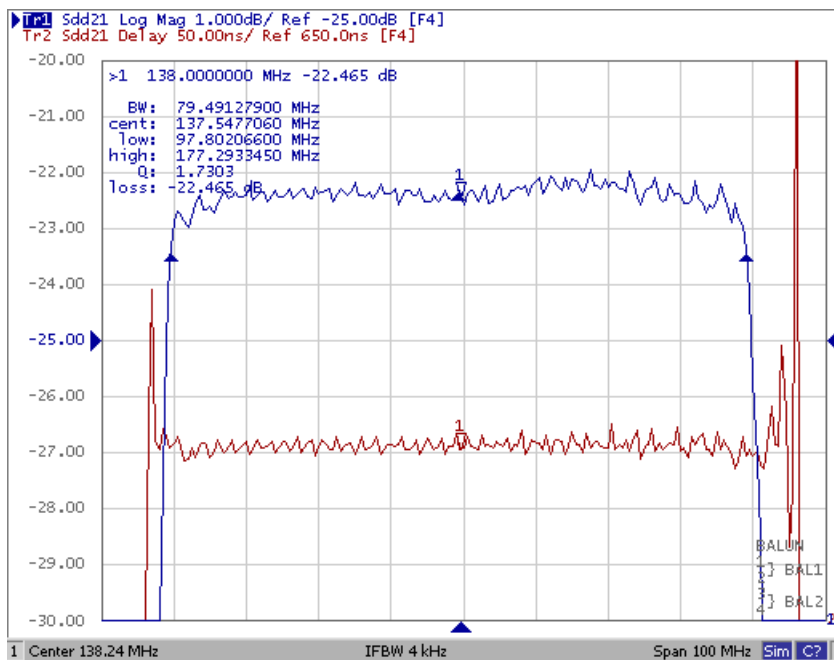
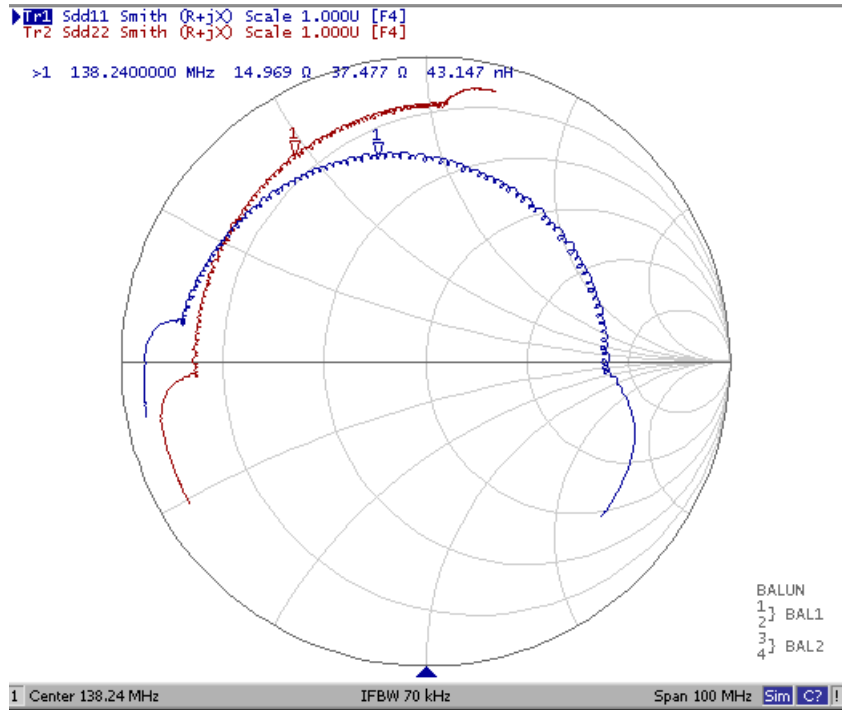


Fig. 2. Horizontal: 10MHz/Div, Vertical: 1dB/Div, Vertical: 50ns/Div

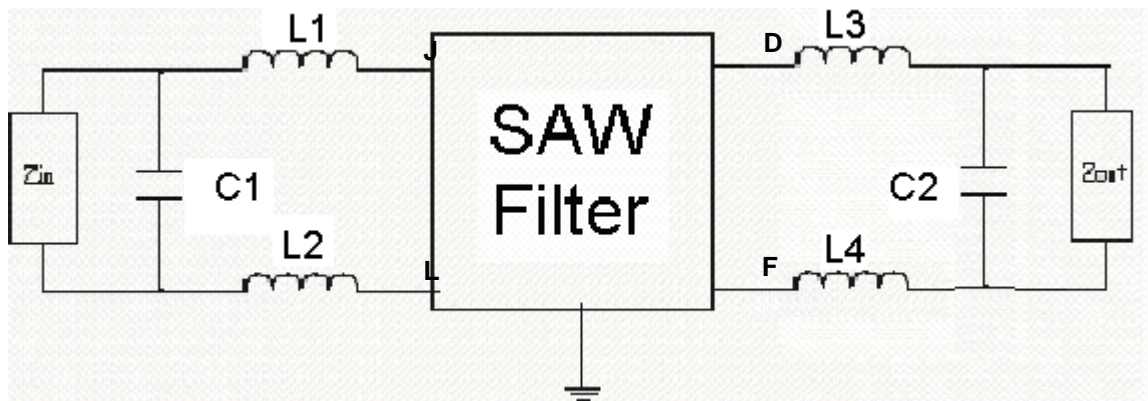
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3. Smith Chart:



**D. MATCHING CIRCUIT:**



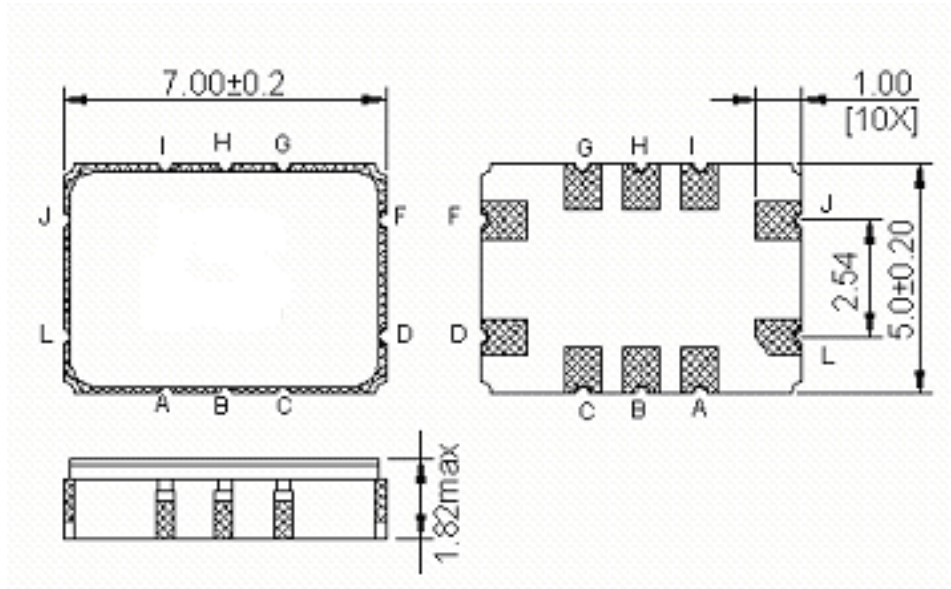
$$L1 = L2 = L3 = L4 = 24\text{nH} \quad C1 = 24\text{pF} \quad C2 = 2\text{pF}$$

$$Z_{IN} = 50\Omega \quad Z_{OUT} = 50\Omega$$

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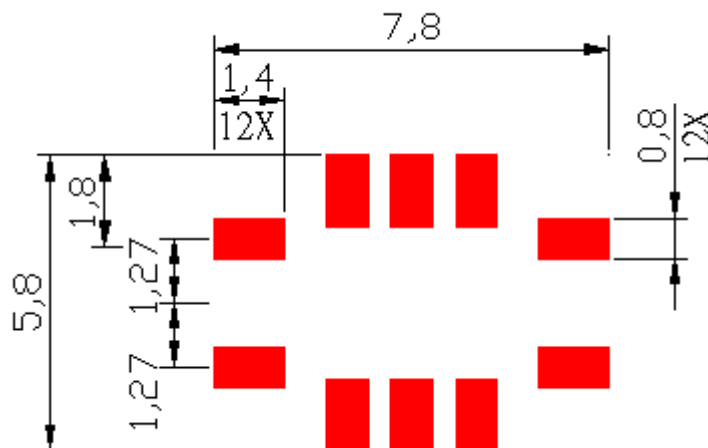
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**E. OUTLINE DRAWING:**



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

**F. PCB FOOTPRINT:**

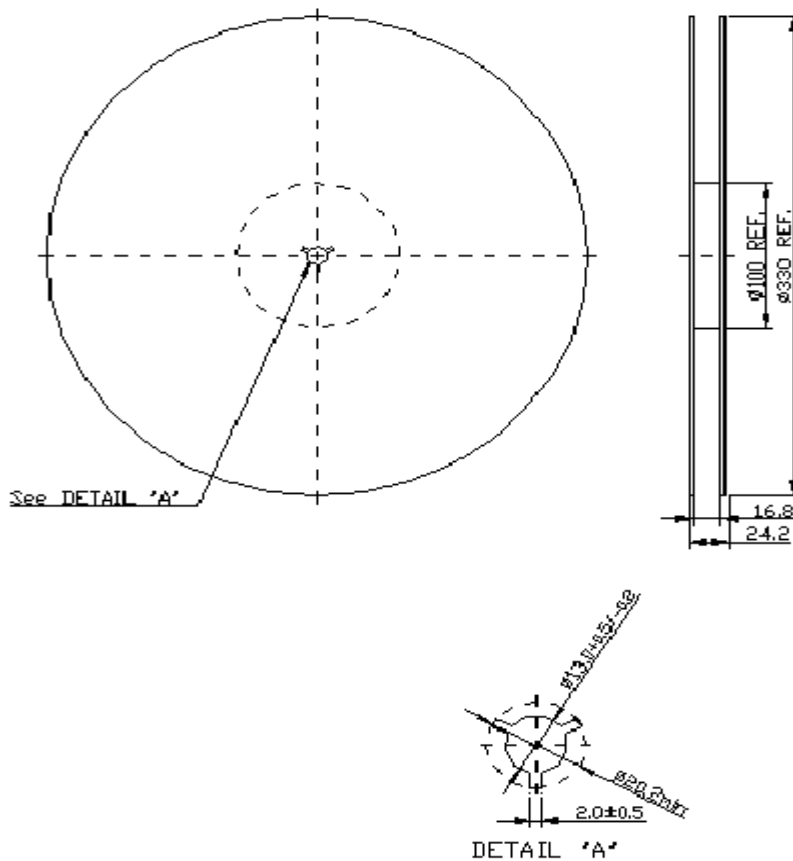


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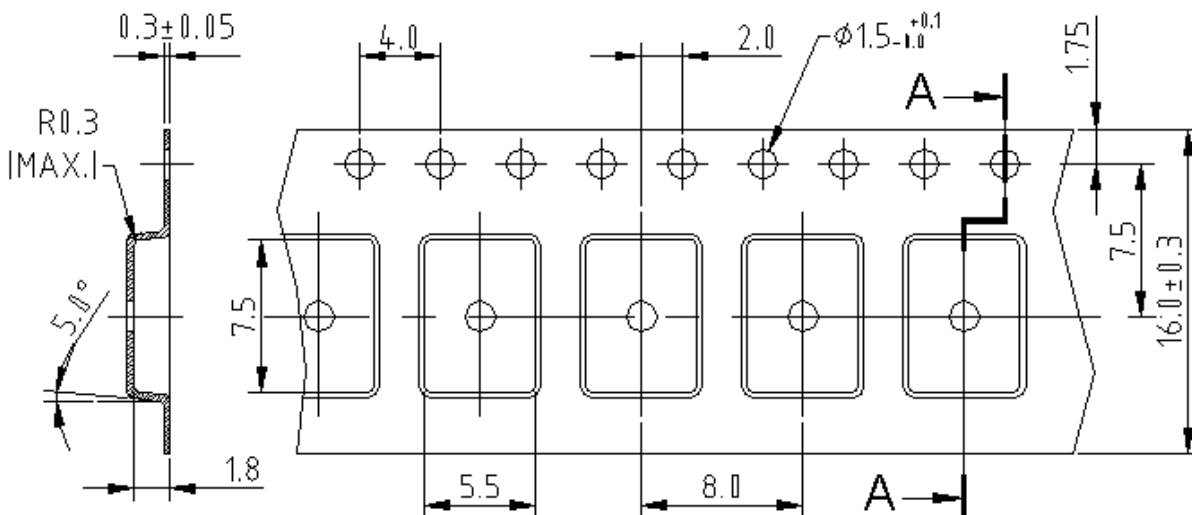
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**G. PACKING:**

**1. REEL DIMENSION**



**2. TAPE DIMENSION**



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**H. RECOMMENDED REFLOW PROFILE:**

