

**SAW Filter 138.0MHz**  
**Part No: MP03444**

**Model: TB0854A**  
**Rev No: 1**

**A. MAXIMUM RATING:**

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:**

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	138	-
Insertion Loss IL	dB	-	18.8	21
-1dB BW	MHz	60.0	63.0	-
-3dB BW	MHz	-	65.4	-
Upper -35dB Band edge	MHz	-	176	179
Lower -35dB Band edge	MHz	97	101	-
Passband Ripple Across 1dB Bandwidth	dB	-	0.6	1.2
Ultimate rejection	dB	35	40	
Temperature Coefficient	ppm/°C	-	-72	-
Source / Load Impedance (Balanced)	Ω	-	50	-

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**C. FREQUENCY CHARACTERISTICS:**

**1. S21 Response: (span 200MHz)**

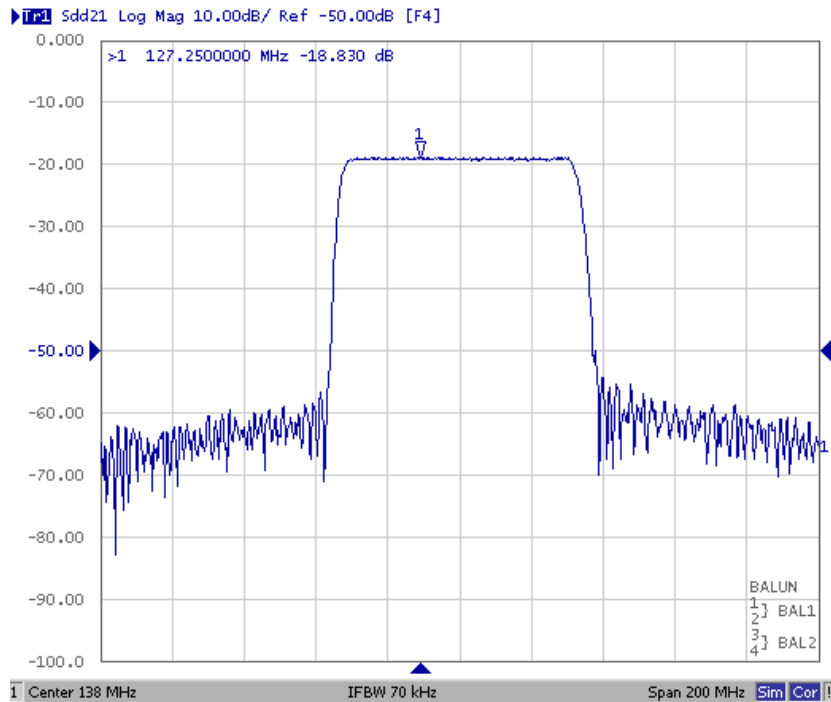


Fig. 1. Horizontal: 20MHz/Div, Vertical: 10dB/Div

**2. Pass band Response:**

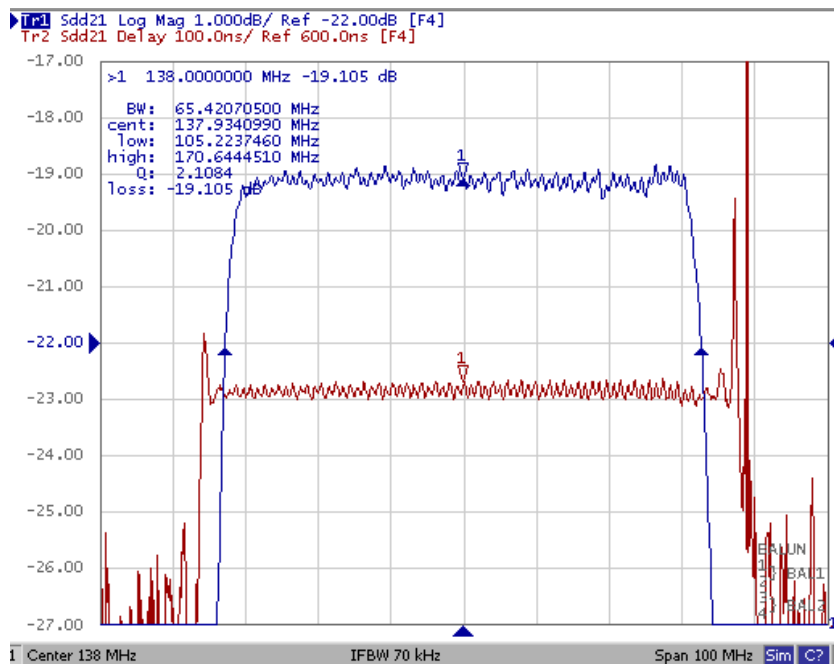


Fig. 2. Horizontal: 10MHz/Div, Vertical: 1dB/Div, Vertical: 100ns/Div

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3. Pass band Response:

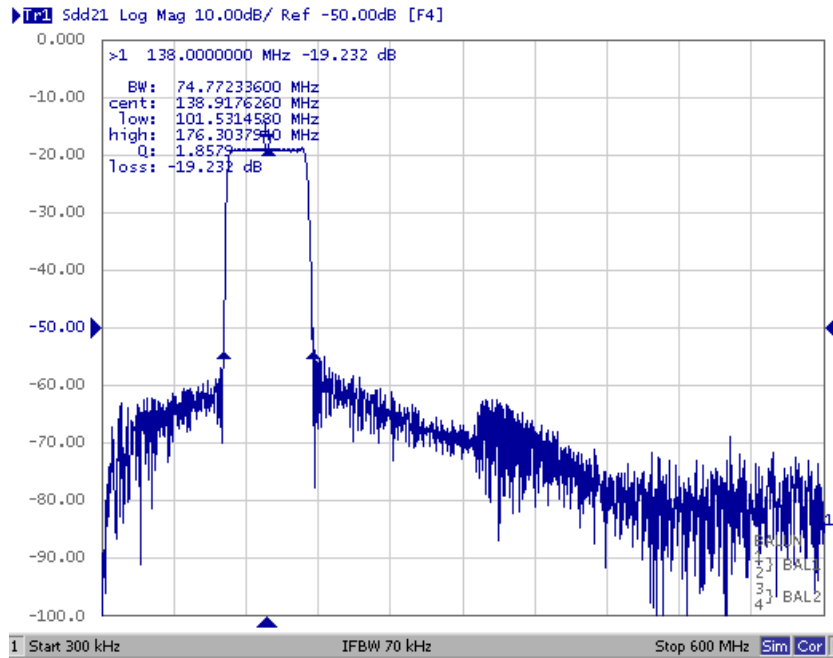
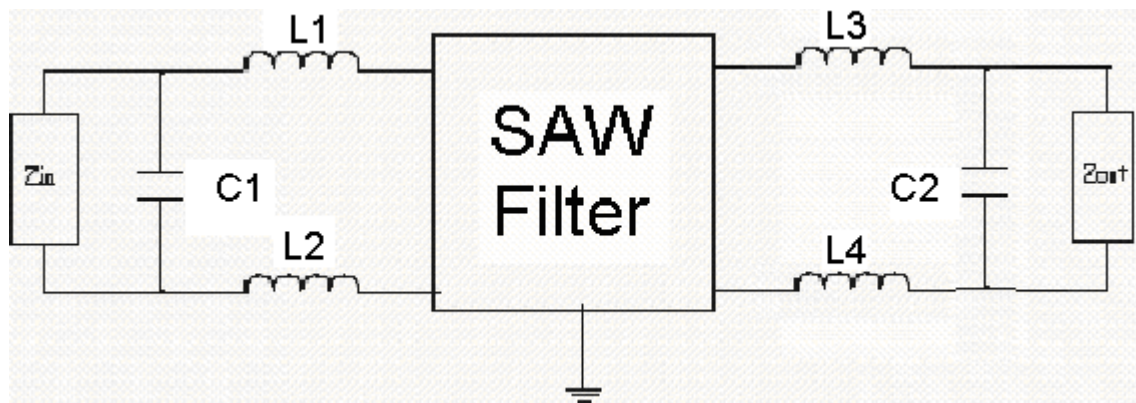


Fig. 3. Horizontal: 60MHz/Div, Vertical: 10dB/Div

**D. MATCHING CIRCUIT:**



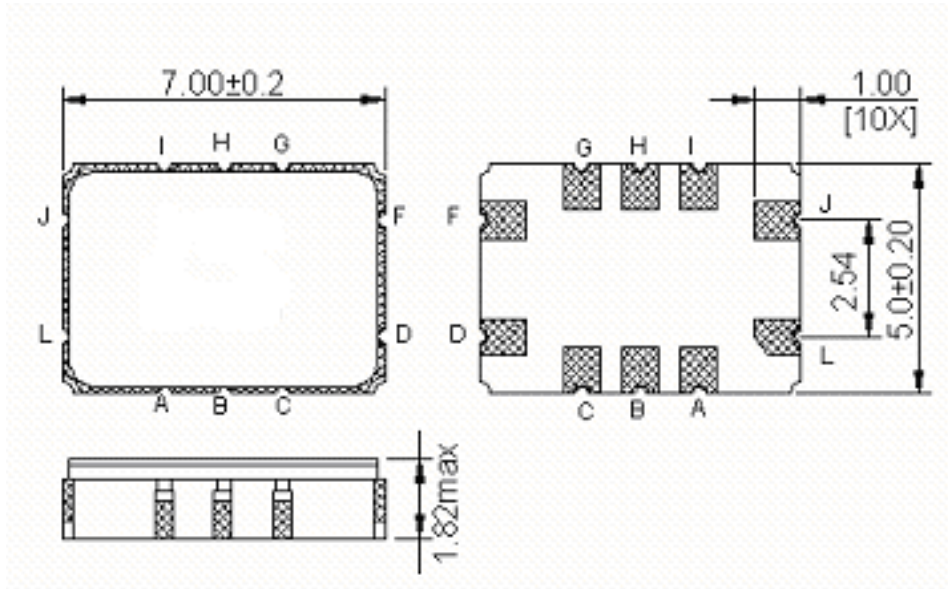
$$L1 = L2 = 27\text{nH} \quad C1 = 15\text{pF} \quad L3 = L4 = 24 \quad C2 = 15\text{pF}$$

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

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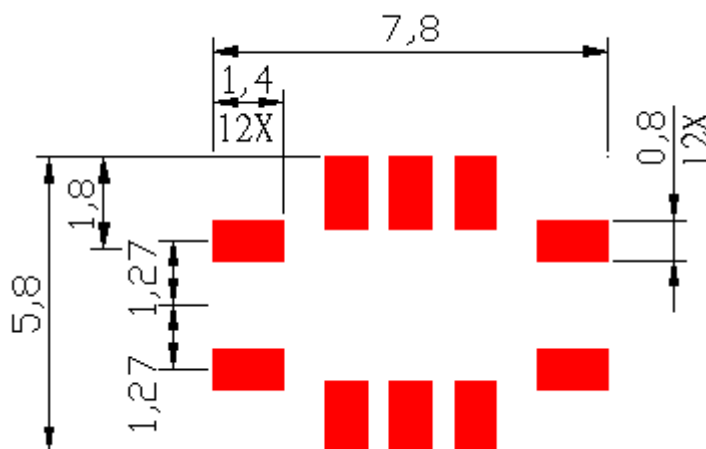
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**E. OUTLINE DRAWING:**



- 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:**

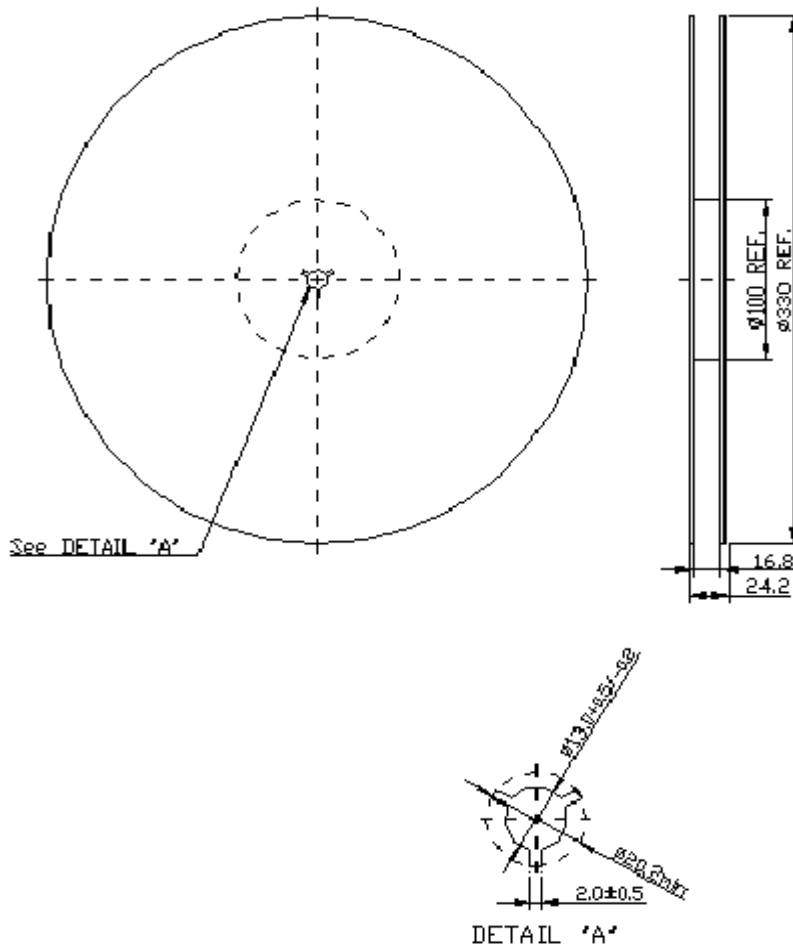


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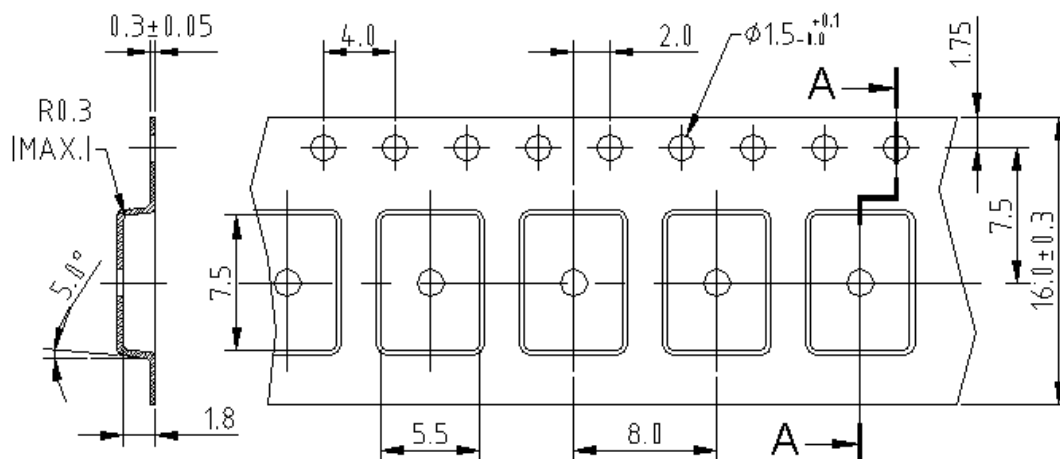
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**G. PACKING:**

**1. REEL DIMENSION**



**2. TAPE DIMENSION**



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**H. RECOMMENDED REFLOW PROFILE:**

