

**SAW Filter 304.0MHz**

**Model: TB1046A**

**Part No: MP04363**

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

**B. CHARACTERISTICS:**

Item	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	304	-
Insertion Loss IL	dB	-	13.4	15.5
Lower 1dB Bandedge	MHz	-	301.02	302.00
Upper 1dB Bandedge	MHz	306.00	306.35	-
Lower 50dB Bandedge	MHz	296.00	297.06	-
Upper 50dB Bandedge	MHz	-	310.85	312.00
Amplitude Ripple Fc ± 1.5MHz	dB	-	0.3	1.0
Attenuation (Reference level from typical Insertion loss)				
4MHz ~ 296MHz	dB	45	52	-
312MHz ~ 319MHz	dB	45	52	-
319MHz ~ 329MHz	dB	43	60	-
329MHz ~ 540MHz	dB	45	60	-
540MHz ~ 570MHz	dB	40	67	-
570MHz ~ 804MHz	dB	45	67	-
Temperature Coefficient	ppm/°C <sup>2</sup>	-	-0.036	-
Source Impedance	Ohm	-	50	-
Load Impedance	Ohm	-	50	-

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**C. FREQUENCY CHARACTERISTICS:**

**1. Wide band Response: (span 100MHz)**

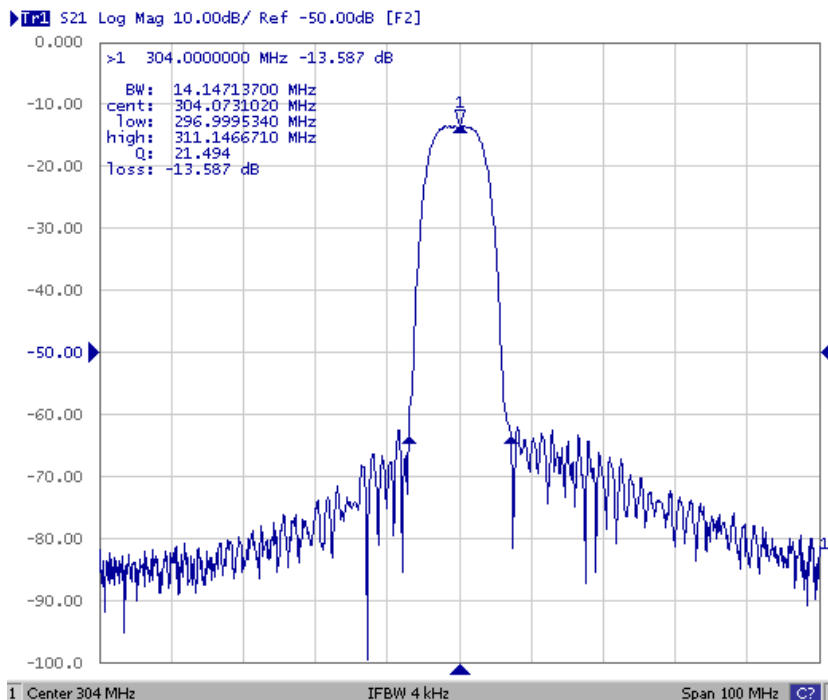


Fig. 1. Horizontal: 10MHz / Div, Vertical: 10Db / Div

**2. Pass band Response and Group Time Delay response:**

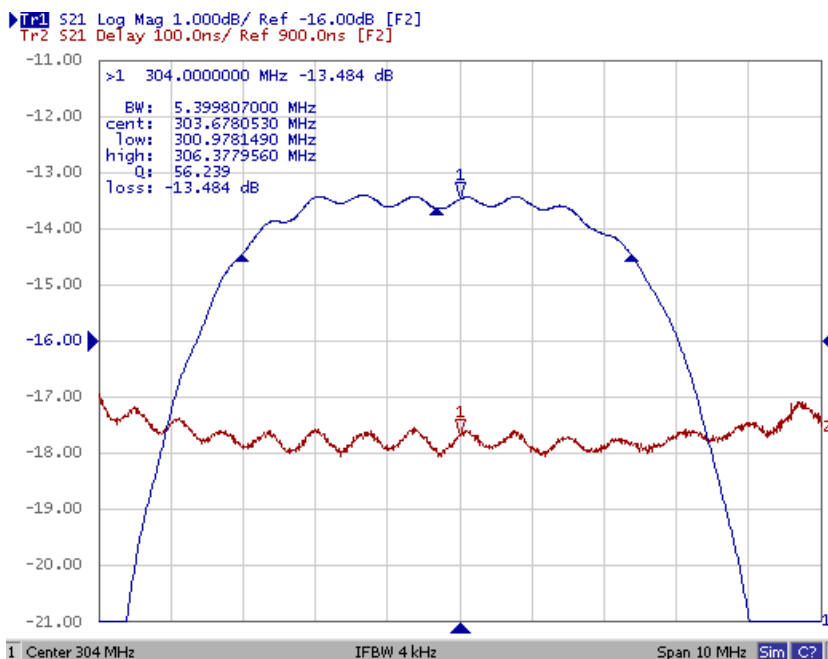
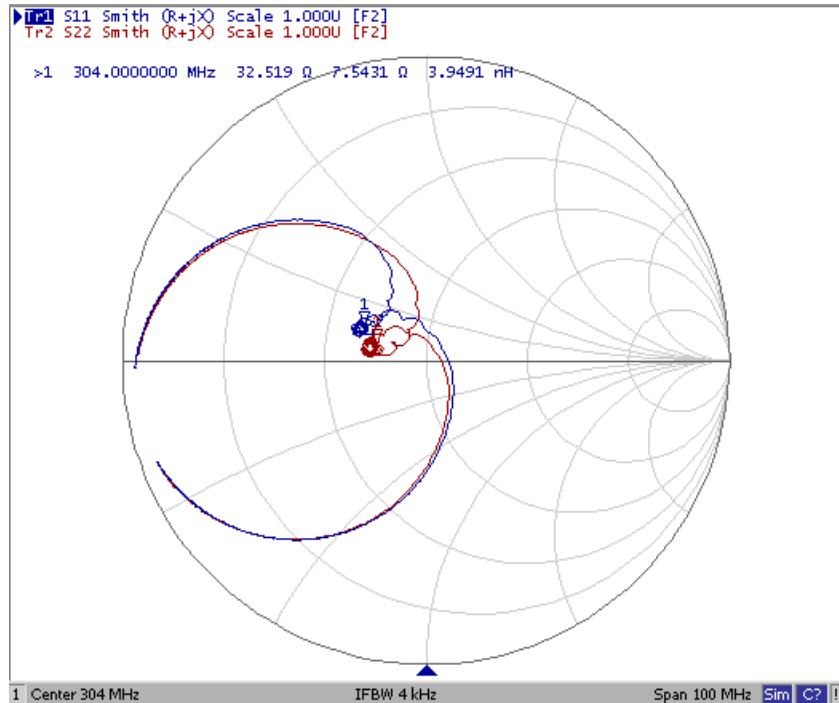


Fig. 2. Horizontal: 1MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div

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3. Smith Chart:



4. Wide band Response:

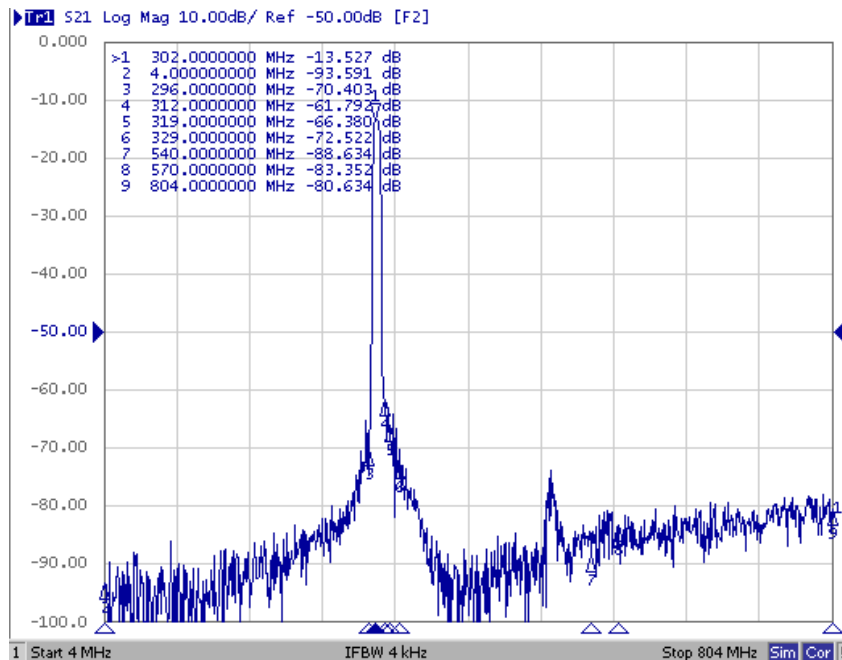
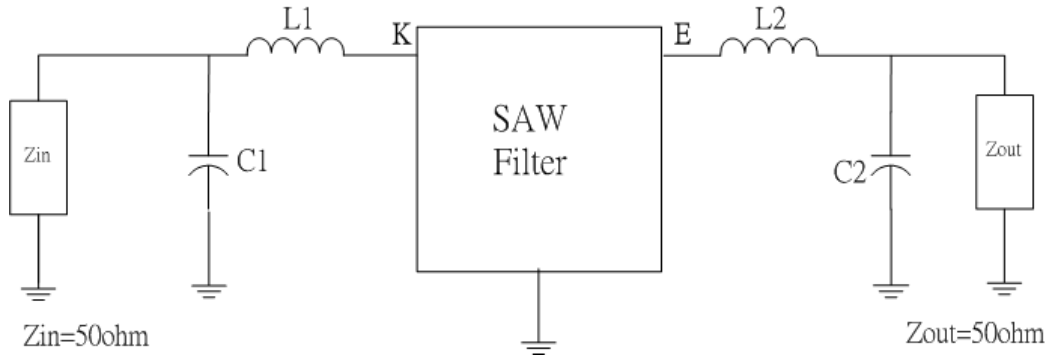


Fig. 4. Horizontal: 80MHz / Div, Vertical: 10dB / Div

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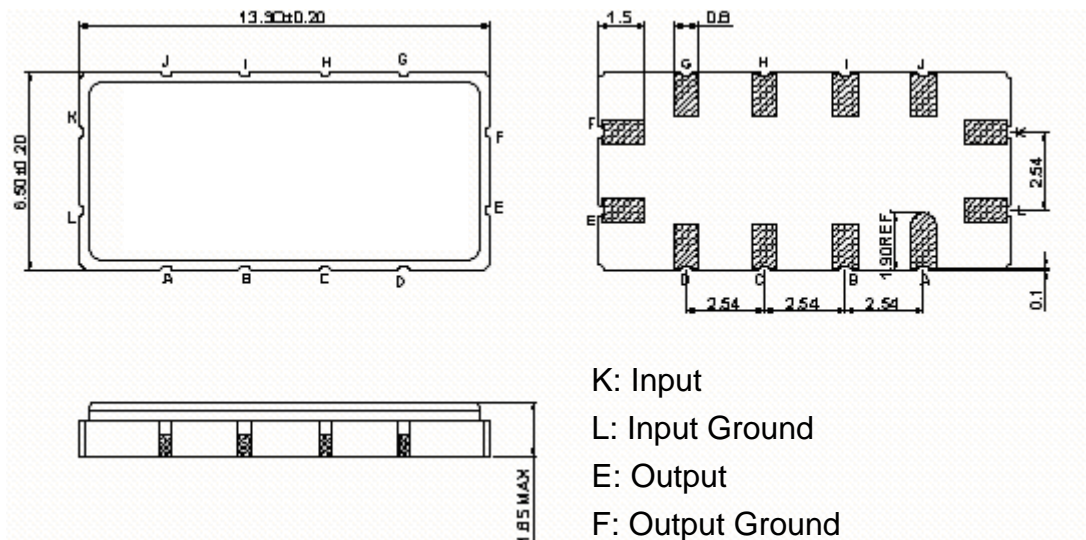
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**D. MATCHING CIRCUIT:**



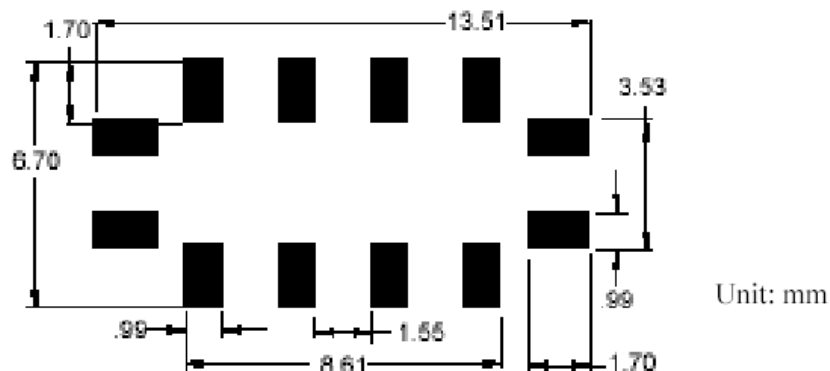
$L1 = 27\text{nH}$   $L2 = 22\text{nH}$   $C1 = 36\text{pF}$   $C2 = 36\text{pF}$

**E. OUTLINE DRAWING:**



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

**F. PCB FOOTPRINT:**

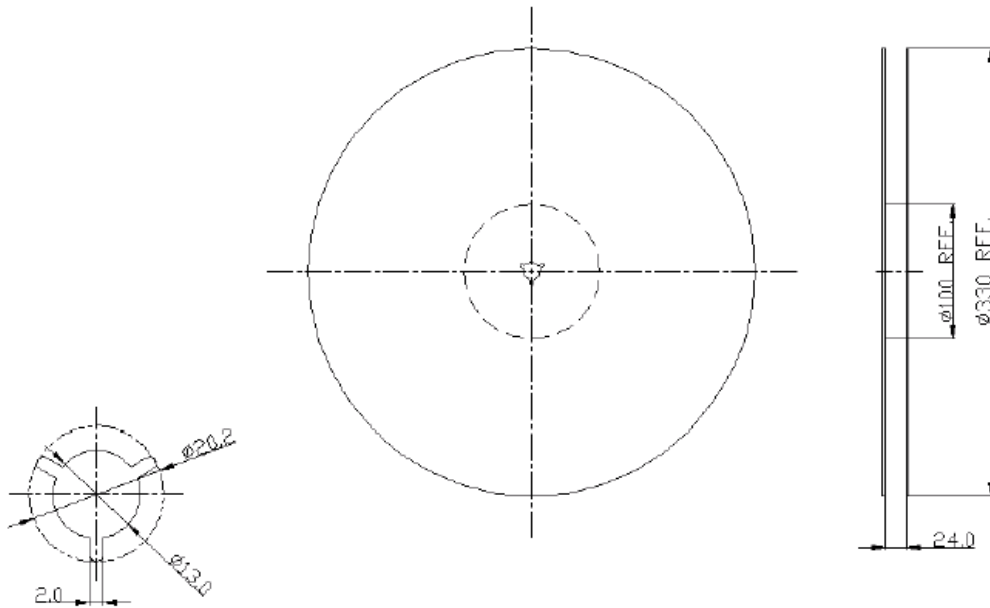


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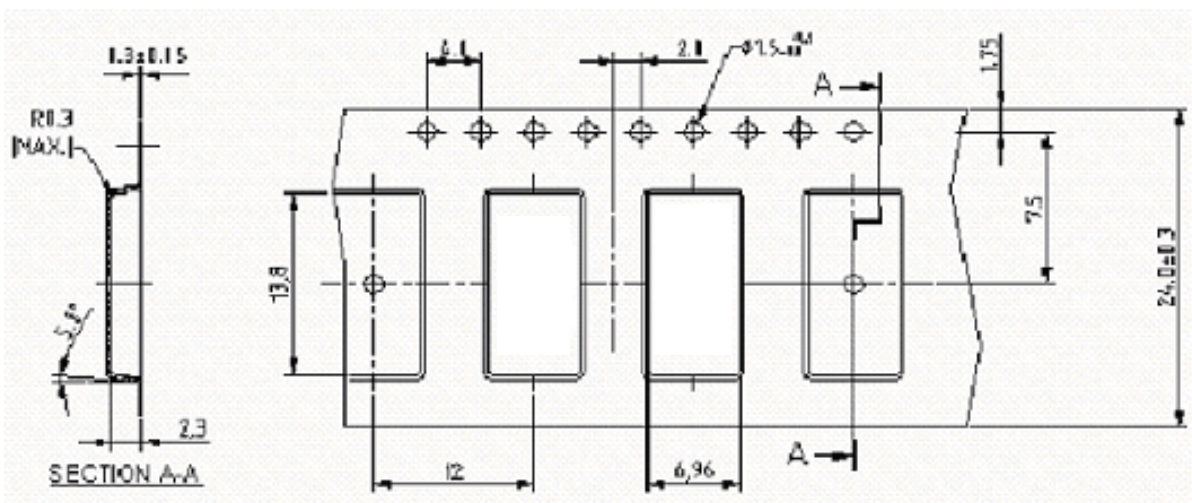
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**G. PACKING:**

1. Reel Dimension



2. Tape Dimension



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**H. RECOMMENDED REFLOW PROFILE:**

