

**SAW Filter 140MHz**

**Model: TB0559A**

**Part No: MP01651**

**REV NO.: 2**

**A. MAXIMUM RATING:**

1. Maximum Input Power: 10dBm
2. Operating Temperature: -40 °C ~ +85°C
3. Storage Temperature: -40 °C ~ +85°C

**B. CHARACTERISTICS:**

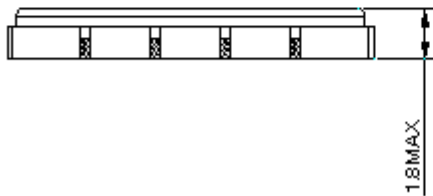
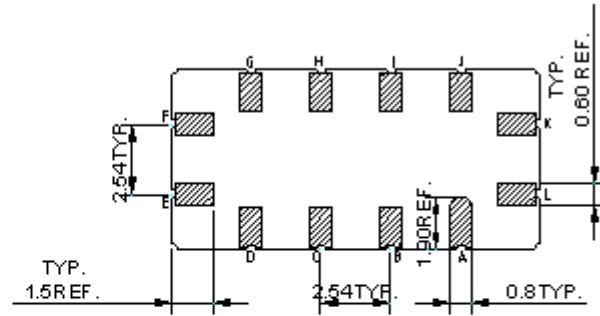
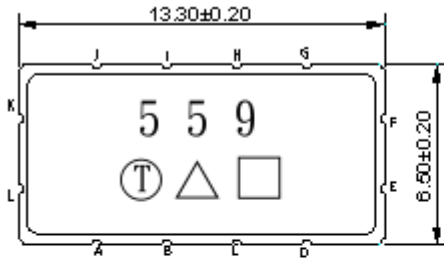
1. Ambient Temperature: 25°C

Characteristics	Value			Note
	Min.	Typ.	Max.	
Center frequency $F_C$ MHz	-	140.0	-	-
Maximum Insertion loss I.L. dB	-	9.2	10.5	-
1dB Bandwidth MHz	18.4	20.8	-	-
3dB Bandwidth MHz	20.0	21.8	-	-
35dB Bandwidth MHz	-	25.5	26.4	-
Passband Ripple (130.9~149.1MHz) dB	-	0.75	1.00	-
Group Delay Ripple (130.9~149.1MHz) nS	-	115	150	-
Absolute Group Delay $\mu$ S	-	1.05	-	-
Input VSWR (within 130.9~149.1MHz) dB	-	2.0	2.5	-
Output VSWR (within 130.9~149.1MHz) dB	-	1.7	2.3	-
Temp Coefficient ppm/°C	-	-93	-	-
Attenuation:( Reference level from minimum insertion loss)				
1) 10 MHz~ 90 MHz dB	35	62	-	-
2) 190 MHz~120MHz dB	40	54	-	-
3) 120MHz ~ 126.8 MHz dB	35	42	-	-
4) 154.7MHz ~ 160MHz dB	35	45	-	-
5) 160MHz ~ 190 MHz dB	40	43	-	-
6) 190MHz ~800MHz dB	35	62	-	-

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**C. OUTLINE DRAWING:**



**Pin configuration**

- #A RF Input
- #B RF Input ground
- #G RF Output
- #H RF Output ground
- #C,D,E,F,H, J, K, M, N To be ground

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**D. FREQUENCY CHARACTERISTICS:**

1. S21 Response

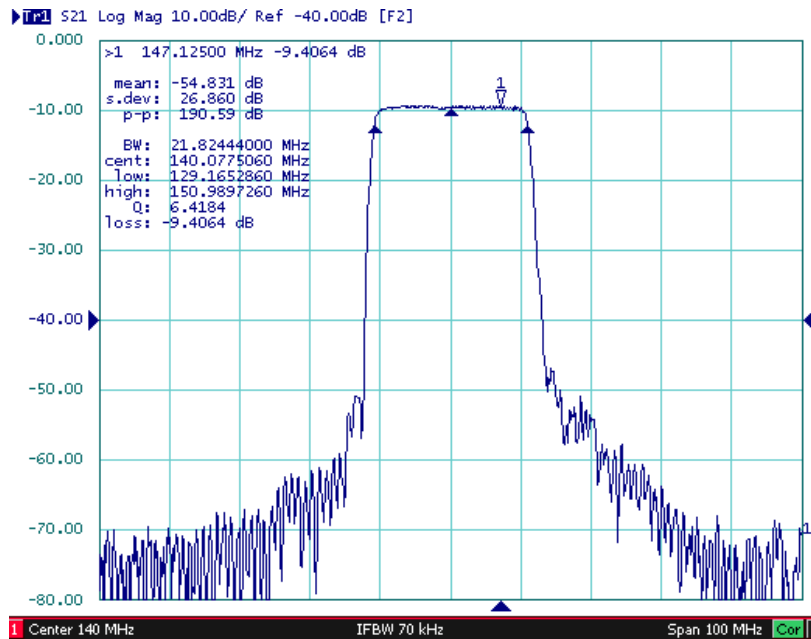


Fig. 1 S21 Response Horizontal: 10MHz/Div; Vertical: 10dB/Div

2. Pass band Ripple

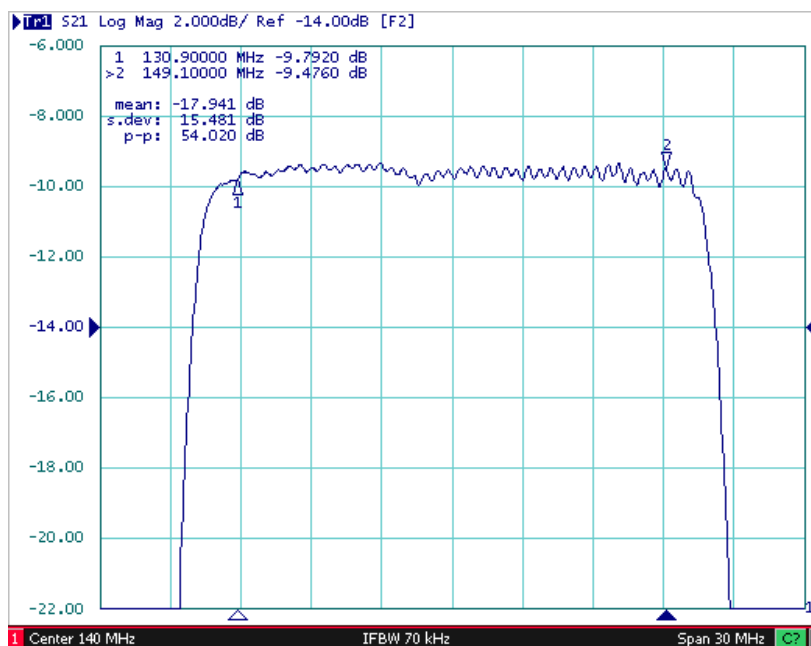


Fig. 2 Inband ripple Horizontal: 3MHz/Div; Vertical: 2dB/Div

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### 3. Group Delay Ripple

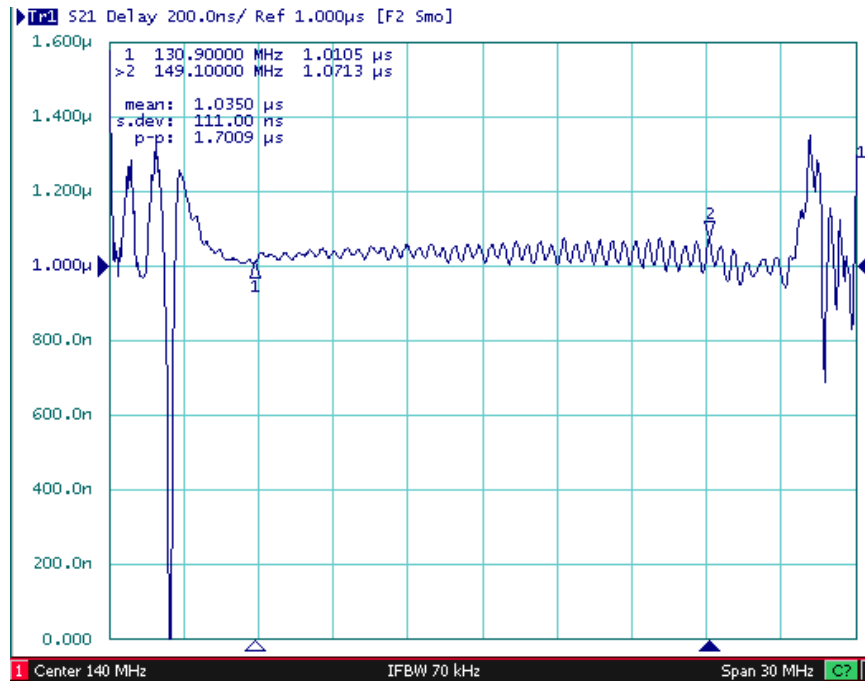


Fig. 3 Group Delay Horizontal: 3MHz/Div; Vertical: 200nS/Div

### 4. Wide band Response

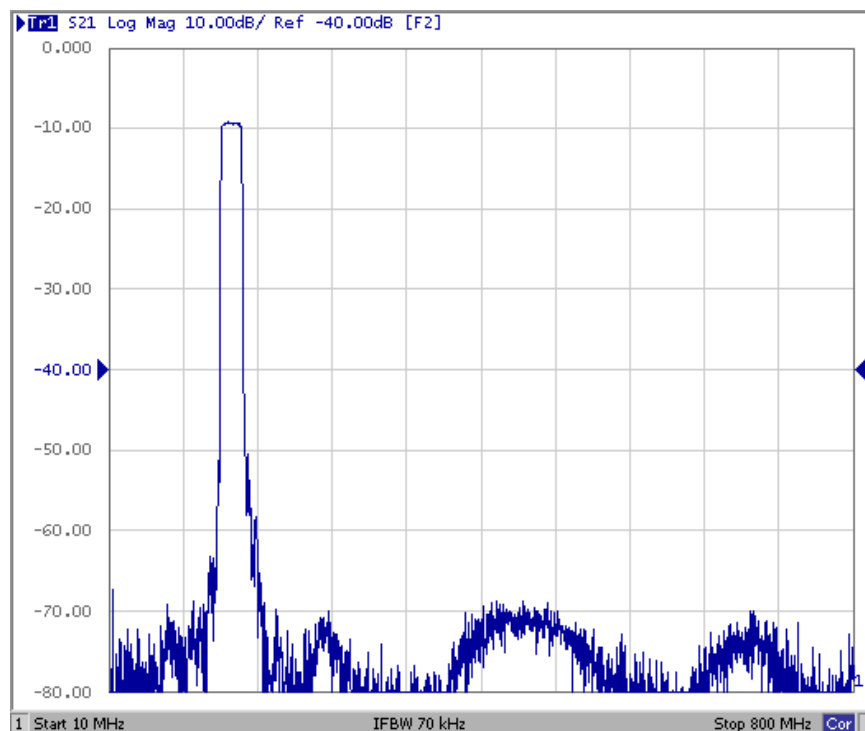


Fig. 4 Wide Band Horizontal: 10~800MHz; Vertical: 10dB/Div

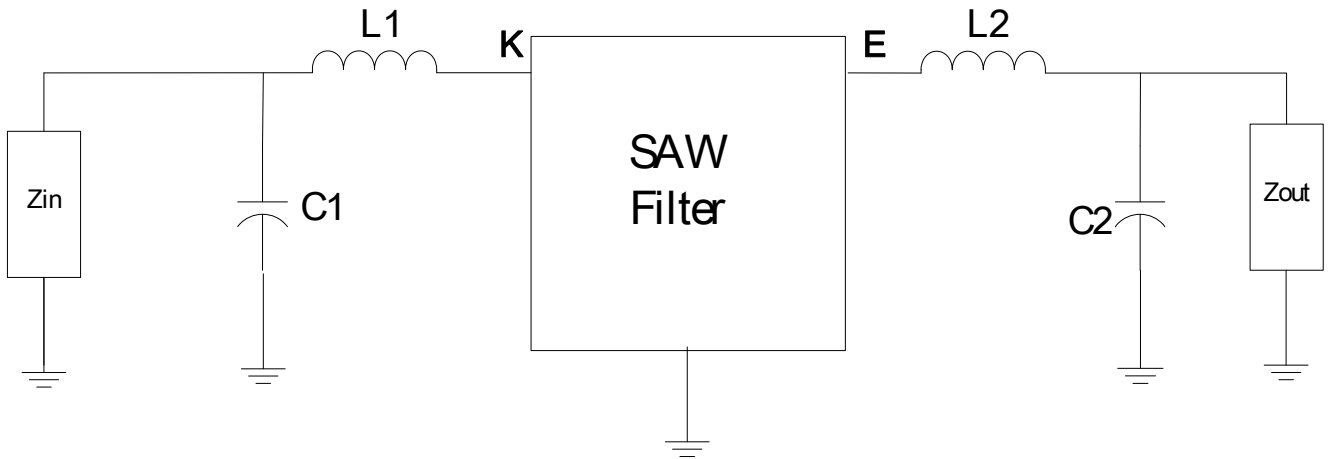
**SAW Filter 140MHz**

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**REV NO.: 2**

**E. MEASUREMENT CIRCUIT:**

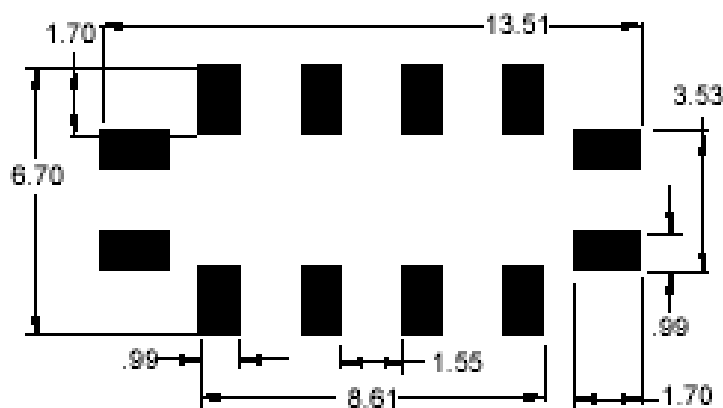


$Z_{in}=Z_{out}= 50 \text{ ohm}$

$L1=92\text{nH}, C1=22\text{pF}, L2=92\text{nH}, C2=33\text{pF}$

Note: The matching structure will change according to different test fixture.

**F. PCB FOOTPRINT**

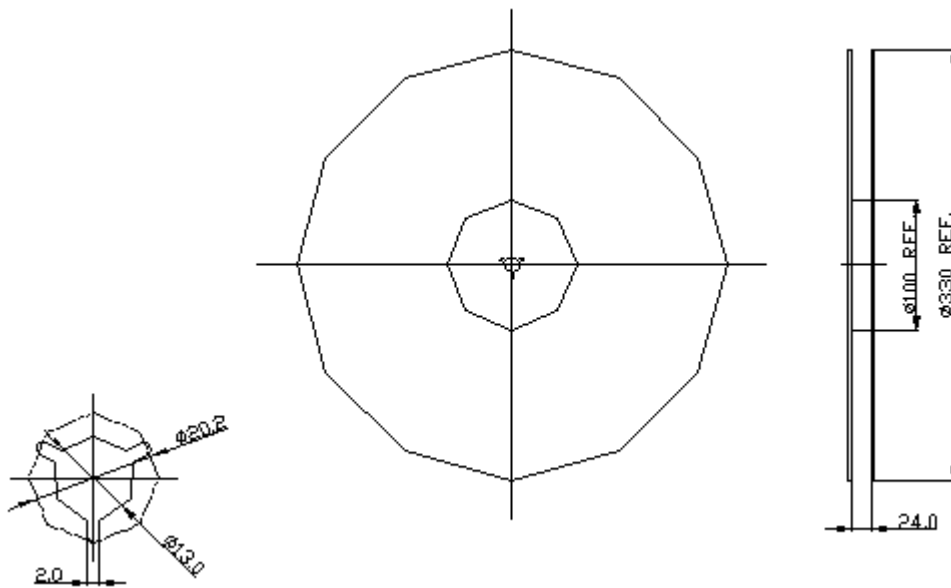


**SAW Filter 140MHz**  
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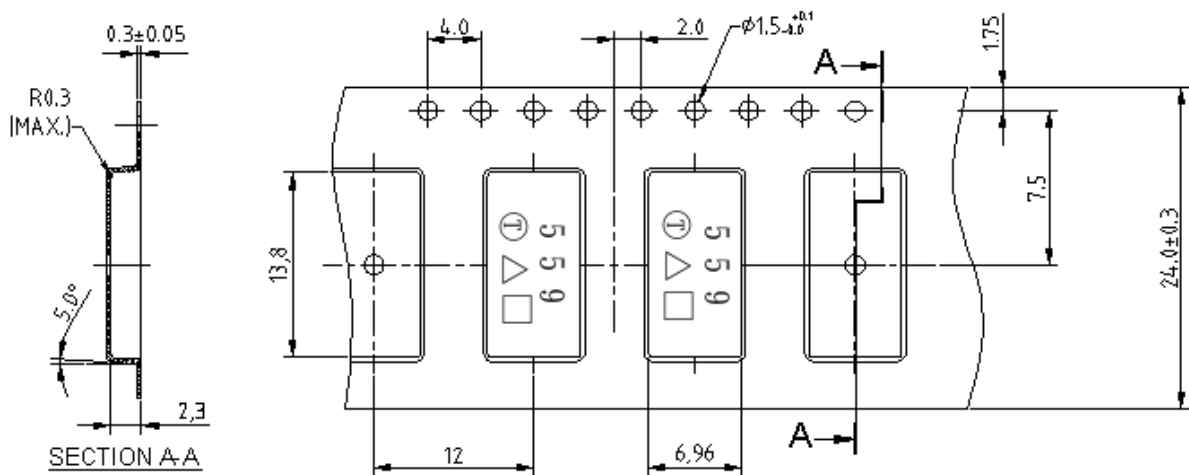
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**REV NO.: 2**

**G. PACKAGING:**

(1). REEL DIMENSION



(2). TAPE DIMENSION



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**H. RECOMMENDED REFLOW PROFILE:**

