



# TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,  
Taoyuan, 324, Taiwan, R.O.C.

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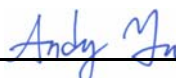
## Product Specifications Approval Sheet

Product Description: IF SAW Filter 140 MHz (SMD 13.3mmX6.5mm)

TST Part No.: TB0559A

Customer Part No.: \_\_\_\_\_

Customer signature required
Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: \_\_\_\_\_ Andy Yu 

Approved by: \_\_\_\_\_ Bob Chau 

Date: \_\_\_\_\_ 2015/06/23

1. Customer signed back is required before TST can proceed with sample build and receive orders.
2. Orders received without customer signed back will be regarded as agreement on the specifications.
3. Any specifications changes must be approved upon by both parties and a new revision of specifications shall be released to reflect the changes.



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## IF SAW Filter 140 MHz SMD 13.3mmX6.5mm

MODEL NO.: TB0559A

Rev. No. V3.0

### A. Maximum Rating:

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

RoHS Compliant  
Lead free  
Lead-free soldering

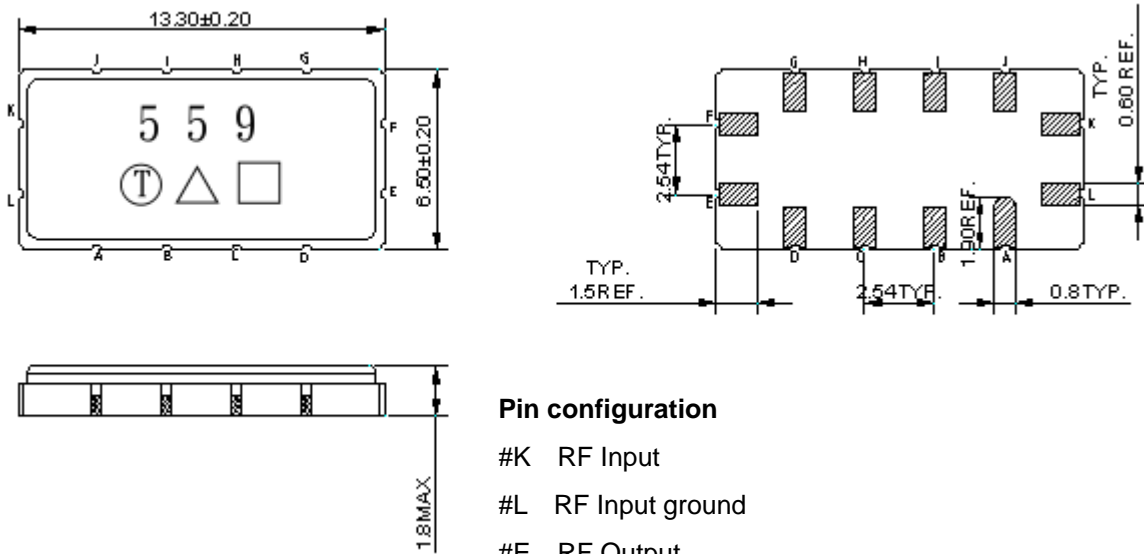
**Electrostatic Sensitive Device (ESD)**

### B. Characteristics :

1. Ambient Temperature: 25 °

Characteristics		Value			Note	
		Min.	Typ.	Max.		
Center frequency	F <sub>C</sub> 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 (within 130.9~149.1MHz)	dB	-	0.75	1.00	-	
Group Delay Ripple (within 130.9~149.1MHz)	nS	-	115	150	-	
Absolute Group Delay	uS	-	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	-	-

**C. Outline Drawing:**



**Pin configuration**

- #K RF Input
- #L RF Input ground
- #E RF Output
- #F RF Output ground
- #A, B, C, D, G, H, I, J To be ground
- : Week Code (Follow the table from planner each year)
- △ : Product / Year Code

Year	2005 2009	2006 2010	2007 2011	2008 2012
Product Code	B	b	<u>B</u>	<u>b</u>

## D. Frequency Characteristics :

### 1. S21 Response

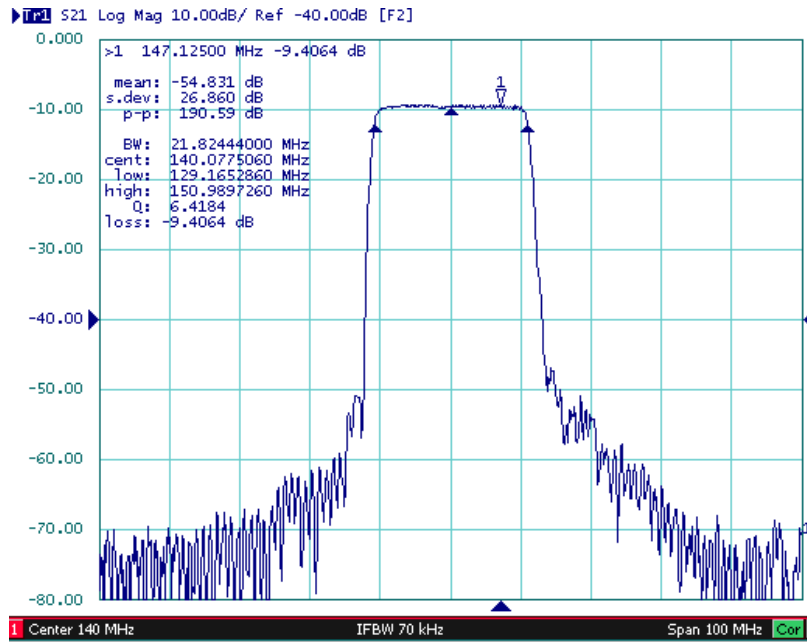


Fig. 1 S21 Response Horizontal: 10MHz/Div; Vertical: 10dB/Div

### 2. Pass band Ripple

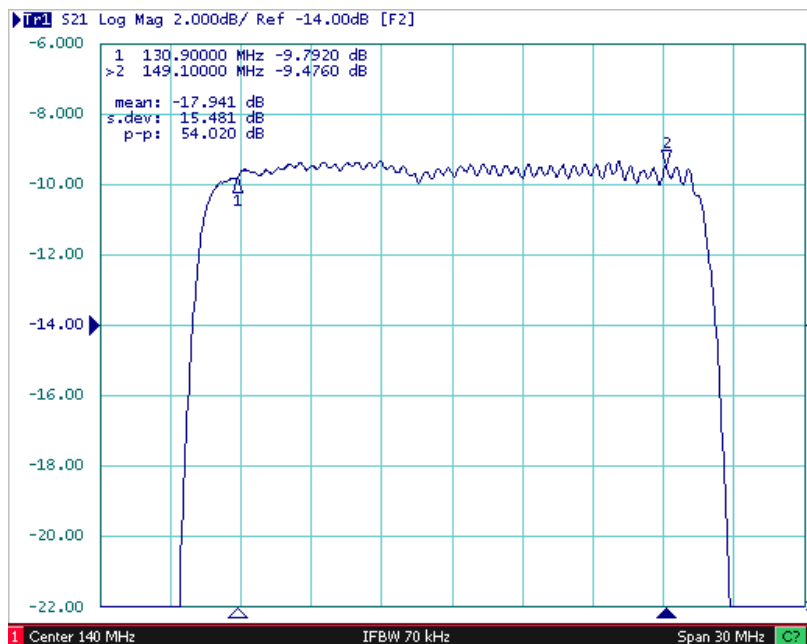


Fig. 2 Inband ripple Horizontal: 3MHz/Div; Vertical: 2dB/Div

### 3. Group Delay Ripple

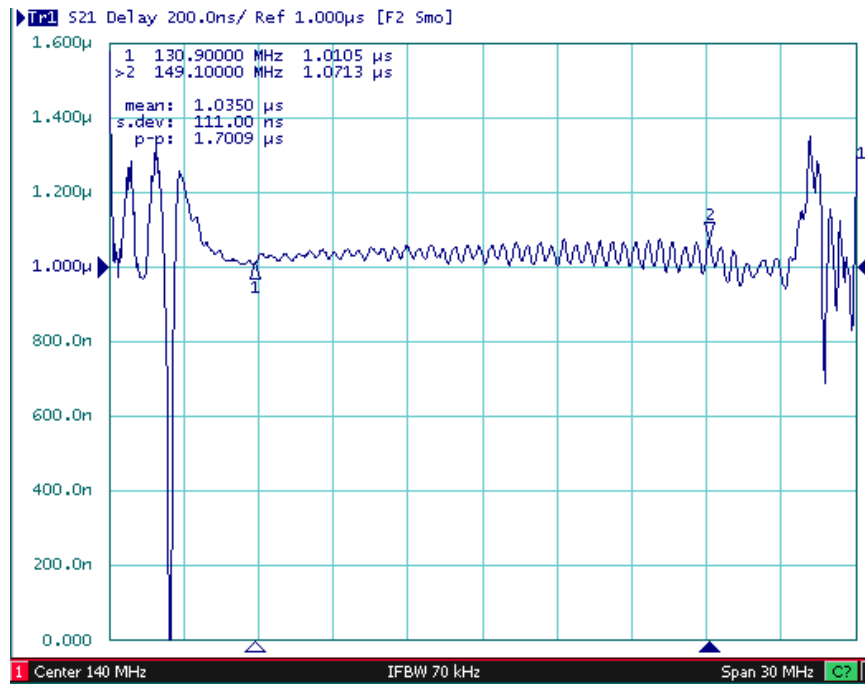


Fig. 3 Group Delay Horizontal: 3MHz/Div; Vertical: 200nS/Div

### 3. Wide band Response

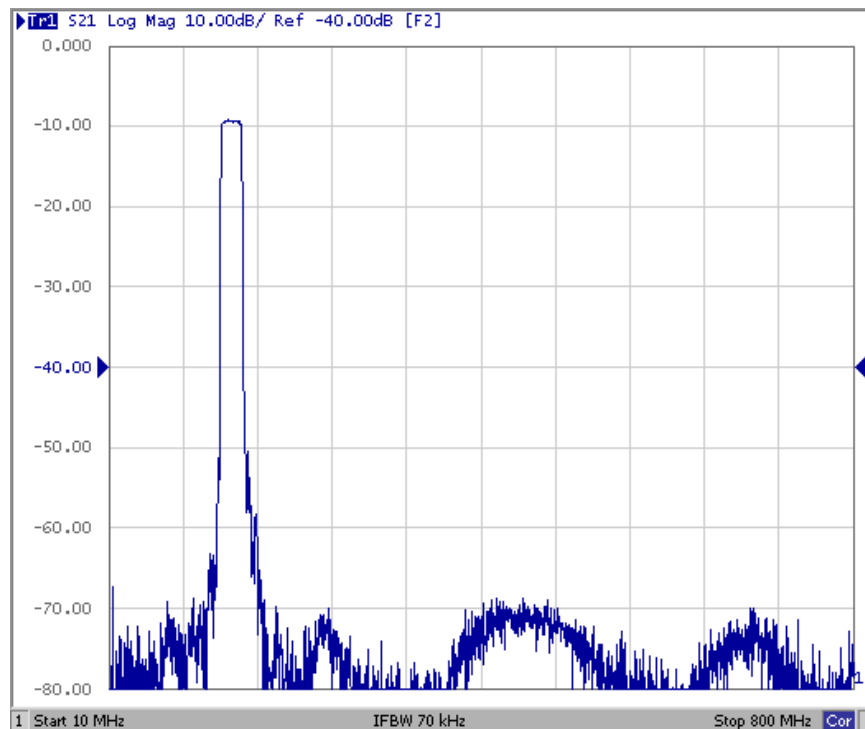
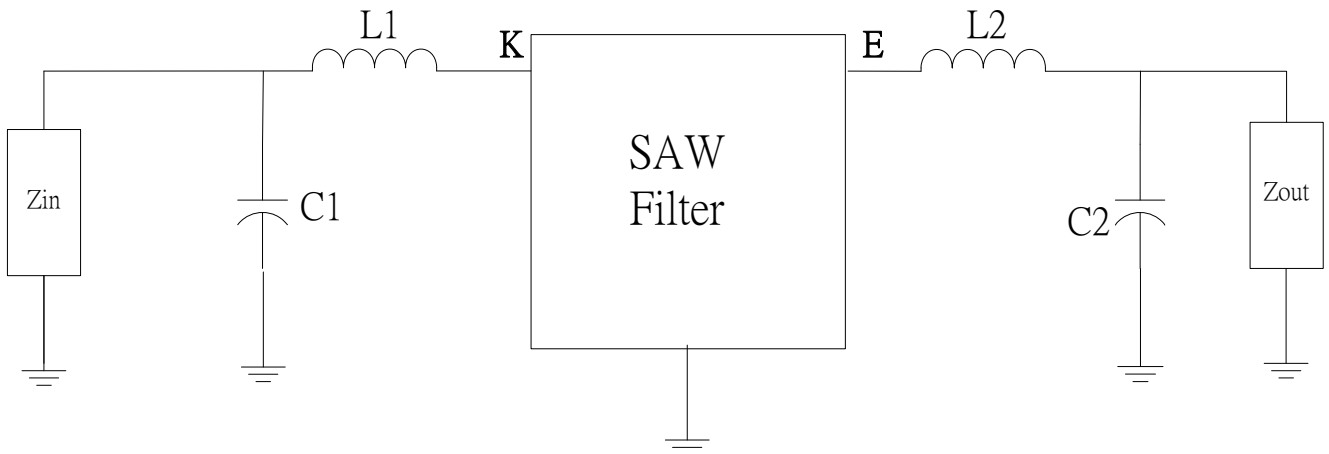


Fig. 3 Wide Band Horizontal: 10~800MHz; Vertical: 10dB/Div

**E. Measurement Circuits :**

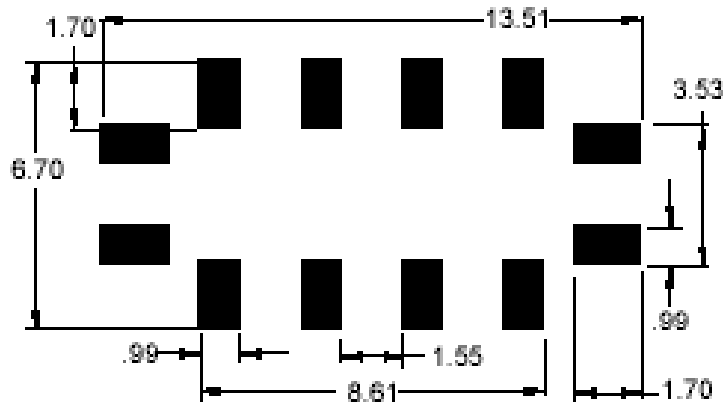


$Z_{in}=Z_{out}= 50 \text{ ohm}$

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

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

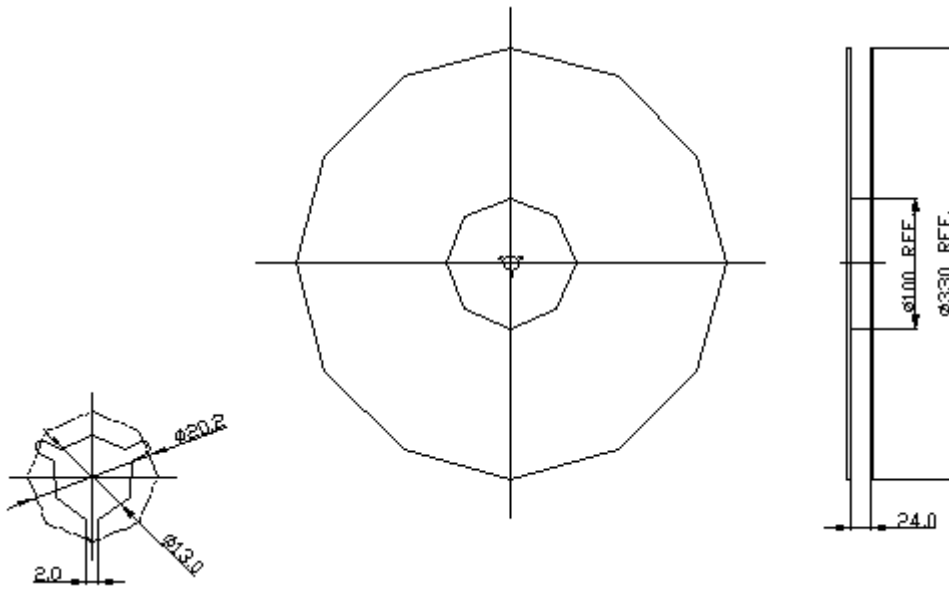
**F. PCB Footprint**



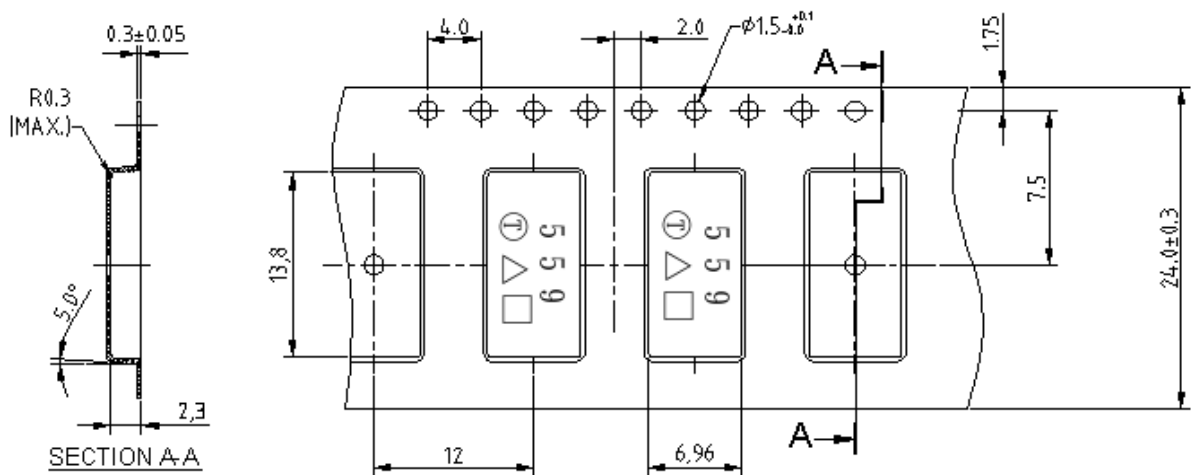
## G. Package:

### (1). REEL DIMENSION

(Please refer to FR-75D10 for packing quantity)



### (2). TAPE DIMENSION



### 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 (20~40sec).
4. Time: 2 times.

