



# 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

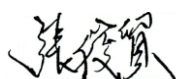
Product Name: IF SAW Filter 140 MHz (SMD 13.3mmX6.5mm)

TST Parts No.:TB0438A

Customer Parts No.: \_\_\_\_\_

<p>Company: _____</p> <p>Division: _____</p> <p>Approved by : _____</p> <p>Date: _____</p>
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Checked by:                     V.J Fanchian                     

Approval by:                     Junmao Chang                     

Date:                     2023/05/29                    

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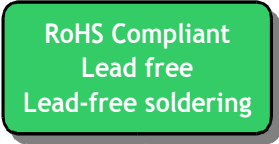
## IF SAW Filter 140 MHz SMD 13.3mmX6.5mm

MODEL NO.: TB0438A

Rev. No. 3.0

### A. MAXIMUM RATING:

1. Input Power Level: +10 dB<sub>m</sub>
2. Operating Temperature: -5 °C ~ +85 °C
3. Storage Temperature: -55 °C ~ +80°C
4. Moisture Sensitive Level (MSL): Level 1



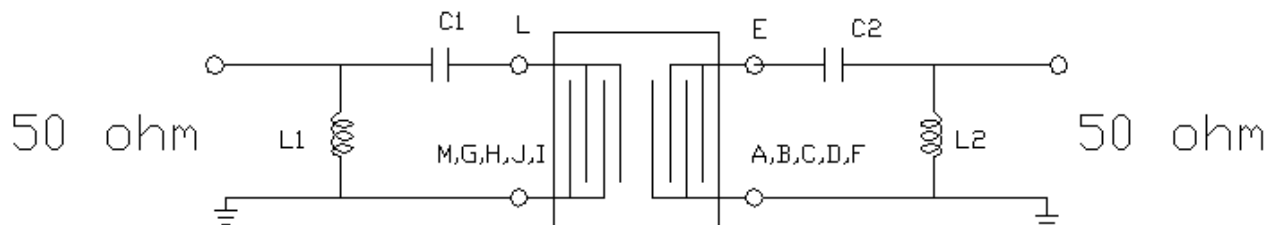
Electrostatic Sensitive Device

### B. Characteristics :

1. Ambient Temperature: 25 °

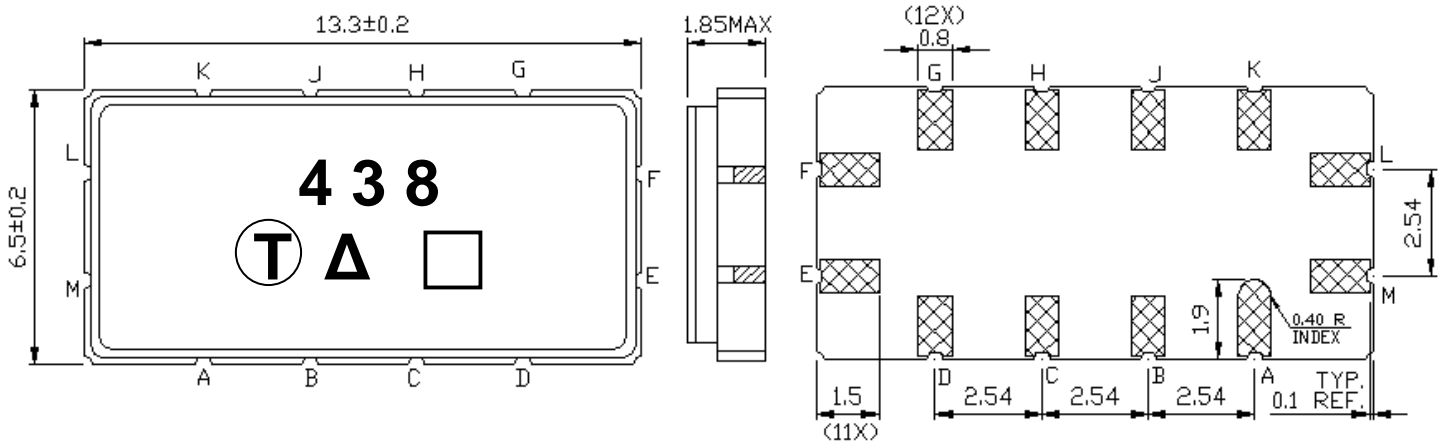
Characteristics	Value			Note.
	Min.	Typ.	Max.	
Center frequency F <sub>c</sub> MHz	-	140.0	-	-
Maximum Insertion loss I.L. dB	-	8.5	10.5	-
1dB Bandwidth MHz	9.6	12.4	-	-
3dB Bandwidth MHz	12.0	14.7	-	-
40dB Bandwidth MHz	-	25.5	40.0	-
Passband Ripple (F <sub>c</sub> ±4.8MHz) MHz	-	0.7	1.0	-
Group Delay Ripple (F <sub>c</sub> ±4.8MHz) nS	-	75	160	-
Temp Coefficient ppm/° C	-	-94	-	-

### C. TEST FIXTURE :



$$L1=47nH \quad C1=56pF \quad L2=47nH \quad C2=120pF$$

**D.OUTLINE DRAWING:**



**Pin configuration**

#L RF Input

#M RF Input ground

#E RF Output

#F RF Output ground

#A,B,C,D,G,H,J,K To be ground

□ : Week Code (Follow the table from planner each year)

Unit : mm

△ : Product / Year Code

Year	2021 2025	2022 2026	2023 2027	2024 2028
Product Code	B	b	<u>B</u>	<u>b</u>

## E. Frequency Characteristics :

### 1. S21 Response

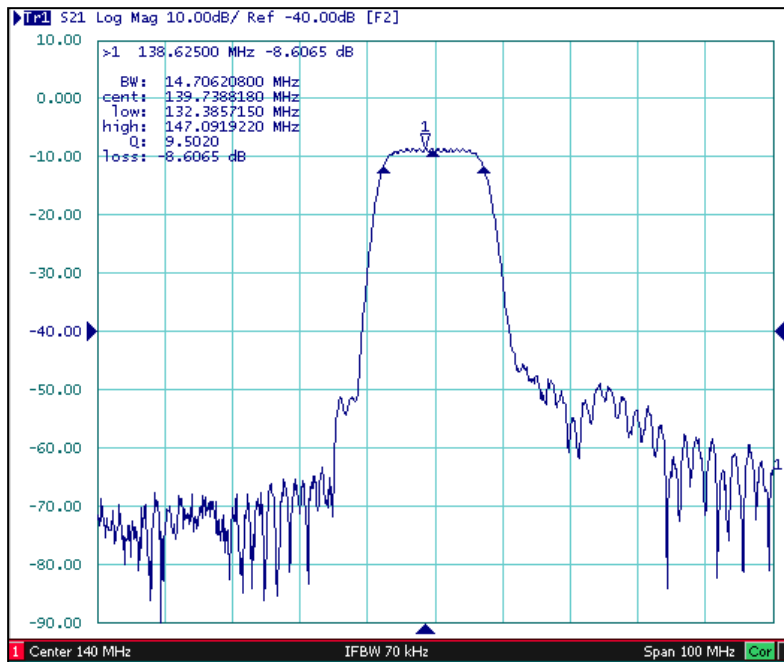


Fig1. Horizontal: 100MHz/Div Vertical: 10dB/Div

### 2. Pass band Ripple and Group Delay Ripple

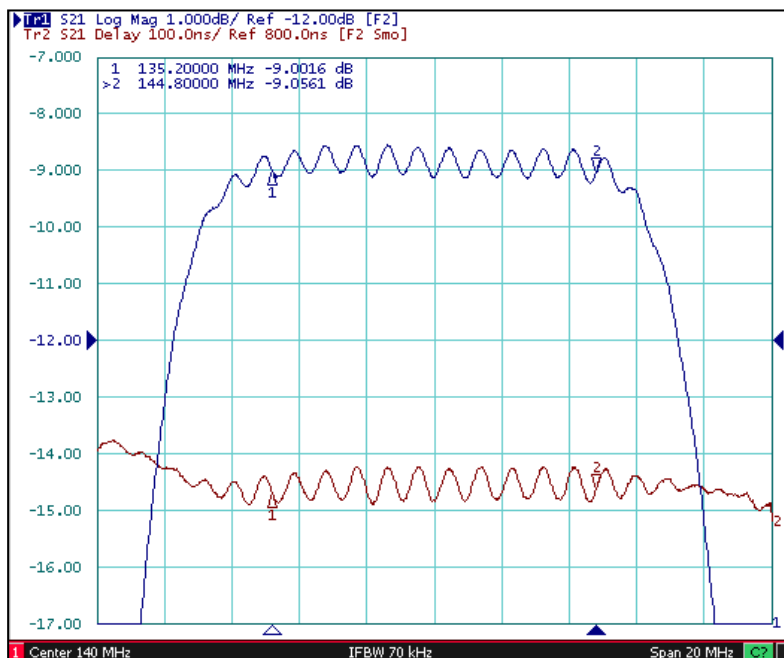
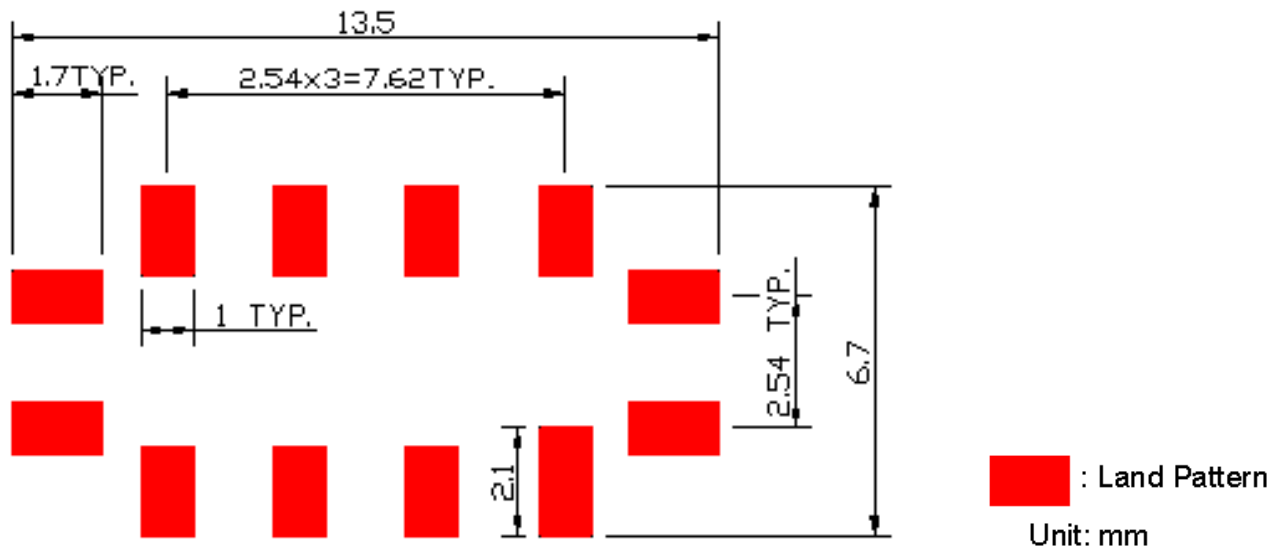


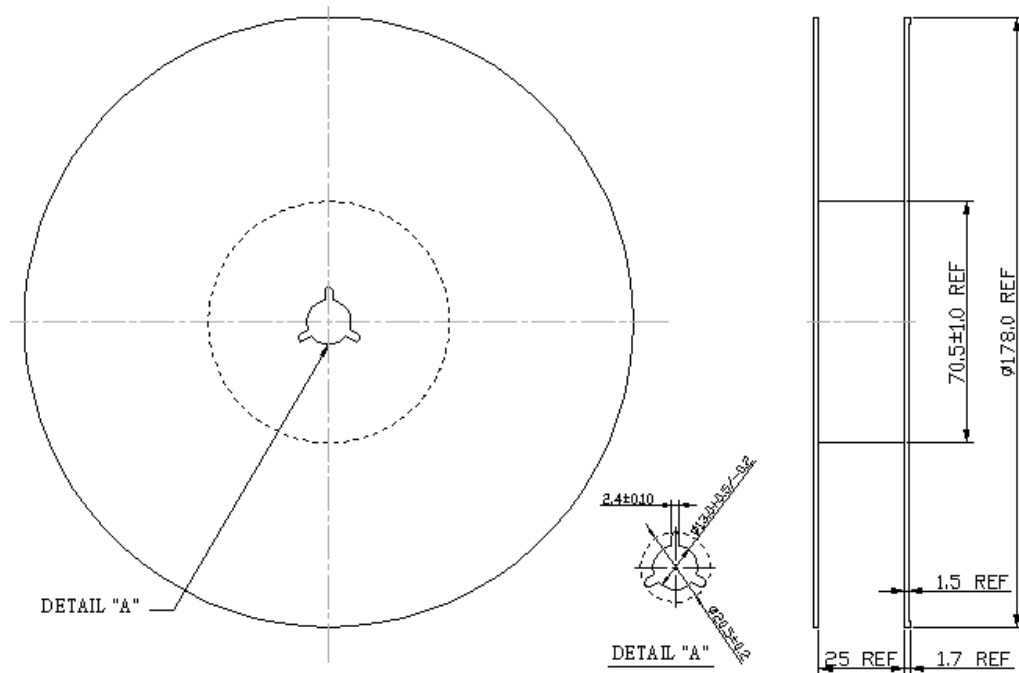
Fig2. Horizontal: 2MHz/Div; Vertical: 1dB/Div,  
Vertical: 100nS/Div,

## F. PCB FOOTPRINT

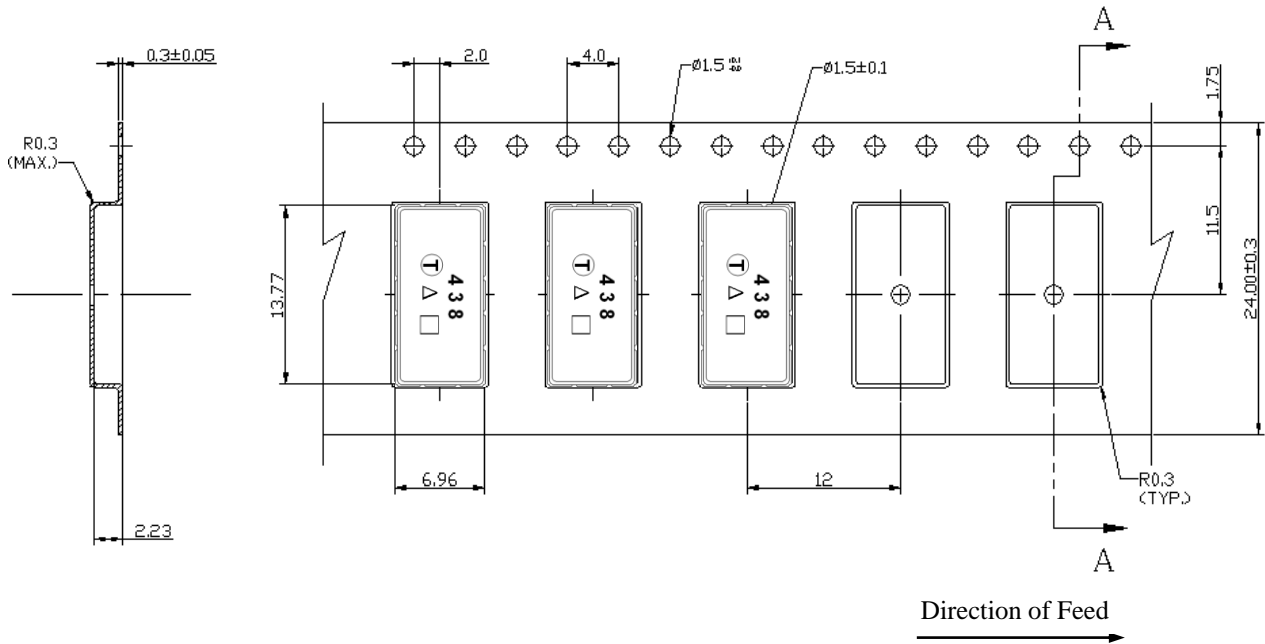


## G. PACKING:

### 1. REEL DIMENSION



## 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.

