



# 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: SAW Filter 869 MHz (BW 2MHz) SMD 3.0X3.0 mm

TST Part No.: TA2087B (This part is compliant with AEC-Q200)

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

Customer signature required

Company: \_\_\_\_\_

Division: \_\_\_\_\_

Approved by : \_\_\_\_\_

Date: \_\_\_\_\_

Checked by: \_\_\_\_\_ Michael Yang *Michael*

Approval by: \_\_\_\_\_ Andy Yu *Andy Yu*

Date: \_\_\_\_\_ 2019/04/30

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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## SAW Filter 869MHz

MODEL NO.:TA2087B

REV. NO.:1.0

### A. MAXIMUM RATING:

1. Input Power Level: 20 dBm
2. DC Voltage : 6V
3. Operating Temperature: -40℃ to +85℃
4. Storage Temperature: -40℃ to +85℃
5. Moisture Sensitive Level (MSL): Level 3

RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device (ESD)

### B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance (single) :  $Z_s = 50 \Omega$

Terminating load impedance (single) :  $Z_L = 50 \Omega$

| Item                                          | Unit | Min              | Type. | Max |
|-----------------------------------------------|------|------------------|-------|-----|
| <b>Center Frequency</b> <b>Fc</b>             | MHz  | -                | 869.  | -   |
| <b>Insertion Loss</b> (868~870 MHz) <b>IL</b> | dB   |                  | 3.0   | 4.0 |
| <b>VSWR</b> (868~870 MHz)                     |      |                  | 1.5   | 2.0 |
| <b>Amplitude ripple</b>                       |      |                  |       |     |
| <b>(868~870 MHz)</b>                          | dB   |                  | 0.5   | 1.2 |
| <b>Attenuation</b>                            |      |                  |       |     |
| 50 ~ 791 MHz                                  | dB   | 45               | 50    |     |
| 791 ~ 835 MHz                                 | dB   | 45               | 50    |     |
| 835 ~ 848 MHz                                 | dB   | 43               | 48    |     |
| 848 ~ 862 MHz                                 | dB   | 30 <sup>1)</sup> | 35    |     |
| 880 ~ 883 MHz                                 | dB   | 35               | 45    |     |
| 883 ~ 1000 MHz                                | dB   | 49               | 54    |     |
| Package size                                  | mm   | SMD 3x3          |       |     |

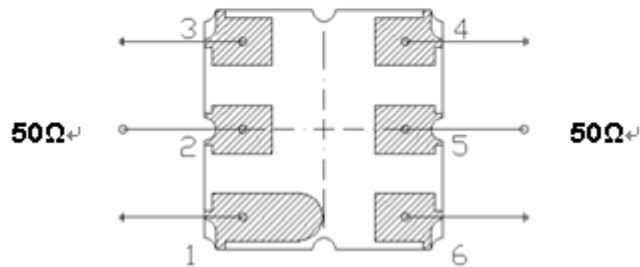
1) 30dB for -40℃ to +30℃

### C.. TEST CIRCUIT:

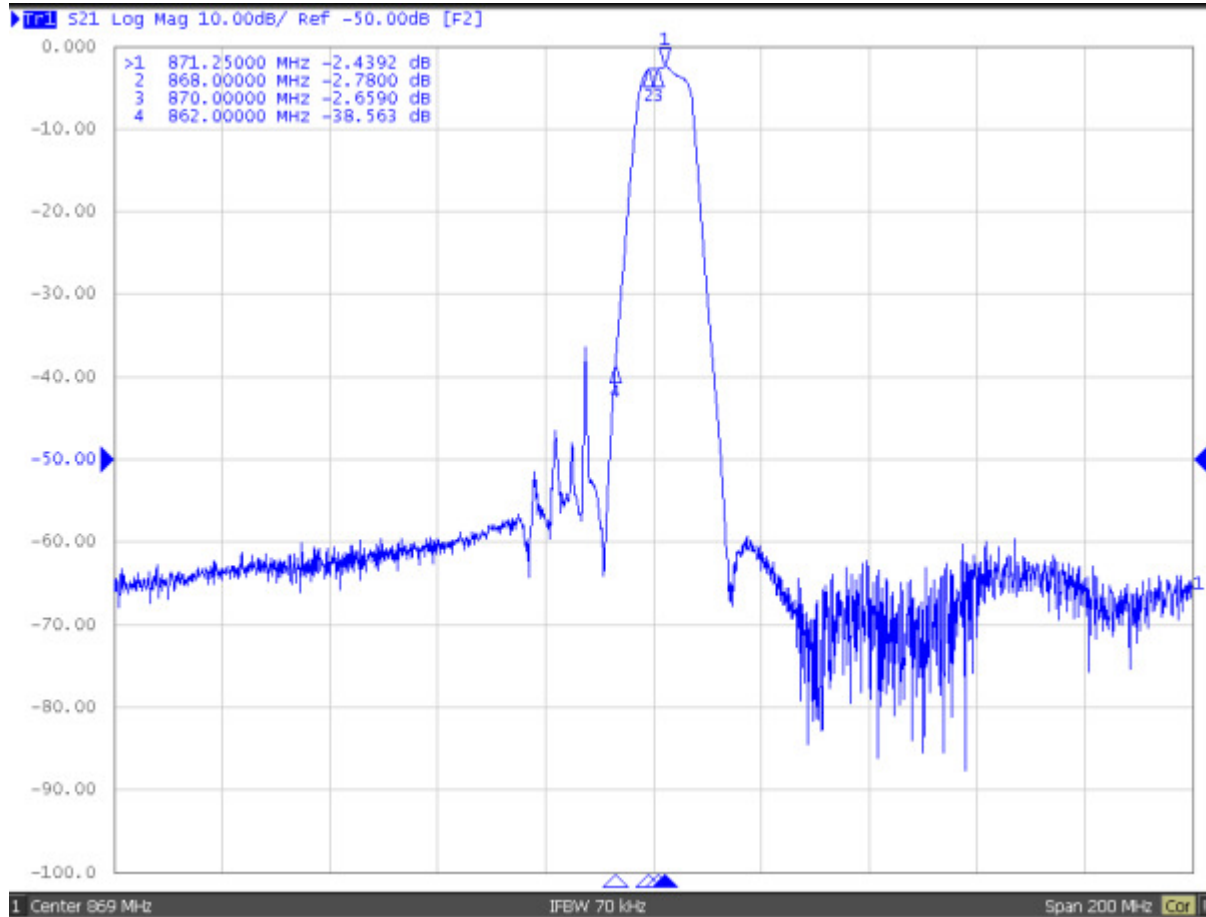
(2): Unbalance Port.,

(5): Unbalance Port.,

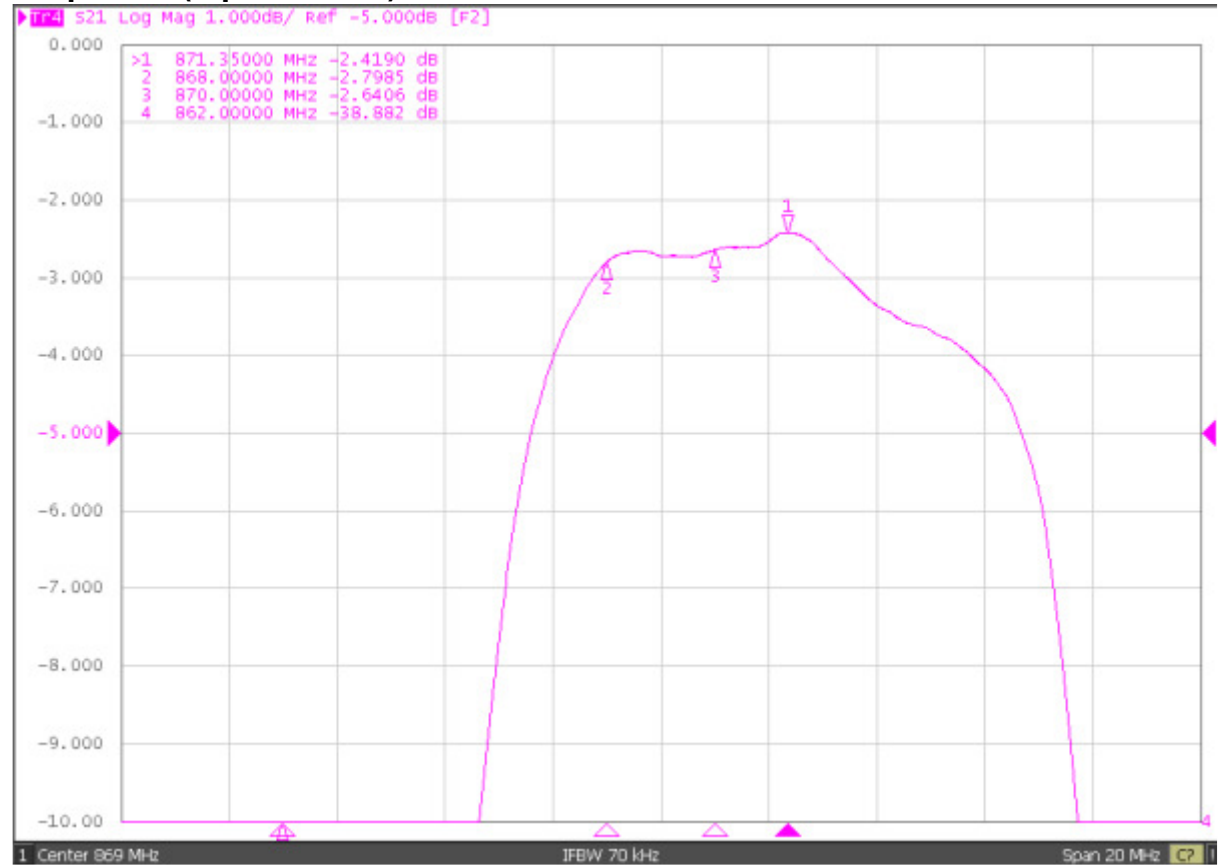
Others: Ground.,



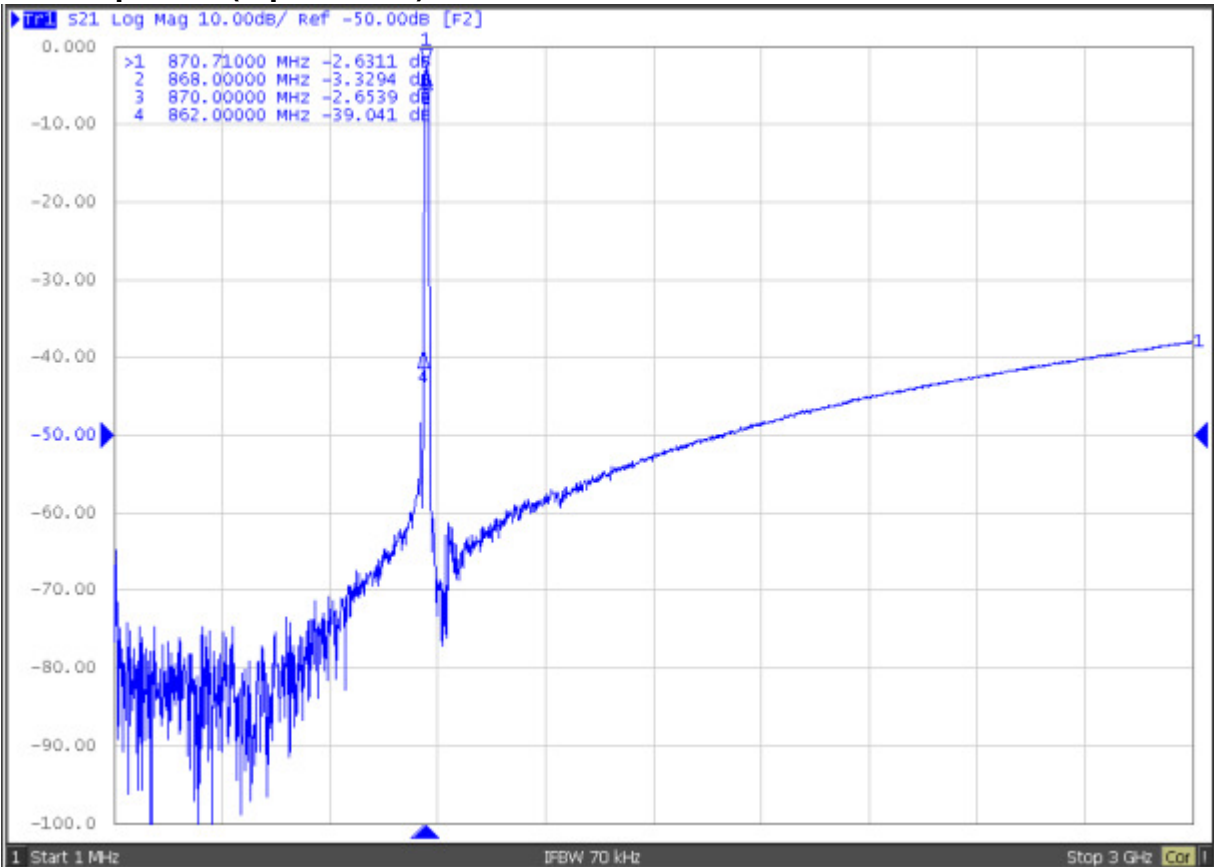
### D. Frequency Characteristics: S21 response :( Span 200MHz)



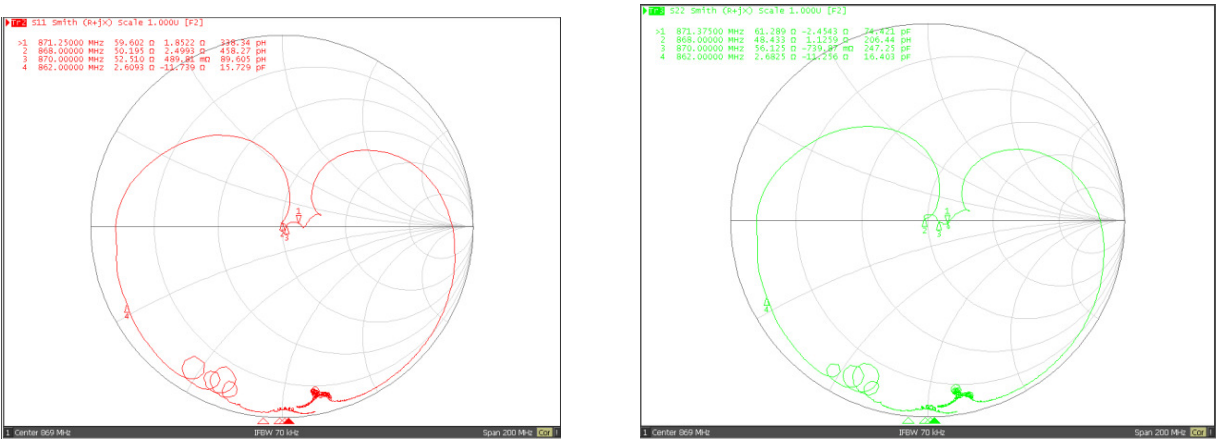
S21 response :( Span 20MHz)



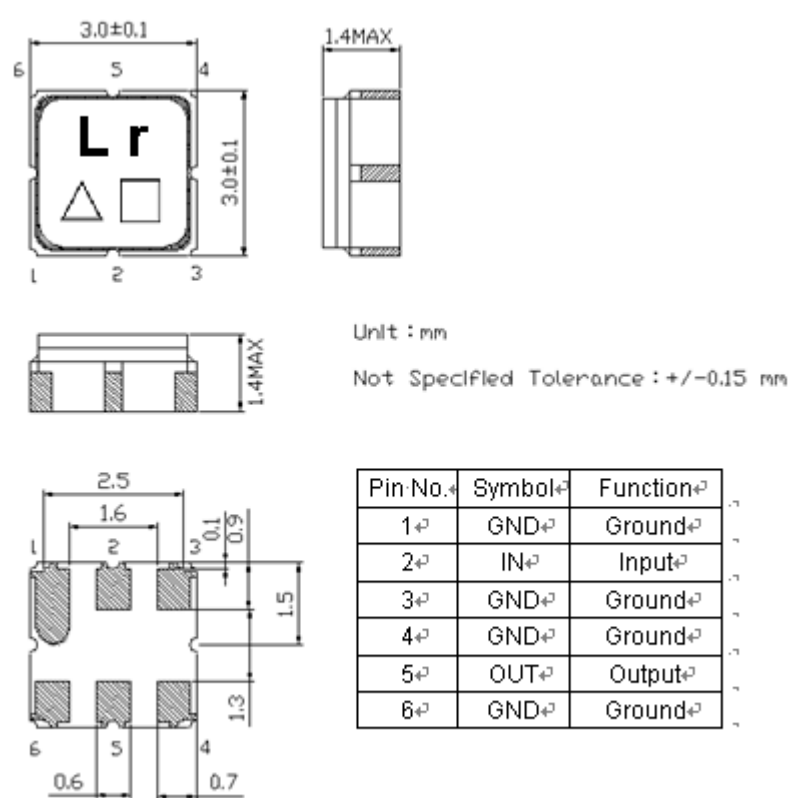
S21 response :( Span 3GHz)



S11/S22 response:



E.OUTLINE DRAWING:



Data code : See the table

|      |    |    |     |    |    |    |     |    |
|------|----|----|-----|----|----|----|-----|----|
| WK   | 01 | 02 | ... | 26 | 27 | 28 | ... | 52 |
| Code | A  | B  | ... | Z  | a  | b  | ... | z  |

△ Year code : See the table

|      |      |      |      |      |     |      |      |
|------|------|------|------|------|-----|------|------|
| Year | 2008 | 2009 | 2010 | 2011 | ... | 2019 | 2020 |
| Code | 8    | 9    | 0    | 1    | ... | 9    | 0    |

## 1. REEL DIMENSION

Technical drawing of a circular plate. The main view shows a large circle with a central hole. A dashed circle indicates the hole's diameter. A leader line points from the text "See DETAIL 'A'" to the central hole. To the right, a vertical dimension line indicates the hole's diameter as  $\phi 100 \text{ REF.}$  and the plate's outer diameter as  $\phi 330 \text{ REF.}$ . Below the main view, a detailed view of the hole is shown, labeled "A". It features a central hole with a diameter of  $\phi 20 \pm 0.1$  and a surrounding ring with a thickness of  $2.0 \pm 0.5$ . The detailed view also shows a hole with a diameter of  $\phi 18.0 \pm 0.1$  and a hole with a diameter of  $\phi 20.0 \pm 0.1$ .

### **G. 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.

