



# TAI-SAW TECHNOLOGY CO., LTD.

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

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: [tstsales@mail.taisaw.com](mailto:tstsales@mail.taisaw.com) Web: [www.taisaw.com](http://www.taisaw.com)

## Product Specifications Approval Sheet

Product Name: SAW Filter 901.5 MHz (BW 1MHz) SMD 3.0X3.0 mm

TST Parts No.: TA1948A

Customer Parts No.:

|                     |
|---------------------|
| Company: _____      |
| Division: _____     |
| Approved by : _____ |
| Date: _____         |

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

Approval by: \_\_\_\_\_ Bob Chau *Bob Chau*

Date: \_\_\_\_\_ 2017/9/28

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



# TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,

Taoyuan, 324, Taiwan, R.O.C.

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: [tstsales@mail.taisaw.com](mailto:tstsales@mail.taisaw.com) Web: [www.taisaw.com](http://www.taisaw.com)

## SAW Filter 901.5MHz

MODEL NO.:TA1948A

REV. NO.:1.0

### A. MAXIMUM RATING:

1. Input Power Level: 10 dBm
2. DC Voltage : 5V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C
5. Moisture Sensitivity Level: Level 1

RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device (ESD)

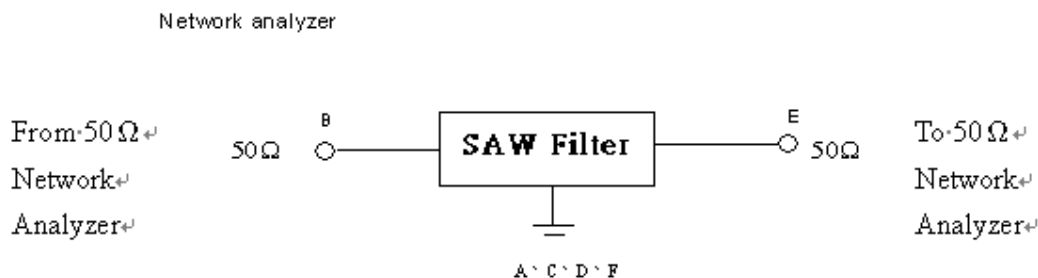
### B. ELECTRICAL CHARACTERISTICS:

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

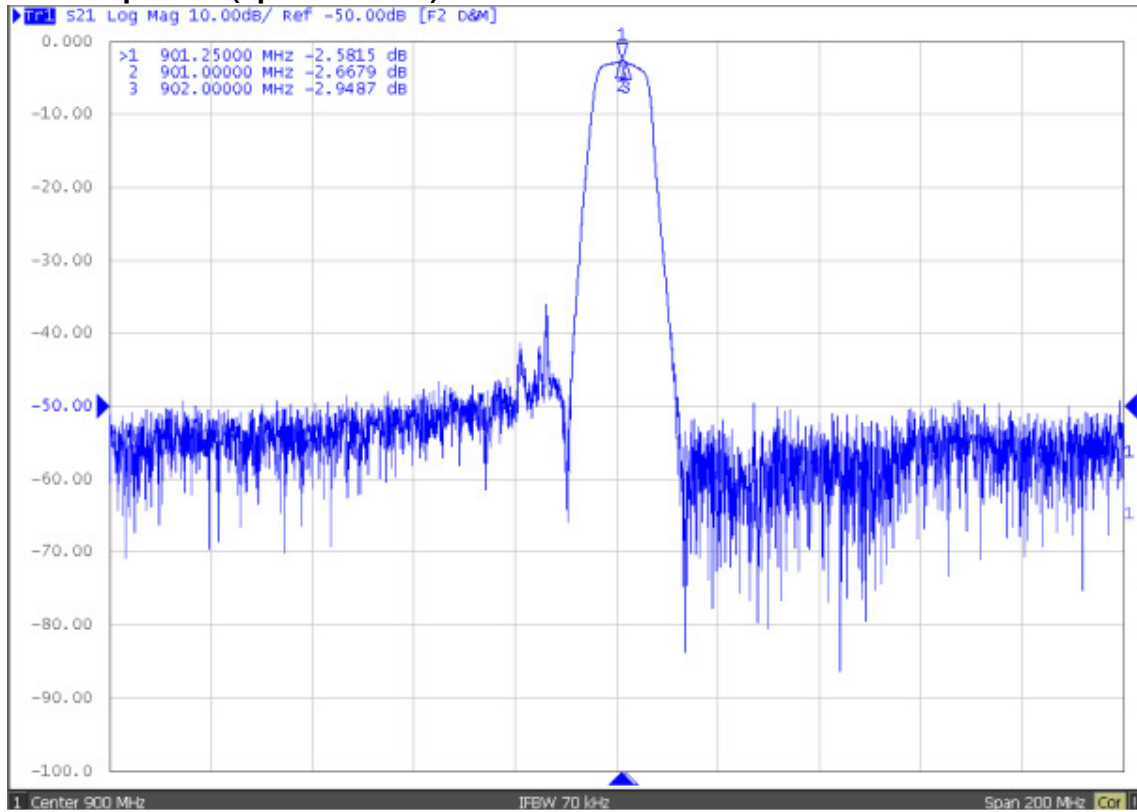
Test Temperature 25°C

| Item                                     | Unit | Min     | Type. | Max |
|------------------------------------------|------|---------|-------|-----|
| <b>Center Frequency</b> Fc               | MHz  | -       | 901.5 | -   |
| <b>Insertion Loss</b> (901~902 MHz) IL   | dB   |         | 3.0   | 4.0 |
| <b>VSWR</b> (901~902 MHz)                |      |         | 1.3   | 2.0 |
| <b>Amplitude ripple</b><br>(901~902 MHz) | dB   |         | 1.0   | 2.0 |
| <b>Attenuation</b>                       |      |         |       |     |
| 50 ~ 861 MHz                             | dB   | 45      | 50    |     |
| 861 ~ 890 MHz                            | dB   | 35      | 40    |     |
| 930 ~ 941 MHz                            | dB   | 45      | 50    |     |
| 941 ~ 1000 MHz                           | dB   | 45      | 50    |     |
|                                          |      |         |       |     |
|                                          |      |         |       |     |
| Package size                             | mm   | SMD 3x3 |       |     |

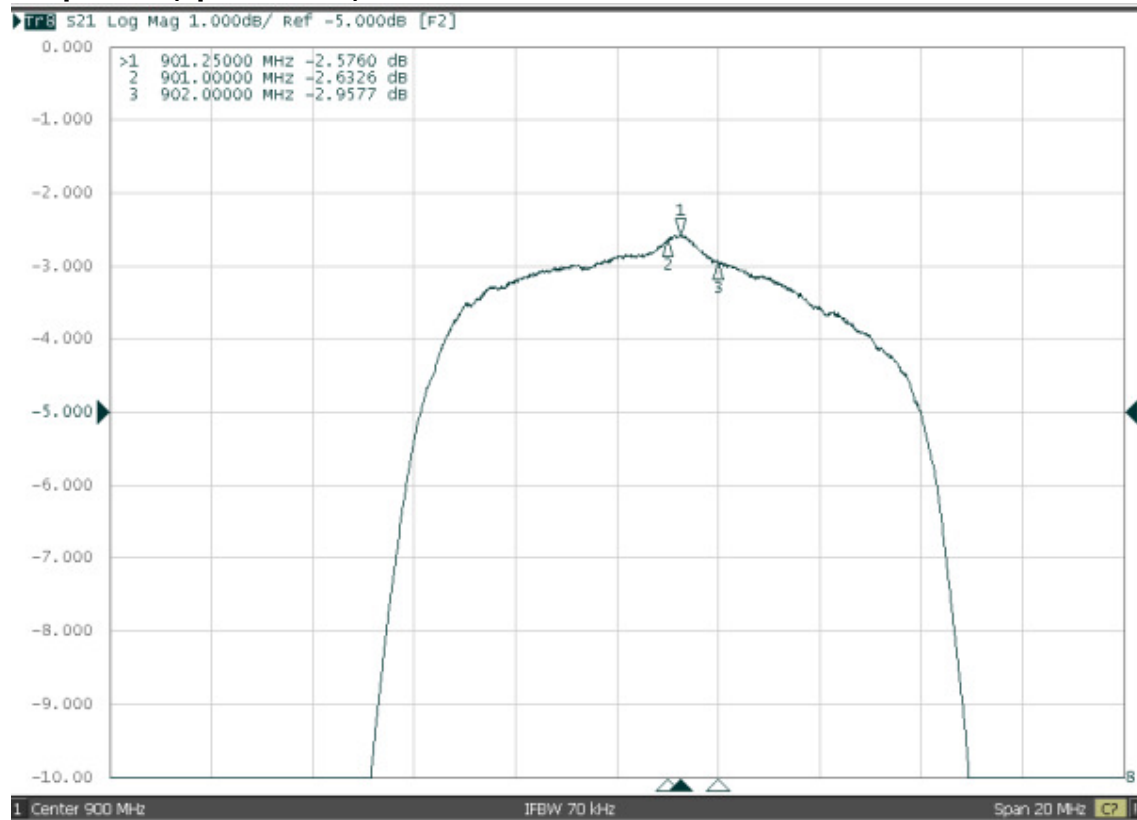
### C. TEST CIRCUIT:



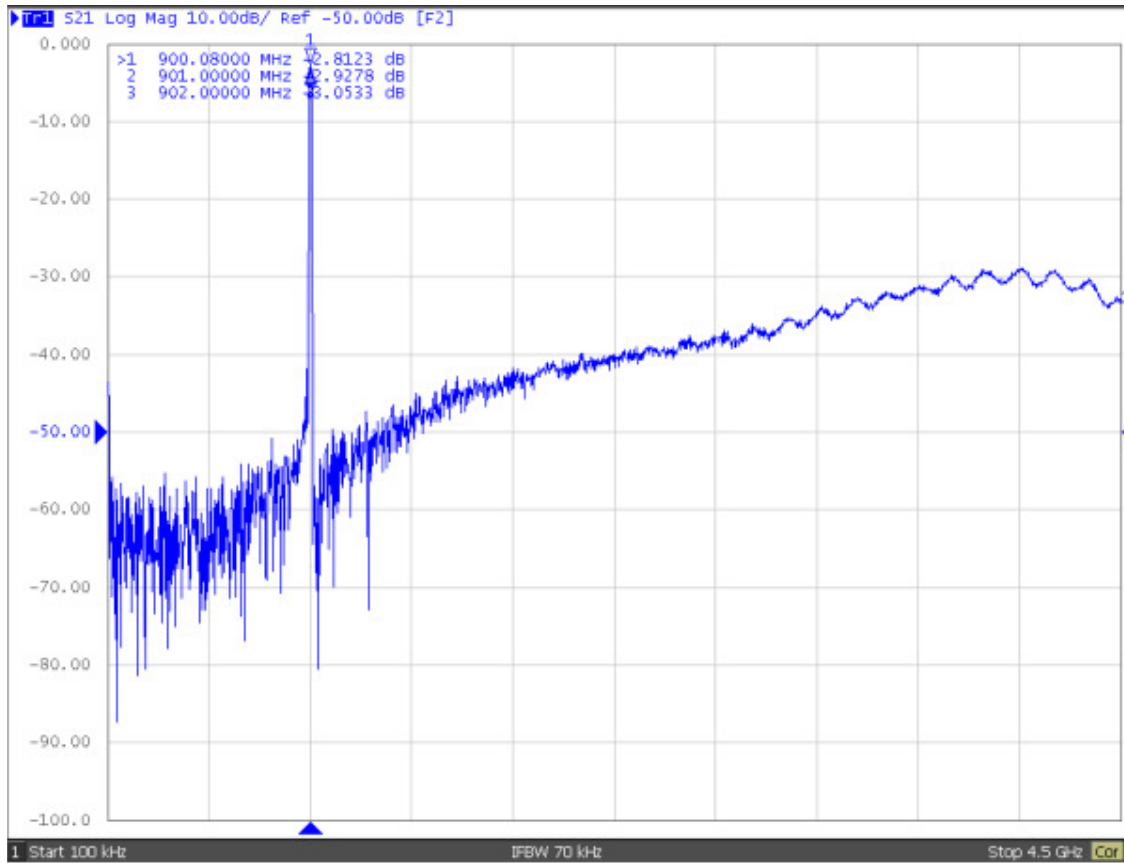
**D. Frequency Characteristics :**  
**S21 response: (span 200MHz)**



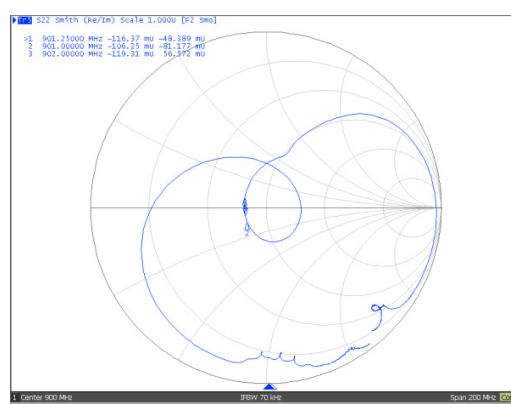
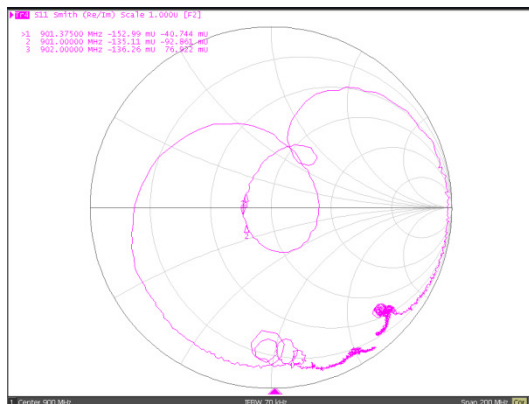
**S21 response: (span 20MHz)**



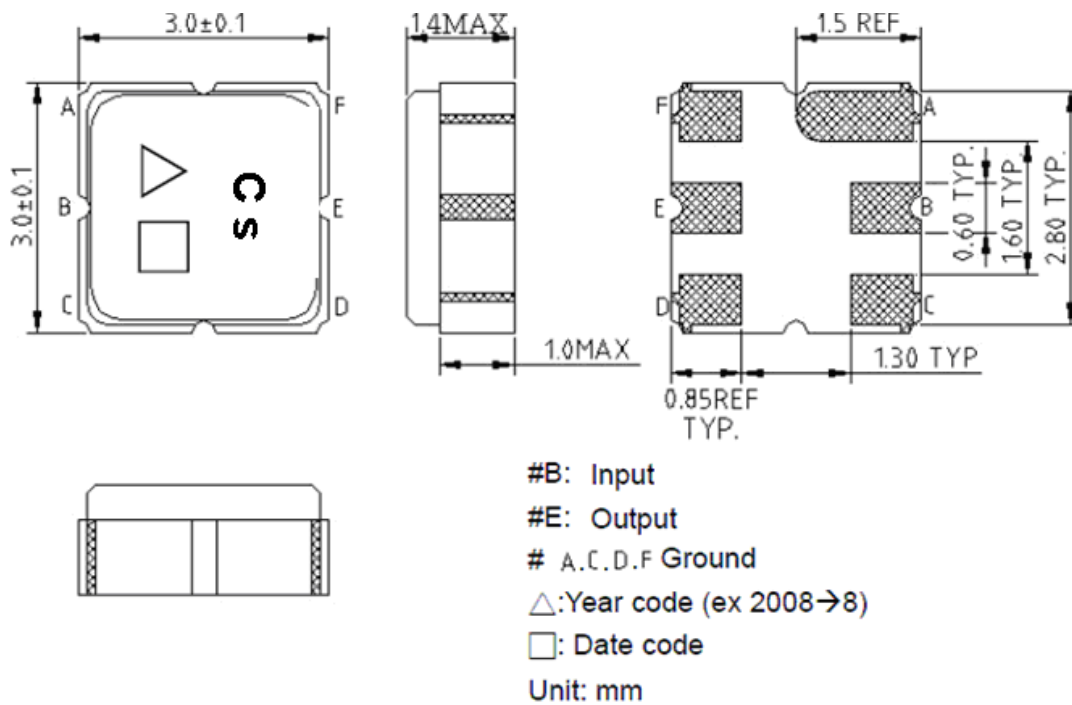
## S21 response: (span 3GHz)



## S11/S22 response:



## E.OUTLINE DRAWING:



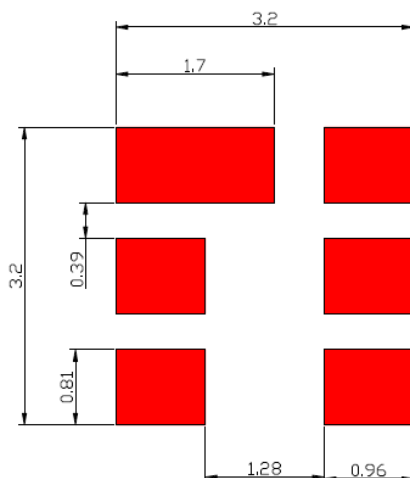
Data code : See the table

| 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    |

## F. Foot Print:



## 1. REEL DIMENSION

Technical drawing of a circular part. The main view shows a large circle with a central hole. A leader line points from the text "See DETAIL 'A'" to the central hole. To the right, a cross-sectional view shows the part's profile with dimensions: 12 TYP. (thickness), 100 REF. (inner diameter), and 330 REF. (outer diameter). Below the main view, a detail view 'A' shows a cross-section of the central hole with dimensions: 13.0-13.1-13.2 (hole diameter), 20 ± 0.5 (hole depth), and 20 ± 0.5 (hole diameter).

Technical drawing of a multi-hole punch die. The drawing includes a top view and two cross-sectional views (left and bottom). Key dimensions and features are labeled:

- Top View:**
  - Overall width:  $12.0 \pm 0.3$
  - Overall length:  $5.5 \pm 0.05$
  - Distance from right edge to center of last hole:  $1.75 \pm 0.1$
  - Distance between hole centers:  $4.0 \pm 0.1$  (total for 8 holes)
  - Distance between hole centers:  $2.0 \pm 0.05$  (for the first two holes)
  - Hole diameter:  $\phi 1.6 \pm 0.1$  DIA
  - Section line A-A.
- Left Cross-section:**
  - Die thickness:  $0.25 \pm 0.05$
  - Die width:  $B_o 3.3 \pm 0.1$
- Bottom Cross-section:**
  - Die height:  $K_o 1.4 \pm 0.1$
  - Die width:  $A_o 3.3 \pm 0.1$

#### 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.

