



# 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: 120 MHz 14.2MHzBW SMD 13.3mm x 6.5 mm SAW IF Filter

TST Parts No.: TB1214A

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

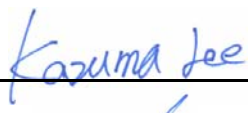
Customer signature required

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

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

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

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

Checked by: \_\_\_\_\_ Kazuma Lee 

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

Date: \_\_\_\_\_ 12 / 16 / 2015

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 120MHz 14.9MHz BW (SMD 13.3×6.5 mm)

MODEL NO.: TB1214A

REV. NO.1

## A. MAXIMUM RATING:

1. Operating temperature range: -10°C to 80°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level : 10 dBm
4. Maximum DC Voltage : 10V

RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device

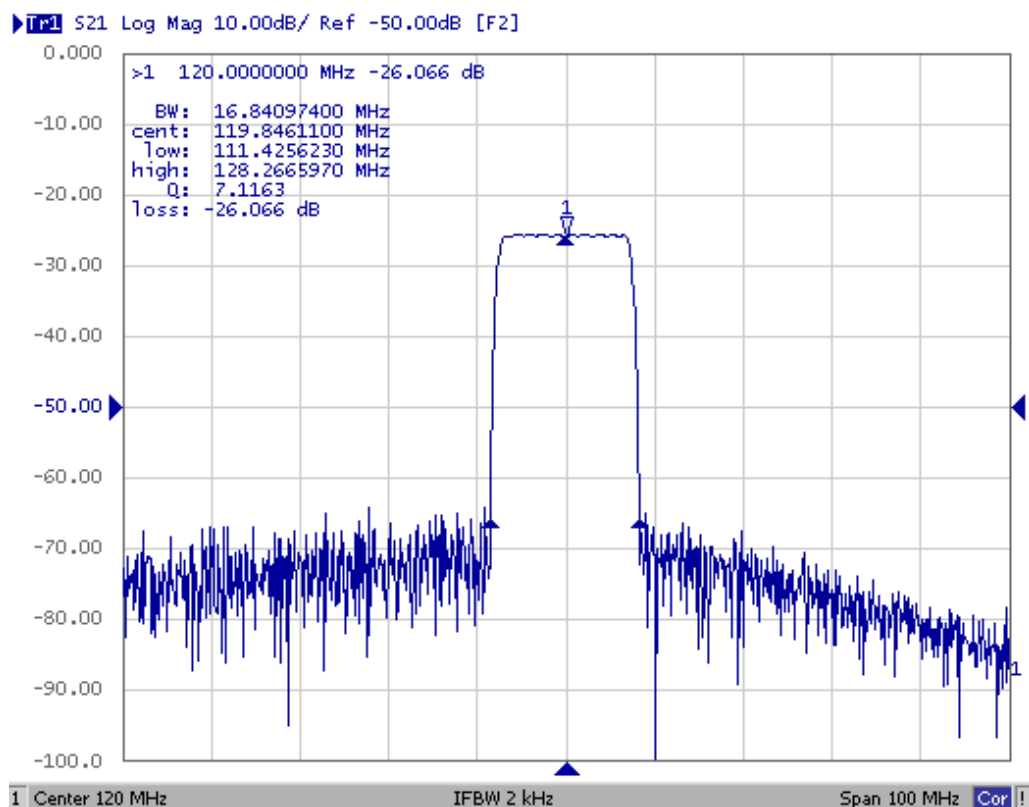
## B. CHARACTERISTICS:

Ambient Temperature: 25°C

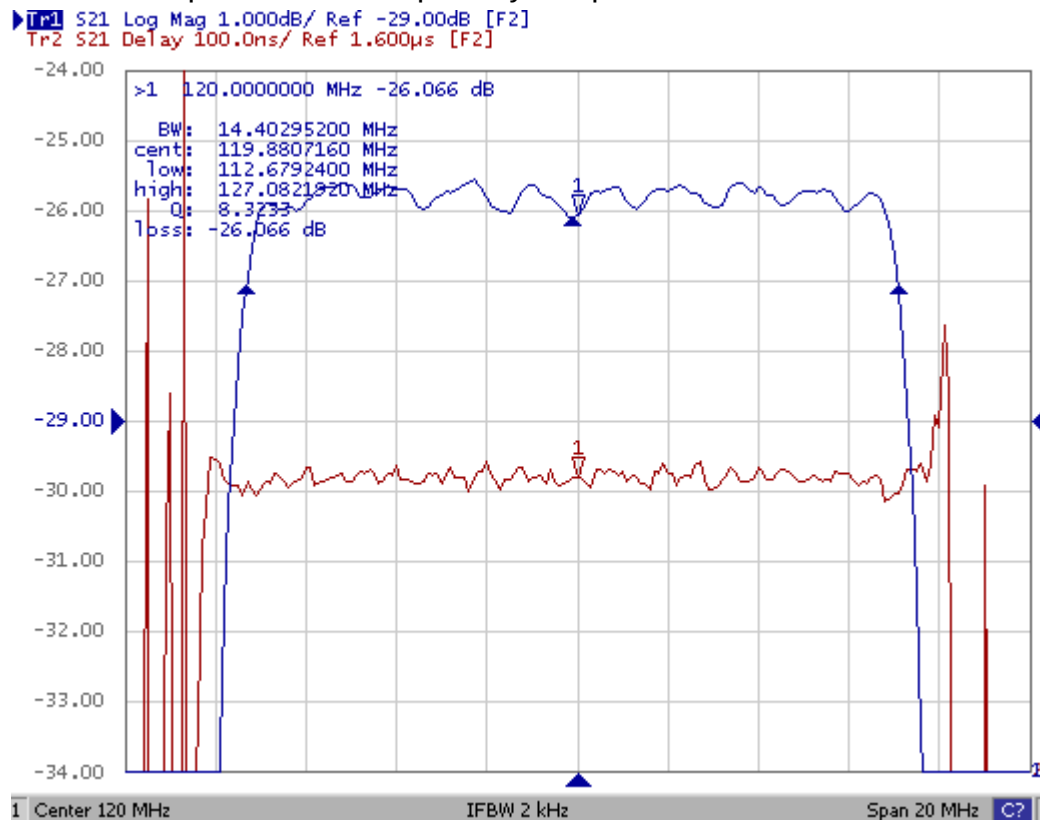
| Item                                      | Unit   | Min.  | Type. | Max. |
|-------------------------------------------|--------|-------|-------|------|
| Center frequency, <b>Fc</b>               | MHz    | -     | 120   | -    |
| Insertion Loss, <b>IL</b>                 | dB     | -     | 25.5  | 27.0 |
| -1dB bandwidth                            | MHz    | 14.20 | 14.40 | -    |
| -5dB bandwidth                            | MHz    | -     | 15.2  | 15.4 |
| -40dB bandwidth                           | MHz    | -     | 16.8  | 17.0 |
| Passband Ripple Fc+/- 6.92MHz             | dB     | -     | 0.7   | 1.5  |
| Group Delay variation Fc+/- 6.92MHz       | ns     |       | 60    | -    |
| Absolute Group Delay                      | us     | -     | 1.52  | -    |
| Attenuation:(Reference level from Min IL) |        |       |       |      |
| Ultimate Attenuation                      | dB     | 40    | 45    | -    |
| Temperature Coefficient                   | ppm/°C | -     | -23   | -    |
| Source Impedance                          | Ohm    | -     | 50    | -    |
| Load Impedance                            | Ohm    | -     | 50    | -    |

## C. FREQUENCY CHARACTERISTICS:

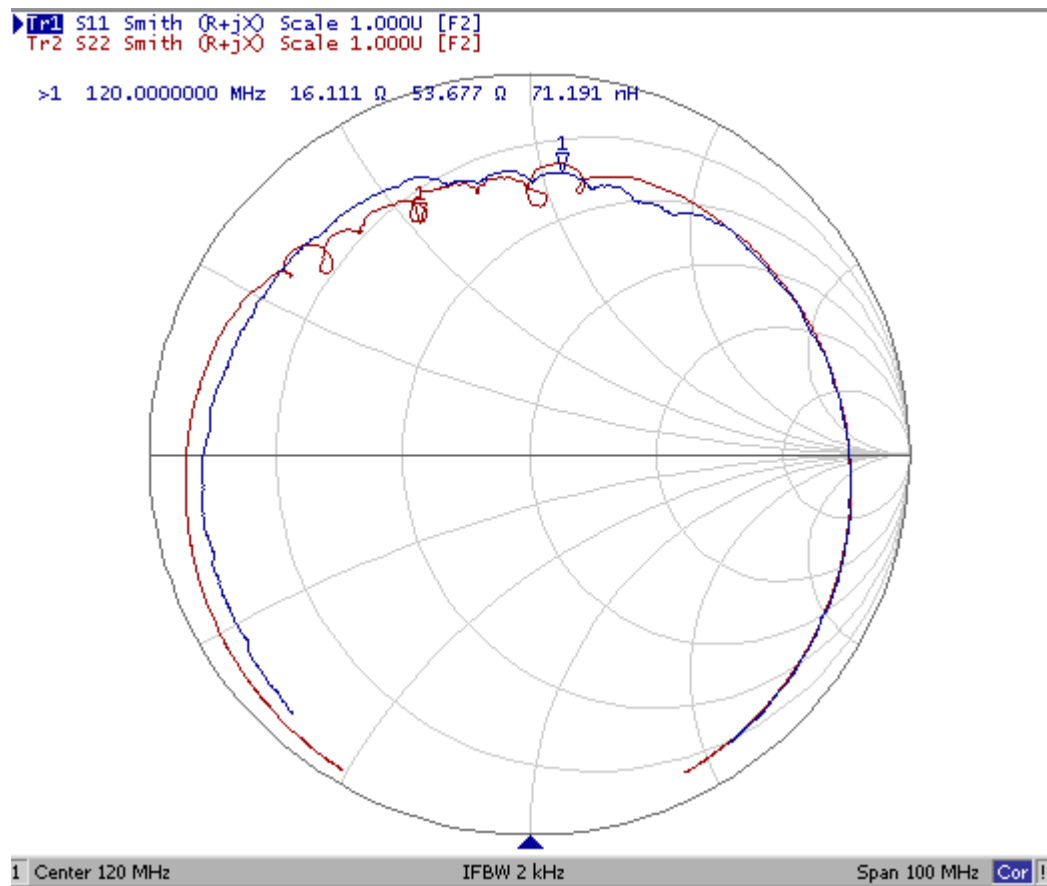
### (1) Wide Band Response:



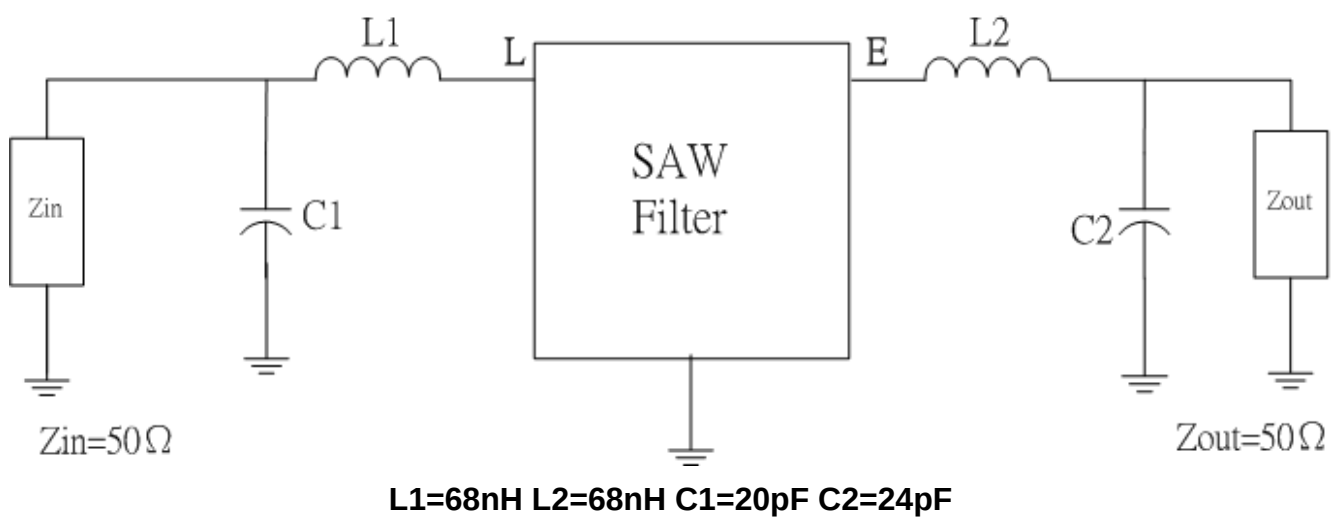
### (2) Pass Band Response and Group Delay Response:



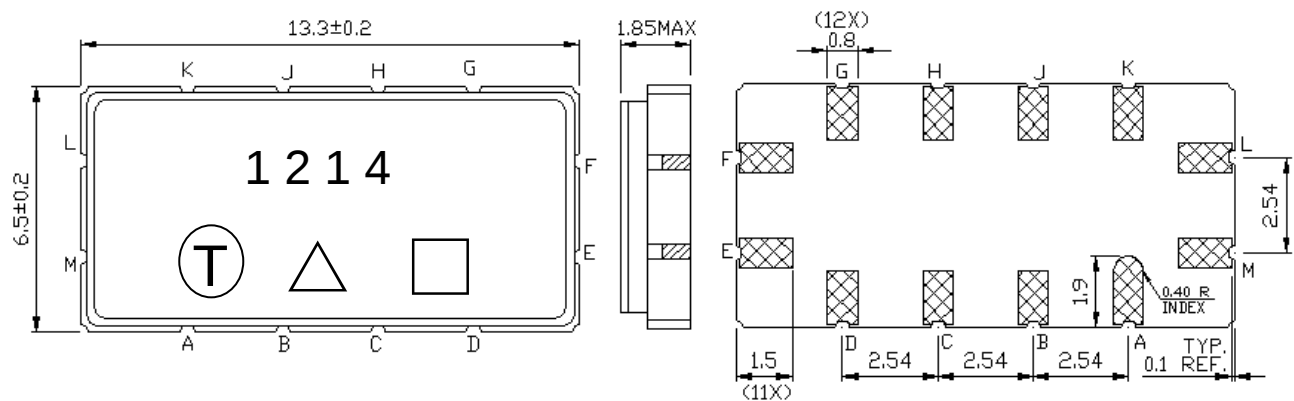
(3) Smith Chart:



D. MATCHING CIRCUIT:



## E. OUTLINE DRAWING:



#L : Input

#M : Input Ground

#E : Output

#F : Output Ground

#A,B,C,D,G,H,J,K : Ground

□: Week Code

Unit: mm

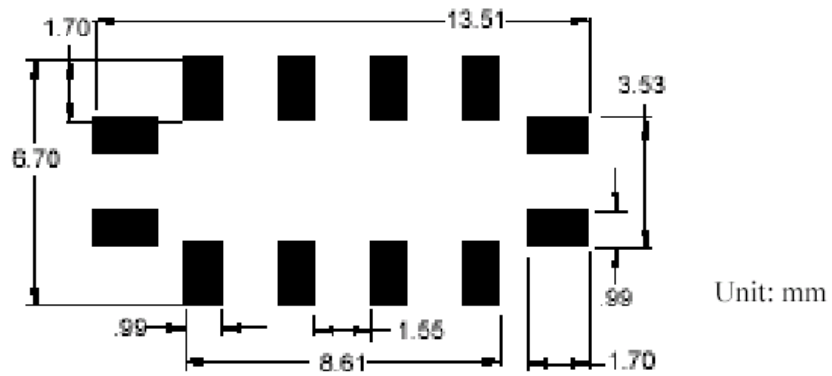
△ : Product / Year Code

| Year         | 2013<br>2017 | 2014<br>2018 | 2015<br>2019 | 2016<br>2020 |
|--------------|--------------|--------------|--------------|--------------|
| Product Code | B            | b            | <u>B</u>     | <u>b</u>     |

## Week Code Table

| WK01 | WK02 | WK03 | WK04 | WK05 | WK06 | WK07 | WK08 | WK09 | WK10 | WK11 | WK12 | WK13 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| A    | B    | C    | D    | E    | F    | G    | H    | I    | J    | K    | L    | M    |
| WK14 | WK15 | WK16 | WK17 | WK18 | WK19 | WK20 | WK21 | WK22 | WK23 | WK24 | WK25 | WK26 |
| N    | O    | P    | Q    | R    | S    | T    | U    | V    | W    | X    | Y    | Z    |
| WK27 | WK28 | WK29 | WK30 | WK31 | WK32 | WK33 | WK34 | WK35 | WK36 | WK37 | WK38 | WK39 |
| a    | b    | c    | d    | e    | f    | g    | h    | i    | j    | k    | l    | m    |
| WK40 | WK41 | WK42 | WK43 | WK44 | WK45 | WK46 | WK47 | WK48 | WK49 | WK50 | WK51 | WK52 |
| n    | o    | p    | q    | r    | s    | t    | u    | v    | w    | x    | y    | z    |

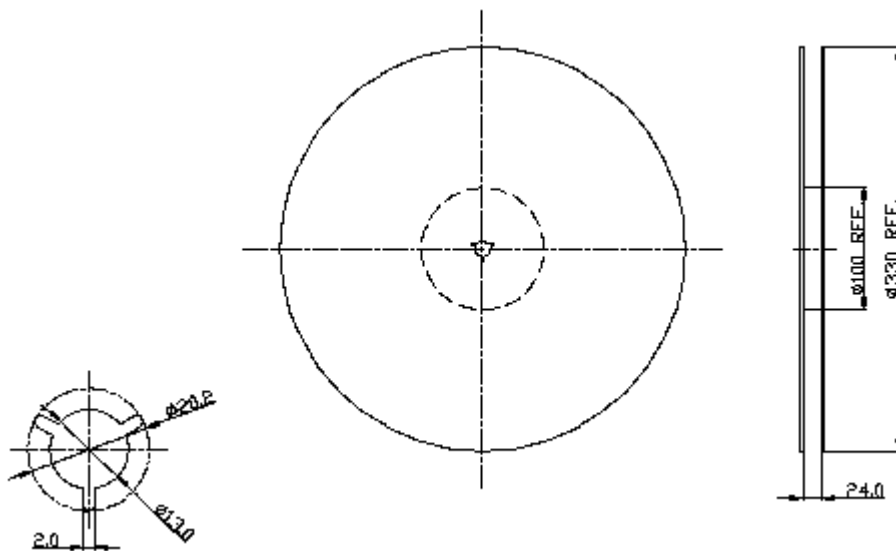
## F. PCB FOOTPRINT:



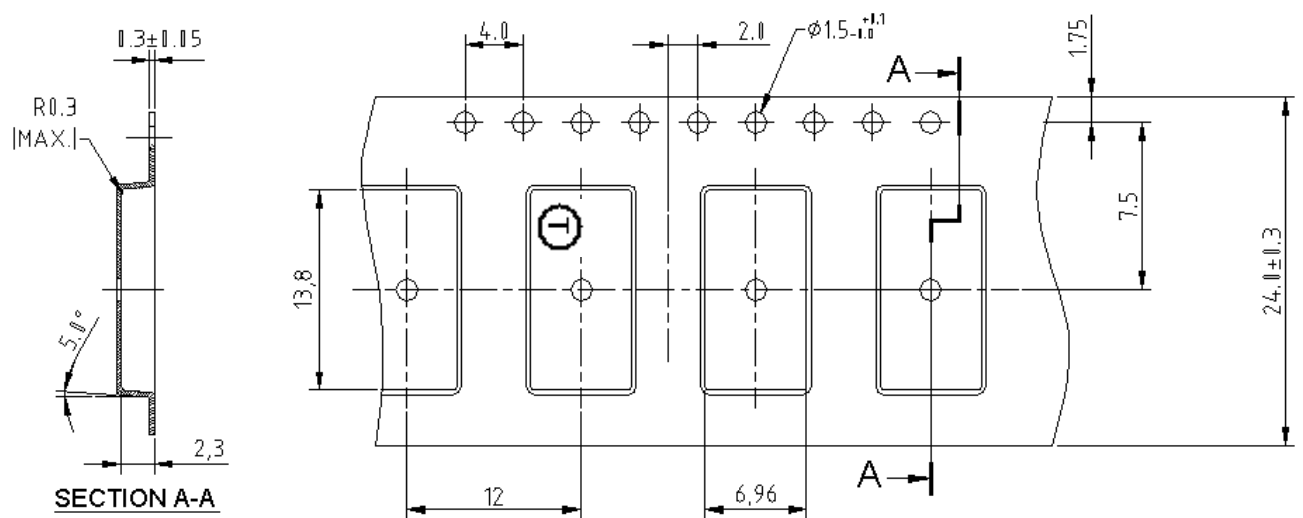
## G. PACKING:

### 1. REEL DIMENSION

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



## 2. TAPE DIMENSION



### H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at  $150\sim 180^\circ\text{C}$  for 60~90 seconds.
2. Ascending time to preheating temperature  $150^\circ\text{C}$  shall be 30 seconds min.
3. Heating shall be fixed at  $220^\circ\text{C}$  for 50~80 seconds and at  $260^\circ\text{C} +0/-5^\circ\text{C}$  peak (20~40sec).
4. Time: 2 times.

