



# TAI-SAW TECHNOLOGY CO., LTD.

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## Product Specifications Approval Sheet

Product Name: 745 MHz 66MHz BW SMD 5.0 x 5.0 mm SAW IF Filter

TST Parts No.: TB1115A

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

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

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

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

Date: \_\_\_\_\_ 04 / 09 / 2013

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 745MHz 66MHz BW (SMD 5.0×5.0 mm)

MODEL NO.: TB1115A

REV. NO.1

## A. MAXIMUM RATING:

1. Operating temperature range: -30°C to 60°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 :

| Item                                      | Unit   | Min. | Type. | Max. |
|-------------------------------------------|--------|------|-------|------|
| Center frequency, <b>Fc</b>               | MHz    | -    | 745   | -    |
| Insertion Loss, <b>IL</b>                 | dB     | -    | 14.8  | 15.5 |
| -1dB bandwidth                            | MHz    | 66.0 | 74.5  | -    |
| Passband Ripple Fc+/- 33MHz               | dB     | -    | 0.7   | 1.2  |
| Group Delay Ripple Fc+/- 33MHz            | ns     | -    | 40    | 50   |
| Absolute Group Delay at Fc                | ns     | -    | 670   | -    |
| Attenuation:(Reference level from Min IL) |        |      |       |      |
| 10MHz ~ 604MHz                            | dB     | 40   | 55    | -    |
| 604MHz ~ 676MHz                           | dB     | 40   | 50    | -    |
| 676MHz ~ 686MHz                           | dB     | 20   | 50    | -    |
| 686MHz ~ 698MHz                           | dB     | 15   | 38    | -    |
| 814MHz ~ 879MHz                           | dB     | 33   | 45    | -    |
| 879MHz ~ 1089MHz                          | dB     | 40   | 50    | -    |
| Temperature Coefficient                   | ppm/°C | -    | -94   | -    |
| Source Impedance                          | Ohm    | -    | 50    | -    |
| Load Impedance                            | Ohm    | -    | 50    | -    |

## C. Frequency Characteristics :

### (1) Narrow band Response:(span 655MHz)

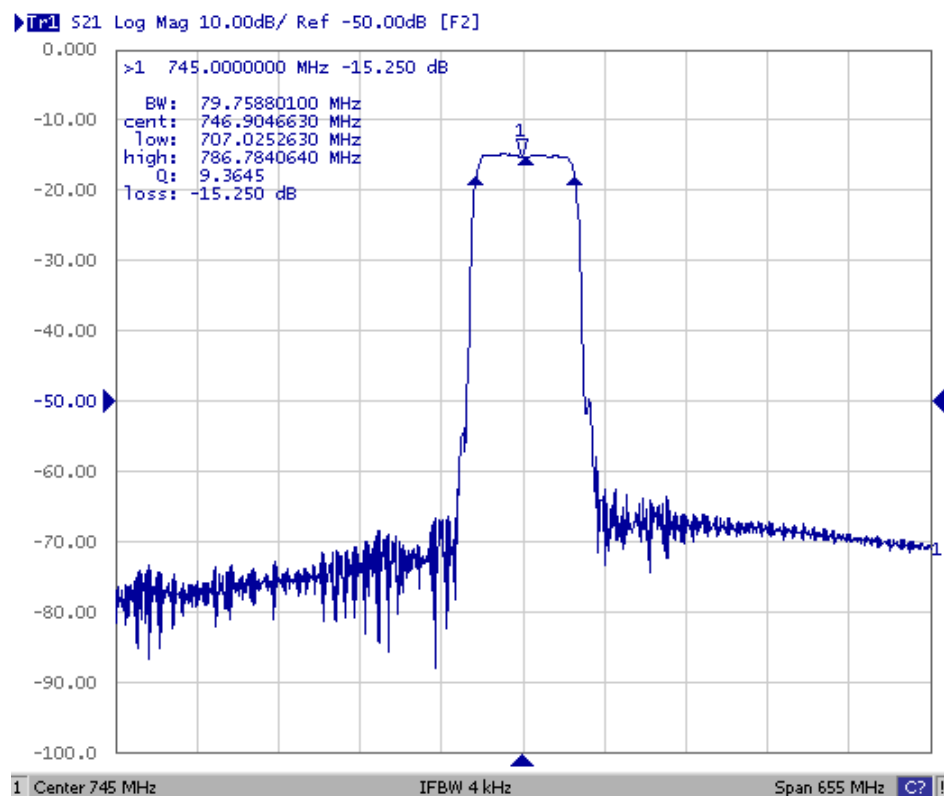


Fig1. Horizontal: 65.5MHz/Div Vertical: 10dB/Div

### (2) Pass band Response and Group Time Delay response

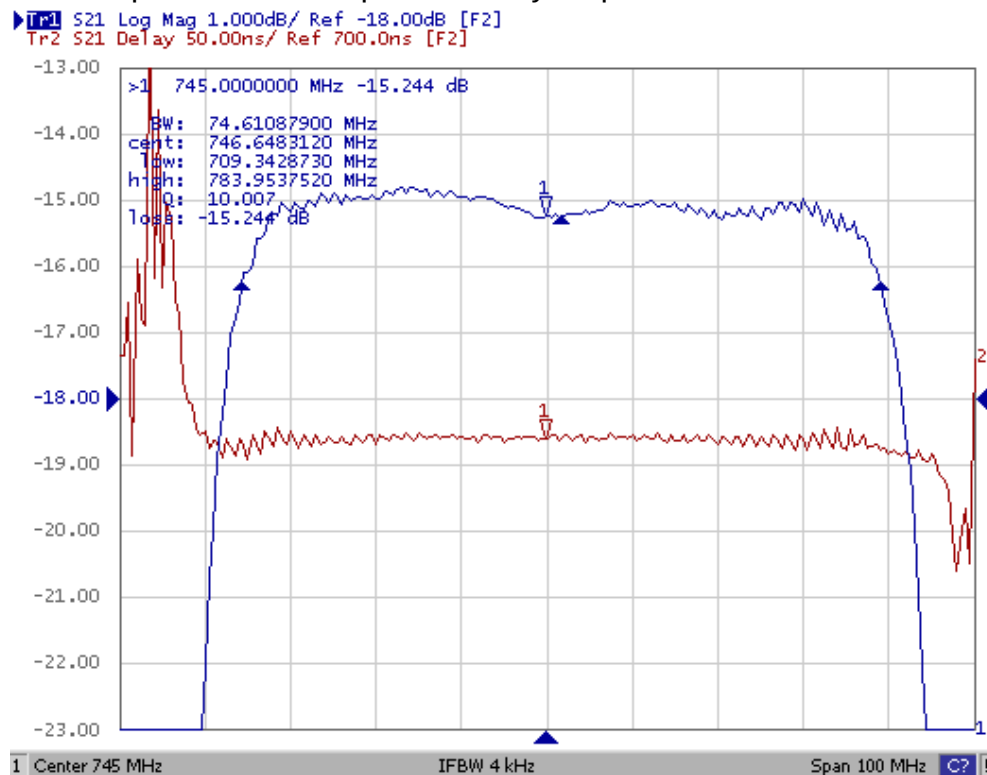
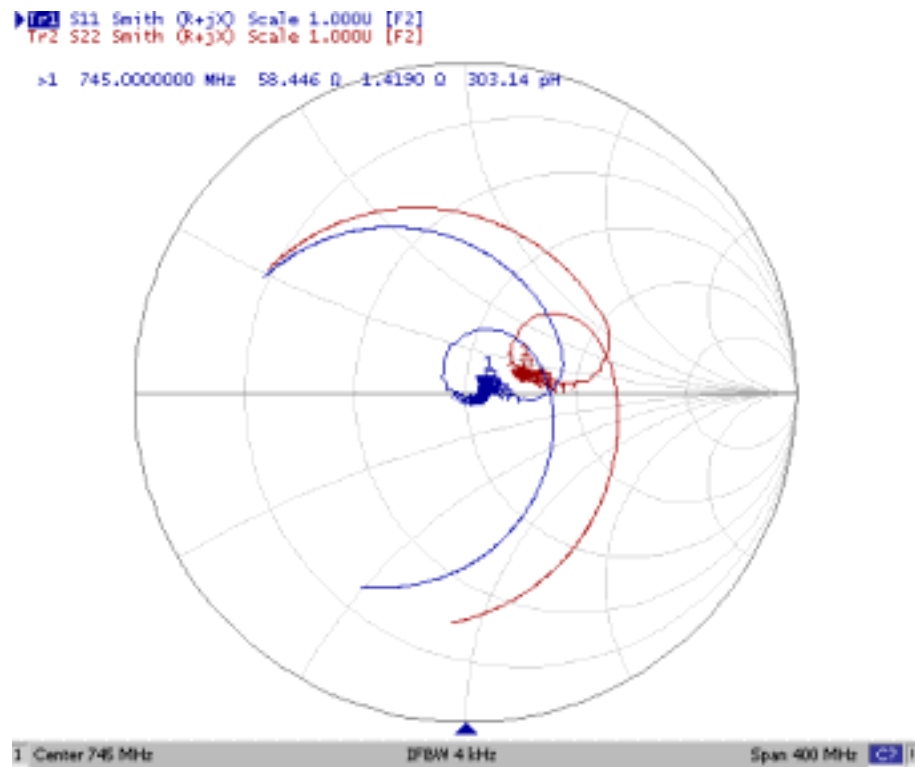


Fig2. Horizontal: 10MHz/Div Vertical: 1dB/Div  
Vertical: 50ns/Div

### (3) Smith Chart



### (4) Wide band Response:(span 1200MHz)

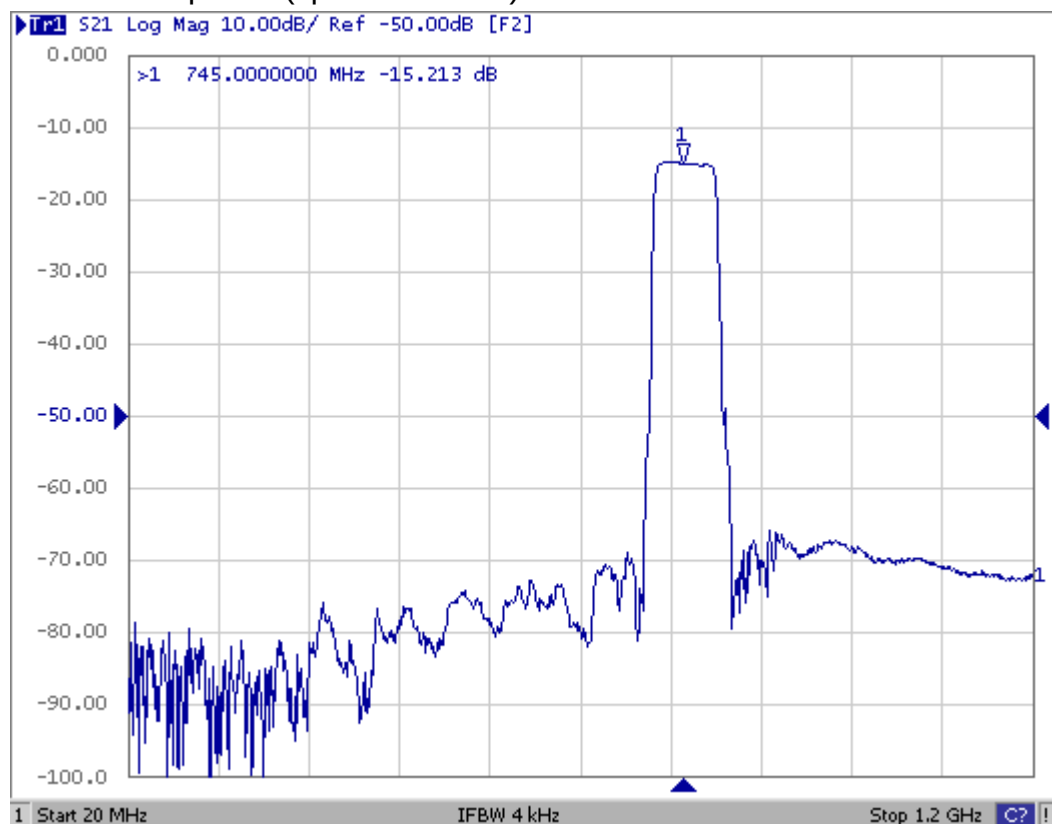
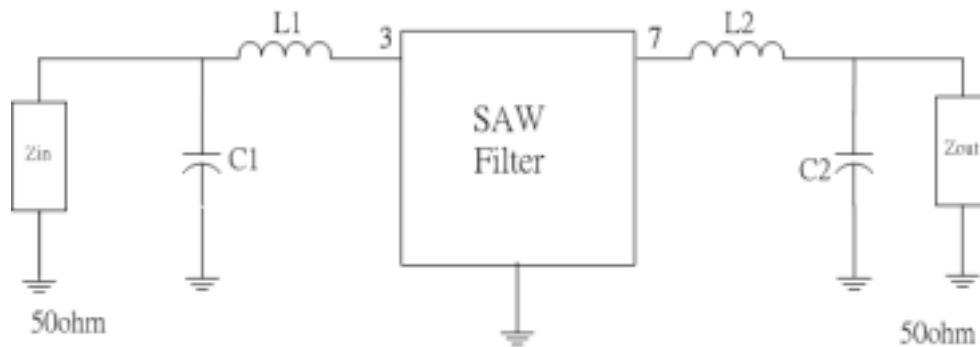


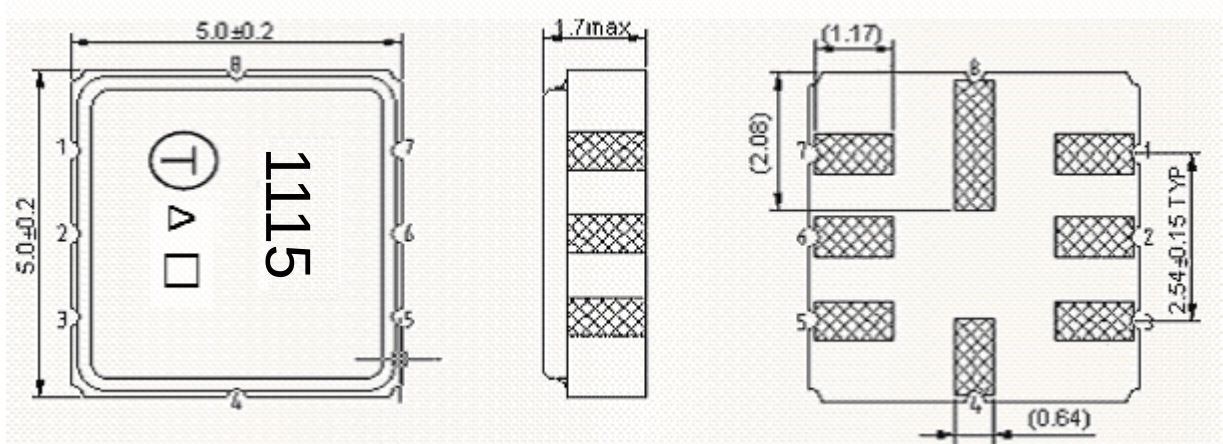
Fig4. Horizontal: 120MHz/Div Vertical: 10dB/Div

#### D. Matching Circuit:



$$L1=3\text{nH} \quad C1=4.7\text{pF} \quad L2=5.6\text{nH} \quad C2=3.5\text{pF}$$

#### E. Outline Drawing:



#3 –Input

#2 –Input ground

#7 – Output

#6 – Output ground

#1,4,5,8 – Ground

□ : Week Code

Unit : mm

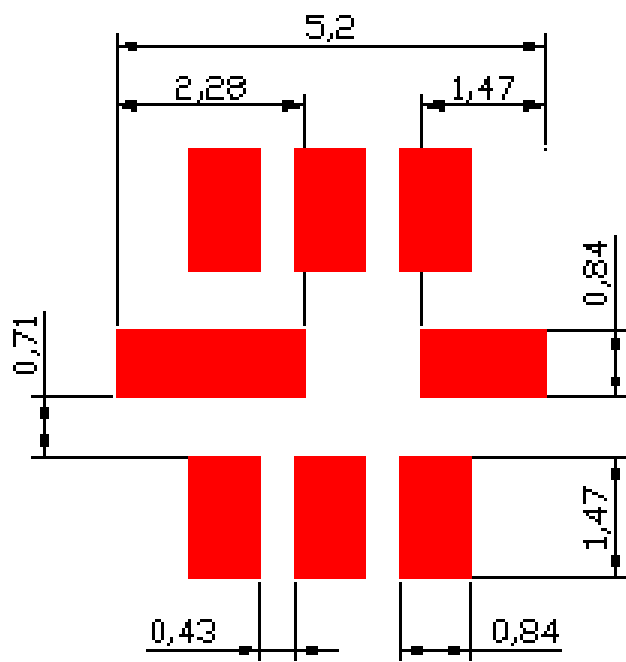
: Product / Year Code

| 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

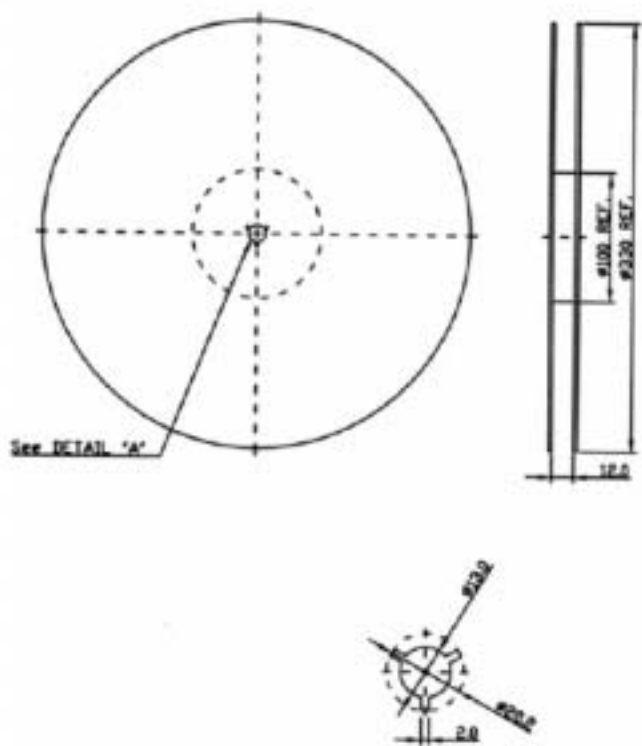
| WK01 | WK02 | WK03 | WK04 | WK05 | WK06 | WK07 | WK08 | WK09 | WK10 | WK11 | WK12 | WK13 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| A    | B    | C    | D    | E    | F    | G    | H    | I    | J    | K    | L    | M    |
| WK14 | WK15 | WK16 | 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:

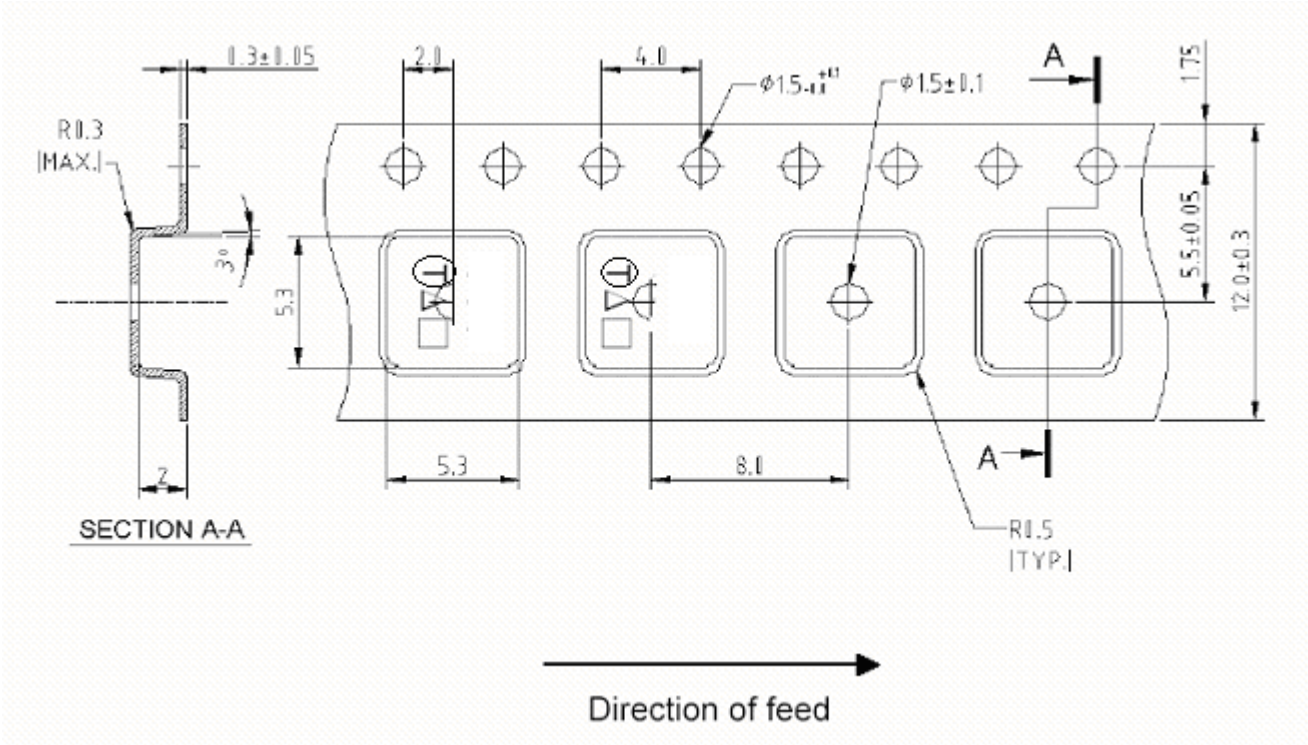


G. PACKING:

1. REEL DIMENSION: (Please refer to FR-75D10 for packing quantity)



2. TAPE DIMENSION:



H. RECOMMENDED REFLOW PROFILE:

