



# 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

Issued Date:

Product Name: SAW IF Filter 190 MHz ( package 5.0mm x 7.0 mm )

TST Parts No.: TB0909A

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

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

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

Approval by: \_\_\_\_\_ Francis Chen 

Date: \_\_\_\_\_ 10 / 11 / 2010

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, Taiwan, R.O.C.

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

E-mail: [tstsales3@mail.taisaw.com](mailto:tstsales3@mail.taisaw.com) Web: [www.taisaw.com](http://www.taisaw.com)

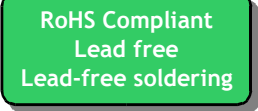
SAW Filter 190MHz 4MHz BW (SMD 5.0×7.0 mm)

MODEL NO.: TB0909A

REV. NO.1

## A. MAXIMUM RATING:

1. Operating temperature range: -30°C to 85°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level : 10 dBm
4. Maximum DC Voltage : 10V



## B. Characteristics :

| Item                          | Unit   | Min.  | Type. | Max.  |
|-------------------------------|--------|-------|-------|-------|
| Center frequency, Fc          | MHz    | -     | 190   | -     |
| Insertion Loss, IL            | dB     | -     | 7.7   | 10.0  |
| 1dB Lower Bandedge            | MHz    | -     | 187.2 | 188   |
| 1dB Upper Bandedge            |        | 192   | 192.6 |       |
| 10dB Lower Bandedge           |        | 185   | 185.8 |       |
| 10dB Upper Bandedge           |        |       | 194   | 195   |
| 30dB Lower Bandedge           |        | 183.5 | 185.0 |       |
| 30dB Upper Bandedge           |        |       | 194.8 | 196.5 |
| Passband Ripple Fc+/- 2MHz    | dB     | -     | 0.4   | 1.0   |
| Group Delay Ripple Fc+/- 2MHz | ns     | -     | 50    | 200   |
| Temperature Coefficient       | ppm/°C | -     | -23   | -     |
| Source Impedance              | Ohm    | -     | 50    | -     |
| Load Impedance                | Ohm    | -     | 50    | -     |

### C. Frequency Characteristics :

#### (1) Wide band Response:(span 100MHz)

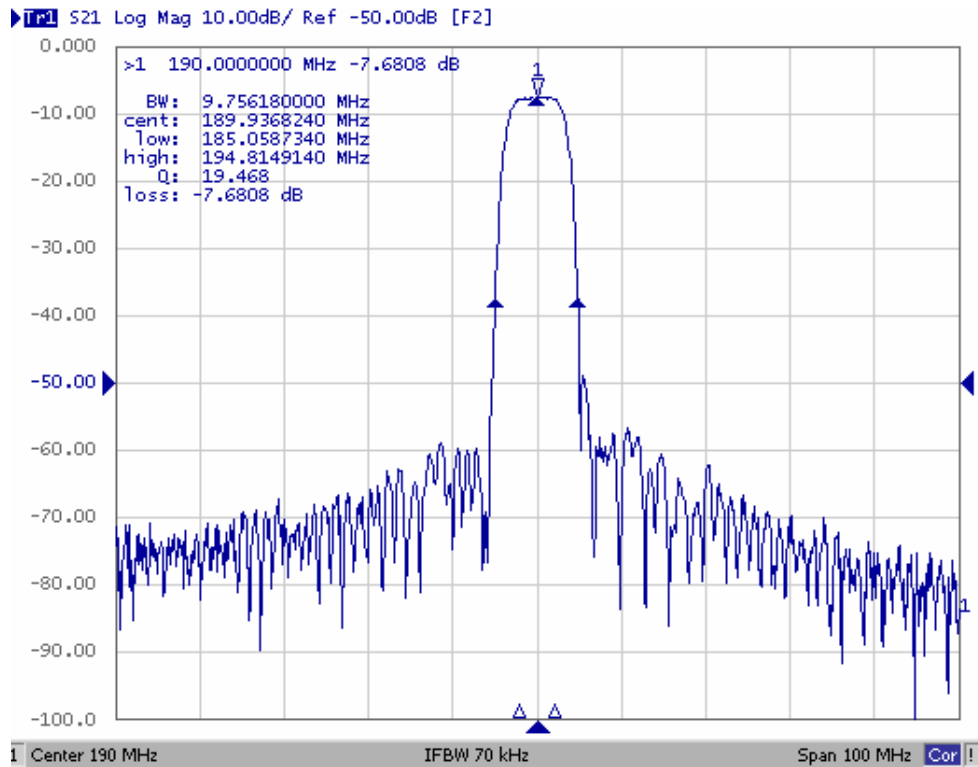


Fig1. Horizontal: 10MHz/Div Vertical: 10dB/Div

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

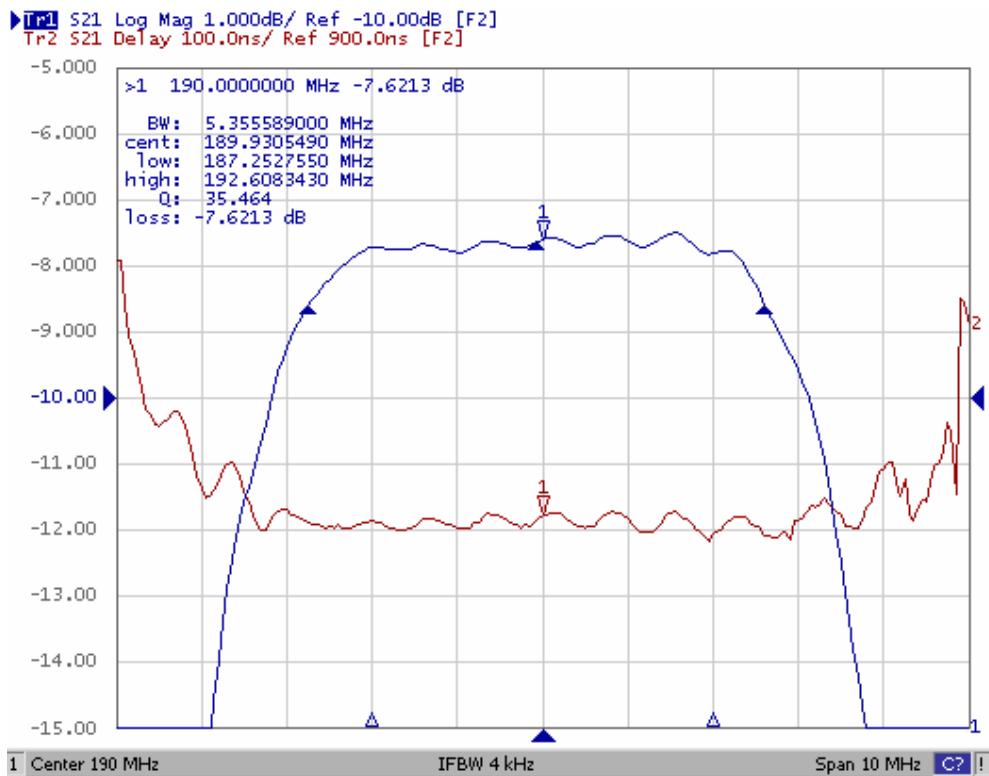
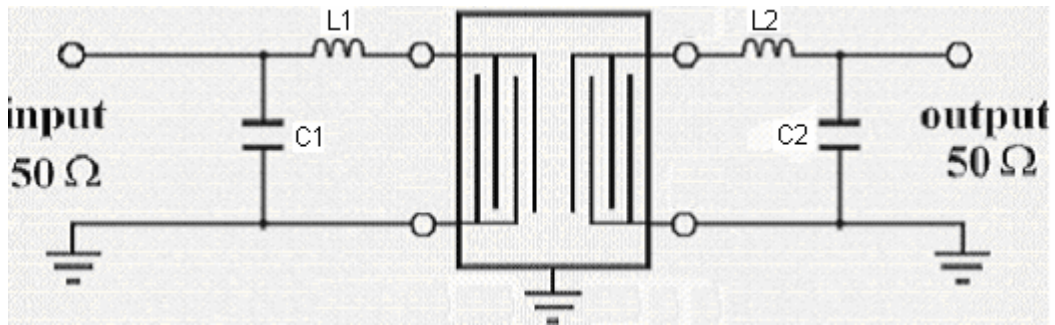


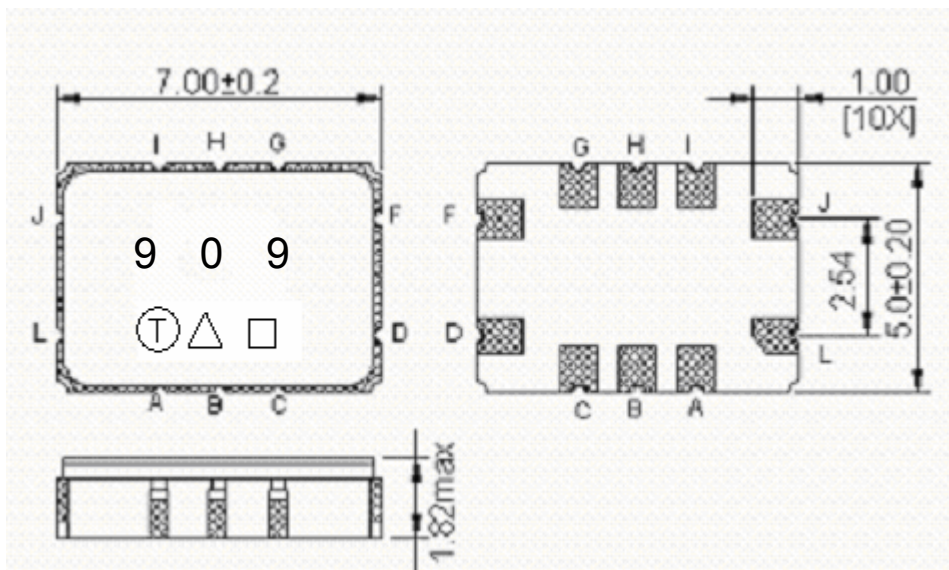
Fig2. Horizontal: 1MHz/Div Vertical: 1dB/Div  
Vertical: 100ns/Div

**D. Matching Circuit:**



L1=47nH L2=56nH C1=24pF C2=24pF

**E. Outline Drawing:**



Pin J –RF input

Pin D –RF output

Pin A,B,C,F,G,H,I,L - Ground

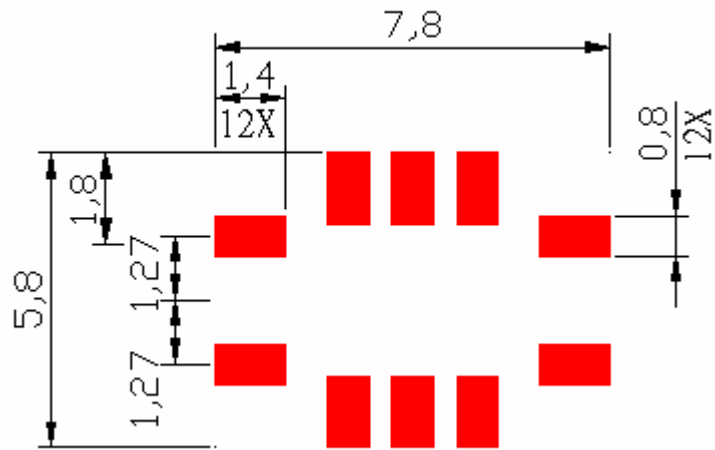
□ : Week Code (Follow the table from planner each year)

Unit : mm

△ : Product / Year Code

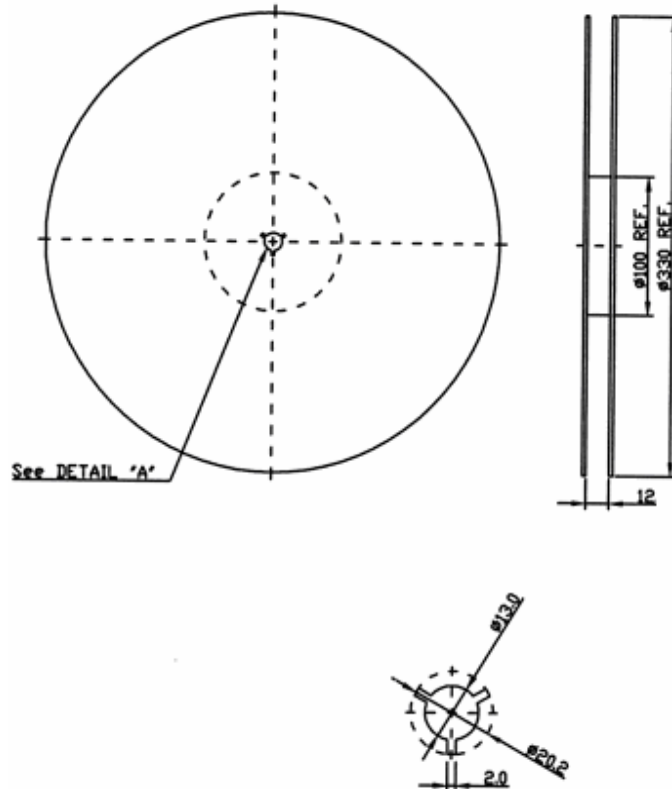
|              |              |              |              |              |
|--------------|--------------|--------------|--------------|--------------|
| Year         | 2009<br>2013 | 2010<br>2014 | 2011<br>2015 | 2012<br>2016 |
| Product Code | B            | b            | <u>B</u>     | <u>b</u>     |

F. PCB Footprint:

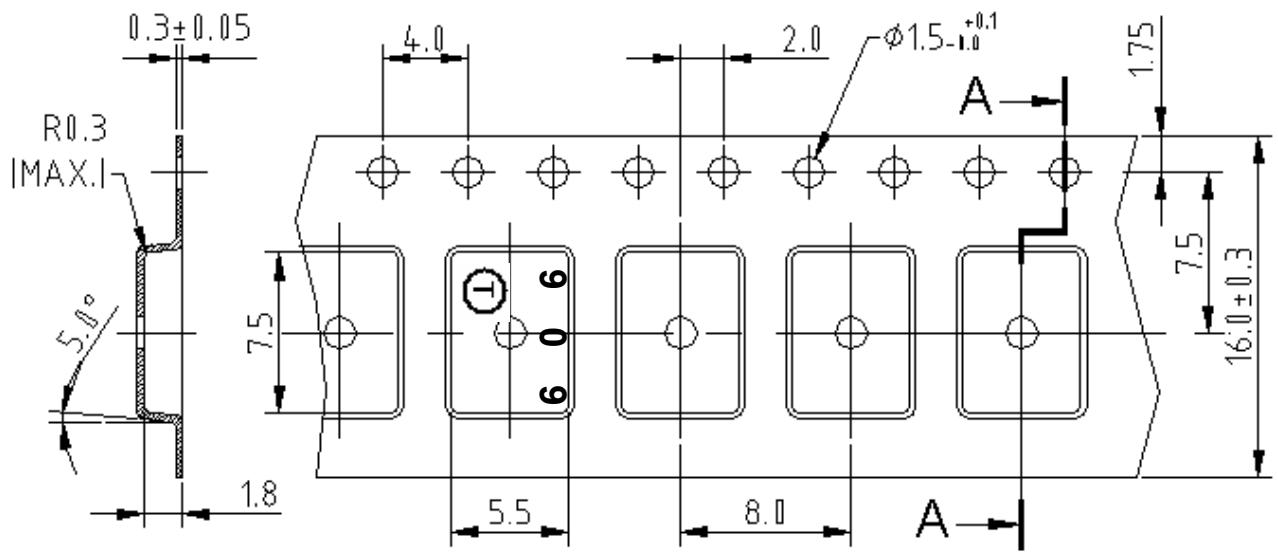


G. PACKING:

1. REEL DIMENSION



2. TAPE DIMENSION



## H. RECOMMENDED REFLOW PROFILE :

