



# TAI-SAW TECHNOLOGY CO., LTD.

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## Approval Sheet for Product Specification

Issued Date:

Product Name: 490MHz IF SAW Filter (BW=15 MHz)

TST Parts No.: TB0716A

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

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

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

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

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

Checked by: \_\_\_\_\_ Andy Yu *Andy*

Approval by: \_\_\_\_\_ Francis Chen *[Signature]*

Date: \_\_\_\_\_ 03/10/2009



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SAW Filter 490MHz (TO39)

MODEL NO.: TB0716A

Rev. NO. 1.0

## A. MAXIMUM RATING:

1. Input Power Level: 10 dBm
2. Operating Temperature: -20 °C ~ +70 °C
3. Storage Temperature: -40 °C ~ +85 °C

RoHS Compliant  
Lead free  
Lead-free soldering

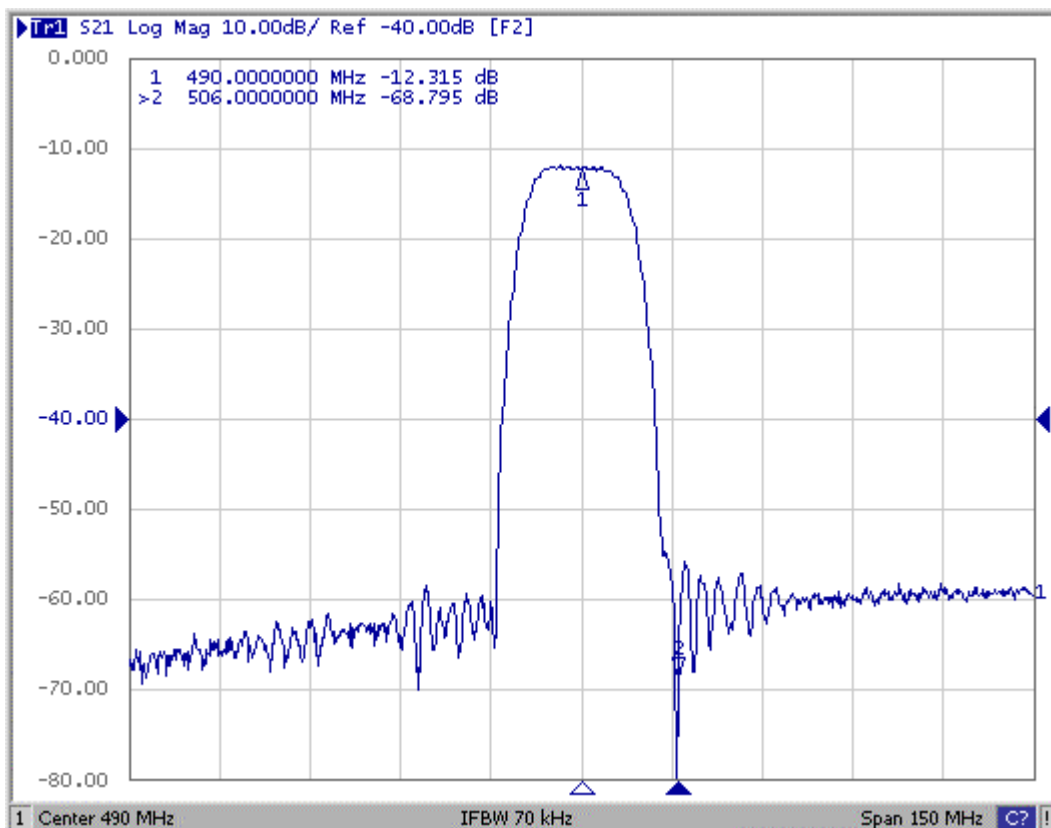
## B. Characteristics :

Ambient Temperature: 25 °

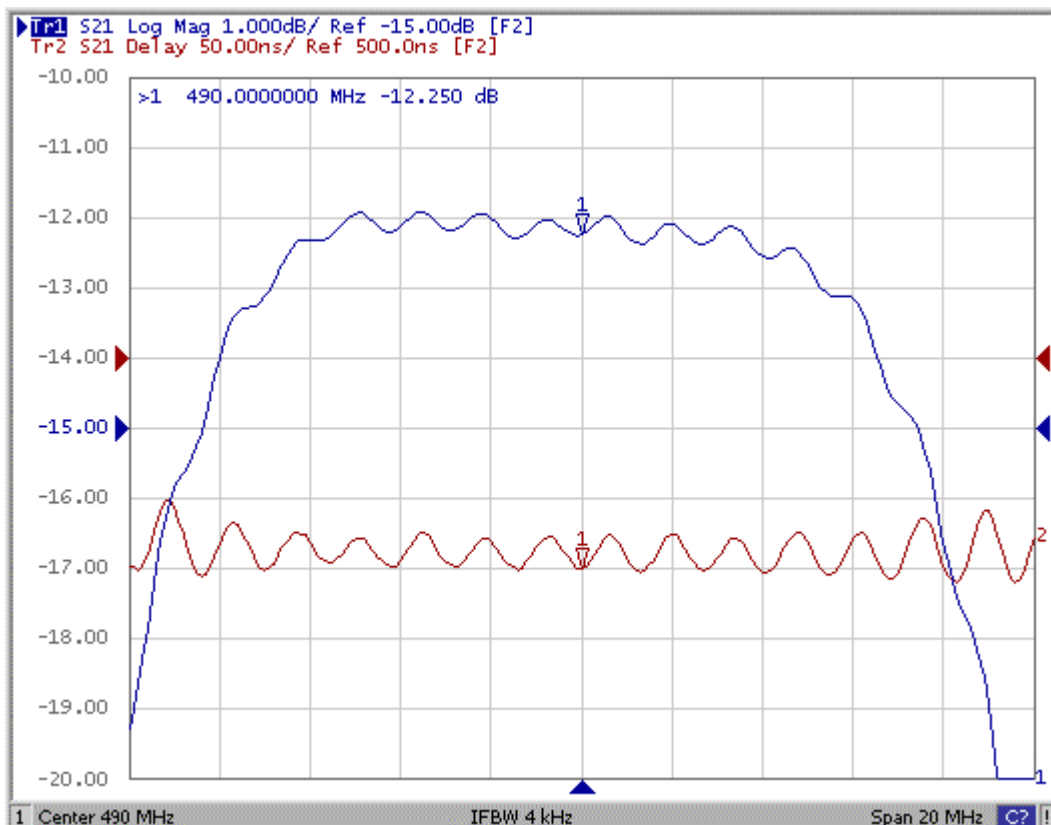
| Characteristics                                           | Value |      |      | Note |
|-----------------------------------------------------------|-------|------|------|------|
|                                                           | Min.  | Typ. | Max. |      |
| Center frequency $F_c$ MHz                                | -     | 490  | -    | -    |
| Minimum Insertion loss I.L. dB                            | -     | 11.8 | 13.0 | -    |
| 3 dB Bandwidth MHz                                        | 15.0  | 16.1 | -    | -    |
| 30 dB Bandwidth                                           | -     | 25.8 | 27.0 |      |
| Amplitude Ripple ( $F_c \pm 5.0\text{MHz}$ ) dB           | -     | 0.6  | 1.0  | -    |
| Group-delay Ripple ( $F_c \pm 6.0\text{MHz}$ ) nsec       | -     | 25   | 40   | -    |
| Temp Coefficient ppm/°C                                   | -     | -18  | -    | -    |
| Attenuation (Reference level from Minimum insertion loss) |       |      |      |      |
| 506MHz dB                                                 | 30    | 45   | -    | -    |

### C. FREQUENCY CHARACTERISTICS:

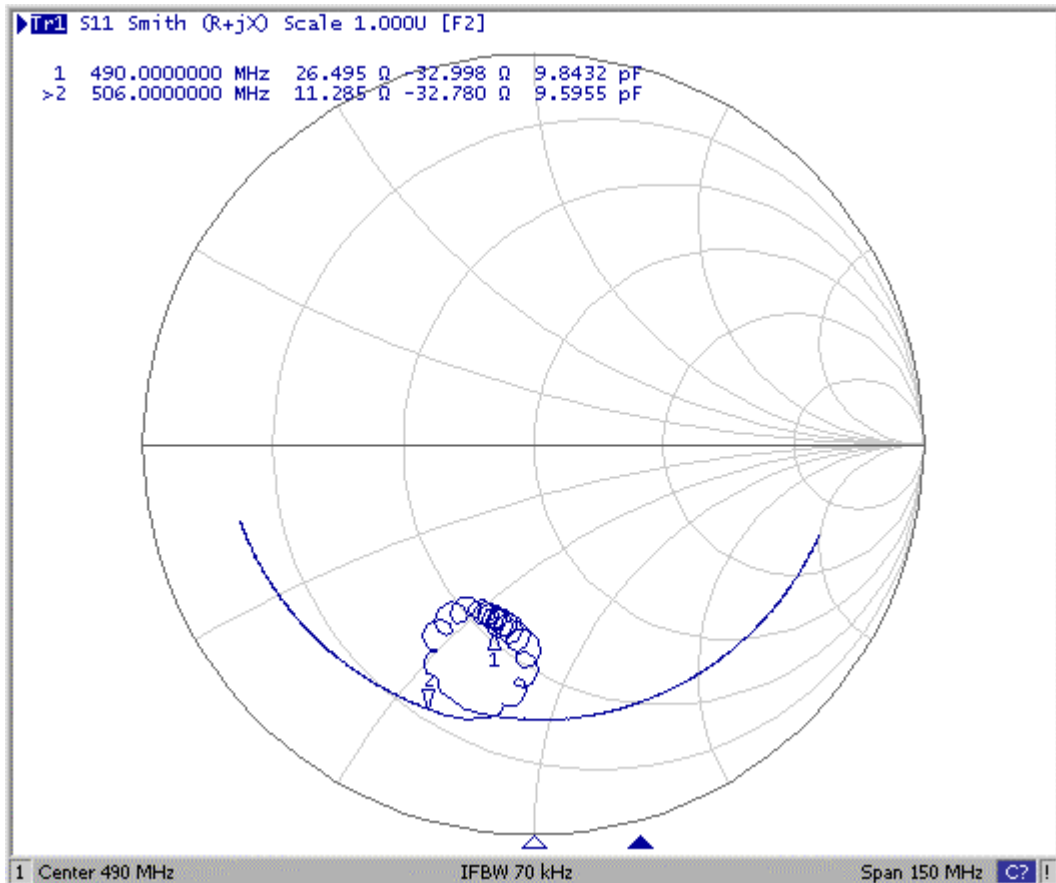
#### (1) S21 Response: (span 100MHz)



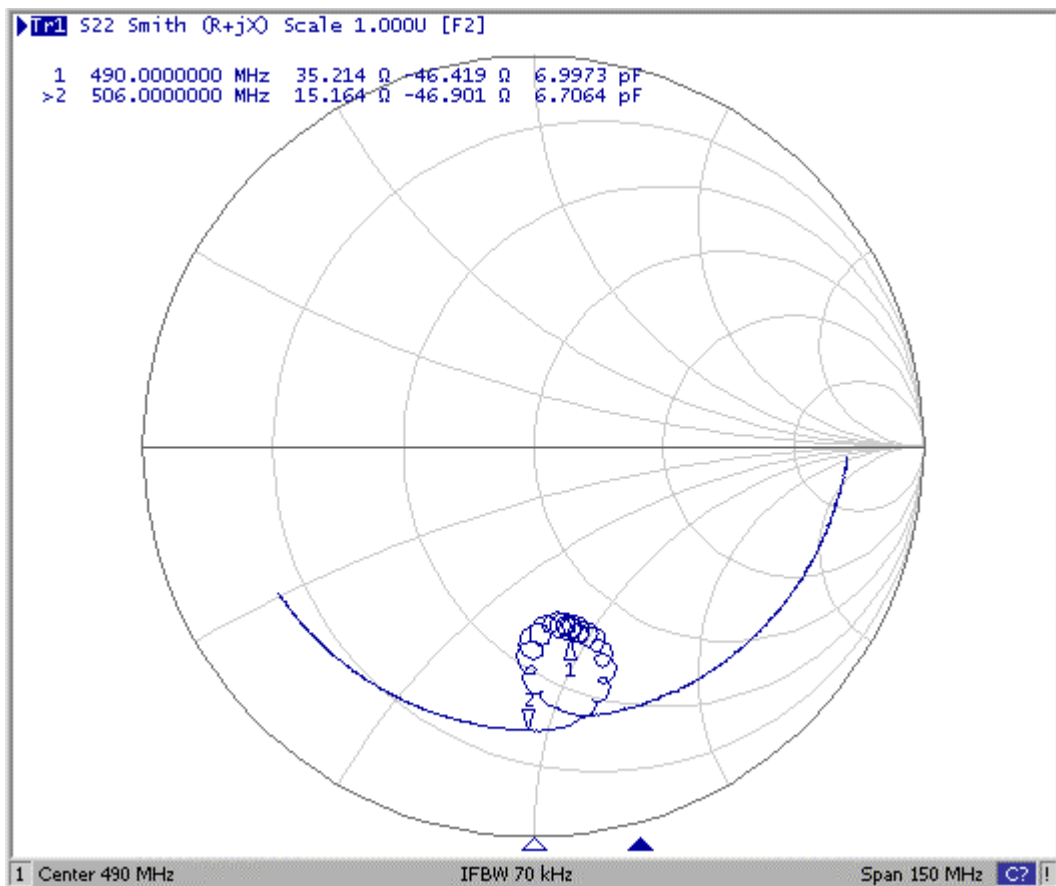
#### (2) Passband of Response: (span: 20MHz)



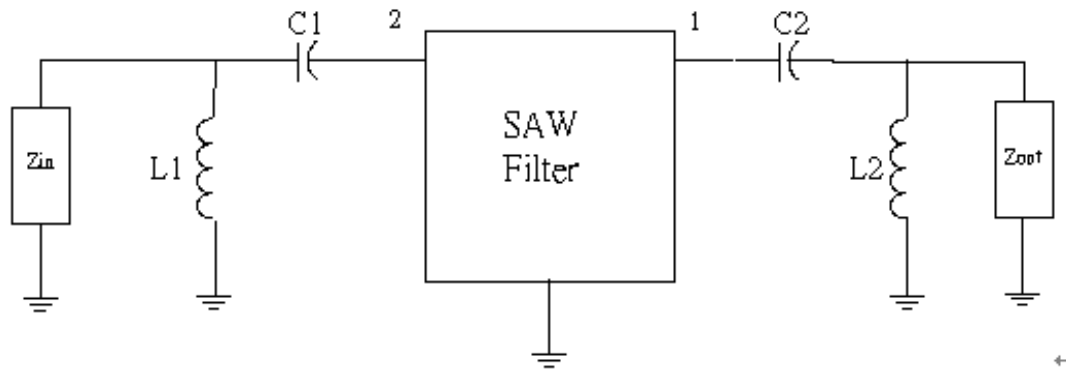
(3) S11 Smith Chart: (span 150MHz)



(4) S22 Smith Chart: (span 150MHz)



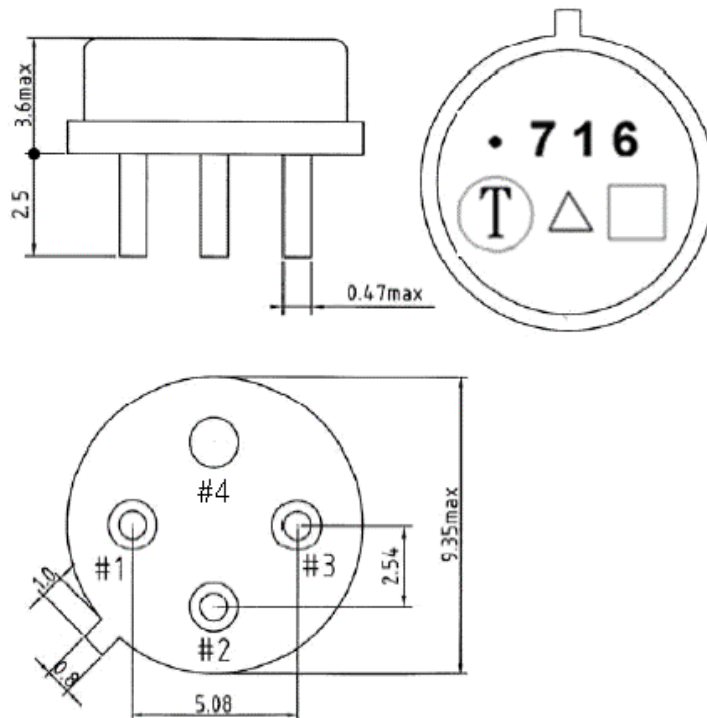
#### D. TEST CIRCUIT:



$Z_{in}$  and  $Z_{out}$  are  $50\Omega$

$L1=12nH$ ,  $C1=15p$ ,  $L2=12nH$ ,  $C2=18p$ ,

#### E. OUTLINE DRAWING:



Pin 3: RF input

Pin 1: RF output

Pin 2, 4: Case Ground

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

Unit : mm

△ : Product / Year Code (年碼)

| Year         | 2005<br>2009 | 2006<br>2010 | 2007<br>2011 | 2008<br>2012 |
|--------------|--------------|--------------|--------------|--------------|
| Product Code | B            | b            | <u>B</u>     | <u>b</u>     |

F. Recommended Reflow Profile:

