



# 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: [ttsales@mail.taisaw.com](mailto:ttsales@mail.taisaw.com) Web: [www.taisaw.com](http://www.taisaw.com)

## Approval Sheet For Product Specification

Issued Date:

Product Name: 210.38MHz SMD7x5mm IF SAW Filter

TST Parts No.:TB0104A

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

Company: _____
Division: _____
Approved by : _____
Date: _____

Checked by: Andy Lee

Approval by: Francis Chen

Date: 2007/9/12



# 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)

## 210.38MHz SMD 7x5mm IF SAW Filter

MODEL NO.: TB0104A

Rev. No.2

### A. Maximum Rating:

1. Operating Temperature: -25 °C ~ +85 °C
2. Storage Temperature: -40 °C ~ +85 °C
3. Input Power Level: 10 dBm

RoHS Compliant  
Lead free  
Lead-free soldering

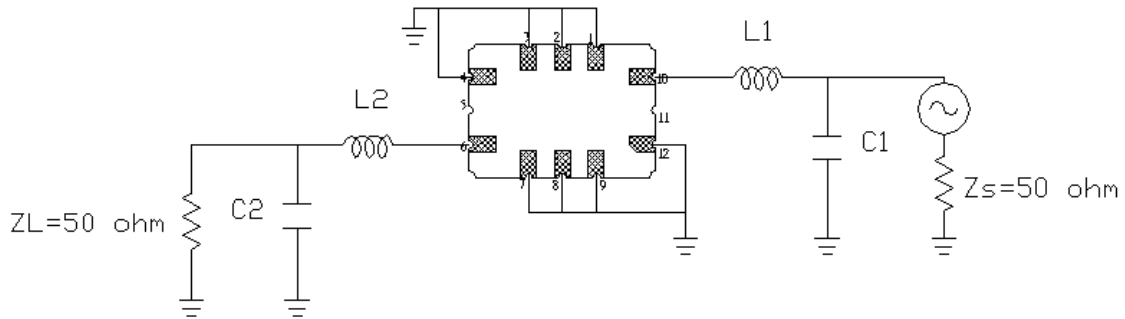
### B. Characteristics :

1. Ambient Temperature: 25 °C

Characteristics	Value			Note
	Min.	Typ.	Max.	
Center Frequency $F_c$ MHz	-	210.38	-	-
Insertion Loss at $F_c$ dB	-	8.2	11.0	-
Passband Ripple ( $F_c \pm 300\text{kHz}$ ) dB	-	0.4	1.3	-
5dB Bandwidth MHz	$\pm 0.63$	$\pm 0.82$	-	-
34dB Bandwidth MHz	-	$\pm 1.18$	$\pm 1.25$	-
36dB Bandwidth MHz	-	$\pm 1.20$	$\pm 1.55$	-
Phase Linearity ( $F_c \pm 630\text{kHz}$ ) rms deg	-	2.60	3.75	-
Absolute Delay $\mu\text{S}$	-	716	-	-
Source impedance $\Omega$	-	50	-	-
Load impedance $\Omega$	-	500	-	-
Temperature Coefficient ppm/ $K^2$	-	-0.036	-	-
Attenuation:(Reference level from $F_c$ )				
(1) $F_c \pm 1.25\text{MHz}$ dB	35	48		
(2) 140MHz~206MHz dB	38	45		
(3) 214.76MHz~280MHz dB	38	48		

C. Measurement Circuit:

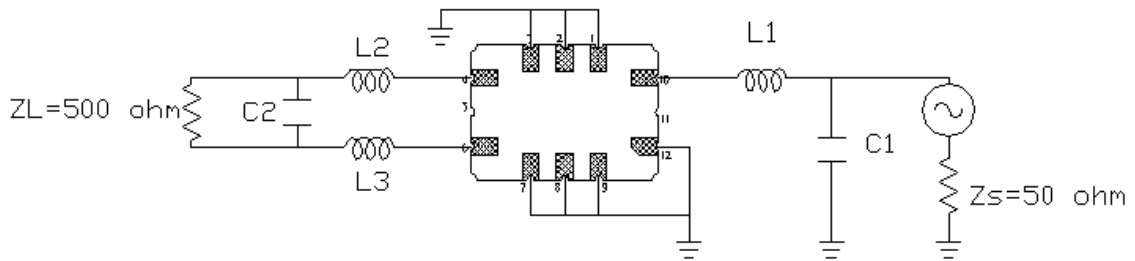
1. Single ended input 50 ohm to Single ended Output 50 ohm



$L1=39\text{nH}$     $C1=36\text{pF}$     $L1=47\text{nH}$     $C2=36\text{pF}$

Y  
A

2. Single ended input 50 ohm to Balanced Output 500 ohm



$L1=36\text{nH}$     $C1=39\text{pF}$     $L2=L3=47\text{nH}$     $C2=10\text{pF}$

## D. Frequency Characteristics :

### 1. S21 Response

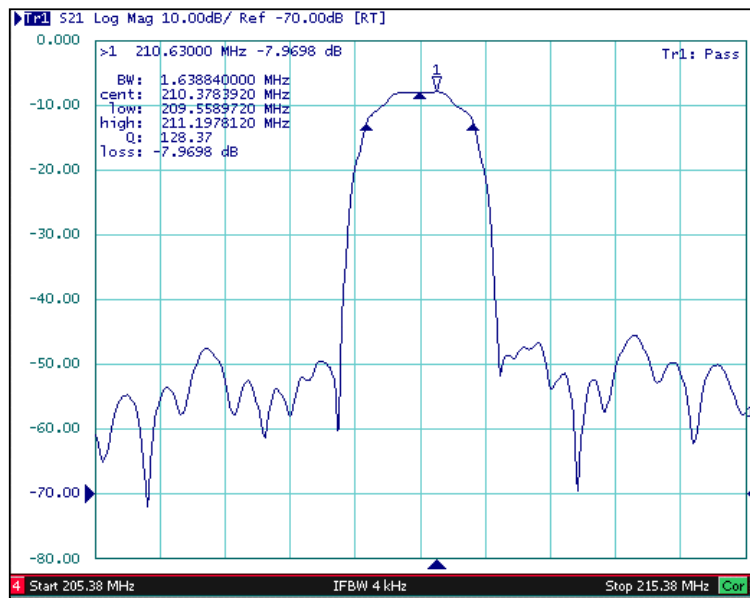


Fig1. Horizontal: 1MHz/Div Vertical: 10dB/Div

### 2. Pass band Ripple

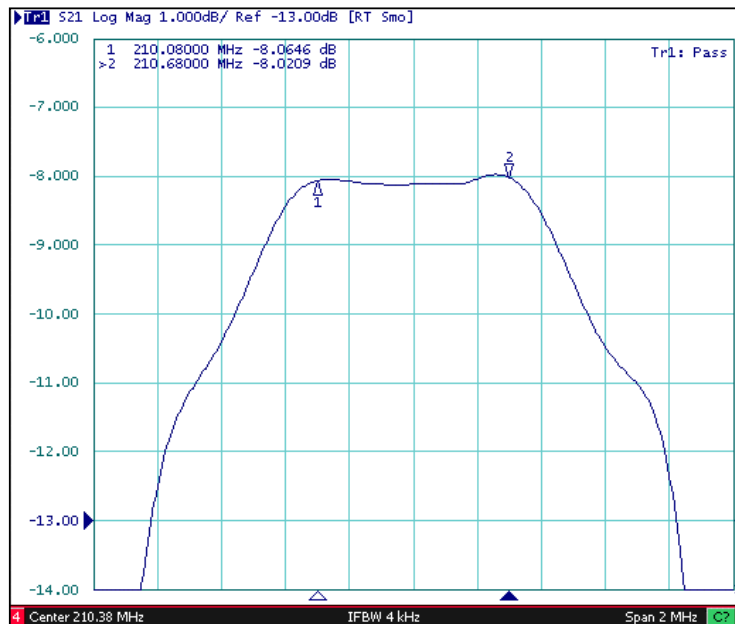


Fig2. Horizontal: 0.2MHz/Div Vertical: 1dB/Div

### 3. Group Delay Ripple

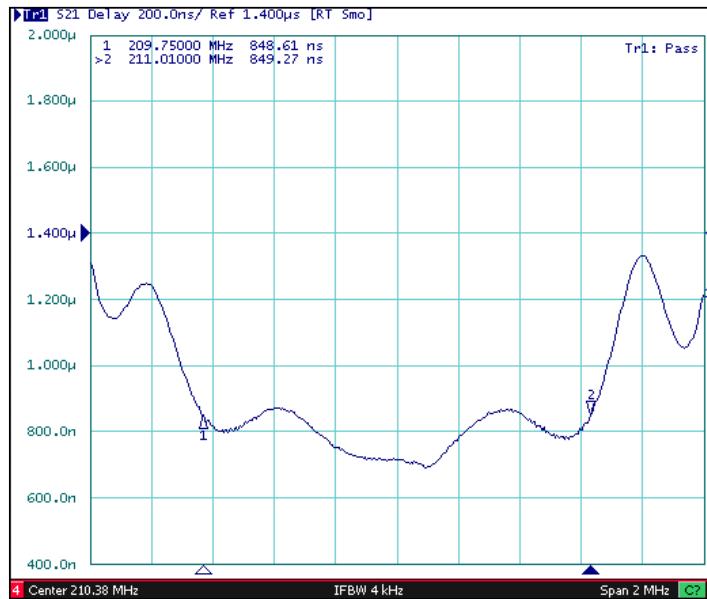
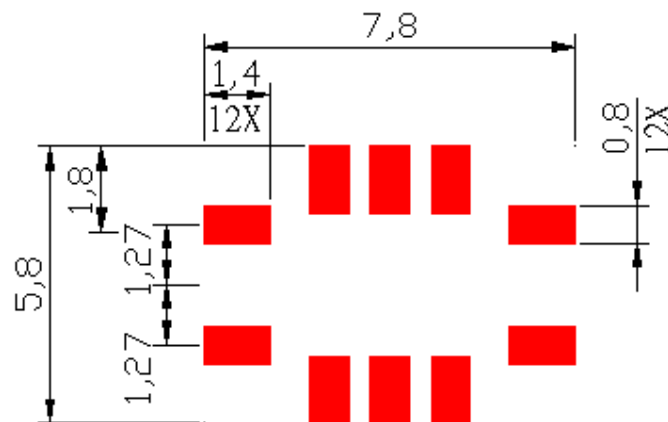
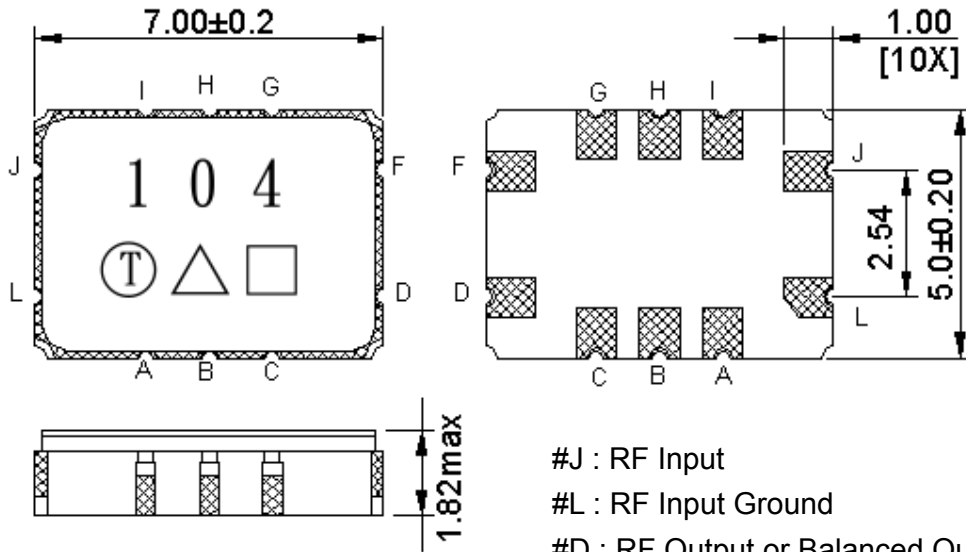


Fig3. Horizontal: 0.2MHz/Div Vertical: 200nS/Div

### E. PCB Footprint



F. Outline Drawing:

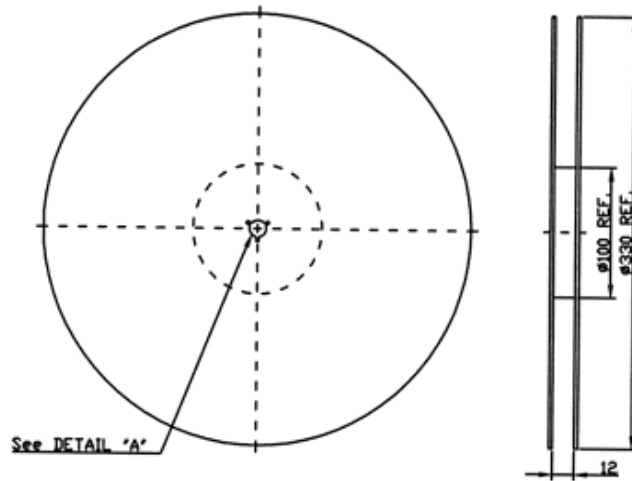


- #J : RF Input
- #L : RF Input Ground
- #D : RF Output or Balanced Output +
- #F : RF Output Ground or Balanced Output -
- #A,B,C,G,H,I : To be Ground
- : Week Code (Follow the table from planner each year)
- △ : Product / Year Code

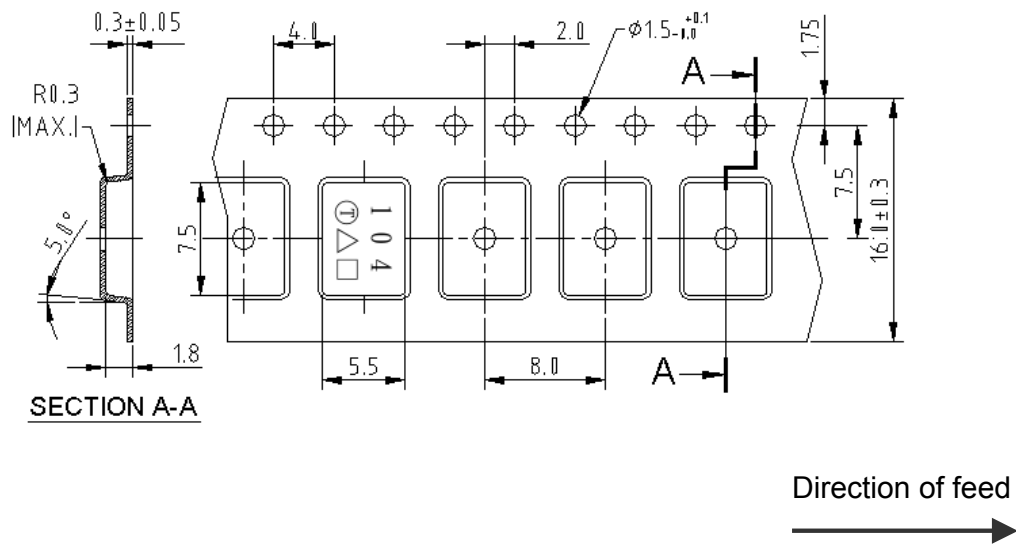
Year	2005 2009	2006 2010	2007 2011	2008 2012
Product Code	B	b	<u>B</u>	<u>b</u>

G. PACKING:

1. REEL DIMENSION



2. TAPE DIMENSION



H. RECOMMENDED REFLOW PROFILE :

