



# 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 Name: SAW Filter 1189 MHz SMD 1.1X0.9 mm (BW=50MHz)

TST Parts No.: TA2448A

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

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

Checked by: \_\_\_\_\_ Bob Chau 

Approval by: \_\_\_\_\_ Andy Yu 

Date: \_\_\_\_\_ 9, 27, 2018

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 1189MHz BW50MHz SMD 1.1x0.9mm

MODEL NO.:TA2448A

REV. NO.:1.0

### A. MAXIMUM RATING:

1. Input Power Level: 13 dBm (2000h)
2. DC Voltage : 3 V
3. Operating Temperature: -20°C to +85°C
4. Storage Temperature: -40°C to +85°C
5. ESD Machine Mode : 50V
6. ESD Human Body Mode : 100V
7. Moisture Sensitive Level (MSL): Level 2a

RoHS Compliant  
Lead free  
Lead-free soldering

Electrostatic Sensitive Device (ESD)

### B. ELECTRICAL CHARACTERISTICS:

Temperature range for specification :  $T_{spec} = -20^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

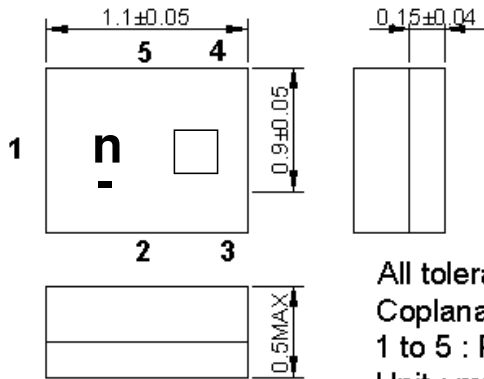
Terminating source impedance :  $Z_s = 50 \Omega$

Terminating load impedance :  $Z_L = 50 \Omega$

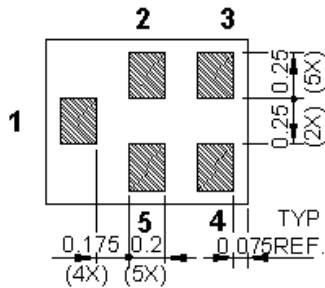
Item	Unit	Min.	Typ.	Max.	
<b>Center Frequency</b>	<b>Fc</b>	MHz	-	1189	-
<b>Insertion Loss</b> (1164~1189 MHz)	<b>IL</b>	dB	-	1.5	2.3
<b>Insertion Loss</b> (1189~1214 MHz)	<b>IL</b>	dB	-	1.8	2.3
<b>Amplitude Ripple</b> (1164~1189 MHz)		dB <sub>p-p</sub>	-	0.3	1.3
<b>Amplitude Ripple</b> (1189~1214 MHz)		dB <sub>p-p</sub>	-	0.5	1.4
<b>VSWR</b> (1164~1214 MHz)			-	1.8	2.1
<b>Group Delay Deviation</b> (1189~1214 MHz)		ns	-	9	15
<b>Attenuation</b> (refer to 0 dB)					
100 ~ 814 MHz		dB	35	39	-
814 ~ 849 MHz		dB	33	39	-
849 ~ 980 MHz		dB	30	37	-
980 ~ 1010 MHz		dB	35	38	-
1010 ~ 1100 MHz		dB	33	36	-
1100 ~ 1130 MHz		dB	20	30	-
1250 ~ 1427 MHz		dB	25	32	-
1427 ~ 1463 MHz		dB	33	36	-
1710 ~ 2025 MHz		dB	33	38	-

2300 ~ 2690 MHz	dB	28	32	-
2690 ~ 3000 MHz	dB	25	30	-
3000 ~ 6000 MHz	dB	20	23	-
Temperature Coefficient	ppm/K	-	-36	-

**C.OUTLINE DRAWING:**



All tolerances are +/-0.05 mm unless otherwise specified  
 Coplanarity : 0.1 mm max.  
 1 to 5 : Pin No.  
 Unit : mm

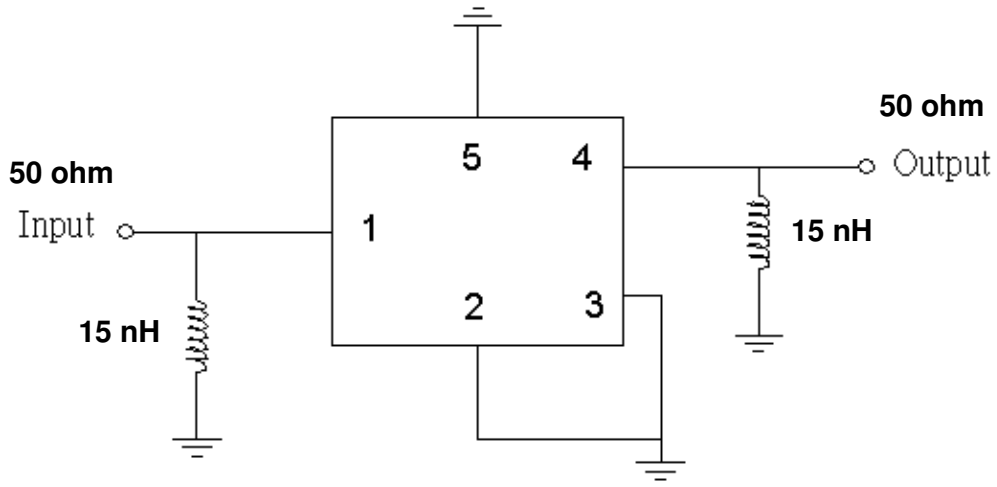


- 1 : Input
- 4 : Output
- 2, 3, 5 : Ground

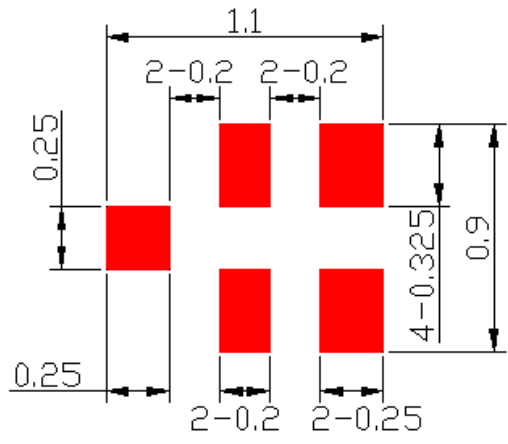
□ : Year/Month Code (Follow the table)

YEAR/Month	1	2	3	4	5	6	7	8	9	10	11	12
2013	A	B	C	D	E	F	G	H	J	K	L	M
2014	N	P	Q	R	S	T	U	V	W	X	Y	Z
2015	a	b	c	d	e	f	g	h	j	k	l	m
2016	n	p	q	r	s	t	u	v	w	x	y	z
2017	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>J</u>	<u>K</u>	<u>L</u>	<u>M</u>
2018	<u>N</u>	<u>P</u>	<u>Q</u>	<u>R</u>	<u>S</u>	<u>T</u>	<u>U</u>	<u>V</u>	<u>W</u>	<u>X</u>	<u>Y</u>	<u>Z</u>
2019	<u>a</u>	<u>b</u>	<u>c</u>	<u>d</u>	<u>e</u>	<u>f</u>	<u>g</u>	<u>h</u>	<u>i</u>	<u>k</u>	<u>l</u>	<u>m</u>
2020	<u>n</u>	<u>p</u>	<u>q</u>	<u>r</u>	<u>s</u>	<u>t</u>	<u>u</u>	<u>v</u>	<u>w</u>	<u>x</u>	<u>y</u>	<u>z</u>

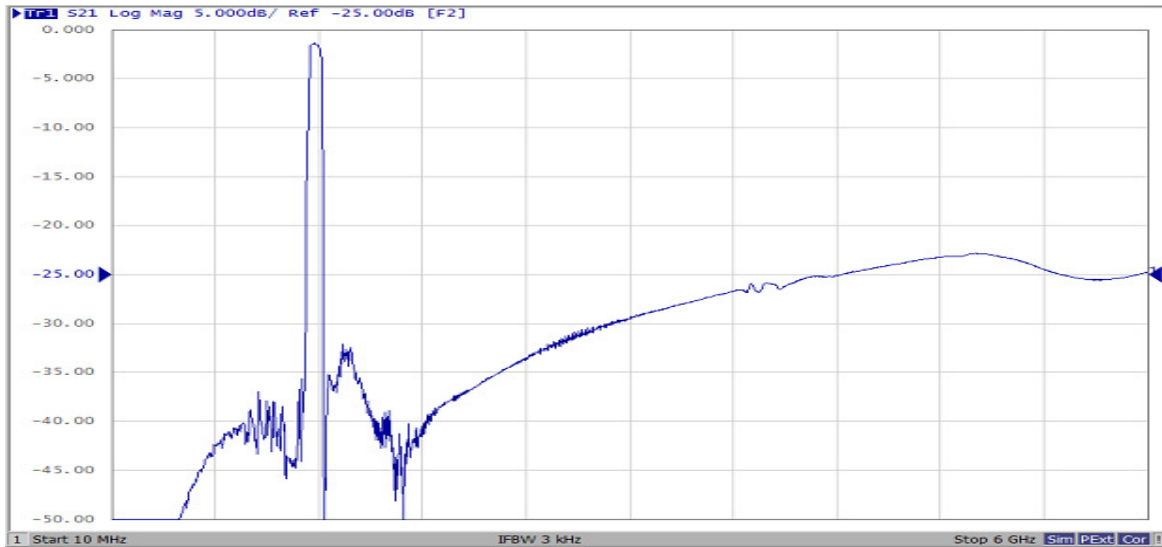
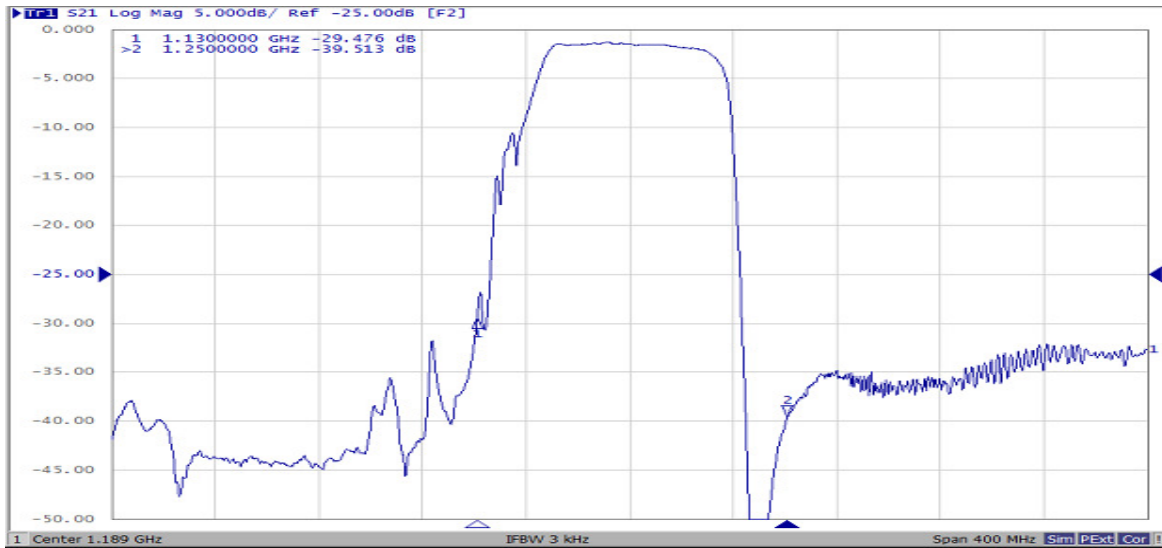
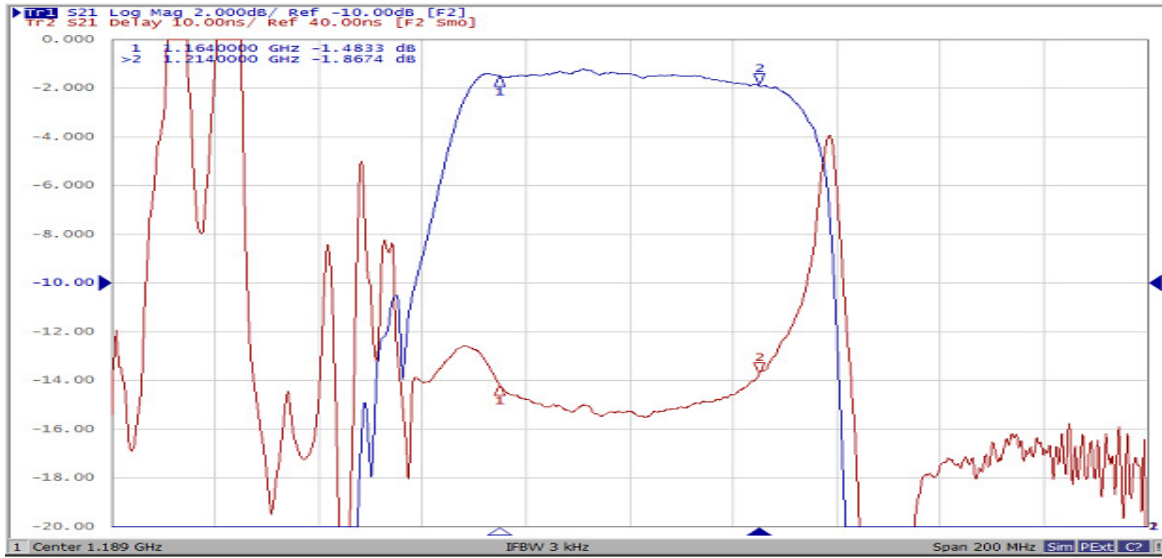
**D. MEASUREMENT CIRCUIT:**

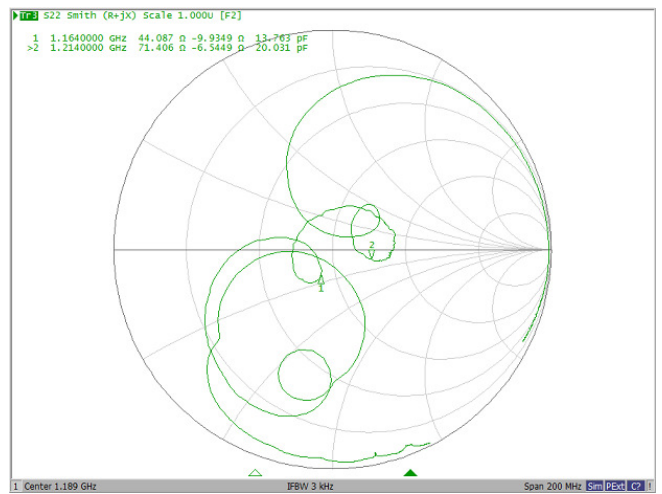
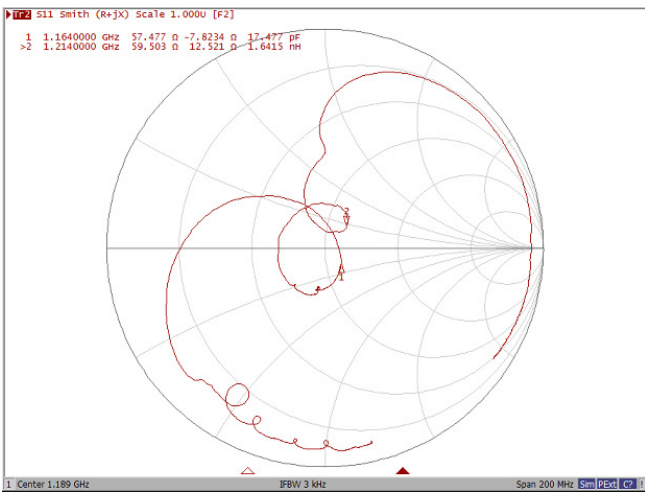
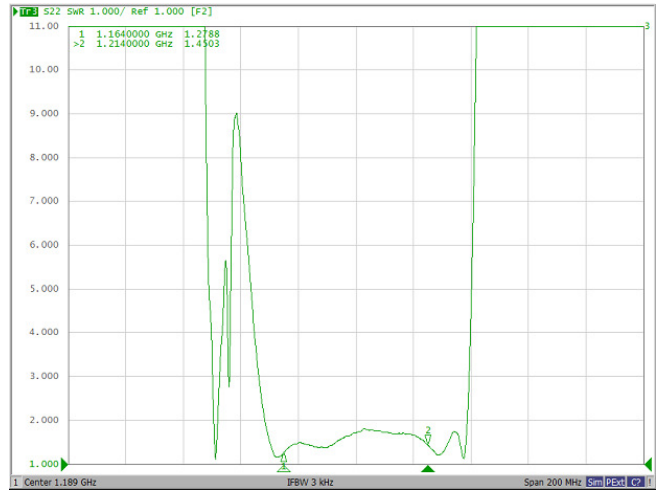
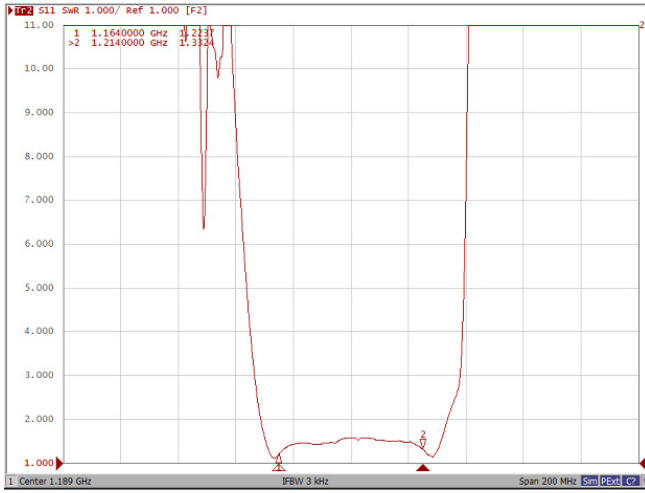


**E. PCB Footprint :**



## F. Frequency Characteristics:







### H. RECOMMENDED REFLOW PROFILE :

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 245~260°C peak (min. 10sec).
4. Time : 2 times.

