



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 Web: www.taisaw.com

Product Specifications Approval Sheet

Product Name: SAW Filter 433.92 MHz (BW 1.07MHz) SMD 3.8X3.8 mm

TST Parts No.: TA1783A

Customer Parts No.: _____

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Michael Yang *Michael*

Approval by: _____ Bob Chau *Bob Chau*

Date: _____ 2017/06/07

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 433.92MHz

MODEL NO.:TA1783A

REV. NO.:1.0

A. MAXIMUM RATING:

1. Input Power Level: 13 dBm
2. DC Voltage : 0V
3. Operating Temperature: -40℃ to +105℃
4. Storage Temperature: -40℃ to +105℃

RoHS Compliant
Lead free
Lead-free soldering

B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance (single) : $Z_s = 50 \Omega$

Terminating load impedance(single) : $Z_L = 50 \Omega$

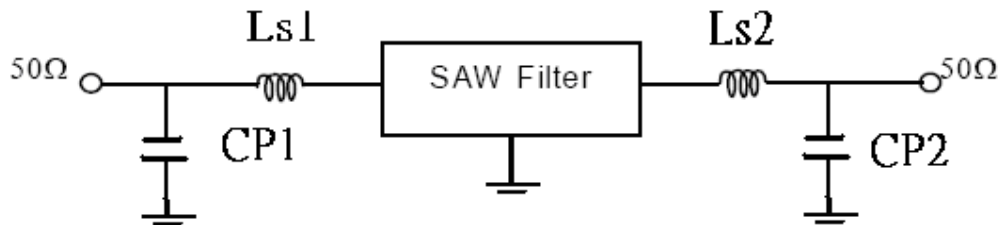
Item	Unit	Min	Type.	Max
Center Frequency F_c	MHz	-	433.92	-
Minimum Insertion Loss α_{min}				
Incl. Loss in matching elements (433.385 ~ 434.455 MHz)	dB		3.0	3.5
Excl. Loss in matching elements (433.385 ~ 434.455 MHz)	dB		2.0	2.5
Pass Band (Relative to α_{min})				
433.385 ~ 434.455 MHz ¹			1.3	2.8
433.37 ~ 434.47 MHz ²			1.5	3.3
Relative Attenuation (Relative to α_{min}) α_{rel}				
10 ~ 350 MHz	dB	50	55	
350 ~ 414 MHz	dB	30	35	
414 ~ 425 MHz	dB	30	35	
425 ~ 432.52 MHz	dB	13	17	
435.92 ~ 436.8 MHz	dB	13	17	
436.8 ~ 438 MHz	dB	22	27	
438 ~ 446 MHz	dB	25	30	
446 ~ 455 MHz	dB	25	30	
455 ~ 480 MHz	dB	28	33	
480 ~ 800 MHz	dB	40	45	
800 ~ 1700 MHz	dB	52	57	
1700 ~ 2500 MHz	dB	42	47	
Package size	mm	SMD 3x3		
Impedance for pass band matching ³⁾				

Input: $Z_{IN} = L_{IN}$	nH		180	
Output: $Z_{OUT} = L_{OUT}$	nH		140	

- 1) 433.385 ... 434.40 MHz for extended temperature range -40°C to $+125^{\circ}\text{C}$.
- 2) 433.370 ... 434.415 MHz for extended temperature range -40°C to $+125^{\circ}\text{C}$.

C.. TEST CIRCUIT:

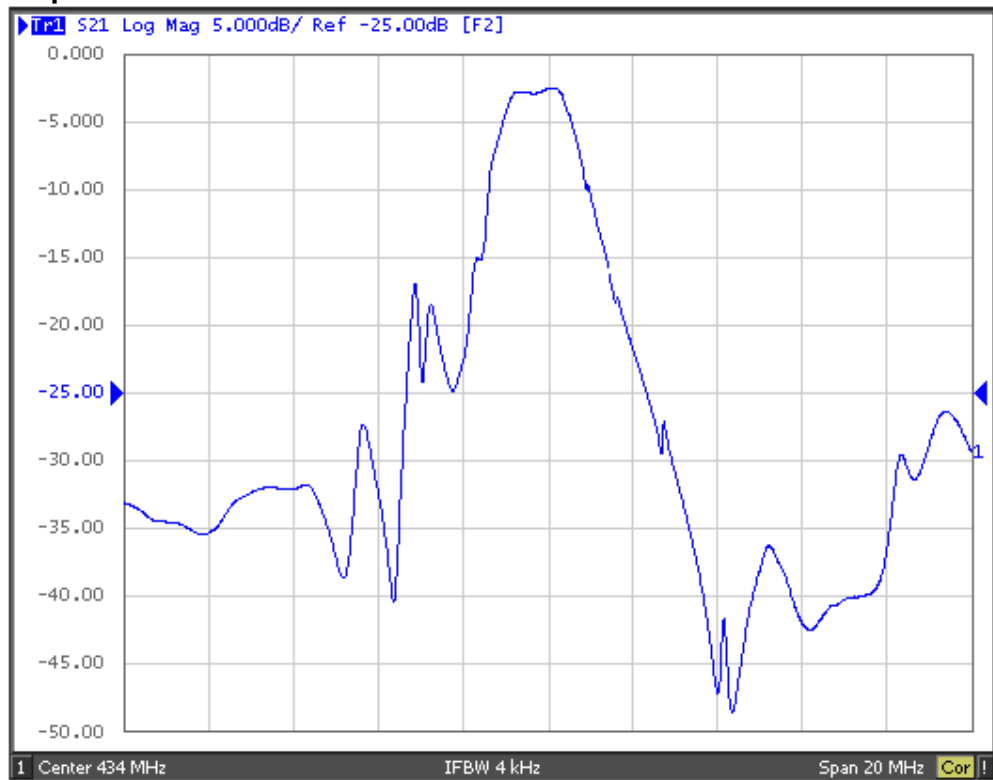
The matching circuit is

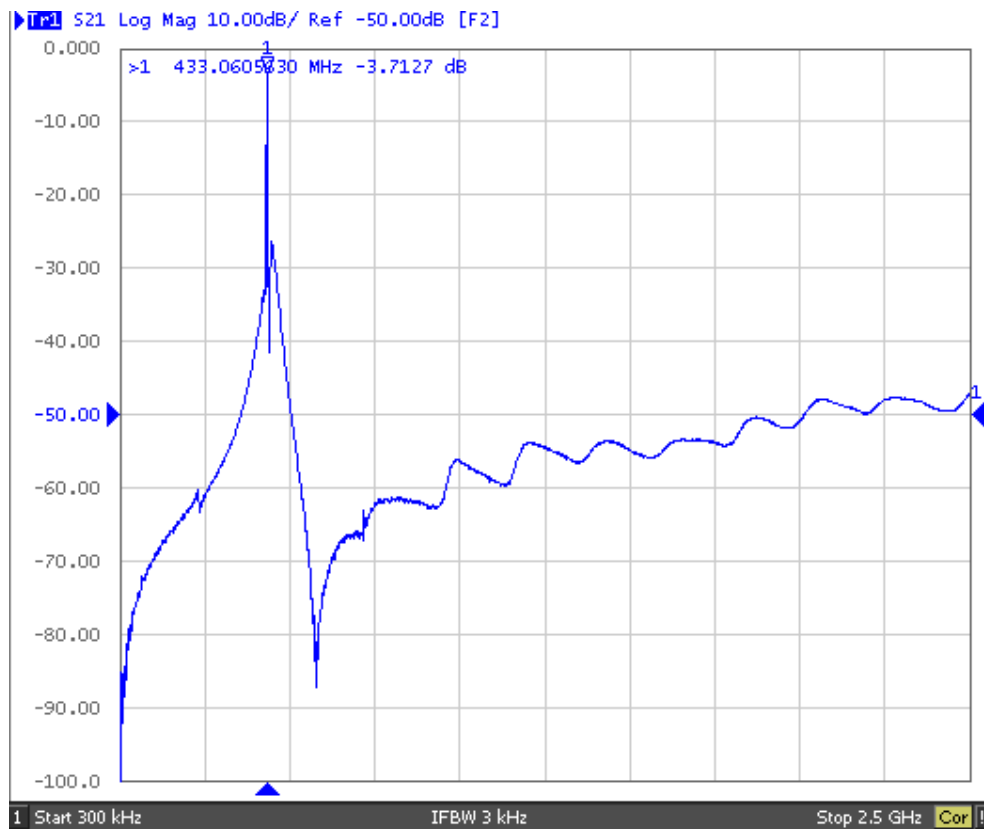
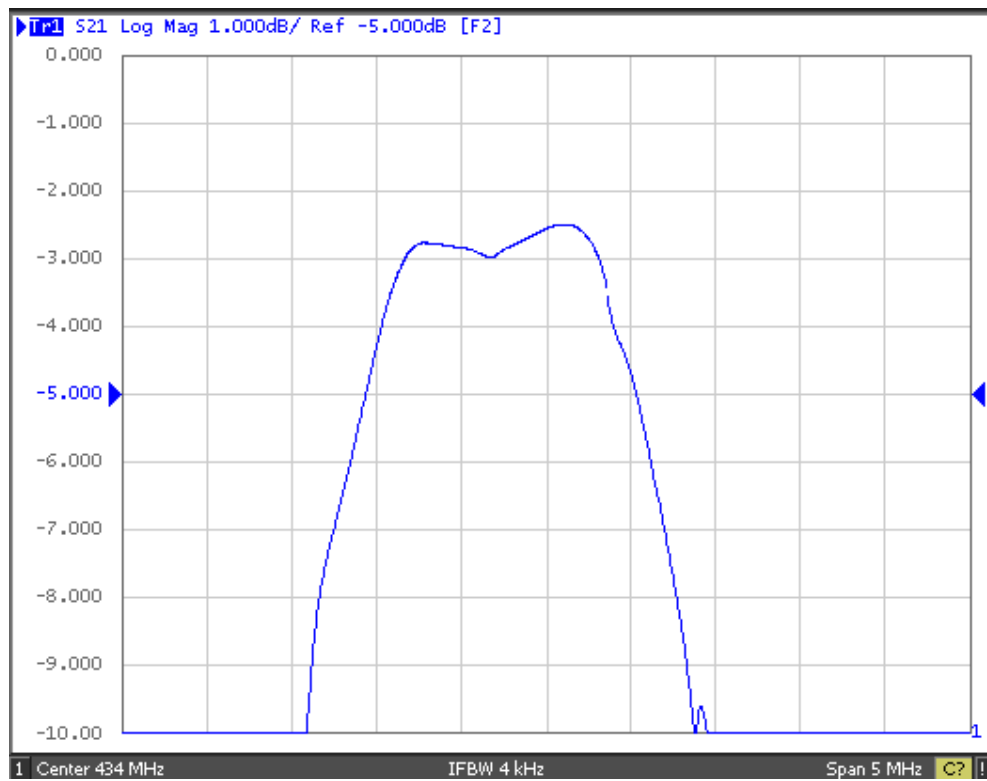


$L_{s1}=56\text{nH}$; $L_{s2}=68\text{nH}$; $C_{p1}=9.0\text{pF}$; $C_{p2}=6\text{pF}$

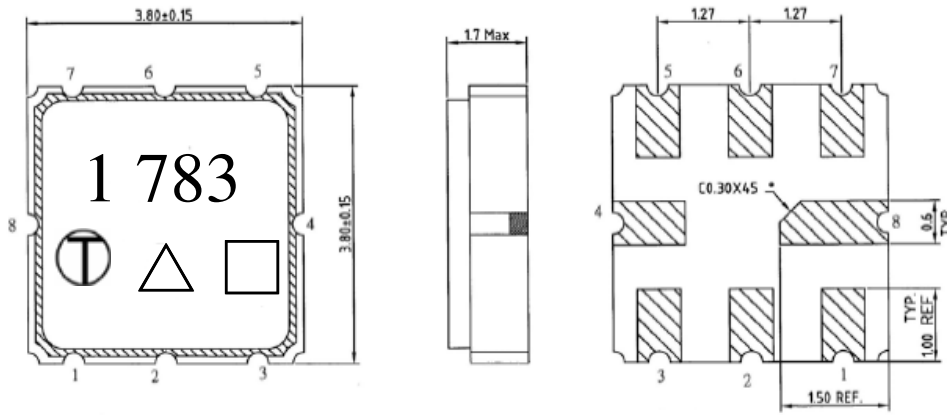
D. Frequency Characteristics:

S21 response:





E.OUTLINE DRAWING:



- #1 : Input or Input ground
 #2 : Input ground or Input
 #5 : Output or Output ground
 #6 : Output ground or Output
 #3,4,7,8 : Ground
 △ : Year code
 □ : Data code

Unit : mm

Year	2011	2012
	:	:
	:	:
	2019	2020
Year Code	A	a

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

*3) The recommended pin configuration offers better suppression of electrical crosstalk.

1. REEL DIMENSION

Technical drawing of a circular structural member. The main view shows a large circle with a central hole. A dashed circle indicates the hole's location. A line points from the text "See DETAIL 'A'" to the central hole. To the right, a vertical dimension line indicates a total height of 12 TYP. and a central hole diameter of $\phi 100$ REF. Below the main view, a detailed view of the hole is shown, labeled "A". It features a central hole with a diameter of $\phi 100 \pm 0.5$ and a surrounding ring with a thickness of 20 ± 0.5 . The ring has a diameter of $\phi 200 \pm 0.5$ and a height of $\phi 130 \pm 0.5$.

Section A-A

Direction of Feed

G. 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 260°C+0/-5°C peak (20~40sec).
4. Time: 2 times.

