



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
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Product Specifications Approval Sheet

Product Name: IF SAW Filter 50 MHz SMD 13.3x6.5 mm (BW=5.62 MHz)

TST Parts No.: TB0281A

Customer Parts No.: _____

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

Checked by: _____ Hayley Chou *Hayley Chou*

Approval by: _____ Andy Yu *Andy Yu*

Date: _____ 2020/03/31

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 50 MHz

MODEL NO.: TB0281A

REV. NO.:3.0

A. MAXIMUM RATING:

1. Input Power Level: 10 dBm
2. DC voltage: 10 V
3. Operating Temperature: -40 °C to +65 °C
4. Storage Temperature: -40 °C to +85 °C
5. Moisture Sensitivity Level: Level 1 (MSL 1)

RoHS Compliant

Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

Item	Unit	Min.	Typ.	Max.
Center Frequency F_c	MHz	49.7	50	50.3
Minimum Insertion Loss IL	dB	-	10	11
Amplitude ripple at any 200kHz bandwidth within 5.6MHz	MHz	-	0.7	1
1dB Bandwidth	MHz	5.62	5.77	-
3dB Bandwidth	MHz	-	6.12	6.165
40dB Bandwidth	MHz	-	8.22	9.00
Group Delay Variation within 5.6MHz BW	nS	-	150	200
Phase Linearity within 5.6MHz BW	deg _{rms}	-	2	3
Triple transit suppression	dB	35	40	-
Attenuation:(Reference level from Min IL)				
(1) DC~20MHz	dB	40	48	-
(2) 20MHz~45MHz	dB	30	37	-
(3) 55MHz~65MHz	dB	30	34	-
(4) 65MHz~75MHz	dB	38	42	-
(5) 75MHz~135MHz	dB	40	47	-

C. FREQUENCY CHARACTERISTIC:

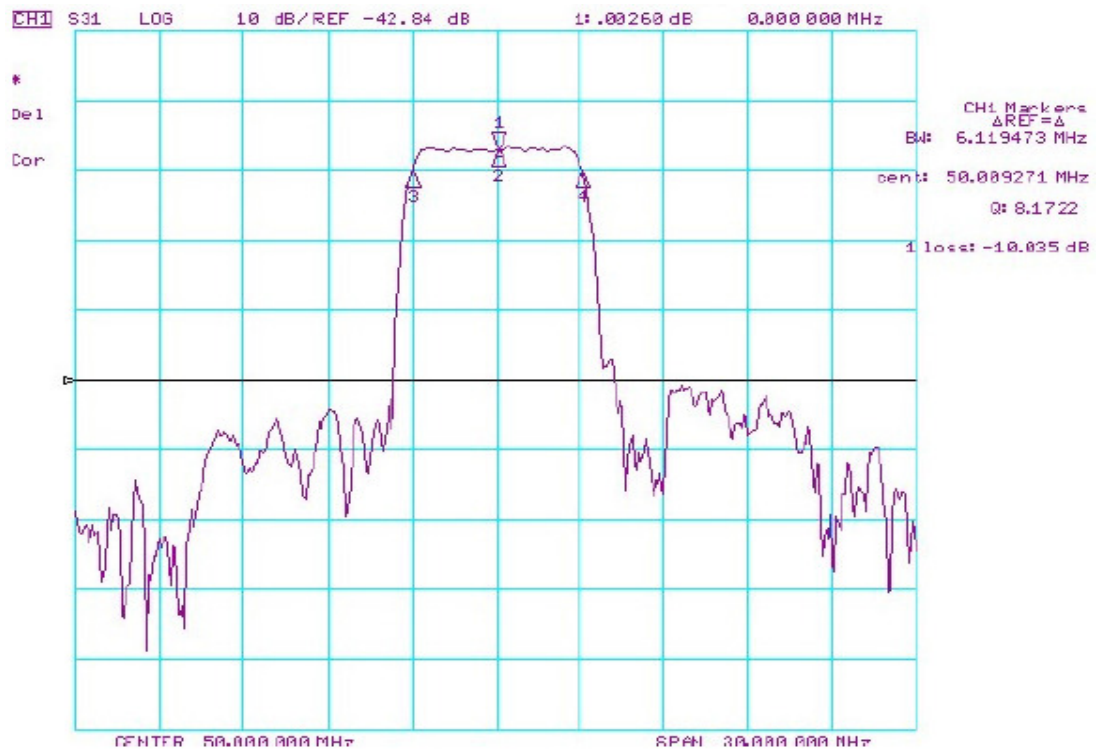


Fig. 1 S21 Response Horizontal: 3MHz; Vertical: 10dB/Div

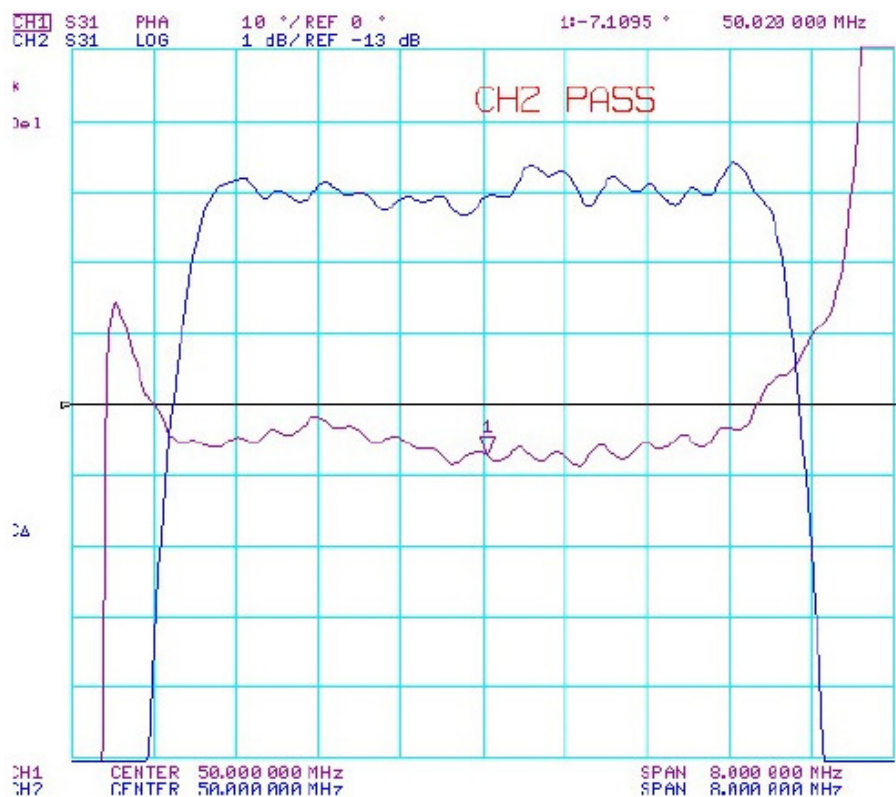


Fig. 2 Inband ripple and phase Horizontal: 0.8MHz; Vertical: 1dB/Div, 10deg/Div

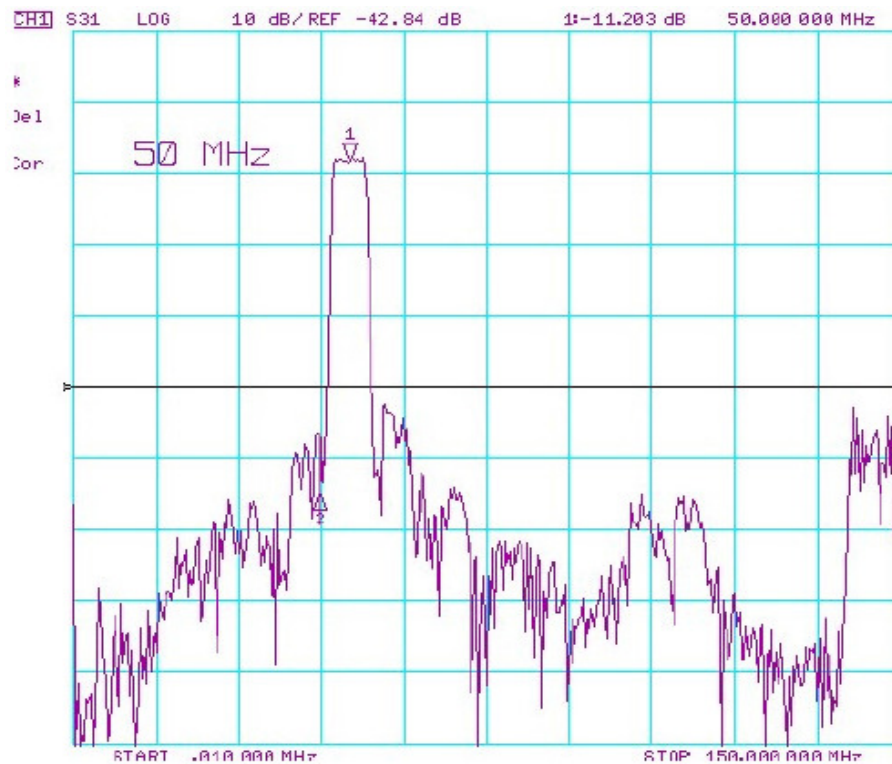


Fig. 3 Wideband response Horizontal: 0.01MHz~150MHz; Vertical: 10dB/Div

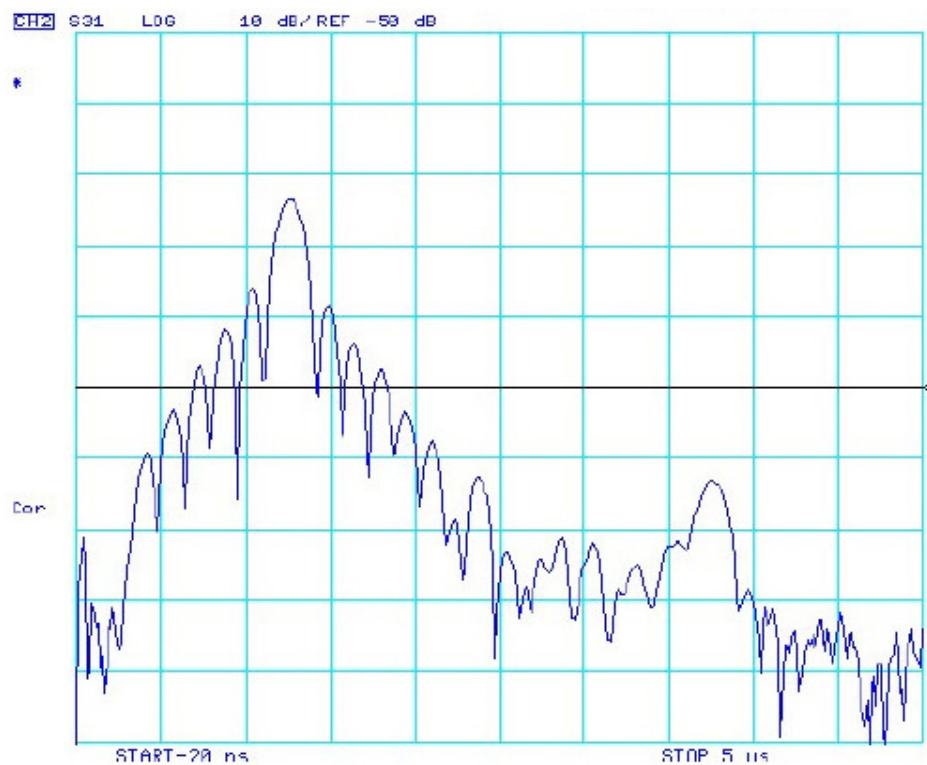
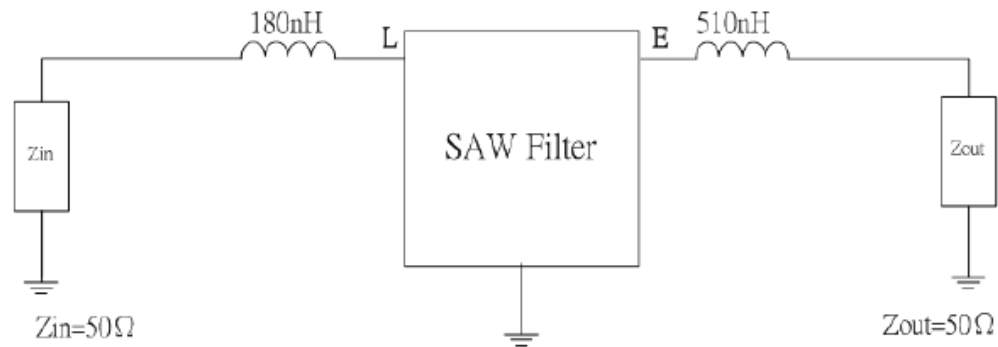
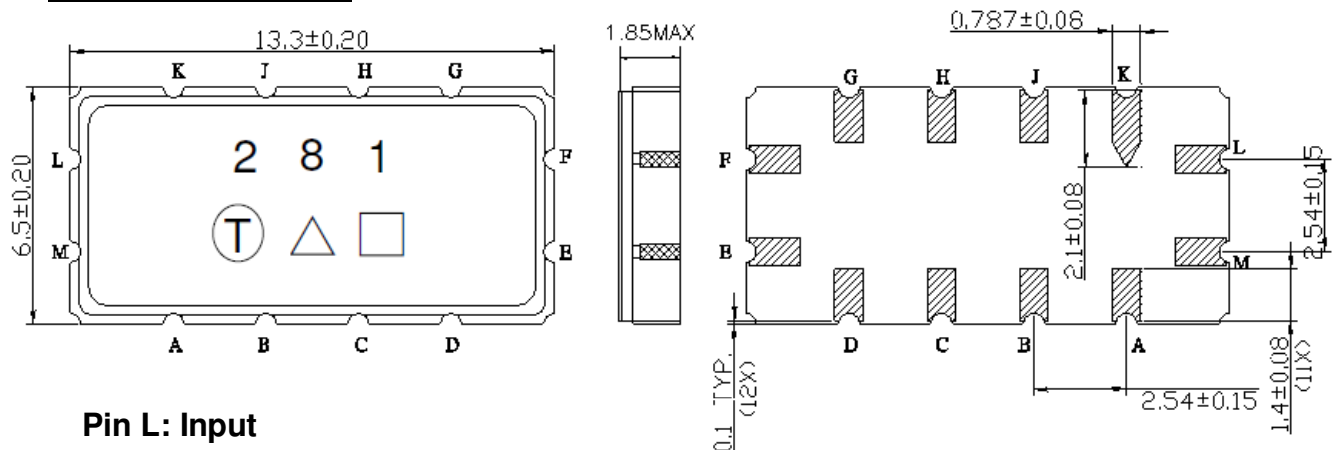


Fig. 4 Time domain response Horizontal: -20nS~5uS; Vertical: 10dB/Div

D. MEASUREMENT CIRCUIT:



E. OUTLINE DRAWING:



Pin L: Input

Pin M: Input ground

Pin E: Output

Pin F: Output ground

Pin A, B, C, D, G, H, J, K: Ground

Unit: mm

△: Product / Year Code

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

Product / Year Code

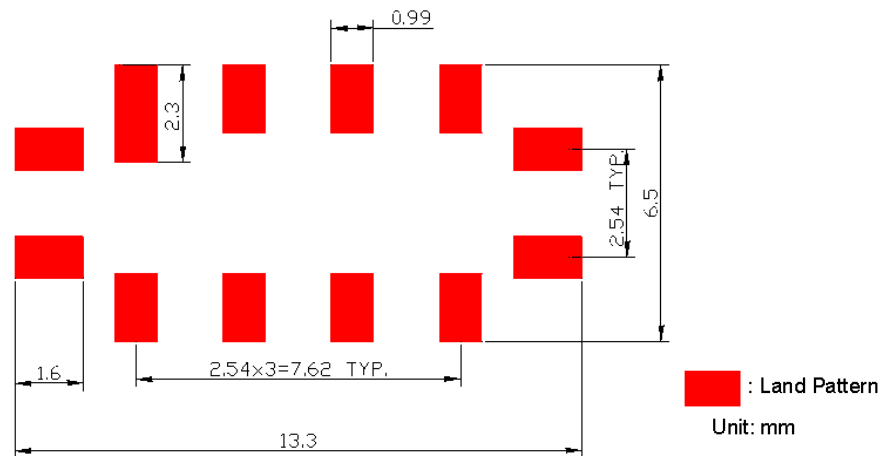
Year	2017 2021	2018 2022	2019 2023	2020 2024
Product Code	B	b	<u>B</u>	<u>b</u>

This table is four-year cycle (ex: Year 2025,△will show “B”)

Date Code Table:

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

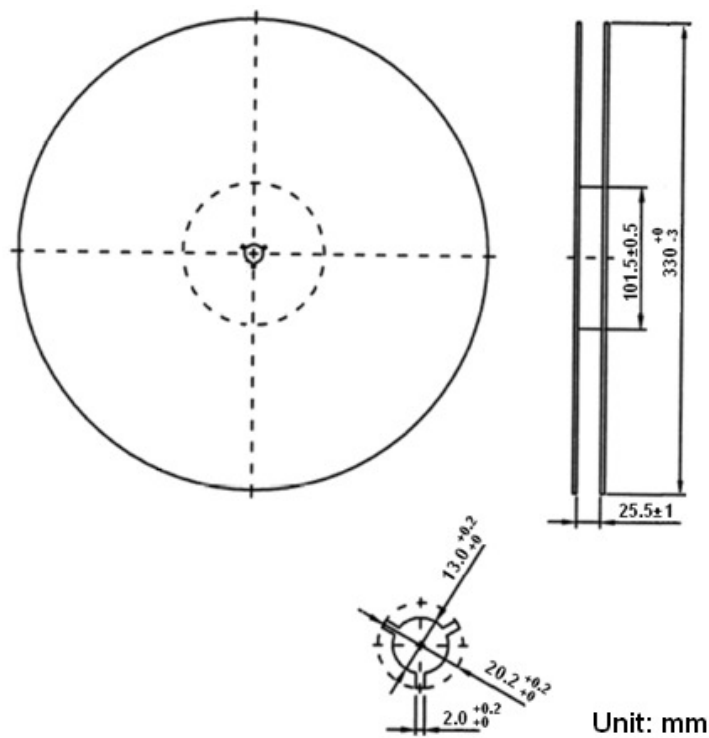
F. PCB Footprint:



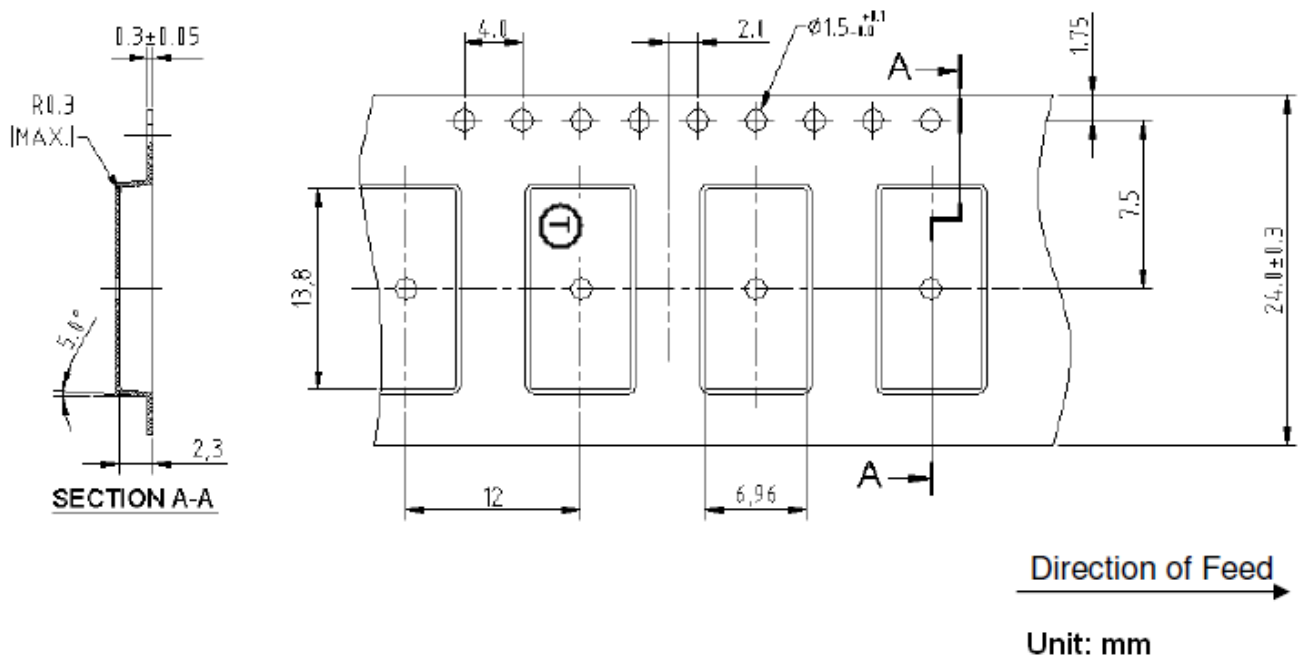
G. PACKING: (Ref. WI-75M03)

1. REEL DIMENSION

(Please refer to FR-75D10 for packing quantity)



2. TAPE DIMENSION



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

