



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

Product Name: SAW IF Filter 140 MHz 2MHz BW (SMD 5.0mm x 7.0 mm)

TST Parts No.: TB0965A

Customer Parts No.: _____

Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Kenweis Lee *Kenweis Lee*

Approval by: _____ Kazuma Lee *Kazuma Lee*

Date: _____ 2023/11/21

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 140MHz 2MHz BW (SMD 5.0×7.0 mm)

MODEL NO.: TB0965A

REV. NO.2

A. MAXIMUM RATING:

1. Operating temperature range: -35°C to 85°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level : 10 dBm
4. Maximum DC Voltage : 10V
5. Moisture Sensitivity Level: Level1 (MSL1)

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device

B. Characteristics :

Item	Unit	Min.	Type.	Max.
Center frequency, F_c	MHz	-	140	-
Insertion Loss, IL	dB	-	8.5	12.0
Amplitude Ripple F _c +/-0.5MHz	dB	-	0.2	1.0
Amplitude Ripple F _c +/-1.0MHz	dB	-	0.2	3.0
Group Delay Ripple F _c +/-0.5MHz	ns	-	24	200
Absolute Group Delay at F _c	us	-	0.7	-
Triple Transit Suppression	dB	35	40	-
In/Output Return Loss F _c +/-1.0MHz	dB	-	10	-
Attenuation (Reference level from minimum Insertion loss)				
DC ~ 110 MHz	dB	40	46	-
110MHz ~ 135MHz	dB	30	37	-
145 MHz ~ 170 MHz	dB	30	35	-
170MHz ~ 250 MHz	dB	40	47	-
250 MHz ~ 425 MHz	dB	20	67	-
Temperature Coefficient	ppm/°C	-	-23	-
Source Impedance	Ohm	-	200	-
Load Impedance	Ohm	-	200	-

C. Frequency Characteristics :

(1) Wide band Response:(span 100MHz)

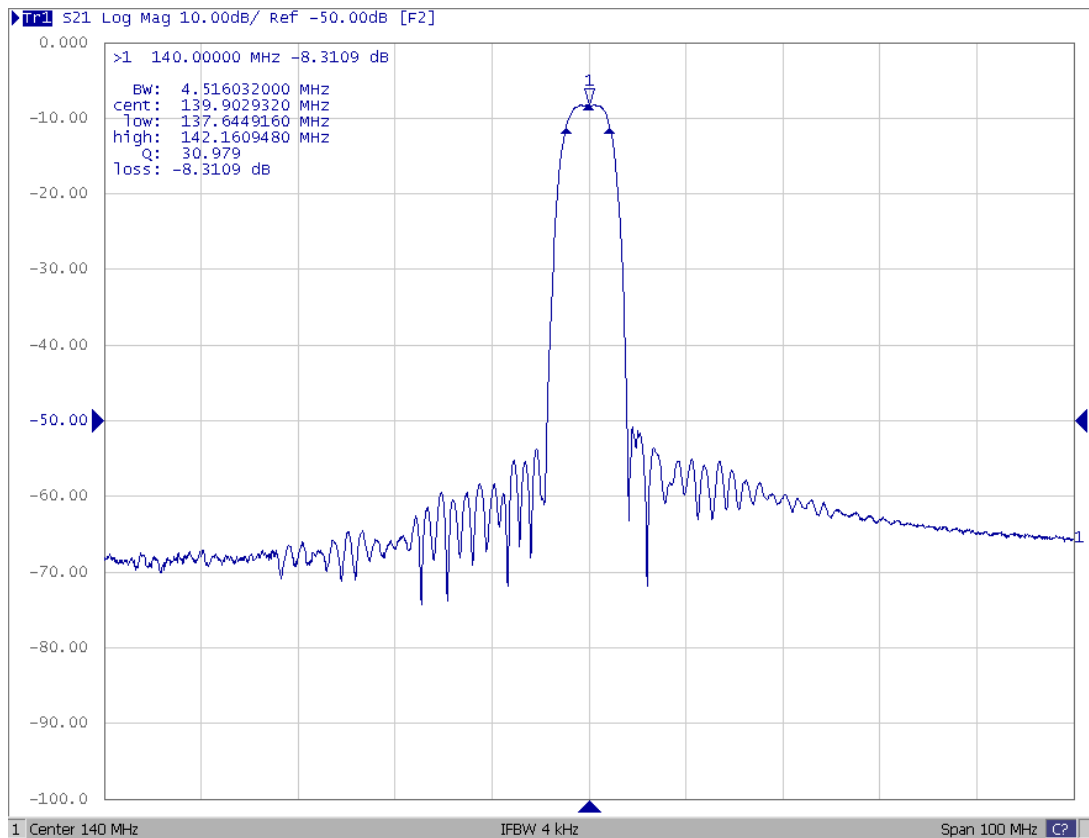


Fig1. Horizontal: 10MHz/Div Vertical: 10dB/Div

(2) Pass band Response and Group Time Delay response:

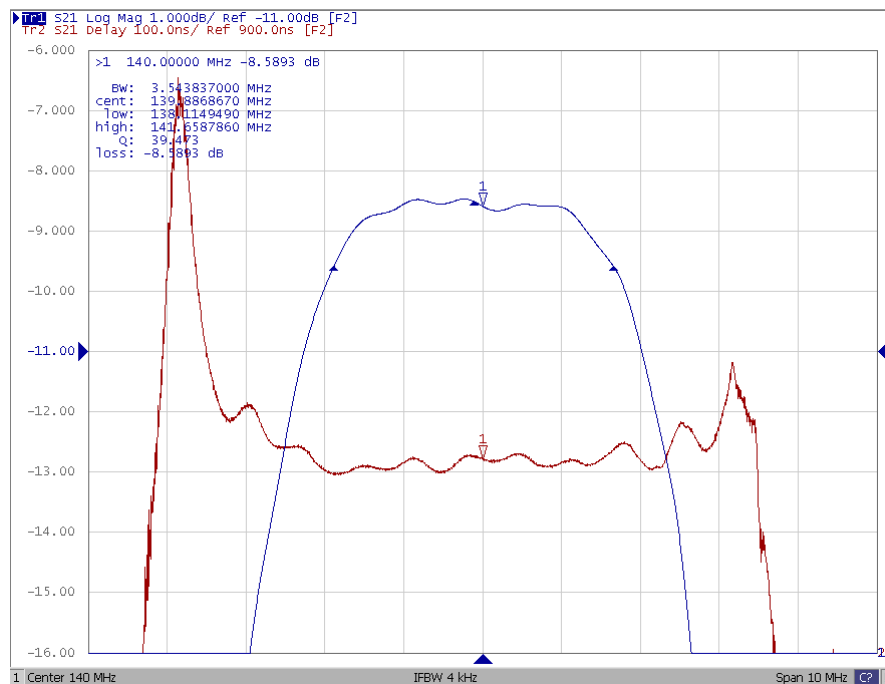
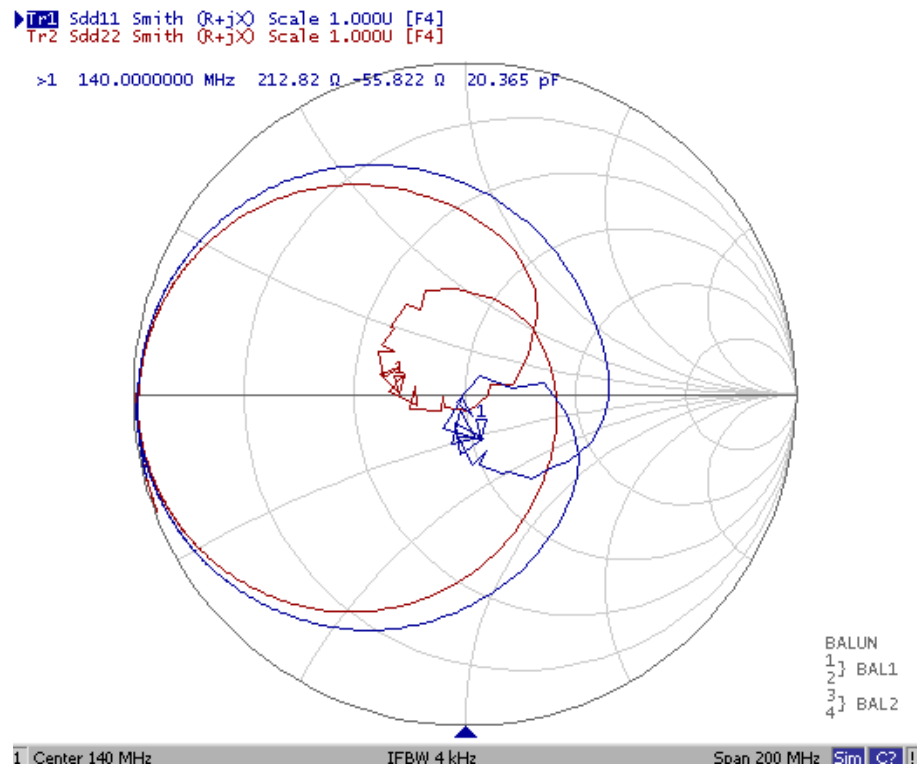


Fig2. Horizontal: 1MHz/Div Vertical: 1dB/Div
Vertical: 100ns/Div

(3) Smith Chart:



(4) Wide Band:

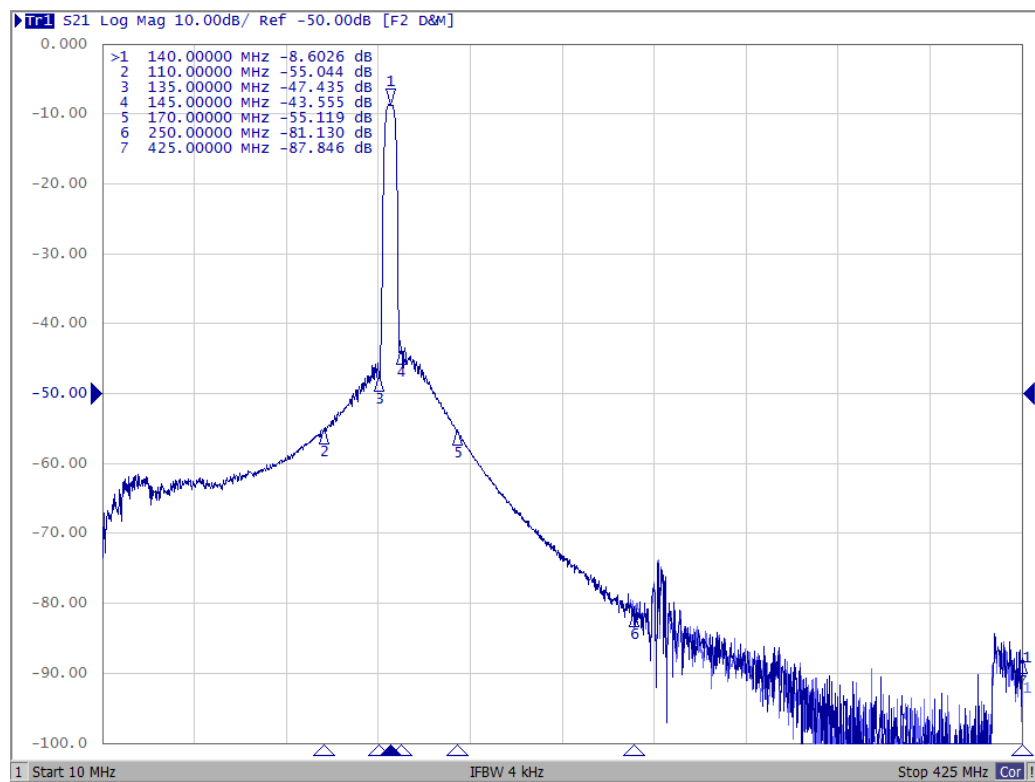
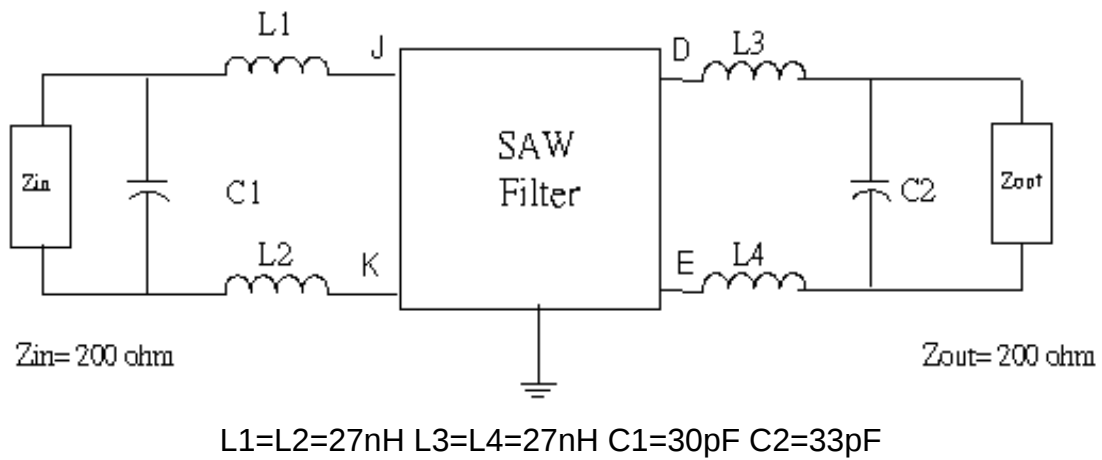


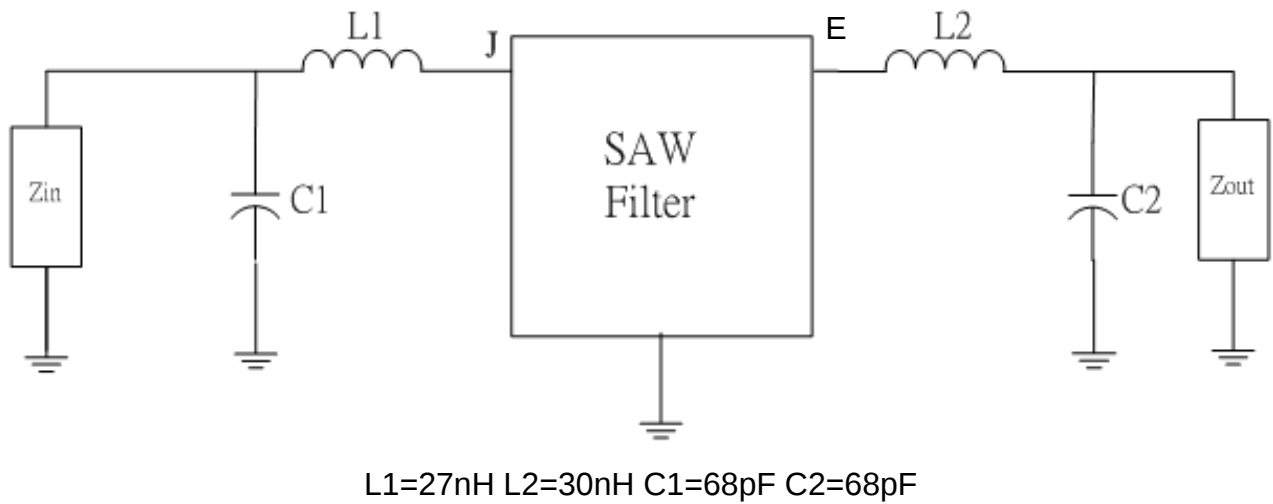
Fig4. Horizontal: 100MHz/Div Vertical: 10dB/Div

D. MATCHING CIRCUIT:

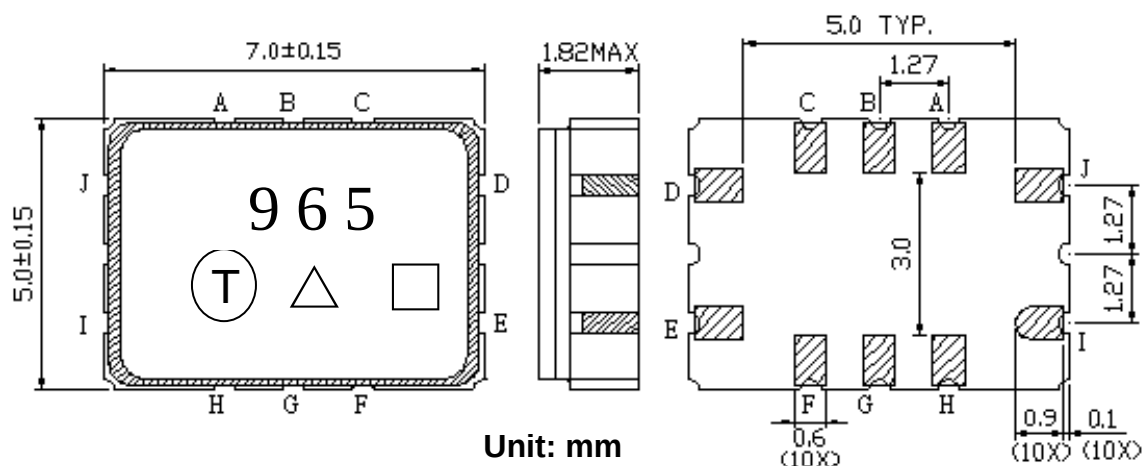
200ohm balance in/out



50ohm single in/out



E. OUTLINE DRAWING:



Pin J –RF input

Pin I –RF balance input or to be ground

Pin E –RF output

Pin D –RF balance output or to be ground

Pin A,B,C,F,G,H - Ground

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

△ : Product / Year Code

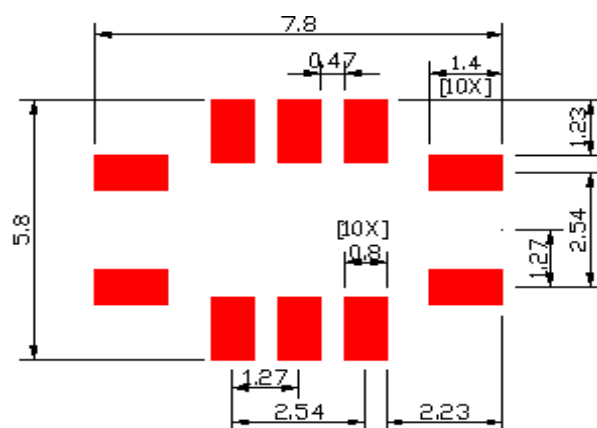
Product / Year Code

Year	2021 2025	2022 2026	2023 2027	2024 2028
Product Code	B	b	<u>B</u>	<u>b</u>

Week 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

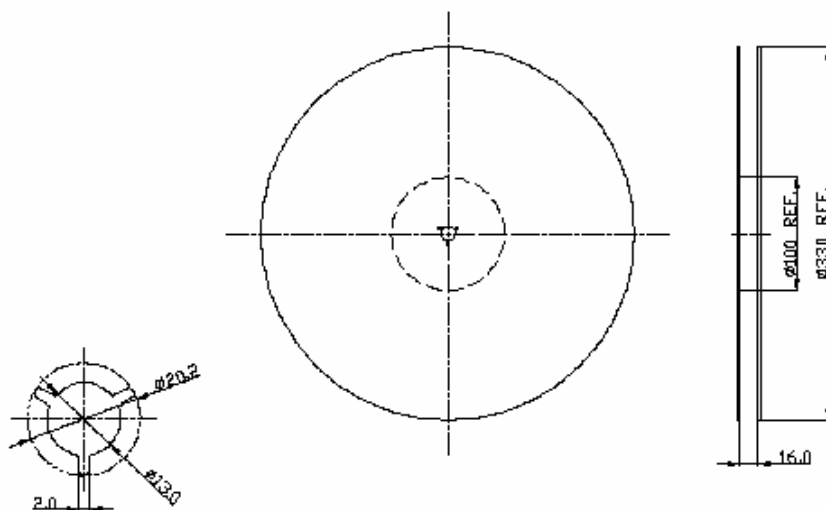
F. PCB Footprint:



G. PACKING:

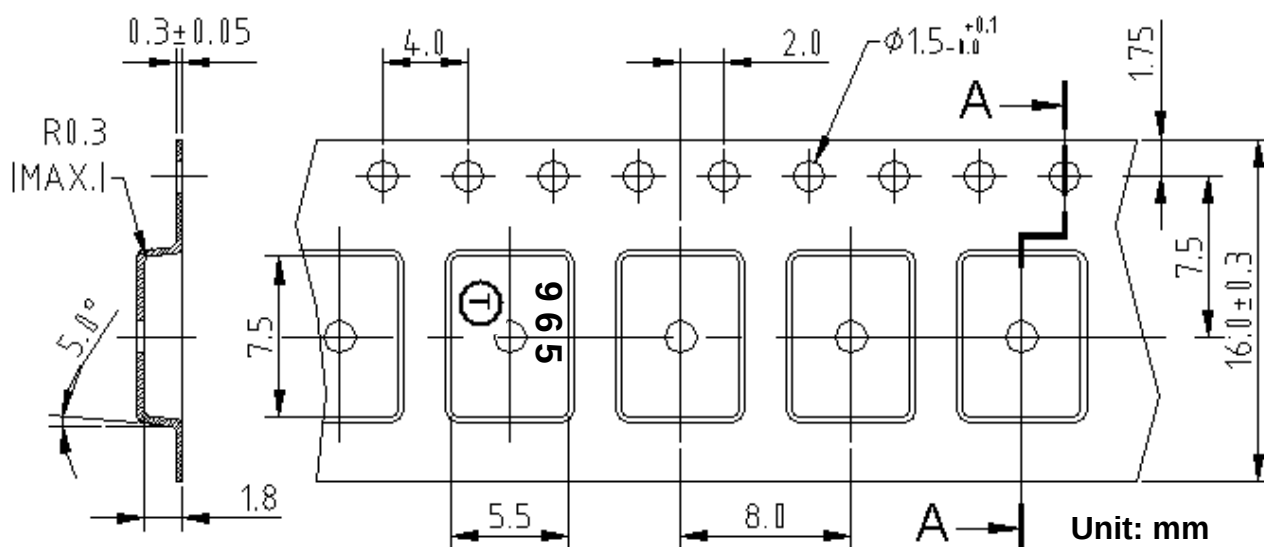
Unit: mm

1. REEL DIMENSION (Please refer to FR-75D10 for packing quantity)



- ## 2. TAPE DIMENSION

Unit: mm



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.

