



# TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,  
Tao-Yuan, 324, Taiwan, R.O.C.

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## Product Specifications Approval Sheet

Product Description: 140MHz IF SAW Filter (BW=6 MHz)

TST Parts No.: TB0320A

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

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

Checked by: \_\_\_\_\_ V.J Fanchian 

Approved by: \_\_\_\_\_ Jun-Mao Chang 

Date: \_\_\_\_\_ 2022/04/14

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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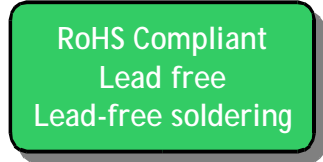
**SAW Filter 140MHz (SMD 13.3x6.5 mm)**

**MODEL NO.: TB0320A**

Rev. NO. 3.0

**A. MAXIMUM RATINGS:**

1. Input Power Level: 10 dBm
2. Operating Temperature: -40°C to 85°C
3. Storage Temperature: -40°C to 85°C
4. Moisture Sensitivity Level: Level 1(MSL1)



**Electrostatic Sensitive Device**

**B. ELECTRICAL CHARACTERISTICS:**

Ambient Temperature: 25 °C

Item	Unit	Min.	Type.	Max.
Central Frequency (Fo)	MHz	-	140	-
Insertion Loss	dB	-	10.5	12.5
1dB Bandwidth	MHz	5.8	6.7	-
3dB Bandwidth	MHz	6.0	7.5	-
40 dB Bandwidth	MHz	-	10.8	11.5
Passband Ripple (Fc)	P-PdB	-	0.6	1.0
Group delay Ripple	Nsec	-	52	70
Ultimate Rejection				
DC~125 MHz	dBc	40	55	-
155~200 MHz	dBc	40	49	-
In/Out Impedance	Ohm	-	50	-
Temp Coefficient	PPM/ oC		-18	

**C. FREQUENCY CHARACTERISTICS:**

(1) wide band of Response: (span: 60MHz)

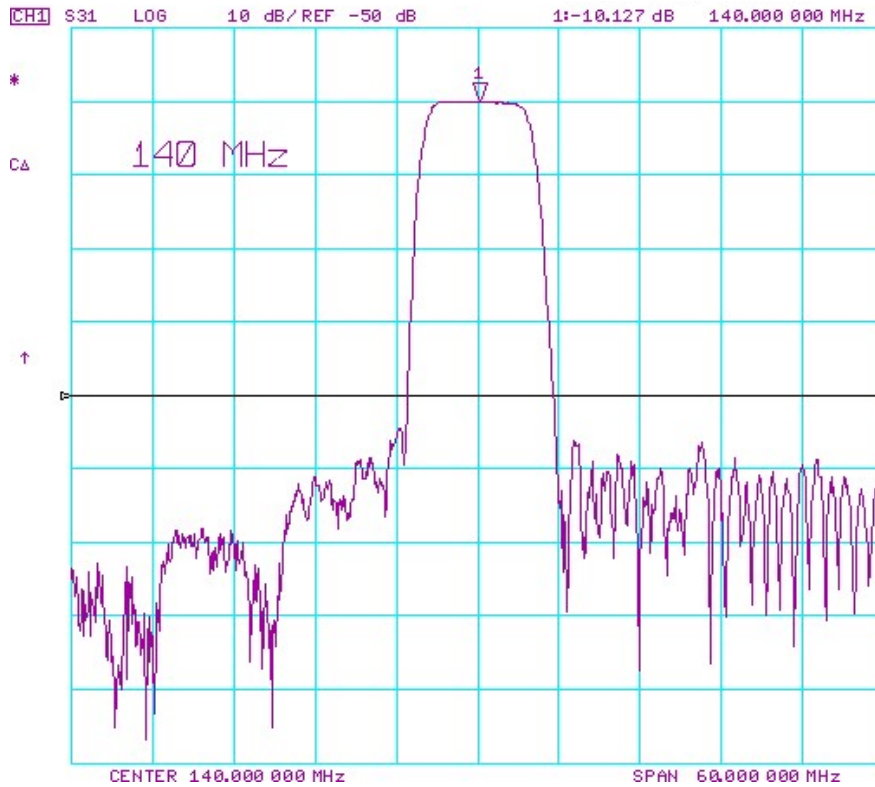


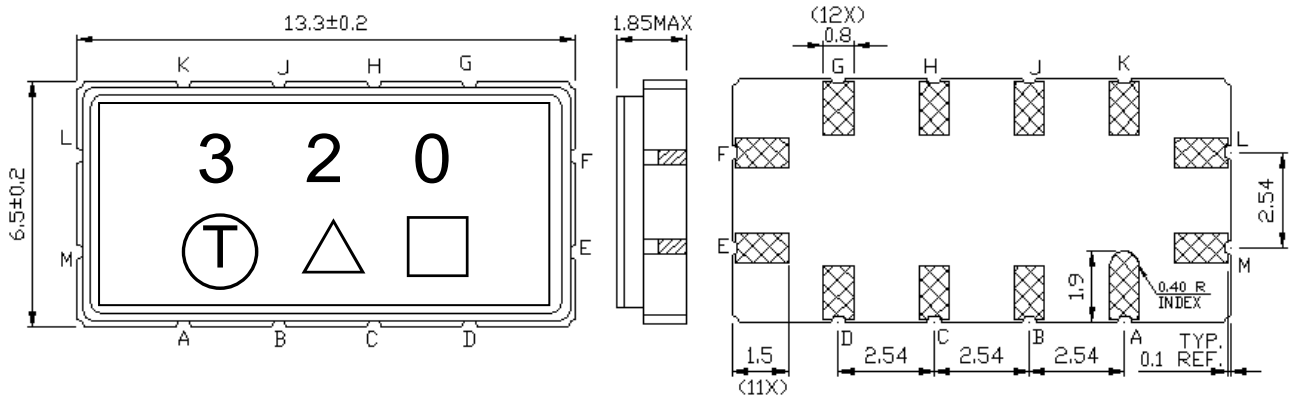
Fig1.S21 Response Horizontal:6MHz/Div Vertical: 10dB/Div

(2) Passband of Response: (span: 10MHz)



Fig2.S21 Response Horizontal:1MHz/Div Vertical: 1dB/Div

**D. OUTLINE DRAWING:**



Pin L: RF input+ ; M: RF input-  
 Pin E: RF output+ ; F: RF output-  
 Unit : mm

△ : Product / Year Code

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

Product / Year Code- 4year cycle

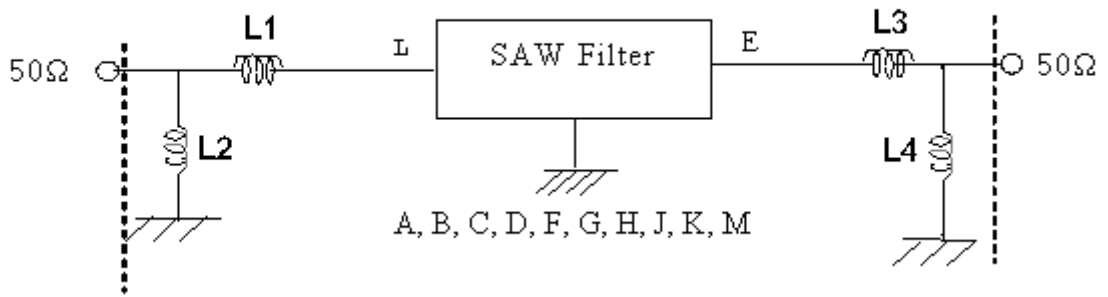
Year	2021 2025	2022 2026	2023 2027	2024 2028
Product Code	B	b	<u>B</u>	<u>b</u>

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

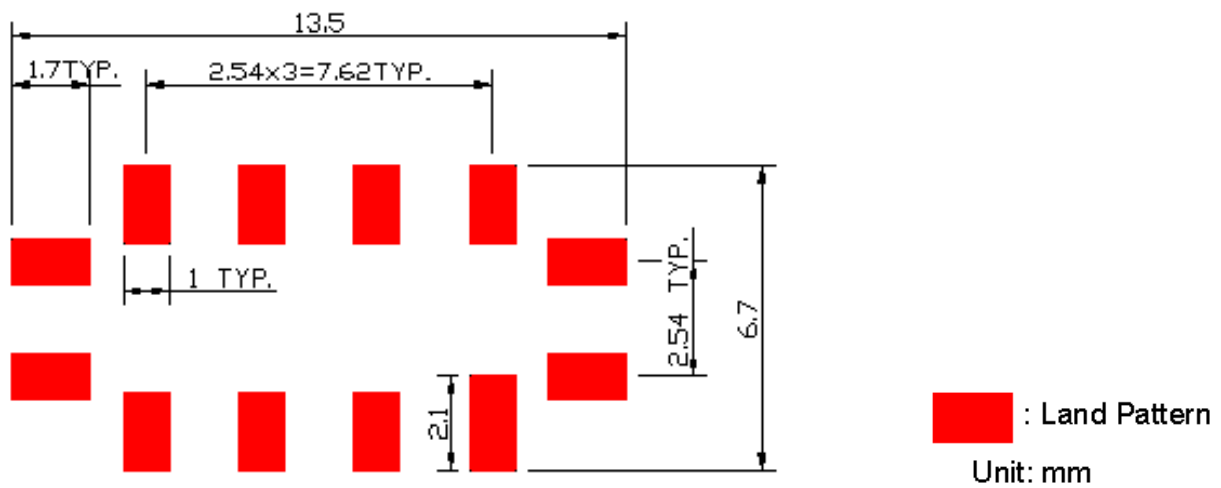
**E. TEST CIRCUIT:**

Network analyzer



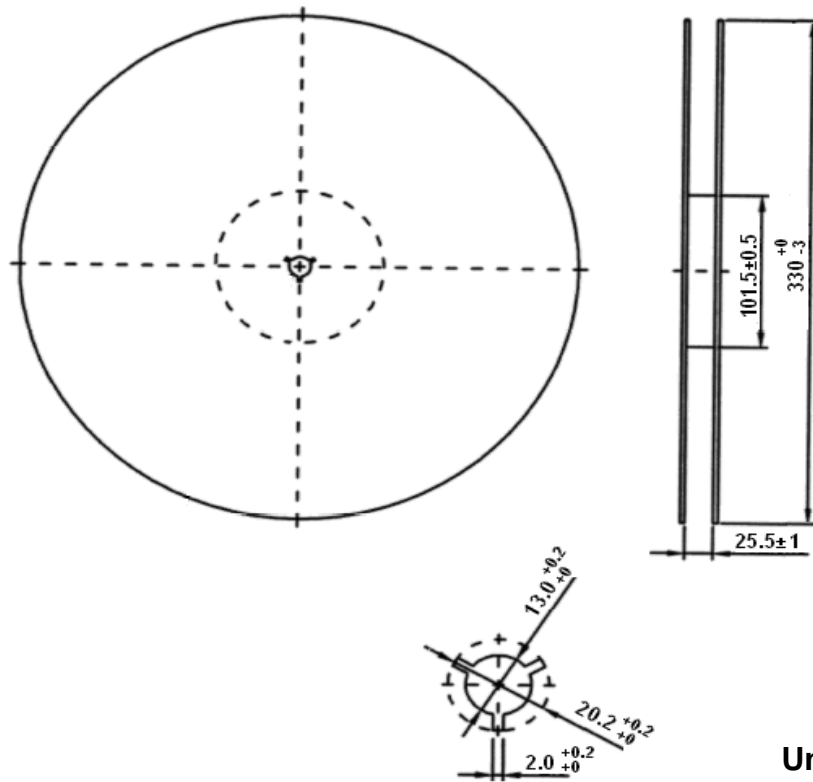
Input: L1=33 nH; L2=22 nH  
 Output: L3= 22nH; L4=27 nH

**F. PCB FOOTPRINT:**



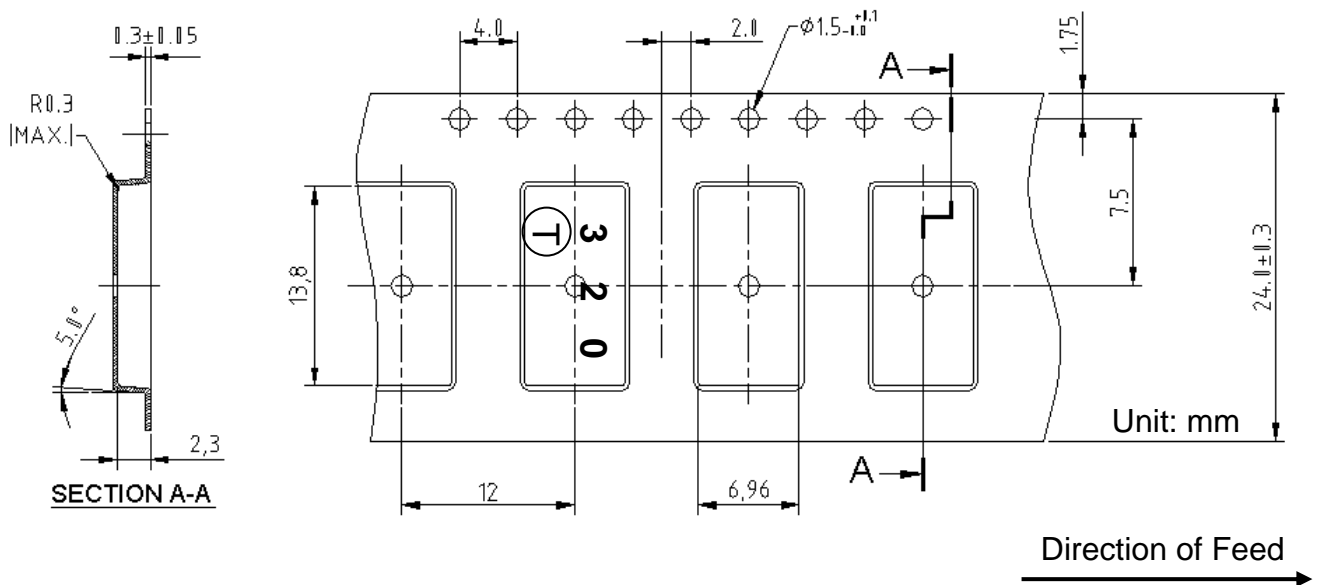
**G. PACKING:**

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



Unit: mm

2. TAPE DIMENSION:



Unit: mm

Direction of Feed

## 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.

