



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

Product Description: 70 MHz 5MHz BW SMD 13.3 x 6.5 mm SAW IF Filter

TST Part No.: TB0194A

Customer Part No.: _____

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

Checked by: _____ Kazuma Lee *Kazuma Lee*

Approval by: _____ Bob Chau *Bob Chau*

Date: _____ 07 / 21 / 2016

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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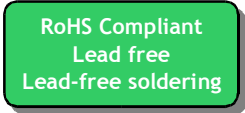
Low Loss 70 MHz SAW Filter (SMD 13.3x6.5 mm)

MODEL NO.: TB0194A

REV. NO.:2

A. MAXIMUM RATING:

- 1.Input Power Level: 10 dBm
- 2.DC voltage: 5 V
- 3.Operating Temperature: -10°C to +70°C
- 4.Storage Temperature: -40°C to +85°C



Electrostatic Sensitive Device

B. ELECTRICAL CHARACTERISTICS:

Item	Unit	Min.	Type.	Max.	Note
Center frequency, Fc	MHz	69.8	70	70.2	
Insertion Loss, IL	dB	-	8	9	
1dB Bandwidth	MHz	4.35	4.45	-	
3dB Bandwidth	dB	5	5.5		
40dB Bandwidth	MHz		8.64	10.25	
Passband ripple (68.26MHz~71.74MHz)	dB	-	0.78	1	
Phase Linearity(68MHz~72MHz) (rms)	deg	-	6.28	9.5	
Group Delay ripple (68MHz~72MHz)	nS		119	150	
Absolute Delay	μS	-	0.84	-	
Attenuation Reference level from Min IL)					
0 ~ 64.875MHz	dB	40	45	-	
75.125~140MHz	dB	40	44	-	
Substrate Material	-	-	YZ-LN	-	
Temperature Coefficient	ppm/°C	-	-94	-	
Ambient Temperature	°C	-	25	-	

C.FREQUENCY CHRACTERISTICS:

(1) S21 Response:

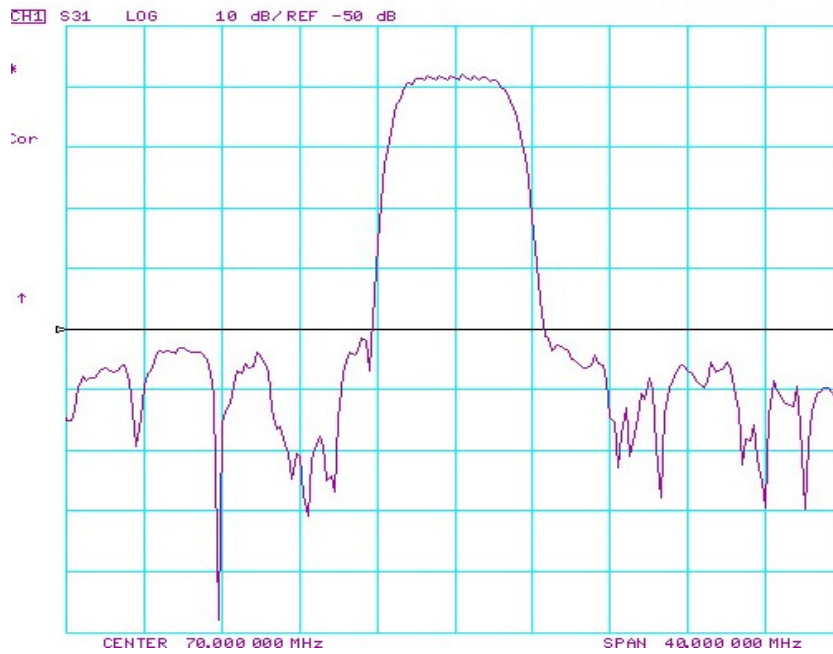


Fig-1 S21 Response Horizontal: 4MHz/Div
Vertical: 10dB/Div

(2) Passband of Response:

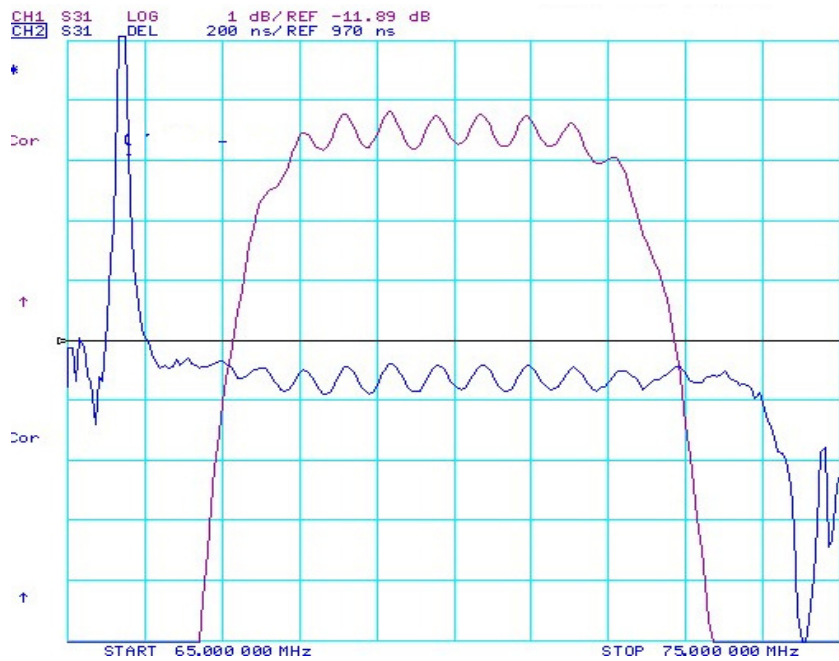
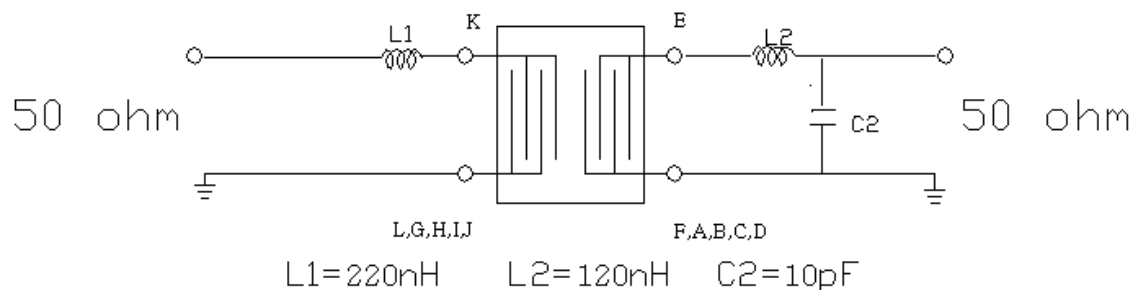


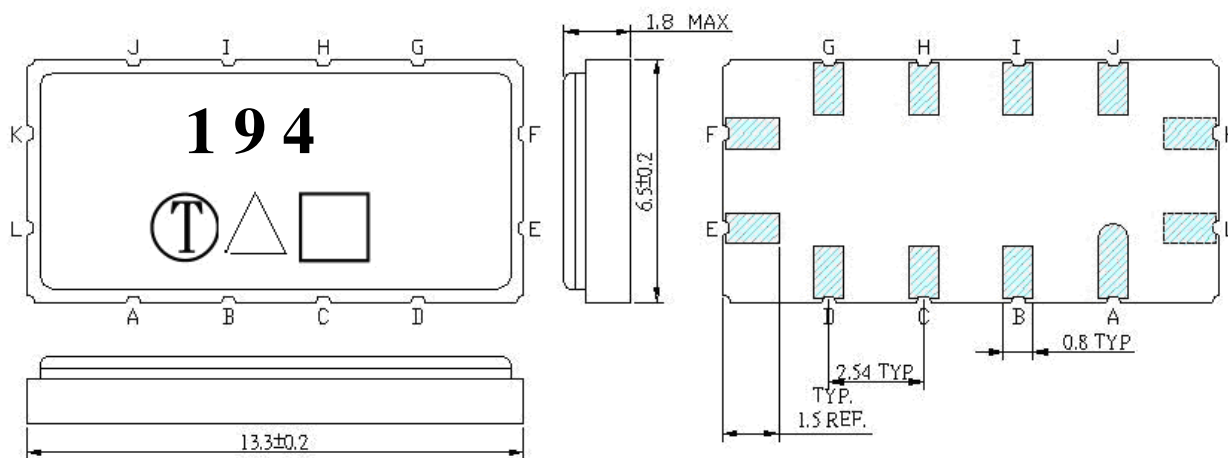
Fig-2 Group Delay and Ripple, Horizontal: 1MHz/Div
Vertical 1: 1 dB/Div Vertical 2: 200nS/Div

D. MEASUREMENT CIRCUIT:

1) For 50 ohm Unbalanced Input and Output



E. OUTLINE DRAWING:



Unit: mm

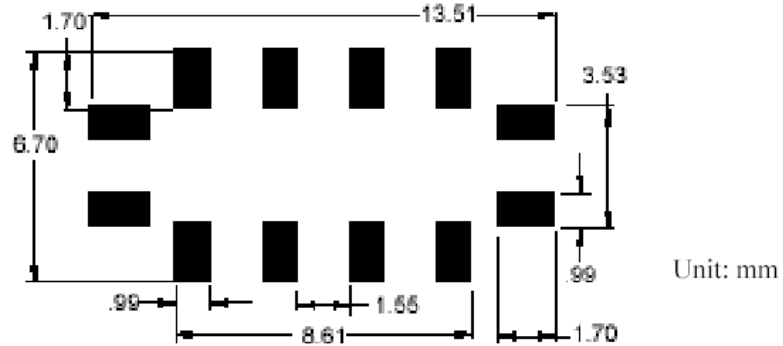
- Pin K: RF Input
- Pin E: RF Output
- Pin L: Input Ground
- Pin F: Output Ground
- Pin A, B, C, D, G, H, I, J: To be Ground
- : Week Code
- Unit: mm
- △ : Product / Year Code

Year	2013 2017	2014 2018	2015 2019	2016 2020
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:



H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at $150\sim 180^{\circ}\text{C}$ 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 $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ peak (20~40sec).
4. Time: 2 times.

