



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

Product Name: 181 MHz 50MHz BW SMD 13.3 x 6.5 mm SAW IF Filter

TST Parts No.: TB1093A

Customer Parts No.: _____

Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Kazuma Lee

Approval by: _____ Francis Chen

Date: _____ 10 / 02 / 2012

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 181MHz 50MHz BW (SMD 13.3×6.5 mm)

MODEL NO.: TB1093A

REV. NO.1

A. MAXIMUM RATING:

1. Operating temperature range: -30°C to 85°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level : 10 dBm
4. Maximum DC Voltage : 10V

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device

B. Characteristics :

Item	Unit	Min.	Type.	Max.
Center frequency, Fc	MHz	-	181	-
Insertion Loss, IL	dB	-	23.0	24.0
1dB Band Width	MHz	50	57	-
40dB Band Width	MHz	-	64	75
Passband Ripple Fc+/- 25MHz	dB	-	0.8	1.2
Absolute group Delay	us	-	0.8	-
Group Delay variation Fc+/- 25MHz	ns	-	50	-
Attenuation (Reference level from minimum Insertion loss)				
DC ~ 141MHz	dB	35	47	-
221MHz ~ 435MHz	dB	35	47	-
435MHz ~ 645MHz	dB	25	60	-
645MHz ~ 1000MHz	dB	45	58	-
Temperature Coefficient	ppm/°C	-	-72	-
Source Impedance	Ohm	-	50	-
Load Impedance	Ohm	-	50	-

C. Frequency Characteristics :

(1) Narrow band Response:

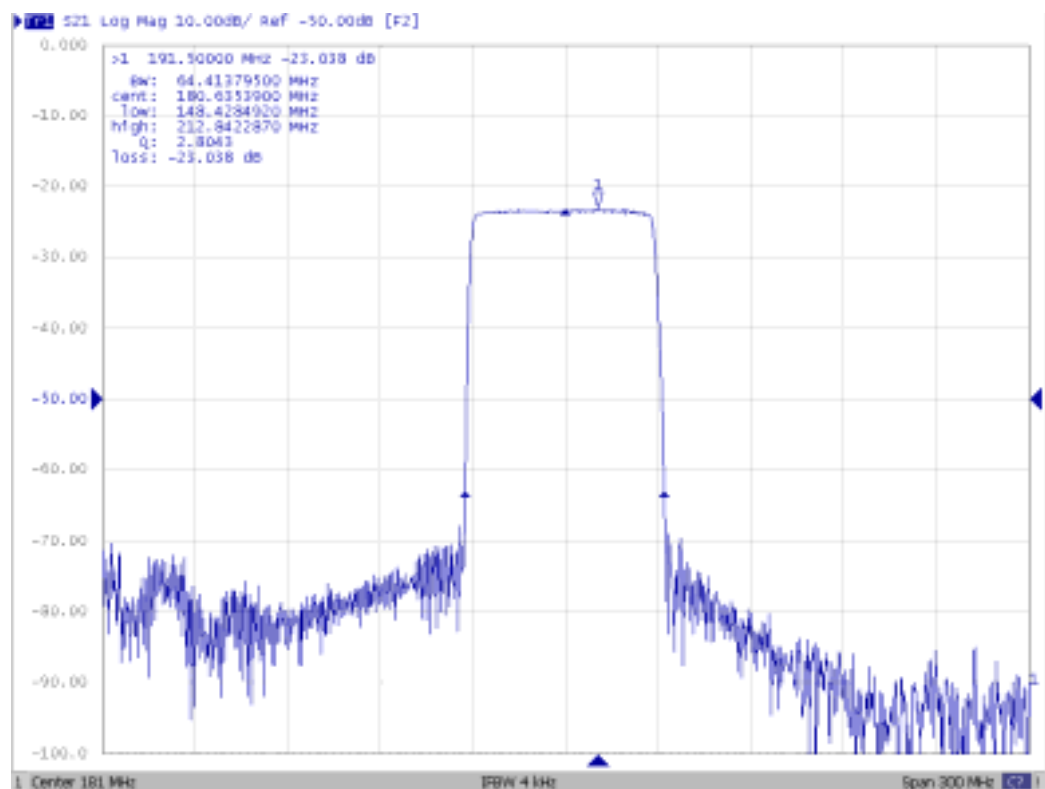


Fig1. Horizontal: 30MHz/Div Vertical: 10dB/Div

(2) Pass band Response and Group Delay Response:

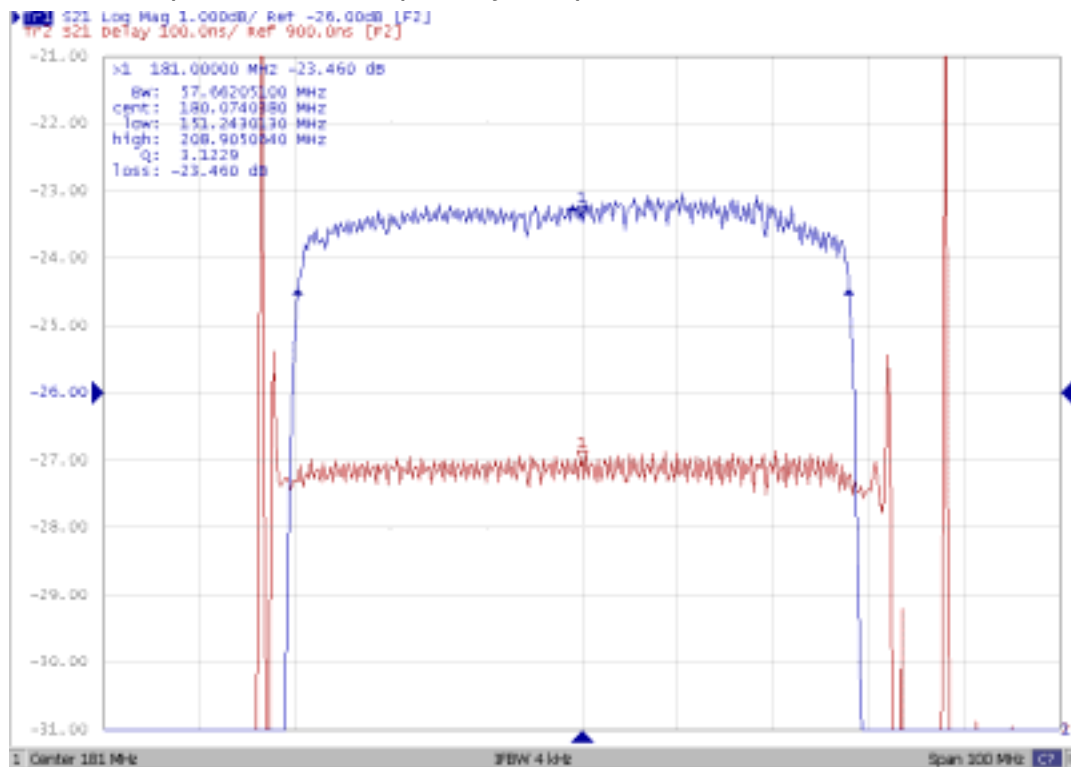


Fig2. Horizontal: 10MHz/Div Vertical: 1dB/Div
Vertical: 100ns/Div

(3) Wide band Response:

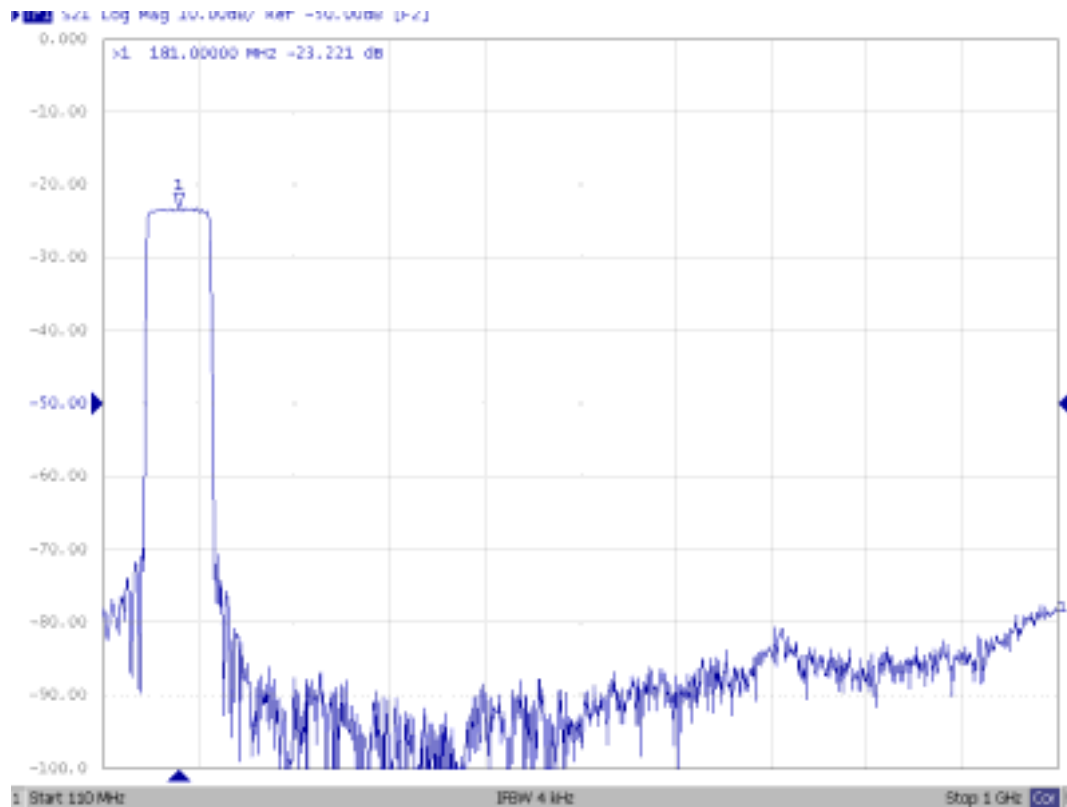
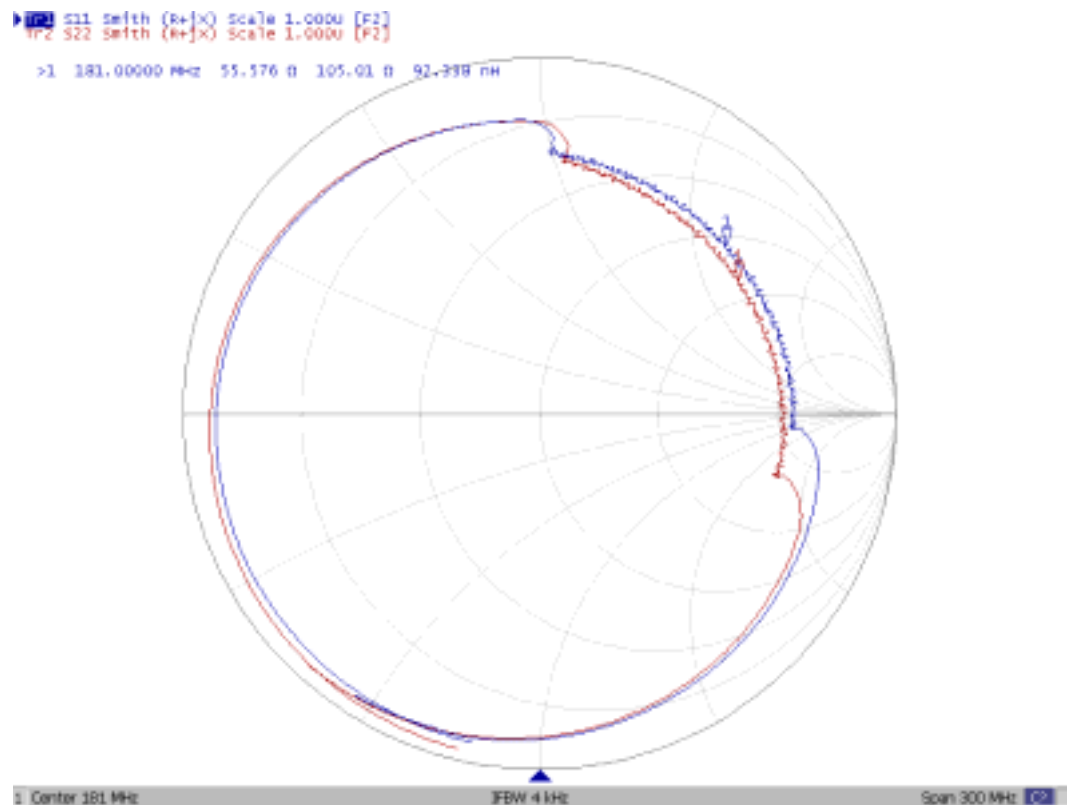
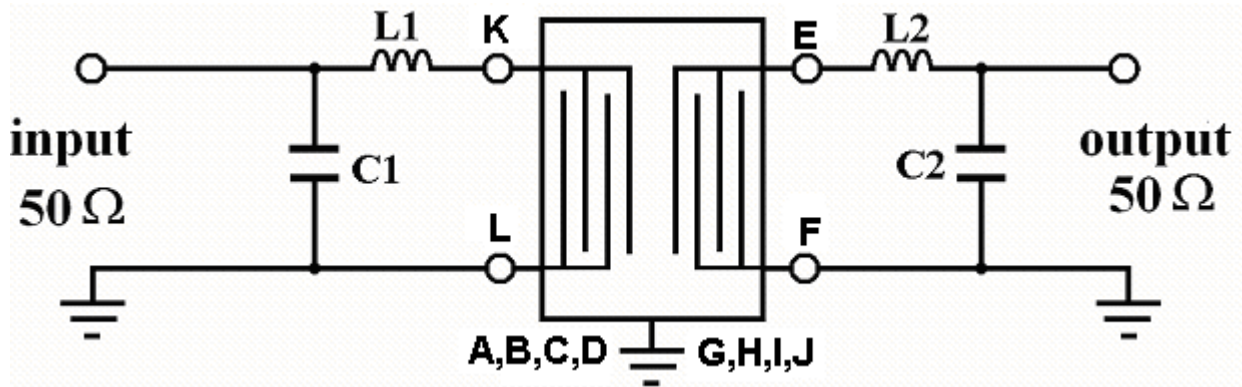


Fig1. Horizontal: 100MHz/Div Vertical: 10dB/Div

(4) Smith Chart

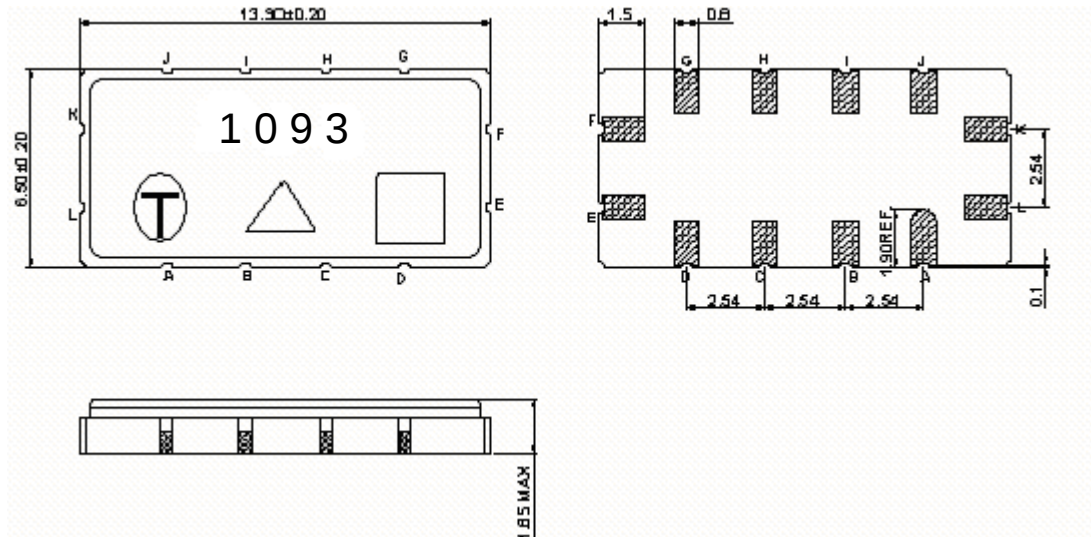


D. Matching Circuit:



$$L1=24\text{nH} \quad C1=18\text{pF} \quad L2=24\text{nH} \quad C2=20\text{pF}$$

E. Outline Drawing:



#K : Input

#L : Input Ground

#E : Output

#F : Output Ground

#A,B,C,D,G,H,I,J : Ground

: Week Code

Unit: mm

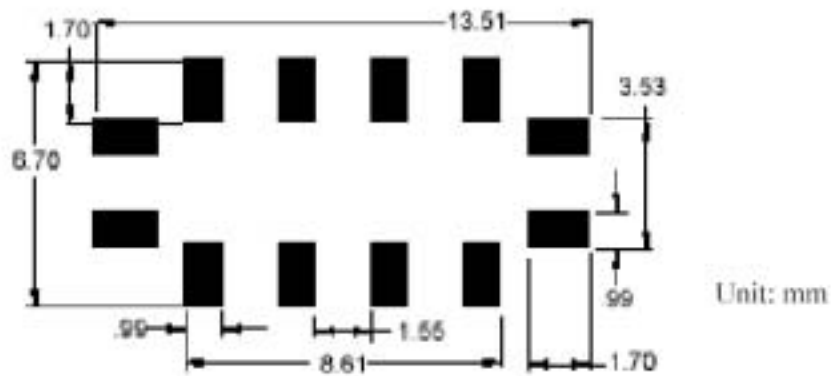
: Product / Year Code

Year	2009 2013	2010 2014	2011 2015	2012 2016
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

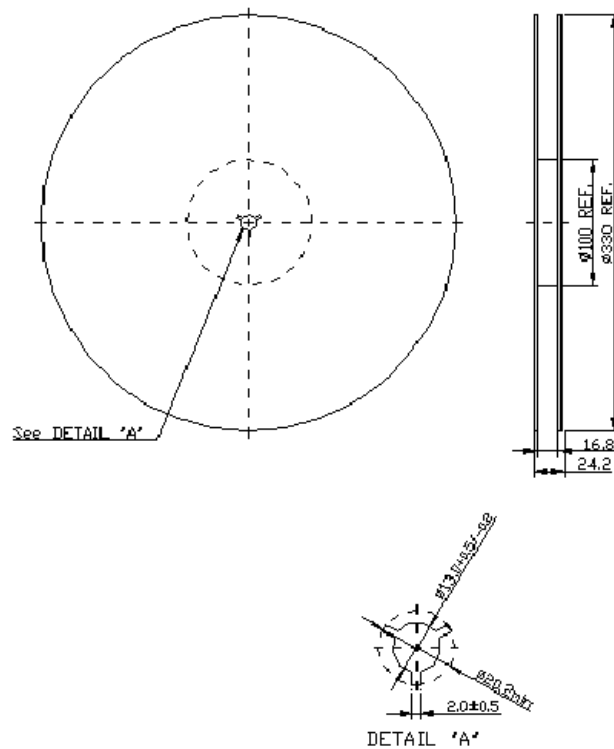
F. PCB Footprint:



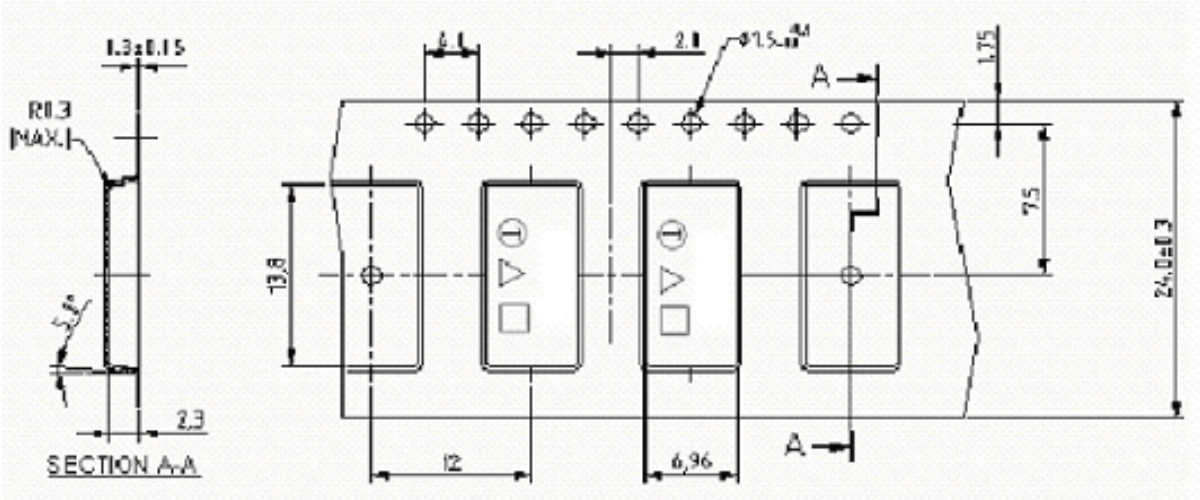
G. PACKING:

1. REEL DIMENSION

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



2. TAPE DIMENSION



Direction of feed →

I. RECOMMENDED REFLOW PROFILE:

