



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

Product Description: 238.6 MHz 92kHz BW SMD 7.0 x 5.0 mm SAW IF Filter

TST Parts No.: TB1162A

Customer Parts No.: _____

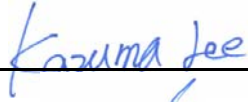
Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Kazuma Lee 

Approval by: _____ Bob Chau 

Date: _____ 11 / 13 / 2014

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 238.6MHz 92kHz BW (SMD 7×5 mm)

MODEL NO.: TB1162A

Rev No.1

A. MAXIMUM RATING:

1. Operating temperature range: -40°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	-	238.6	-
Insertion Loss, IL	dB	-	3.4	5.0
-1dB bandwidth	kHz	92	195	-
-3dB bandwidth	kHz	-	211	-
-40dB bandwidth	kHz	-	555	-
Passband Ripple Fc+/- 46kHz	dB	-	1.1	2.0
Group Delay Variation Fc+/- 46kHz	us	-	2.2	10
Attenuation:(Reference level from Min IL)				
Fc - 10 ~ Fc - 2 MHz	dB	55	65	-
Fc - 2 ~ Fc - 1 MHz	dB	50	59	-
Fc - 1 ~ Fc - 0.5 MHz	dB	40	52	-
Fc - 0.5 ~ Fc - 0.2 MHz	dB	8	17	-
Fc + 0.2 ~ Fc + 0.5 MHz	dB	8	26	-
Fc + 0.5 ~ Fc + 1 MHz	dB	37	45	-
Fc + 1 ~ Fc + 2 MHz	dB	50	63	-
Fc + 2 ~ Fc + 10 MHz	dB	40	51	-
Temperature Coefficient	ppm/°C ²	-	-0.036	-
Source Impedance	Ohm	-	50	-
Load Impedance	Ohm	-	50	-

Note1. Considering -37 KHz frequency shift from -40°C to +85°C

C. Frequency Characteristics :

(1) Wide band Response:

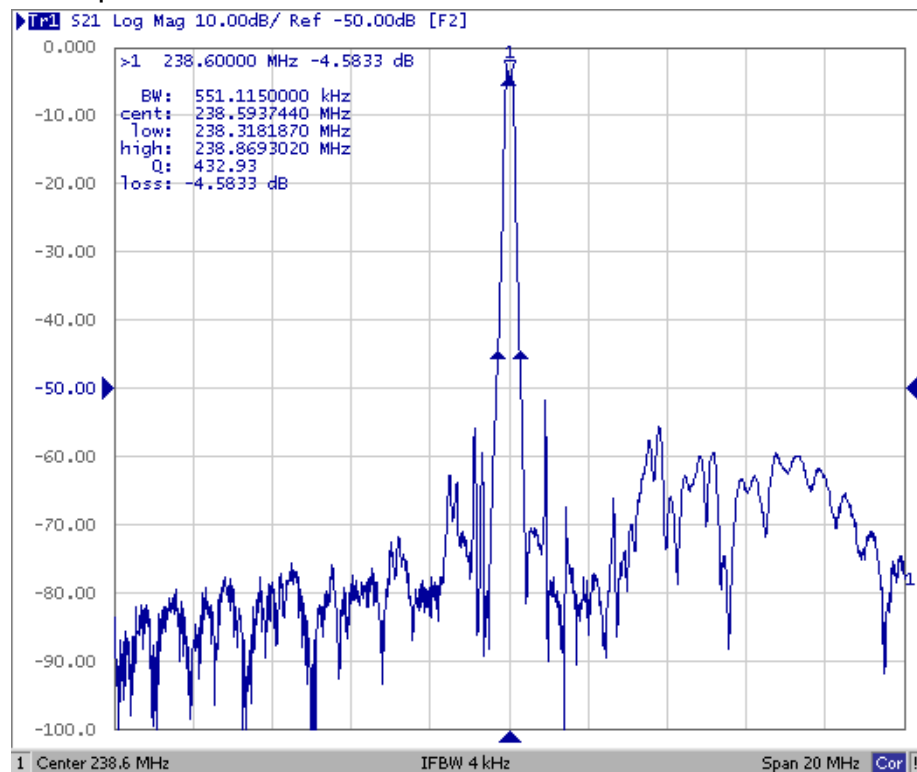


Fig1. Horizontal: 2MHz/Div Vertical: 10dB/Div

(2) Pass band Response and Group Delay Response:

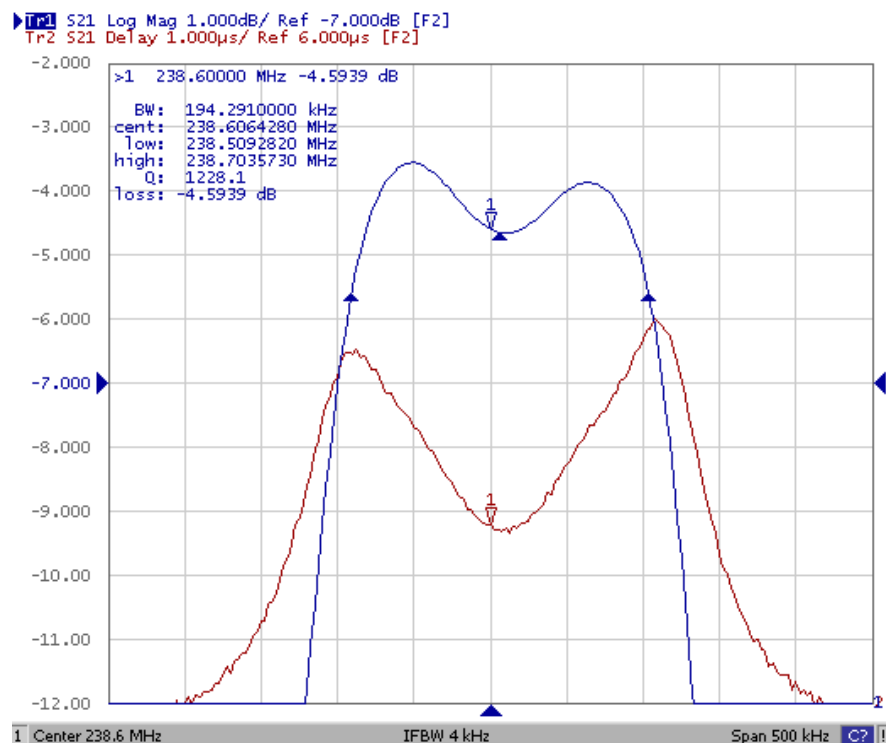
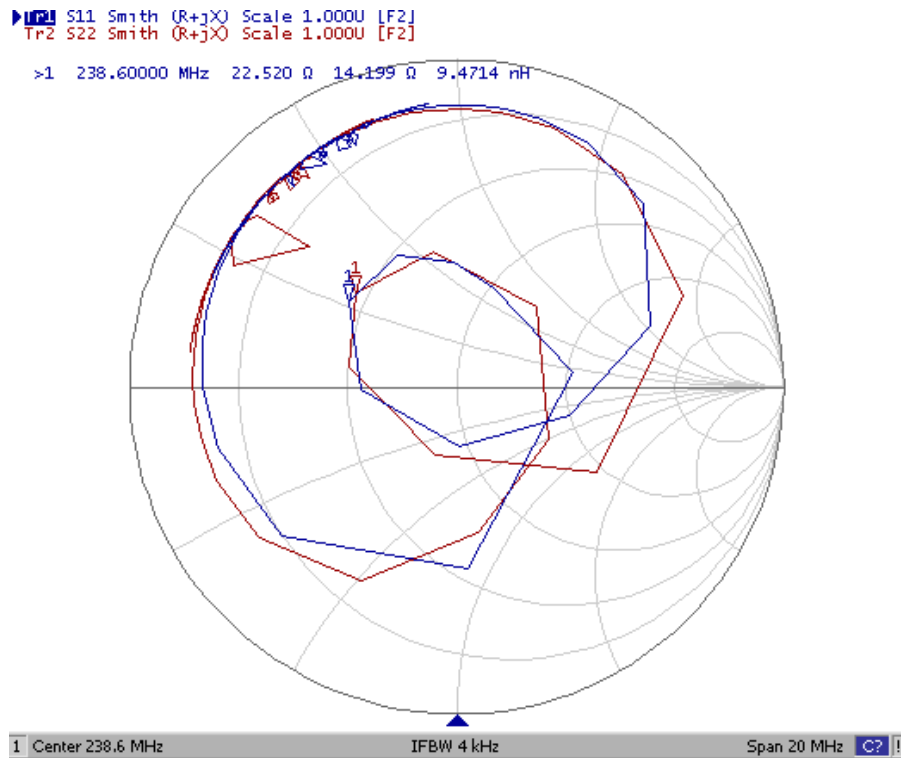
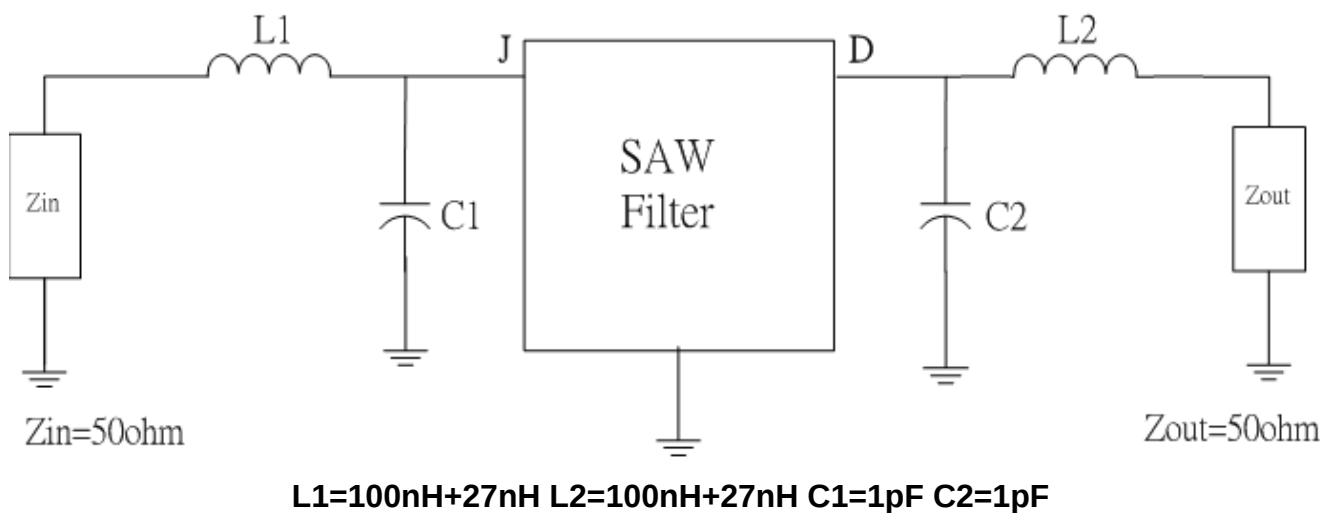


Fig2. Horizontal: 0.05MHz/Div Vertical: 1dB/Div
Vertical: 1us/Div

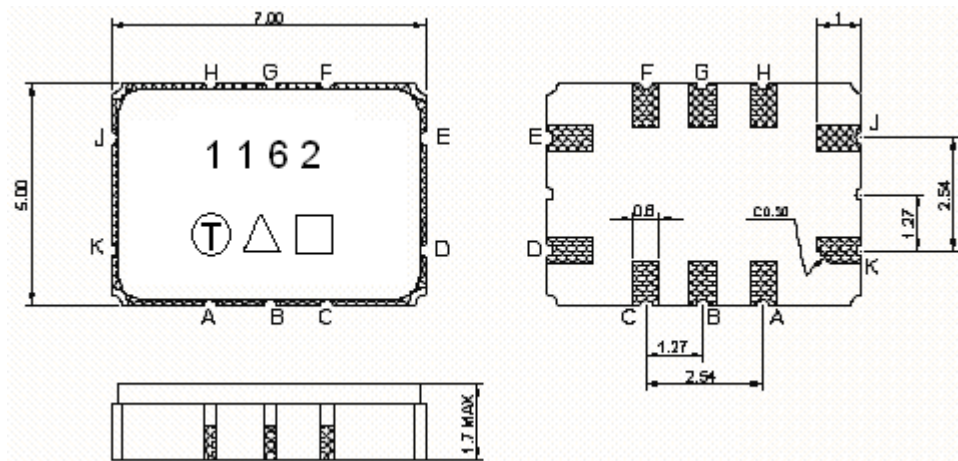
(3) Smith Chart:



D. Matching Circuit:



E. Outline Drawing:



Pin J –RF input

Pin K –RF input ground

Pin D –RF output

Pin E –RF output ground

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

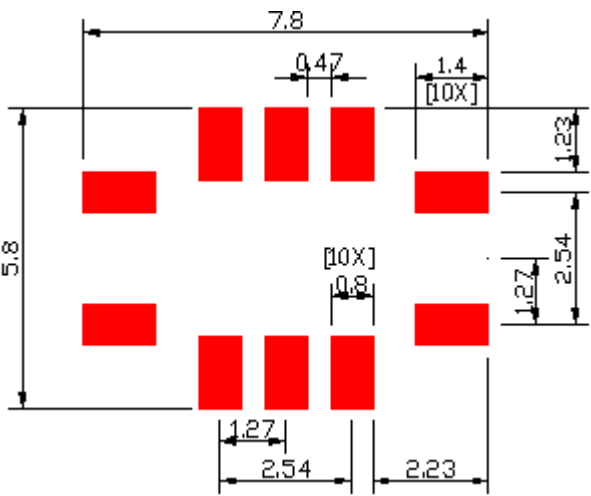
△ : Product / Year Code

Year	2013 2017	2014 2018	2015 2019	2016 2020
Product Code	B	b	<u>B</u>	<u>b</u>

Week Code Table

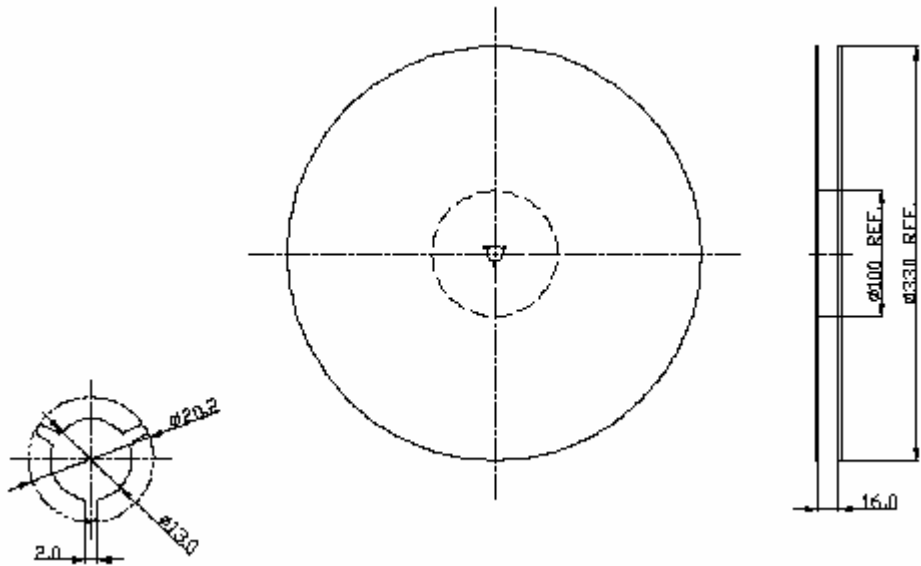
WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45	WK46	WK47	WK48	WK49	WK50	WK51	WK52
n	o	p	q	r	s	t	u	v	w	x	y	z

F. PCB Footprint:

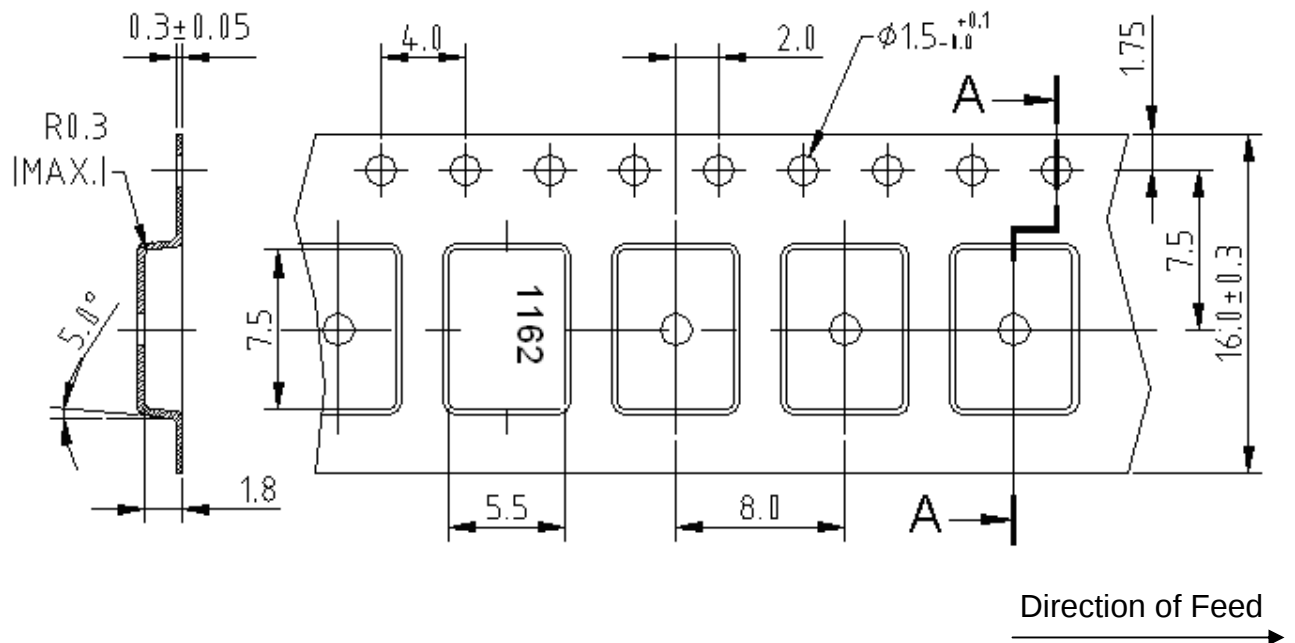


G. Packing:

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



2. TAPE DIMENSION



H. RECOMMENDED REFLOW PROFILE:

