



TAI-SAW TECHNOLOGY CO., LTD.

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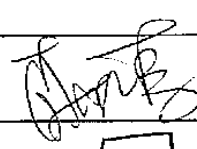
Product Specifications Approval Sheet

Product Name: 304 MHz 4MHz BW SMD 13.3 x 6.5 mm SAW IF Filter

TST Parts No.: TB1046A

Customer Parts No.: _____

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

Checked by: _____ Kazuma Lee 

Approval by: _____ Francis Chen 

Date: _____ 02 / 04 / 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 304MHz 4MHz BW (SMD 13.3×6.5 mm)

MODEL NO.: TB1046A

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, F_c	MHz	-	304	-
Insertion Loss, IL	dB	-	13.4	15.5
Lower 1dB Bandedge	MHz	-	301.02	302.00
Upper 1dB Bandedge	MHz	306.00	306.35	-
Lower 50dB Bandedge	MHz	296.00	297.06	-
Upper 50dB Bandedge	MHz	-	310.85	312.00
Amplitude Ripple F _c ±1.5MHz	dB	-	0.3	1.0
Attenuation (Reference level from typical Insertion loss)				
4MHz ~ 296 MHz	dB	45	52	-
312MHz ~ 319 MHz	dB	45	52	-
319MHz ~ 329 MHz	dB	43	60	-
329MHz ~ 540 MHz	dB	45	60	-
540MHz ~ 570 MHz	dB	40	67	-
570MHz ~ 804 MHz	dB	45	67	-
Temperature Coefficient	ppm/°C ²	-	-0.036	-
Source Impedance	Ohm	-	50	-
Load Impedance	Ohm	-	50	-

C. Frequency Characteristics :

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

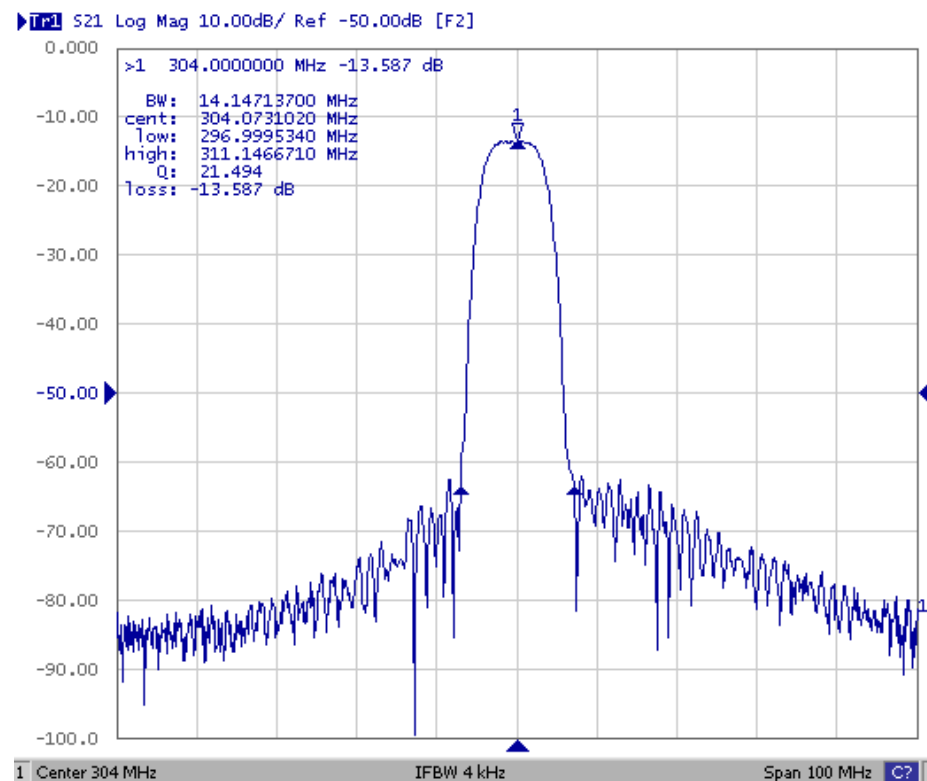


Fig1. Horizontal: 10MHz/Div Vertical: 10dB/Div

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

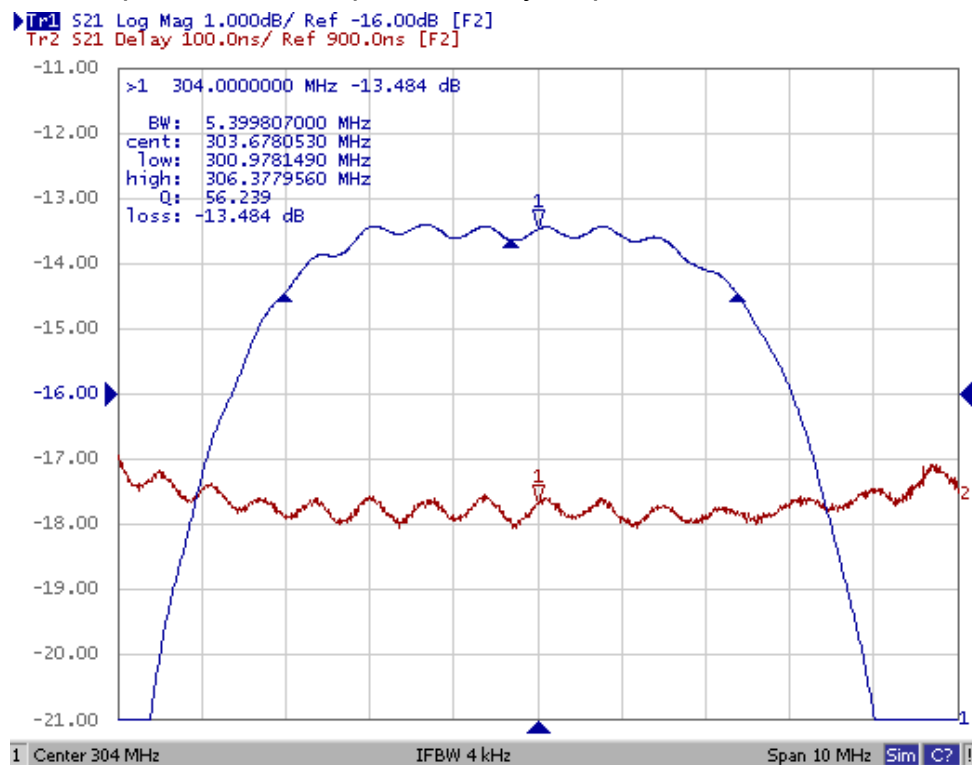
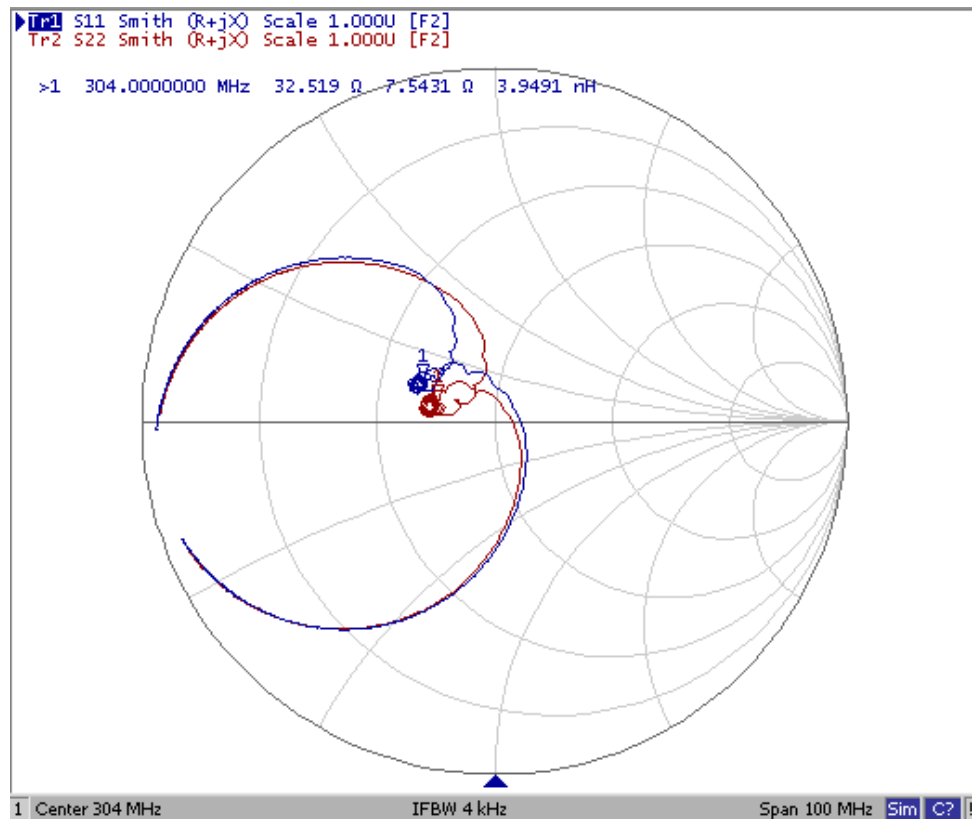


Fig2. Horizontal: 1MHz/Div Vertical: 1dB/Div
Vertical: 100ns/Div

(3) Smith Chart:



(4) Wide band Response:

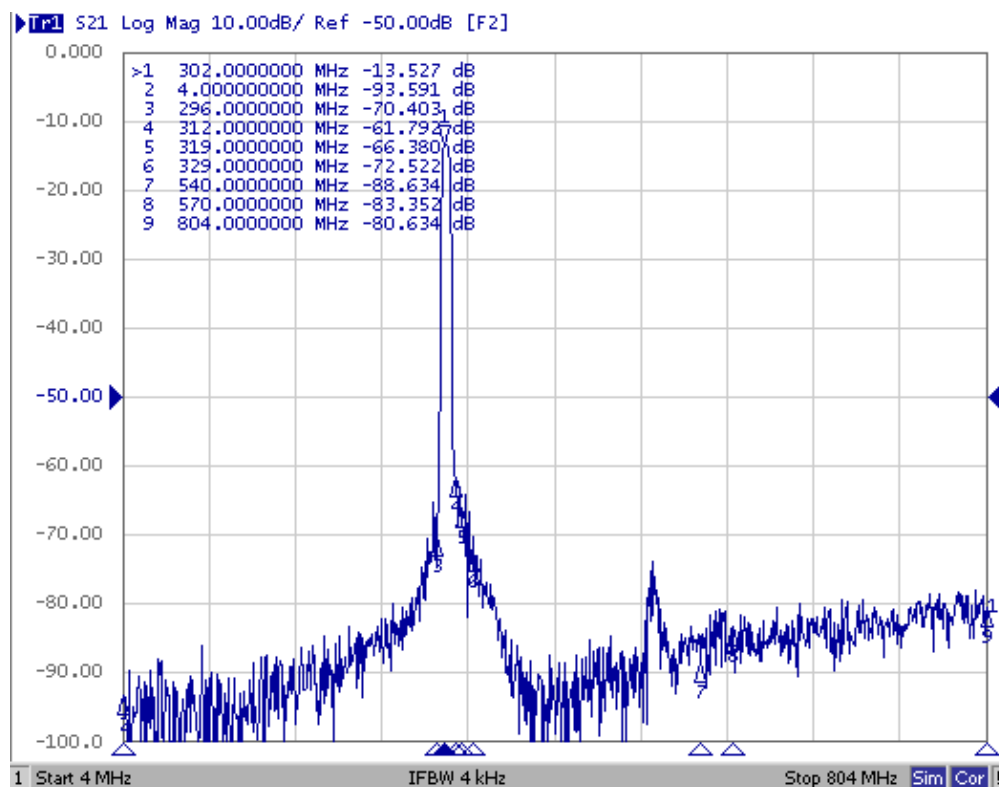
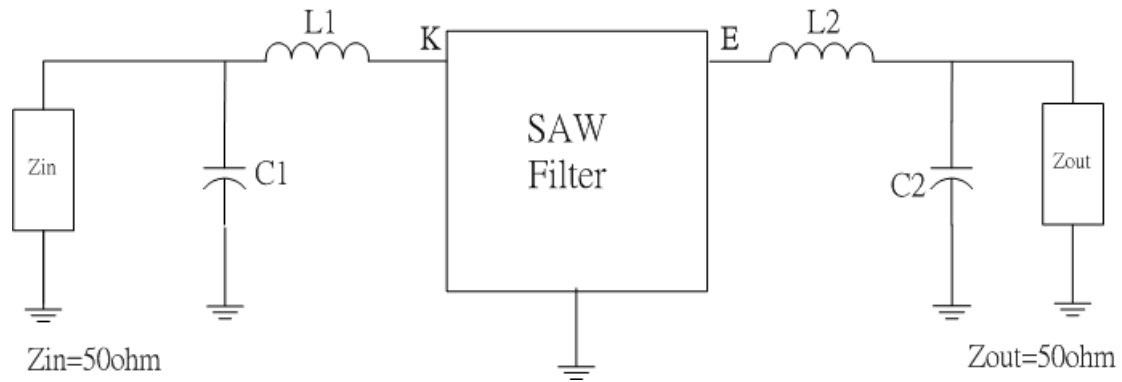


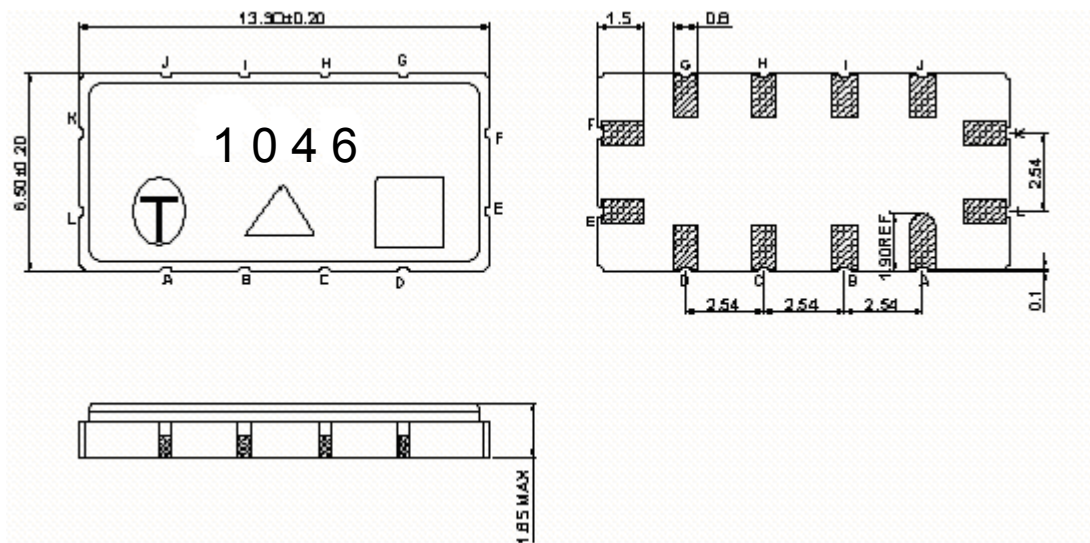
Fig4. Horizontal: 80MHz/Div Vertical: 10dB/Div

D. Matching Circuit:



$$L1 = 27\text{nH} \quad L2 = 22\text{nH} \quad C1 = 36\text{pF} \quad C2 = 36\text{pF}$$

E. Outline Drawing:



#K : Input

#L : Input Ground

#E : Output

#F : Output Ground

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

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

Unit: mm

△ : Product / Year Code

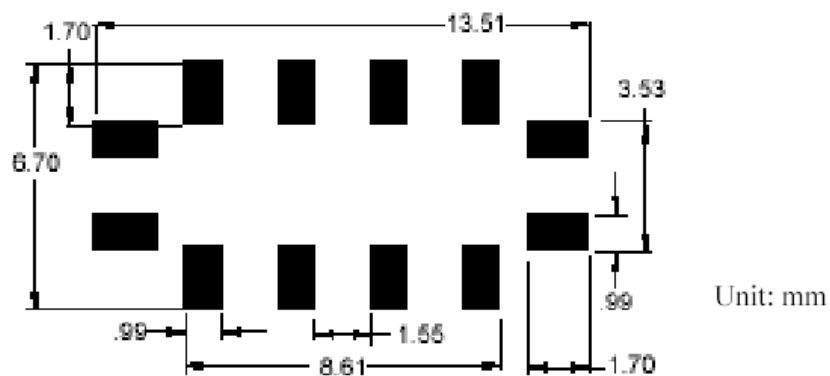
Product Code Table

Year	2009 2013	2010 2014	2011 2015	2012 2016
Product Code	B	b	<u>B</u>	<u>b</u>

Date Code Table

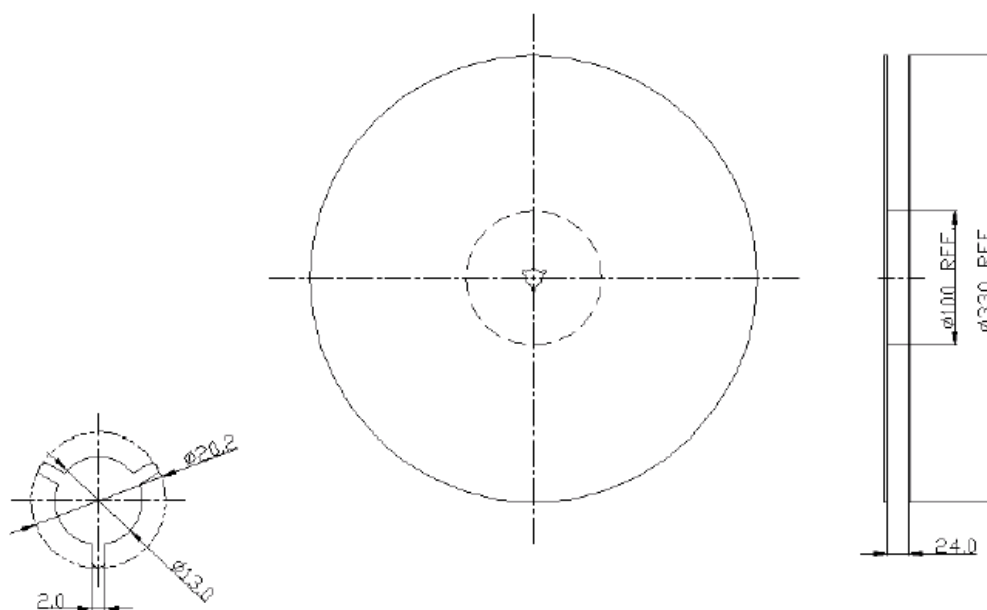
WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45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



The graph displays the temperature profile over a 360-second period. The temperature starts at 25°C, rises to a plateau around 155°C between 70 and 100 seconds, then continues to rise to a peak of 260°C at 220 seconds. After the peak, the temperature drops sharply to 145°C at 280 seconds and then gradually decreases to 110°C at 360 seconds.

Time (Sec)	Temp (Deg C)
0	25
20	28
40	145
60	150
80	155
100	155
120	170
140	175
160	195
180	220
200	255
220	260
240	250
260	175
280	145
300	148
320	135
340	120
360	110