



TAI-SAW TECHNOLOGY CO., LTD.

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

TEL: 886-3-4690038 FAX: 886-3-4697532

E-mail: tstsales@mail.taisaw.com Web: www.taisaw.com

Product Specifications Approval Sheet

Product Description: 165 MHz 14.2MHzBW SMD 13.3mm x 6.5 mm SAW IF Filter

TST Parts No.: TB1213A

Customer Parts No.: _____

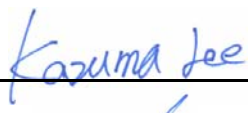
Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Kazuma Lee 

Approval by: _____ Bob Chau 

Date: _____ 12 / 16 / 2015

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 165MHz 14.5MHz BW (SMD 13.3×6.5 mm)

MODEL NO.: TB1213A

REV. NO.1

A. MAXIMUM RATING:

1. Operating temperature range: -10°C to 80°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

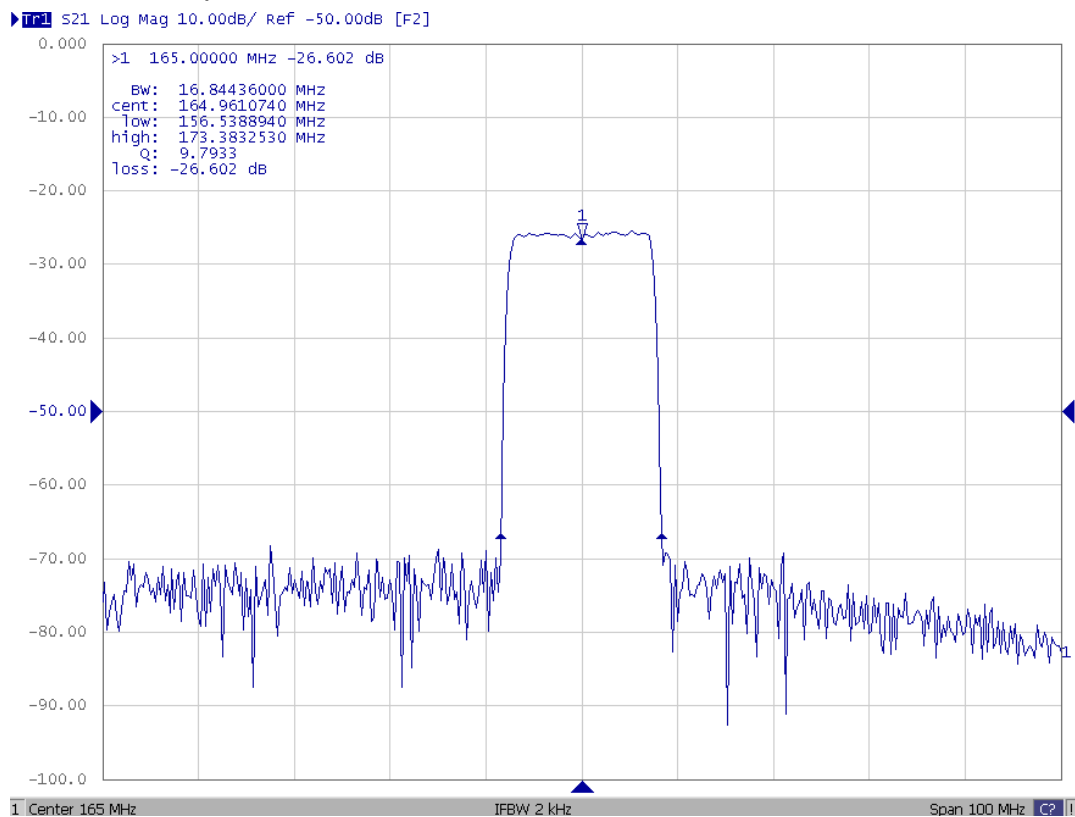
B. CHARACTERISTICS:

Ambient Temperature: 25°C

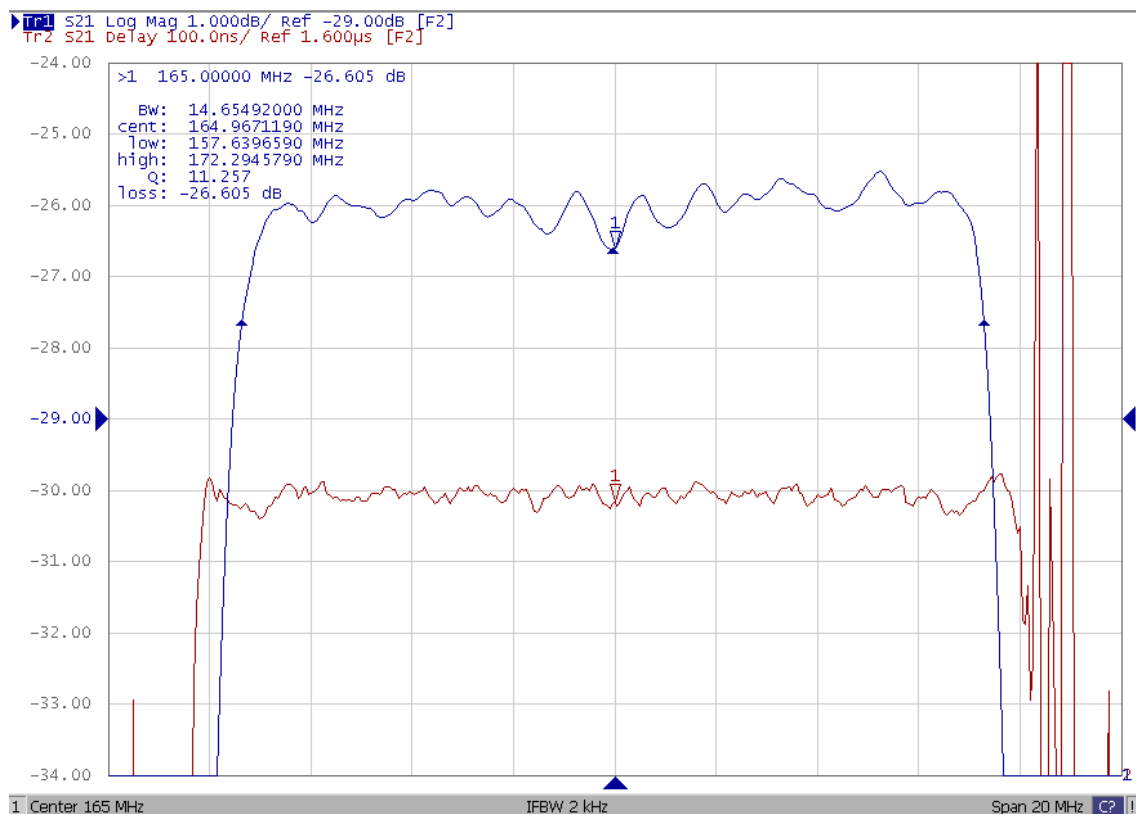
Item	Unit	Min.	Type.	Max.
Center frequency, Fc	MHz	-	165	-
Insertion Loss, IL	dB	-	25.5	27
-1dB bandwidth	MHz	14.20	14.65	-
-5dB bandwidth	MHz	-	15.28	15.30
-40dB bandwidth	MHz	-	16.84	17.00
Passband Ripple Fc+/- 6.75MHz	dB	-	1.0	1.5
Group Delay variation Fc+/- 6.75MHz	ns		40	-
Absolute Group Delay	us	-	1.4	-
Attenuation:(Reference level from Min IL)				
Ultimate Attenuation	dB	40	45	-
Temperature Coefficient	ppm/°C	-	-23	-
Source Impedance	Ohm	-	50	-
Load Impedance	Ohm	-	50	-

C. FREQUENCY CHARACTERISTICS:

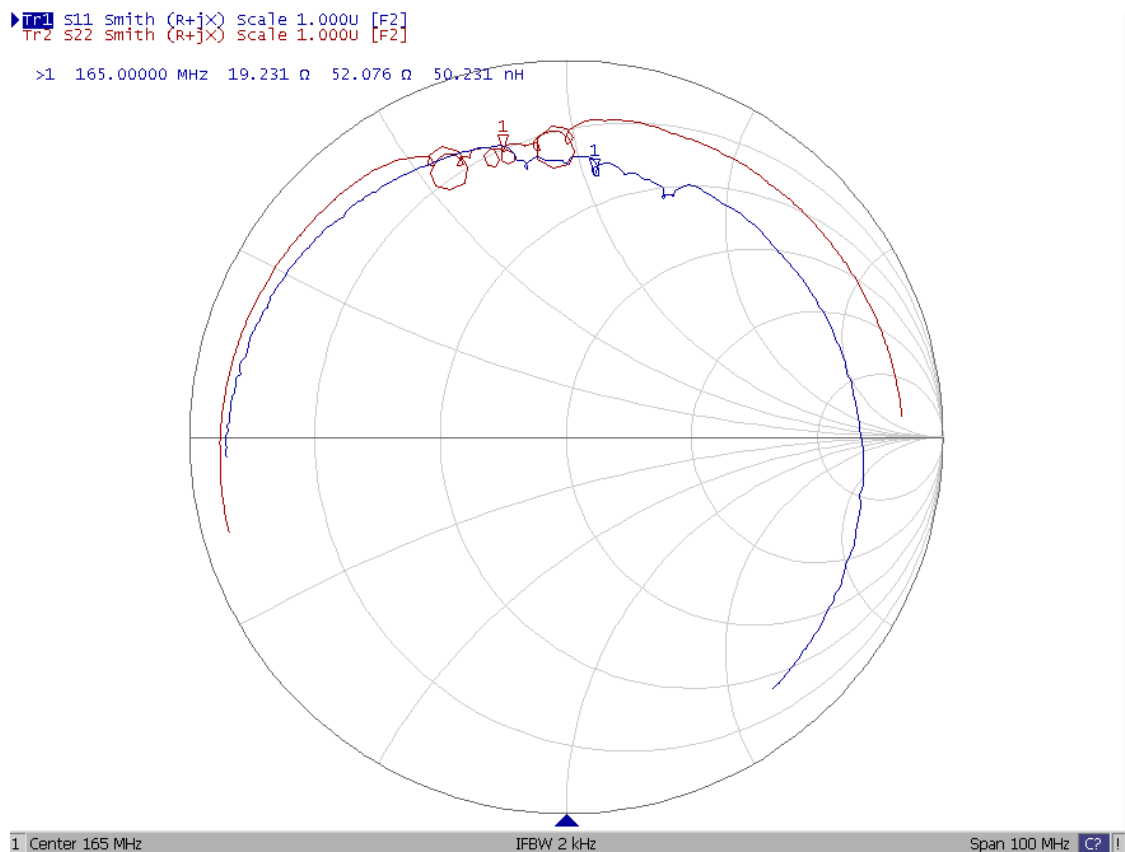
(1) Wide Band Response:



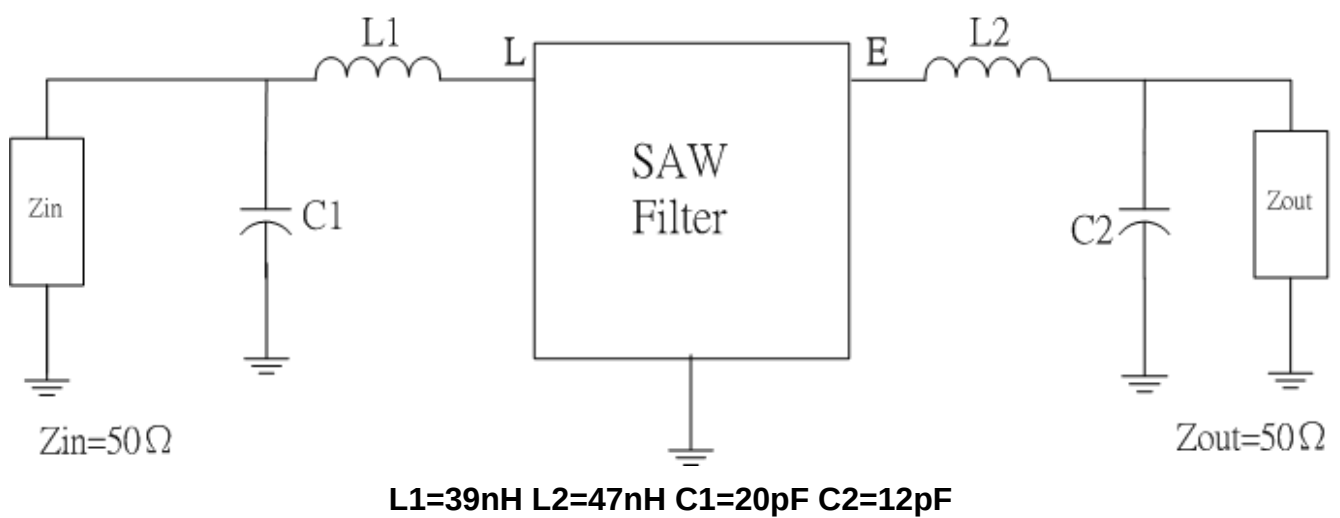
(2) Pass Band Response and Group Delay Response:



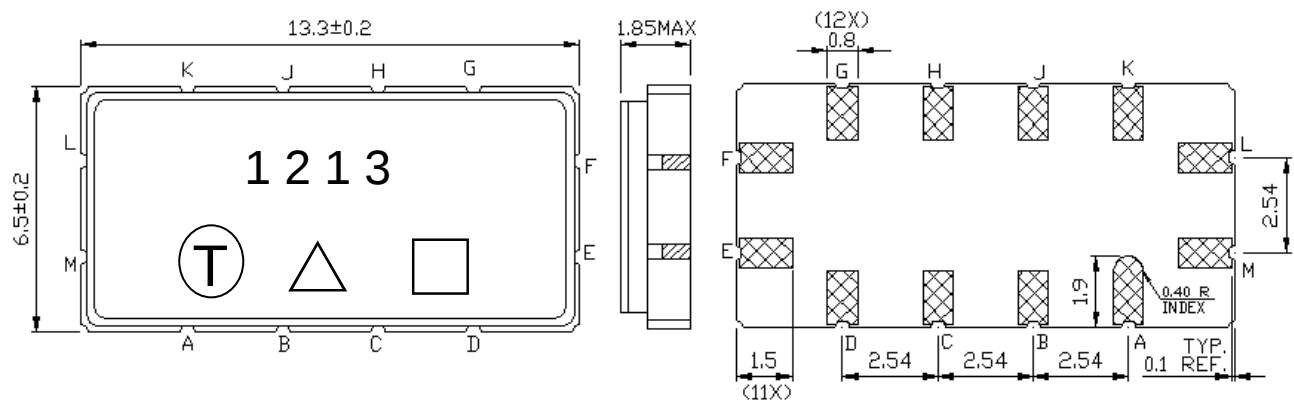
(3) Smith Chart:



D. MATCHING CIRCUIT:



E. OUTLINE DRAWING:



#L : Input

#M : Input Ground

#E : Output

#F : Output Ground

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

□: Week Code

Unit: mm

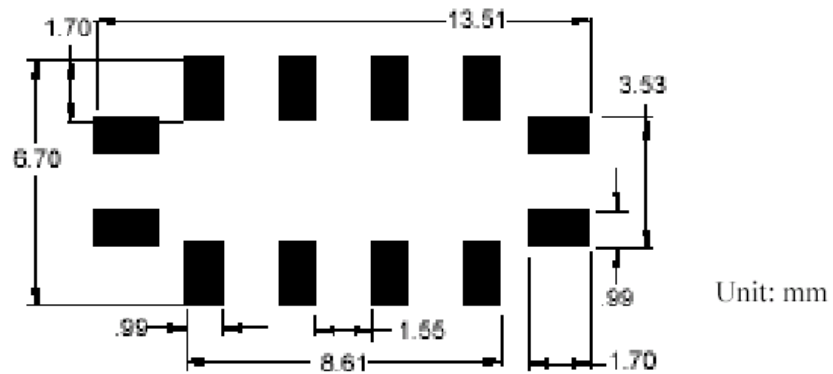
△ : Product / Year Code

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

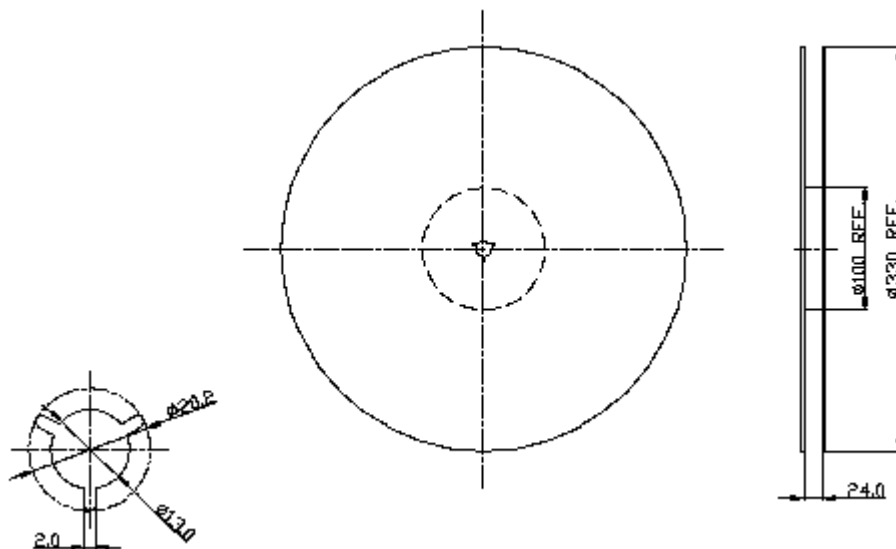
F. PCB FOOTPRINT:



G. PACKING:

1. REEL DIMENSION

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



The drawing consists of two parts: a side view and a cross-section A-A.

Side View:

- Overall width: 24.1 ± 0.3
- Overall height: 13.8
- Top edge features a series of holes with a diameter of $\varnothing 1.5 \pm 0.1$.
- Distance between the first two holes: 4.0
- Distance between the last two holes: 2.0
- Distance between the center of the first hole and the center of the last hole: 12
- Distance between the center of the second hole and the center of the third hole: 6.96
- Distance from the right edge to the center of the last hole: 7.5
- Distance from the right edge to the center of the first hole: 1.75

Cross-section A-A:

- Overall width: 2.3
- Top edge thickness: 0.3 ± 0.15
- Bottom edge thickness: 2.3
- Top edge radius: $R0.3$ (MAX.)
- Bottom edge angle: 5.0°

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.

