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: 176MHz 60MHz BW SMD 7.0 x 5.0 mm SAW IF Filter

TST Parts No.: TB1270A

Customer Parts No.:_____

Customer signature required

Company:_____

Division:_____

Approved by :_____

Date:_____

Checked by: Kazuma Lee

Approval by: Bob Chau

Date: 05 / 03 / 2017

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 176MHz 60MHz BW (SMD 7.0×5.0mm)
MODEL NO.: TB1270A REV. NO.1

A. MAXIMUM RATING:

1. Operating temperature range: -40℃ to85℃
2. Storage temperature range: -40℃ to 85℃
3. Input Power Level : 10 dBm
4. Maximum DC Voltage : 10V

RoHS Compliant
Lead free
Lead-free soldering

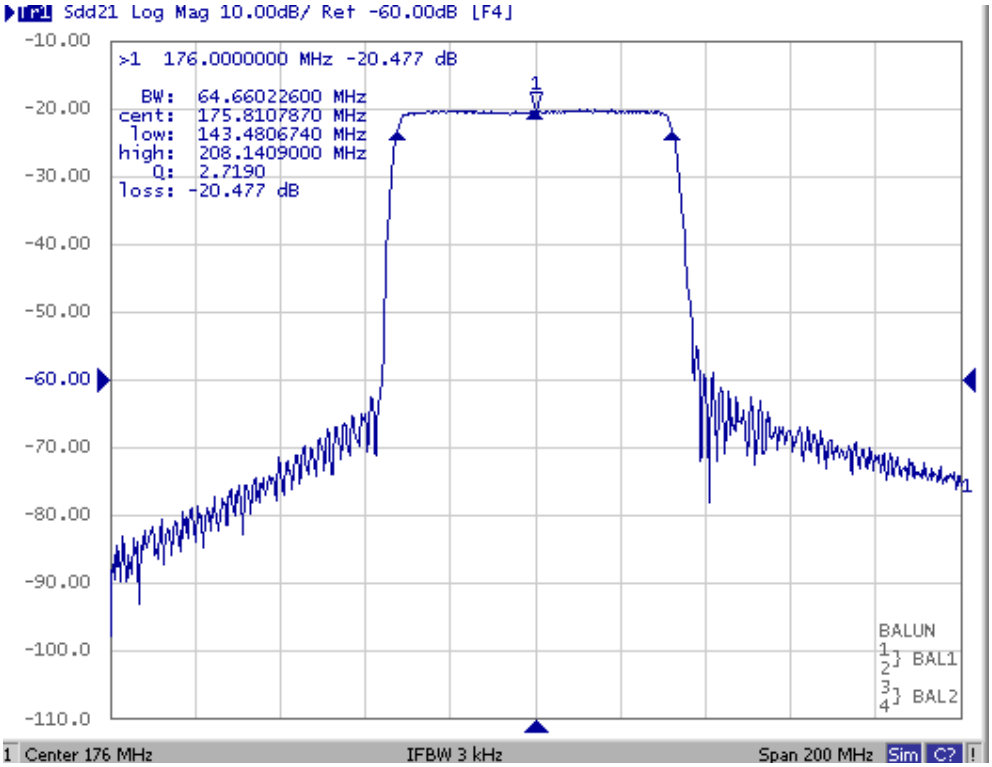
Electrostatic **S**ensitive **D**evice

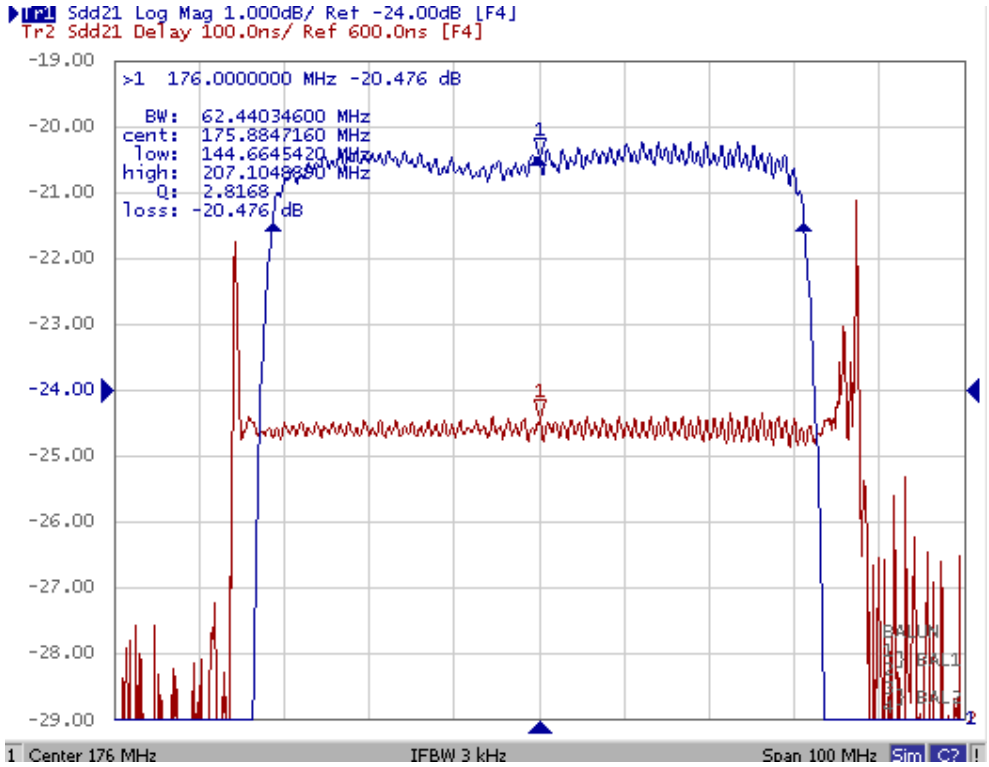
B. CHARACTERISTICS:

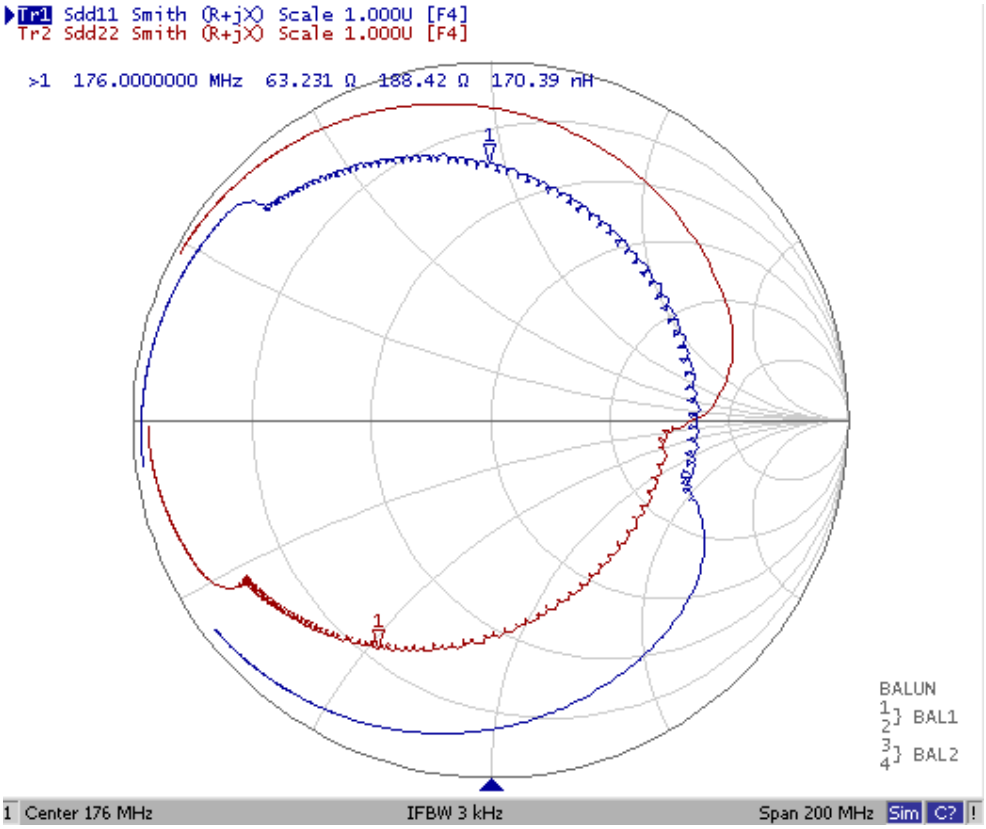
Temperature range for specification: T = 25 ℃

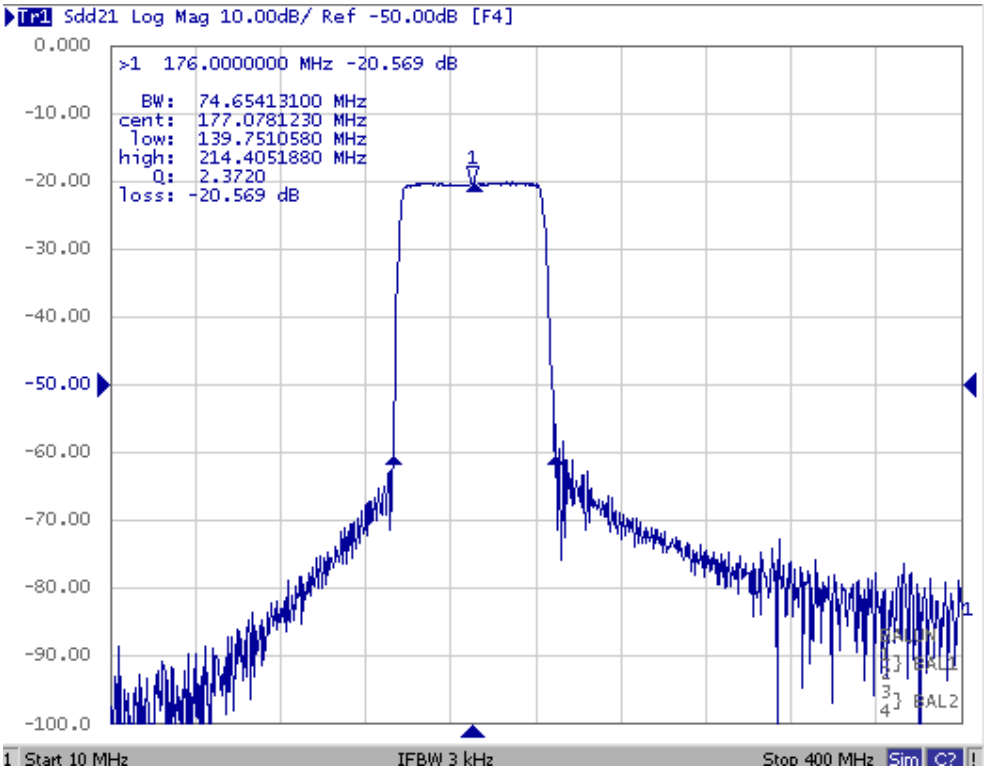
Item	Unit	Min.	Type.	Max.
Center frequency, **Fc**	MHz	-	176	-
Insertion Loss, **IL**	dB	-	20.0	21.0
-1dB bandwidth	MHz	60.0	62.5	-
-3dB bandwidth	MHz	-	64.6	-
-40dB bandwidth	MHz	-	71	-
Passband Ripple Fc+/- 27MHz	dB	-	0.6	1.2
Group Delay Variation Fc+/- 27MHz	ns	-	50	100
Absolute Delay at Fc	us	-	0.55	-
Attenuation:(Reference level from Min IL)				
10 MHz ~ 86MHz	dB	40	60	-
266 MHz ~ 375MHz	dB	40	50	-
Temperature Coefficient	ppm/℃	-	-94	-
Source Impedance(Balanced)	Ohm	-	200	-
Load Impedance(Balanced)	Ohm	-	200	-

C. FREQUENCY CHARACTERISTICS:

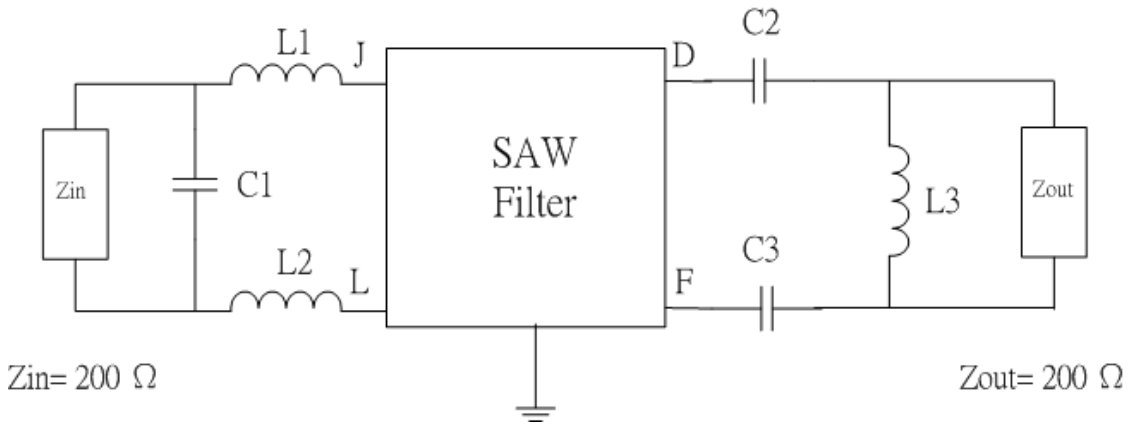





Tr1 Sdd11 Smith (R+jX) Scale 1.000U [F4]
Tr2 Sdd22 Smith (R+jX) Scale 1.000U [F4]
>1 176.0000000 MHz 63.231 Ω 188.42 Ω 170.39 nH
BALUN
1
2 BAL1
3
4 BAL2
1 Center 176 MHz
IFBW 3 kHz
Span 200 MHz
Sim
C?

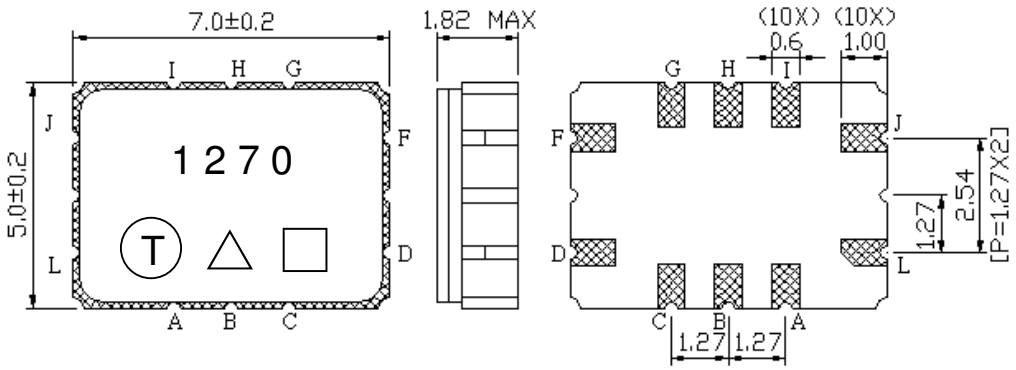

Tr1 Sdd21 Log Mag 10.00dB/ Ref -50.00dB [F4]
>1 176.0000000 MHz -20.569 dB
BW: 74.65413100 MHz
cent: 177.0781230 MHz
low: 139.7510580 MHz
high: 214.4051880 MHz
Q: 2.3720
loss: -20.569 dB
0.000
-10.00
-20.00
-30.00
-40.00
-50.00
-60.00
-70.00
-80.00
-90.00
-100.0
BAL1
BAL2
1 Start 10 MHz
IFBW 3 kHz
Stop 400 MHz
Sim
C?

D. MATCHING CIRCUIT:



L1=L2=33nH C1=10pF L3=68nH C2=C3=56pF

E. OUTLINE DRAWING:



Pin J: RF Input

Pin L: RF Balanced Input

Pin D: RF Output

Pin F: RF Balanced Output

Pin A, B, C, E, G, H, I: To be ground

Unit : mm

□ : Week Code

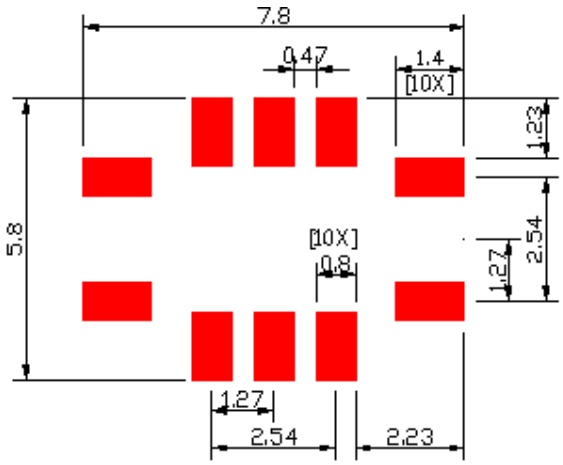
△ : Product / Year Code

Year	2013 2017	2014 2018	2015 2019	2016 2020
Product Code	B	b	B	b

Week Code Table

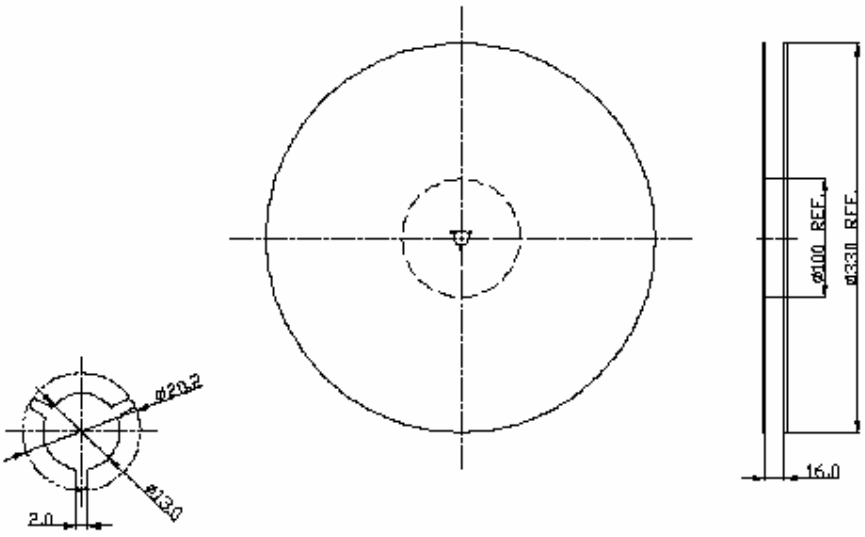
WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45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

F. PCB FOOTPRINT:

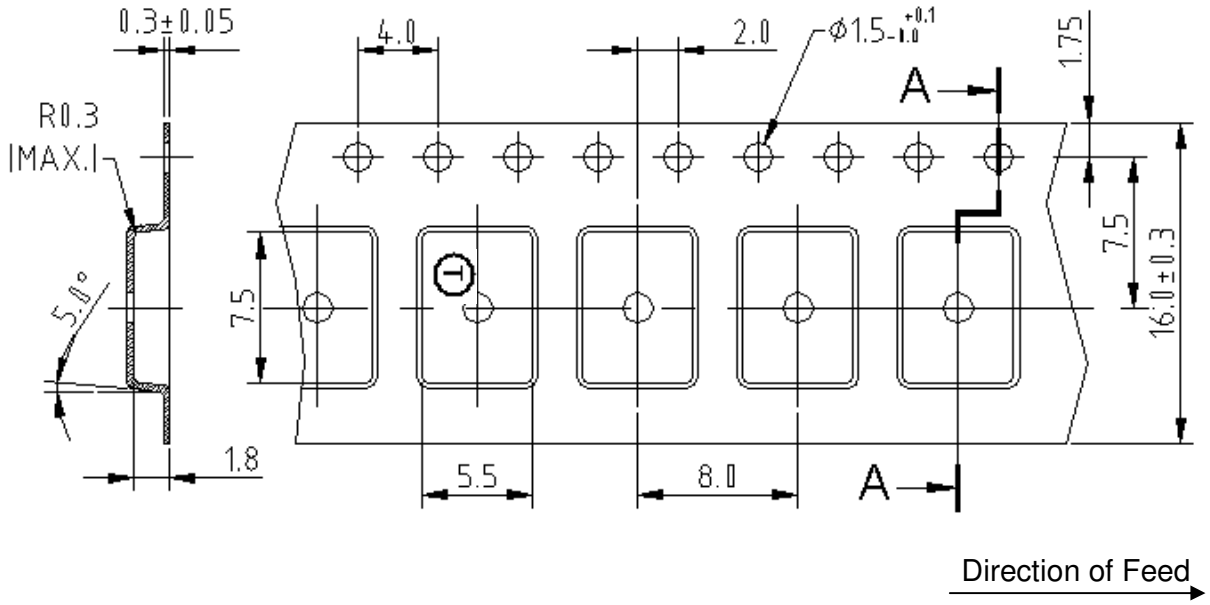


G. PACKING:

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



2. TAPE DIMENSION



H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150~180℃ for 60~90 seconds.
2. Ascending time to preheating temperature 150℃ shall be 30 seconds min.
3. Heating shall be fixed at 220℃ for 50~80 seconds and at 260℃+0/-5℃ peak (20~40sec).
4. Time: 2 times.