



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

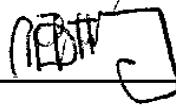
Product Description: SAW Filter 153.6MHz SMD 5.0×7.0mm

TST Part No.: TB0781A

Customer Part No.: _____

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

Checked by: _____ Ricky Lee 

Approved by: _____ Francis Chen 

Date: _____ 2009/07/29

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.



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

IF SAW Filter 153.6MHz(BW=5MHz) SMD 5X7mm

MODEL NO.: TB0781A

REV.1.0

A. MAXIMUM RATING:

1. Operating Temperature: 0 °C ~ +70 °C
2. Storage Temperature: -40 °C ~ +85 °C
3. Input power: 10dBm

RoHS Compliant
Lead free
Lead-free soldering

B. Characteristics :

Ambient Temperature: 25 °C

Characteristics	Value			Note
	Min.	Typ.	Max.	
Center frequency F_c MHz	-	153.6	-	-
Minimum Insertion loss I.L. dB	-	7.1	13.0	-
1dB BW MHz	5	6.8	-	-
Passband Ripple ($F_c \pm 2.5\text{MH}$) dB	-	0.5	1.0	-
Attenuation (Reference to Minimum Insertion loss)				
141.1MHz dB	10	49	-	-
166.1MHz dB	10	49	-	-
Temp Coefficient ppm/K	-	-23	-	-
Matching:				
1.The input of the filter will be matched to <u>50 ohm</u>				
2.The output of the filter will be matched to <u>50 ohm</u>				

C. Frequency Characteristics :

1. S21 Response: (span : 50MHz)

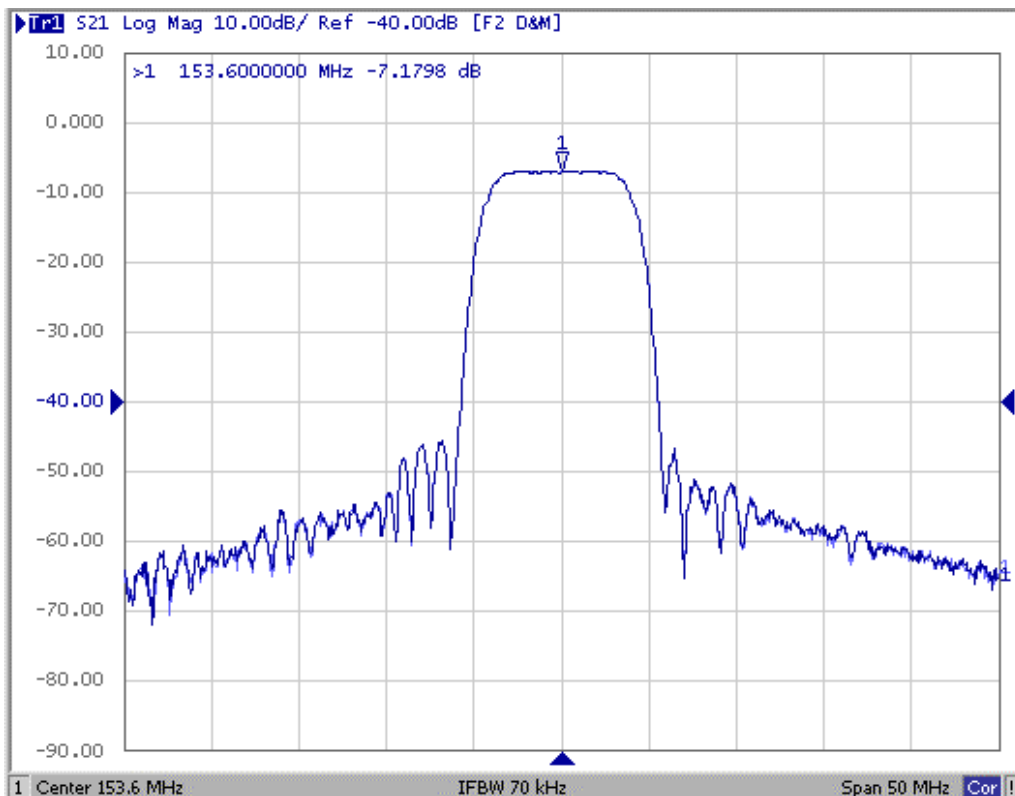


Fig1. Horizontal: 5MHz/Div Vertical: 10dB/Div

2. Group-Delay Ripple: (span : 10MHz)

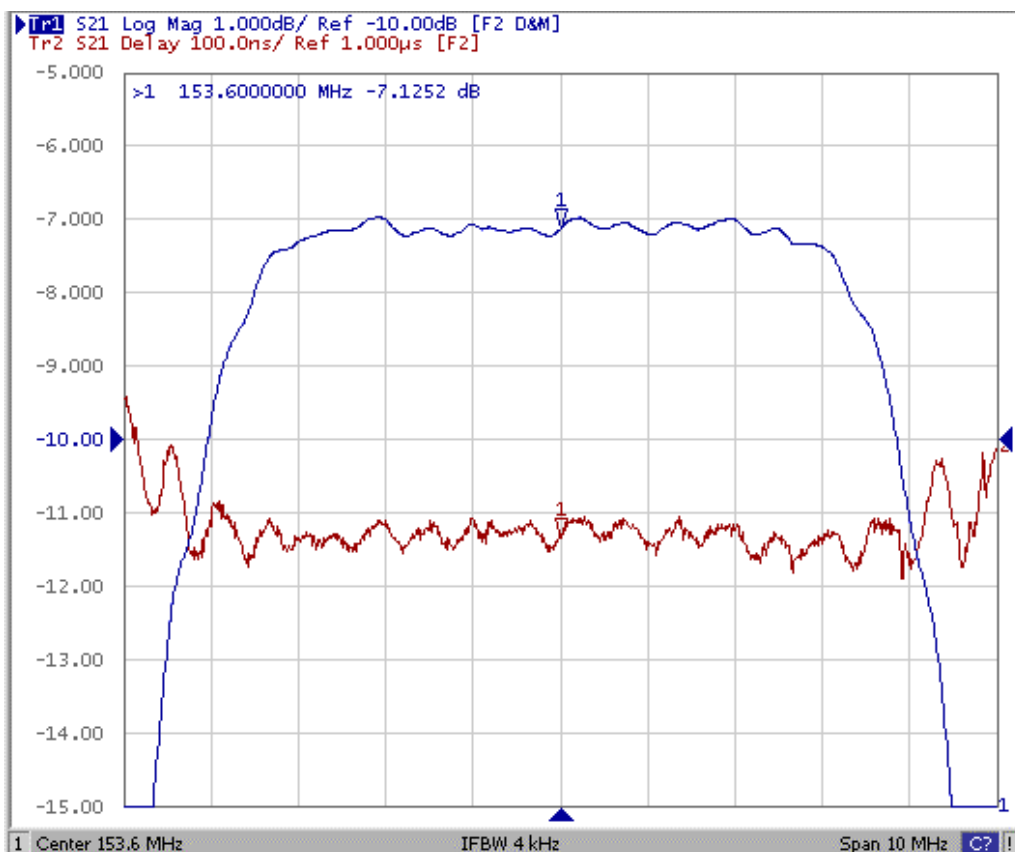
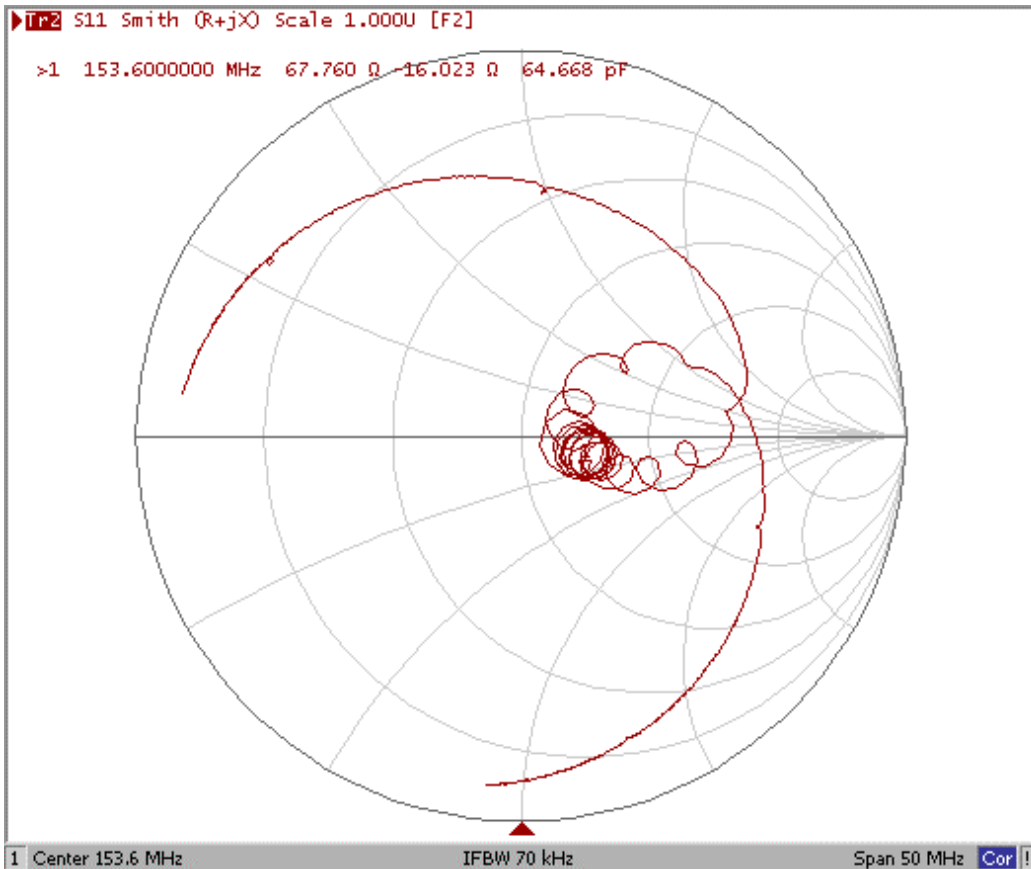
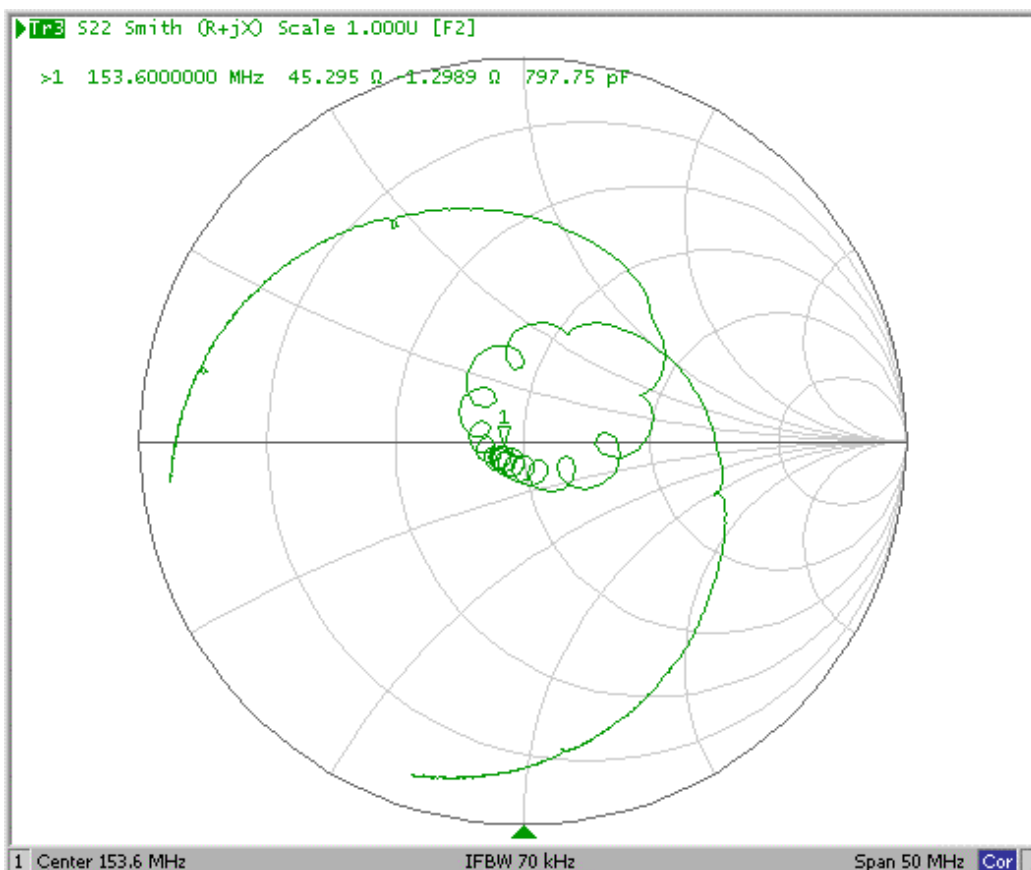


Fig2. Horizontal: 1MHz/Div Vertical: 100nec/Div

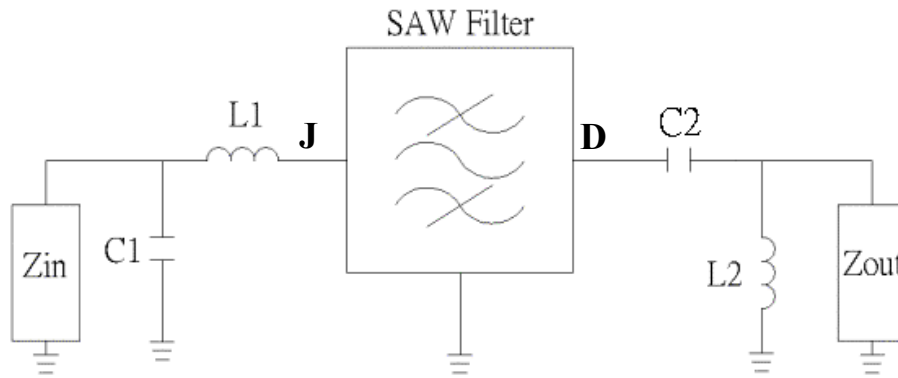
3. S11 Smith Chart: (span : 50MHz)



4. S22 Smith Chart (span : 50MHz)



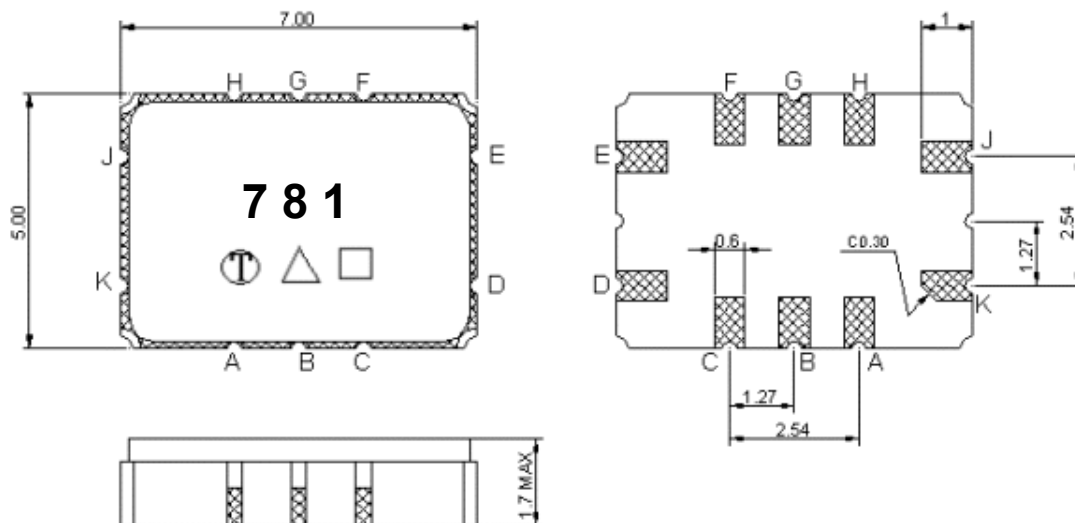
D. Measurement Circuit:



Zin and Zout are $50\ \Omega$.

$L1=82\text{nH}$, $C1=33\text{pF}$, $L2=82\text{nH}$, $C2=39\text{pF}$

E. Outline Drawing:



Pin J: RF input

Pin D: RF output

Pin K,E: Case Ground

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

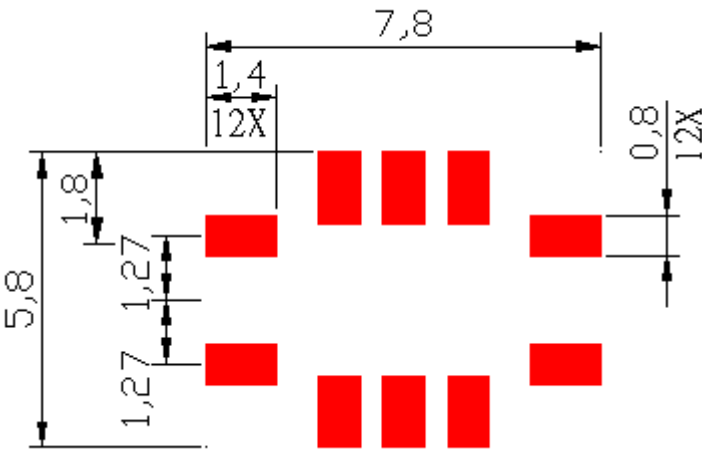
□ : Week Code (W01->A,W02->B,...W27->a,...,W52->z)

Unit : mm

△ : Product / Year Code

Year	2005 2009	2006 2010	2007 2011	2008 2012
Product Code	B	b	<u>B</u>	<u>b</u>

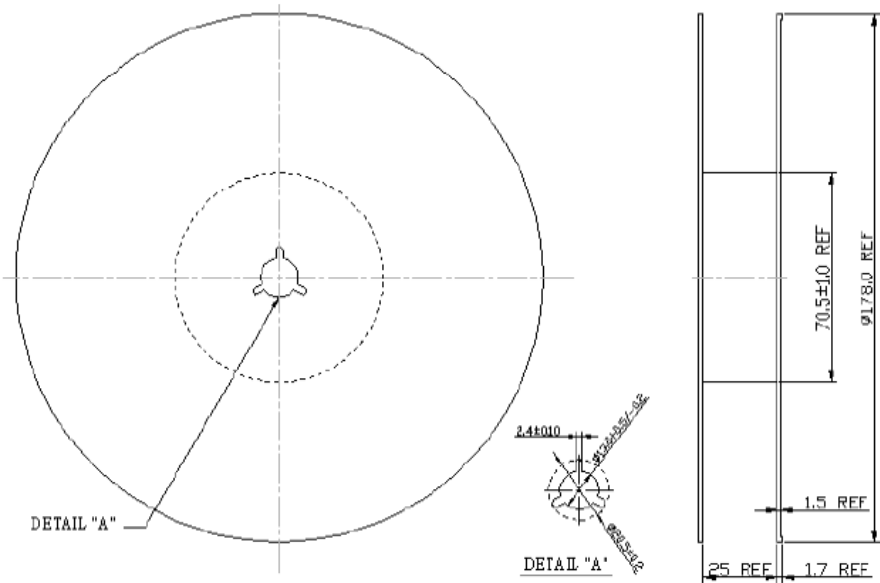
F. PCB Footprint:



Unit: mm

H. PACKING:

1. REEL DIMENSION



Unit: mm

Technical drawing of the rear view of the connector housing. The drawing includes the following dimensions and features:

- Section A-A:** A cross-section view of the housing wall, showing a thickness of 0.3 ± 0.05 mm, a top fillet radius of $R0.3$ (MAX.), and a bottom fillet radius of $R0.3$ (TYP.). The bottom edge has a 5.0° chamfer and a width of 1.8 mm.
- Top View:**
 - Overall width: 16.0 ± 0.3 mm.
 - Overall height: 7.5 mm.
 - Pin pitch: 2.0 mm.
 - Pin diameter: $\phi 1.5^{+0.1}_{-0.0}$ mm.
 - Pin 1 indicator: A circle with the number 1 inside, located at the bottom center.
 - Internal features: Two rectangular cutouts, each labeled "7 8 1" with a circle, triangle, and square symbol.
 - Dimensions: 4.0 mm from the left edge to the first pin; 5.5 mm from the left edge to the first rectangular cutout; 8.0 mm between the two rectangular cutouts; 5.5 mm from the second rectangular cutout to the right edge.
- Side View:**
 - Overall height: 16.0 ± 0.3 mm.
 - Pin height: 1.75 mm.
 - Pin diameter: $\phi 1.5$ (MIN.) mm.
 - Section A-A is indicated by arrows pointing to the housing wall.

I. RECOMMENDED REFLOW PROFILE:

