



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

Product Name: SAW IF Filter 140 MHz 7.5MHz BW (SMD 5.0mm x 7.0 mm)

TST Parts No.: TB0964A

Customer Parts No.: _____

Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Kazuma Lee

Approval by: _____ Francis Chen

Date: _____ 03 / 02 / 2011

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 140MHz 7.5MHz BW (SMD 5.0×7.0 mm)

MODEL NO.: TB0964A

REV. NO.1

A. MAXIMUM RATING:

1. Operating temperature range: -35°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

B. Characteristics :

Item	Unit	Min.	Type.	Max.
Center frequency, Fc	MHz	-	140	-
Insertion Loss, IL	dB	-	12.7	14.0
Amplitude Ripple Fc+/-3.7MHz	dB	-	0.7	1.0
Group Delay Ripple Fc+/-3.7MHz	ns	-	75	100
Absolute Group Delay at Fc	us	-	0.78	-
Phase Linearity Fc+/-3.7MHz	P-P deg	-	10	15
Triple Transit Suppression	dB	40	45	-
In/Output Return Loss Fc+/-3.7MHz	dB	-	10	-
Attenuation (Reference level from minimum Insertion loss)				
DC ~ 110 MHz	dB	40	55	-
110MHz ~ 131MHz	dB	30	42	-
149 MHz ~ 170 MHz	dB	30	43	-
170MHz ~ 250 MHz	dB	40	58	-
250 MHz ~ 425 MHz	dB	20	55	-
Temperature Coefficient	ppm/°C	-	-23	-
Source Impedance	Ohm	-	200	-
Load Impedance	Ohm	-	200	-

C. Frequency Characteristics :

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

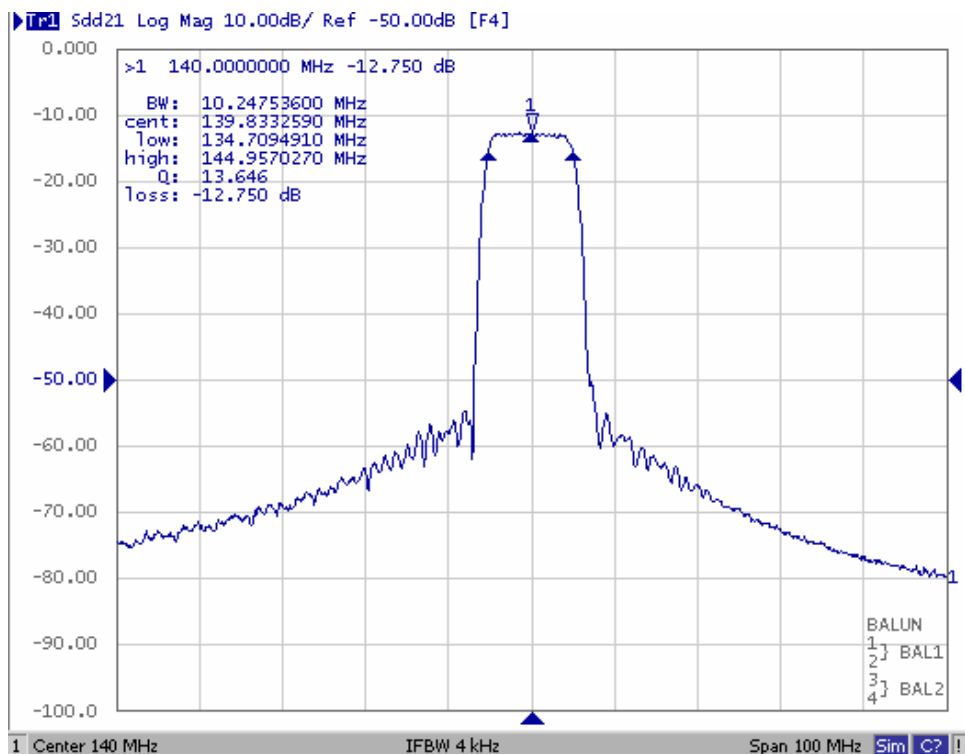


Fig1. Horizontal: 10MHz/Div Vertical: 10dB/Div

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

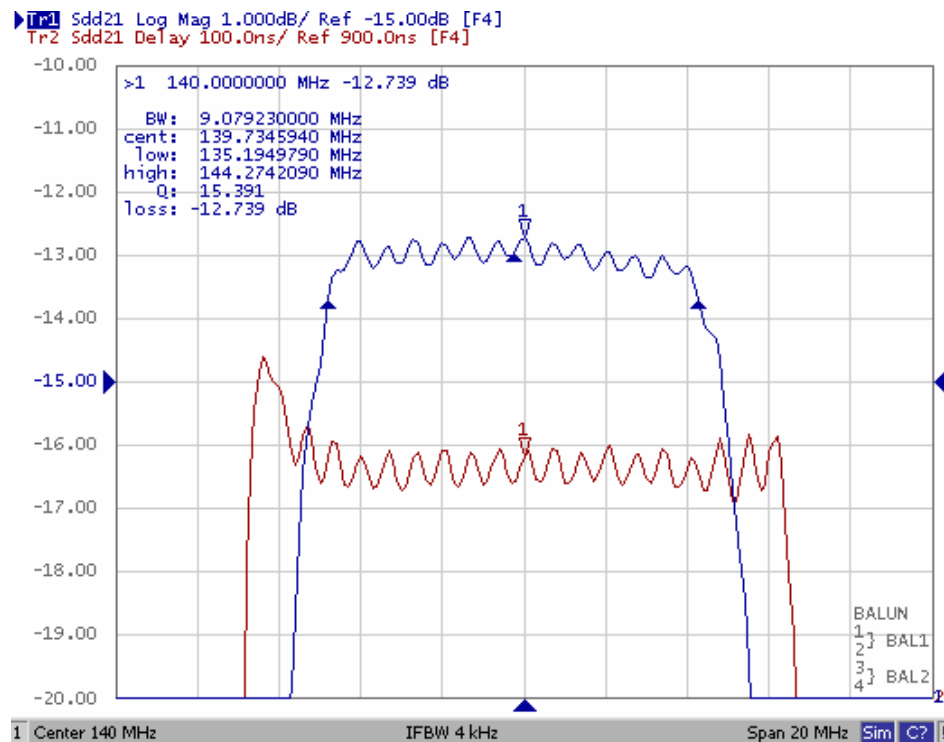
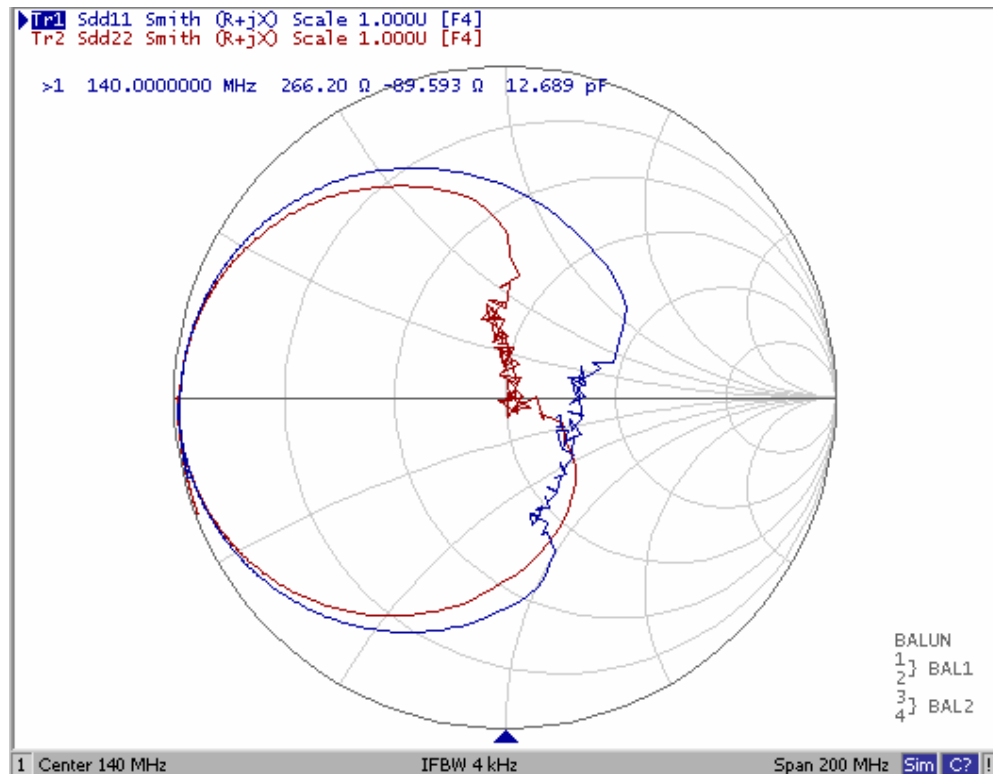


Fig2. Horizontal: 2MHz/Div Vertical: 1dB/Div
Vertical: 100ns/Div

(3) Smith Chart:



(4) Wide Band:

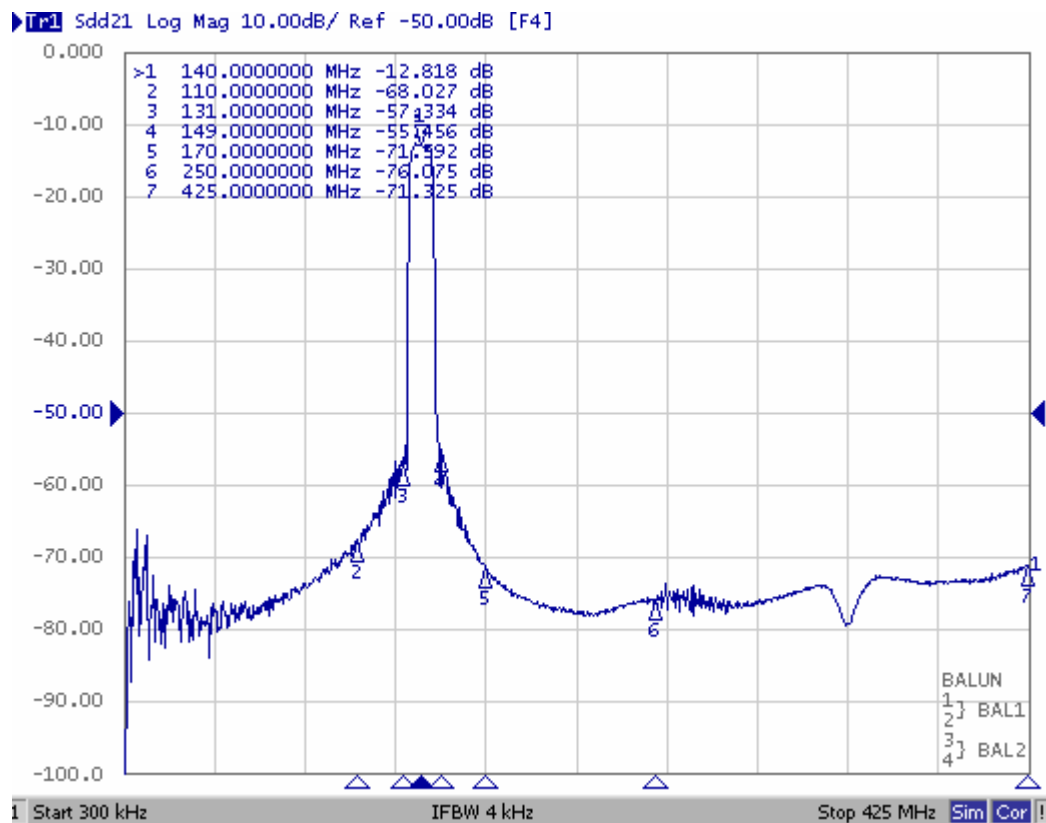
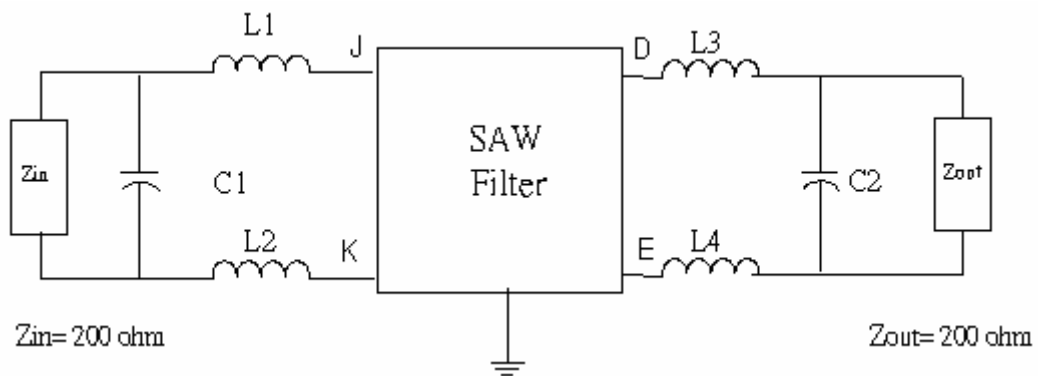


Fig4. Horizontal: 100MHz/Div Vertical: 10dB/Div

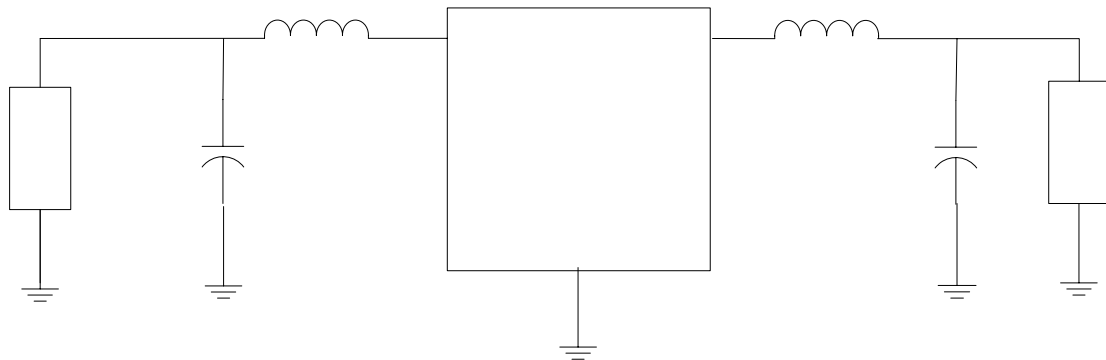
D. Matching Circuit:

200ohm balance in/out



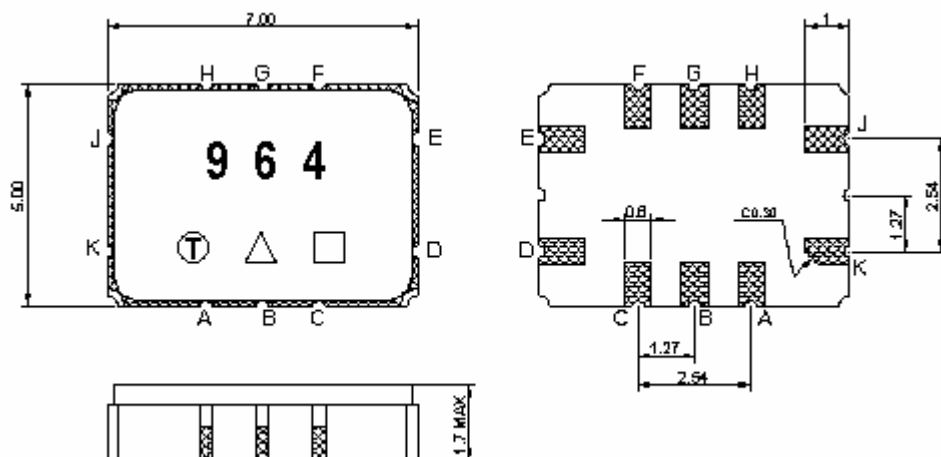
$$L1=L2=27\text{nH} \quad L3=L4=27\text{nH} \quad C1=30\text{pF} \quad C2=33\text{pF}$$

50ohm single in/out



$$L1=27\text{nH} \quad L2=30\text{nH} \quad C1=68\text{pF} \quad C2=68\text{pF}$$

E. Outline Drawing:



Pin J –RF input

Pin K –RF balance input or to be ground

Pin D –RF output

Pin E –RF balance output or to be ground

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

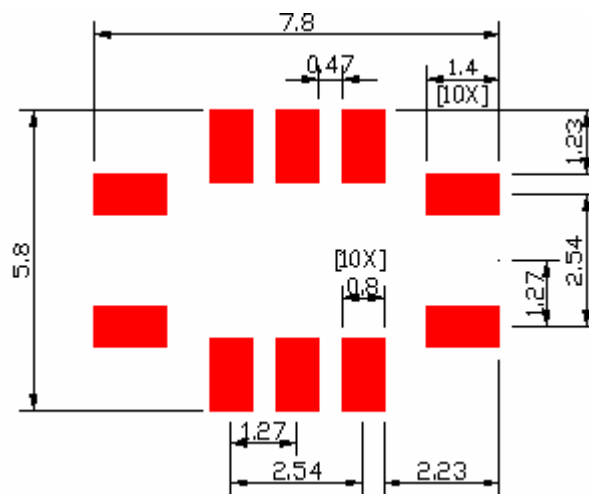
□ : Week Code (Follow the table from planner each year)

Unit : mm

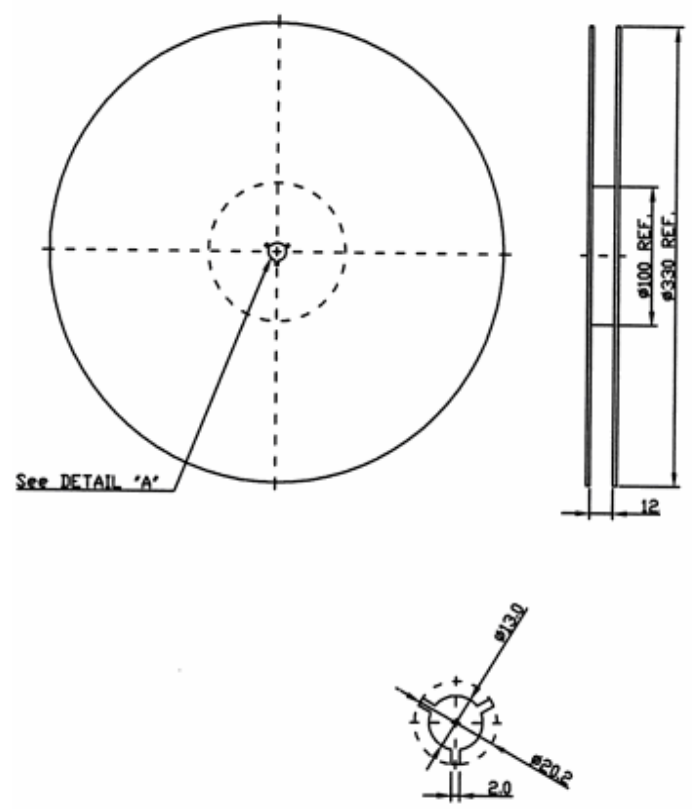
△ : Product / Year Code

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

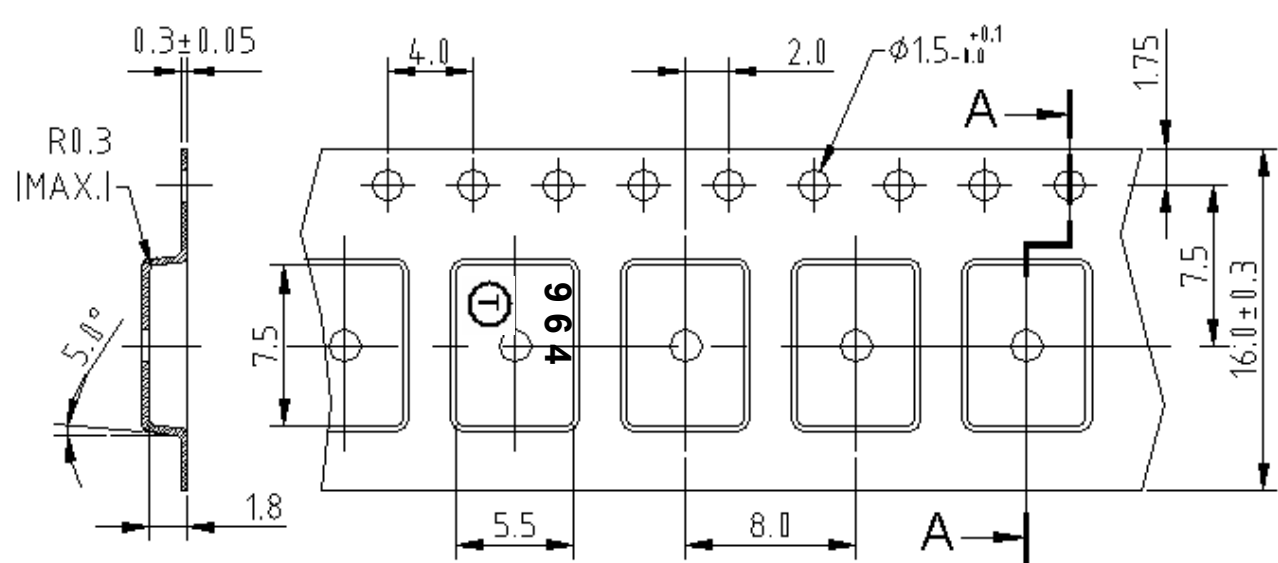
F. PCB Footprint:



G. PACKING:
1. REEL DIMENSION



2. TAPE DIMENSION



H. RECOMMENDED REFLOW PROFILE:

