



TAI-SAW TECHNOLOGY CO., LTD.

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Product Specifications Approval Sheet

Product Name: SAW IF Filter 140 MHz 2MHz BW (SMD 5.0mm x 7.0 mm)

TST Parts No.: TB0965A

Customer Parts No.: _____

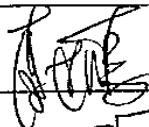
Customer signature required

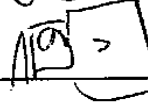
Company: _____

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 2MHz BW (SMD 5.0×7.0 mm)

MODEL NO.: TB0965A

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, F_c	MHz	-	140	-
Insertion Loss, IL	dB	-	9.0	12.0
Amplitude Ripple F _c +/-0.5MHz	dB	-	0.4	1.0
Amplitude Ripple F _c +/-1.0MHz	dB	-	0.4	3.0
Group Delay Ripple F _c +/-0.5MHz	ns	-	65	200
Absolute Group Delay at F _c	us	-	0.7	-
Triple Transit Suppression	dB	35	40	-
In/Output Return Loss F _c +/-1.0MHz	dB	-	10	-
Attenuation (Reference level from minimum Insertion loss)				
DC ~ 110 MHz	dB	40	60	-
110MHz ~ 135MHz	dB	30	45	-
145 MHz ~ 170 MHz	dB	30	45	-
170MHz ~ 250 MHz	dB	40	60	-
250 MHz ~ 425 MHz	dB	20	70	-
Temperature Coefficient	ppm/°C	-	-23	-
Source Impedance	Ohm	-	200	-
Load Impedance	Ohm	-	200	-

C. Frequency Characteristics :

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

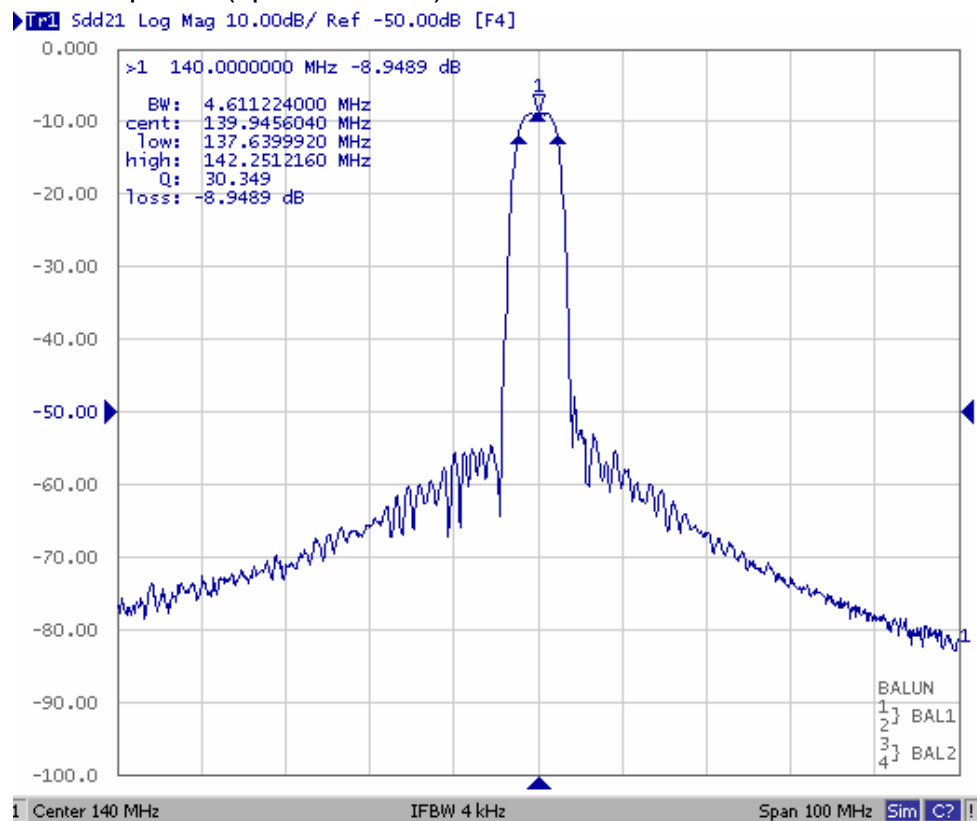


Fig1. Horizontal: 10MHz/Div Vertical: 10dB/Div

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

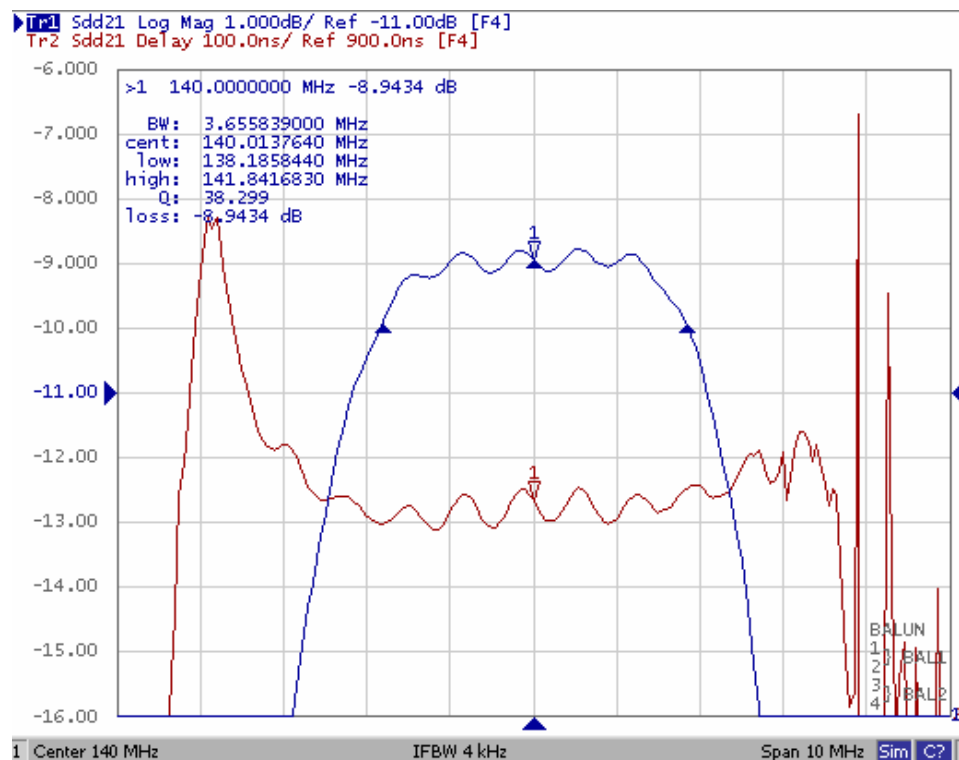
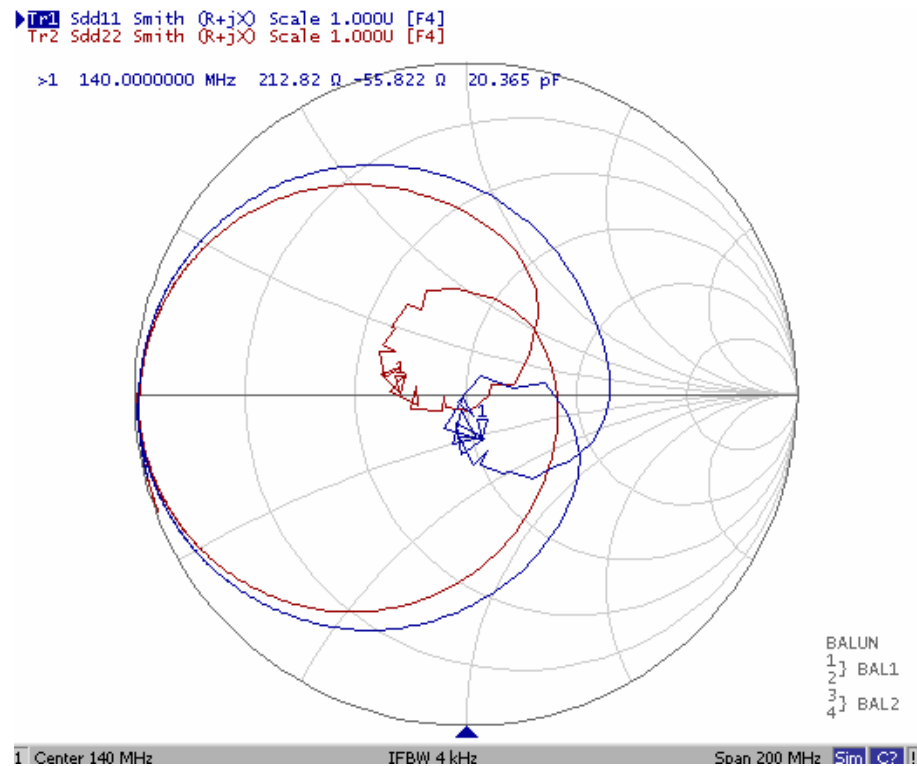


Fig2. Horizontal: 1MHz/Div Vertical: 1dB/Div
Vertical: 100ns/Div

(3) Smith Chart:



(4) Wide Band:

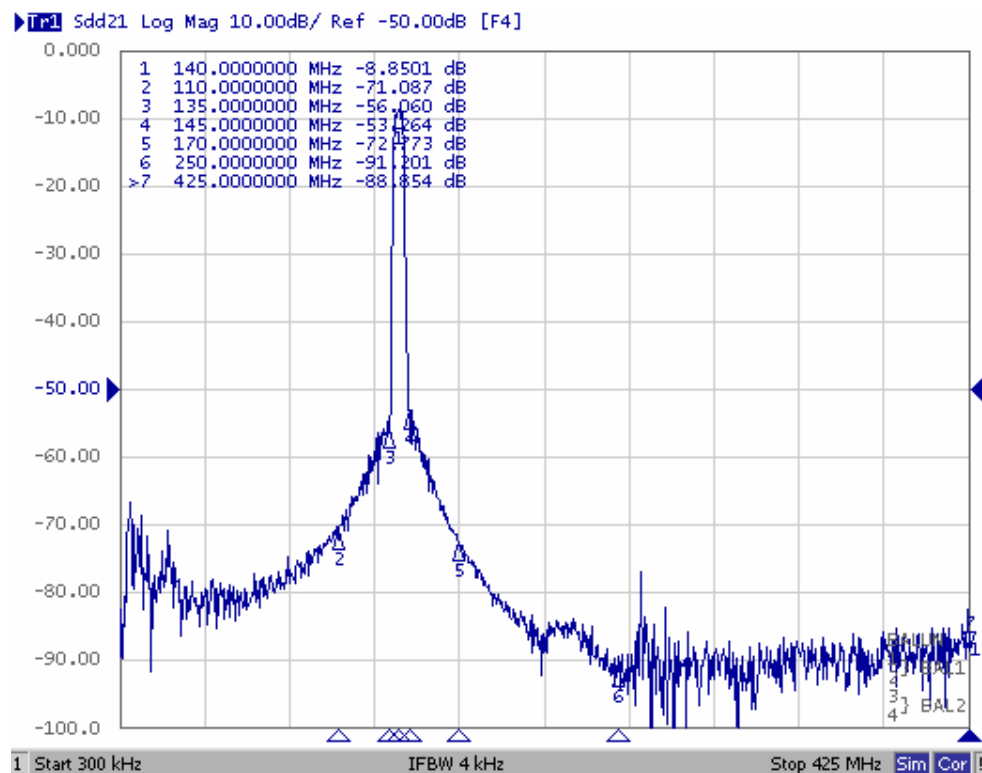
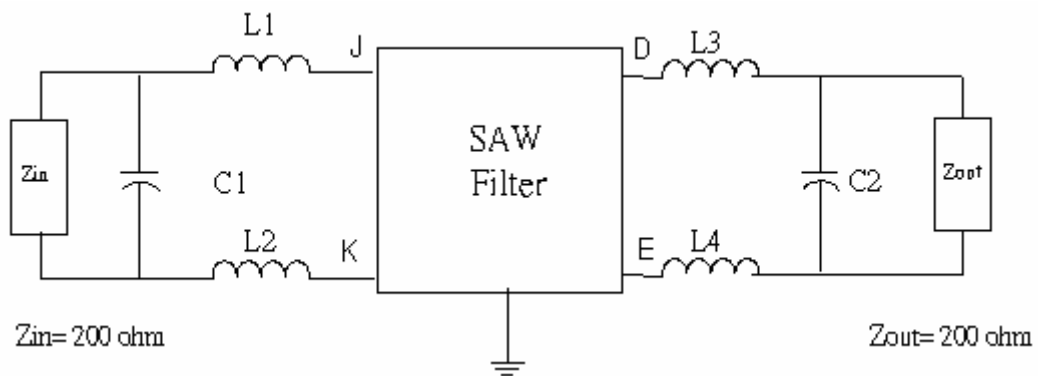


Fig4. Horizontal: 100MHz/Div Vertical: 10dB/Div

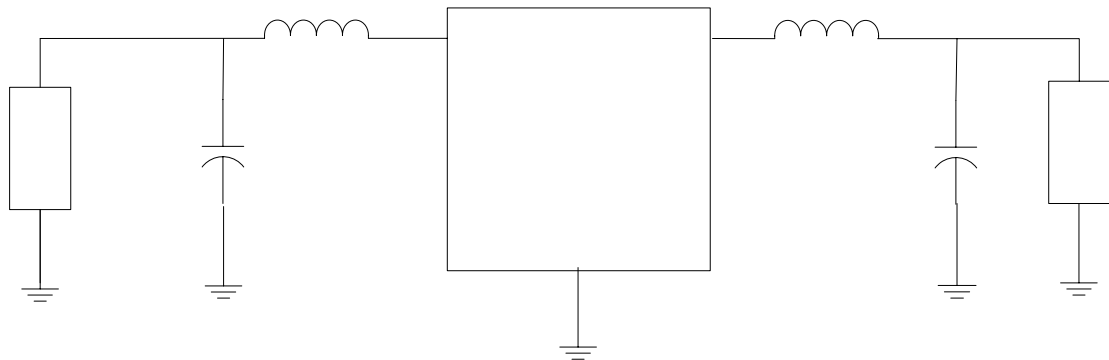
D. Matching Circuit:

200ohm balance in/out



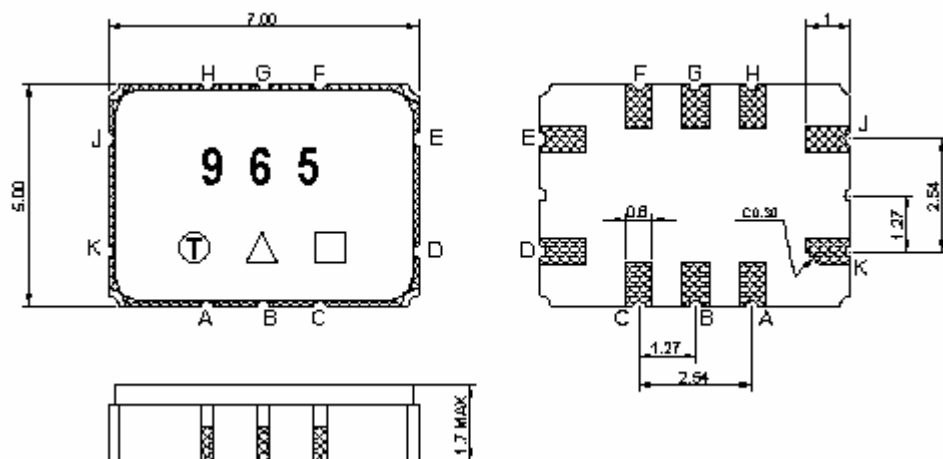
$$L1=L2=27\text{nH} \quad L3=L4=27\text{nH} \quad C1=30\text{pF} \quad C2=33\text{pF}$$

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

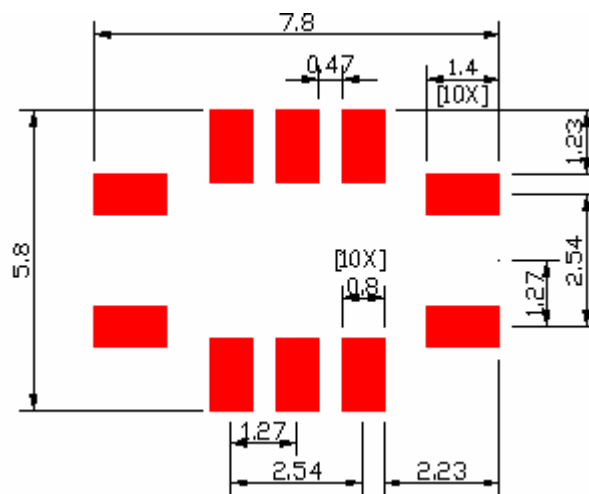
□ : Week Code (Follow the table from planner each year)

Unit : mm

△ : Product / Year Code

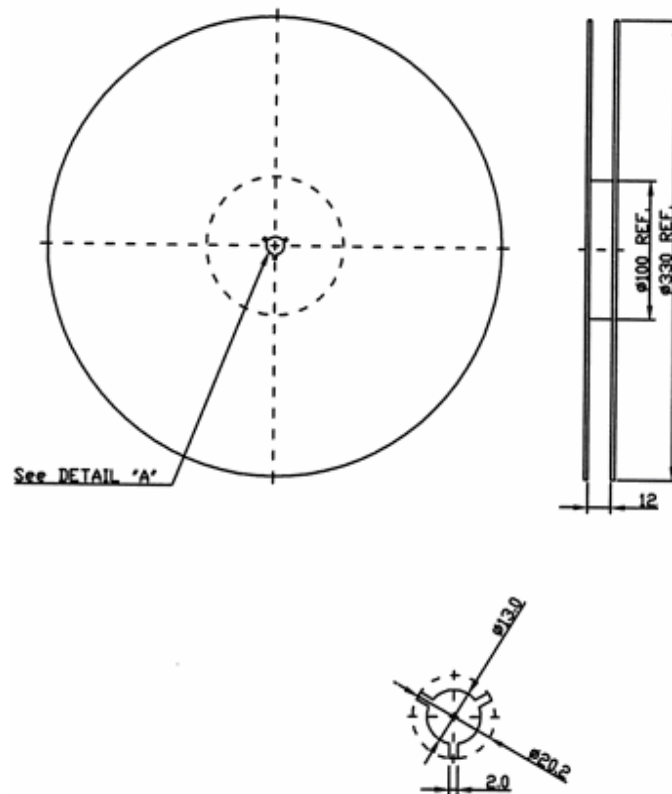
Year	2009 2013	2010 2014	2011 2015	2012 2016
Product Code	B	b	<u>B</u>	<u>b</u>

F. PCB Footprint:

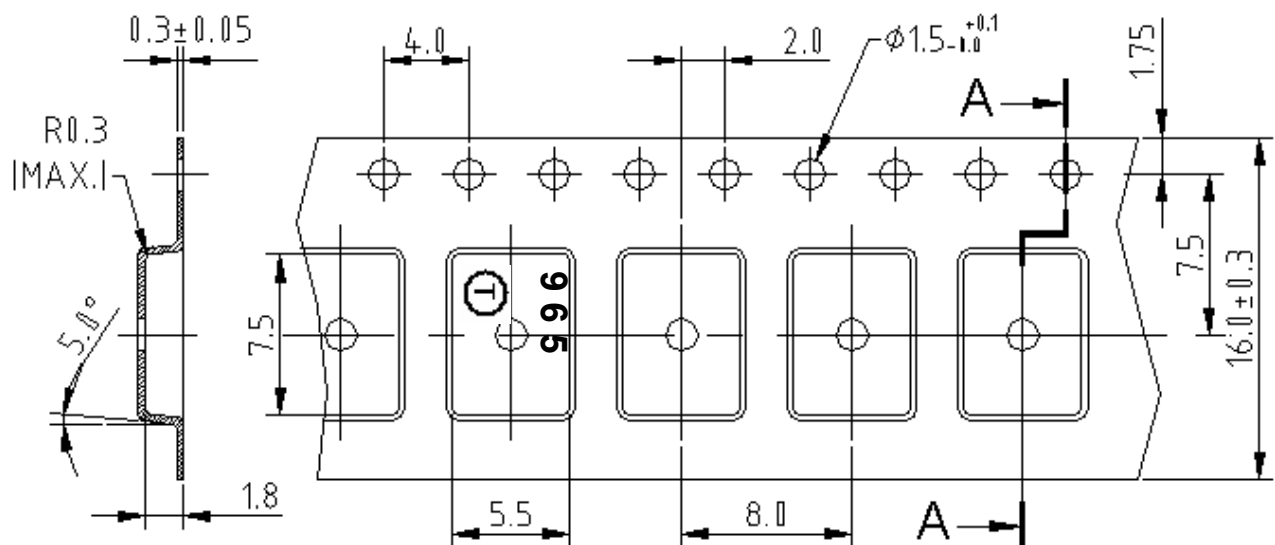


G. PACKING:

1. REEL DIMENSION



2. TAPE DIMENSION



H. RECOMMENDED REFLOW PROFILE:

