



TAI-SAW TECHNOLOGY CO., LTD.

No. 3, Industrial 2nd Rd., Ping-Chen Industrial District,
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Product Specifications Approval Sheet

Product Description: SAW Filter 314.45 MHz (BW 1.06MHz) SMD 3X3 mm

TST Part No.: TA1778A (This part is is compliant with AEC-Q200)

Customer Part No.: _____

Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Michael Yang 

Approval by: _____ Bob Chau 

Date: _____ 2014/12/23

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 314.45MHz

MODEL NO.:TA1778A

REV. NO.:1.0

A. MAXIMUM RATING:

1. Input Power Level: 13 dBm
2. DC Voltage : 0V
3. Operating Temperature: -40°C to +105°C
4. Storage Temperature: -40°C to +105°C

RoHS Compliant
Lead free
Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

Terminating source impedance (single) : $Z_s = 50 \Omega$

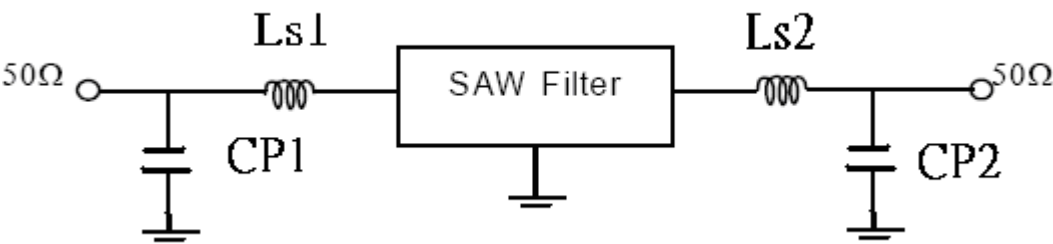
Terminating load impedance(single) : $Z_L = 50 \Omega$

Item	Unit	Min	Type.	Max
Center Frequency F_c	MHz	-	314.45	-
Minimum Insertion Loss α_{min}				
Incl. Loss in matching elements (313.92 ~ 314.98 MHz)	dB		1.9	2.7
Excl. Loss in matching elements (313.92 ~ 314.98 MHz)	dB		1.0	1.6
Pass Band (Relative to α_{min})				
313.92 ~ 314.98 MHz ¹			2.5	3.0
313.90 ~ 315.00 MHz ²			3.0	3.5
Relative Attenuation (Relative to α_{min}) α_{rel}				
10 ~ 180 MHz	dB	61	66	
180 ~ 200 MHz	dB	57	62	
300 ~ 310 MHz	dB	26	31	
310 ~ 313 MHz	dB	11	16	
315.9 ~ 318.8 MHz	dB	11	16	
318.9 ~ 326 MHz	dB	18	25	
326 ~ 328 MHz	dB	31	36	
328 ~ 340 MHz	dB	36	41	
340 ~ 389 MHz	dB	41	46	
349 ~ 568 MHz	dB	54	59	
568 ~ 1164 MHz	dB	61	66	
1164 ~ 2250 MHz	dB	51	57	
2250 ~ 2500 MHz	dB	55	61	

Package size	mm	SMD 3x3		
Impedance for pass band matching3)				
Input: ZIN = Ls1/Cp1	nH		130/8.2	
Output: ZOUT = Ls2/Cp2	nH		120/5.6	

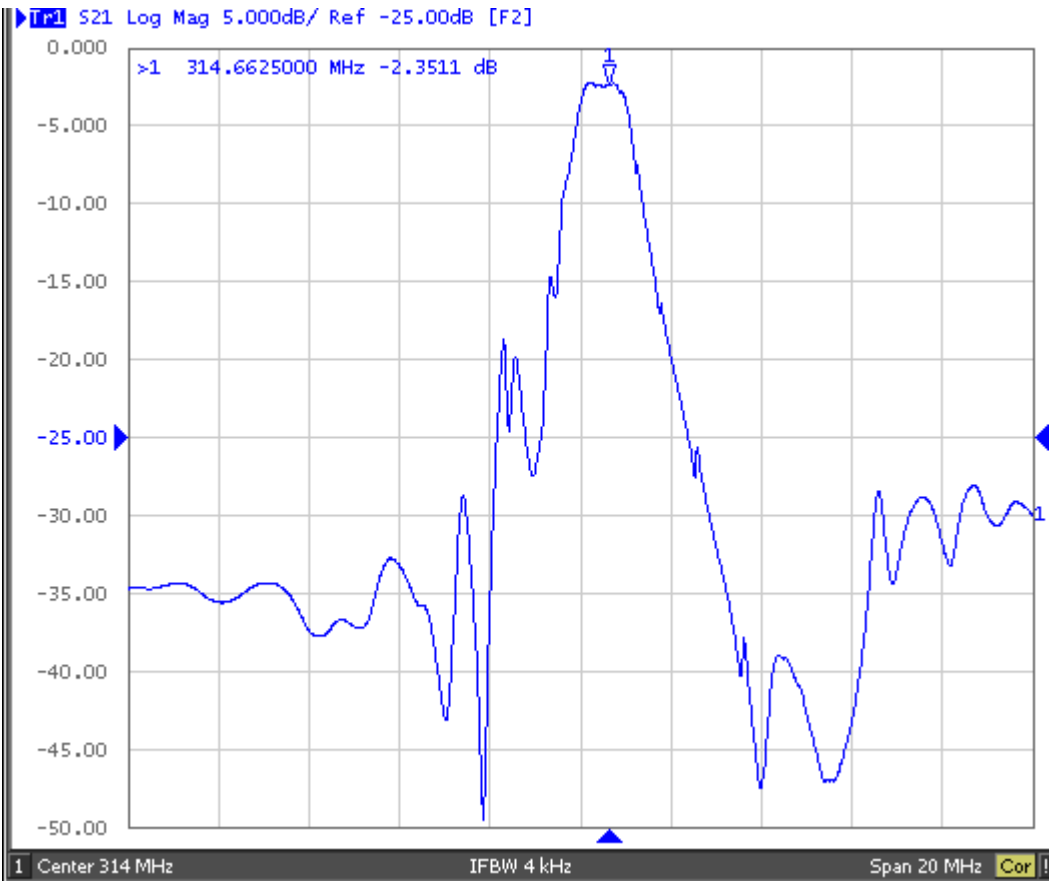
C..**TEST CIRCUIT:**

The matching circuit is

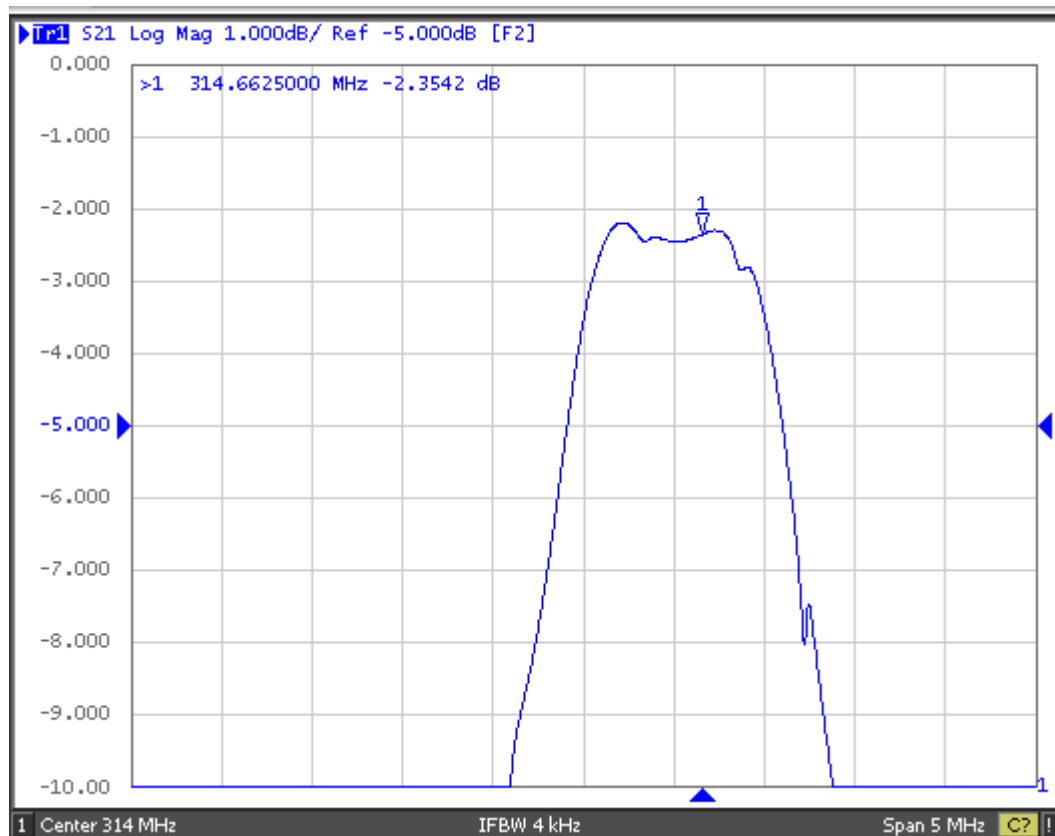


Ls1=130 ; Ls2=120nH;Cp1=8.2pF ; Cp2=5.6pF

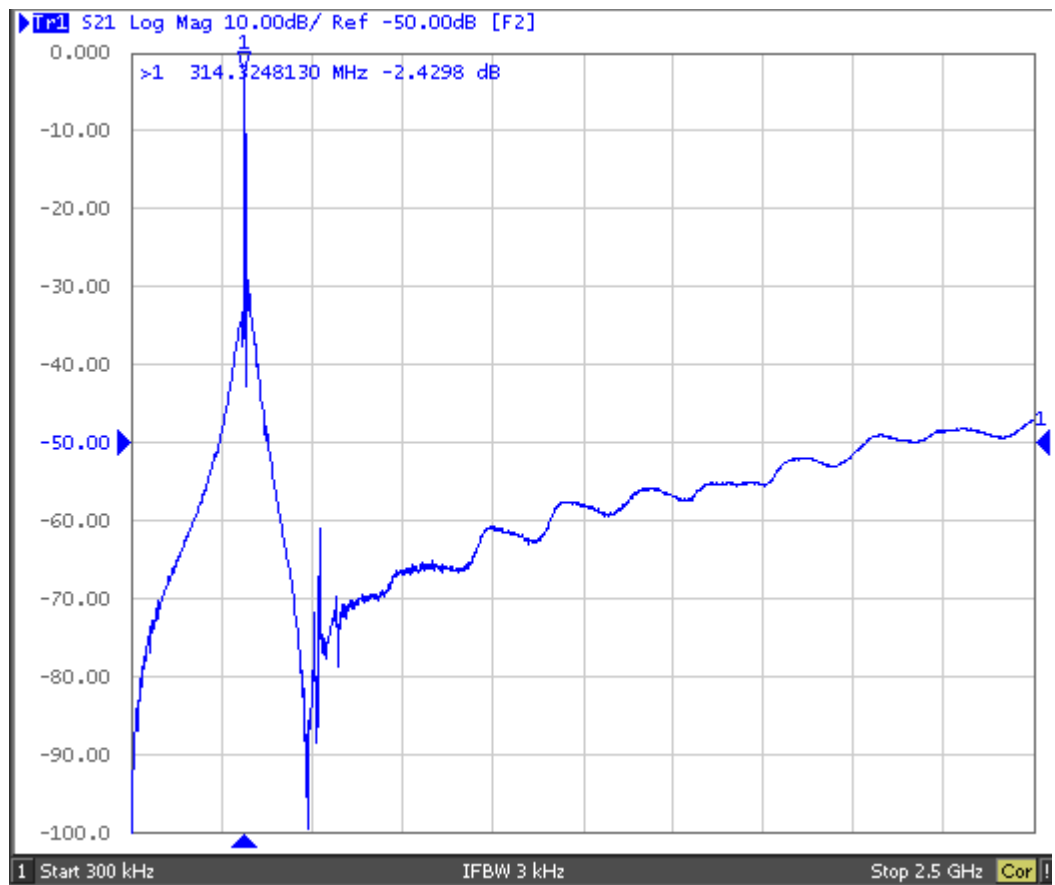
D. Frequency Characteristics :
S21 response: span 20 MHz



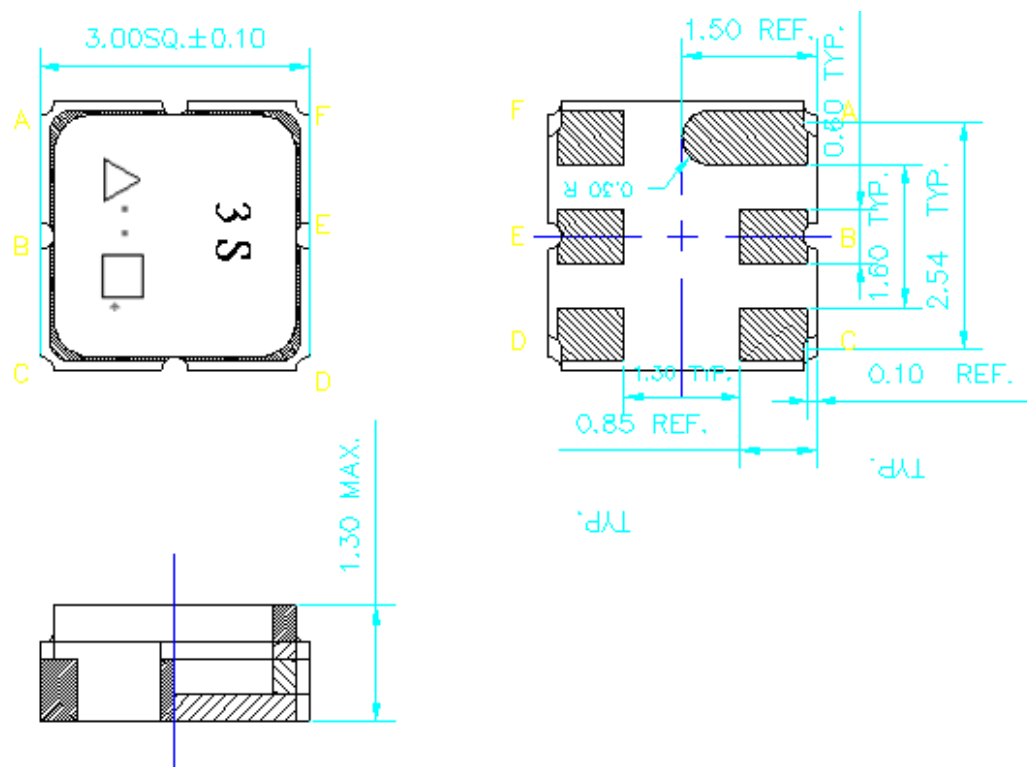
S21 response: span 5 MHz



S21 response: span 1MHz ~ 2.5G MHz



E.OUTLINE DRAWING:



#A: Input or input ground
 #B: Input or input ground
 #D: Output or output ground
 #E: Output or output ground
 #C.F Ground
 △: Year code(ex 2008-> 8
 □: Date code
 Unit:mm

Data code : See the table

WK	01	02	...	26	27	28	...	52
Code	A	B	...	Z	a	b	...	z

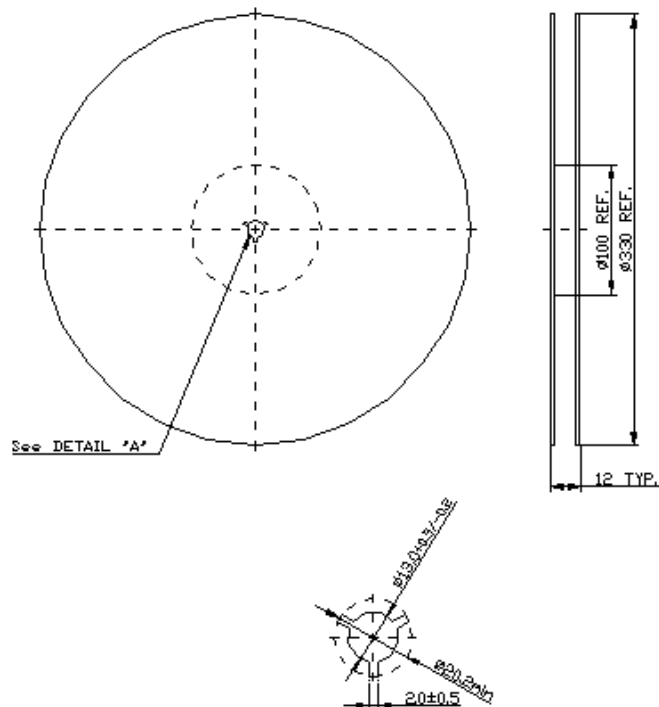
△ Year code : See the table

Year	2008	2009	2010	2011	...	2019	2020
Code	8	9	0	1	...	9	0

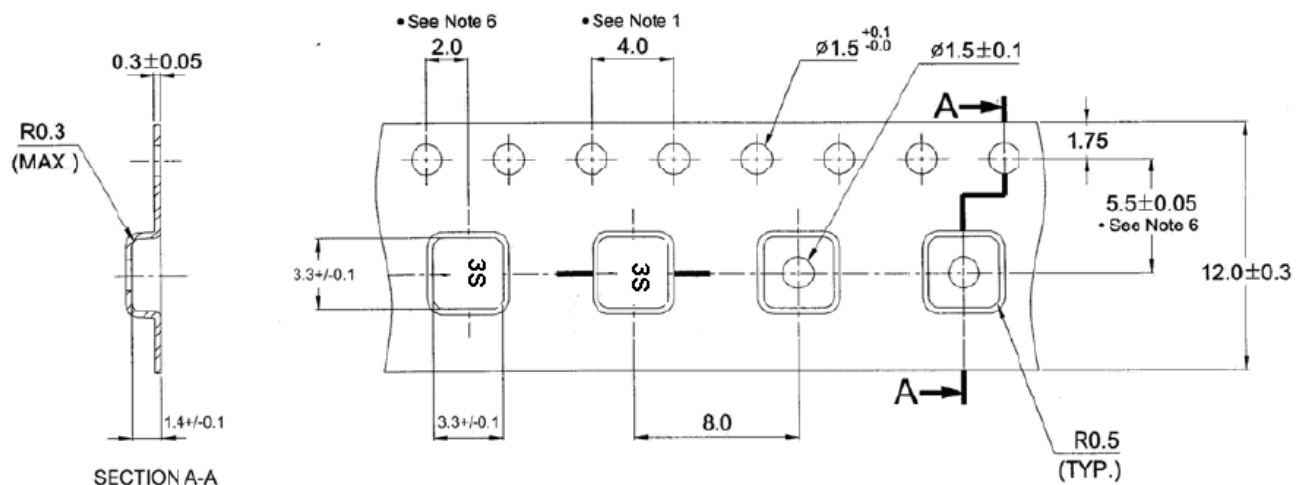
F. PACKING:

1. REEL DIMENSION

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



2. TAPE DIMENSION



Direction of Feed



G. RECOMMENDED REFLOW PROFILE :

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.

