



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 315 MHz (BW 0.96MHz) SMD 3X3 mm

TST Parts No.: TA1794A (This part is is compliant with AEC-Q200)

Customer Part No.: _____

Customer signature required

Company: _____

Division: _____

Approved by : _____

Date: _____

Checked by: _____ Michael Yang *Michael*

Approval by: _____ Andy Yu *Andy Yu*

Date: _____ 2019/12/05

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 315MHz

MODEL NO.:TA1794A

REV. NO.:3.0

A. MAXIMUM RATING:

1. Input Power Level: 13 dBm
2. DC Voltage : 0V
3. Operating Temperature: -40℃ to +105℃
4. Storage Temperature: -40℃ to +105℃
5. Moisture Sensitive Level (MSL): Level 1

RoHS Compliant

Lead-free soldering

Electrostatic Sensitive Device (ESD)

B. ELECTRICAL CHARACTERISTICS:

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

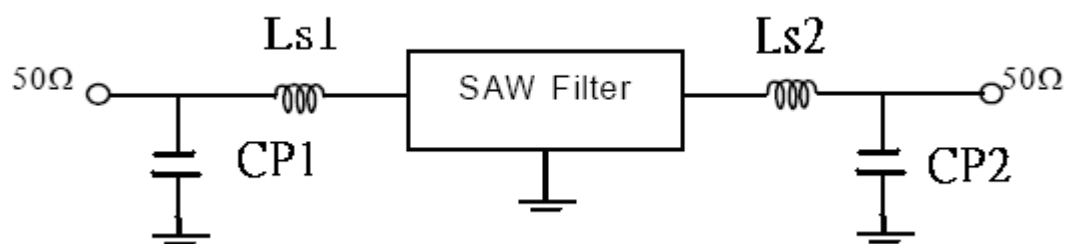
Terminating load impedance(single) : $Z_L = 50 \Omega$

Item	Unit	Min	Type.	Max
Center Frequency F_c	MHz	-	315	-
Minimum Insertion Loss α_{min} (@315MHz)				
Incl. Loss in matching elements (314.615 ~ 315.385 MHz)	dB		2.0	3.0
Excl. Loss in matching elements (314.615 ~ 315.385 MHz)	dB		1.1	1.9
Pass Band (Relative to α_{min})				
314.615 ~ 315.385 MHz			2.0	2.5
314.52 ~ 315.48 MHz			2.5	3.0
Relative Attenuation (Relative to α_{min}) α_{rel}				
10 ~ 140 MHz	dB	66	71	
140 ~ 235 MHz	dB	57	62	
235 ~ 300 MHz	dB	44	49	
300 ~ 310 MHz	dB	23	34	
310 ~ 313 MHz	dB	9	14	
317 ~ 320 MHz	dB	9	14	
320 ~ 325 MHz	dB	15	20	
325 ~ 332 MHz	dB	27	32	
332 ~ 352 MHz	dB	36	41	
352 ~ 390 MHz	dB	47	52	
390 ~ 1600 MHz	dB	55	60	
1600 ~ 2500 MHz	dB	50	55	

Package size	mm	SMD 3x3		
Impedance for pass band matching				
Input: Z _{IN} = Ls1/Cp1	nH		133/8.2	
Output: Z _{OUT} = Ls2/Cp2	nH		120/8.2	

C..TEST CIRCUIT:

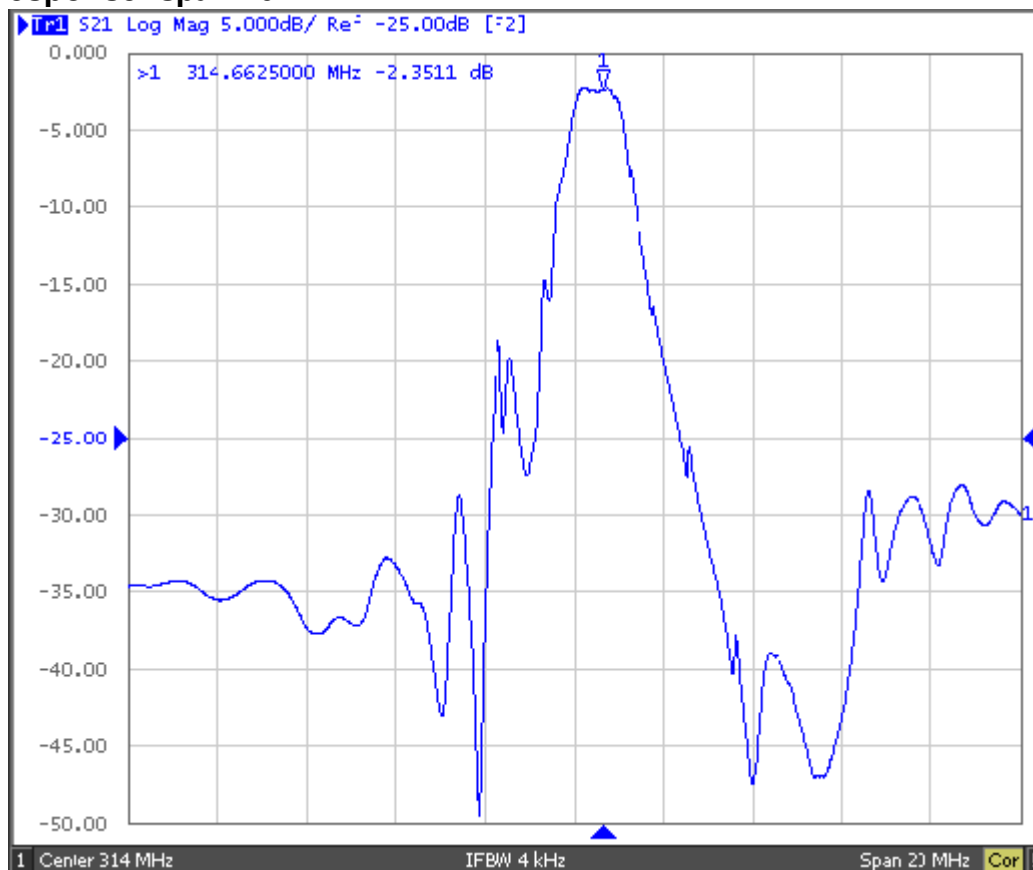
The matching circuit is



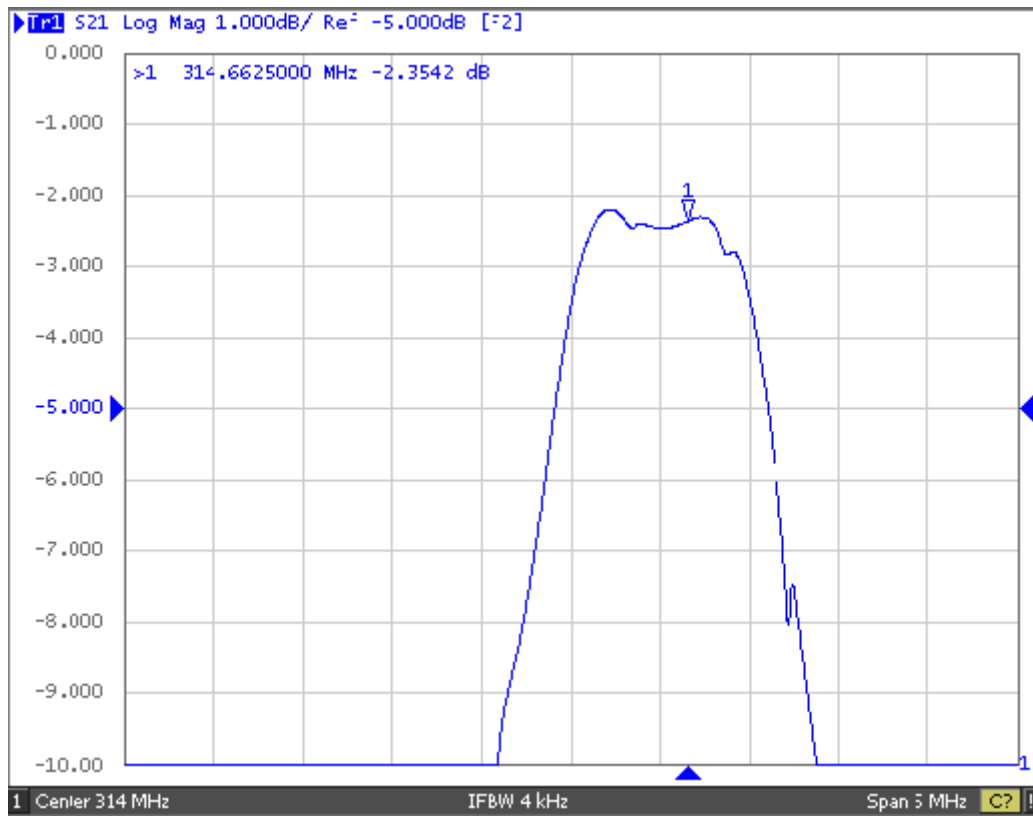
$Ls1=120\text{nH} + 13\text{nH}$; $Ls2=120\text{nH}$; $Cp1=8.2\text{pF}$; $Cp2=8.2\text{pF}$

D. Frequency Characteristics:

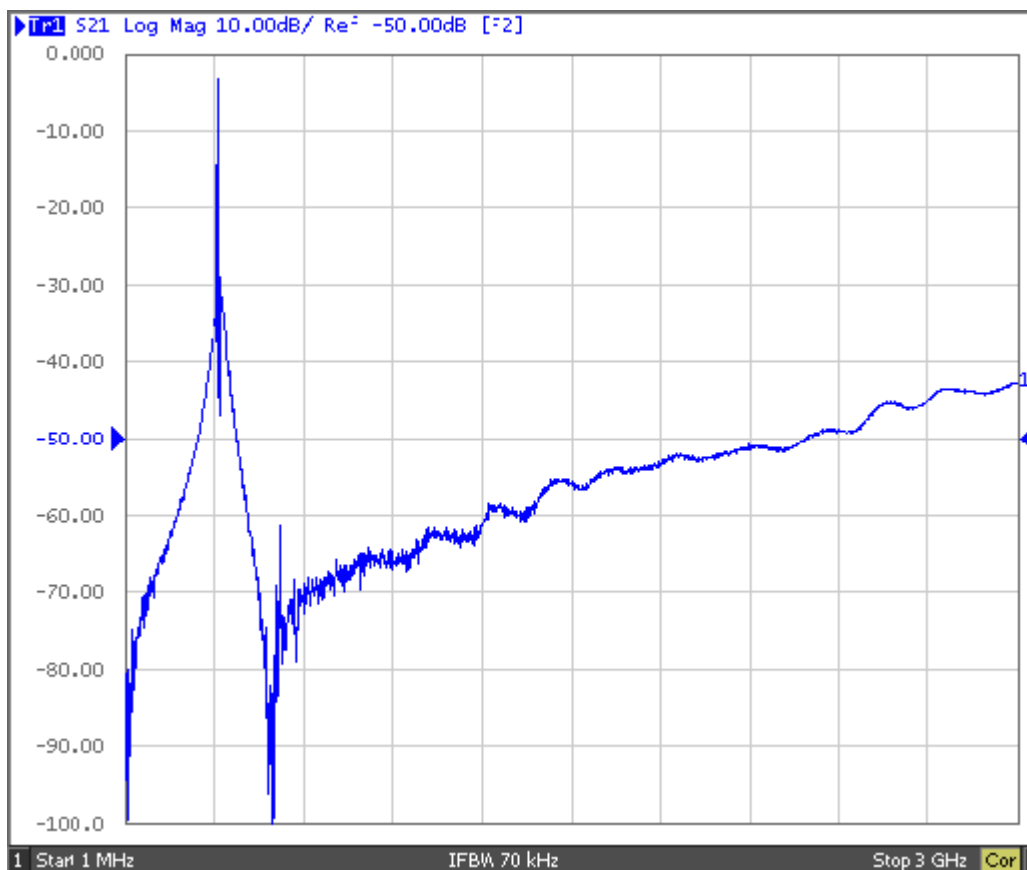
S21 response: span 20MHz



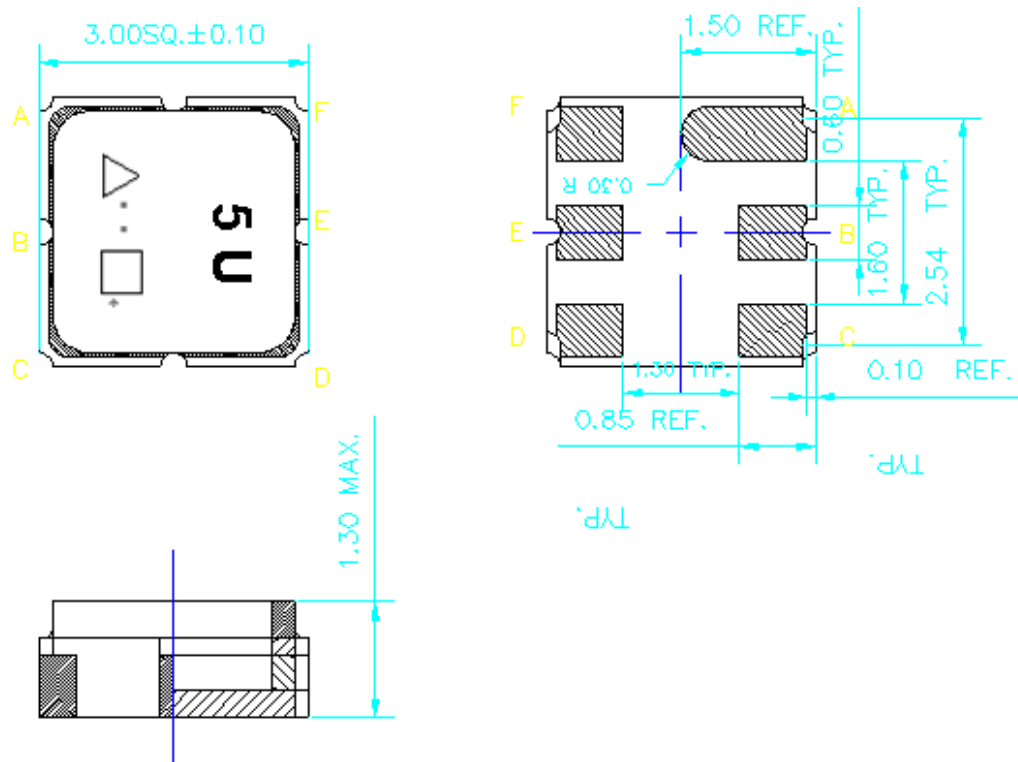
S21 response: span 5MHz



S21 response: span 1 MHz ~2.5 GHz



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

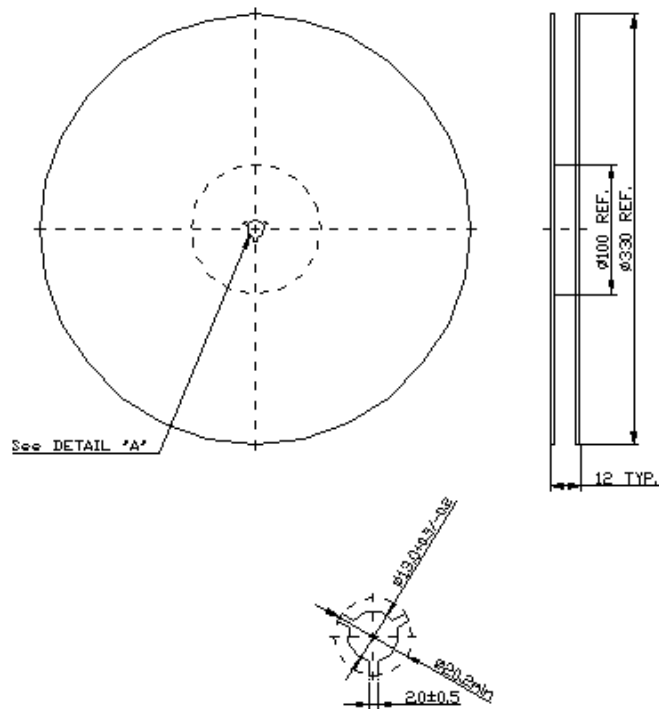
△ Year code : See the table

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

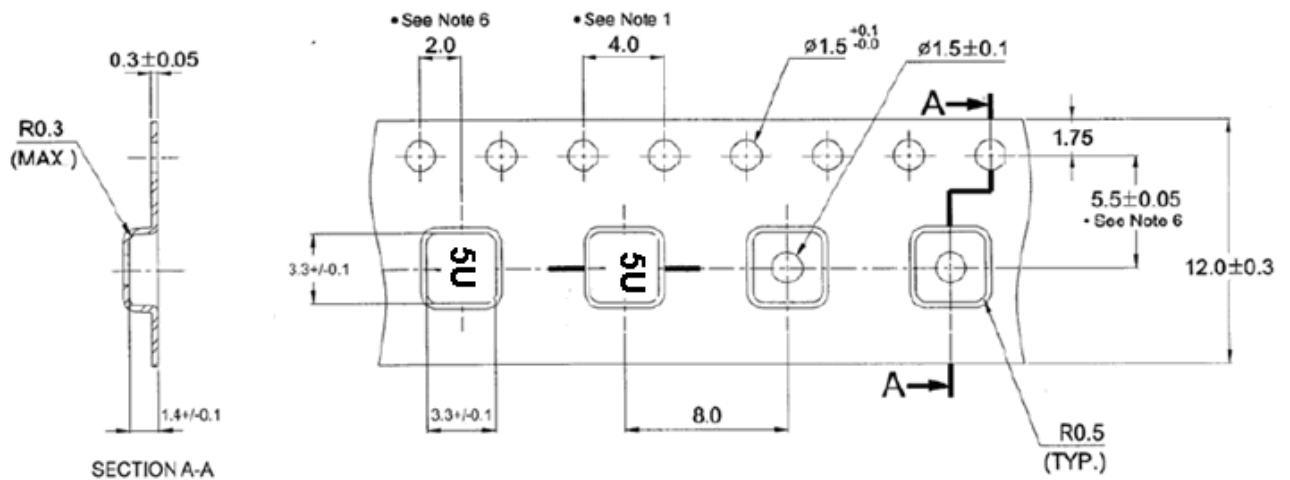
F. PACKING:

1. REEL DIMENSION

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



2. TAPE DIMENSION





G. RECOMMENDED REFLOW PROFILE :

1. Preheating shall be fixed at $150\sim 180^{\circ}\text{C}$ 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 $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ peak (20~40sec).
4. Time: 2 times.

