

SAW Filter 315.0MHz
Part No: MP07512

Model: TA1794A
Rev No: 1

A. MAXIMUM RATING:

Electrostatic Sensitive Device (ESD)

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

B. ELECTRICAL CHARACTERISTICS:

1. Terminating source impedance (single): $Z_S = 50\Omega$
2. Terminating load impedance (single): $Z_L = 50\Omega$

Item	Unit	Min	Typ.	Max
Center Frequency F_c	MHz	-	315	-
Minimum Insertion Loss α min				
Incl. Loss in matching elements (314.47~315.53MHz)	dB		2.5	2.7
Excl. Loss in matching elements (314.47~315.53MHz)	dB		1.5	1.6
Pass Band (Relative to α min)				
1) 314.47 ~ 315.53MHz			2.5	3.0
2) 314.45 ~ 315.55MHz			3.0	3.5
Relative Attenuation (Relative to α min) α rel				
10 ~ 140MHz	dB	66	71	
140 ~ 235MHz	dB	57	62	
235 ~ 300MHz	dB	44	49	
300 ~ 310MHz	dB	23	34	
310 ~ 313MHz	dB	9	14	
317 ~ 320MHz	dB	9	14	
320 ~ 325MHz	dB	15	20	
325 ~ 332MHz	dB	27	32	
332 ~ 352MHz	dB	36	41	
352 ~ 390MHz	dB	47	52	
390 ~ 1600MHz	dB	55	60	
1600 ~ 2500MHz	dB	50	55	
Package size	mm	SMD 3x3		
Impedance for pass band matching 3)				
Input: $Z_{IN} = L_{s1} / C_{p1}$	nH		120/10	
Output: $Z_{OUT} = L_{s2} / C_{p2}$	nH		110/8.2	

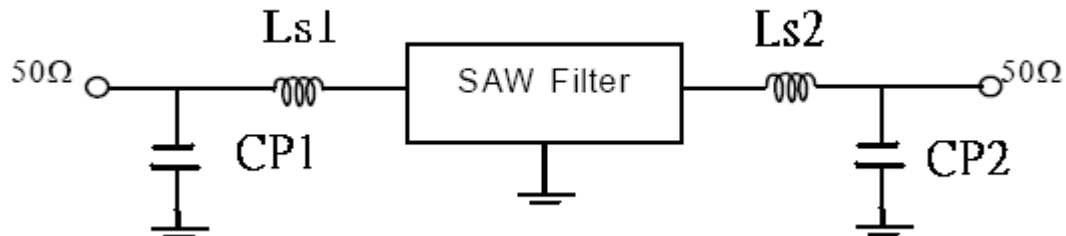
- 1) 314.47 ~ 315.49MHz for extended temperature range -40°C to +125°C.
- 2) 314.45 ~ 315.51MHz for extended temperature range -40°C to +125°C.

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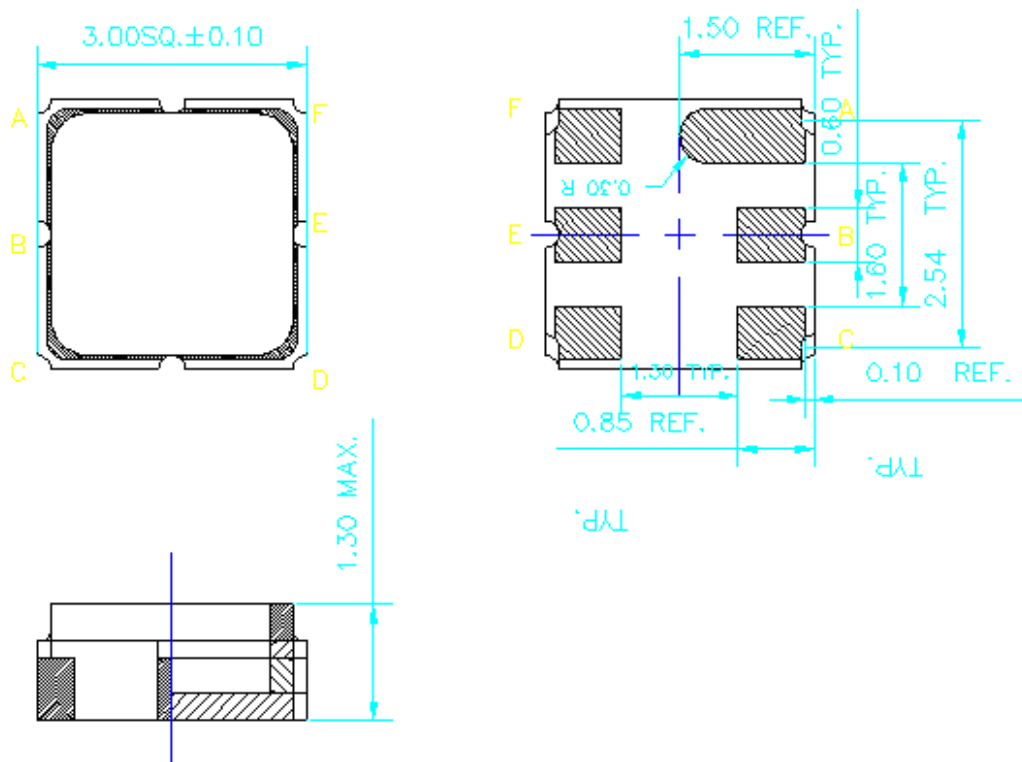
C. TEST CIRCUIT:

The matching circuit is



$Ls1 = 120nH$, $Ls2 = 110nH$, $Cp1 = 10pF$, $Cp2 = 8.2pF$

D. 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

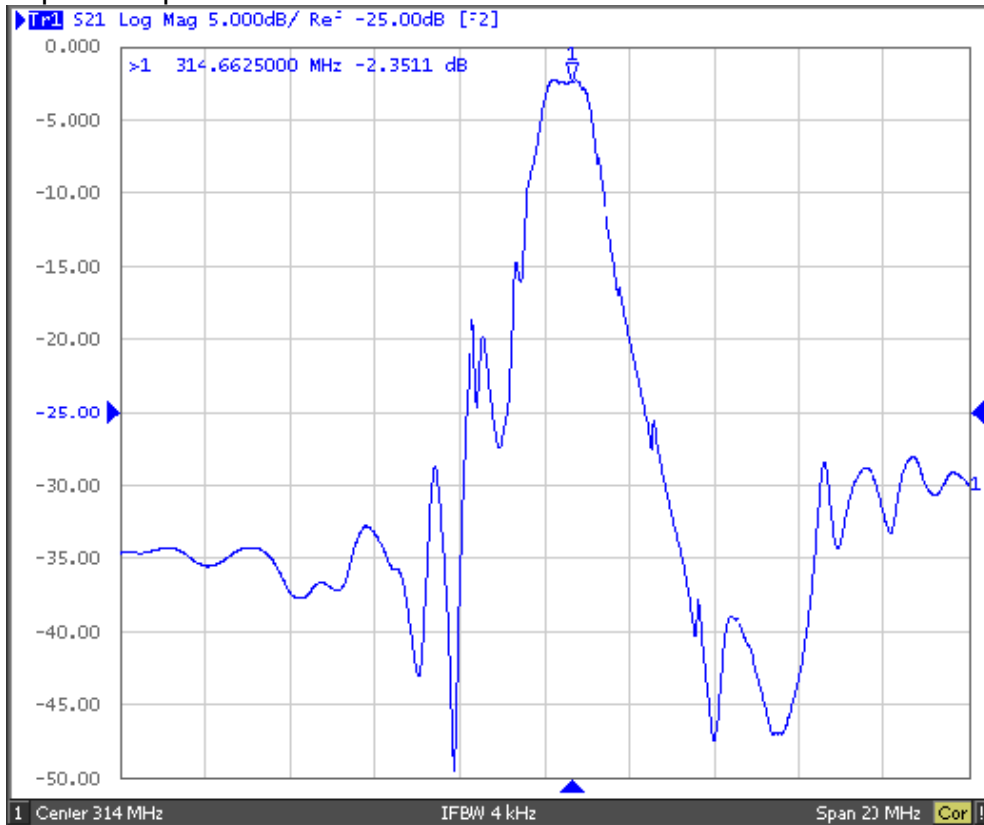
Unit: mm

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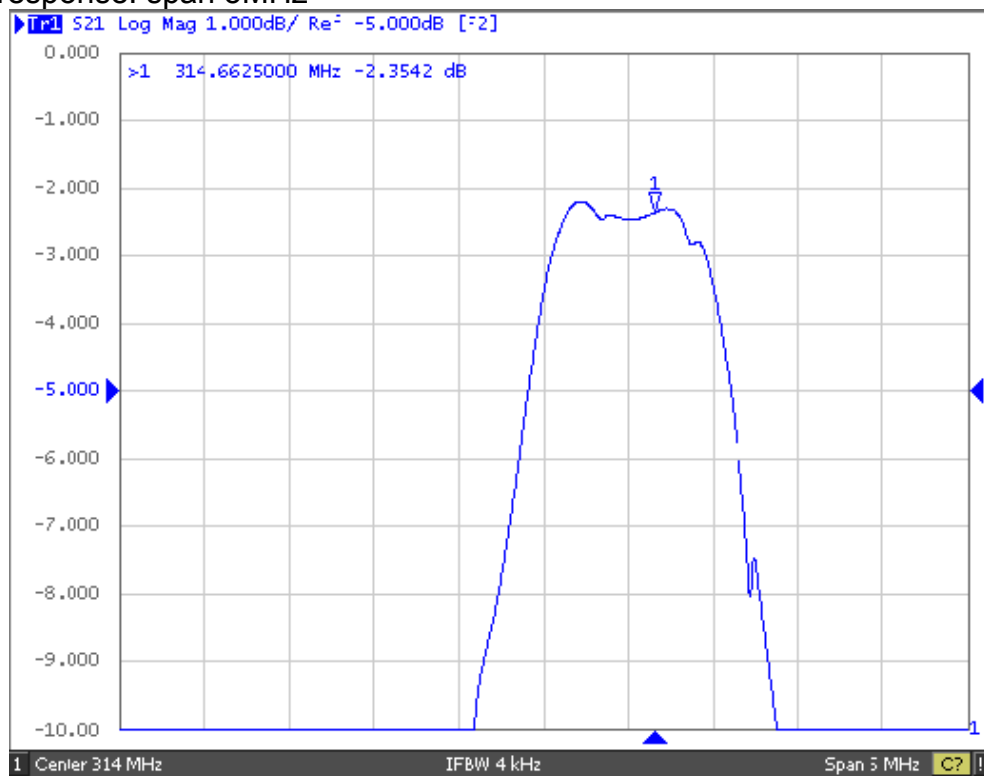
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E. FREQUENCY CHARACTERISTICS:

1. S21 response: span 20MHz



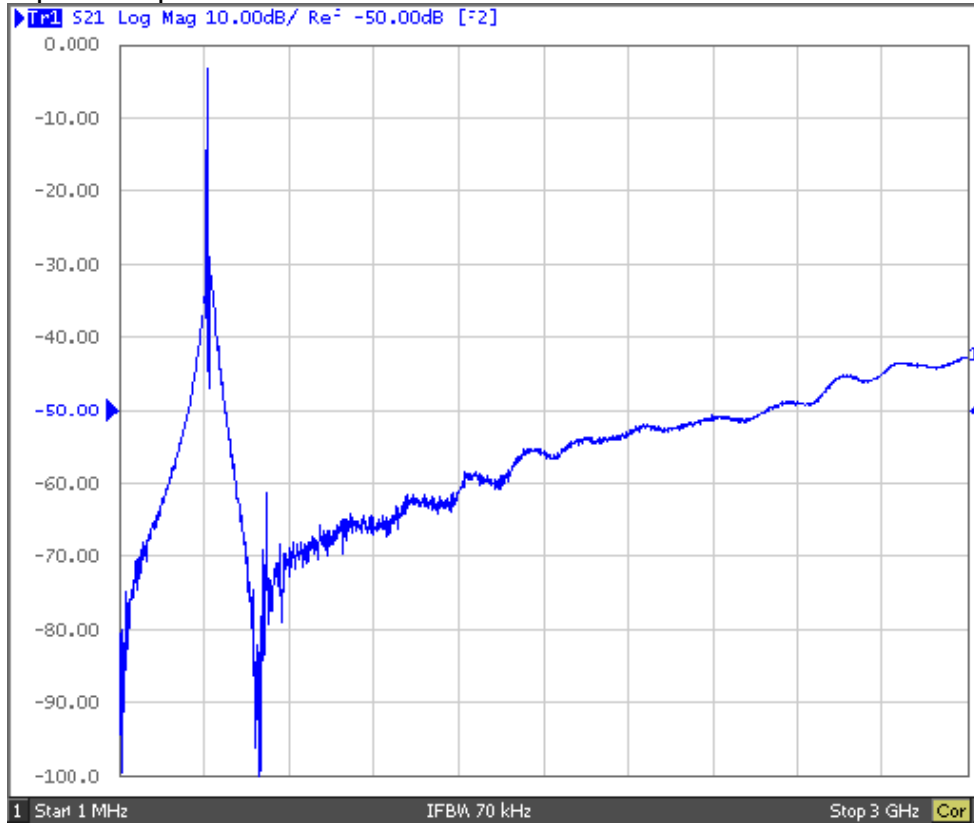
2. S21 response: span 5MHz



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3. S21 response: span 1 MHz ~2.5 GHz

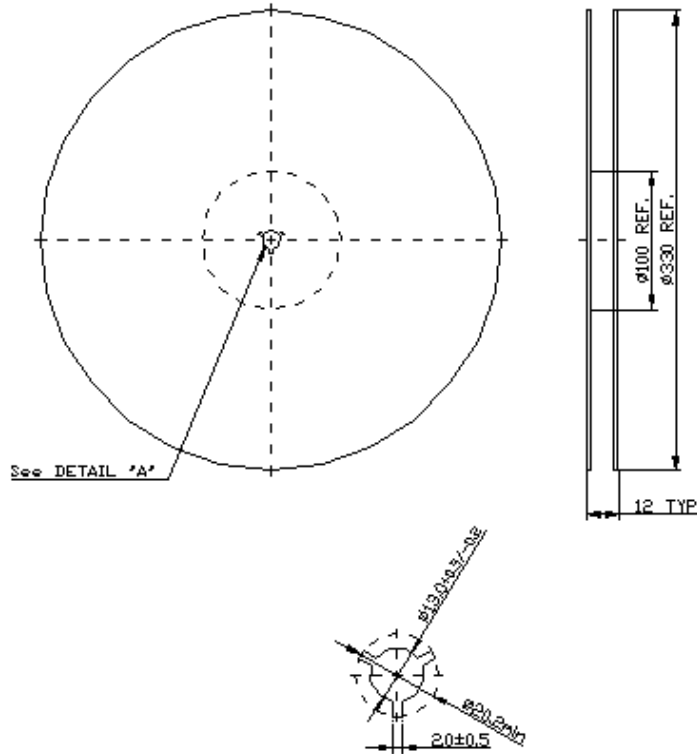


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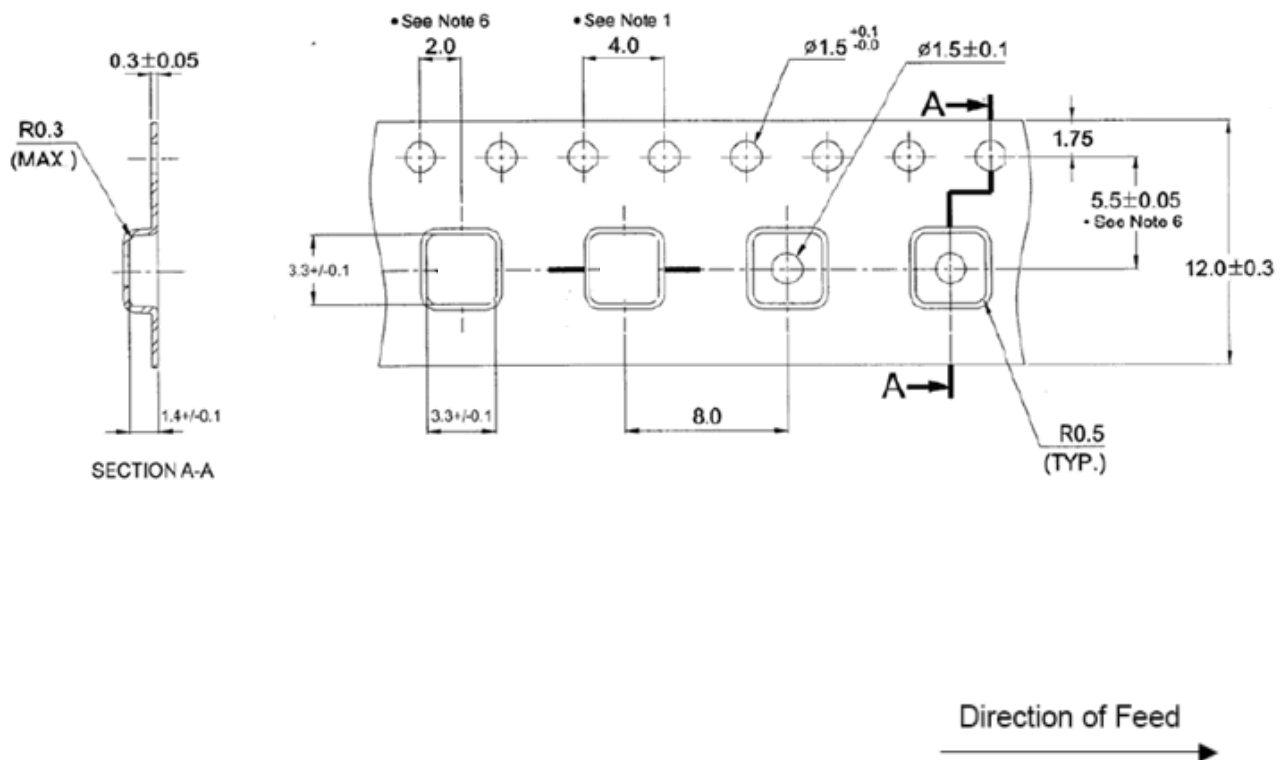
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F. PACKING:

1. Reel Dimension (please refer to FR-75D10 for packing quantity)



2. Tape Dimension



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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 ~ 40 sec).
4. Time: 2 times.

