

**SAW Filter 314.450MHz**

**Model: TA1778A**

**Part No: MP06983**

**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):  $Z_L = 50\Omega$

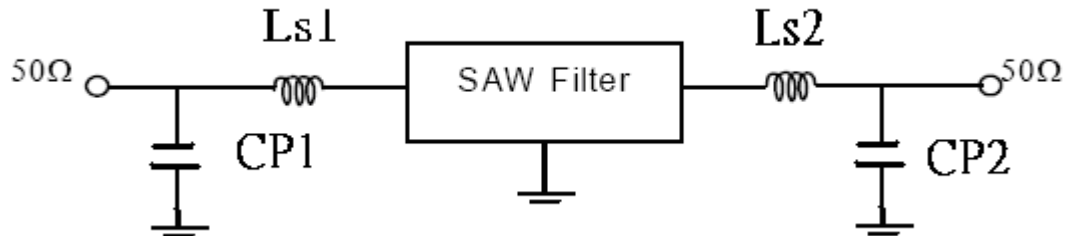
Item	Unit	Min	Typ.	Max
Center Frequency Fc	MHz	-	314.45	-
Minimum Insertion Loss IL min				
Incl. Loss in matching elements (313.92 ~ 314.98MHz)	dB		1.9	2.7
Excl. Loss in matching elements (313.92 ~ 314.98MHz)	dB		1.0	1.6
Pass Band (Relative to IL min)				
313.92 ~ 314.98MHz 1			2.5	3.0
313.90 ~ 315.00MHz 2			3.0	3.5
Relative Attenuation (Relative to IL min)				
10 ~ 180MHz	dB	61	66	
180 ~ 200MHz	dB	57	62	
300 ~ 310MHz	dB	26	31	
310 ~ 313MHz	dB	11	16	
315.9 ~ 318.8MHz	dB	11	16	
318.9 ~ 326MHz	dB	18	25	
326 ~ 328MHz	dB	31	36	
328 ~ 340MHz	dB	36	41	
340 ~ 389MHz	dB	41	46	
349 ~ 568MHz	dB	54	59	
568 ~ 1164MHz	dB	61	66	
1164 ~ 2250MHz	dB	51	57	
2250 ~ 2500MHz	dB	55	61	
Package size	mm	SMD 3x3		
Impedance for pass band matching <sup>3)</sup>				
Input: $Z_{IN} = Ls1/Cp1$	nH		130/8.2	
Output: $Z_{OUT} = Ls2/Cp2$	nH		120/5.6	

**SAW Filter 314.450MHz**  
**Part No: MP06983**

**Model: TA1778A**  
**Rev No: 1**

**C: TEST CIRCUIT:**

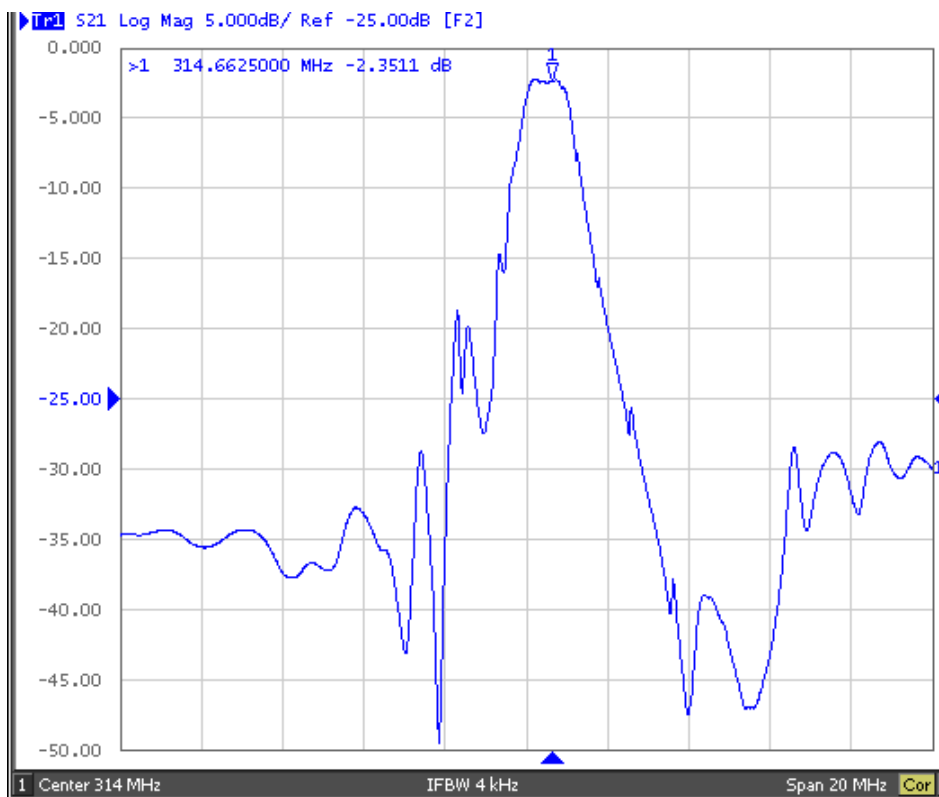
The matching circuit is



$Ls1 = 130$ ;  $Ls2 = 120\text{nH}$ ;  $Cp1 = 8.2\text{Pf}$ ;  $Cp2 = 5.6\text{pF}$

**D. FREQUENCY CHARACTERISTICS:**

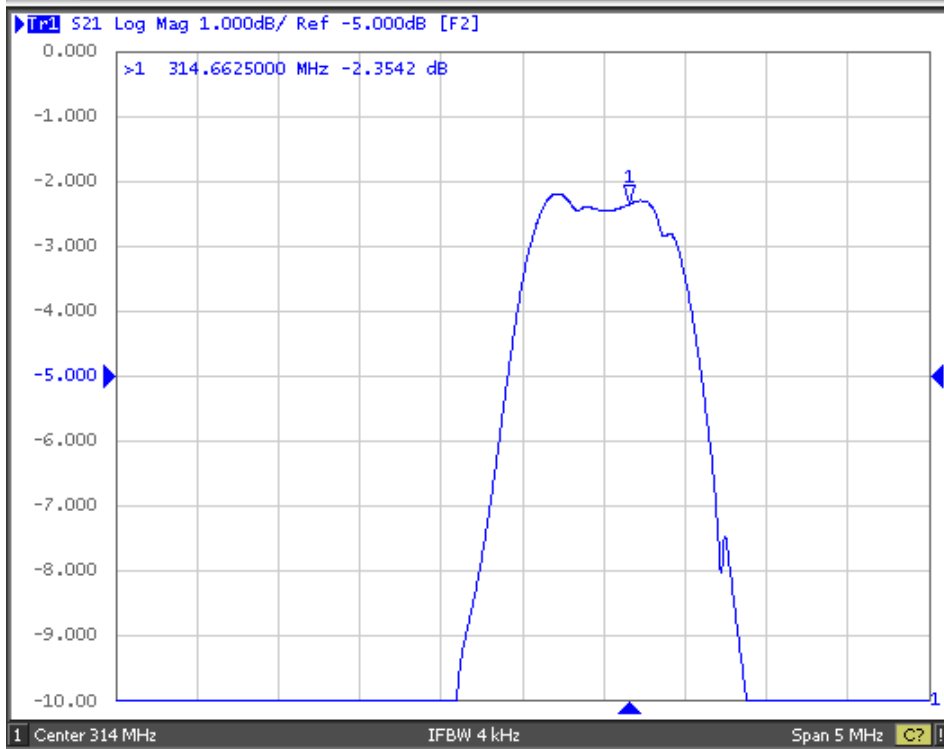
S21 response: span 20MHz



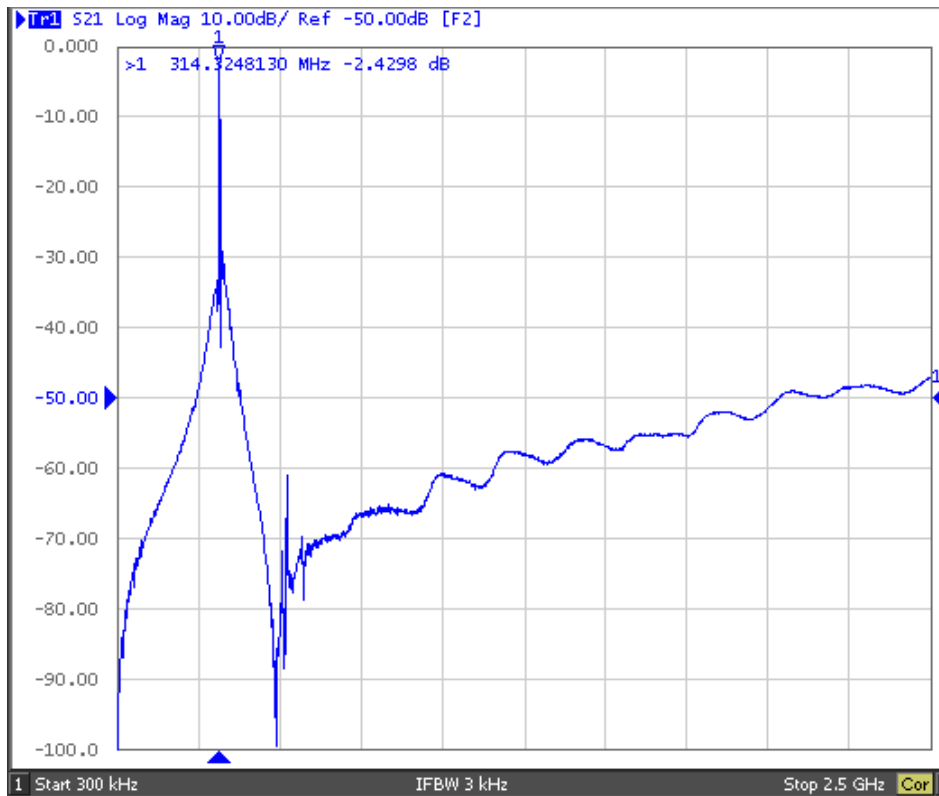
**SAW Filter 314.450MHz**  
**Part No: MP06983**

**Model: TA1778A**  
**Rev No: 1**

S21 response: span 5 MHz



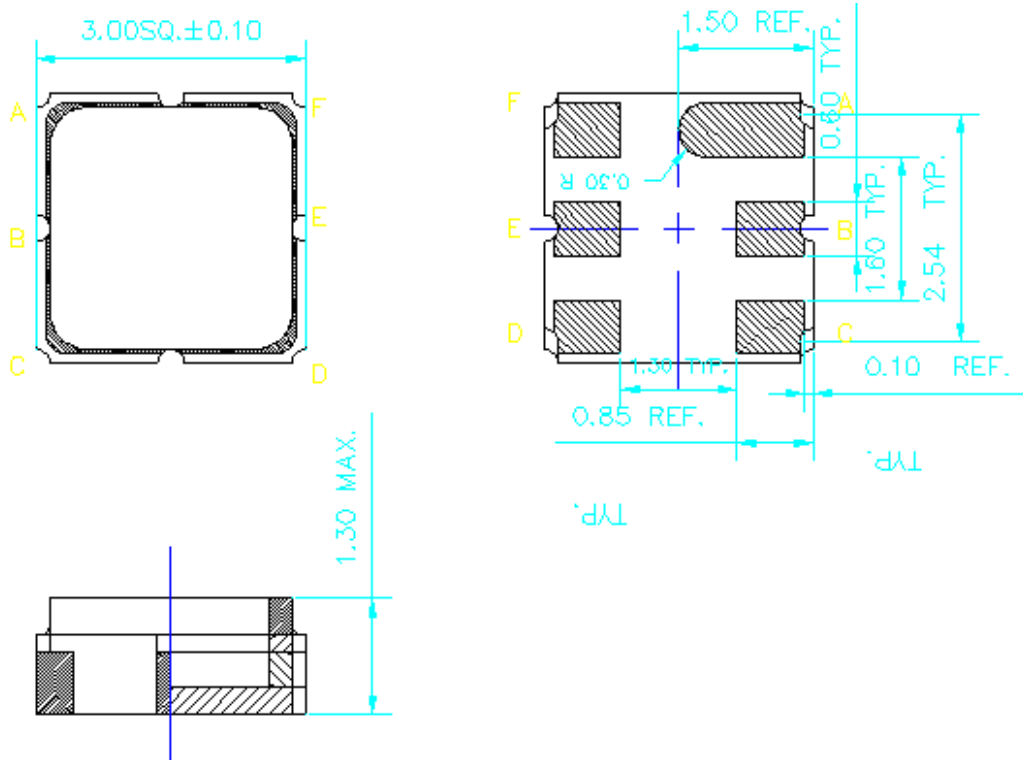
S21 response: span 1MHz ~ 2.5G MHz



**SAW Filter 314.450MHz**  
**Part No: MP06983**

**Model: TA1778A**  
**Rev No: 1**

**E. OUTLINE DRAWING:**



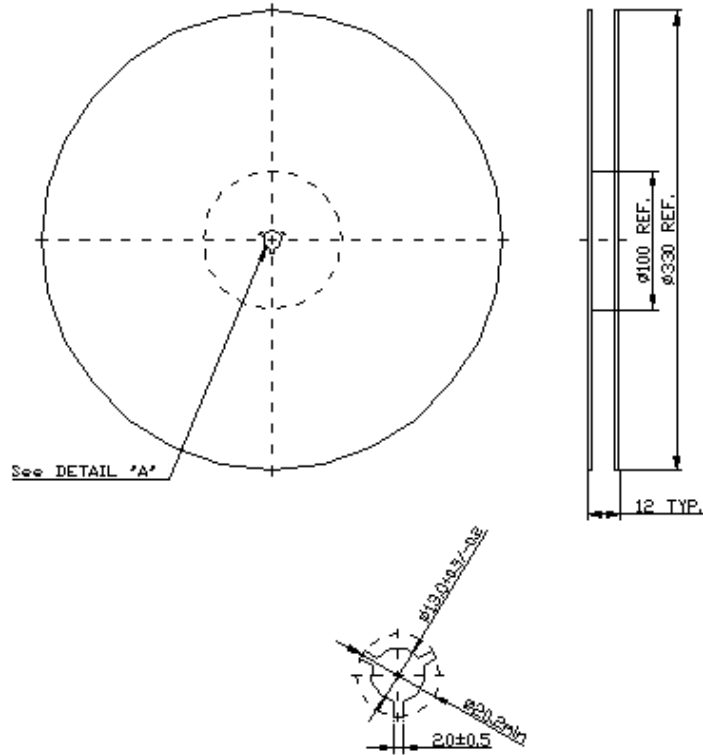
- A: Input or input ground
  - B: Input or input ground
  - D: Output or output ground
  - E: Output or output ground
  - C, F: Ground
- Unit: mm

**SAW Filter 314.450MHz**  
**Part No: MP06983**

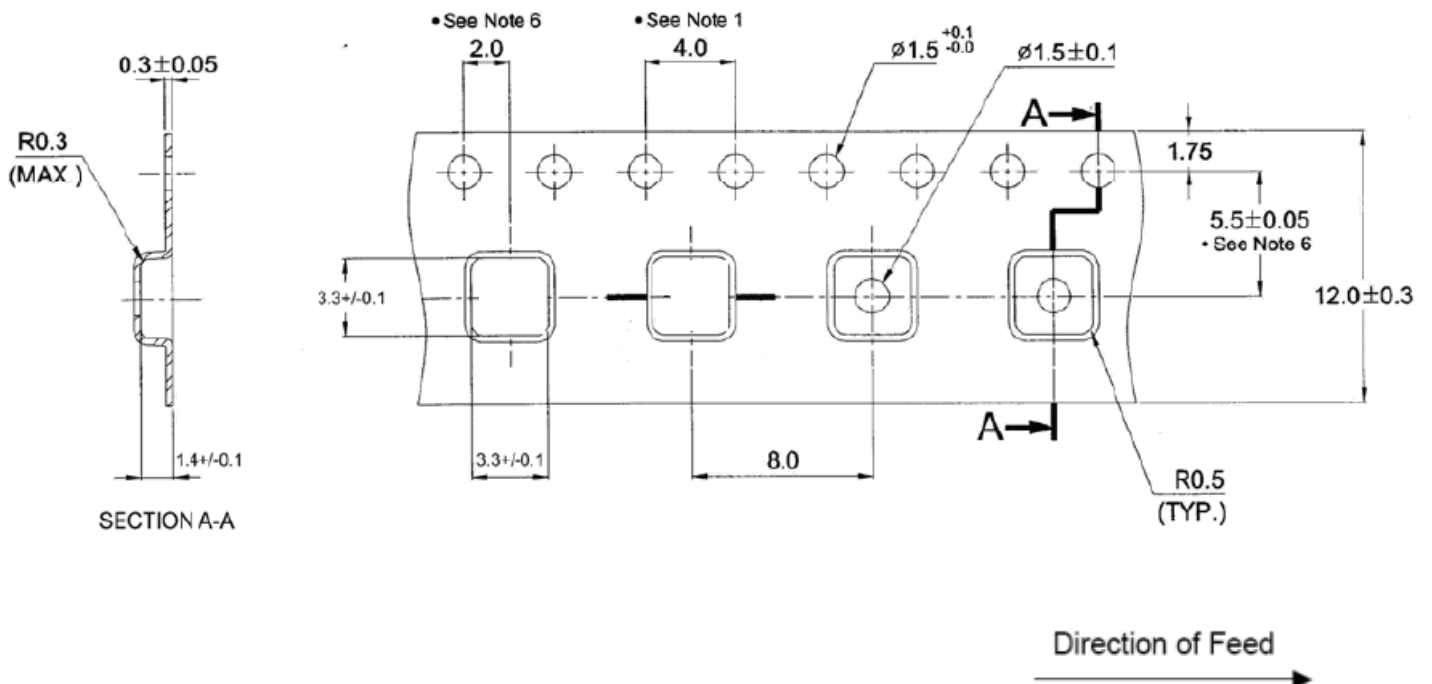
**Model: TA1778A**  
**Rev No: 1**

**F. PACKING:**

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



2. Tape Dimension



**SAW Filter 314.450MHz**  
**Part No: MP06983**

**Model: TA1778A**  
**Rev No: 1**

**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.

