

**SAW Filter 433.920MHz**

**Model: TA1783A**

**Part No: MP06988**

**Rev No: 1**

**A. MAXIMUM RATING:**

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	-	433.92	-
Minimum Insertion Loss IL min				
Incl. Loss in matching elements (433.385 ~ 434.455MHz)	dB		3.0	3.5
Excl. Loss in matching elements (433.385 ~ 434.455 MHz)	dB		2.0	2.5
Pass Band (Relative to IL min)				
433.385 ~ 434.455MHz 1			1.3	2.8
433.37 ~ 434.47MHz 2			1.5	3.3
Relative Attenuation (Relative to IL min)				
10 ~ 350MHz	dB	50	55	
350 ~ 414MHz	dB	30	35	
414 ~ 425MHz	dB	30	35	
425 ~ 432.52MHz	dB	13	17	
435.92 ~ 436.8MHz	dB	13	17	
436.8 ~ 438MHz	dB	22	27	
438 ~ 330MHz	dB	25	30	
330 ~ 446MHz	dB	25	30	
446 ~ 455MHz	dB	25	30	
455 ~ 480MHz	dB	28	33	
480 ~ 800MHz	dB	40	45	
800 ~ 1700MHz	dB	52	57	
1700 ~ 2500MHz	dB	42	47	
Package size	mm	SMD 3x3		
Impedance for pass band matching3)				
Input: $Z_{IN} = L_{IN}$	nH		180	
Output: $Z_{OUT} = L_{OUT}$	nH		140	

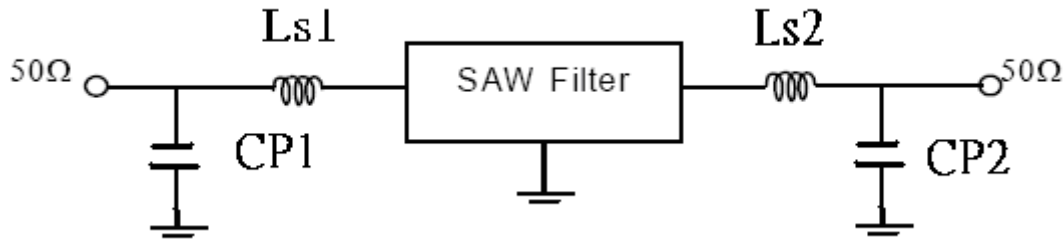
1. 433.385 ... 434.40 MHz for extended temperature range -40°C to +125°C.
2. 433.370 ... 434.415 MHz for extended temperature range -40°C to +125°C.

**SAW Filter 433.920MHz**  
**Part No: MP06988**

**Model: TA1783A**  
**Rev No: 1**

**C. TEST CIRCUIT:**

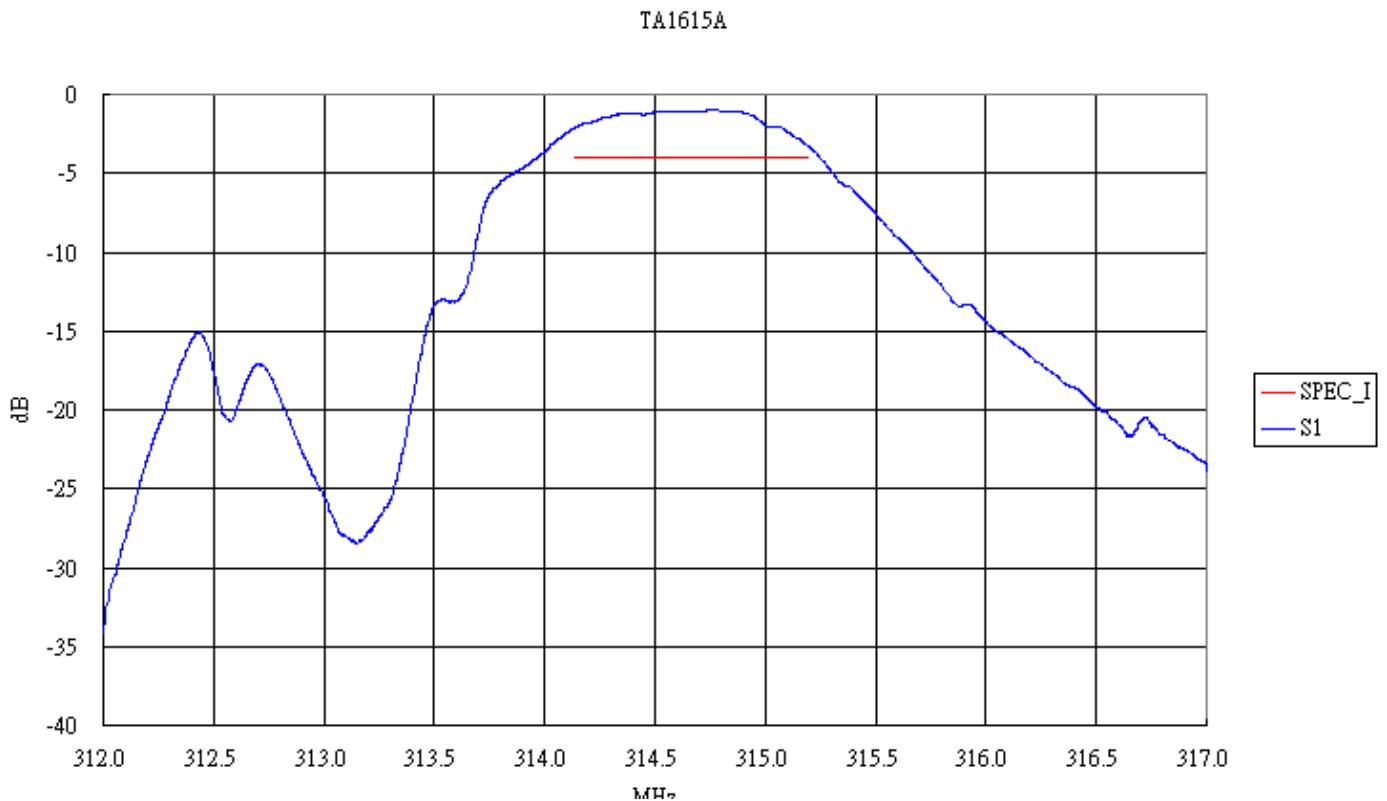
The matching circuit is



Ls1 = 56nH; Ls2 = 68nH; Cp1 = 9.0pF; Cp2 = 6pF

**D. FREQUENCY CHARACTERISTICS:**

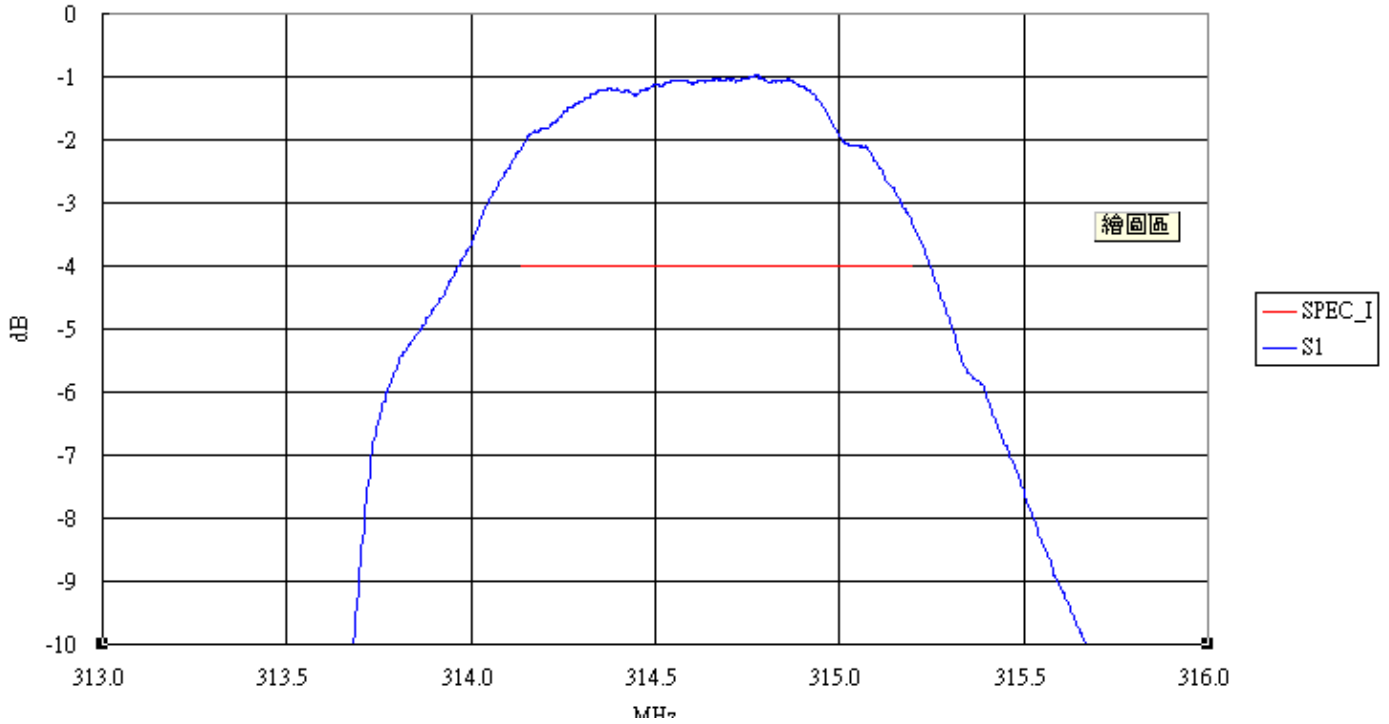
S21 response



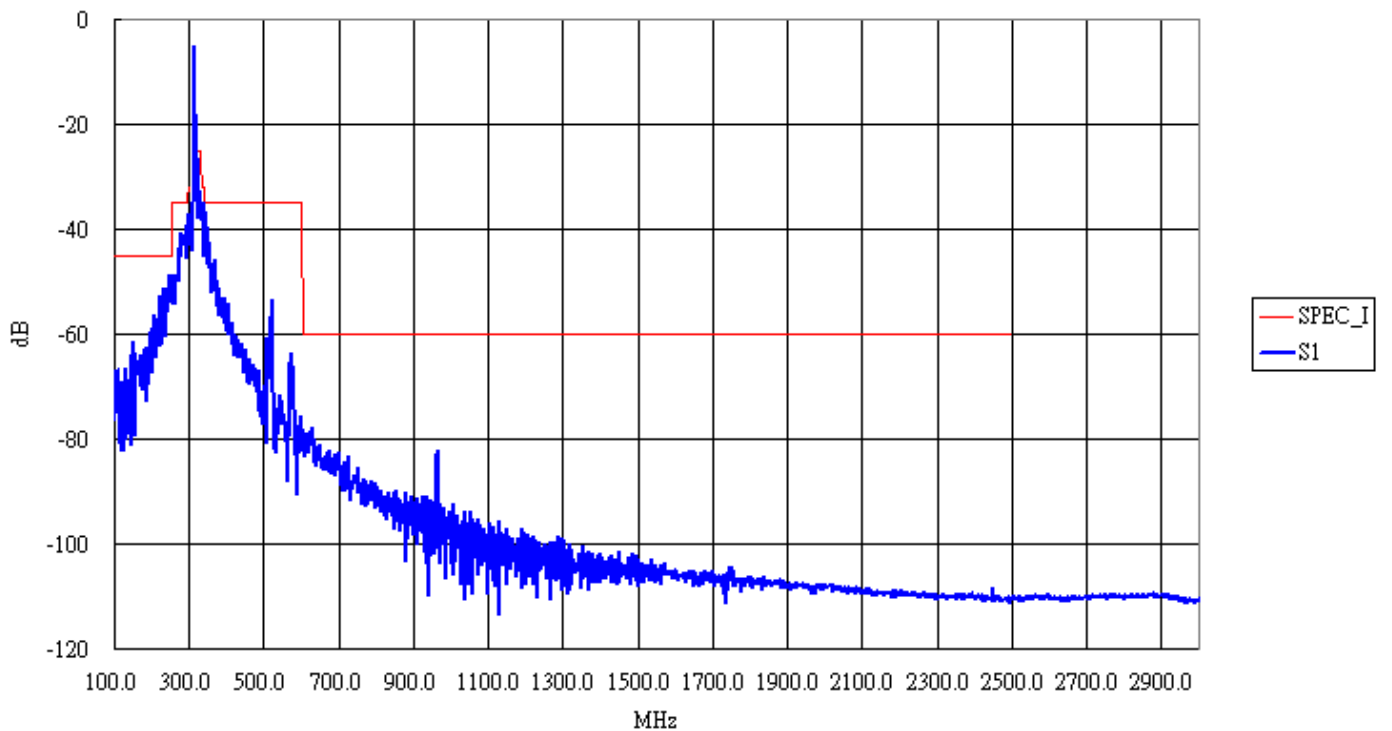
**SAW Filter 433.920MHz**  
**Part No: MP06988**

**Model: TA1783A**  
**Rev No: 1**

TA1615A



TA1615A







**SAW Filter 433.920MHz**  
**Part No: MP06988**

**Model: TA1783A**  
**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 ~ 40 sec).
4. Time: 2 times.

