

SAW Filter 433.920MHz

Model: TA1784A

Part No: MP06986

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	-	433.92	-
Minimum Insertion Loss IL min				
Incl. Loss in matching elements (433.385 ~ 434.455MHz)	dB		2.2	2.9
Excl. Loss in matching elements (433.385 ~ 434.455 MHz)	dB		1.4	2.1
Pass Band (Relative to IL min)				
433.385 ~ 434.455MHz 1			1.1	2.5
433.37 ~ 434.47MHz 2			1.3	3.0
Relative Attenuation (Relative to IL min)				
10 ~ 350MHz	dB	50	55	
350 ~ 414MHz	dB	30	35	
414 ~ 425MHz	dB	30	35	
425 ~ 432.22MHz	dB	13	17	
435.92 ~ 436.8MHz	dB	13	17	
436.8 ~ 438MHz	dB	22	27	
438 ~ 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 matching)				
Input: $Z_{IN} = Ls1/Cp1$	nH		56/9.0	
Output: $Z_{OUT} = Ls2/Cp2$	nH		68/6.0	

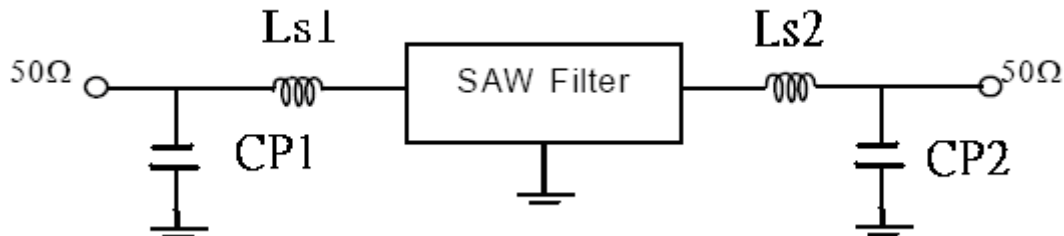
1. 433.385 ... 434.40 MHz for extended temperature range -40°C to +125°C.
2. 433.370 ... 434.415 MHz for extended temperature range -40°C to +125°C.

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C. TEST CIRCUIT:

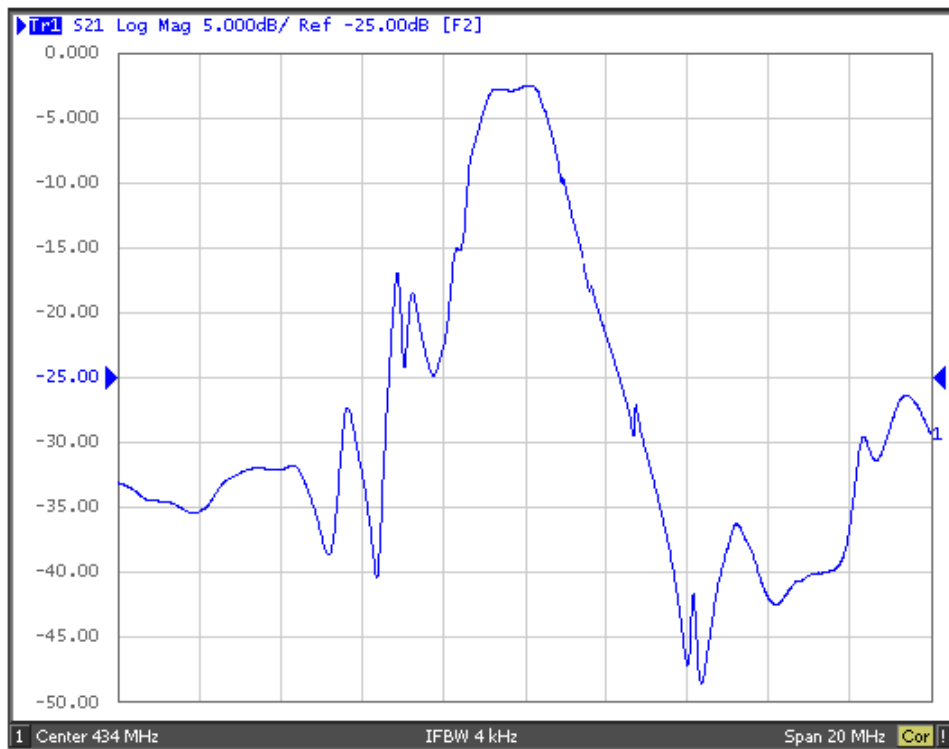
The matching circuit is



$Ls1 = 56nH$; $Ls2 = 68nH$; $Cp1 = 9.0pF$; $Cp2 = 6.0pF$

D. FREQUENCY CHARACTERISTICS:

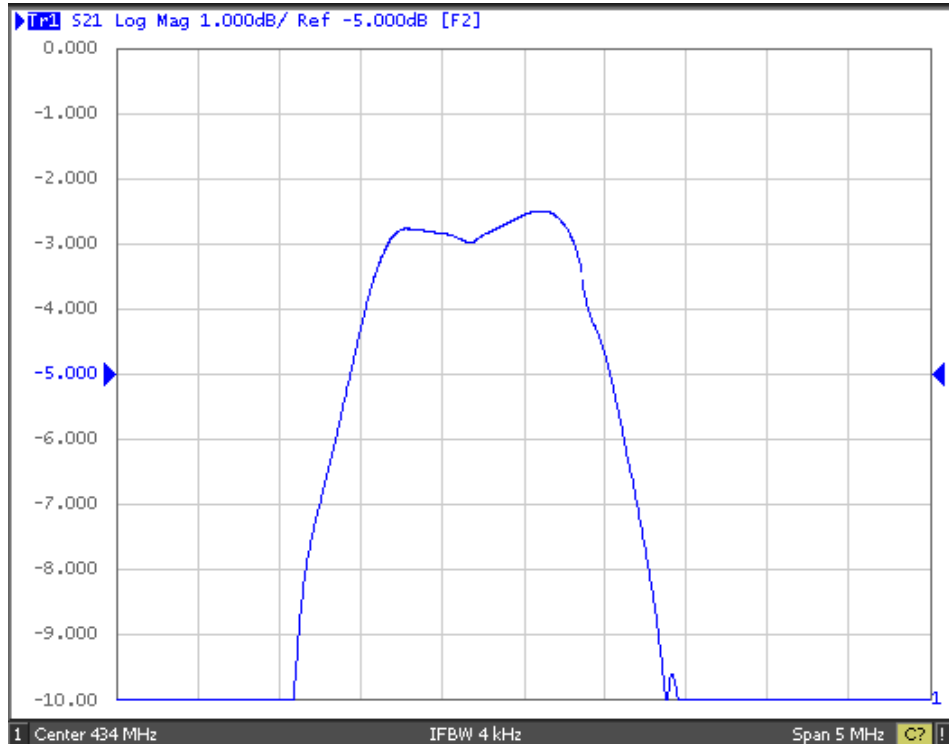
S21 response: span 20MHz



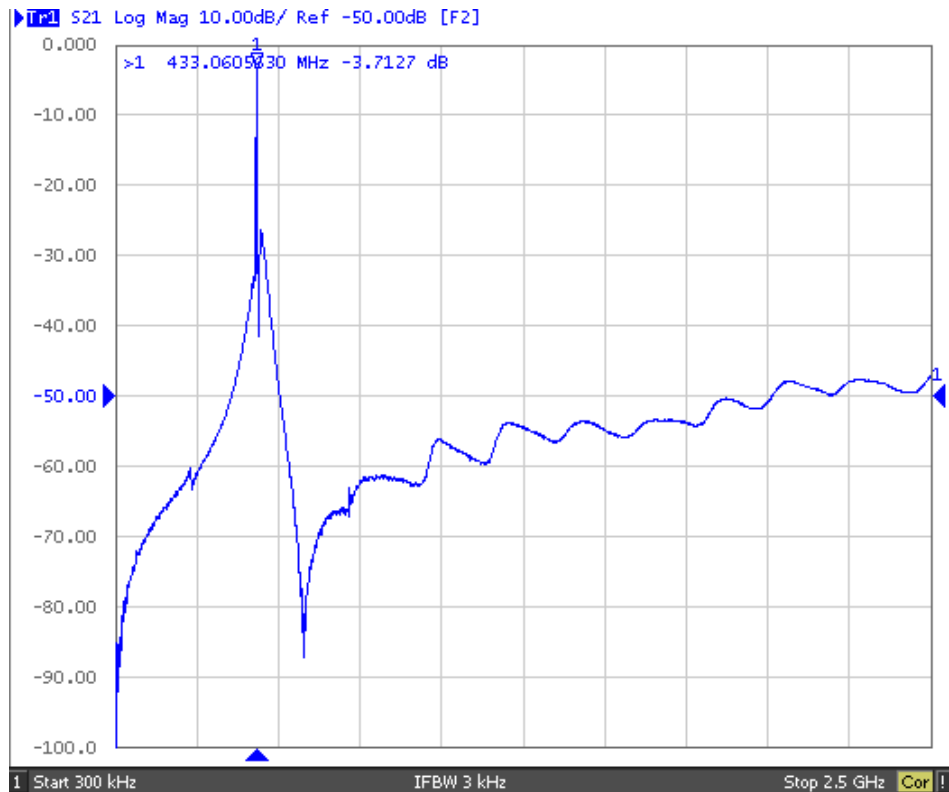
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S21 response: span 5MHz



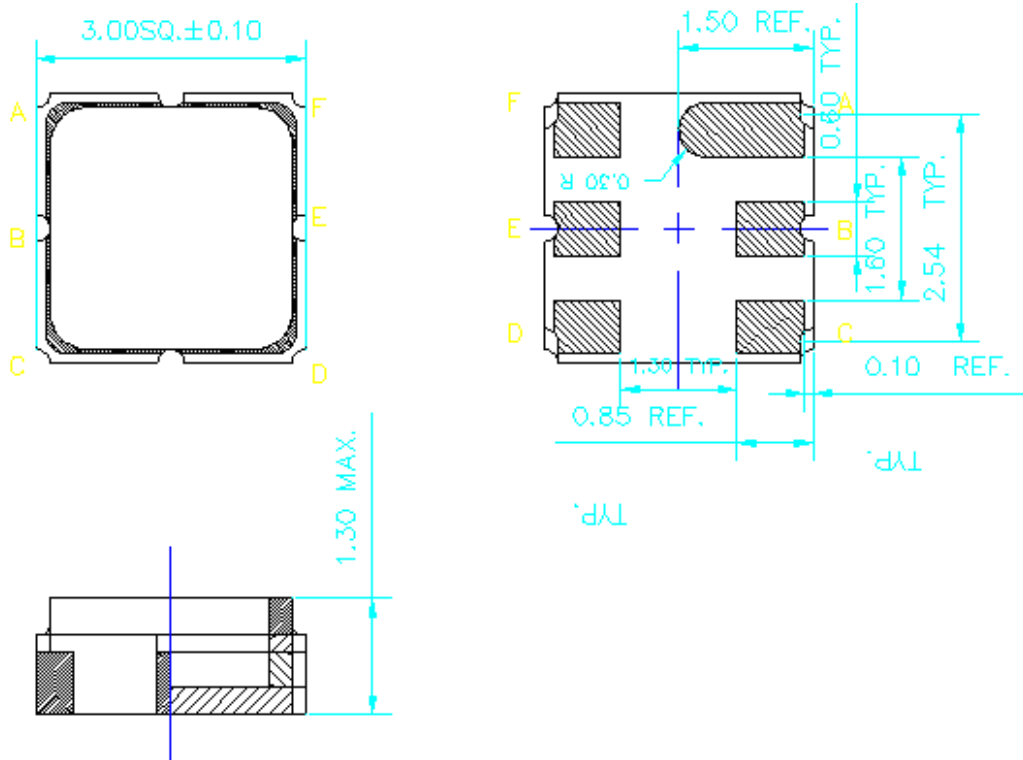
S21 response: 1MHz ~ 2.5GHz



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E. OUTLINE DRAWING:



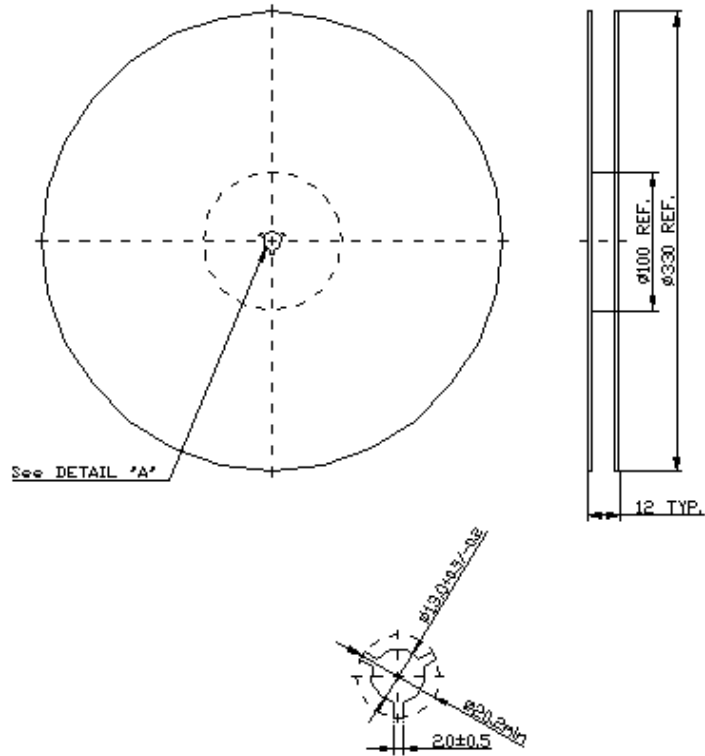
- A: Input or input ground
 - B: Input or input ground
 - D: Output or output ground
 - E: Output or output ground
 - C, F: Ground
- Unit: mm

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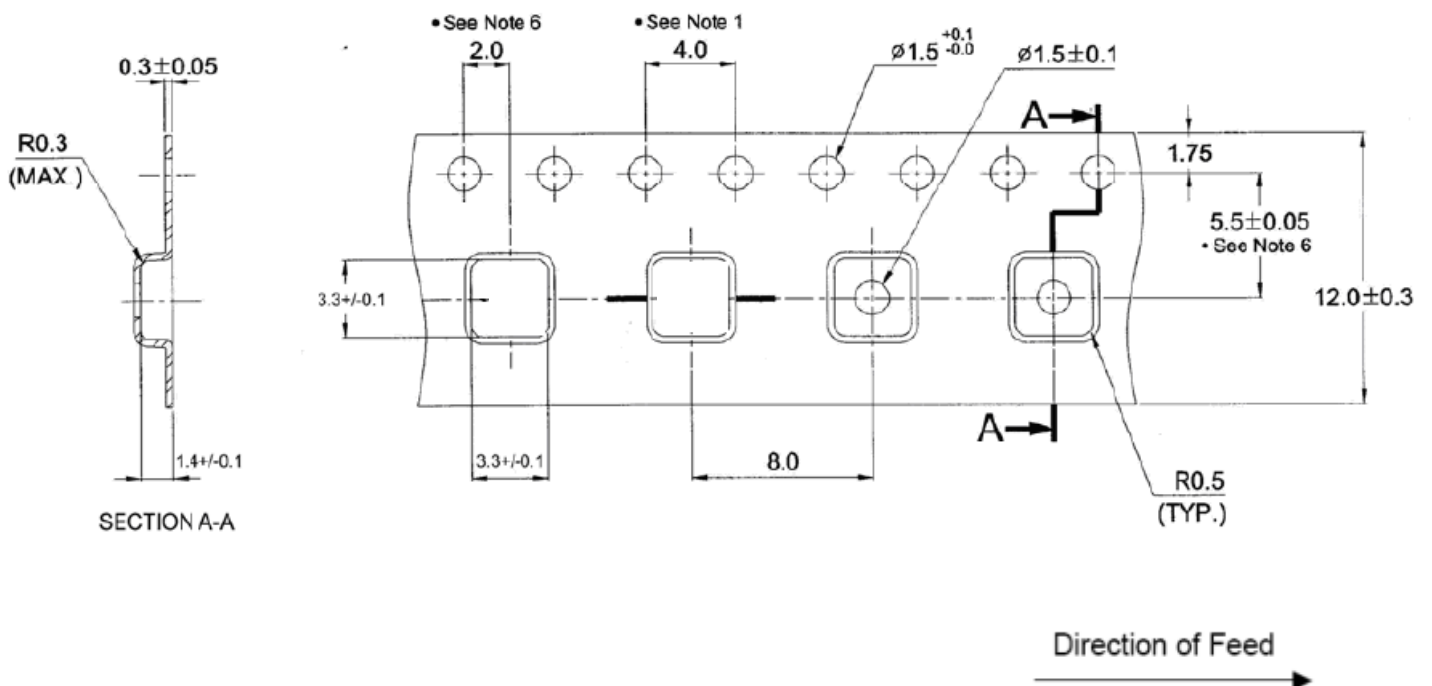
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F. PACKING:

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.

