

SAW Filter 434.70MHz
Part No: MP07646

Model: TA1820A
Rev No: 2

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
5. Moisture Sensitivity Level: Level 1(MSL1)

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	-	434.7	-
Minimum Insertion Loss α min				
Incl. Loss in matching elements (434.165 ~ 435.235MHz)	dB		2.2	2.9
Excl. Loss in matching elements(434.165 ~ 435.235MHz)	dB		1.4	2.1
Pass Band (Relative to α min)				
434.165 ~ 435.235MHz ¹			1.1	2.5
434.15 ~ 435.25MHz ²			1.3	3.0
Relative Attenuation (Relative to α min) α rel				
10 ~ 350MHz	dB	50	55	
350 ~ 414MHz	dB	30	35	
414 ~ 425MHz	dB	30	35	
425 ~ 433MHz	dB	13	17	
436.7 ~ 437.3MHz	dB	13	17	
437.3 ~ 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	82/8.2		
Output: $Z_{OUT} = Ls2/Cp2$	nH	68/1		

1. 433.913 . 434.928MHz for extended temperature range -40°C to +125°C.

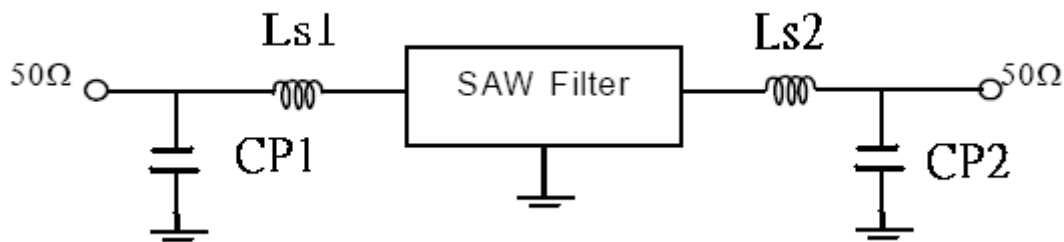
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2. 433.898 . 434.943MHz for extended temperature range -40°C to +125°C.
0805 Coilcraft CS series chip conductor is used for inductor.
0402 muRata GRM series is used for capacitor.

C. TEST CIRCUIT:

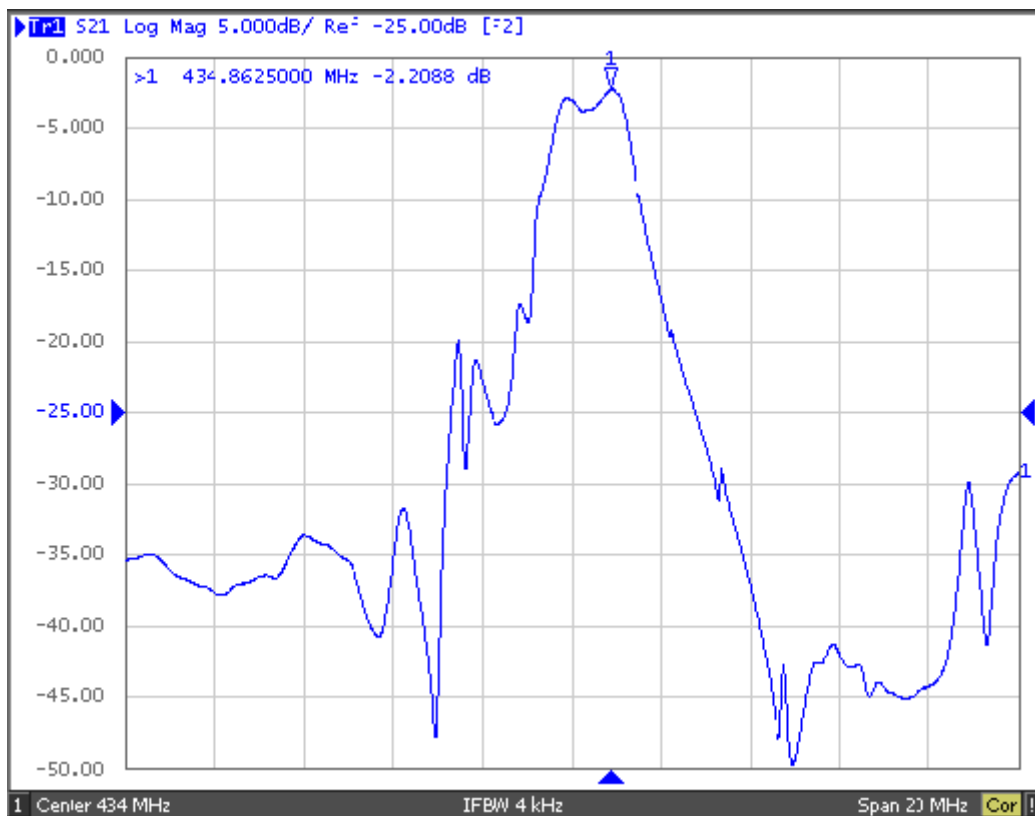
The matching circuit is



Ls1=82nH, Ls2=68nH, Cp1=8.2 pF, Cp2=1pF

D. FREQUENCY CHARACTERISTICS:

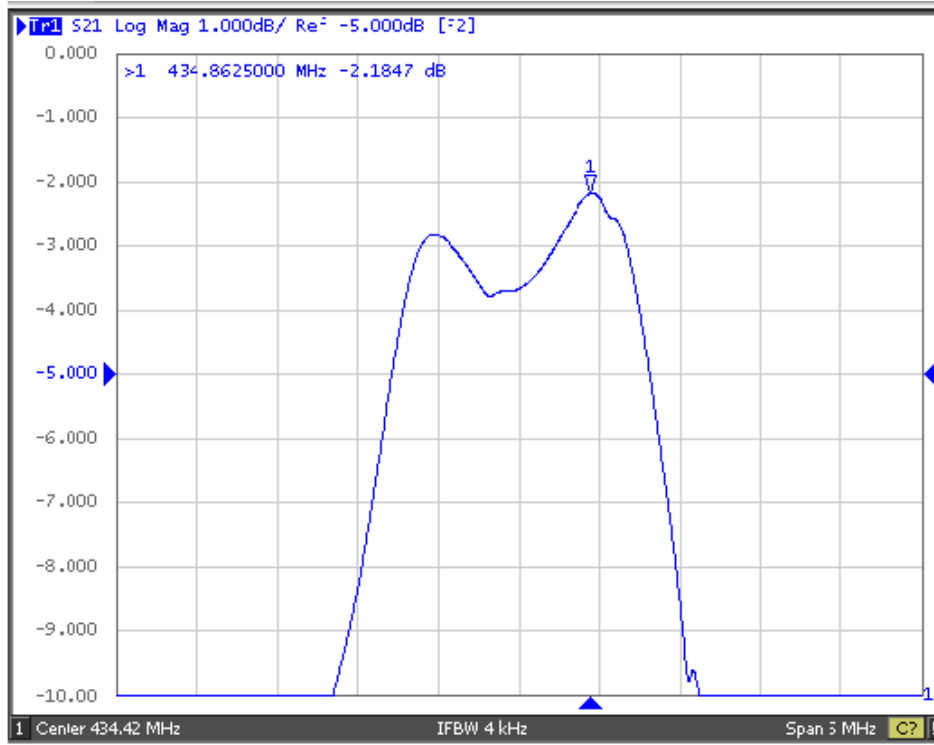
1. S21 response: span 20MHz



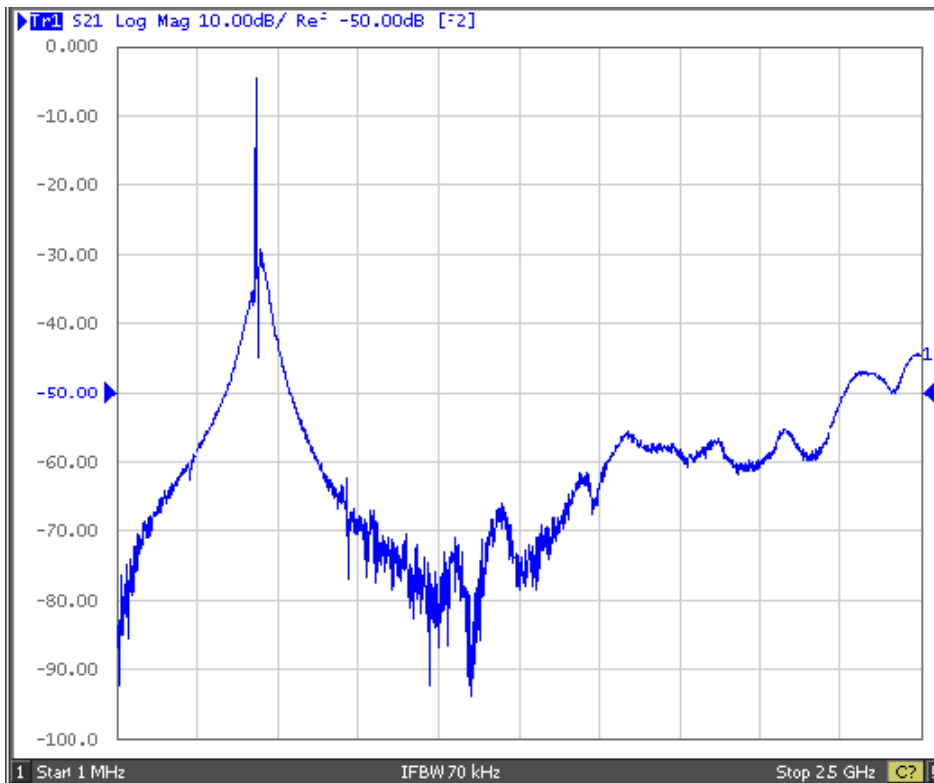
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2. S21 response: span 5MHz



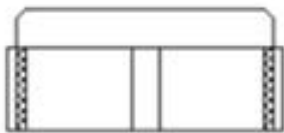
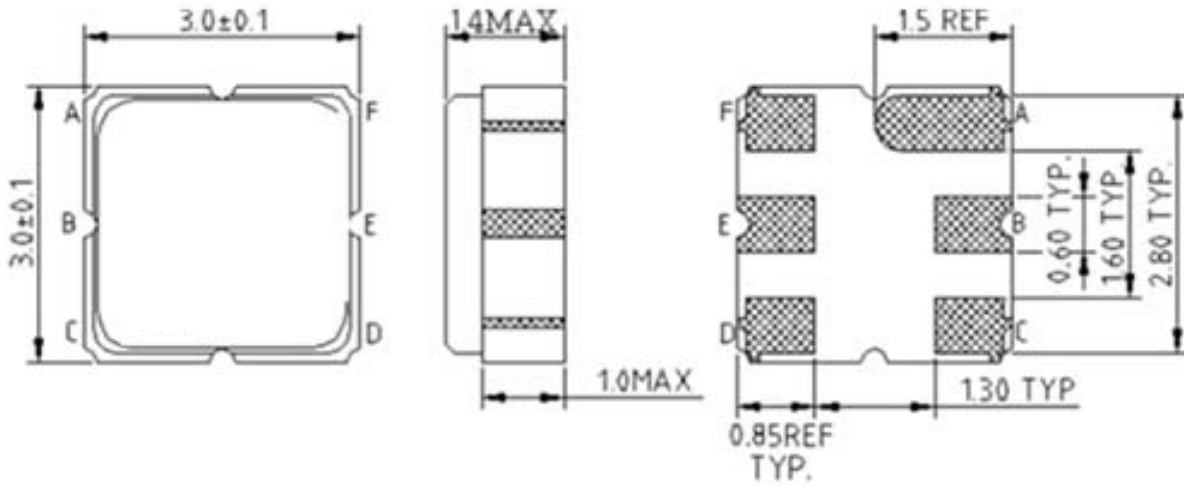
3. S21 response: 1MHz ~ 2.5GHz



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E. OUTLINE DRAWING:



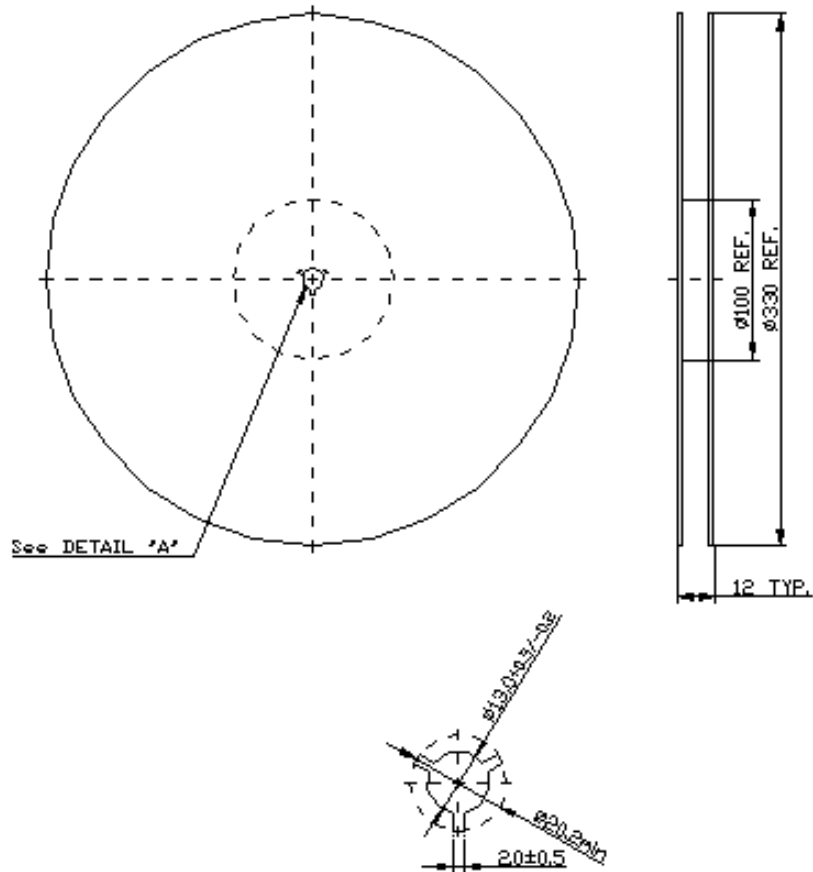
- #B: Input
- #E: Output
- # A.C.D.F Ground
- △: Year code (ex 2008→8)
- : Date code
- Unit: mm

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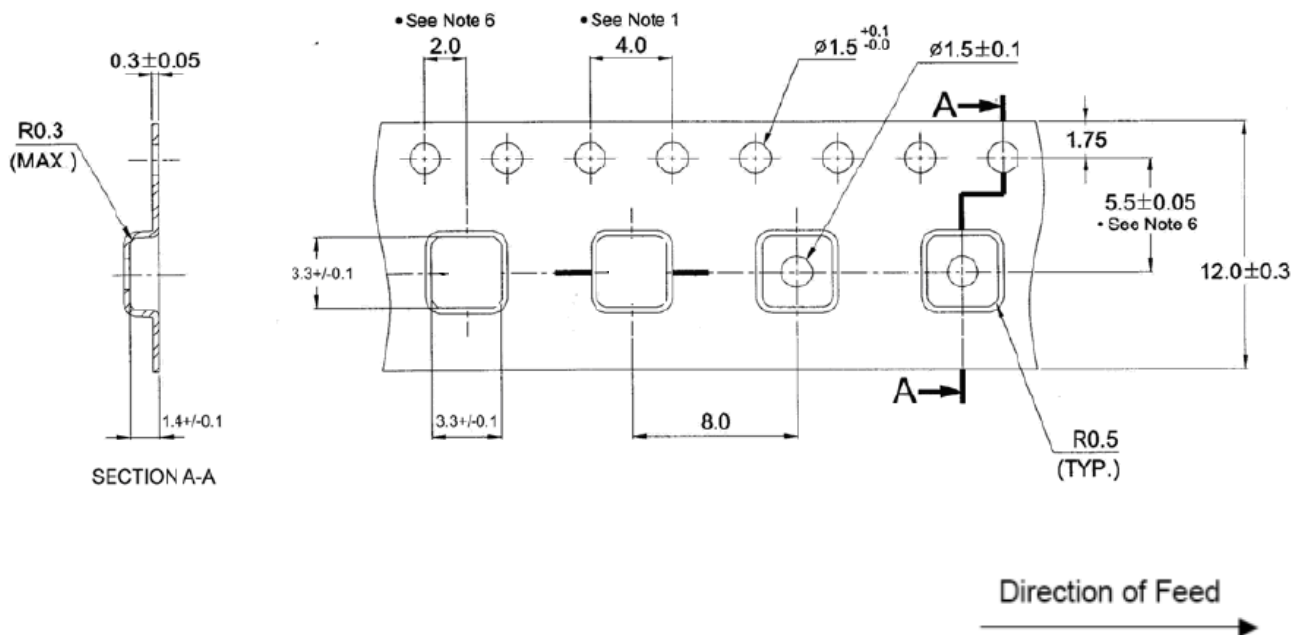
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F. PACKING:

1. Reel Dimensions



2. Tape Dimensions



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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.

