

SAW Filter 458.88750MHz
Part No: MP06041

Model: TA1959A
Rev No: 2

A. MAXIMUM RATING:

Electrostatic Sensitive Device (ESD)

1. Input Power Level: 10dBm
2. DC Voltage: 3V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°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	Type.	Max
Center Frequency Fc	MHz	-	458.8875	-
Maximum Insertion Loss (458.5 ~ 459.275MHz)	dB		3.0	4.0
Amplitude Ripple (458.5 ~ 459.275MHz)	dB		1.2	2.0
2dB Bandwidth	MHz	0.775	1.500	
Attenuation (Reference level from IL min)				
10 ~ 135.9MHz	dB	40	65	
135.9 ~ 446.5MHz	dB	30	40	
446.5 ~ 457MHz	dB	10	13	
460.5 ~ 469.8MHz	dB	10	15	
469.8 ~ 515MHz	dB	22	30	
515 ~ 1000MHz	dB	40	44	
Temperature	ppm /k2		-0.036	
Impedance (By NA simulation)				
Input: $Z_{IN} = Ls1 / Cp1$	nH/pF		90/5	
Output: $Z_{OUT} = Ls2 / Cp2$	nH/pF		88/5	

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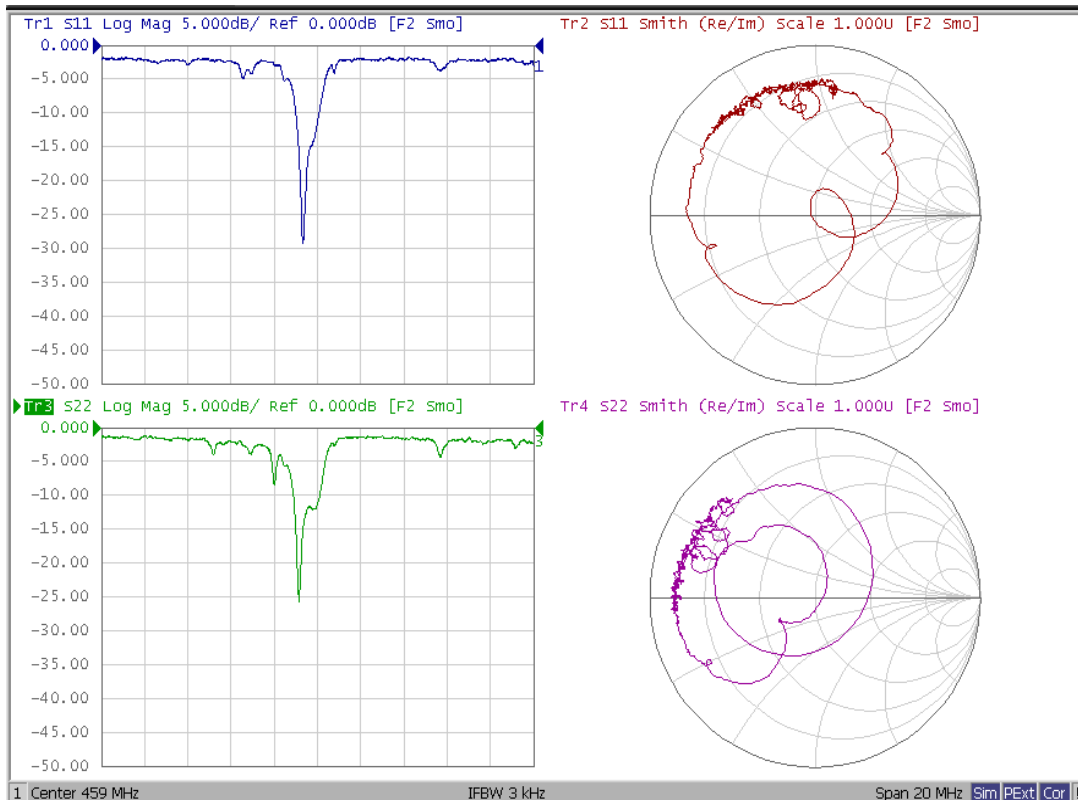
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C. FREQUENCY CHARACTERISTICS:

1. Center 460MHz, Span 20MHz



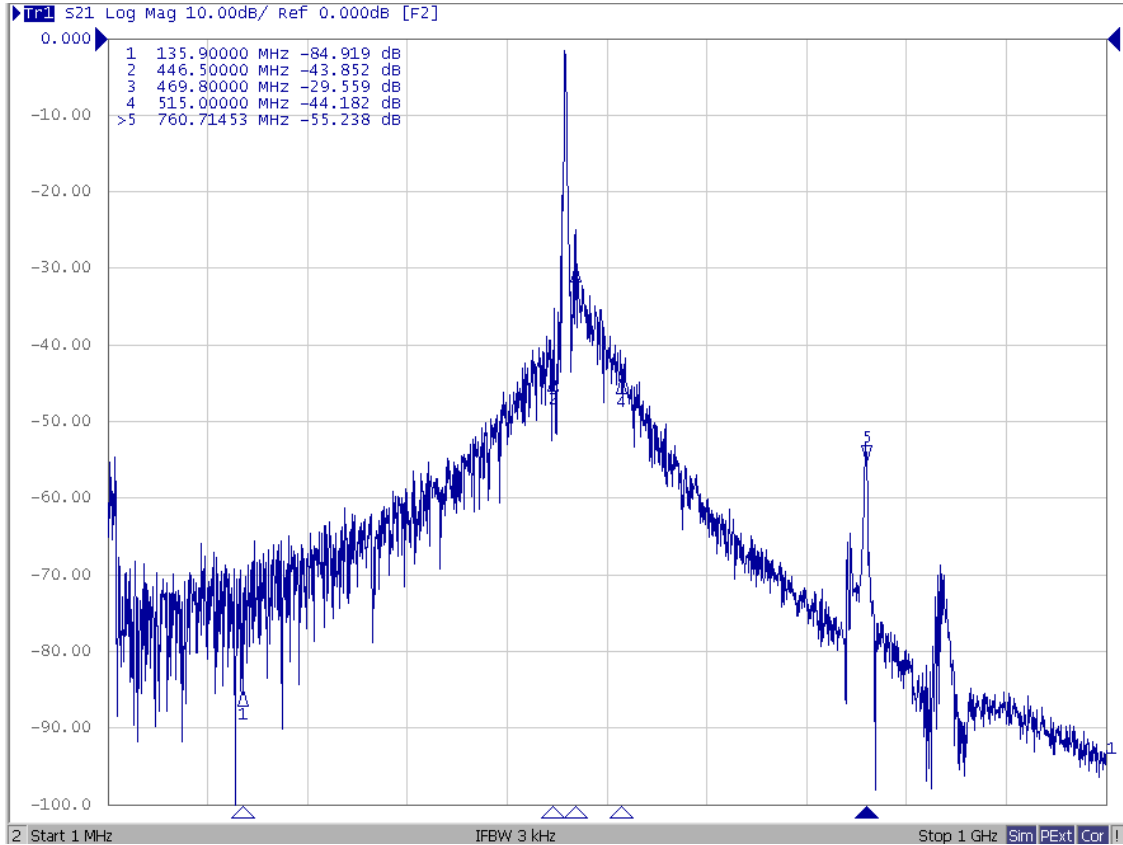
2. Reflection Characteristics



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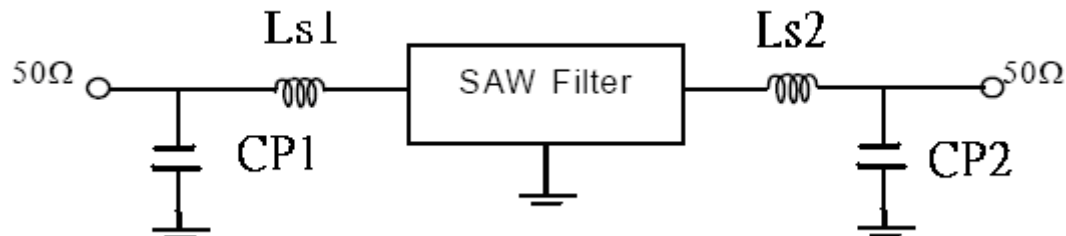
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3. 1MHz ~ 2000MHz



D: TEST CIRCUIT:

The matching circuit is

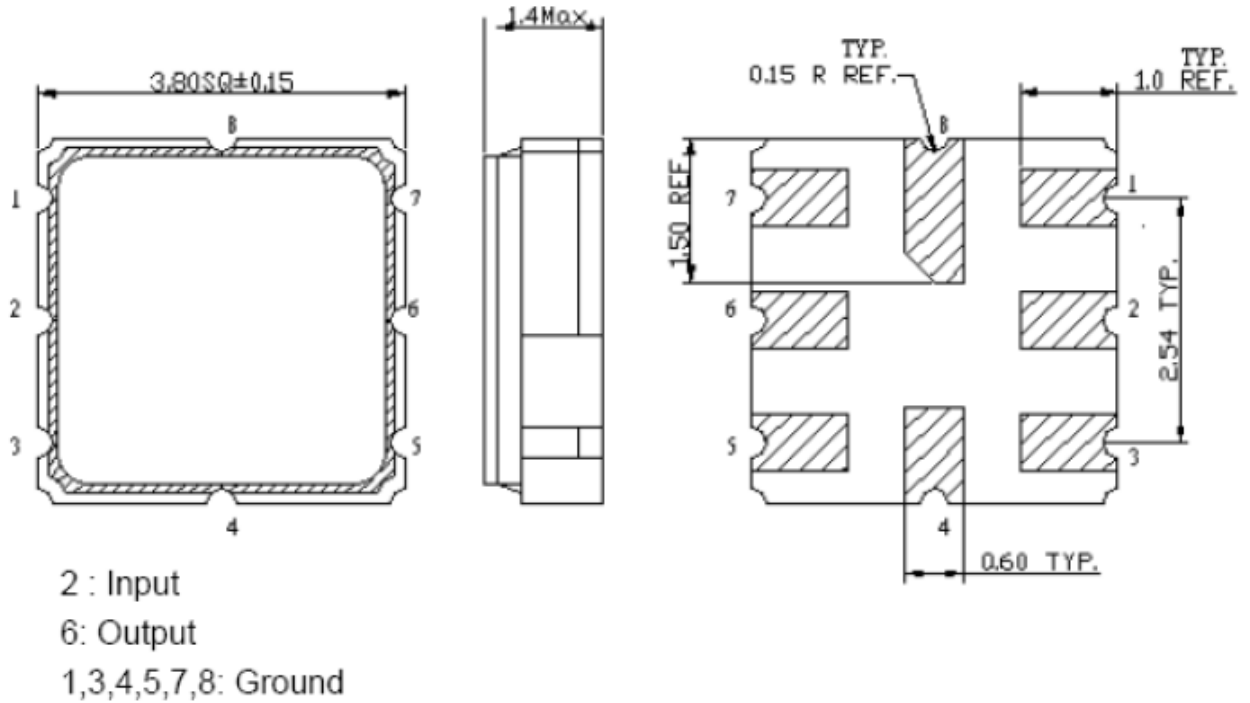


$Ls1 = 90\text{nH}$, $Ls2 = 88\text{nH}$, $Cp1 = 5\text{pF}$, $Cp2 = 5\text{pF}$

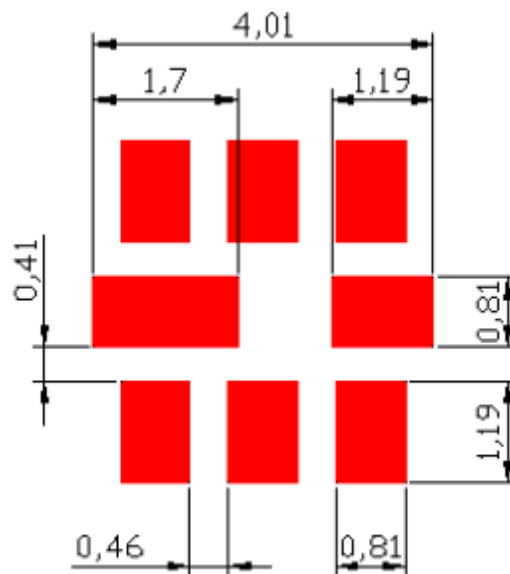
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E. OUTLINE DRAWING:



F. PCB FOOTPRINT:



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H. 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.

