

SAW Filter 118.30MHz

Model: TB1202A

Part No: MP07282

Rev No: 1

A. MAXIMUM RATINGS:

Electrostatic Sensitive Device

1. Operating Temperature: -30°C to 85°C
2. Storage Temperature: -40°C to 85°C
3. Input Power: 10dBm
4. DC Voltage: 5V
5. Implementation of IIP3: 28dBm min.

B. ELECTRICAL CHARACTERISTICS:

Characteristics	Min.	Typ.	Max.
Center frequency Fc MHz	-	118.3	-
Insertion Loss at Fo MHz	-	6.9	8.5
-1dB Bandwidth kHz	-	128	-
-3dB Bandwidth kHz	150	237	-
Passband Ripple (Fo ± 30kHz) dB	-	0.2	1
Group Delay variation (Fo ± 12.5kHz) usec	-	0.2	1
Group Delay variation (Fo ± 75kHz) usec	-	0.5	4
Relative Attenuation dB			
Fc ± 200kHz ~ Fc ± 400kHz	5	9	-
Fc ± 400kHz ~ Fc ± 600kHz	10	36	-
Fc ± 600kHz ~ Fc ± 1.0MHz	15	34	-
Fc ± 1.0MHz ~ Fc ± 3.0MHz	30	35	-
Fc ± 3.0MHz ~ Fc ± 15.0MHz	37	41	-
Fc ± 15.0MHz ~ Fc ± 80.0MHz	45	50	-
Temperature Coefficient ppm/°C2		-0.036	
Source Impedance (Differential) Ω	-	200	-
Load Impedance (Differential) Ω	-	200	-

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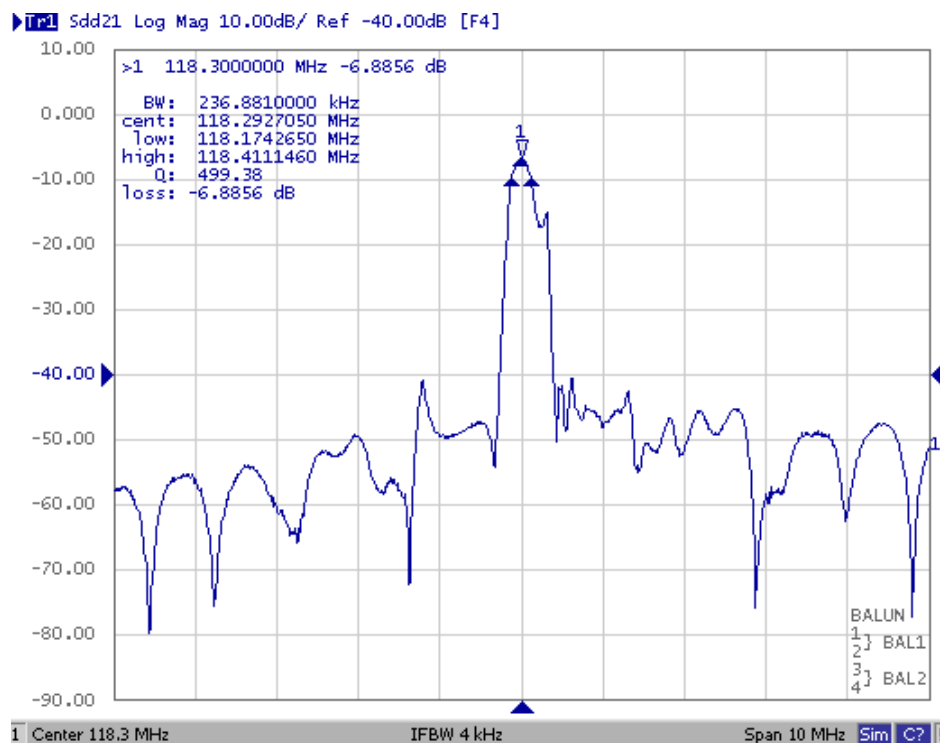
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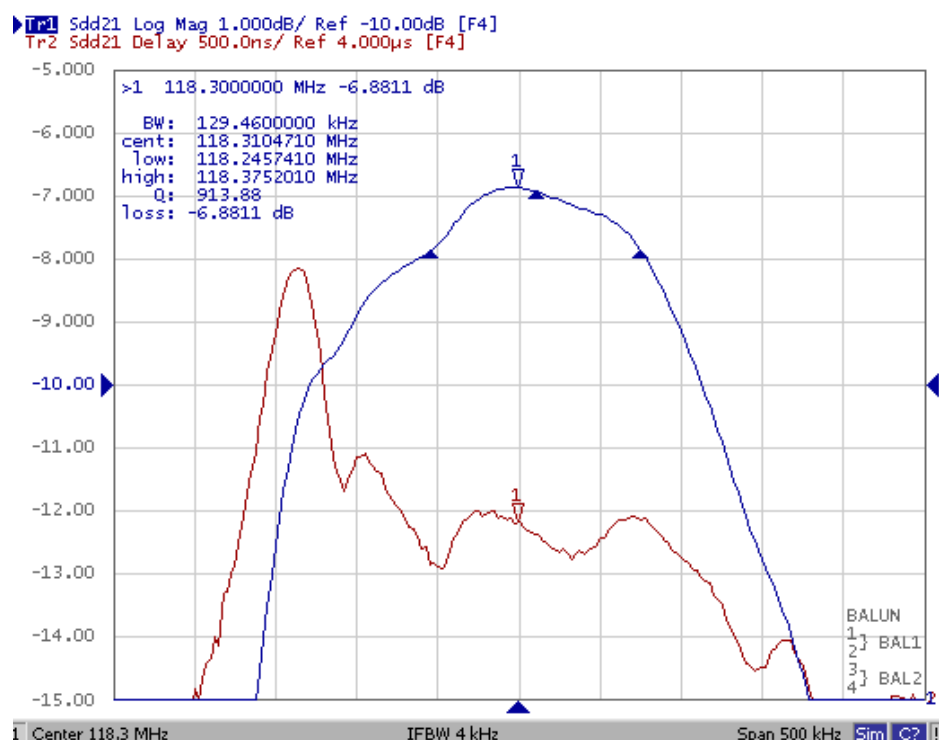
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C. FREQUENCY CHARACTERISTICS:

1. Narrow Band Response:



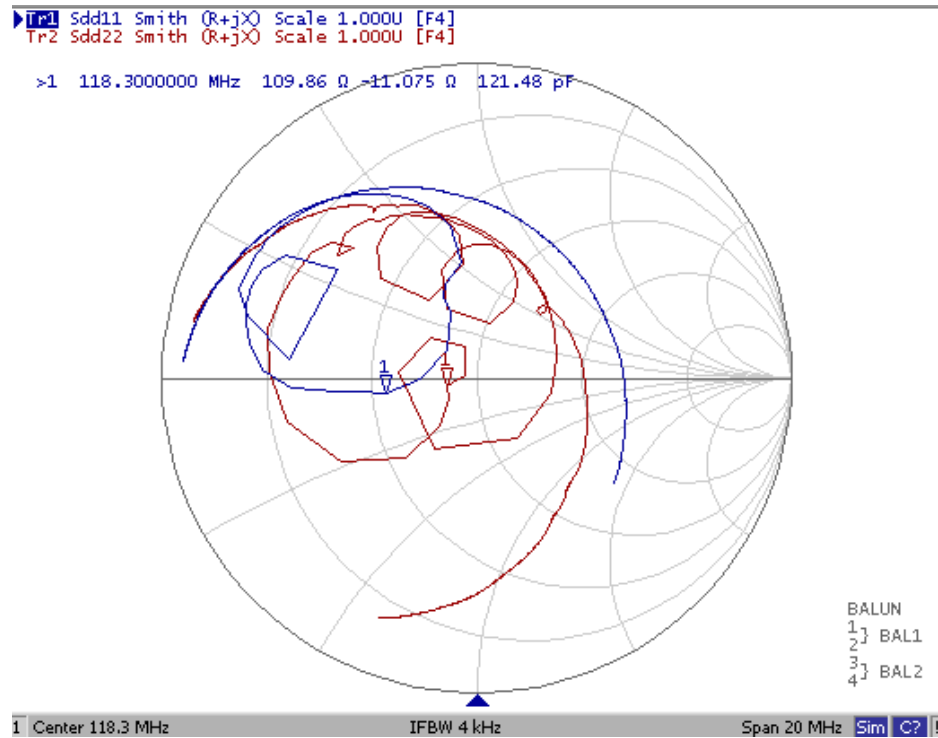
2. Pass Band Response and Group Time Delay Response:



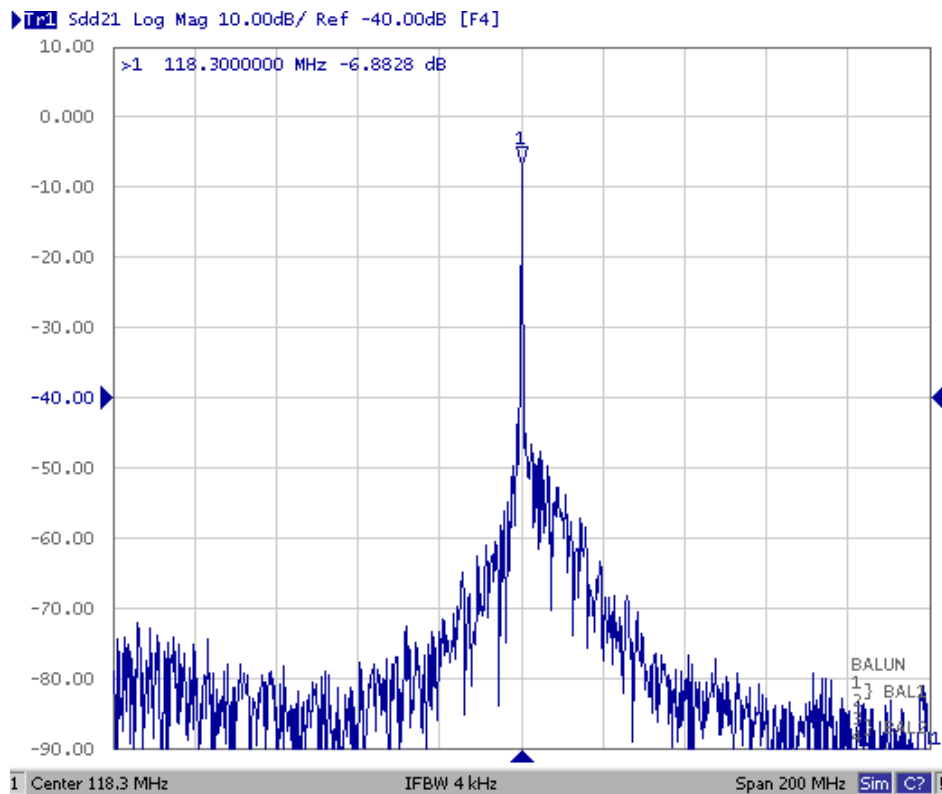
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3. Smith Chart:



4. Wide Band Response:



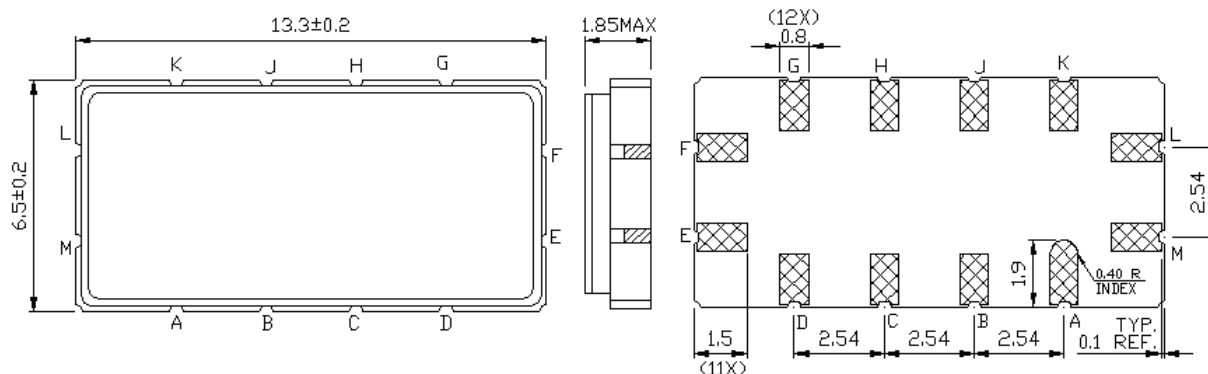
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D. OUTLINE DRAWING:



L: Input

M: Balanced Input

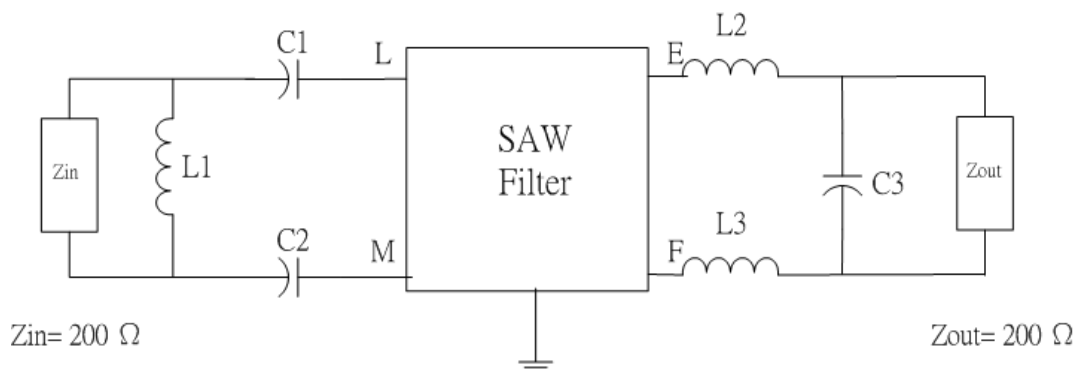
E: Output

F: Balanced Output

A, B, C, D, G, H, I, J: Ground

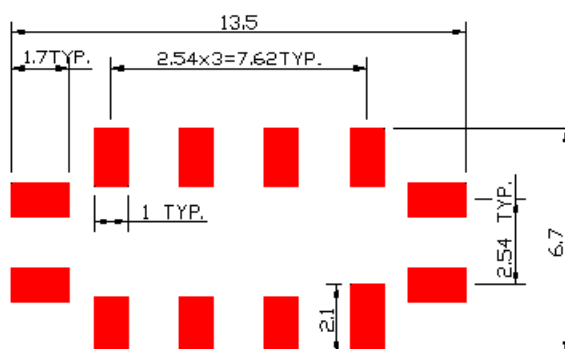
Unit: mm

E. MATCHING CIRCUIT:



$$L1 = L2 = 150\text{nH} + 15\text{nH} \quad L3 = L4 = 120\text{nH} + 15\text{nH} \quad C1 = 18\text{pF} \quad C2 = 24\text{pF}$$

F. PCB FOOTPRINT:



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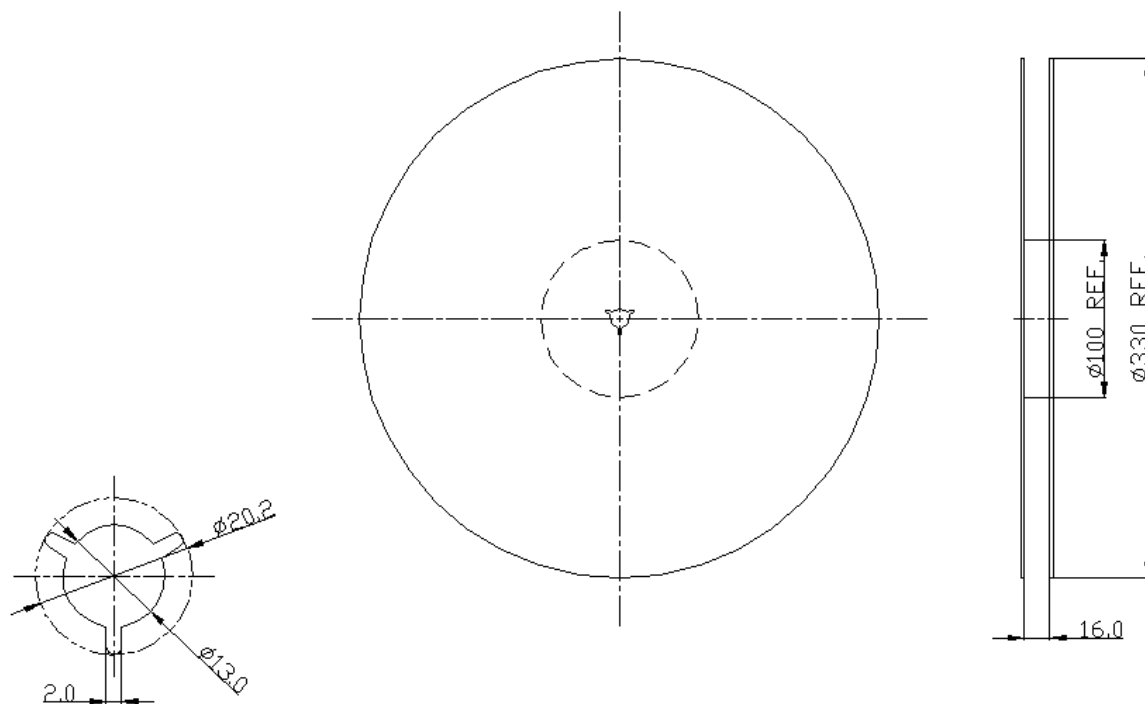
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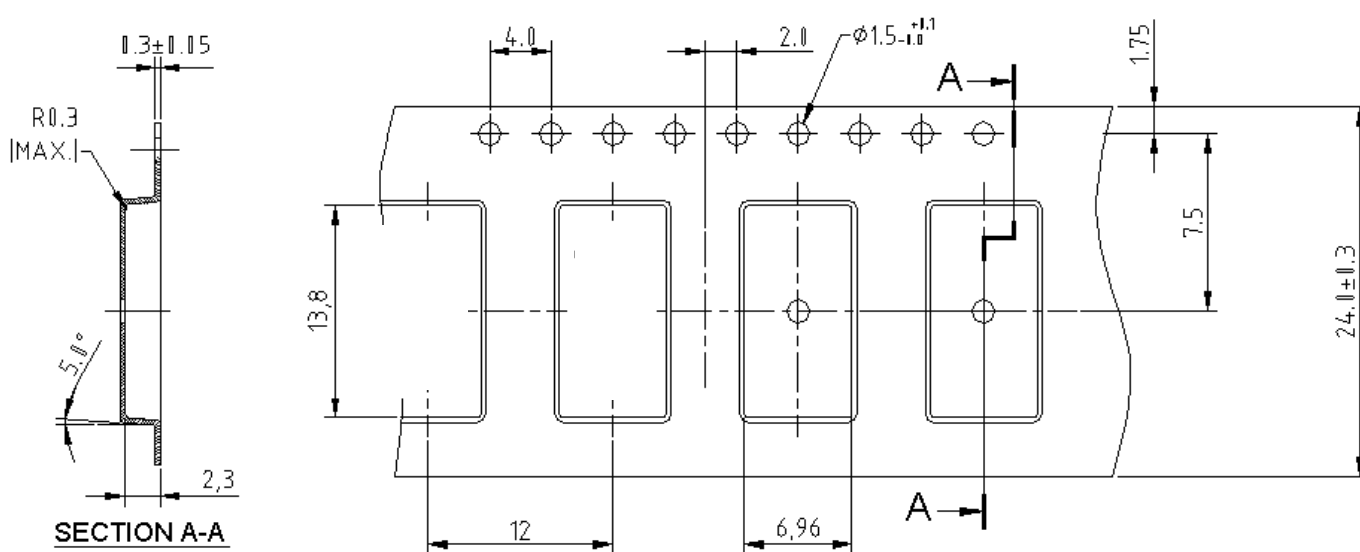
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G. PACKING:

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



2. Tape Dimension



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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.

