

70.0MHz IF SAW Filter
Part No: MA09580

Model: TB0460A
Rev No: 2

A. MAXIMUM RATING:

Electrostatic Sensitive Device

1. Operating Temperature: -30°C ~ 80°C
2. Storage Temperature: -40°C ~ +85°C
3. Input Power Level: 10dBm
4. Moisture Sensitivity Level: Level 1 (MSL1)

B. CHARACTERISTICS:

Ambient Temperature: 25°C

Single 50ohm

Characteristics	Min.	Typ.	Max.	Note
Center frequency Fc MHz	69.8	70	70.2	-
Minimum Insertion loss IL dB	-	11.5	13.0	-
1dB Bandwidth MHz	-	11.77	-	-
3dB Bandwidth MHz	-	12.77	-	-
40dB Bandwidth MHz	-	16.00	18.25	-
Passband Ripple (Fc ±5MHz) dB	-	0.46	1.00	-
Group Delay Ripple (Fc ±5MHz) nsec	-	30	90	-
Triple transit suppression dB	40	49		
Phase linearity (Fc ±5MHz) (p-p) deg	-	5	11	-
Attenuation: (Reference level from minimum insertion loss) dB				
Fc ±15MHz, Fc ±30MHz dB	36	53	-	-
Temp Coefficient ppm/°C		-94	-	-

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TB0460A differential 200ohm

Characteristics	Min.	Typ.	Max.	Note
Center frequency Fc MHz	69.8	70	70.2	-
Minimum Insertion loss IL dB		11.3	13	-
1dB Bandwidth MHz		11.89		-
3dB Bandwidth MHz		12.64		-
40dB Bandwidth MHz		15.94	18.25	-
Passband Ripple (Fc ±5MHz) dB		0.8	1.2	-
Group Delay Ripple (Fc ±5MHz) nsec		97	150	-
Triple transit suppression dB	40	49		
Phase linearity (Fc ±5MHz) (p-p) deg		5	11	-
Attenuation: (Reference level from minimum insertion loss) dB				
Fc ±15 MHz, Fc ±30MHz dB	36	53	-	-
Temp Coefficient ppm/°C		-94	-	-

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C. FREQUENCY CHARACTERISTICS:

Single 50ohm

1. S21 Response

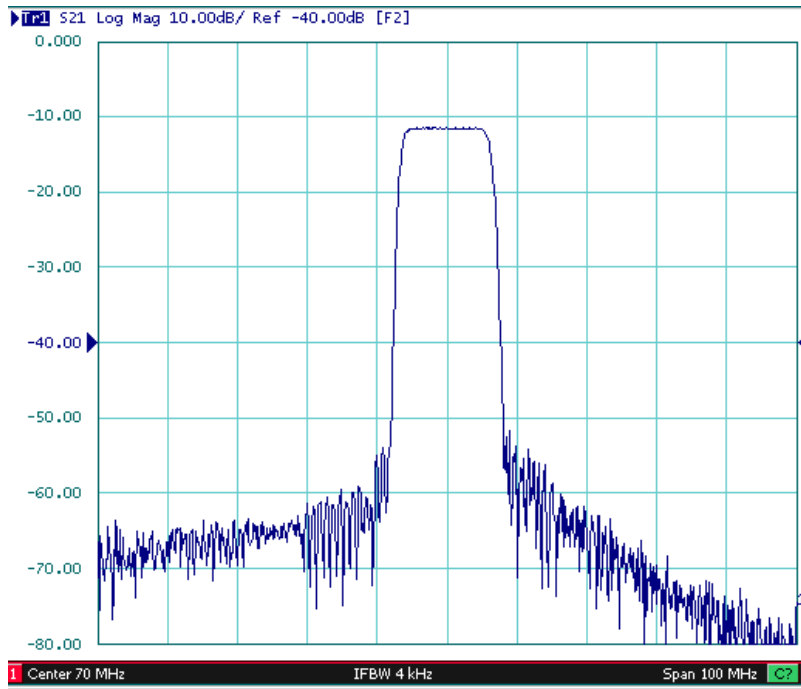


Fig.1 Horizontal: 10MHz/Div, Vertical: 10dB/Div

2. Passband Ripple

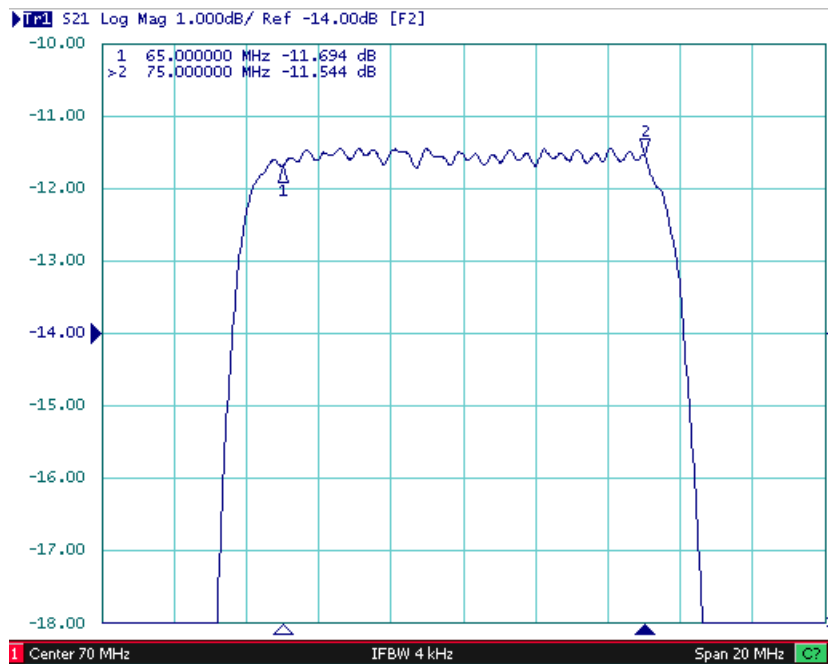


Fig.2 Horizontal: 2 MHz/Div, Vertical: 1dB/Div

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3. Group Delay Ripple

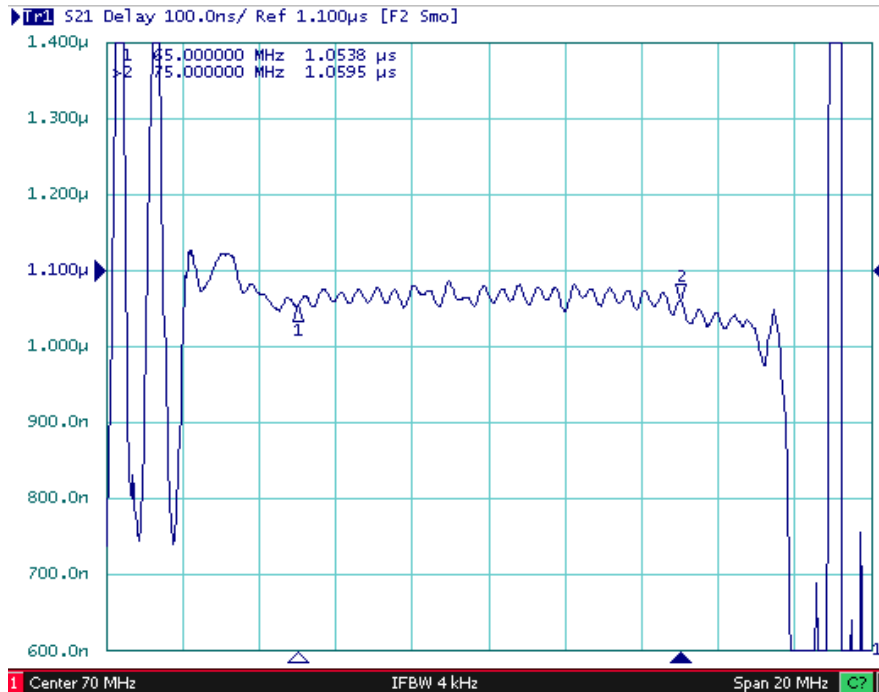


Fig.3 Horizontal: 2 MHz/Div, Vertical: 100nS/Div

4. Time domain

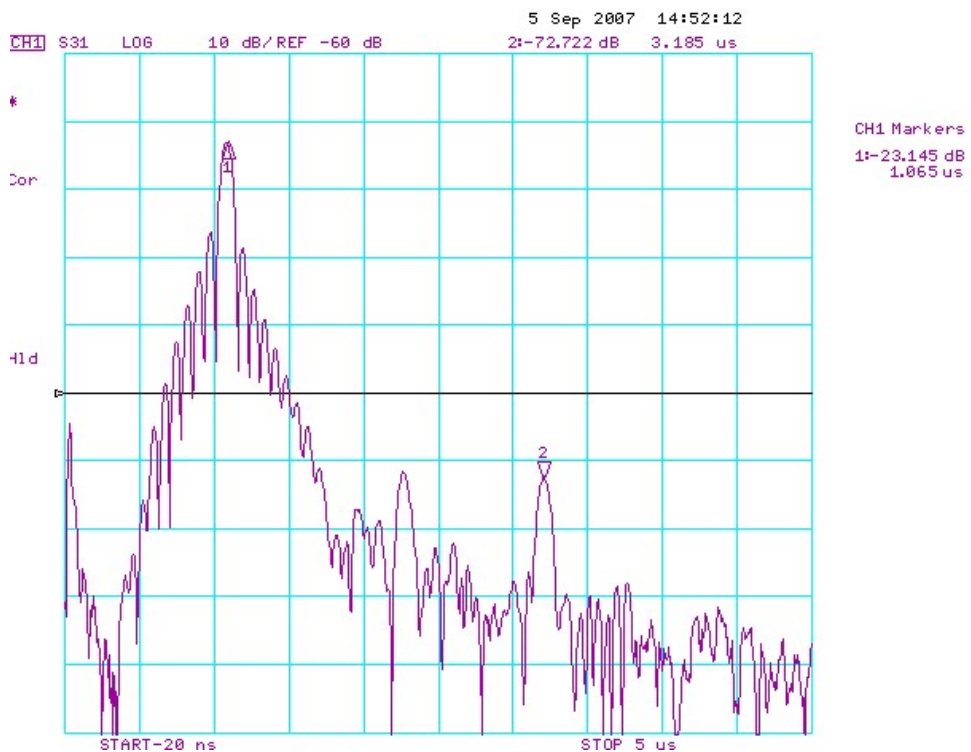


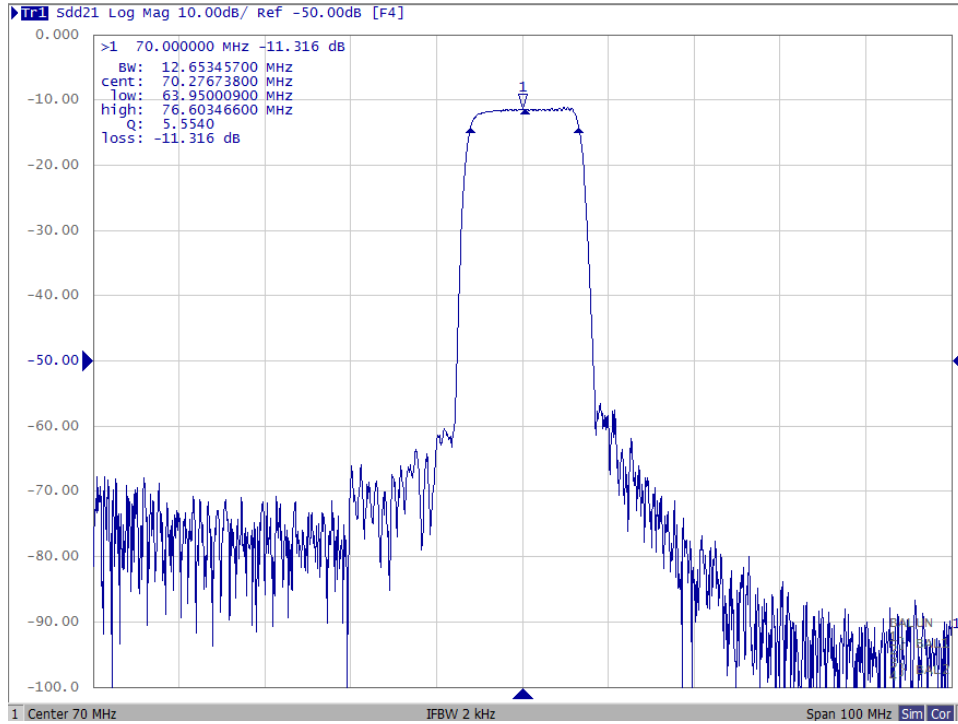
Fig.4 Horizontal: -20nS~5Us, Vertical: 10dB/Div

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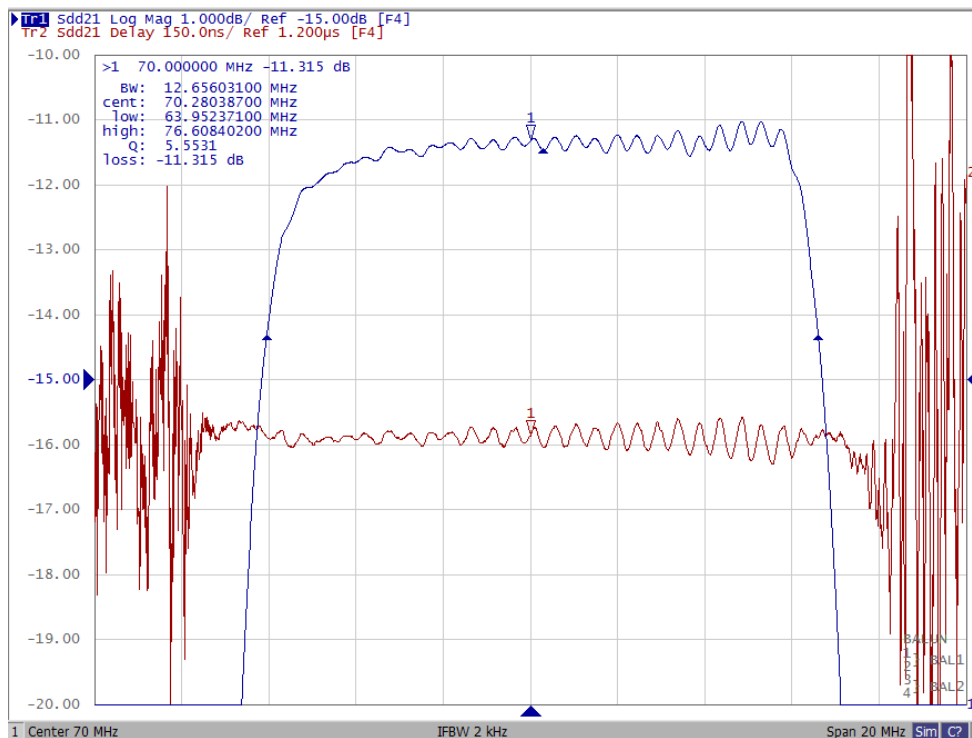
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TB0460A differential 200ohm

1. S21 Response



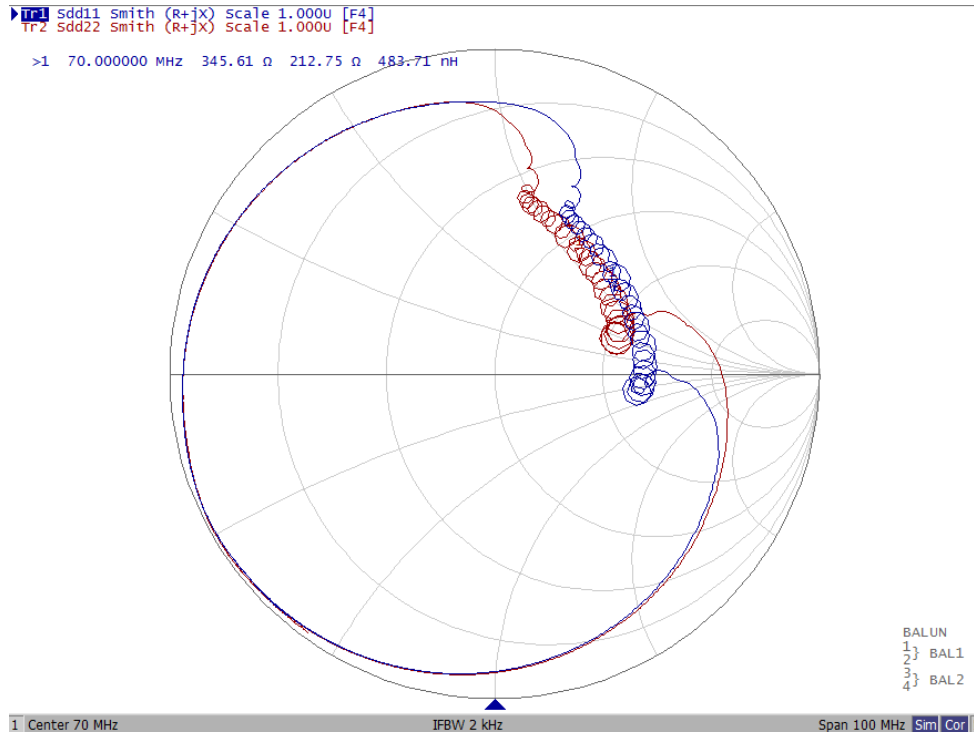
2. Passband Ripple and Group Delay Ripple



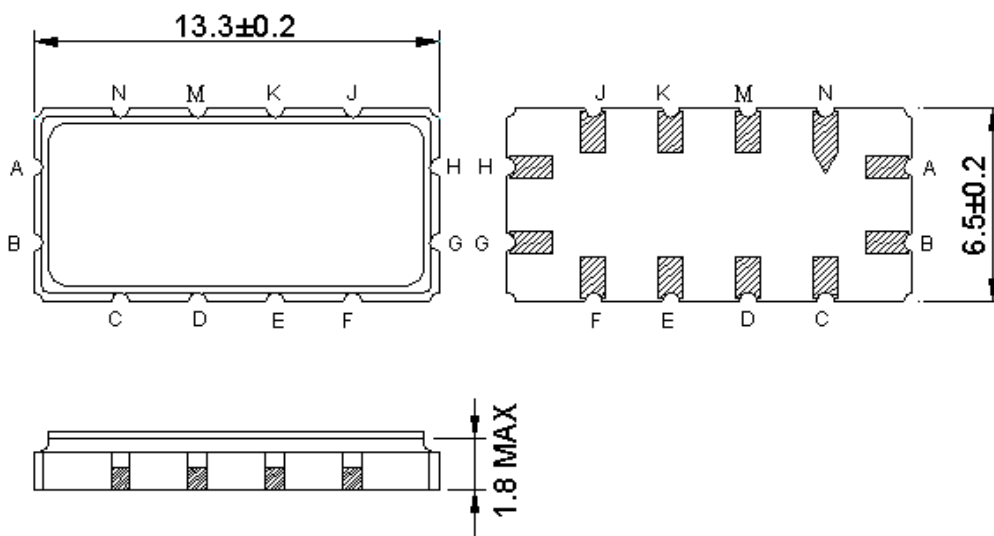
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3. Smith Chart



D. OUTLINE DRAWING:



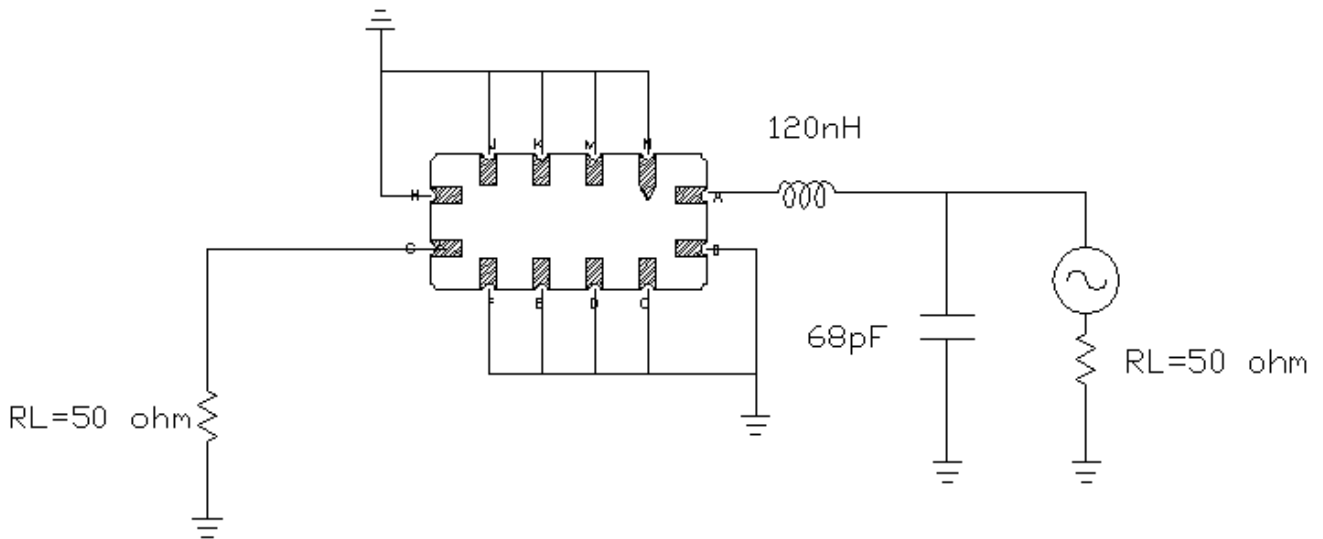
- A: RF Input
- B: RF Input ground or balance ground
- G: RF Output
- H: RF Output ground or balance ground
- C, D, E, F, J, K, M, N: To be ground

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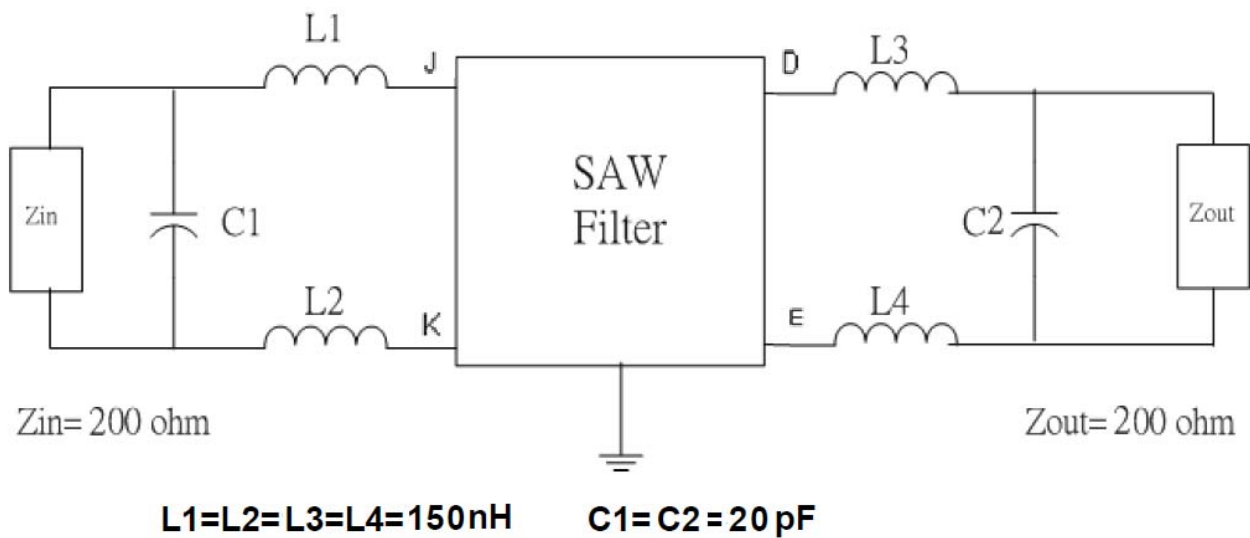
Model: TB0460A
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E. TEST FIXTURE:

Single 50ohm



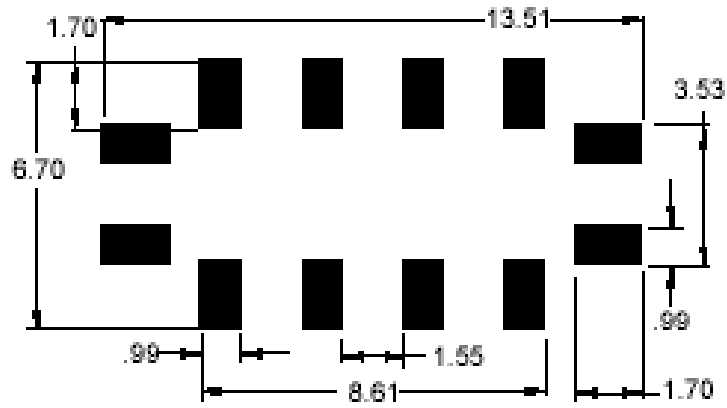
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F. PCB FOOTPRINT:

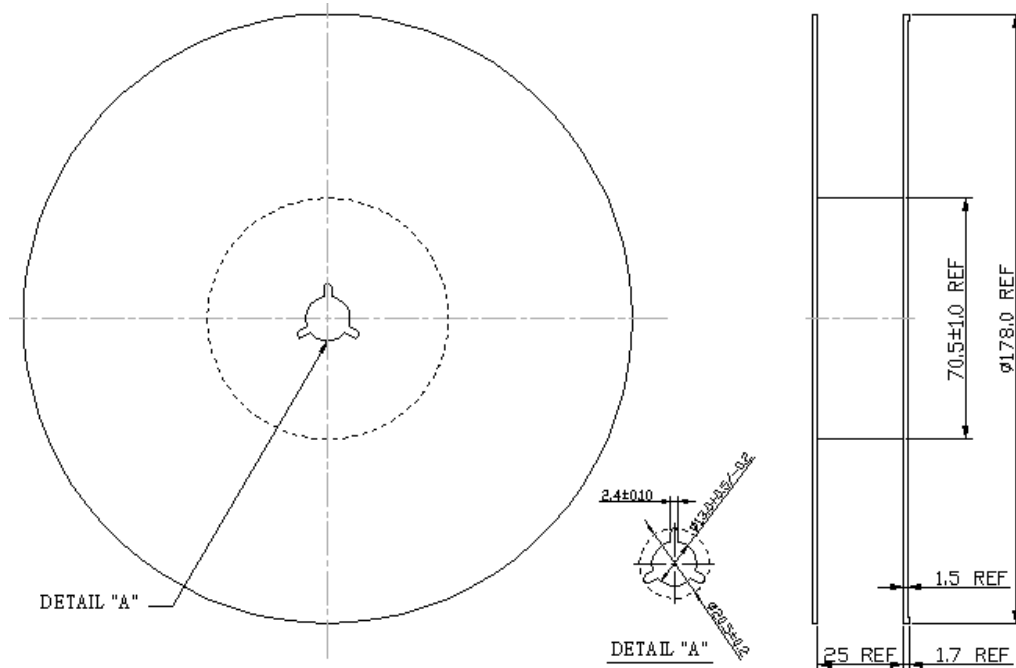


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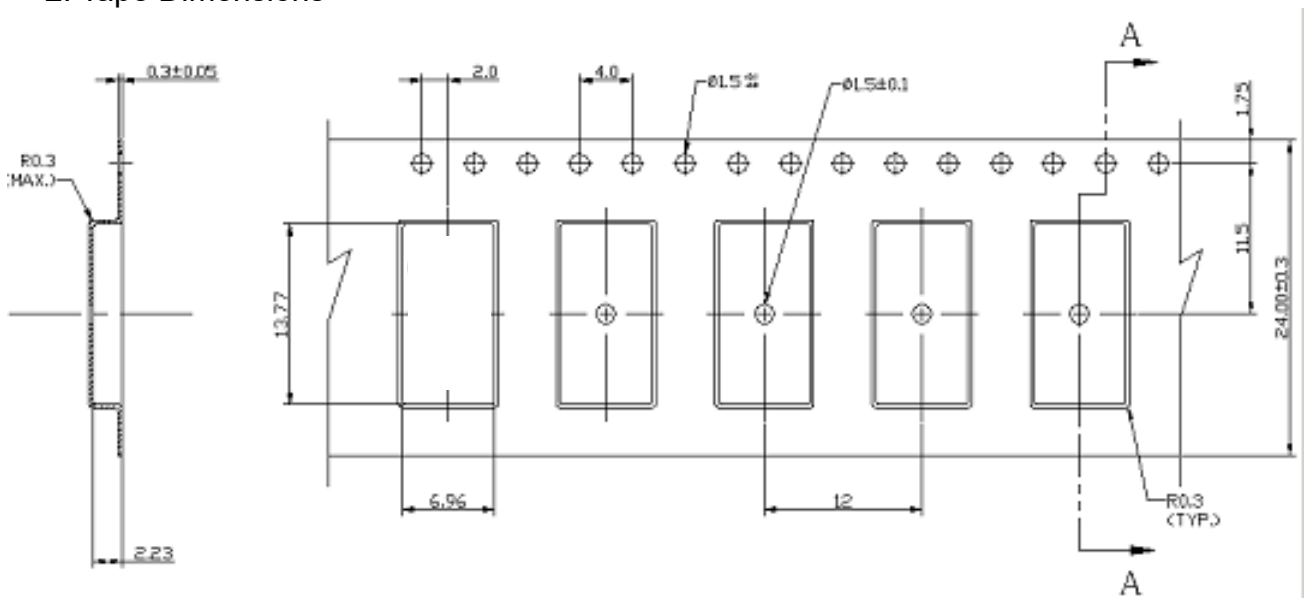
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G. PACKING:

1. Reel Dimensions



2. Tape Dimensions



Direction of Feed



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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 (20~40sec).
4. Time: 2 times.

