

SAW Filter 456MHz
Part No: MP01779

Model: TB0471A
Rev No: 1

A. MAXIMUM RATING:

1. Operating Temperature: -40°C ~ +85°C
2. Storage Temperature: -40°C ~ +85°C
3. Input Power Level: 10dBm

B. CHARACTERISTICS:

1. Ambient Temperature: 25°C
2. Optimal Source Impedance (Balanced): 200Ω
3. Optimal Load Impedance (Balanced): 200Ω

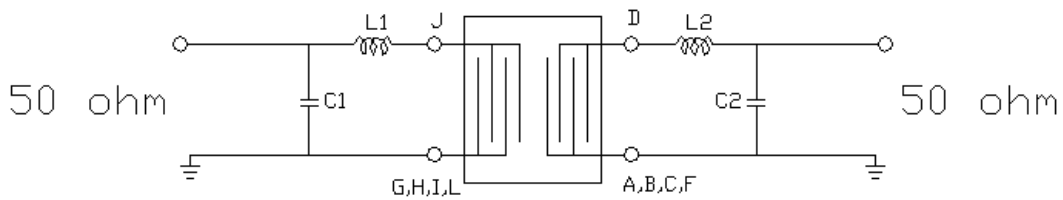
| Characteristics | Value | | | Note |
|---|--------|------|------|------|
| | Min. | Typ. | Max. | |
| Center frequency Fc MHz | - | 456 | - | - |
| Minimum Insertion Loss dB | - | 12.4 | 15.5 | - |
| Return Loss (Fc ± 1.5MHz) dB | 9 | 15 | - | - |
| 1dB Bandwidth MHz | - | 6.2 | - | - |
| 30dB Bandwidth MHz | - | 7.7 | - | - |
| Passband Ripple (Fc ± 1.5MHz) dB | - | 0.4 | 1 | - |
| Group Delay Ripple (Fc ± 1.5MHz) nS | - | 36 | 200 | - |
| Attenuation: (Reference level from minimum insertion loss) dB | | | | |
| 10MHz ~ 256MHz dB | 30 | 65 | - | - |
| 256MHz ~ 360MHz dB | 45 | 59 | - | - |
| 360MHz ~ 416MHz dB | 45 | 55 | - | - |
| 416MHz ~ 445.1MHz dB | 35 | 47 | - | - |
| 466.9MHz ~ 496MHz dB | 35 | 46 | - | - |
| 496MHz ~ 656MHz dB | 35 | 50 | - | - |
| 656MHz ~ 1000MHz dB | 30 | 55 | - | - |
| Temp Coefficient ppm/°C ² | -0.036 | | | |

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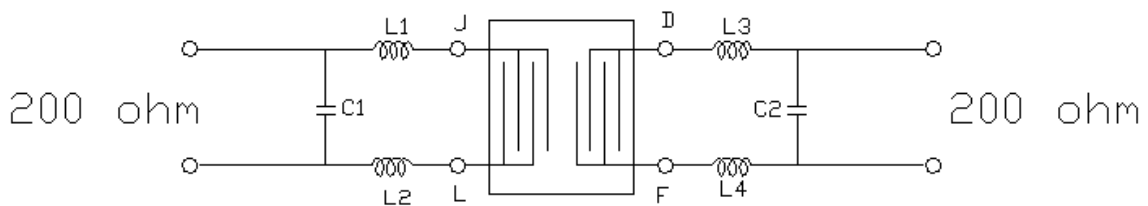
C. MEASUREMENT CIRCUIT:

1. Single end 50Ω to Single end 50Ω



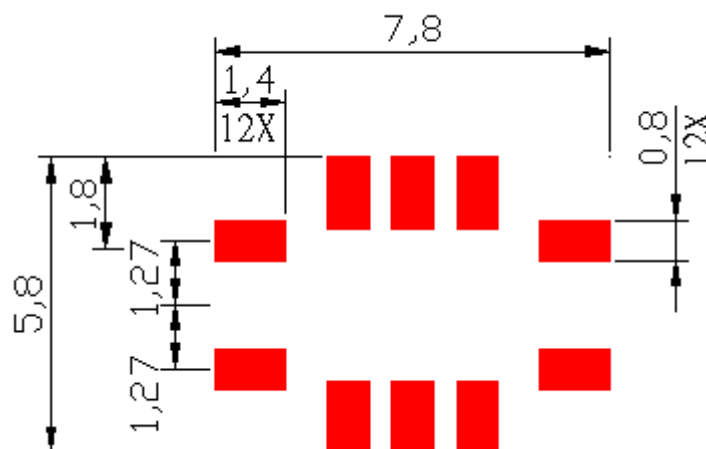
$$L1=12\text{nH} \quad C1=18\text{pF} \quad L2=12\text{nH} \quad C2=18\text{pF}$$

2. Balanced 200 ohm to Balanced 200 ohm



$$L1=L2=8\text{nH} \quad C1=18\text{pF} \quad L3=L4=8\text{nH} \quad C2=18\text{pF}$$

D. PCB FOOTPRINT:



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E. FREQUENCY CHARACTERISTICS:

1. S21 Response

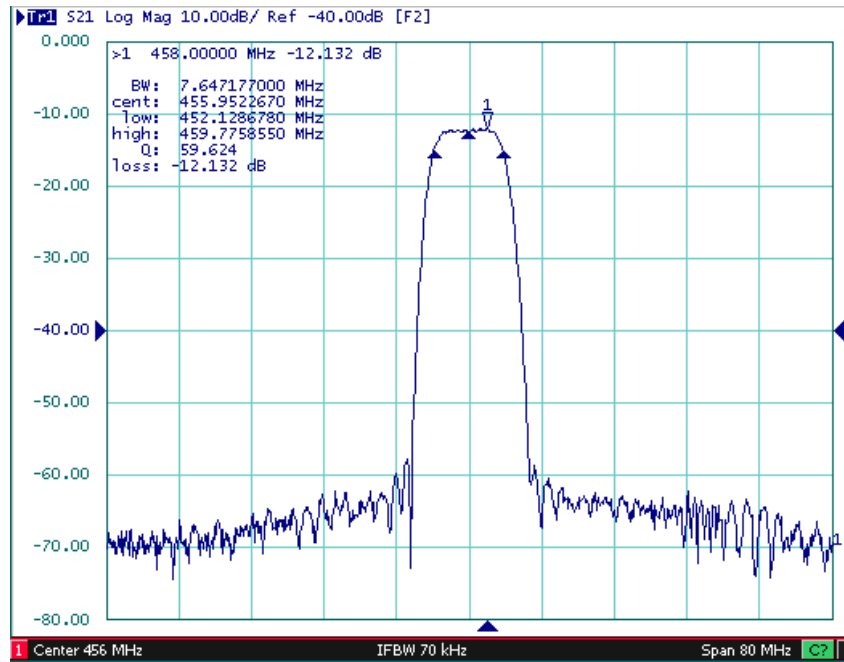


Fig1. Horizontal: 8MHz/Div Vertical: 10dB/Div

2. Passband Ripple

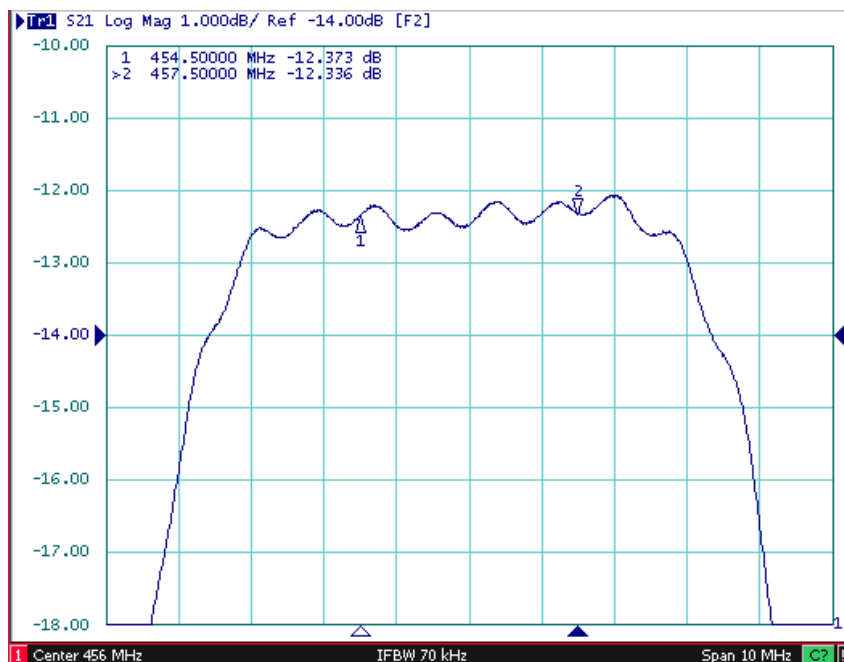


Fig2. Horizontal: 1MHz/Div Vertical: 1dB/Div

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3. Group Delay ripple

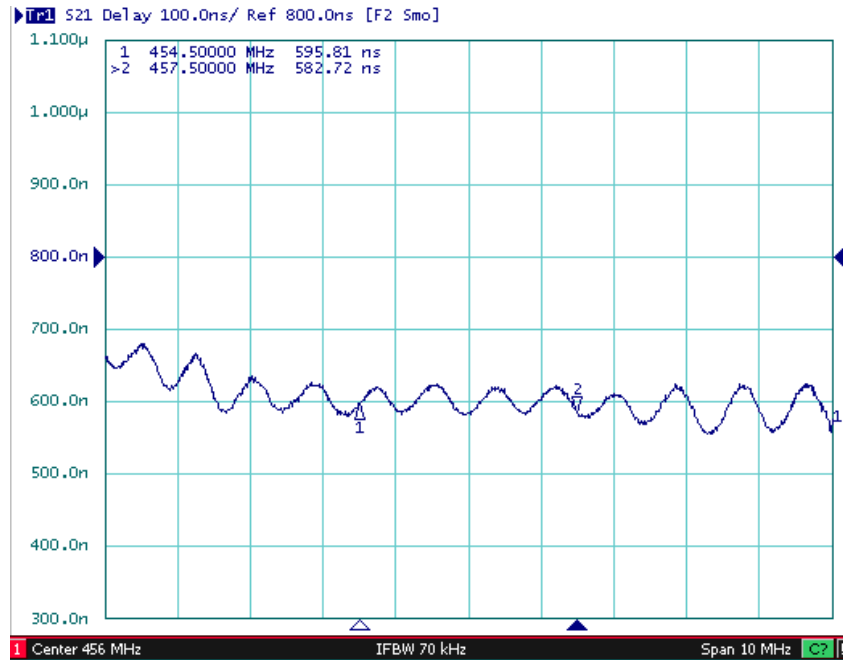


Fig3. Horizontal: 1MHz/Div Vertical: 100nS/Div

4. Wideband Response

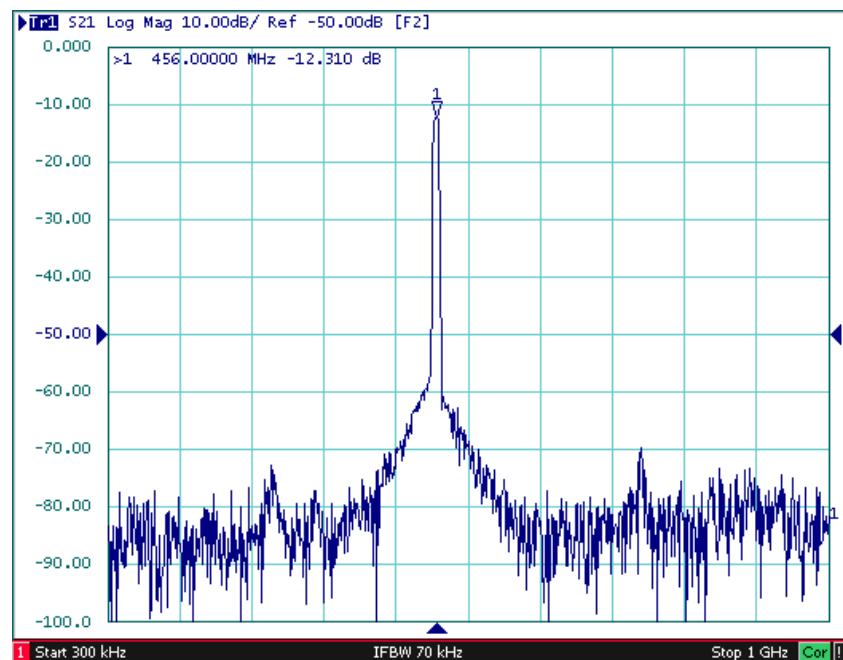
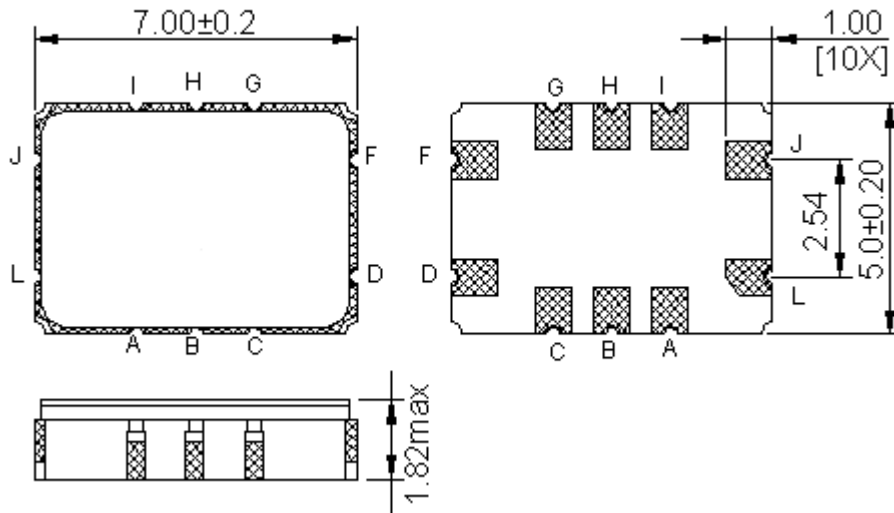


Fig4. Horizontal: 300kHz ~ 1GHz Vertical: 10dB/Div

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F. OUTLINE DRAWING:



J, L: Balanced Input

F, D: Balanced Output

A, B, C, I, H, G: To be Ground

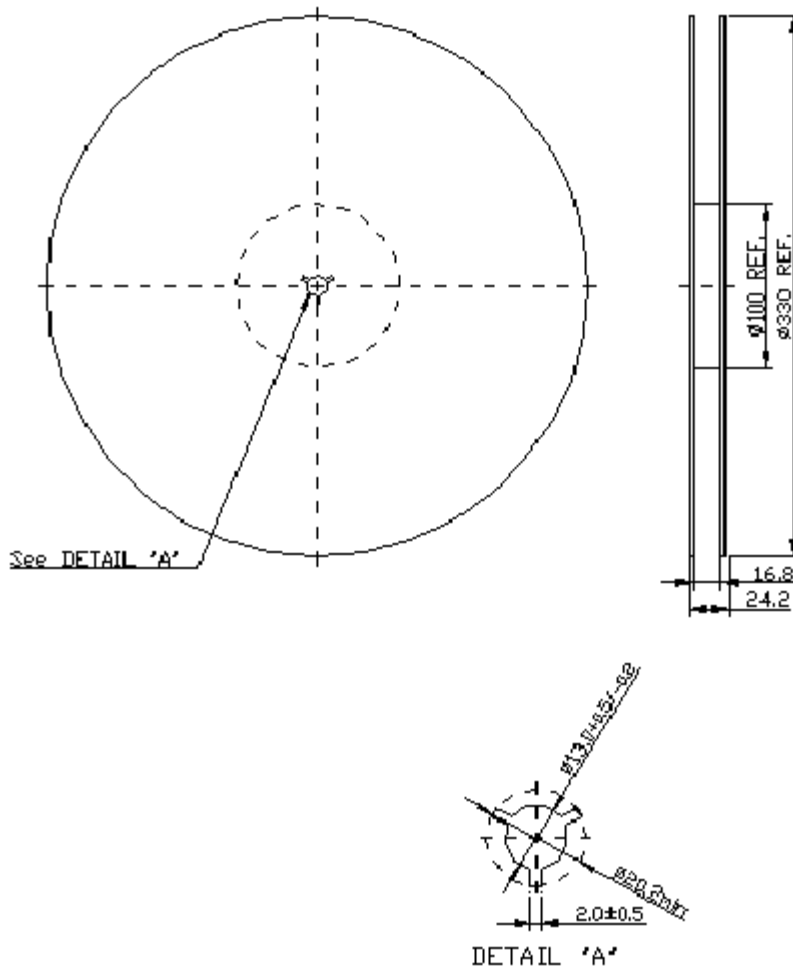
Unit: mm

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G. PACKING:

1. REEL DIMENSION



2. TAPE DIMENSION

