

SAW Filter Low Loss 140.0MHz
Part No: MP08431

Model: TB0203B
Rev. No: 2

Electrostatic Sensitive Device

A. MAXIMUM RATING:

1. Input Power Level: +20dBm
2. Operating Temperature: -55°C to +85°C
3. Storage Temperature: -55°C to +85°C

B. ELECTRICAL CHARACTERISTICS:

Operating Temperature: -55°C to +85°C

Parameters	Unit	Min.	Typ.	Max.
Center frequency Fc	MHz	-	140	-
Insertion Loss IL	dB	-	10.5	12.5
1.5dB Bandwidth	MHz	8.9	9.3	-
3dB Bandwidth	MHz	9.4	9.9	-
35dB Bandwidth	MHz	-	13.5	14.5
Relative Attenuation:				
10 to 132MHz	dB	45	50	
149 to 260MHz	dB	40	47	
Amplitude ripple within Fc ±3.6MHz	dB	-	0.65	2.0
Group Delay ripple within Fc ±3.6MHz	nsec	-	60	150
Substrate Material	-	-	YZ-LN	-
Temperature Coefficient of frequency	ppm/°C	-	-86	-

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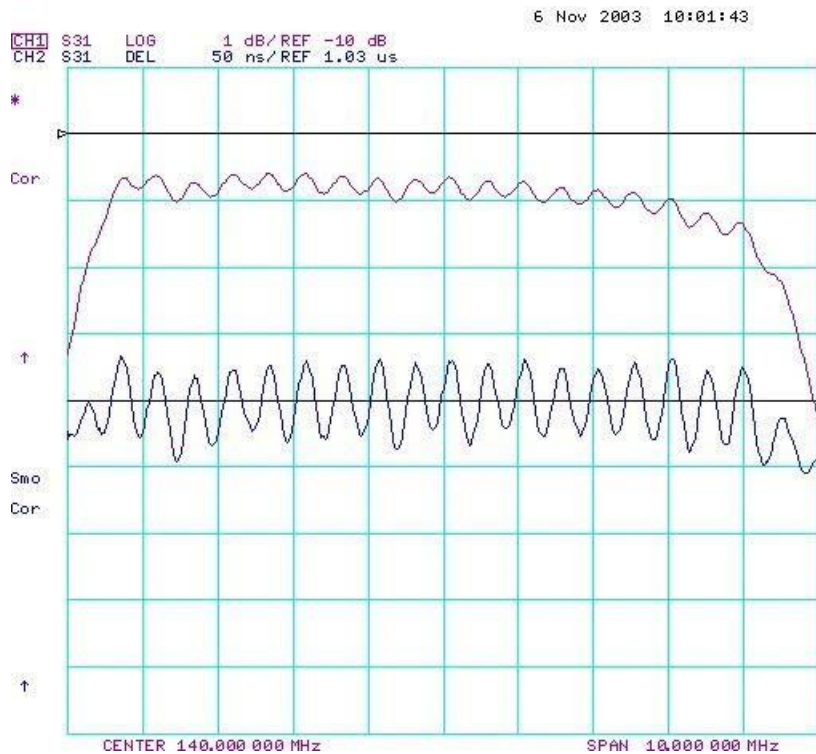
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C. FREQUENCY CHARACTERISTICS:

1. Frequency response



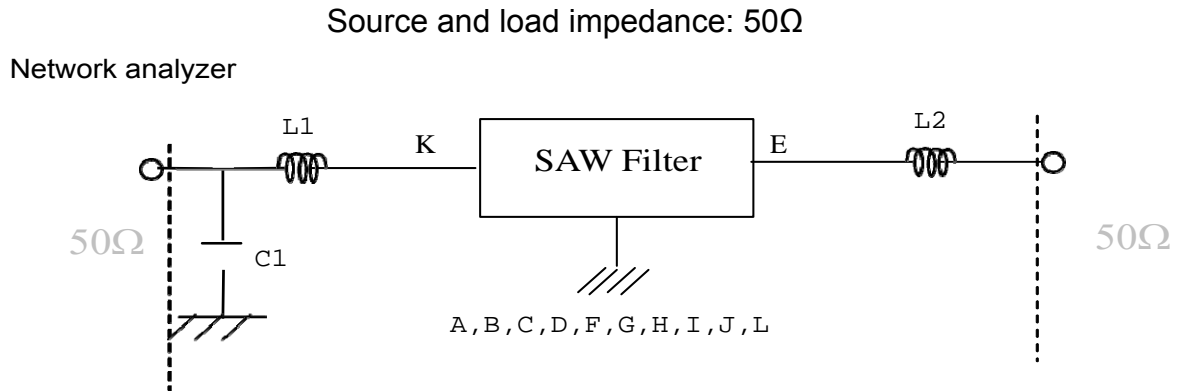
2. Passband response and group delay variation



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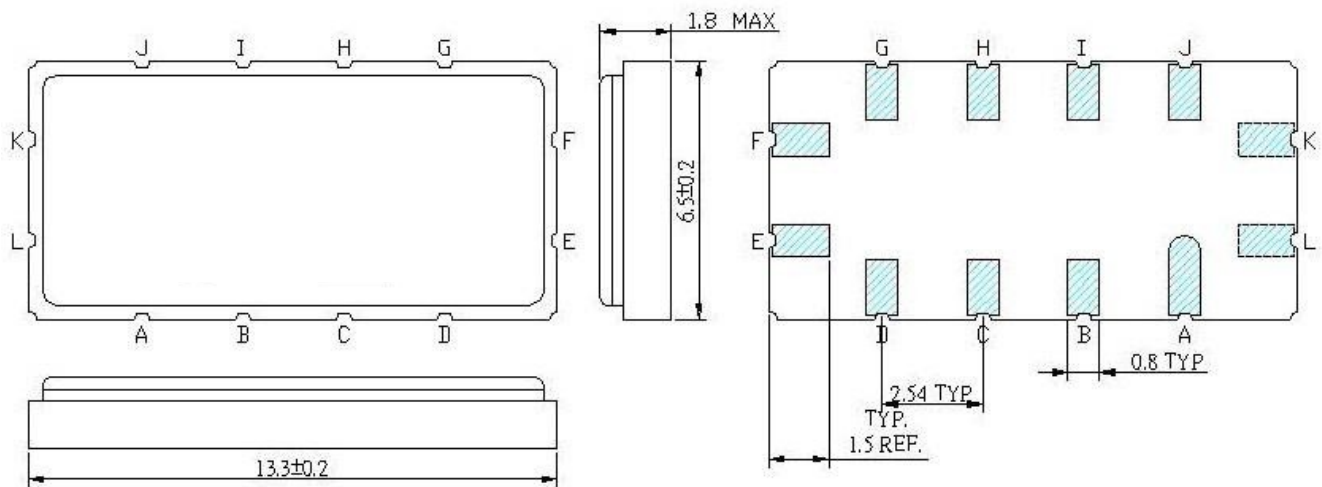
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D. MEASUREMENT CIRCUIT:



Input: L1 = 82H, Q>40; C1 = 33pF
 Output: L2 = 56nH, Q>40

E. OUTLINE DRAWING:



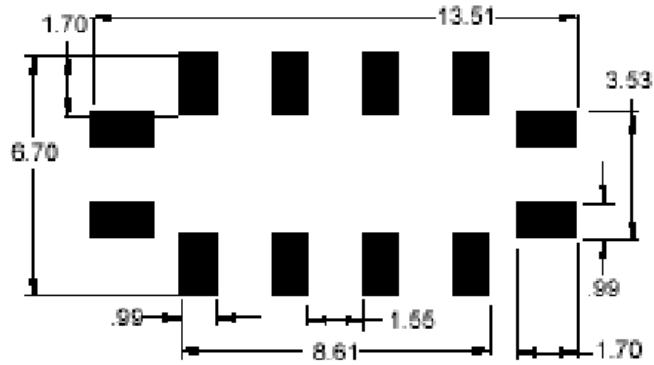
Unit: mm

- K: RF Input
- E: RF Output
- L: Input Ground
- F: Output Ground
- Pin A, B, C, D, G, H, I, J: To be Ground

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F: PCB FOOTPRINT:



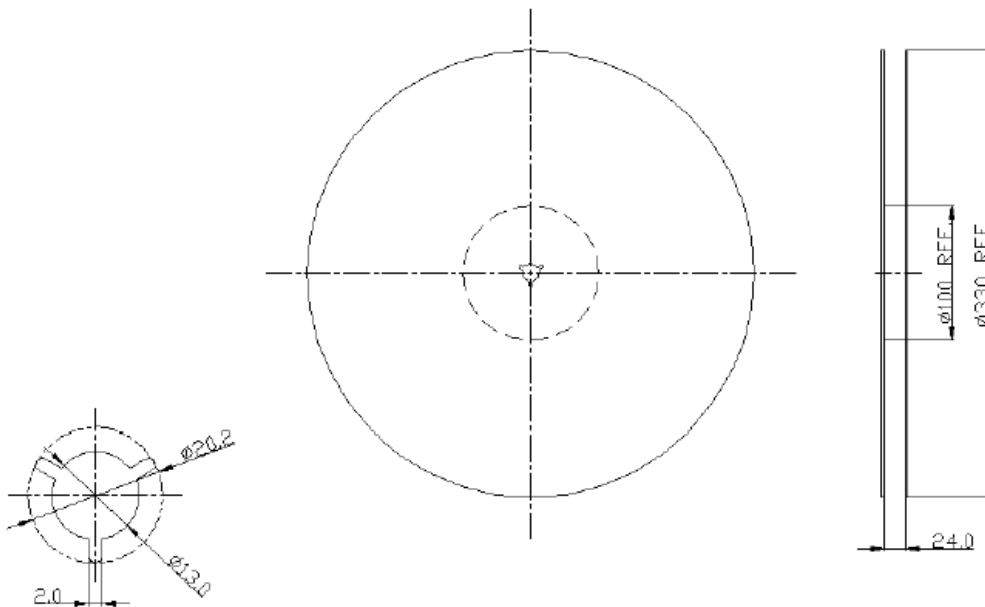
Unit: mm

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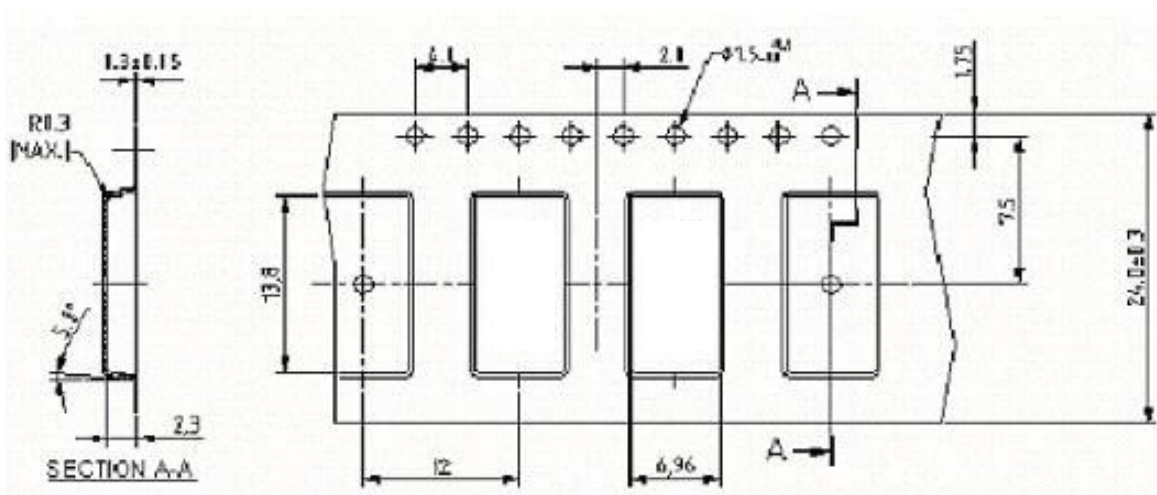
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G: PACKING:

1. Reel dimension



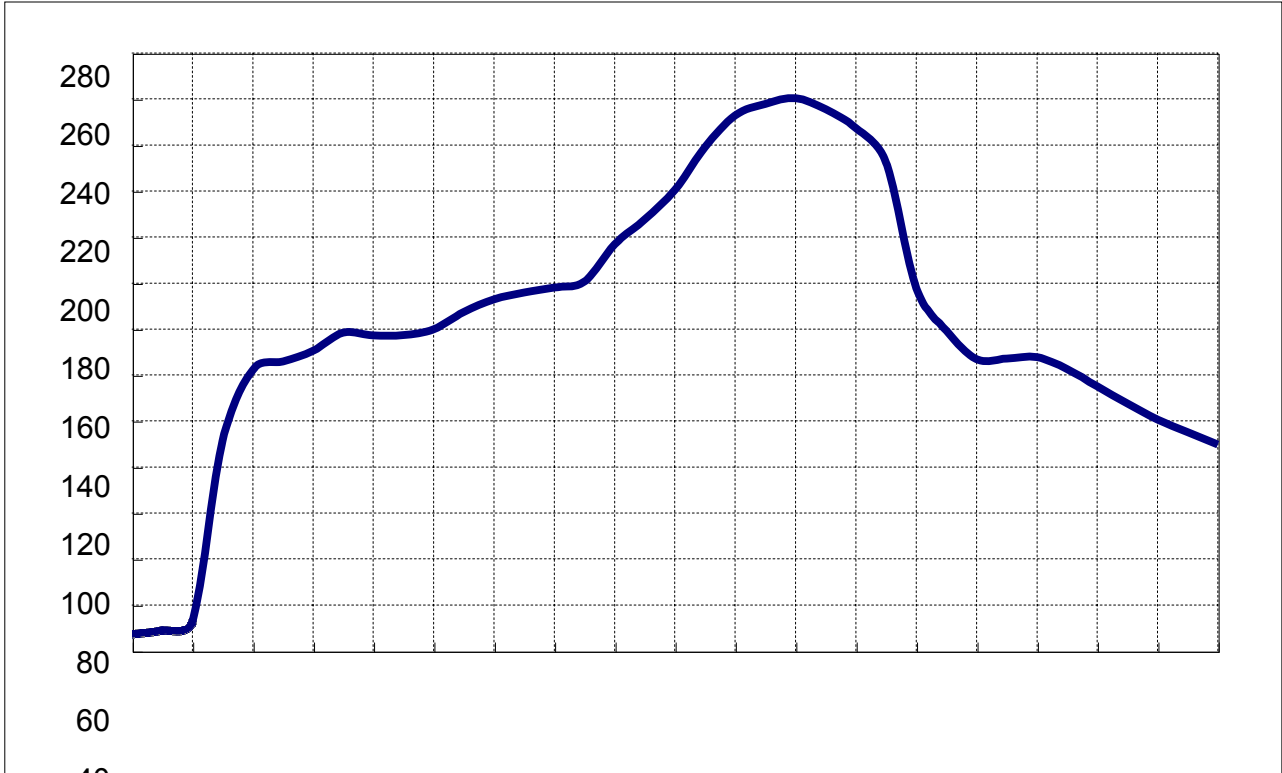
2. Tape dimension



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H. RECOMMENDED REFLOW PROFILE:



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I. ENVIRONMENTAL CHARACTERISTICS:

Thermal Shock	Heat cycle conditions -55 °C (30min) ↔ 125 °C (30min) * cycle time : 10 times	After testing , specimens would be kept at room temperature for 2 hour , and the specimens shall meet the electrical specifications. external visual inspection
Humidity test	Temperature: 85 °C Relative humidity : 85% Duration: 96 hours	After testing , specimens shall be conditioned at room ambient conditions for not less than 1 hour, and the specimens shall meet the electrical specifications
Dry heat (Aging test)	Temperature: 125 ± 2 °C Duration: 250 hours	After testing , specimens would be kept at room temperature for 2 hour , and the specimens shall meet the electrical specifications
Cold resistance	Temperature: -40 ± 3 °C Duration: 96 hours	After testing , specimens would be kept at room temperature for 2 hour , and the specimens shall meet the electrical specifications
PCT test	Pressure: 2.06kg/cm ² (2.03*10 ⁵ pa) Temperature: 121 ± 2 °C Relative humidity : 100±10% Duration: 24 hours	After testing , specimens shall be conditioned at room ambient conditions for not less than 0.5 hour, and the specimens shall meet the fine leak and gross leak test