

**SAW Filter 70.0MHz**

**Model: TB0185A**

**Part No: MA07421**

**REV. NO.: 1**

**A. MAXIMUM RATING:**

1. Input Power Level: +20 dBm
2. Operating Temperature: 0°C to +70°C
3. Storage Temperature: -40°C to +85°C

**B. ELECTRICAL CHARACTERISTICS:**

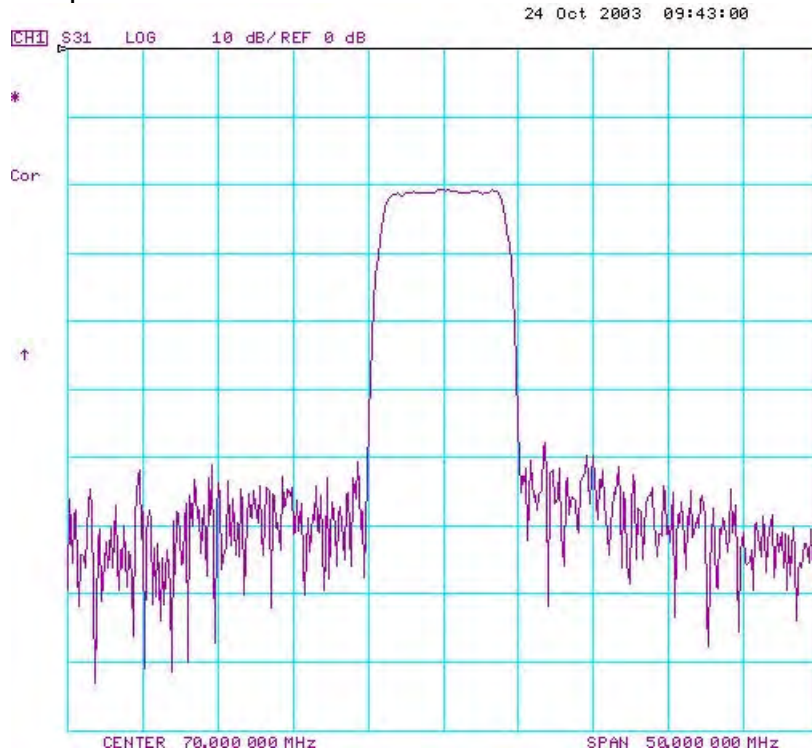
| Parameter                                     | Unit      | Min. | Typ. | Max.  |
|---|-----------|------|------|-------|
| Center frequency, Fc                          | MHz       | 69.8 | 70   | 70.2  |
| Insertion Loss, IL                            | dB        | -    | 21   | 23    |
| 1 dB Bandwidth                                | MHz       | 7.0  | 7.3  | -     |
| 3 dB Bandwidth                                | MHz       | 7.3  | 7.9  | -     |
| 40 dB Bandwidth                               | MHz       | -    | 10.2 | 10.75 |
| Amplitude ripple (within $\pm 2.8$ MHz)       | dB        | -    | 0.8  | 1     |
| Phase Linearity (within $\pm 2.92$ MHz) (rms) | deg       | -    | 2.5  | 6     |
| Group Delay ripple (within $\pm 2.92$ MHz)    | nsec      | -    | 50   | 100   |
| Absolute Delay                                | $\mu$ sec | -    | 1.02 | -     |
| Attenuation (Reference level from 0 dB)       |           |      |      |       |
| 10 ~ 64MHz                                    | dB        | 55   | 62   | -     |
| 76~140MHz                                     | dB        | 55   | 62   | -     |
| Substrate Material                            | -         | -    | LT   | -     |
| Temperature Coefficient                       | ppm/ °C   | -    | -18  | -     |
| Ambient Temperature                           | °C        | -    | 25   | -     |

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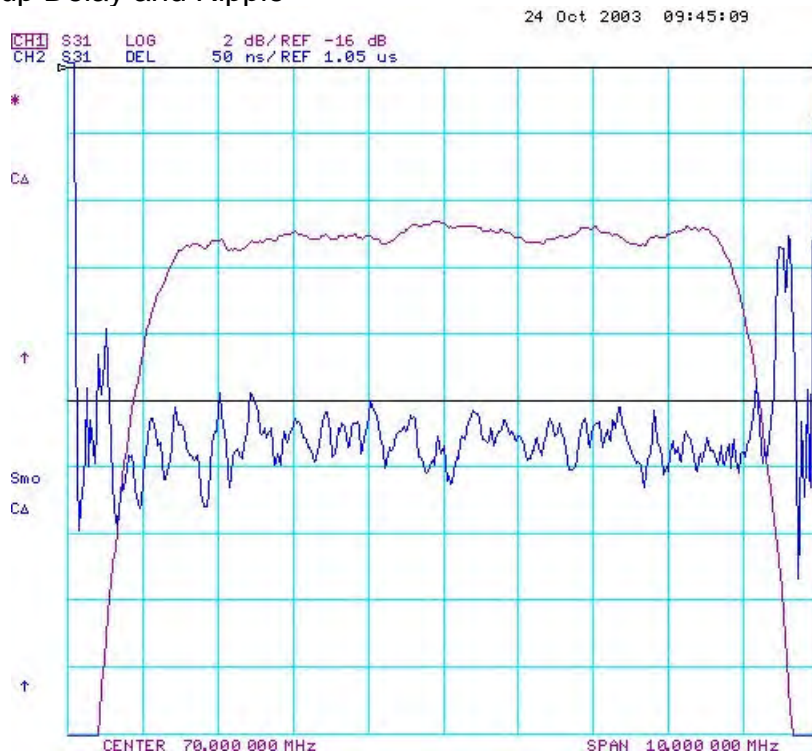
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**C. FREQUENCY CHARACTERISTICS:**

(1) S21 Response:



(2) Group Delay and Ripple



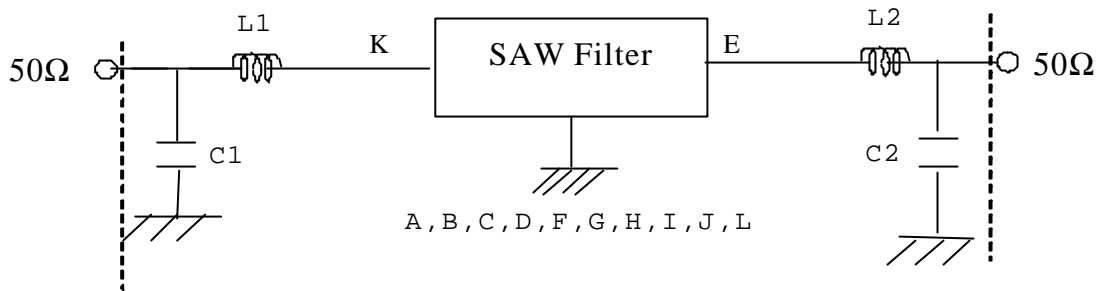
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**D. MEASUREMENT CIRCUIT:**

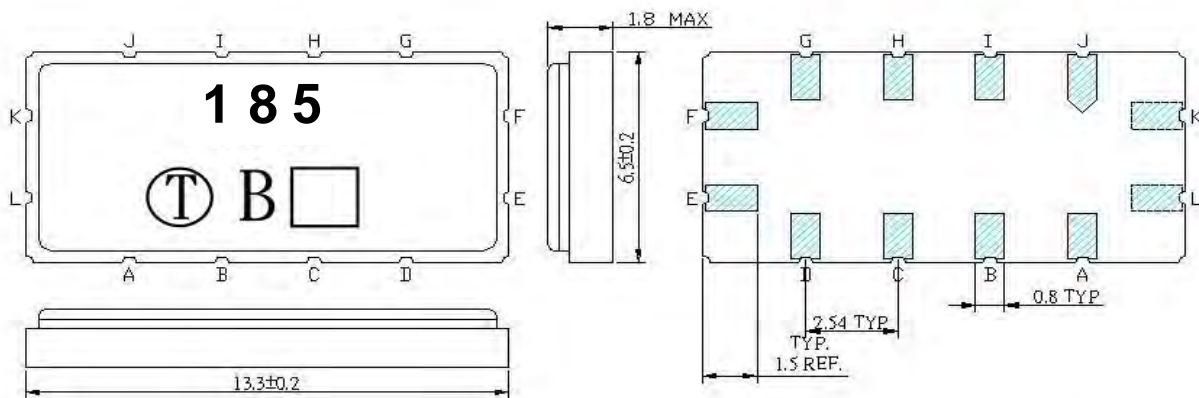
For 50 ohm Unbalanced Input and Output

Network analyzer



Input: L1=180 nH, Q>40; C1=47 pF  
 Output: L2=180 nH, Q>40; C2=27 pF

**E. OUTLINE DRAWING:**



Unit: mm

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