

**SAW Filter 48.0MHz**

**Model: TB0411A**

**Part No: MP01495**

**REV. NO.: 1**

**A. MAXIMUM RATING:**

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

**B. CHARACTERISTICS:**

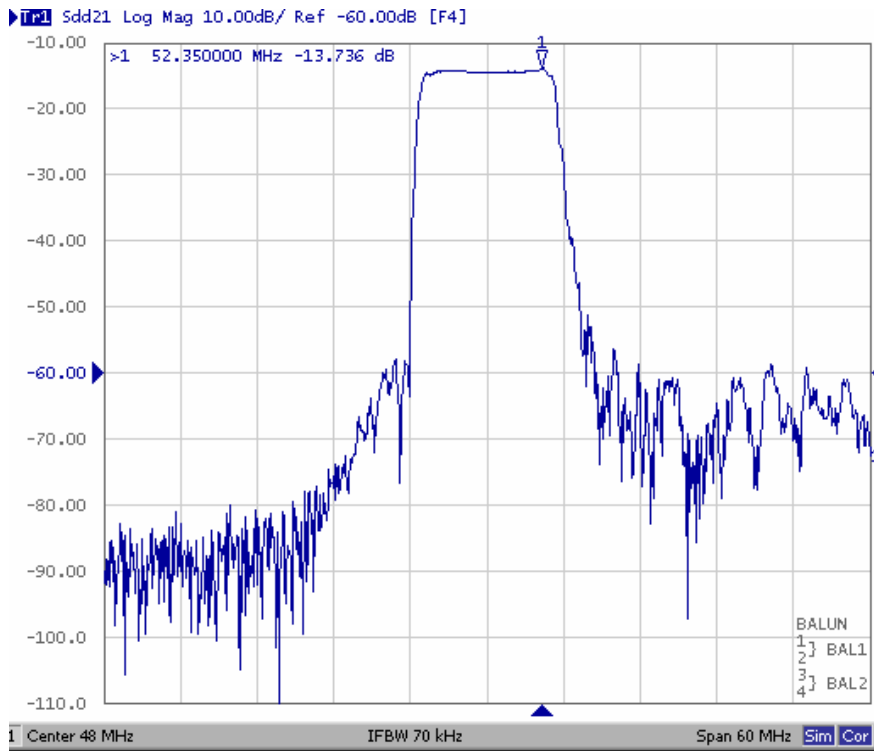
| Item                             | Unit | Min.                    | Typ. | Max. |
|----------------------------------|------|-------------------------|------|------|
| Center frequency, Fc             | MHz  | -                       | 48   | -    |
| Insertion Loss, IL               | dB   | -                       | 13.5 | 16.0 |
| 1 dB Bandwidth                   | MHz  | 9                       | 10.1 | -    |
| 3 dB Bandwidth                   | MHz  | -                       | 10.5 | -    |
| Pass band Ripple Fc±4.25MHz      | dB   | -                       | 0.6  | 1.2  |
| Group delay Variation Fc±4.5MHz  | nsec | -                       | 120  | 220  |
| Stopband Rejection (ref: Max IL) |      |                         |      |      |
| Fc±5.5MHz                        | dBc  | -                       | 5.5  | -    |
| Fc±7.75MHz                       | dBc  | 35                      | 43   | -    |
| Fc±10.0MHz                       | dBc  | 40                      | 53   | -    |
| Fc+15.0~25.0MHz                  | dBc  | 40                      | 52   | -    |
| Fc-15.0~25.0MHz                  | dBc  | 40                      | 68   | -    |
| Operating Temp Range             | °C   | -40                     | 25   | 80   |
| Frequency Stability              | kHz  | -300                    |      | 300  |
| Termination Impedance            | Ohm  | 50(input), 2000(output) |      |      |

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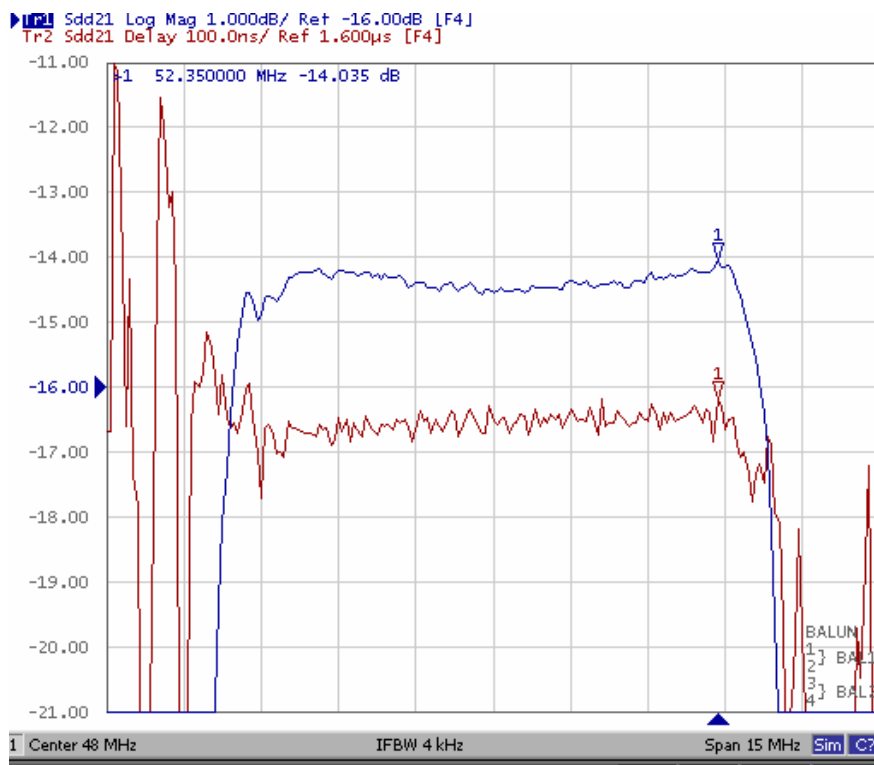
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**C. FREQUENCY CHARACTERISTICS:**

(1) Wide band Response: (span 60MHz)



(2) Pass band Response: (span 15MHz)



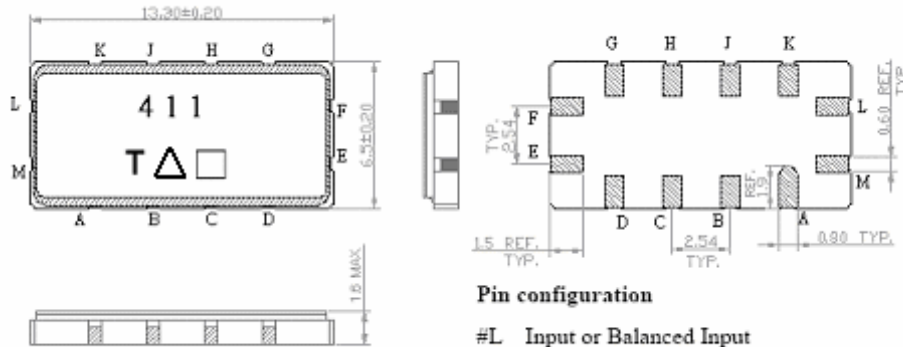
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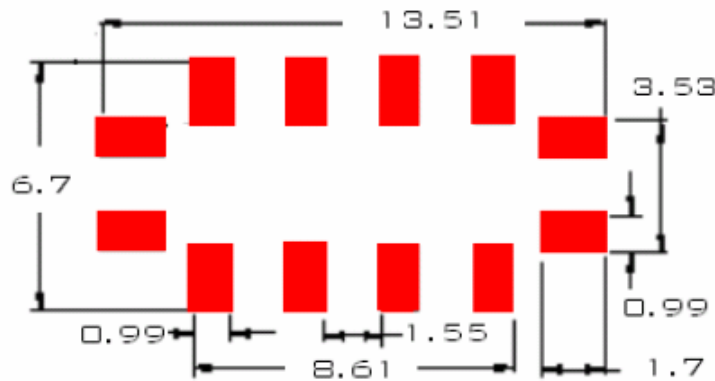
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**D. OUTLINE DRAWING:**

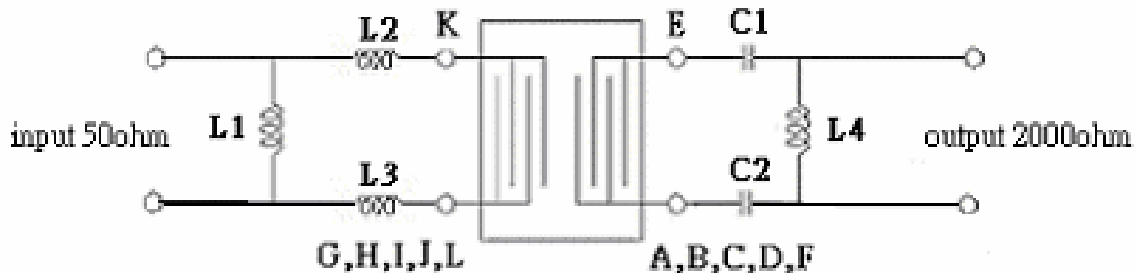


- Pin configuration**
- #L Input or Balanced Input
  - #M Input ground or Balanced Input return
  - #E Output or Balanced Output
  - #F Output ground or Balanced Output return
  - #A,B,C,D,G,H,J,K To be grounded
  - Date code
- Unit mm

**E. PCB FOOTPRINT:**



**F. MATCHING CIRCUIT:**



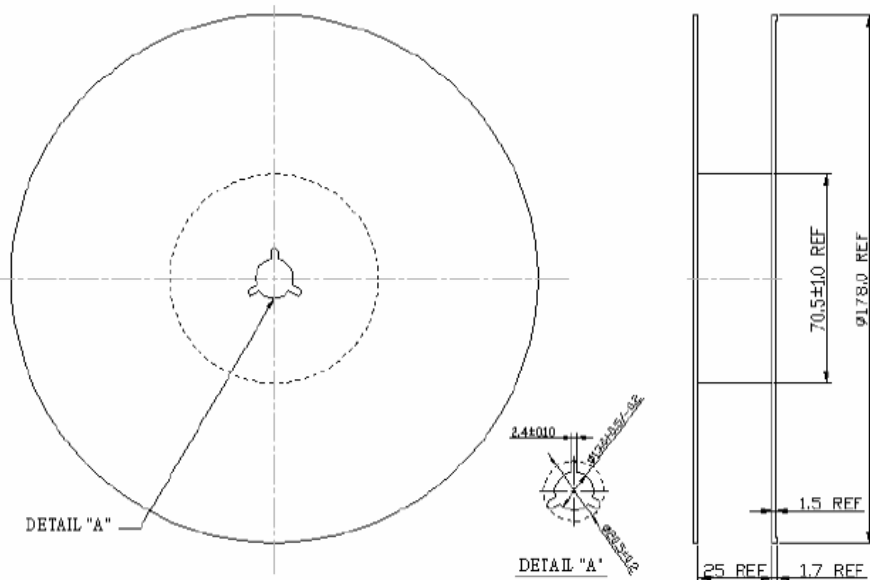
L1=890nH, L2=L3=47nH, L4=970nH, C1= C2=36pF

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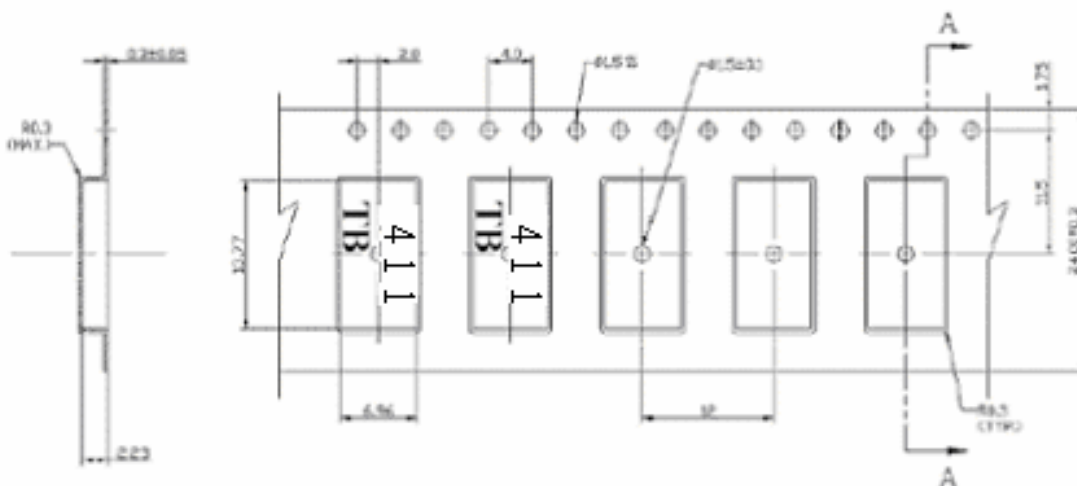
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**G. PACKING:**

(1). REEL DIMENSION:



(2). TYPE DIMENSION:



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**H. RECOMMENDED REFLOW PROFILE:**

