

**SAW Resonator 622.410MHz**

**Model: TC0302A**

**Part No: MP01853**

**REV. NO.: 1**

**A. FEATURES:**

1. 1-Port Resonator.

**B. MAXIMUM RATING:**

1. Input Power Level: 0 dBm
2. DC voltage: 5 V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C

**C. ELECTRICAL CHARACTERISTICS:**

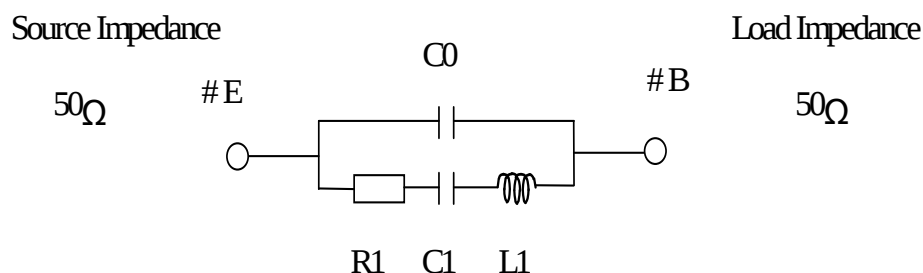
Reference Temperature  $T_A = 25^\circ\text{C}$

| Characteristic                               | Units                         | Minimum        | Typical | Maximum  |
|----------------------------------------------|-------------------------------|----------------|---------|----------|
| Center frequency $f_c$                       | MHz                           | 622.375        | 622.41  | 622.445  |
| Insertion Loss IL                            | dB                            | -              | 1.3     | 2.0      |
| Unload quality factor $Q_U$                  |                               | -              | 11300   | -        |
| Ageing of $f_c$                              | ppm/yr                        | -              | -       | $\pm 10$ |
| Motional capacitance $C_1$                   | fF                            | -              | 1.55    | -        |
| Motional inductance $L_1$                    | $\mu\text{H}$                 | -              | 42.14   | -        |
| Motional resistance $R_1$                    | Ohm                           | -              | 15.3    | -        |
| Parallel capacitance $C_0$                   | pF                            | -              | 2.82    | -        |
| Frequency Temperature coefficient ( $TC_f$ ) | $\text{ppm}/^\circ\text{C}^2$ | -              | 0.032   | -        |
| Turnover $T_o$                               | deg.C                         | -              | 25      | -        |
| Package size                                 |                               | SMD 3x3x1.1 mm |         |          |

Temperature dependence of  $f_c$ :  $f_c(T_A) = f_c(T_O)(1 + TC_f(T_A - T_O)^2)$

**D. EQUIVALENT CIRCUIT:**

One-Port Resonator:



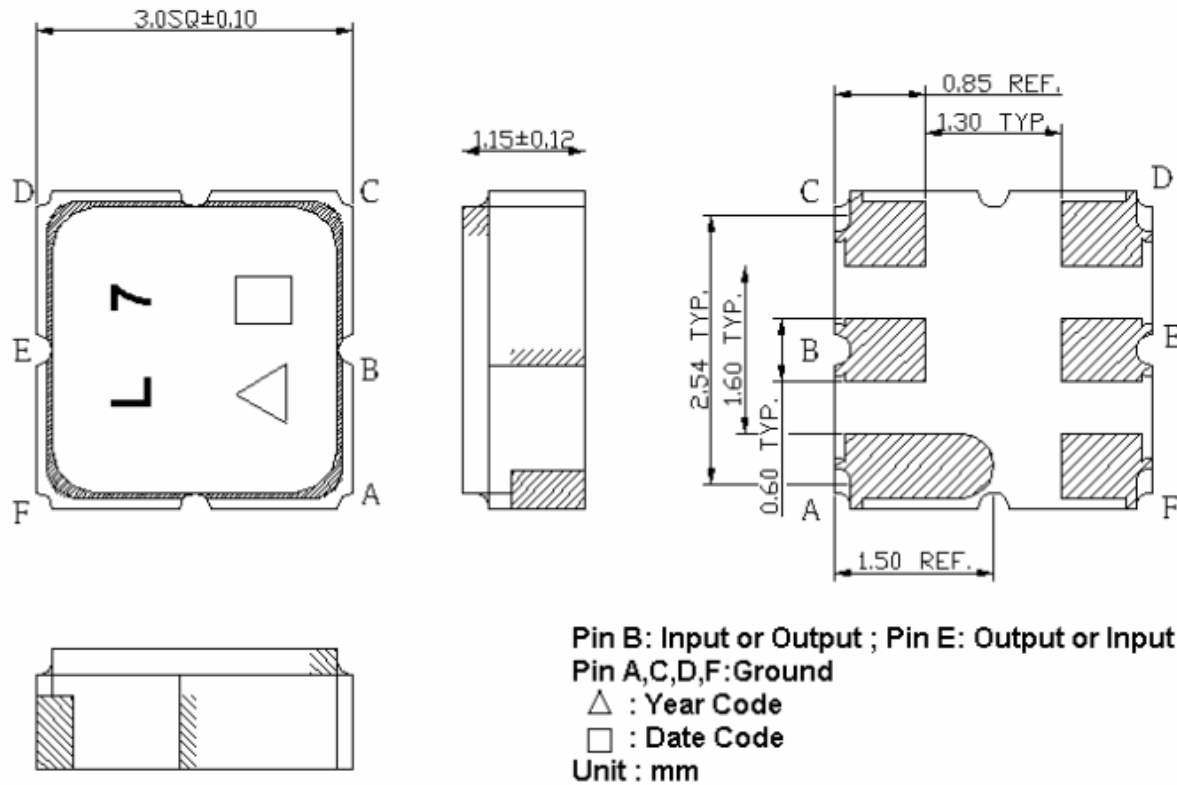
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**E. OUTLINE DRAWING:**



**F. FREQUENCY CHARACTERISTICS:**



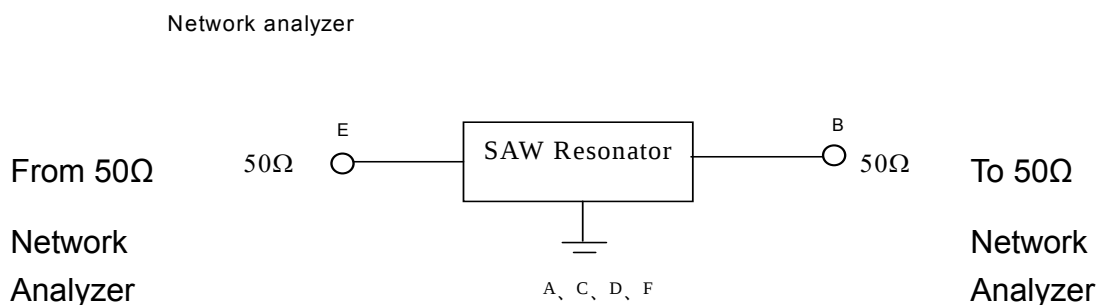
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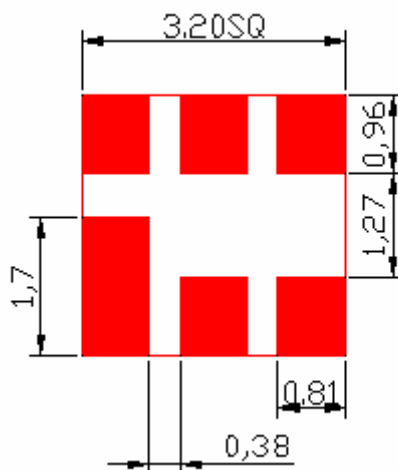
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**G. TEST CIRCUIT:**



**H. LAND PATTERN:**



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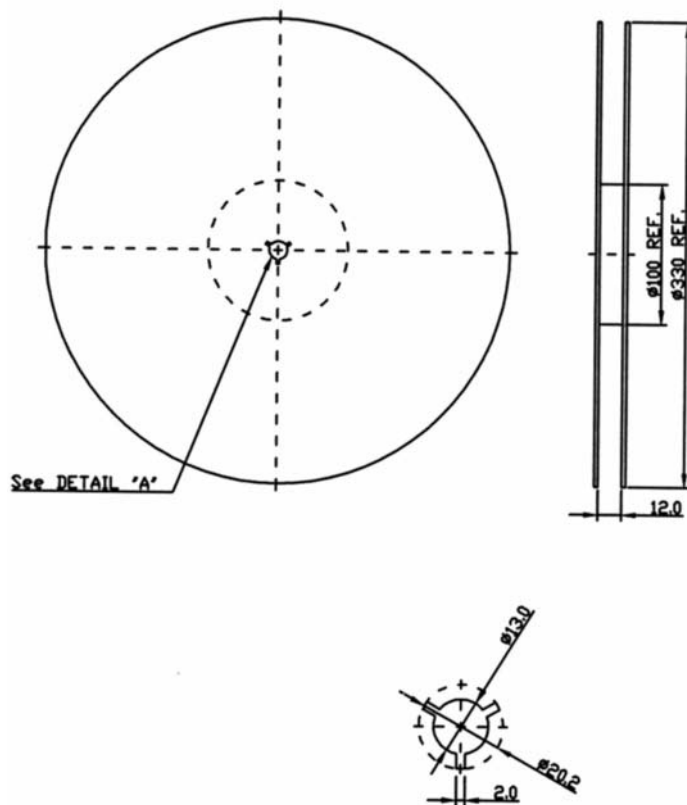
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## I. PACKING:

### 1. REEL DIMENSION



### 2. TAPE DIMENSION

