

# SAW Resonator 1073.817 MHz

MODEL NO.: TC0598A

REV. NO.: 2.0

## A. FEATURES:

- 1-Port Resonator.

## B. MAXIMUM RATING:

- Input Power Level: 0 dBm
- DC voltage: 3 V
- Operating Temperature: -40°C to +85°C
- Storage Temperature: -40°C to +85°C
- Moisture Sensitive Level: Level 1 (MSL1)

RoHS Compliant  
Lead free  
Lead-free soldering

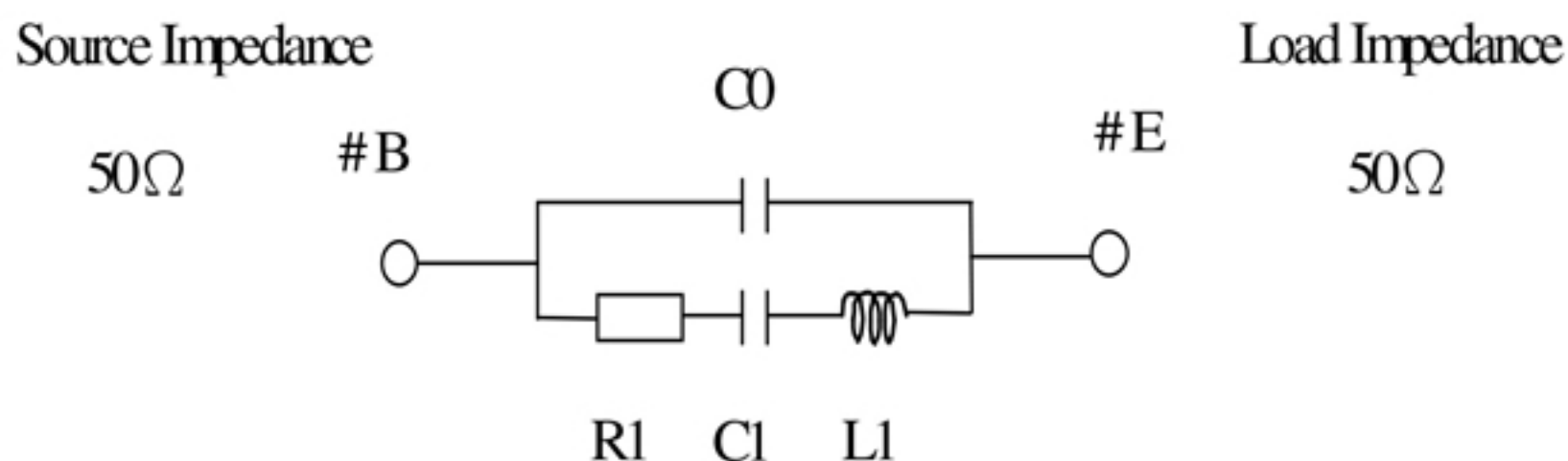
Electrostatic Sensitive Device (ESD)

## C. ELECTRICAL CHARACTERISTICS:

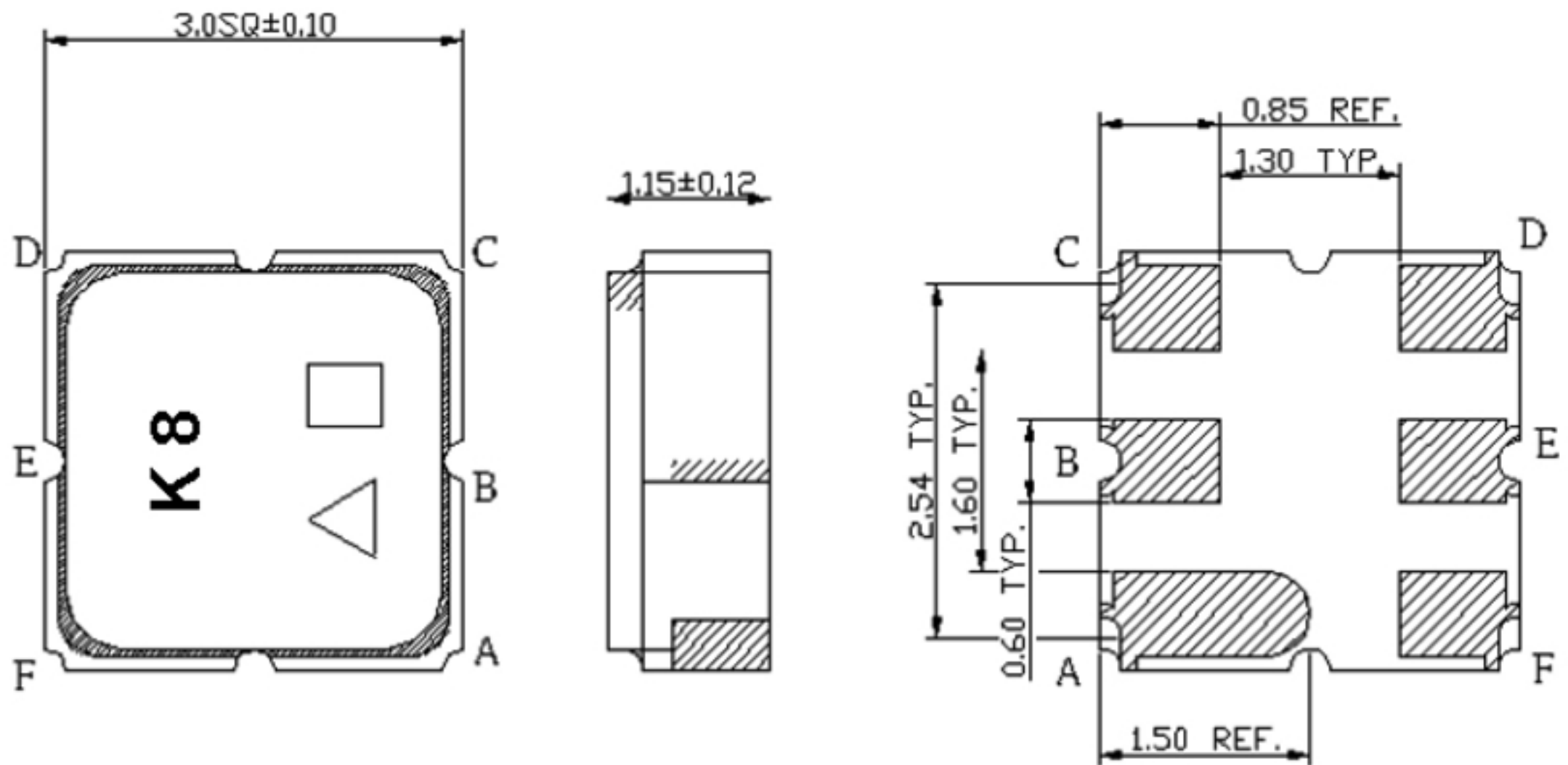
| Characteristic                 | Units          | Minimum           | Typical  | Maximum  |
|--------------------------------|----------------|-------------------|----------|----------|
| Center frequency <b>Fr</b>     | <b>MHz</b>     | 1073.692          | 1073.817 | 1073.942 |
| Insertion Loss <b>IL</b>       | <b>dB</b>      | -                 | 2.0      | 2.5      |
| Equivalent Elements            |                |                   |          |          |
| Motional capacitance <b>C1</b> | <b>fF</b>      | -                 | 1.04     | -        |
| Motional inductance <b>L1</b>  | <b>μH</b>      | -                 | 20.57    | -        |
| Motional resistance <b>R1</b>  | <b>Ohm</b>     | -                 | 18.31    | -        |
| Parallel capacitance <b>Co</b> | <b>pF</b>      | -                 | 2.18     | -        |
| Temp.coeff.                    | <b>ppm/c*2</b> | -                 | 0.032    | -        |
| Turnover To                    | <b>deg.C</b>   | -                 | 25       | -        |
| Package size                   |                | SMD 3.0X3.0X1.4mm |          |          |

## D. EQUIVALENT CIRCUIT:

One-Port Resonator:



### E. OUTLINE DRAWING:



Pin B: Input or Output ; Pin E: Output or Input  
 Pin A,C,D,F:Ground  
 △ : Year Code  
 □ : Date Code  
 Unit : mm

□ Data code : See the table

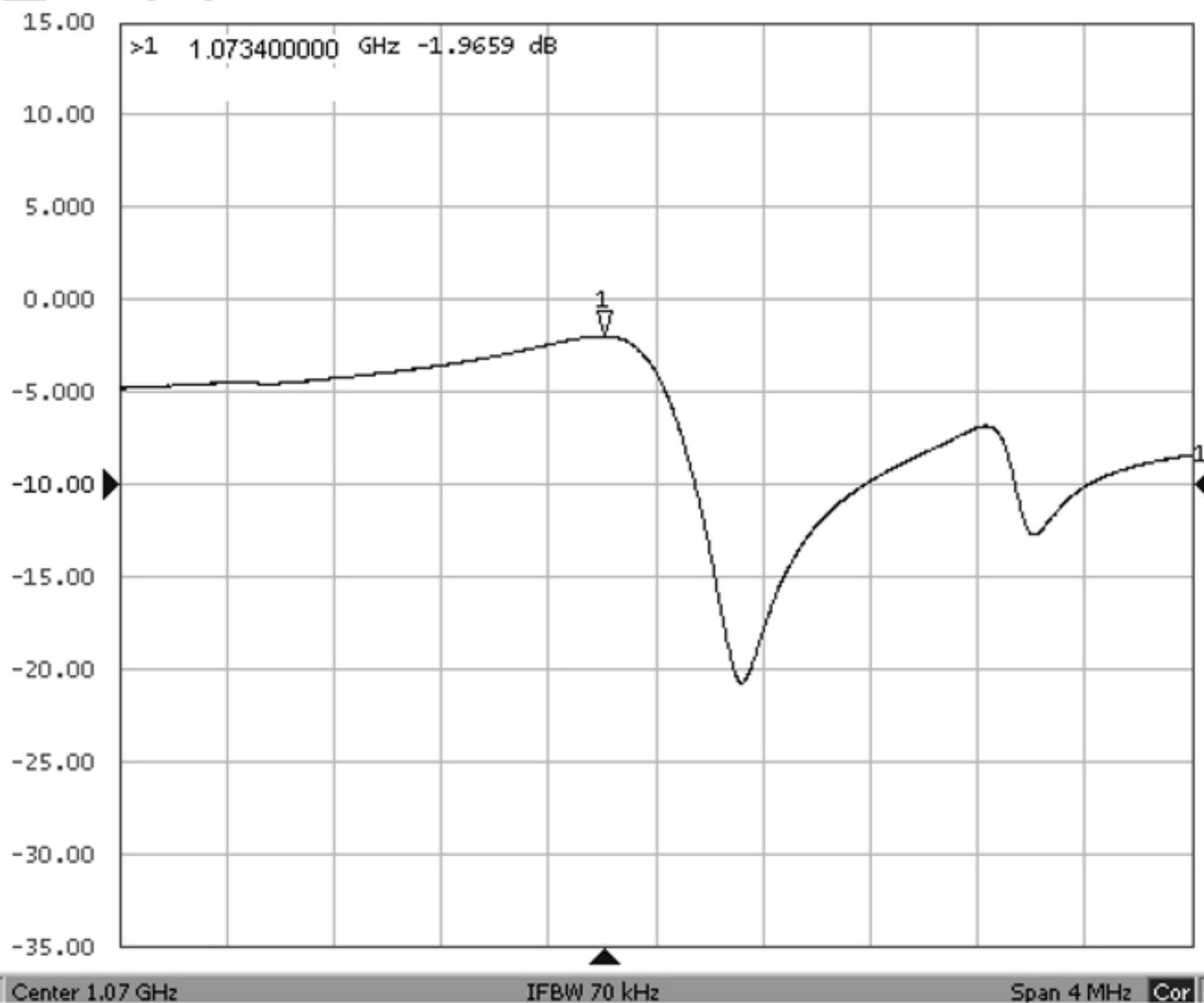
|      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| WK01 | WK02 | WK03 | WK04 | WK05 | WK06 | WK07 | WK08 | WK09 | WK10 | WK11 | WK12 | WK13 |
| A    | B    | C    | D    | E    | F    | G    | H    | I    | J    | K    | L    | M    |
| WK14 | WK15 | WK16 | WK17 | WK18 | WK19 | WK20 | WK21 | WK22 | WK23 | WK24 | WK25 | WK26 |
| N    | O    | P    | Q    | R    | S    | T    | U    | V    | W    | X    | Y    | Z    |
| WK27 | WK28 | WK29 | WK30 | WK31 | WK32 | WK33 | WK34 | WK35 | WK36 | WK37 | WK38 | WK39 |
| a    | b    | c    | d    | e    | f    | g    | h    | i    | j    | k    | l    | m    |
| WK40 | WK41 | WK42 | WK43 | WK44 | WK45 | WK46 | WK47 | WK48 | WK49 | WK50 | WK51 | WK52 |
| n    | o    | p    | q    | r    | s    | t    | u    | v    | w    | x    | y    | z    |

△ Year code : See the table

|      |      |      |      |     |      |      |      |     |
|------|------|------|------|-----|------|------|------|-----|
| Year | 2011 | 2012 | 2013 | ... | 2019 | 2020 | 2021 | ... |
| Code | 1    | 2    | 3    | ... | 9    | 0    | 1    | ... |

## F. FREQUENCY CHARACTERISTICS:

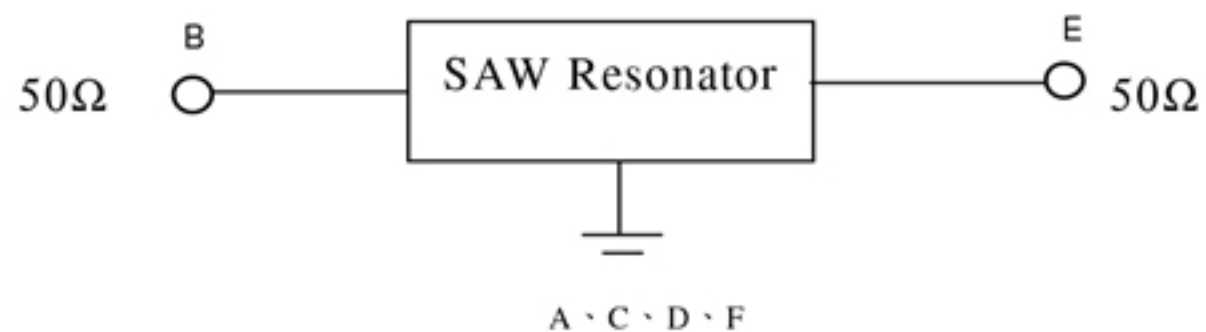
S21 Log Mag 5.000dB/ Ret -10.00dB [RT]



## G. TEST CIRCUIT:

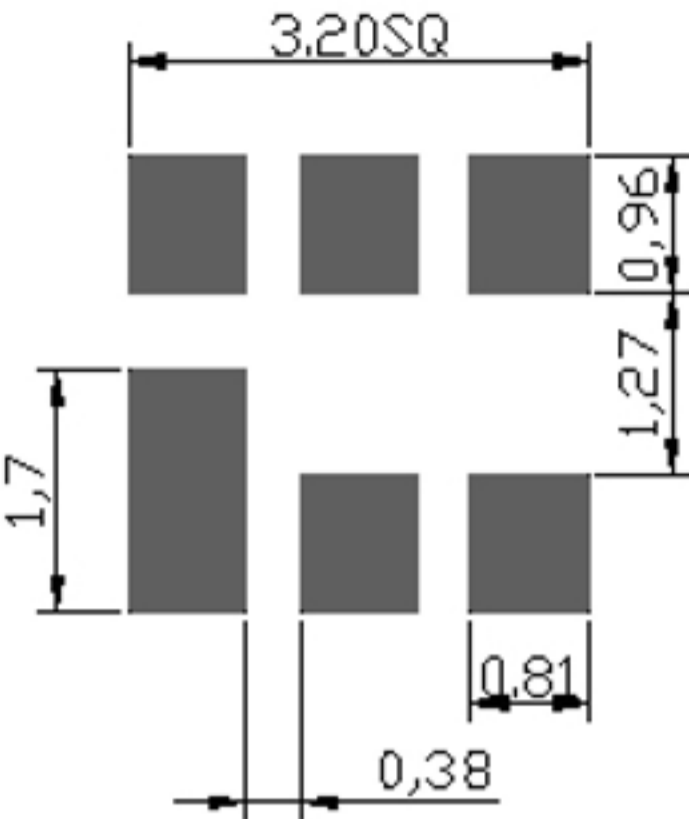
Network analyzer

From  $50\Omega$   
Network  
Analyzer



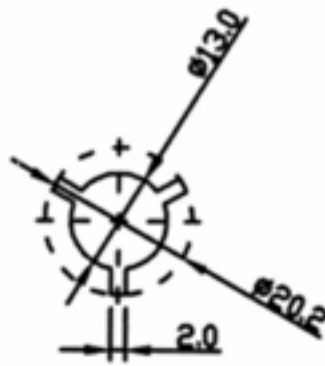
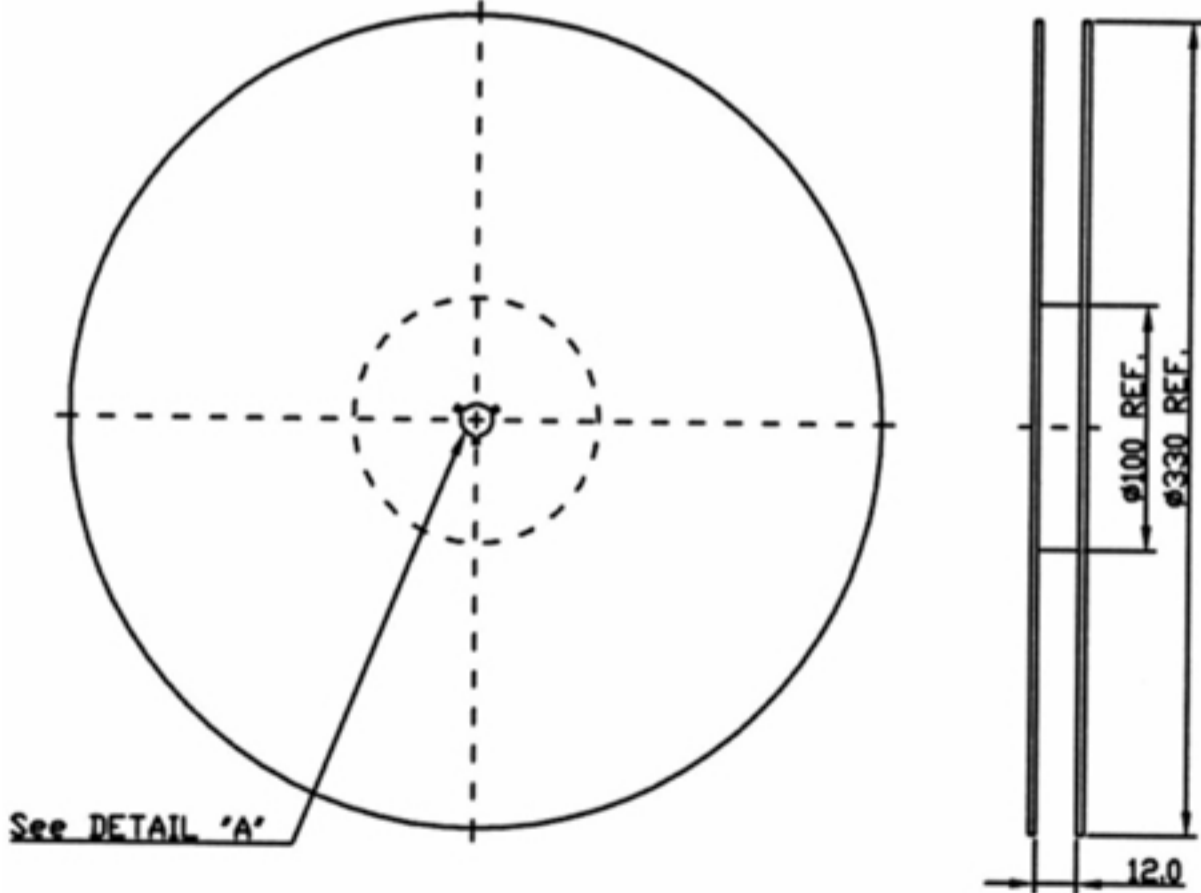
To  $50\Omega$   
Network  
Analyzer

**H. LAND PATTERN:**

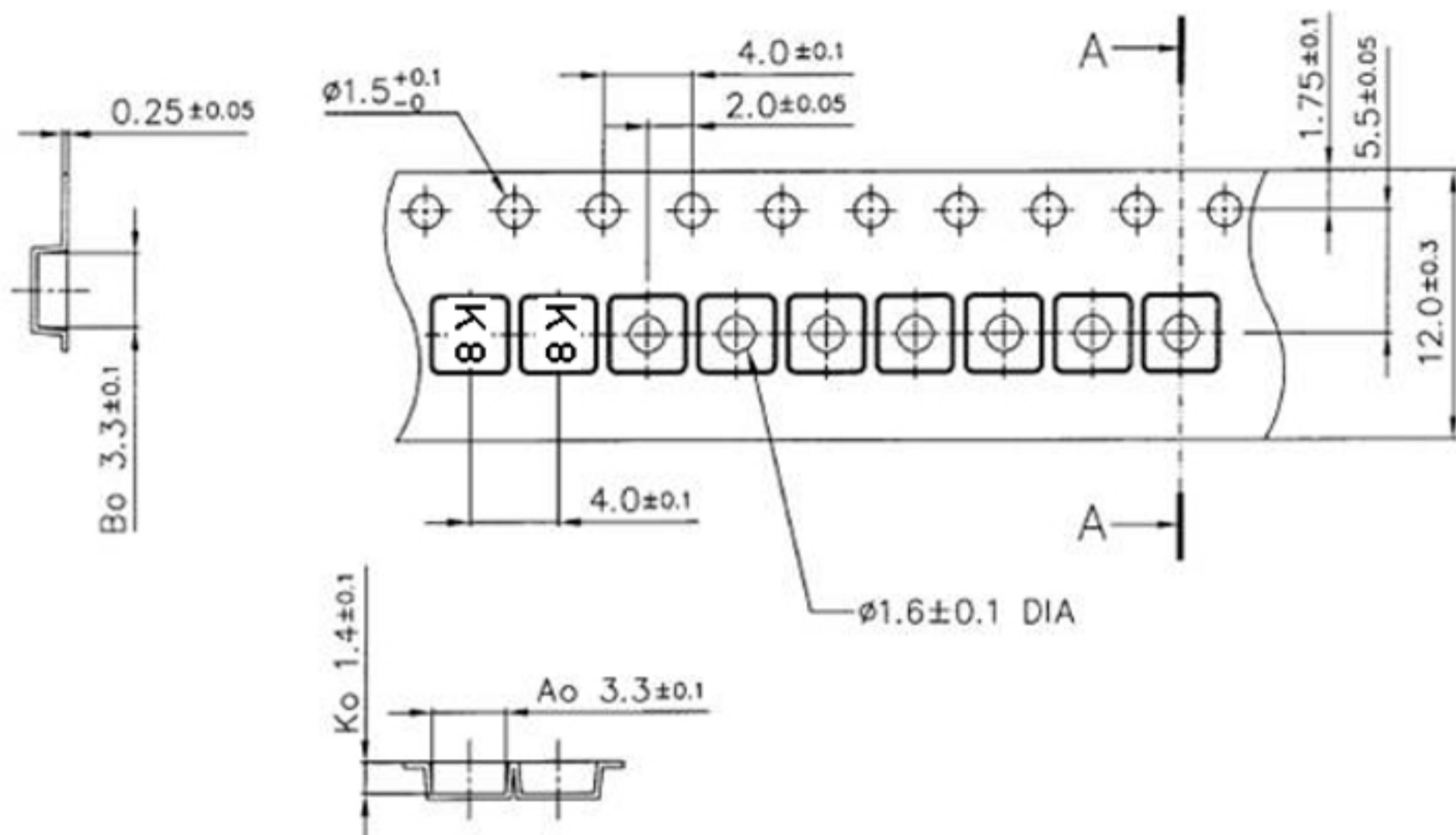


**I. PACKING:**

1. REEL DIMENSION (Please refer to FR-75D10 for packing quantity)



## 2. TAPE DIMENSION



### J. RECOMMENDED REFLOW PROFILE :

1. Preheating shall be fixed at  $150 \sim 180^\circ\text{C}$  for 60~90 seconds.
2. Ascending time to preheating temperature  $150^\circ\text{C}$  shall be 30 seconds min.
3. Heating shall be fixed at  $220^\circ\text{C}$  for 50~80 seconds and at  $245 \sim 260^\circ\text{C}$  peak (min. 10sec).
4. Time: 2 times.

