# SAW Filter 915 MHz

MODEL NO.:TA1392A REV. NO : 2.0

## A. MAXIMUM RATING:

1. Input Power Level: 10 dBm
2. DC Voltage : 6V
3. Operating Temperature: -40℃ to +85℃
4. Storage Temperature: -40℃ to +85℃
5. Moisture Sensitivity Level: Level 1(**MSL1**)

RoHS Compliant
Lead free
Lead-free soldering

**E**lectrostatic **S**ensitive **D**evice

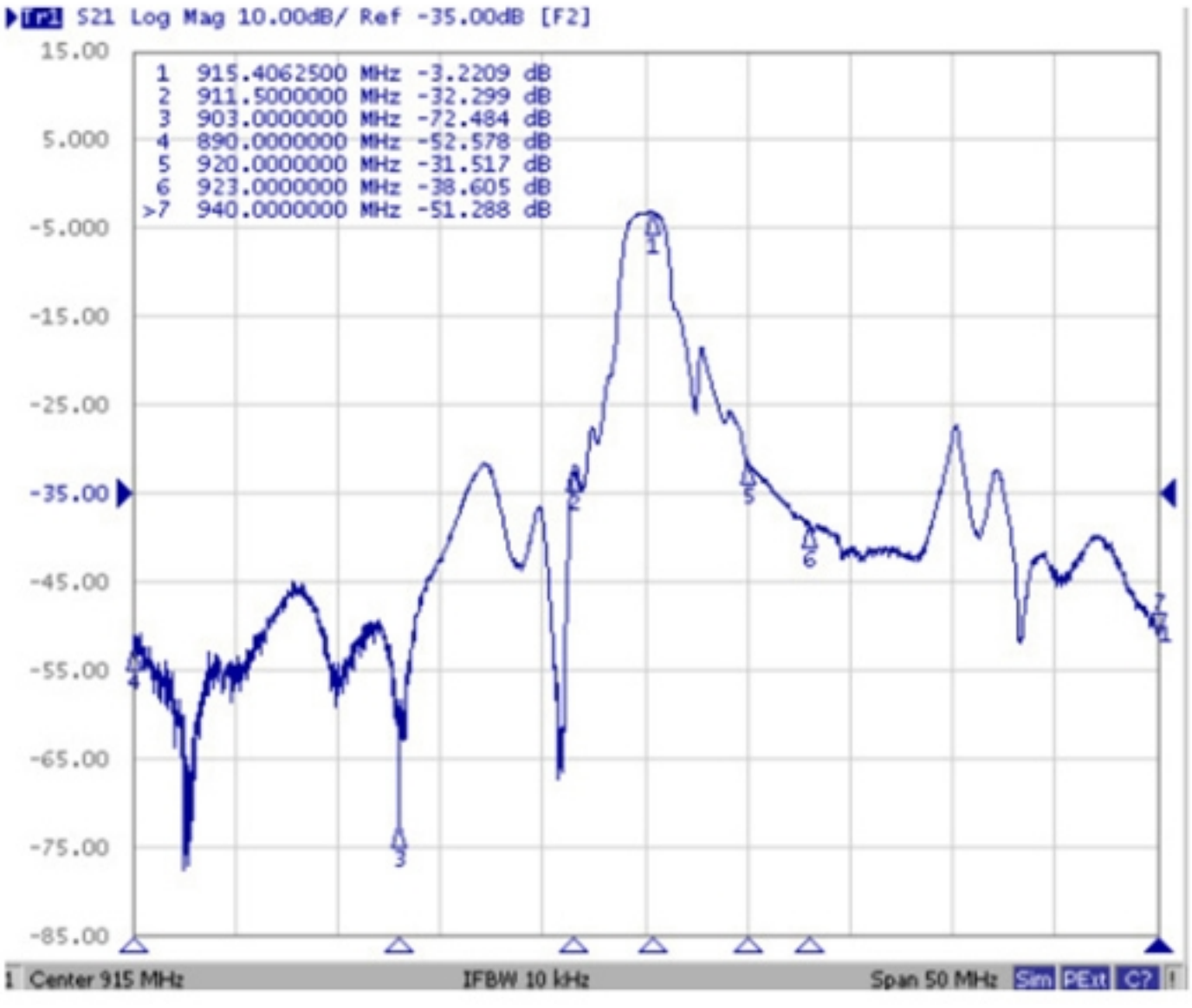
## B. ELECTRICAL CHARACTERISTICS:

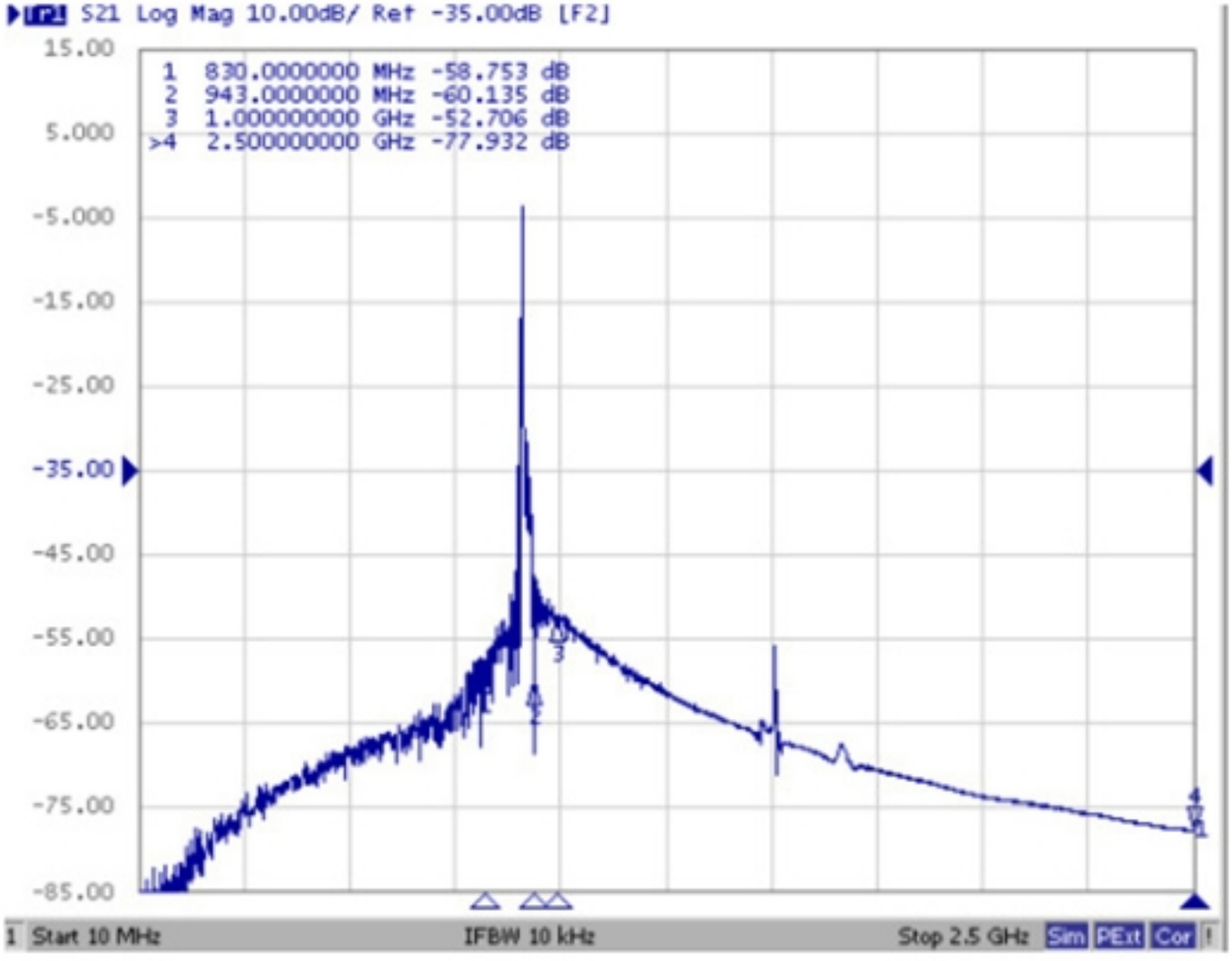
| Item | | Unit | Min. | Typ. | Max. |
|---|---|---|---|---|---|
| **Center frequency** | **Fc** | MHz | - | 915 | - |
| **3dB BW** | | MHz | - | 2.0 | - |
| **Minimum insertion loss** | **IL(min)** | | | | |
| Exclude loss in matching elements *1) | | dB | - | 2.7 | 4.0 |
| Incl. loss of matching elements(Q=89) *2) | | dB | - | 3.9 | 5.0 |
| **Passband (relative to $IL_{min}$ ) *1)** | | | | | |
| 914.50 ~ 915.50 MHz | | dB | - | 0.4 | 2.5 |
| 914.30 ~ 915.70 MHz | | dB | - | 1.0 | 5.0 |
| **Attenuation (relative to $IL_{min}$ ) *1)** | | | | | |
| 10.000 ~ 830.00 | MHz | dB | 47 | 53 | - |
| 830.00 ~ 890.00 | MHz | dB | 41 | 46 | - |
| 890.00 ~ 903.00 | MHz | dB | 36 | 42 | - |
| 903.00 ~ 911.50 | MHz | dB | 19 | 28 | - |
| 920.00 ~ 923.00 | MHz | dB | 19 | 28 | - |
| 923.00 ~ 943.00 | MHz | dB | 19 | 24 | - |
| 943.00 ~ 1000.0 | MHz | dB | 37 | 43 | - |
| 1000.0 ~ 2500.0 | MHz | dB | 43 | 48 | - |
| **Impedance at Fc, Input** *1) **Zin = Rin//Cin** | $Z_S$ | Ω | | 354Ω//1.88pF | |
| **Impedance at Fc, Output** *1) **Zout = Rout//Cout** | $Z_L$ | Ω | | 334Ω//1.93pF | |

*1) : The matching circuit is ideal by simluation.

*2) : The matching circuit is real by actual passive components.
0805 Coillcraft CS series chip conductor is used for inductor.
0402 muRata GRM series is used for capacitor.

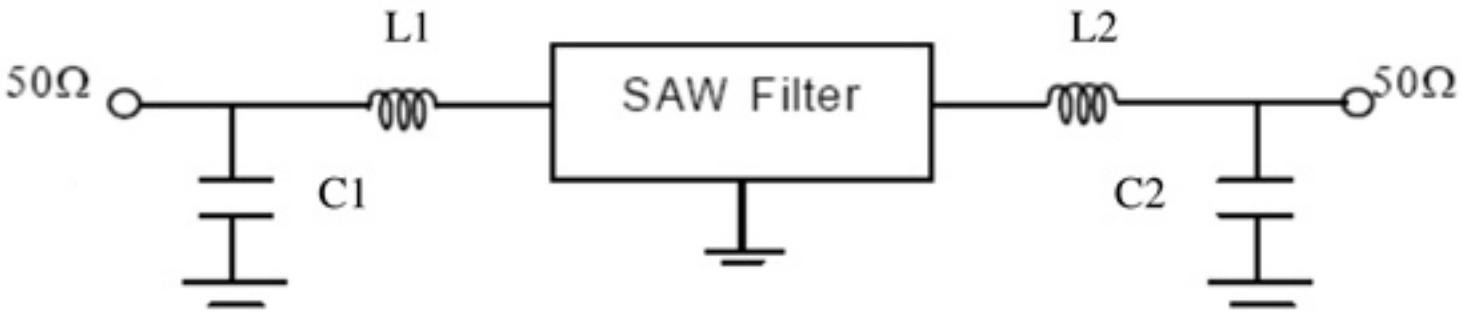
## C. Frequency Characteristics :


F2 S21 Log Mag 10.00dB/ Ref -35.00dB [F2]
1 830.0000000 MHz -58.753 dB
2 943.0000000 MHz -60.135 dB
3 1.000000000 GHz -52.706 dB
>4 2.500000000 GHz -77.932 dB
15.00
5.000
-5.000
-15.00
-25.00
-35.00
-45.00
-55.00
-65.00
-75.00
-85.00
1 Start 10 MHz
IFBW 10 kHz
Stop 2.5 GHz
Sim
PExt
Cor

## D. MEASUREMENT CIRCUIT:

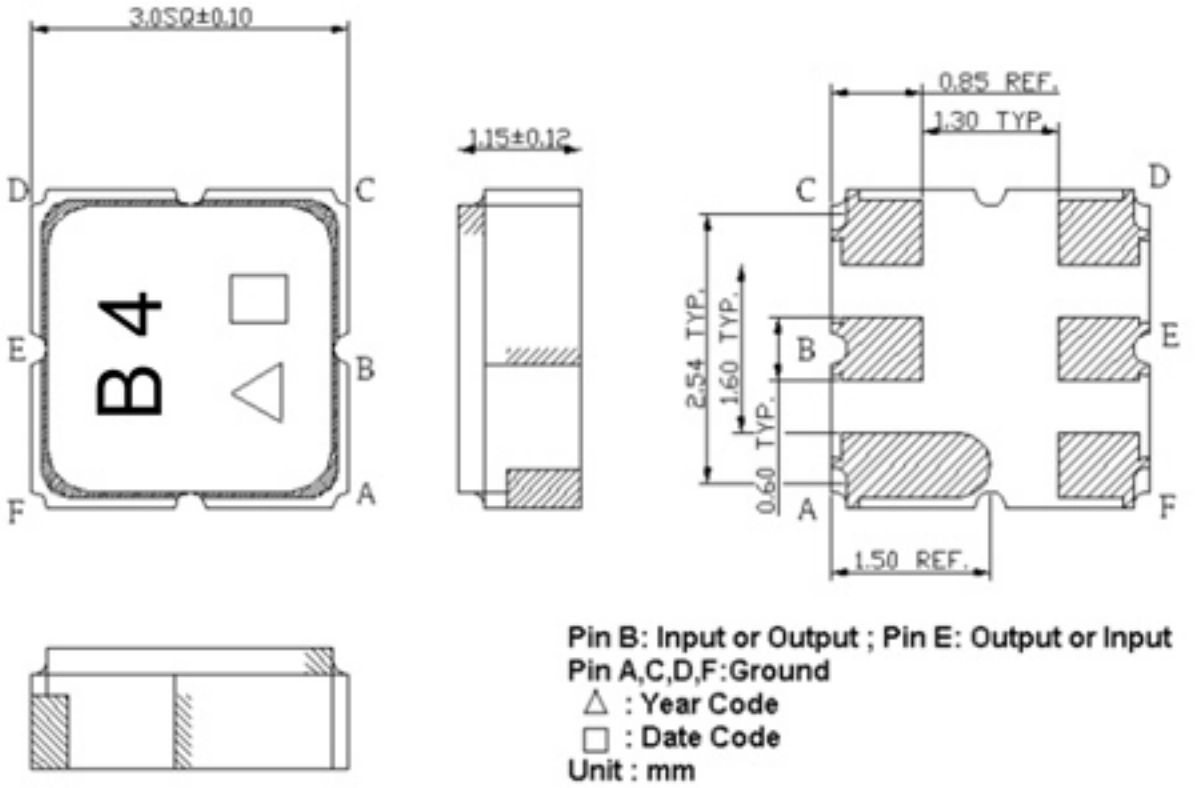
The matching circuit is ideal by simulation




**L1 : 34nH , L2 : 33nH (Ideal value)**

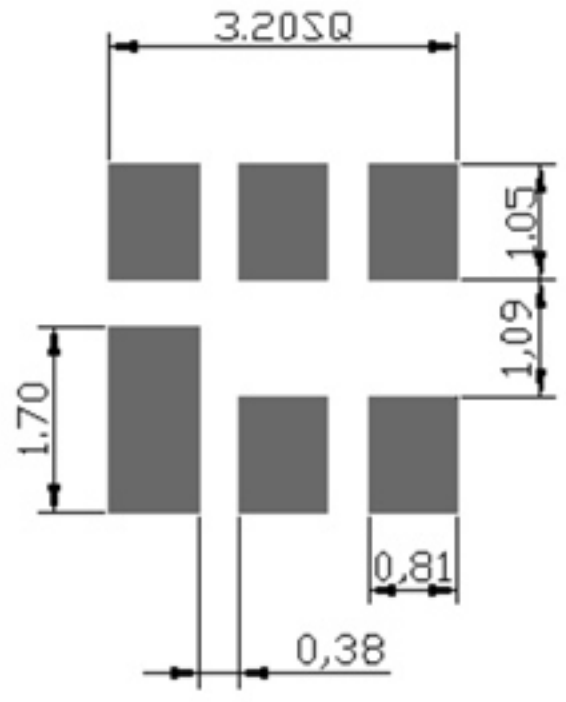
**C1 : 1.6 pF , C2 : 1.6pF (Ideal value)**

## E.OUTLINE DRAWING:



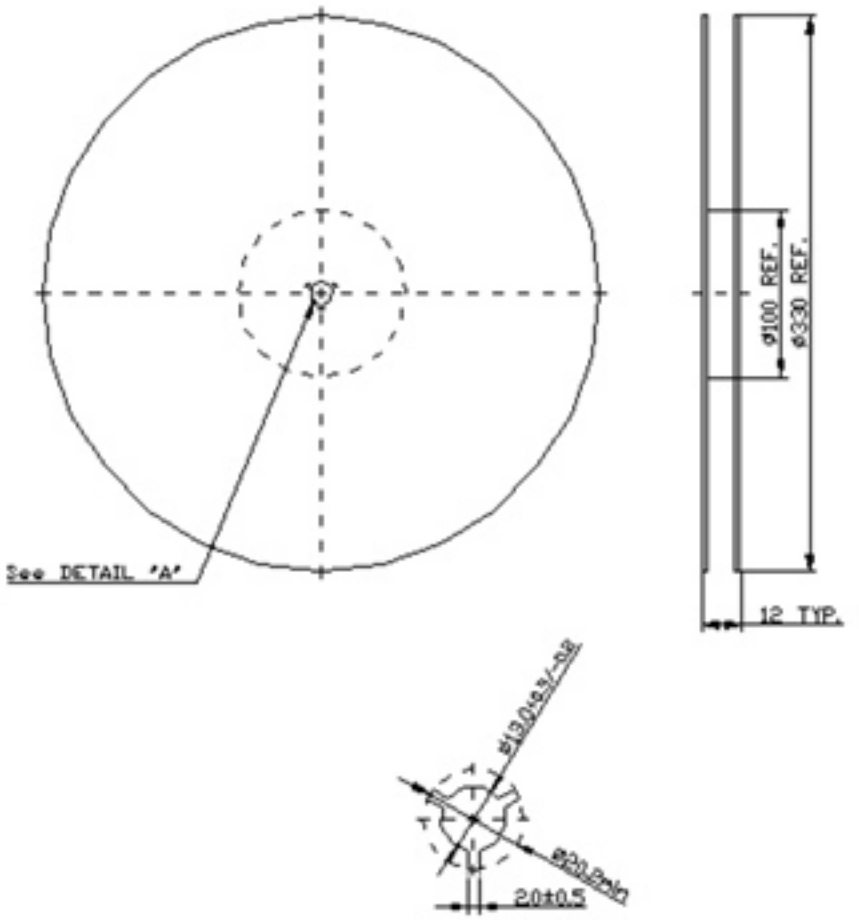

**Pin B: Input or Output ; Pin E: Output or Input**
**Pin A,C,D,F:Ground**
**△ : Year Code**
**□ : Date Code**
**Unit : mm**

## F. PCB Footprint:

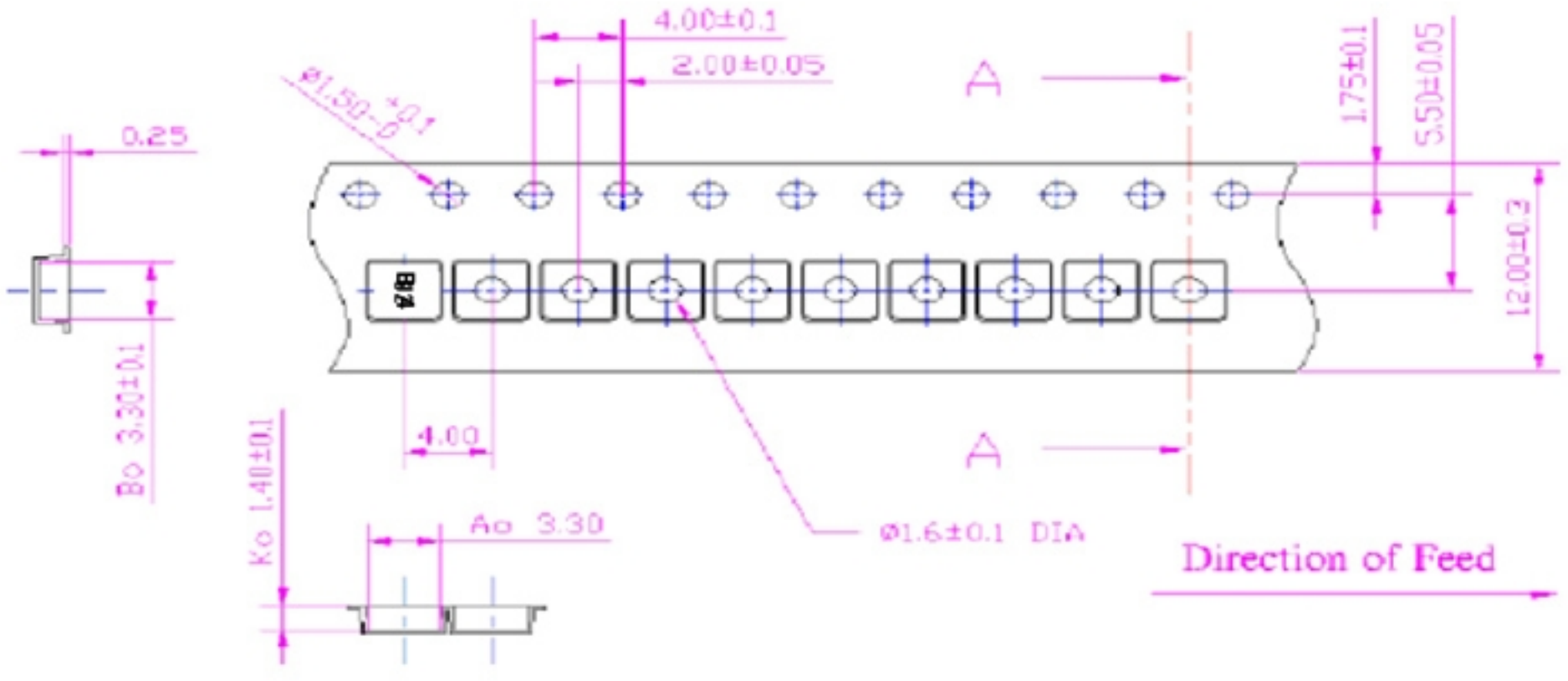


## G. PACKING:

1. REEL DIMENSION




2. TAPE DIMENSION



## H. RECOMMENDED REFLOW PROFILE :

1. Preheating shall be fixed at 150~180℃ for 60~90 seconds.
2. Ascending time to preheating temperature 150℃ shall be 30 seconds min.
3. Heating shall be fixed at 220℃ for 50~80 seconds and at 260℃+0/-5℃ peak (20~40sec).
4. Time: 2 times.