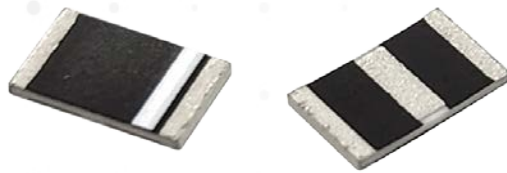




SPECIFICATION

ISM band – 915 MHz Chip Antenna



Model No. : UTCLW-901



1. General Description

1.1 Electrical Properties

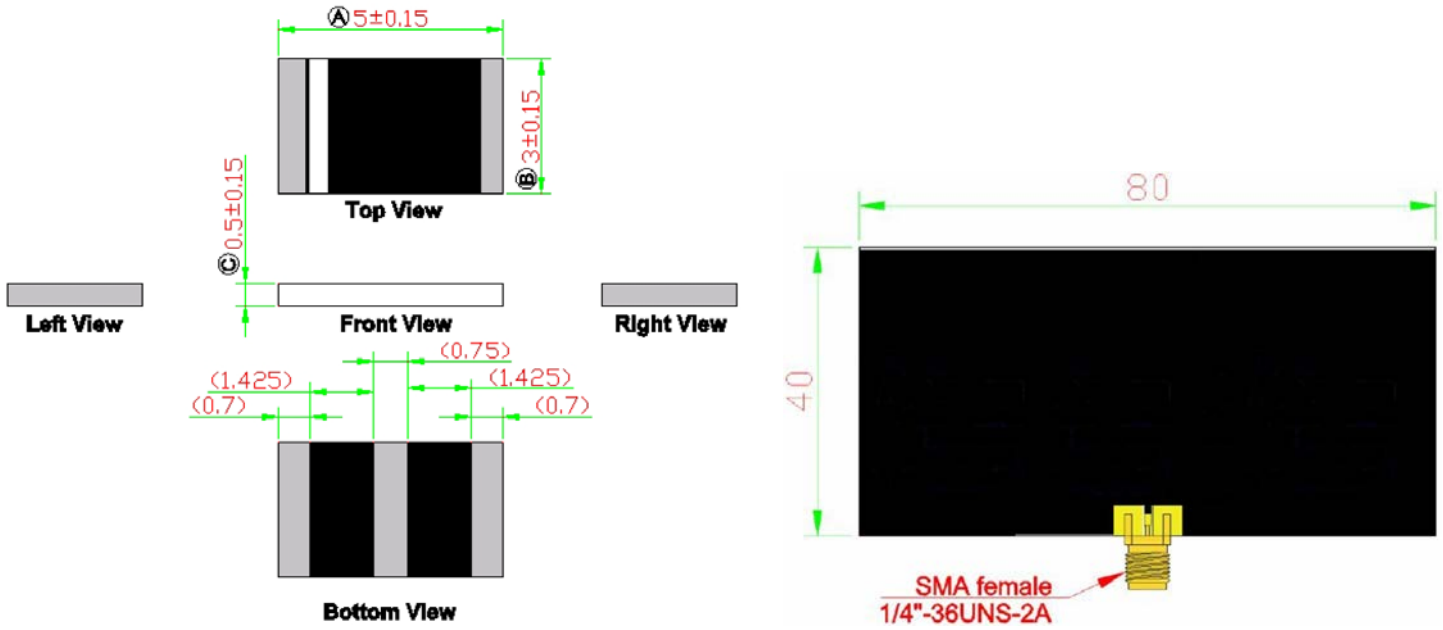
| Parameter | | Description |
|-----------------------------------|-----------|-------------|
| Frequency Band | | 910~920 MHz |
| Nominal Impedance | | 50 Ω |
| Polarization | | Linear |
| V.S.W.R | | <2:1 |
| Efficiency | @ 915 MHz | 52 % |
| Peak Gain | | 0.8 dBi |
| ※With 80 x 40 mm Evaluation Board | | |

1.2 Mechanical Properties

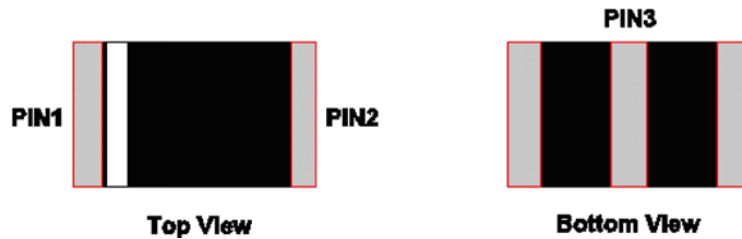
| Parameter | Description |
|--|-------------|
| Dimension | 5×3×0.5 mm |
| Operating Temperature | -40°C~85°C |
| Storage Temperature (With Packing Sealed) | -5°C~40°C |

2. Appearance

2.1 Dimensions Of Antenna And Evaluation Board (Unit : mm)



2.2 PIN Definitions

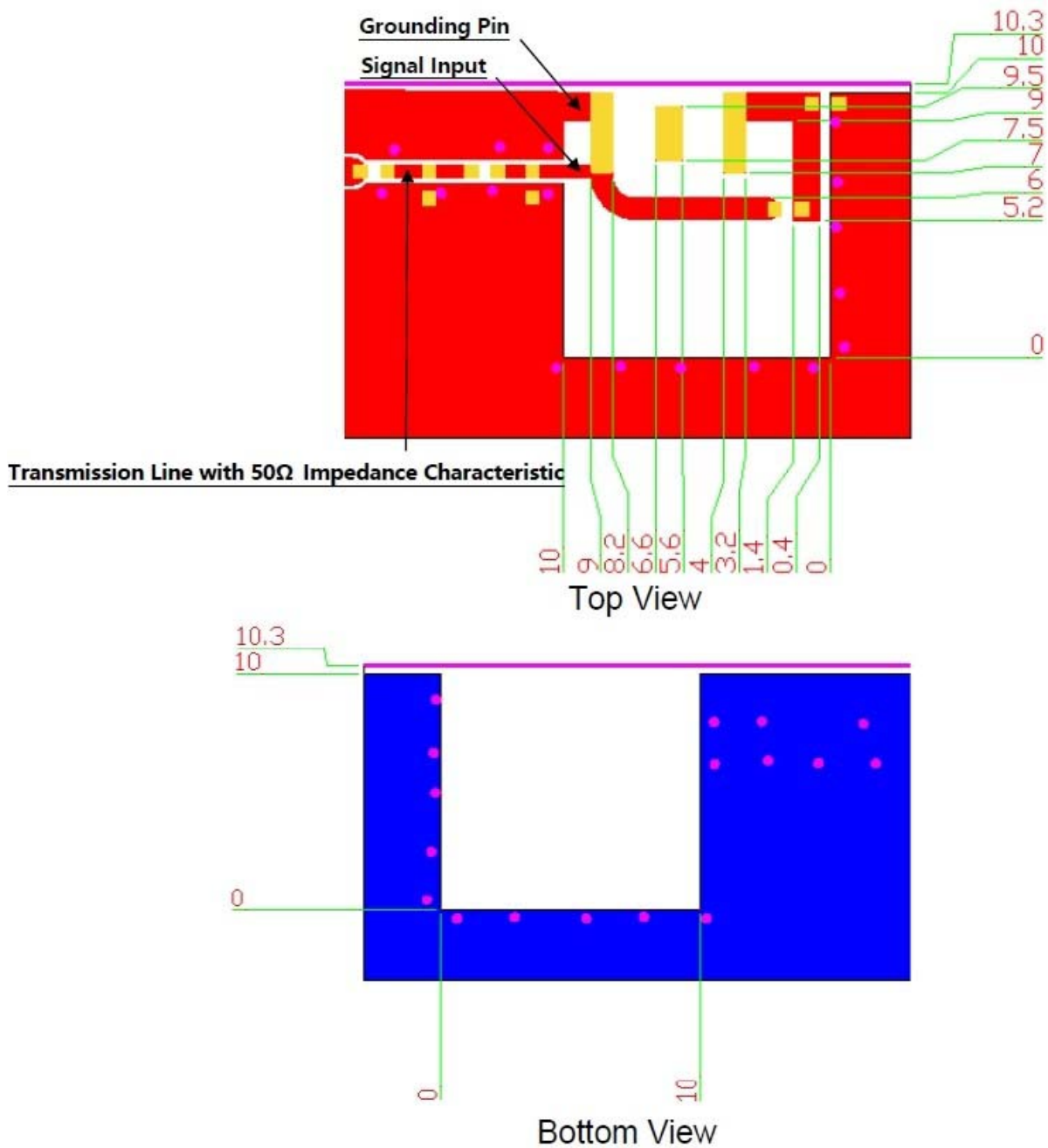


| Item | PIN 1 | PIN 2 | PIN 3 |
|----------|--------|-----------------|---------------|
| Terminal | Signal | Tuning / Ground | Soldering Pad |

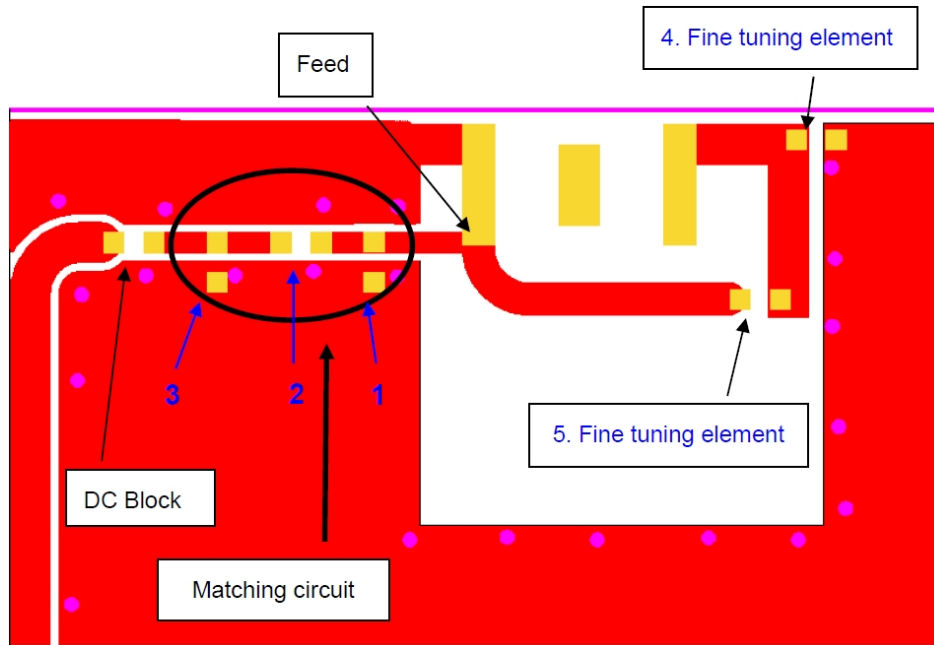
3. Layout Guide (Unit : mm)

The solder land pattern (yellow marking areas) is shown as below.
 Recommendation on matching circuit will be provided according to customer's installation conditions.

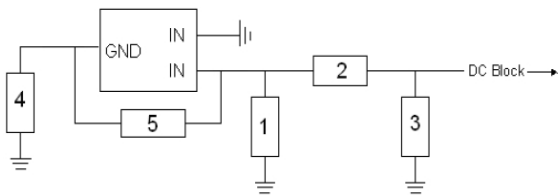
With 80 x 40 mm Evaluation Board



4. Frequency Tuning And Matching Circuit



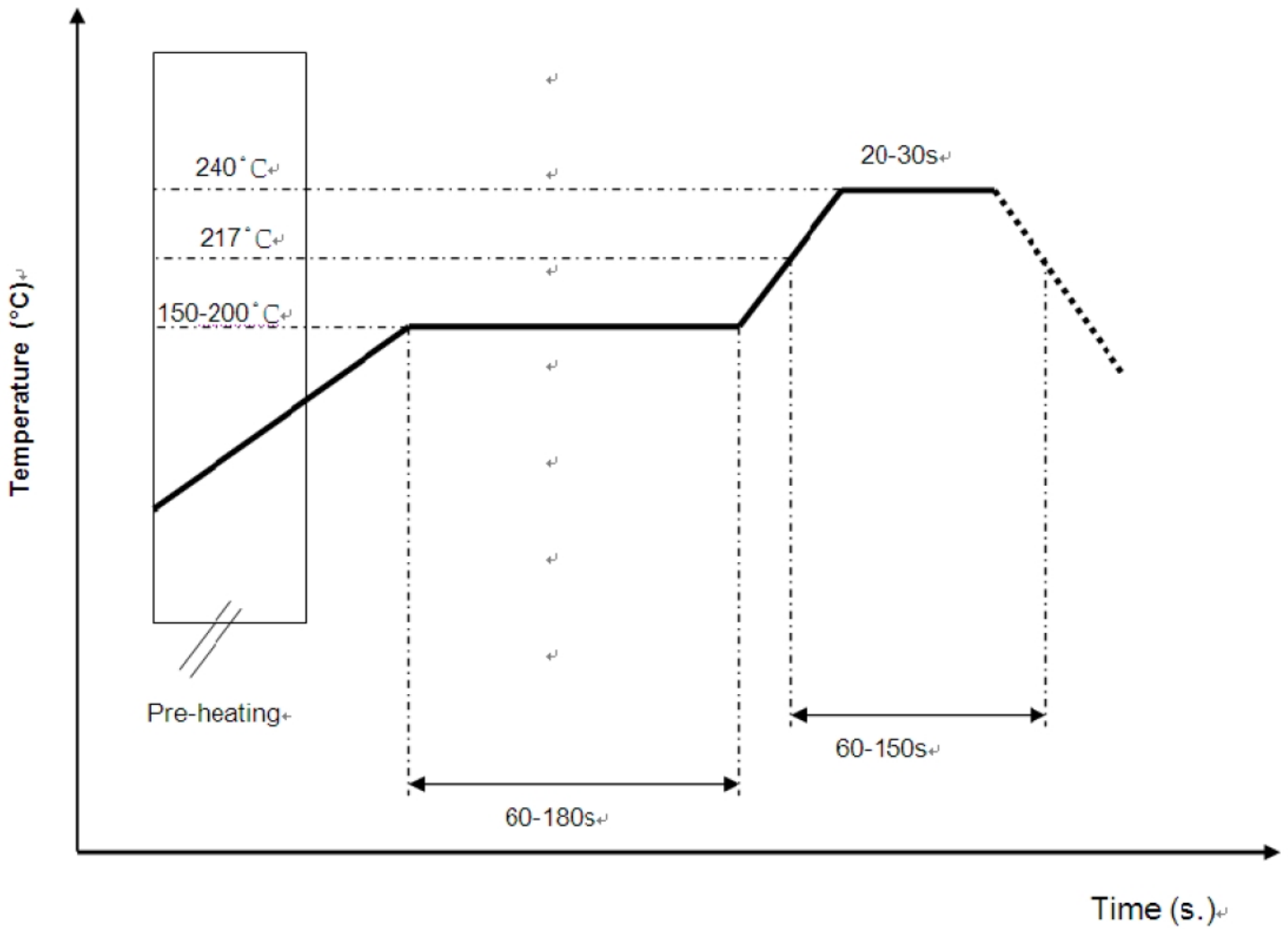
With the following recommended values of matching and tuning components, the center frequency will be about 915 MHz at our standard 80x40 mm evaluation board.



| System Matching Circuit Component | | | |
|-----------------------------------|---------------|--------|-----------|
| Location | Description | Vendor | Tolerance |
| 1 | 10.0nH*, 0402 | MURATA | ±3% |
| 2 | 1.0nH*, 0402 | MURATA | ±0.3nH |
| 3 | N/A* | - | - |
| DC Block | 22pF*, 0402 | MURATA | ±5% |
| Fine tuning element 4 | 3.0pF*, 0402 | MURATA | ±0.05pF |
| Fine tuning element 5 | 3.3pF*, 0402 | MURATA | ±0.05pF |

※These are typical reference values which may need to be changed when circuit boards or part vendors are different.

5. Soldering Conditions

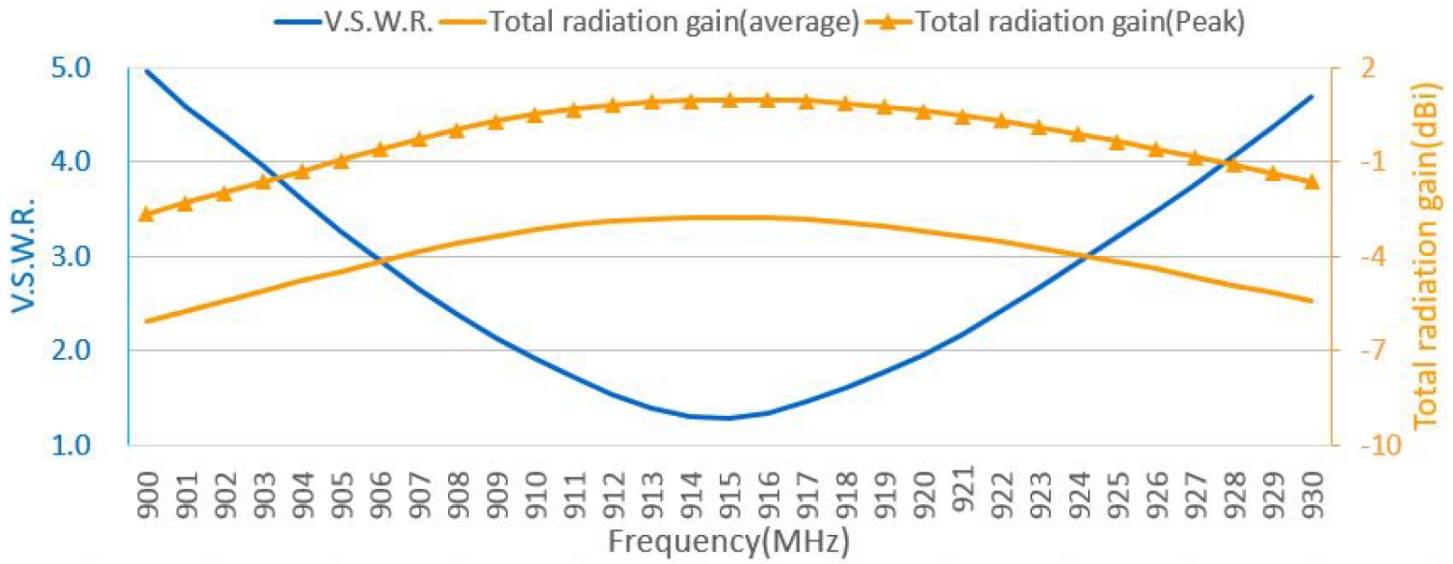


※Recommended solder paste alloy : SAC305(Sn96.5/Ag3/Cu0.5) Lead free solder paste.



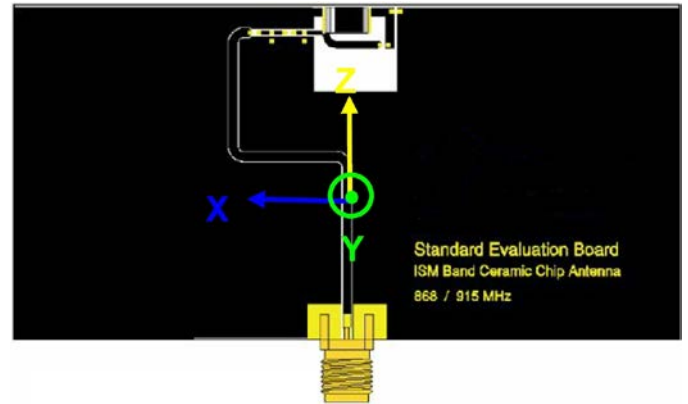
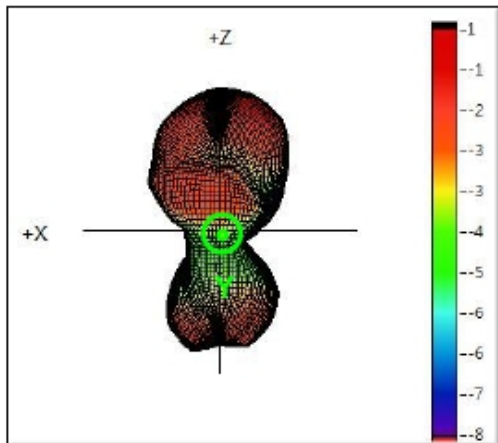
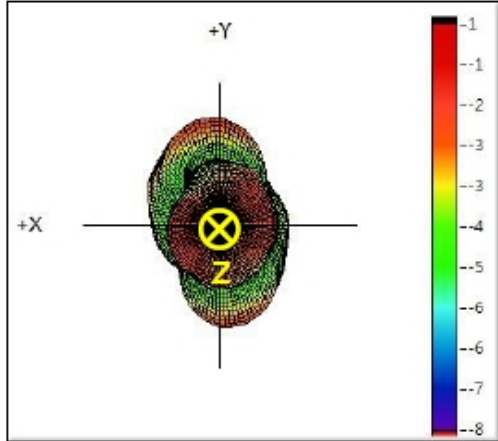
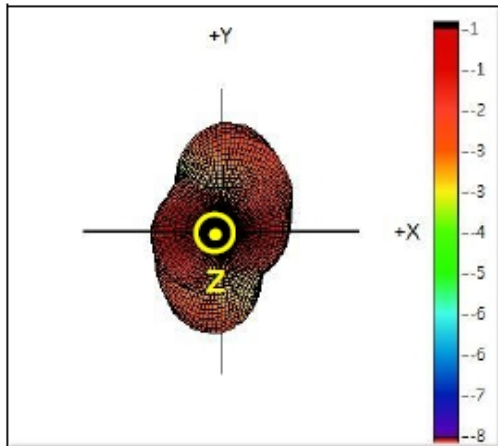
6. Performance

6.1 V.S.W.R. , Average Gain , Peak Gain



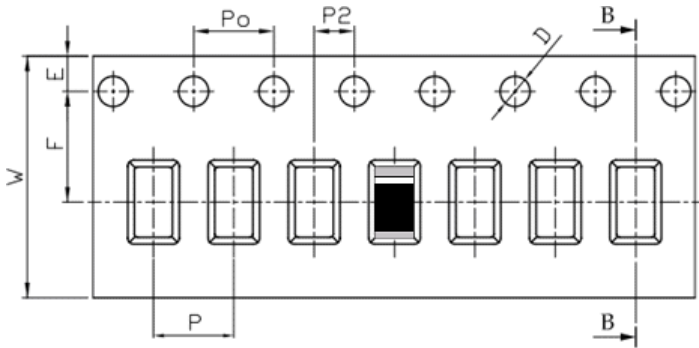
6.2 3D Radiation Pattern

3D Gain Pattern @ 915 MHz (Unit : dBi)



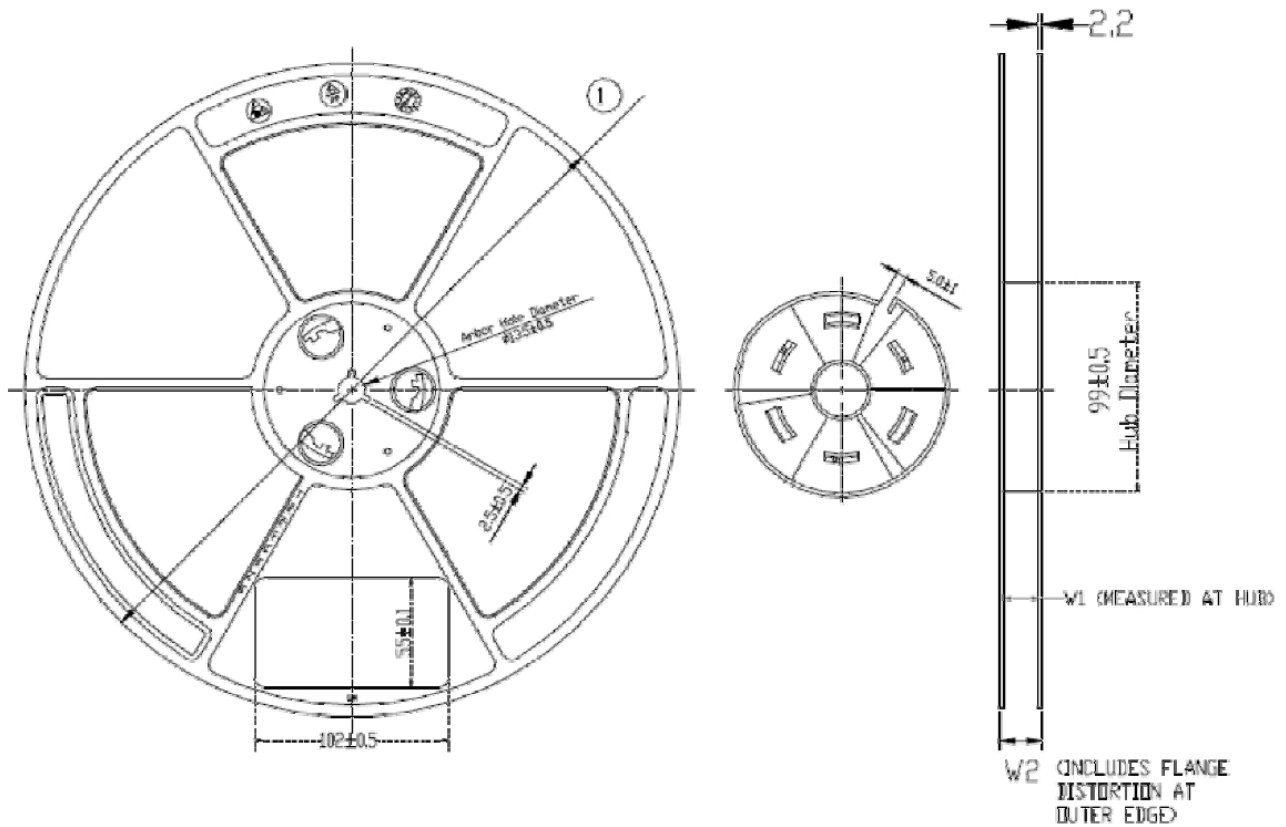
7. Packing

- Tape :



| Feature | Specifications | Tolerances |
|---------|----------------|----------------|
| W | 12.00 | ±0.30 |
| P | 4.00 | ±0.10 |
| E | 1.75 | ±0.10 |
| F | 5.50 | ±0.10 |
| P2 | 2.00 | ±0.10 |
| D | 1.50 | +0.10 -0.00 |
| Po | 4.00 | ±0.10 |
| 10Po | 40.00 | ±0.20 |

- Reel : 6,000 pcs



| ① Diameter | W1 | W2 |
|------------|----------|----------|
| 330±1mm | 13.4±1mm | 17.8±1mm |