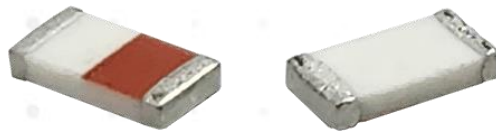




SPECIFICATION

Triple Wi-Fi—2.4 / 5 / 6 GHz Chip Antenna



Model No. : UTCTW03



1. General Description

1.1 Electrical Properties

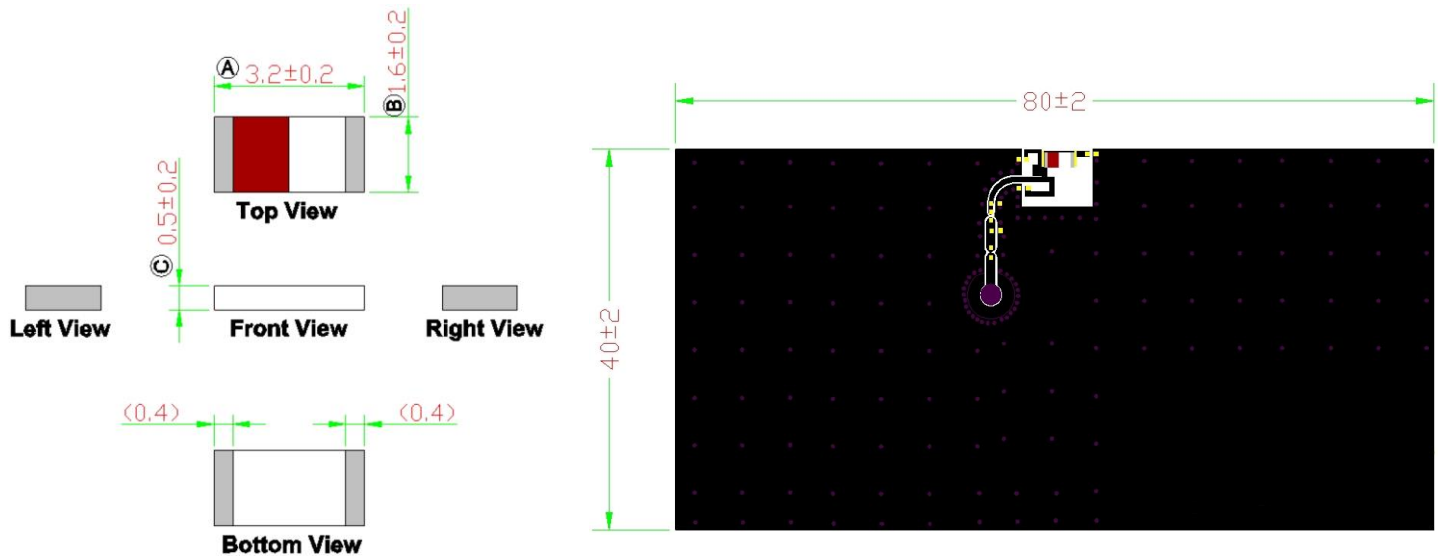
| Parameter | Description | | |
|-----------------------------------|---------------|---------------|---------------|
| Frequency Band | 2400~2500 MHz | 5150~5850 MHz | 5925~7125 MHz |
| Nominal Impedance | 50 Ω | | |
| Polarization | Linear | | |
| V.S.W.R. | <2:1 | | |
| Efficiency | 68 % | 61 % | 62 % |
| Average Gain | -1.7 dBi | -2.2 dBi | -2.1 dBi |
| Peak Gain | 2 dBi | 2.8 dBi | 3 dBi |
| ※With 80 x 40 mm Evaluation Board | | | |

1.2 Mechanical Properties

| Parameter | Description |
|--|----------------|
| Dimensions | 3.2*1.6*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

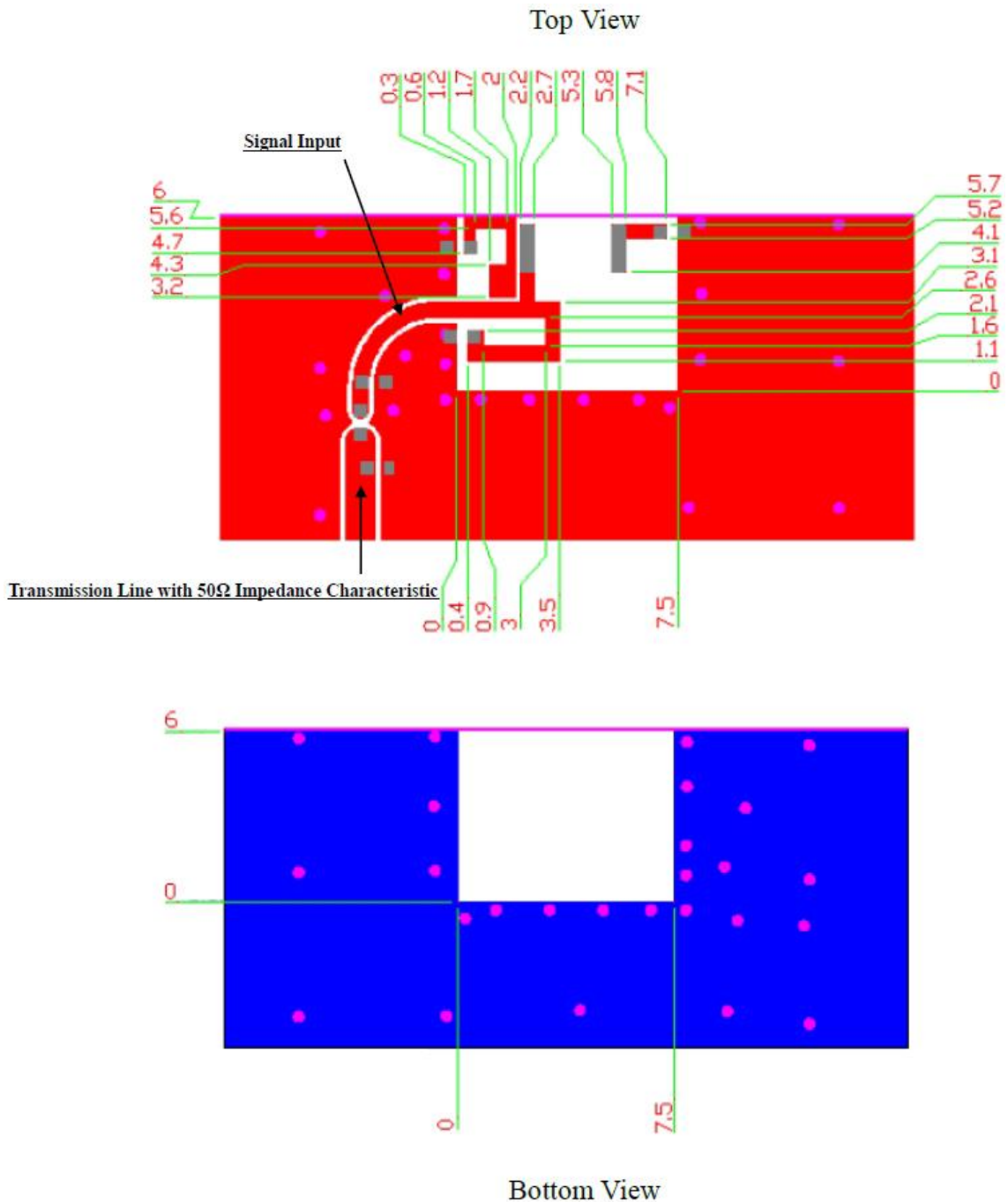


| Item | PIN 1 | PIN 2 |
|----------|--------------|------------------------|
| Terminal | Signal Input | Tuning / Signal Output |

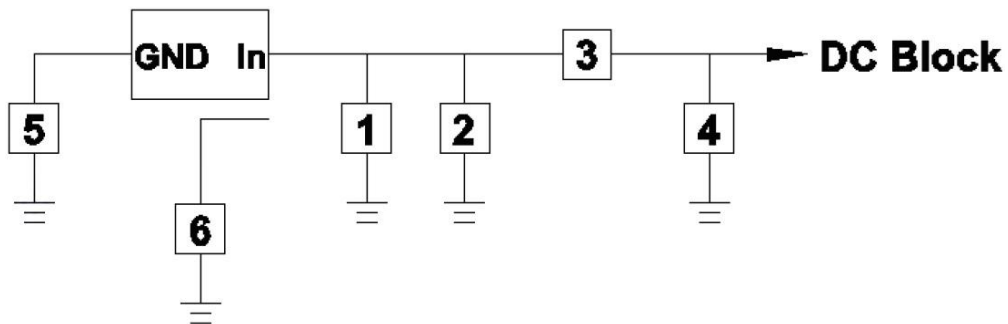
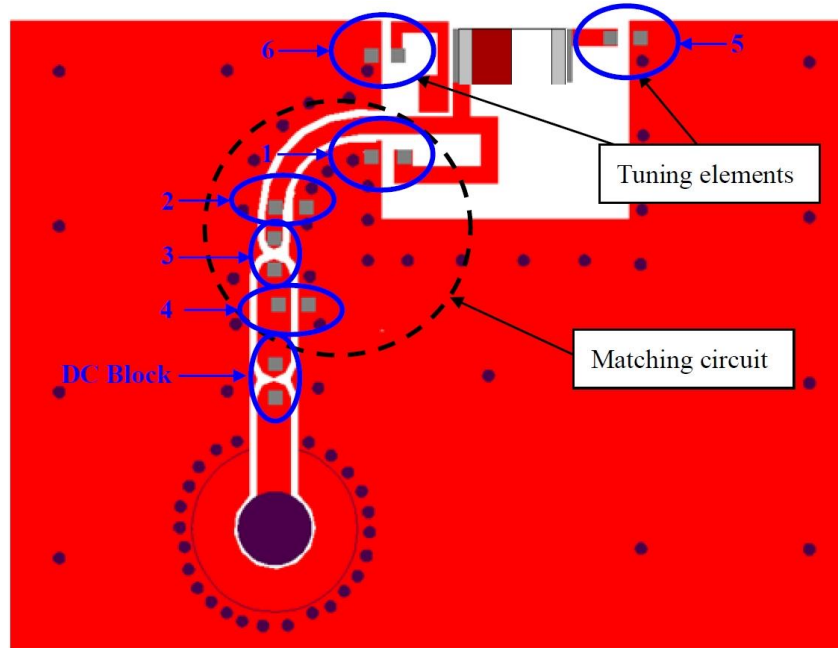
3. Layout Guide (Unit : mm)

The solder land pattern (gray 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



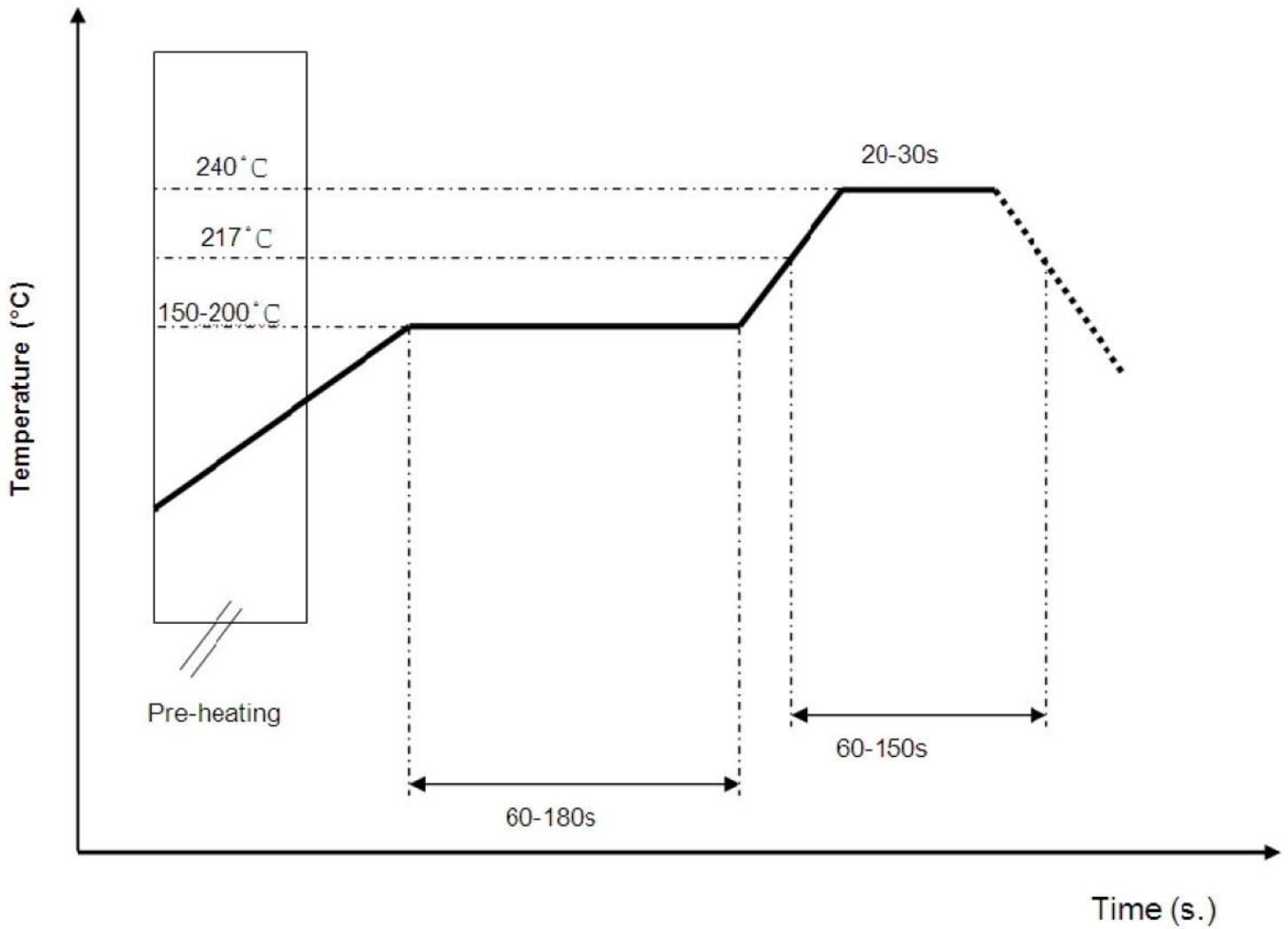
4. Frequency Tuning And Matching Circuit



| Typical Matching Circuit Components | | | |
|-------------------------------------|--------------|--------|-----------|
| Location | Description | Vendor | Tolerance |
| 1 | 0Ω (0402) | - | ±5% |
| 2 | 8.2nH (0402) | MURATA | ±5% |
| 3 | 0Ω (0402) | - | ±5% |
| 4 | 15nH (0402) | MURATA | ±5% |
| 5 | 2.2pF (0402) | MURATA | ±0.05 pF |
| 6 | 0.2pF (0402) | MURATA | ±0.05 pF |
| DC Block | 3.3pF (0402) | MURATA | ±0.05 pF |

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

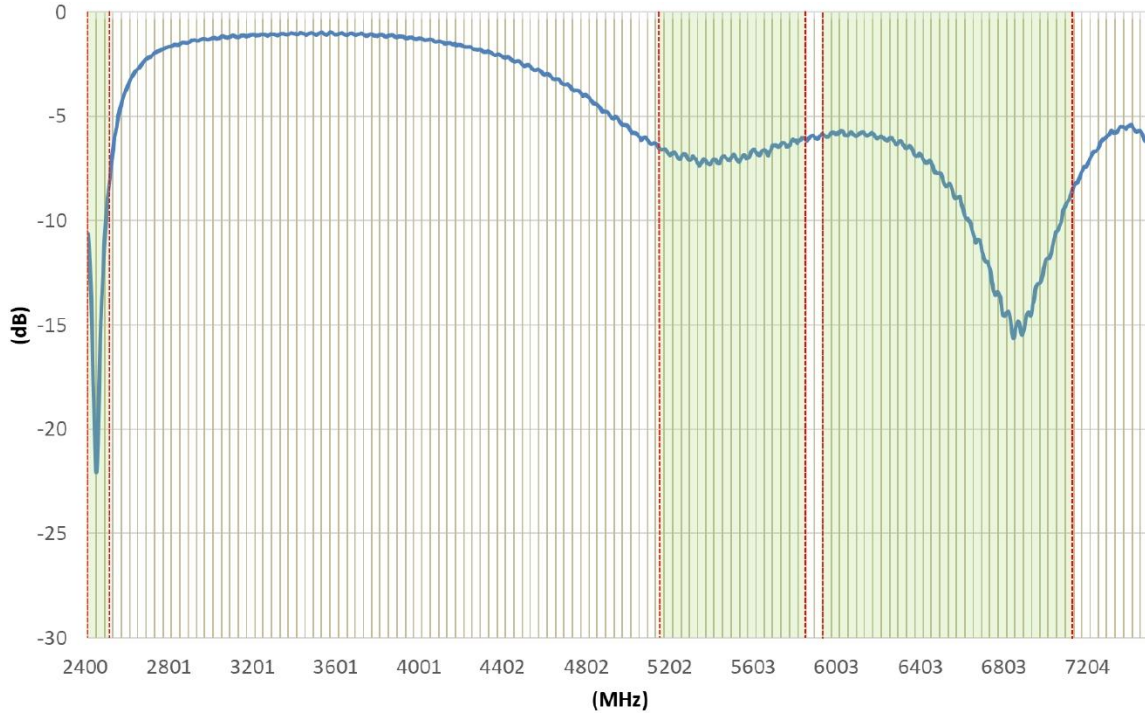
5. Soldering Conditions



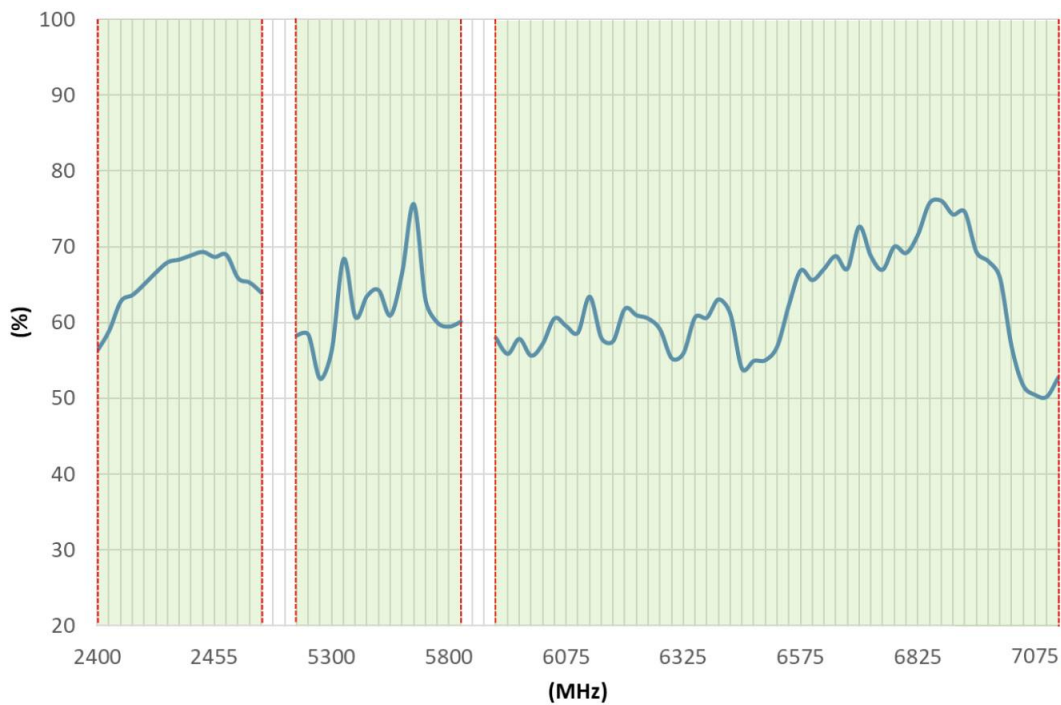
※Recommended solder paste alloy : SAC305(Sn96.5/Ag3/Cu0.5) Lead free solder paste.

6. Performance

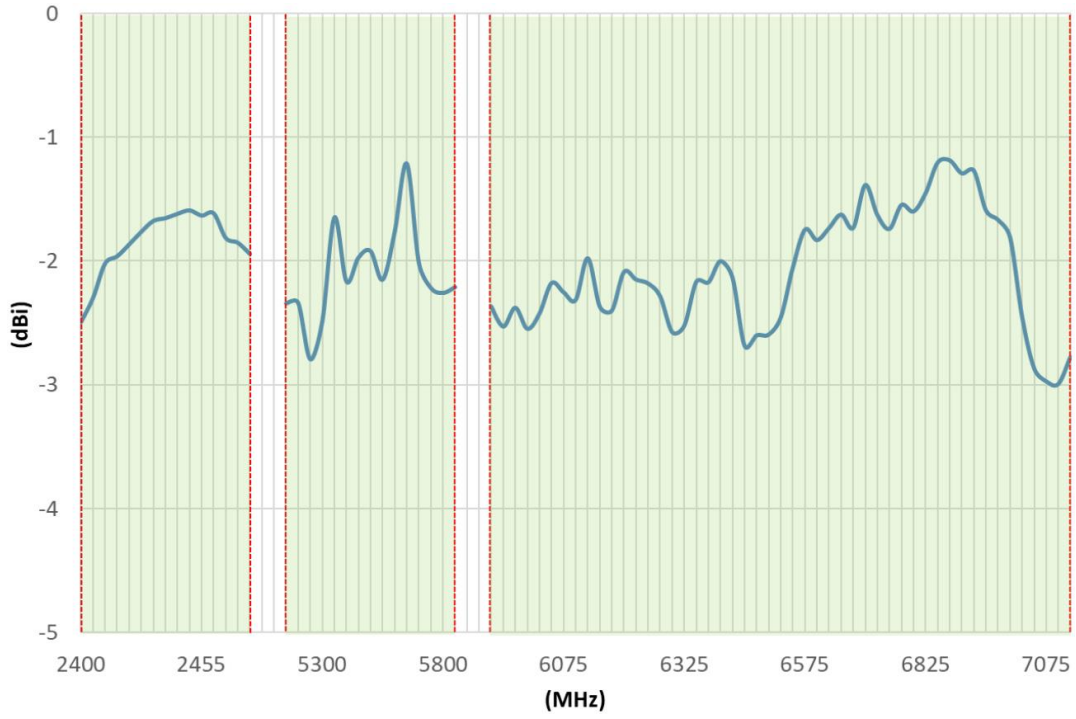
6.1 Return Loss



6.2 Efficiency



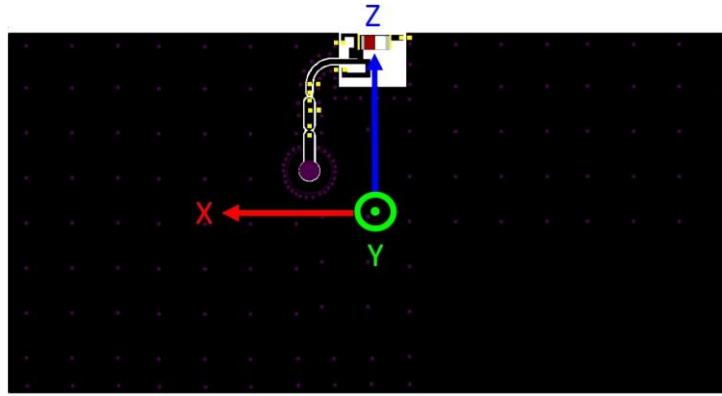
6.3 Average Gain



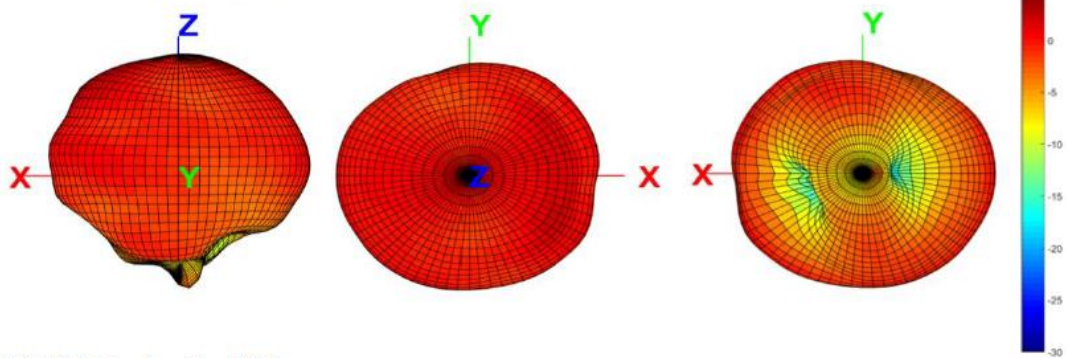
6.4 Peak Gain



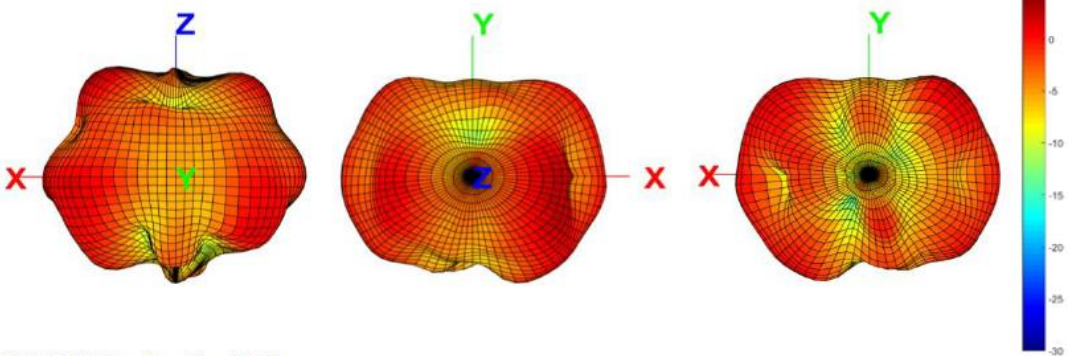
6.5 3D Radiation Pattern



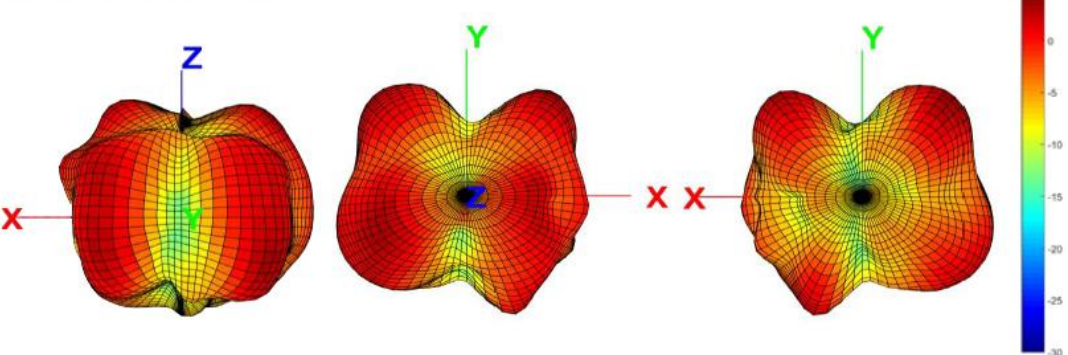
2440 MHz (unit: dBi)



5550 MHz (unit: dBi)

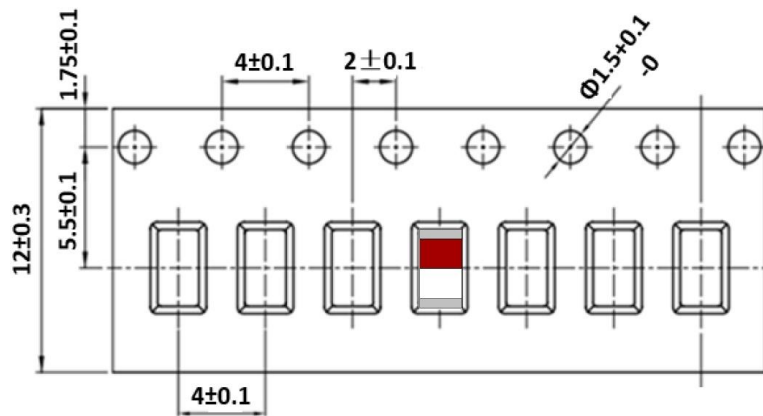


6550 MHz (unit: dBi)

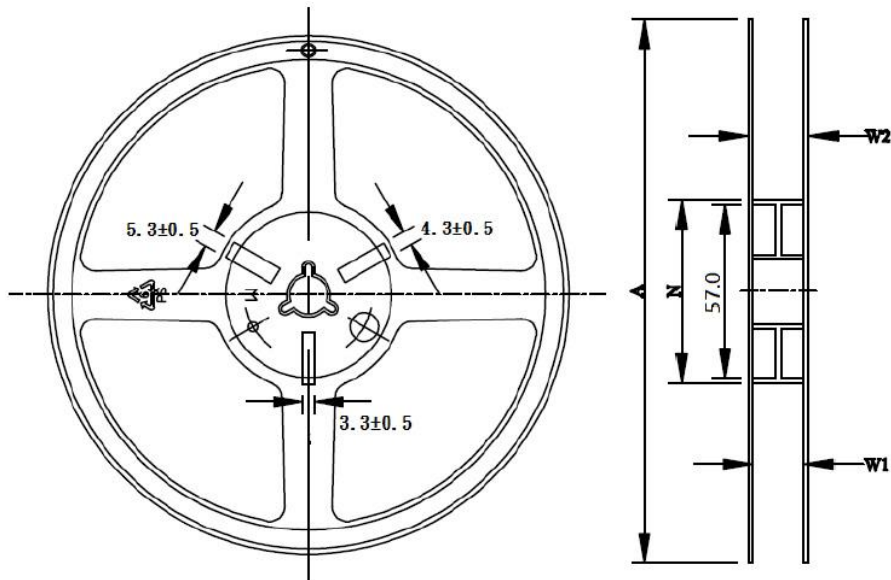


7. Packing

- Tape :



- Reel : 5,000 pcs



| Feature | Specifications | Tolerances |
|---------|----------------|------------|
| A | 178.0 | ± 1.0 |
| B | 2.7 | ± 0.5 |
| C | 13.3 | ± 0.5 |
| N | 60.0 | ± 0.5 |
| W1 | 13.7 | ± 0.5 |
| W2 | 16.1 | ± 0.5 |