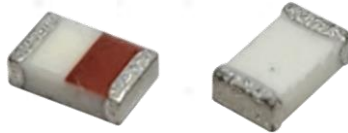




# SPECIFICATION

**Wi-Fi / Bluetooth / Zigbee – 2.4 GHz  
Chip Antenna**



**Model No. : UTCB02**



## 1. General Description

### 1.1 Electrical Properties

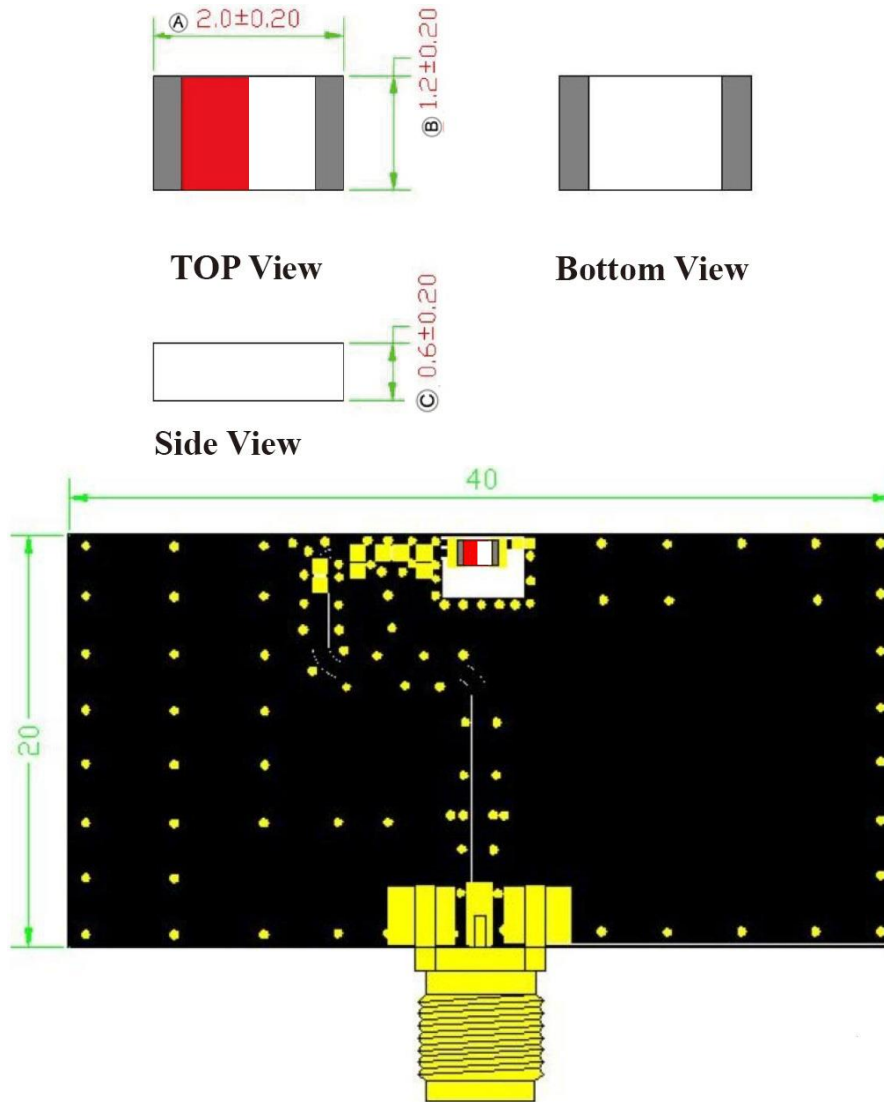
Parameter	Description
Frequency Band	2400~2485 MHz
Nominal Impedance	50 $\Omega$
Polarization	Linear
V.S.W.R	<2:1
Efficiency	62 %
Average Gain	-2.1 dBi
Peak Gain	2 dBi
※With 40 x 20 mm Evaluation Board	

### 1.2 Mechanical Properties

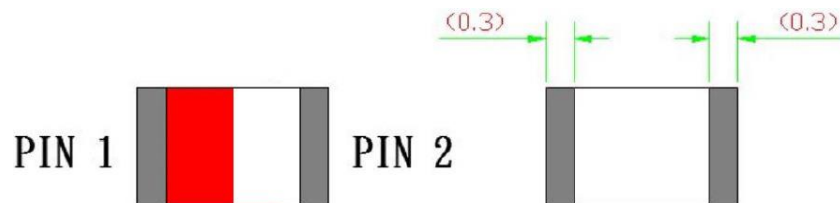
Parameter	Description
Dimensions	2*1.2*0.6 mm
Operating Temperature	-40°C~105°C
Storage Temperature (With Packing Sealed)	-5°C~40°C

## 2. Appearance

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



### 2.2 PIN Definitions

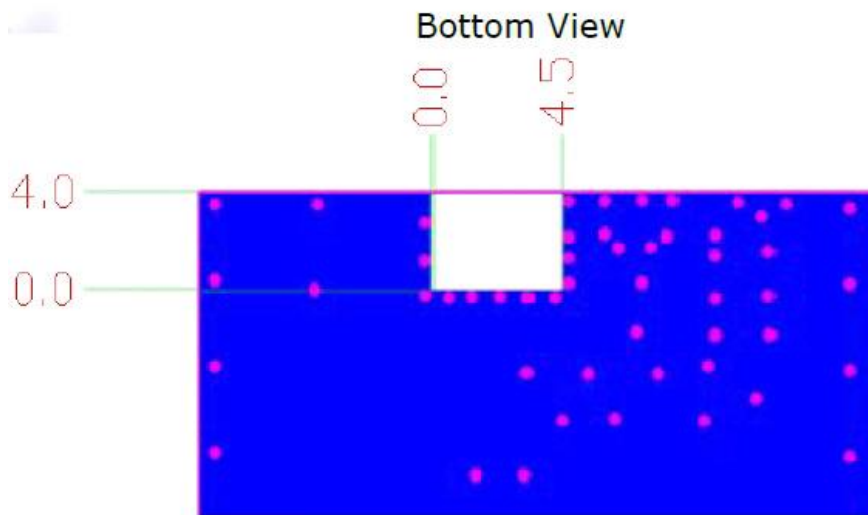
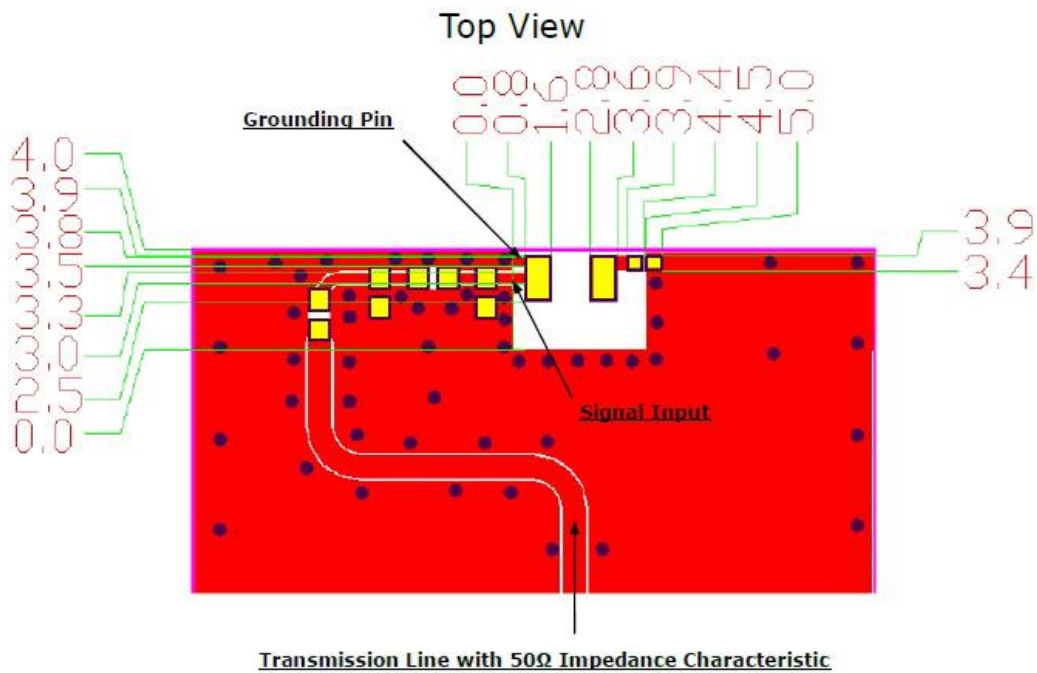


Item	PIN 1	PIN 2
Terminal	Signal Input	Tuning / Signal Output

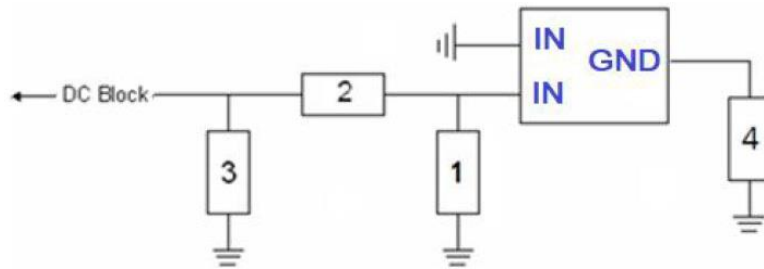
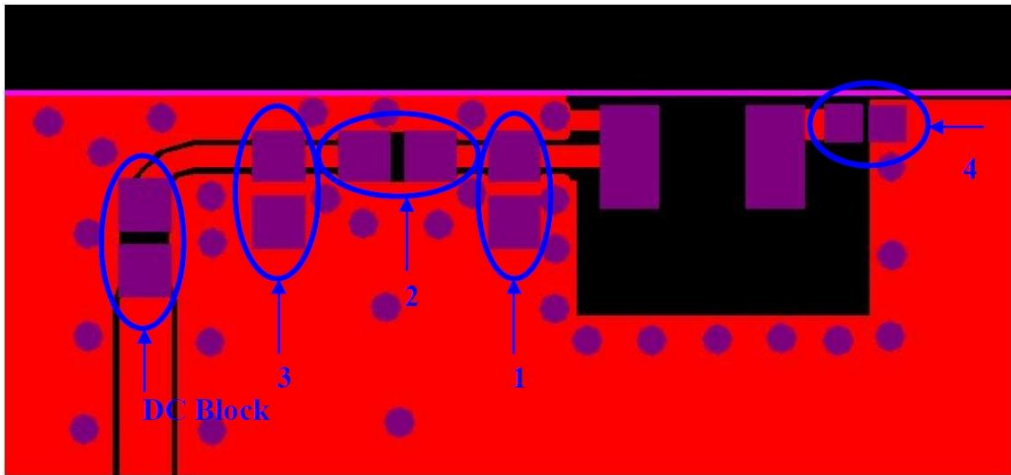
### 3. Layout Guide (Unit : mm)

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

#### With 40 x 20 mm Evaluation Board



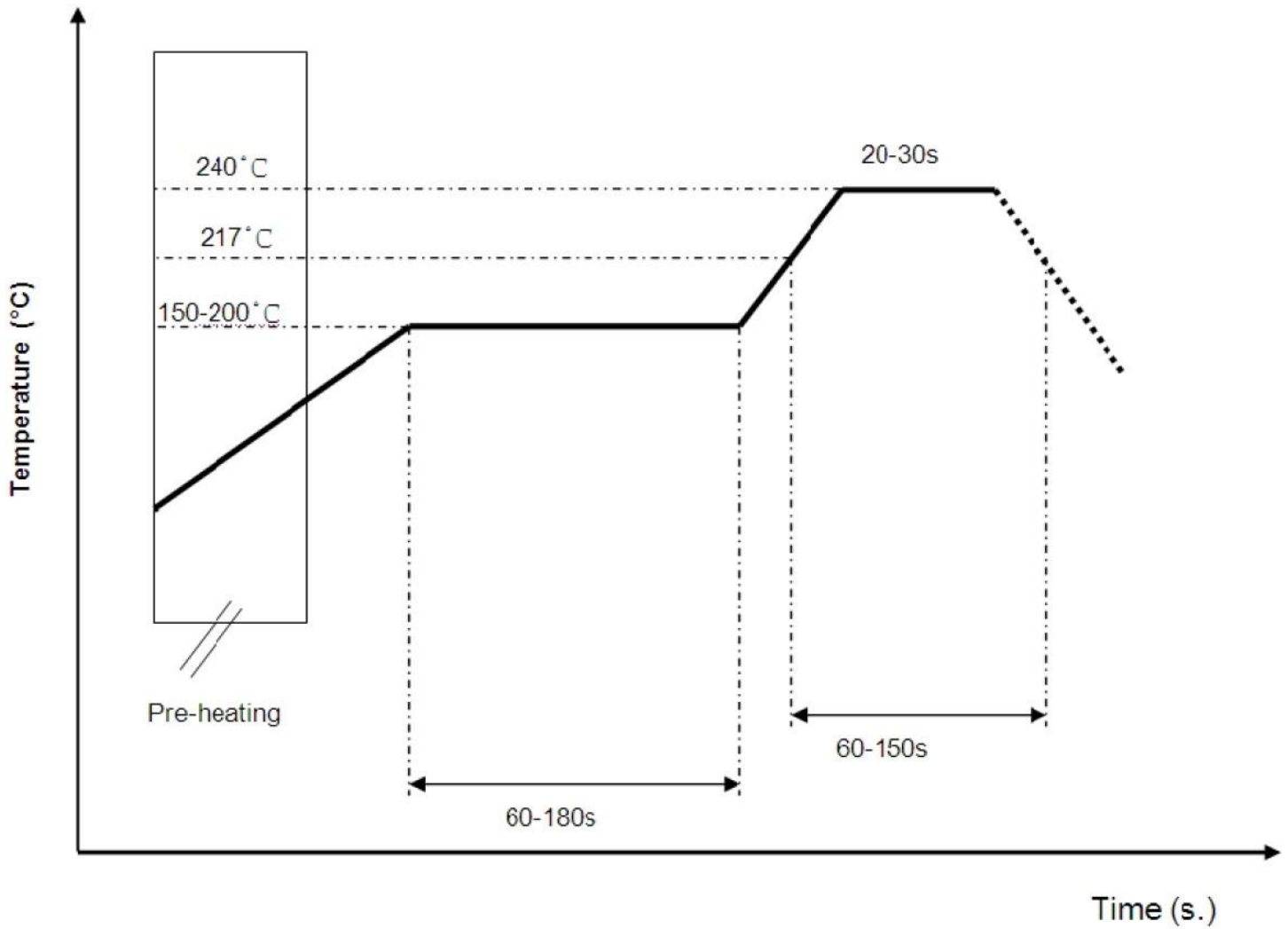
## 4. Frequency Tuning And Matching Circuit



System Matching Circuit Component			
Location	Description	Vendor	Tolerance
1	N/C	-	-
2	5.0 pF (0402)	MURATA	±0.05 pF
3	0.8 pF (0402)	MURATA	±0.05 pF
4	2.7 pF (0201)	MURATA	±0.05 pF
DC Block	22 pF (0402)	MURATA	±5%

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

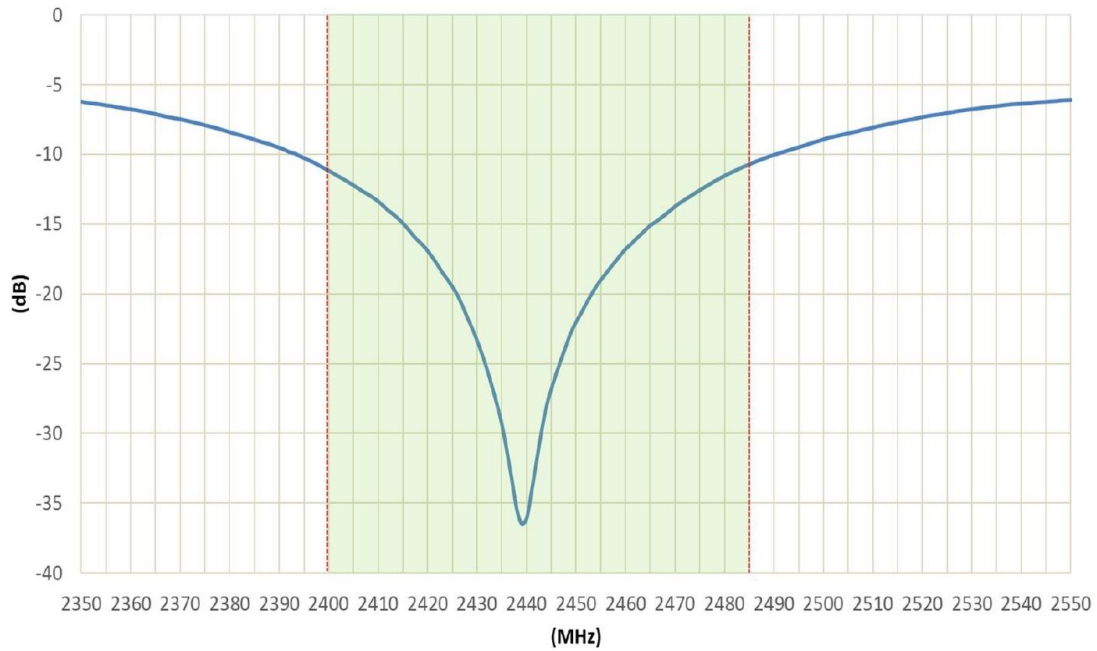
## 5. Soldering Conditions



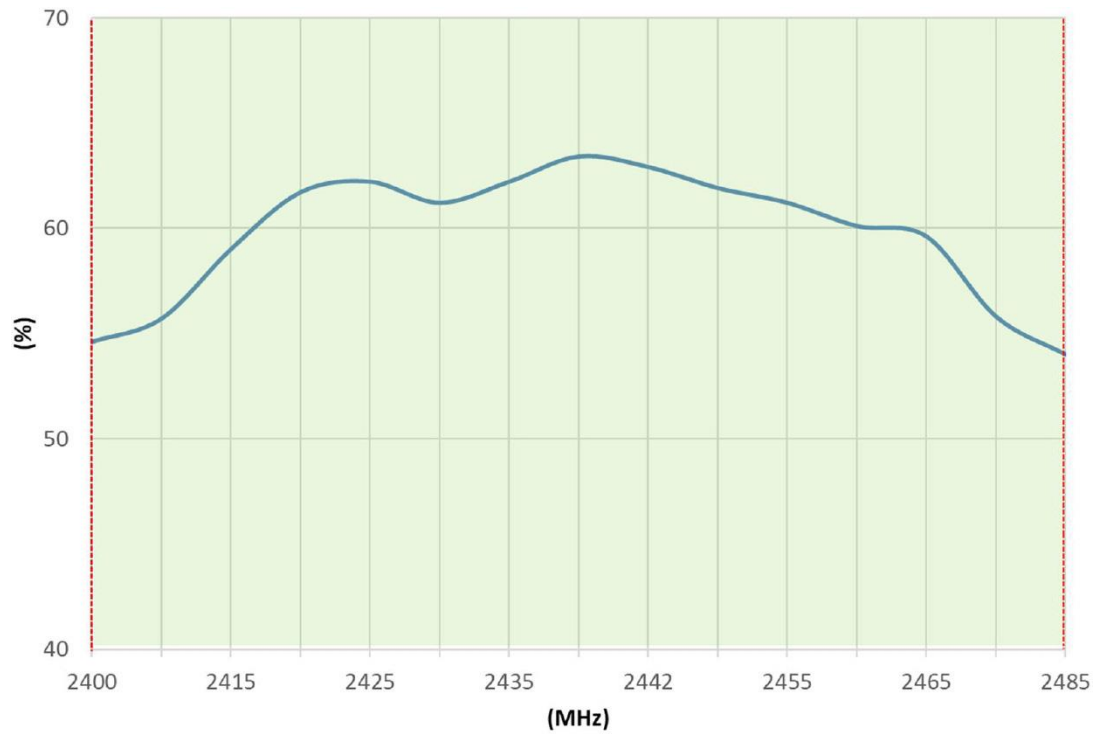
※Recommended solder paste alloy : SAC305(Sn96.5/Ag3/Cu0.5) Lead free solder paste.

## 6. Performance

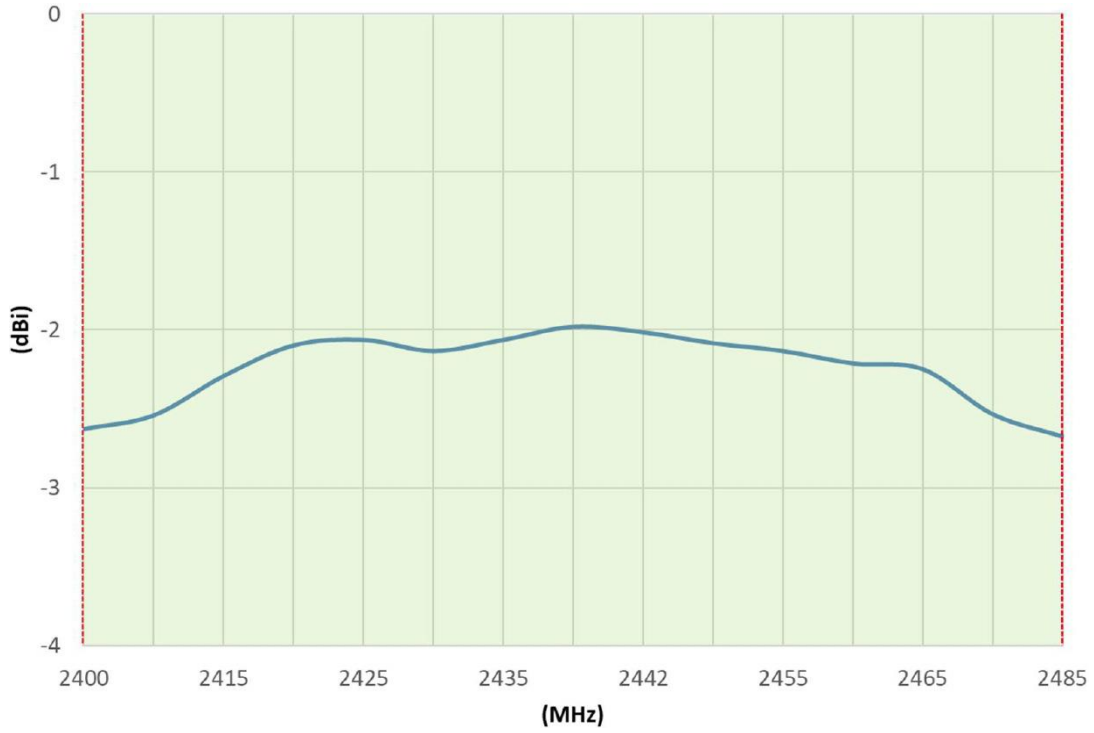
### 6.1 Return Loss



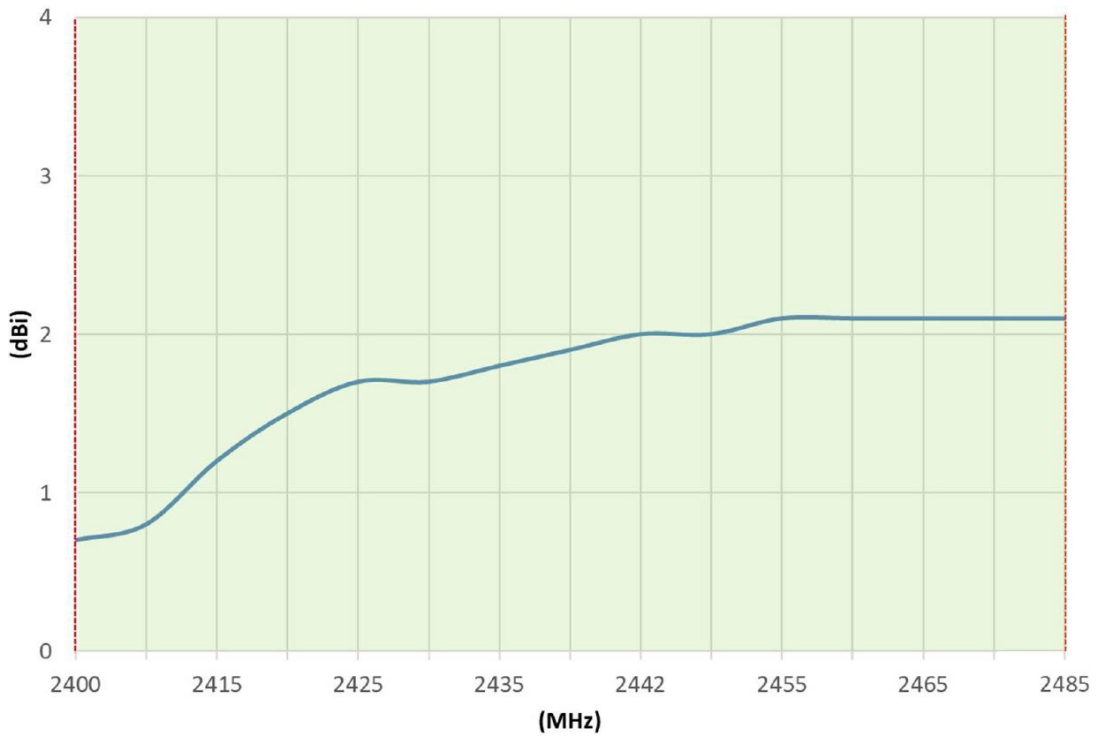
### 6.2 Efficiency



### 6.3 Average Gain

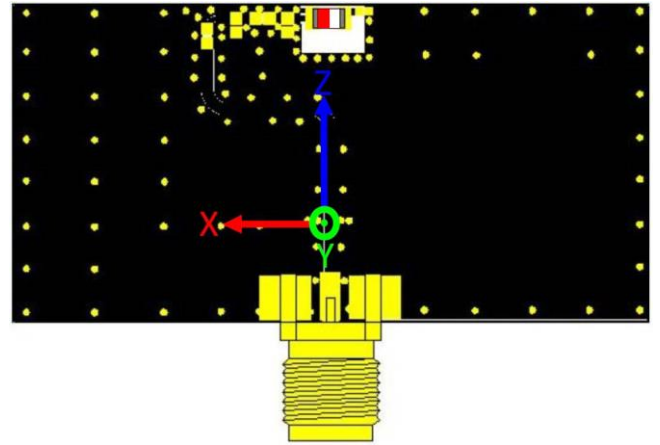
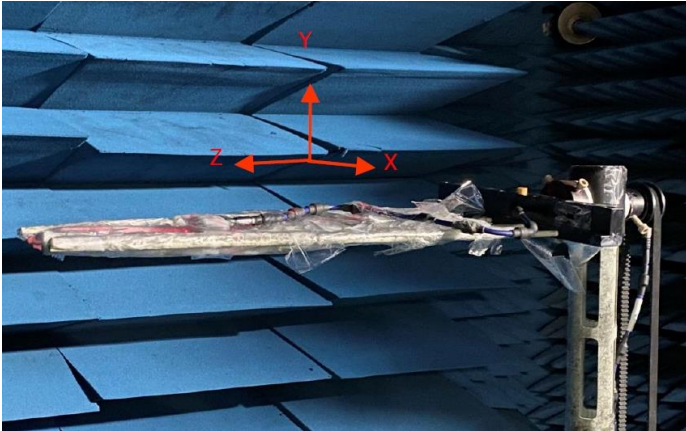


### 6.4 Peak Gain

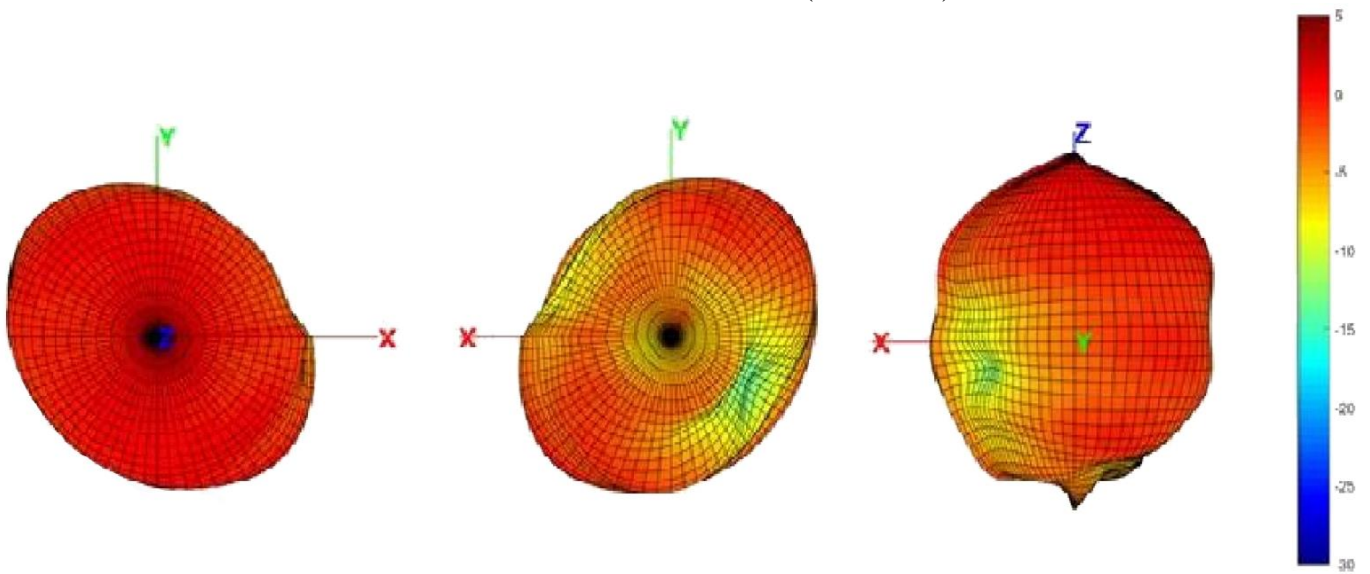




## 6.5 3D Radiation Pattern

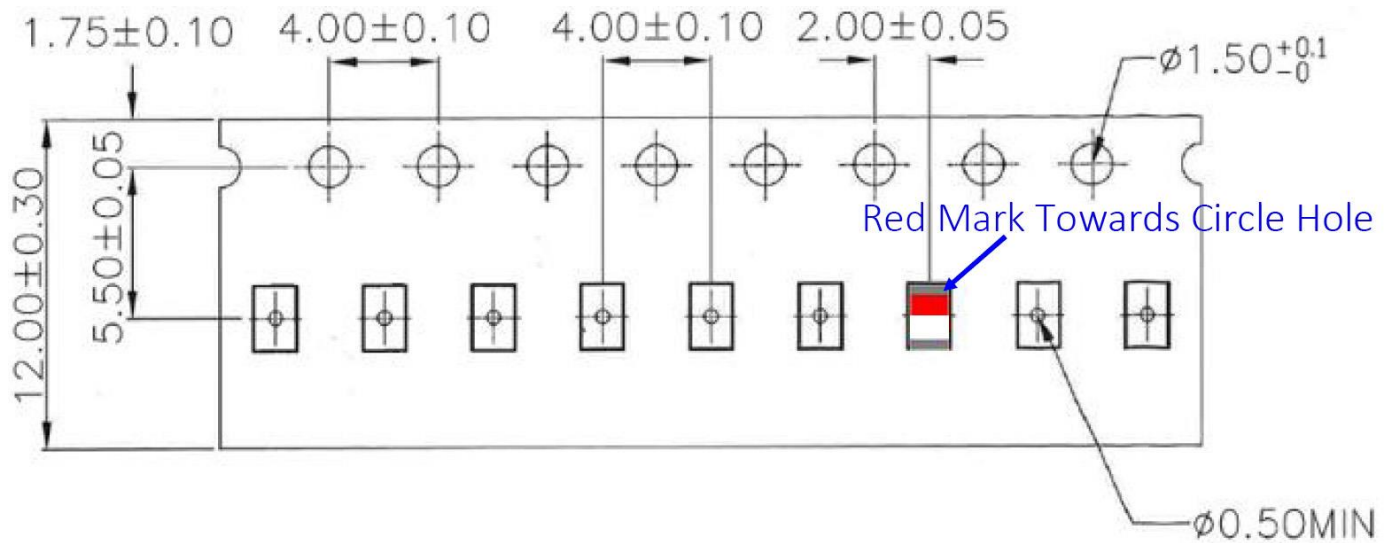


3D Gain Pattern @ 2450 MHz (Unit : dBi)

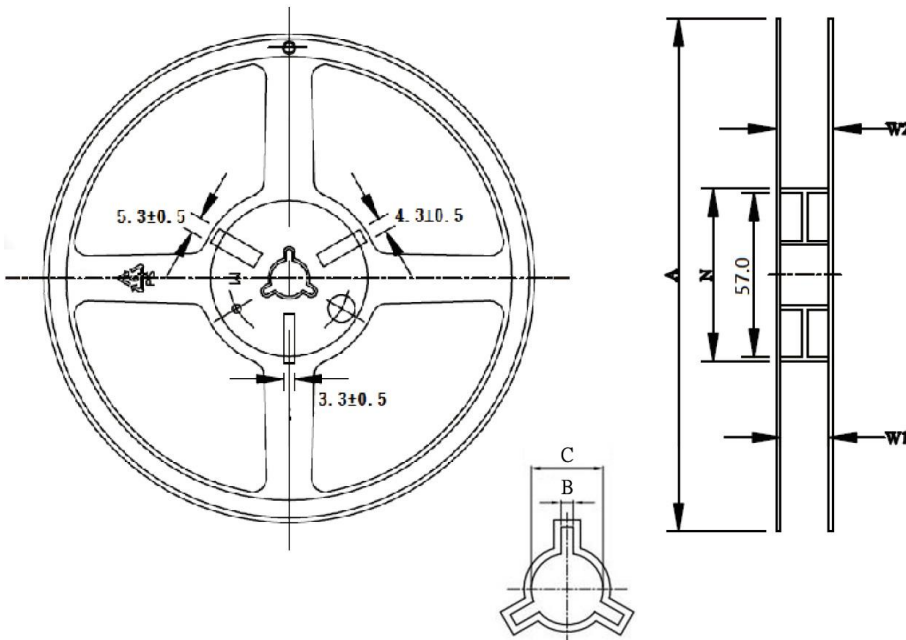


## 7. Packing

- Tape :



- Reel : 5,000 pcs



Feature	Specifications	Tolerances
A	178.0	$\pm 1.0$
B	2.7	$\pm 0.5$
C	13.3	$\pm 0.5$
N	60.0	$\pm 0.5$
W1	13.7	$\pm 0.5$
W2	16.1	$\pm 0.5$