



Product Name: WiFi Triple band Chip Antenna – CT321S

Part Number: H2UM4W1L1B0100

Features:

- Supporting WiFi Triple band, covering 2.4~2.5 GHz & 5.15~5.85 GHz & 5.925~7.125 GHz
- Stable and reliable in performances
- Low profile, compact size
- RoHS 2.0 compliance
- SMT processes compatible
- AEC-Q200 compliant

Applications:

- For WiFi Triple band network communication products
- Residential WiFi Access Points, Routers and Repeaters
- Set Top Box Clients



WiFi Triple band Chip Antenna

MODEL: CT321S

Version: C

I. Specifications:

Items	Specifications		
Frequencies (MHz)	2400~2500	5150~5850	5925~7125
Return loss (dB)	<-10 Typ.	<-5 Typ.	<-5 Typ.
Efficiency (%)	68 Typ.	61 Typ.	62 Typ.
Average Gain (dB)	-1.7 Typ.	-2.2 Typ.	-2.1 Typ.
Peak Gain (dBi)	2.0 Typ.	2.8 Typ.	3.0 Typ.
Test Condition	80 x 40 mm ² (Evaluation board)		
Impedance (Ω)	50		
Polarization	Linear Polarization		

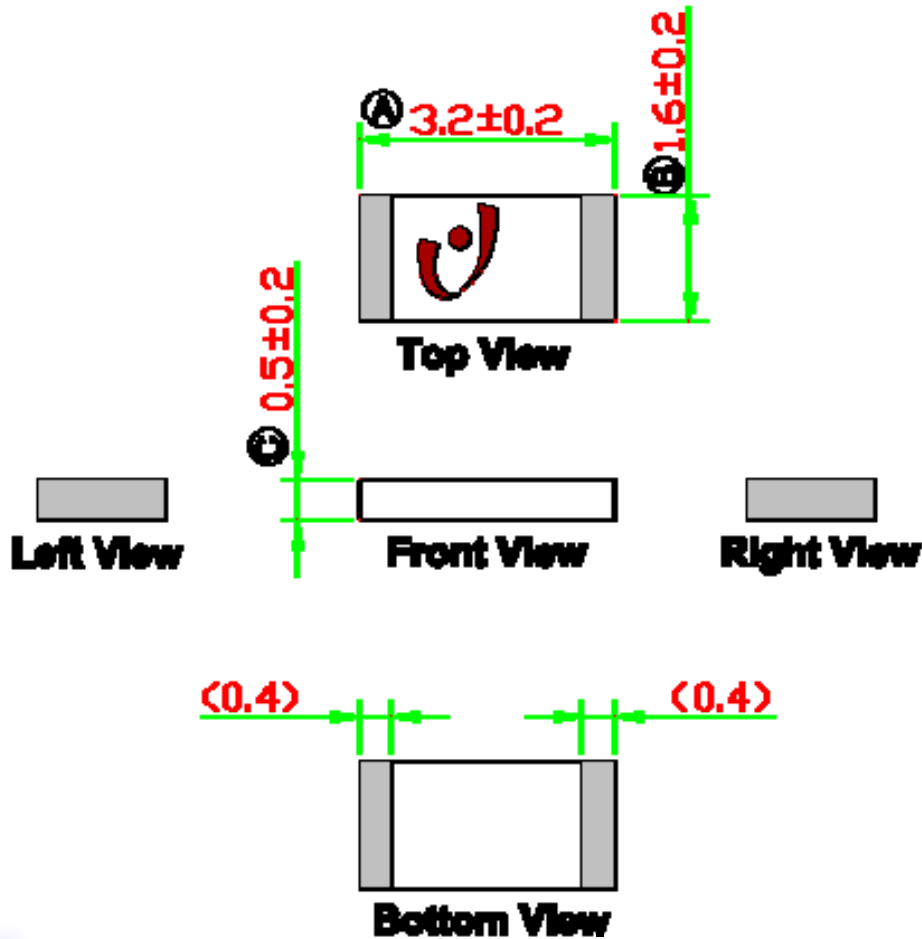
Mechanical Specifications	
Dimensions (mm)	3.2 (L) x 1.6 (W) x 0.5 (H)
Material	Ceramic
Environmental Conditions	
Operation & Storage Temperature (°C)	-40 ~ +85
Storage Temperature (°C) (Antenna with packing sealed)	-5 ~ +40
Relative Humidity	10 ~ 70 %

© Unictron Technologies Corp.
All specifications subject to change without notice.



III. Mechanical Dimensions (unit : mm):

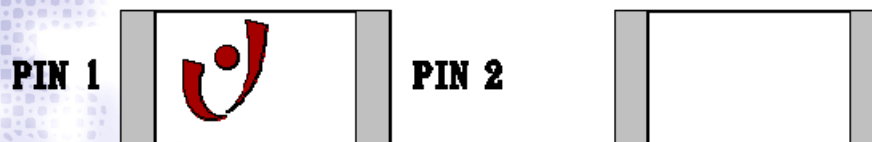
a) Antenna Dimensions



NOTE:

1. All materials are RoHS 2.0 compliant.
2. "A~C" Critical Dimensions.
3. "()" Reference Dimensions.

b) PIN Definition



PIN	1	2
Soldering Pad	Signal Input	Tuning/Signal Output

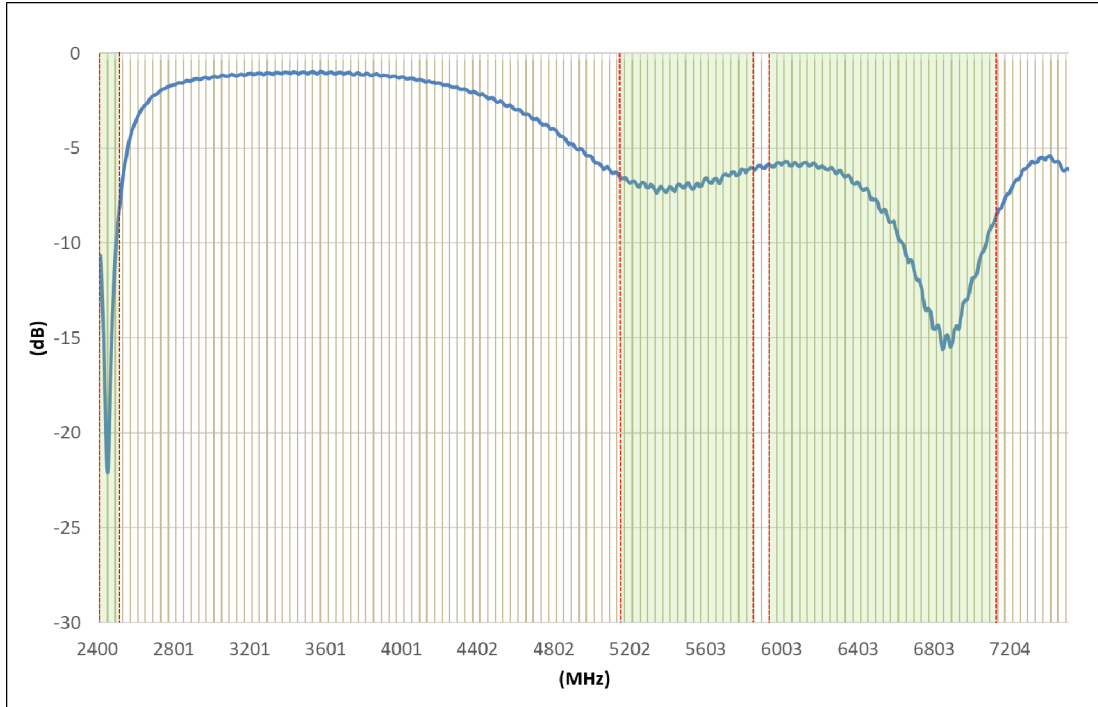
Unictron
Technologies Corp.

2022-11-08

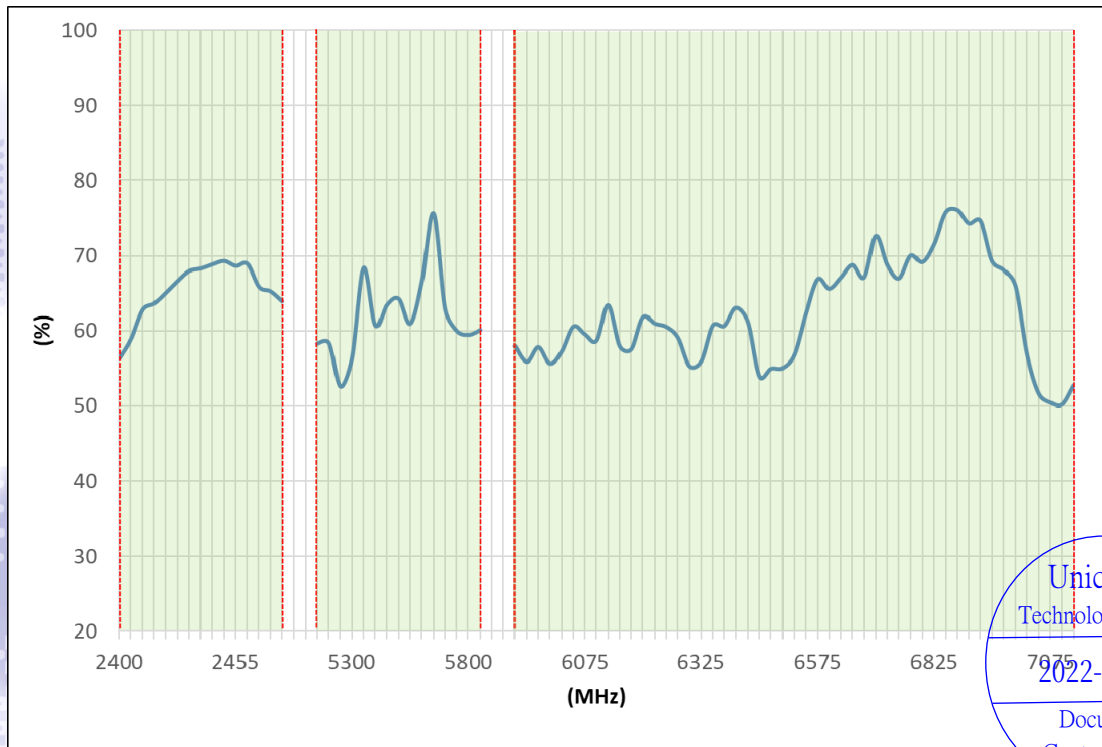
Document
Control Center

IV. Properties:

a) Return loss (dB)



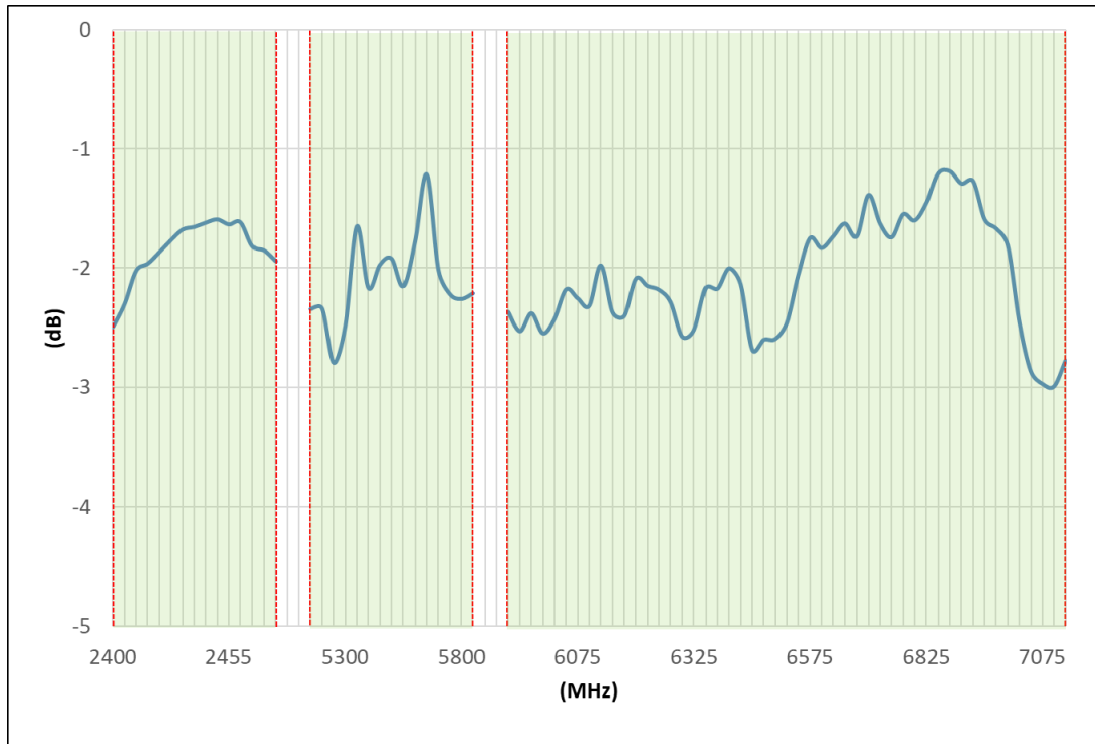
b) Efficiency (%)



© Unictron Technologies Corp.
All specifications subject to change without notice.

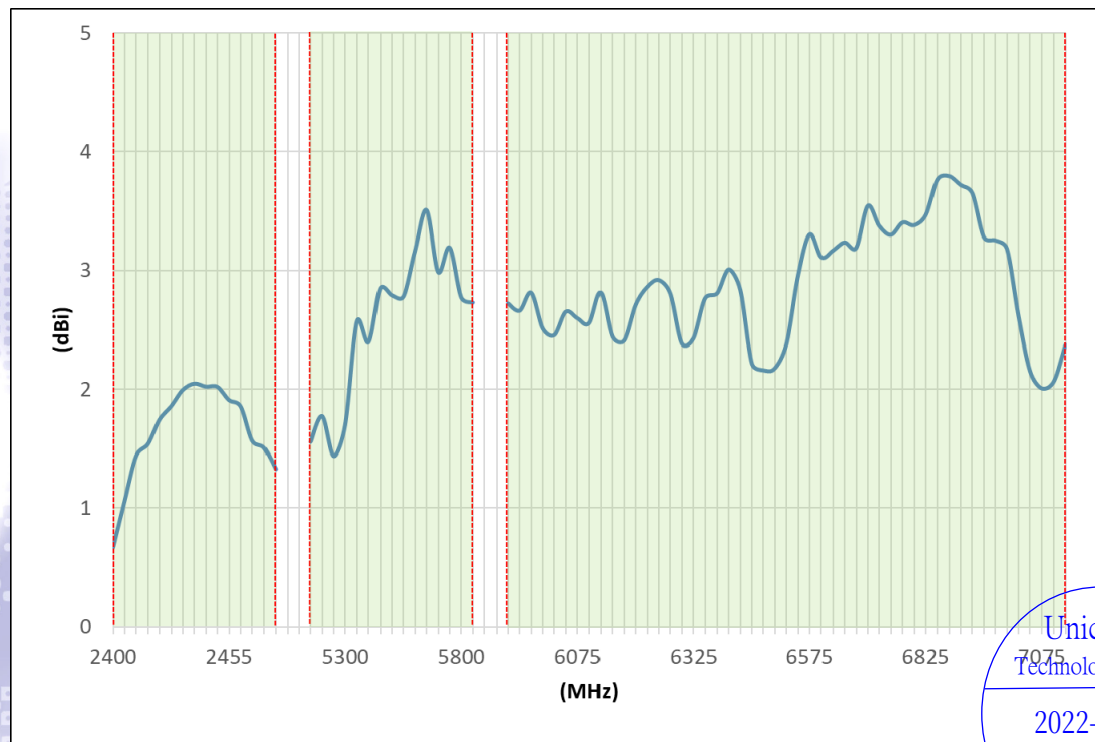
Unictron
Technologies Corp.
2022-11-08
Document
Control Center

c) Average Gain (dB)



© Unictron Technologies Corp.
All specifications subject to change without notice.

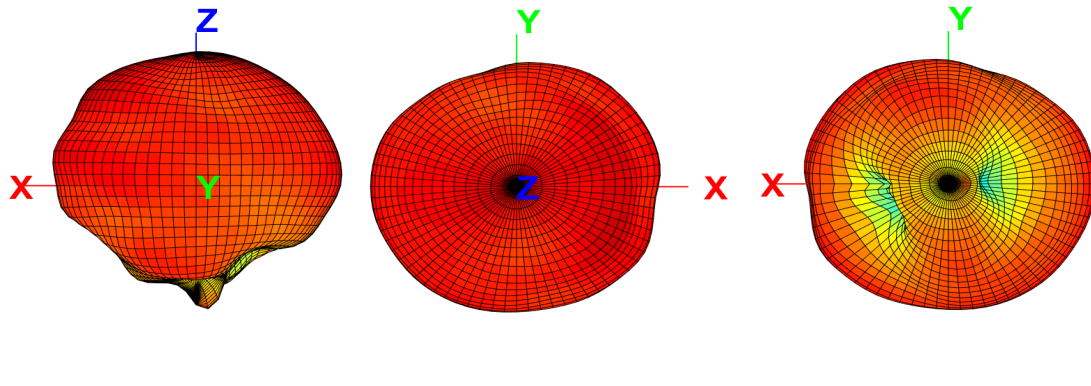
d) Peak Gain (dBi)



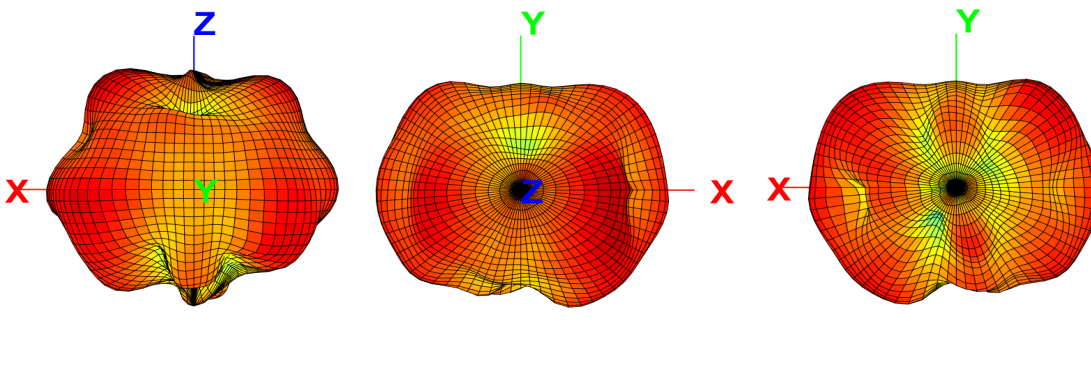
Unictron
Technologies Corp.
2022-11-08
Document
Control Center

3D Radiation Gain Pattern

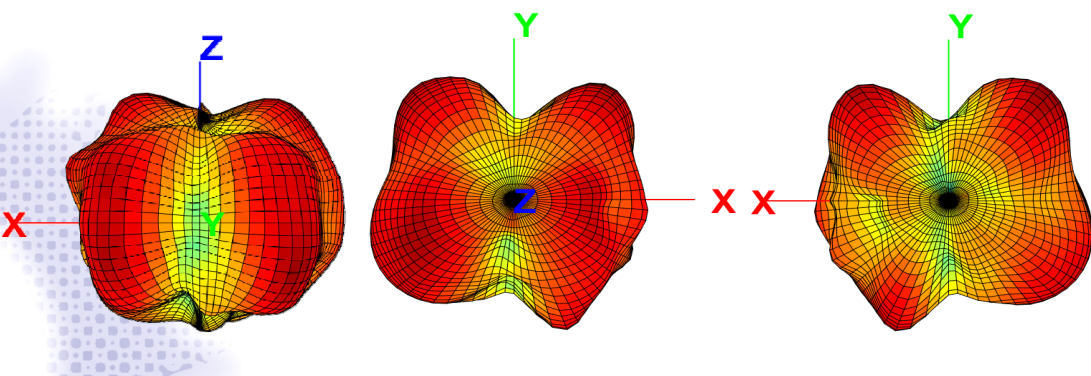
2440 MHz (unit: dBi)



5550 MHz (unit: dBi)



6550 MHz (unit: dBi)



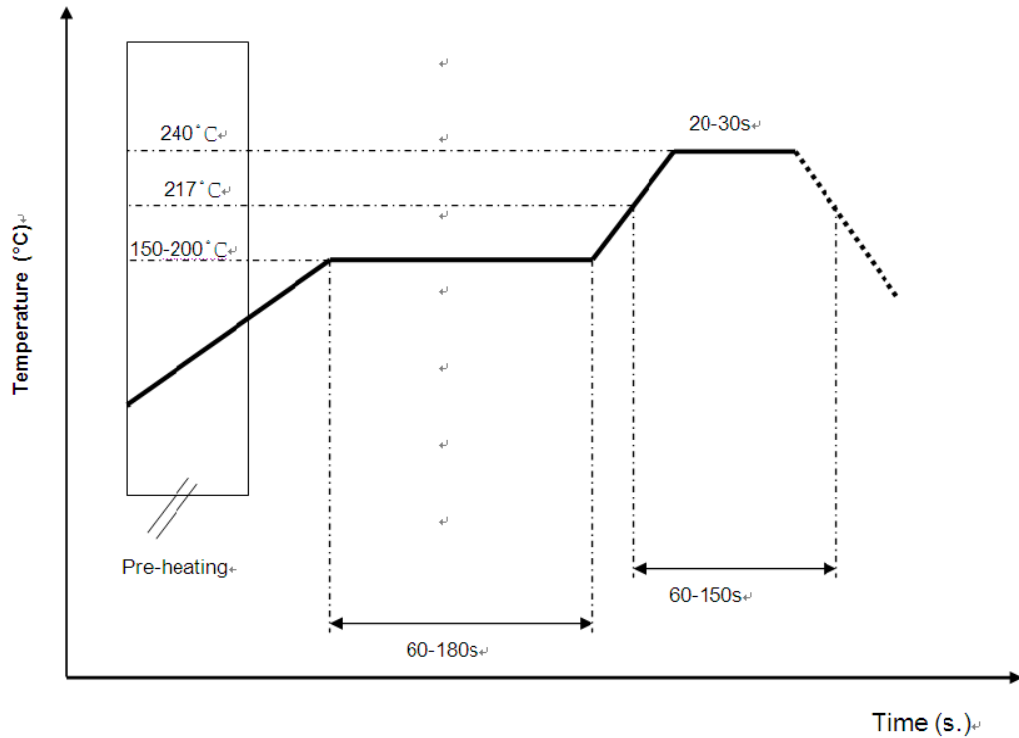
Unictron
Technologies Corp.

2022-11-08

Document
Control Center

VII. Soldering conditions:

Typical Soldering Profile for Lead-free Process

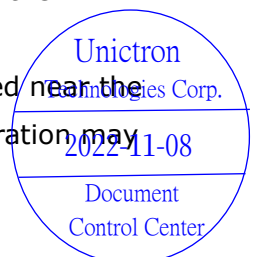


*Recommended solder paste alloy: SAC305 (Sn96.5 /Ag3 /Cu0.5) Lead Free solder paste.

© Unictron Technologies Corp.
All specifications subject to change without notice.

VIII. Reminders for use of Unictron's ceramic chip antennas:

- This chip antenna is made of ceramic materials which is relatively more rigid and brittle compared to circuit board materials. Furthermore, the length of this antenna is quite long. Bending of circuit board at the locations where chip antenna is mounted may cause the cracking of solder joints or antenna itself.
- Punching/cutting of the break-off tab of PCB panel may cause severe bending of the circuit board which may result in cracking of solder joints or chip antenna itself. Therefore break-off tab shall be located away from the installation site of chip antenna.
- Be cautious when ultrasonic welding process needs to be used near the locations where chip antennas are installed. Strong ultrasonic vibration may cause the cracking of chip antenna solder joints.



IX. Operating & Storage conditions:

a) Operating

- (1) Maximum Input Power: 2 W
- (2) Operating Temperature: -40°C to 85°C
- (3) Relative Humidity: 10% to 70%

b) Storage (sealed)

- (1) Storage Temperature: -5°C to 40°C
- (2) Relative Humidity: 20% to 70%
- (3) Shelf Life: 1 year

c) Storage (After mounted on customer's PCB with SMT process)

- (1) Storage Temperature: -40°C to 85°C
- (2) Relative Humidity: 10% to 70%

X. Notice

(1) Installation Guide:

Please refer to Unictron's application note "General guidelines for the installation of Unictron's chip antennas" for further information.

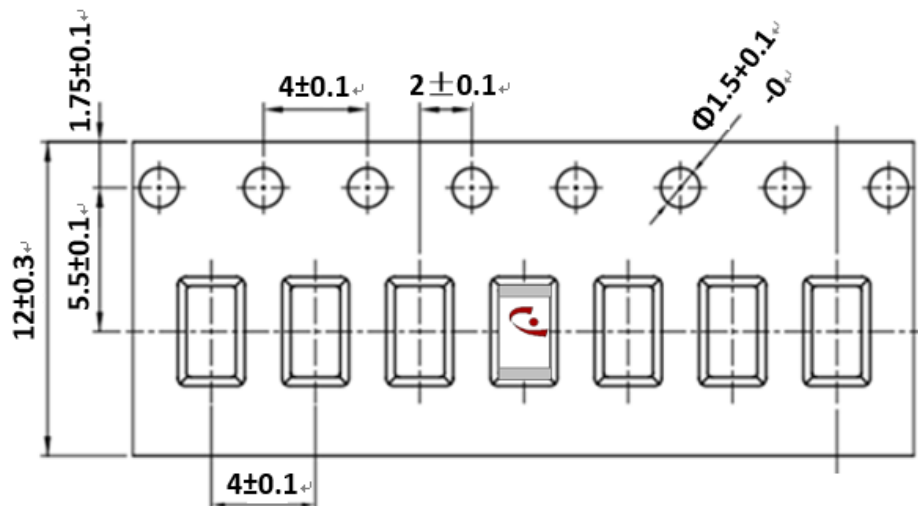
(2) All specifications are subject to change without notice.



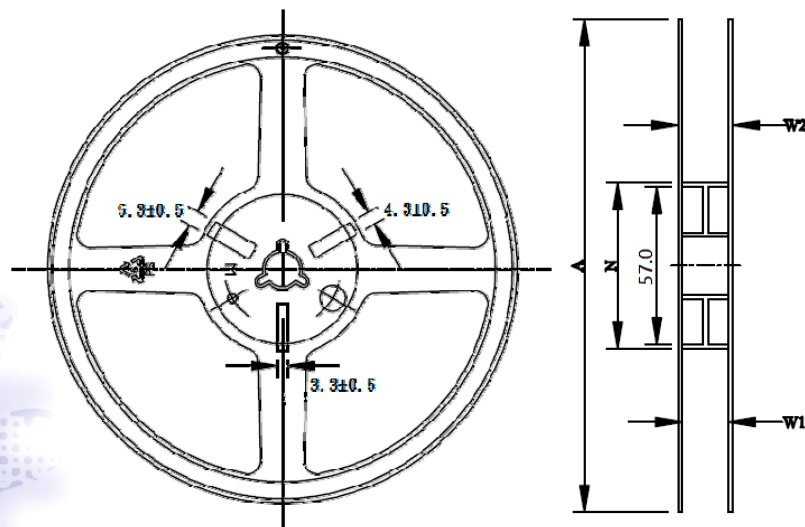
XI. Packing

- (1) Unit Weight: 0.008 ± 0.001 (g) /pcs
- (2) Quantity/Reel: 5000 pcs/Reel
- (3) Plastic tape: Black Conductive Polystyrene.

a. Tape Drawing (unit: mm)



b. Reel Drawing (unit: mm)



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

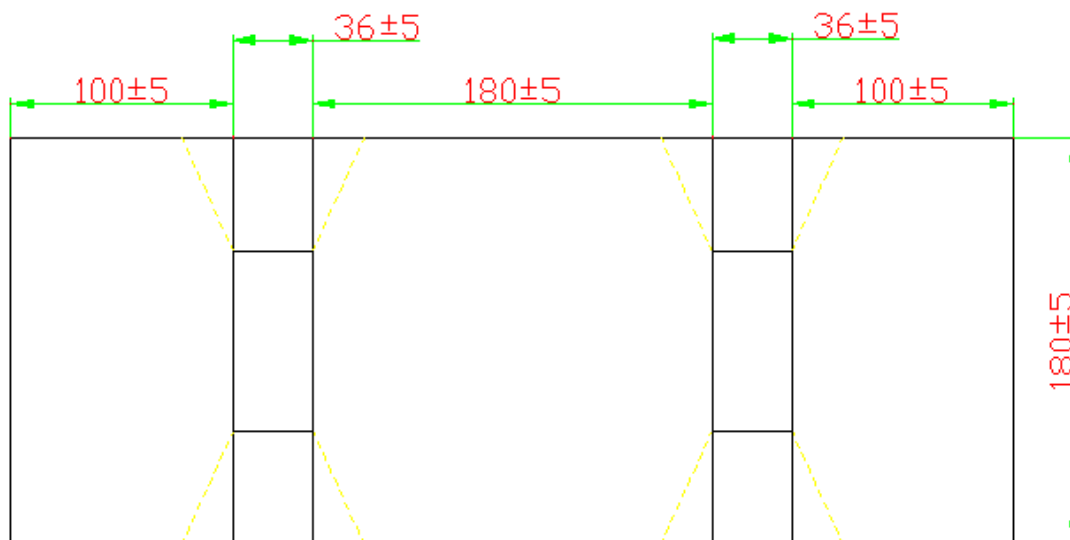
© Unictron Technologies Corp.
All specifications subject to change without notice.

Unictron
Technologies Corp.

2022-11-08

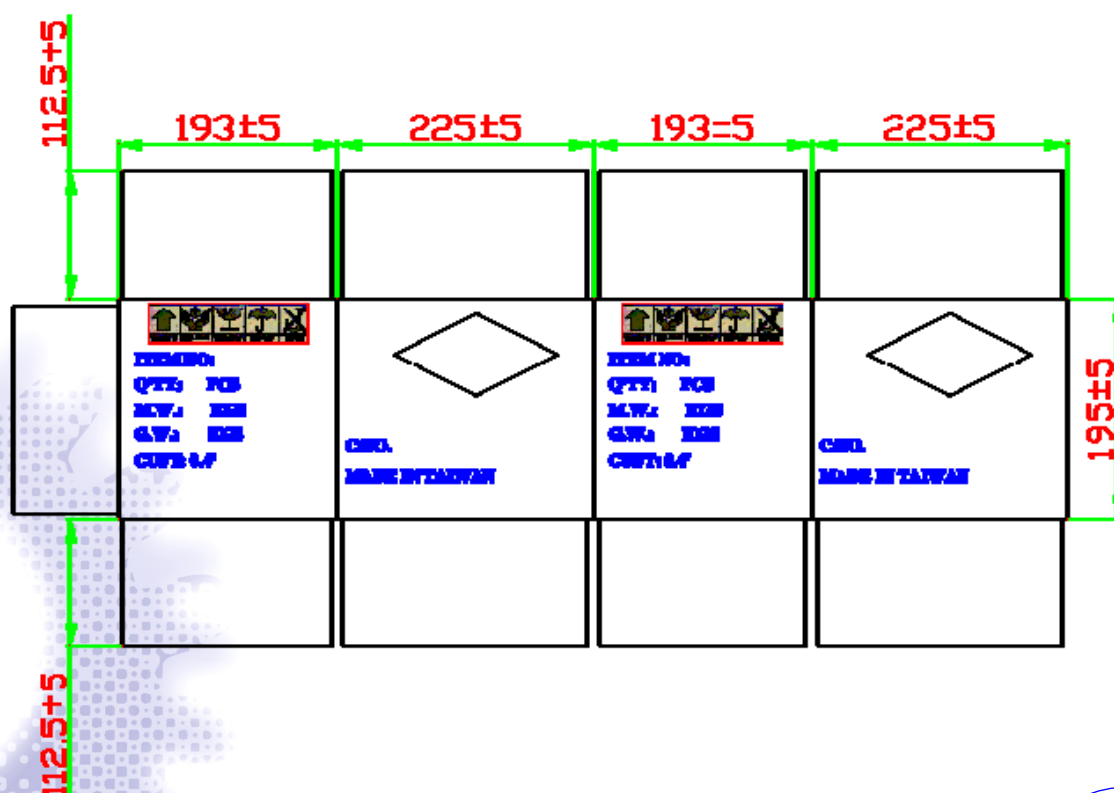
Document
Control Center

c. Drawing of small size carton in developed view

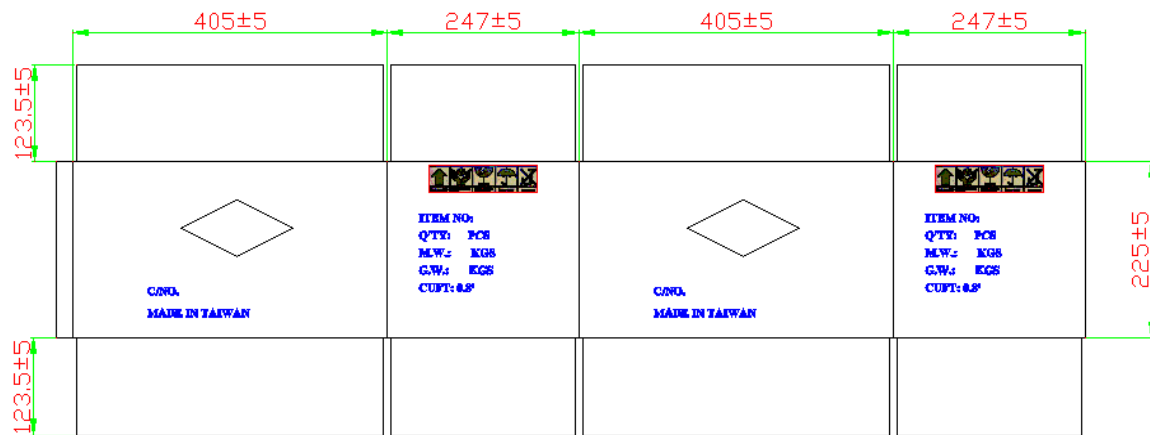


© Unictron Technologies Corp.
All specifications subject to change without notice.

d. Drawing of middle size carton in developed view

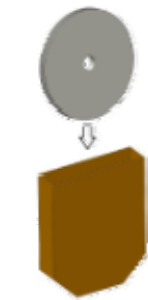


e. Drawing of large size carton in developed view



© Unictron Technologies Corp.
All specifications subject to change without notice.

f. Process of packing



1 reel includes 5,000pcs(max.) chip antennas



1 small size carton includes 2pcs(max.) reels



1 middle size carton includes 5pcs(max.) small cartons

1 large size carton includes 2pcs(max.) middle cartons

