

4. Description

Unictron's chip antenna series are specially designed for WiFi/Bluetooth applications. Based on Unictron's proprietary design and processes, this chip antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

5. Electrical Specifications (80 x 40 mm² ground plane)

	Characteristics	Specifications	Unit
Outline D	imensions	3.2x1.6x0.5	mm
Working I	Frequency	2400~2500	MHz
VSWR		2 Max.	
Impedanc	ce	50	Ω
Polarizati	on	Linear Polarization	
Gain	Peak	3.5 (typical)	dBi
	Efficiency	84 (typical)	%

5-1. Electrical Table

5-2. Return Loss & VSWR









7-2. 3D Efficiency Table

Frequency(MHz)	2400	2410	2420	2430	2442	2450	2460	2470	2480	2490	2500
Efficiency (dB)	-1.4	-1.0	-0.9	-0.7	-0.7	-0.8	-0.9	-1.1	-1.2	-1.3	-1.4
Efficiency (%)	72.8	78.7	82.3	84.4	84.5	84.0	82.0	78.6	76.1	74.6	72.5
Gain (dBi)	2.5	2.8	3.1	3.4	3.5	3.5	3.4	2.8	2.7	2.6	2.4

7-3. 3D Efficiency vs. Frequency





b. Matching circuit : (Center frequency is about 2442 MHz @ 80 x 40 mm² ground plane)



System Matching Circuit Component					
Location	Description Vendor		Tolerance		
1	1.2 pF*	Murata (0402)	±0.1 pF		
2	10PF*	Murata(0402)	±0.5 PF		
3	N/A*	-	-		
Fine tuning element 4	1.5 pF*	Murata (0402)	±0.1 pF		

*Typical reference values which may need to be changed when circuit boards or part vendors are different.

c. Fine tuning element vs. Center frequency





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Prepared by : Xenia Designed by : Mike		Checked	by : <mark>Mike</mark>	Approved by :	lerbert	
TITLE: 3.2 x 1.6 x 0.5(mm) WiFi/Bluetooth Ceramic Chip		DOCUMEN	T H2U34	2U34WGTQW0100		
Antenna (AA055) Engineering Specification		NO.		PAGE 9 OF	0 10	

12. Packing

- (1) Quantity/Reel: 5000 pcs/Reel
- (2) Plastic tape:



- 1. Cumulative tolerance of 10 sprocket hole pitch: ±0.20mm
- 2. Carrier camber not to exceed 1mm in 250mm
- 3. Ao and Bo measured on a plane above the inside bottom of the pocket.
- 4. Ko measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
- 5. All dimensions meet EIA-481-B requirements.
- 6. Material:
 □ Clear Non Anti-Static Polystyrene.
 - Black Conductive Polystyrene.

13. Operating & Storage Conditions

13-1. Operating

- (1) Maximum Input Power: 2 W
- (2) Operating Temperature: -40 $^{\circ}$ C to 85 $^{\circ}$ C

13-2. Storage

- (1) Storage Temperature: -25° C to 85° C
- (2) Relative Humidity: 20% to 70%
- (3) Shelf Life: 1 year

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2.1 Tape Dimensions(unit: mm)

Feature	Specifications	Tolerances
W	12.00	±0.30
Р	4.00	±0.10
E	1.75	±0.10
F	5.50	±0.10
P2	2.00	±0.10
р	1 50	+0.10
D	1.50	-0.00
Po	4.00	±0.10
10Po	40.00	±0.20

2.2 Pocket Dimensions(unit: mm)

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Feature	Specifications	Tolerances
Ao	1.90	+0.20
Bo	3.50	-0.10
Ko	0.60	±0.10
t	0.30	±0.05

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