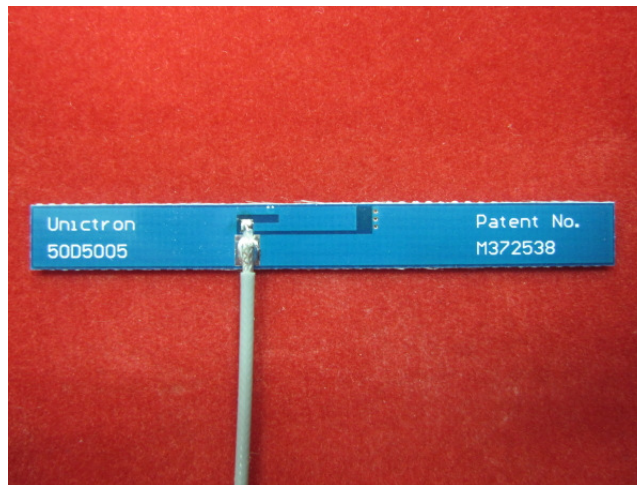


50 x 5.0 x 0.5 WiFi PCB Substrate Antenna(AA107)


1. Explanation of Product Number

H	2	B	1	B	E	1	A	1	B	0	2	0	0
				(1)	(2)	(3)	(4)	(5)					



Product Code:

- (1) Product Categories:
B: polymer substrate antenna
- (2) Dimensions:
E1: 50 x 5.0 x 0.5(mm)
- (3) Material:
A: GF
- (4) Working Frequencies
1B: 2400~2500MHz
- (6) Antenna Series:
02: serial number

Tolerances (Unless otherwise specified) X : ± 1 X.X : ± 0.1 X.XX : ± 0.01 Angle : ± Hole Dia. : ±		 Unictron Technologies Corporation Website: www.unictron.com		
Scale :	Unit : mm	THIS SPECIFICATION IS THE PROPERTY OF UNICTRON TECHNOLOGIES CORPORATION AND SHALL NOT BE REPRODUCED OR USED IN ALL CIRCUMSTANCES WITHOUT WRITTEN PERMISSION		
Prepared By : Meiping	Checked By :Chinling			
Designed By : Mike	Approved By :Herbert			
TITLE : 50 x 5.0 x 0.5 WiFi PCB Substrate Antenna(AA107)		DOCUMENT NO.	H2B1BE1A1B0200	REV. B

2. Features

- *Stable and reliable in performances
- *Compact size
- *RoHS compliance

3. Applications

- * IEEE802.11 (b/g/n).
- * Hand-held devices when WiFi (802.11 b/g/n) functions are needed.

4. Description

Unictron's PCB antenna series are specially designed for WiFi (802.11 b/g/n) applications. Based on Unictron's proprietary design and processes, this PCB antenna has excellent stability and sensitivity to consistently provide high signal reception efficiency.

5. Electrical Specifications

5-1.

Characteristics		Specifications	Unit
Outline Dimensions		50 x 5.0 x 0.5	mm
Center Frequency		2442	MHz
Bandwidth		100 min.	MHz
VSWR		2 max.	
Impedance		50	Ω
Polarization		Linear Polarization	
Gain	Peak	3.3 (typical)	dBi
	Efficiency	76 (typical)	%

Tolerances (Unless otherwise specified)

X : ± 1 X.X : ± 0.1 X.XX : ± 0.01

Angle : \pm Hole Dia. : \pm

Scale : Unit : mm

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Substrate Antenna(AA107)**

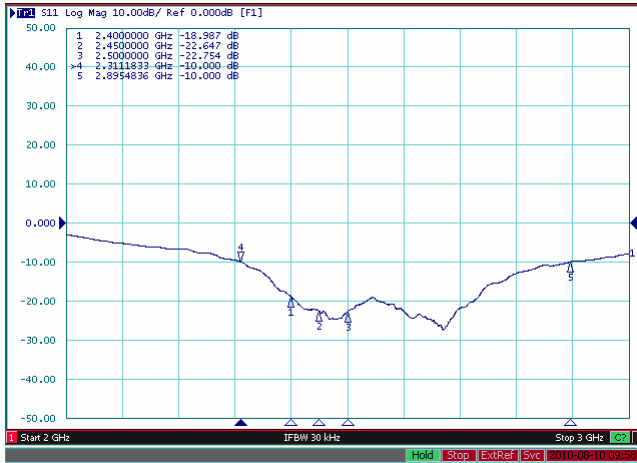
**DOCUMENT
NO.**

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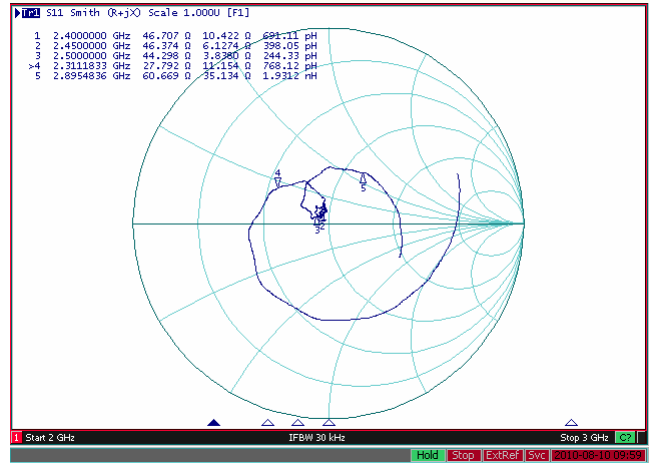
**REV.
B**

5-2.

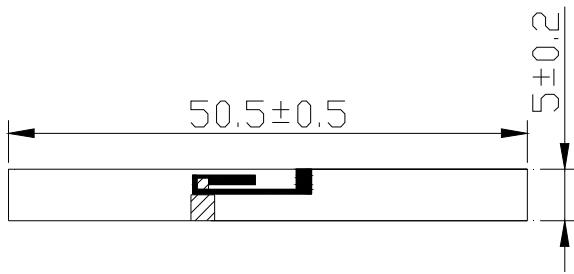
Return Loss(S₁₁)



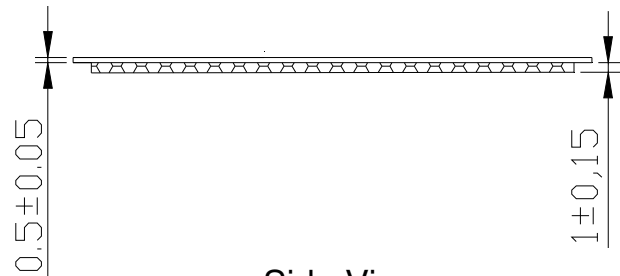
Smith Chart(S₁₁)



6. Antenna Dimensions (unit: mm)




Top View



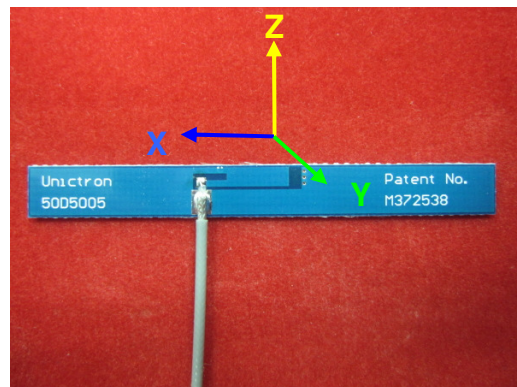
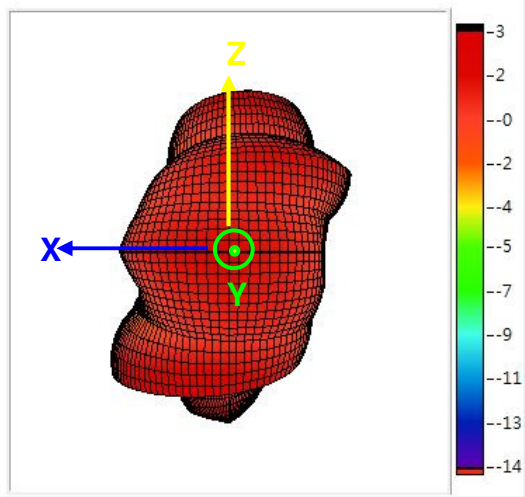
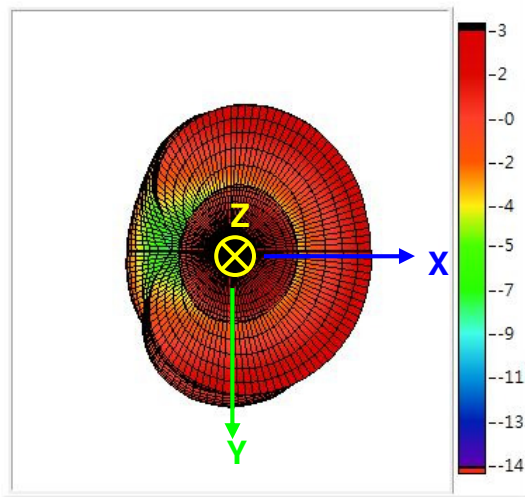
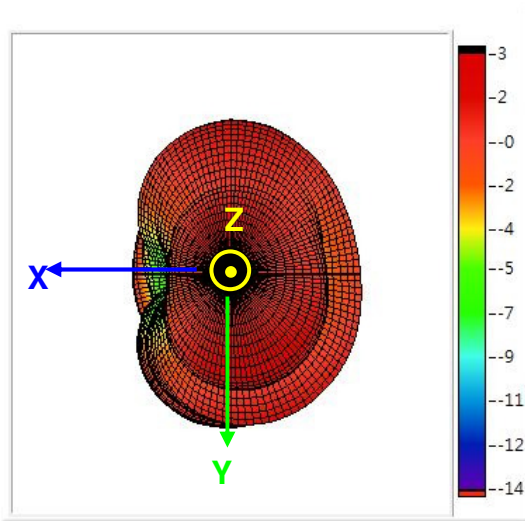
Side View

unit:mm

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Scale :	Unit : mm			
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7. Radiation Pattern

7-1. 3D Gain Pattern (Radiation Pattern at 2442 MHz)



Tolerances (Unless otherwise specified)
 X : ± 1 X.X : ± 0.1 X.XX : ± 0.01
 Angle : ± Hole Dia. : ±

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Scale :	Unit : mm
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**TITLE : 50 x 5.0 x 0.5 WiFi PCB
 Substrate Antenna(AA107)**

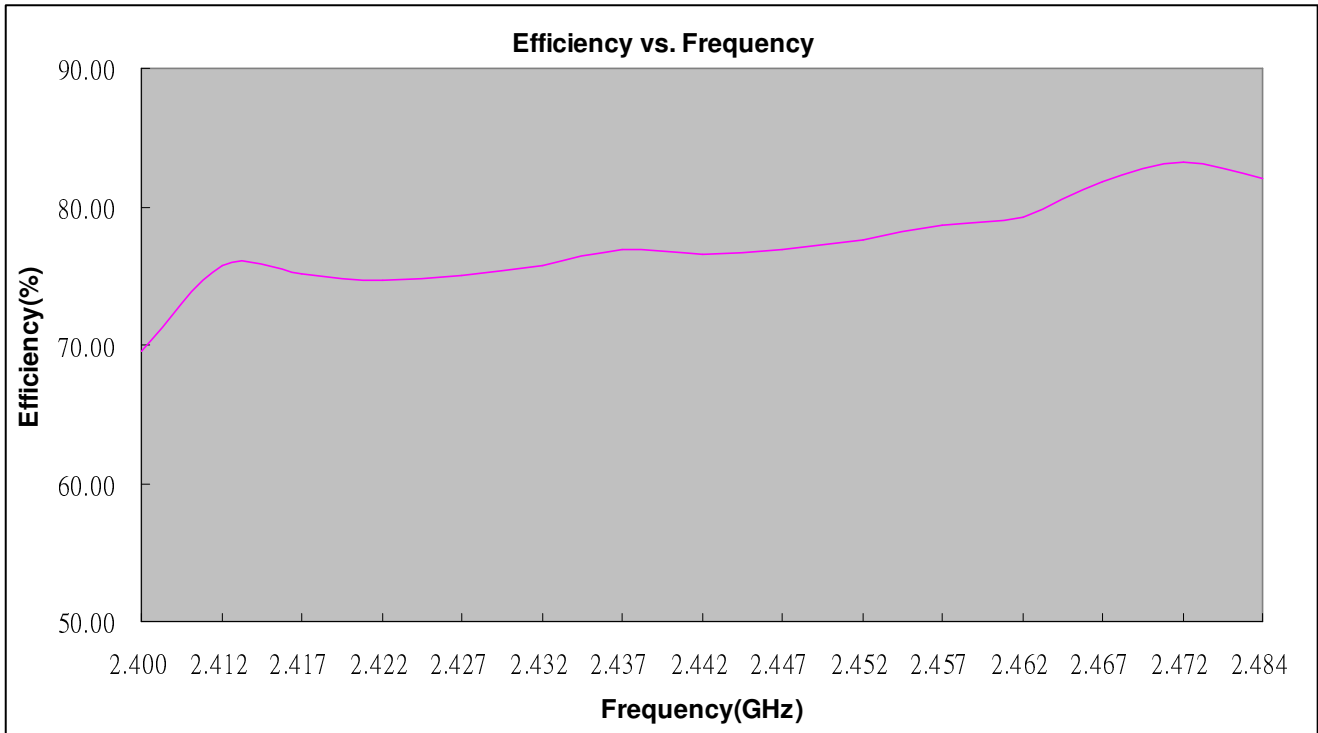
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B

7-2. Efficiency Table

Frequency(GHz)	2.400	2.412	2.417	2.422	2.427	2.432	2.437	2.442	2.447	2.452	2.457	2.462	2.467	2.472	2.484
Efficiency(dB)	-1.58	-1.21	-1.24	-1.27	-1.25	-1.21	-1.14	-1.16	-1.14	-1.10	-1.04	-1.01	-0.87	-0.80	-0.86
Efficiency(%)	69.50	75.68	75.16	74.64	74.99	75.68	76.91	76.56	76.91	77.62	78.70	79.25	81.85	83.18	82.04
Gain(dBi)	2.81	3.20	3.18	3.17	3.21	3.22	3.35	3.39	3.48	3.60	3.66	3.73	4.02	4.13	4.06

7-3. Efficiency vs. Frequency



Tolerances (Unless otherwise specified)	
X : ± 1	X.X : ± 0.1 X.XX : ± 0.01
Angle : ±	Hole Dia. : ±
Scale :	Unit : mm
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