40.0 x 6.0 x 0.5 (mm) Wi-Fi Dual Band PCB Substrate Antenna

(JI003)Engineering Specification (For Silicon)



A: GF

(4) Working Frequencies:

1C: 2400~2500 & 4900~5900 MHz

- (5) Antenna Series:
 - 38: serial number

2. Features

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

3. Applications

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

4. Description

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

5. Operating Condition:

Temperature	-	•10 t	o +85 °C
Humidity	10	to	95% RH

6. Storage Condition:

Temperature	-	-10 t	o +85 °C
Humidity	10	to	95% RH

7. Electrical Specifications

(Antenna is attached on a 2.0mm-thick ABS + PC material plate) 7-1. 2400~2500 MHz Band

	Char	acteristics		Specificat	ions		Unit		
	Outline Dimensi	ons		40.0 x 6.0		mm			
	Working Frequen	су		2400~25	00		Ν	ЛНz	
	VSWR(@ center	frequency)*		2 Max.					
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Pre	epared by : Wen	Designed by : Tom	Checke	ed by : Mike	Approv	ved by	ı : Hei	rbert	
TIT	LE: 40.0 x 6.0 x 0.5 (mm) V Antenna (JI003)(L=100	Vi-Fi Dual Band PCB Substrate mm) Engineering Specification	DOCUME NO.	H2B1PD	85L	-	REV.		
			·		PAGE	1	OF	12	

Cł	haracteristics Impe	edance	50	Ω
Po	Polarization		Linear Polarization	
Pe	eak Gain	(@ 2442 MU-)	3.4 (typical)	dBi
Ef			75.2(typical).	%

*Center frequency means the frequency with the lowest value in return loss of the antenna in free space.

Charac	teristics	Specifications	Unit				
Working Frequency		4900~5900 M					
VSWR(@ center fre	equency)*	2 Max.					
Characteristics Impedance		50	Ω				
Polarization		Linear Polarization					
Peak Gain		3.9(typical)	dBi				
Efficiency		77.9(typical)	%				

*Center frequency means the frequency with the lowest value in return loss of the antenna in free space.

7-3. Return Loss & Smith Chart **Return Loss**







8. Dimensions of antenna with cable (unit: mm)





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TITLE: 40.0 x 6.0 x 0.5 (n	nm) Wi-Fi Dual Band PCB Substrate	DOCUMENT	H2B1PD1		385L		REV.		
Antenna (JI003)(L	=100mm) Engineering Specification	NO.					Α		
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ltem	Name	Material	Color	Q'ty
1	AA222_PCB (40mm*6mm*0.5mm)	FR4	Black	1
2	I-PEX Connector (MHF IV)_Cable Φ 1.13mm	FEP	Gray	1
3	Adhesive Tape	PE	Black	1

9. Radiation Pattern

9-1. 2400~2500 MHz Band

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Efficiency (dB)	-1.6	-1.4	-1.4	-1.4	-1.4	-1.3	-1.2	-1.2	-1.1	-1.0	-0.9	-0.8	-0.8	-0.7	-0.9
Efficiency (%)	68.4	72.5	73.0	72.7	72.5	73.8	75.4	75.2	76.8	78.6	81.5	82.5	84.0	84.6	81.7
Peak Gain (dBi)	3.0	3.3	3.3	3.4	3.4	3.4	3.5	3.4	3.5	3.5	3.6	3.6	3.7	3.9	3.9

9-1-3. 3D Efficiency vs. Frequency



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OF







Frequency (MHz)	4900	4950	5000	5050	5100	5150	5200	5250	5300	5350	5400
Efficiency (dB)	-0.9	-1.2	-1.7	-1.3	-1.4	-1.6	0.3	2.0	0.8	0.6	0.3
Efficiency (%)	82.2	75.3	67.1	73.7	72.1	71.7	74.4	79.0	77.3	81.9	83.2
Peak Gain (dBi)	3.8	3.7	4.3	4.2	4.3	3.8	3.9	3.9	4.3	4.2	4.1

Frequency (MHz)	5450	5500	5550	5600	5650	5700	5750	5800	5850	5900
Efficiency (dB)	-0.9	-1.7	-1.7	-1.0	-1.5	-1.8	-1.8	-2.1	-1.8	-2.3
Efficiency (%)	82.2	77.9	76.5	78.7	70.5	66.7	66.2	64.2	65.8	66.6
Peak Gain (dBi)	3.9	3.9	4.3	4.2	4.1	3.9	4.1	4.1	3.8	3.8

9-2-5. 3D Efficiency vs. Frequency



10. Package

10-1. Weight and Quantity: THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF UNICTRON TECHNOLOGIES 詠業科技股份有限公司 CORPORATION AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR **Unictron Technologies Corporation** SALE OF APPARATUS OR DEVICES WITHOUT Technologies Corp. PERMISSION Website:www.unictron.com Prepared by : Wen Designed by : Tom Checked by : Mike Approved by : Herbert TITLE : 40.0 x 6.0 x 0.5 (mm) Wi-Fi Dual Band PCB Substrate DOCUMENT REV. H2B1PD1A1C385L Antenna (JI003)(L=100mm) Engineering Specification NO. Α

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10-1-	1. Unit Weight: 0.6 ± 0.5 (g)						
10-1-2	2. Quantity						
Eac	ch EPE Tray: 25 pcs						
Ead	ch Outer Box: 2500 pcs						
10-1-3	Total Weight						
N.V	V.: 1.5 ± 1 kg						
G.V	V.: 2.3 ± 1 kg						
Process	Photos			Rem	nark		
1			Put 25 p label on	ocs in a PE PE bag.	E bag	and	attach
2			Put 100 with 2,50	PE bags i 00 pcs of a	nto ar	n out na in	er box side.
10-2. Din 10-2-	nensions 1. Outer Box (605mm*400m	ım*190mr	n)				
		THI	S DRAWING	GS AND SPEC	IFICATIO	ONS AF	RE THE
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Antenna (JI	1003)(L=100mm) Engineering Specification	NO.			JJL		Α
				PAGE	10	OF	12

ITEM NO. ITEM NO. QTY : PCS. ITEM NO. N.W : KGS. C/NO. G.W : KGS. C/NO. GUFT : 1.7 MADE IN TAIWAN	<u>400±5</u> →	<u> </u>	<u>400±5</u>	<u>← 605±5</u>]
	ITEM NO. QTY : PCS. N.W : KGS. G.W : KGS. GUFT : 1.7	C/NO. MADE IN TAIWAN	ITEM NO. QTY : PCS. N.W : KGS. G.W : KGS. GUFT : 1.7	C/NO. MADE IN TAIWAN	190±5

10-3. Label

10-3-1 封裝後之成品必須貼附產品製造標籤,標示產品型號、品名、數量及批號 下圖標籤為內箱標籤

Unictron Technologies Corporation						
CUST P/N						
DESC						
P/N						
L/N						
Q'TY						
DATE						



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