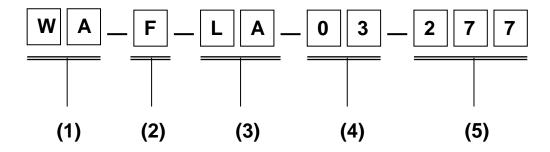
## **Embedded Single-Band Antenna for WA-F-LA-03-277**

### 1. Explanation of part number:



(1) Product type: Wireless Antenna

(2) Material: FPCB

(3) Frequency: 2400~2500 MHz(4) Coaxial Cable Type: Gray

(5) Suffix: 277

### 2. Electrical Specification:

Those specifications were specially defined for model, and all characteristics were measured under the model's handset testing jig.

#### 2-1. Frequency Band:

Frequency Band	MHz
Wi-Fi	2400~2500 MHz

#### 2-2. Impedance:

50 ohm nominal

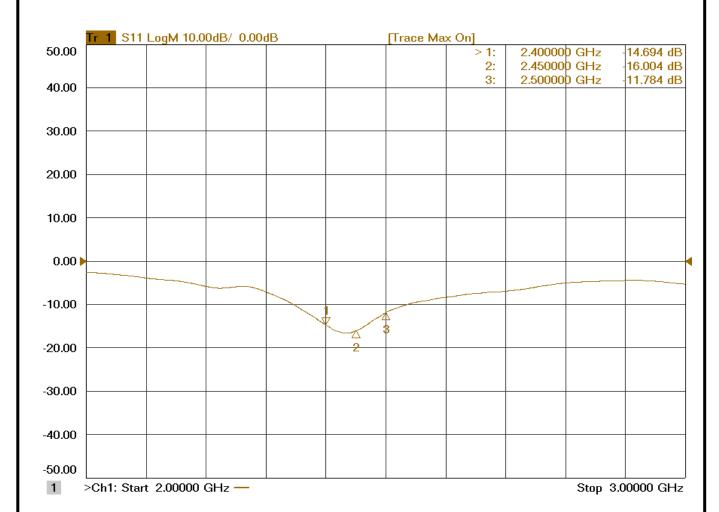
### 2-3. Matching circuit:

None

UNLESS OTHER SPECIFIED TOLERANCES ON :				
X=N/A X.X:	=N/A $X.XX=N/A$	G	INPAQ TECHNOLOGY CO	D., LTD.
ANGLES=N/A	HOLEDIA=N/A			
SCALE: N/A	UNIT: mm		AND SPECIFICATIONS ARE THE PROPERT	
DRAWN BY:涂正憲	CHECKED BY:鄭榮謀		O.,LTD.AND SHALL NOT BE REPRODUCED ( R THE MANUFACTURE OR SALE OF APP	
DESIGNED BY:洪賢修	APPROVED BY:謝立庭	DEVICES WITHO	UT PERMISSION	
TITLE: Embedded Sir	ngle-Band Antenna for	DOCUMENT ENSO00151830 SPEC R		SPEC REV.
WA-F-LA-03-2	277	NO.	LINSUUU 13 103U	P0

### 2-4. VSWR:

Frequency (Unit MHz)	2400	2450	2500
dB	-14.6	-16.0	-11.7



UNLESS OTHER SPECIFIED TOLERANCES ON:					
X=N/A	X.X = N/A	X.XX = N/A	G	INPAQ TECHNOLOGY C	O., LTD.
ANGLES=N/A		HOLEDIA=N/A			
SCALE : N/A		UNIT: mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INP		
DRAWN BY:涂正	憲	CHECKED BY:鄭榮謀	TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS		
DESIGNED BY:洪	野修	APPROVED BY:謝立庭	DEVICES WITHOU	JT PERMISSION	
TITLE: Embed	ded Single-	Band Antenna for	DOCUMENT ENSO00151830 SPEC		SPEC REV.
WA-F-LA-03-277		NO.	LIN3000151630	P0	

### 2-5 Gain data

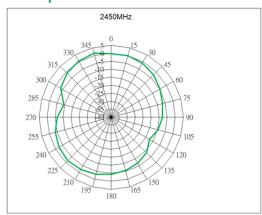
Antenna gain is marked [dBi] and is based on STANDARD HORN antenna. The data shows Average-Gain.

Frequency (MHz)	Peak Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	3.67	-1.74	66.92
2410	3.82	-1.70	67.59
2420	3.84	-1.70	67.37
2430	3.78	-1.79	66.28
2440	3.83	-1.64	68.49
2450	4.09	-1.63	68.78
2460	3.94	-1.71	67.46
2470	3.72	-1.80	66.00
2480	3.83	-1.69	67.82
2490	3.79	-1.75	66.88
2500	3.74	-1.82	65.78

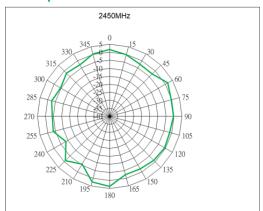
UNLESS OTHER SPECIFIED TOLERANCES ON:				
X=N/A $X.X=N$	/A $X.XX=N/A$	G	INPAQ TECHNOLOGY CO	O., LTD.
ANGLES=N/A	HOLEDIA=N/A			
SCALE: N/A	UNIT: mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPA		
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DESIGNED BY:洪賢修	APPROVED BY:謝立庭	DEVICES WITHO	UT PERMISSION	
TITLE: Embedded Singl	e-Band Antenna for	DOCUMENT ENSO00151830 SPEC R		SPEC REV.
WA-F-LA-03-277		NO.	EN3000131630	P0

### 2.6 Antenna 2D Radiation Pattern

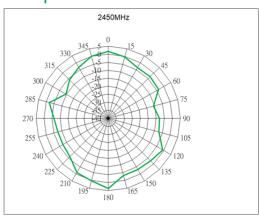
## XY-plane



# ZX-plane



# ZY-plane



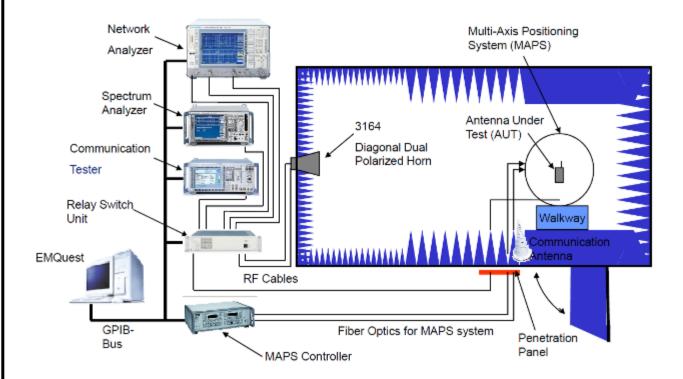
UNLESS OTHER SPECIFIED TOLERANCES ON:				
X=N/A $X.X=N/A$	A X.XX = N/A	G	INPAQ TECHNOLOGY CO	)., LTD.
ANGLES=N/A	HOLEDIA=N/A			
SCALE: N/A		THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPA		
DRAWN BY:涂正憲		TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR U		
DESIGNED BY:洪賢修	APPROVED BY:謝立庭			
TITLE: Embedded Single	-Band Antenna for	DOCUMENT ENS000151830		SPEC REV.
WA-F-LA-03-277		NO.	EN3000131630	P0

#### 2-7 Gain and Radiation Pattern

#### 2-7.1 Measure method

- 1. Using a coaxial cable to link a standard handset jig
- 2. Fixed this handset jig on chamber's rotator plane
- 3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
- 4. Using another standard gain horn antenna to calibrated those data

#### 2-7.2 Chamber definition



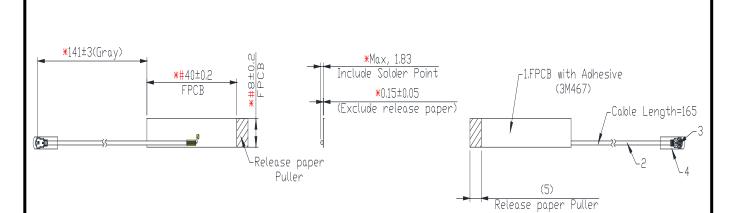
- 1. An anechoic chamber (10mx3mx3m) which satisfied far-field condition was applied to avoid multi-path effect
- 2. The guite room region is 50cmx50cmx50cm at the center of rotator
- 3. The distance between DUT and standard antenna is 9.14m.
- Two measurement antennas is 3164-06 (300MHz 6GHz) and 3164-05 (2 -18GHz)

UNLESS OTHER SPECIFIED TOLERANCES ON:				
X=N/A $X.X=1$	N/A X.XX=N/A	G	INPAQ TECHNOLOGY CO	D., LTD.
ANGLES=N/A	HOLEDIA=N/A			
SCALE: N/A	UNIT: mm		AND SPECIFICATIONS ARE THE PROPERT	-
DRAWN BY:涂正憲	CHECKED BY:鄭榮謀	TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS		
DESIGNED BY:洪賢修	APPROVED BY:謝立庭	DEVICES WITHO	UT PERMISSION	
TITLE: Embedded Sing	le-Band Antenna for	DOCUMENT	ENS000151830	SPEC REV.
WA-F-LA-03-277	7	NO.	EN3000131630	P0

## 3. Mechanical Specification:

TOP

## 3-1. Mechanical Configuration:



SIDE

Drawing P0
The appearance of the antenna is according to drawing Figure 3-1-1.

 $B\Box T$ 

ITEM	DESCRIPTION	MATERIAL SPECIFICATION	QUANTITY	UNIT
1	FPCB	T=0.15mm,40*8mm	1	PCS
2	Cable	RF Cable1.13 (Gray)	1	PCS
3	Connector	I-PEX MHF I-PEX Equivalent(compatible)	1	PCS
4	Shrink Tube	OD3.0*20mm	1	PCS

UNLESS OTHER SPECIFIED  X=N/A X.X=N/A	A X.XX=N/A	G	INPAQ TECHNOLOGY CO	D., LTD.
ANGLES=N/A	HOLEDIA=N/A			
SCALE: N/A			AND SPECIFICATIONS ARE THE PROPERT	
DRAWN BY:涂正憲		TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS		
DESIGNED BY:洪賢修	APPROVED BY:謝立庭	DEVICES WITHOU	JT PERMISSION	
TITLE: Embedded Single	-Band Antenna for	DOCUMENT ENSO00151830 SPEC		SPEC REV.
WA-F-LA-03-277		NO.	EN3000151630	P0