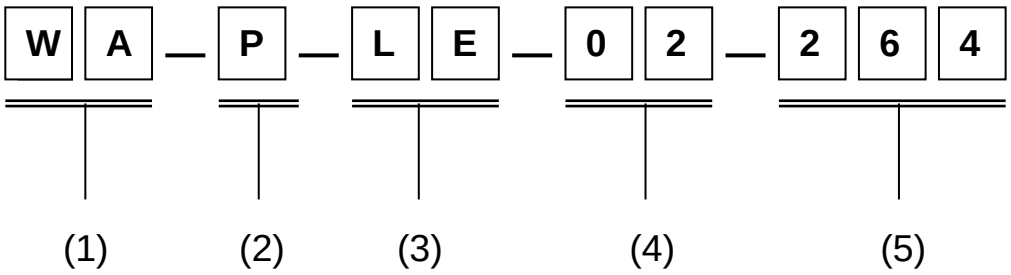
品名：**Embedded Multi-Band Antenna for WA-P-LE-02-264** **History List**

版本 **RE.**	修訂者 **EDITOR**	修訂 頁次 **PAGE**	修訂內容 **ITEMS OF CHANGE**	申請日期 **DATE**	生效日期 **VALID DATE**	**ECN 編號** **ECN NO.**
P0	高楨棋	ALL	暫時發行	2024/03/28		N/A

Embedded Multi-Band Antenna for WA-P-LE-02-264

3. Explanation of part number :



(1) Product type：Wireless Antenna
(2) Material：PCB
(3) Frequency：2400~2500 / 5150~5850 /5925~7125MHz
(4) Coaxial Cable Type：Black Cable
(5) Suffix：264

2. Electrical Specification :

Ant. Part Number (main & Main parts)	Type	Highest Peak Gain with Cable Loss (dBi)		Cable loss (dB)		Connector Type	Cable Length (mm)	Laptop/ Host Model
		2400~2500 MHz	5150~7125 MHz	2400~2500 MHz	5150~7125 MHz			
Main: INPAQ P/N: WA-P-LE-02-264 ASUS P/N 14008-06010100	PIFA	2.92	4.65	0.61	1.08	I-PEX MHF4-L	221	UM5606

Antenna Type	PIFA Antenna For WIFI 802.11a/b/g/n/ac/ax	
Connector Type	I-PEX MHF4-L Connector	
Cable Type	OD 1.13 LLS RF Cable	
Impedance	50Ω	
Polarization	Linear	
Radiation Pattern	Omni-directional	
Frequency Range	WLAN 802.11a/b/g/n/ac/ax	2.4~2.5GHz & 5.15~7.125 GHz
VSWR	WLAN 802.11a/b/g/n/ac/ax	≦3.5
Operation Temperature	-10℃~+55℃	
Storage Temperature	-30℃~+75℃	
Return Loss	≦ -6 dB	
Max Power	1W	

UNLESS OTHER SPECIFIED TOLERANCES ON：
X＝N/A X.X＝N/A X.XX＝N/A
ANGLES＝N/A HOLEDIA＝N/A

INPAQ TECHNOLOGY CO., LTD.

SCALE：N/A | UNIT：mm

DRAWN BY: 周敬晨 | CHECKED BY:鄭榮謀

DESIGNED BY: 高楨棋 | APPROVED BY:張建焜

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5. Electrical Specification：

Those specifications were specially defined for UM5606 model, and all characteristics were measured under the model's handset testing jig.

5-1. Frequency Band：

Frequency Band	MHz	MHz
Wi-Fi 6e	2400~2500	5150~7125

5-2. Impedance：

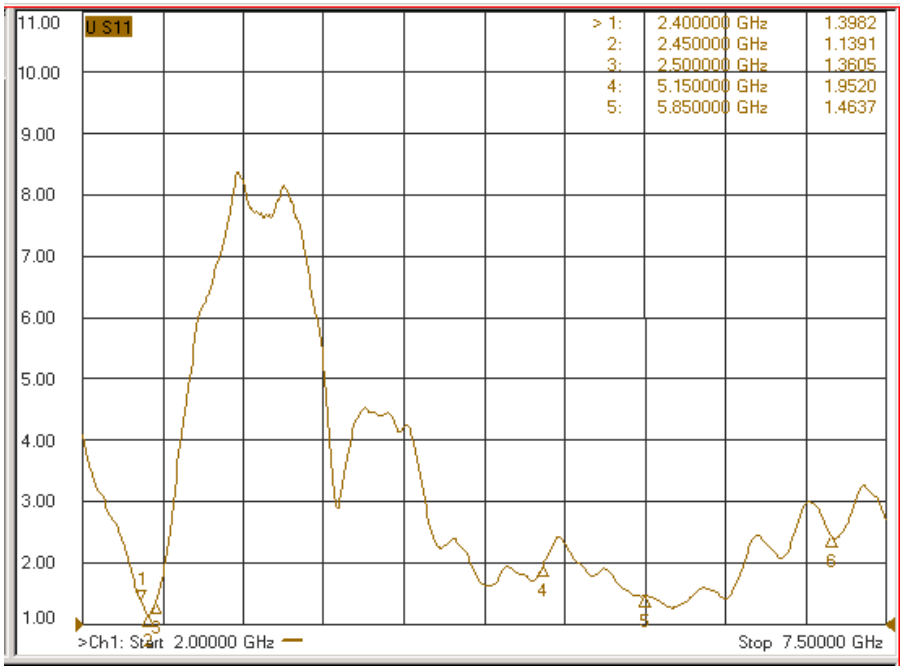
50 ohm nominal

5-3. Matching circuit：

None

5-4. Return loss/VSWR：

Frequency(MHz)	2400	2500	5150	5850	7125
VSWR	1.39	1.36	1.95	1.46	2.24



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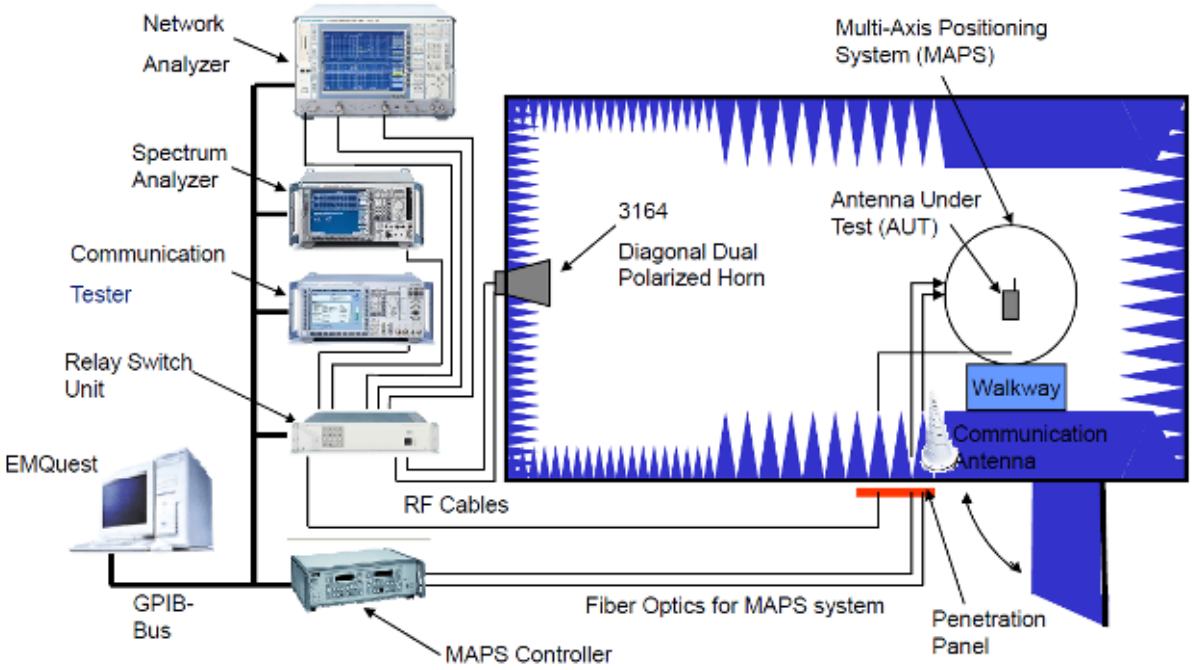
5-5 Gain and Radiation Pattern

5-5.1 Measure method

1. Using a low loss 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

5-5.2 Chamber definition



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

5-5.3 Gain data and radiation pattern

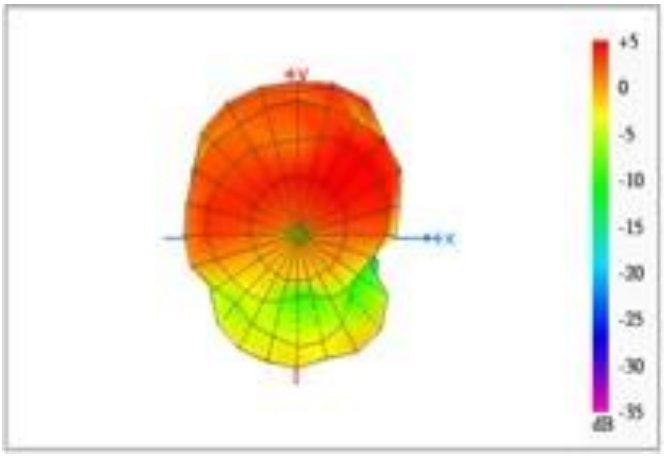
Antenna gain is marked (dBi) and is based on **STANDARD HORN** antenna. The data shows Peak-Gain and Average-Gain.

	Main Gain Data		
Frequency (MHz)	Three-dimensional peak (dBi)	Average (dBi)	Efficiency(%)
2400	2.53	-3.58	43.85
2412	2.68	-3.45	45.19
2437	2.88	-3.32	46.56
2462	2.92	-3.29	46.88
2500	2.79	-3.74	42.27
5150	3.52	-4.27	37.41
5250	3.61	-4.13	38.64
5350	3.69	-3.91	40.64
5470	3.98	-3.80	41.69
5600	4.00	-3.93	40.46
5725	4.65	-3.65	43.15
5785	3.82	-3.72	42.46
5850	4.34	-4.09	38.99
5895	4.38	-4.01	39.72
5925	4.27	-3.51	44.57
6125	3.68	-3.68	42.85
6425	3.24	-4.14	38.55
6525	1.99	-3.95	40.27
6725	3.06	-3.86	41.11
6875	1.50	-4.20	38.02
6925	1.77	-4.22	37.84
7125	3.27	-4.51	35.40

Main Antenna

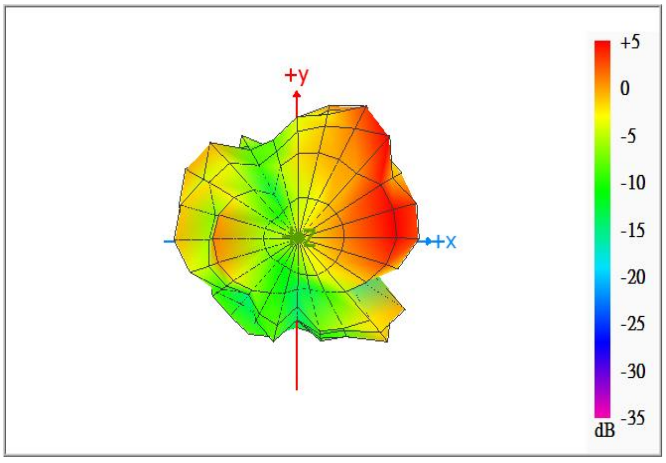
Max Antenna 3D Radiation Pattern 2400 – 2483.5 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
2400-2483.5	2.92



Max Antenna 3D Radiation Pattern 5150-5250 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5150-5250	3.61



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DESIGNED BY: 高楨棋	APPROVED BY:張建焜		
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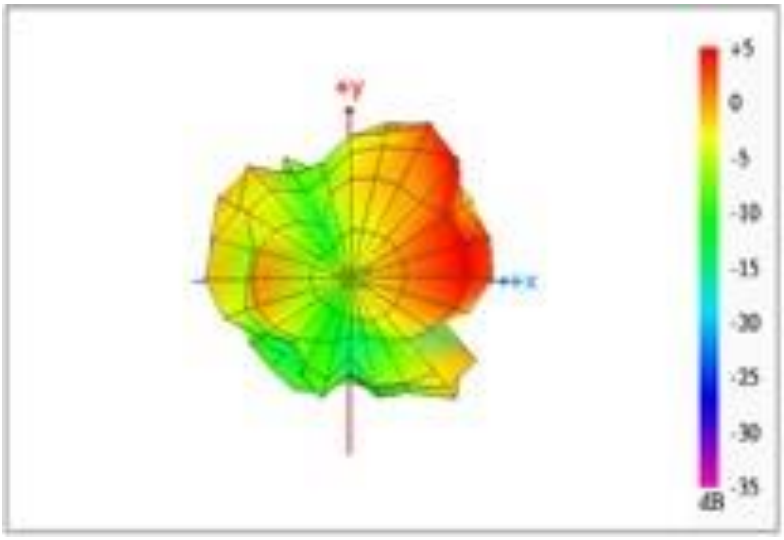
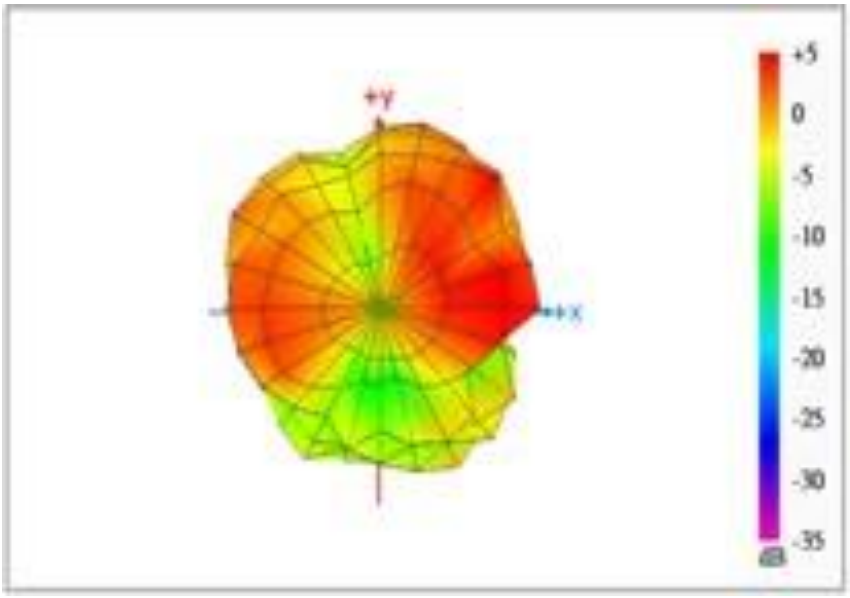
Max Antenna 3D Radiation Pattern 5250-5350 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5250-5350	3.69



Max Antenna 3D Radiation Pattern 5470-5725 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5470-5725	4.65



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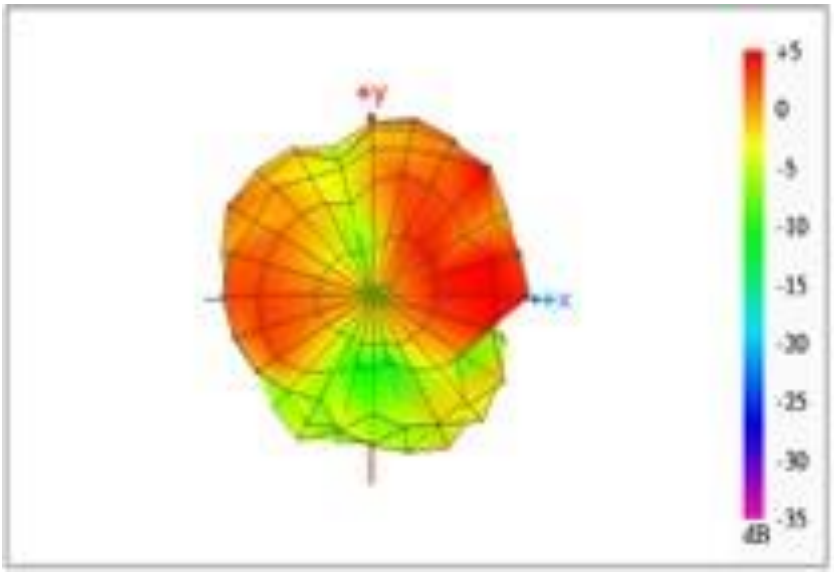
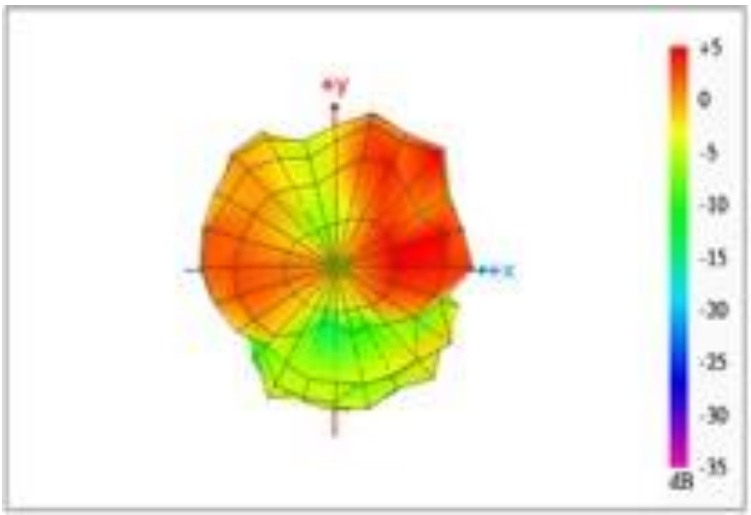
Max Antenna 3D Radiation Pattern 5725-5850 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5725-5850	4.65



Max Antenna 3D Radiation Pattern 5850-5895 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5850-5895	4.38



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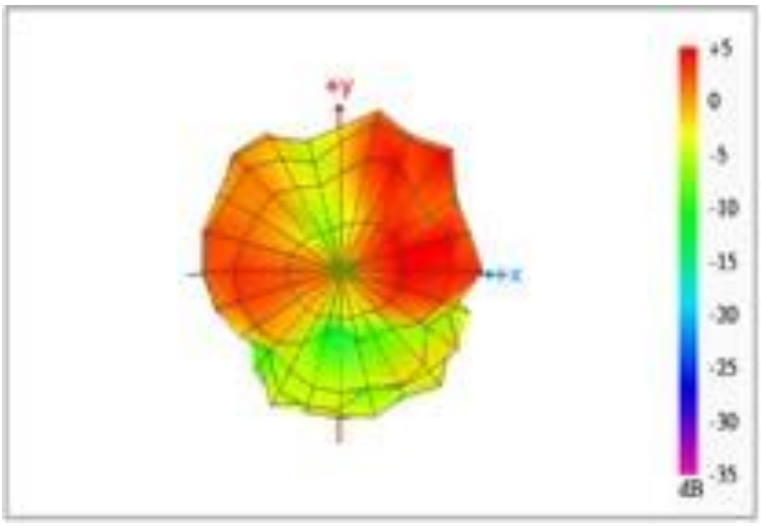
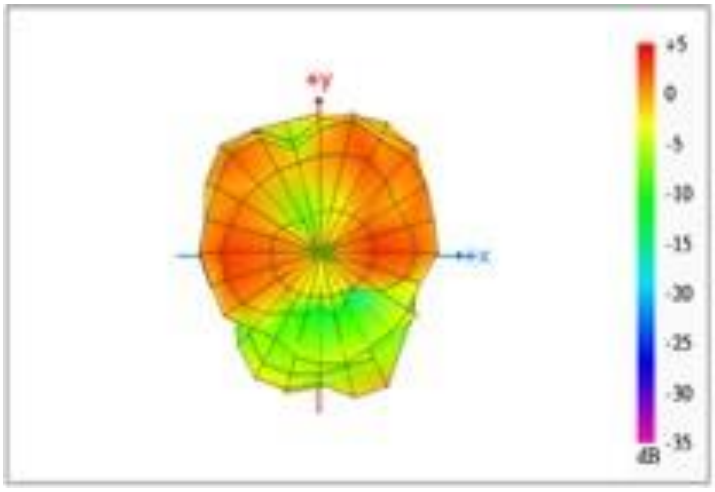
Max Antenna 3D Radiation Pattern 5925-6425 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
5925-6425	4.27



Max Antenna 3D Radiation Pattern 6425-6525 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6425-6525	3.24



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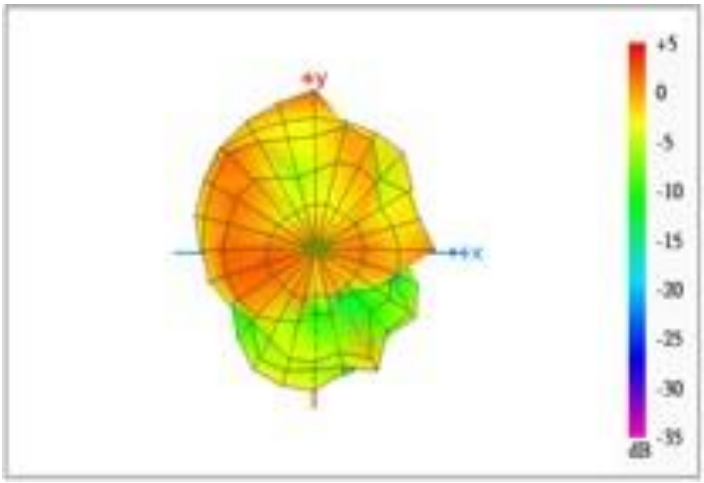
TITLE：Embedded Multi-Band Antenna for WA-P-LE-02-264		DOCUMENT NO.	SPEC REV. P0

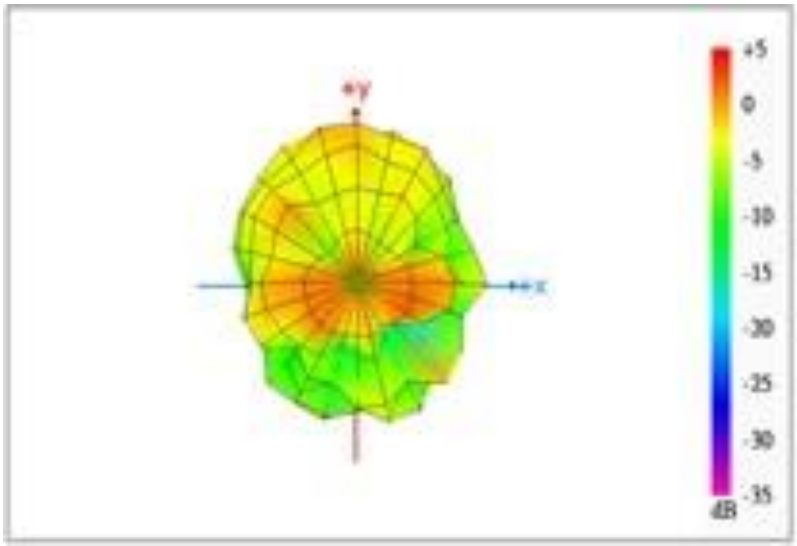
Max Antenna 3D Radiation Pattern 6525-6875 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6525-6875	3.06



Max Antenna 3D Radiation Pattern 6875-7125 MHz

Frequency (MHz)	Peak Gain w/ Cable Loss (dBi)
6875-7125	3.27



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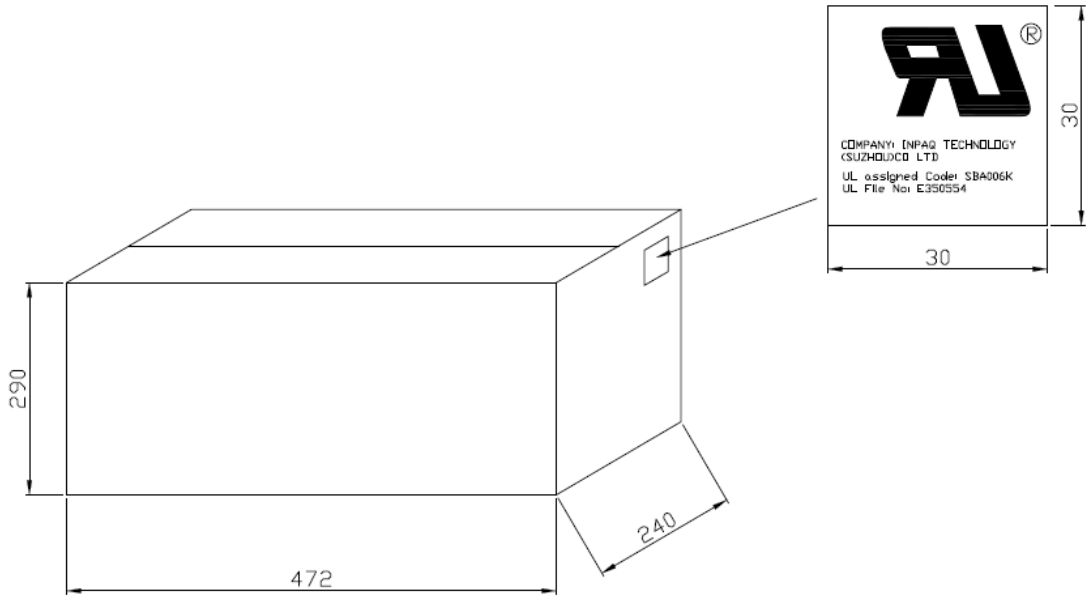
TITLE：Embedded Multi-Band Antenna for WA-P-LE-02-264		DOCUMENT NO.	SPEC REV. P0

6. 外箱貼附 Cable 的 UL 標籤：

The appearance of cable UL label is according to drawing Figure 7-1-1



帶線材的產品出貨時皆需貼附此標籤

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