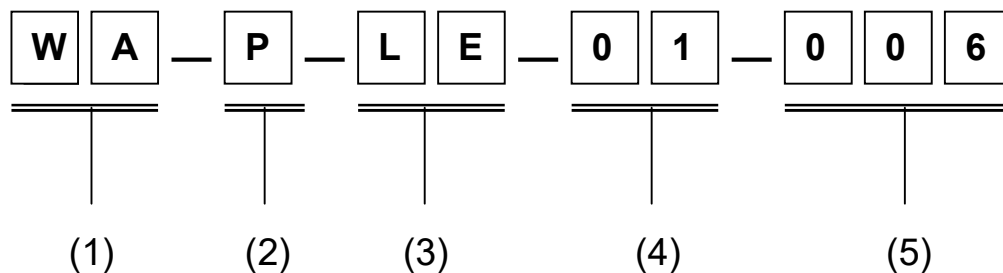


Embedded Multi-Band Antenna for WA-P-LE-01-006

1. Explanation of part number :



1. Product Type : Wireless Antenna
2. Material : PCB
3. Frequency/Band code : 2400~2500 & 5150~7125MHz
4. Coaxial Cable Type : White Coaxial Cable
5. Suffix : 006

2. Electrical Specification :

Ant. Part Number (main & aux parts)	Type	Highest Peak Gain with Cable Loss (dBi)		Cable loss (dB)		Connector Type	Cable length	Laptop/ Host Model
		2400~2500 MHz	5150~7125 MHz	2400~2500 MHz	5150~7125 MHz			
Aux: INPAQ P/N: WA-P-LE-01-006 ASUS P/N: 14008-04890000	PIFA	2.71	4.63	1.22	1.90	I-PEX MHF4-L	440	X1403

Antenna Type	PIFA Antenna For WIFI 802.11a/b/g/n/ac/ax	
Connector Type	I-PEX MHF4-L Connector 20565-001R-13	
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=± X.X=± X.XX=±
 ANGLES=± HOLEDIA=±



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY:王聖元

CHECKED BY:鄭榮謀

DESIGNED BY:林易暄

APPROVED BY:張建焜

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WA-P-LE-01-006

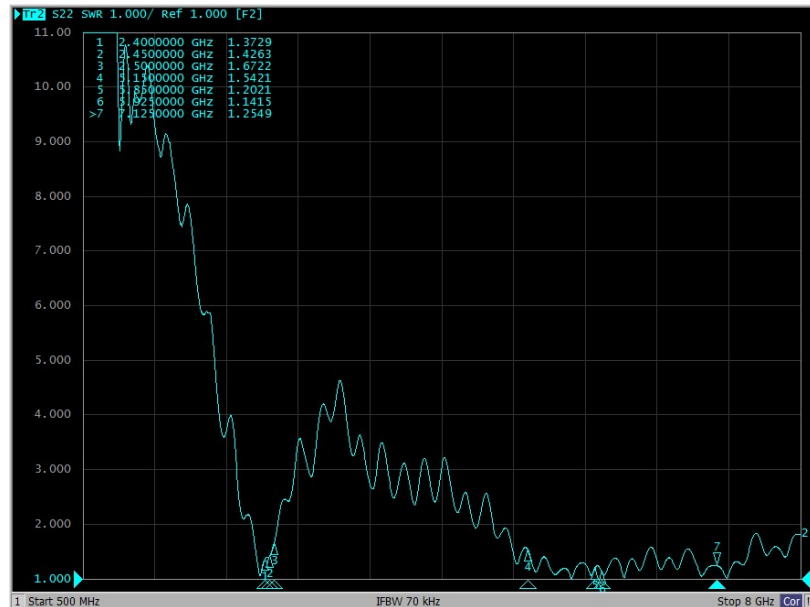
DOCUMENT
NO.

ENS000159130

SPEC REV.
A3

6-4. Return loss/VSWR :

Frequency(MHz)	2400	2500	5150	5850	7125
Aux VSWR(dB)	1.37	1.67	1.54	1.20	1.25



UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±
 ANGLES=± HOLEDIA=±



INPAQ TECHNOLOGY CO., LTD.

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UNIT : mm

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**DOCUMENT
 NO.**

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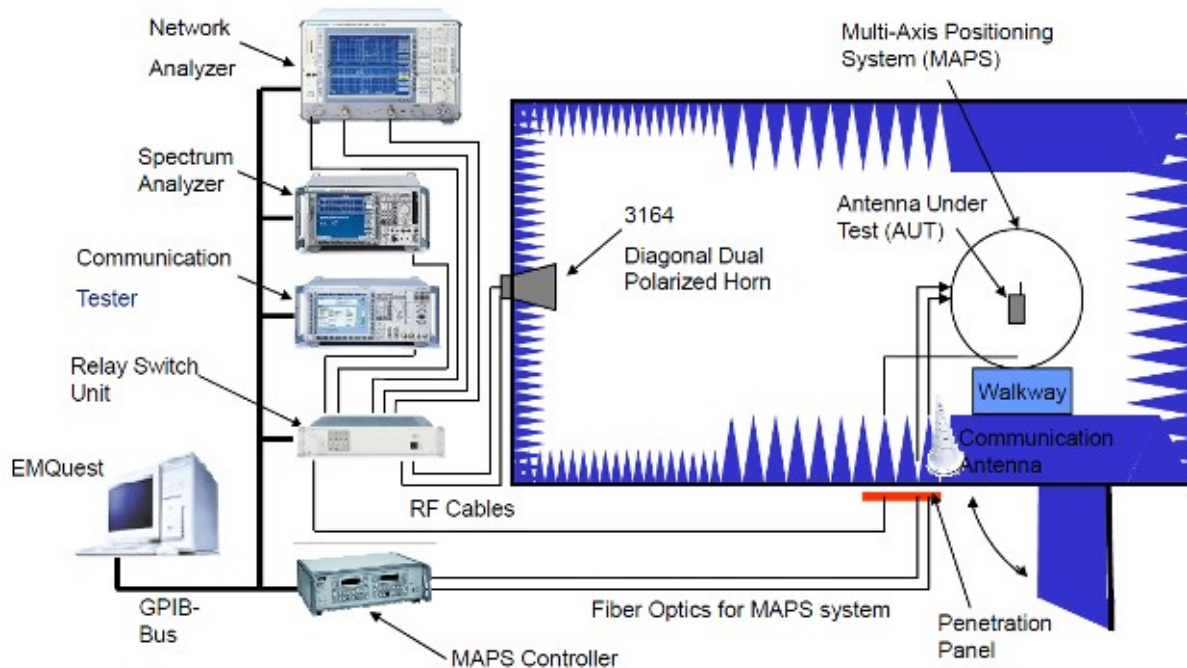
**SPEC REV.
 A3**

6-5 Gain and Radiation Pattern

6-5.1 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

6-5.2 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)

UNLESS OTHER SPECIFIED TOLERANCES ON :

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ANGLES=± HOLEDIA=±



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

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6-5.3 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.

Frequency (MHz)	Aux	
	Efficiency (dBi)	3D Peak gain (dBi)
2400	-2.62	2.33
2412	-2.66	2.71
2437	-2.72	2.05
2450	-2.89	1.98
2462	-2.97	2.22
2500	-2.82	1.78
5150	-2.64	3.5
5250	-2.59	3.49
5350	-2.76	3.32
5470	-2.73	3.67
5600	-3.4	3.79
5725	-3.11	4.35
5785	-2.93	4.63
5850	-2.97	4.52
5895	-3.19	4.42
5925	-3.41	4.31
6000	-3.05	4.04
6125	-2.6	4.29
6225	-2.63	4.09
6325	-3.31	3.23
6425	-3.6	3.73
6525	-3.83	4.07
6625	-3.51	4.26
6725	-3.27	4.55
6875	-3.29	3.77
6925	-3.26	3.81
7000	-2.83	4.01
7125	-3.28	4.06

UNLESS OTHER SPECIFIED TOLERANCES ON :

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 ANGLES=± HOLEDIA=±



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY:王聖元

CHECKED BY:鄭榮謀

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APPROVED BY:張建焜

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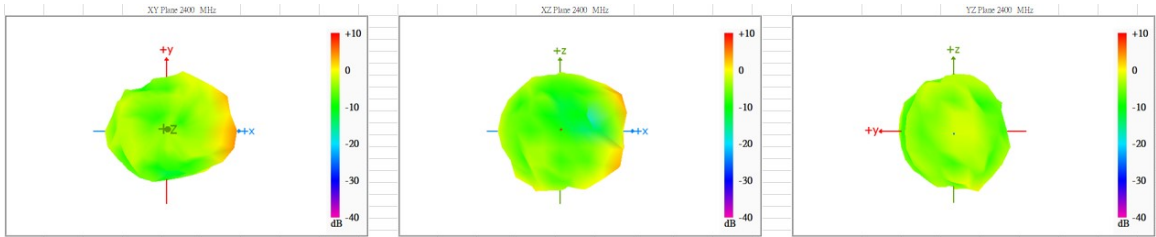
DOCUMENT
 NO.

ENS000159130

SPEC REV.
A3

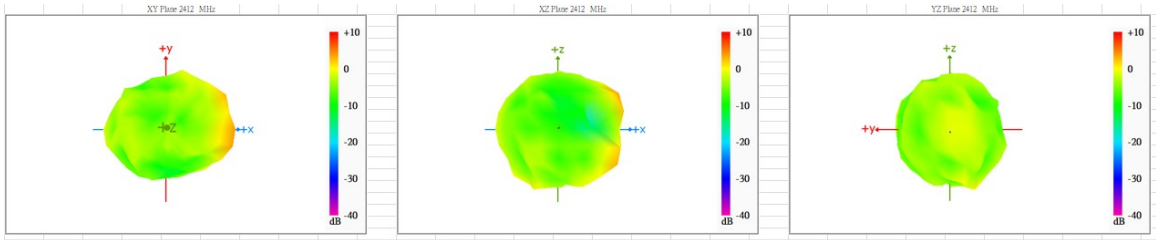
2400-2500MHz radiation characteristic

Aux antenna: 2400 MHz



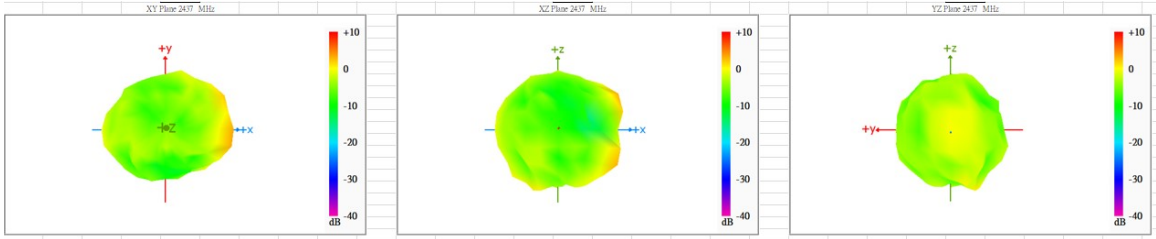
Center Frequency	2400 MHz
Three-dimensional (dBi) peak	2.33

Aux antenna: 2412 MHz



Center Frequency	2412 MHz
Three-dimensional (dBi) peak	2.71

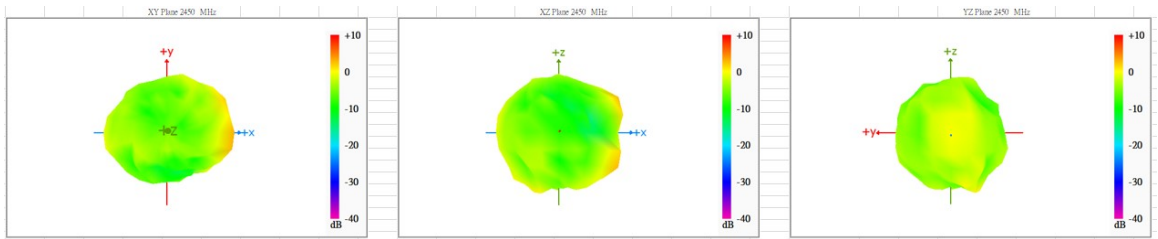
Aux antenna: 2437 MHz



Center Frequency	2437 MHz
Three-dimensional (dBi) peak	2.05

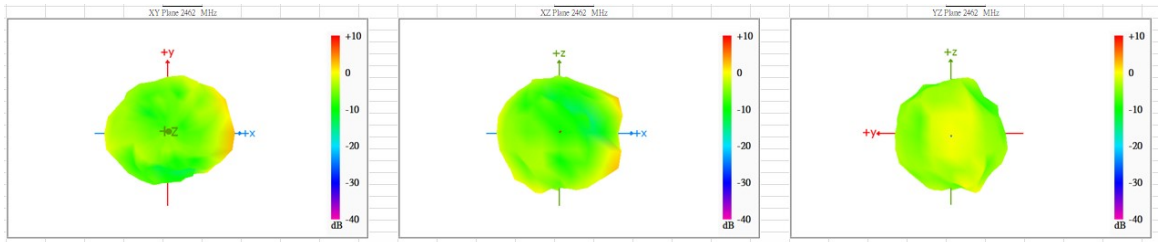
UNLESS OTHER SPECIFIED TOLERANCES ON : X=± X.X=± X.XX=± ANGLES=± HOLEDIA=±		 INPAQ TECHNOLOGY CO., LTD.
SCALE : N/A	UNIT : mm	
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Aux antenna: 2450 MHz



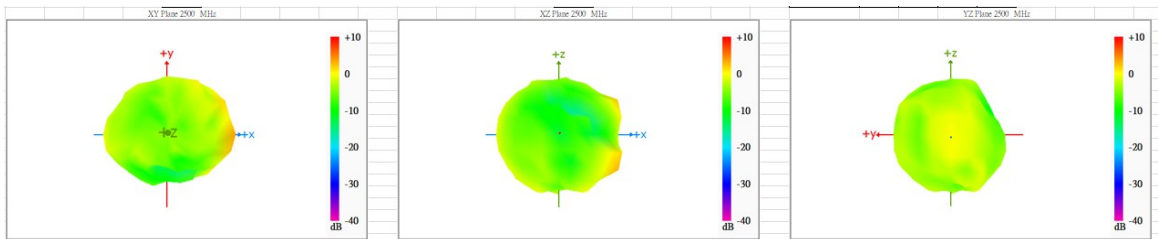
Center Frequency	2450 MHz
Three-dimensional (dBi) peak	1.98

Aux antenna: 2462 MHz



Center Frequency	2462 MHz
Three-dimensional (dBi) peak	2.22

Aux antenna: 2500 MHz

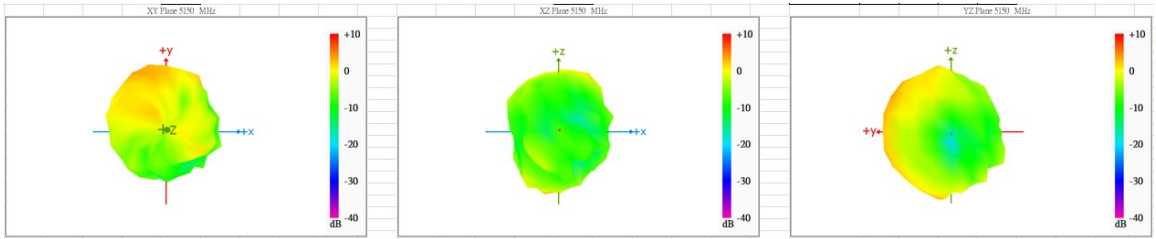


Center Frequency	2500 MHz
Three-dimensional (dBi) peak	1.78

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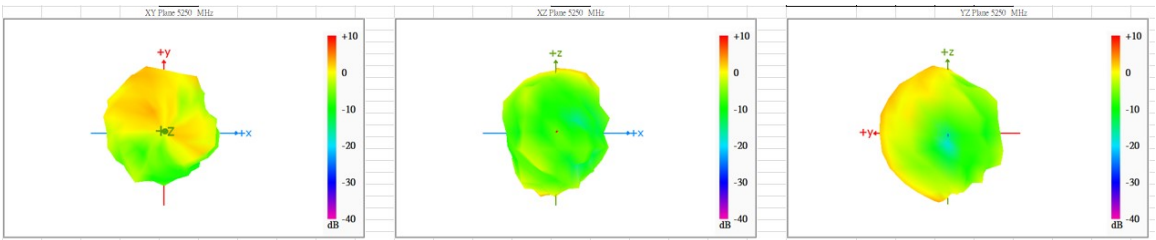
5150-5350MHz radiation characteristic

Aux antenna: 5150 MHz



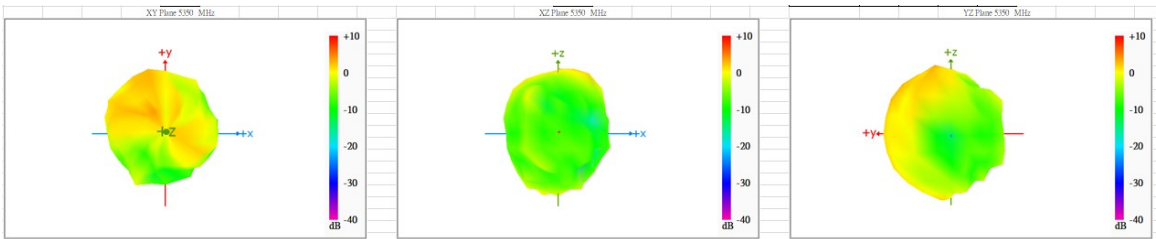
Center Frequency	5150 MHz
Three-dimensional (dBi) peak	3.5

Aux antenna: 5250 MHz



Center Frequency	5250 MHz
Three-dimensional (dBi) peak	3.49

Aux antenna: 5350 MHz

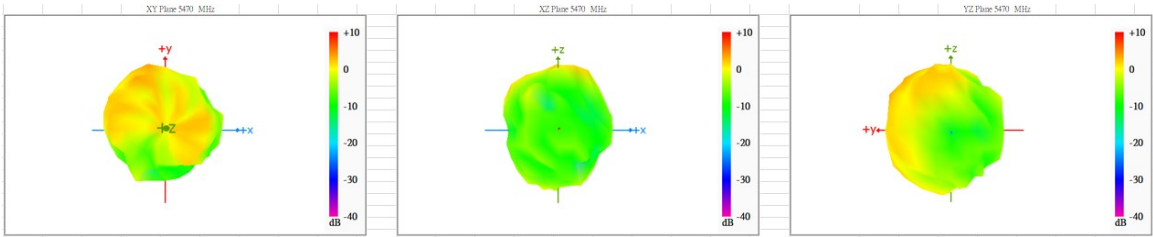


Center Frequency	5350 MHz
Three-dimensional (dBi) peak	3.32

UNLESS OTHER SPECIFIED TOLERANCES ON : X=± X.X=± X.XX=± ANGLES=± HOLEDIA=±		 INPAQ TECHNOLOGY CO., LTD.
SCALE : N/A	UNIT : mm	
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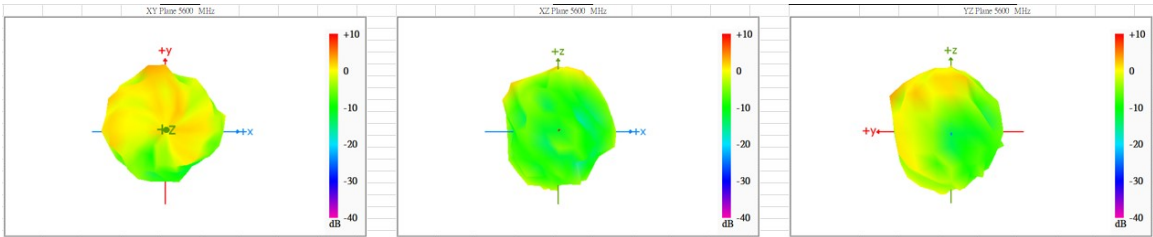
5470-5725MHz radiation characteristic

Aux antenna: 5470 MHz



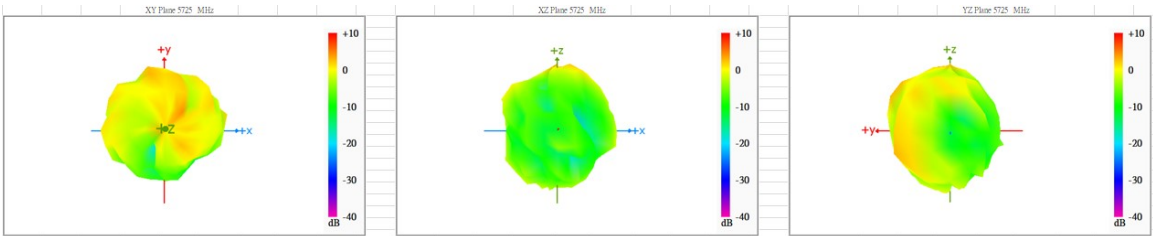
Center Frequency	5470 MHz
Three-dimensional (dBi) peak	3.67

Aux antenna: 5600 MHz



Center Frequency	5600 MHz
Three-dimensional (dBi) peak	3.79

Aux antenna: 5725 MHz

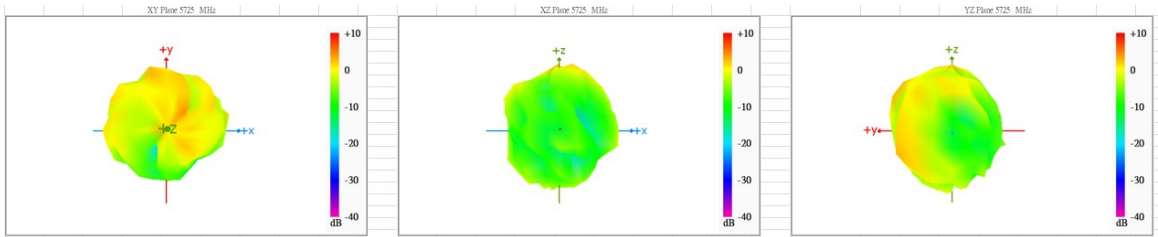


Center Frequency	5725 MHz
Three-dimensional (dBi) peak	4.35

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SCALE : N/A	UNIT : mm	
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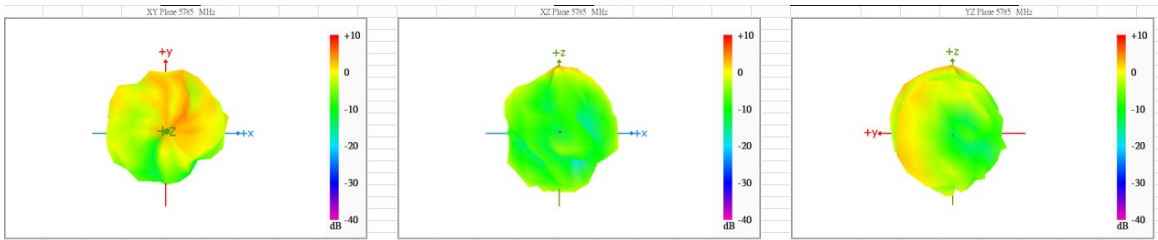
5725-5895MHz radiation characteristic

Aux antenna: 5725 MHz



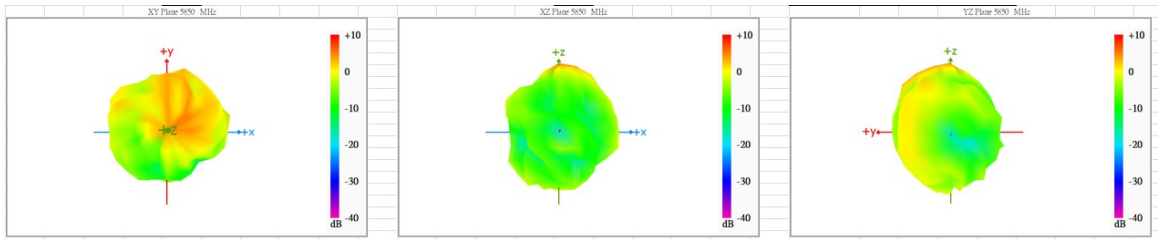
Center Frequency	5725 MHz
Three-dimensional (dBi) peak	4.35

Aux antenna: 5785 MHz



Center Frequency	5785 MHz
Three-dimensional (dBi) peak	4.63

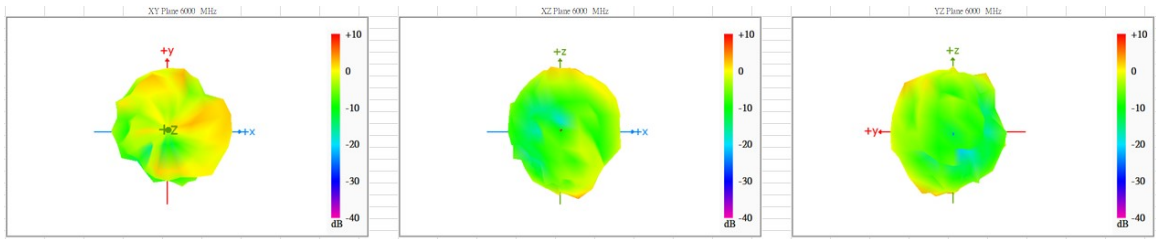
Aux antenna: 5850 MHz



Center Frequency	5850 MHz
Three-dimensional (dBi) peak	4.52

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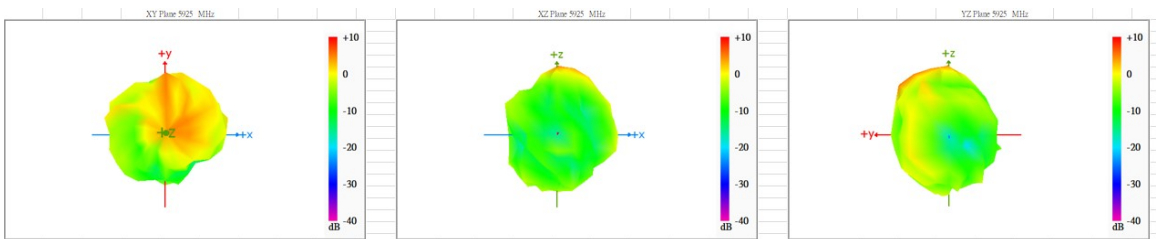
Aux antenna: 5895 MHz



Center Frequency	5895 MHz
Three-dimensional (dBi) peak	4.42

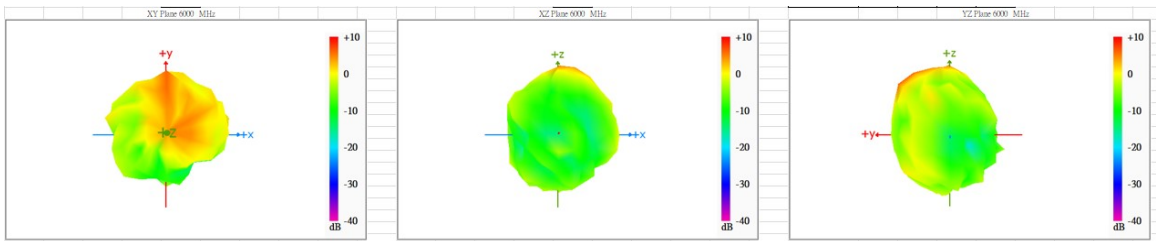
5925-6425MHz radiation characteristic

Aux antenna: 5925 MHz



Center Frequency	5925 MHz
Three-dimensional (dBi) peak	4.31

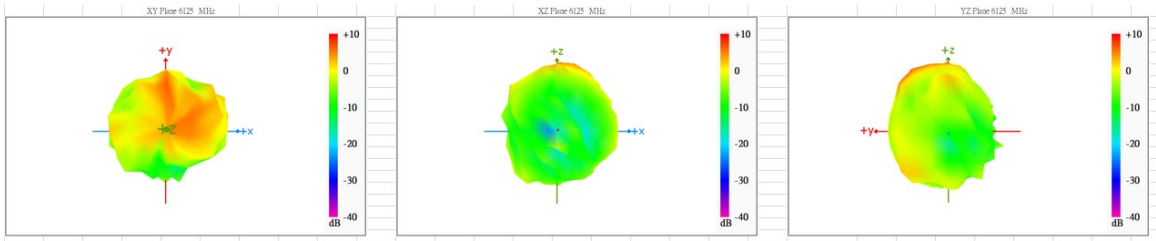
Aux antenna: 6000 MHz



Center Frequency	6000 MHz
Three-dimensional (dBi) peak	4.04

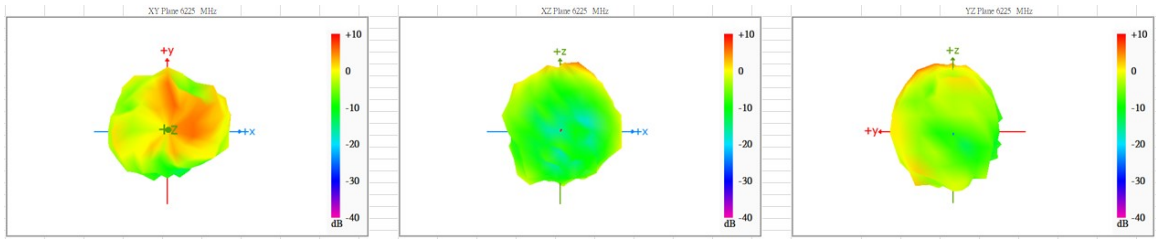
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DESIGNED BY:林易暄		APPROVED BY:張建焜		
TITLE : Embedded Multi-Band Antenna for WA-P-LE-01-006		DOCUMENT NO.	ENS000159130	SPEC REV. A3

Aux antenna: 6125 MHz



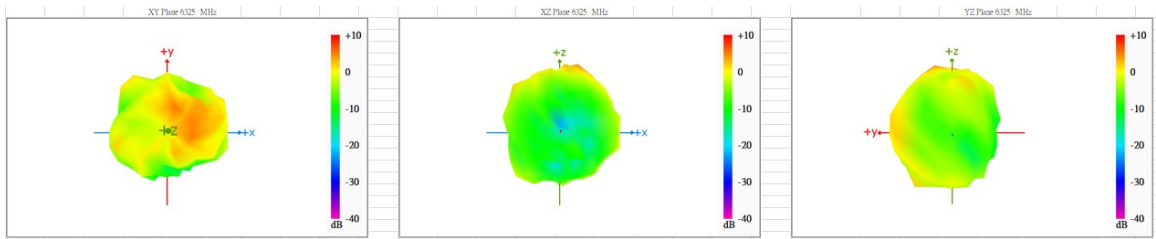
Center Frequency	6125 MHz
Three-dimensional (dBi) peak	4.29

Aux antenna: 6225 MHz



Center Frequency	6225 MHz
Three-dimensional (dBi) peak	4.09

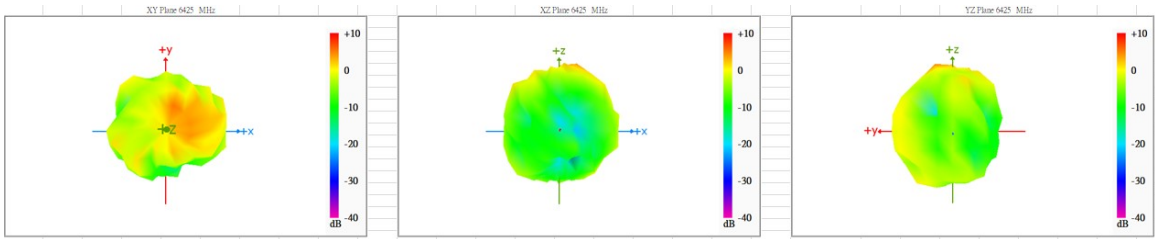
Aux antenna: 6325 MHz



Center Frequency	6325 MHz
Three-dimensional (dBi) peak	3.23

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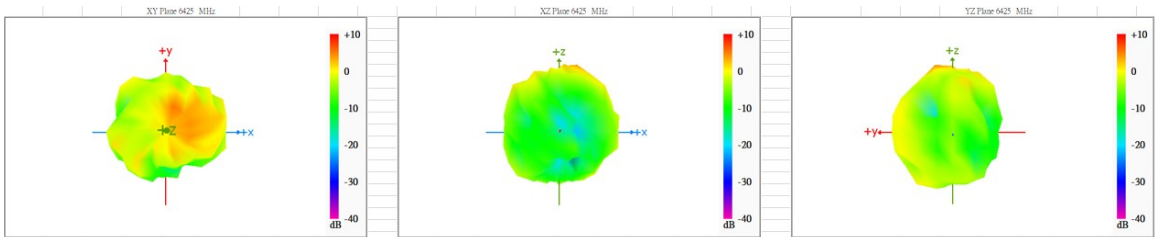
Aux antenna: 6425 MHz



Center Frequency	6425 MHz
Three-dimensional (dBi) peak	3.73

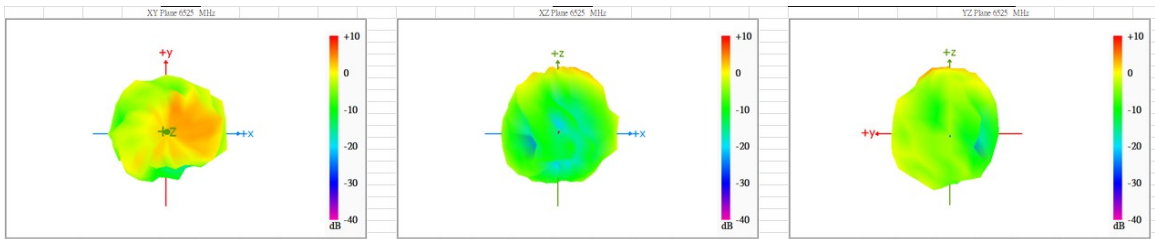
6425-6525MHz radiation characteristic

Aux antenna: 6425 MHz



Center Frequency	6425 MHz
Three-dimensional (dBi) peak	3.73

Aux antenna: 6525 MHz

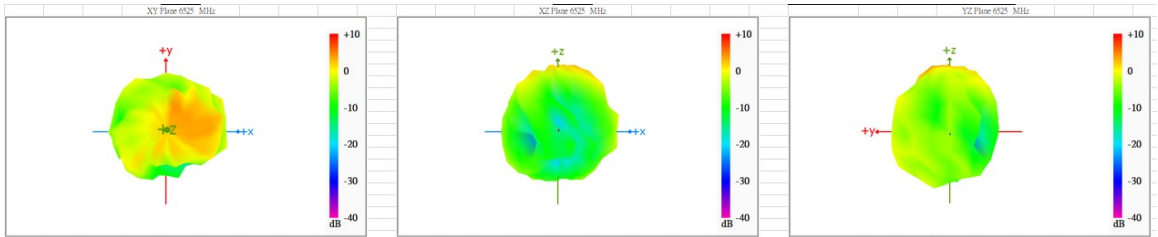


Center Frequency	6525 MHz
Three-dimensional (dBi) peak	4.07

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DESIGNED BY:林易暄		APPROVED BY:張建焜		
TITLE : Embedded Multi-Band Antenna for WA-P-LE-01-006		DOCUMENT NO.	ENS000159130	SPEC REV. A3

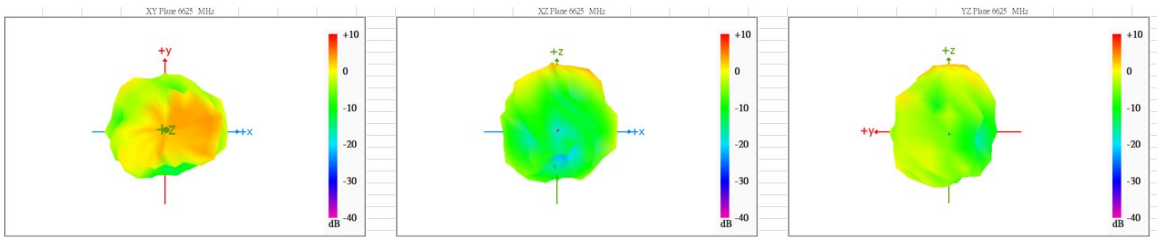
6525-6875MHz radiation characteristic

Aux antenna: 6525 MHz



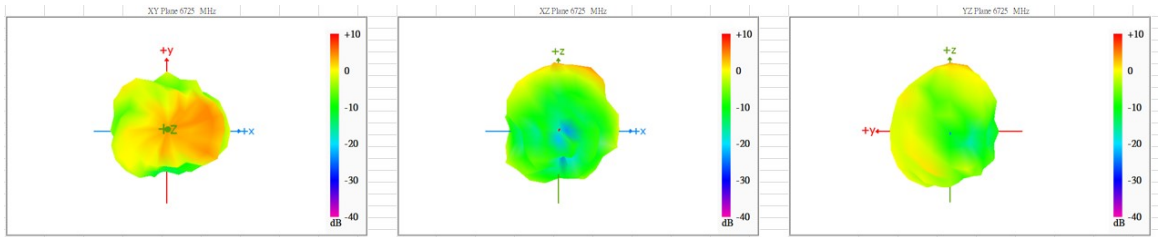
Center Frequency	6525 MHz
Three-dimensional (dBi) peak	4.07

Aux antenna: 6625 MHz



Center Frequency	6625 MHz
Three-dimensional (dBi) peak	4.26

Aux antenna: 6725 MHz



Center Frequency	6725 MHz
Three-dimensional (dBi) peak	4.55

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±
ANGLES=± HOLEDIA=±



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY:王聖元

CHECKED BY:鄭榮謀

DESIGNED BY:林易暄

APPROVED BY:張建焜

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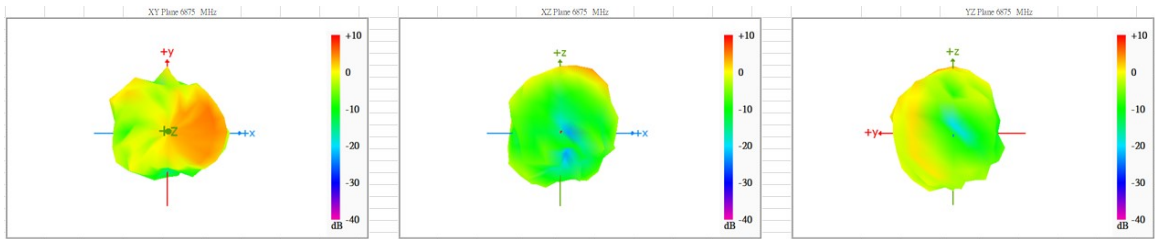
TITLE : Embedded Multi-Band Antenna for
WA-P-LE-01-006

DOCUMENT
NO.

ENS000159130

SPEC REV.
A3

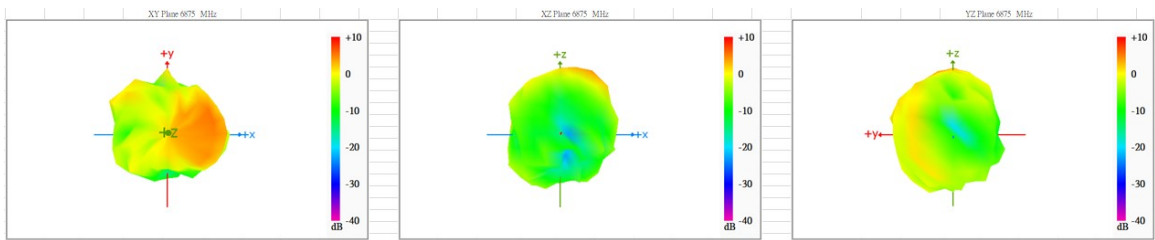
Aux antenna: 6875 MHz



Center Frequency	6875 MHz
Three-dimensional (dBi) peak	3.77

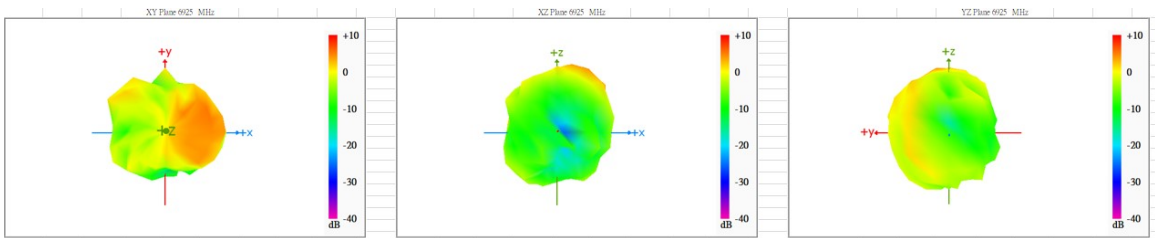
6875-7125MHz radiation characteristic

Aux antenna: 6875 MHz



Center Frequency	6875 MHz
Three-dimensional (dBi) peak	3.77

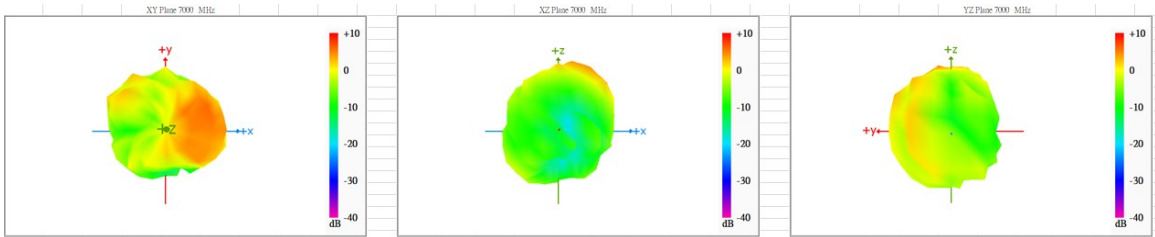
Aux antenna: 6925 MHz



Center Frequency	6925 MHz
Three-dimensional (dBi) peak	3.81

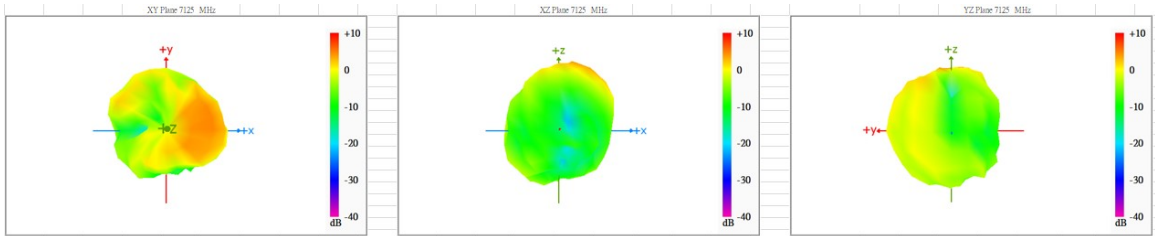
UNLESS OTHER SPECIFIED TOLERANCES ON :			INPAQ TECHNOLOGY CO., LTD.	
X=± X.X=± X.XX=±				
ANGLES=± HOLEDIA=±				
SCALE : N/A		UNIT : mm		THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DRAWN BY:王聖元		CHECKED BY:鄭榮謀		
DESIGNED BY:林易暄		APPROVED BY:張建焜		
TITLE : Embedded Multi-Band Antenna for WA-P-LE-01-006		DOCUMENT NO.	ENS000159130	SPEC REV. A3

Aux antenna: 7000 MHz



Center Frequency	7000 MHz
Three-dimensional (dBi) peak	4.01

Aux antenna: 7125 MHz

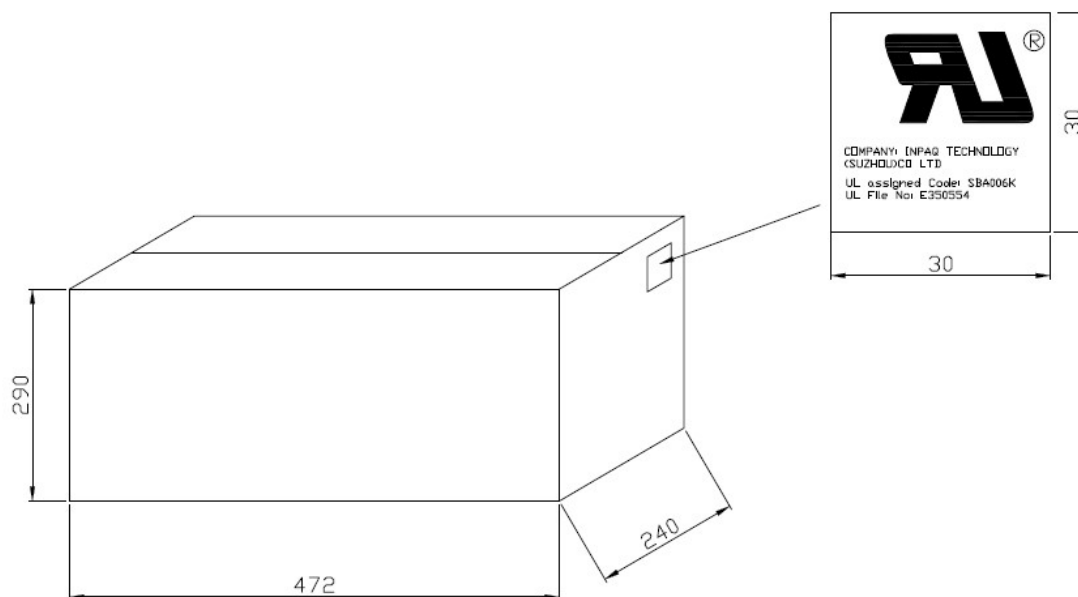


Center Frequency	7125 MHz
Three-dimensional (dBi) peak	4.06

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SCALE : N/A	UNIT : mm			
DRAWN BY:王聖元	CHECKED BY:鄭榮謀			
DESIGNED BY:林易暄	APPROVED BY:張建焜			
TITLE : Embedded Multi-Band Antenna for WA-P-LE-01-006		DOCUMENT NO.	ENS000159130	SPEC REV. A3

7.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

UNLESS OTHER SPECIFIED TOLERANCES ON :			INPAQ TECHNOLOGY CO., LTD.		
X=±	X.X=±				X.XX=±
ANGLES=±					HOLEDIA=±
SCALE : N/A		UNIT : mm		THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DRAWN BY:王聖元		CHECKED BY:鄭榮謀			
DESIGNED BY:林易暄		APPROVED BY:張建焜			
TITLE : Embedded Multi-Band Antenna for WA-P-LE-01-006		DOCUMENT NO.	ENS000159130	SPEC REV A3	