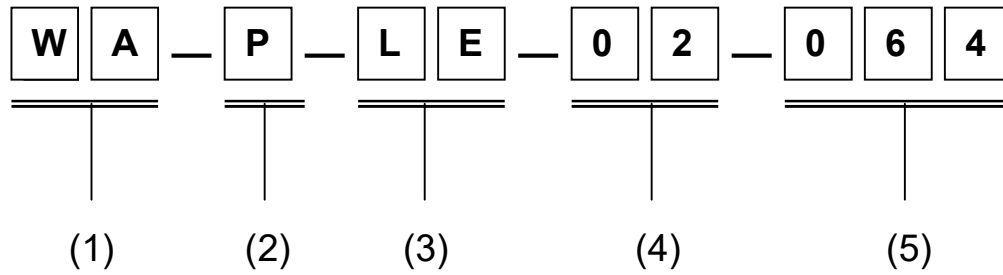


Embedded Multi-Band Antenna for WA-P-LE-02-064

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 : Black Coaxial Cable
5. Suffix : 064

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	5150~7125	2400~2500	5150~7125			
		MHz	MHz	MHz	MHz			
Main: INPAQ P/N: WA-P-LE-02-064 ASUS P/N: 14008-04890100	PIFA	2.75	4.57	0.56	0.87	I-PEX MHF4-L	200	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°C ~ +55°C	
Storage Temperature	-30°C ~ +75°C	
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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TITLE : Embedded Multi-Band Antenna for
WA-P-LE-02-064

DOCUMENT
NO.

ENS000159140

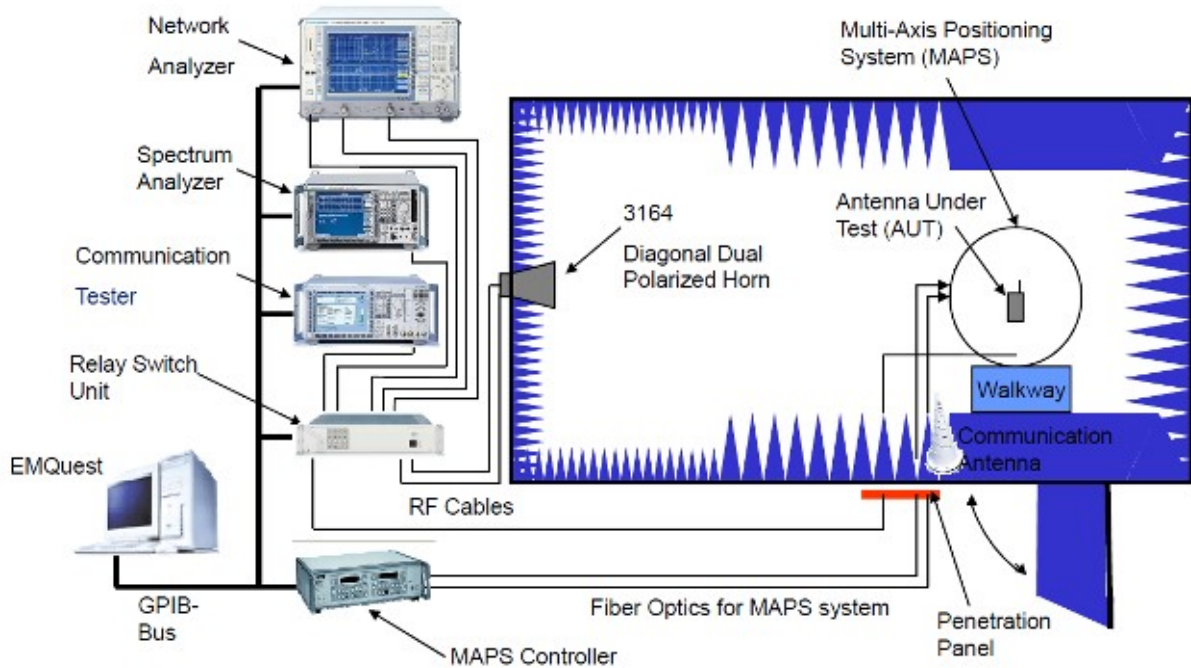
SPEC REV.
A4

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 quiet 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 :

X=± X.X=± X.XX=±

ANGLES=± HOLEDIA=±

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-02-064



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A4

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)	Main	
	Efficiency (%)	3D Peak gain (dBi)
2400	-3.72	2.65
2412	-3.65	2.75
2437	-3.59	2.67
2450	-3.63	2.49
2462	-3.56	2.44
2500	-3.68	1.96
5150	-1.72	2.81
5250	-1.74	2.9
5350	-1.64	3.25
5470	-1.74	3.38
5600	-2.08	3.79
5725	-1.92	4.39
5785	-1.78	4.57
5850	-1.92	4.22
5895	-2.36	4.32
5925	-2.79	4.41
6000	-2.67	3.34
6125	-2.13	3.71
6225	-2.11	3.79
6325	-2.6	3.67
6425	-3.21	3.34
6525	-2.9	3.58
6625	-2.34	4.33
6725	-2.74	4.53
6875	-2.65	3.74
6925	-2.59	3.52
7000	-3.01	3.87
7125	-3.59	3.92

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±
 ANGLES=± HOLEDIA=±



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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

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TITLE : Embedded Multi-Band Antenna for
 WA-P-LE-02-064

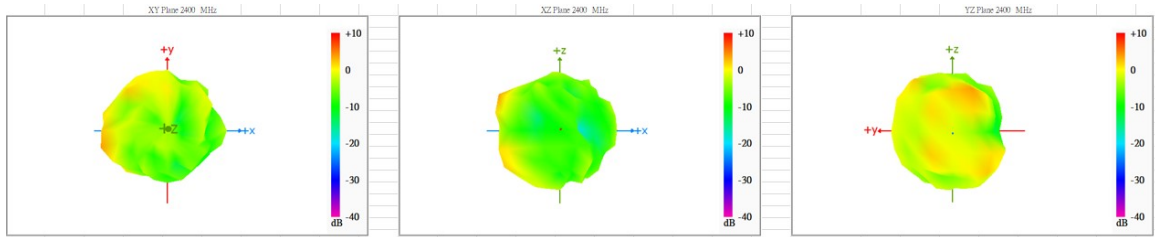
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SPEC REV.
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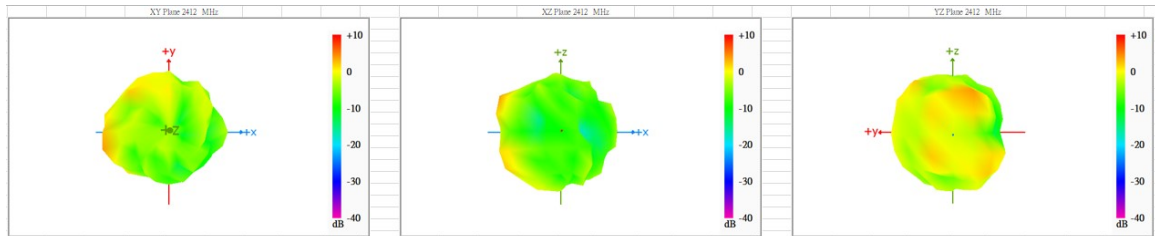
2400-2500MHz radiation characteristic

Main antenna: 2400 MHz



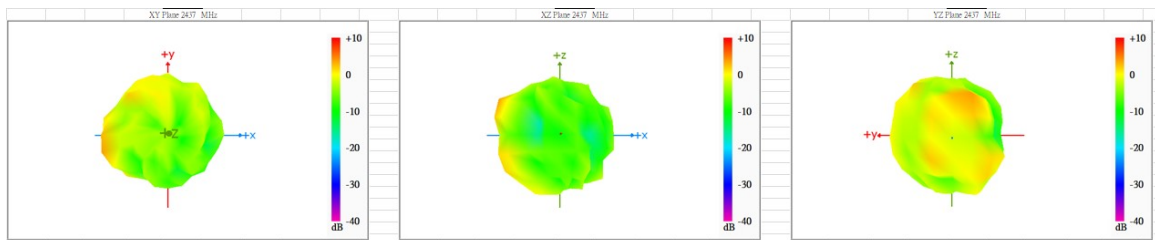
Center Frequency	2400 MHz
Three-dimensional (dBi) peak	2.65

Main antenna: 2412 MHz



Center Frequency	2412 MHz
Three-dimensional (dBi) peak	2.75

Main antenna: 2437 MHz



Center Frequency	2437 MHz
Three-dimensional (dBi) peak	2.67

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±

ANGLES=± HOLEDIA=±

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-02-064



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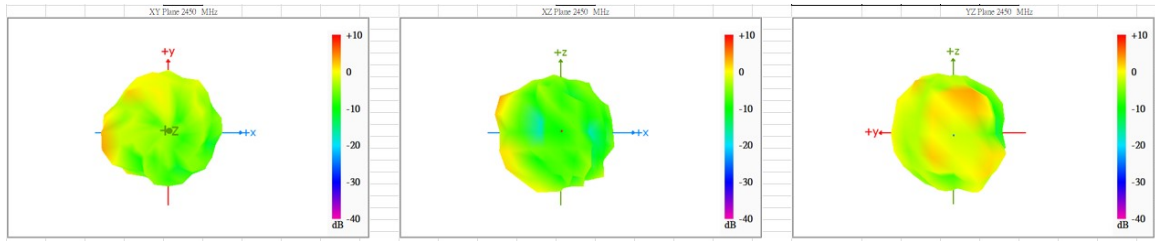
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SPEC REV.

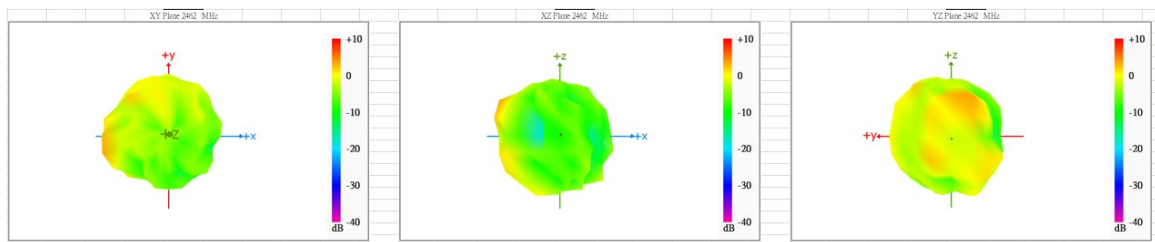
A4

Main antenna: 2450 MHz



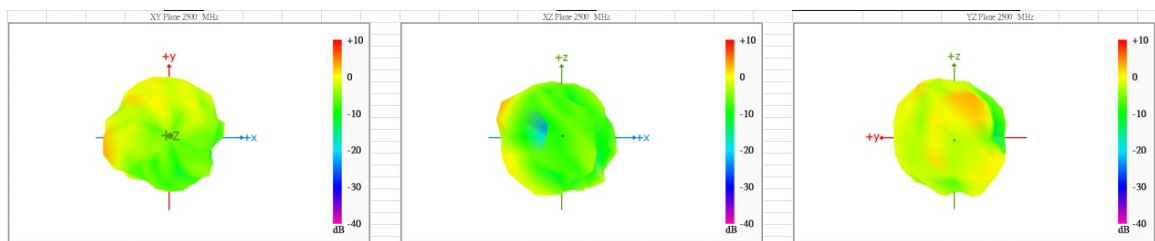
Center Frequency	2450 MHz
Three-dimensional (dBi) peak	2.49

Main antenna: 2462 MHz



Center Frequency	2462 MHz
Three-dimensional (dBi) peak	2.44

Main antenna: 2500 MHz



Center Frequency	2500 MHz
Three-dimensional (dBi) peak	1.96

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

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DESIGNED BY:林易暄

APPROVED BY:張建焜

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TITLE : Embedded Multi-Band Antenna for
 WA-P-LE-02-064

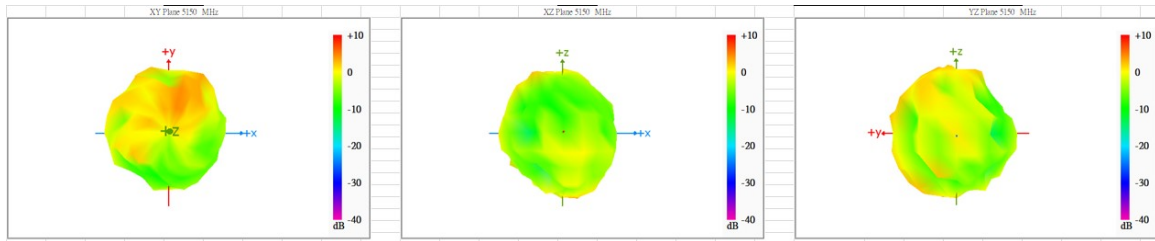
DOCUMENT
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ENS000159140

SPEC REV.
A4

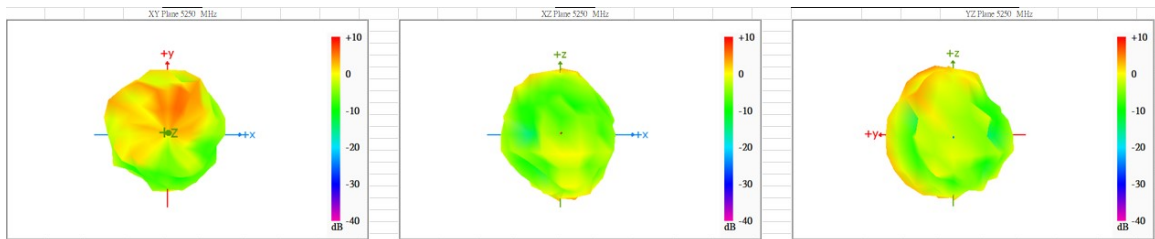
5150-5350MHz radiation characteristic

Main antenna: 5150 MHz



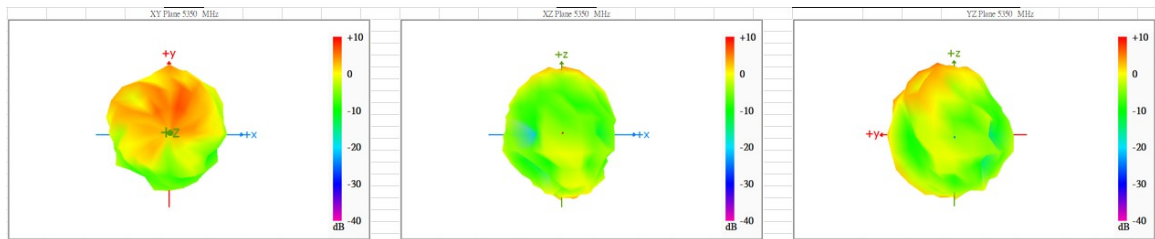
Center Frequency	5150 MHz
Three-dimensional (dBi) peak	2.81

Main antenna: 5250 MHz



Center Frequency	5250 MHz
Three-dimensional (dBi) peak	2.9

Main antenna: 5350 MHz



Center Frequency	5350 MHz
Three-dimensional (dBi) peak	3.25

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±

ANGLES=± HOLEDIA=±

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
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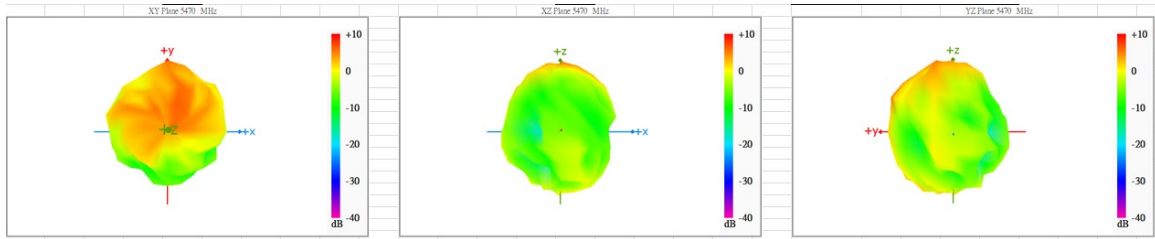
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SPEC REV.
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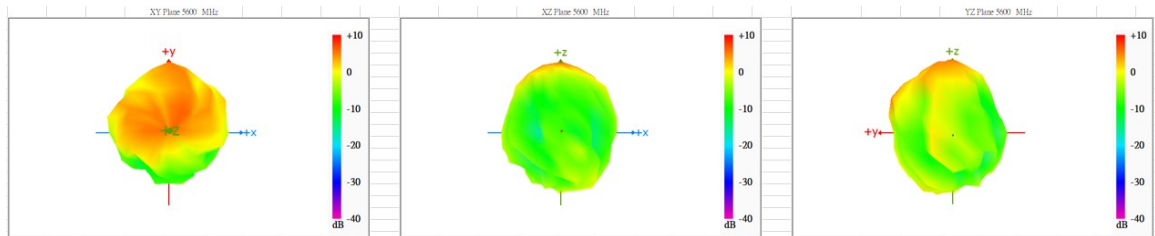
5470-5725MHz radiation characteristic

Main antenna: 5470 MHz



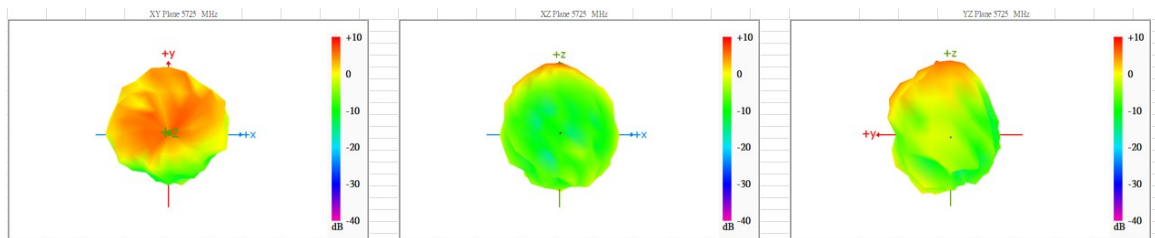
Center Frequency	5470 MHz
Three-dimensional (dBi) peak	3.38

Main antenna: 5600 MHz



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

Main antenna: 5725 MHz



Center Frequency	5725 MHz
Three-dimensional (dBi) peak	4.39

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±

ANGLES=± HOLEDIA=±

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-02-064



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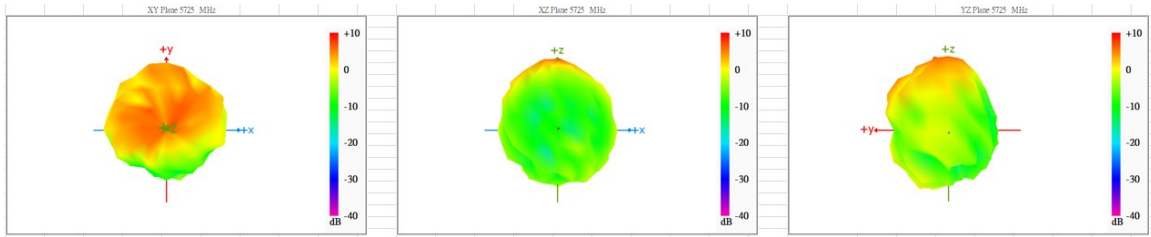
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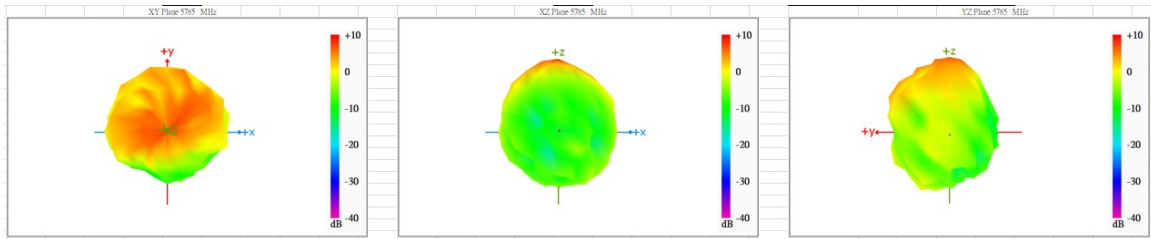
5725-5895MHz radiation characteristic

Main antenna: 5725 MHz



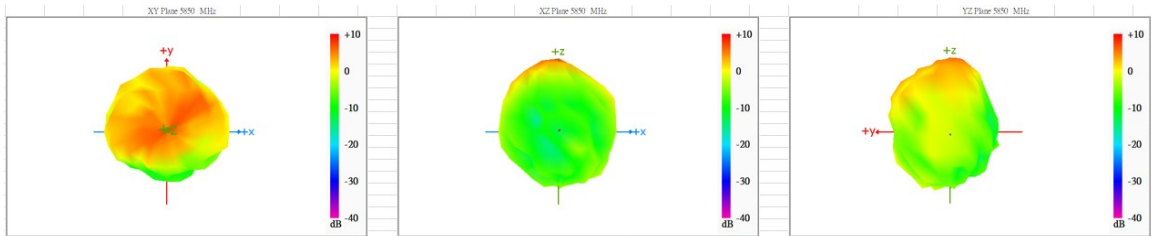
Center Frequency	5725 MHz
Three-dimensional (dBi) peak	4.39

Main antenna: 5785 MHz



Center Frequency	5785 MHz
Three-dimensional (dBi) peak	4.57

Main antenna: 5850 MHz



Center Frequency	5850 MHz
Three-dimensional (dBi) peak	4.22

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±

ANGLES=± HOLEDIA=±

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-02-064



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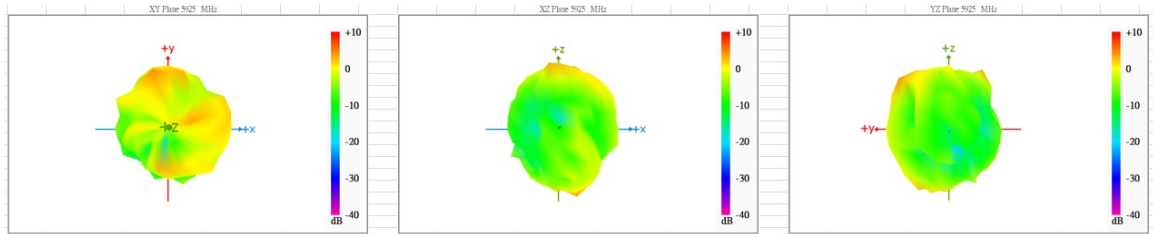
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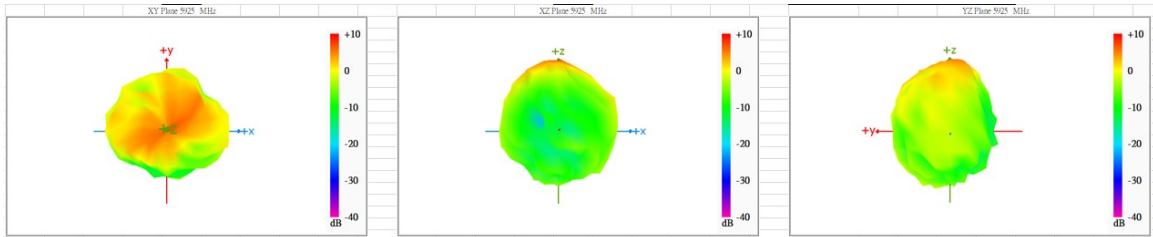
Main antenna: 5895 MHz



Center Frequency	5895 MHz
Three-dimensional (dBi) peak	4.32

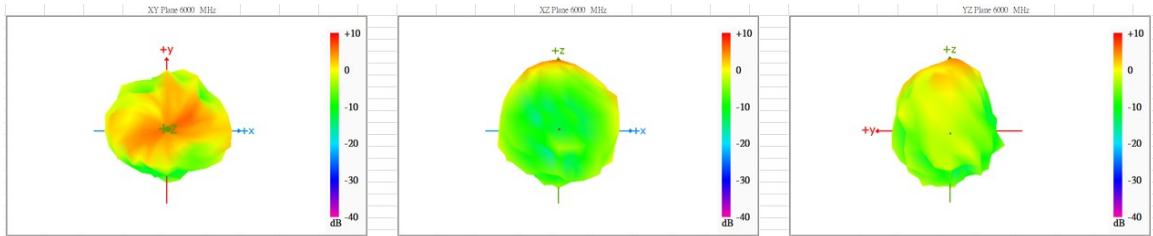
5925-6425MHz radiation characteristic

Main antenna: 5925 MHz



Center Frequency	5925 MHz
Three-dimensional (dBi) peak	4.41

Main antenna: 6000 MHz



Center Frequency	6000 MHz
Three-dimensional (dBi) peak	3.34

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±

ANGLES=± HOLEDIA=±



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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

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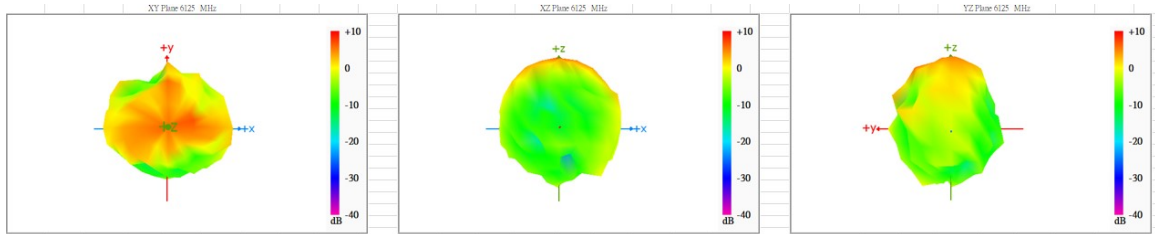
TITLE : Embedded Multi-Band Antenna for
WA-P-LE-02-064

DOCUMENT
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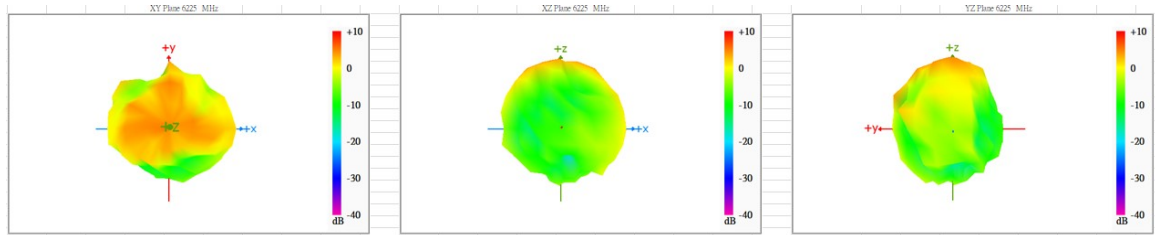
SPEC REV.
A4

Main antenna: 6125 MHz



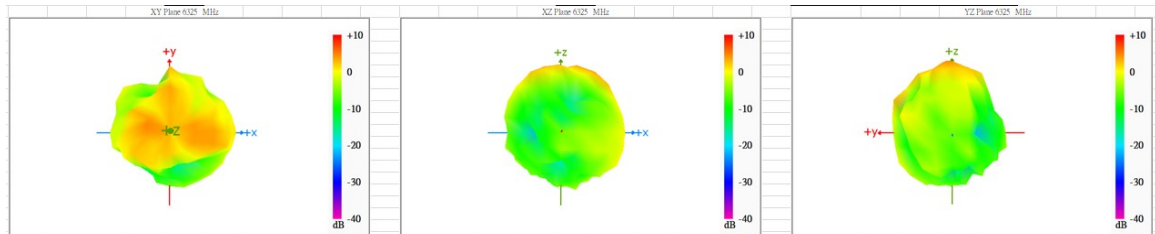
Center Frequency	6125 MHz
Three-dimensional (dBi) peak	3.71

Main antenna: 6225 MHz



Center Frequency	6225 MHz
Three-dimensional (dBi) peak	3.79

Main antenna: 6325 MHz



Center Frequency	6325 MHz
Three-dimensional (dBi) peak	3.67

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±

ANGLES=± HOLEDIA=±



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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

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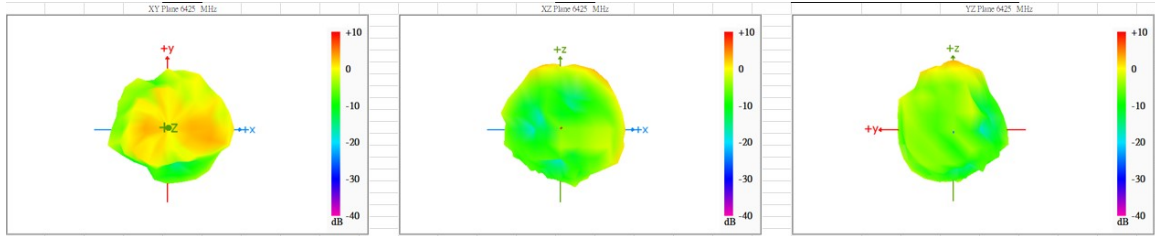
TITLE : Embedded Multi-Band Antenna for
WA-P-LE-02-064

DOCUMENT
NO.

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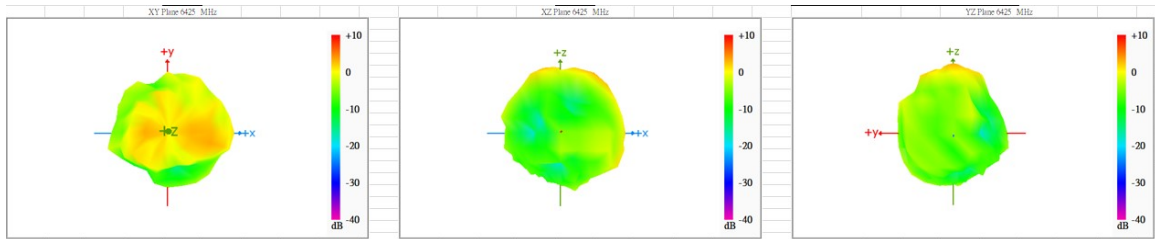
Main antenna: 6425 MHz



Center Frequency	6425 MHz
Three-dimensional (dBi) peak	3.34

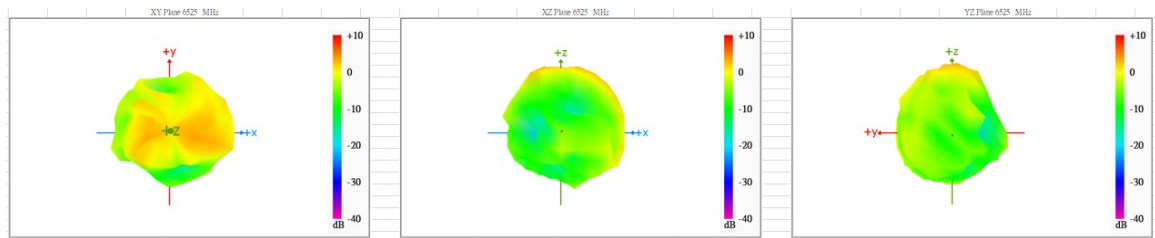
6425-6525MHz radiation characteristic

Main antenna: 6425 MHz



Center Frequency	6425 MHz
Three-dimensional (dBi) peak	3.34

Main antenna: 6525 MHz



Center Frequency	6525 MHz
Three-dimensional (dBi) peak	3.58

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±
 ANGLES=± HOLEDIA=±



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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

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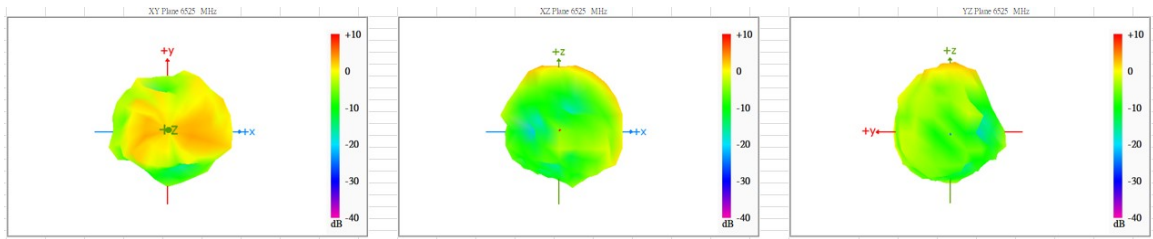
TITLE : Embedded Multi-Band Antenna for
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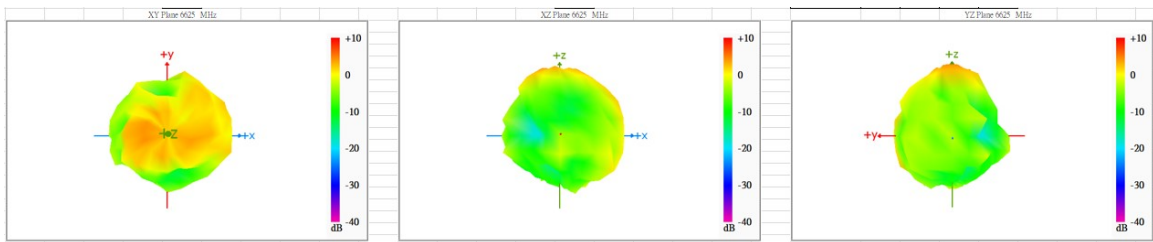
6525-6875MHz radiation characteristic

Main antenna: 6525 MHz



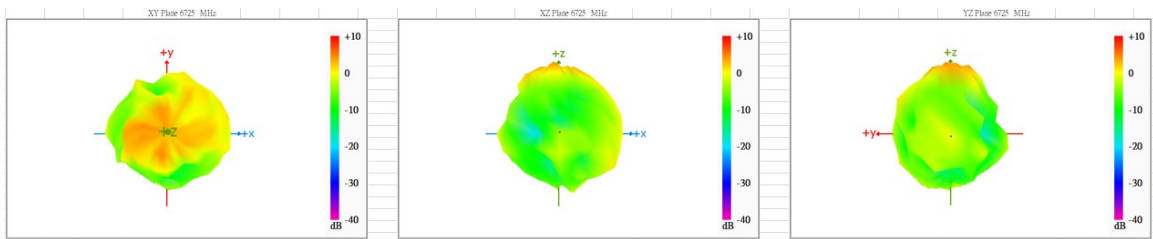
Center Frequency	6525 MHz
Three-dimensional (dBi) peak	3.58

Main antenna: 6625 MHz



Center Frequency	6625 MHz
Three-dimensional (dBi) peak	4.33

Main antenna: 6725 MHz



Center Frequency	6725 MHz
Three-dimensional (dBi) peak	4.53

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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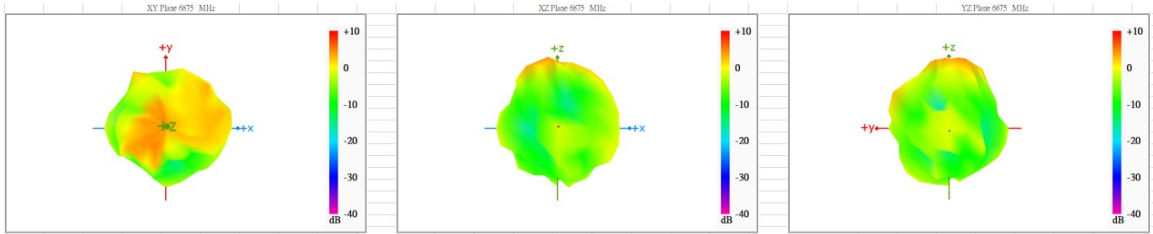
TITLE : Embedded Multi-Band Antenna for
WA-P-LE-02-064

DOCUMENT
NO.

ENS000159140

SPEC REV.
A4

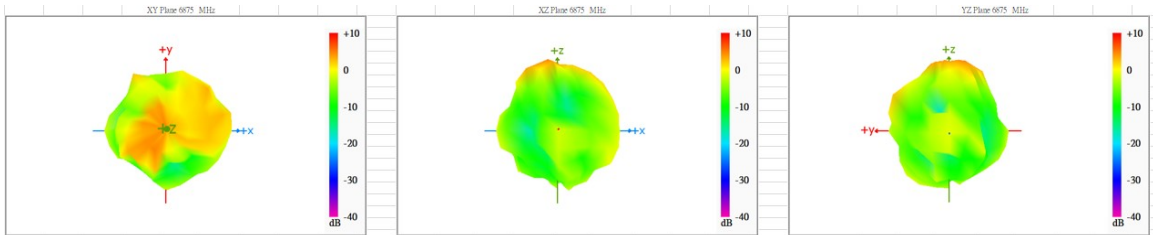
Main antenna: 6875 MHz



Center Frequency	6875 MHz
Three-dimensional (dBi) peak	3.74

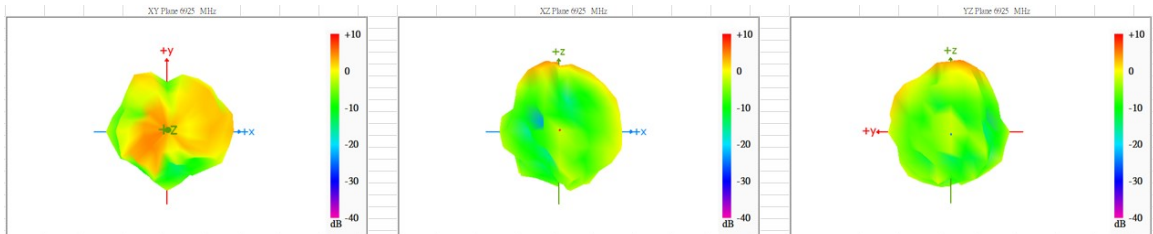
6875-7125MHz radiation characteristic

Main antenna: 6875 MHz



Center Frequency	6875 MHz
Three-dimensional (dBi) peak	3.74

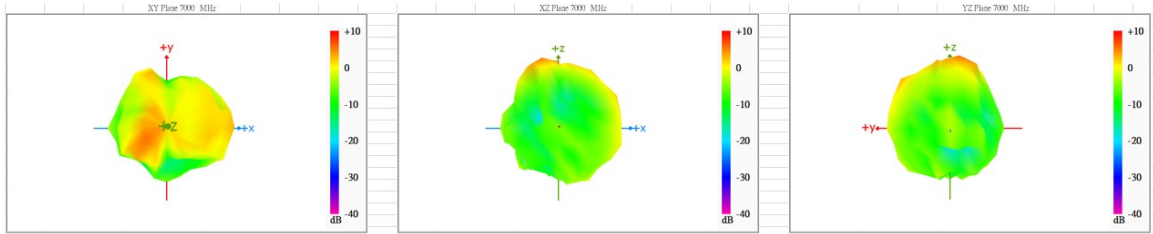
Main antenna: 6925 MHz



Center Frequency	6925 MHz
Three-dimensional (dBi) peak	3.52

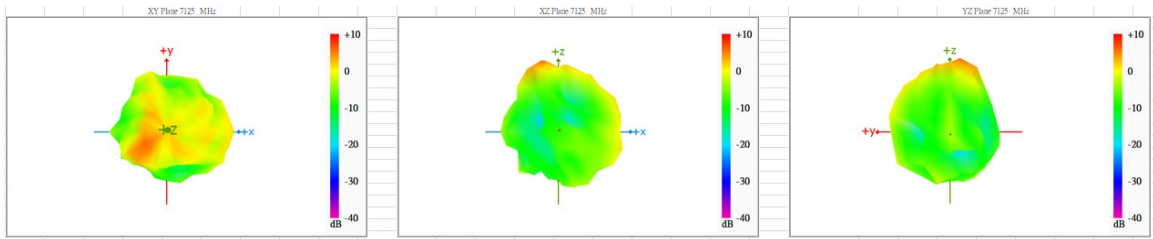
UNLESS OTHER SPECIFIED TOLERANCES ON :			INPAQ TECHNOLOGY CO., LTD.
X=±	X.X=±		
ANGLES=±		HOLEDIA=±	
SCALE : N/A	UNIT : mm		
DRAWN BY:王聖元	CHECKED BY:鄭榮謀		
DESIGNED BY:林易暄	APPROVED BY:張建焜		
TITLE : Embedded Multi-Band Antenna for WA-P-LE-02-064		DOCUMENT NO.	ENS000159140
			SPEC REV. A4

Main antenna: 7000 MHz



Center Frequency	7000 MHz
Three-dimensional (dBi) peak	3.87

Main antenna: 7125 MHz



Center Frequency	7125 MHz
Three-dimensional (dBi) peak	3.92

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-02-064

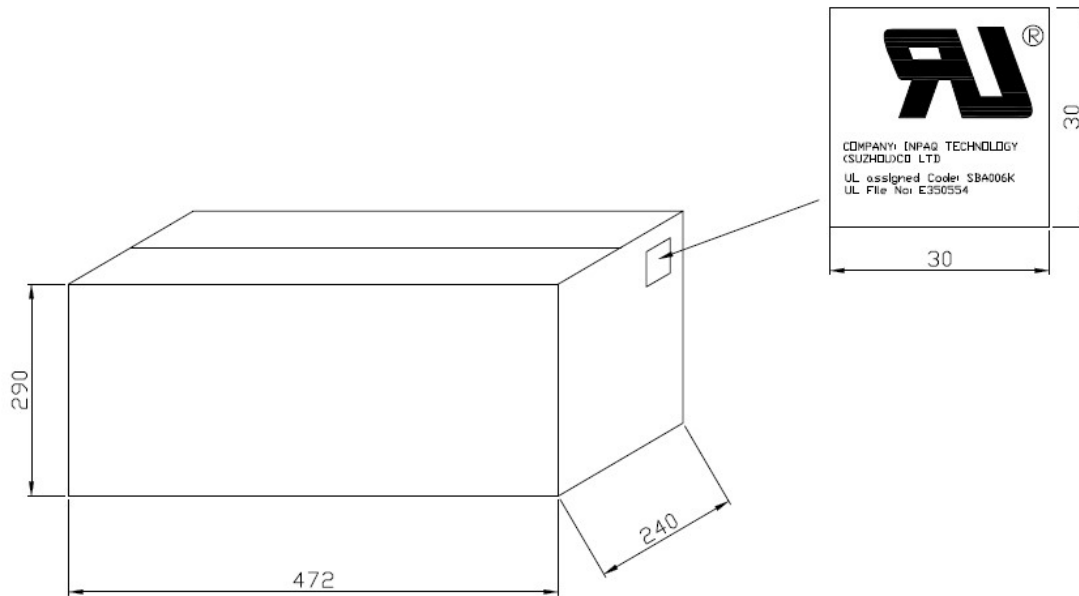
DOCUMENT
NO.

ENS000159140


SPEC REV.
A4

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.
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