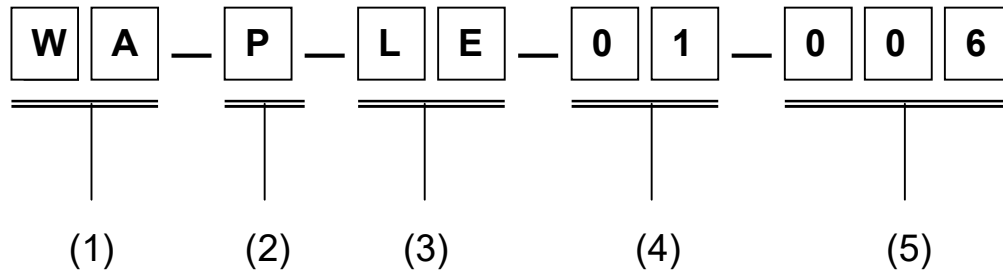


Embedded Multi-Band Antenna for WA-P-LE-01-006

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	5150~7125	2400~2500	5150~7125			
		MHz	MHz	MHz	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°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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WA-P-LE-01-006

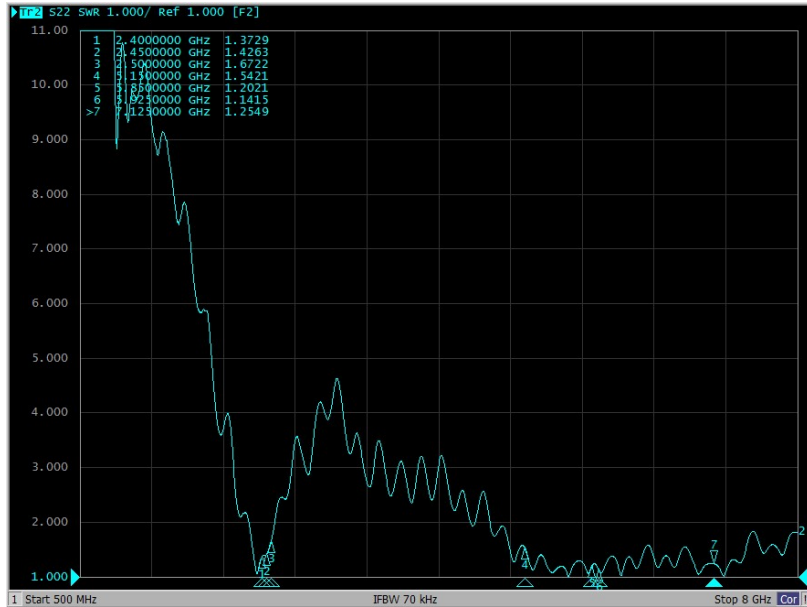
DOCUMENT
NO.

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=±



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SCALE : N/A

UNIT : mm

DRAWN BY:王聖元

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 WA-P-LE-01-006**

**DOCUMENT
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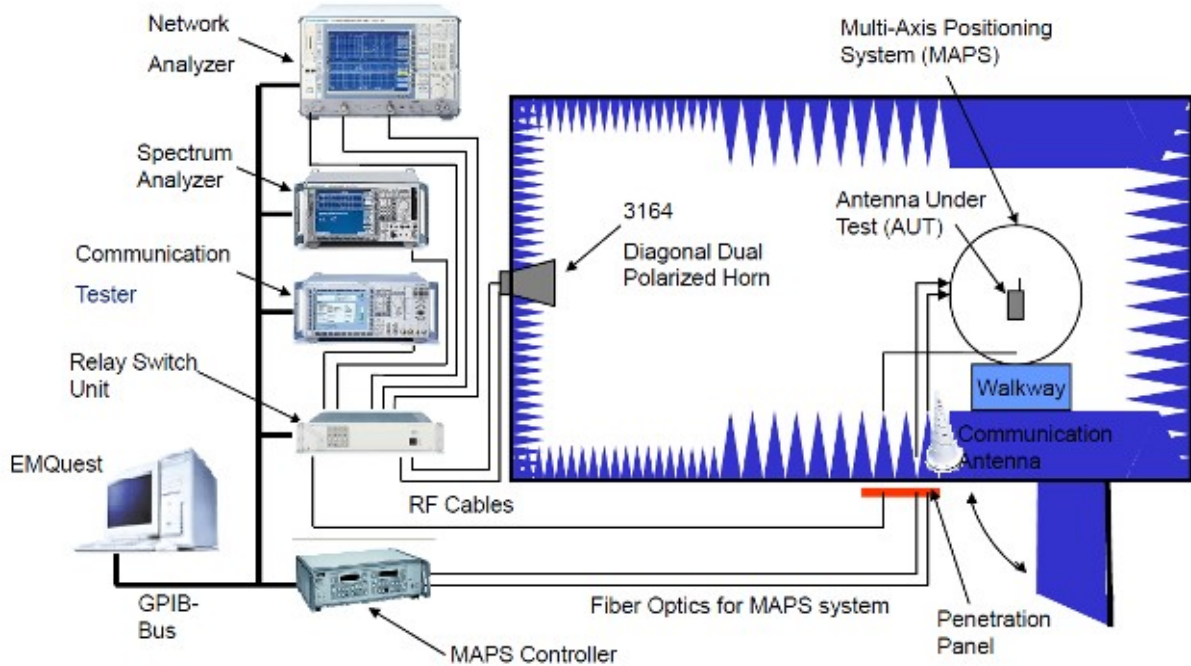
**SPEC REV.
 A3**

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 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=±



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UNIT : mm

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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 :

X=± X.X=± X.XX=±
 ANGLES=± HOLEDIA=±



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

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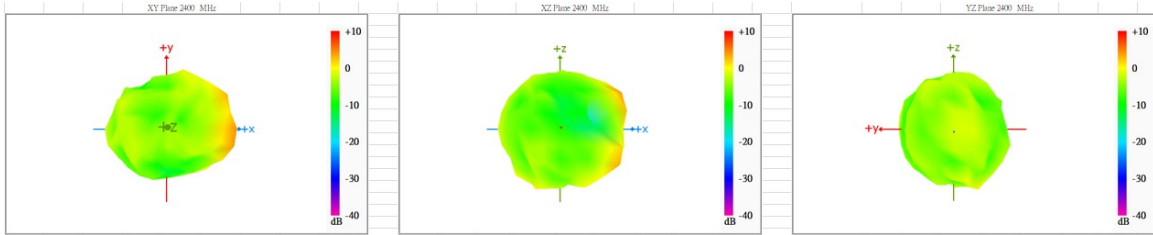
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SPEC REV.
A3

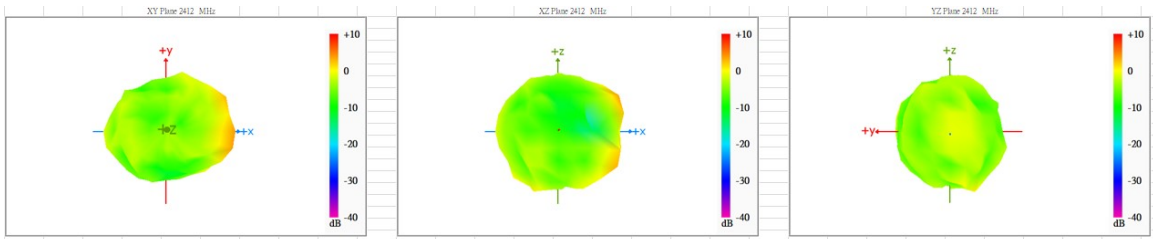
2400-2500MHz radiation characteristic

Aux antenna: 2400 MHz



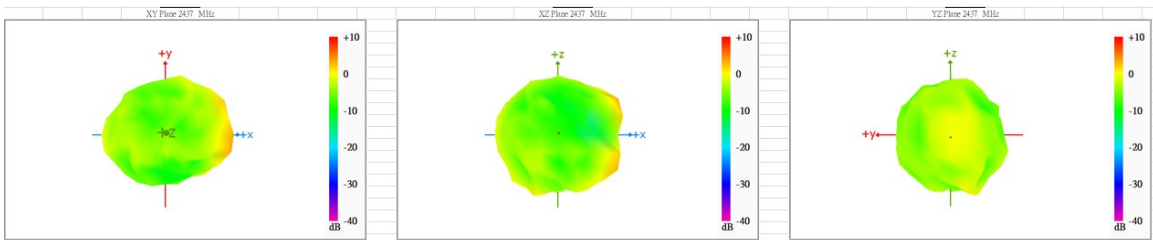
Center Frequency	2400 MHz
Three-dimensional (dBi) peak	2.33

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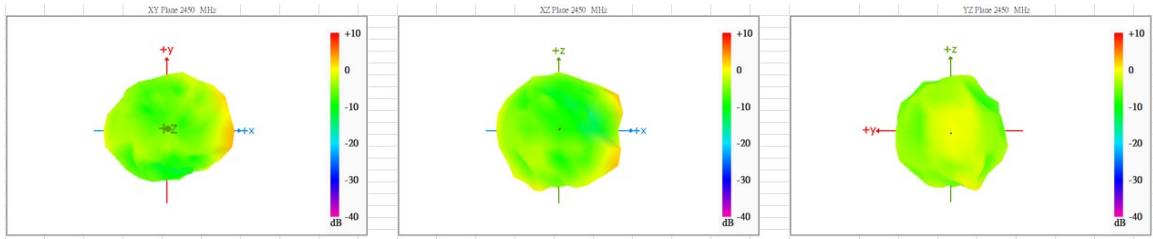
TITLE : Embedded Multi-Band Antenna for
 WA-P-LE-01-006

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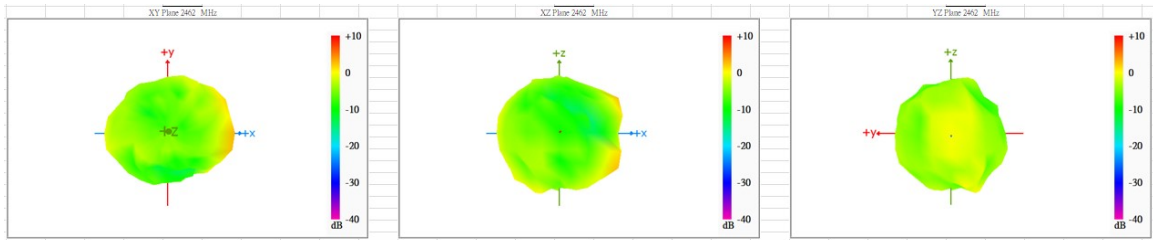
SPEC REV.
 A3

Aux antenna: 2450 MHz



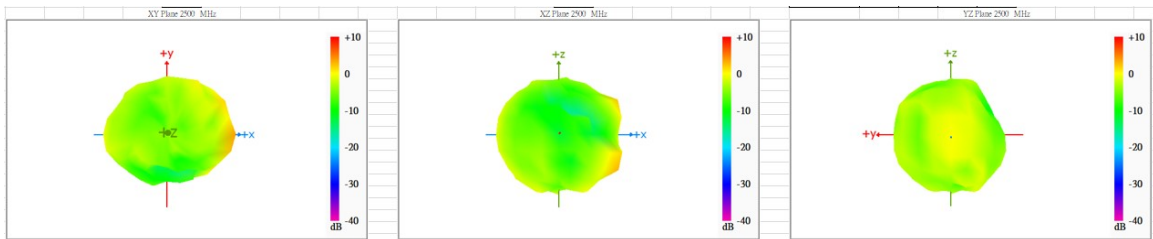
Center Frequency	2450 MHz
Three-dimensional (dBi) peak	1.98

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

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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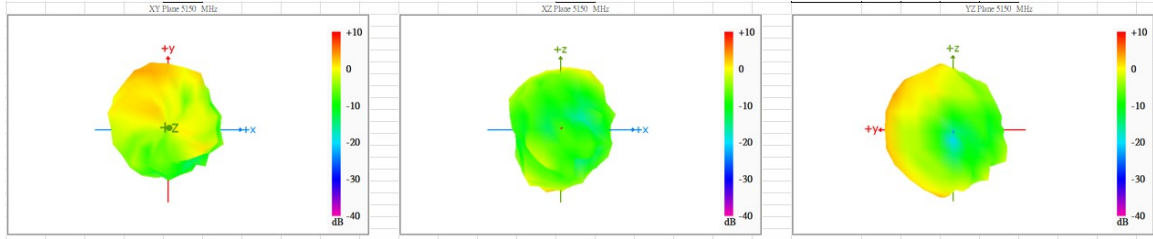
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SPEC REV.
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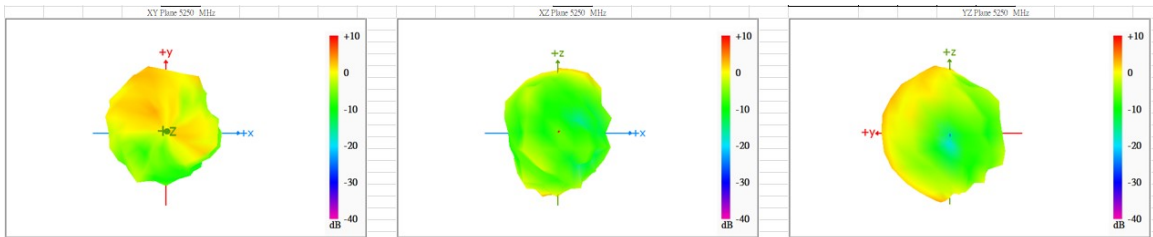
5150-5350MHz radiation characteristic

Aux antenna: 5150 MHz



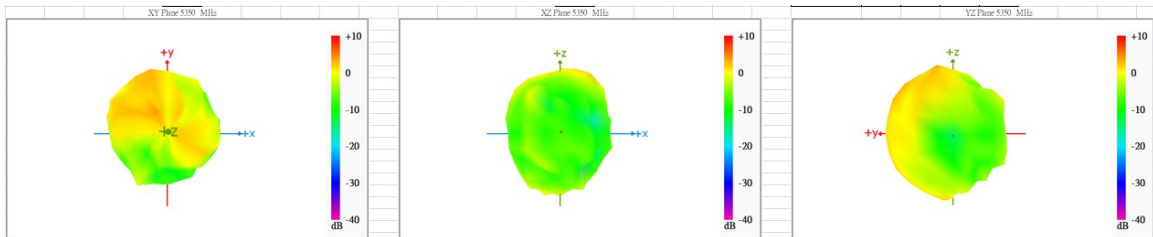
Center Frequency	5150 MHz
Three-dimensional (dBi) peak	3.5

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

DRAWN BY:王聖元

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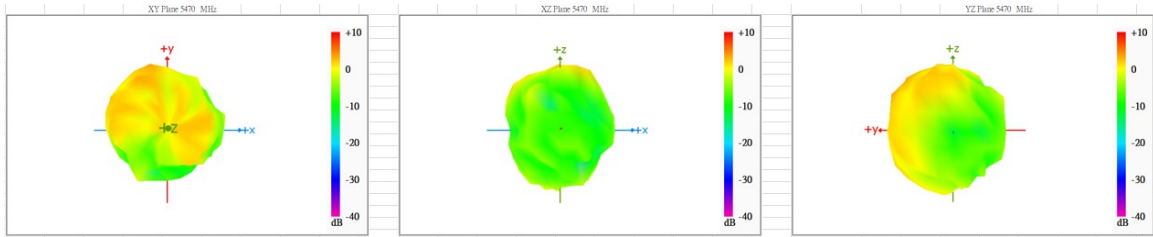
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SPEC REV.
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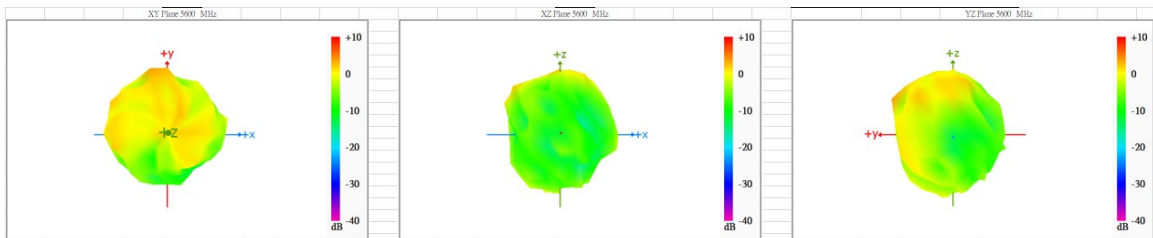
5470-5725MHz radiation characteristic

Aux antenna: 5470 MHz



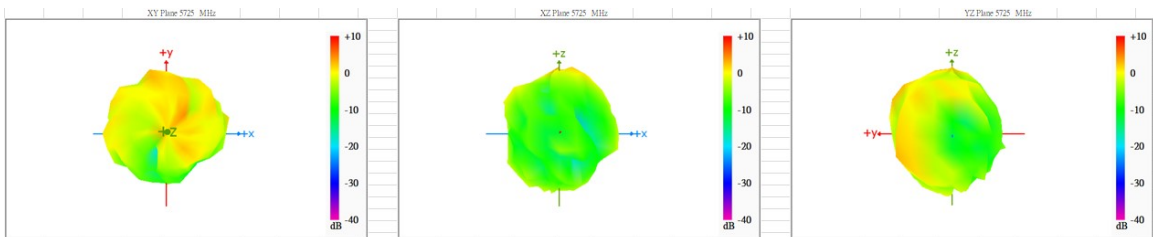
Center Frequency	5470 MHz
Three-dimensional (dBi) peak	3.67

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

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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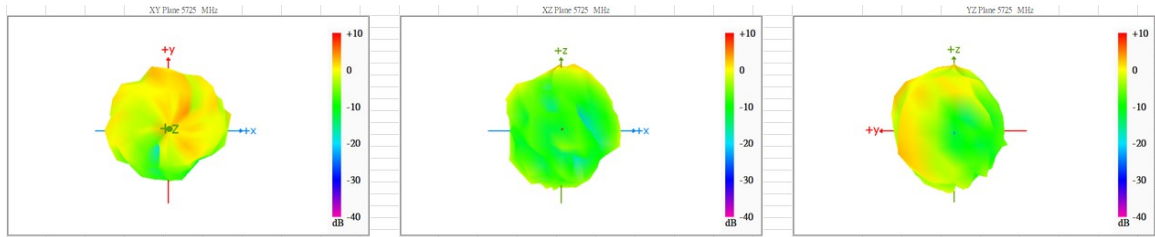
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SPEC REV.
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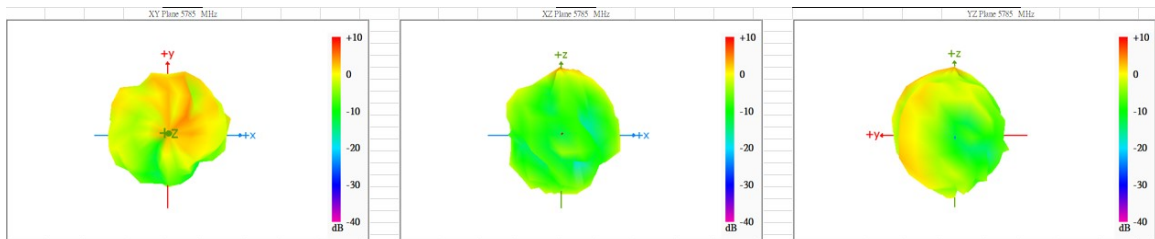
5725-5895MHz radiation characteristic

Aux antenna: 5725 MHz



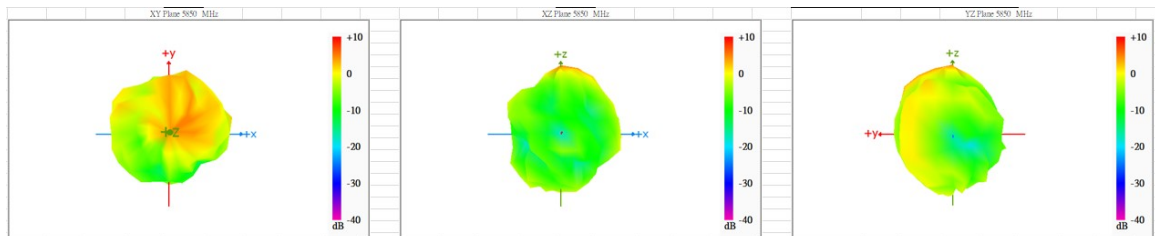
Center Frequency	5725 MHz
Three-dimensional (dBi) peak	4.35

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

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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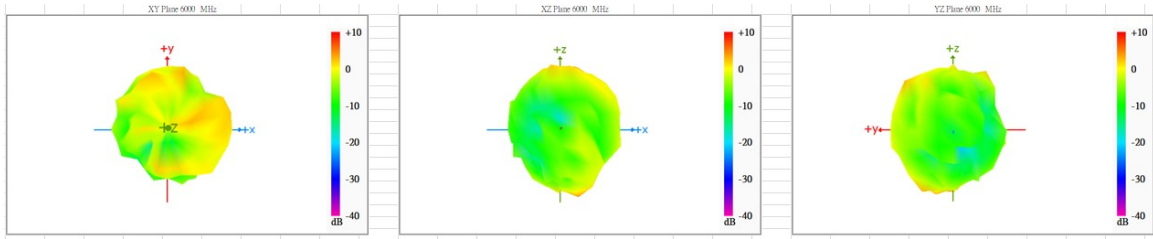
TITLE : Embedded Multi-Band Antenna for
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SPEC REV.
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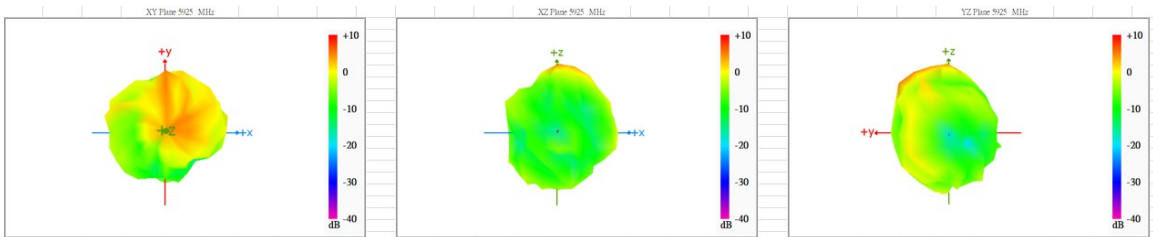
Aux antenna: 5895 MHz



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

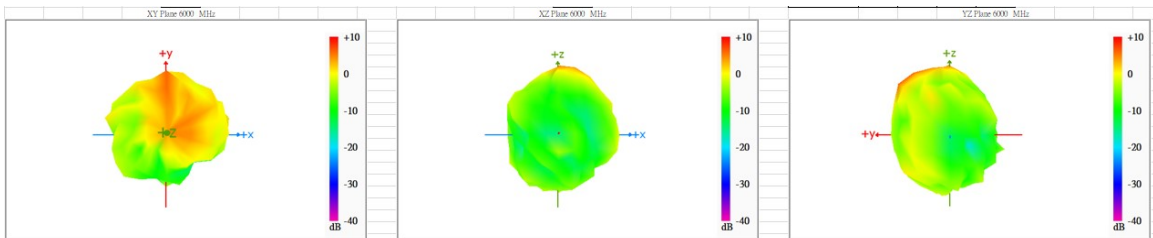
5925-6425MHz radiation characteristic

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

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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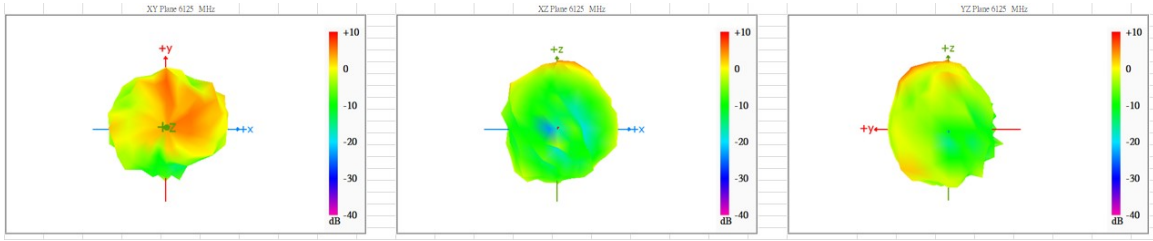
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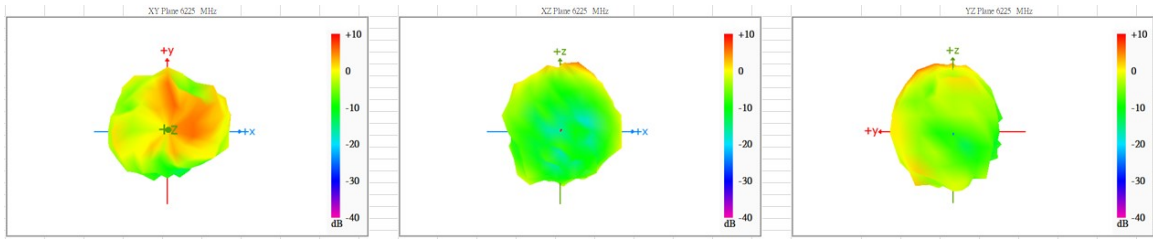
SPEC REV.
A3

Aux antenna: 6125 MHz



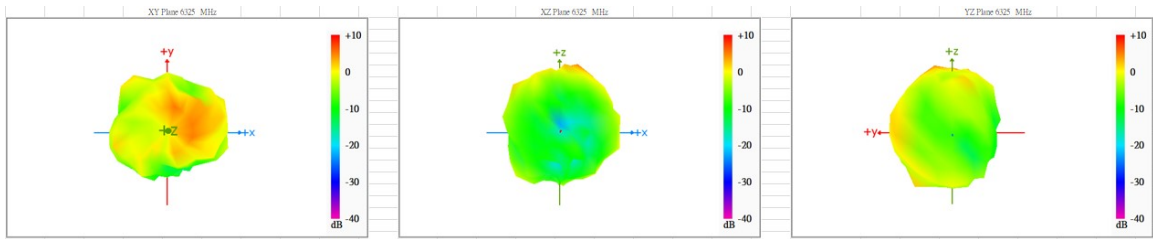
Center Frequency	6125 MHz
Three-dimensional (dBi) peak	4.29

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

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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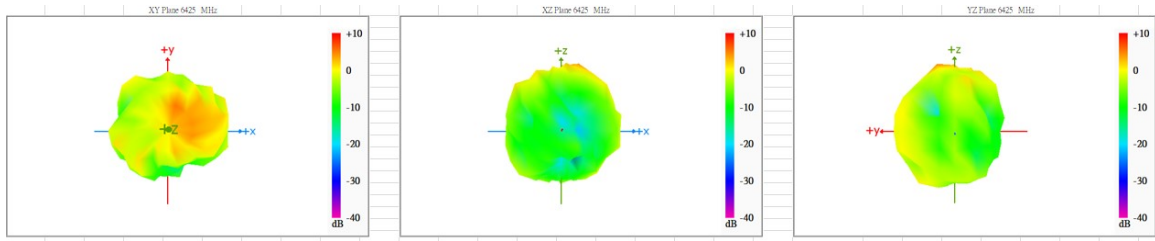
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SPEC REV.
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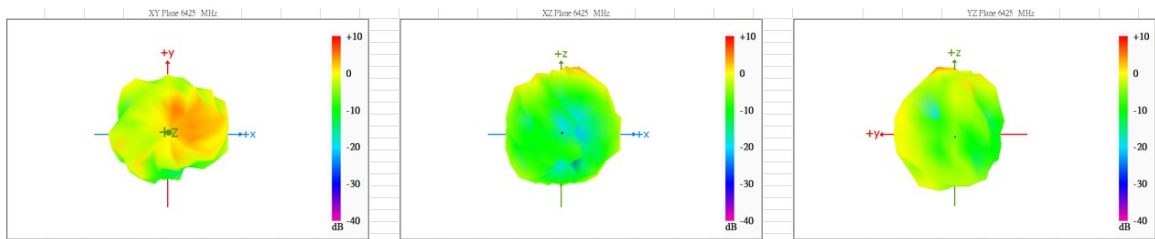
Aux antenna: 6425 MHz



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

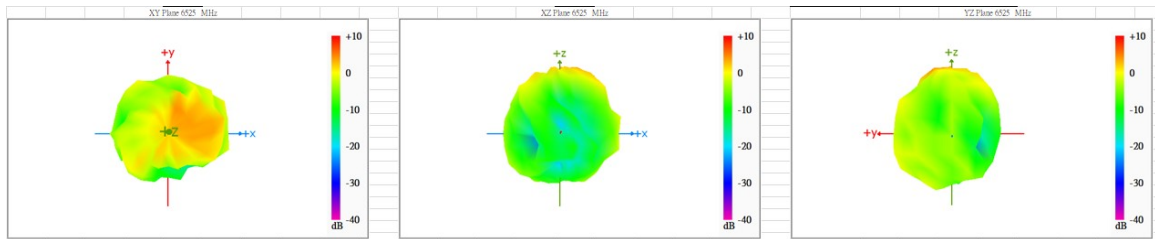
6425-6525MHz radiation characteristic

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

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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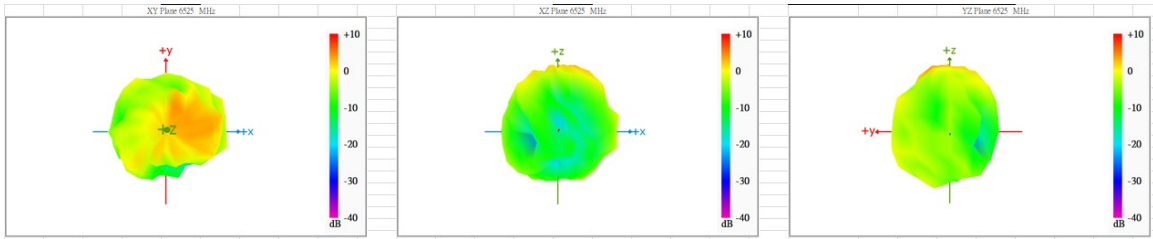
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SPEC REV.
A3

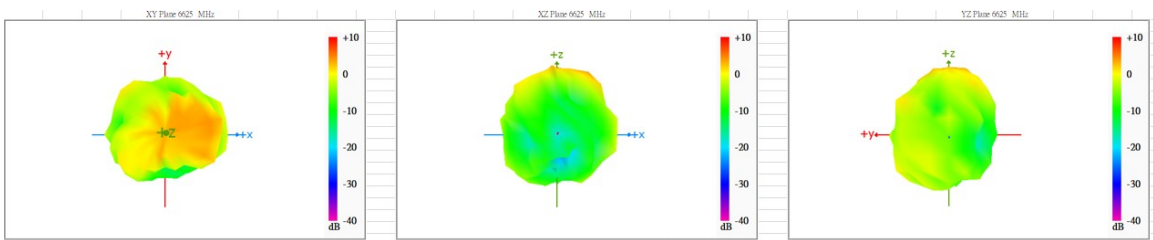
6525-6875MHz radiation characteristic

Aux antenna: 6525 MHz



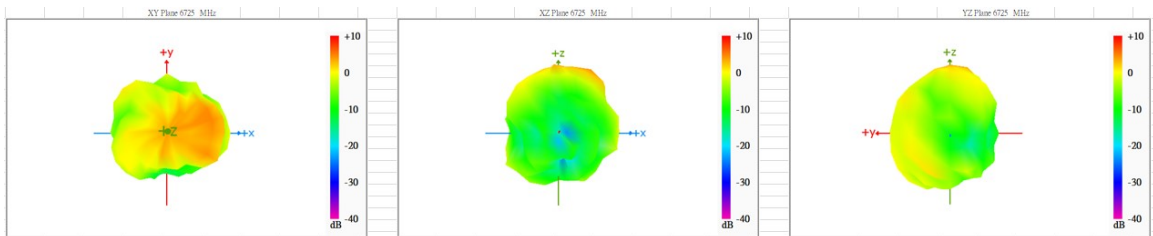
Center Frequency	6525 MHz
Three-dimensional (dBi) peak	4.07

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

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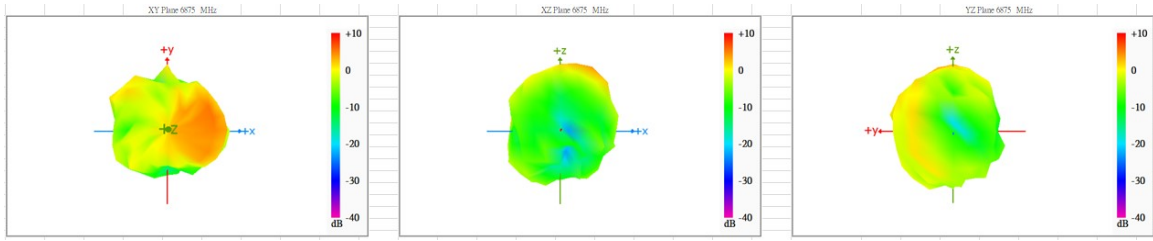
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 WA-P-LE-01-006

DOCUMENT
 NO.

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SPEC REV.
A3

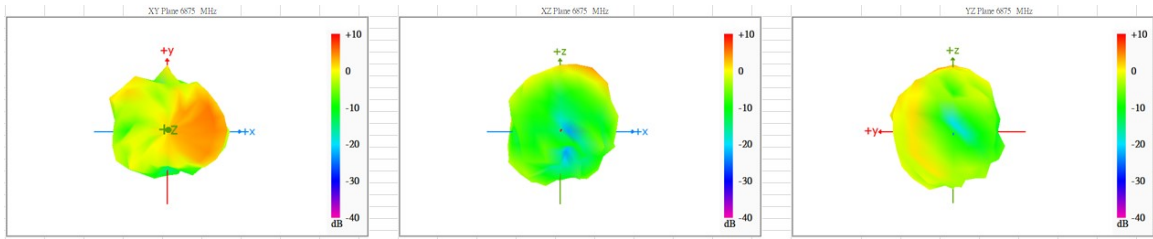
Aux antenna: 6875 MHz



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

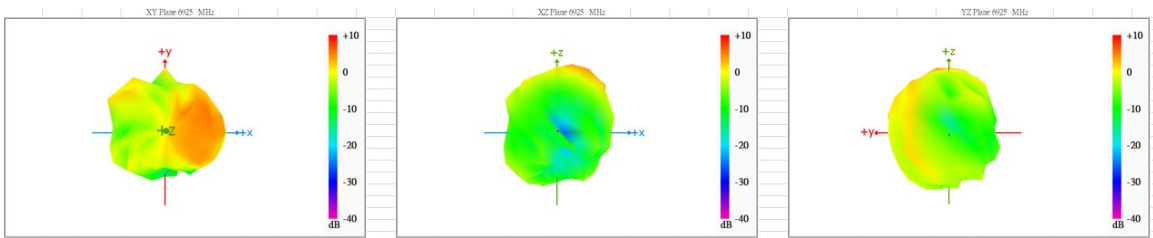
6875-7125MHz radiation characteristic

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 :

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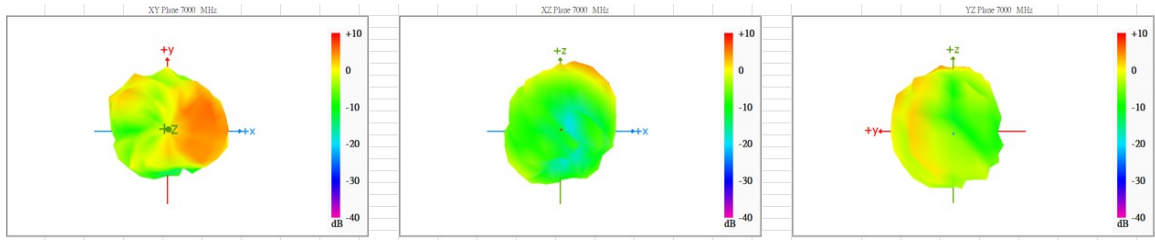
TITLE : Embedded Multi-Band Antenna for
 WA-P-LE-01-006

DOCUMENT NO.

ENS000159130

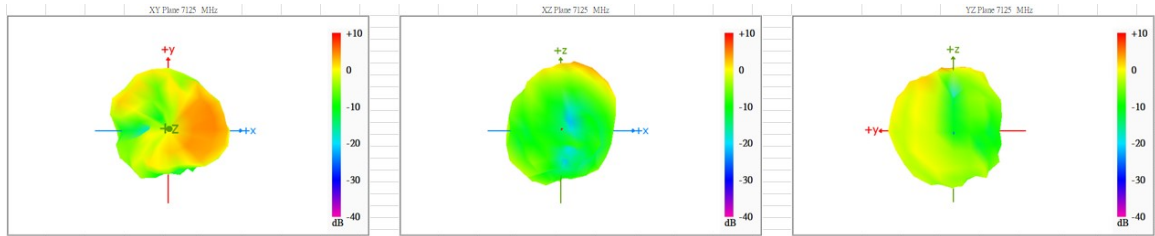
SPEC REV.
A3

Aux antenna: 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

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=±
 ANGLES=± HOLEDIA=±



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SCALE : N/A

UNIT : mm

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

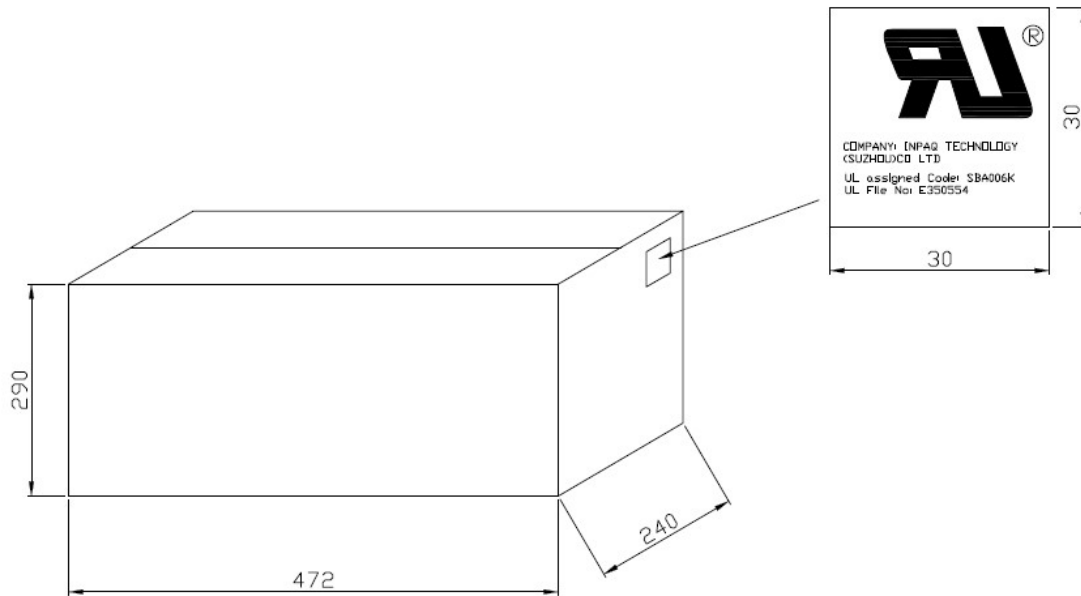
DOCUMENT
 NO.

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 :

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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SPEC REV.
A3