

Data Sheet

CUSTOMER: Inventec

MODEL NAME: ATC53R

AWAN P/N: AYP6Y-100421 (Main)

AYP6Y-100422 (Aux)

Inventec P/N: 6036B0343001 (Main)

6036B0343101 (Aux)



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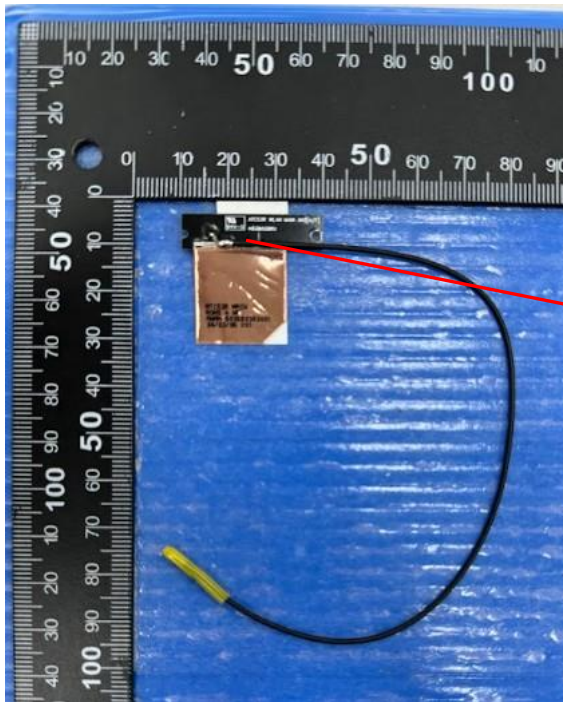
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1. Description

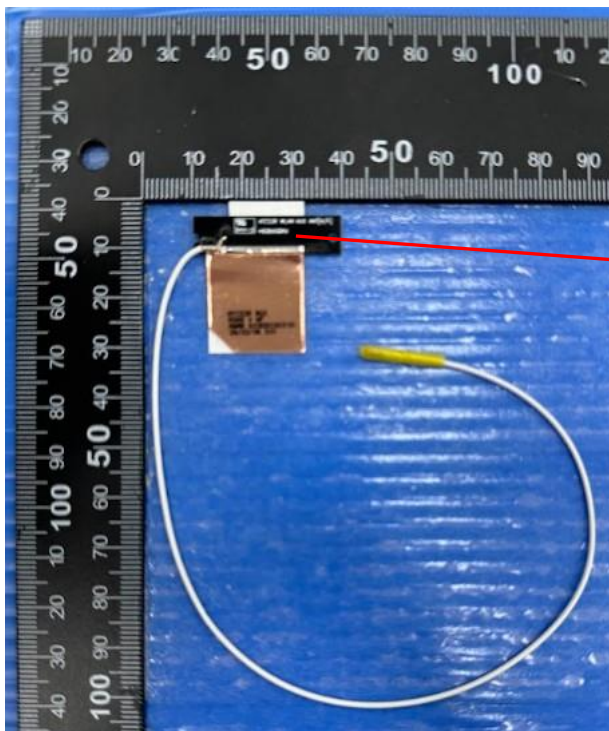
1.1 Specifications

Antennas Type	PIFA Antenna for WLAN WIFI application	
Connector Type	IPEX NGFF Connector for 1.13 cable	
Cable Type	Main : OD 1.13 RF Low Loss Cable Aux : OD 1.13 RF Low Loss Cable	
Impedance	50Ω	
Polarization	Linear	
Radiation pattern	Omni-directional	
Frequency	2.40~2.50 GHz	
	5.15~5.85 GHz	
	5.925~7.125 GHz	
VSWR	2.40~2.50 GHz	5.0 Max
	5.15~5.85 GHz	
	5.925~7.125 GHz	
Peak gain(dBi)	2.40~2.50 GHz	Main : 1.60 dBi Aux : 2.39 dBi
	5.15~5.85 GHz	Main : 2.31 dBi Aux : 2.77 dBi
	5.925~7.125 GHz	Main : 2.31 dBi Aux : 2.47 dBi
Cable Loss	2.40~2.50 GHz	Main : 0.41 dBi Aux : 0.59 dBi
	5.15~5.85 GHz	Main : 0.70 dBi Aux : 1.00 dBi
	5.925~7.125 GHz	Main : 0.79 dBi Aux : 1.13 dBi
Cable length	WLAN Main(AYP6Y-100421) WLAN Aux(AYP6Y-100422)	Main : 165 mm, Black Aux : 235 mm, White

1.2 Antenna Picture



Main
(AYP6Y-100421)



Aux
(AYP6Y-100422)

2. Electrical Specification

2.1 Test Equipment

- A. VSWR and input impedance: Agilent 8720/8753 Network Analyzer
- B. Antenna gain and efficiency: ETS three-dimensional anechoic chamber

2.2 Test Setup

2.2.1 Frequency Range

- A. 2.40~2.50 GHz
- B. 5.15~5.85 GHz
- C. 5.925~7.125 GHz

2.2.2 VSWR

Step 1: The antenna is arranged on the customer provided test fixture(see figure. 1).

Step 2: The VSWR of the antenna is measured via Agilent 8720/8753 Network Analyzer (see figure. 1).



Figure.1

2.2.3 Radiation pattern and Gain

- A. The 3D chamber provides less than -40dB reflectivity from 500MHz to 7.125GHz and a 40cm diameter spherical quiet zone. The measurement results are calibrated using both dipoles and standard gain horns (see figure. 2).
- B. The antenna under tested is arranged in the turned table and a decoupling sleeve is used to reduce feed line radiation (see figure. 3).
- C. The measured results of the radiation patterns and antenna gain are obtained from the control system and showed on the monitor (see figure. 4 and 5).

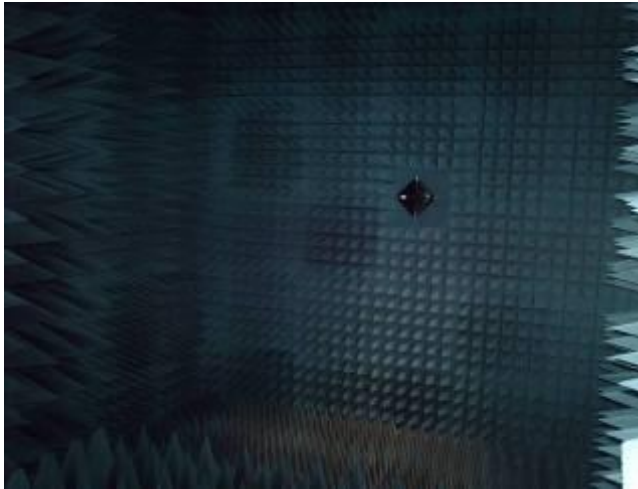


Figure. 2

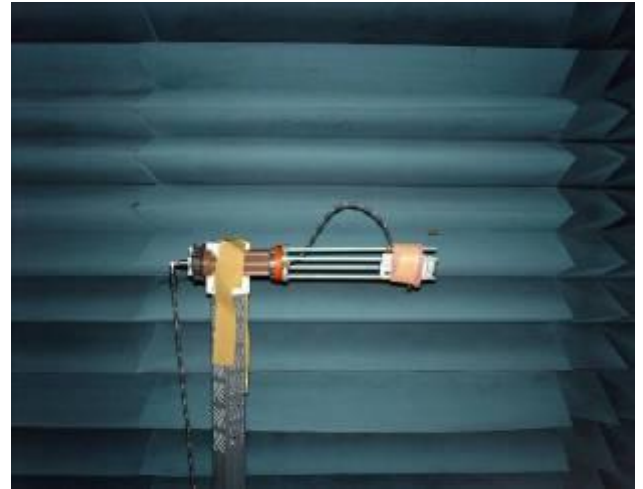


Figure. 3



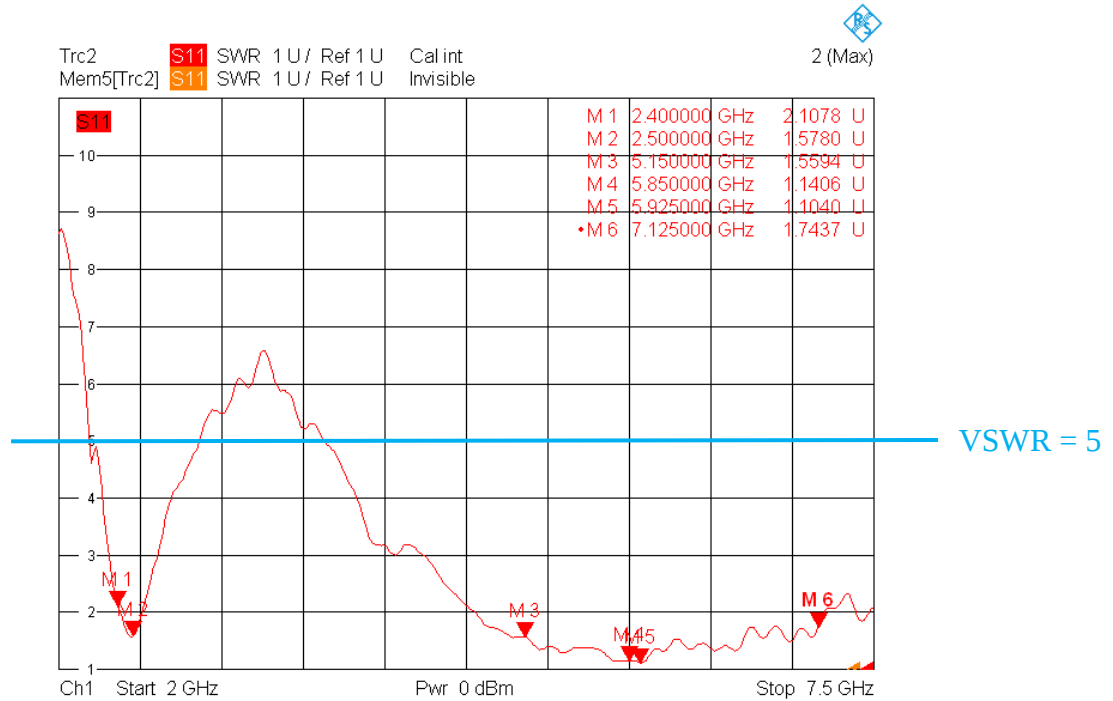
Figure. 4



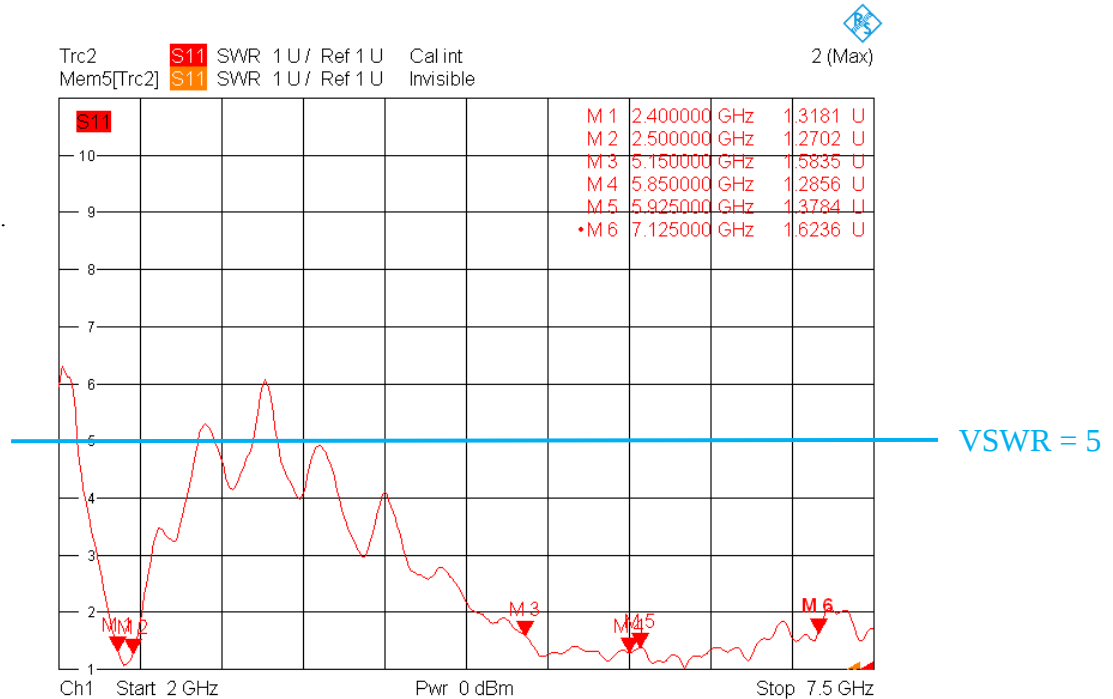
Figure. 5

3. Performance Data

3.1 VSWR



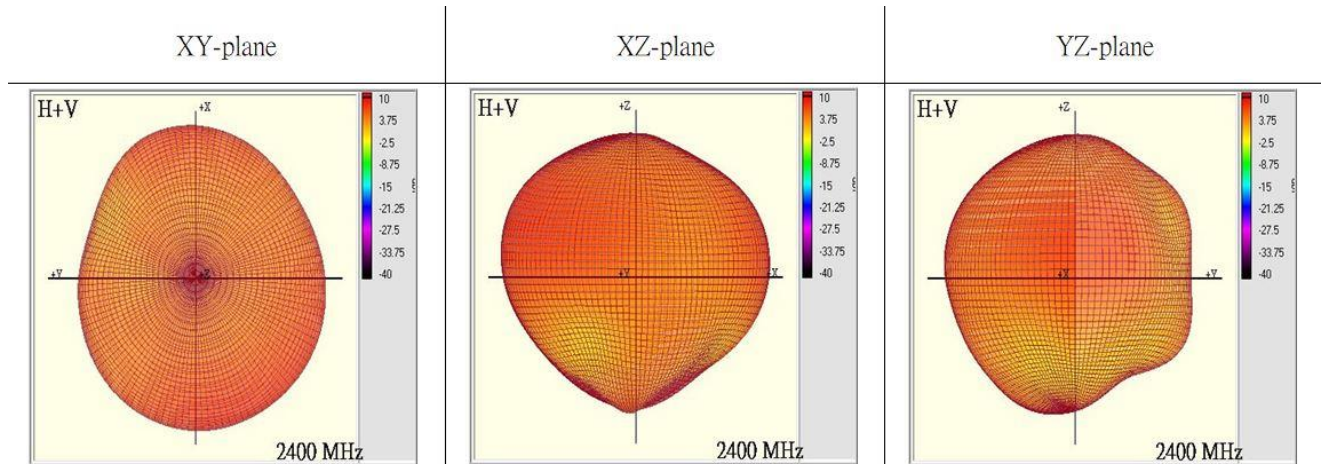
WLAN Main



WLAN Aux

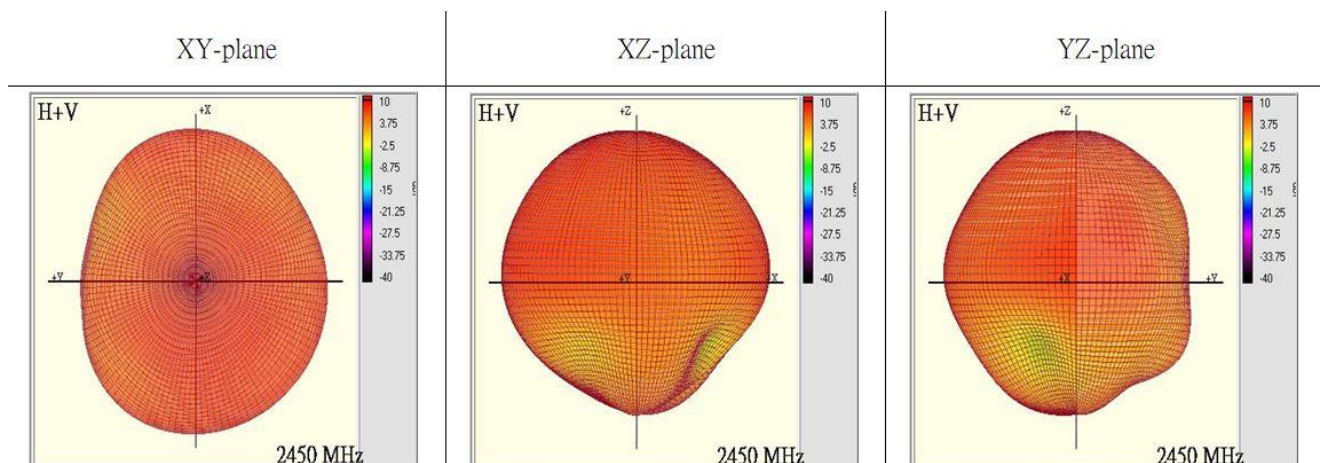
3.2.1 Radiation pattern & Gain(WLAN Main Antenna)

Main antenna: 2400 MHz



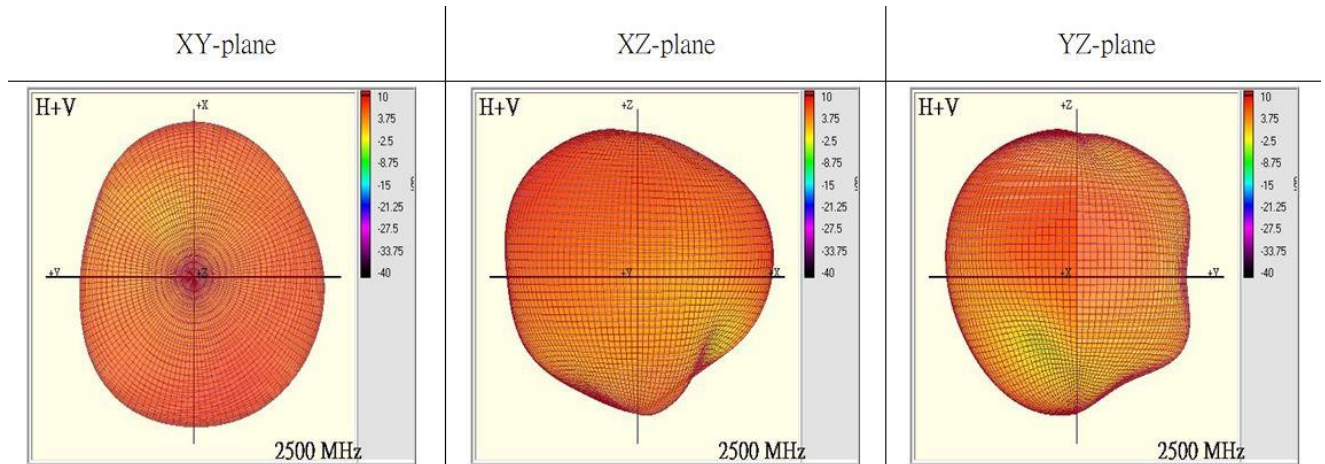
Center Frequency	2400 MHz
Three-dimensional (dBi) peak	1.36

Main antenna: 2450 MHz



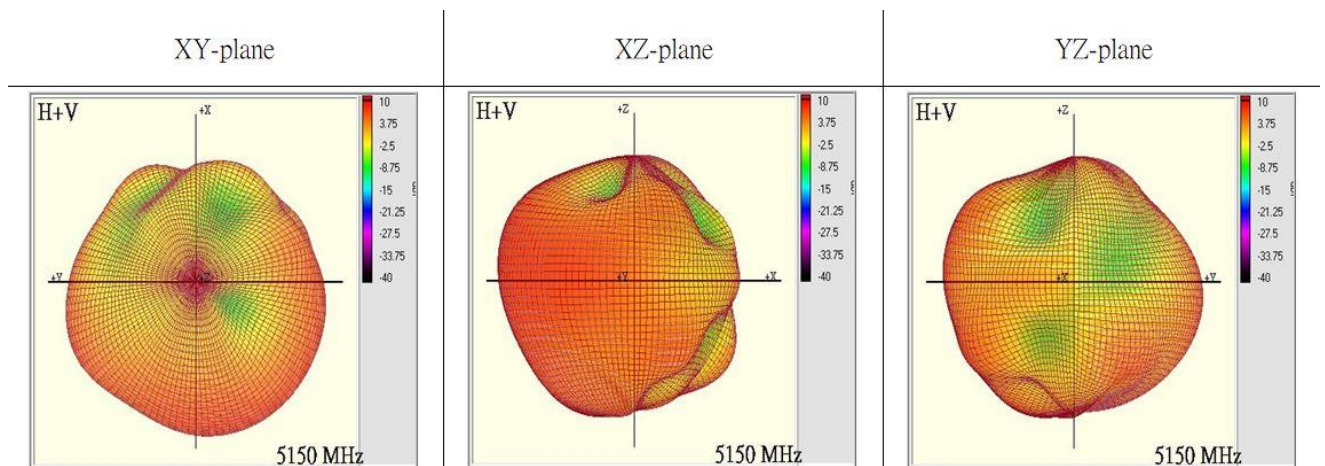
Center Frequency	2450 MHz
Three-dimensional (dBi) peak	1.60

Main antenna: 2500 MHz



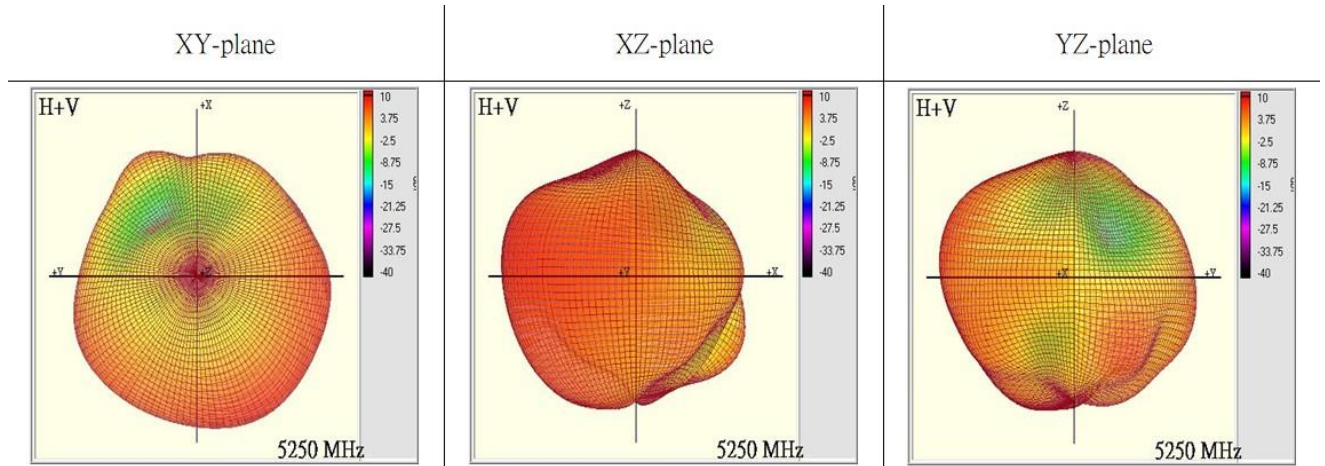
Center Frequency	2500 MHz
Three-dimensional (dBi) peak	1.57

Main antenna: 5150 MHz



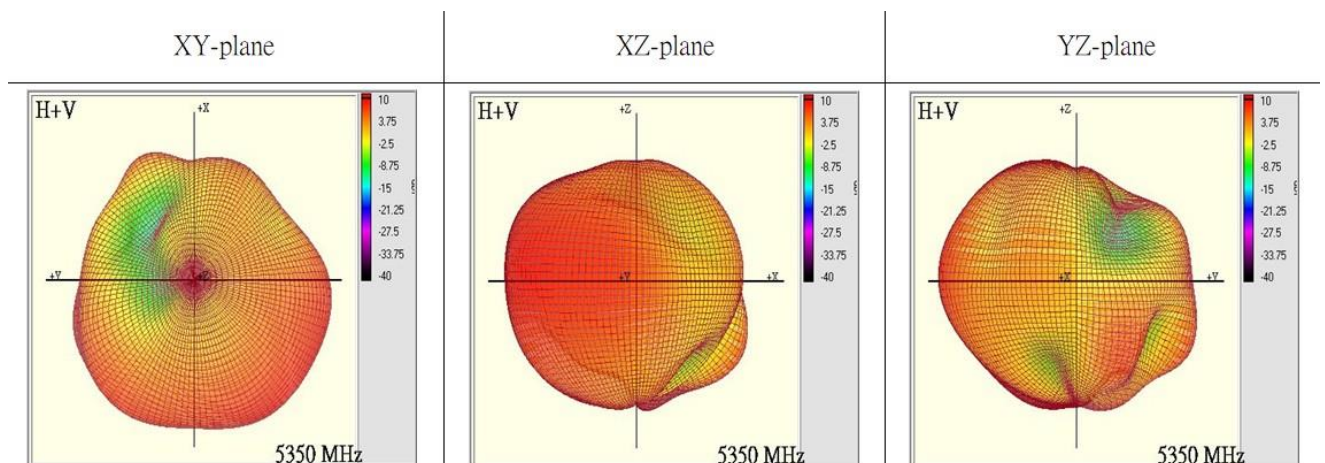
Center Frequency	5150 MHz
Three-dimensional (dBi) peak	1.59

Main antenna: 5250 MHz



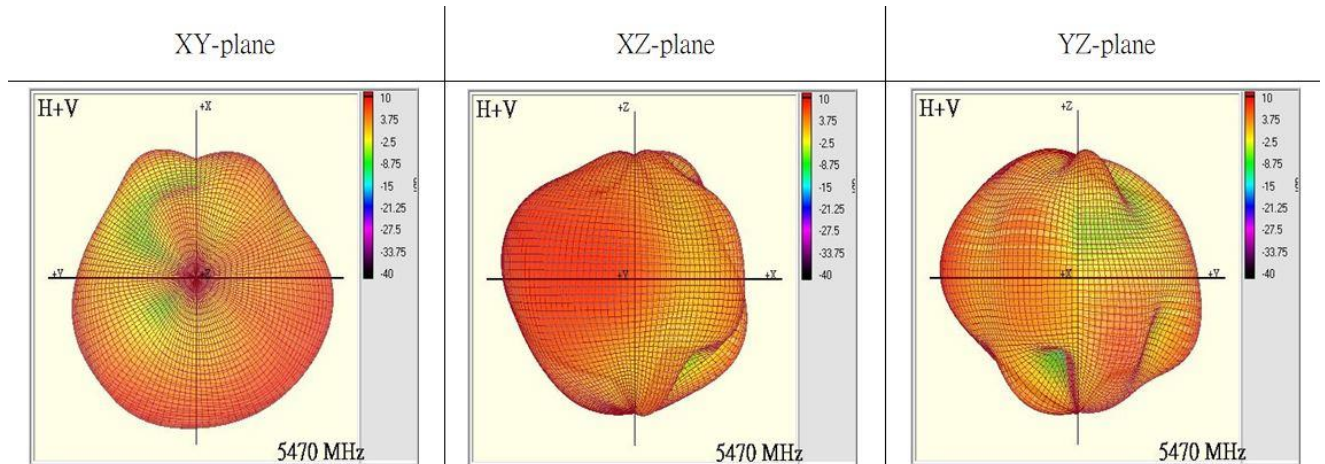
Center Frequency	5250 MHz
Three-dimensional (dBi) peak	2.12

Main antenna: 5350 MHz



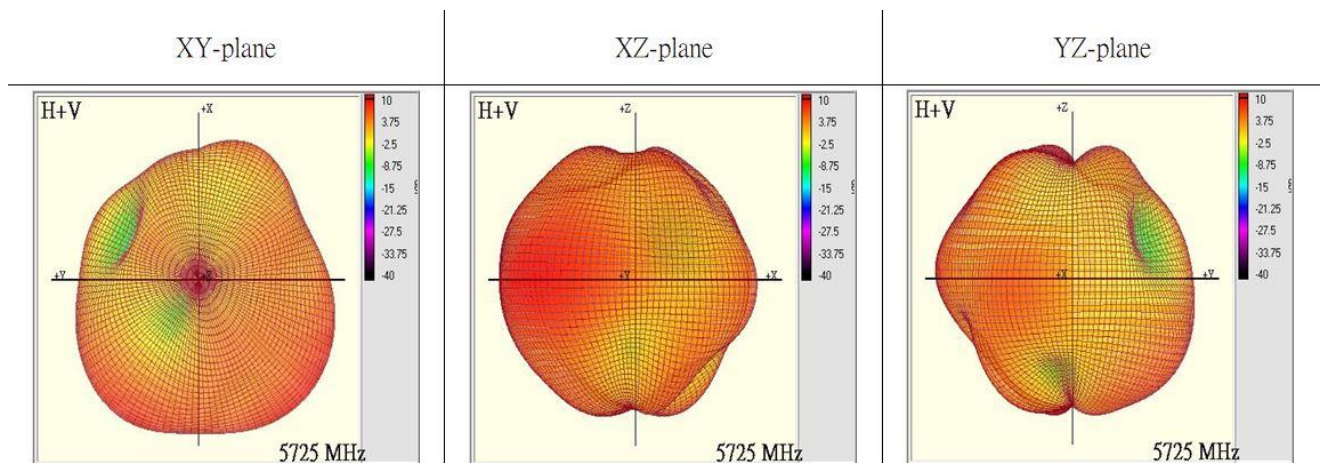
Center Frequency	5350 MHz
Three-dimensional (dBi) peak	2.19

Main antenna: 5470 MHz



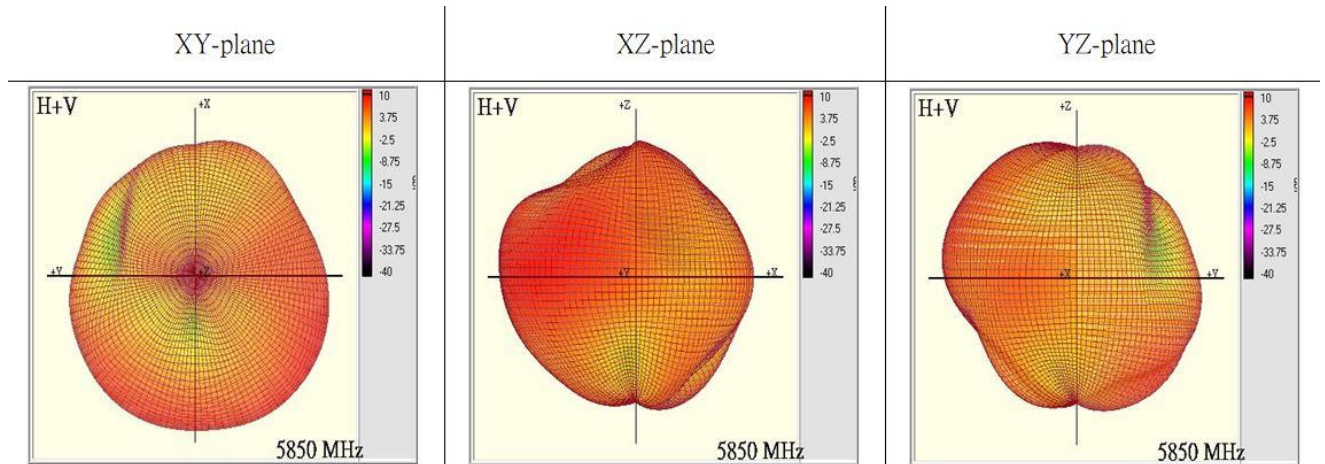
Center Frequency	5470 MHz
Three-dimensional (dBi) peak	2.04

Main antenna: 5725 MHz



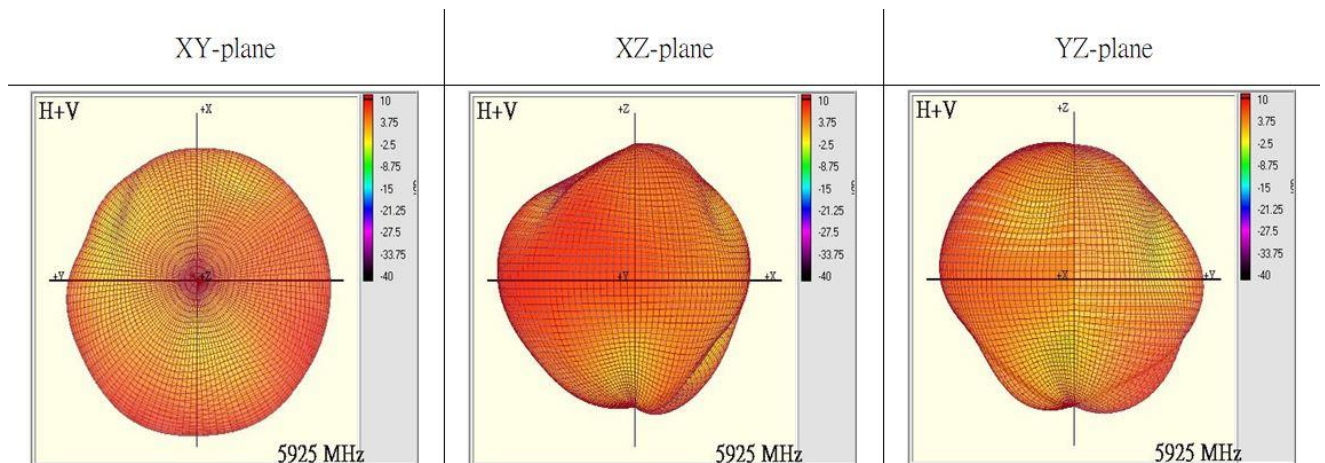
Center Frequency	5725 MHz
Three-dimensional (dBi) peak	2.31

Main antenna: 5850 MHz



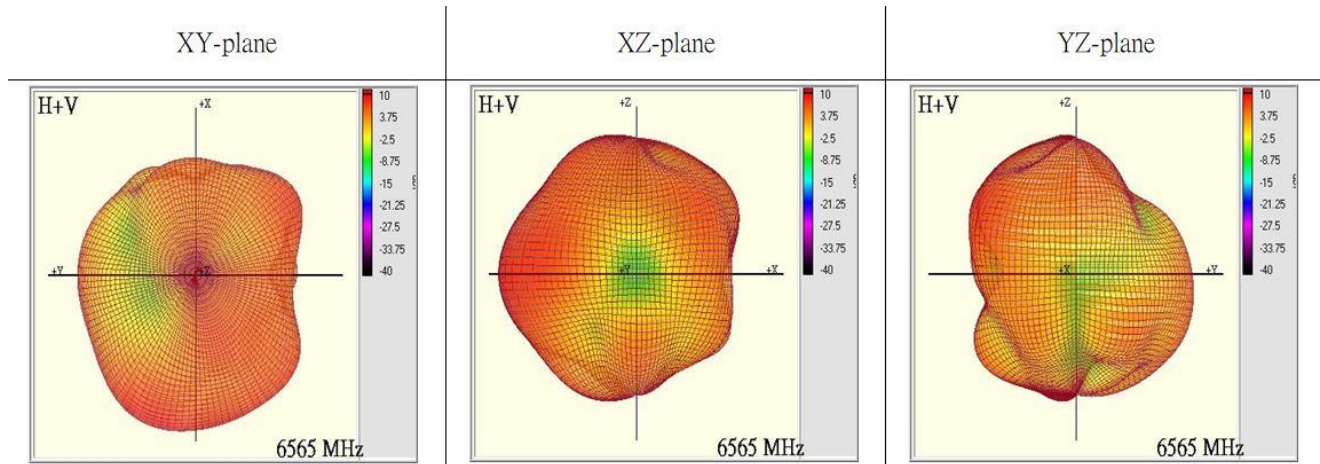
Center Frequency	5850 MHz
Three-dimensional (dBi) peak	2.26

Main antenna: 5925 MHz



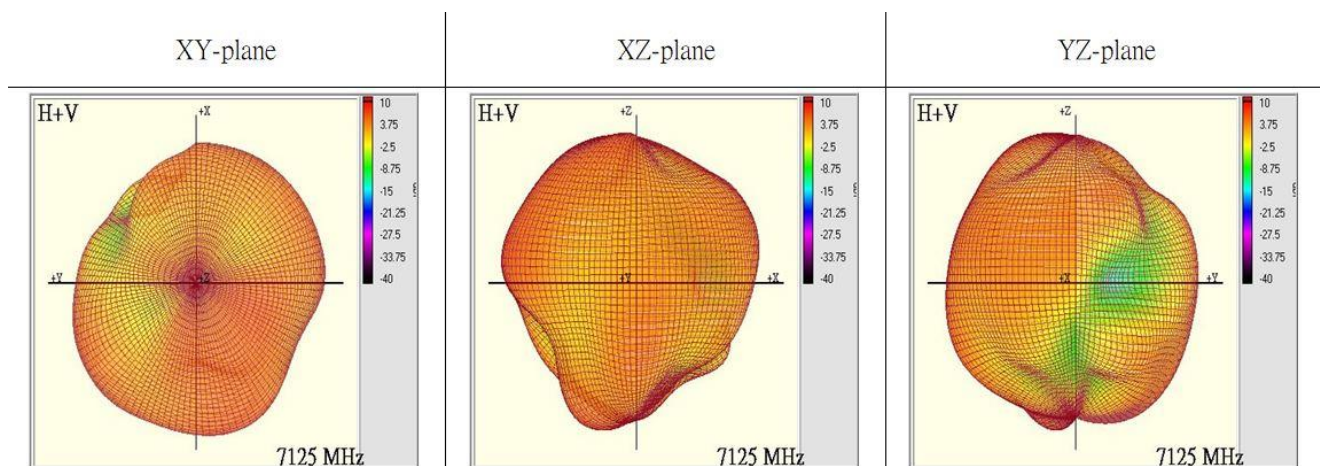
Center Frequency	5925 MHz
Three-dimensional (dBi) peak	2.31

Main antenna: 6565 MHz



Center Frequency	6565 MHz
Three-dimensional (dBi) peak	2.13

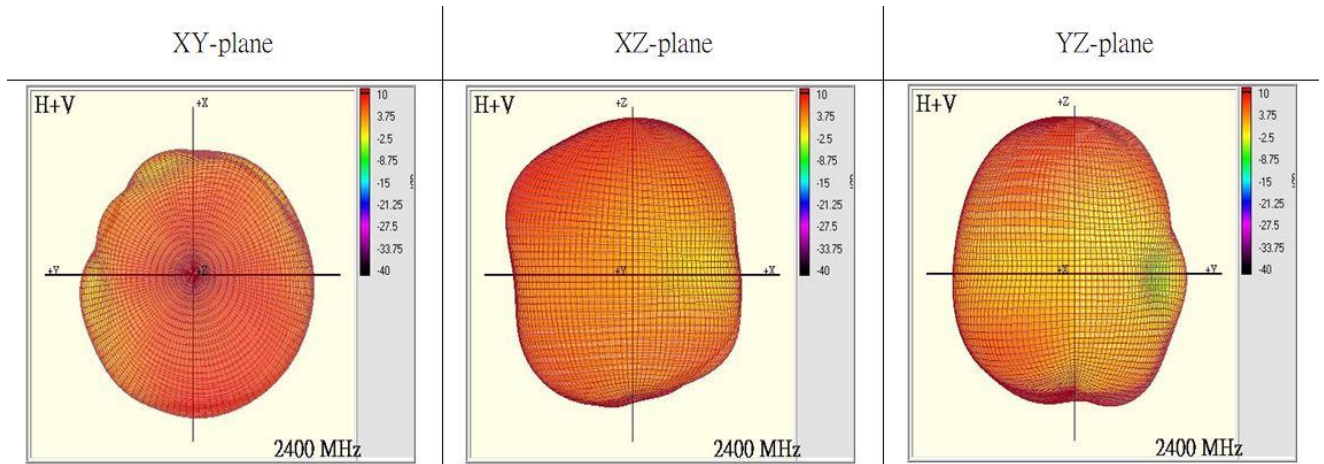
Main antenna: 7125 MHz



Center Frequency	7125 MHz
Three-dimensional (dBi) peak	0.06

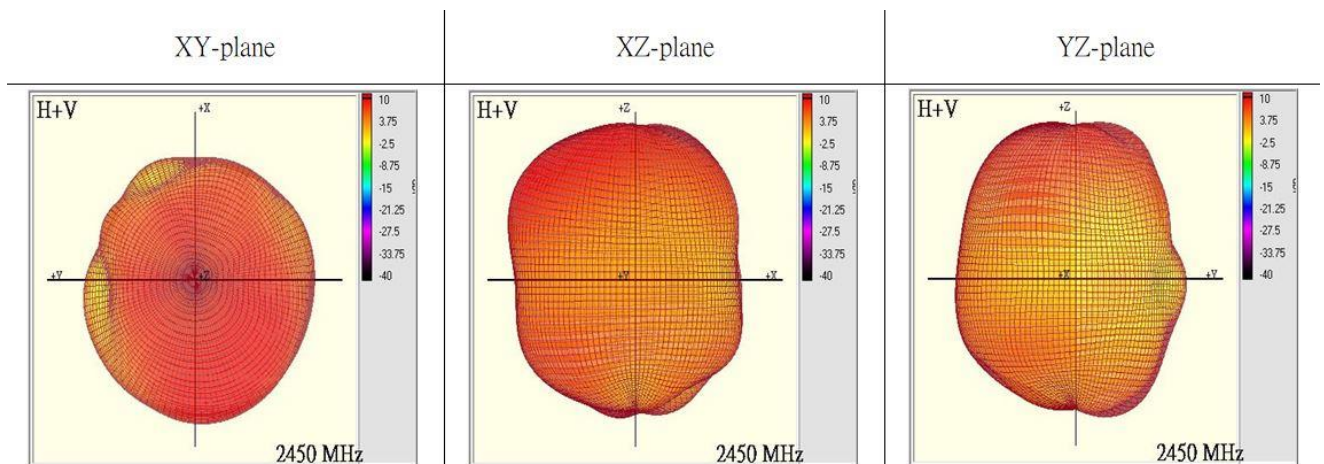
3.2.2 Radiation pattern & Gain(WLAN Aux Antenna)

Aux antenna: 2400 MHz



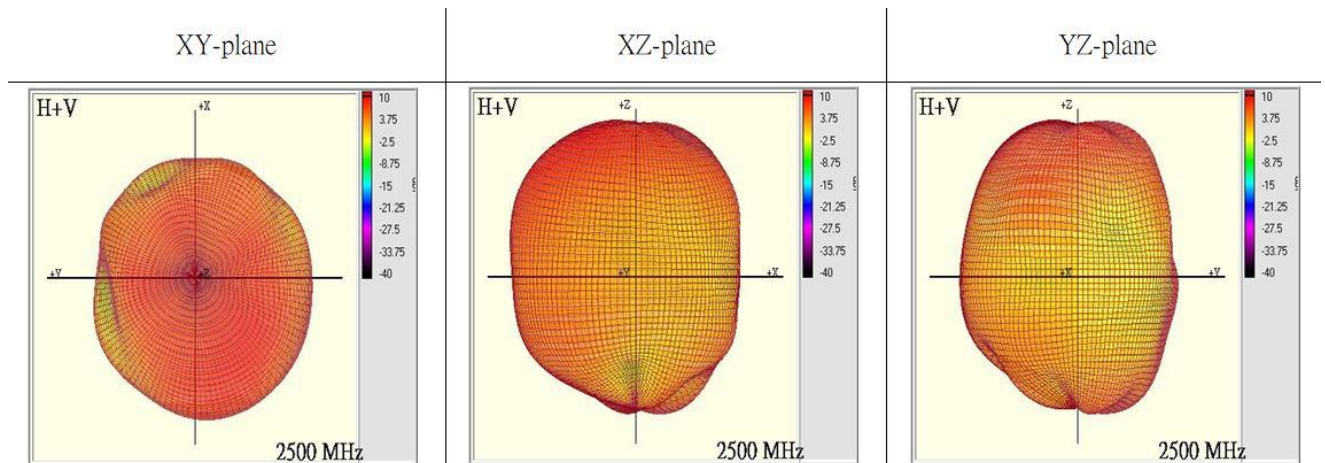
Center Frequency	2400 MHz
Three-dimensional (dBi) peak	2.00

Aux antenna: 2450 MHz



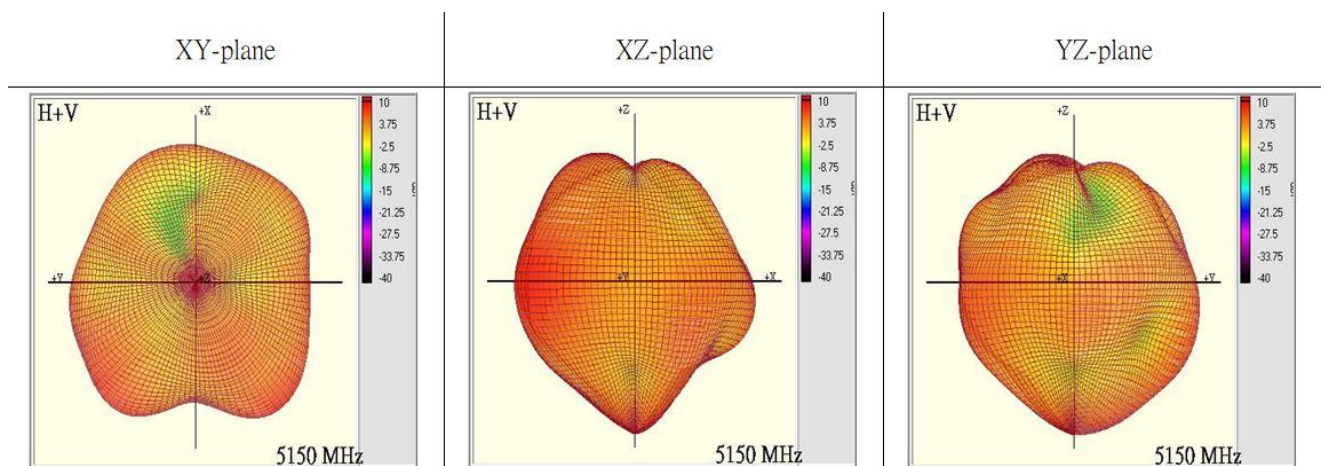
Center Frequency	2450 MHz
Three-dimensional (dBi) peak	2.22

Aux antenna: 2500 MHz



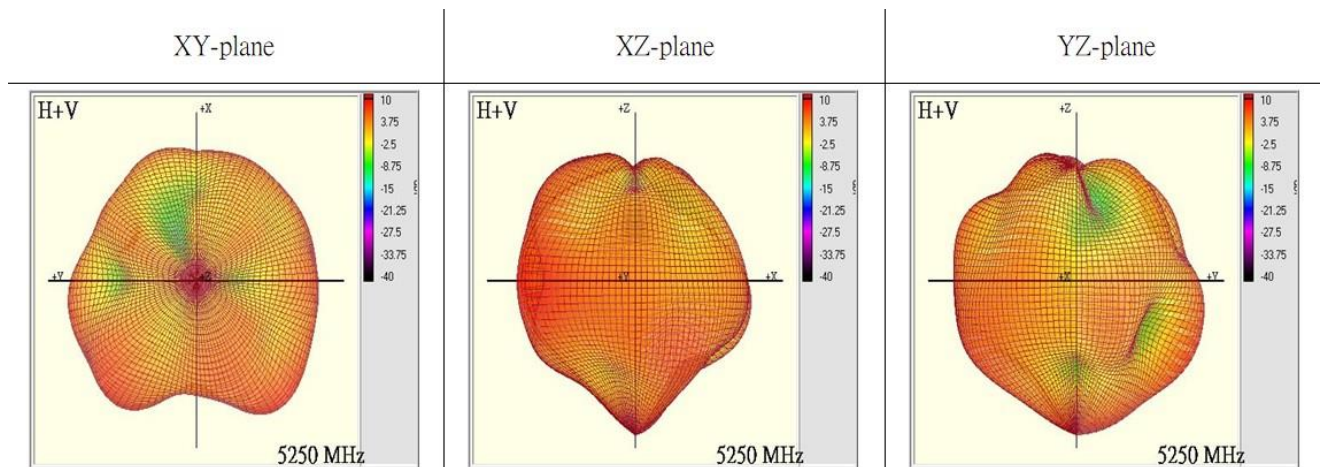
Center Frequency	2500 MHz
Three-dimensional (dBi) peak	2.39

Aux antenna: 5150 MHz



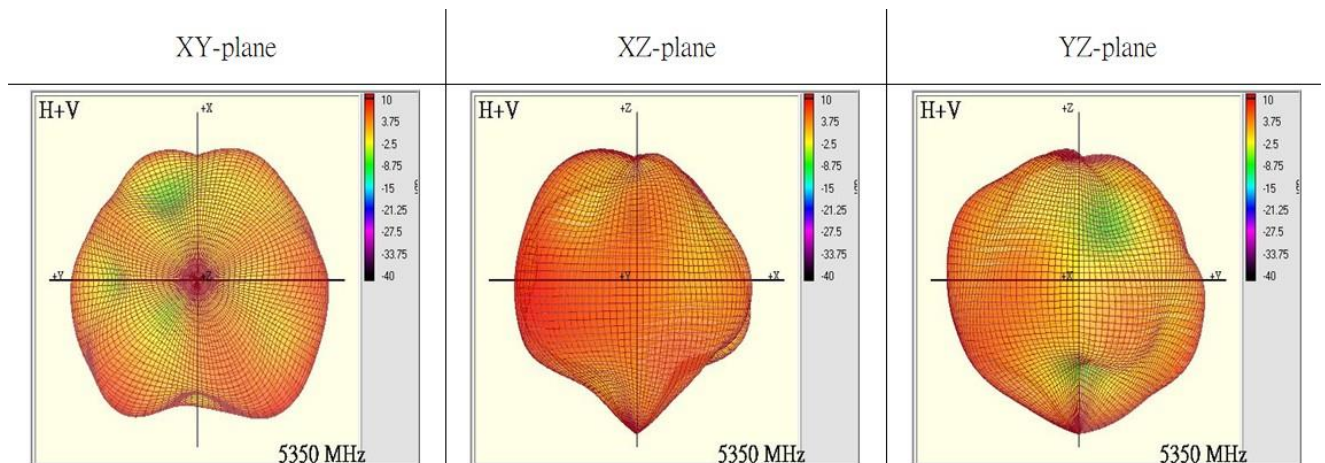
Center Frequency	5150 MHz
Three-dimensional (dBi) peak	1.89

Aux antenna: 5250 MHz



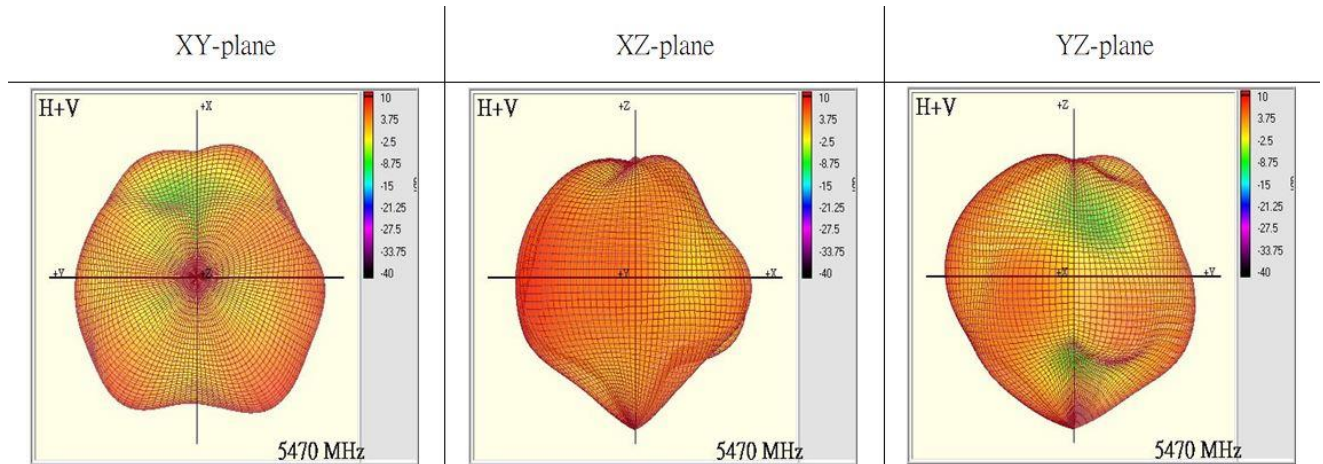
Center Frequency	5250 MHz
Three-dimensional (dBi) peak	1.72

Aux antenna: 5350 MHz



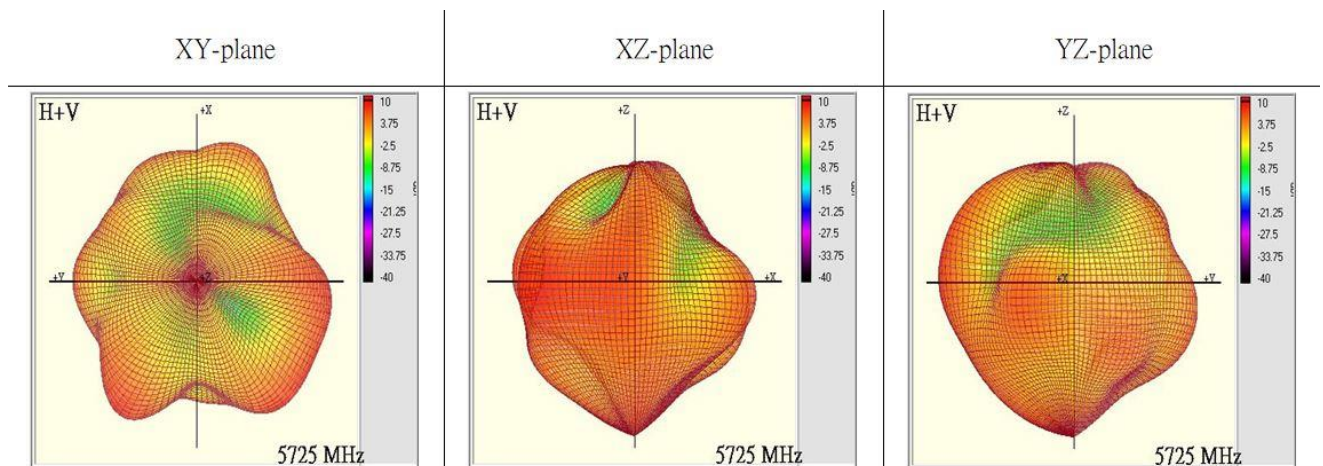
Center Frequency	5350 MHz
Three-dimensional (dBi) peak	2.20

Aux antenna: 5470 MHz



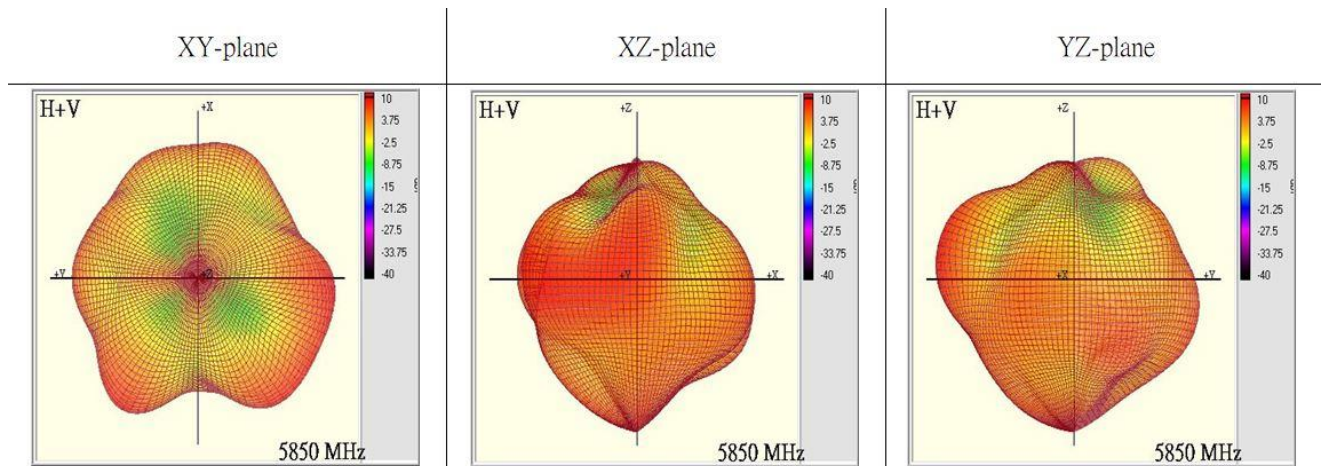
Center Frequency	5470 MHz
Three-dimensional (dBi) peak	1.57

Aux antenna: 5725 MHz



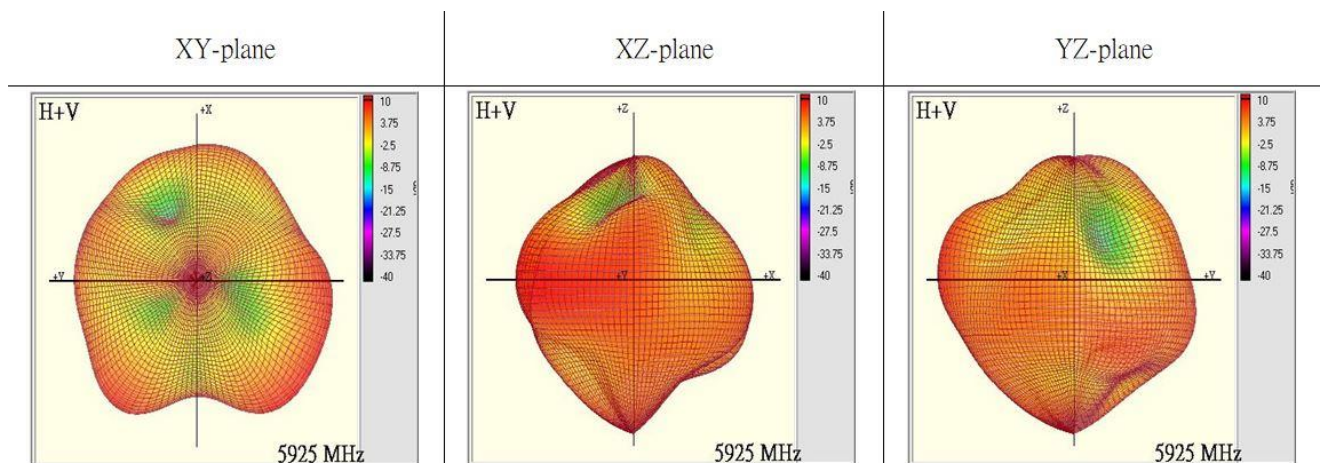
Center Frequency	5725 MHz
Three-dimensional (dBi) peak	2.52

Aux antenna: 5850 MHz



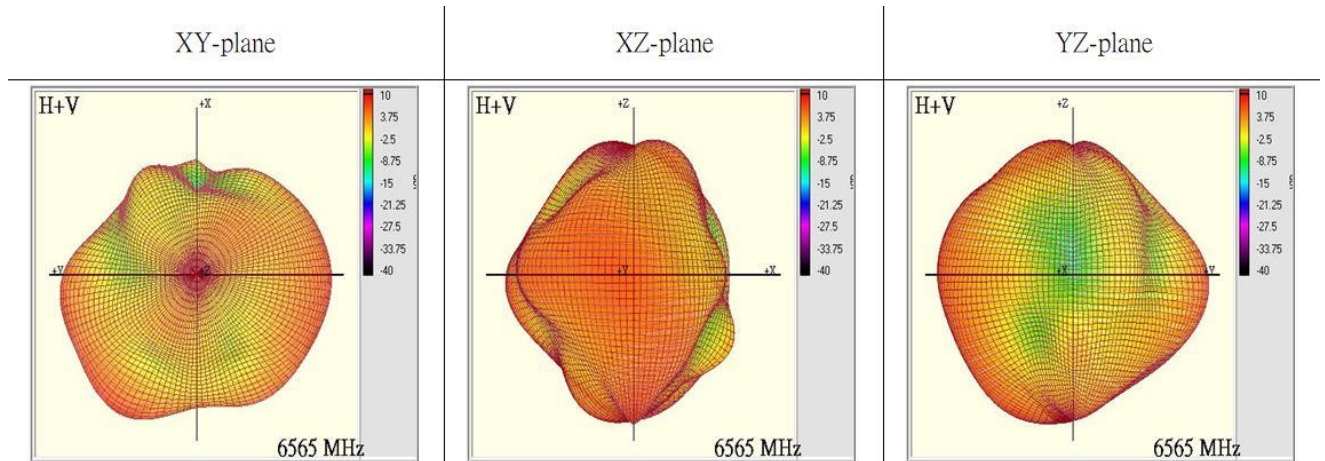
Center Frequency	5850 MHz
Three-dimensional (dBi) peak	2.77

Aux antenna: 5925 MHz



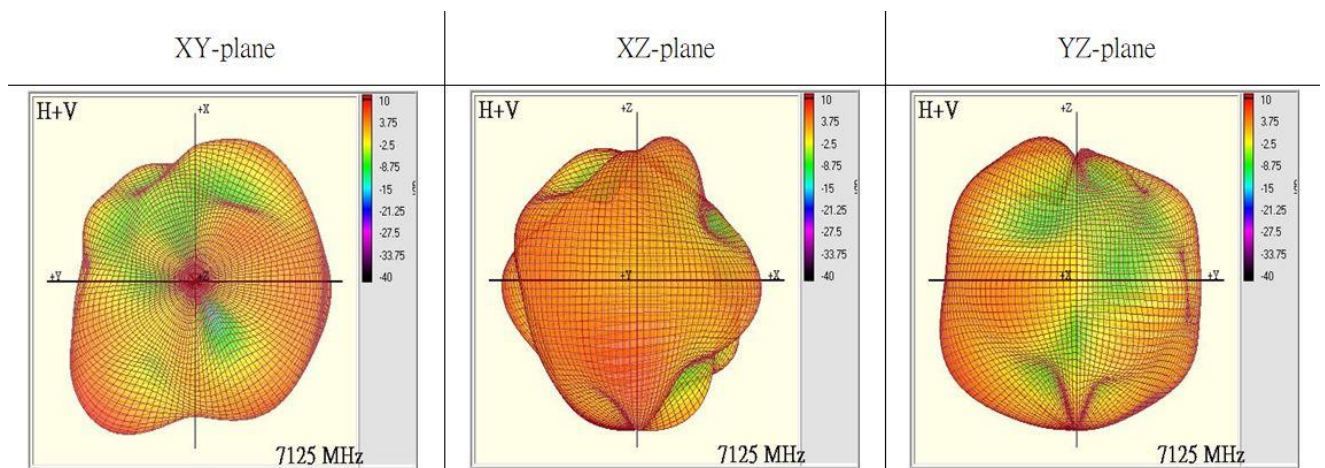
Center Frequency	5925 MHz
Three-dimensional (dBi) peak	2.47

Aux antenna: 6565 MHz



Center Frequency	6565 MHz
Three-dimensional (dBi) peak	1.76

Aux antenna: 7125 MHz



Center Frequency	7125 MHz
Three-dimensional (dBi) peak	1.68

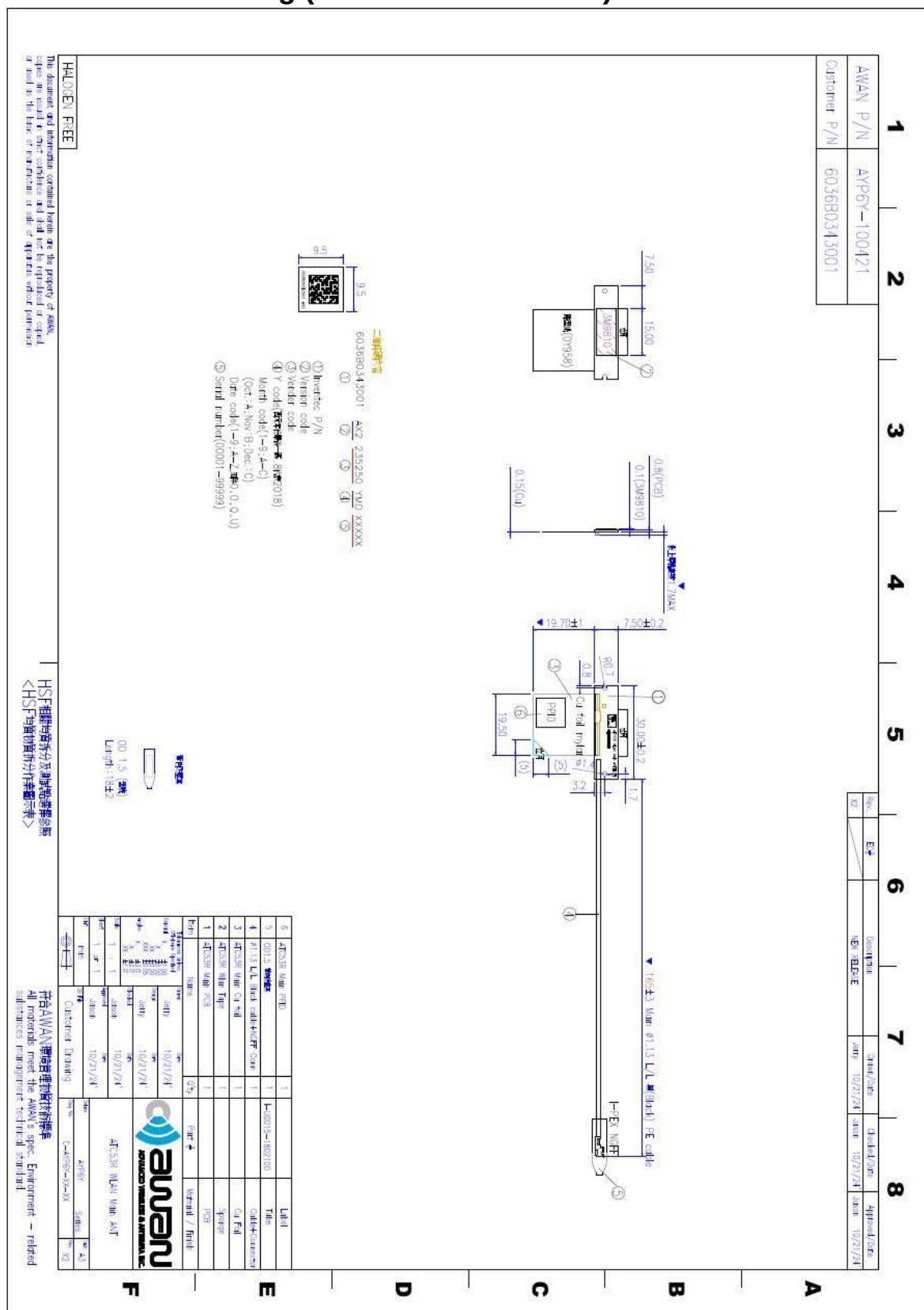
3.3 Gain

Antenna Gain Table:

WLAN MAIN Antenna Gain		
Frequency	3D Peak Gain	3D Gain
	Total(dBi)	Efficiency %
2400(MHz)	1.36	51.1
2450(MHz)	1.60	54.1
2500(MHz)	1.57	51.3
5150(MHz)	1.59	43.4
5250(MHz)	2.12	43.9
5350(MHz)	2.19	45.0
5470(MHz)	2.04	46.1
5725(MHz)	2.31	49.5
5850(MHz)	2.26	45.2
5925(MHz)	2.31	46.1
6565(MHz)	2.13	37.0
7125(MHz)	0.06	32.9

WLAN Aux Antenna Gain		
Frequency	3D Peak Gain	3D Gain
	Total(dBi)	Efficiency %
2400(MHz)	2.00	50.6
2450(MHz)	2.22	48.0
2500(MHz)	2.39	46.8
5150(MHz)	1.89	42.6
5250(MHz)	1.72	40.0
5350(MHz)	2.20	42.7
5470(MHz)	1.57	38.7
5725(MHz)	2.52	35.5
5850(MHz)	2.77	39.1
5925(MHz)	2.47	39.7
6565(MHz)	1.76	34.0
7125(MHz)	1.68	30.0

4.1 Dimension Drawing (WLAN Main Antenna)



Technical drawing of the AWP-100422 device. The drawing includes a front view, a side view, and a detail view of the bottom connector. Dimensions are provided in millimeters (mm) and inches (in). Callouts 1 through 5 identify specific components.

Front View Dimensions:

- Overall width: 19.70 ± 0.1
- Overall height: 7.50 ± 0.2
- Top section width: 30.00 ± 0.2
- Top section height: 0.80
- Bottom section width: 19.50
- Bottom section height: 3.70 ± 0.1

Side View Dimensions:

- Overall width: 19.70 ± 0.1
- Overall height: 7.50 ± 0.2
- Top section width: 30.00 ± 0.2
- Top section height: 0.80
- Bottom section width: 19.50
- Bottom section height: 3.70 ± 0.1

Detail View Dimensions:

- Overall width: 19.70 ± 0.1
- Overall height: 7.50 ± 0.2
- Top section width: 30.00 ± 0.2
- Top section height: 0.80
- Bottom section width: 19.50
- Bottom section height: 3.70 ± 0.1

Callouts:

- 1: L-EX N.F.F.
- 2: L-EX N.F.F.
- 3: L-EX N.F.F.
- 4: L-EX N.F.F.
- 5: L-EX N.F.F.

Revision

Revision	Date	Change Notification	Notes
Rev.0	2024-11-25	---	

型号 Type	RF-1.13L/50	料号 P/N	SY113L/50-065(Black)	版本: V0
结构图 Structure drawing				
结构特性 Structure characteristics				
结构 Structure	项目 Item		标准值 Standard value	
①内导体 Inner conductor	材料 Material		裸铜线 Bare copper wire	
	组成:总根数/单根外径(mm) Makeup:total / O.D. of every wire(mm)		7/0.08	
	(绞合)标称外径(mm) (Intertwist)NOM.O.D.(mm)		0.24±0.02	
②绝缘层 Insulation	材料 Material		PE	
	颜色 Color		透明 Clarity	
	标称外径(mm) NOM.O.D.(mm)		0.72±0.03	
③外导体 Outer conductor	材料 Material		铜塑箔 Cu-plastic composite tape	
	组成:厚度(mm)×宽度(mm) Makeup:thickness(mm)×width(mm)		0.012×2.5	
	标称外径(mm) NOM.O.D.(mm)		0.744±0.03	
	覆盖率(%) Coverage ratio(%)		100	
④外导体 Outer conductor	材料 Material		镀锡铜线 Tinned copper wire	
	组成:总根数/单根外径(mm) Makeup:total / O.D. of every wire(mm)		4/0.05	
	标称外径(mm) NOM.O.D.(mm)		0.95±0.05	
	覆盖率(%)以标称中心值计算 Coverage ratio(%)		90±5	
⑤护套层 Jacket	材料 Material		聚乙烯 PE	
	颜色 Color		黑Black	
	标称外径(mm) NOM.O.D.(mm)		1.15±0.05	
电性能特性 Electrical characteristics				
项目 Item	标准值 Standard value	项目 Item	频率 Frequency	标准值 Standard value 单位 Unit:dB/m
电容(pF/m) Capacitance(pF/m)	96	衰减 Attenuation	1GHz	≤1.8
速率(%) Velocity(%)	70		2GHz	≤2.5
阻抗(Ω) Impedance(Ω)	50±2		3GHz	≤3.2
驻波比 Standing wave ratio	≤1.3@0~6GHz		4GHz	≤3.75
最大工作电压(V) Max.operating voltage(V)	1000		5GHz	≤4.26
			6GHz	≤4.7
可靠性 Dependability				
项目 Item	单位 Unit	标准值 Standard value		
最小弯曲半径(一次) Min.bending radius static	mm	5		
最小弯曲半径(重复) Min.bending radius repeated	mm	—		
工作温度范围 Operating temperature	℃	-40~+105		
包装 Packing				
项目 Item	单位 Unit	标准值 Standard value		
包装方式 Packing mode	/	纸盘 Papery plate		
每盘长度 The length of each plate	m	1000		
每盘接头数 Each connector plate number	/	≤5		
每段最短长度 The shortest length of each root	m	≥10		
使用提示 Use tips				
存储环境 Storage environment	温度: 30℃以下; 湿度: 20%~65%			
最佳保存周期 The best save cycle	2个月; 2个月以上作业性下降, 如上锡效果变差,但电性能不受影响。夏季高温高湿环境开剥后需尽快流转			
加工温度 Processing temperature	浸锡温度260℃, 浸锡时间不超过3秒			
绝缘收缩 Insulation Shrink	固有材料特性。绝缘: 0.3mm以下; 护套: 0.6mm以下			
护套窜动 Jacket traverse	加工长度(护套残留长度) 低于5cm易发生			
其他 Other				
特殊加工工艺, 请与供方协商后使用				

型号 Type		RF-1.13L/50	料号 P/N		SY113L/50-066(White)	版本: V0
结构图 Structure drawing						
结构特性 Structure characteristics						
结构 Structure		项目 Item		标准值 Standard value		
①内导体 Inner conductor		材料 Material		裸铜线 Bare copper wire		
		组成:总根数/单根外径(mm) Makeup:total / O.D. of every wire(mm)		7/0.08		
		(绞合)标称外径(mm) (Intertwist)NOM.O.D.(mm)		0.24±0.02		
②绝缘层 Insulation		材料 Material		PE		
		颜色 Color		透明 Clarity		
		标称外径(mm) NOM.O.D.(mm)		0.72±0.03		
③外导体 Outer conductor		材料 Material		铜塑箔 Cu-plastic composite tape		
		组成:厚度(mm)×宽度(mm) Makeup:thickness(mm)×width(mm)		0.012×2.5		
		标称外径(mm) NOM.O.D.(mm)		0.744±0.03		
		覆盖率(%) Coverage ratio(%)		100		
④外导体 Outer conductor		材料 Material		镀锡铜线 Tinned copper wire		
		组成:总根数/单根外径(mm) Makeup:total / O.D. of every wire(mm)		4/0.05		
		标称外径(mm) NOM.O.D.(mm)		0.95±0.05		
		覆盖率(%)以标称中心值计算 Coverage ratio(%)		90±5		
⑤护套层 Jacket		材料 Material		聚乙烯 PE		
		颜色 Color		白White		
		标称外径(mm) NOM.O.D.(mm)		1.15±0.05		
电性能特性 Electrical characteristics						
项目 Item		标准值 Standard value		项目 Item	频率 Frequency	标准值 Standard value 单位 Unit:dB/m
电容(pF/m) Capacitance(pF/m)		96		衰减 Attenuation	1GHz	≤1.8
速率(%) Velocity(%)		70			2GHz	≤2.5
阻抗(Ω) Impedance(Ω)		50±2			3GHz	≤3.2
驻波比 Standing wave ratio		≤1.3@0~6GHz			4GHz	≤3.75
最大工作电压(V) Max.operating voltage(V)		1000			5GHz	≤4.26
					6GHz	≤4.7
可靠性 Dependability						
项目 Item		单位 Unit		标准值 Standard value		
最小弯曲半径(一次) Min.bending radius static		mm		5		
最小弯曲半径(重复) Min.bending radius repeated		mm		—		
工作温度范围 Operating temperature		℃		-40~+105		
包装 Packing						
项目 Item		单位 Unit		标准值 Standard value		
包装方式 Packing mode		/		纸盘 Papery plate		
每盘长度		m		1000		
每盘接头数 Each connector plate number		/		≤5		
每段最短长度 The shortest length of each root		m		≥10		
使用提示 Use tips						
存储环境 Storage environment		温度: 30℃以下; 湿度: 20%~65%				
最佳保存周期 The best save cycle		2个月; 2个月以上作业性下降, 如上锡效果变差,但电性能不受影响。夏季高温高湿环境开剥后需尽快流转				
加工温度 Processing temperature		浸锡温度260℃, 浸锡时间不超过3秒				
绝缘收缩 Insulation Shrink		固有材料特性。绝缘: 0.3mm以下; 护套: 0.6mm以下				
护套窜动 Jacket traverse		加工长度(护套残留长度)低于5cm易发生				
其他 Other						
特殊加工工艺, 请与供方协商后使用						

AVLV2.E318898 - Appliance Wiring Material - Component

Appliance Wiring Material - Component

SHENYU COMMUNICATION TECHNOLOGY INC

275 E Waihuan Rd
Jiangyin, Jiangsu 214400 China

E318898

Table of Recognized Styles

Single-conductor, thermoplastic insulation							
1226	1354	1592	1727	1860	1979	10111	11149
1227	1371	1708	1766	1882	10005	10231	11180
1330	1538	1709	1847	1886	10008	10248	
1331	1577	1710	1857	1887	10011	10362	
1332	1589	1723	1858	1901	10064	10518	
1333	1591	1726	1859	1927	10072	11085	
Multiple-conductor, thermoplastic insulation							
20276	21100	21533	21572	21719			

Style(s) 11149 can be assigned the IEC 60332-2 flammability rating

Marking: Company name, voltage rating, temperature rating, conductor size, conductor material if other than copper,.

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