



SPECIFICATION

Dongguan Huoxun Electronic Co., Ltd

Customer Name: _____

Product Name: _____ WiFi antenna _____

HX P/N: _____ TX2458-0200-01 _____

Customer P/N: _____

Specifications: _____ 2.4G&5.8G, IPEX interface, black, 20CM long _____

Date Prepared: _____ 2026.04.02 _____

Revision : _____ 1.0 _____

APPROVED NO: _____ HO-1-0002 _____

Huo.Xun Co.,Ltd		Customer Approval	
Prepare	Approval	Check	Approval
Fang.Wang	Tom.Xiao		

1. Product images



2. Product parameters

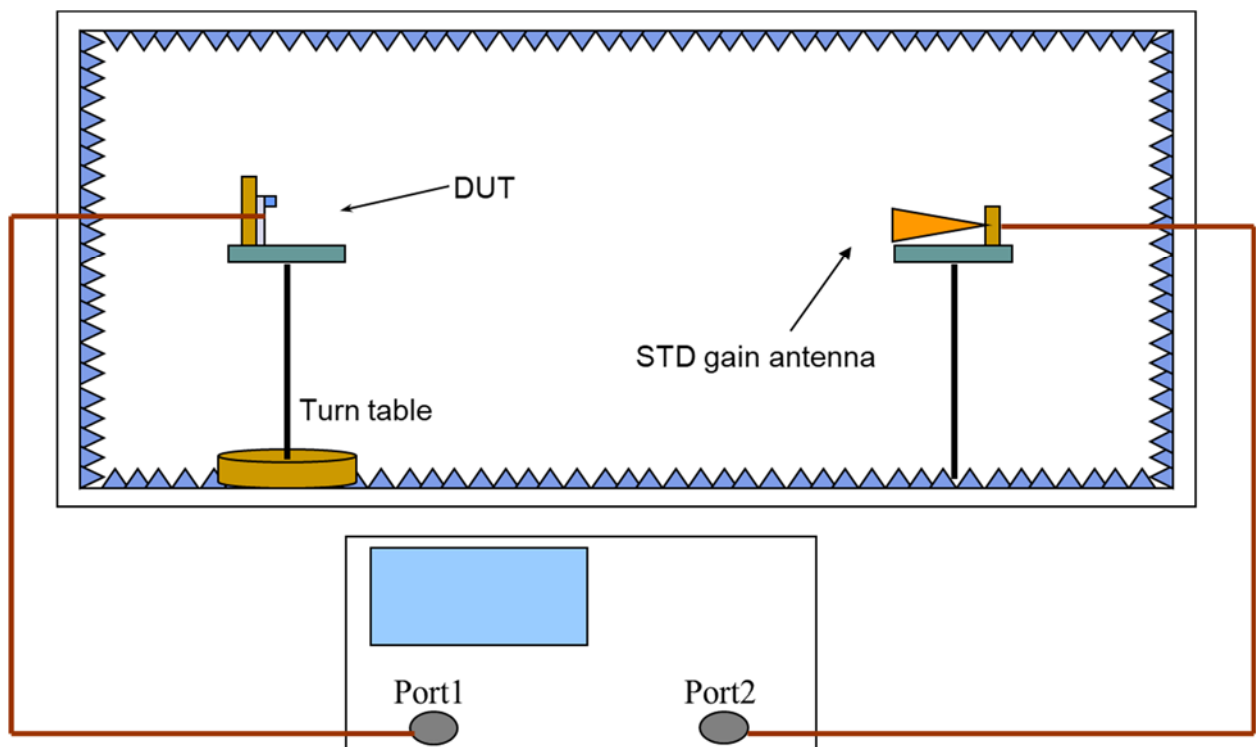
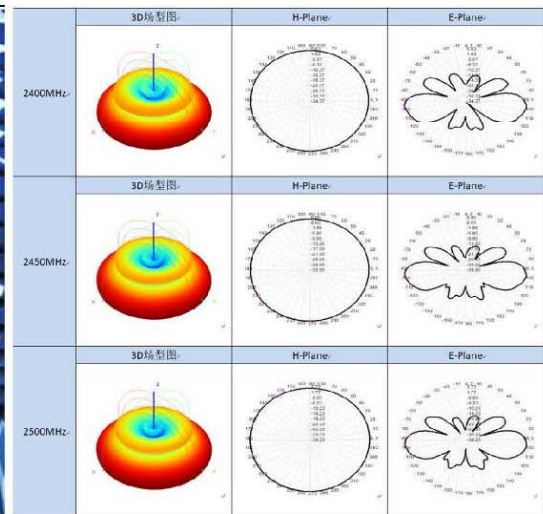
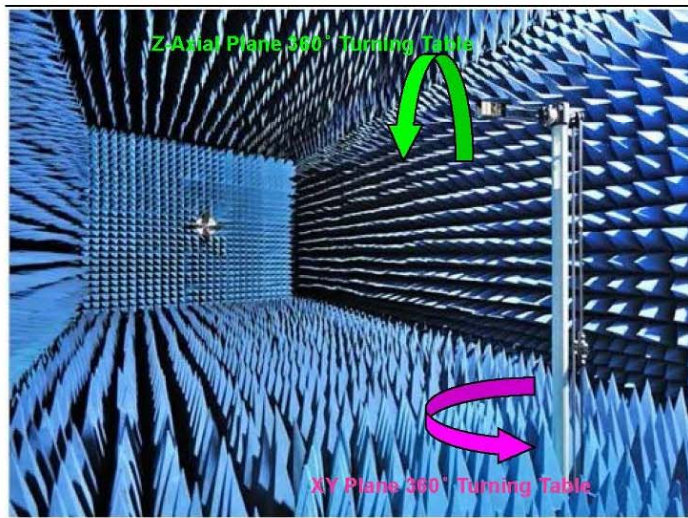
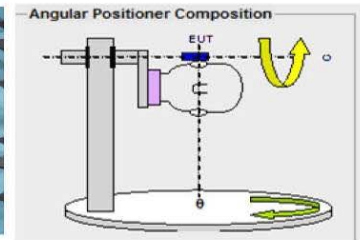
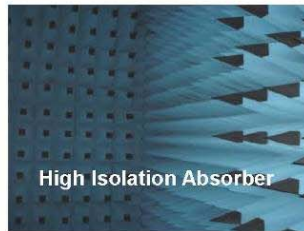
Product testing parameters			
Electrical Specifications			
Frenquency Range	2.4-2.5GHz, 5.1-5.8Ghz	Polarization	horizontal direction
Impedance	50 Ω	Radiation direction	omnidirectio nal
VSWR	≦2.0	power capacity	50W
增益 (Gain)	2dBi	Bandwidth	1000Mhz
Mechanical Specifications			
Dimensions	20CM	Antenna Color	Bsslack
Connector	IPEX	Cable Length	20CM
Chassis Material	Copper + plastic	<u>Weight</u>	0.15g
Working Temperature	-40℃-+85℃	Limit Temperature	-40℃-+85℃

Test Equipment & Conditions

1、 Network Analyzers : Keysight E5071C

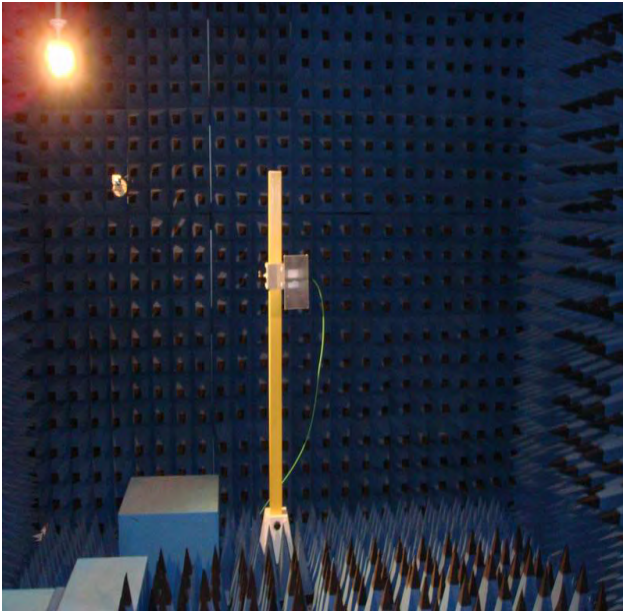
2、 3D Chamber Test System

.Chamber Size: $9 \times 5 \times 4 \text{ m}^3$
 .Freq. Range: 0.4 ~ 18.0 GHz
 .Double Ridge Horn Antenna
 .VNA: Agilent E5071C
 .3D Turning Table and Positioner
 .ADT Solution 3D Testing Software

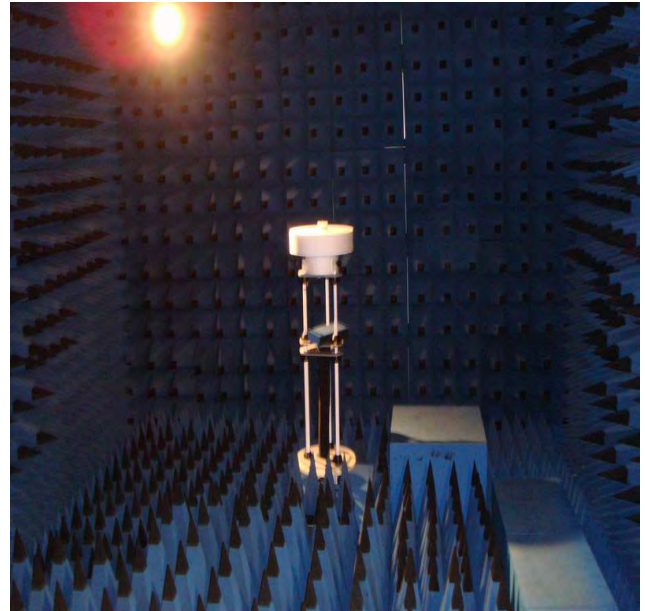


Anechoic Chamber

Standard Horn Antenna

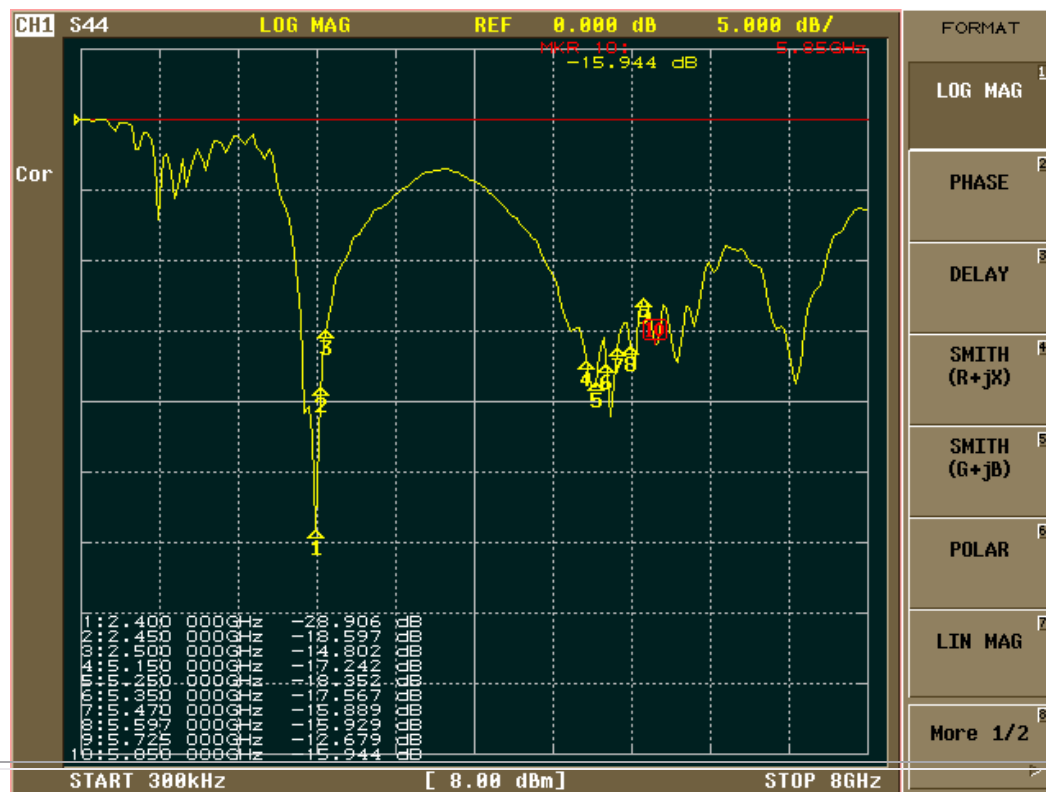


Antenna Test



Antenna Electricity Characteristics :

1. Return Loss :



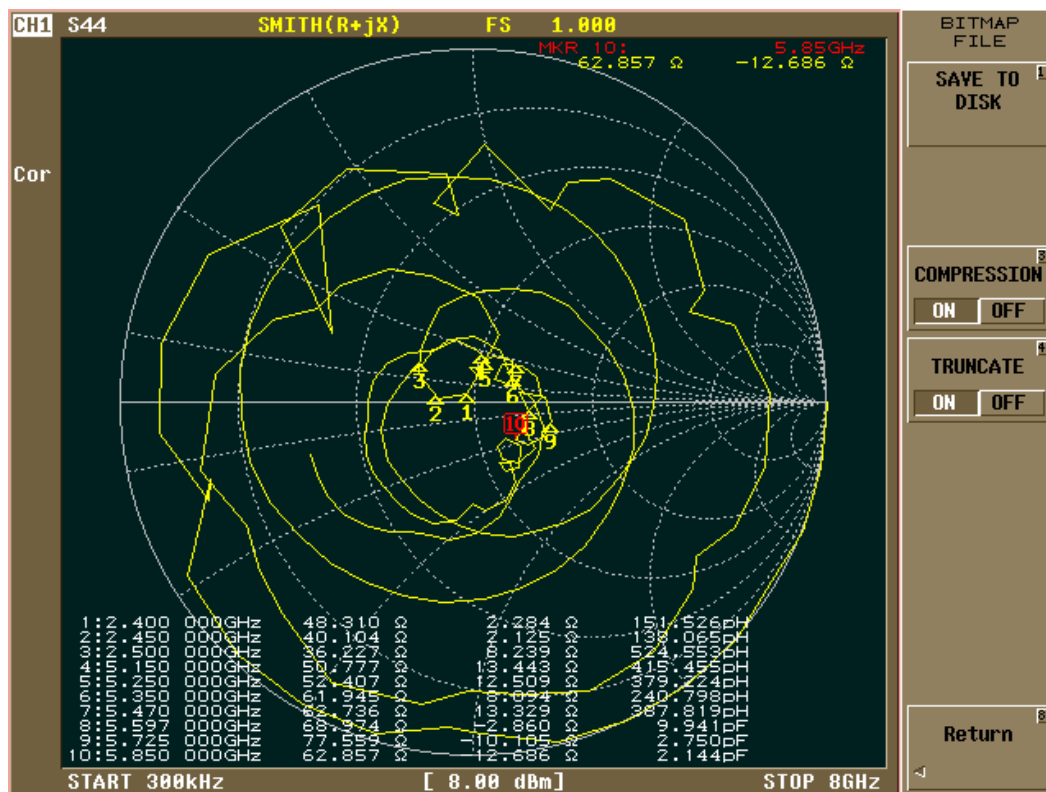
Antenna Frequency (2400~2500MHZ) — (5150~5850MHZ)

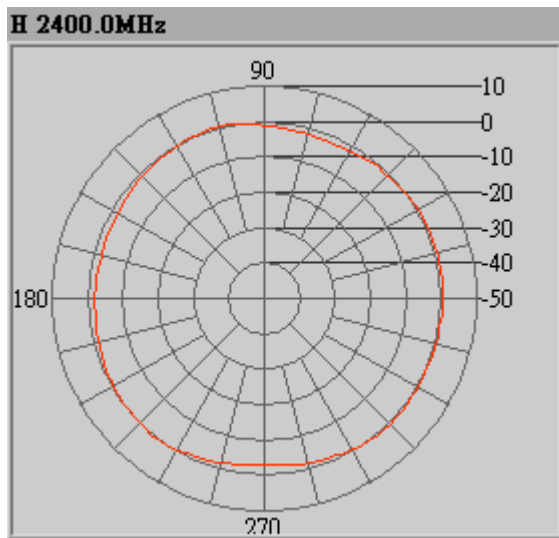
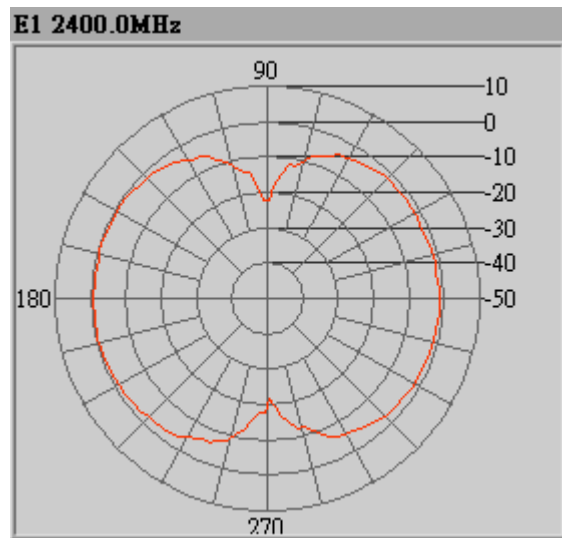
Frequency	2400 MHZ	2450 MHZ	2500 MHZ				
Return Loss	-28.906	-18.597	-14.802				
Frequency	5150 MHZ	5250 MHZ	5530 MHZ	5470 MHZ	5597 MHZ	5725 MHZ	5850 MHZ
Return Loss	-17.242	-18.352	-17.567	-15.889	-15.929	-12.679	-15.944



Frequency	2400 MHZ	2450 MHZ	2500 MHZ				
VSWR	1.059	1.273	1.468				
Frequency	5150 MHZ	5250 MHZ	5530 MHZ	5470 MHZ	5597 MHZ	5725 MHZ	5850 MHZ
VSWR	1.320	1.271	1.305	1.395	1.385	1.604	1.377

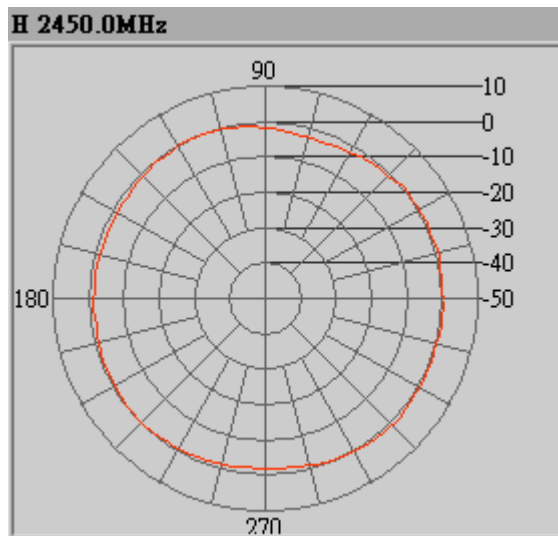
3. Smith Chart :



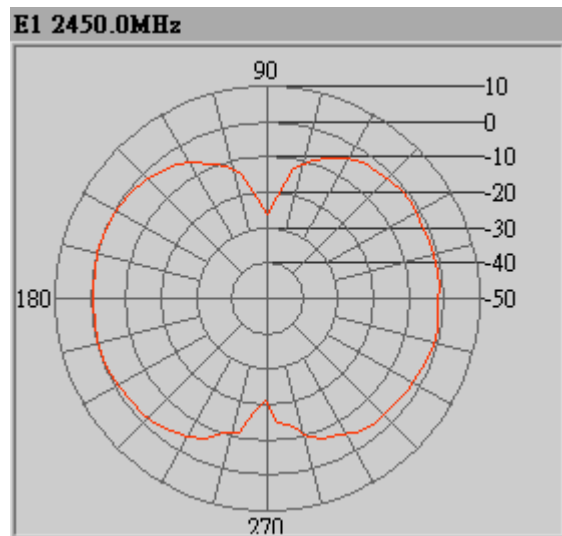
Antenna Radiation pattern :**H plane (2400MHZ)****E plane (2400MHZ)**

	H	E1
Max Gain	1.09	1.07
Max Gain@Angle	21	162
Min Gain	-2.78	-22.51
Min Gain@Angle	275	89
Average Gain	-0.81	-2.23
-3dB Angle A		
-3db Angle B		
HPB		

H plane (2450MHZ)

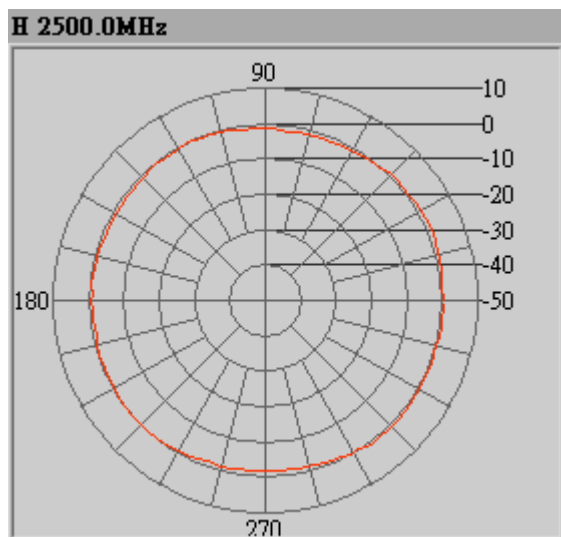


E plane (2450MHZ)

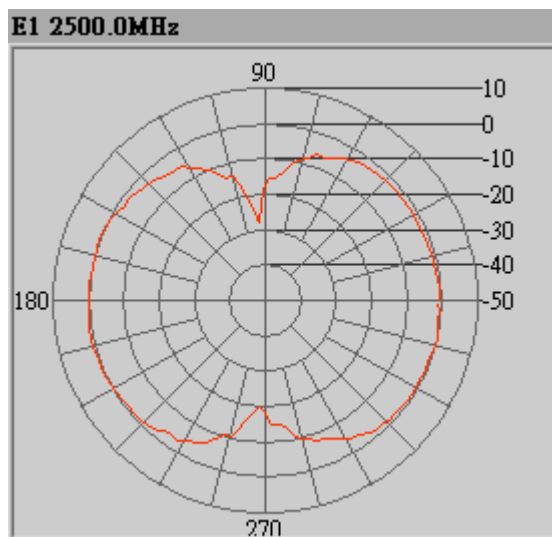


	H	E1
Max Gain	1.17	1.07
Max Gain@Angle	316	165
Min Gain	-3.14	-25.98
Min Gain@Angle	71	90
Average Gain	-0.8	-2.16
-3dB Angle A		
-3db Angle B		
HPB		

H plane (2500MHZ)

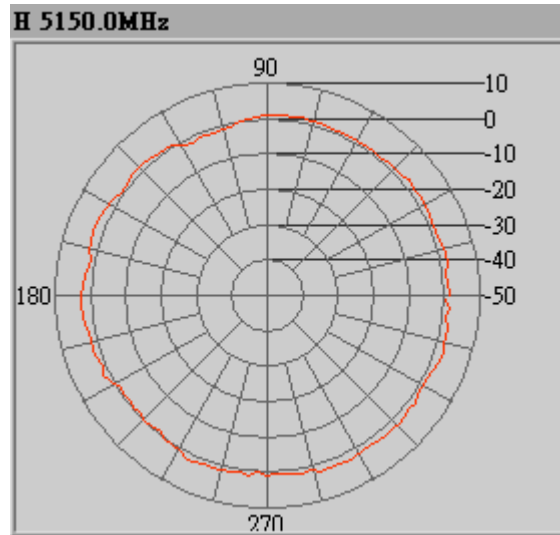


E plane (2500MHZ)

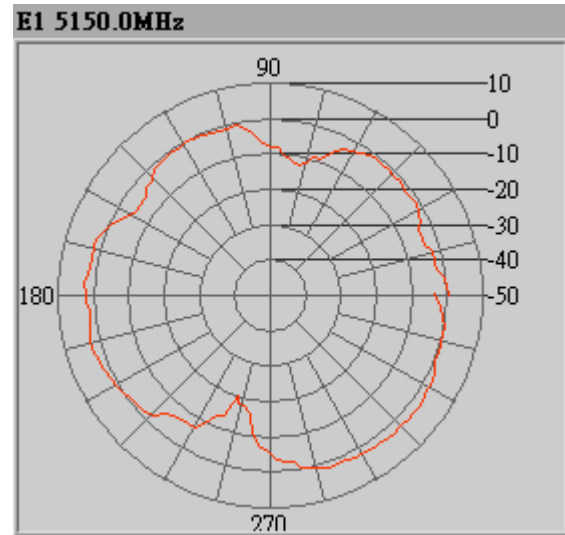


	H	E1
Max Gain	1.05	1.09
Max Gain@Angle	27	189
Min Gain	-2.03	-27.69
Min Gain@Angle	273	94
Average Gain	-0.55	-1.68
-3dB Angle A		
-3db Angle B		
HPB		

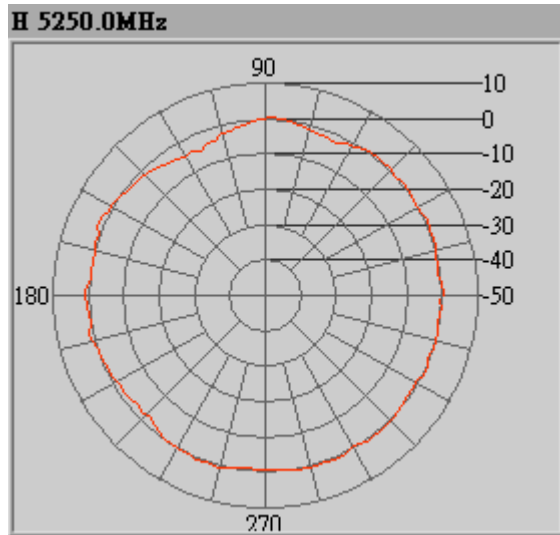
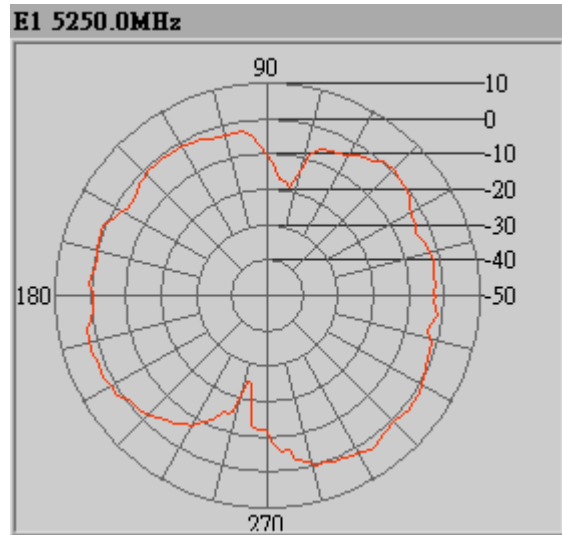
H plane (5150MHZ)



E plane (5150MHZ)

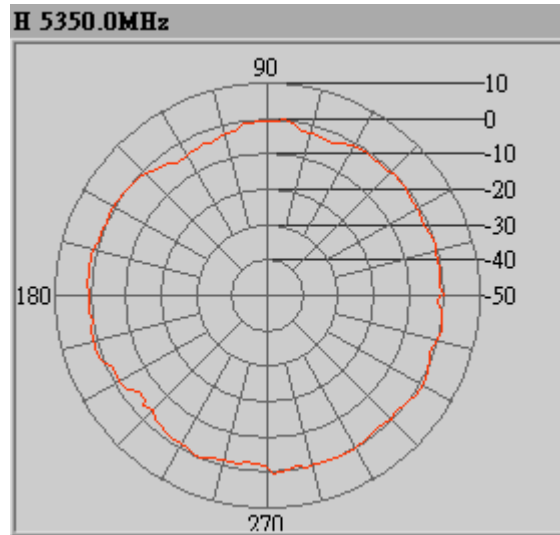


	H	E1
Max Gain	1.95	1.96
Max Gain@Angle	157	318
Min Gain	-2.04	-20.16
Min Gain@Angle	116	252
Average Gain	1.01	-0.91
-3dB Angle A		
-3db Angle B		
HPB		

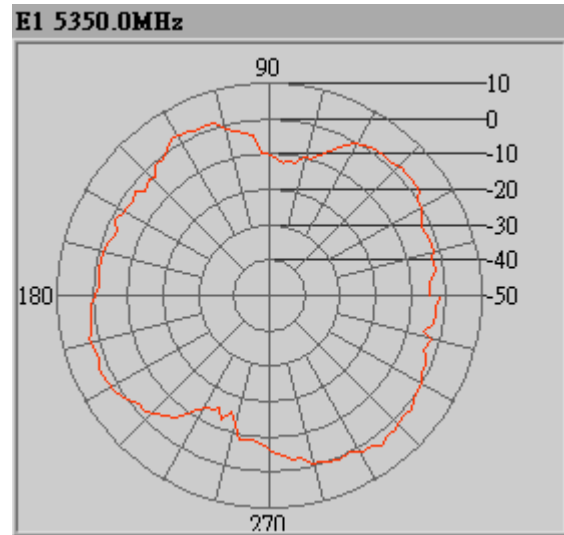
H plane (5250MHZ)**E plane (5250MHZ)**

	H	E1
Max Gain	1.4	1.89
Max Gain@Angle	157	304
Min Gain	-5.19	-24.89
Min Gain@Angle	114	257
Average Gain	-0.55	-1.63
-3dB Angle A		
-3db Angle B		
HPB		

H plane (5350MHZ)

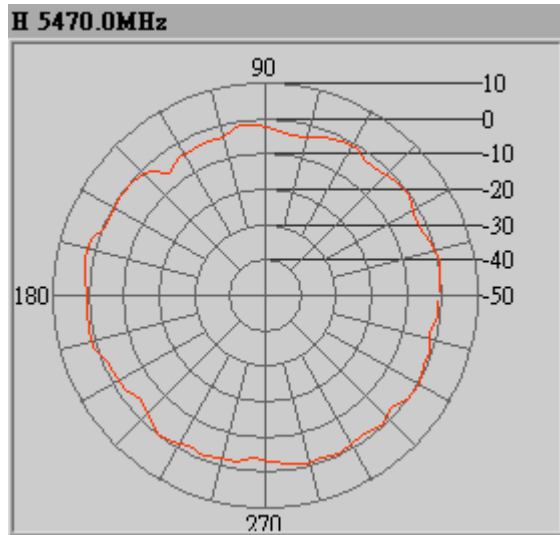


E plane (5350MHZ)

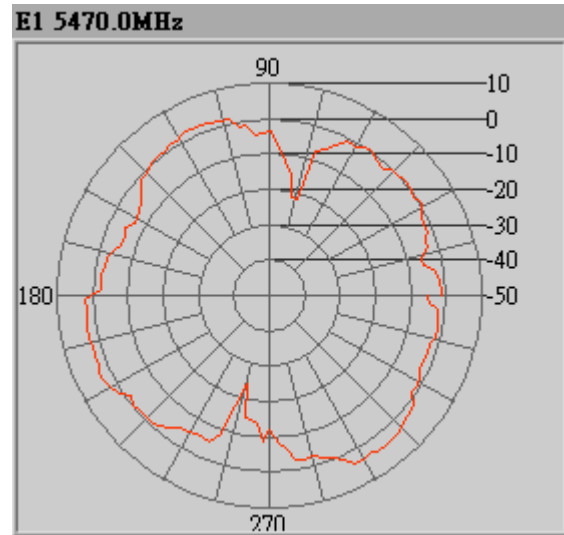


	H	E1
Max Gain	1.07	1.86
Max Gain@Angle	168	307
Min Gain	-4.73	-15.73
Min Gain@Angle	121	252
Average Gain	-0.92	-1.26
-3dB Angle A		
-3db Angle B		
HPB		

H plane (5470MHZ)

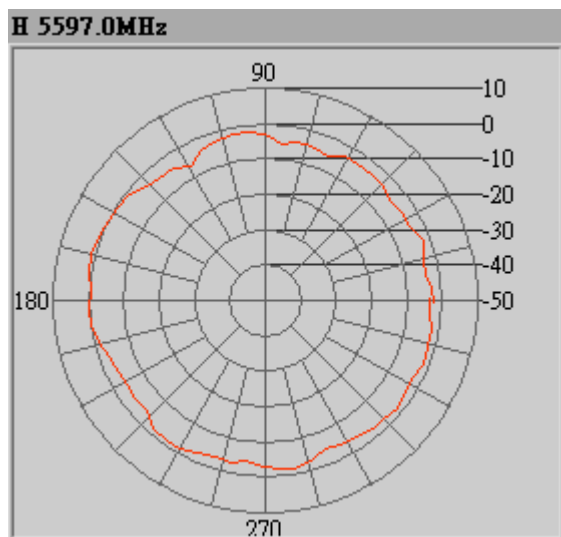


E plane (5470MHZ)

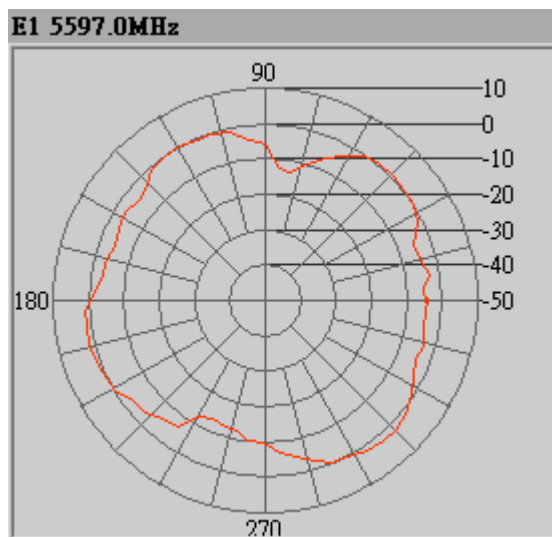


	H	E1
Max Gain	1.94	1.95
Max Gain@Angle	168	308
Min Gain	-5.87	-24.12
Min Gain@Angle	128	256
Average Gain	-1.28	-0.98
-3dB Angle A		
-3db Angle B		
HPB		

H plane (5597MHZ)

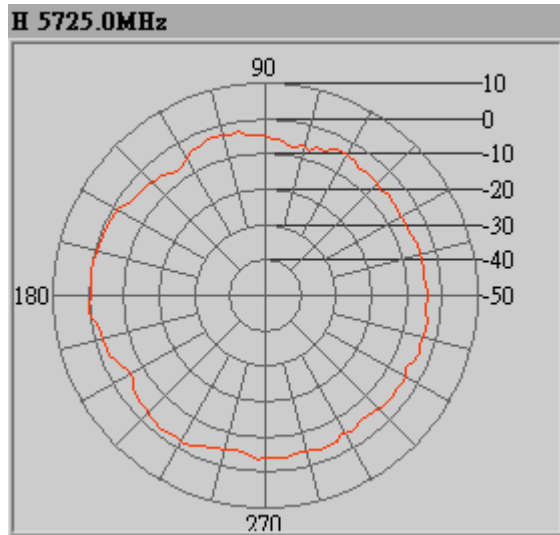


E plane (5597MHZ)

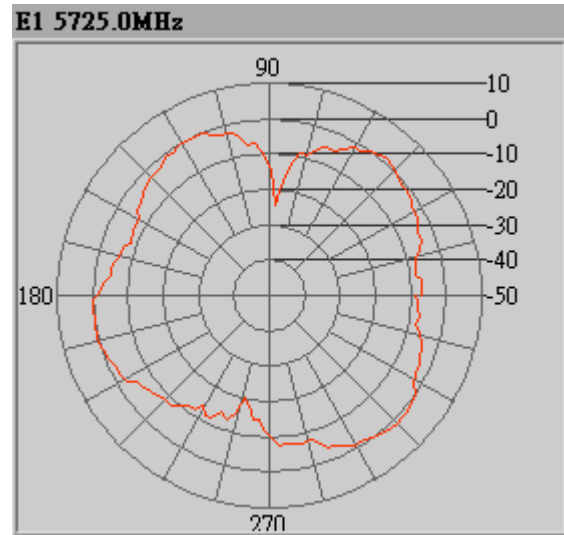


	H	E1
Max Gain	1.76	1.91
Max Gain@Angle	165	310
Min Gain	-6.62	-13.4
Min Gain@Angle	119	246
Average Gain	-1.63	-2.25
-3dB Angle A		
-3db Angle B		
HPB		

H plane (5725MHZ)

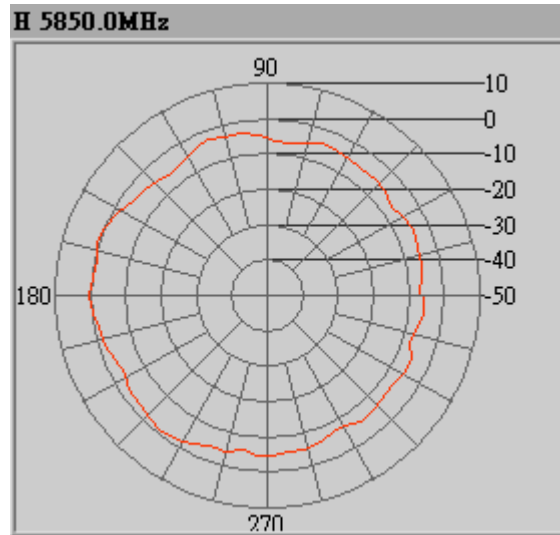


E plane (5725MHZ)

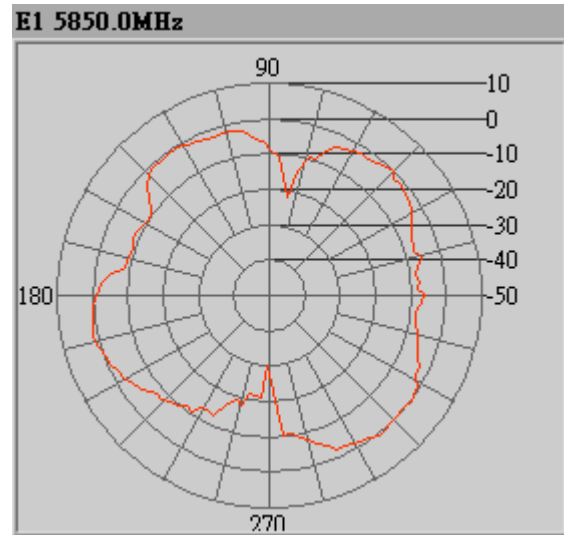


	H	E1
Max Gain	1.01	1.03
Max Gain@Angle	186	317
Min Gain	-7.41	-24.29
Min Gain@Angle	73	86
Average Gain	-2.73	-3.56
-3dB Angle A		
-3db Angle B		
HPB		

H plane (5850MHZ)



E plane (5850MHZ)



	H	E1
Max Gain	1.07	1.92
Max Gain@Angle	180	193
Min Gain	-7.51	-30.4
Min Gain@Angle	342	268
Average Gain	-2.87	-2.92
-3dB Angle A		
-3db Angle B		
HPB		

CONNECTOR & RF ANTENNA

SPECIFICATIONS :

Electrical Properties

<u>Frequency Range</u>	: <u>2.4~2.5GHz</u>
<u>Impedance</u>	: <u>50Ohms nominal</u>
<u>VSWR</u>	: <u>≤ 2.0</u>
<u>Peak Gain</u>	: <u>$\leq 2\text{dBi}$</u>
<u>Standard Connector</u>	: <u>SMA Connector</u>

<u>Frequency Range</u>	: <u>5.15~5.85GHz</u>
<u>Impedance</u>	: <u>50Ohms nominal</u>
<u>VSWR</u>	: <u>≤ 2.0</u>
<u>Peak Gain</u>	: <u>$\leq 2\text{dBi}$</u>
<u>Standard Connector</u>	: <u>SMA Connector</u>