广东盛路通信科技股份有限公司

ShengLu Comunication CO.,Ltd

Antenna Measurement Report

Product Name: Indoor Omni Terminal antenna

Antenna Model ： SL15040A

Project Item: Normal Temperature Electrical Test

Test Place： ShengLu Microwave Test Center

Tested By： WuMeizhi YeZhongHui

Test Date： June.20, 2007

ShengLu Microwave Test Center

Measurement Report

Sample Name	Indoor Omni Terminal antenna	**Antenna Model**	SL15040A
Factory Name	ShengLu Communicaon Co.,Ltd		
Sample Number	01	**Test Place**	ShengLu Microwave Test Center
Test Date	June.20, 2007		
Test Surrounding	Temperature: （40～60）℃	Relative Humidity: 54%～72%	Atmospheric Pressure.: 101.3kPa
Test Item	Normal Temperature Electrical Specification: Frequency Range,VSWR,Pattern,Gain,HPBW, Electrical Downtilt,Front to Back Ratio,Up Side Lobe Supperession and Polarization Type		
Test Standard	GB9410-88 Technical Criterion of Mobile Communication Antenna YD/T1059-2004 Technical Qualification of Mobile Communication System Station Antenna Antenna Specification of ShengLu Communicaon Co.,Ltd		
Main Apparatus for Antenna Measurement	E5062A Vector Network Analyzer; HD-22HA15.5N Standard Horn Antenna E8257D Analog Signals Emitter		
Test Survey	Basing on the test standard,we test the performance of the 2±1dBi dual polarization directional UMTS antenna---SL15040A under normal temperature,the result is conform to the standard. Please turn to page 2 to check the report.		
Conclusion	All Test Items can fulfill the Specification.		
Note			

Checked By: **Date:**	**Audited By:** **Date:**	**Approved By:** **Date:**

Normal Temperature Electrical Specification Test Results

Antenna Model： SL15040A

Sample Serial Number：

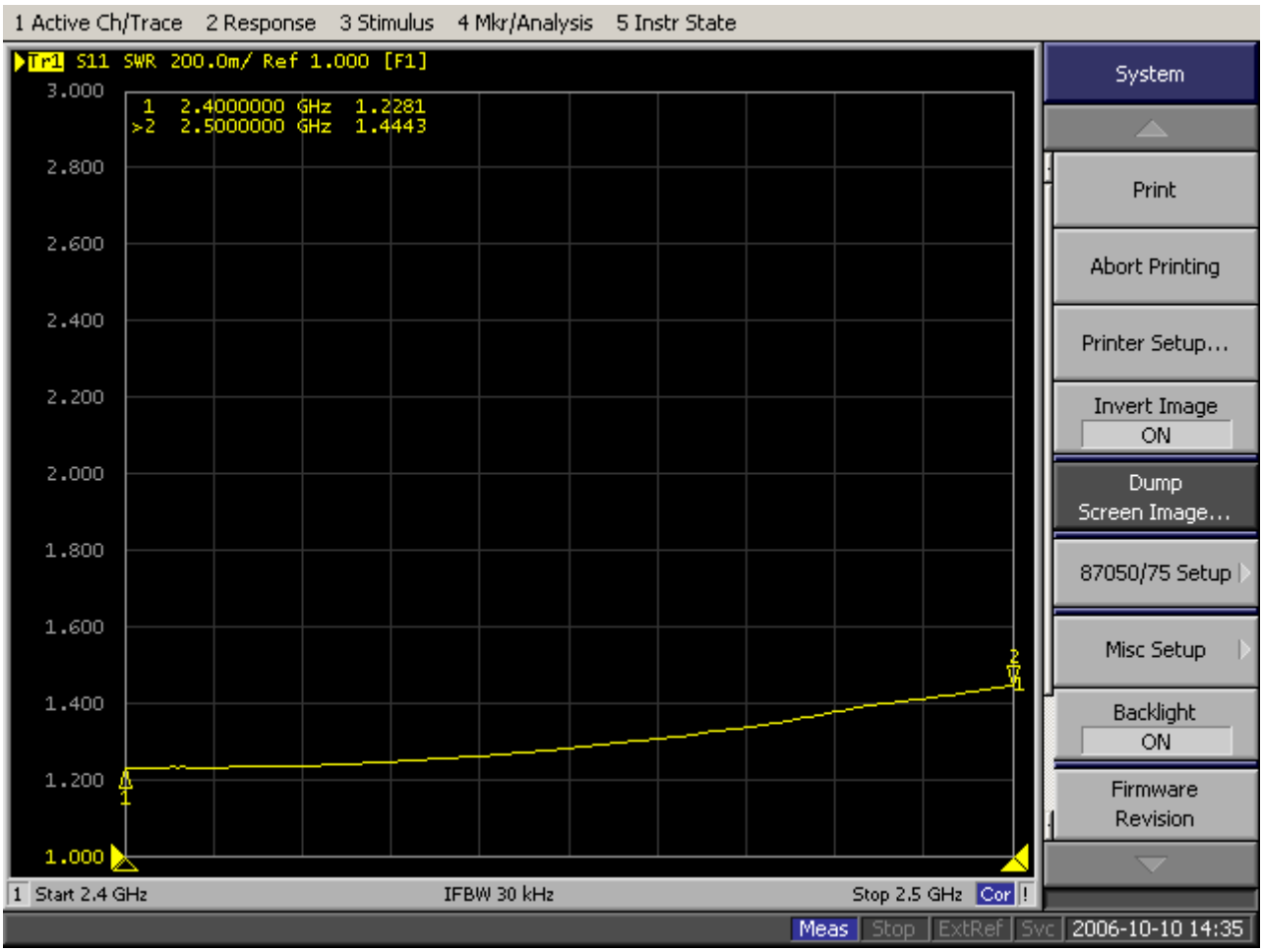
Specification：

Sequence Number	Test Item	Units	Specification	Test results		Judgement
1	Frequency Range	MHz	2400-2500 MHz	2400-2500MHz		Pass
2	Gain	dBi	2±1	2400 MHz	1.22 dBi	Pass
				2500 MHz	1.44 dBi	
3	VSWR	/	≤2	2400 MHz	1.92	Pass
				2500MHz	1.67	
4	Polarization Type	/	Vertical	Vertical		Pass
Conclusion： Every Item of Normal Temperature Electrical Specification Test is OK.						

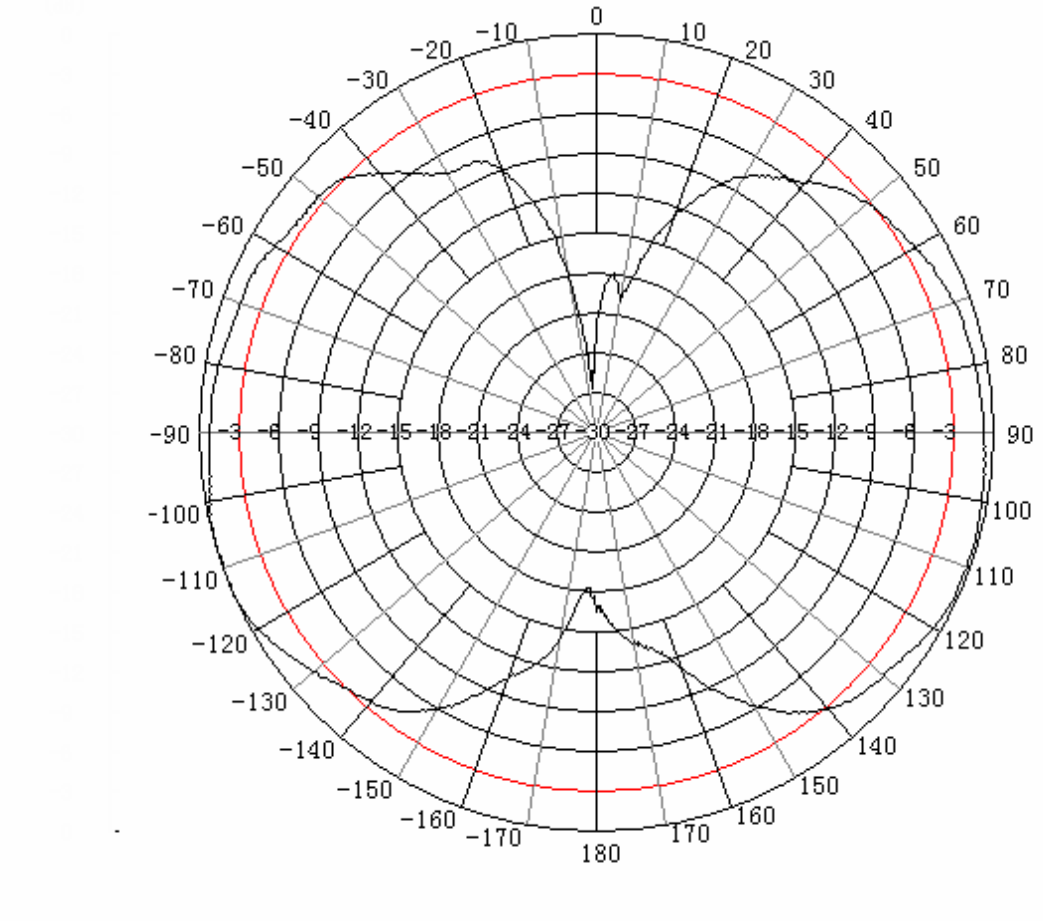
VSWR Test Data Chart

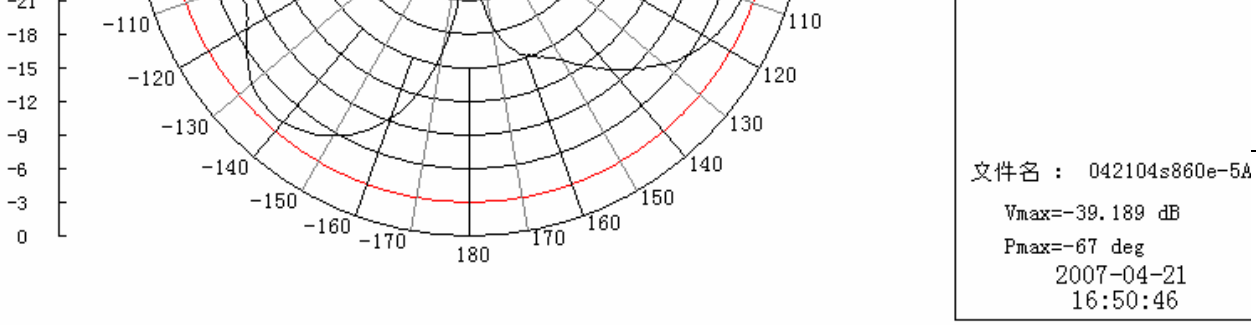
Antenna Model： SL15040A **Sample Serial Number：**

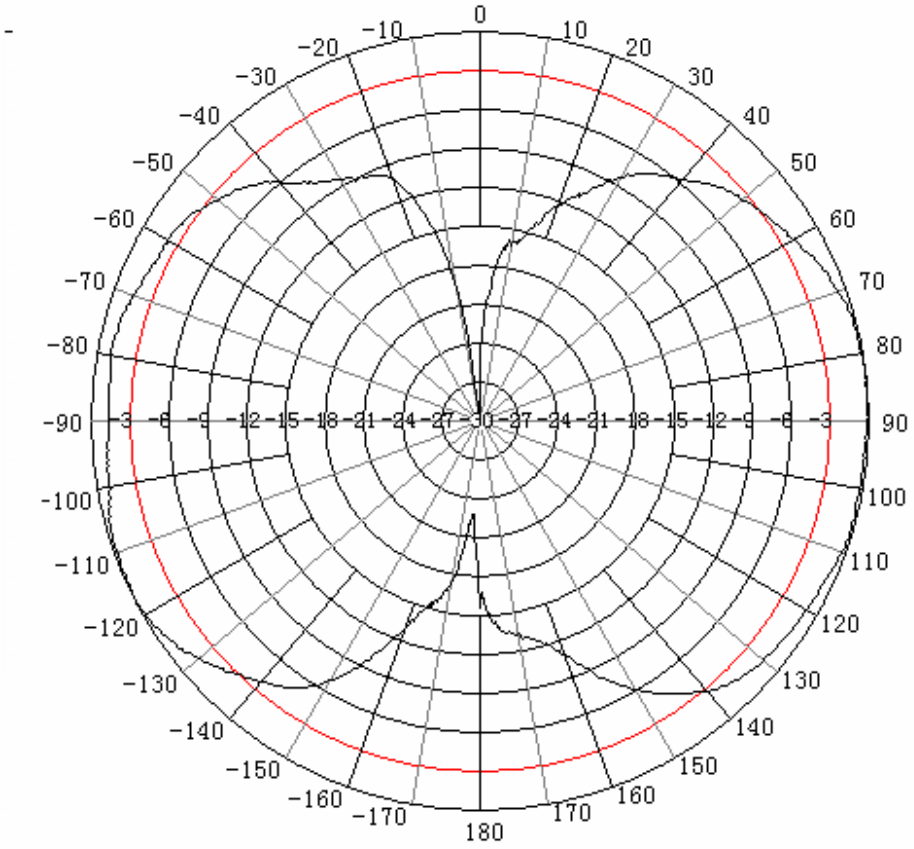
VSWR



Frequency：2400MHz

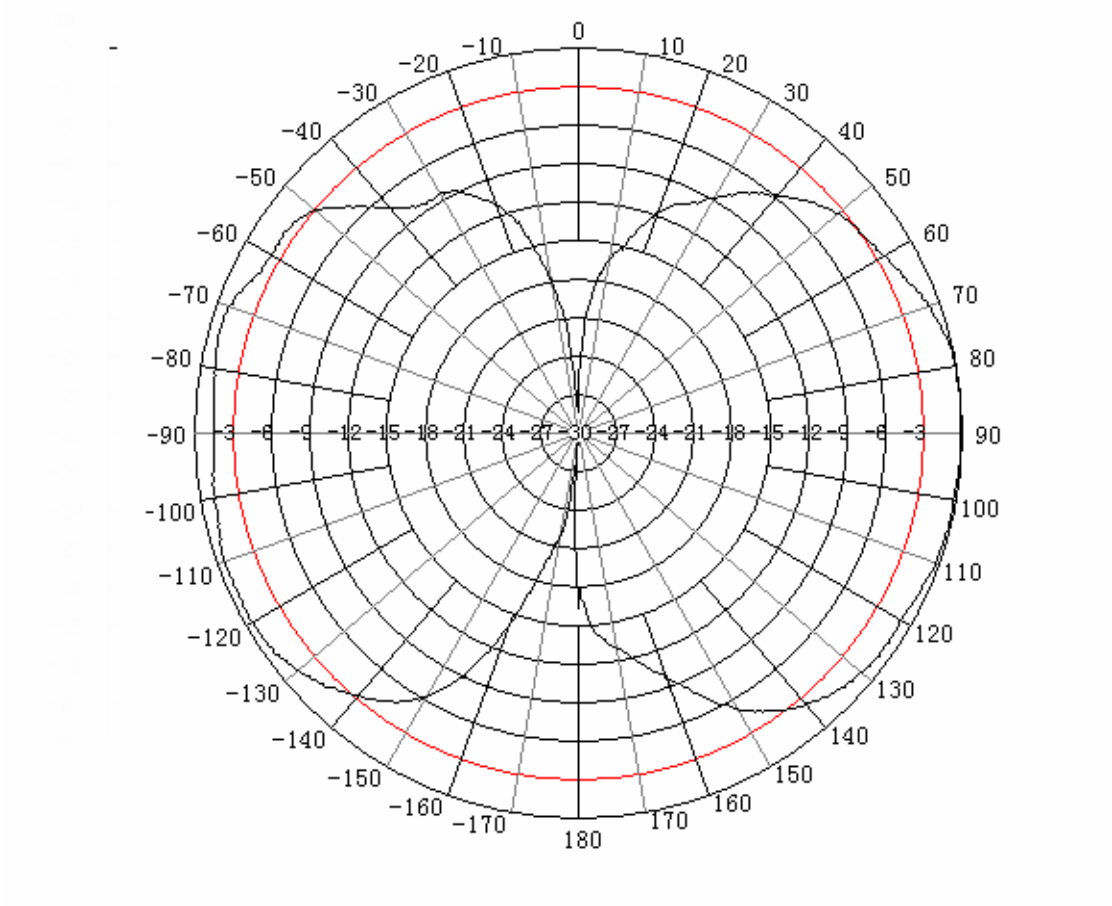






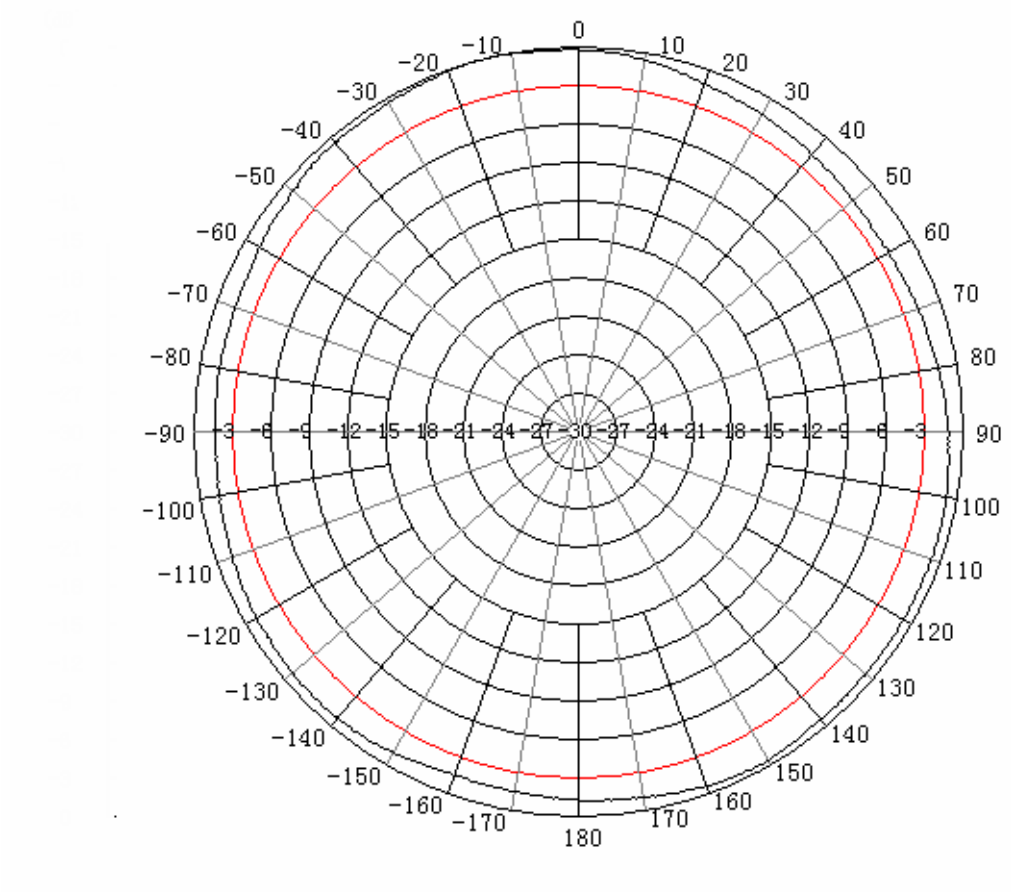
E－Plan Pattern

Frequency：2500MHz



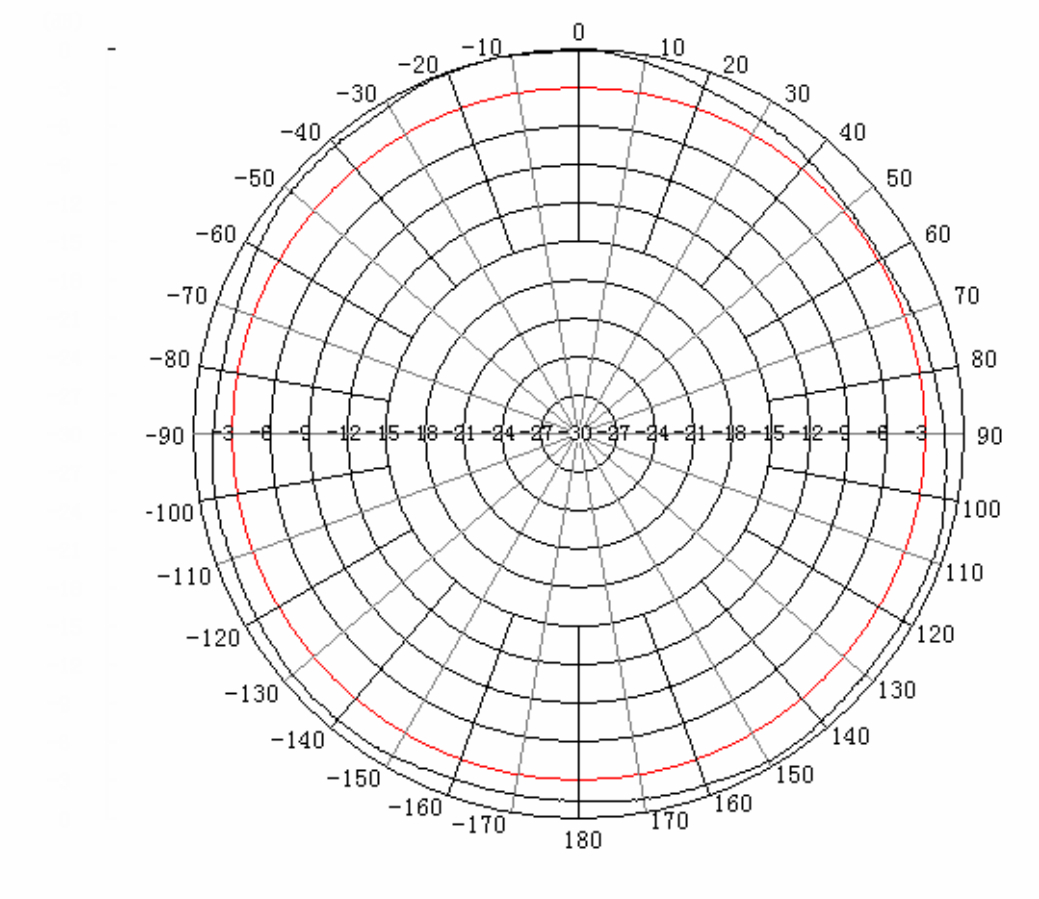
E－Plan Pattern

Frequency：2400MHz



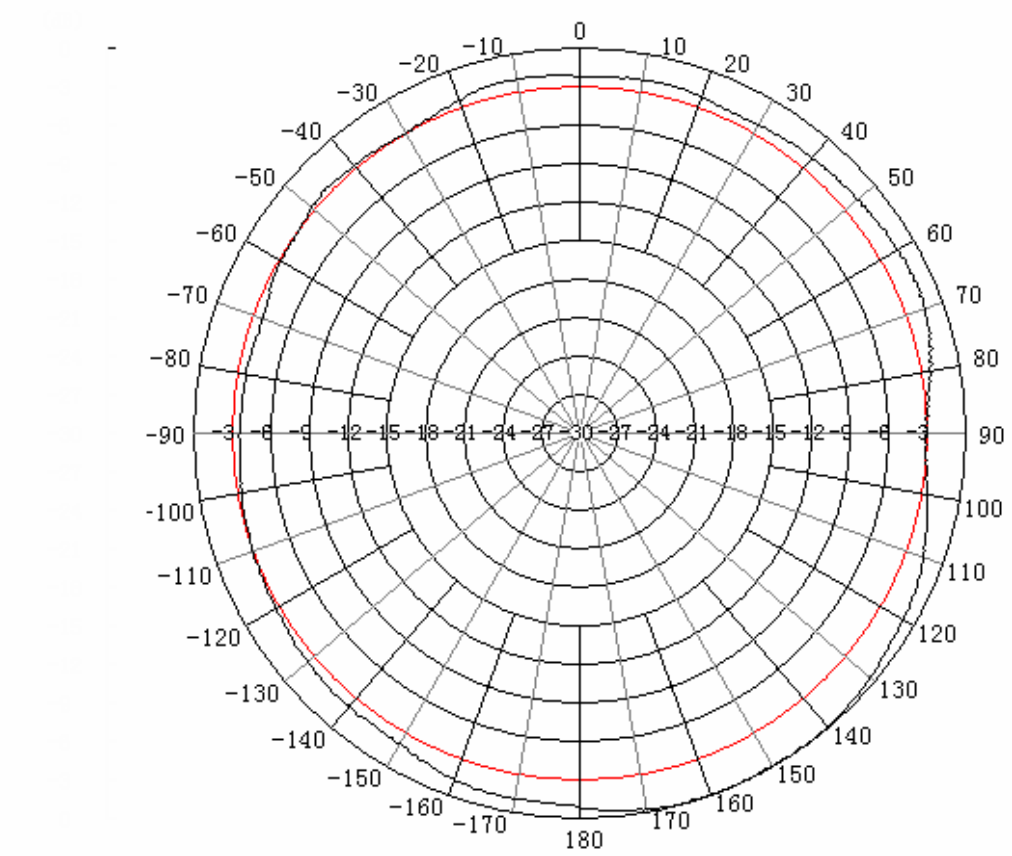
H－Plan Pattern

Frequency：2450 MHz



H－Plan Pattern

Frequency：2500MHz



H—Plan Pattern

Increase the benefit test data watch

Antenna model number:SL15040A

Testing methods: Comparison
Compute the formula:

$$G_x(dB)=G_s(dB)+10lg(P_{xr})-10lg(P_{sr})$$

G_x — Gain of AUT （dB）

G_s — Gain of STD Antenna（dB）

P_{xr} — Received Power of AUT

P_{sr} — Received Power of AUT

Frequency Range (MHz)	Gain of STD Antenna (dBi)	Received Power of AUT (dBm)	Received Power of STD Antenna (dBm)	Gain of AUT (dBi)
2400	16.82	-42.960	-28.060	1.92
2450	16.95	-44.030	-28.540	1.33
2500	17.08	-44.050	-28.640	1.67

Main Apparatus for Antenna Measurement

Sequence Number	Apparatus Name	Antenna Model	Serial Number of Leaving Factory	Efficient Date
1	Vector Network Analyzer;	E5062A	MY43030476	2007
2	Analog Signals Emitter	E8257D	MY45140247	2007
3	Automatic System of Far Field Measurement	/	/	Until the Efficient Date
4	Standard Horn Antenna	/	/	/