Specifications Sheet

Object	External Dipole Antenna	**Page**	1 of 7
Customer		**Date**	August 19, 2005
System	WLAN/ Bluetooth/ Zigbee	**Rev.**	B
Model Name	LS100W-Dipole Antenna		

Electrical Specifications

Frequency Range (MHz)	2400 ∽ 2483.5
Band Width (MHz)	83.5
V.S.W.R (Min)	1.9 : 1
Gain (Max)	3 ± 0.5 (dBi)
Input Impedance	50 (Ω)
Polarization	Linear

Mechanical Specifications

Antenna Size (Length x Diameter)	102.8 × 11 mm
Weight	12.5 ± 2 g
Radiator Material	Copper
Operation Temperature	– 20 ∽ 70 (℃)
Operation Humidity	10 ∽ 90 (%)

Option	
Remarks	

Fig 1. Return Loss (Agilent E8357A 300KHz～6GHz PNA Series Network Analyzer)

Fig 2. V.S.W.R (Agilent E8357A 300KHz～6GHz PNA Series Network Analyzer)

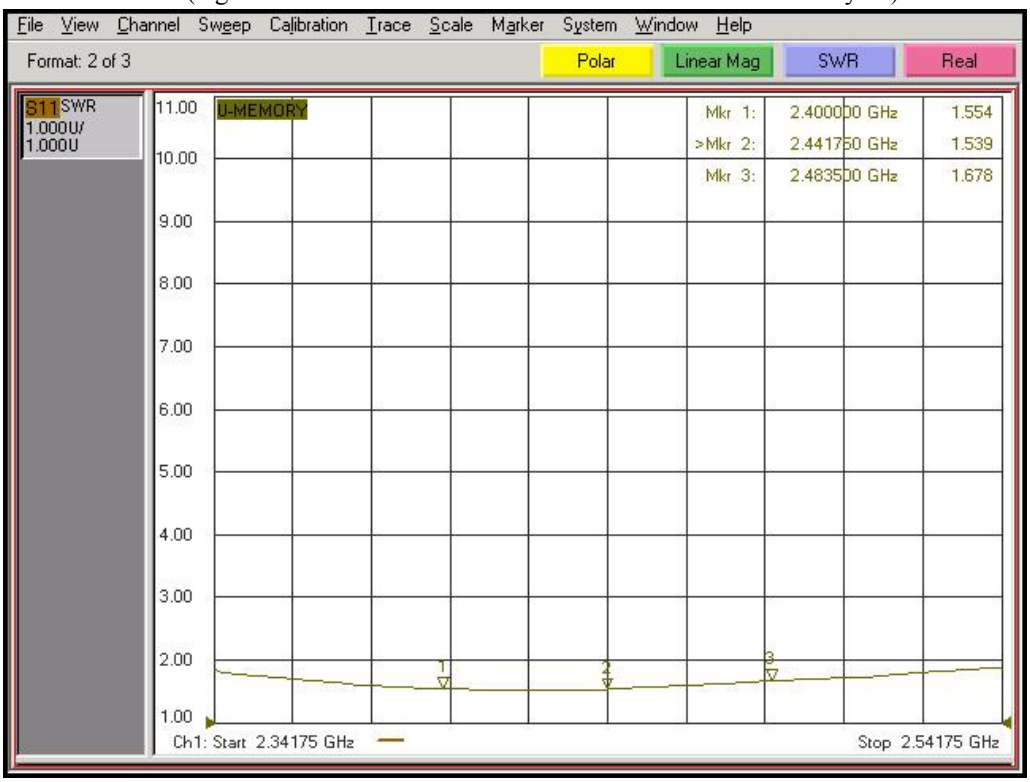


Fig 3. Smith Chart (Agilent E8357A 300KHz～6GHz PNA Series Network Analyzer)

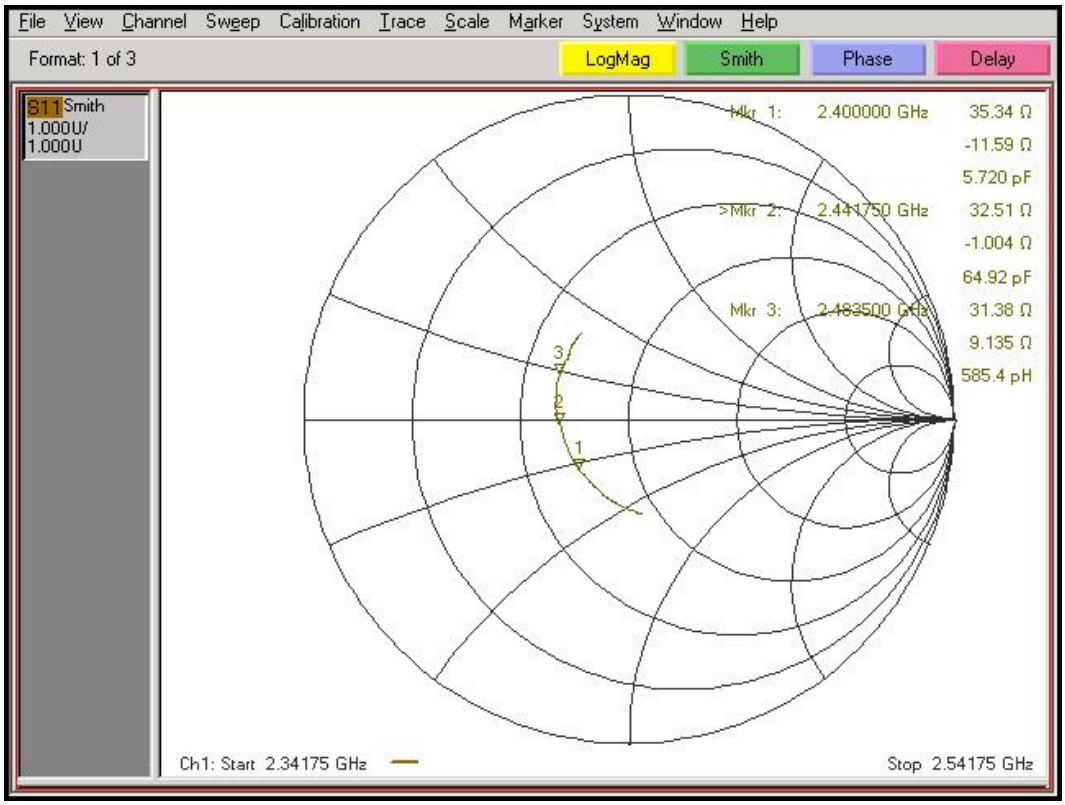
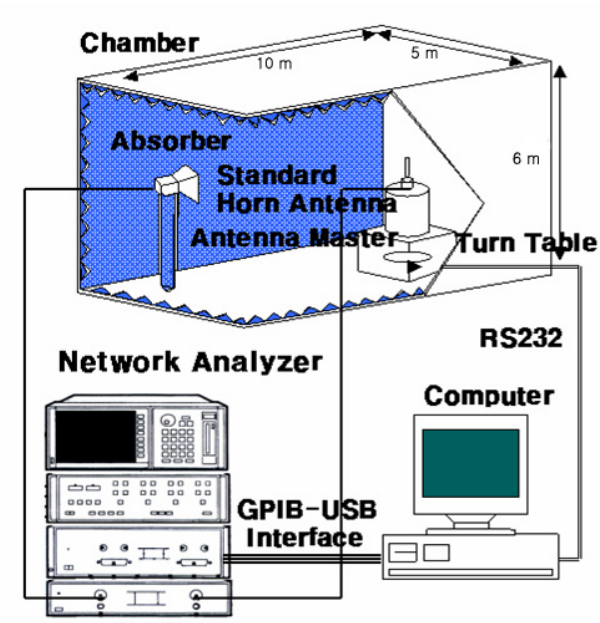


Fig 4. Measurement Configuration

(Hewlett Packard 8722ES 50 MHz～40 GHz S-Parameter Network Analyzer)



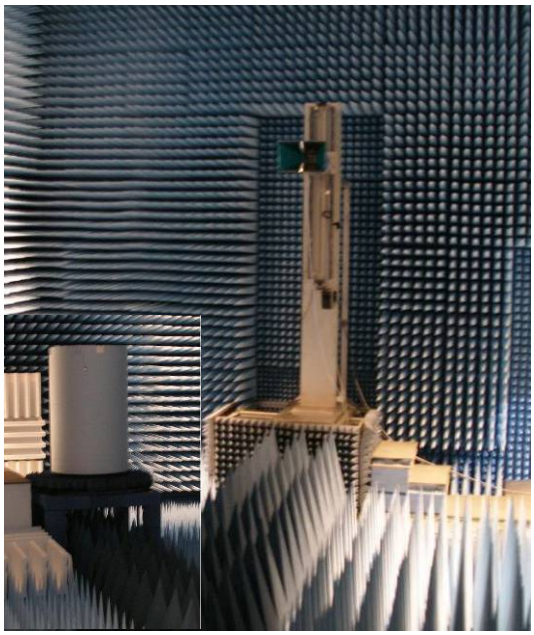


Fig 5. Axis Definitions (Antenna Center)

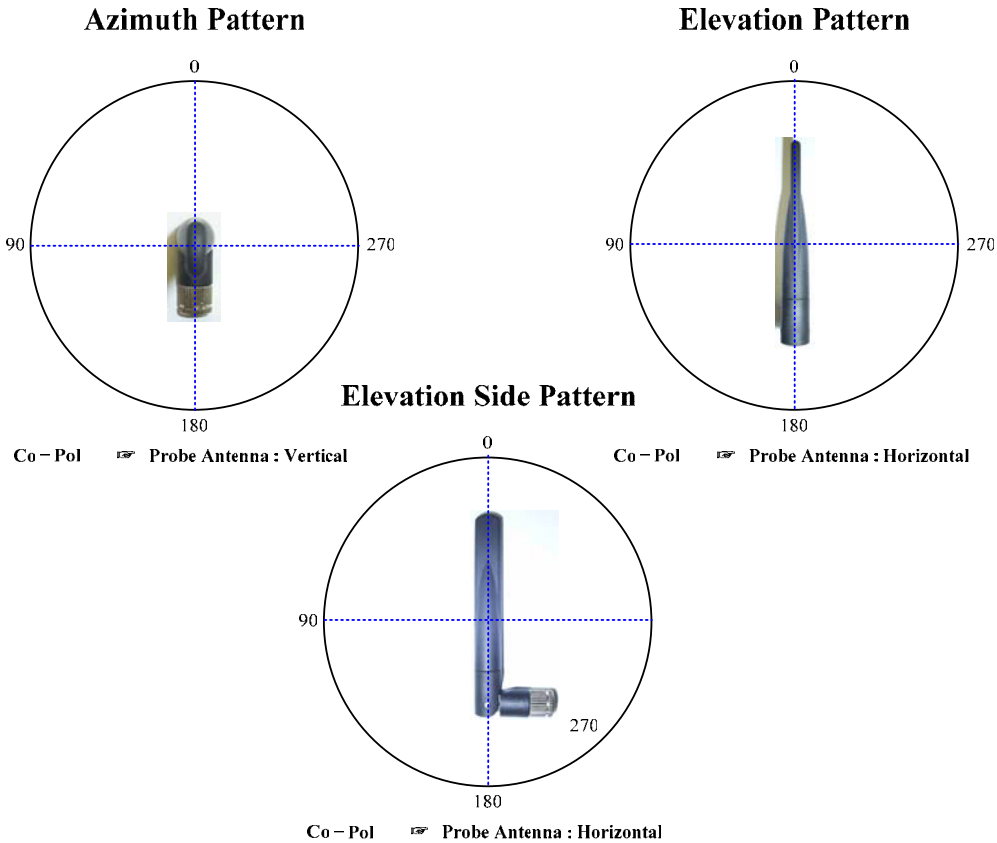
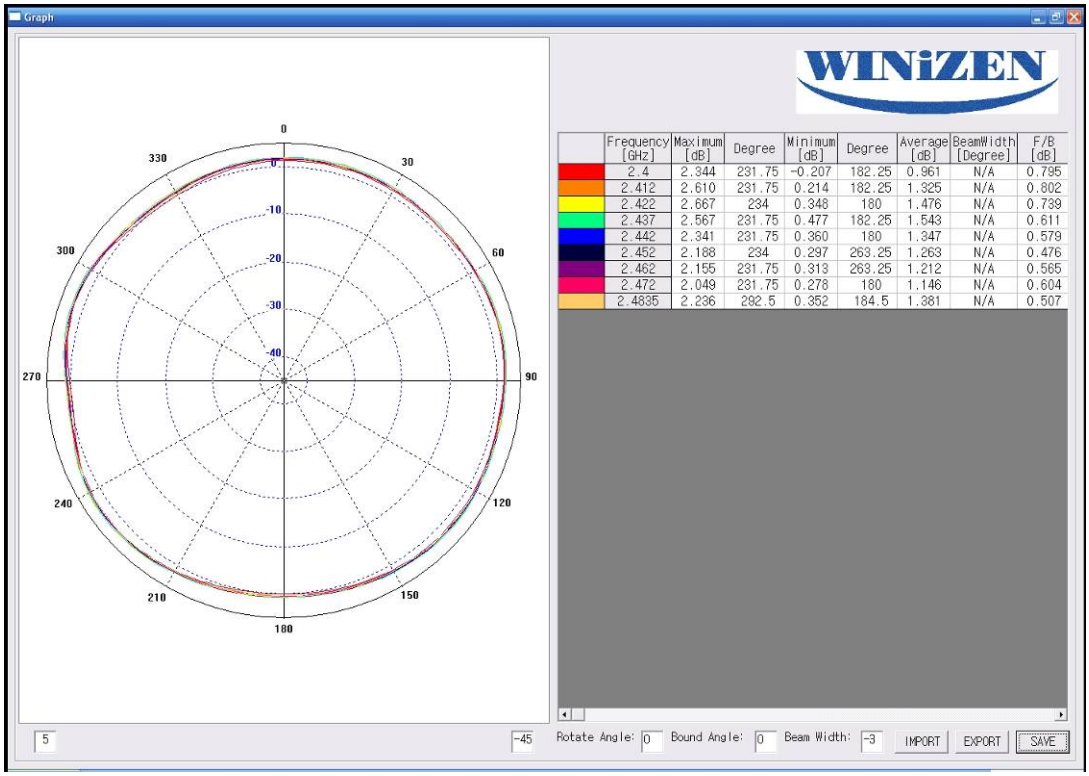


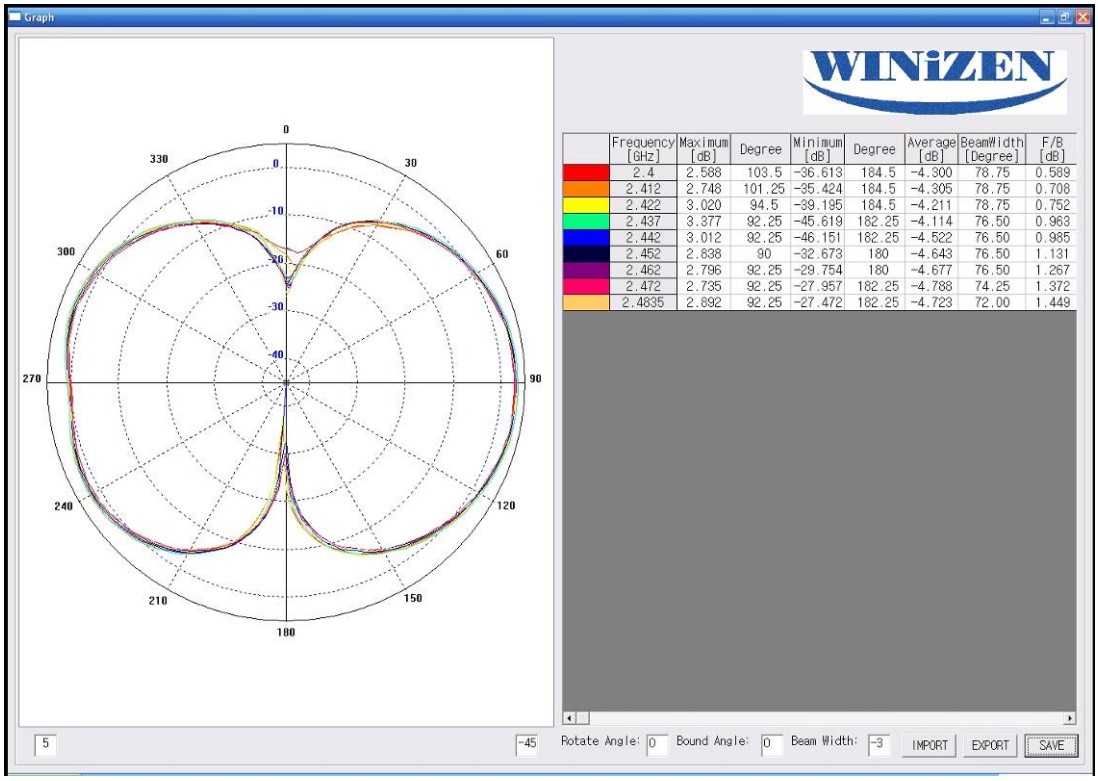
Fig 6. Gain Patterns

a. Azimuth Pattern



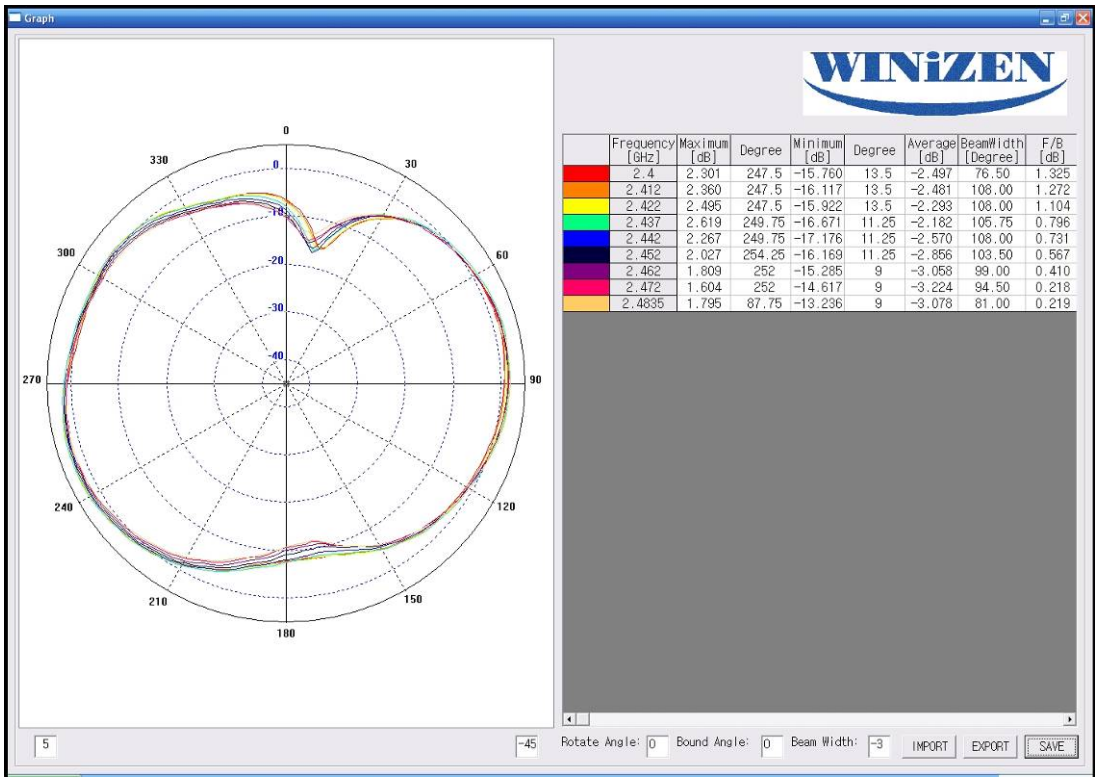
	Frequency [GHz]	Maximum [dB]	Degree	Minimum [dB]	Degree	Average [dB]	BeamWidth [Degree]	F/B [dB]
	2.4	2.344	231.75	-0.207	182.25	0.961	N/A	0.795
	2.412	2.610	231.75	0.214	182.25	1.325	N/A	0.802
	2.422	2.667	234	0.348	180	1.476	N/A	0.739
	2.437	2.567	231.75	0.477	182.25	1.543	N/A	0.611
	2.442	2.341	231.75	0.360	180	1.347	N/A	0.579
	2.452	2.188	234	0.297	263.25	1.263	N/A	0.476
	2.462	2.155	231.75	0.313	263.25	1.212	N/A	0.565
	2.472	2.049	231.75	0.278	180	1.146	N/A	0.604
	2.4835	2.236	282.5	0.352	184.5	1.381	N/A	0.507

b. Elevation Pattern



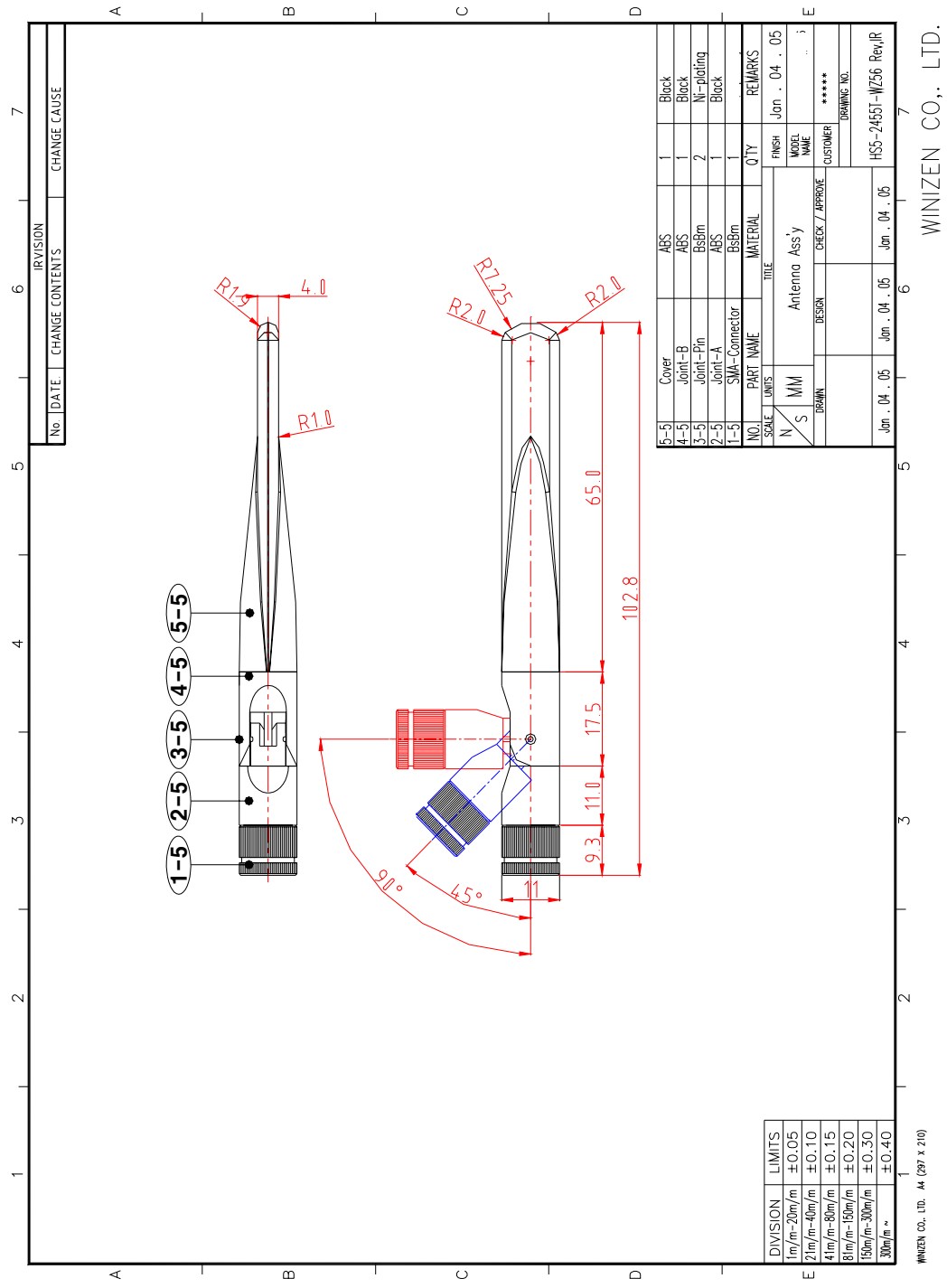
	Frequency [GHz]	Maximum [dB]	Degree	Minimum [dB]	Degree	Average [dB]	BeamWidth [Degree]	F/B [dB]
	2.4	2.588	103.5	-36.613	184.5	-4.300	78.75	0.589
	2.412	2.748	101.25	-35.424	184.5	-4.305	78.75	0.708
	2.422	3.020	94.5	-39.195	184.5	-4.211	78.75	0.752
	2.437	3.377	92.25	-45.619	182.25	-4.114	76.50	0.963
	2.442	3.012	92.25	-46.151	182.25	-4.522	76.50	0.985
	2.452	2.838	90	-32.673	180	-4.643	76.50	1.131
	2.462	2.796	92.25	-29.754	180	-4.677	76.50	1.267
	2.472	2.735	92.25	-27.957	182.25	-4.788	74.25	1.372
	2.4835	2.892	92.25	-27.472	182.25	-4.723	72.00	1.449

c. Elevation Side Pattern



	Frequency [GHz]	Maximum [dB]	Degree	Minimum [dB]	Degree	Average [dB]	BeamWidth [Degree]	F/B [dB]
	2.4	2.301	247.5	-15.760	13.5	-2.497	76.50	1.325
	2.412	2.360	247.5	-16.117	13.5	-2.481	108.00	1.272
	2.422	2.495	247.5	-15.922	13.5	-2.293	108.00	1.104
	2.437	2.619	249.75	-16.671	11.25	-2.182	105.75	0.796
	2.442	2.267	249.75	-17.176	11.25	-2.570	108.00	0.731
	2.452	2.027	254.25	-16.169	11.25	-2.856	103.50	0.567
	2.462	1.809	252	-15.285	9	-3.058	99.00	0.410
	2.472	1.604	252	-14.617	9	-3.224	94.50	0.218
	2.4835	1.795	87.75	-13.236	9	-3.078	81.00	0.219

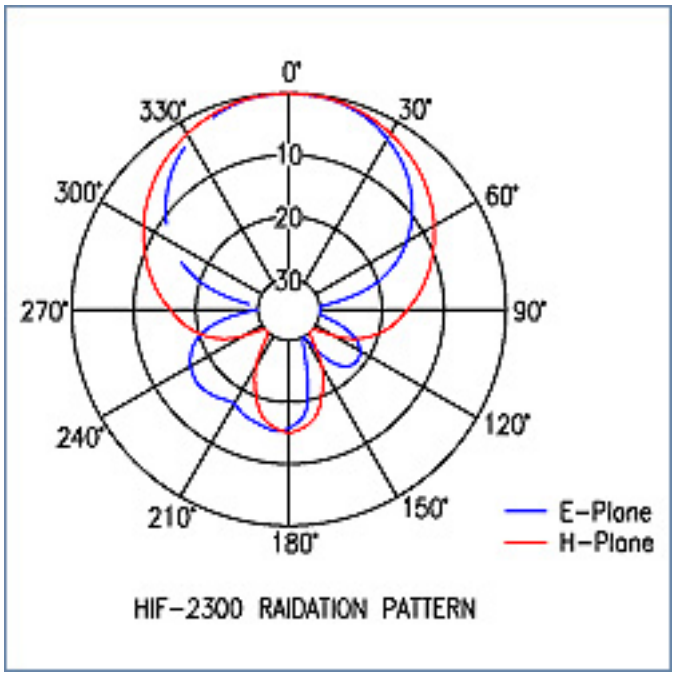
Fig 7. Antenna Mechanical



LS100W-Patch Antenna 2.4 GHz PATCH ANTENNA

:: Electrical specifications

Item	Specifications
Frequency Range	2400-2500MHz
Gain	8.5 dBi
Front to Back Ratio	15 dB
3dB Beam width	E-Plane55° H-Plane 70°
V.S.W.R (Max.)	1. 5 : 1
Impedance	50 ohms (nominal)
Polarization	Vertical
Power Input(Max.)	50 W



:: Mechanical specifications

Item	Specification
Dimensions	W : 90 mm, H : 127 mm, D : 68 mm
Weight	160 g
Connector Type	SMA - R/A Female
Articulation Angle	- 60 ° ~ + 60 °
Operating Temperature	- 30 ℃ ~ + 60 ℃

LS100W-Patch Antenna 2.4 GHz PATCH ANTENNA

< Out line drawing >