Specifications Sheet

Object	Dipole Antenna	**Page**	1 of 7
Customer		**Date**	March 30, 2011
System	WIFI 2.4/5 GHz Dual-band	**Ver.**	IR
Model Name	W1E – WO – 08	**Written by**	G.. H. KIM

Electrical Specifications

Frequency Range (MHz)	2400 ∽ 2483.5	5150 ∽ 5875
Band Width (MHz)	83.5	725
V.S.W.R (Min)	1.9 : 1	1.9 : 1
Gain (Max)	2.5 ± 1 (dBi)	3.5 ± 1 (dBi)
Input Impedance	50 (Ω)	
Polarization	Linear	

Mechanical Specifications

Antenna Size (Length x Diameter)	105 × 11
Connector	SMA Reverse Polarity (Female)
Weight	N/A
Operation Temperature	– 30 ∽ 70 (℃)
Operation Humidity	10 ∽ 90 (%)

Option	
Remarks	

WINiZEN Co., Ltd.

Fig 1. Return Loss (Agilent E8358A 300KHz～9GHz PNA Series Network Analyzer)

Fig 2. V.S.W.R (Agilent E8358A 300KHz～9GHz PNA Series Network Analyzer)

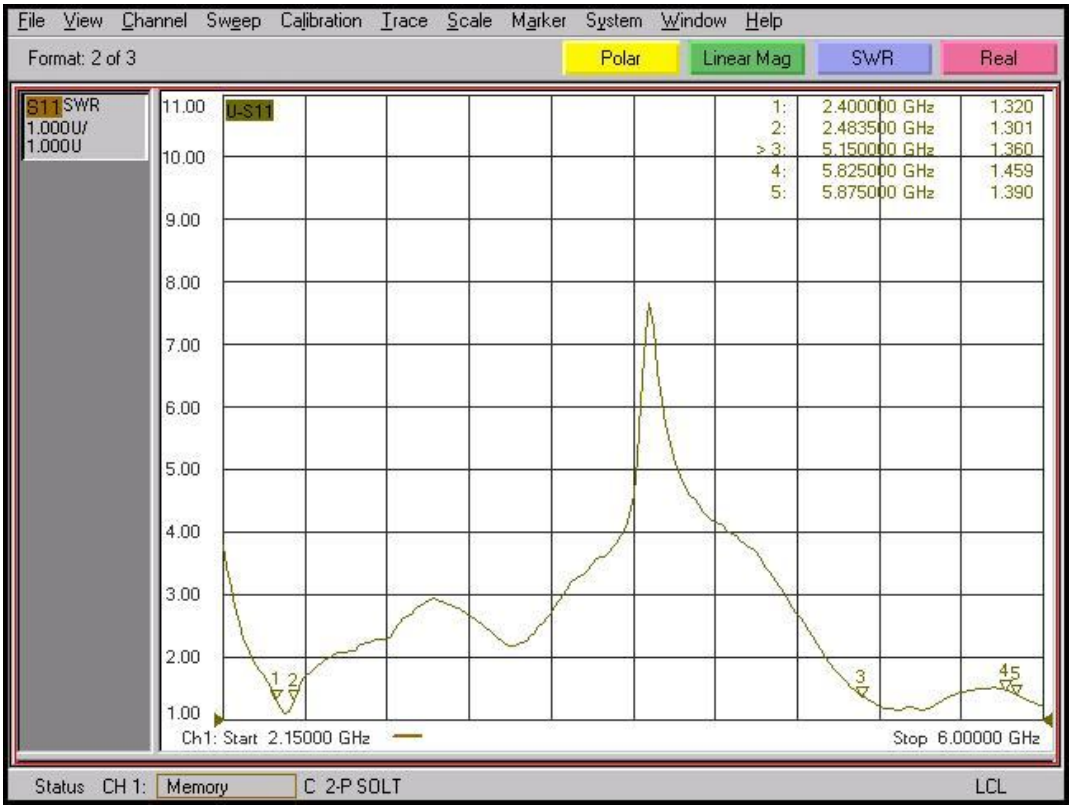


Fig 3. Smith Chart (Agilent E8358A 300KHz～9GHz PNA Series Network Analyzer)

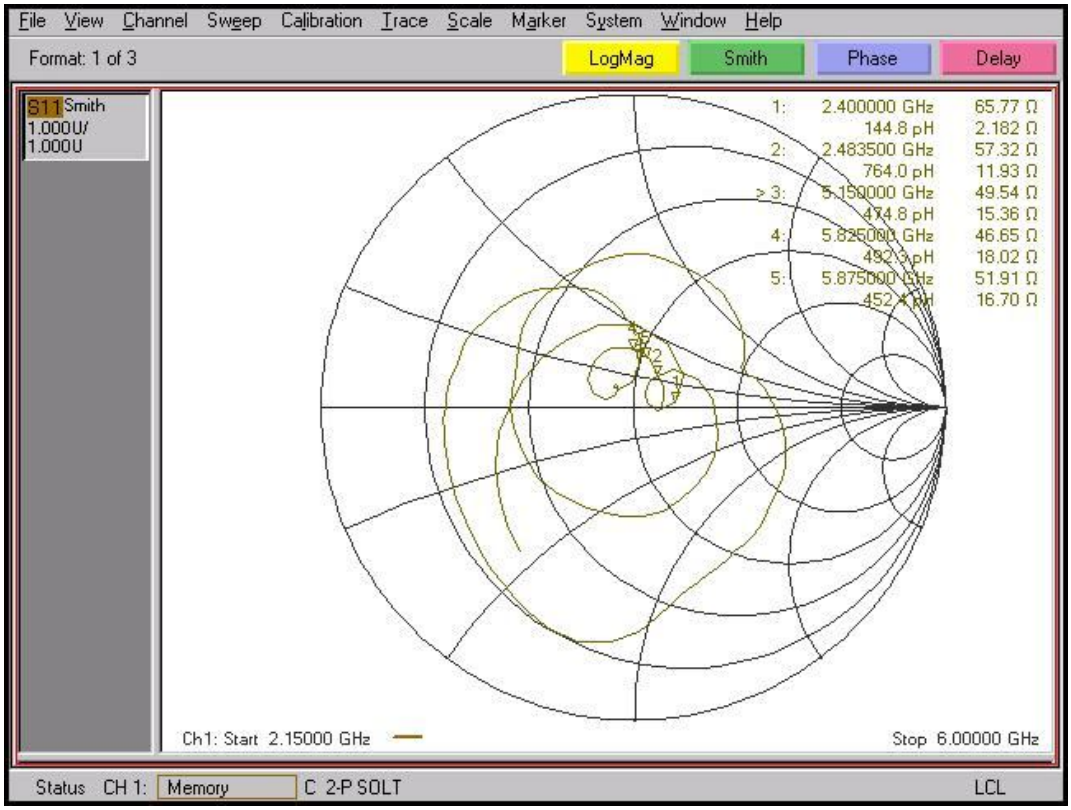


Fig 4. Measurement Configuration

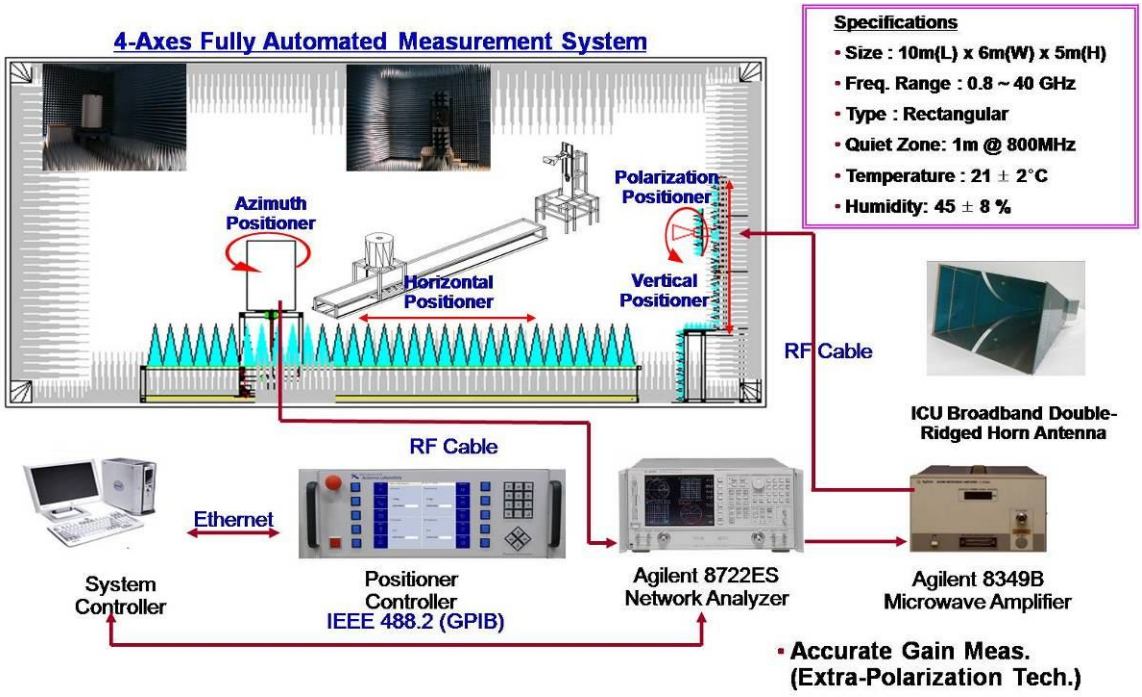


Fig 5. Axis Definitions (Antenna Center)

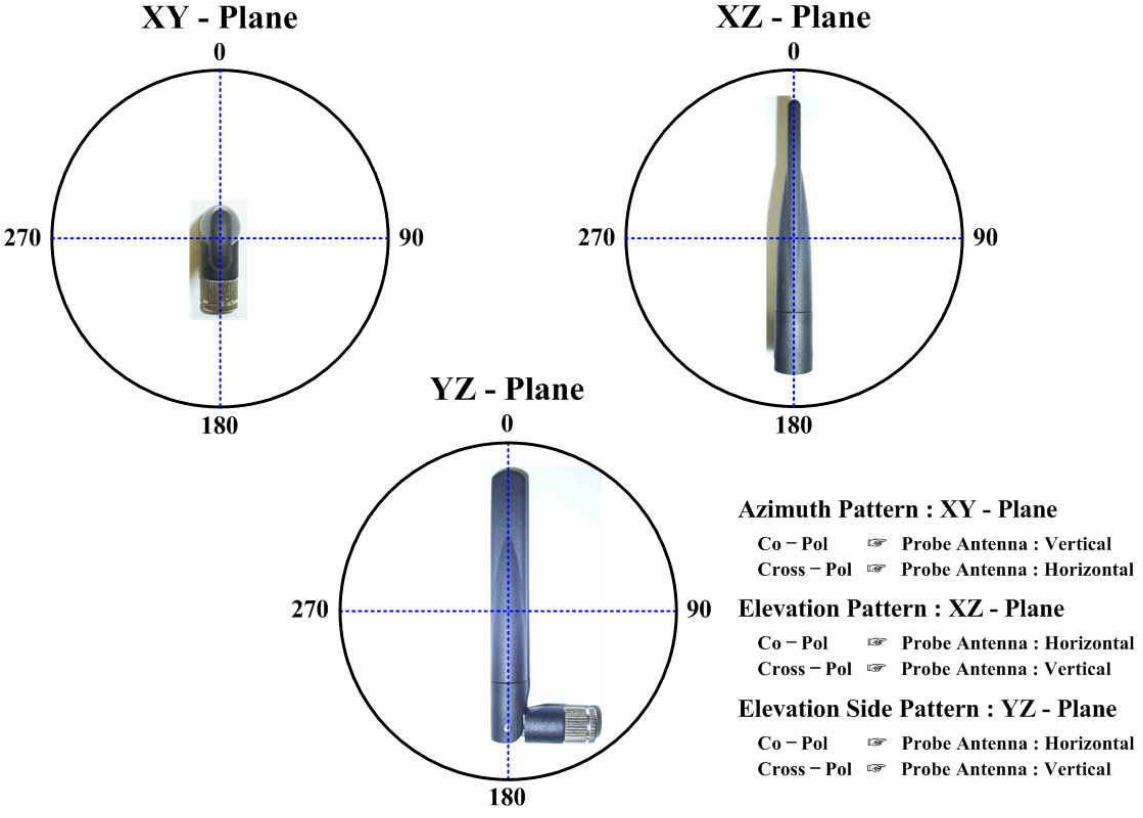
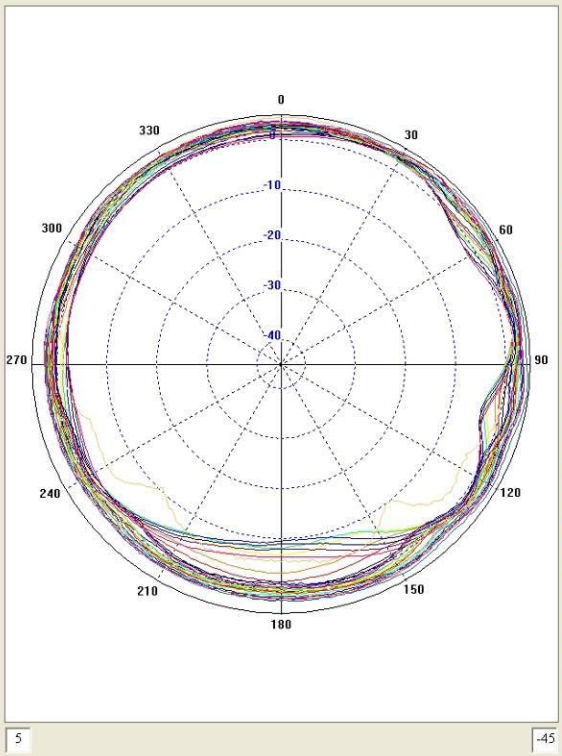


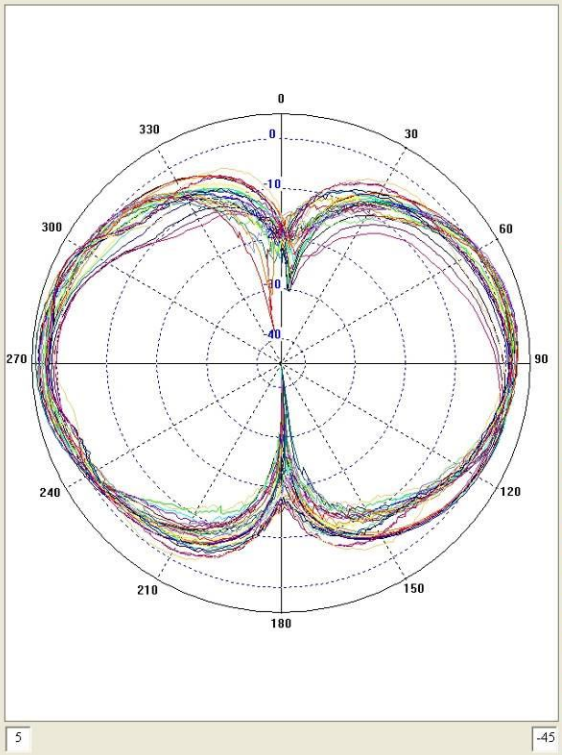
Fig 6. Gain Patterns

a. Azimuth Pattern ; Co – Pol



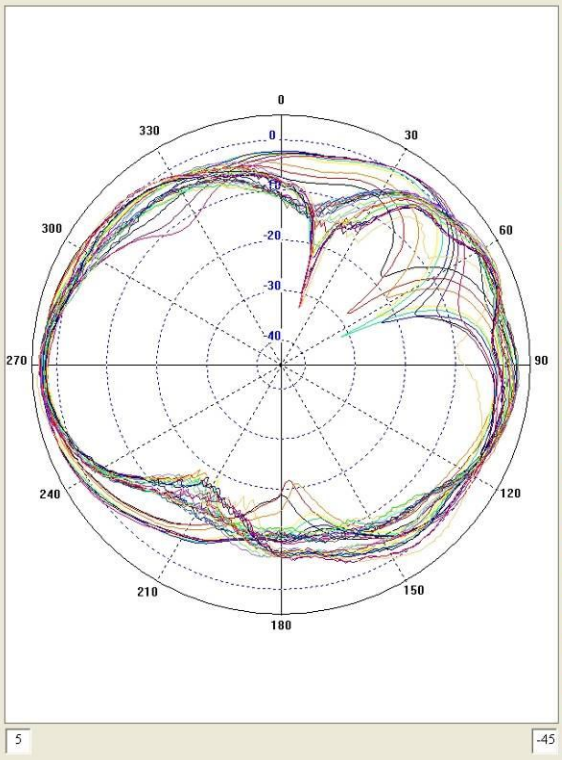
	Frequency [GHz]	Maximum [dB]	Degree	Minimum [dB]	Degree	Average [dB]	BeamWidth -3[dB]	F/B [dB]
Aver.	4.58	3.251	45.33	-2.570	209.47	0.866	193.30	3.070
	2.4	3.106	8	-1.009	152	0.953	222.00	3.243
	2.412	3.183	7	-2.863	151	0.395	151.00	4.738
	2.422	3.214	18	-4.831	153	-0.139	106.00	5.096
	2.437	3.200	19	-8.048	160	-1.096	103.00	5.611
	2.442	3.163	20	-9.038	167	-1.363	102.00	5.476
	2.452	2.896	25	-9.819	177	-1.575	107.00	4.556
	2.462	2.376	26	-9.136	178	-1.642	111.00	3.915
	2.472	2.270	27	-8.047	179	-1.494	109.00	3.850
	2.4835	2.080	31	-6.436	181	-1.300	112.00	3.682
	5	2.368	95	0.442	233	1.452	N/A	0.678
	5.05	2.501	94	0.589	230	1.554	N/A	0.801
	5.11	3.102	94	1.027	230	2.143	N/A	0.848
	5.15	3.624	51	1.407	228	2.631	N/A	1.254
	5.2	3.810	95	1.729	232	2.758	N/A	1.094
	5.25	3.428	50	1.051	228	2.311	N/A	1.694
	5.3	3.947	51	1.087	228	2.592	N/A	2.010
	5.35	4.558	97	1.460	233	3.002	356.00	1.842
	5.4	3.495	98	-0.341	233	1.770	273.00	2.024
	5.47	3.915	50	-0.040	229	2.088	254.00	2.424
	5.5	3.053	52	-0.484	228	1.373	259.00	2.154
	5.55	2.582	55	-1.168	227	0.851	258.00	1.805
	5.6	3.009	57	-0.546	227	1.488	266.00	1.655
	5.65	3.441	25	-0.553	225	1.702	260.00	2.489
	5.725	2.965	31	-1.260	227	1.266	239.00	2.391
	5.755	3.238	36	-1.168	226	1.362	236.00	2.633
	5.8	2.949	34	-2.618	226	0.585	209.00	3.342
	5.825	3.151	37	-2.843	225	0.666	199.00	3.615
	5.865	4.226	37	-2.514	224	1.485	191.00	4.084
	5.875	4.144	37	-2.384	223	1.320	191.00	4.139
	6	4.535	3	-10.750	224	-1.158	132.00	8.949

b. Elevation Pattern ; Co – Pol



	Frequency [GHz]	Maximum [dB]	Degree	Minimum [dB]	Degree	Average [dB]	BeamWidth -3[dB]	F/B [dB]
Aver.	4.58	2.596	276.17	-31.297	172.47	-5.581	58.20	1.152
	2.4	1.955	263	-27.654	5	-4.457	86.00	0.290
	2.412	2.084	265	-25.681	181	-4.492	78.00	0.730
	2.422	2.168	266	-27.726	179	-4.649	60.00	0.830
	2.437	2.161	267	-38.287	178	-4.962	54.00	0.788
	2.442	2.132	267	-70.419	178	-5.190	56.00	0.767
	2.452	1.843	267	-32.997	178	-5.669	63.00	0.743
	2.462	1.118	266	-30.482	6	-6.672	69.00	0.694
	2.472	0.689	266	-28.988	7	-7.195	74.00	0.634
	2.4835	0.244	266	-23.489	10	-7.482	79.00	0.492
	5	2.131	274	-30.509	182	-6.788	65.00	0.330
	5.05	2.294	273	-33.931	178	-6.688	65.00	0.629
	5.11	3.170	272	-31.027	178	-5.890	65.00	0.666
	5.15	3.463	268	-33.613	177	-5.667	65.00	0.812
	5.2	3.649	275	-42.161	178	-5.796	61.00	1.072
	5.25	3.750	273	-37.029	180	-5.785	56.00	1.193
	5.3	4.400	277	-40.120	177	-5.726	52.00	1.868
	5.35	4.380	274	-44.653	173	-6.049	49.00	2.339
	5.4	3.813	268	-43.121	174	-6.549	48.00	2.611
	5.47	3.409	273	-26.263	173	-5.600	51.00	0.848
	5.5	2.549	272	-25.779	175	-6.182	54.00	0.607
	5.55	2.633	284	-24.664	173	-6.101	54.00	1.092
	5.6	2.616	285	-38.368	347	-6.061	53.00	1.092
	5.65	3.599	288	-31.104	352	-5.126	51.00	1.445
	5.725	2.734	288	-23.043	357	-5.320	51.00	1.789
	5.755	3.086	289	-22.895	355	-4.904	49.00	1.742
	5.8	2.574	289	-21.301	358	-5.195	47.00	1.797
	5.825	2.392	290	-18.933	358	-4.918	48.00	1.715
	5.865	3.033	292	-20.459	2	-3.895	47.00	1.746
	5.875	2.749	292	-20.620	1	-4.068	49.00	1.672
	6	1.054	296	-23.579	4	-4.347	47.00	1.517

c. Elevation Side Pattern ; Co – Pol



	Frequency [GHz]	Maximum [dB]	Degree	Minimum [dB]	Degree	Average [dB]	BeamWidth -3[dB]	F/B [dB]
Aver.	4.58	2.862	267.57	-19.529	58.37	-4.274	52.43	1.805
	2.4	2.870	274	-18.929	180	-4.543	72.00	2.376
	2.412	2.868	272	-28.206	52	-5.053	72.00	3.466
	2.422	2.858	272	-21.039	173	-4.752	73.00	4.283
	2.437	2.993	262	-23.396	63	-3.701	66.00	4.853
	2.442	3.113	263	-31.692	65	-3.460	61.00	4.860
	2.452	3.062	262	-23.186	67	-3.232	58.00	4.340
	2.462	2.710	259	-16.297	69	-3.508	57.00	3.299
	2.472	2.652	258	-11.947	71	-3.569	57.00	2.362
	2.4835	2.482	255	-11.485	324	-3.448	60.00	1.298
	5	2.124	273	-12.822	10	-4.916	49.00	0.442
	5.05	2.306	270	-13.032	9	-4.998	48.00	0.766
	5.11	3.064	270	-13.514	10	-4.407	45.00	0.705
	5.15	3.180	270	-13.005	7	-4.258	45.00	0.926
	5.2	3.294	269	-13.663	12	-4.337	44.00	1.031
	5.25	3.340	272	-13.840	11	-4.413	44.00	1.182
	5.3	3.583	272	-14.427	7	-4.343	42.00	0.834
	5.35	3.607	269	-14.995	10	-4.353	42.00	1.248
	5.4	2.879	268	-15.207	12	-4.684	40.00	1.029
	5.47	3.179	267	-14.403	15	-3.539	40.00	0.907
	5.5	2.430	267	-16.375	217	-4.206	39.00	0.469
	5.55	2.092	269	-16.291	216	-4.453	39.00	0.305
	5.6	2.149	269	-17.161	19	-4.359	44.00	0.564
	5.65	2.656	267	-22.303	16	-3.947	45.00	0.323
	5.725	2.125	267	-22.449	16	-4.735	48.00	0.656
	5.755	2.635	268	-20.254	17	-4.280	43.00	0.682
	5.8	2.367	269	-22.712	16	-4.799	44.00	1.332
	5.825	2.405	269	-27.415	16	-4.785	71.00	1.414
	5.865	3.418	269	-29.990	16	-3.960	72.00	1.651
	5.875	3.351	271	-33.081	17	-4.160	71.00	1.815
	6	4.054	265	-32.743	18	-5.011	42.00	4.744

Fig 7. Drawing