



Qineng HHT4GR(1) Evaluation report

(800/850/900/1900/2100 band for main antenna)

20110622





Content

- Test Fixture
- Matching circuit
- Antenna performance

Fixture overview



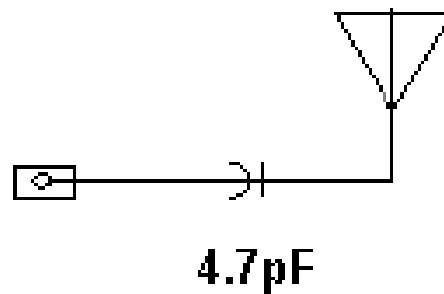
Front side



back side

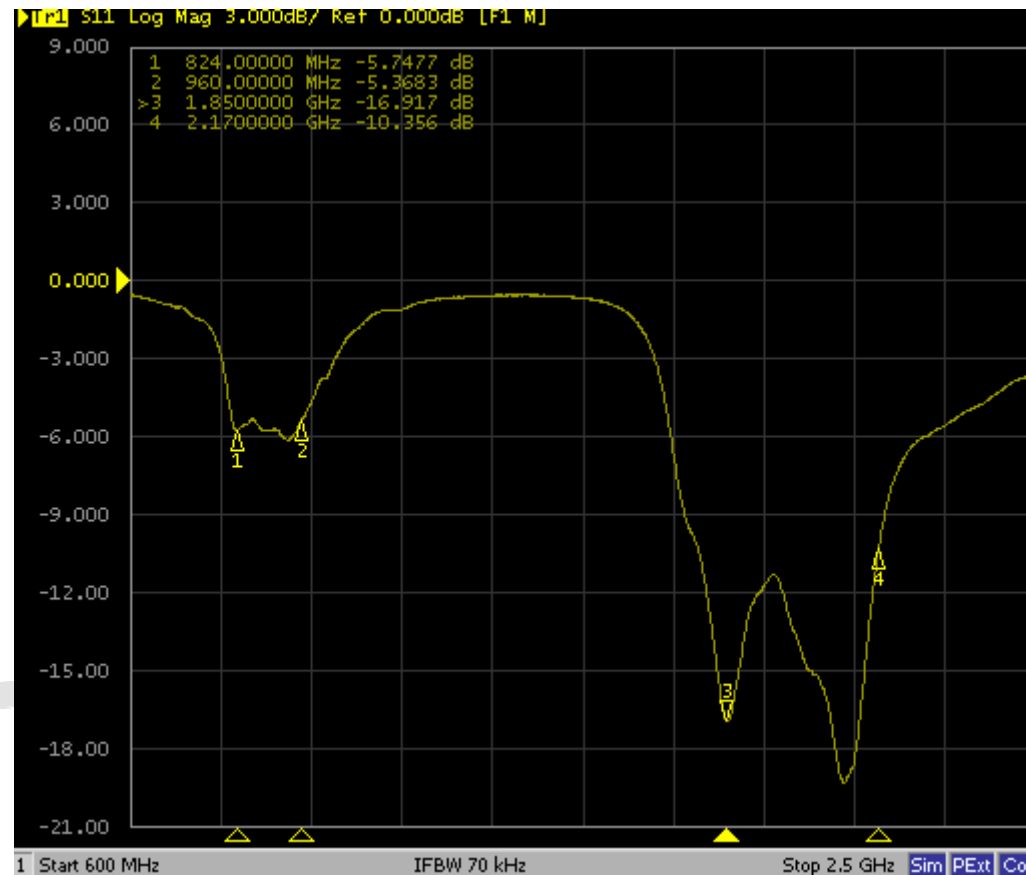
Matching Circuit

Matching circuit for main antenna:



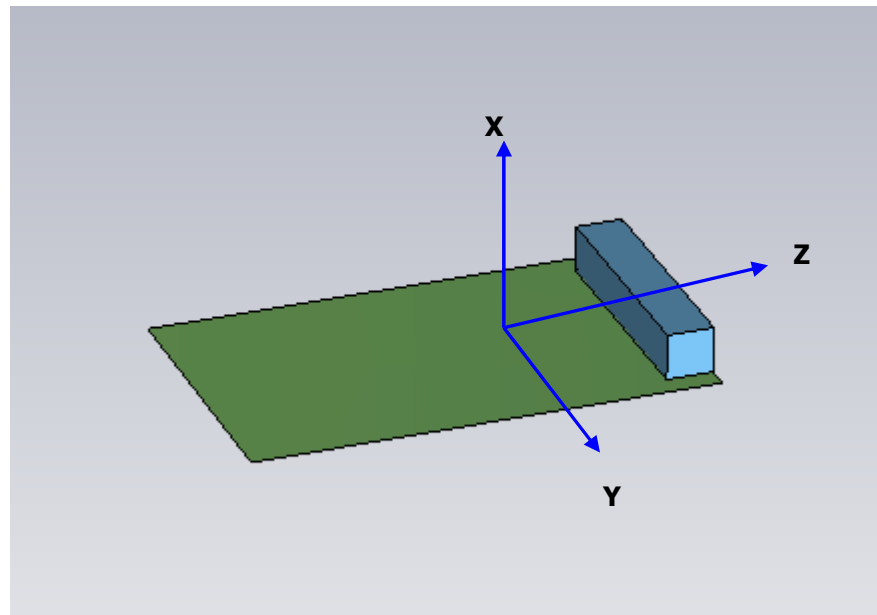
Antenna performance

Main antenna S11:



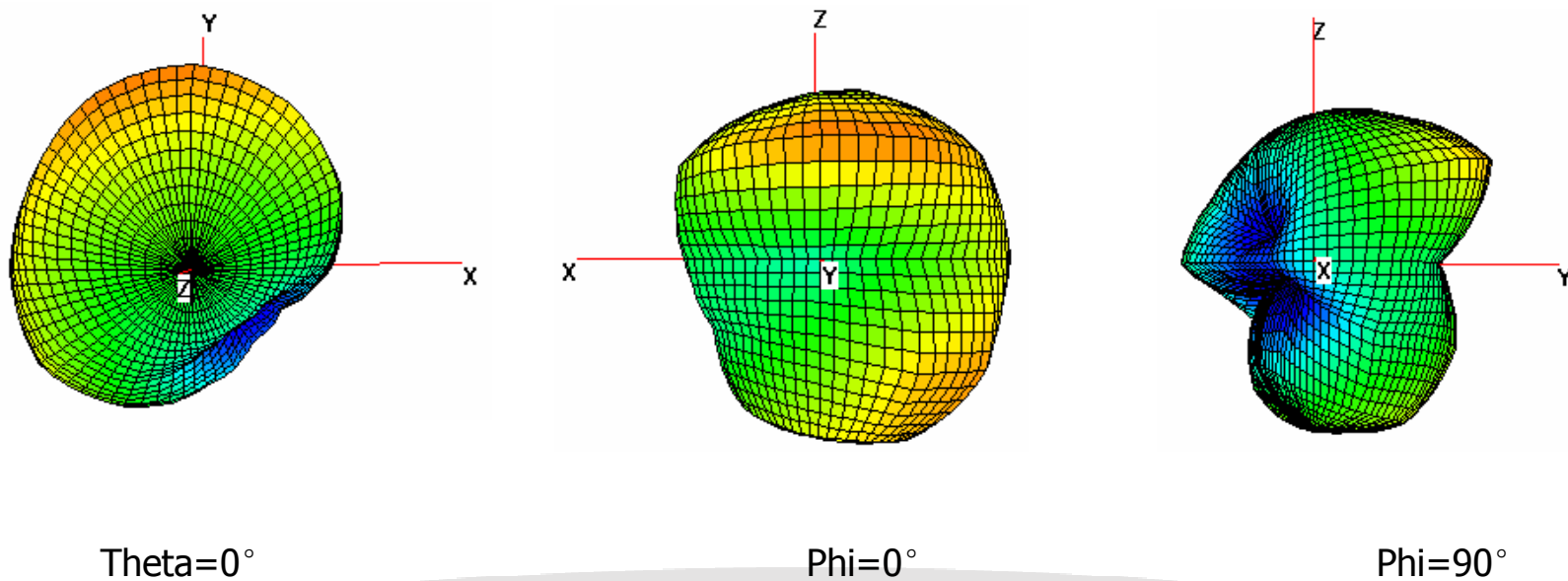
Antenna performance

Measure method:



Antenna performance

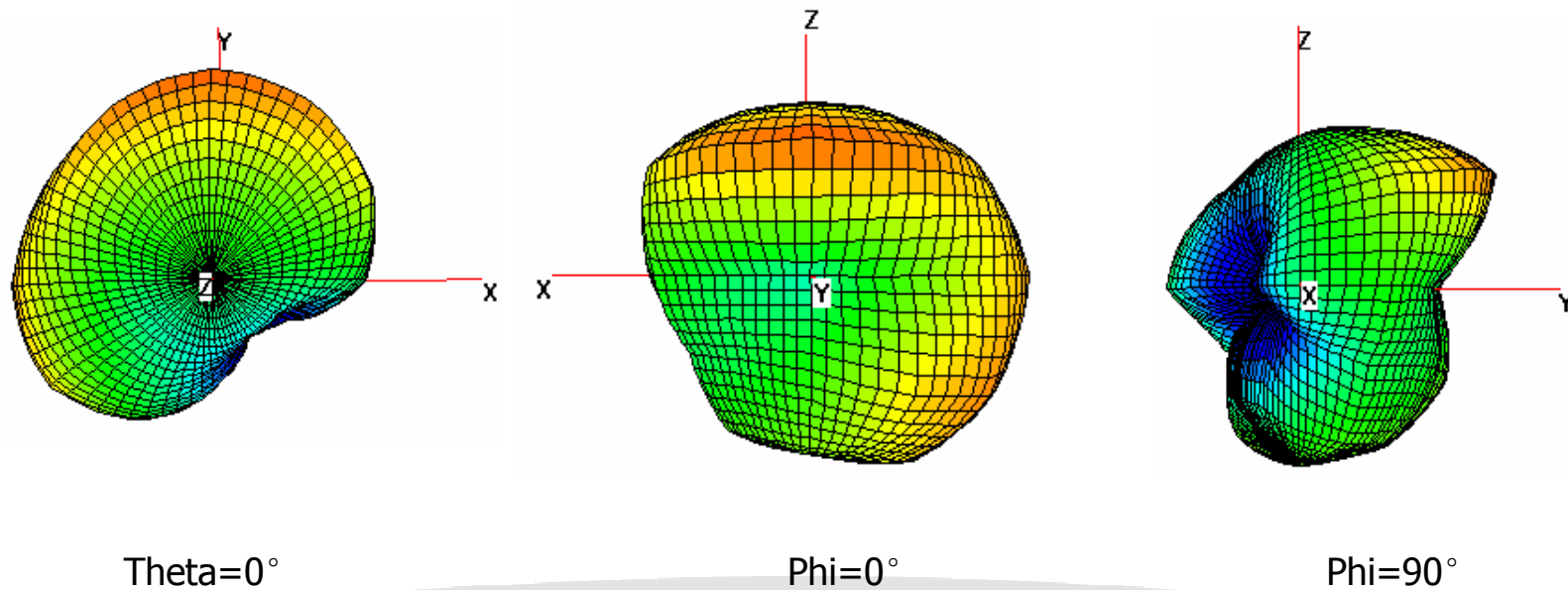
Total Radiation pattern



radiation pattern of typical frequency 1920MHz in 1920-1980MHz frequency band

Antenna performance

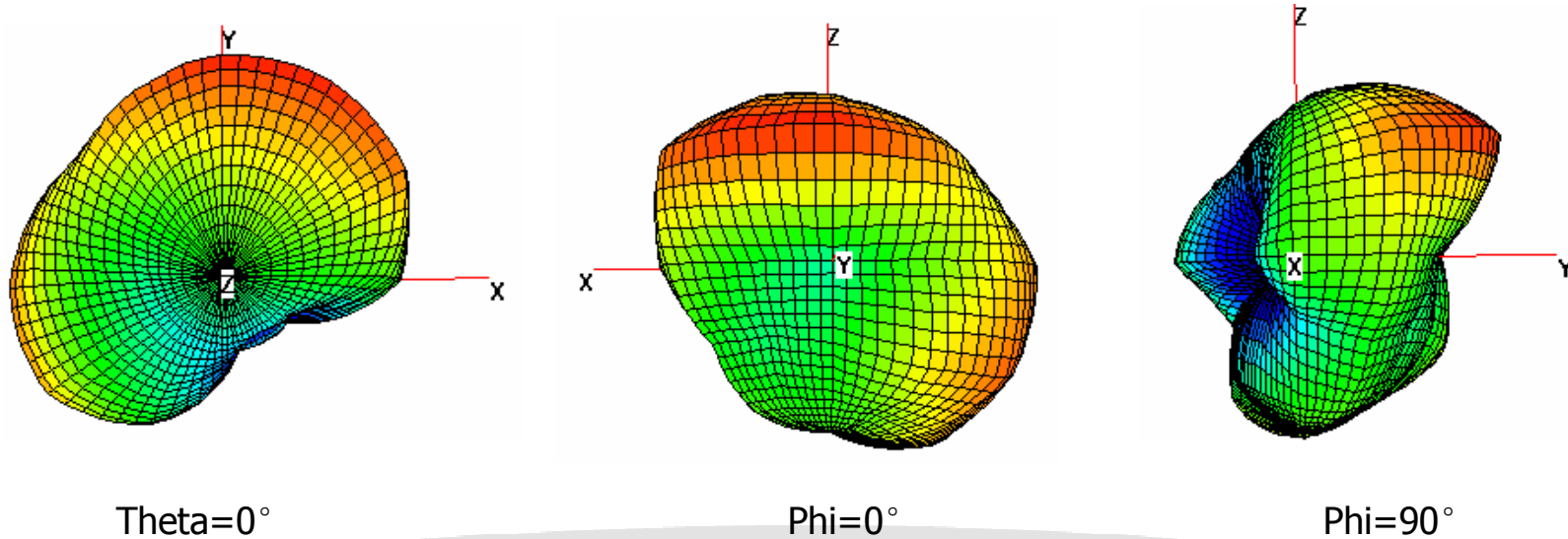
Total Radiation pattern



radiation pattern of typical frequency 1950MHz in 1920-1980MHz frequency band

Antenna performance

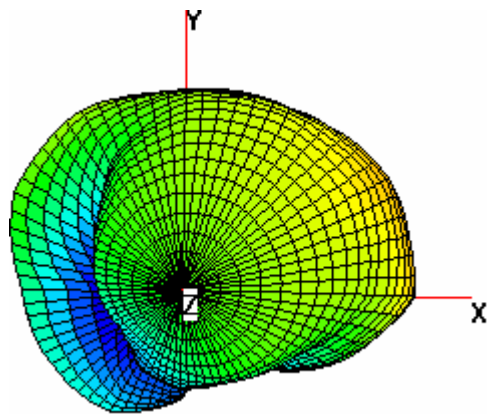
Total Radiation pattern



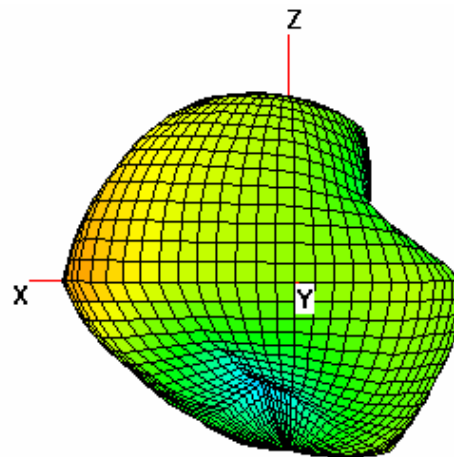
radiation pattern of typical frequency 1980MHz in 1920-1980MHz frequency band

Antenna performance

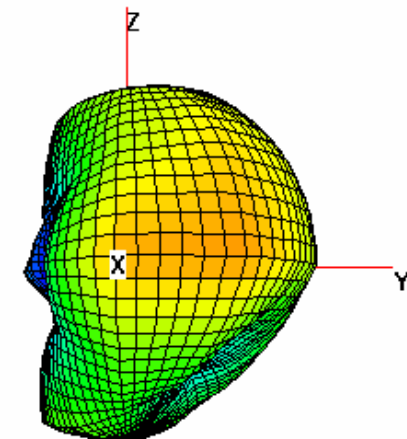
Total Radiation pattern



Theta=0°



Phi=0°

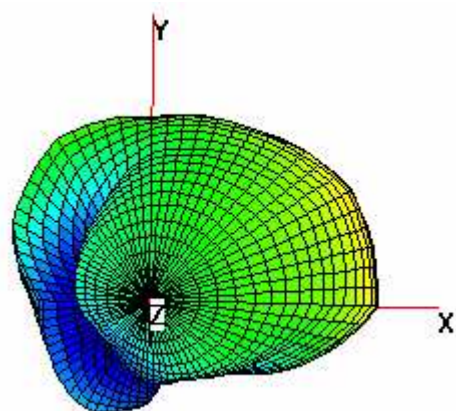


Phi=90°

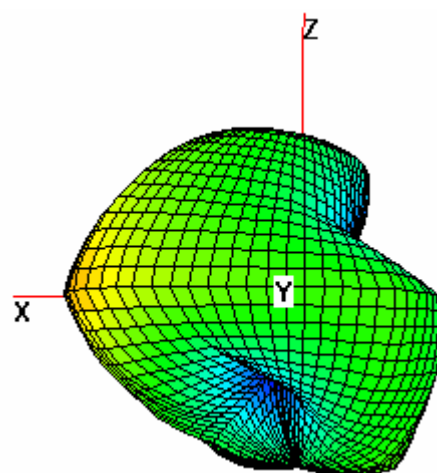
radiation pattern of typical frequency 2110MHz in 2110-2170MHz frequency band

Antenna performance

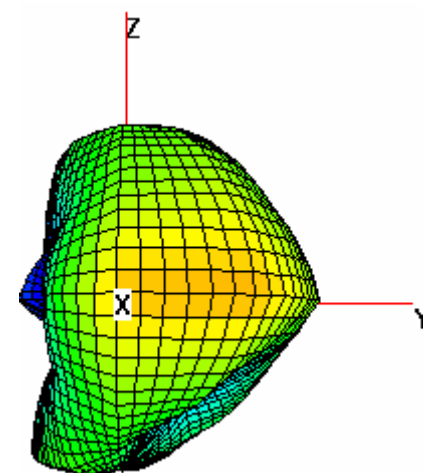
Total Radiation pattern



Theta=0°



Phi=0°

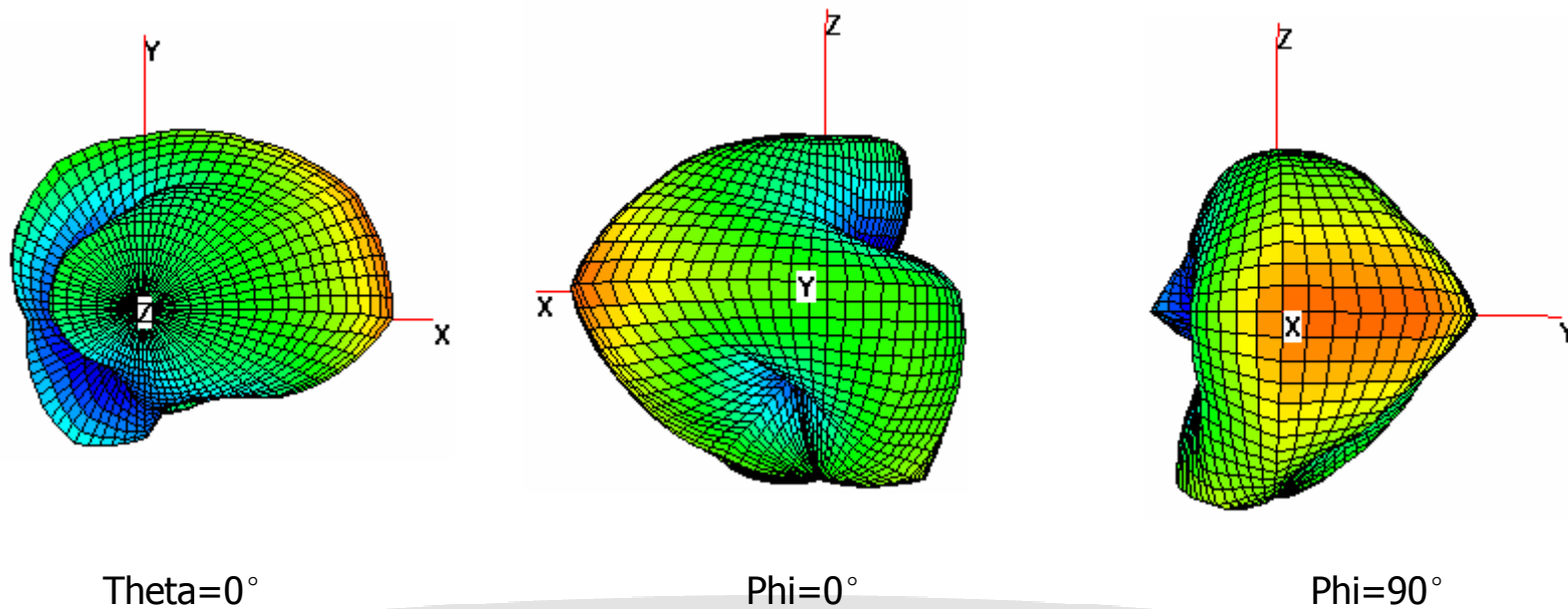


Phi=90°

radiation pattern of typical frequency 2140MHz in 2110-2170MHz frequency band

Antenna performance

Total Radiation pattern



radiation pattern of typical frequency 2170MHz in 2110-2170MHz frequency band

Antenna performance

Main antenna Efficiency (low band):

Freq (MHz)	Efficiency(%)	Gain(dBi)	Freq (MHz)	Efficiency(%)	Gain(dBi)
824	28	-2.2	902	33	-0.7
830	29	-2.1	908	34	-0.6
836	29	-2.0	914	35	-0.5
842	30	-1.8	920	35	-0.5
848	31	-1.6	926	35	-0.4
854	31	-1.5	932	35	-0.3
860	31	-1.3	938	35	-0.3
866	32	-1.2	944	35	-0.3
872	32	-1.1	950	34	-0.4
878	33	-1.1	956	33	-0.6
884	33	-1.0	960	32	-0.6
890	33	-0.9	Average	33	
896	32	-0.8			

Antenna performance

Main antenna Efficiency (high band):

Freq(MHz)	Efficiency(%)	Gain(dBi)	Freq(MHz)	Efficiency(%)	Gain(dBi)	Freq(MHz)	Efficiency(%)	Gain(dBi)
1848	33	-1.2	1938	39	-1.7	2050	51	0.1
1854	33	-1.3	1944	40	-1.5	2060	52	0.2
1860	33	-1.4	1950	40	-1.4	2070	53	0.2
1866	34	-1.4	1956	40	-1.3	2080	55	0.3
1872	35	-1.4	1962	41	-1.2	2090	57	0.3
1878	35	-1.5	1968	41	-1.1	2100	57	0.3
1884	35	-1.5	1974	42	-1.1	2110	57	0.2
1890	36	-1.6	1980	43	-1.1	2120	56	0.0
1896	36	-1.6	1986	43	-1.2	2130	53	-0.2
1902	37	-1.7	1990	43	-1.0	2140	51	-0.3
1908	38	-1.7	2000	48	-0.4	2150	47	-0.5
1914	38	-1.7	2010	49	-0.2	2160	43	-0.9
1920	39	-1.8	2020	51	0.0	2170	38	-1.3
1926	39	-1.8	2030	51	0.1	Average	44	
1932	39	-1.9	2040	50	0.0			



Thanks!

