

CAR GSM / 3G/ LTE / WIFI Antenna

MODEL: MA-88



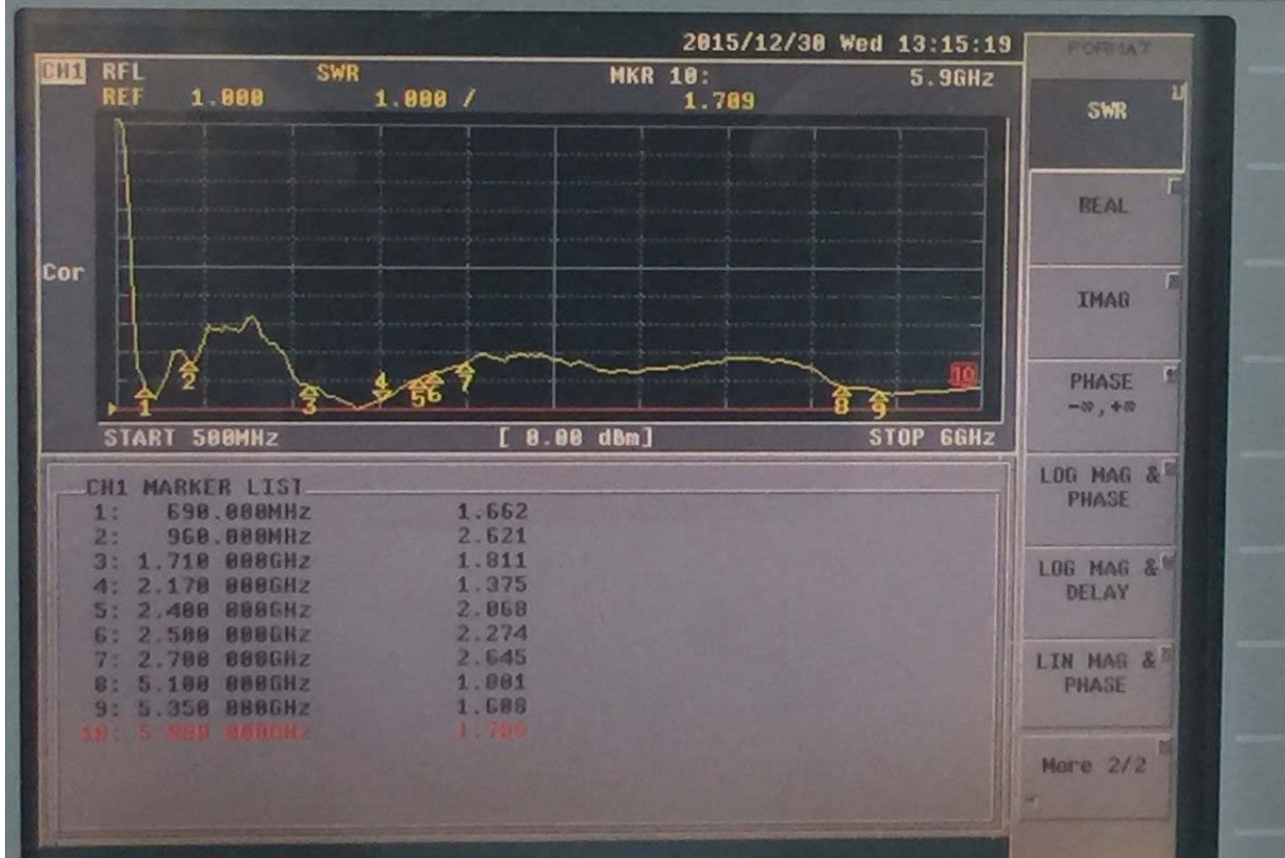
1. Electrica Properties

Parameter	Description
Frequency Band	690-960/1710-2170/2400-2700/5100-5850Mhz
Nominal Impedance	50 ohm
Polarization	Vertical
Electrical Wave	Dipole
Return Loss	Please See Data-1
V.S.W.R	3.0:1
Antenna Peak Gain	2.5 / 3 / 4.5 / 3 dBi

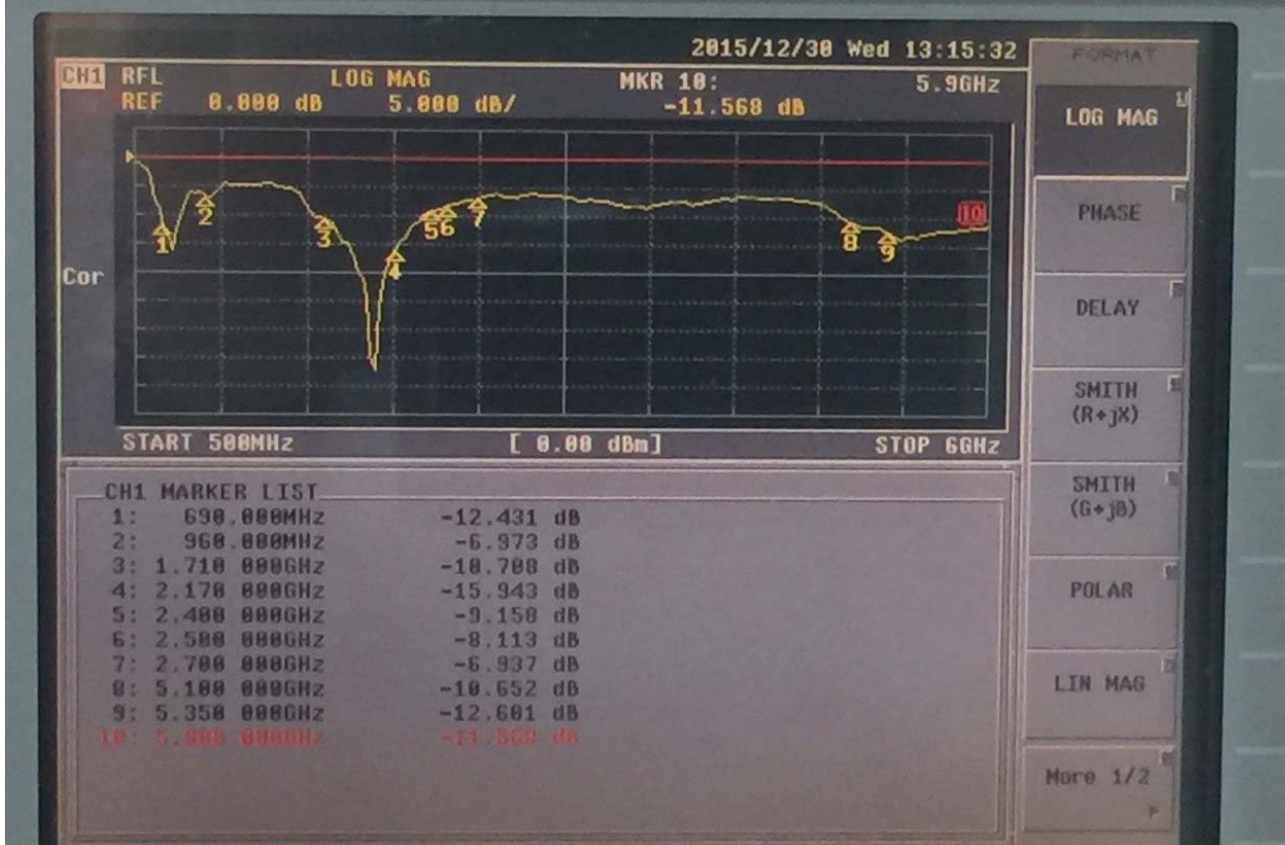
2. Mechanical Properties

Parameter	Description
Antenna Type	External Antenna
Touch Type	SUS430 Magnet Base mounting
Connector Type	SMA 180°-Type
Antenna Dimensions	55.0 mm $\pm$ 3 (without Magnet base mounting)
Antenna Cable Total Length	CFD200-3000 mm $\pm$ 30
Antenna Color	Black
Operating Temperature Range	-40°C~+80°C
Storage Temperature Range	-40°C~+80°C
Waterproof	IPX7

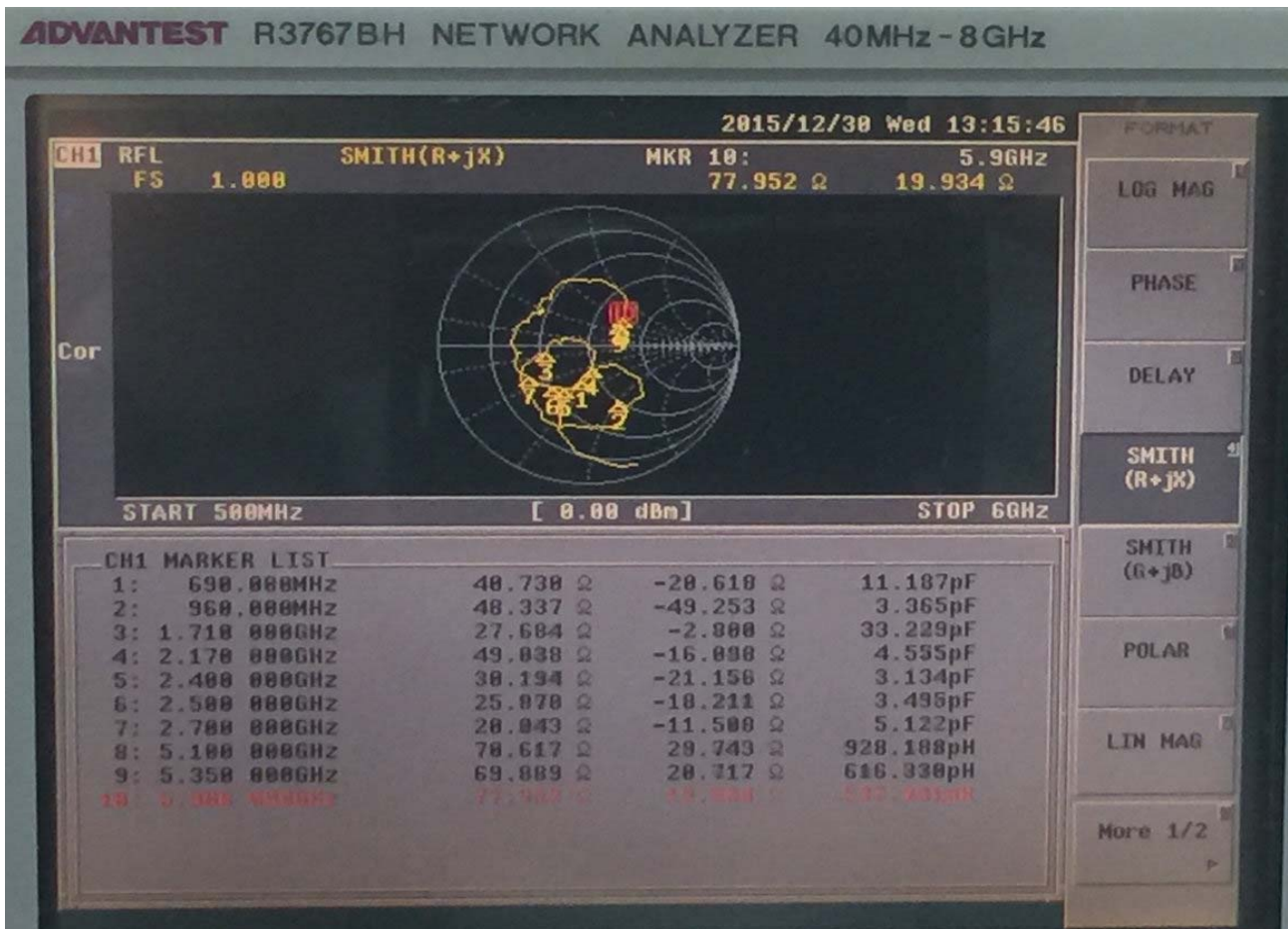
ADVANTEST R3767BH NETWORK ANALYZER 40MHz-8GHz



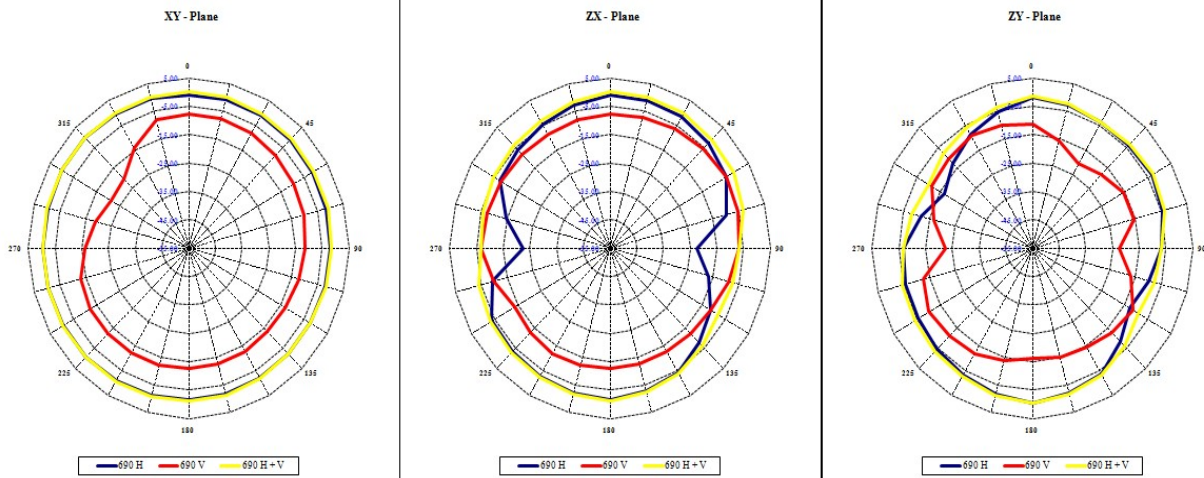
ADVANTEST R3767BH NETWORK ANALYZER 40MHz-8GHz



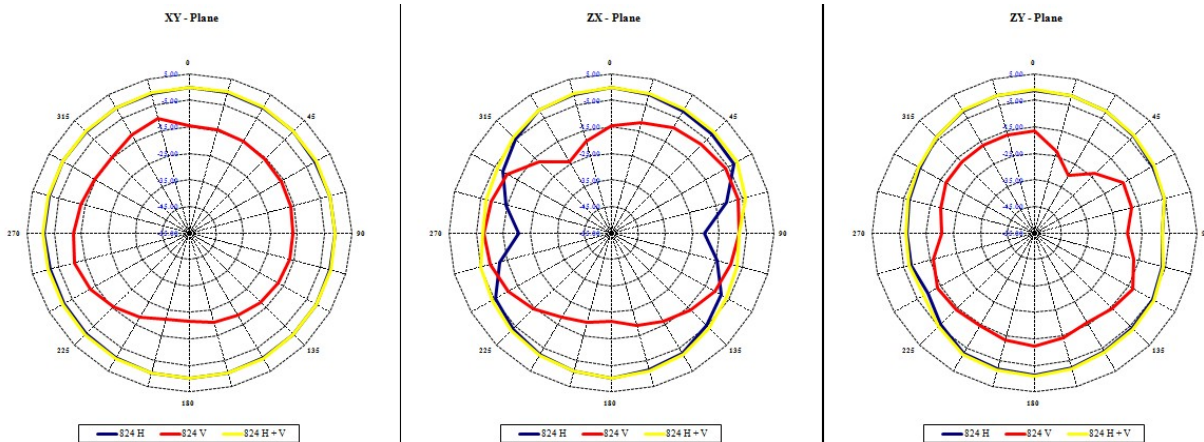
ADVANTEST R3767BH NETWORK ANALYZER 40MHz-8GHz



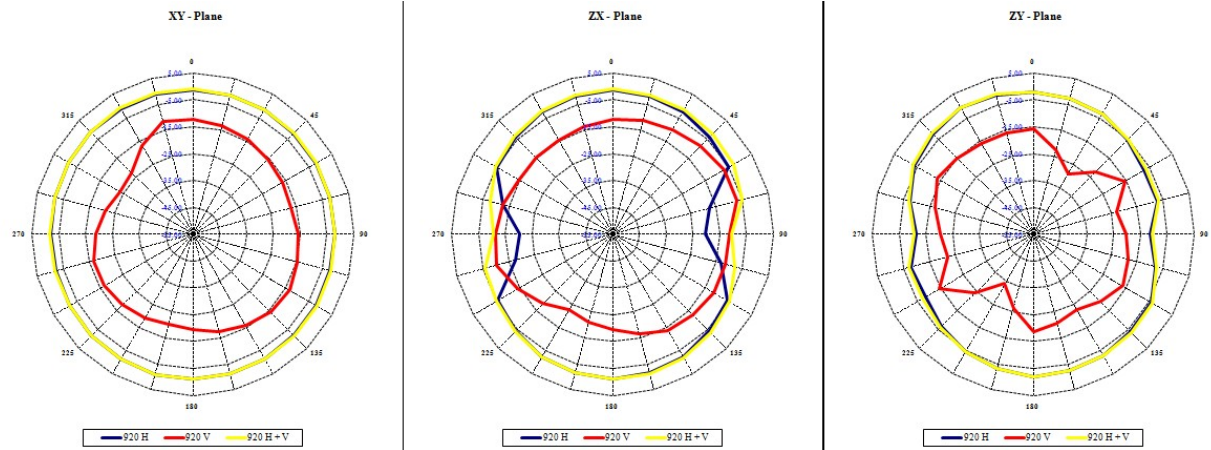
690Mhz



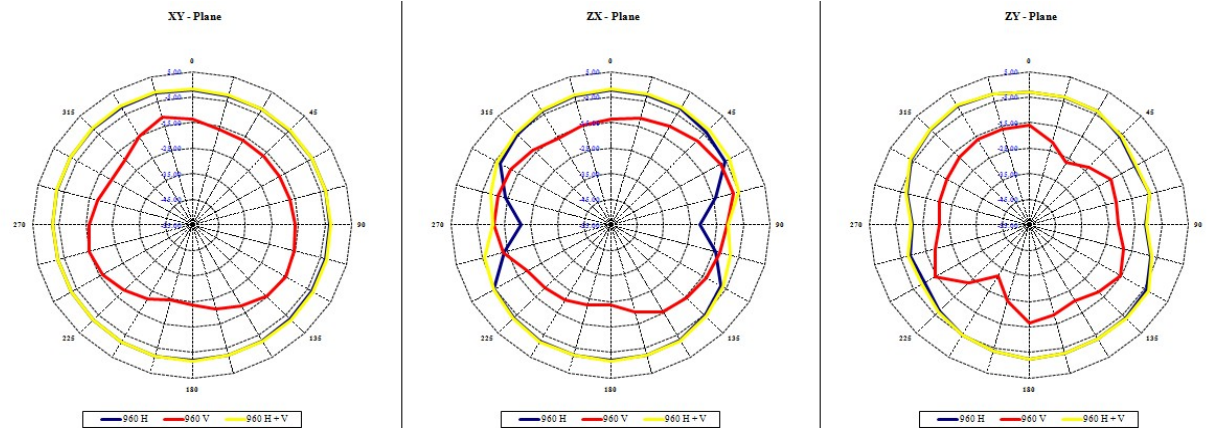
824Mhz



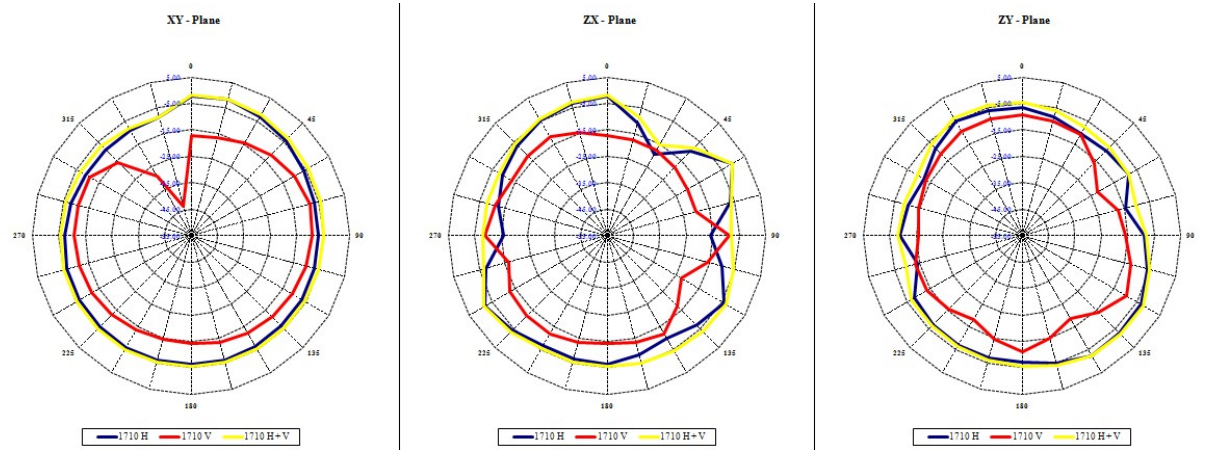
920Mhz



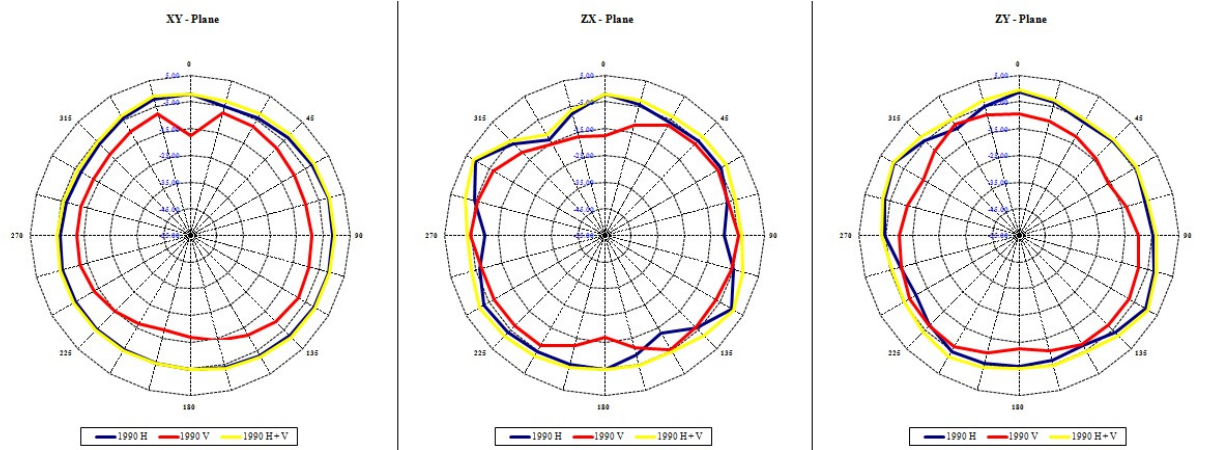
960Mhz



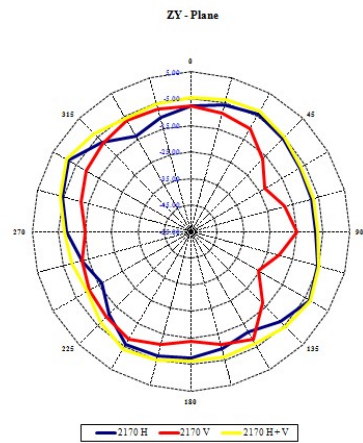
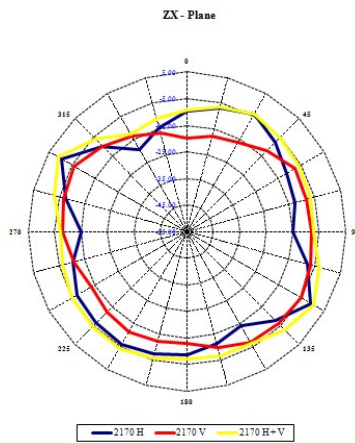
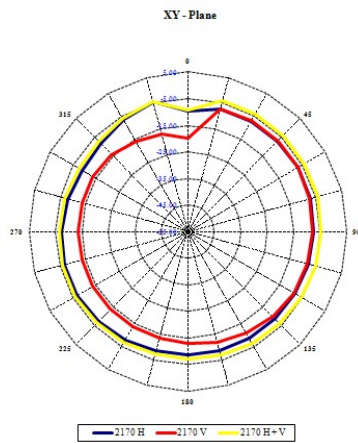
1710Mhz



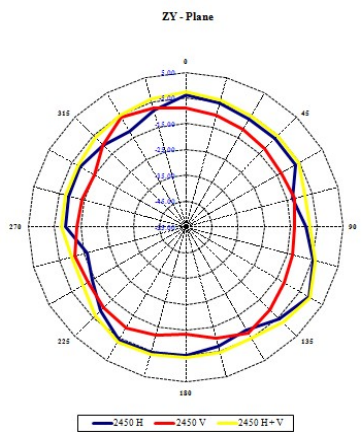
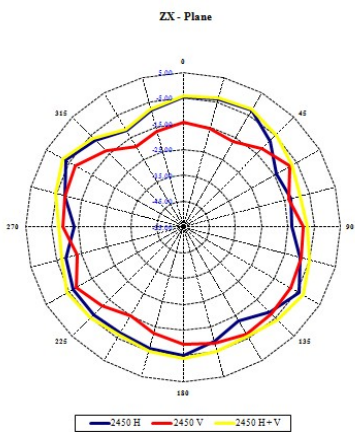
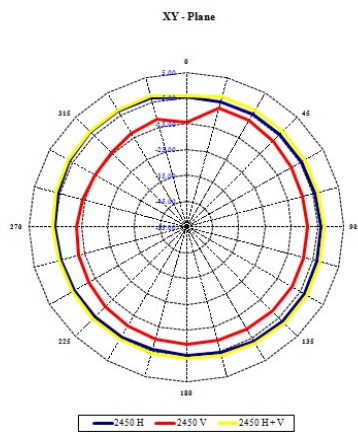
1990Mhz



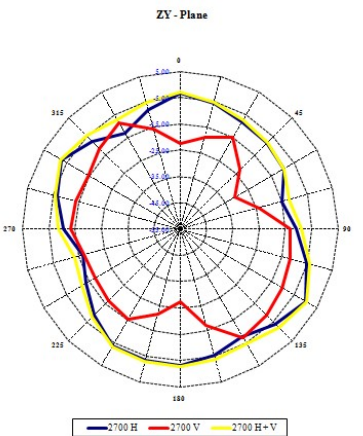
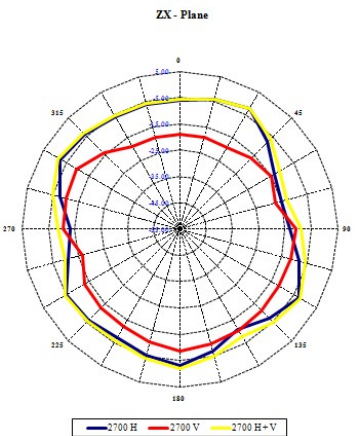
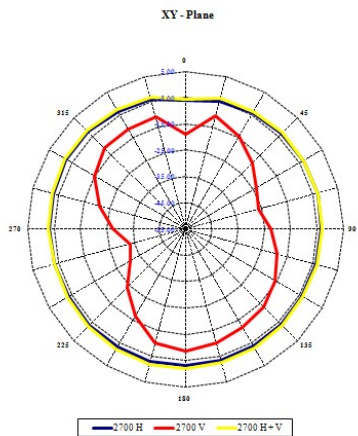
2170Mhz



2450Mhz



2700Mhz



Test result: on 320 x 240 GND

Frequency (MHz)	704	710	716	734	740	746	751	756	777	782	787	791	806	815
Peak Gain (dBi)	1.84	1.99	1.99	1.27	1.46	1.58	1.71	1.69	1.86	1.84	1.90	1.89	2.52	2.24
Efficiency (%)	66.76	67.30	66.24	55.77	59.23	62.72	66.16	67.56	69.20	67.76	67.35	66.44	76.29	73.20

Frequency (MHz)	821	824	830	832	836	845	847	849	860	862	869	875	880	881
Peak Gain (dBi)	2.13	2.11	2.17	2.19	2.16	1.95	1.89	1.79	1.50	1.45	1.35	1.21	1.07	1.01
Efficiency (%)	73.16	73.95	76.33	77.60	78.13	74.33	73.36	71.82	67.41	67.35	67.73	66.41	64.78	64.44

Frequency (MHz)	890	894	900	915	925	940	960	1710	1750	1755	1785	1805	1840	1850
Peak Gain (dBi)	0.82	0.80	0.86	1.31	1.25	1.01	1.19	-0.42	-0.26	-0.47	-0.82	-1.09	-0.80	-1.02
Efficiency (%)	62.75	63.12	64.48	66.28	63.15	58.98	57.51	37.11	36.76	35.68	35.67	31.51	34.93	34.54
Frequency (MHz)	1880	1882	1910	1920	1930	1950	1962	1980	1990	2110	2132	2140	2155	2170
Peak Gain (dBi)	-0.17	-0.29	0.52	0.31	0.31	0.84	0.88	1.31	1.46	3.21	2.93	3.11	3.19	3.20
Efficiency (%)	39.56	39.09	45.02	43.09	43.55	48.94	48.12	51.20	52.29	50.02	46.06	47.29	47.00	47.09

Frequency (MHz)	2400	2450	2500	2535	2570	2620	2655	2690	2700	5110	5150	5190	5320	5500
Peak Gain (dBi)	2.99	3.54	4.20	4.37	4.55	4.60	4.63	4.88	4.95	3.42	3.32	3.03	2.71	2.97
Efficiency (%)	48.16	49.17	49.32	51.64	53.33	52.85	50.38	48.96	50.35	47.71	45.39	44.48	43.41	42.77

Frequency (MHz)	5670	5700	5745	5765	5785	5805	5825	5850						
Peak Gain (dBi)	3.36	3.47	2.83	2.42	2.18	1.65	1.82	2.10						
Efficiency (%)	45.72	46.75	45.11	40.67	40.06	39.28	41.44	43.50						

