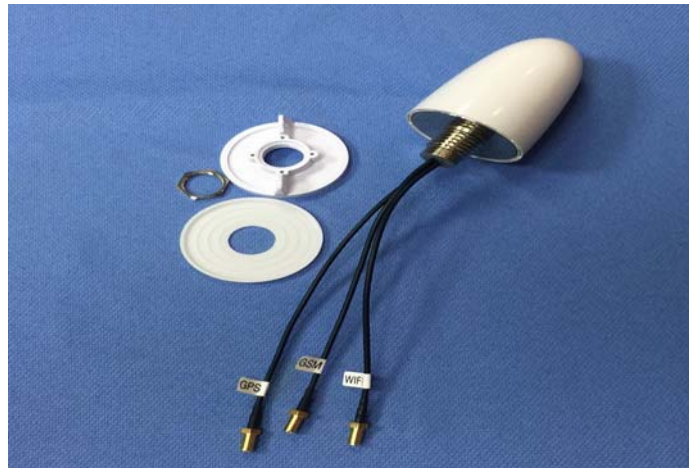


Vehicle Locating GPS/3G<E/WIFI MIMO Antenna

MODEL: GWA-680

Drills a hole fixed type antenna



Specifications:

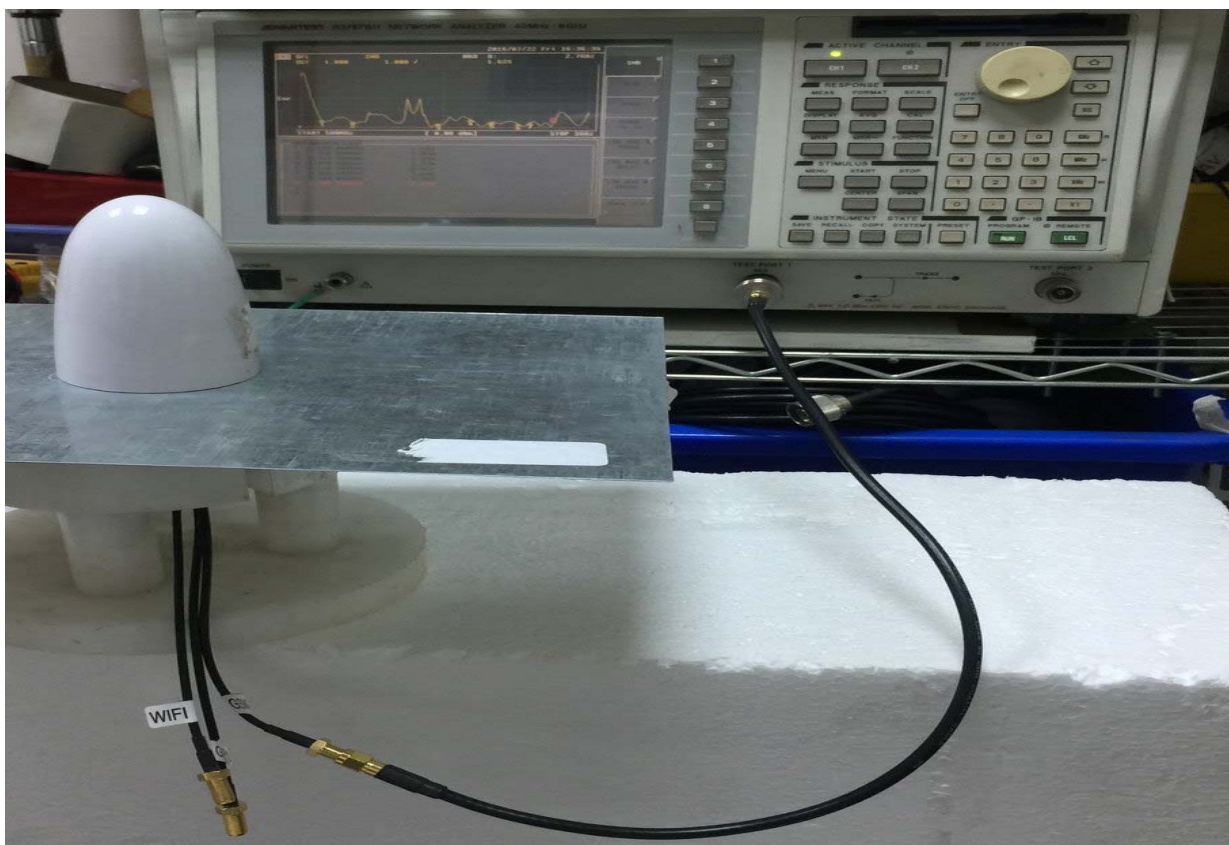
PHYSICAL CONDITION	
Constructions:	Polycarbonate radome,detachable cable/connector for easy mount, rubber-O-ring between top radome and screw base for waterproof
Dimensions:	60mm(Dia.) x 90mm(H)
Weight:	65grams (w/o cable & connector).
Color:	White or Black (Optional)
Mounting:	Bulkhead mount with 0.8 inch threaded wing nut (standard accessory).
Cable & Connector	
RF cable:	RG174-20CM
Pulling strength:	6 Kg @ 5sec. molded plastic on connector end for strain relief.
Connector	SMA(F)
Antenna Element	
Center Frequency:	1575.42 MHz +/-1.023 MHz
Polarization:	R.H.C.P. (Right Handed Circular Polarization).
Absolute Gain @ Zenith:	+5 dBi typical.
Gain @ 10° Elevation:	-1 dBi typical.
Axial Ratio:	3 dB max.
Output VSWR:	2.0
Output Impedance:	50 ohm
Low Noise Amplifier	
Center Frequency:	1575.42 +/- 1.023 MHz
Power Gain:	28 db +/-3db
Bandwidth:	10 MHz min. @S11≤-10 dB
Noise Figure:	1.5
Outer Band Attenuation:	3 dB max.
Supply Voltages:	2.5~5.5V DC.
Current Consumption:	at 2.5V 6.6mA Typ. at 3.0V 8.6mA Typ. at 4.0V 12.6mA Typ.

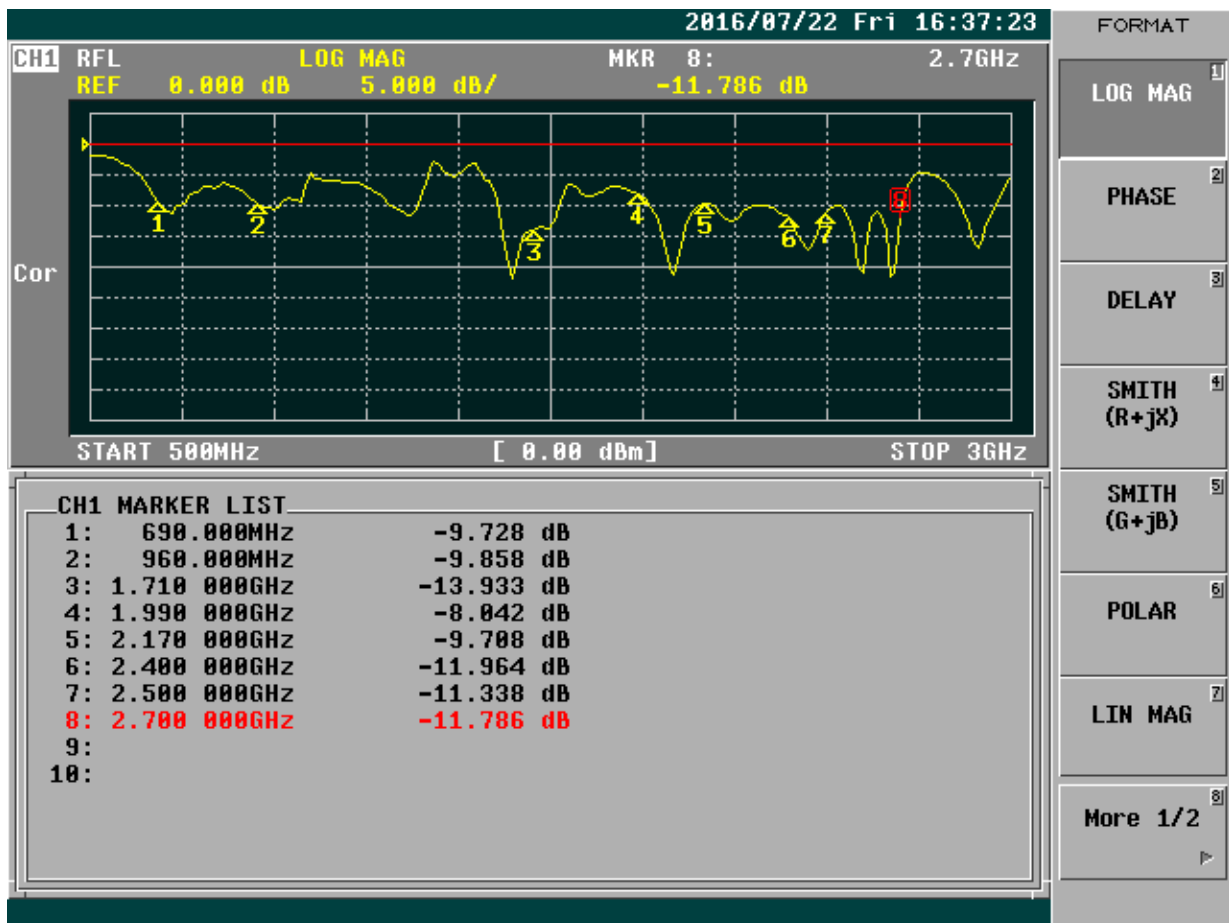
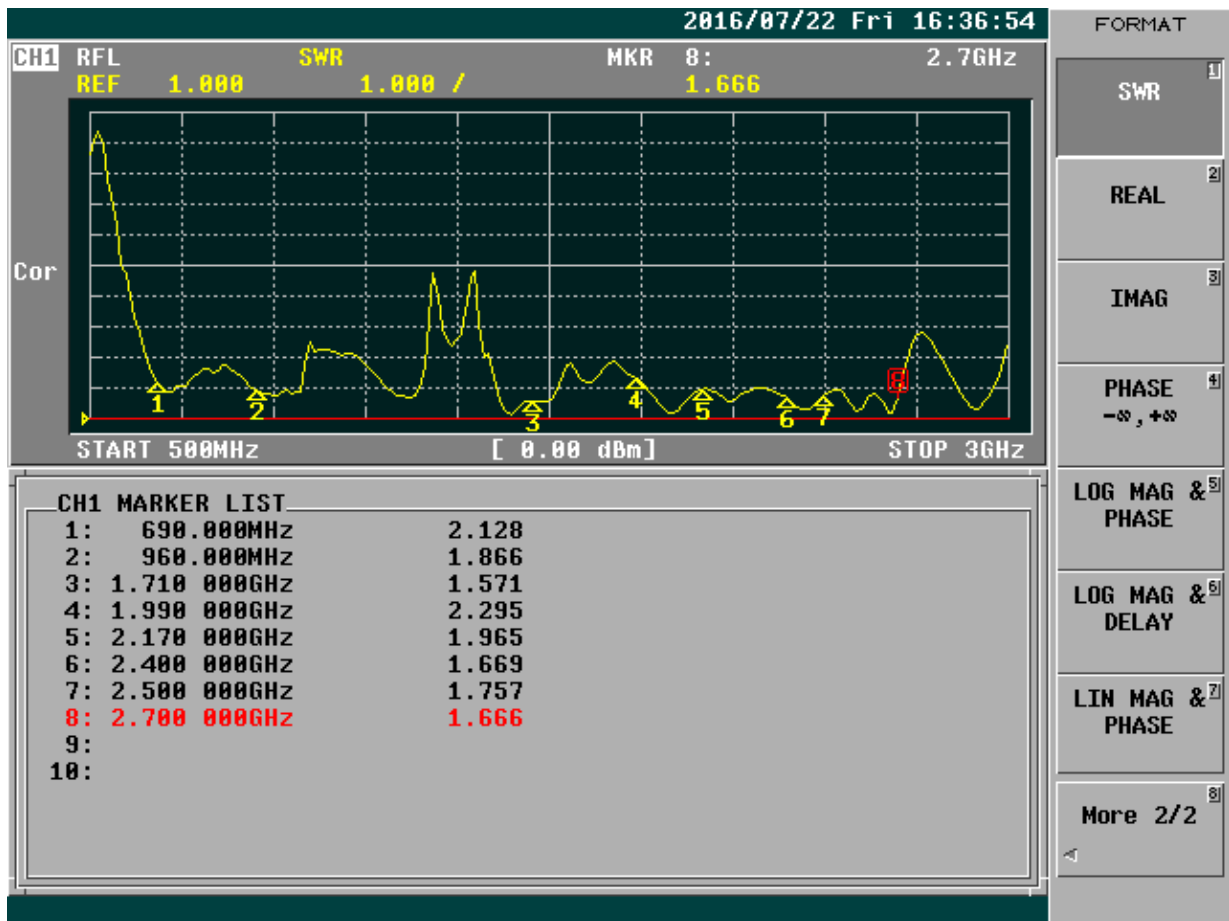
	at 5.0V 16.6mA Typ.
Filter	20dB 25dB @ fo+/- 50MHz 30dB 35dB @ fo+/- 100MHz * fo=1575.42MHz
Overall Performance: (antenna element, LNA & coax cable)	
Center Frequency:	1575.42 +/- 1.023 MHz
Gain:	At 90° vertical to sky 30 ± 4.5dBi (cable loss) Note:1 Mounted on the 60mm x 60mm square ground plane
Noise Figure:	1.5 max.
Axial Ratio:	3 dB max.
Bandwidth:	10 MHz min. @S11≤-10 dB
VSWR:	2.0 max.
Output Impedance:	50 ohm
Environmental	
Operating Temperature:	-40°C~ +80°C.
Storage Temperature:	-40°C~ +80°C.
Relative Humidity:	95% non-condensing.
Water Resistance:	100% waterproof.
GSM / CDMA / 3G / LTE	
Frequency	690~960/1710~2700
VSWR	2.0
Impedence	50Ω
Cable type	RG174
Cable length	20CM
Connector	SMA(F)
WIFI	
Frequency	2400~2500Mhz
VSWR	2.0
Impedence	50Ω
Cable type	RG174
Cable length	20CM
Connector	SMA(F)

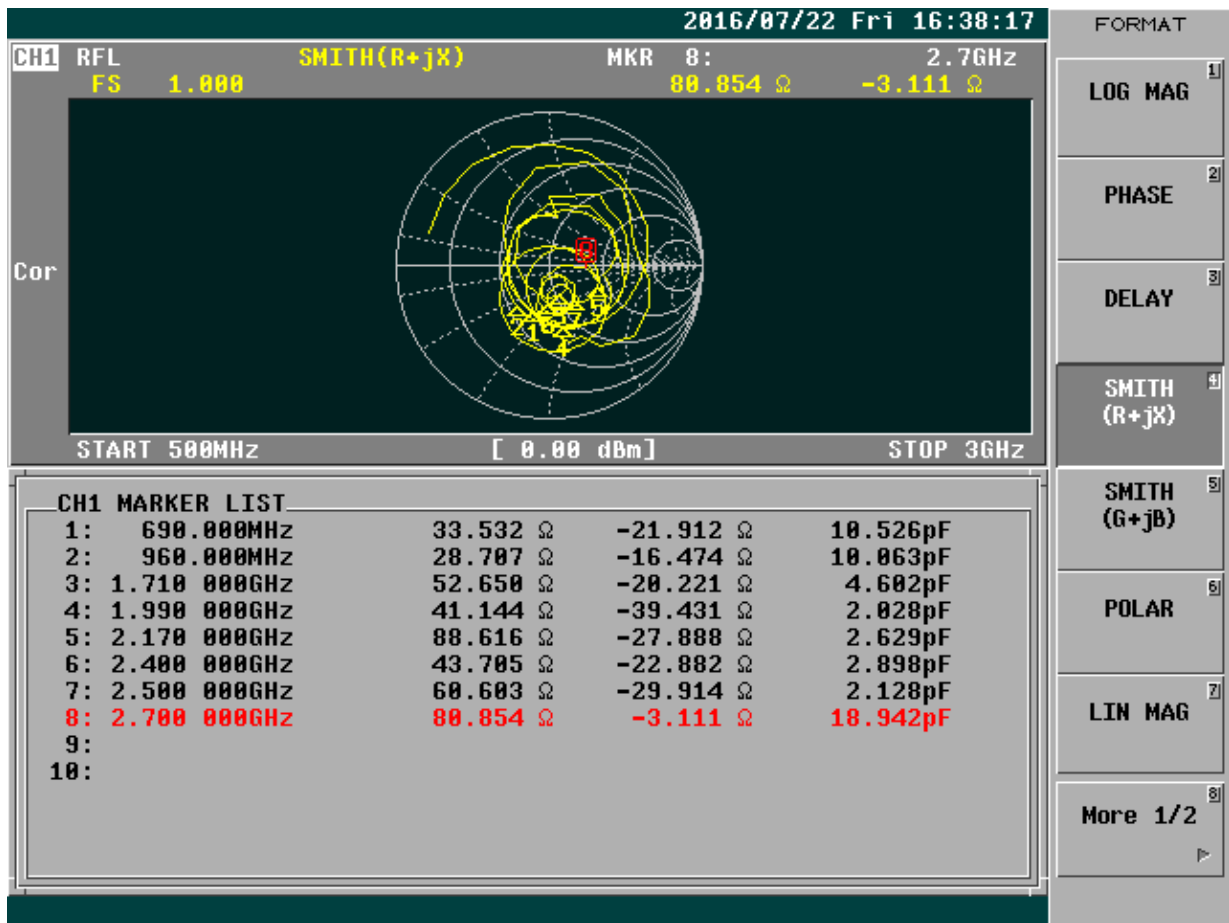
* This specification is subject to change without prior notice

Data Updated: Jul.28, 2016

GSM TEST : ON 320X240mm GND

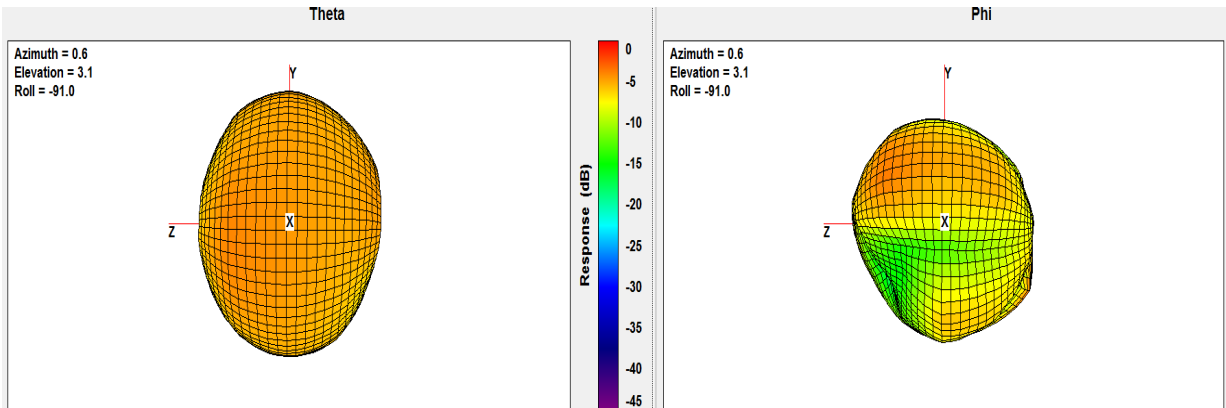
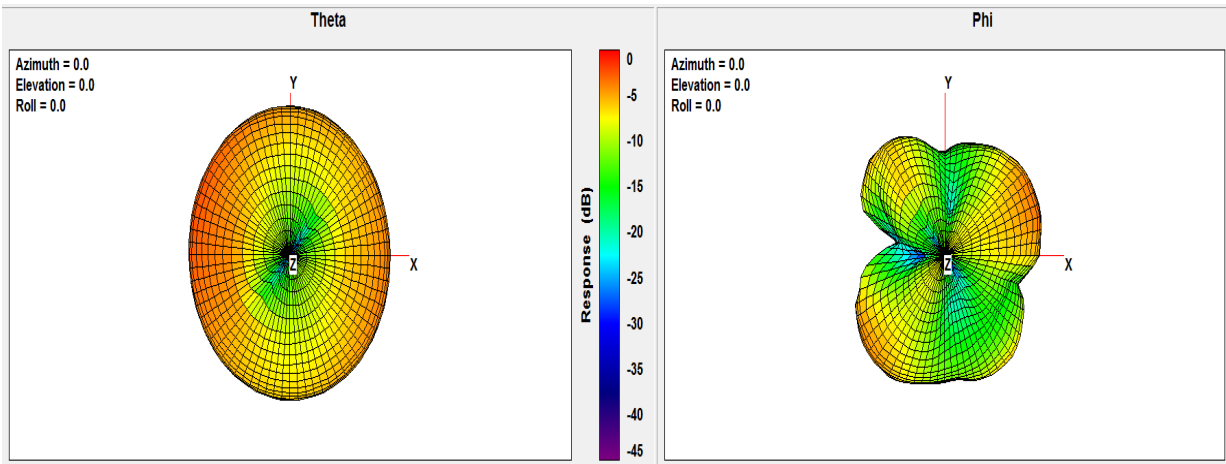


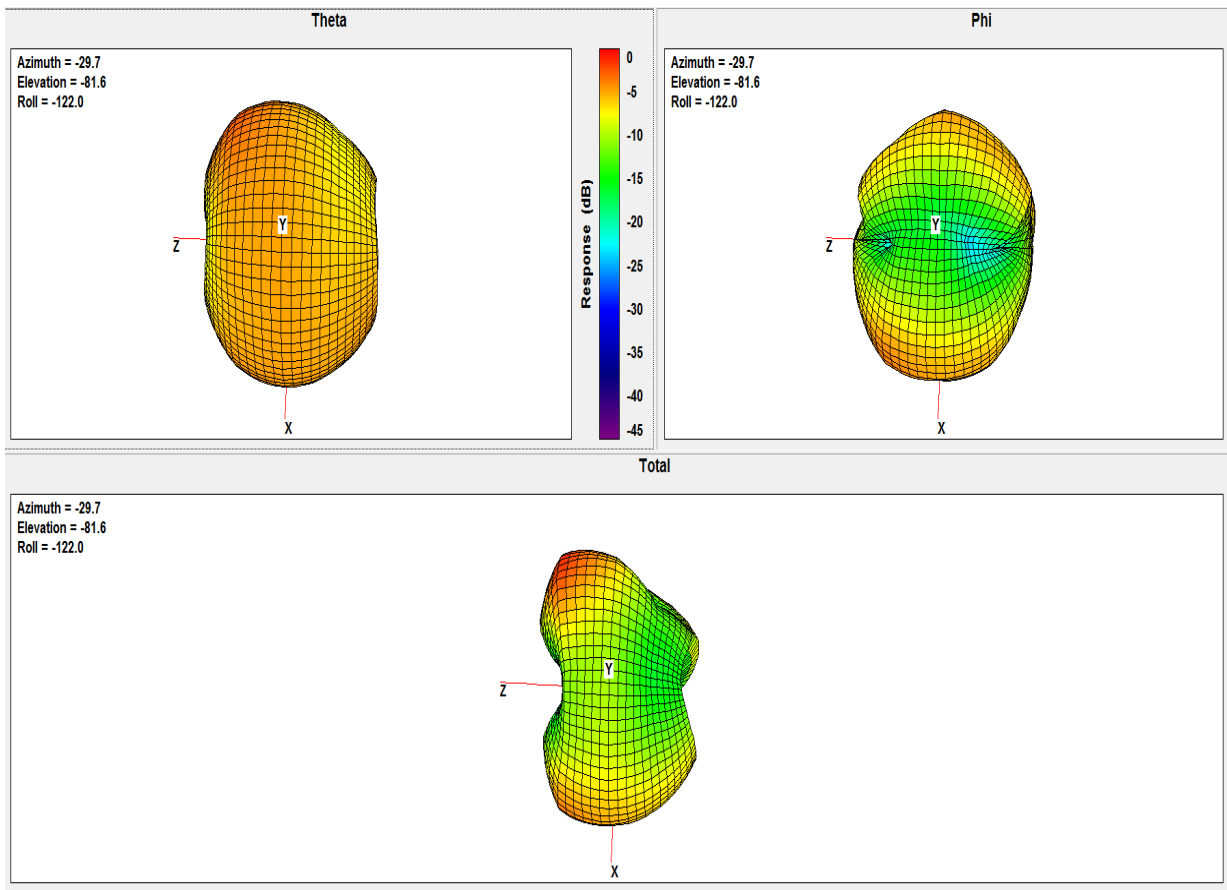




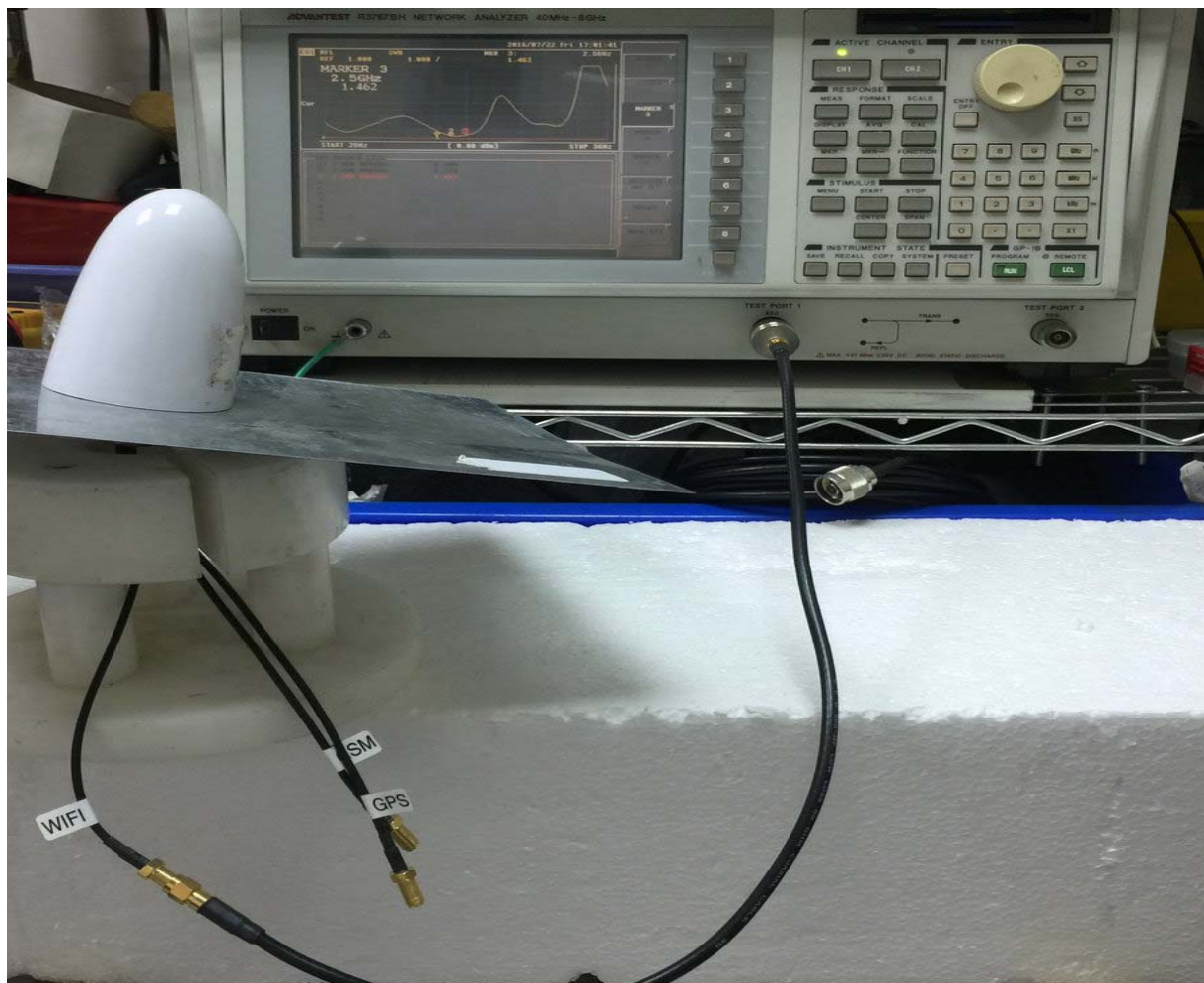
Frequency (MHz)	690	740	790	840	890	940	960	1710	1760	1810	1860	1910	1960	2010
Efficiency (%)	34.66	43.70	34.20	33.50	26.26	32.17	33.71	37.50	49.94	57.53	63.53	46.18	51.22	57.97
Peak Gain (dBi)	-2.23	-0.15	-0.99	-0.94	-1.43	-1.39	-1.12	1.70	2.58	1.69	2.74	1.71	2.82	3.34

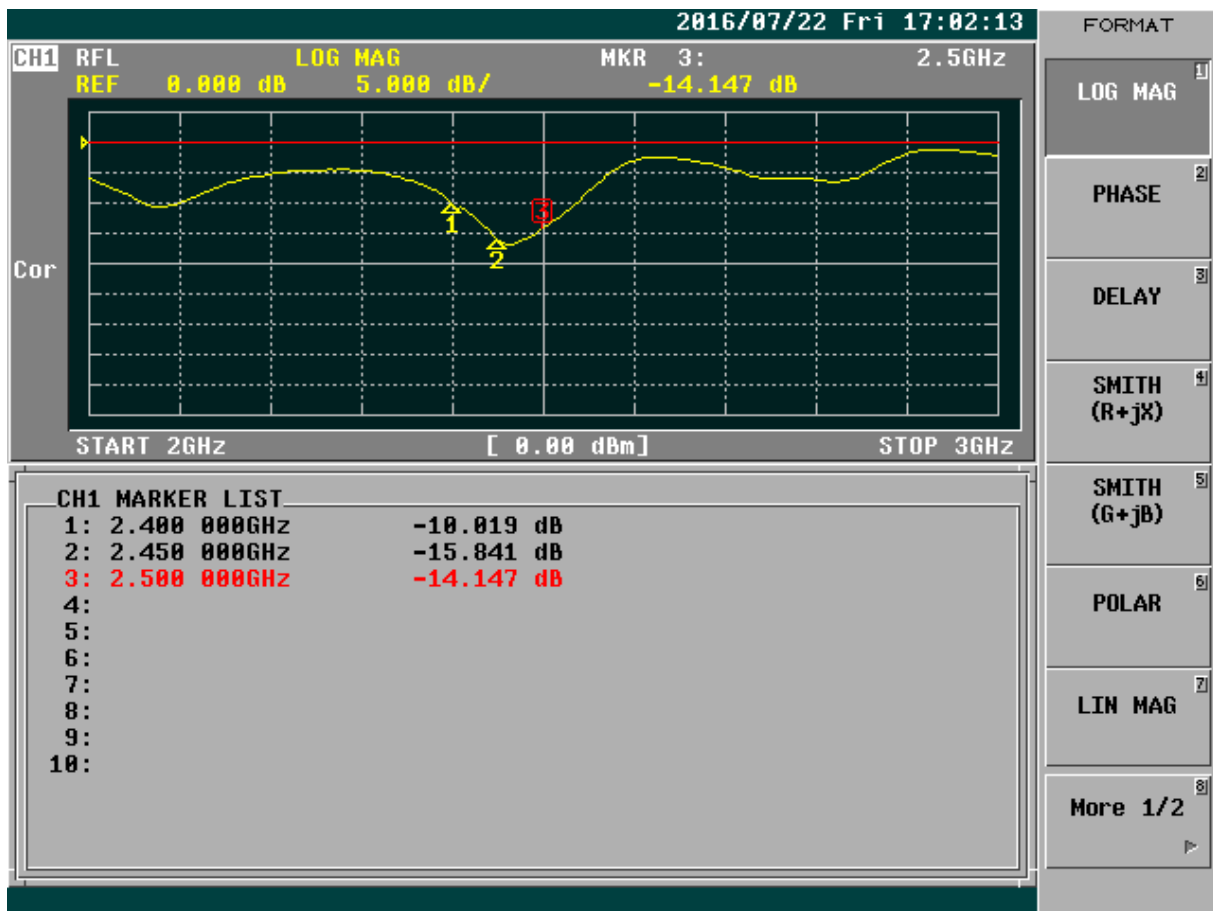
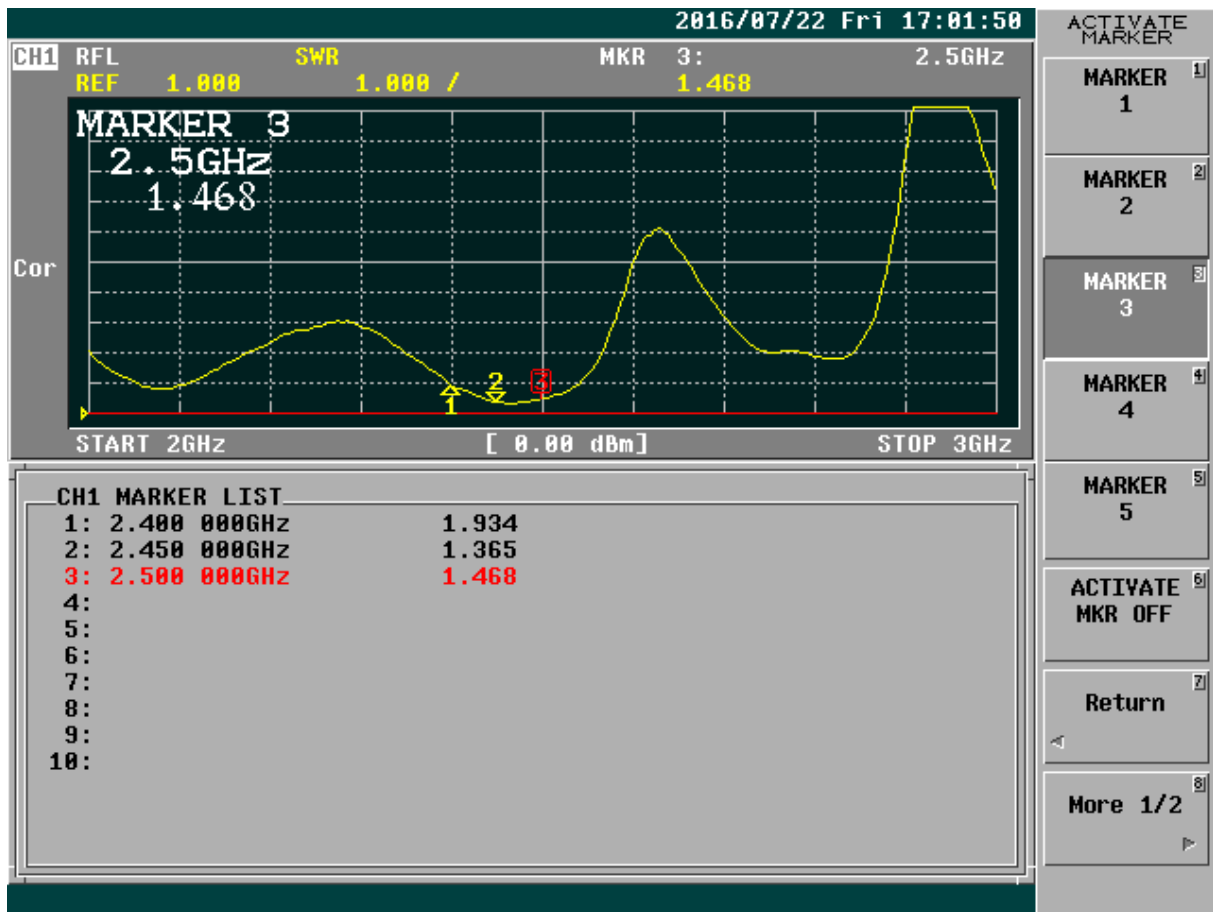
Frequency (MHz)	2060	2110	2160	2210	2260	2310	2360	2410	2460	2510	2560	2610	2660	2700
Efficiency (%)	60.37	62.07	64.74	77.16	81.93	70.04	67.77	66.59	65.90	68.15	68.26	64.25	53.46	44.39
Peak Gain (dBi)	3.31	3.15	2.81	2.58	3.83	4.56	4.30	4.08	3.31	3.99	4.36	4.73	2.48	1.98





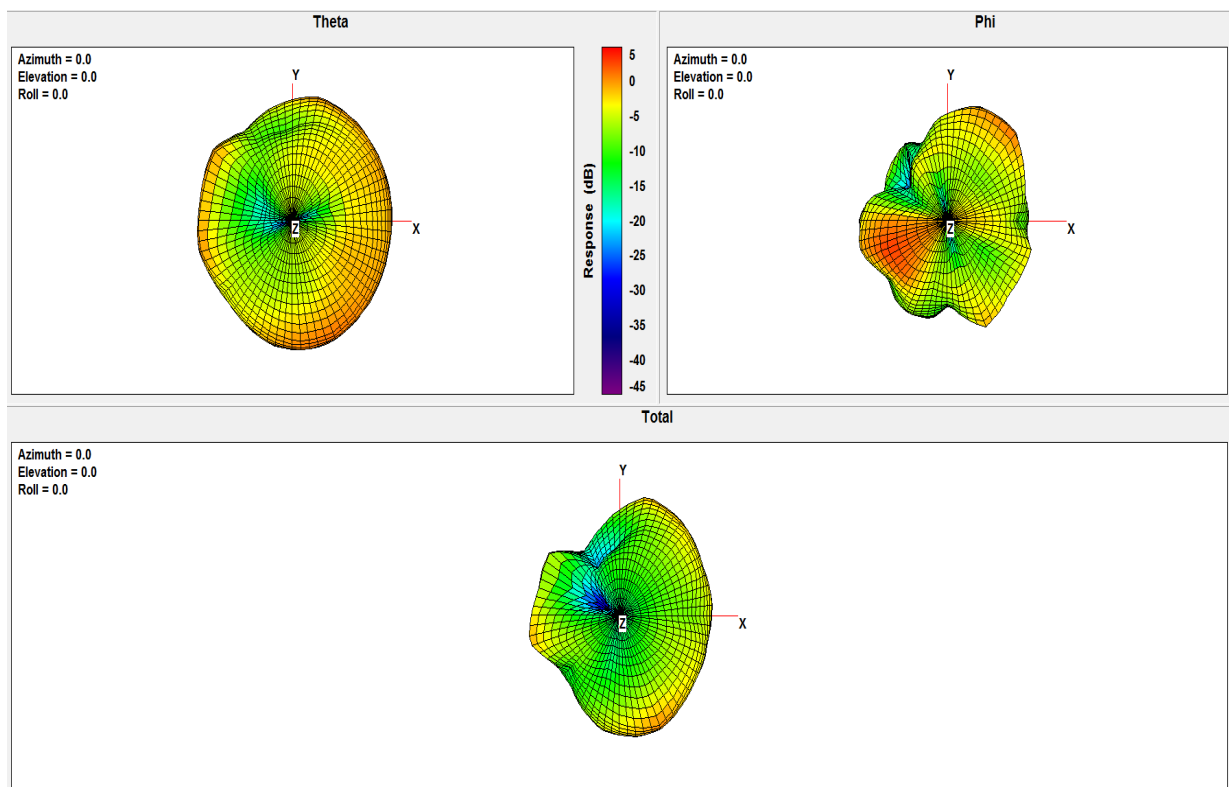
WIFI TEST : ON 320X240mm GND

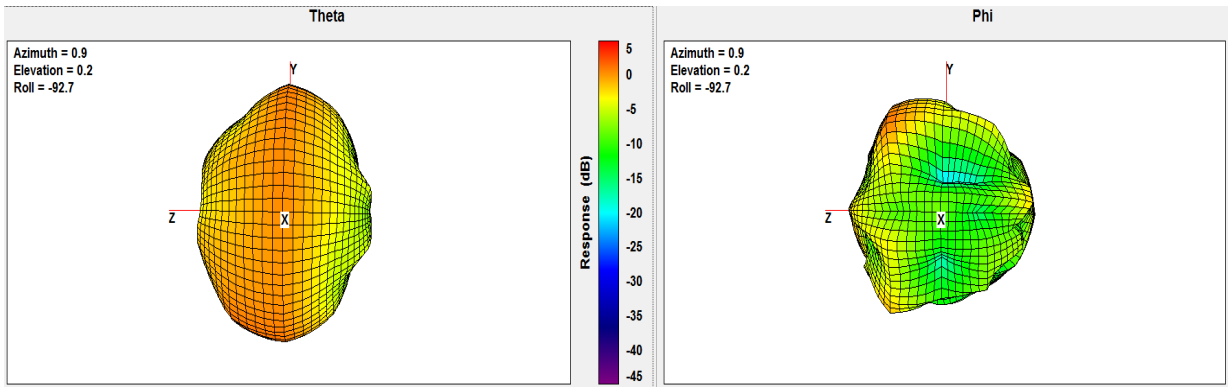




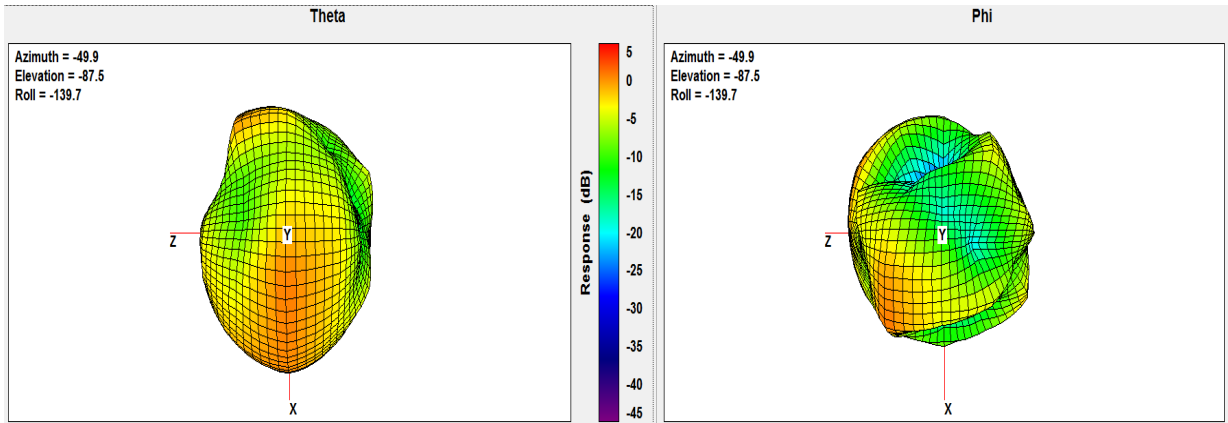
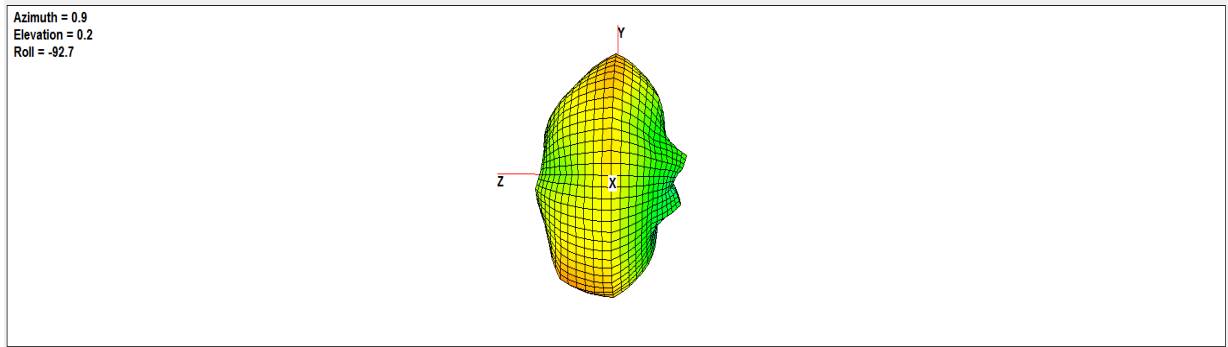


Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500			
Efficiency (%)	63.02	65.72	68.78	71.50	73.51	75.07	75.00	73.27	71.71	71.57	70.26			
Peak Gain (dBi)	2.19	2.44	2.26	2.64	2.77	2.94	2.94	2.70	2.62	2.80	2.91			





Total



Total

