

Classification	Confidential
Date	Aug. 31 <sup>th</sup> 2012



## TF600TG

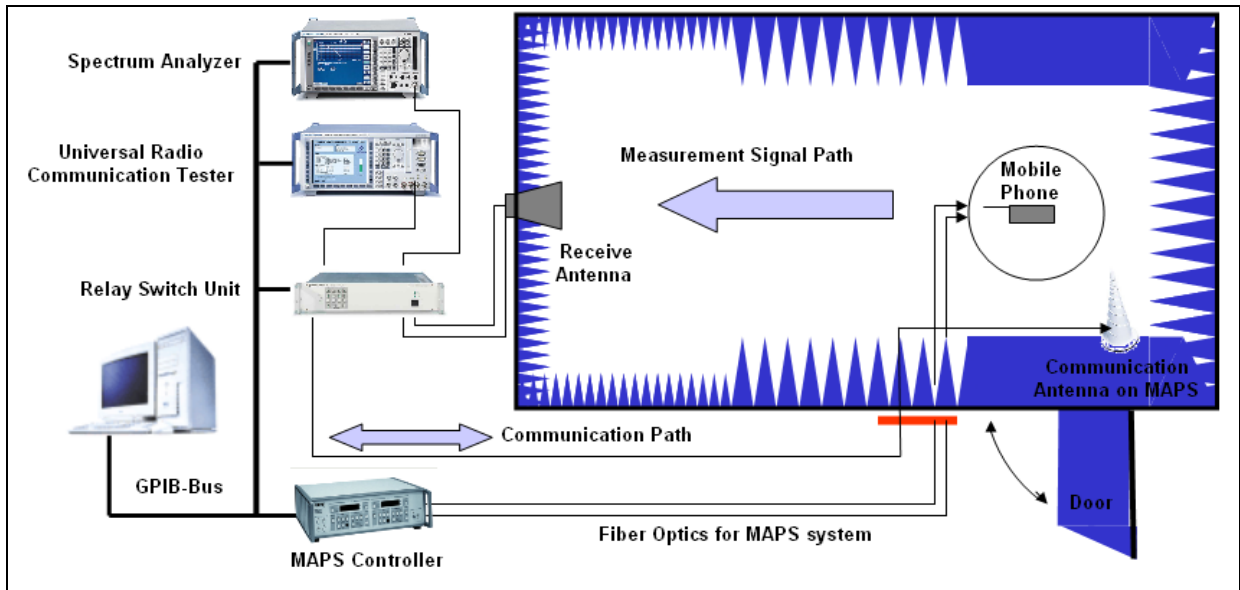
# Antenna Performance Report

Designed by: Steve Hsieh #3635  
Confirmed by: Giovanni Huang #5401

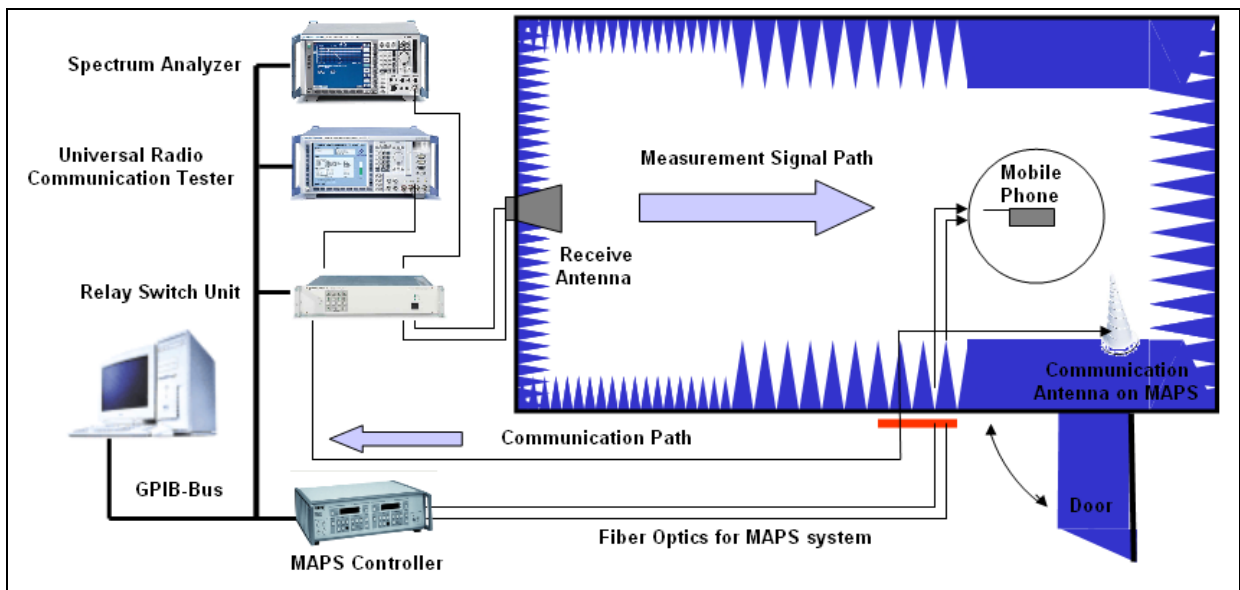
# 1 Measurement Methodology and Settings

All test results are under chamber environment of **ASUS Antenna Lab**. The basic methodology of getting the test result is following mostly the principles outlined in CTIA the test plan. <sup>[4]</sup>

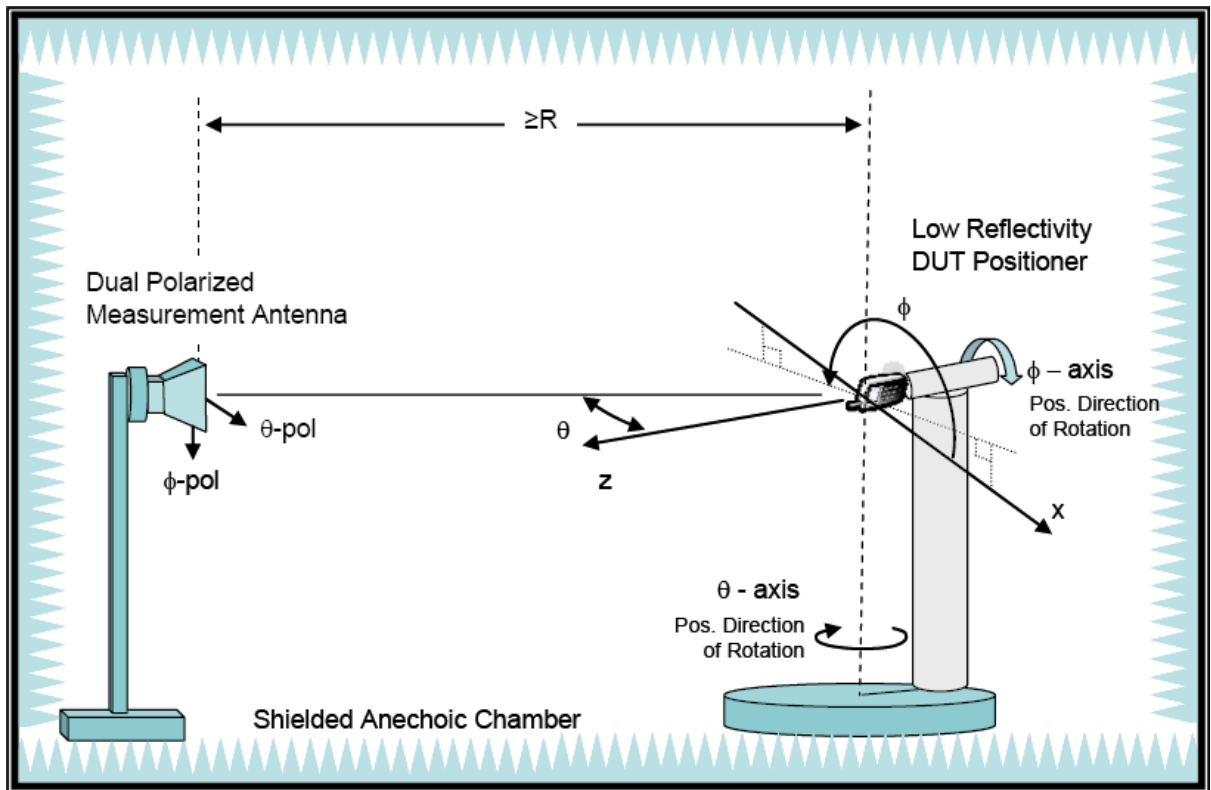
## 1.1 TRP (Total Radiation Power)



## 1.2 TIS (Total Isotropic Sensitivity)



# 1.3 Rectangular / Spherical Coordination of DUT



## 1.4 Equipment List

Description	Manufacturer	Model	Serial No.
Anechoic Chamber	ETS-Lindgren	AMS-8500	1036
MAPS Positioner	ETS-Lindgren	2015-72	N/A
Light Duty Mast Shaft Accessory	ETS-Lindgren	107354	N/A
Conical Log Spiral Communication Antenna	ETS-Lindgren	3102	00042655
Dual-Polarized Diagonal Horn Antenna	ETS-Lindgren	3164-04	00041919
SAM Phantom Head	ETS-Lindgren	IEEE SCC34	N/A
Positioner Controller	ETS-Lindgren	2090	00042680
RF Switch Module	R&S	TS-RSP	100122
Universal Radio Communication Test	R&S	CMU200	106387
Spectrum Analyzer	R&S	FSP 7	100330
Pattern Measurement Software	ETS-Lindgren	EMQuest™ EMQ-100	V1.06
Desktop Computer with Windows XP	DELL	N/A	N/A
Vector Network Analyzer	R&S	ZVM	100144
Sleeve Dipole	ETS-Lindgren	3126-836	00045587
Sleeve Dipole	ETS-Lindgren	3126-1800	00040647
Loop Antenna	ETS-Lindgren	3127-836	00034836
Loop Antenna	ETS-Lindgren	3127-1880	00034837

## 2 Detail Test Result

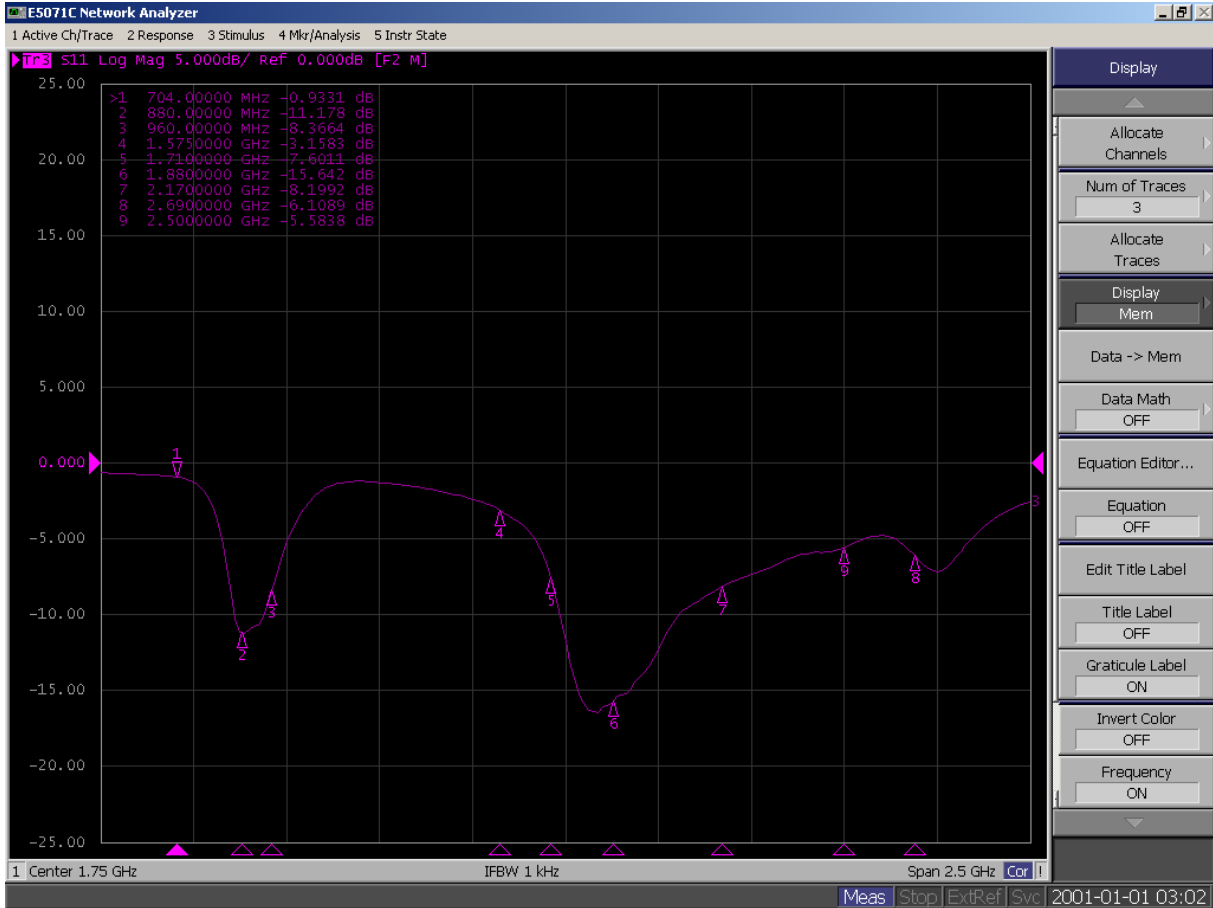
### 2.1 Main : GSM / WCDMA

#### 2.1.1 Efficiency

Low band : 850/900						
Frequency (MHz)	824	836	849	869	880	881
Tot. Rad. Pwr. (dBm)	-6.43	-5.50	-5.35	-5.20	-5.23	-5.24
Efficiency (%)	22.75%	28.18%	29.17%	30.20%	29.99%	29.92%
Gain (dBi)	-3.29	-2.42	-2.16	-1.88	-1.82	-1.85
Frequency (MHz)	894	897	915	925	942	960
Tot. Rad. Pwr. (dBm)	-4.81	-4.92	-5.06	-5.59	-6.13	-6.54
Efficiency (%)	33.04%	32.21%	31.19%	27.61%	24.38%	22.18%
Gain (dBi)	-1.36	-1.41	-1.40	-1.97	-2.52	-2.96

High Band : 1800/1900/2100~						
Frequency (MHz)	1710	1747	1785	1805	1842	1850
Tot. Rad. Pwr. (dBm)	-4.37	-3.53	-3.48	-4.15	-4.43	-4.33
Efficiency (%)	36.56%	44.36%	44.87%	38.46%	36.06%	36.90%
Gain (dBi)	-0.18	0.69	0.06	-0.12	0.25	0.39
Frequency (MHz)	1880	1900	1910	1920	1930	1950
Tot. Rad. Pwr. (dBm)	-4.79	-5.07	-4.94	-5.03	-5.23	-5.22
Efficiency (%)	33.19%	31.12%	32.06%	31.41%	29.99%	30.06%
Gain (dBi)	0.30	0.18	0.36	0.32	0.25	0.32
Frequency (MHz)	1960	1980	1990	2010	2018	2025
Tot. Rad. Pwr. (dBm)	-5.18	-5.08	-4.97	-4.99	-4.69	-4.73
Efficiency (%)	30.34%	31.05%	31.84%	31.70%	33.96%	33.65%
Gain (dBi)	0.49	0.70	0.79	0.76	0.98	0.85
Frequency (MHz)	2110	2140	2170			
Tot. Rad. Pwr. (dBm)	-4.73	-4.60	-4.78			
Efficiency (%)	33.65%	34.67%	33.27%			
Gain (dBi)	-1.17	-1.28	-1.30			

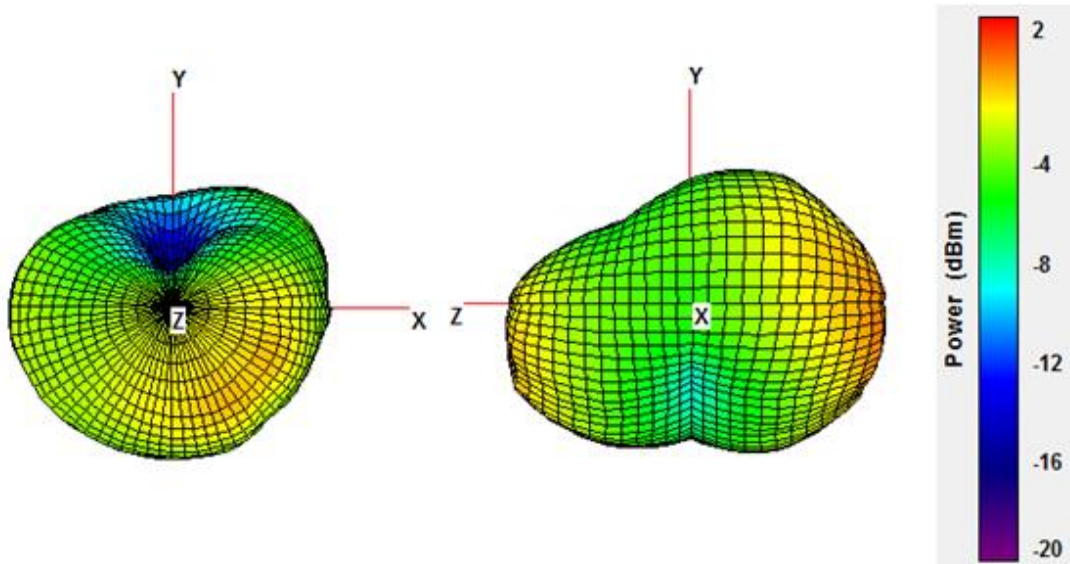
## 2.1.2 |S11|



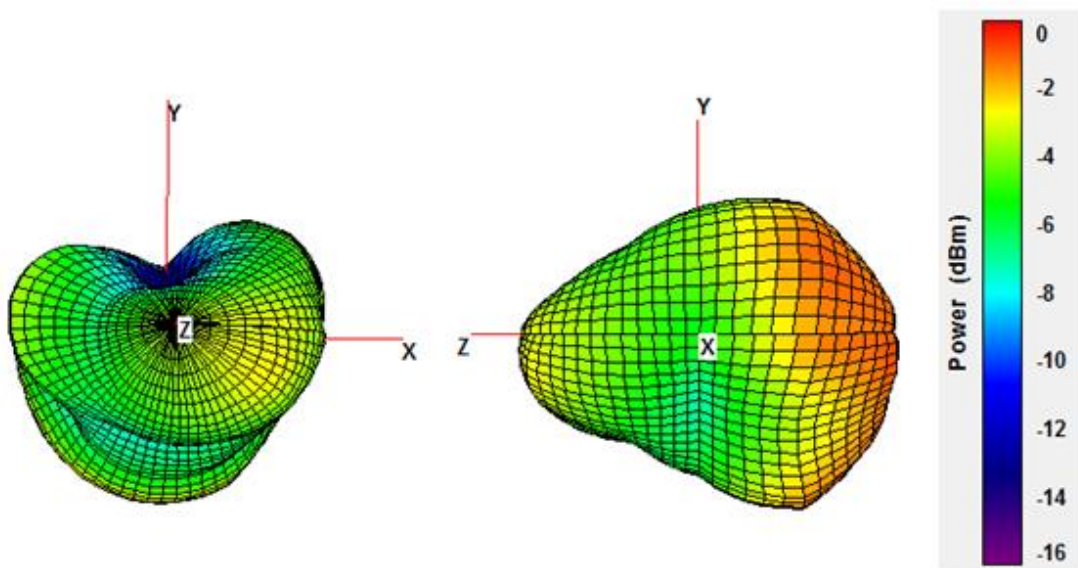
## 2.1.3 TRP / TIS

## 2.1.4 Radiation Pattern

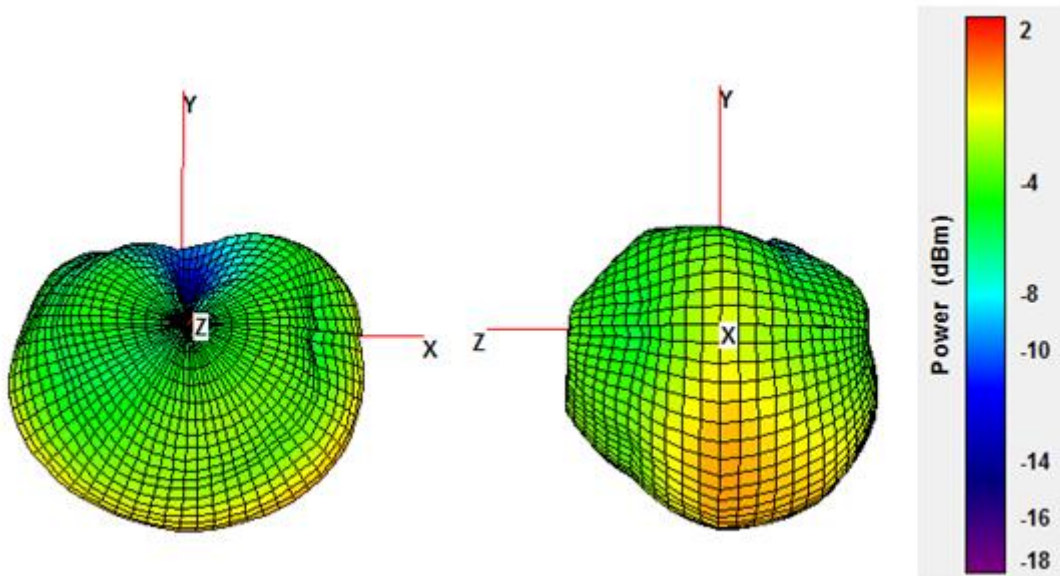
### 2.1.4.1 GSM 850 / middle channel / free space



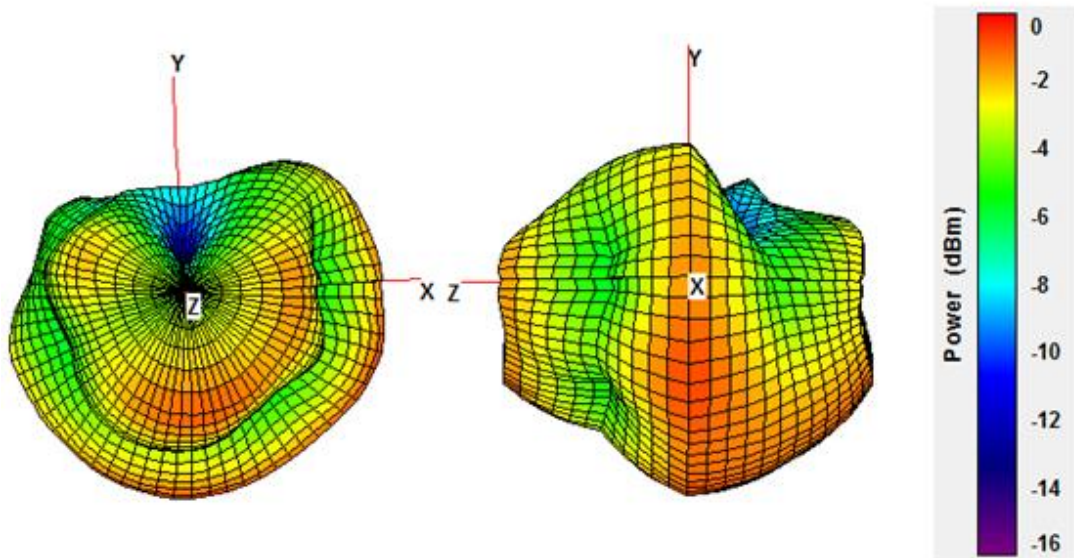
### 2.1.4.2 GSM 900 / middle channel / free space



### 2.1.4.3 GSM 1800 / middle channel / free space

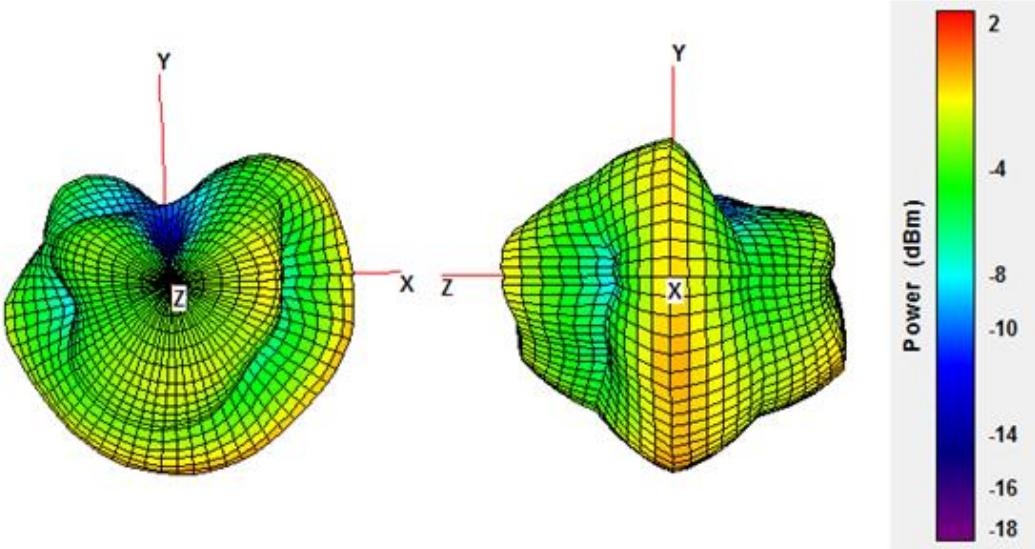


### 2.1.4.4 GSM 1900 / middle channel / free space

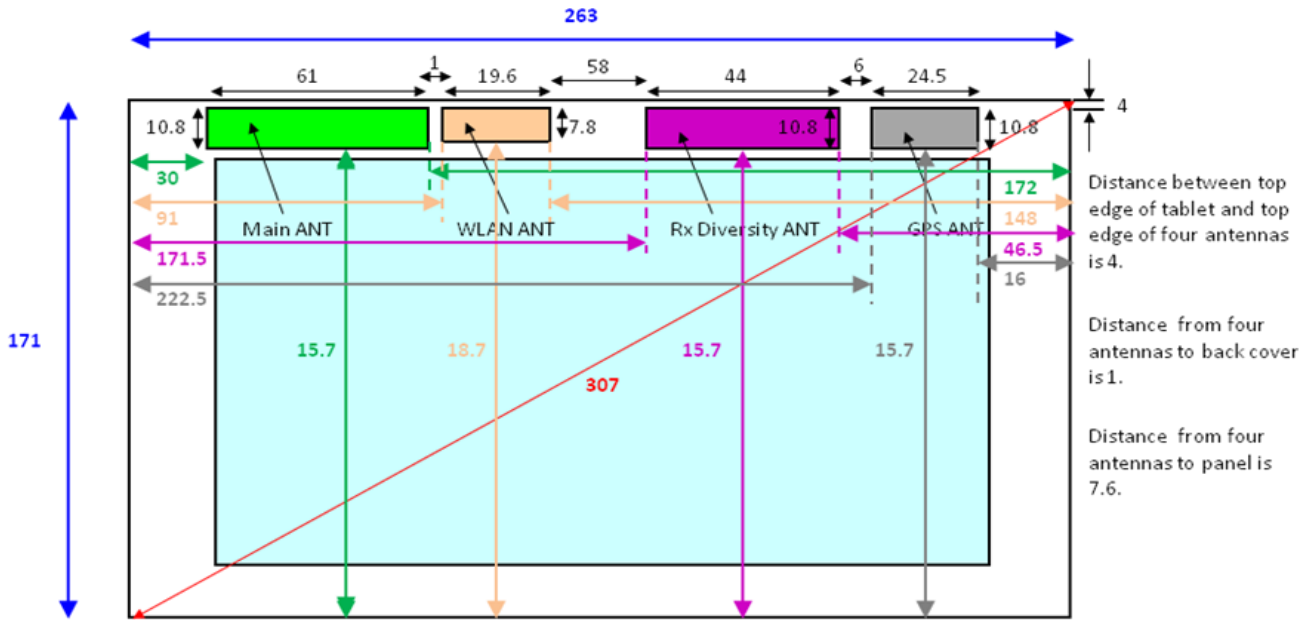




2.1.4.5 WCDMA B1 / middle channel / free space



### 3 Antenna Location



Front View

Unit: mm