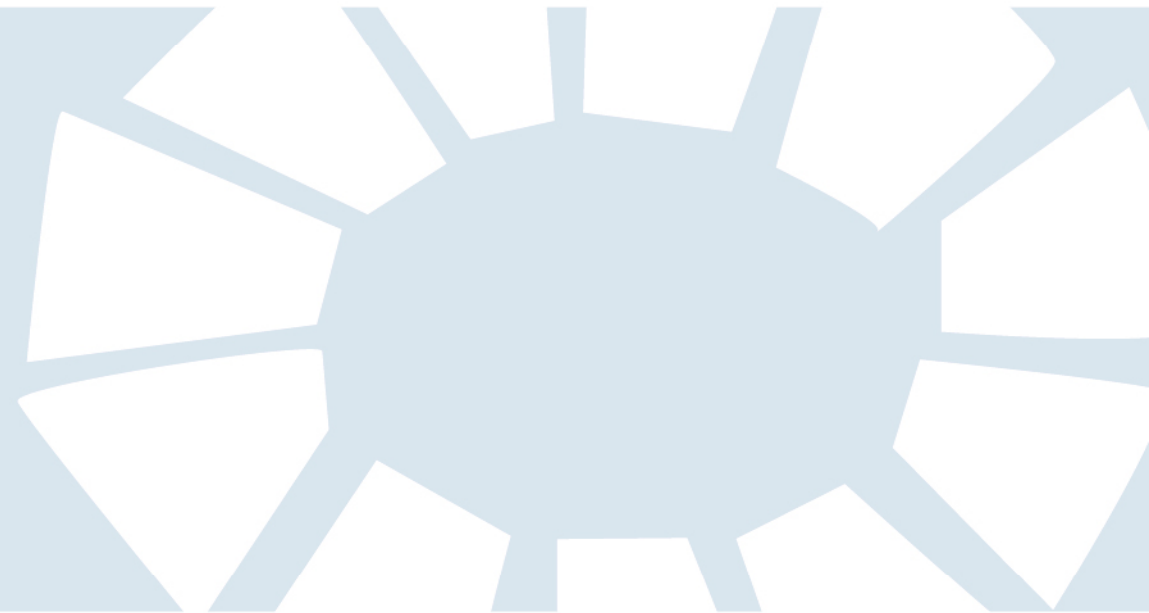


Cipherlab Antenna Test Report

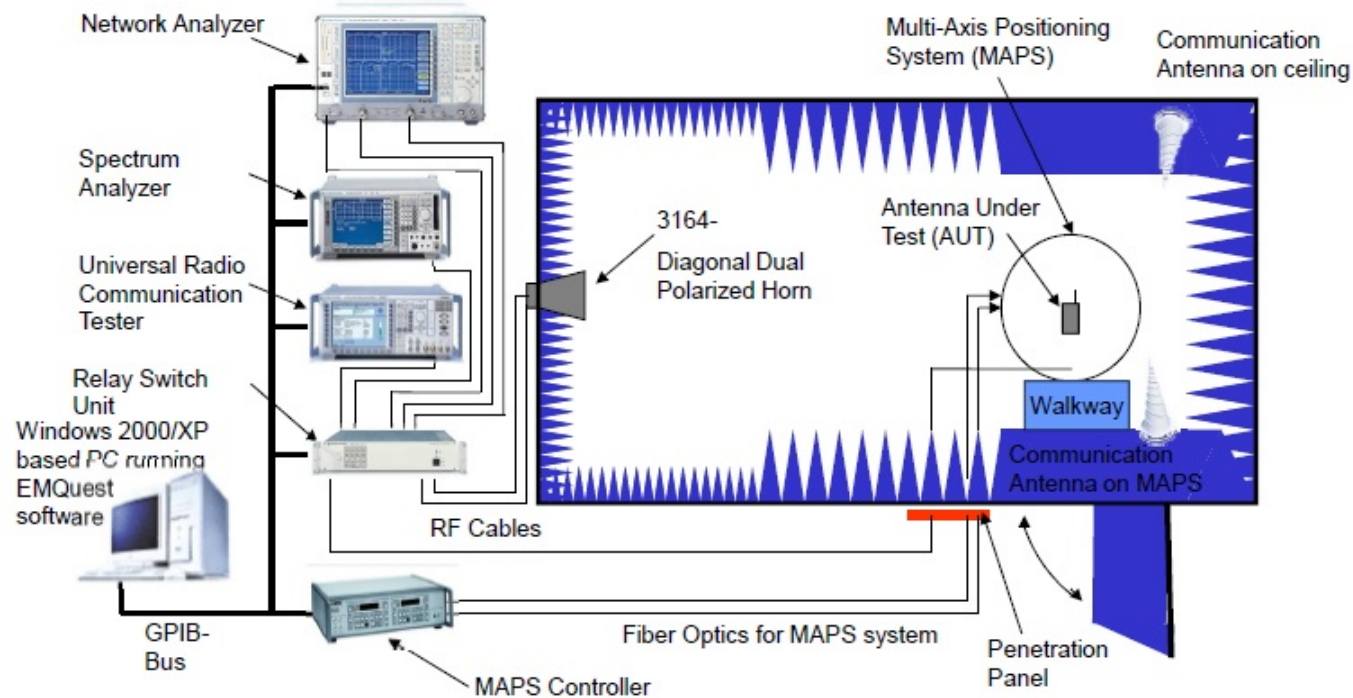
804~2170 MHz



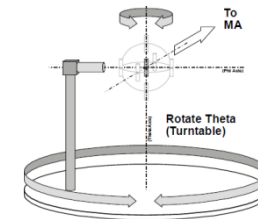
Integrity , Innovative , Sincere

ETS Chamber - AMS-8500

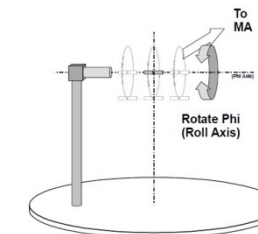
Chamber Size: 7.32m x 3.66m x 3.66m
Test Distance: 4.9 meter
Frequency: 700MHz – 6GHz



Theta - Axis



Phi - Axis





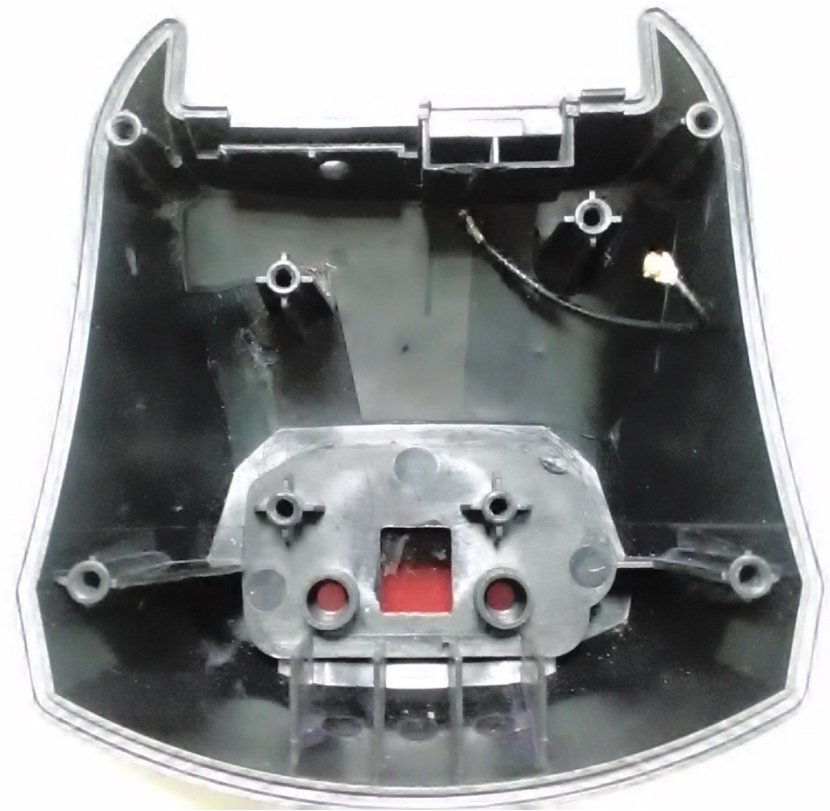
Purpose:

This report is to show the test results of 3G Antenna for CIPHER LAB.

Contents:

- 1. Overview & Antenna Information
- 2. Test Results
 - 2.1 VSWR
 - 2.2 3D Gain table

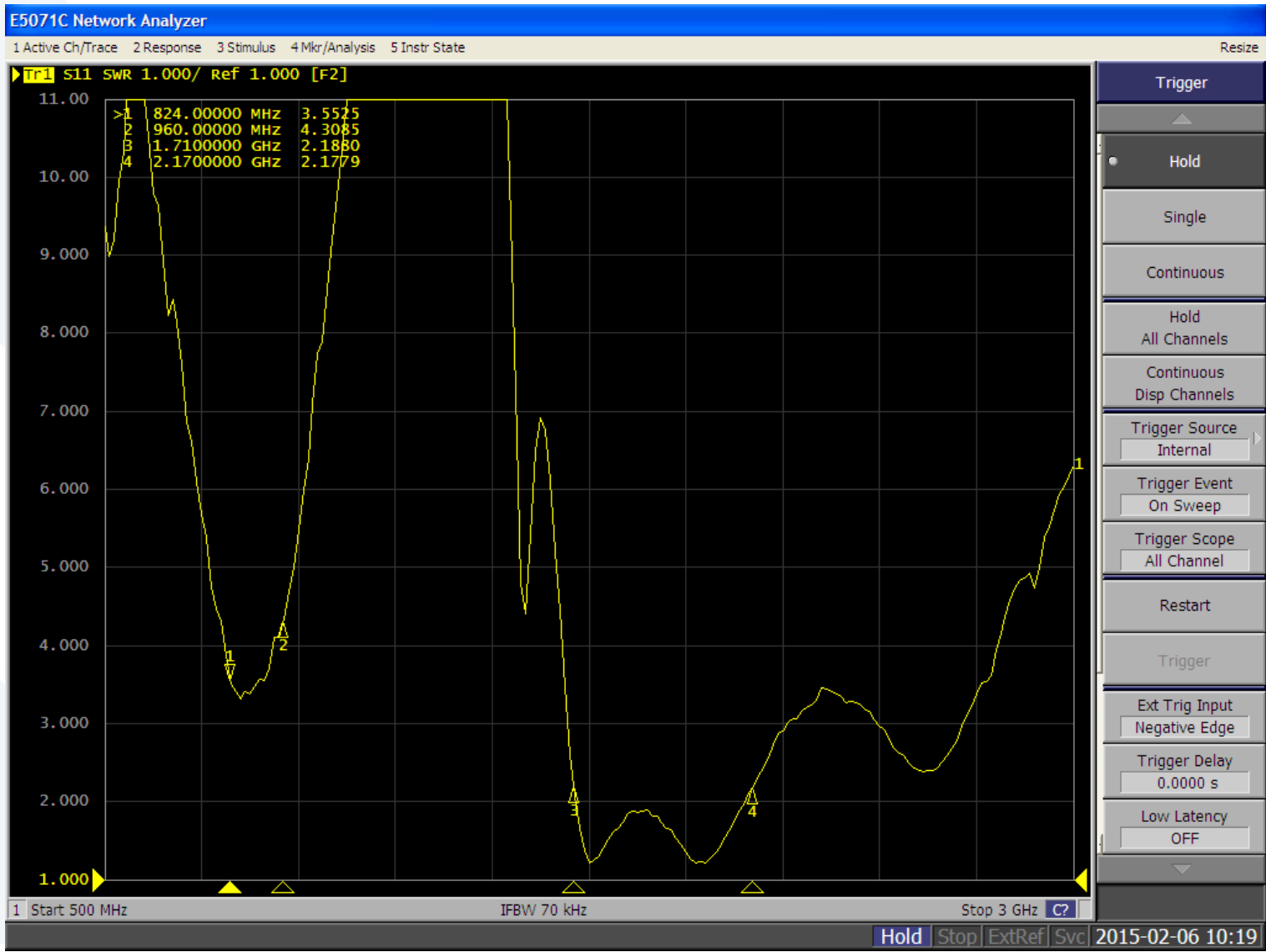
1. Overview& Antenna Information





2.Test Results

2.1 VSWR



2.2 3D Gain table

Band	Freq.	Gain (dBi)		Efficiency (%)
	MHz	Peak Gain(dBi)	Average Gain(dBi)	
WDM A V & GSM850	815	-1.61	-3.81	41.60
	824	-1.42	-3.69	42.75
	836	-1.12	-3.60	43.64
	849	-0.91	-3.52	44.44
	869	-1.03	-3.69	42.79
	836	-1.12	-3.60	43.64
GSM900	894	-1.13	-3.97	40.05
	900	-1.13	-4.01	39.76
	915	-1.28	-4.13	38.68
	940	-1.72	-4.42	36.17
	960	-1.97	-4.79	33.16
GSM 1800 1900 WCDMA III IV	1710	0.09	-4.87	32.57
	1750	0.96	-4.27	37.41
	1785	2.45	-3.21	47.80
	1805	2.84	-2.89	51.41
	1840	2.92	-2.80	52.43
	1850	2.85	-2.92	51.09

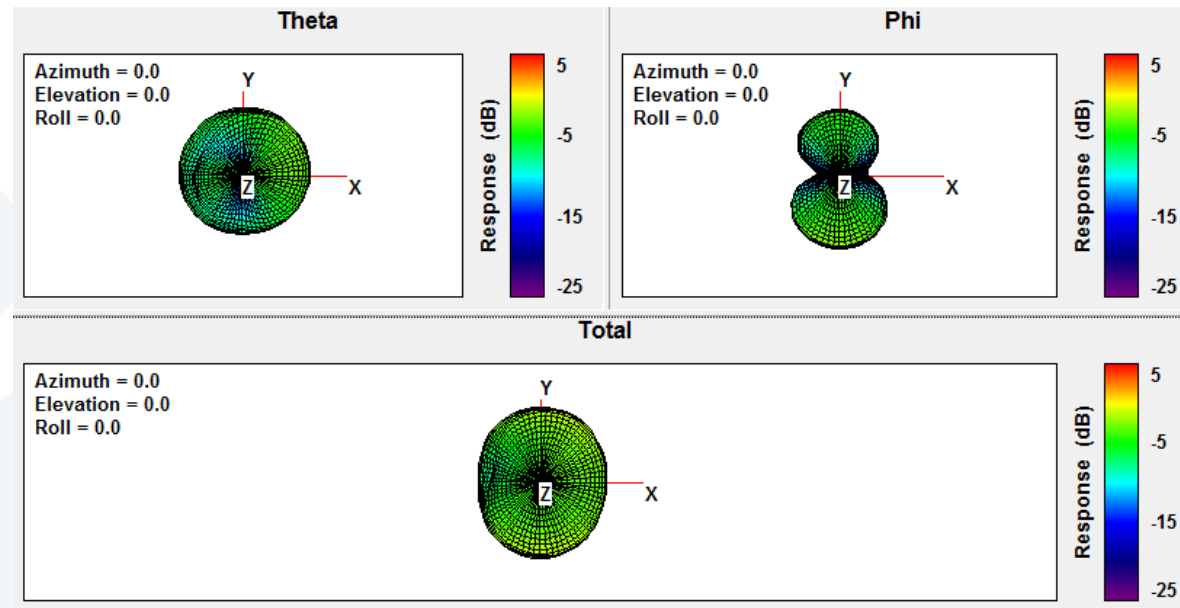
2.2 3D Gain table



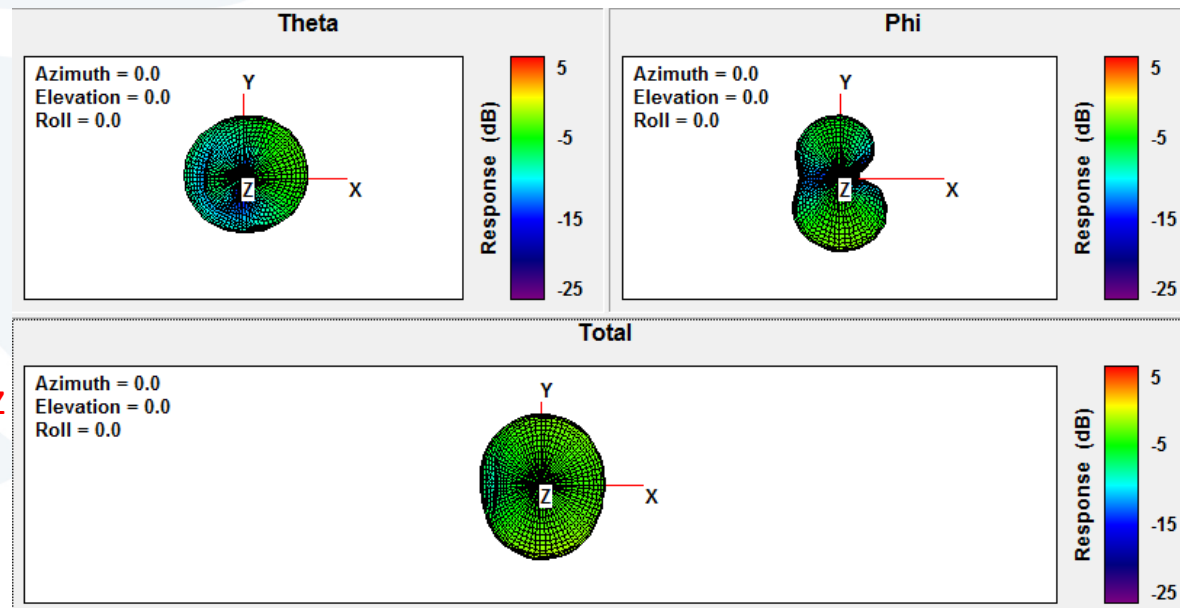
WCDMA BI BII	Freq.	Gain (dBi)		Efficiency (%)
	MHz	Peak Gain(dBi)	Average Gain(dBi)	
	1920	3.34	-2.81	52.37
	1980	3.38	-2.77	52.78
	1990	3.31	-2.74	53.25
	2110	3.38	-2.11	61.53
	2140	3.19	-2.19	60.33
	2170	2.85	-2.24	59.76

2.3 3D Radiation Pattern

845MHz

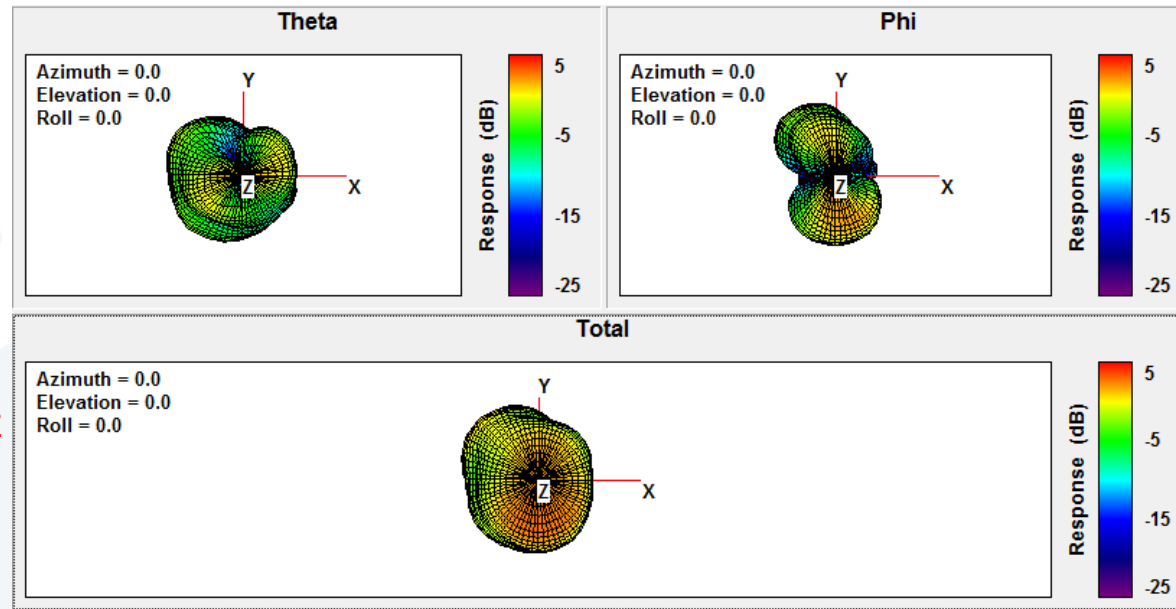


925 MHz

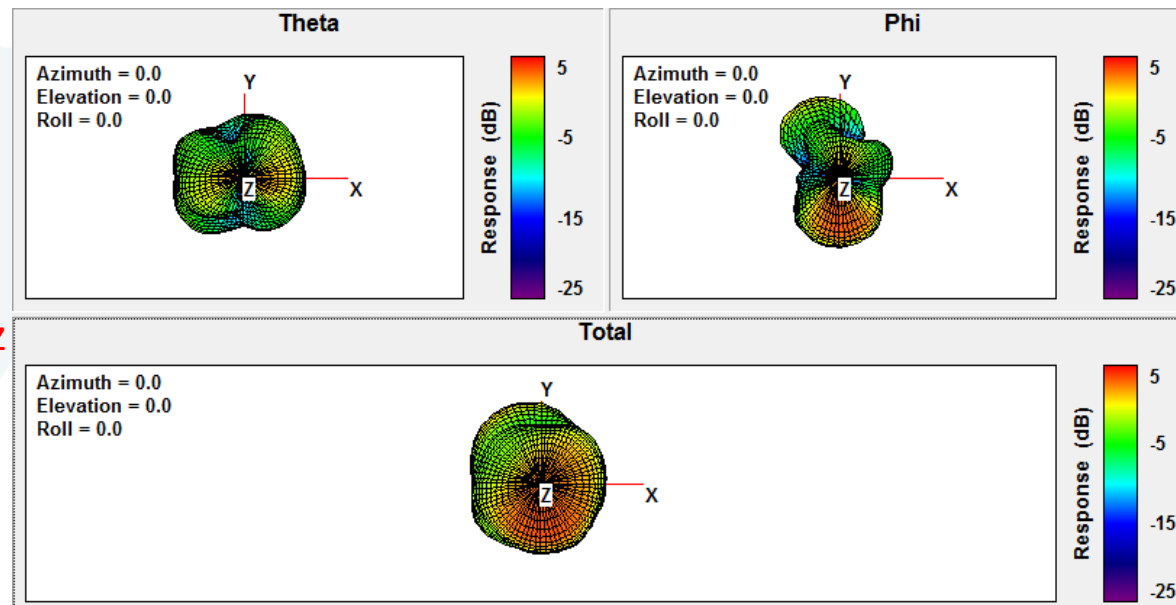


2.3 3D Radiation Pattern

1805 MHz



1980 MHz



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