Report No.:SZ13040148E01

ANTENNA PERFORMANCE TEST REPORT

TESTING
CNAS L3572

Issued to

G-Lab GmbH

For

Bluetooth Module

Model Name:	Geneva Bluetooth
Trade Name:	Geneva
Brand Name:	N/A
Standard:	IEEE149-1979
	ETSI EN 50383-2002
Test date:	2013-04-26
Issue date:	2013-04-28

by

Shenzhen Morlab Communications Technology Co., Ltd.

MORLAB Certification

Tested by Chi Shide
Chi Shide
Date 2013.4.28

Approved by Zeng Dexin
Zeng Dexin
Date 2013.4.28

Reviewed by Huang Pulong
Huang Pulong
Date 2013.4.28

CTIA Authorized Test Lab LAB CODE 20081223-00 IEEE 1725 OTA

OFTA 電訊管理局

TAF Testing Laboratory 2030

GCF Official Observer of Global Certification Forum

Bluetooth BQTF

FCC Reg. No. 741109

1. General Information

1.1 Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Department:	Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China 518101
Responsible Test Lab Manager:	Mr. Shu Luan
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

1.2 Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China 518101

1.3 List of Test Equipments

No.	Type	Specification
1	8960-5515C System Simulator	Manufacturer: Agilent
2	CMU 200 System Simulator	Manufacturer: R&S
3	E5071B Vector Network Analyzer	Manufacturer: Agilent
4	4*4*4 Full Anechoic Chamber	Manufacturer: Satimo
5	SG24 Multi-probe Antenna Measurement System	Manufacturer: Satimo

2. Technical Information

Note: Provide by applicant.

2.1 Applicant Information

Company:	G-Lab GmbH
Address:	Schiffbaustrasse 10,8005 Zurich,Switzerland
Contact:	Frank Joosten
Telephone:	+86 755 82775210
Fax:	+86 755 82775215
E-mail:	frank joosten@genevalab.com

2.2 Antenna under Test (AUT) Description

Brand Name:	N/A
Model Name:	Geneva Bluetooth

2.2.1 Photographs of the EUT

Please reference annex A.

2.2.2 Identification of all used EUTs

The EUT Identity consists of numerical and letter characters (see the table below), the first five numerical characters indicates the Type of the EUT defined by Morlab, the next letter character indicates the test sample, and the following two numerical characters indicates the software version of the test sample.

EUT Identity	Memo
AUT01	N/A

3. Test Results

3.1 Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	IEEE149-1979	IEEE Standard Test Procedures for Antennas

Specific reference documents for testing:

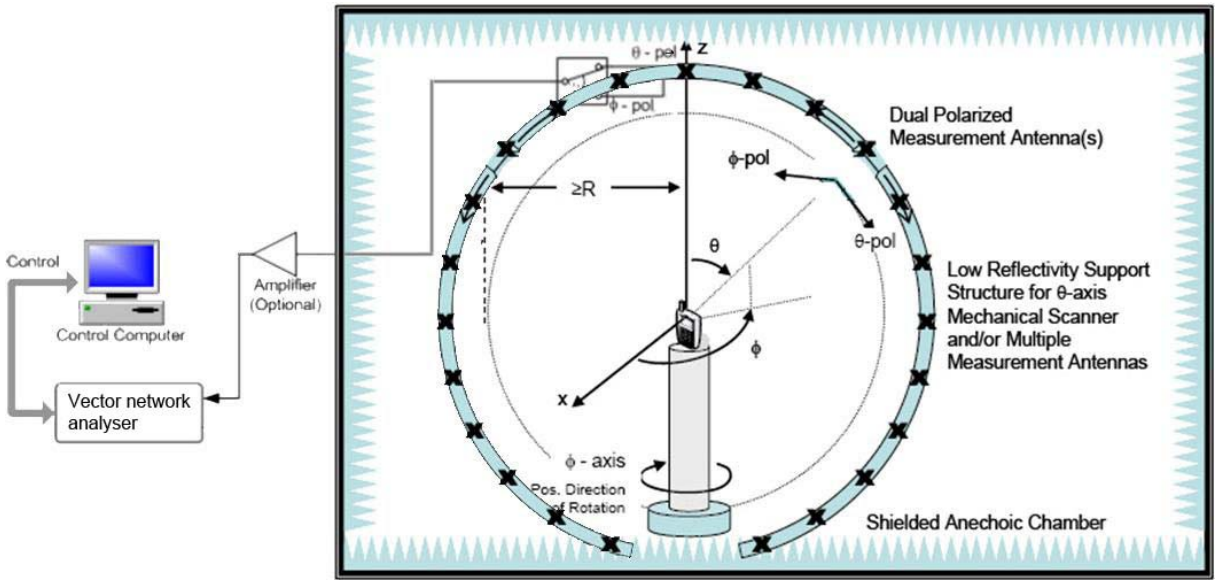
No.	Identity	Document Title
2	ETSI EN 50383-2002	Basic standard for the calculation and measurement of electromagnetic field strength and SAR related to human exposure from radio base stations and fixed terminal stations for wireless telecommunication systems (110 MHz – 40 GHz).

3.2 Test Conditions

Test Environment Conditions：

1) Temperature：23° C
2) Relative Humidity：49%

Test Setup:



3.3 Test Results lists

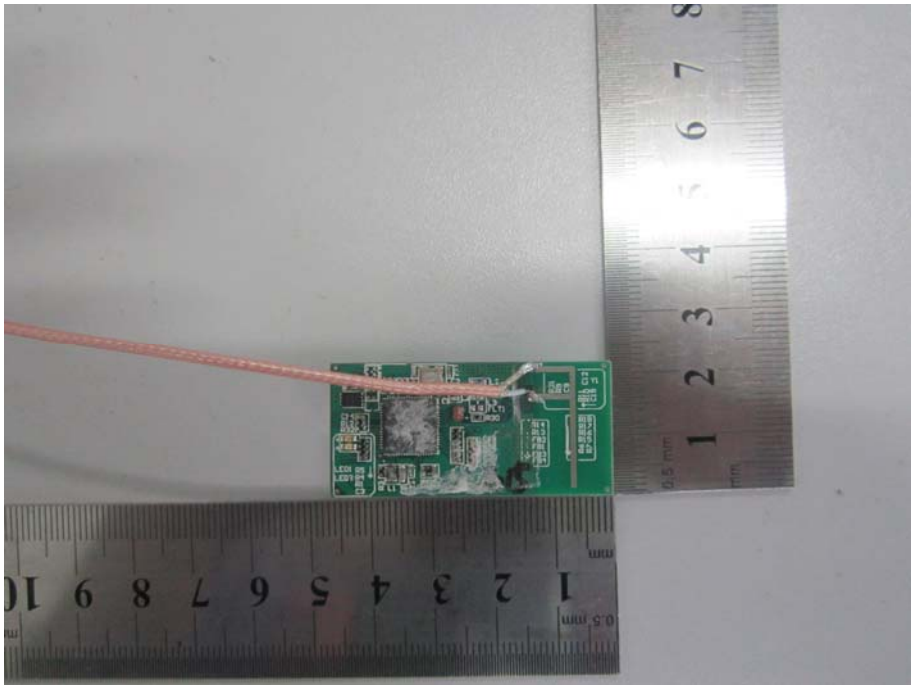
3.3.1 Gain

Frequency	Gain(dBi)
2400MHz	2.35492
2410MHz	2.26616
2420MHz	2.14977
2430MHz	1.99938
2440MHz	1.95693
2450MHz	1.78128
2460MHz	1.92999
2470MHz	1.88383
2480MHz	2.0966
2490MHz	2.26599
2500MHz	2.41483

Annex A. Photographs

1. Test environment

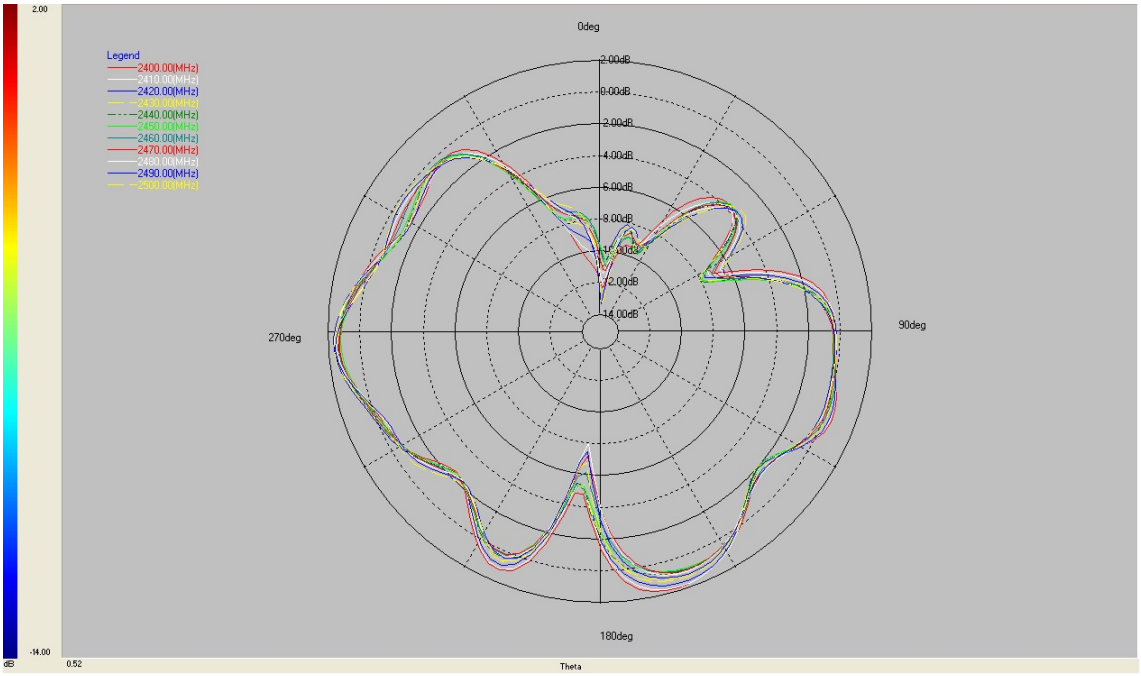
2. EUT



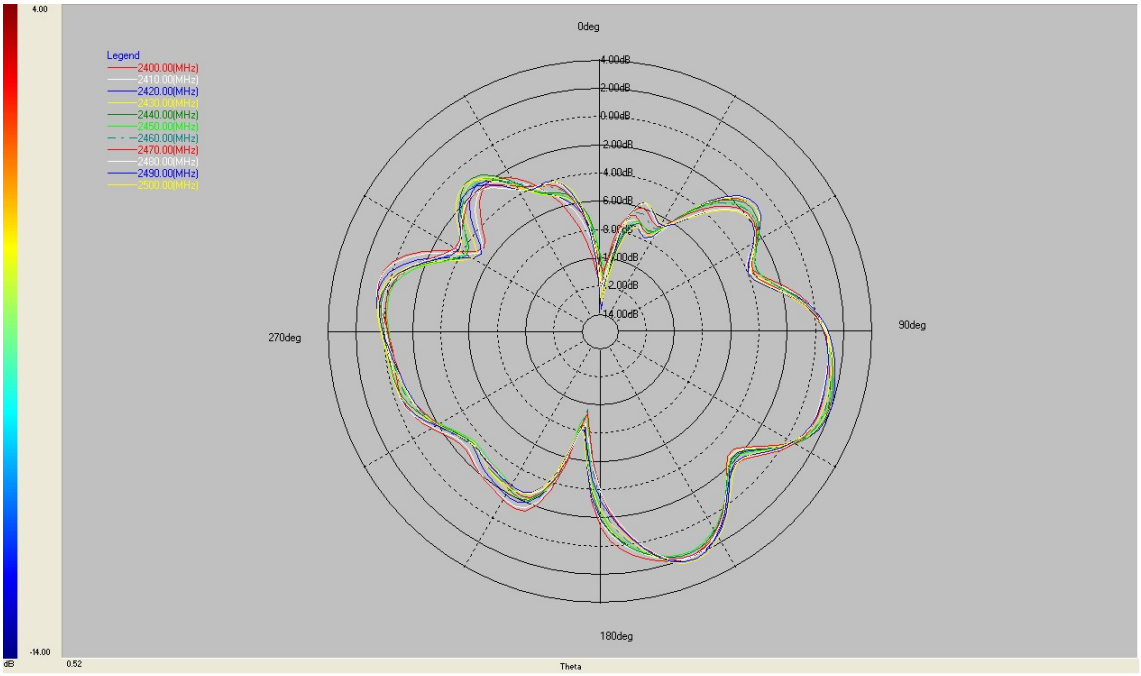
Figures

2D Radiation Pattern

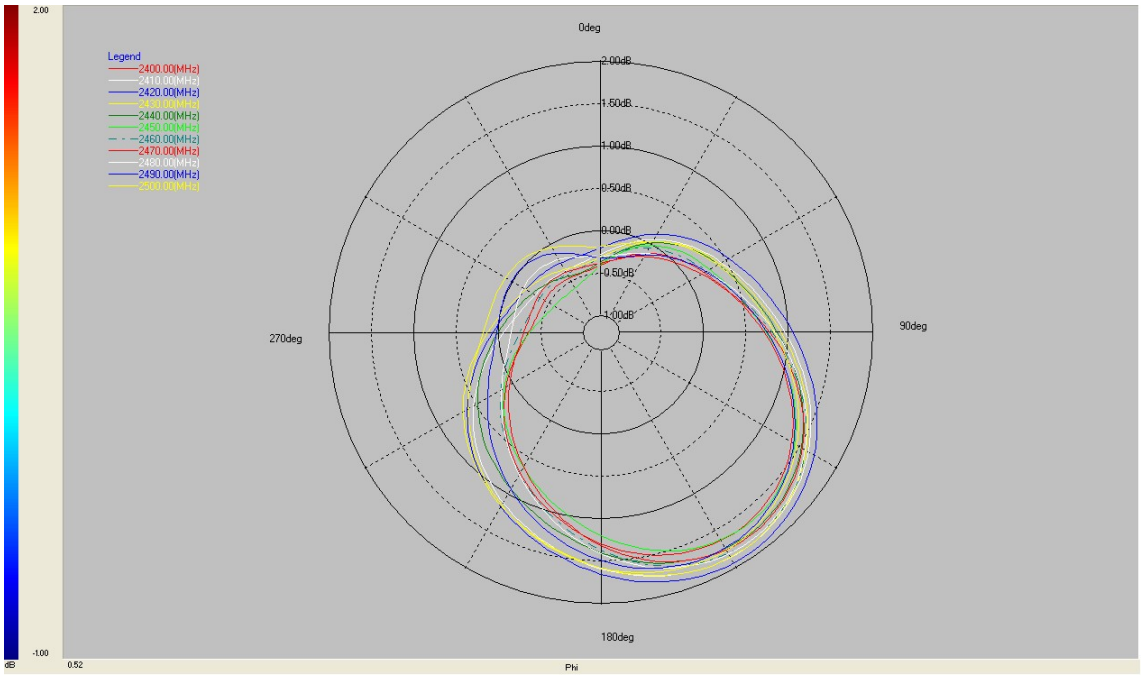
1. Phi=0



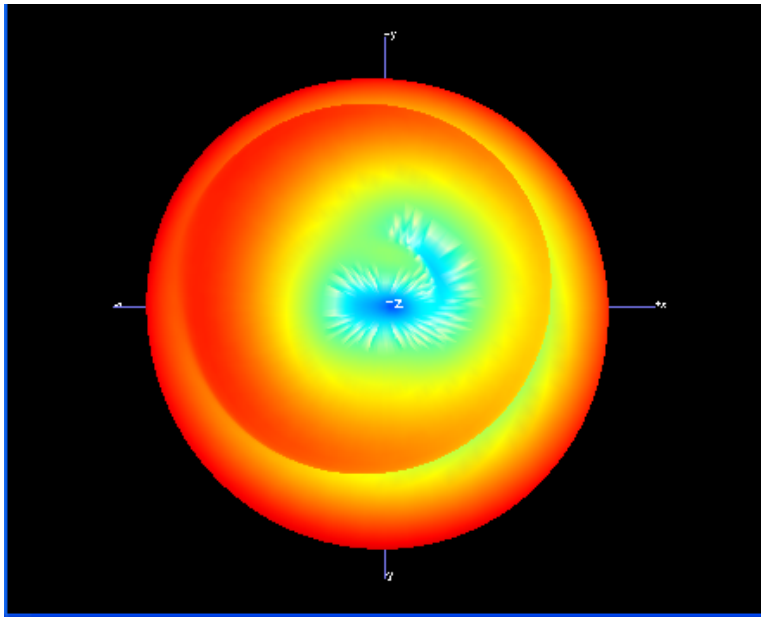
2. Phi=90



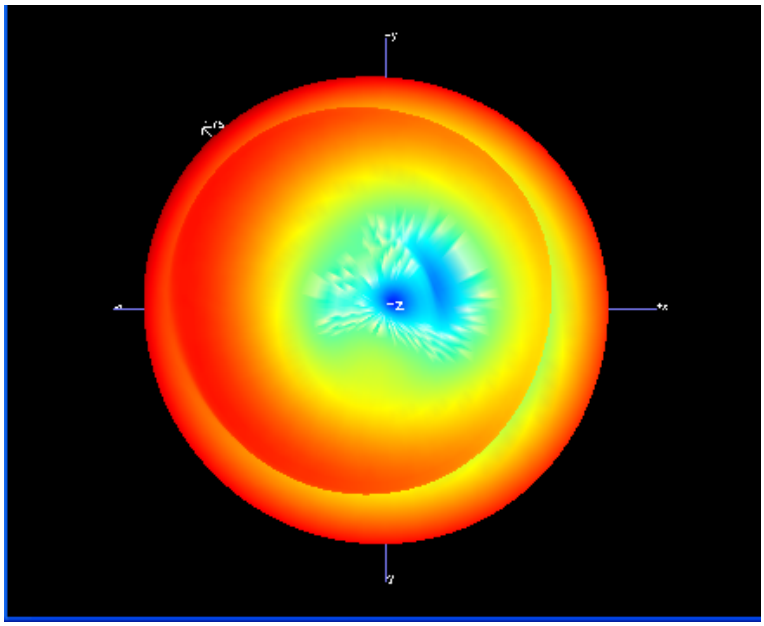
3. Theta=90


2.00
-1.00
dB
0.52
Legend
2400.00(MHz)
2410.00(MHz)
2420.00(MHz)
2440.00(MHz)
2450.00(MHz)
2460.00(MHz)
2470.00(MHz)
2480.00(MHz)
2490.00(MHz)
0deg
90deg
180deg
270deg
2.00dB
1.50dB
1.00dB
0.50dB
0.00dB
-0.50dB
-1.00dB
Phi

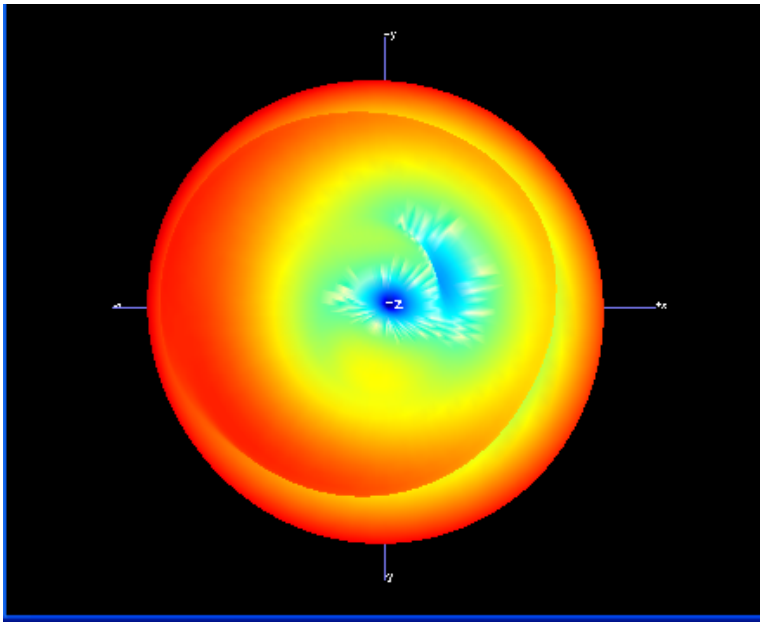
3D Radiation Pattern



2400MHz



2450MHz



2500 MHz

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