OTA performance

TEST REPORT

Issued to

Cellsafe PTY LTD

For

Radi chip for iphone

Model Name:	Radi Chip for iphone 6/6s/6plus/6splus.
Trade Name:	Cellsafe Radi chip
Brand Name:	Cellsafe
Standard:	Test plan for Mobile Station Over the Air Performance Revision_2_2_2
Test date:	2016-3-16 & 2016-3-17.
Issue date:	2016-3-22

by

Shenzhen Morlab Communications Technology Co., Ltd.

Tested by *Wang Guoqiang*
Wang Guoqiang
Date 2016. 3. 22

Approved by
Huang Pulong
Date

Reviewed by *Mo Huina*
Mo Huina
Date 2016. 3. 22

CTIA Authorized Test Lab
LAB CODE 200812233-00
IEEE 1725   OTA

OFTA
電訊管理局

ilac-MRA

TAF
Testing Laboratory

GCF'
Official Observer of
Global Certification Forum

Bluetooth
BQTF

FCC
Reg. No.
741109

CONTENTS

General Information

1.1   Identification of the Responsible Testing Laboratory

Company Name: Shenzhen Morlab Communications Technology Co., Ltd.
Address: 3/F, Electronic Testing Building, Shahe Road, Nanshan
District, Shenzhen, 518055 P. R. China
Responsible Test Lab Manager: Mr. Shu Luan
Telephone: +86 755 86130228
Facsimile: +86 755 86130218

1.2   Identification of the Responsible Testing Location

Name: Shenzhen Morlab Communications Technology Co., Ltd.
Address: 3/F, Electronic Testing Building, Shahe Road, Nanshan
District, Shenzhen, 518055 P. R. China

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
6	Simulated Head	Manufacturer：IndexSAR

2. Technical Information

Note: Provide by applicant.

2.1 Applicant Information

Company: **Cellsafe PTY.LTD**

Address: NA

Contact: NA
Telephone: NA
Fax: NA

2.2 Photographs of the EUT

Please reference annex A.

2.3 Identification of all used EUT

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	IMEI	Hardware Version	Software Version
EUT01	(n.a.)	(n.a.)	(n.a.)

3. Test Results

3.1 Applied Reference Documents

No	Identity	Document Title
1	Test Plan for Mobile Station Over the Air Performance	Method of Measurement for Radiated RF Power and Receiver Performance V2.2.2

3.2 Test Conditions

3.2.1 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	20 - 25
Relative Humidity (%):	30 - 60
Atmospheric Pressure (kPa):	86 - 106

3.2.2 Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

TRP Uncertainty in Measurement of GSM1800 in Freespace:	±1.751dB
TRP Uncertainty in Measurement of WCDMA2100 in Freespace:	±1.845dB
TIS Uncertainty in Measurement of GSM1800 in Freespace:	±1.713dB
TIS Uncertainty in Measurement of WCDMA2100 in Freespace:	±1.799dB

3.2.3 Test Setup
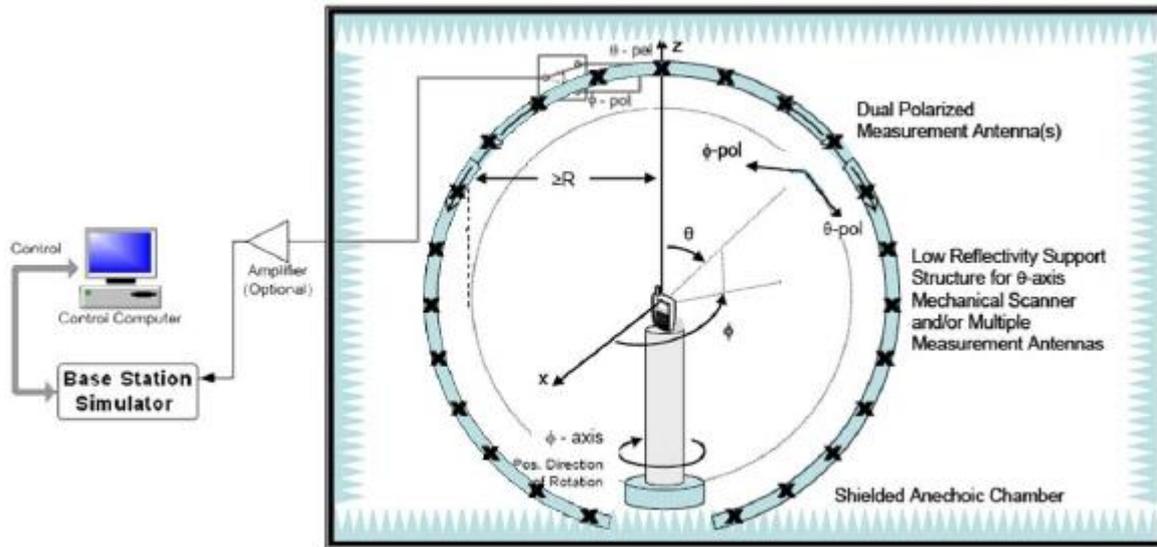
3.3 Summary of test results For Iphone 6

3.3.1Total Radiated Power (TRP)

Band	Frequency	TRP(-dBm)	
		Original	with Cellsafe Chip
WCDMA	1950MHz	21.9527	**21.3254**
	836.6MHz	20.6841	**20.0814**
	897.6MHz	20.8634	**20.3589**

3.3.2Total Isotropic Sensitivity (TIS)

Band	Frequency	TIS(-dBm)	
		Original	with Cellsafe Chip
WCDMA	1950MHz	102.6832	**102.1586**
	836.6MHz	103.2586	**102.9014**
	897.6MHz	102.9532	**102.5136**

3.4 Summary of test results For Iphone 6S

3.4.1Total Radiated Power (TRP)

Band	Frequency	TRP(-dBm)	
		Original	with Cellsafe Chip
WCDMA	1950MHz	22.3015	**21.9231**
	836.6MHz	21.0321	**20.8354**
	897.6MHz	20.9667	**20.5233**

3.4.2Total Isotropic Sensitivity (TIS)

Band	Frequency	TIS(-dBm)	
		Original	with Cellsafe Chip
WCDMA	1950MHz	103.063	**102.801**
	836.6MHz	103.573	**102.8846**
	897.6MHz	103.2246	**102.6529**

3.5 Summary of test results For IPHONE 6 plus
3.5.1Total Radiated Power (TRP)

Band	Frequency	TRP(-dBm)	
		Original	with Cellsafe Chip
WCDMA	1950MHz	23.6825	**23.154**
	836.6MHz	22.051	**21.534**
	897.6MHz	21.6354	**21.4863**

3.5.2Total Isotropic Sensitivity (TIS)

Band	Frequency	TIS(-dBm)	
		Original	with Cellsafe Chip
WCDMA	1950MHz	108.3652	**107.643**
	836.6MHz	107.853	**107.2541**
	897.6MHz	107.2563	**106.687**

3.6 Summary of test results For IPHONE 6S plus
3.6.1Total Radiated Power (TRP)

Band	Frequency	TRP(-dBm)	
		Original	with Cellsafe Chip
WCDMA	1950MHz	23.3542	**23.014**
	836.6MHz	22.6418	**21.8747**
	897.6MHz	22.0576	**21.533**

3.5.2Total Isotropic Sensitivity (TIS)

Band	Frequency	TIS(-dBm)	
		Original	with Cellsafe Chip
WCDMA	1950MHz	108.0647	**107.676**
	836.6MHz	107.9631	**107.286**
	897.6MHz	107.7874	**106.7935**

2. Testing environment for iphone 6

3.Testing environment for iphoe6 plus

3.Testing environment for iphoe6S

3.Testing environment for iphoe6S PLUS