TEST REPORT

Reference No.	:	WTS14S1220959E
FCC ID		2ADTE-DG2014
Applicant	:	Shenzhen KVD Communication Equipment
Address	:	13C, Block C, Shenzhen Electronic Technology Building, Shennan Middle Road, Futian District, Shenzhen, China
Manufacturer	:	The same as above
Address	:	The same as above
Product Name	:	Mobile Phone
Model No.	:	TURBO DG2014
Brand	:	DOOGEE
Standards	:	FCC PART15 SUBPART B: 2014
Date of Receipt sample	:	Dec. 6, 2014
Date of Test	:	Dec. 10, 2014 ~ Dec. 30, 2014
Date of Issue	:	Dec. 31, 2014
Test Result	:	**Pass ***

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:
Waltek Services (Shenzhen) Co., Ltd.
Address: 1/F., Fukangtai Building, West Baima Road, Songgang Street, Baoan District, Shenzhen, Guangdong, China
Tel :+86-755-83551033
Fax:+86-755-83552400

Compiled by:

Zero Zhou / Project Engineer

Approved by:

Philo Zhong / Manager

1 Test Summary

Test Item	Test Requirement	Class	Test Method	Test Result
Power Line Conducted Emission (150kHz to 30MHz)	FCC PART 15, SUBPART B: 2014	Class B	ANSI C63.4: 2003	Pass
Radiated Emission 30MHz to 1GHz)	FCC PART 15, SUBPART B: 2014	Class B	ANSI C63.4: 2003	Pass
Radiated Emission (Above 1GHz)	FCC PART 15, SUBPART B: 2014	Class B	ANSI C63.4: 2003	Pass

Remark:

Pass	Test item meets the requirement
Fail	Test item does not meet the requirement
N/A	Test case does not apply to the test object

2 Contents

Page

COVER PAGE 1

1 TEST SUMMARY 2

2 CONTENTS 3

3 GENERAL INFORMATION 4

3.1 GENERAL DESCRIPTION OF E.U.T. 4
3.2 DETAILS OF E.U.T. 4
3.3 STANDARDS APPLICABLE FOR TESTING 5
3.4 TEST FACILITY 5
3.5 SUBCONTRACTED 5
3.6 ABNORMALITIES FROM STANDARD CONDITIONS 6

4 EQUIPMENT USED DURING TEST 6

4.1 EQUIPMENT LIST 6
4.2 DESCRIPTION OF SUPPORT UNITS 7
4.3 MEASUREMENT UNCERTAINTY 7

5 EMISSION TEST RESULTS 8

5.1 POWER LINE CONDUCTED EMISSION, 150KHZ TO 30MHZ 8
5.2 RADIATION EMISSION, 30MHZ TO 1000MHZ 11
5.3 RADIATION EMISSION, ABOVE 1000MHZ 14

6 PHOTOGRAPHS – TEST SETUP 17

6.1 PHOTOGRAPH –POWER LINE CONDUCTED EMISSION TEST SETUP AT TEST SITE 2# 17
6.2 PHOTOGRAPH – RADIATED EMISSION TEST SETUP FOR 30~1000MHZ AT TEST SITE 2# 17
6.3 PHOTOGRAPH – RADIATED EMISSION TEST SETUP FOR ABOVE 1GHZ AT TEST SITE 1# 18

7 PHOTOGRAPHS – CONSTRUCTIONAL DETAILS 19

7.1 EUT – EXTERNAL VIEW 19
7.2 EUT – INTERNAL VIEW 23

3 General Information

3.1 General Description of E.U.T.

Product Name	: Mobile Phone
Model No.	: TURBO DG2014
Model Description	: N/A
GSM Band(s)	: GSM 850/900/1800/1900MHz
GPRS Class	: 12
WCDMA Band(s)	: FDD Band I/V
Wi-Fi Specification	: 802.11b/g/n HT20/n HT40
Bluetooth Version	: Bluetooth v4.0 with BLE
GPS	: Support
NFC	: N/A
Hardware Version	: Z819BS-B1
Software Version	: DOOGEE-TURBO-DG2014-4.4-R11

3.2 Details of E.U.T.

Operation Frequency	: GSM 850: 824~849MHz PCS 1900: 1850~1910MHz WCDMA Band V: 824~849MHz WiFi: 802.11b/g/n HT20: 2412-2462MHz 802.11n HT40: 2422-2452MHz Bluetooth: 2402-2480MHz GPS: 1.57GHz
Max. RF output power	: GSM 850: 32.53dBm PCS1900: 29.72dBm WCDMA Band V: 22.03dBm WiFi: 9.40dBm Bluetooth: 0.79dBm
Type of Modulation	: GSM,GPRS: GMSK WCDMA: QPSK WiFi: CCK, OFDM Bluetooth: GFSK, Pi/4 DQPSK,8DPSK
Antenna installation	: GSM/WCDMA: Wire antenna WiFi/Bluetooth: Metal Dome
Antenna Gain	: GSM 850: -4dBi PCS1900: -4dBi

	WCDMA Band V: -4dBi
	WiFi: -1dBi
	Bluetooth: -1dBi
Technical Data	Battery DC 3.7V 1750mAh
	DC 5V, 1.0A, charging from adapter (Adapter Input: 100-240VAC 50/60Hz, 0.15A)
Adapter	Manufacture: Shenzhen KVD Communication Equipment
	Model No.: TN-050100UZ

3.3 Standards Applicable for Testing

The tests were performed according to following standards:

FCC PART 15, SUBPART B: Electronic Code of Federal Regulations- Unintentional Radiators 2014

3.4 Test Facility

The test facility has a test site registered with the following organizations:

- **IC – Registration No.: 7760A-1**

  Waltek Services (Shenzhen) Co., Ltd. has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration 7760A-1, July 12, 2012.

- **FCC Test Site 1#– Registration No.: 880581**

  Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory `has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 880581, April 29, 2014.

- **FCC Test Site 2#– Registration No.: 328995**

  Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory `has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 328995, December 3, 2014.

-

3.5 Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

☐ Yes ☒ No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

3.6 Abnormalities from Standard Conditions

None.

4 Equipment Used during Test

4.1 Equipment List

Conducted Emissions Test Site 1#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMI Test Receiver	R&S	ESCI	100947	Sep.15,2014	Sep.14,2015
2.	LISN	R&S	ENV216	101215	Sep.15,2014	Sep.14,2015
3.	Cable	Top	TYPE16(3.5M)	-	Sep.15,2014	Sep.14,2015
Conducted Emissions Test Site 2#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMI Test Receiver	R&S	ESCI	101155	Sep.15,2014	Sep.14,2015
2.	LISN	SCHWARZBECK	NSLK 8128	8128-289	Sep.15,2014	Sep.14,2015
3.	Limiter	York	MTS-IMP-136	261115-001-0024	Sep.15,2014	Sep.14,2015
4.	Cable	LARGE	RF300	-	Sep.15,2014	Sep.14,2015
3m Semi-anechoic Chamber for Radiation Emissions Test site 1#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1	EMC Analyzer	Agilent	E7405A	MY45114943	Sep.15,2014	Sep.14,2015
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	Sep.15,2014	Sep.14,2015
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	Apr.19,2014	Apr.18,2015
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	Sep.15,2014	Sep.14,2015
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	Apr.19,2014	Apr.18,2015
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	Apr.19,2014	Apr.18,2015
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	Mar.17,2014	Mar.16,2015
8	Coaxial Cable (above 1GHz)	Top	1GHz-25GHz	EW02014-7	Apr.10,2014	Apr.09,2015
3m Semi-anechoic Chamber for Radiation Emissions Test site 2#						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No**	**Last Calibration Date**	**Calibration Due Date**
1	Test Receiver	R&S	ESCI	101296	Sep.15,2014	Sep.14,2015
2	Trilog Broadband	SCHWARZBECK	VULB9160	9160-3325	Sep.15,2014	Sep.14,2015

	Antenna					
3	Amplifier	Compliance pirection systems inc	PAP-0203	22024	Sep.15,2014	Sep.14,2015
4	Cable	HUBER+SUHNER	CBL2	525178	Sep.15,2014	Sep.14,2015
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No**	**Last Calibration Date**	**Calibration Due Date**
RF Conducted Testing						
Item	**Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Last Calibration Date**	**Calibration Due Date**
1.	EMC Analyzer (9k~26.5GHz)	Agilent	E7405A	MY45114943	Sep.15,2014	Sep.14,2015
2.	Spectrum Analyzer (9k-6GHz)	R&S	FSL6	100959	Sep.15,2014	Sep.14,2015
3.	Signal Analyzer (9k~26.5GHz)	Agilent	N9010A	MY50520207	Sep.15,2014	Sep.14,2015

4.2 Description of Support Units

Equipment	Manufacturer	Model No.	Series No.
Headphone	Qisheng	S-325	N/A
Notebook	LENOVO	X201i	75Y4408
MacBook Air	APPLE	A1465	C17KTQDNF5N7

4.3 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Conduction disturbance	150kHz~30MHz	±3.64dB	(1)
Radiation Emission	30MHz~1000MHz	±5.03dB	(1)
	1GHz~6GHz	±5.47dB	(1)

(1)This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5 Emission Test Results

5.1 Power Line Conducted Emission, 150kHz to 30MHz

Test Requirement ..... : FCC PART 15, SUBPART B

Test Method ..... : ANSI C63.4

Test Result ..... : Pass

Frequency Range ..... : 150kHz to 30MHz

Class ..... : Class B

Limit ..... :

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	46
5 to 30	60	50

5.1.1 E.U.T. Operation

Operating Environment:

Temperature ..... : 23°C

Humidity ..... : 53.6%RH

Atmospheric Pressure..... : 101kPa

EUT Operation:

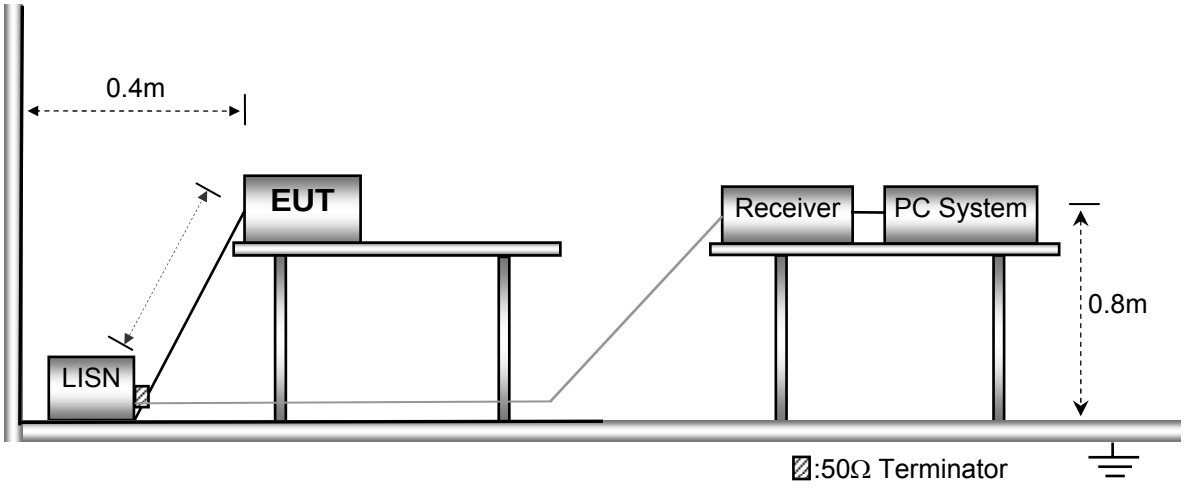
Input Voltage..... : (1)DC 5V by adapter input AC120V/60Hz
(2)DC 5V by PC

Operating Mode ..... : GPS receiving mode, Charging mode, Data transmission mode with PC.

Remark ..... : The worse case is under the condition of AC 120V/60Hz adapter input and the data is shown as follow.

5.1.2 Block Diagram of Test Setup

The Mains Terminals Disturbance Voltage tests were performed in accordance with the ANSI C63.4 .

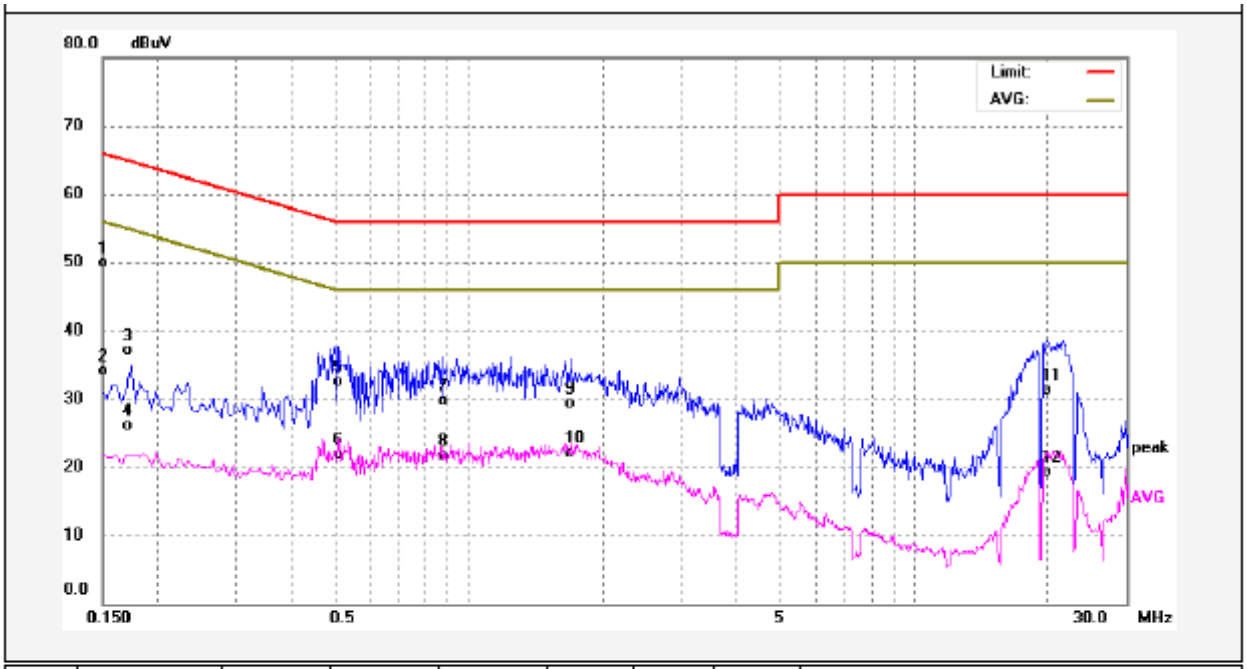


5.1.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line. According to the data in section 5.1.4, the EUT complied with the FCC PART 15, SUBPART B standards.

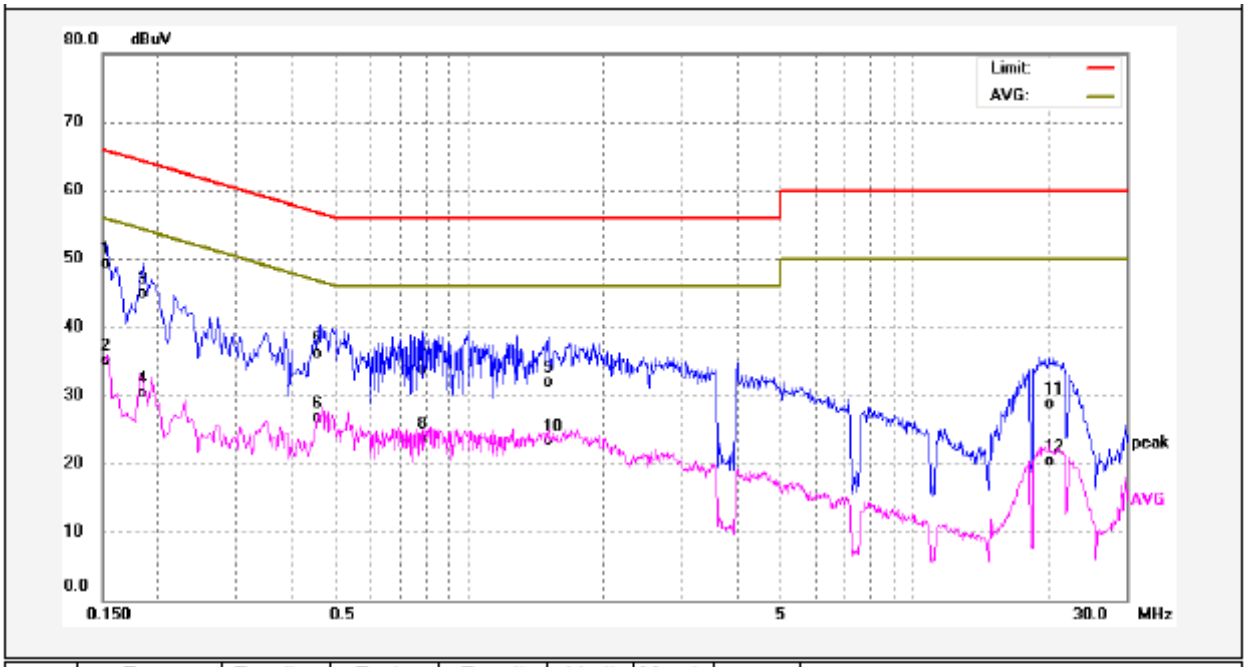
5.1.4 Power Line Conducted Emission Test Data

Live Line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1500	38.70	11.17	49.87	65.99	-16.12	QP	
2	0.1500	22.84	11.17	34.01	55.99	-21.98	AVG	
3	0.1712	25.87	11.23	37.10	64.90	-27.80	QP	
4	0.1712	14.97	11.23	26.20	54.90	-28.70	AVG	
5	0.5100	21.19	11.31	32.50	56.00	-23.50	QP	
6	0.5100	10.58	11.31	21.89	46.00	-24.11	AVG	
7	0.8740	18.48	11.25	29.73	56.00	-26.27	QP	
8	0.8740	10.53	11.25	21.78	46.00	-24.22	AVG	
9	1.6940	18.10	11.19	29.29	56.00	-26.71	QP	
10	1.6940	10.99	11.19	22.18	46.00	-23.82	AVG	
11	19.9220	19.84	11.49	31.33	60.00	-28.67	QP	
12	19.9220	7.80	11.49	19.29	50.00	-30.71	AVG	

Neutral Line:



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Margin (dB)	Detector	Remark
1	0.1500	38.09	11.17	49.26	65.99	-16.73	QP	
2	0.1500	23.88	11.17	35.05	55.99	-20.94	AVG	
3	0.1860	33.60	11.26	44.86	64.21	-19.35	QP	
4	0.1860	19.05	11.26	30.31	54.21	-23.90	AVG	
5	0.4620	24.80	11.31	36.11	56.66	-20.55	QP	
6	0.4620	15.34	11.31	26.65	46.66	-20.01	AVG	
7	0.7900	22.41	11.29	33.70	56.00	-22.30	QP	
8	0.7900	12.44	11.29	23.73	46.00	-22.27	AVG	
9	1.5060	20.72	11.19	31.91	56.00	-24.09	QP	
10	1.5060	12.14	11.19	23.33	46.00	-22.67	AVG	
11	20.1220	17.31	11.49	28.80	60.00	-31.20	QP	
12	20.1220	8.80	11.49	20.29	50.00	-29.71	AVG	

5.2 Radiation Emission, 30MHz to 1000MHz

Test Requirement ..... : FCC PART 15, SUBPART B

Test Method ..... : ANSI C63.4

Test Result ..... : Pass

Frequency Range ..... : 30MHz to 1000MHz

Class. : Class B

Limit..... :

Frequency (MHz)	Distance (Meter)	Limit (dBμV/m Quasi-peak
30 to 88	3	40
88 to 216	3	43.5
216 to 960	3	46
960 to 1000	3	54

5.2.1 E.U.T. Operation

Operating Environment:

Temperature ..... : 22.5°C

Humidity ..... : 52.6%RH

Atmospheric Pressure..... : 101.2kPa

EUT Operation:

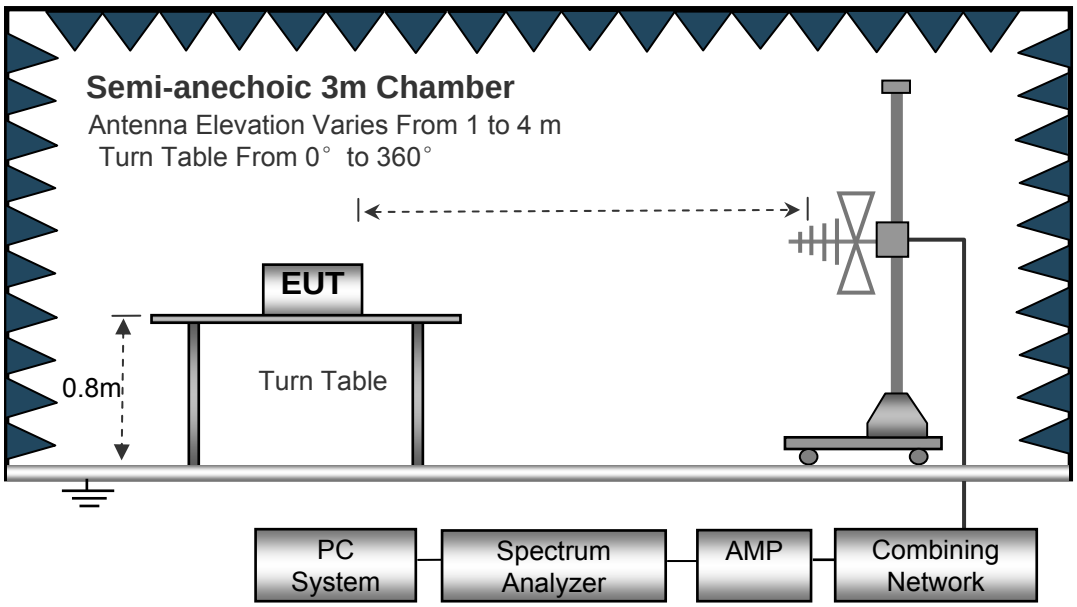
Input Voltage..... : (1)DC 5V by Adapter Input AC 120V/60Hz
(2)DC 5V by PC
(3)DC 3.7V by Battery

Operating Mode ..... : GPS receiving mode, Charging mode, Data transmission mode with PC.

Remark ..... : The worse case is under the condition of AC 120V/60Hz adapter input and the data is shown as follow.

5.2.2 Block Diagram of Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.

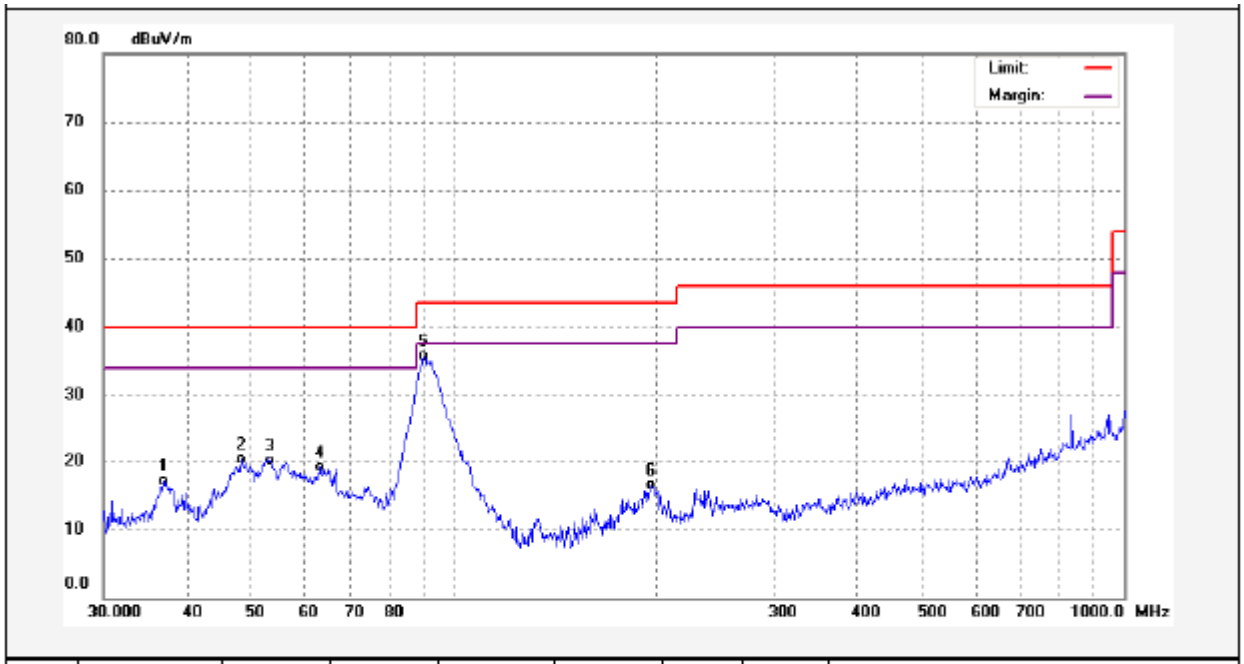


5.2.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Antenna Vertical Polarization and Antenna Horizontal Polarization. Quasi-peak measurements were performed if peak emissions were within 6dB of the Quasi-peak limit line.

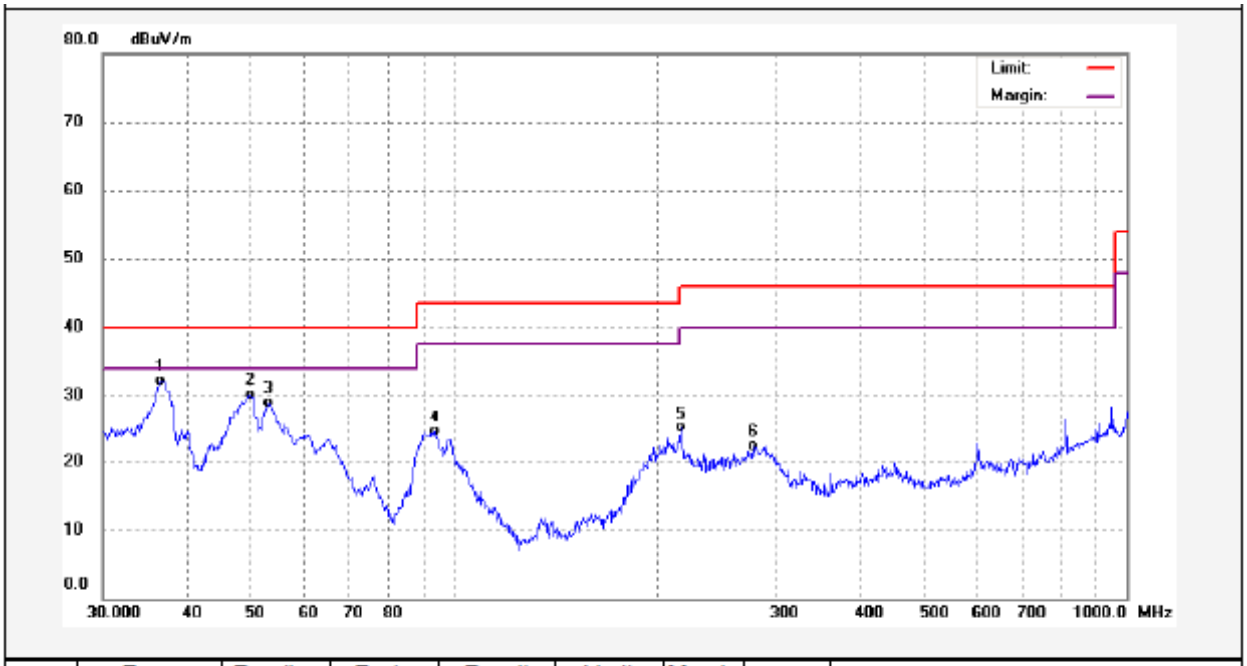
5.2.4 Radiated Emission Test Data, 30MHz to 1000MHz

Antenna Polarization: Vertical



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	36.8953	37.37	-20.36	17.01	40.00	-22.99	QP	
2	48.1626	41.96	-21.62	20.34	40.00	-19.66	QP	
3	53.1313	42.28	-22.23	20.05	40.00	-19.95	QP	
4	63.3132	43.13	-24.07	19.06	40.00	-20.94	QP	
5	90.2205	58.78	-23.03	35.75	43.50	-7.75	QP	
6	197.2001	38.49	-22.07	16.42	43.50	-27.08	QP	

Antenna Polarization: Horizontal



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	36.6375	52.61	-20.42	32.19	40.00	-7.81	QP	
2	49.7068	51.90	-21.75	30.15	40.00	-9.85	QP	
3	52.9453	51.01	-22.19	28.82	40.00	-11.18	QP	
4	93.4402	47.21	-22.62	24.59	43.50	-18.91	QP	
5	216.7828	47.27	-22.13	25.14	46.00	-20.86	QP	
6	278.0668	42.54	-20.24	22.30	46.00	-23.70	QP	

5.3 Radiation Emission, Above 1000MHz

Test Requirement ..... : FCC PART 15, SUBPART B

Test Method ..... : ANSI C63.4

Test Result..... : Pass

Frequency Range ..... : 1GHz~6GHz

Class. : Class B

Limit. ..... :

Frequency Range (MHz)	Distance (Meter)	Average Limit dB(uV/m)	Peak Limit (dBuV/m)
Above 1GHz	3	54	74

5.3.1 E.U.T. Operation

Operating Environment:

Temperature..... : 22.4°C

Humidity ..... : 52.3%RH

Atmospheric Pressure..... : 101.3kPa

EUT Operation:

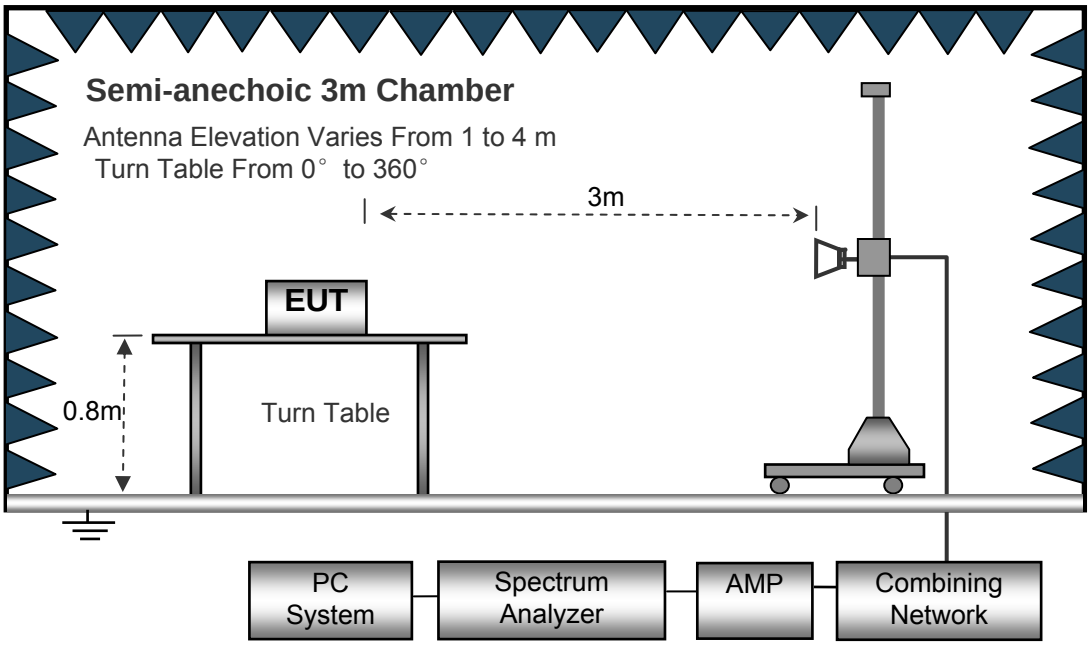
Input Voltage ..... : (1)DC 5V by Adapter Input AC 120V/60Hz
(2)DC 5V by PC
(3)DC 3.7V by Battery

Operating Mode ..... : GPS receiving mode, Charging mode, Data transmission mode with PC.

Remark..... : The worse case is under the condition of AC 120V/60Hz adapter input and the data is shown as follow.

5.3.2 Block Diagram of Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.

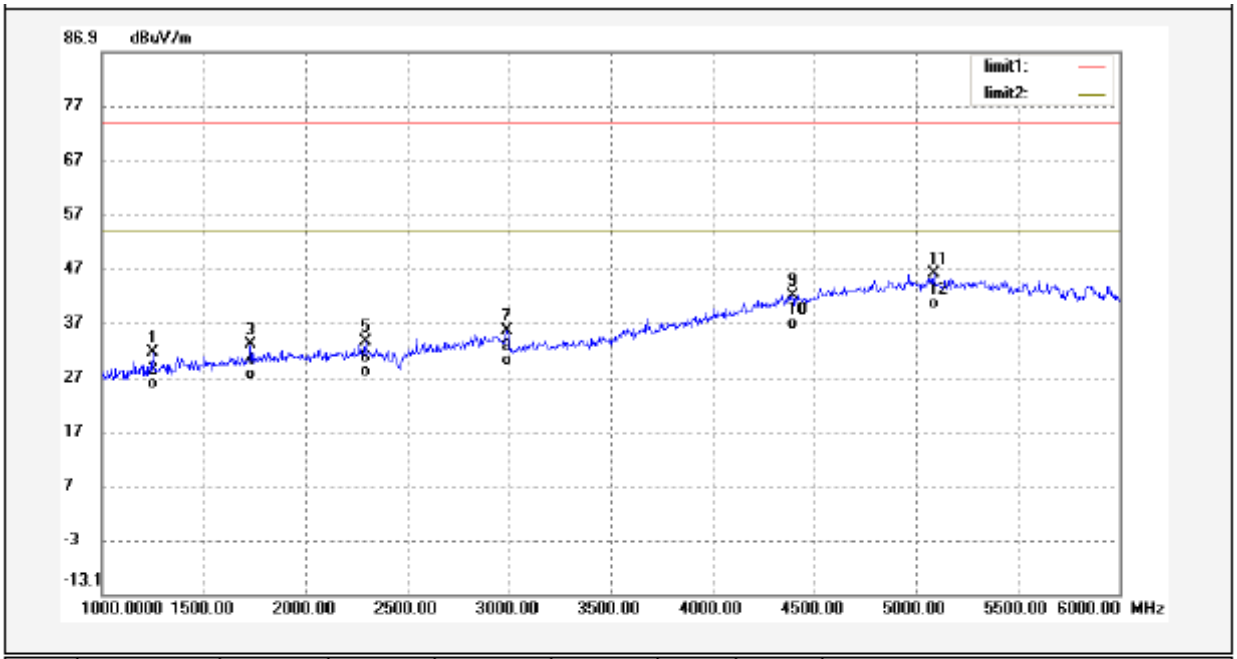


5.3.3 Measurement Data

The maximised peak emissions from the EUT was scanned and measured for both the Antenna Vertical Polarization and Antenna Horizontal Polarization. Average measurements were performed if peak emissions were within 6dB of the average limit line

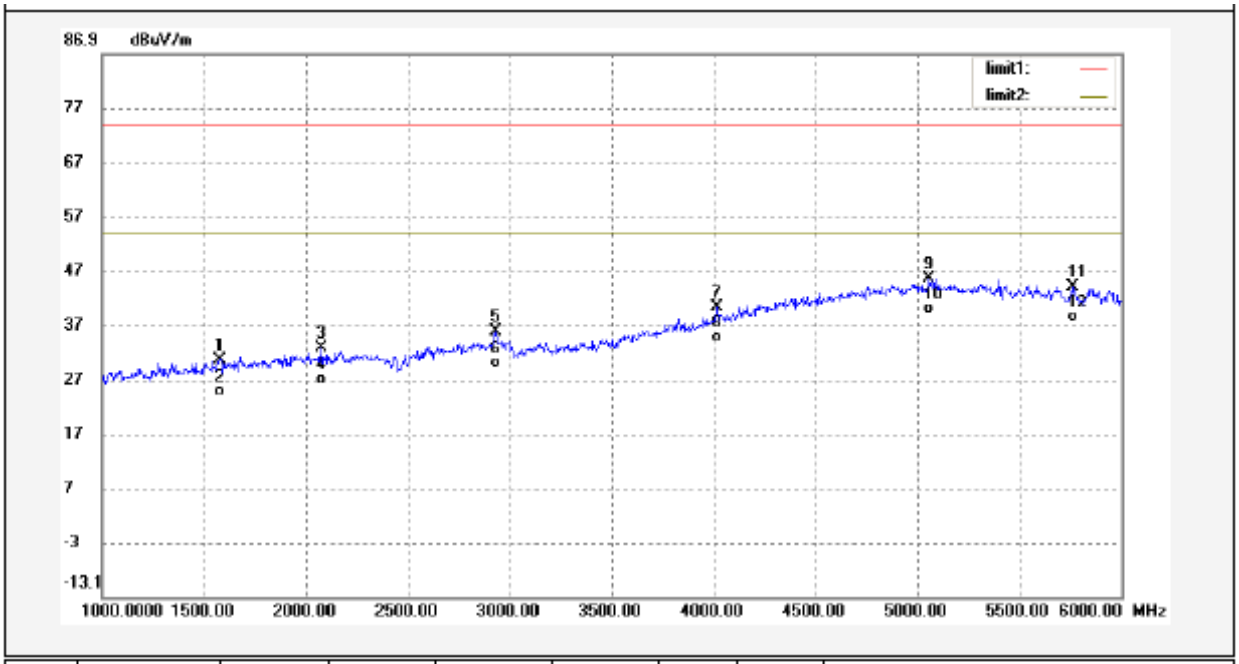
5.3.4 Radiated Emission Test Data, Above 1000MHz

Antenna Polarization: Vertical



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	1250.000	50.47	-18.98	31.49	74.00	-42.51	peak	
2	1250.000	43.85	-18.98	24.87	54.00	-29.13	AVG	
3	1730.000	50.40	-17.42	32.98	74.00	-41.02	peak	
4	1730.000	43.91	-17.42	26.49	54.00	-27.51	AVG	
5	2295.000	49.70	-16.22	33.48	74.00	-40.52	peak	
6	2295.000	43.16	-16.22	26.94	54.00	-27.06	AVG	
7	2990.000	48.79	-13.37	35.42	74.00	-38.58	peak	
8	2990.000	42.33	-13.37	28.96	54.00	-25.04	AVG	
9	4395.000	46.47	-4.36	42.11	74.00	-31.89	peak	
10	4395.000	40.05	-4.36	35.69	54.00	-18.31	AVG	
11	5090.000	46.81	-0.77	46.04	74.00	-27.96	peak	
12	5090.000	40.26	-0.77	39.49	54.00	-14.51	AVG	

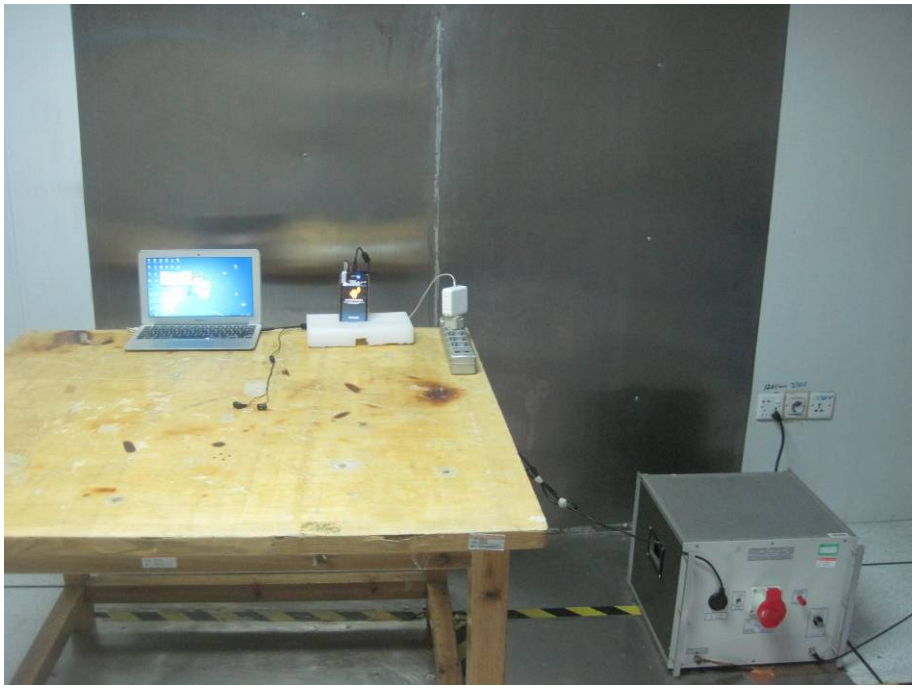
Antenna Polarization: Horizontal



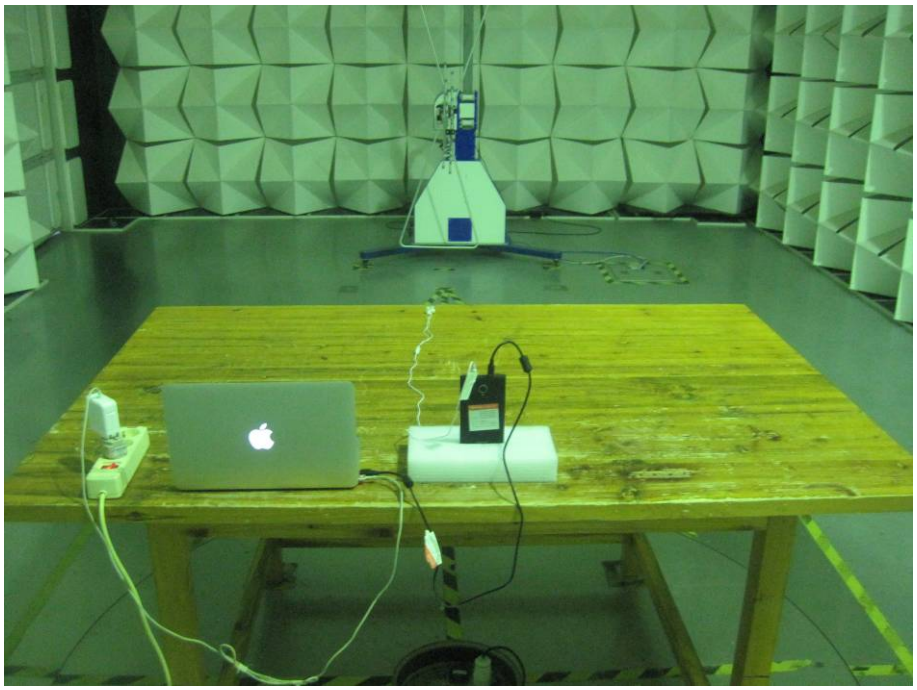
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	1575.000	48.59	-17.94	30.65	74.00	-43.35	peak	
2	1575.000	41.77	-17.94	23.83	54.00	-30.17	AVG	
3	2075.000	49.12	-16.43	32.69	74.00	-41.31	peak	
4	2075.000	42.50	-16.43	26.07	54.00	-27.93	AVG	
5	2930.000	49.53	-13.70	35.83	74.00	-38.17	peak	
6	2930.000	42.65	-13.70	28.95	54.00	-25.05	AVG	
7	4015.000	47.01	-6.71	40.30	74.00	-33.70	peak	
8	4015.000	40.37	-6.71	33.66	54.00	-20.34	AVG	
9	5055.000	46.28	-0.68	45.60	74.00	-28.40	peak	
10	5055.000	39.82	-0.68	39.14	54.00	-14.86	AVG	
11	5765.000	45.92	-1.91	44.01	74.00	-29.99	peak	
12	5765.000	39.47	-1.91	37.56	54.00	-16.44	AVG	

6 Photographs – Test Setup

6.1 Photograph –Power Line Conducted Emission Test Setup at Test Site 2#



6.2 Photograph – Radiated Emission Test Setup for 30~1000MHz at Test Site 2#



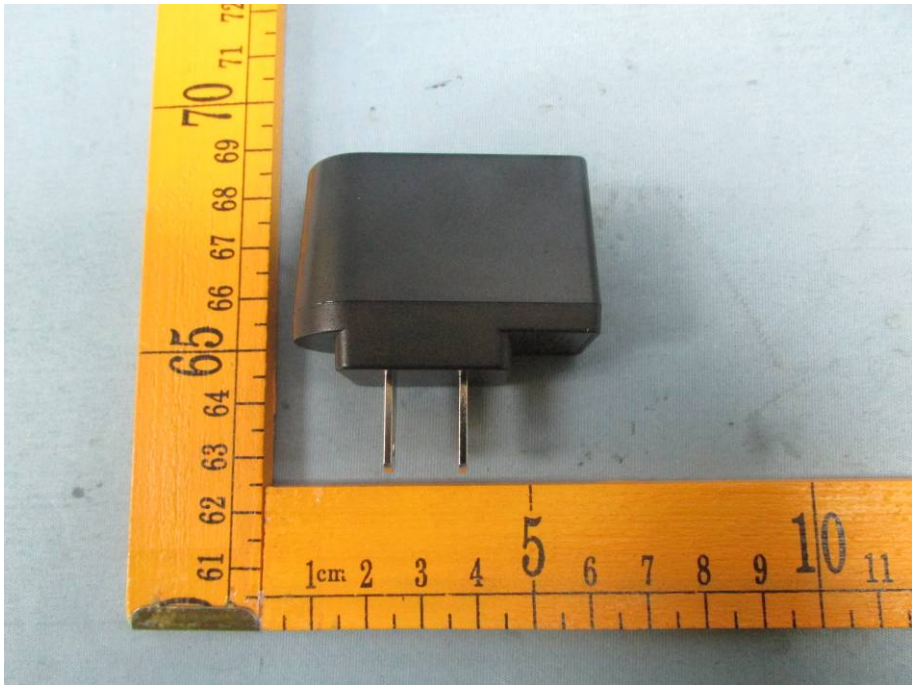
6.3 Photograph – Radiated Emission Test Setup for Above 1GHz at Test Site 1#

7 Photographs – Constructional Details

7.1 EUT – External View

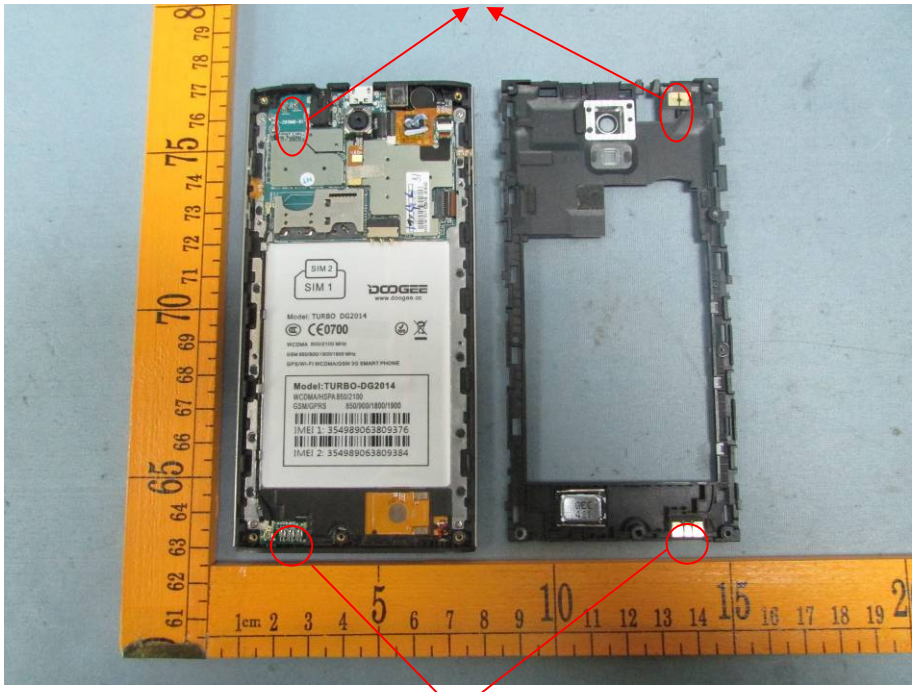

DOOGEE
CONNECTING PEOPLE AND THE WORLD


DOOGEE
CONNECTING PEOPLE AND THE WORLD

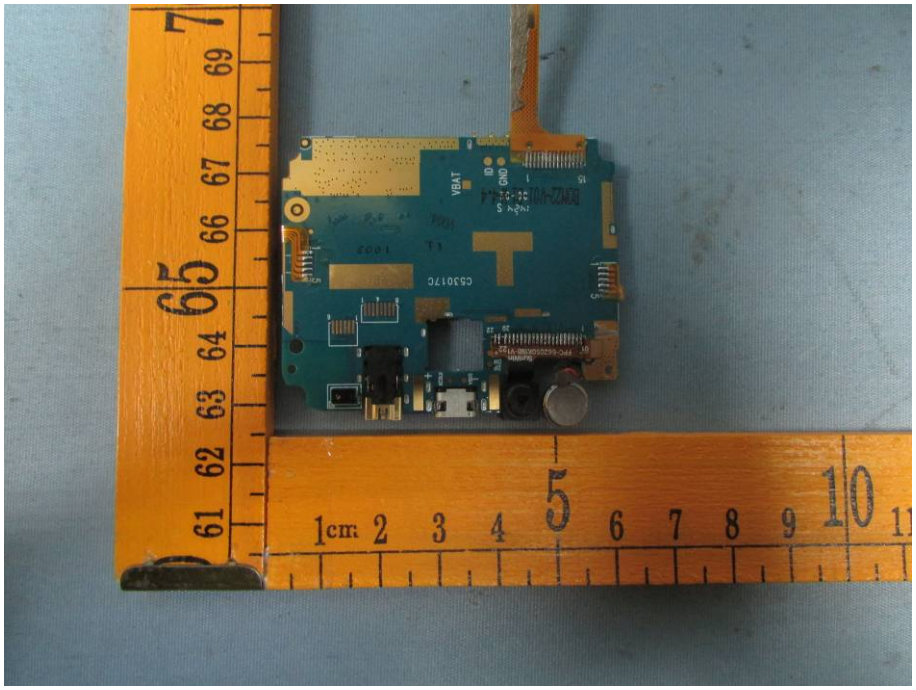


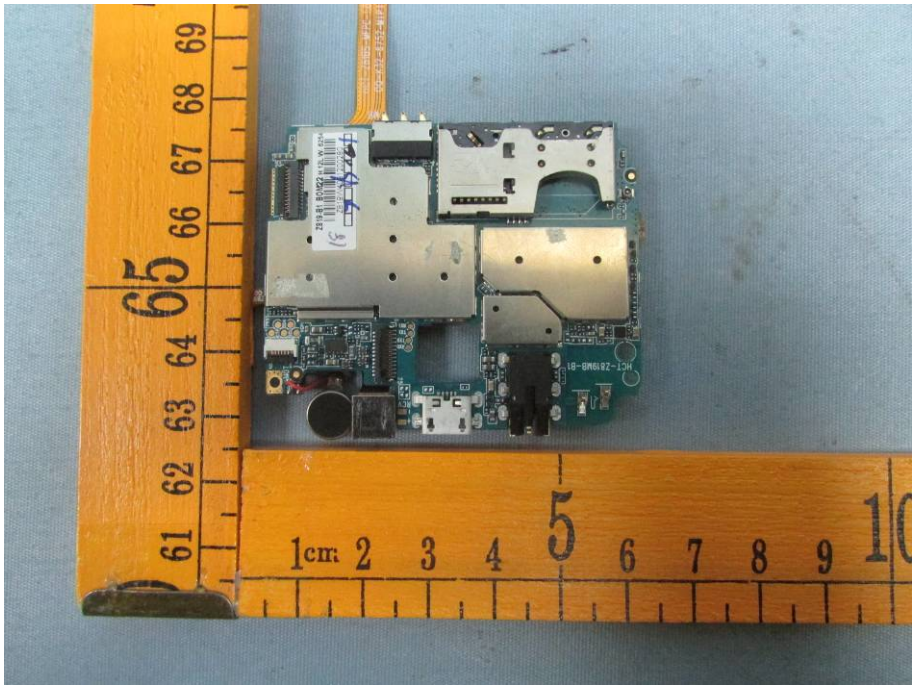
7.2 EUT – Internal View

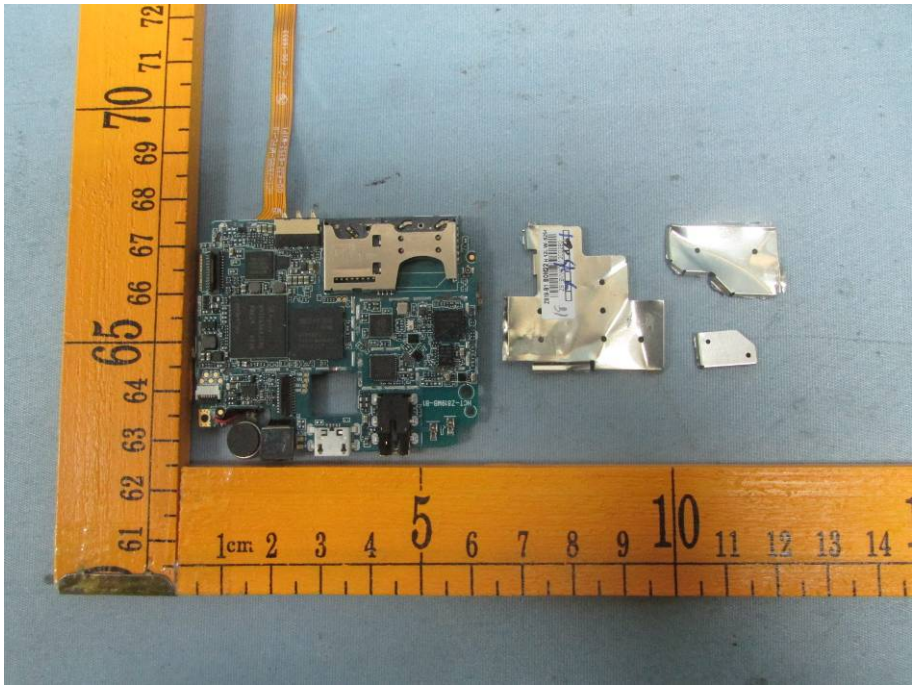
WIFI/BT ANT.

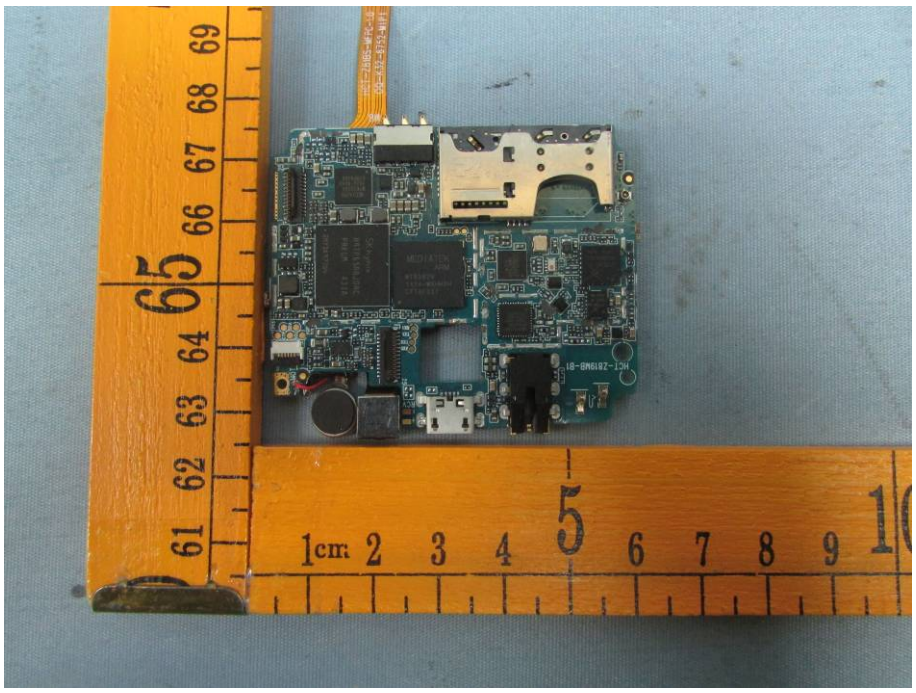


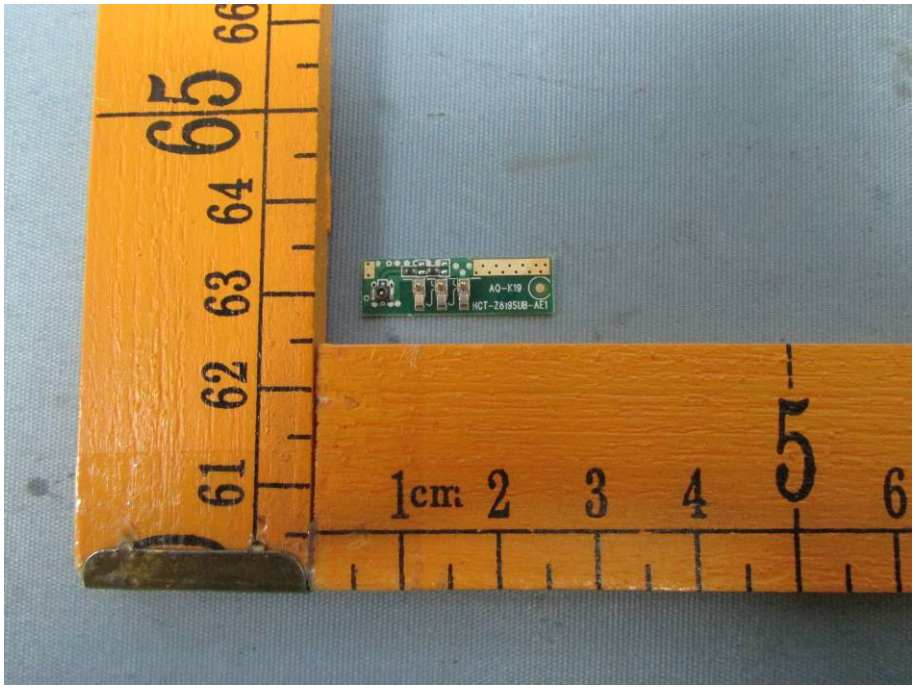
GSM/WCDMA ANT.

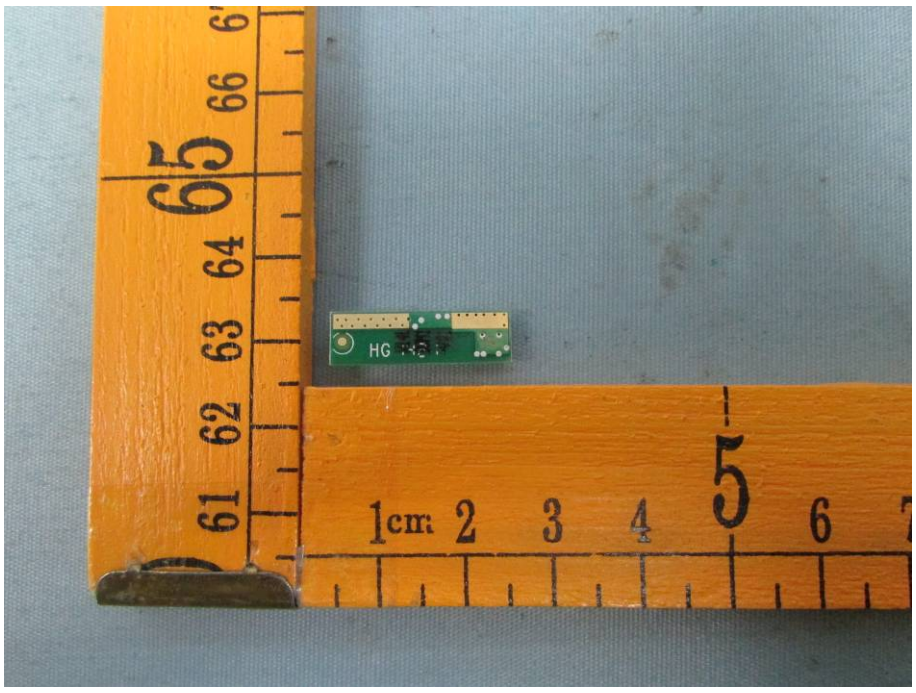

VBAT
GND
1cm 2 3 4 5 6 7 8 9 10


1cm 2 3 4 5 6 7 8 9






AQ-K19
HCT-Z819SUB-AE1
1cm 2 3 4 5 6


1cm 2 3 4 5 6

======End of Report======