FCC Part 15B TEST REPORT

Report No: STS1508040E01

Issued for

ALPHA EXPORT AND IMPORT CO.,LIMITED

Room 4d, Huashang Block, NO.3, Biezhan Road,
Shenzhen, China

Product Name:	Mobile Phone
Brand Name:	ALPHARD
Model No.:	CY1
Series Model:	CY2,CY3,CY4,CY5,CY6, CY7,CY8,CY9,CY10
FCC ID:	2AFAPCY1
Test Standard:	FCC Part 15B

Shenzhen STS Test Services Co., Ltd.
1/F., Building B, Zhuoke Science Park, No.190,Chongqing Road,
Fuyong Street, Bao'an District, Shenzhen, Guangdong,China
TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com

TEST RESULT CERTIFICATION

Applicant's name..... ALPHA EXPORT AND IMPORT CO.,LIMITED

Address..... Room 4d, Huashang Block, NO.3, Biezhan Road, Shenzhen, China

Manufacture's Name ..... ALPHA EXPORT AND IMPORT CO.,LIMITED

Address..... Room 4d, Huashang Block, NO.3, Biezhan Road, Shenzhen, China

Product description

Product name..... Mobile Phone

Brand name..... ALPHARD

Model and/or type reference... CY1

Standards..... FCC Part 15B

Test procedure ..... ANSI C63.4-2014

This device described above has been tested by STS, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Date of Test.....

Date of performance of tests .. 17 Aug. 2015 ~24 Aug. 2015

Date of Issue..... 25 Aug. 2015

Test Result ..... **Pass**

Testing Engineer : (Hakim Hou)

Technical Manager : (Vita Li)

Authorized Signatory : (Bovey Yang)

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	25 Aug. 2015	STS1508040E01	ALL	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

EMISSION			
Standard	Item	Result	Remarks
FCC 47 CFR Part 15 Subpart B (10-1-05 Edition)	Conducted Emission	PASS	Meet Class B limit
	Radiated Emission	PASS	Meet Class B limit

NOTE:

(1) ” N/A” denotes test is not applicable in this Test Report

1.1 TEST FACTORY

Shenzhen STS Test Services Co., Ltd.
Add.: 1/F., Building B, Zhuoke Science Park, No.190,Chongqing Road,
Fuyong Street, Bao’an District, Shenzhen, Guangdong,China

CNAS Registration No.: L7649;

FCC Registration No.: 842334; IC Registration No.: 12108A-1

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± U，where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2，providing a level of confidence of approximately 95 %。

No.	Item	Uncertainty
1	Conducted Emission (9KHz-150KHz)	±2.88dB
2	Conducted Emission (150KHz-30MHz)	±2.67dB
3	RF power,conducted	±0.70dB
4	Spurious emissions,conducted	±1.19dB
5	All emissions,radiated(<1G) 30MHz-200MHz	±2.83dB
6	All emissions,radiated(<1G) 200MHz-1000MHz	±2.94dB
7	All emissions,radiated(>1G)	±3.03dB
8	Temperature	±0.5°C
9	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Mobile Phone
Trade Name	ALPHARD
Model Name	CY1
Serial Model	CY2,CY3,CY4,CY5,CY6,CY7,CY8,CY9,CY10
Model Difference	Only difference in mode name
Channel List	Please refer to the Note 2.
Power Rating	Adapter: Input:AC 100-240V,50/60Hz,350mA Output:DC 5V,2000mA Battery: Rated Voltage:3.8V capacity : 1500mA
Hardware version number	P900
Software versioning number	P900B_V117En20150724
Connecting I/O Port(s)	USB Port/ Earphone *1

Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

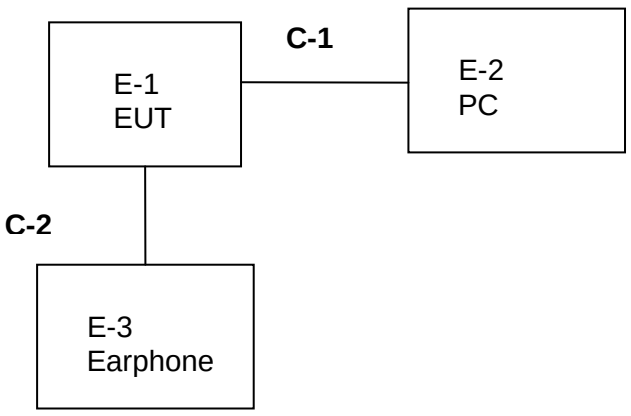
Pretest Mode	Description
Mode 1	USB port do data communication with PC

For Conducted Test	
Final Test Mode	Description
Mode 1	USB port do data communication with PC

For Radiated Test	
Final Test Mode	Description
Mode 1	USB port do data communication with PC

NOTE:
1. Due to the different configuration and test, in this list only some worse mode. The worst test data of the worse modeis reported by this report.
2. We have be tested for all avaiable U.S. voltage and frequencies(For 120V, 50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Mobile Phone	ALPHARD	CY1	N/A	EUT
E-2	PC	HP	500-320cx	N/A	N/A
E-3	Earphone	N/A	N/A	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
C-1	unshielded	NO	102cm	N/A
C-2	unshielded	NO	107cm	N/A

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

(3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

(4) PC is the FCC DOC is approved.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESCI	101427	2014.10.25	2015.10.24
Loop Antenna	Daze	ZN30900N	SEL0097	2014.10.27	2015.10.26
Bilog Antenna	TESEQ	CBL6111D	34678	2014.11.25	2015.11.24
Horn Antenna	Schwarzbeck	BBHA 9120D(1201)	9120D-1343	2015.03.06	2016.03.05
PreAmplifier	Agilent	8449B	60538	2014.10.25	2015.10.24
Temperature & Humitidy	Mieo	HH660	N/A	2014.10.28	2015.10.27
Unversal radio communication tester	R&S	CMU200	111764	2014.10.25	2015.10.24
Spectrum Analyzer	Agilent	E4407B	MY50140340	2014.10.25	2015.10.24

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
EMI Test Receiver	R&S	ESPI	102086	2014.11.20	2015.11.19
LISN	R&S	ENV216	101242	2014.10.25	2015.10.24
LISN	EMCO	3810/2NM	000-23625	2014.10.25	2015.10.24
Absorbing clamp	R&S	MDS-21	100668	2014.10.27	2015.10.26

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.2 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

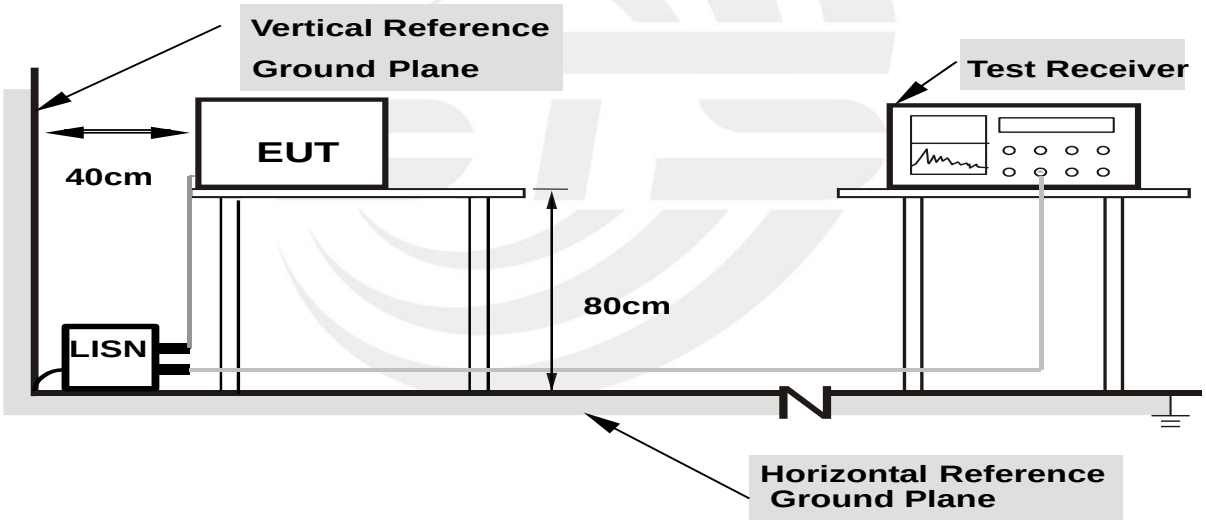
d. LISN at least 80 cm from nearest part of EUT chassis.

e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

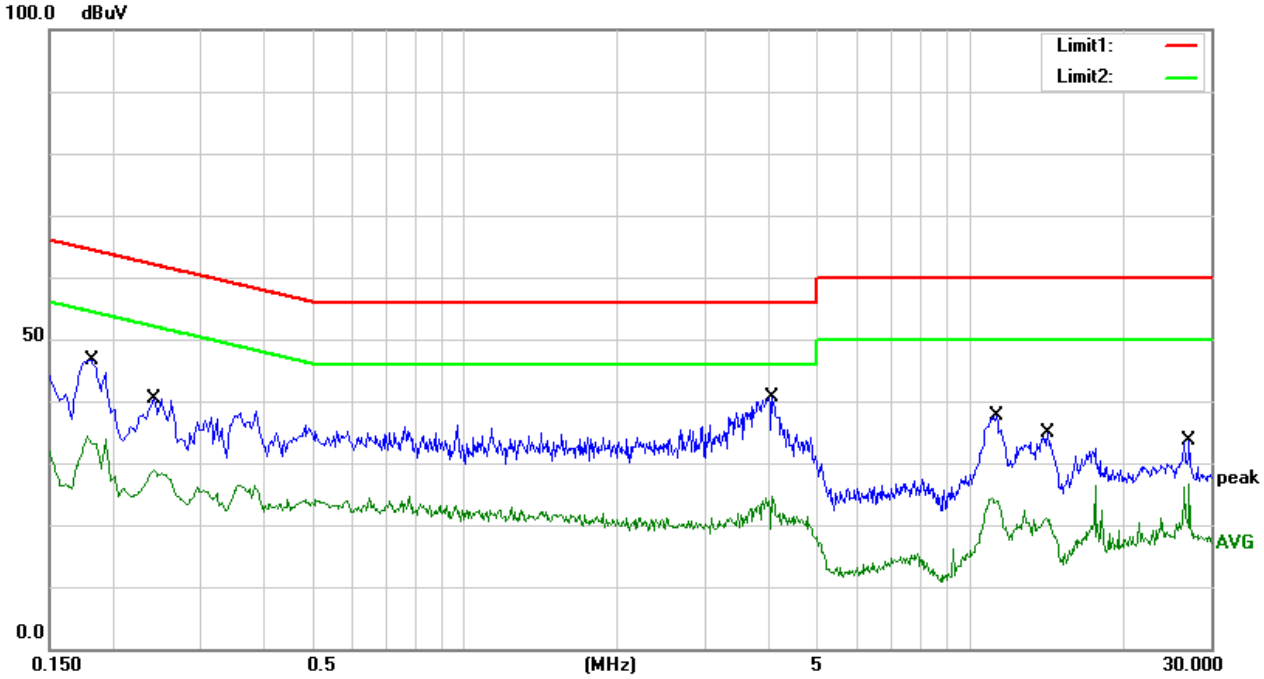
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

EUT:	Mobile Phone	Model Name.:	CY1
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	L
Test Voltage:	DC 5V	Test Mode:	Mode 1

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.1804	33.25	10.44	43.69	64.47	-20.78	QP
2	0.1804	22.33	10.44	32.77	54.47	-21.70	AVG
3	0.2433	25.24	10.43	35.67	61.98	-26.31	QP
4	0.2433	17.46	10.43	27.89	51.98	-24.09	AVG
5	4.0491	22.37	10.62	32.99	56.00	-23.01	QP
6	4.0491	10.00	10.62	20.62	46.00	-25.38	AVG
7	11.1620	20.27	10.69	30.96	60.00	-29.04	QP
8	11.1620	11.51	10.69	22.20	50.00	-27.80	AVG
9	14.2716	16.07	10.71	26.78	60.00	-33.22	QP
10	14.2716	8.33	10.71	19.04	50.00	-30.96	AVG
11	27.1577	16.68	10.60	27.28	60.00	-32.72	QP
12	27.1577	11.63	10.60	22.23	50.00	-27.77	AVG

Remark:
1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

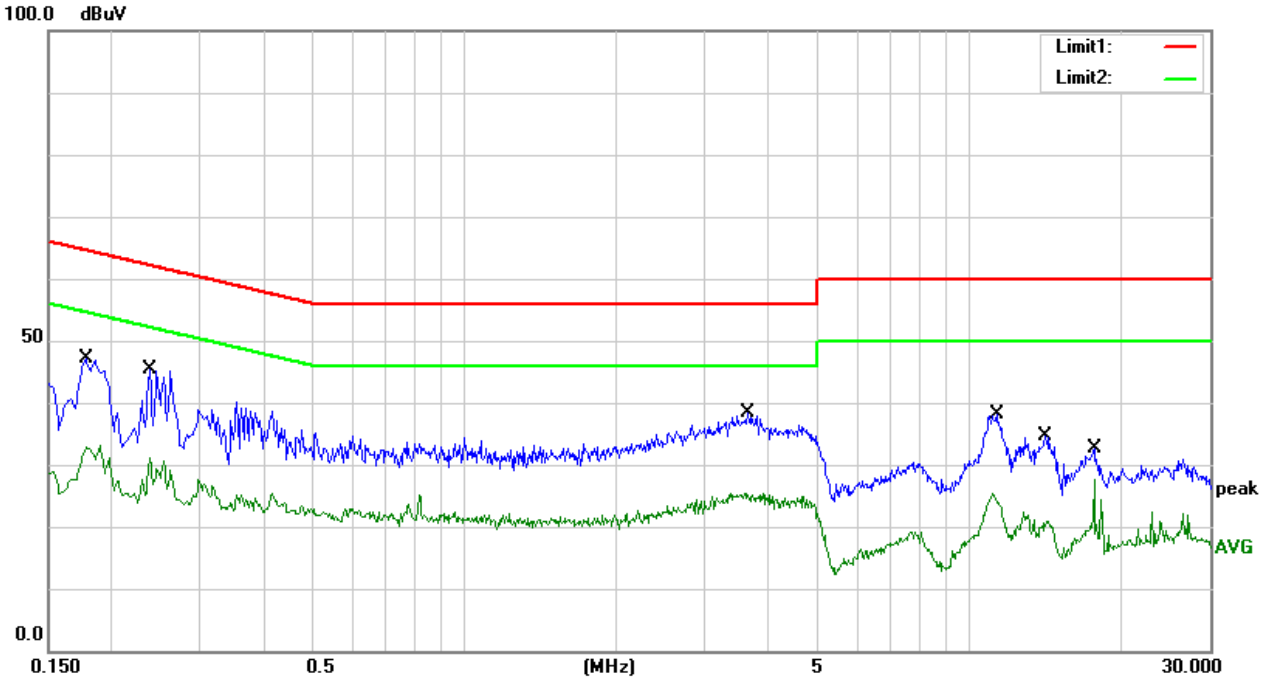


EUT:	Mobile Phone	Model Name.:	CY1
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	N
Test Voltage:	DC 5V	Test Mode:	Mode 1

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.1782	34.18	10.37	44.55	64.57	-20.02	QP
2	0.1782	21.58	10.37	31.95	54.57	-22.62	AVG
3	0.2374	30.23	10.43	40.66	62.19	-21.53	QP
4	0.2374	17.89	10.43	28.32	52.19	-23.87	AVG
5	3.6841	21.77	10.65	32.42	56.00	-23.58	QP
6	3.6841	13.05	10.65	23.70	46.00	-22.30	AVG
7	11.3202	21.04	10.71	31.75	60.00	-28.25	QP
8	11.3202	12.10	10.71	22.81	50.00	-27.19	AVG
9	14.1566	16.89	10.72	27.61	60.00	-32.39	QP
10	14.1566	8.94	10.72	19.66	50.00	-30.34	AVG
11	17.6960	18.02	10.75	28.77	60.00	-31.23	QP
12	17.6960	13.52	10.75	24.27	50.00	-25.73	AVG

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 Radiated Emission Limits

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3M)		Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Note:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier harmonic(Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=3 MHz

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz/RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz/RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz/RB 120kHz for QP

3.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.

b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

c. the height of the antenna shall vary between 1m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.

f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

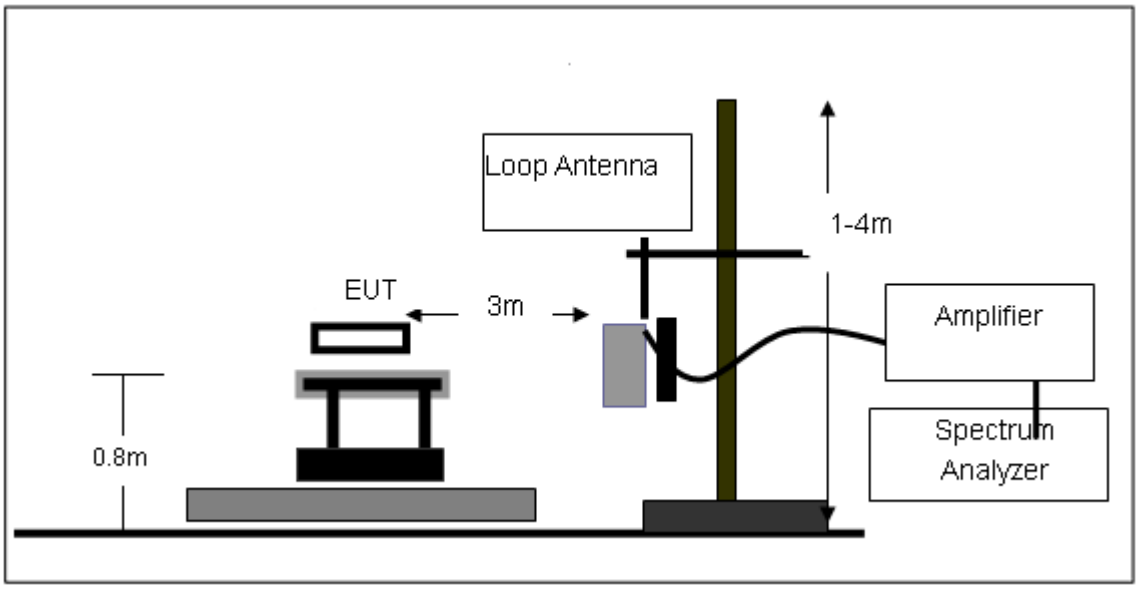
Note: Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

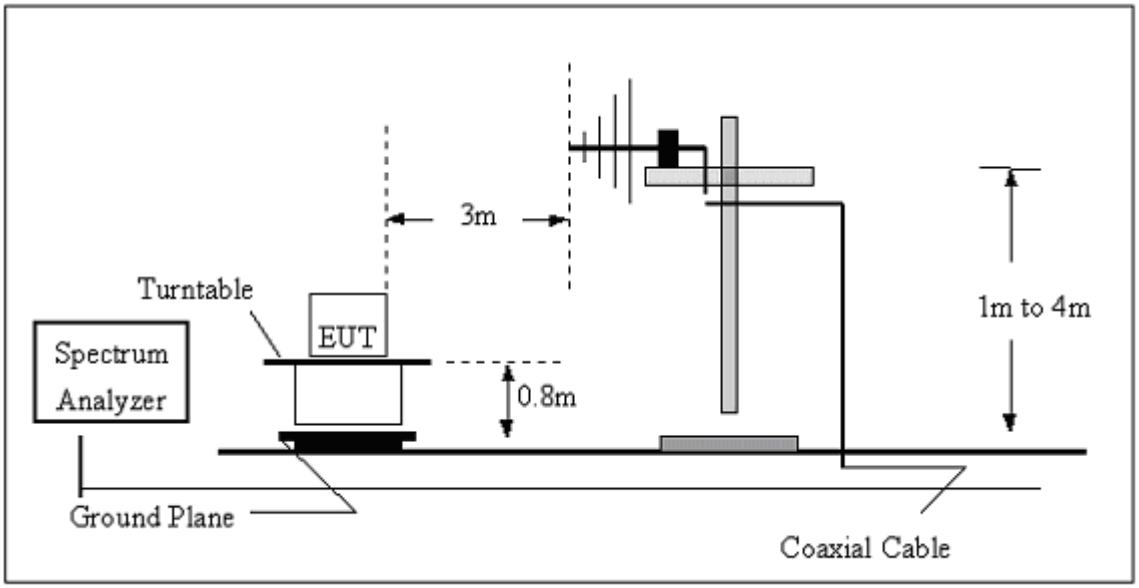
No deviation

3.2.4 TEST SETUP

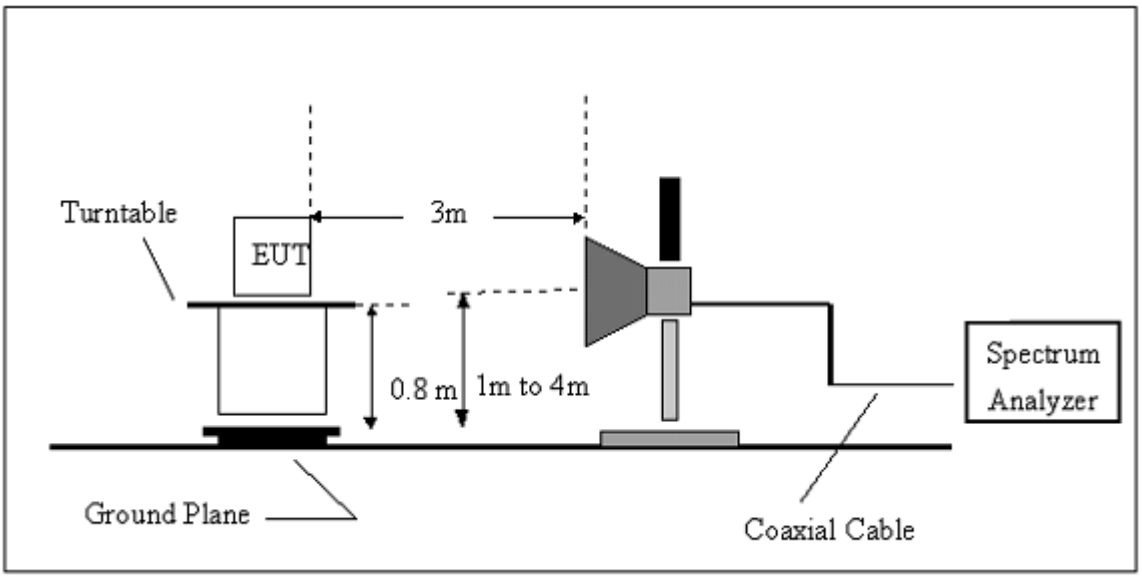
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS

Below 30MHz

EUT:	Mobile Phone	Model Name.:	CY1
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	N/A
Test Voltage:	DC 5V	Test Mode:	N/A

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
---	---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---	---

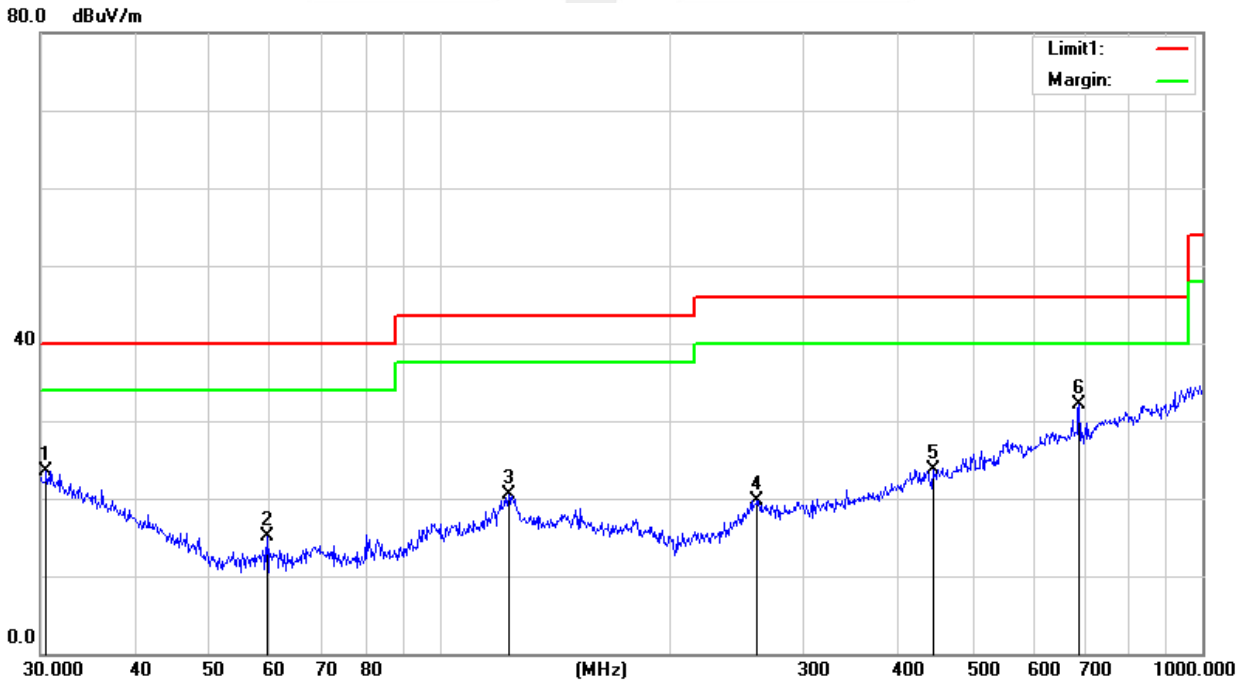
NOTE:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

Between 30-1000MHz

EUT:	Mobile Phone	Model Name.:	CY1
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	Horizontal
Test Voltage:	DC 5V	Test Mode:	Mode 1

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.5306	5.03	18.43	23.46	40.00	-16.54	QP
2	59.4405	9.72	5.42	15.14	40.00	-24.86	QP
3	123.2655	8.88	11.60	20.48	43.50	-23.02	QP
4	261.0581	4.85	14.95	19.80	46.00	-26.20	QP
5	443.2943	4.89	18.83	23.72	46.00	-22.28	QP
6	689.5643	8.65	23.36	32.01	46.00	-13.99	QP

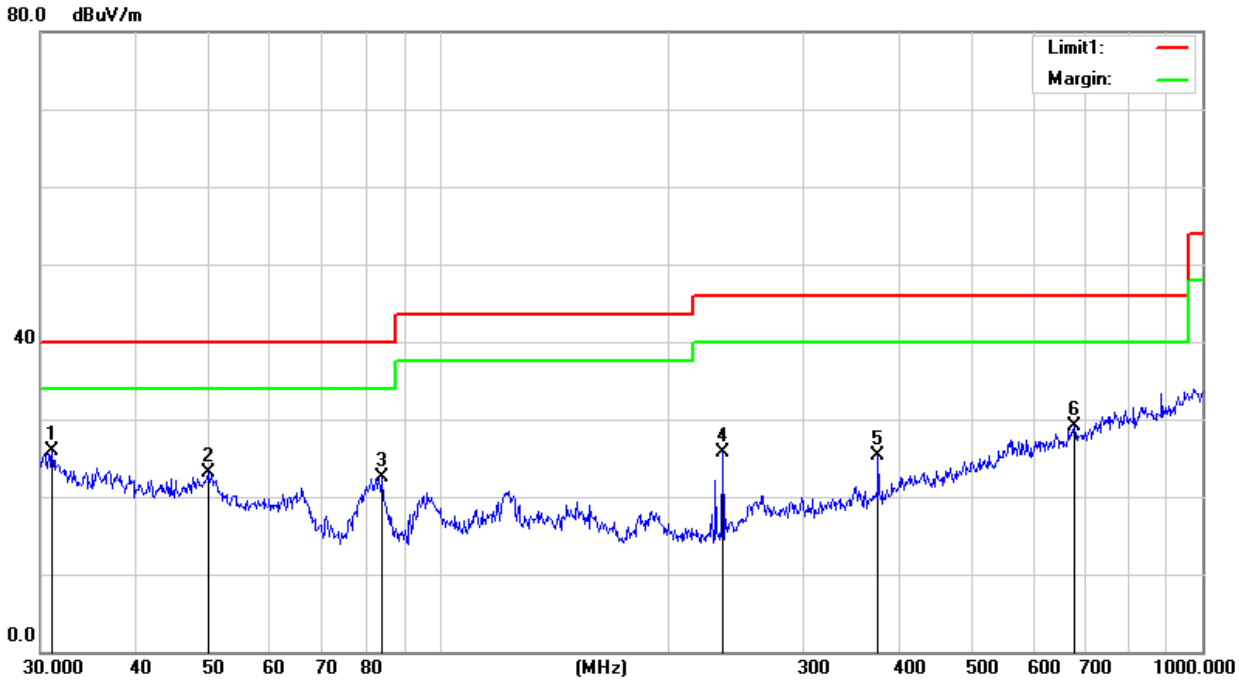
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Antenna Factor + Cable Loss.
3. N/A means All Data have pass Limit



EUT:	Mobile Phone	Model Name.:	CY1
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	Vertical
Test Voltage:	DC 5V	Test Mode:	Mode 1

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	31.0706	7.67	18.15	25.82	40.00	-14.18	QP
2	49.7068	14.85	8.24	23.09	40.00	-16.91	QP
3	84.1100	13.81	8.60	22.41	40.00	-17.59	QP
4	234.9910	14.41	11.22	25.63	46.00	-20.37	QP
5	375.9384	8.53	16.81	25.34	46.00	-20.66	QP
6	679.9600	5.60	23.45	29.05	46.00	-16.95	QP

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Antenna Factor + Cable Loss.
3. N/A means All Data have pass Limit



Above 1GHz

The worst test data above 1 GHz was showed as thefollow:

EUT:	Mobile Phone	Model Name.:	CY1
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Test Mode:	Mode 1

Freq.	Ant. Pol	Peak	AV	Ant./CL	Actual Fs		Peak	AV	Peak	AV
(MHz)	H/V	Reading	Reading	CF			Limit	Limit	margin	margin
		(dBuV)	(dBuV)	(dB)	Peak	AV	(dBuV/m)	(dBuV/m	(dBuV/m	(dBuV/
					(dBuV/m	(dBuV/m				
1097.54	H	57.62	41.28	5.15	62.77	46.43	74.00	54.00	-11.23	-7.57
2866.85	H	52.41	38.29	9.45	61.86	47.74	74.00	54.00	-12.14	-6.26
N/A										
1069.77	V	52.87	37.55	5.15	58.02	42.70	74.00	54.00	-15.98	-11.30
2896.79	V	49.06	32.14	9.45	58.51	41.59	74.00	54.00	-15.49	-12.41
N/A										

Notes:

1. Measuring frequencies from 1 GHz to 6GHz.

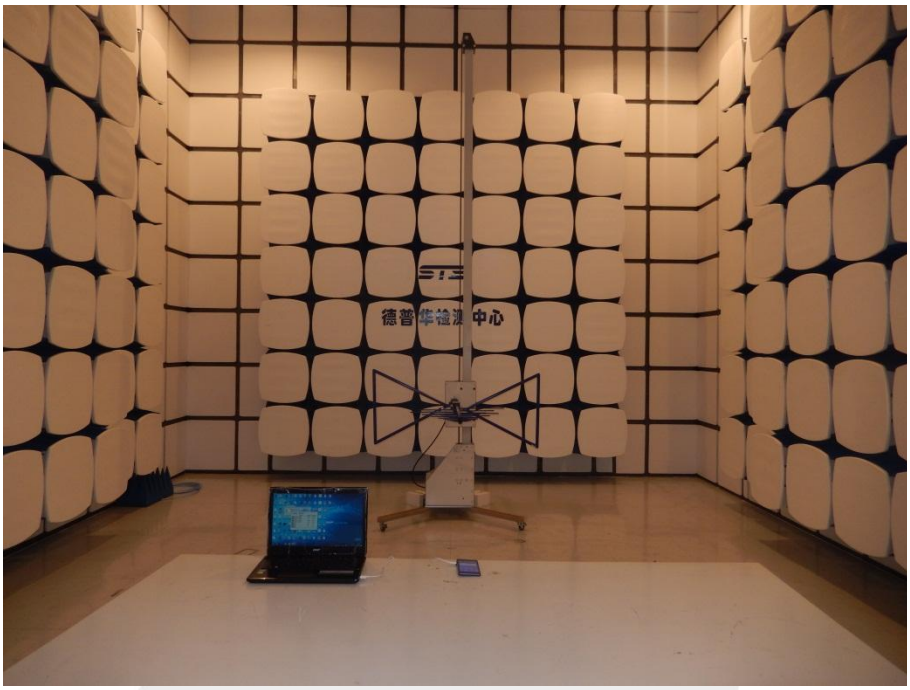
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode of the emission shown in Actual FS column.

3. The frequency that above 3GHz is mainly from the environment noise.

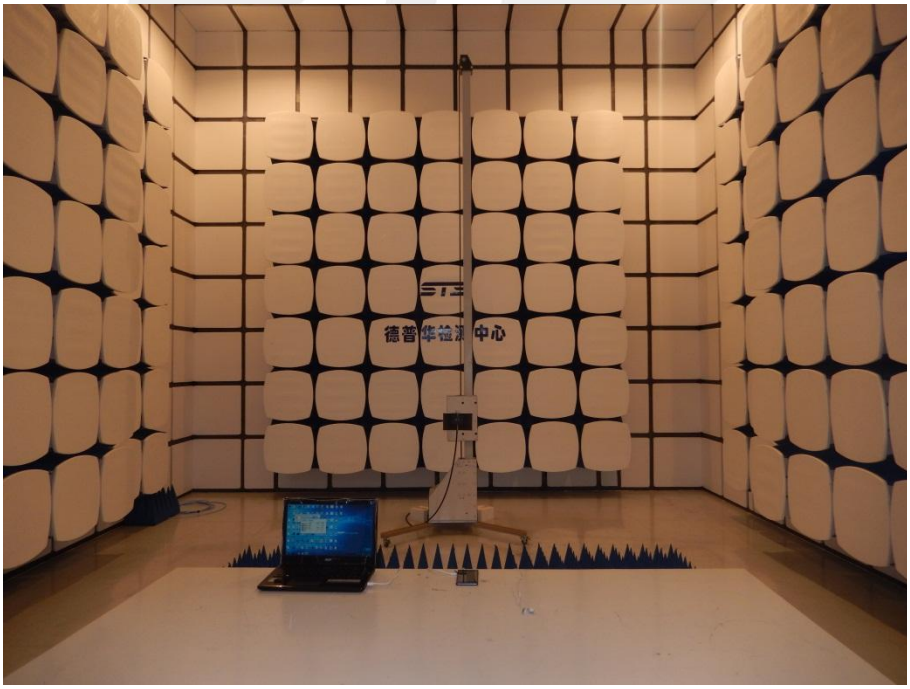
4. PHOTOS OF TEST SETUP

Radiated Measurement Photos

30MHz- 1GHz



Above 1GHz



Conducted Measurement Photos

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