



FCC PART 15 SUBPART B TEST REPORT

FCC Part 15B

Report Reference No.....: **CTL130125147-WD**

Compiled by

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Name of the organization performing the tests

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Approved by

(position+printed name+signature)..: Manager Tracy Qi

Date of issue.....: Mar. 01, 2013

Representative Laboratory Name : **Shenzhen CTL Electromagnetic Technology Co., Ltd.**

Address.....: Zone B, 4/F, Block 20, Guangqian Industrial Park, Longzhu Road, Nanshan, Shenzhen 518055 China.

Test Firm.....: **Bontek Compliance Testing Laboratory Ltd**

Address.....: 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China

Applicant's name.....: **SHENZHEN SANGFEI CONSUMER COMMUNICATIONS CO., LTD**

Address.....: 11 Science and Technology Road, Shenzhen Hi-tech Industrial Park Nanshan District. Shenzhen, PRC

Test specification:

Standard.....: FCC Part 15B: Unintentional Radiators

TRF Originator.....: Shenzhen CTL Electromagnetic Technology Co., Ltd.

Master TRF.....: Dated 2011-01

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Test item description.....: **Smartphone**

FCC ID.....: **VQR-W6360**

Trade Mark.....: PHILIPS

Model/Type reference.....: W6360

I/O Type of EUT.....: USB Port/ Earphone Port

I/O Q'TY.....: 1/ 1

GSM/WCDMA

Transmit: 2G:GSM 850: 824~849MHz, PCS 1900: 1850~1910MHz

3G:WCDMA Band II: 1850-1910MHz,

WCDMA Band V: 824~849MHz

Receive	2G:GSM 850: 869~894MHz, PCS 1900: 1930~1990MHz 3G:WCDMA Band II: 1930~1990MHz, WCDMA Band V: 869~894MHz
Release Version	2G:R99 3G:UMTS FDD: Rel-6
Type of modulation.....	2G: GMSK for GSM/GPRS/EDGE 3G: QPSK
GPRS Type	Class B
GPRS Class	Class 12
GPS	
work frequency.....	1575.42MHz
Type of modulation.....	BPSK
Bluetooth	
Work frequency.....	2402~2480MHz
Version.....	V3.0
Type of modulation.....	FHSS
Data Rate.....	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps(8DPSK)
Wi-Fi	
Work frequency.....	802.11b/g/n(20MHz): 2412~2462MHz
Type of modulation.....	802.11b DSSS, 802.11g/n: OFDM
Data Rate.....	802.11b: 1/2/5.5/11 Mbps 802.11g: 6/9/12/18/24/36/48/54 Mbps 802.11n: up to 65 Mbps
Antenna Gain	-1.0 dBi for GSM850 and WCDMA Band V 1.0 dBi for PCS1900 and WCDMA Band II -2.5 dBi for Bluetooth and Wi-Fi
Antenna type.....	Internal
IMEI.....	911131205416663
Hardware version.....	SR801_V2.0
Software version.....	20130115-0.0.1034.0103
Result.....	Positive

TEST REPORT

Test Report No. :	CTL130125147-WD	Mar. 01, 2013
		Date of issue

Equipment under Test : Smartphone

Model /Type : W6360

Listed Models : /

Applicant : **SHENZHEN SANGFEI CONSUMER COMMUNICATIONS CO.,LTD**

Address : 11 Science and Technology Road, Shenzhen Hi-tech Industrial Park Nanshan District. Shenzhen, PRC

Manufacturer : **SHENZHEN SANGFEI CONSUMER COMMUNICATIONS CO.,LTD**

Address : 11 Science and Technology Road, Shenzhen Hi-tech Industrial Park Nanshan District. Shenzhen, PRC

Test Result according to the standards on page 5:

Positive

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1. TEST STANDARDS

The tests were performed according to following standards:

[FCC Part 15B: Unintentional Radiators](#)

[ANCI C63.4: 2009](#)



2. SUMMARY

2.1. General Remarks

Date of receipt of test sample : Feb. 04, 2013

Testing commenced on : Feb. 16, 2013

Testing concluded on : Mar. 01, 2013

2.2. Equipment Under Test

Power supply system utilised

Power supply voltage : 120V / 60 Hz 115V / 60Hz
 12 V DC 24 V DC
 Other (specified in blank below)

DC 3.7V from battery

2.3. Short description of the Equipment under Test (EUT)

The device is a Smartphone.

For more details, refer to the user's manual of the EUT.

Serial number: Prototype

2.4. EUT operation mode

Test Mode(TM)	Description	Remark
TM1	MP3 Playing	1KHz Audio
TM2	Downloading	Connect to PC
TM3	Charging	Charged by Adapter

The field strength of radiation emission was measured in the following position: EUT stand-up position (Y axis), lie-down position (X, Z axis).

The following data show only with the worst case setup.

The worst case of Y axis was reported.

Based on client request, all normal using modes of the normal function were tested but only the worst test data of the worst mode is reported by this report.

The worst case of AC Conducted Emission is mode 1; the test data of this mode was reported.

2.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

Cable List and Details

Cable Description	Length (M)	Shielded/Unshielded	With Core/Without Core
USB Cable	0.8	Unshielded	Without Core
Earphone Cable	1.5	Unshielded	Without Core

- - supplied by the manufacturer
- - supplied by the lab

- Ear-phone

Manufacturer : Philips
Model No. : KY21-05

- Notebook PC

Manufacturer : HP
Model No. : 4-1007TX

2.6. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: **VQR-W6360** filing to comply with of the FCC Part 15B Rules.

2.7. Modifications

No modifications were implemented to meet testing criteria.



3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Bontek Compliance Testing Laboratory Ltd
1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2003) and CISPR Publication 22.

3.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

IC Registration No.: 7631A

The 3m alternate test site of Bontek Compliance Testing Laboratory Ltd EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 7631A on March, 2011.

FCC-Registration No.: 338263

Bontek Compliance Testing Laboratory 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 338263, March 24, 2008.

3.3. Environmental conditions

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

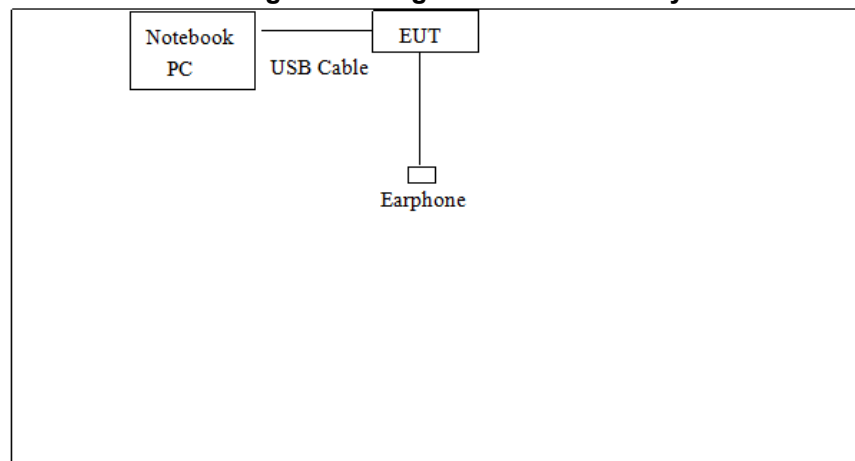
Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 950-1050mbar

3.4. Configuration of Tested System

Fig. 2-1 Configuration of Tested System



3.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC

Measurements“ and is documented in the Bontek Compliance Testing Laboratory Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Bontek laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10dB	(1)
Radiated Emission	1~12.75GHz	4.32dB	(1)
Conducted Disturbance	0.15~30MHz	3.20dB	(1)

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

3.6. Equipments Used during the Test

Item	Test Equipment	Manufacturer	Model No.	Last Cal.	Due. Date
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	2012/04/14	2013/04/13
2	Radio Communication Tester	ROHDE & SCHWARZ	CMU200	2012/04/14	2013/04/13
3	Dual Directional Coupler	Agilent	778D	2012/04/14	2013/04/13
4	10dB attenuator	SCHWARZBECK	MTAIMP-136	2012/04/14	2013/04/13
5	Tunable Bandreject filter	K&L	3TNF-800	2012/04/14	2013/04/13
6	Tunable Bandreject filter	K&L	5TNF-1700	2012/04/14	2013/04/13
7	High-Pass Filter	K&L	9SH10-2700/X12750-O/O	2012/04/14	2013/04/13
8	High-Pass Filter	K&L	41H10-1375/U12750-O/O	2012/04/14	2013/04/13
9	Coaxial Cable	Huber+Suhner	AC4-RF-H	2012/04/14	2013/04/13
10	AC Power Supply	IDRC	CF-500TP	2012/04/14	2013/04/13
11	DC Power Supply	IDRC	CD-035-020PR	2012/04/14	2013/04/13
12	RF Current Probe	FCC	F-33-4	2012/04/14	2013/04/13
13	Temperature /Humidity Meter	zhicheng	ZC1-2	2012/04/14	2013/04/13
14	MICROWAVE AMPLIFIER	HP	8349B	2012/04/14	2013/04/13
15	Amplifier	HP	8447D	2012/04/14	2013/04/13
16	SIGNAL GENERATOR	HP	8647A	2012/04/14	2013/04/13
17	Log Periodic Antenna	ELECTRO-METRICS	EM-6950	2012/04/14	2013/04/13
18	Horn Antenna	Schwarzbeck	BBHA9120A	2012/04/14	2013/04/13
19	EMI Test Receiver	R&S	ESPI	2012/04/14	2013/04/13
20	Loop Antenna	ZHINAN	ZN30900A	2012/04/14	2013/04/13
21	Horn Antenna	Schwarzbeck	BBHA9120D	2012/04/14	2013/04/13
22	Horn Antenna	Schwarzbeck	BBHA9170	2012/04/14	2013/04/13

3.7. Summary of Test Result

No deviations from the test standards

Test Item	Test Requirement	Standard Paragraph	Result
Radiated Emission	FCC PART 15	Section 15.109	PASS
Conducted Emission	FCC PART 15	Section 15.107	PASS

3.8. Test Software

The following programs installed in the EUT were programmed during the test.

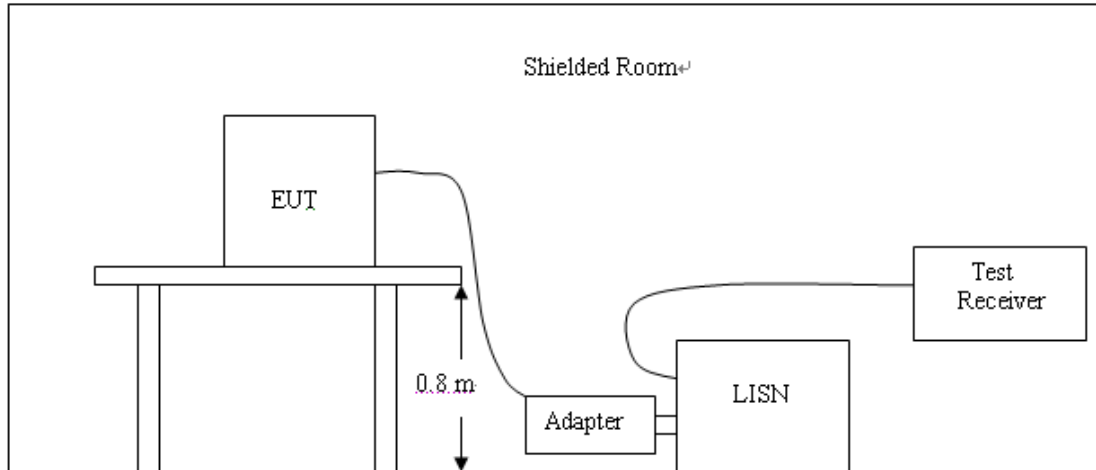
1. Execute the program, “Winthrax” , installed in PC for files transfer with EUT via USB cable.
2. Turn on camera to capture images.



4. TEST CONDITIONS AND RESULTS

4.1. Conducted Emissions Test

TEST CONFIGURATION



TEST PROCEDURE

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following:

Frequency (MHz)	Maximum RF Line Voltage (dB μ v)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

For intentional device, according to §15.207(a) Line Conducted Emission Limit is same as above table.

1. Please follow the guidelines in ANSI C63.4-2003.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 kHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

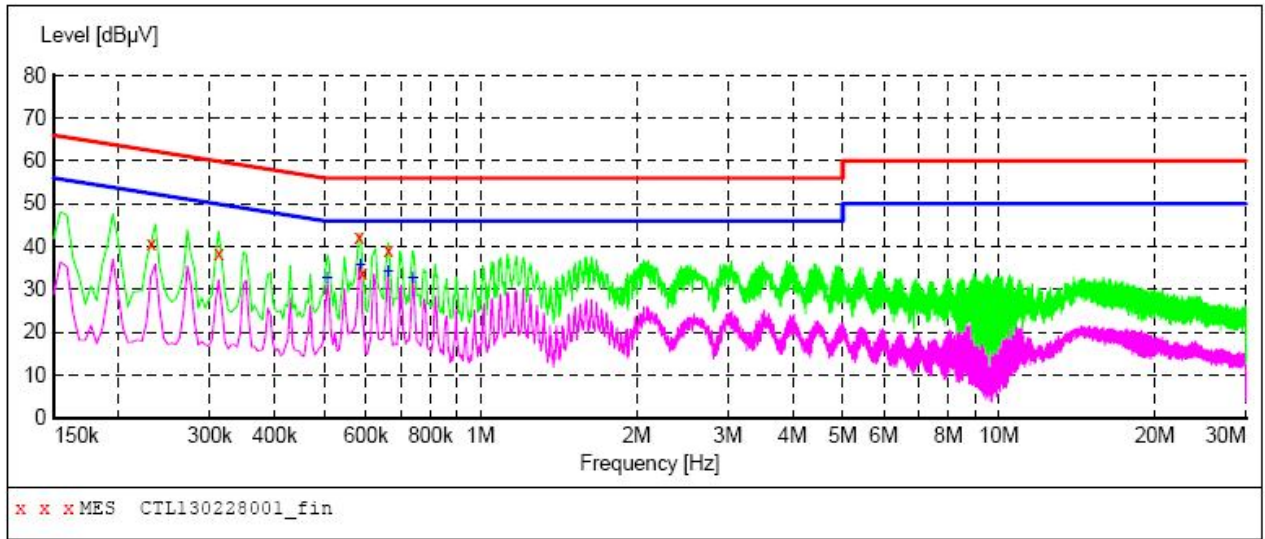
The RBW/VBW for 150KHz to 30MHz: 9KHz

TEST RESULTS

Charging mode:

SCAN TABLE: "Voltage (9K-30M) FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "CTL130228001_fin"

2/28/2013 2:53PM

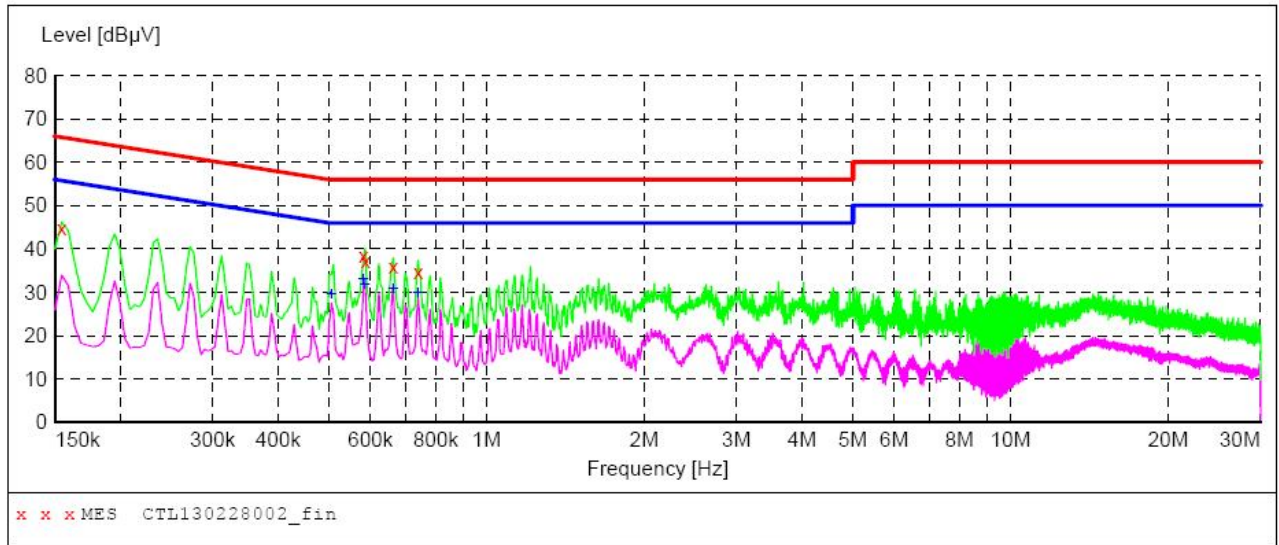
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.231000	40.80	10.2	62	21.6	QP	N	GND
0.312000	38.30	10.2	60	21.6	QP	N	GND
0.582000	42.20	10.2	56	13.8	QP	N	GND
0.591000	34.00	10.2	56	22.0	QP	N	GND
0.663000	39.20	10.2	56	16.8	QP	N	GND

MEASUREMENT RESULT: "CTL130228001_fin2"

2/28/2013 2:53PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.505500	32.70	10.2	46	13.3	AV	N	GND
0.586500	35.70	10.2	46	10.3	AV	N	GND
0.663000	34.20	10.2	46	11.8	AV	N	GND
0.739500	32.90	10.2	46	13.1	AV	N	GND

SCAN TABLE: "Voltage (9K-30M) FIN"
 Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "CTL130228002_fin"

2/28/2013 2:55PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.154500	44.80	10.2	66	21.0	QP	L1	GND
0.582000	38.60	10.2	56	17.4	QP	L1	GND
0.586500	37.20	10.2	56	18.8	QP	L1	GND
0.663000	35.90	10.2	56	20.1	QP	L1	GND
0.739500	34.60	10.2	56	21.4	QP	L1	GND

MEASUREMENT RESULT: "CTL130228002_fin2"

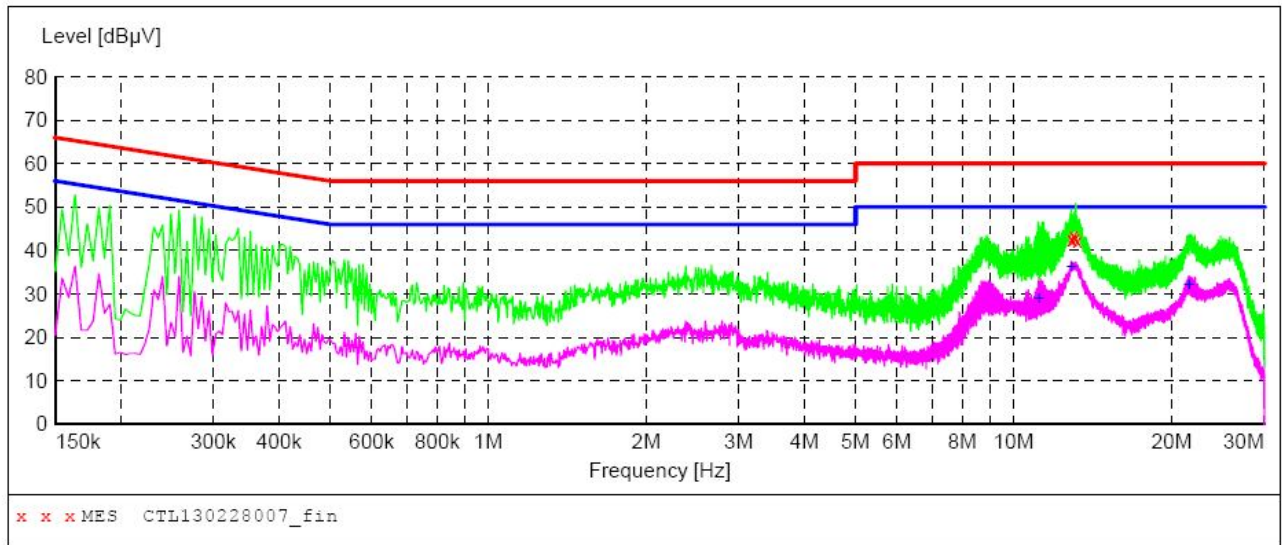
2/28/2013 2:55PM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.505500	29.50	10.2	46	16.5	AV	L1	GND
0.582000	33.10	10.2	46	12.9	AV	L1	GND
0.586500	31.70	10.2	46	14.3	AV	L1	GND
0.663000	30.90	10.2	46	15.1	AV	L1	GND
0.739500	30.00	10.2	46	16.0	AV	L1	GND

USB Copy mode:

SCAN TABLE: "Voltage (9K-30M)FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "CTL130228007_fin"

2/28/2013 3:16PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
12.907500	42.60	10.6	60	17.4	QP	L1	GND
12.925500	42.50	10.6	60	17.5	QP	L1	GND
12.997500	43.40	10.6	60	16.6	QP	L1	GND
13.101000	42.70	10.6	60	17.3	QP	L1	GND
13.222500	42.20	10.6	60	17.8	QP	L1	GND

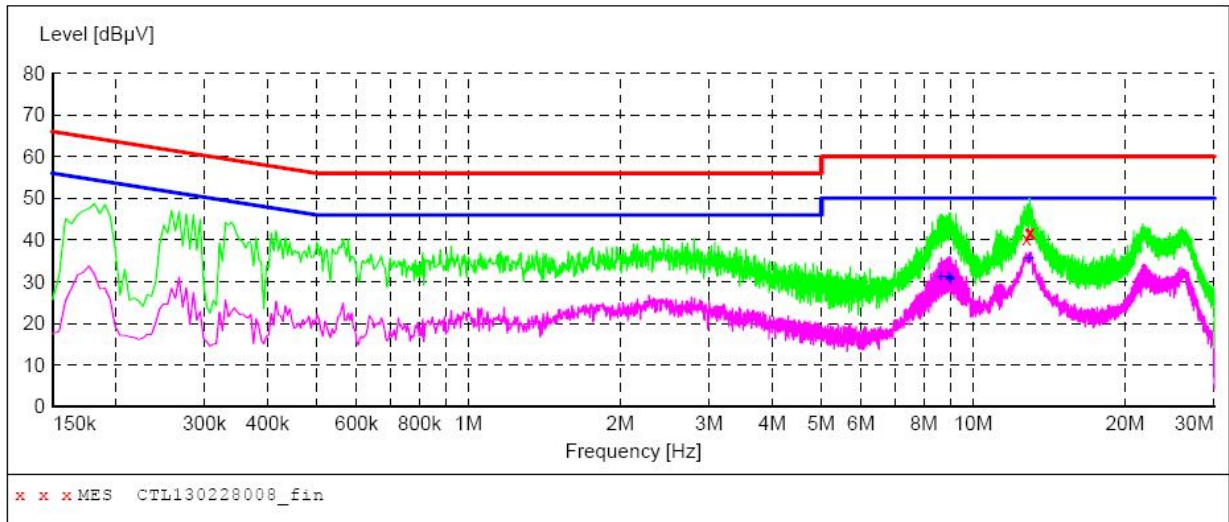
MEASUREMENT RESULT: "CTL130228007_fin2"

2/28/2013 3:16PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
11.179500	28.80	10.5	50	21.2	AV	L1	GND
12.898500	36.10	10.6	50	13.9	AV	L1	GND
21.583500	32.20	10.9	50	17.8	AV	L1	GND
21.633000	32.20	10.9	50	17.8	AV	L1	GND

SCAN TABLE: "Voltage (9K-30M) FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "CTL130228008_fin"

2/28/2013 3:19PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
12.754500	40.50	10.6	60	19.5	QP	N	GND
12.898500	41.60	10.6	60	18.4	QP	N	GND
12.970500	42.00	10.6	60	18.0	QP	N	GND
12.979500	42.00	10.6	60	18.0	QP	N	GND
12.988500	41.90	10.6	60	18.1	QP	N	GND

MEASUREMENT RESULT: "CTL130228008_fin2"

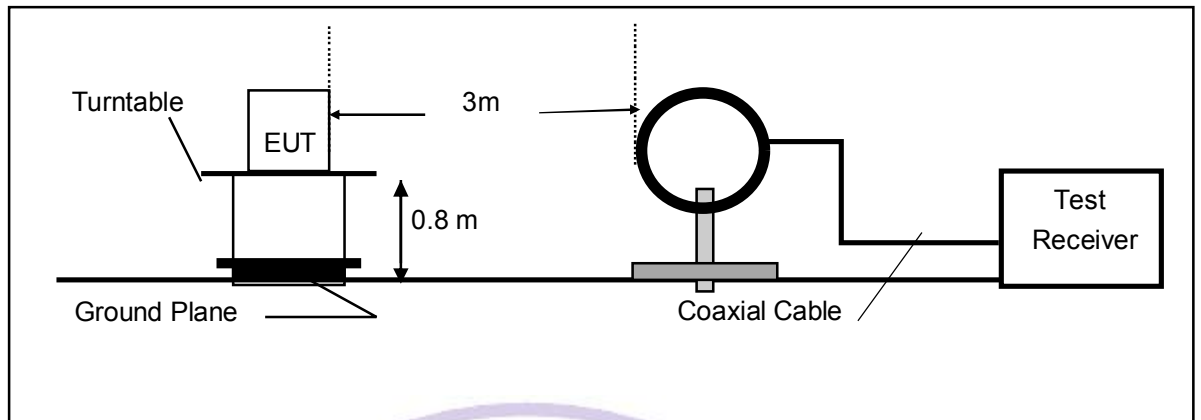
2/28/2013 3:19PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
8.632500	31.20	10.5	50	18.8	AV	N	GND
8.952000	31.10	10.5	50	18.9	AV	N	GND
9.001500	30.80	10.5	50	19.2	AV	N	GND
9.015000	30.60	10.5	50	19.4	AV	N	GND
12.930000	35.60	10.6	50	14.4	AV	N	GND

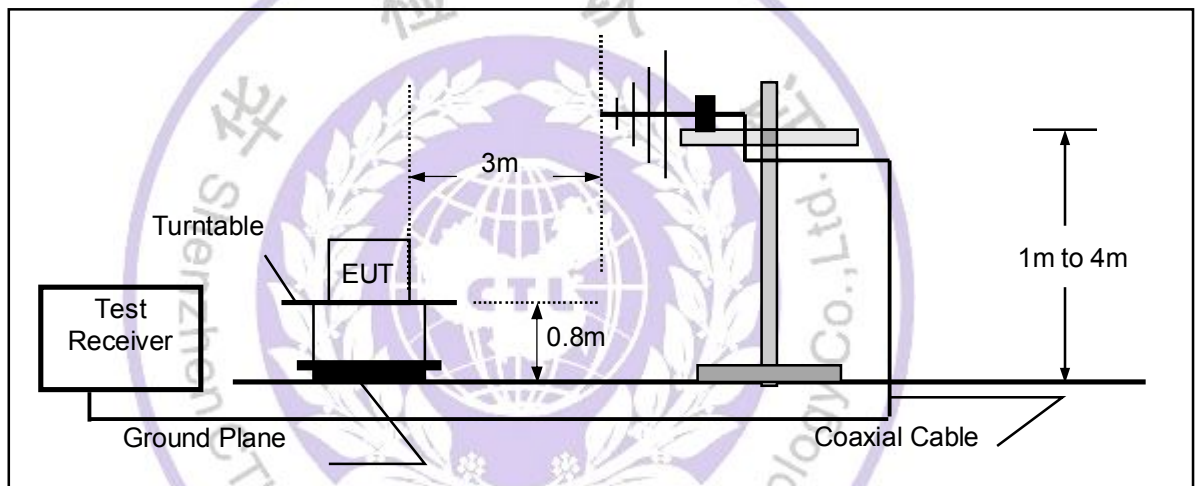
4.2. Radiated Emissions Test

TEST CONFIGURATION

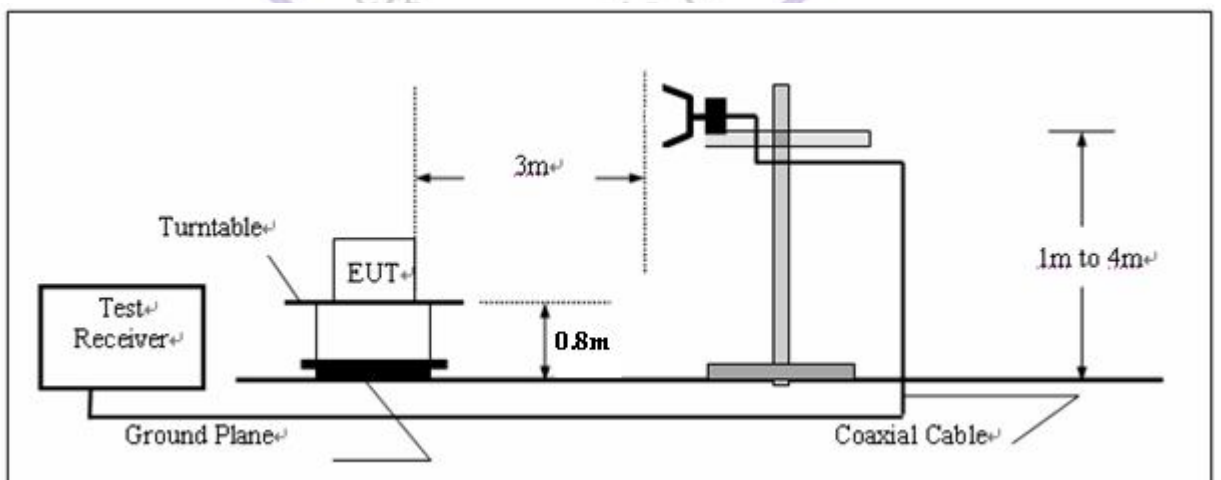
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



LIMIT

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/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

FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

TEST PROCEDURE

1. The testing follows the guidelines in ANSI C63.4-2003.
2. The EUT was placed on a turn table which is 0.8m above ground plane.
3. Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0° to 360° to acquire the highest emissions from EUT
4. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
5. Repeat above procedures until all frequency measurements have been completed.
6. Based on the Frequency Generator in the device include 32KHz, 19.2MHz, and the speed of CPU is 1G, so the test frequency range from 9KHz to 2GHz per FCC PART 15.33(a) and 1.33(b)(1).

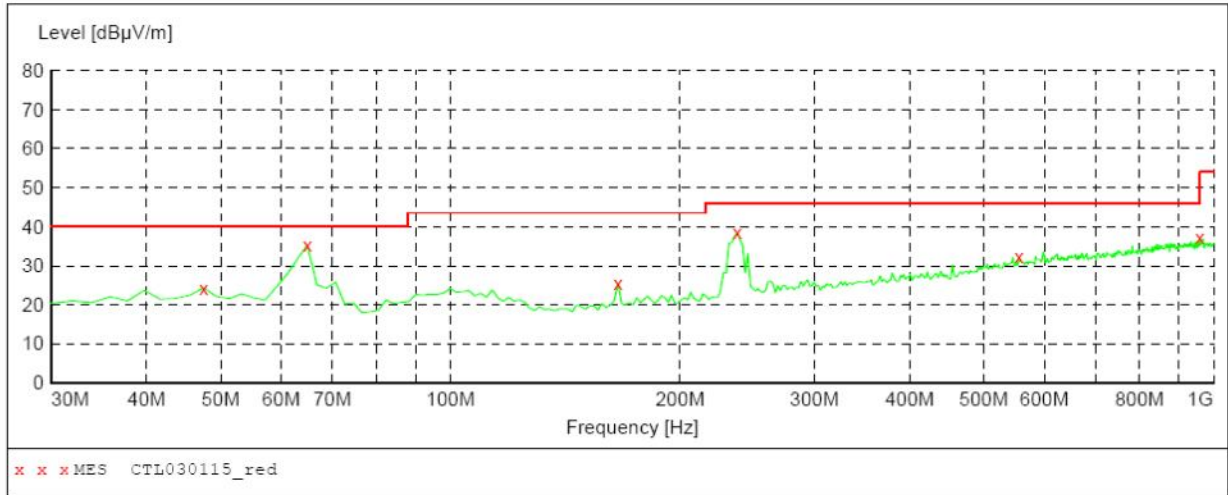
TEST RESULTS

All the test modes (TM1, TM2 and TM3) completed for test. The worst case of Radiated Emission is mode 2; the test data of this mode was reported.

TM 2(USB Copy):

SWEEP TABLE: "test (30M-1G)"

Short Description:		Field Strength			
Start	Stop	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VULB9163 NEW



MEASUREMENT RESULT: "CTL030115_red"

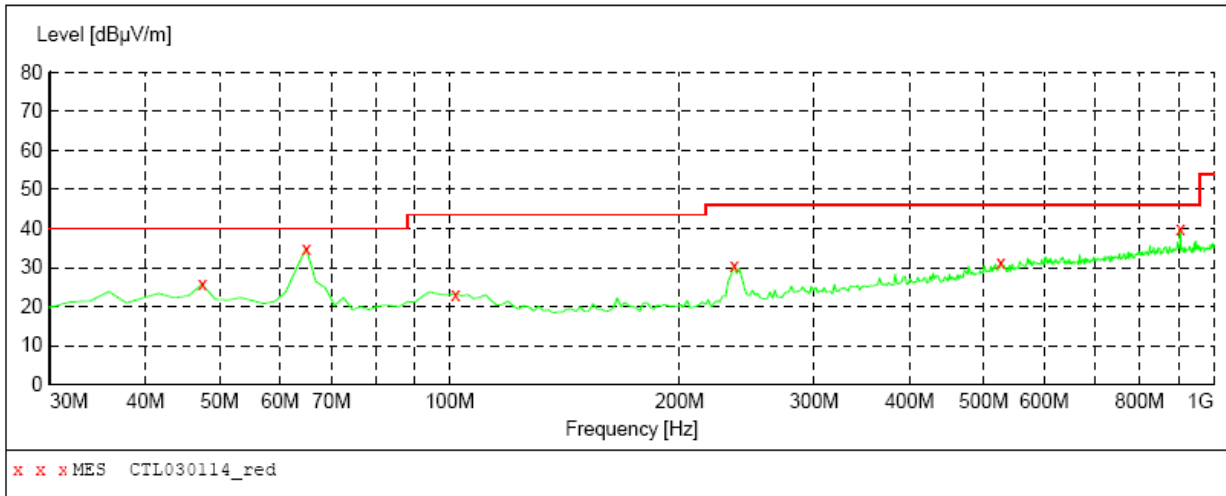
3/1/2013 10:56AM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	24.40	15.8	40.0	15.6	---	100.0	0.00	Horizontal
64.920000	35.40	13.5	40.0	4.6	---	300.0	0.00	Horizontal
165.800000	25.50	13.0	43.5	18.0	---	100.0	0.00	Horizontal
237.580000	38.50	16.7	46.0	7.5	---	100.0	0.00	Horizontal
555.740000	32.30	25.1	46.0	13.7	---	300.0	0.00	Horizontal
959.260000	37.40	29.6	46.0	8.6	---	300.0	0.00	Horizontal



SWEEP TABLE: "test (30M-1G)"

Short Description:		Field Strength			
Start	Stop	Detector	Meas. Time	IF Bandw.	Transducer
30.0 MHz	1.0 GHz	MaxPeak	Coupled	100 kHz	VULB9163 NEW



MEASUREMENT RESULT: "CTL030114_red"

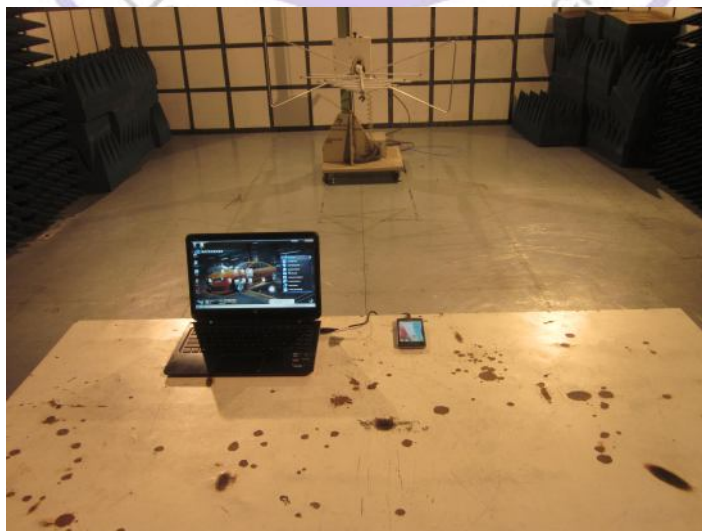
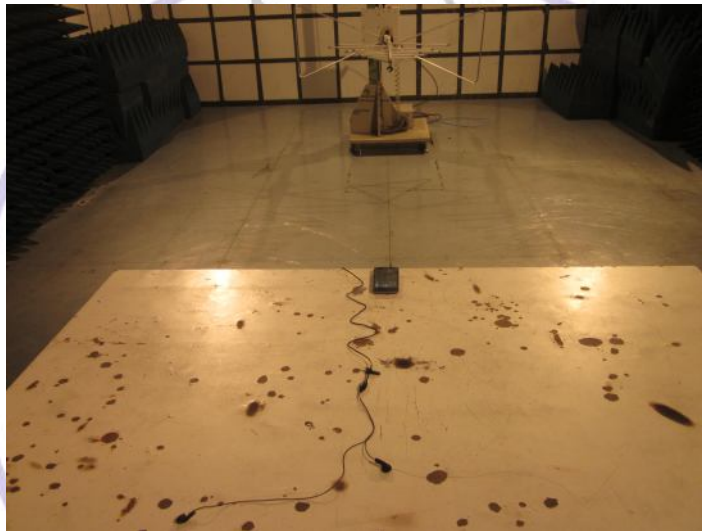
3/1/2013 10:53AM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	25.70	15.8	40.0	14.3	---	100.0	0.00	Vertical
64.920000	35.00	13.5	40.0	5.0	---	100.0	0.00	Vertical
101.780000	23.30	17.3	43.5	20.2	---	100.0	0.00	Vertical
235.640000	30.40	16.6	46.0	15.6	---	100.0	0.00	Vertical
526.640000	31.20	24.5	46.0	14.8	---	100.0	0.00	Vertical
904.940000	40.00	29.2	46.0	6.0	---	100.0	0.00	Vertical

Remark:

- (1) Measuring frequencies from 9 KHz to the 2GHz, Loop Antenna used below 30MHz. See Section 3.6 table item 20. Radiated emission test from 9KHz to 30MHz, above 1GHz were verified, and no any emission was found except system noise floor.
- (2) "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
- (4) Datas of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured. The test results from 9KHz to 30MHz, above 1GHz are not reported because the emissions levels that are 20dB below the official limit.
- (5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 100KHz. Below 30MHz was 10KHz. Above 1GHz was 1MHz.

5. Test Setup Photos of the EUT





6. External and Internal Photos of the EUT

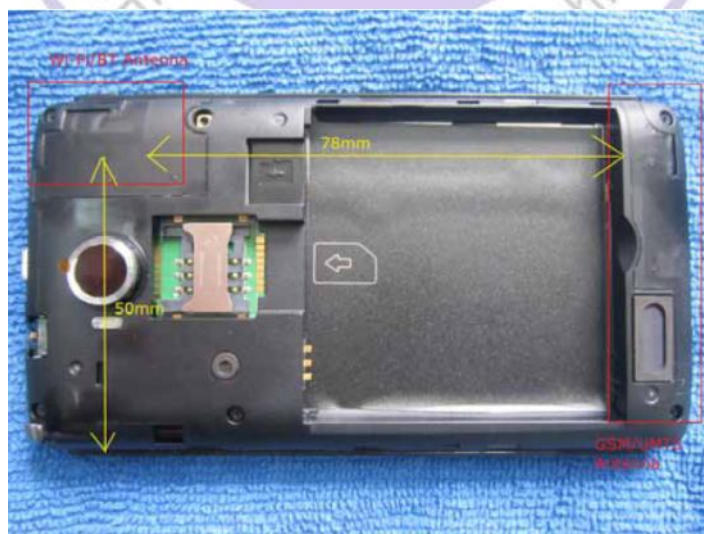
External Photos of EUT



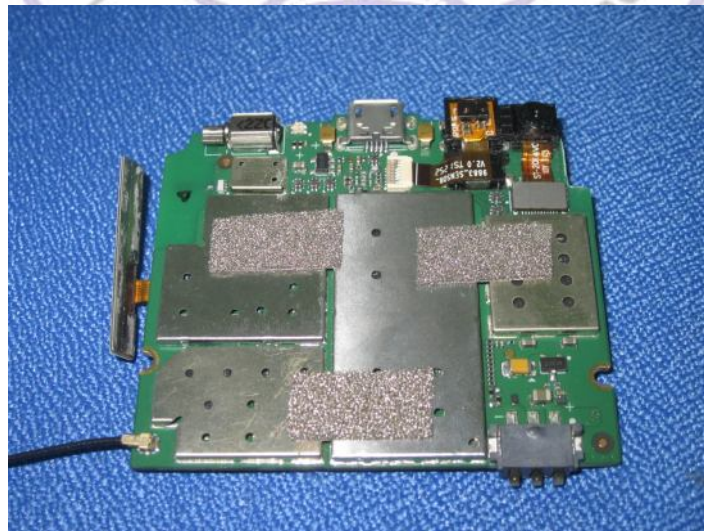




Internal Photos of EUT











.....End of Report.....

