47 CFR PART 15 SUBPART B

TEST REPORT

of

GPS tracker

Model Name: GL100
Brand Name: eLoc
Report No.: SH08090012E01
FCC ID: UDV-0809182008007

prepared for

SHANGHAI SIMCOM LIMITED.
Build A, No. 633 JinZhong Rd.,
ChangNing District Shanghai, PRC China.

prepared by

Shenzhen Electronic Product Quality Testing Center
Morlab Laboratory
3/F, Electronic Testing Building, Shahe Road, Xili,
Nanshan District, Shenzhen, 518055 P. R. China
Tel: +86 755 86130398
Fax: +86 755 86130218

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1 TEST CERTIFICATION

Equipment under Test:	GPS tracker
Brand Name:	eLoc
Model Name:	GL100
FCC ID:	UDV-0809182008007
Applicant:	SHANGHAI SIMCOM LIMITED Build A, No. 633 JinZhong Rd., ChangNing District Shanghai, PRC China
Manufacturer:	SHANGHAI SIMCOM LIMITED Build A, No. 633 JinZhong Rd., ChangNing District Shanghai, PRC China
Test Standards:	47 CFR Part 15 Subpart B
Test Date(s):	Sept. 17, 2008 –Sept 25, 2008
Test Result:	PASS

*** We Hereby Certify That:**

The equipment under test was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

The test results of this report only apply for the tested sample equipment identified above. The test report shall be invalid without all the signatures of the test engineer, the reviewer and the approver.

Tested by: Lou Qinchao Dated: 2008.10.7
Lou Qinchao

Reviewed by: Zhang Jun Dated: 2008.10.7
Zhang Jun

Approved by: Su Feng Dated: 2008.10.7
Su Feng

2 GENERAL INFORMATION

2.1 EUT Description

EUT Type	:	GPS tracker
Model Name	:	GL100
Serial No.	:	(n.a)
IMEI	:	000000000000000
Hardware Version	:	V1.02
Software Version	:	ADI 16.0
Modulation Type	:	GMSK
Power Supply	:	Battery
		Brand name: JiaDe.
		Mode no.: GL100(JLFV)
		Capacitance: 1300mAh
		Rated voltage: 3.7V
		Charge limited: 4.2V
		Manufacturer: Jiade Energy Technology(ZHUHAI)Co.,Ltd.
		Manufacturer Address: 2/F,Helping Industrial Center Building,#209 Shihua Road West, Jida Area Zhuhai, China
Ancillary Equipment 1	:	AC Adapter (Charger for Battery)
		Model Name: P-051B-050050
		Brand Name: SOMETHING.
		Serial No.: (n.a)
		Rated Input: ～ 100/240V,50/60Hz
		Rated Output: DC 5V 500mA
		Manufacturer: No.421, Xiahushe, Houkengshe Area, Huli Industrial Park, Xiamen, China
		Wire Length: (n.a)

Note 1: The EUT is a GPS tracker operating in GSM 850MHz, GSM 900MHz, GSM 1800MHz, 1900MHz bands, GSM 850MHz are tested in this report.

Note 2: The normal configuration for the EUT is the MS associated with ancillary equipments e.g.theBattery and/or the AC Adapter(Charger).

Note 3: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart B:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-05 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.107	Conducted Emission	PASS
2	15.109	Radiated Emission	PASS

2.3 Facilities and Accreditations

2.3.1 Facilities

Shenzhen Electronic Product Quality Testing Center Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Laboratories (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

All measurement facilities used to collect the measurement data are located at Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen 518055 CHINA. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

2.3.2 Test Environment Conditions

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

Temperature (°C):	20 – 25
Relative Humidity (%):	40 – 60
Atmospheric Pressure (kPa):	960

3 TEST CONDITIONS SETTING

3.1 Test Mode

1. The GSM test modes of the EUT are showed as below:
   (1) Call mode
   The EUT configuration of the emission tests is EUT + Battery + Charger.
   During the measurement, the charger was connected to the EUT.A communication link was established between the EUT and a System Simulator (SS).
   (2) Idle mode
   The EUT configuration of the emission tests is EUT + Battery + Charger.
   Before the measurement, the lithium battery was completely discharge.
   The EUT was registered to the base station simulator but no call was set up.
2. The GPS test modes of the EUT are showed as below:
   The EUT configuration of the emission tests is EUT + Battery + USB cable+PC
   .During the measurement, the PC was connected to the EUT.A data transfer was established between the EUT and a PC.

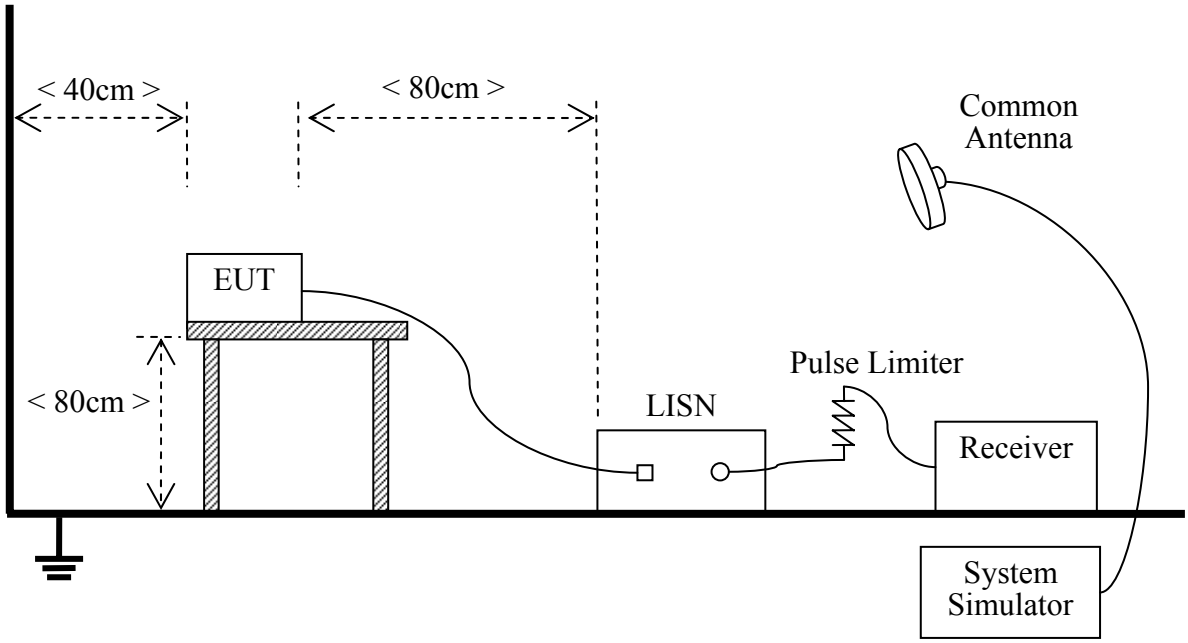
NOTE:

All test modes are performed, only the worst cases are recorded in this report.

3.2 Test Setup and Equipments List

3.2.1 Conducted Emission

A. Test Setup:



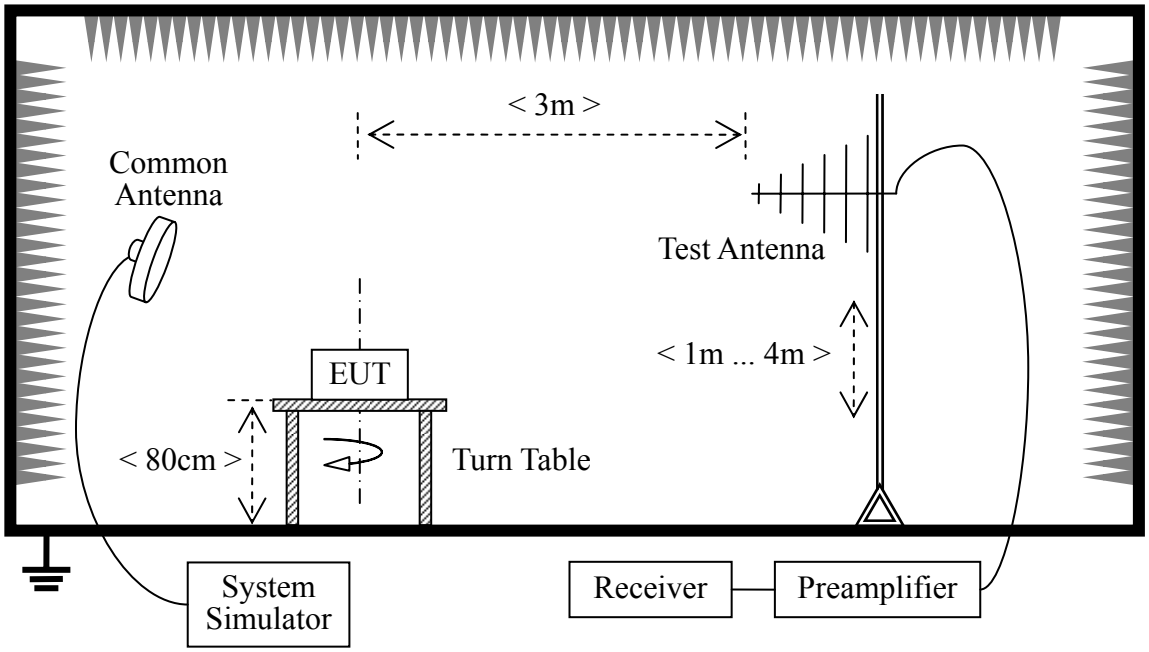
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides 50Ω/50μH of coupling impedance for the measuring instrument. The Common Antenna is used for the call between the EUT and the System Simulator (SS). A Pulse Limiter is used to protect the measuring instrument. The factors of the whole test system are calibrated to correct the reading.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Rohde&Schwarz	ESCI3	100666	2007.11	1year
LISN	Rohde&Schwarz	ENV216	812744	2007.11	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2007.12.	1year
Personal Computer	Lenovo	(n.a.)	(n.a.)	(n.a.)	(n.a.)

3.2.2 Radiated Emission

C. Test Setup:



The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on a variable-height antenna master tower. The Common Antenna is used for the call between the EUT and the System Simulator (SS).

D. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Rohde&Schwarz	ESCI3	100666	2007.11	1year
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2007.11	1year
Test Antenna - Bi-Log	Rohde&Schwarz	HL562	100385	2007.11	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2007.12	1year
Personal Computer	Lenovo	(n.a.)	(n.a.)	(n.a.)	(n.a.)

47 CFR PART 15B REQUIREMENTS

4 Conducted Emission

4.1 Requirement

According to FCC section 15.107, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

NOTE:

a) The limit subjects to the Class B digital device.

b) The lower limit shall apply at the band edges.

c) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

4.2 Test Description

See section 3.2.1 of this report.

4.3 Test Result

The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. All test modes are considered, refer to recorded points and plots below.

4.3.1.1 GSM Test Mode

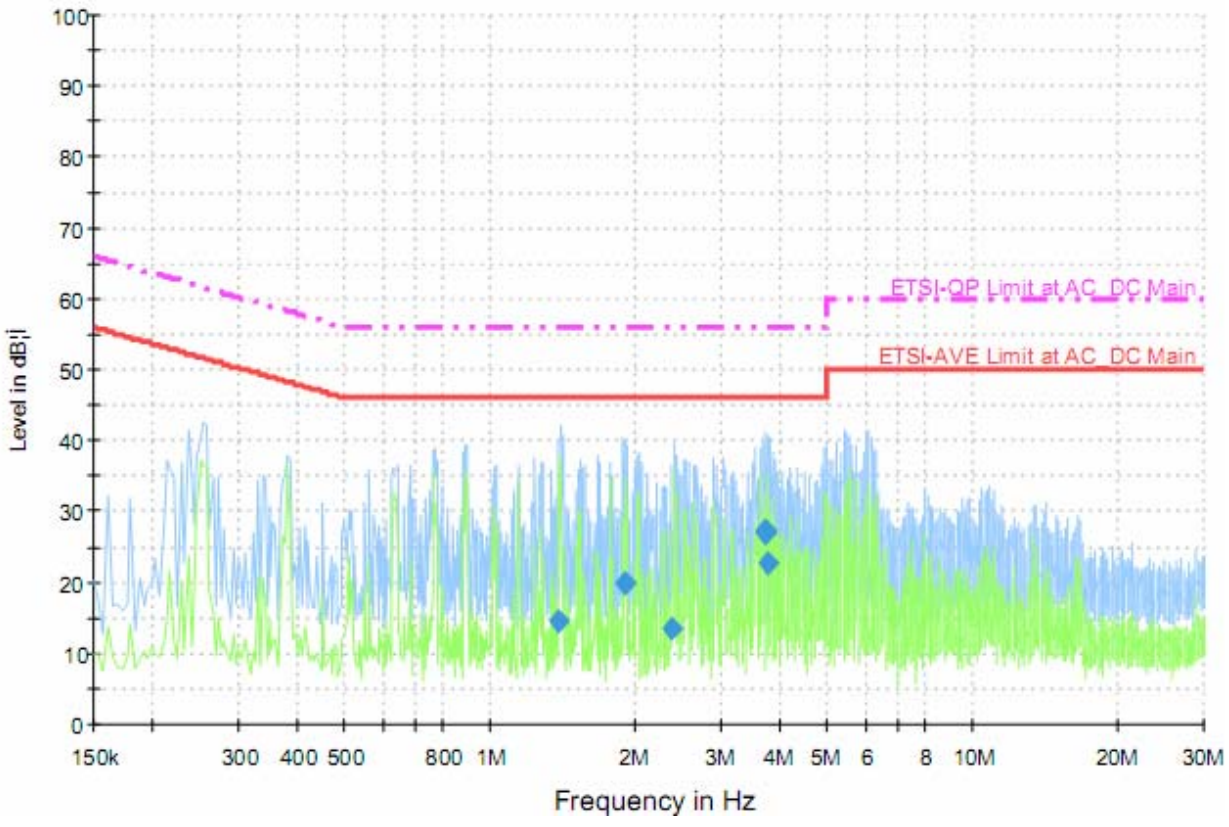
4.3.1.1.1 The test mode

The EUT configuration of the emission tests is EUT + Battery + Charger.

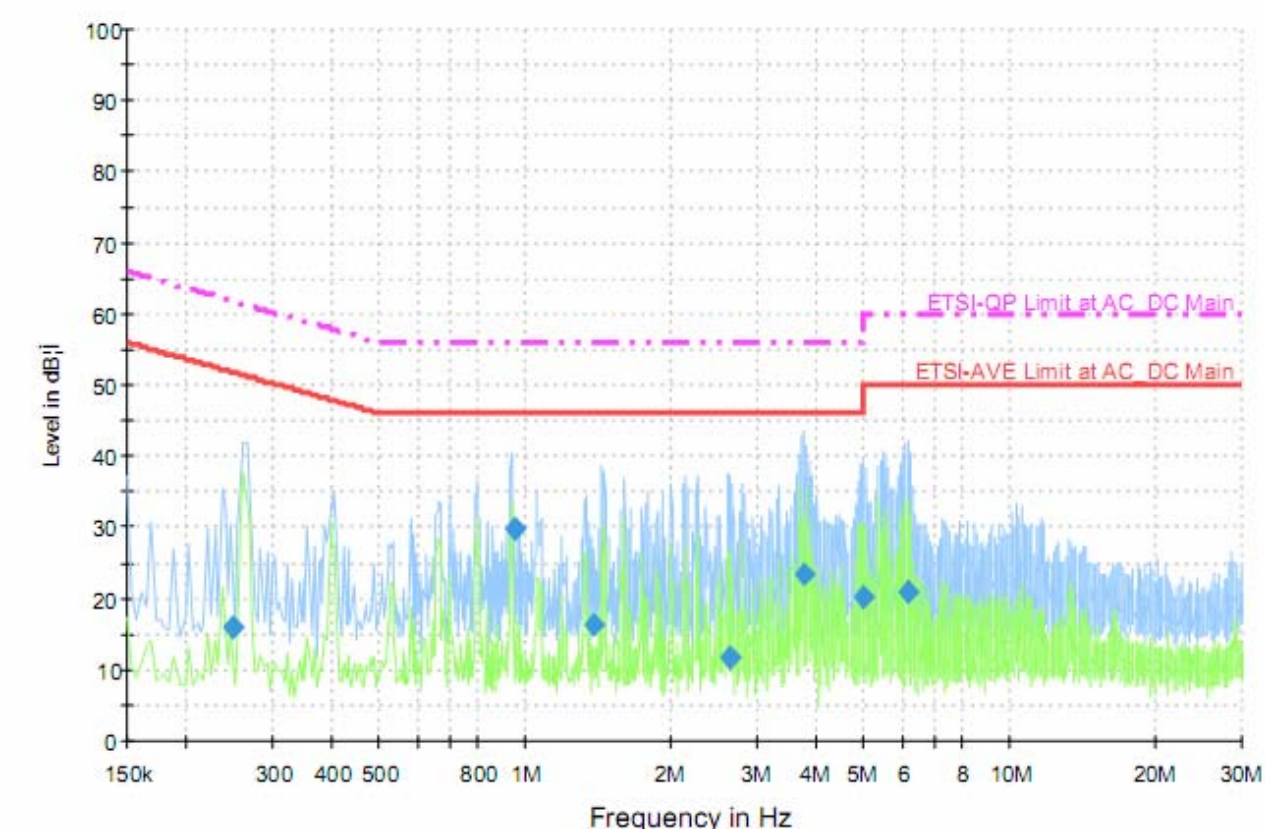
A. Test Verdict Recorded for Suspicious Points:

No.	@Frequency (MHz)	Measured Emission Level (dBµV)				Limit (dBµV)		Verdict
		PK	QP	AV	Phase	QP	AV	
1	0.249165	30.2	26.7	15.9	N	60.0	50.0	PASS
2	0.953587	40.3	36.5	29.7	N	56.0	46.0	PASS
3	1.388307	42.8	39.4	14.4	L	56.0	46.0	PASS
4	1.388561	31.6	27.8	16.4	N	56.0	46.0	PASS
5	1.89876	40.1	36.8	20.0	L	56.0	46.0	PASS
6	2.385592	34.2	29.9	13.6	L	56.0	46.0	PASS
7	2.645637	26.3	23.1	11.7	N	56.0	46.0	PASS
8	3.710212	41.3	37.6	27.3	L	56.0	46.0	PASS
9	3.718939	40.7	36.2	26.8	L	56.0	46.0	PASS
10	3.730593	37.2	34.0	22.6	L	56.0	46.0	PASS
11	3.744248	44.3	40.5	23.5	N	56.0	46.0	PASS
12	4.977742	38.2	36.1	20.3	N	56.0	46.0	PASS
13	6.120817	42.5	38.7	21.1	N	60.0	50.0	PASS

B. Test Plot:



(Plot A: L Phase)



(Plot B: N Phase)

5 Radiated Emission

5.1 Requirement

According to FCC section 15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency range (MHz)	Field Strength	
	μV/m	dBμV/m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

NOTE:

a) Field Strength (dBμV/m) = 20*log[Field Strength (μV/m)].

b) In the emission tables above, the tighter limit applies at the band edges.

5.2 Test Description

See section 0 of this report.

5.3 Test Result

The maximum radiated emission is searched using PK, QP and AV detectors; the emission levels more than the limits, and that have narrow margins from the limits will be re-measured with AV and QP detectors. Both the vertical and the horizontal polarizations of the Test Antenna are considered to perform the tests. All test modes are considered, refer to recorded points and plots below.

5.3.1.1 GSM test mode

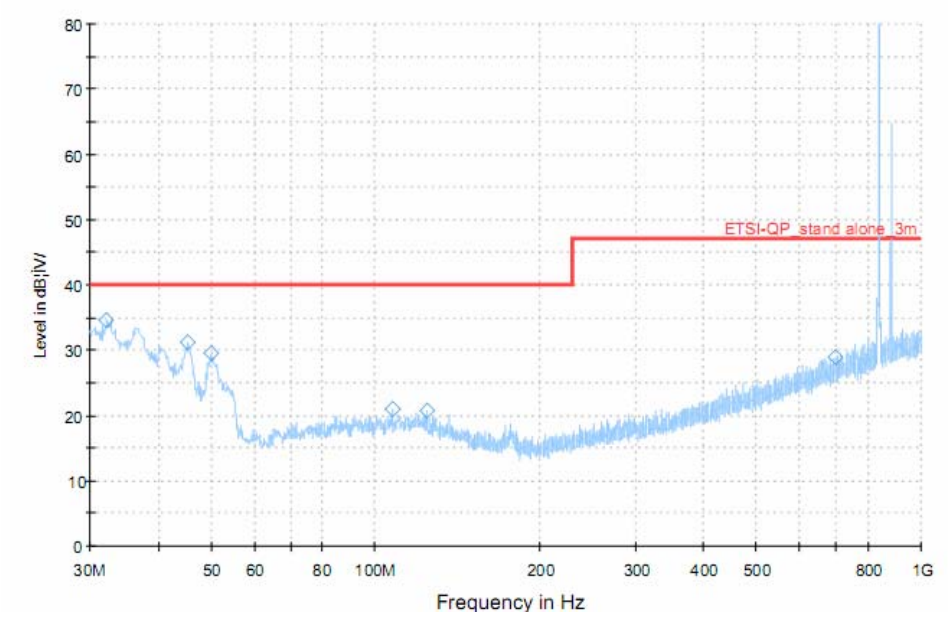
5.3.1.1.1 The test mode

The EUT configuration of the emission tests is EUT + Battery + Charger.

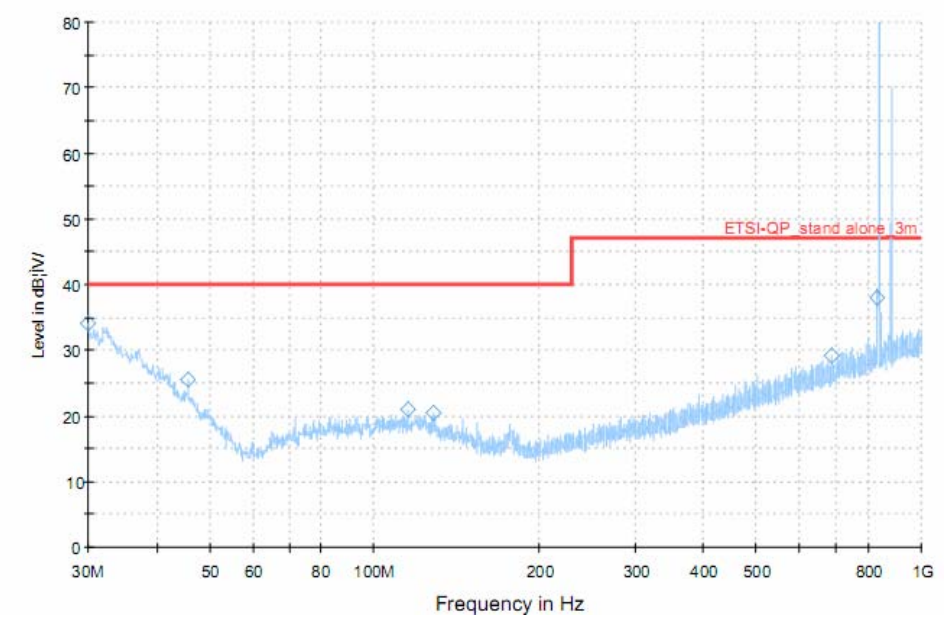
A. Test Plot:

Note: Following is the plots for emission measurement; please note that marked spikes with circle should be ignored because they are MS and SS carrier frequency.

No.	@Frequency (MHz)	Measured Emission Level (dBμV)			Limit (dBμV)	Verdict
		PK	QP	Polarity		
1	30.0000000	33.9	30.2	H	40.0	PASS
2	32.1825000	34.7	31.4	V	40.0	PASS
3	45.5200000	31.3	27.6	V	40.0	PASS
4	45.7625000	25.4	21.4	H	40.0	PASS
5	50.0062500	29.5	26.0	V	40.0	PASS
6	107.600000	21.0	17.7	V	43.5	PASS
7	115.117500	20.9	16.8	H	43.5	PASS
8	124.575000	20.8	16.9	V	43.5	PASS
9	128.818750	20.3	17.2	H	43.5	PASS
10	685.477500	29.1	27.3	H	46.0	PASS
11	695.905000	28.8	25.4	V	46.0	PASS
12	834.736250	38.0	35.1	H	46.0	PASS



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

**** END OF REPORT ****