47 CFR PART 15 SUBPART B

TEST REPORT

of

MOBILE SCOUTING CAMERA

Model Name: SG550M
Trade Name: Scout Guard/Boly Guard
Brand Name: Scout Guard/Boly Guard
Report No.: SH10080017E02
FCC ID: Y2L00001

prepared for

Boly Media Communications (Asia) Co., Ltd.
WORKSHOP B9,6/F,BLOCK B,CAMBRIDGE PLAZA NO.188 SAN WAN ROAD,
SHEUNG SHUI,N.T.,HONG KONG

prepared by

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LAB CODE 20081223-00

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TABLE OF CONTENTS

1 TEST CERTIFICATION 3

2 GENERAL INFORMATION 4

2.1 EUT Description 4

2.2 Test Standards and Results 5

2.3 Facilities and Accreditations 5

2.3.1 Facilities 5

2.3.2 Test Environment Conditions 5

3 TEST CONDITIONS SETTING 6

3.1 Test Mode 6

3.2 Test Setup and Equipments List 7

3.2.1 Conducted Emission 7

3.2.2 Radiated Emission 8

47 CFR PART 15B REQUIREMENTS 9

4 Conducted Emission 9

4.1 Requirement 9

4.2 Test Description 9

4.3 Test Result 9

4.4 The test mode 9

5 Radiated Emission 12

5.1 Requirement 12

5.2 Test Description 12

5.3 Test Result 12

5.4 The test mode 12

1 TEST CERTIFICATION

Equipment under Test:	MOBILE SCOUTING CAMERA
Trade Name:	Scout Guard/Boly Guard
Brand Name:	Scout Guard/Boly Guard
Model Name:	SG550M
FCC ID:	Y2L00001
Applicant:	Boly Media Communications (Asia) Co., Ltd.
Applicant Address:	WORKSHOP B9,6/F,BLOCK B,CAMBRIDGE PLAZA NO.188 SAN WAN ROAD,SHEUNG SHUI, N.T., HONG KONG
Manufacturer:	Boly Media Communications (Asia) Co., Ltd.
Manufacturer Address:	WORKSHOP B9,6/F,BLOCK B,CAMBRIDGE PLAZA NO.188 SAN WAN ROAD,SHEUNG SHUI, N.T., HONG KONG
Factory:	Boly Media Communications (Shenzhen) Co., Ltd.
Factory Address:	9F, Jialitai Building, No. 6 Yanshan Road, Shekou, Shenzhen , PR China
Test Standards:	47 CFR Part 15 Subpart B
Test Date(s):	Nov.07, 2010 –Nov.12, 2010
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: Zhang Wenjie Dated: 2010.12.9

Zhang Wenjie

Reviewed by: Zhang Jun Dated: 2010.12.9

Zhang Jun

Approved by: Wei Bei Dated: 2010.12.9

Wei Bei

2 GENERAL INFORMATION

2.1 EUT Description

EUT Type	:	MOBILE SCOUTING CAMERA
Model Name	:	SG550M
Serial No.	:	(n.a)
IMEI	:	(n.a)
Hardware Version	:	5002V13M
Software Version	:	V2.1
Modulation Type	:	QPSK

Note 1: The EUT supports GSM850/900/1800/1900MHz band .

Note 2: 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 (℃):	20 – 25
Relative Humidity (%):	40 – 60
Atmospheric Pressure (kPa):	96

3 TEST CONDITIONS SETTING

3.1 Test Mode

1. The test modes of the EUT are showed as below:
   During the measurement, the GPRS radio is working. The test modes of the EUT are showed as below:
   (1) EUT test mode
   The EUT configuration of the emission tests is EUT.
   A communication link was established between the EUT and a System Simulator (SS). The EUT operated at GPRS 850 mid ARFCN (190) and maximum output power. The EUT operated at GPRS 1900 mid ARFCN (661) and maximum output power.
   (2) EUT + PC test mode
   The EUT configuration of the emission tests is EUT + PC.
   A communication link was established between the EUT and a System Simulator (SS). The EUT operated at GPRS 850 mid ARFCN (190) and maximum output power. The EUT operated at GPRS 1900 mid ARFCN (661) and maximum output power.
   The EUT was connected with the PC via the USB cable, and the dates was kept transmitting between the EUT and the PC.
   (3) Idle operating mode
   The EUT configuration of the emission tests is EUT.
   The EUT was registered to the base station simulator but no call was set up.

NOTE:

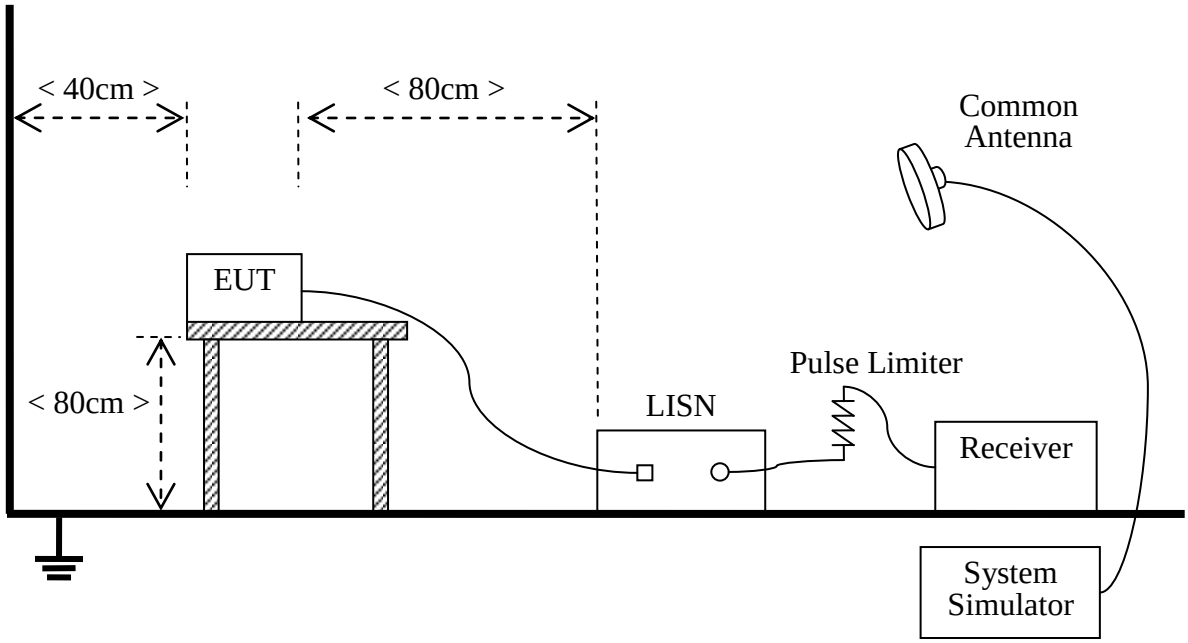
1 All test modes are performed, only the worst cases are recorded in this report.

2 The worst cases are operated at EUT + PC.

3.2 Test Setup and Equipments List

3.2.1 Conducted Emission

A. Test Setup:



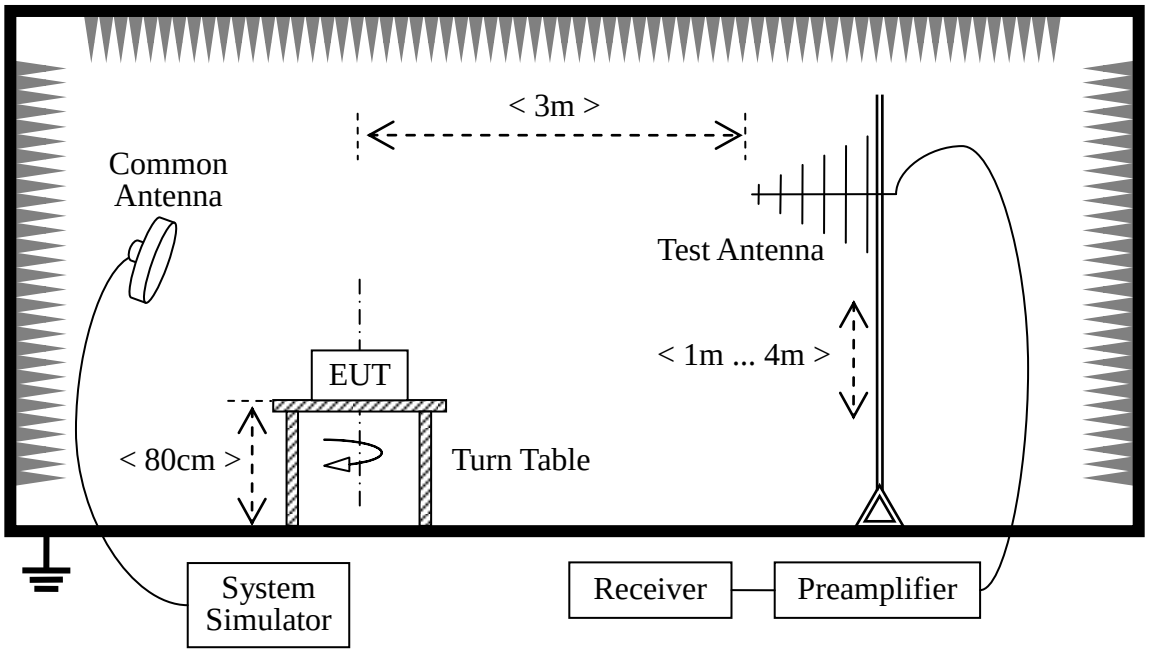
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides 50Ω/50μH of coupling impedance for the measuring instrument. The Common Antenna 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	2010.09	1year
LISN	Rohde&Schwarz	ENV216	812744	2010.09	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2010.09	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	2010.09	1year
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2010.09	1year
Test Antenna - Bi-Log	Rohde&Schwarz	HL562	100385	2010.09	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2010.09	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
5- 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.

4.4 The test mode

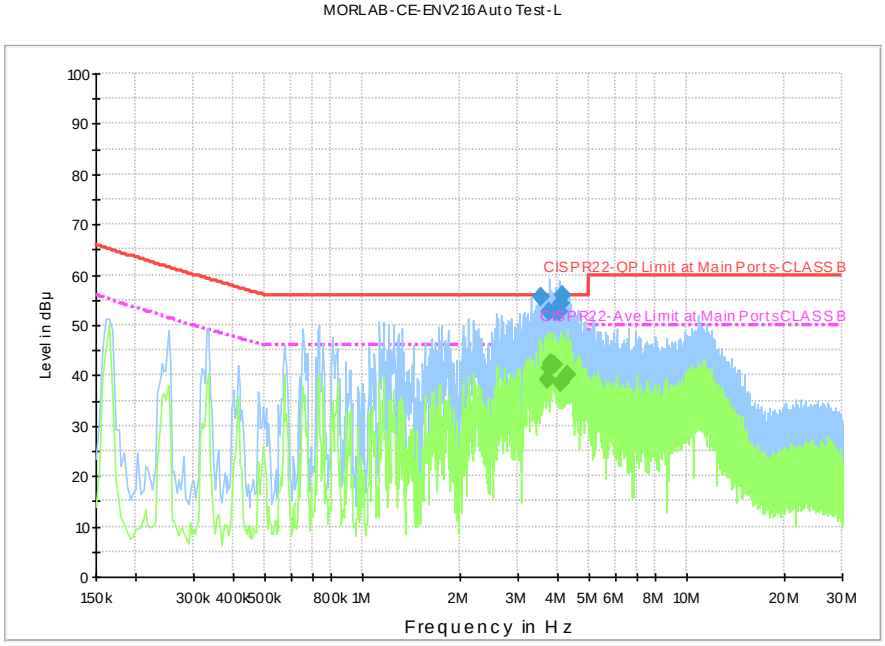
The EUT configuration of the emission tests is EUT + PC.

A. Test Verdict Recorded for Suspicious Points:

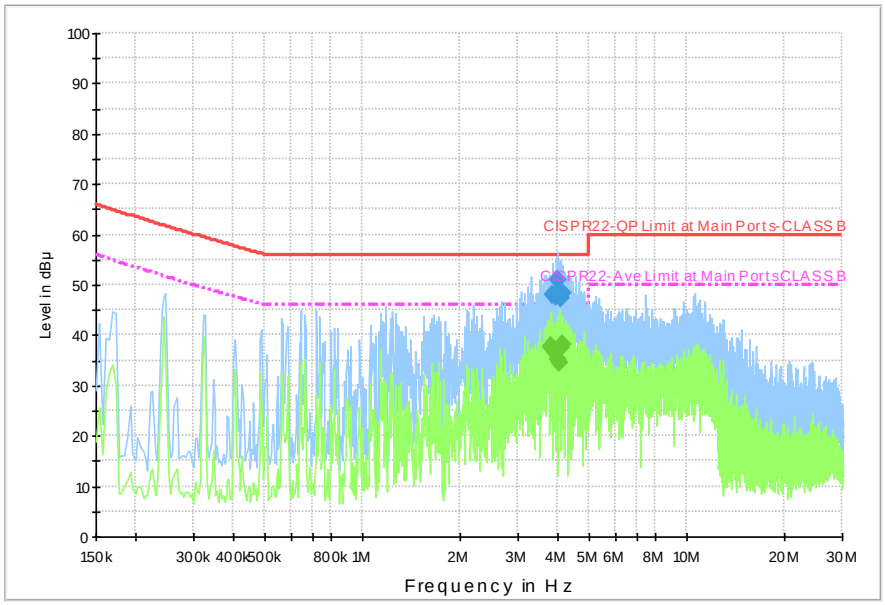
Frequency (MHz)	QuasiPeak (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
3.840206	47.9	1000.000	9.000	N	9.8	8.1	56.0	PASS
3.952144	47.8	1000.000	9.000	N	9.9	8.2	56.0	PASS
3.959606	50.9	1000.000	9.000	N	9.9	5.1	56.0	PASS
4.034231	48.1	1000.000	9.000	N	9.9	7.9	56.0	PASS
4.075275	47.4	1000.000	9.000	N	9.9	8.6	56.0	PASS
4.116319	48.4	1000.000	9.000	N	9.9	7.6	56.0	PASS
3.556631	55.7	1000.000	9.000	L1	9.8	0.3	56.0	PASS
3.750656	52.6	1000.000	9.000	L1	9.9	3.4	56.0	PASS
3.948412	52.6	1000.000	9.000	L1	9.9	3.4	56.0	PASS
4.030500	52.5	1000.000	9.000	L1	9.9	3.5	56.0	PASS
4.064081	54.3	1000.000	9.000	L1	9.9	1.7	56.0	PASS
4.142438	55.8	1000.000	9.000	L1	9.9	0.2	56.0	PASS

Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
3.776775	37.6	1000.000	9.000	N	9.9	8.4	46.0	PASS
3.799162	37.7	1000.000	9.000	N	9.9	8.3	46.0	PASS
3.996919	35.2	1000.000	9.000	N	9.9	10.8	46.0	PASS
4.034231	34.6	1000.000	9.000	N	9.9	11.4	46.0	PASS
4.075275	37.5	1000.000	9.000	N	9.9	8.5	46.0	PASS
4.116319	38.2	1000.000	9.000	N	9.9	7.8	46.0	PASS
3.709612	39.1	1000.000	9.000	L1	9.9	6.9	46.0	PASS
3.750656	41.4	1000.000	9.000	L1	9.9	4.6	46.0	PASS
3.787969	42.6	1000.000	9.000	L1	9.9	3.4	46.0	PASS
3.873788	42.1	1000.000	9.000	L1	9.9	3.9	46.0	PASS
4.067812	38.6	1000.000	9.000	L1	9.9	7.4	46.0	PASS
4.265569	40.1	1000.000	9.000	L1	9.9	5.9	46.0	PASS

B. Test Plot:



(Plot: L Phase)



(Plot: 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	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

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 3.2.2 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.

5.4 The test mode

The EUT configuration of the emission tests is EUT +PC.

A. Test Verdict Recorded:

GPRS 850

No.	@Frequency (MHz)	Measured Emission Level (dBμV)		Limit (dBμV)	Margin (dB)	Verdict
		QP	Polarity			
1	34.122500	35.0	V	40.0	5.0	PASS
2	47.702500	26.5	V	40.0	13.5	PASS
3	72.437500	23.2	V	40.0	16.8	PASS
4	107.478750	25.7	V	43.5	17.8	PASS
5	197.082500	25.1	V	43.5	18.4	PASS
6	203.387500	25.6	V	43.5	17.9	PASS
7	33.273750	33.1	H	40.0	6.9	PASS
8	45.641250	26.3	H	40.0	13.7	PASS
9	73.286250	23.2	H	40.0	16.8	PASS
10	90.018750	24.9	H	43.5	18.6	PASS
11	112.328750	25.9	H	43.5	17.6	PASS
12	159.737500	24.3	H	43.5	19.2	PASS

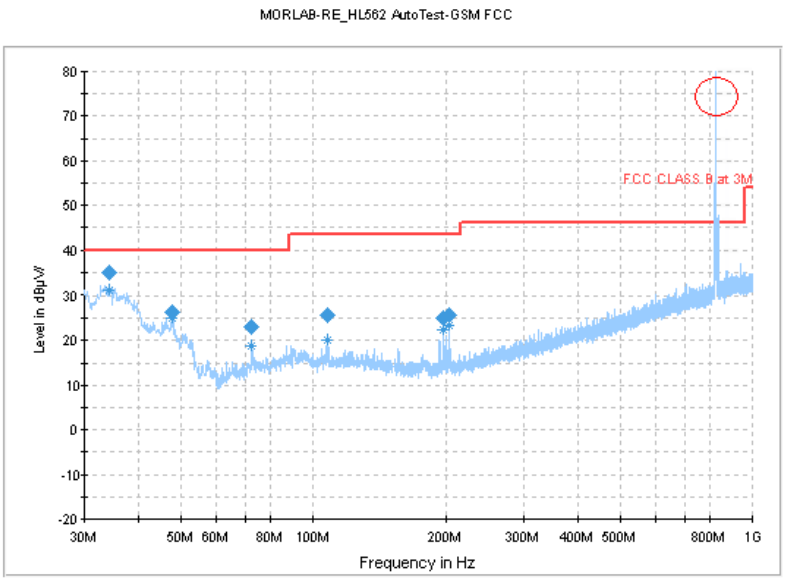
GPRS 1900

No.	@Frequency (MHz)	Measured Emission Level (dBμV)		Limit (dBμV)	Margin (dB)	Verdict
		QP	Polarity			
1	34.971250	33.2	V	40.0	6.8	PASS
2	37.638750	31.6	V	40.0	8.4	PASS
3	47.823750	26.8	V	40.0	13.2	PASS
4	106.872500	26.4	V	43.5	17.1	PASS
5	149.552500	26.0	V	43.5	17.5	PASS
6	197.082500	26.0	V	43.5	17.5	PASS
7	31.697500	34.5	H	40.0	5.5	PASS
8	35.941250	32.2	H	40.0	7.8	PASS
9	43.580000	28.0	H	40.0	12.0	PASS
10	59.948750	20.5	H	40.0	19.5	PASS
11	104.568750	26.3	H	43.5	17.2	PASS
12	155.978750	26.3	H	43.5	17.2	PASS

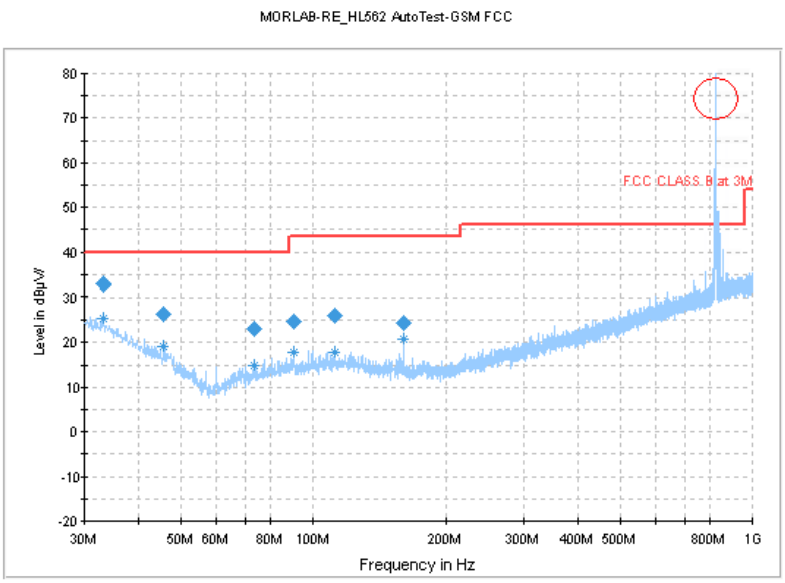
B. Test Plot:

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

GPRS 850

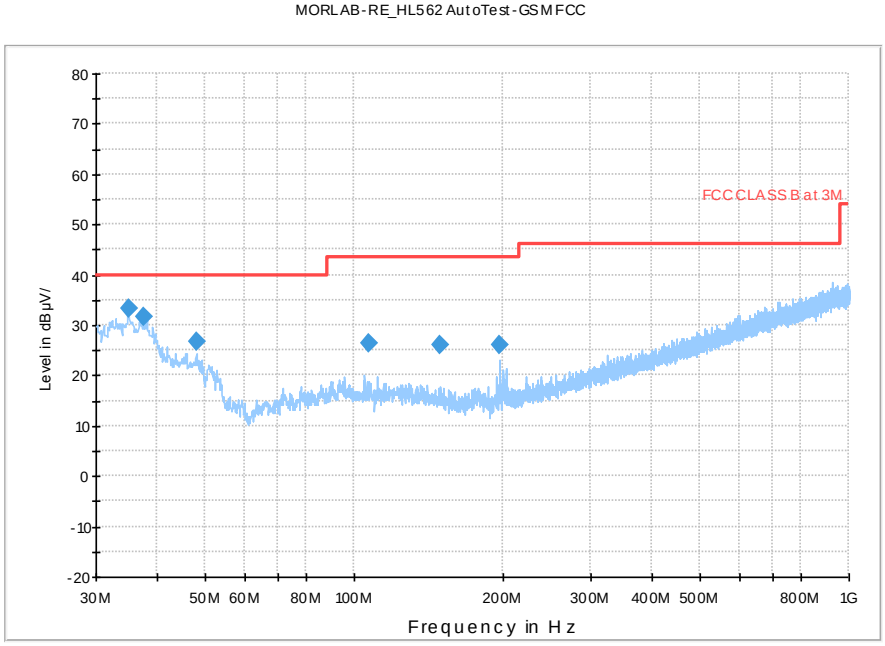


(Plot: Test Antenna Vertical)

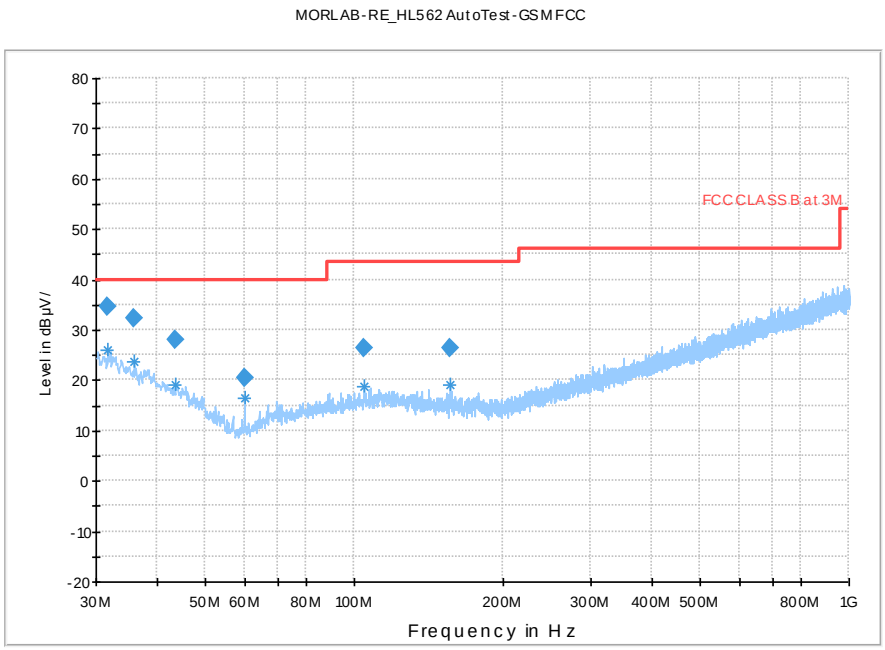


(Plot: Test Antenna Horizontal)

GPRS 1900



(Plot: Test Antenna Vertical)



(Plot: Test Antenna Horizontal)

**** END OF REPORT ****