

# **FCC Test Report**

Report No.: SEFD1303061

#### According to

### 47 CFR, Part 2, Part 15, CISPR PUB. 22

**Applicant** : Capricorn Electronics Ltd.

Suite 1012, 10/Fl., Metro Centre I, 32 Lam King Address

Street, Kowloon Bay, Kowloon, HK

Equipment monitoring and tracking device

Model No. : ENVOY

FCC ID : WXLENVOY

• The test result refers exclusively to the test presented test model / sample.

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#### ■ ORIGINAL.

☐ Additional attachment as following record:

Attachment No.	Date	Description



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### According to

47 CFR, Part 2, Part 15 and CISPR PUB. 22

Applicant : Capricorn Electronics Ltd.

Address Suite 1012, 10/Fl., Metro Centre I, 32 Lam King

Street, Kowloon Bay, Kowloon, HK

Equipment : monitoring and tracking device

Model No. : ENVOY

FCC ID : WXLENVOY

#### I HEREBY CERTIFY THAT:

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 – 2009** and the energy emitted by this equipment was *passed CISPR PUB. 22*, FCC Part 15 in both radiated and conducted emission class B limits. Testing was carried out on Mar 27, 2013 at Cerpass Technology(Suzhou) Corp.

Signature

Miro Chueh/ Technical director



# 1. Summary of Test Procedure and Test Result

Test Item	Normative References	Test Result
Conducted Emission	ANSI C63.4-2009	DACC
Conducted Emission	FCC Part 15 Subpart B	PASS
Dadiated Emission	ANSI C63.4-2009	DACC
Radiated Emission	FCC Part 15 Subpart B	PASS

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### 2. Test Configuration of Equipment under Test

#### 2.1. Manufacturer

Capricorn Electronics Ltd.

Suite 1012, 10/FI., Metro Centre I, 32 Lam King Street, Kowloon Bay, Kowloon, HK

#### 2.2. Feature of Equipment under Test

monitoring	and	tracking	Model No:	ENVOY
device			Model No.	LINVOT

Note: the detail information please refer to the user manual.

#### 2.3. Test Manner.0

#### **Test Manner**

- During testing, the interface cables and equipment positions were varied according to ANSIC63.4-2009
- b The complete test system included accessory and EUT for EMI test.
- Connect the accessory and EUT, and then test.

#### The pre-test modes

Mode 1: GPRS 850 Idle

Mode 2: GPS Link

#### Select the worst case of the pre-test modes as the final test mode

Mode 1: GPRS 850 Idle

Mode 2: GPS Link

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### 2.4. Description of Test System

No.	Device	Manufacturer	Model No.	Description
1	LCD Monitor	Lenovo	L2364Wa	N/A
2	Earphone	Lenovo	P550	N/A
3	Mouse	DELL	G0K02XYK	N/A
4	IPOD	APPLE	MA477TA/A	N/A
5	Notebook PC	SONY	PCG-71811P	N/A

Item	Cable	Quantity	Description
Α	VGA Cable	1	Shielded, 1.8m, with two ferrites core bonded
В	USB Cable	1	Shielded, 1.2m
С	Audio Cable	1	Non-Shielded, 1.8m
D	USB Cable	1	Shielded, 1.2m
Е	USB Cable	1	Shielded, 1.0m

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#### 2.5. General Information of Test

Test Site:	Cerpass Technology (Suzhou) Co.,Ltd			
Test Site Location :	No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China			
NVLAP LAB Code :	200814-0			
FCC Registration Number :	916572, 331395			
IC Registration Number :	7290A-1, 7290A-2			
VCCI Registration Number :	T-1945 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test below 1GHz G-227 for Radiated emission test above 1GHz			
Frequency Range Investigated :	Conducted Emission Test: from 150kHz to 30 MHz Radiated Emission Test: from 30 MHz to 1,000 MHz Radiated Emission Test: from 1GHz to 18GHz			
Test Distance :	The test distance of radiated emission below 1GHz from antenna to EUT is 3 M.  The test distance of radiated emission above 1GHz from antenna to EUT is 3 M.			

#### LABORATORY ACCREDITATION









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### 2.6. Measurement Uncertainty

Conducted Emission							
The measurement uncertainty is evaluated as ± 2.71 dB.							
Radiated Emission	Radiated Emission						
(30MHz -1000MHz)	Horizontal	The measurement uncertainty is evaluated as ±3.89 dB.					
(30101112 - 1000101112)	Vertical	The measurement uncertainty is evaluated as ± 3.74 dB					
(1G-18GHz)	Horizontal	The measurement uncertainty is evaluated as ± 2.31 dB.					
(10-160H2)	Vertical	The measurement uncertainty is evaluated as ± 2.15 dB.					

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#### 3. Test of Conducted Emission

#### 3.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2009 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

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#### **Conducted Emission Limits:**

Frequency (MHz)	Quasi Peak (dB µ V)	Average (dB µ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

#### 3.2. Test Procedures

- a. The EUT was placed 0.8 meter from the conducting wall of the shielding room was kept at least 40 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- c. All the support units are connecting to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

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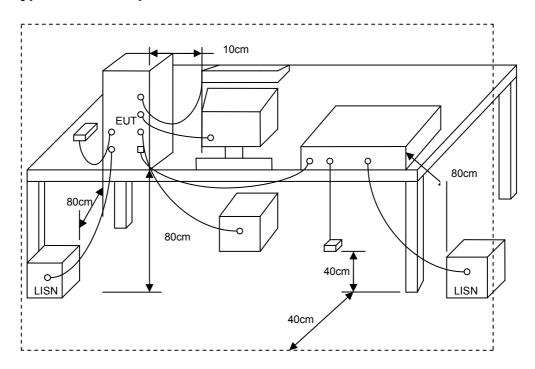
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### 3.3. Typical test Setup



### 3.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100565	2012.11.05	2013.11.04
AMN	R&S	ESH2-Z5	100182	2012.11.05	2013.11.04
Two-Line V-Network	R&S	ENV216	100325	2013.03.10	2014.03.09
ISN	FCC	FCC-TLISN-T2-02	20379	2012.12.08	2013.12.07
ISN	FCC	FCC-TLISN-T4-02	20380	2012.12.08	2013.12.07
ISN	FCC	FCC-TLISN-T8-02	20381	2012.12.08	2013.12.07
ISN	TESEQ	ISN ST08	30175	2012.09.13	2013.09.12
Current Probe	R&S	EZ-17	100303	2013.03.10	2014.03.09
Passive Voltage Probe	R&S	ESH2-Z3	100026	2013.03.10	2014.03.09
Attenuator	R&S	ESH3-Z2	100529	2013.03.10	2014.03.09
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2013.03.10	2014.03.09

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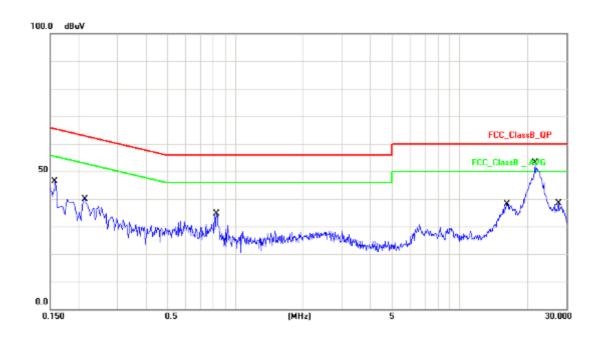
#### 3.5. Test Result and Data

Test Mode: Mode 1: GPRS 850 Idle

AC Power: AC 120V/60Hz Phase: LINE

22°C Temperature: Humidity: 50%

Pressure(mbar): 2013/03/27 1002 Date:



No.	Frequency	Factor	Reading	Level	Limit	Margin	Detector
	(MHz)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.1580	9.87	27.98	37.85	65.57	-27.72	QP
2	0.1580	9.87	8.93	18.80	55.57	-36.77	AVG
3	0.2140	9.87	26.85	36.72	63.05	-26.33	QP
4	0.2140	9.87	11.71	21.58	53.05	-31.47	AVG
5	0.8300	9.80	18.14	27.94	56.00	-28.06	QP
6	0.8300	9.80	4.19	13.99	46.00	-32.01	AVG
7	16.2460	9.75	25.20	34.95	60.00	-25.05	QP
8	16.2460	9.75	22.39	32.14	50.00	-17.86	AVG
9	21.8300	9.56	36.64	46.20	60.00	-13.80	QP
10	21.8300	9.56	31.69	41.25	50.00	-8.75	AVG
11	27.6660	9.57	22.09	31.66	60.00	-28.34	QP
12	27.6660	9.57	17.21	26.78	50.00	-23.22	AVG

Note: Measurement Level = Reading Level + Correct Factor

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Test Mode: Mode 1: GPRS 850 Idle

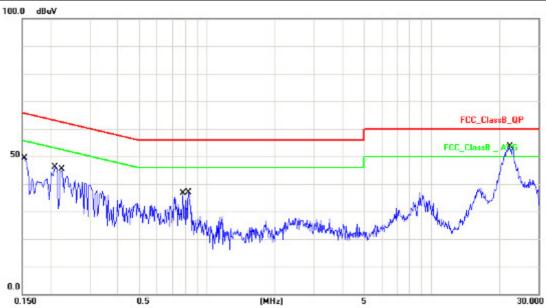
AC Power: AC 120V/60Hz Phase: **NEUTRAL** 

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22°C Temperature: Humidity: 50%

1002 Pressure(mbar): Date: 2013/03/27



No.	Frequency	Factor	Reading	Level	Limit	Margin	Detector
	(MHz)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.1540	9.50	38.12	47.62	65.78	-18.16	QP
2	0.1540	9.50	20.25	29.75	55.78	-26.03	AVG
3	0.2100	9.50	27.28	36.78	63.21	-26.43	QP
4	0.2100	9.50	7.40	16.90	53.21	-36.31	AVG
5	0.2260	9.50	28.76	38.26	62.60	-24.34	QP
6	0.2260	9.50	11.53	21.03	52.60	-31.57	AVG
7	0.7820	9.48	14.11	23.59	56.00	-32.41	QP
8	0.7820	9.48	1.62	11.10	46.00	-34.90	AVG
9	0.8300	9.47	21.40	30.87	56.00	-25.13	QP
10	0.8300	9.47	4.52	13.99	46.00	-32.01	AVG
11	22.4060	9.89	36.88	46.77	60.00	-13.23	QP
12	22.4060	9.89	31.10	40.99	50.00	-9.01	AVG

Note: Measurement Level = Reading Level + Correct Factor

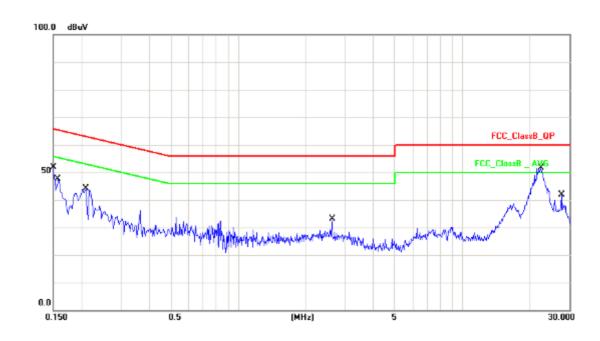


Test Mode: Mode 2: GPS Link

AC Power: AC 120V/60Hz Phase: LINE

Temperature : 22 °C Humidity : 50%

Pressure(mbar): 1002 Date: 2013/03/27



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No.	Frequency	Factor	Reading	Level	Limit	Margin	Detector
	(MHz)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.1500	9.87	35.78	45.65	65.99	-20.34	QP
2	0.1500	9.87	16.76	26.63	55.99	-29.36	AVG
3	0.1580	9.87	32.10	41.97	65.56	-23.59	QP
4	0.1580	9.87	11.68	21.55	55.56	-34.01	AVG
5	0.2100	9.87	24.62	34.49	63.20	-28.71	QP
6	0.2100	9.87	9.22	19.09	53.20	-34.11	AVG
7	2.6260	9.71	12.31	22.02	56.00	-33.98	QP
8	2.6260	9.71	4.61	14.32	46.00	-31.68	AVG
9	22.4460	9.56	36.99	46.55	60.00	-13.45	QP
10	22.4460	9.56	32.11	41.67	50.00	-8.33	AVG
11	27.5740	9.57	22.34	31.91	60.00	-28.09	QP
12	27.5740	9.57	17.32	26.89	50.00	-23.11	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode : Mode 2: GPS Link

AC Power: AC 120V/60Hz Phase: NEUTRAL

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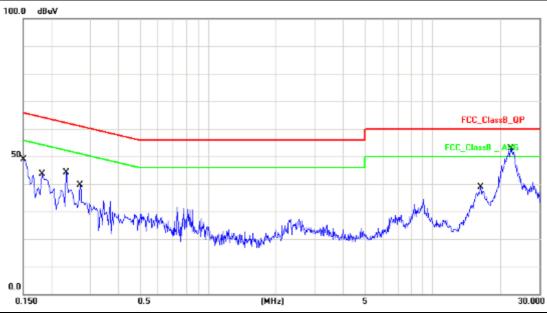
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Temperature: 22°C Humidity: 50%

Pressure(mbar): 1002 Date: 2013/03/27



No.	Frequency	Factor	Reading	Level	Limit	Margin	Detector
	(MHz)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.1500	9.50	37.96	47.46	66.00	-18.54	QP
2	0.1500	9.50	21.81	31.31	56.00	-24.69	AVG
3	0.1820	9.50	29.83	39.33	64.39	-25.06	QP
4	0.1820	9.50	15.61	25.11	54.39	-29.28	AVG
5	0.2340	9.50	27.41	36.91	62.31	-25.40	QP
6	0.2340	9.50	10.49	19.99	52.31	-32.32	AVG
7	0.2700	9.50	22.70	32.20	61.12	-28.92	QP
8	0.2700	9.50	8.81	18.31	51.12	-32.81	AVG
9	16.4220	9.94	23.03	32.97	60.00	-27.03	QP
10	16.4220	9.94	19.00	28.94	50.00	-21.06	AVG
11	22.3580	9.89	36.22	46.11	60.00	-13.89	QP
12	22.3580	9.89	31.10	40.99	50.00	-9.01	AVG

Note: Measurement Level = Reading Level + Correct Factor

Test engineer:



### 3.1. Test Photographs



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Front View



Rear View

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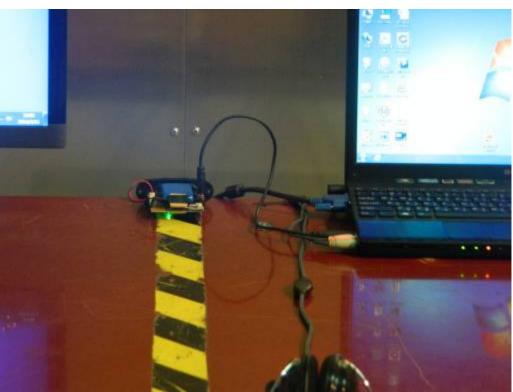
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Front View



Rear View

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#### 4. Test of Radiated Emission

#### 4.1. Test Limit

Radiated emissions were measured with a bandwidth according to the methods defines in ANSI C63.4-2009. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in section 3.2. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

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For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance Meters	Radiated (μ V / M)	Radiated (dB µ V/ M)
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
Above 960	3	500	54.0

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the below table.

Frequency (MHz)	Distance Meters	Radiated (dB µ V/ M)	
30-230	10	30	
230-1000	10	37	

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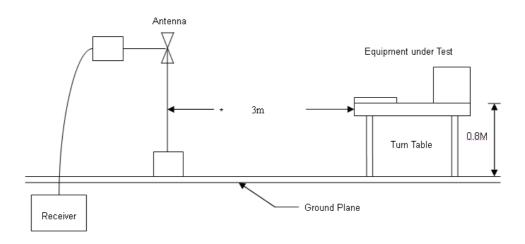
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#### 4.2. Test Procedures

- a. The EUT was placed on a relatable table top 0.8 meter above ground.
- b. The EUT was set such that distance from the interference receiving antenna to EUT was 3 meters for below 1GHz and 3 meters for above 1GHz. The antenna was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a broadband antenna for below 1GHz and horn antenna for above 1GHz, and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. The bandwidth below 1GHz setting on the strength meter is 120kHz and above 1GHz is 1MHz.

#### 4.3. Typical test Setup

Below 1GHz Test Setup



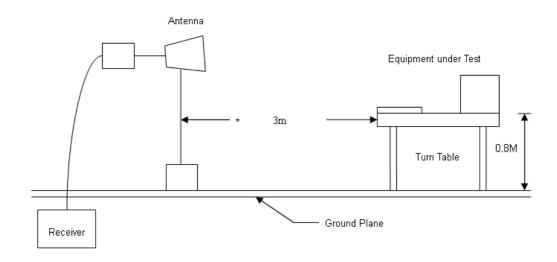
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Above 1GHz Test Setup



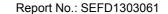
### 4.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI	100563	2013.03.10	2014.03.09
H64 Preamplifier	HP	8447F	3113A05582	2013.03.10	2014.03.09
Preamplifier	Agilent	8449B	3008A02342	2013.03.10	2014.03.09
Ultra Broadband Antenna	R&S	HL562	100362	2012.05.03	2013.05.02
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2012.05.03	2013.05.02
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	9170-347	2012.05.15	2013.05.15
Spectrum Analyzer	R&S	FSP40	100324	2013.03.10	2014.03.09
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2013.03.10	2014.03.09

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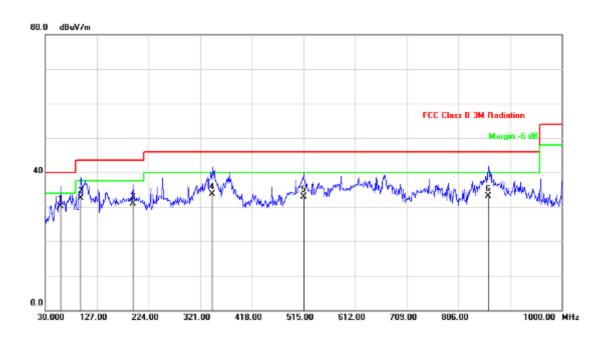
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### 4.5. Test Result and Data (30MHz ~ 1000MHz)

Test Mode :	Mode 1: GPRS 850 Idle		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Temp :	23℃	Humidity:	52%
Pressure(mbar) :	1002	Date :	2013/03/27



No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.	Height	Azimuth
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		(cm)	(deg)
1	59.1000	-16.94	47.06	30.12	40.00	-9.88	QP	200	258
2	96.9300	-14.58	47.09	32.51	43.50	-10.99	QP	200	15
3	194.9000	-15.44	46.28	30.84	43.50	-12.66	QP	200	123
4	344.2798	-9.39	43.01	33.62	46.00	-12.38	QP	100	154
5	515.0000	-4.49	37.33	32.84	46.00	-13.16	QP	100	226
6	862.2599	2.30	30.88	33.18	46.00	-12.82	QP	100	25

Note: Measurement Level = Reading Level + Correct Factor

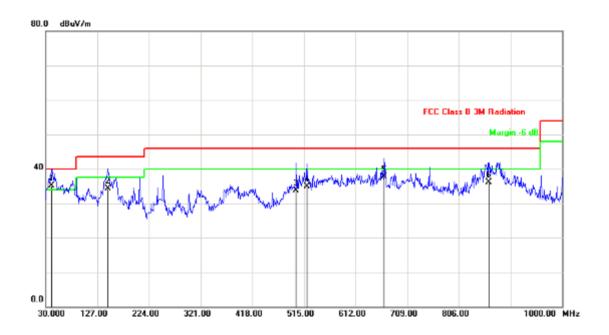
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Test Mode :	Mode 1: GPRS 850 Idle							
AC Power :	AC 120V/60Hz	AC 120V/60Hz Ant. Polarization: Vertical						
Temp :	23℃	23°C Humidity: 52%						
Pressure(mbar):	1002	Date :	2013/03/27					

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No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.	Height	Azimuth
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		(cm)	(deg)
1	40.6700	-6.86	42.06	35.20	40.00	-4.80	QP	100	223
2	147.3700	-15.31	49.52	34.21	43.50	-9.29	QP	100	152
3	500.4499	-4.81	38.49	33.68	46.00	-12.32	QP	200	15
4	520.8200	-4.37	39.18	34.81	46.00	-11.19	QP	200	148
5	665.3500	-1.26	38.91	37.65	46.00	-8.35	QP	200	265
6	862.2599	2.30	33.85	36.15	46.00	-9.85	QP	200	230

Note: Measurement Level = Reading Level + Correct Factor

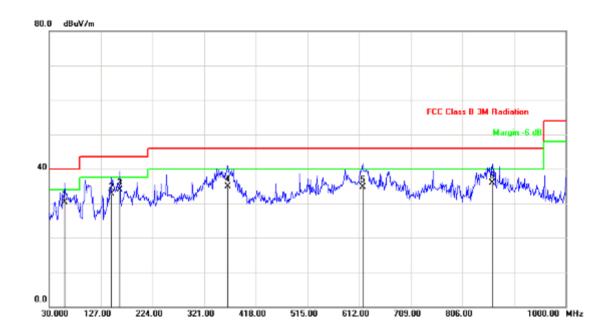
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Test Mode :	Mode 2: GPS Link		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Temp :	23℃	Humidity:	52%
Pressure(mbar) :	1002	Date :	2013/03/27

Report No.: SEFD1303061



No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.	Height	Azimuth
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		(cm)	(deg)
1	59.1000	-16.94	47.20	30.26	40.00	-9.74	QP	200	263
2	147.3700	-15.31	48.00	32.69	43.50	-10.81	QP	200	263
3	162.8899	-15.40	49.24	33.84	43.50	-9.66	QP	100	15
4	365.6200	-8.68	43.53	34.85	46.00	-11.15	QP	100	225
5	618.7898	-2.25	36.87	34.62	46.00	-11.38	QP	100	184
6	862.2599	2.30	33.54	35.84	46.00	-10.16	QP	200	56

Note: Measurement Level = Reading Level + Correct Factor

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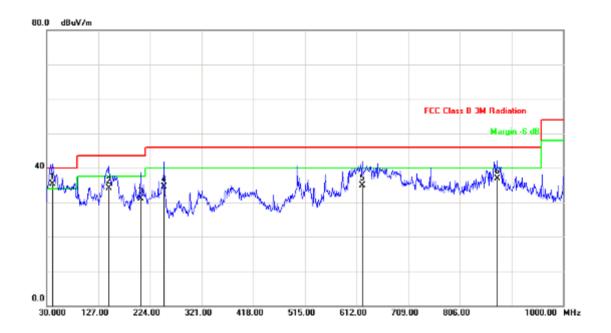
Test Mode :	Mode 2: GPS Link		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Temp :	23℃	Humidity :	52%
Pressure(mbar):	1002	Date :	2013/03/27

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No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.	Height	Azimuth
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		(cm)	(deg)
1	40.6699	-6.86	42.09	35.23	40.00	-4.77	QP	100	56
2	146.4000	-15.26	49.38	34.12	43.50	-9.38	QP	100	158
3	206.5399	-15.01	46.06	31.05	43.50	-12.45	QP	100	154
4	250.1899	-12.74	47.24	34.50	46.00	-11.50	QP	200	156
5	622.6698	-2.17	37.05	34.88	46.00	-11.12	QP	200	22
6	875.8400	2.56	34.39	36.95	46.00	-9.05	QP	200	263

Note: Measurement Level = Reading Level + Correct Factor

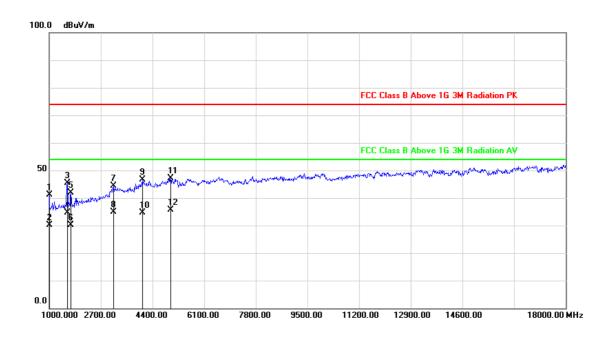
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### 4.6. Test Result and Data (1000MHz ~ 18000MHz)

Test Mode :	Mode 1: GPRS 850 Idle						
AC Power :	AC 120V/60Hz	Horizontal					
Temp:	23℃	Humidity:	52%				
Pressure(mbar):	1002	Date :	2013/03/27				

Report No.: SEFD1303061



No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.	Height	Azimuth
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		(cm)	(deg)
1	1000.0000	-6.87	48.05	41.18	74.00	-32.82	peak	100	52
2	1000.0000	-6.87	36.98	30.11	54.00	-23.89	AVG	100	52
3	1595.000	-4.39	49.66	45.27	74.00	-28.73	peak	100	143
4	1595.000	-4.39	39.00	34.61	54.00	-19.39	AVG	100	143
5	1714.000	-3.89	45.73	41.84	74.00	-32.16	peak	100	172
6	1714.000	-3.89	34.10	30.21	54.00	-23.79	AVG	100	172
7	3125.000	1.11	43.29	44.40	74.00	-29.60	peak	200	309
8	3125.000	1.11	33.77	34.88	54.00	-19.12	AVG	200	309
9	4060.000	4.51	42.24	46.75	74.00	-27.25	peak	200	23
10	4060.000	4.51	30.11	34.62	54.00	-19.38	AVG	200	23
11	4995.000	6.84	40.17	47.01	74.00	-26.99	peak	100	189
12	4995.000	6.84	28.85	35.69	54.00	-18.31	AVG	100	189

Note: Measurement Level = Reading Level + Correct Factor

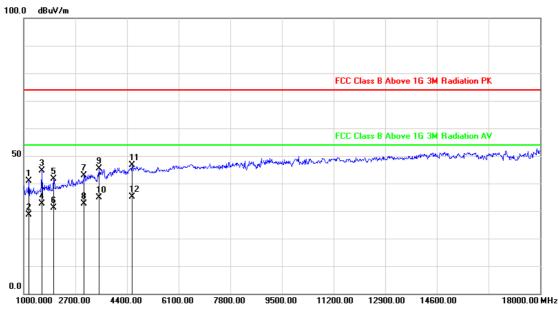
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Test Mode :	Mode 1: GPRS 850 Idle					
AC Power :	AC 120V/60Hz Ant. Polarization: Vertical					
Temp :	23℃	Humidity:	52%			
Pressure(mbar):	1002	Date :	2013/03/27			

Report No.: SEFD1303061



No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.	Height	Azimuth
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		(cm)	(deg)
1	1170.000	-6.16	47.01	40.85	74.00	-33.15	peak	100	130
2	1170.000	-6.16	34.85	28.69	54.00	-25.31	AVG	100	130
3	1595.000	-4.39	49.03	44.64	74.00	-29.36	peak	200	25
4	1595.000	-4.39	37.00	32.61	54.00	-21.39	AVG	200	25
5	1986.000	-2.76	44.31	41.55	74.00	-32.45	peak	100	199
6	1986.000	-2.76	33.98	31.22	54.00	-22.78	AVG	100	199
7	2989.000	0.61	42.38	42.99	74.00	-31.01	peak	200	344
8	2989.000	0.61	32.00	32.61	54.00	-21.39	AVG	200	344
9	3482.000	2.44	42.92	45.36	74.00	-28.64	peak	200	267
10	3482.000	2.44	32.41	34.85	54.00	-19.15	AVG	200	267
11	4570.000	5.78	40.76	46.54	74.00	-27.46	peak	100	250
12	4570.000	5.78	29.34	35.12	54.00	-18.88	AVG	100	250

Note: Measurement Level = Reading Level + Correct Factor

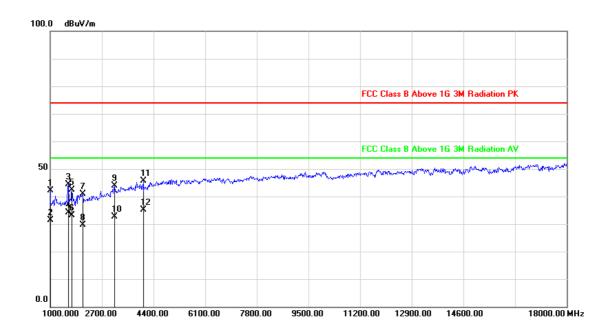
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Test Mode :	Mode 2: GPS Link						
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal				
Temp :	23℃	Humidity:	52%				
Pressure(mbar):	1002	Date :	2013/03/27				

Report No.: SEFD1303061



No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.	Height	Azimuth
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		(cm)	(deg)
1	1000.0000	-6.87	49.05	42.18	74.00	-31.82	peak	100	16
2	1000.0000	-6.87	38.13	31.26	54.00	-22.74	AVG	100	16
3	1595.000	-4.39	48.66	44.27	74.00	-29.73	peak	100	123
4	1595.000	-4.39	38.64	34.25	54.00	-19.75	AVG	100	123
5	1714.000	-3.89	46.23	42.34	74.00	-31.66	peak	100	55
6	1714.000	-3.89	36.90	33.01	54.00	-20.99	AVG	100	55
7	2071.000	-2.46	43.36	40.90	74.00	-33.10	peak	100	162
8	2071.000	-2.46	32.11	29.65	54.00	-24.35	AVG	100	162
9	3125.000	1.11	42.79	43.90	74.00	-30.10	peak	100	20
10	3125.000	1.11	31.58	32.69	54.00	-21.31	AVG	100	20
11	4060.000	4.51	41.24	45.75	74.00	-28.25	peak	100	312
12	4060.000	4.51	30.71	35.22	54.00	-18.78	AVG	100	312

Note: Measurement Level = Reading Level + Correct Factor

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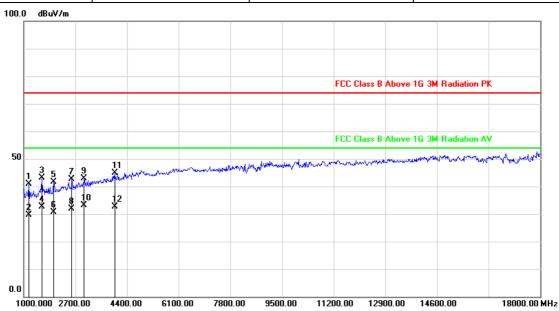
Test Mode :	Mode 2: GPS Link						
AC Power :	AC 120V/60Hz	AC 120V/60Hz Ant. Polarization: Vertical					
Temp :	23℃	Humidity :	52%				
Pressure(mbar):	1002	Date :	2013/03/27				

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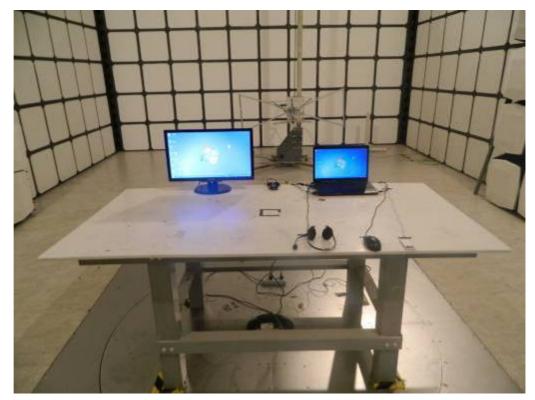
No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.	Height	Azimuth
	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		(cm)	(deg)
1	1170.000	-6.16	47.01	40.85	74.00	-33.15	peak	200	32
2	1170.000	-6.16	35.82	29.66	54.00	-24.34	AVG	200	32
3	1595.000	-4.39	47.53	43.14	74.00	-30.86	peak	100	62
4	1595.000	-4.39	37.01	32.62	54.00	-21.38	AVG	100	62
5	1986.000	-2.76	44.31	41.55	74.00	-32.45	peak	100	12
6	1986.000	-2.76	33.31	30.55	54.00	-23.45	AVG	100	12
7	2581.000	-0.75	43.34	42.59	74.00	-31.41	peak	100	154
8	2581.000	-0.75	32.70	31.95	54.00	-22.05	AVG	100	154
9	2989.000	0.61	42.38	42.99	74.00	-31.01	peak	100	132
10	2989.000	0.61	32.41	33.02	54.00	-20.98	AVG	100	132
11	3992.000	4.33	40.45	44.78	74.00	-29.22	peak	100	11
12	3992.000	4.33	28.25	32.58	54.00	-21.42	AVG	100	11

Note: Measurement Level = Reading Level + Correct Factor

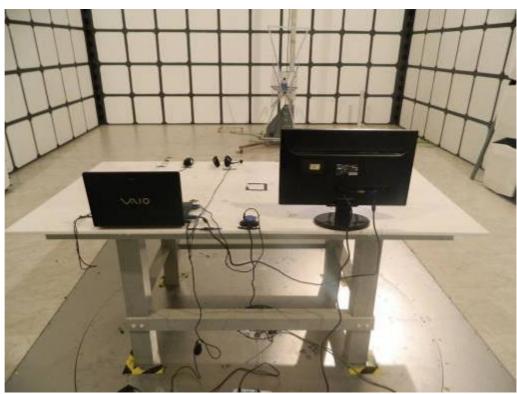
Test engineer:

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### 4.7. Test Photographs (30MHz ~ 1000MHz)



Front View



Rear View

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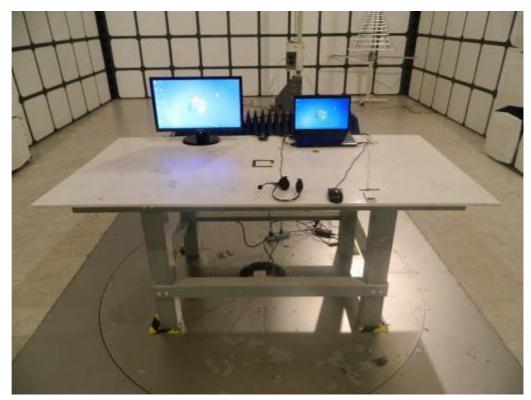
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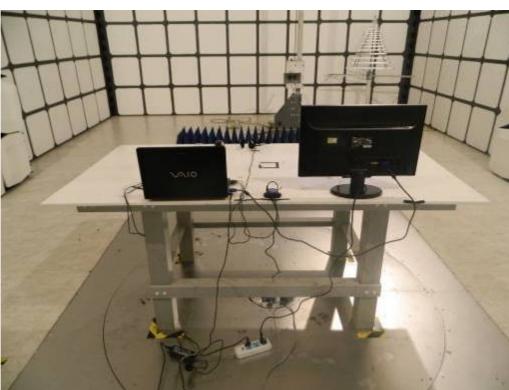


### 4.8. Test Photographs (1000MHz ~ 6000MHz)



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Front View



Rear View

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### 5. Photographs of EUT

1) EUT Photo



2) EUT Photo



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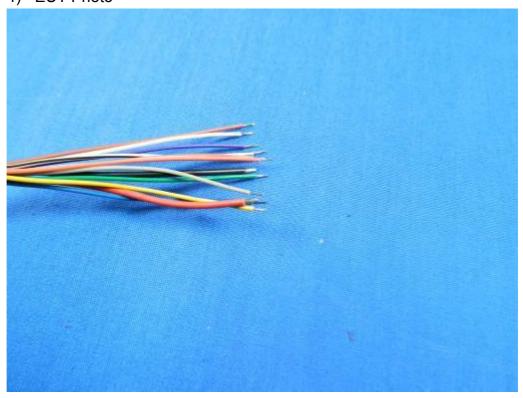


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### 3) EUT Photo



### 4) EUT Photo



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