

APPLICATION FOR VERIFICATION

On Behalf of  
Payment Guardian Inc.

GPS Guardian  
Model No.: GPSG01

Prepared for : Payment Guardian Inc.  
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Prepared By : Anbotek Compliance Laboratory Limited  
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Report Number : 200906678F  
Date of Test : Jun. 08~12, 2009  
Date of Report : Jun. 13, 2009

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APPENDIX III (Photos of EUT) (4 Pages)

## TEST REPORT VERIFICATION

Applicant	:	Payment Guardian Inc.
Manufacturer	:	Shun Ying Enterprise
EUT	:	GPS Guardian
		(A) MODEL NO. : GPSG01
		(B) SERIAL NO. : N/A
		(C) POWER SUPPLY: DC 5V via PC or Adapter; DC 3.7V via Battery
		(D) TRADE MARK: N/A

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B 2007 &amp; FCC / ANSI C63.4-2003

The device described above is tested by Anbotek Compliance Laboratory Limited To determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class B limits both radiated and conducted emissions. The measurement results are contained in this test report and Anbotek Compliance Laboratory Limited Is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements. This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Anbotek Compliance Laboratory Limited

Date of Test : Jun. 08~12, 2009

Jacky

Prepared by : \_\_\_\_\_  
(Engineer)

Coco

Reviewer : \_\_\_\_\_  
(Project Manager)

Rich

Approved & Authorized Signer : \_\_\_\_\_  
(Manager)

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

Description	: GPS Guardian
Model Number	: GPSG01
Test Power Supply	: AC 120V, 60Hz
Applicant	: Payment Guardian Inc.
Address	: 29783 Evans Rd., Sun City, California 92586
Manufacturer	: Shun Ying Enterprise
Address	: Room 407, Yip Fung Ind. Bldg., 7 Sheung Hei St., San Po Kong, Kowloon, Hong Kong
Date of Sample received	: Jun. 05, 2009
Date of Test	: Jun. 08~12, 2009

## 1.2. Description of Test Facility

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

### **CNAS - LAB Code: L3503**

Anbotech Compliance Laboratory Limited., Laboratory has been assessed and in compliance with CNAS/CL01: 2006 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

### **FCC-Registration No.: 607248**

Anbotech Compliance Laboratory Limited, 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 607248, November 12, 2008.

### **IC-Registration No.: 8058A**

Anbotech Compliance Laboratory Limited., EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration 8058A, November 12, 2008.

### **Test Location**

All Emissions tests were performed

Anbotech Compliance Laboratory Limited. at 2F, Langfeng Building, Kefa Road North, Hi-tech Industrial Park, Nanshan District, Shenzhen 518057, China

## 1.3. Measurement Uncertainty

Radiation Uncertainty :  $U_r = \pm 4.26\text{dB}$

Conduction Uncertainty :  $U_c = \pm 2.66\text{dB}$

## 2. POWER LINE CONDUCTED MEASUREMENT

### 2.1. Test Equipment

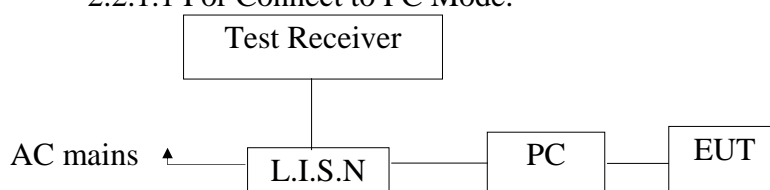
The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESPI	1101604	Jun. 21, 2008	1 Year
2.	Spectrum Analyzer	Agilent	E7405A	MY45114970	Jun. 21, 2008	1 Year
3.	Artificial Mains	Rohde & Schwarz	ENV216	100055	Jun. 21, 2008	1 Year
4.	CE Variac	QUANLI	TDGC2-5	N/A	N/A	N/A
5.	Coaxial cable	Anbotech	RG214-N-3	11066	Jun. 21, 2008	1 Year
6.	EMI Test Software	SHURPLE	N/A	N/A	N/A	N/A

### 2.2. Block Diagram of Test Setup

2.2.1. Block diagram of connection between the EUT and simulators

2.2.1.1 For Connect to PC Mode.



(EUT: GPS Guardian)

2.2.1.2 For Charging Mode (via AC/DC Adapter).

### 2.3. Power Line Conducted Emission Measurement Limits (FCC Part 15

Class B)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. \*Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

## 2.4. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

EUT	:	GPS Guardian
Model Number	:	GPSG01
Applicant	:	Payment Guardian Inc.

## 2.5. Operating Condition of EUT

- 2.5.1. Setup the EUT and simulator as shown as Section 2.2.
- 2.5.2. Turn on the power of all equipment.
- 2.5.3. Let the EUT work in test mode (Connect to PC / Charging(via AC/DC Adapter)) and measure it.

## 2.6. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.4-2003 on Conducted Emission Measurement.

The bandwidth of test receiver (E7405A) set at 9KHz.

The frequency range from 150KHz to 30MHz is checked.

The test results are reported on Section 2.7.

## 2.7. Power Line Conducted Emission Measurement Results

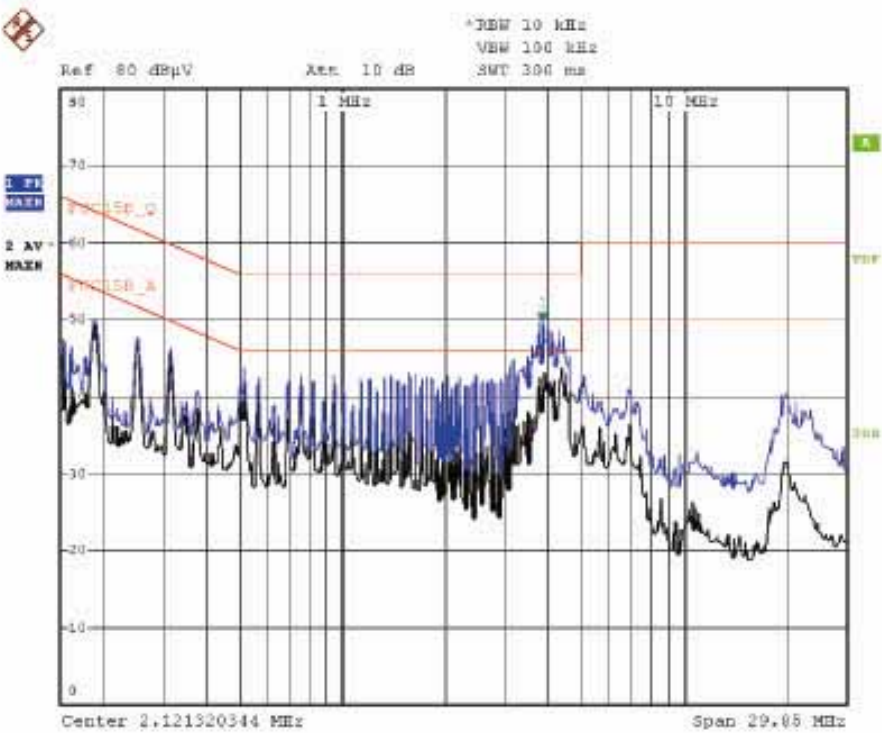
**PASS.**

The frequency range from 150KHz to 30 MHz is investigated.

The test curves please refer the following pages.

Conducted disturbance

EUT: GPS Guardian                      M/N: GPSG01  
Op Cond: Connect to PC  
Test Spec: L  
Comment: AC 120V/60Hz  
Data: 2009-06-09

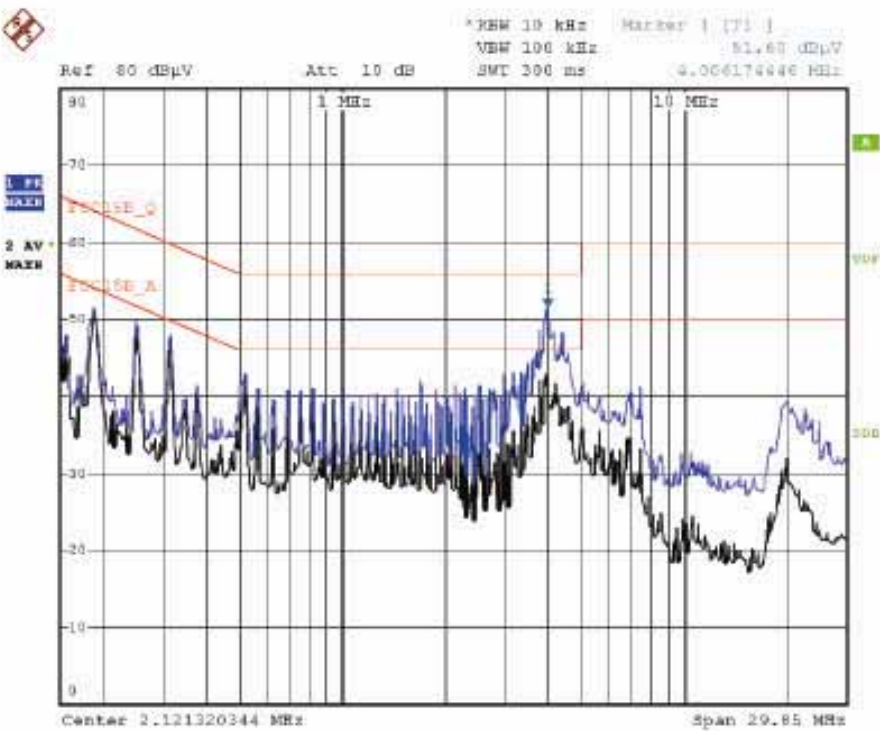


Frequency (MHz)	Reading Level (dBμV)	Limit (dBμV)	Over limit (dB)	
3.880	42.2	56.0	-13.8	QP
3.880	34.0	46.0	-12.0	AV



Conducted disturbance

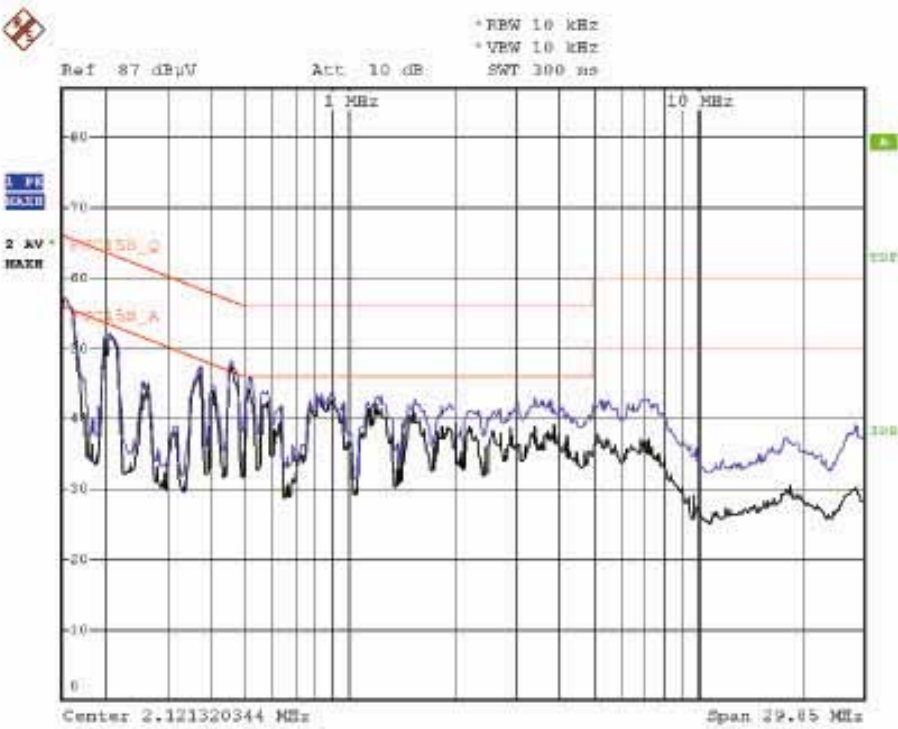
EUT: GPS Guardian M/N: GPSG01  
Op Cond: Connect to PC  
Test Spec: N  
Comment: AC 120V/60Hz  
Data: 2009-06-09



Frequency (MHz)	Reading Level (dBμV)	Limit (dBμV)	Over limit (dB)	
4.007	42.5	56.0	-13.5	QP
4.007	35.4	46.0	-10.6	AV

Conducted disturbance

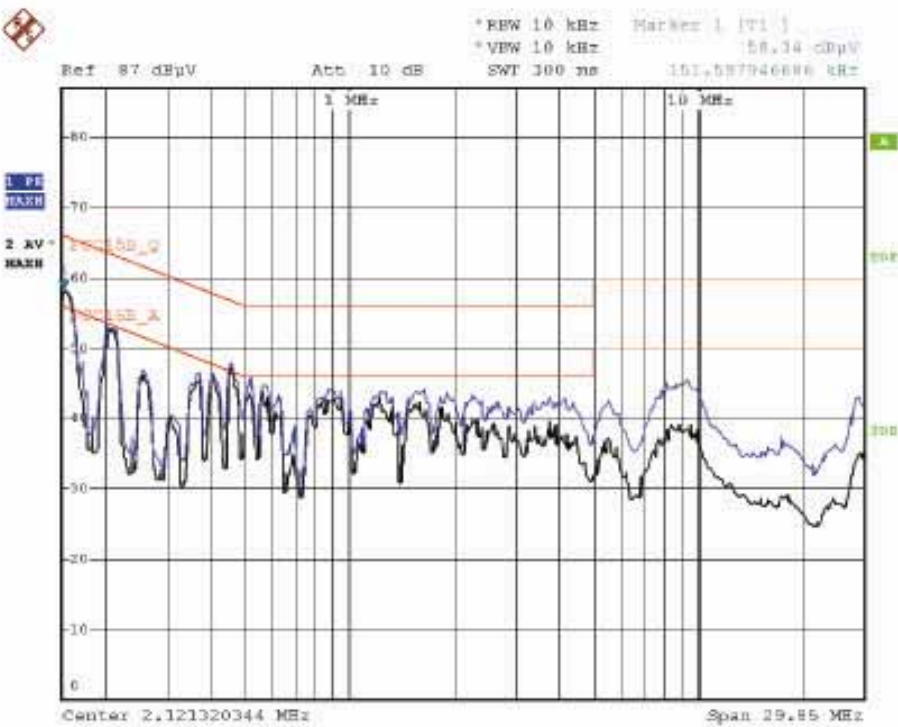
EUT: GPS Guardian M/N: GPSG01  
Op Cond: Charge via AC/DC Adapter  
Test Spec: L  
Comment: AC 120V/60Hz  
Data: 2009-06-09



Frequency (MHz)	Reading Level (dBμV)	Limit (dBμV)	Over limit (dB)	
0.151	53.40	65.94	-12.54	QP
0.151	38.10	55.94	-17.84	AV
0.461	45.00	56.67	-11.67	QP
0.461	35.20	46.67	-11.47	AV

Conducted disturbance

EUT: GPS Guardian M/N: GP SG01  
Op Cond: Charge via AC/DC Adapter  
Test Spec: N  
Comment: AC 120V/60Hz  
Data: 2009-06-09



Frequency (MHz)	Reading Level (dBμV)	Limit (dBμV)	Over limit (dB)	
0.153	55.00	65.84	-10.84	QP
0.153	38.50	55.84	-17.34	AV
0.211	49.70	63.17	-13.47	QP
0.211	39.50	53.17	-13.67	AV
0.456	44.10	56.77	-12.67	QP
0.456	32.00	46.77	-14.77	AV

### 3. RADIATED EMISSION MEASUREMENT

#### 3.1. Test Equipment

The following test equipments are used during the radiated emission measurement:

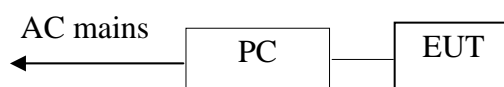
##### 3.1.1. For Anechoic Chamber

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	345	Mar. 21, 2008	1 Year
2.	Spectrum Analyzer	Agilent	E7405A	MY45114970	Jun. 21, 2008	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESPI	1101604	Jun. 21, 2008	1 Year
4.	EMI Test Software	Shurple	N/A	N/A	N/A	N/A
5.	Coaxial cable	Anbotek	RG214-N-8	11065	Jun. 21, 2008	1 Year
6.	PC	N/A	486DX2	N/A	N/A	N/A

#### 3.2. Block Diagram of Test Setup

##### 3.2.1. Block diagram of connection between the EUT and simulators

###### 3.2.1.1. For Connect to PC Mode.



(EUT: GPS Guardian)

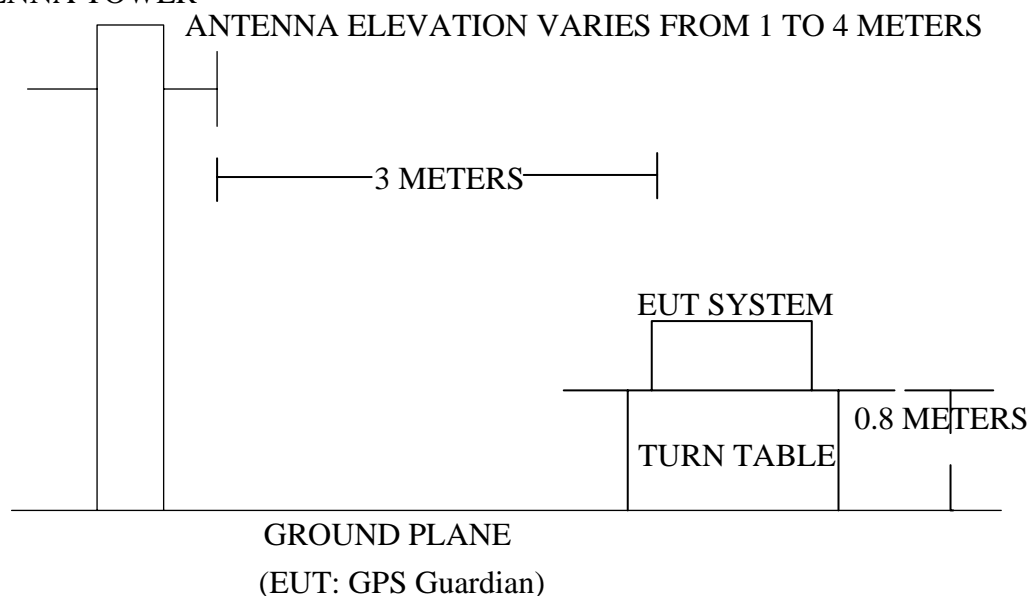
###### 3.2.1.2. For Charging(via AC/DC Adapter) Mode.

###### 3.2.1.3. For Charging(via DC/DC Adapter) Mode.

###### 3.2.1.4. For On Mode.

##### 3.2.2. Anechoic Chamber Test Setup Diagram

ANTENNA TOWER



### 3.3. Radiated Emission Limit (Subpart B Class B)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
960~1000	3	500	54.0

- Remark :
- (1) Emission level  $(\text{dB})\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$
  - (2) The smaller limit shall apply at the cross point between two frequency bands.
  - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

### 3.4. EUT Configuration on Measurement

The following equipments are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

EUT : GPS Guardian  
 Model Number : GPSG01  
 Applicant : Payment Guardian Inc.

### 3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT as shown in Section 3.2.
- 3.5.2. Let the EUT work in test mode (Connect to PC / Charging(via AC/DC Adapter) / Charging(via DC/DC Adapter) / On) and measure it.

### 3.6. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (Trilog Broadband Antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2003 on radiated emission measurement.

The bandwidth of the EMI test receiver (E7405A) is set at 120kHz.

The frequency range from 30MHz to 1000MHz is checked.

*FCC ID: XG2GPSG01*

The test mode (On) is tested in chamber and all the test results are listed in Section 3.7.

### 3.7. Radiated Emission Measurement Results

**PASS.**

The test curves please refer the following pages.


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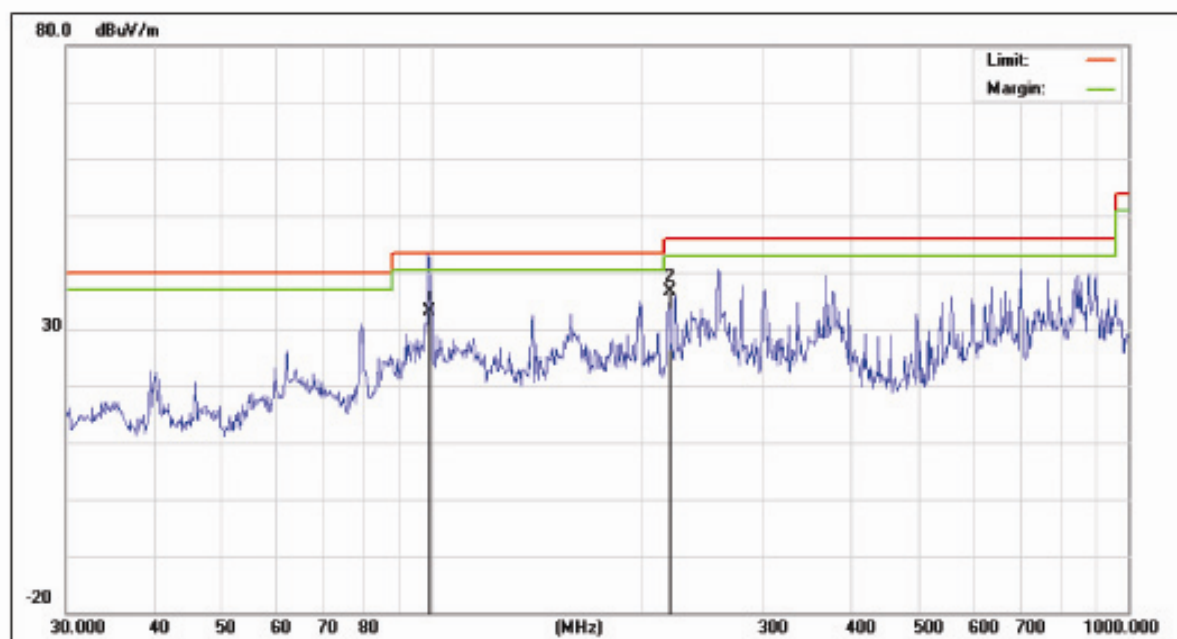
 2/F, Langfeng Building, Kefa Road North, Hi-tech Industrial  
Park, Nanshan District, Shenzhen 518057, China

Tel (86)755- 26014755

Fax: (86)755-26014720

Http://www.anbotek.com

Job No.:	AT0906618F	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiation	Power Source:	AC 120V, 60Hz
Test item:	Radiation Test	Date:	2009/06/10
Temp.( C)/Hum.(%RH):	25( C)/56%RH	Time:	15:21:22
EUT:	GPS Guardian	Test By:	Jacky
Model:	GPSG01	Distance:	3m
Note:	Connect to PC		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	99.3140	60.45	-27.34	33.11	43.50	-10.39	QP
2	219.2599	65.36	-28.74	36.62	46.00	-9.38	QP


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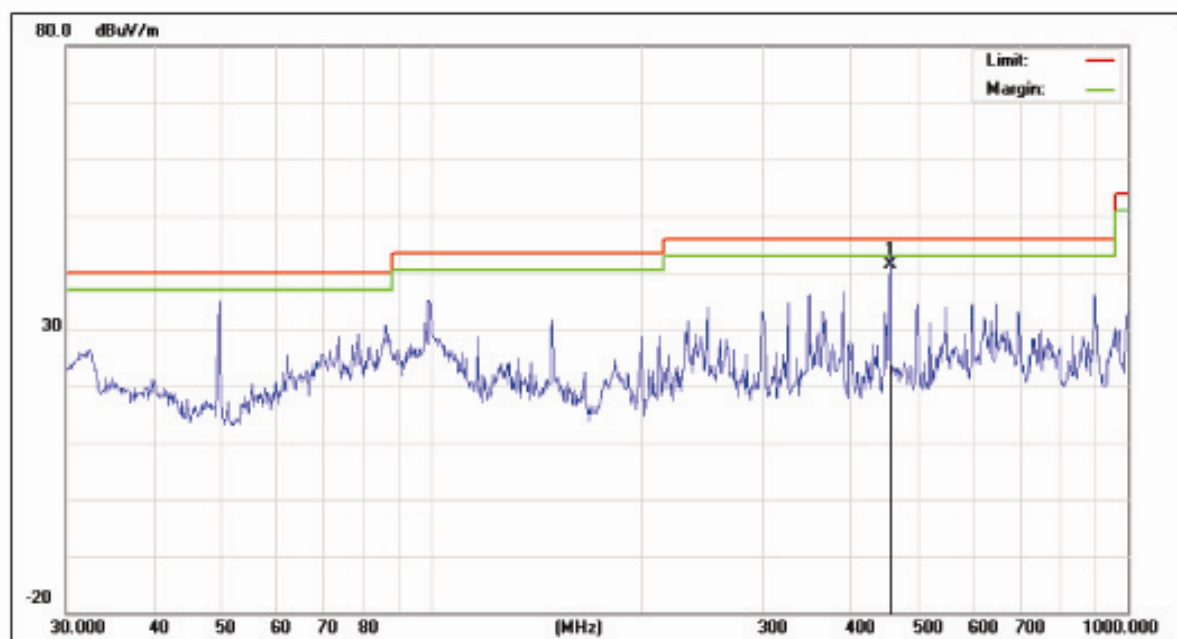
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Fax: (86)755-26014720

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Job No.:	AT0906618F	Polarization:	Vertical
Standard:	FCC Class B 3M Radiation	Power Source:	AC 120V, 60Hz
Test item:	Radiation Test	Date:	2009/06/10
Temp.( C)/Hum.(%RH):	25( C)/56%RH	Time:	15:01:10
EUT:	GPS Guardian	Test By:	Jacky
Model:	GPSG01	Distance:	3m
Note:	Connect to PC		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	454.8808	65.21	-23.84	41.37	46.00	-4.63	QP




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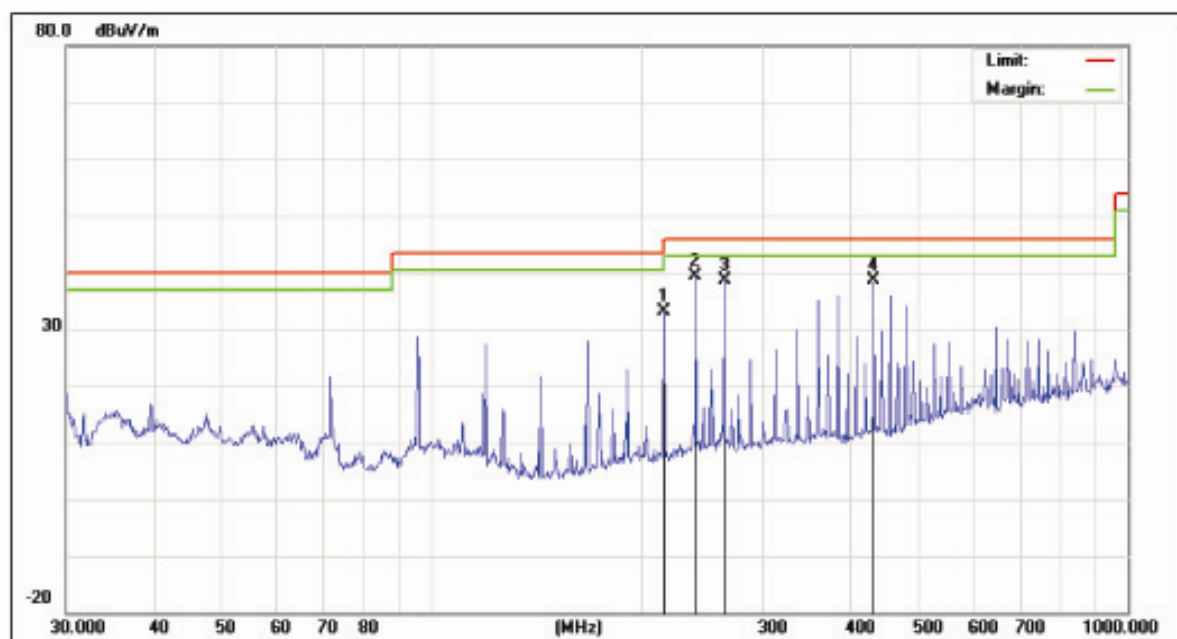
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Fax: (86)755-26014720

Http://www.anbotek.com

Job No.:	AT0906618F	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiation	Power Source:	AC 120V, 60Hz
Test item:	Radiation Test	Date:	2009/06/10
Temp.( C)/Hum.(%RH):	25( C)/56%RH	Time:	14:17:05
EUT:	GPS Guardian	Test By:	Jacky
Model:	GPSG01	Distance:	3m
Note: Charge via AC/DC Adapter			



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	215.7939	61.87	-28.86	33.01	43.50	-10.49	QP
2	239.7624	67.25	-27.83	39.42	46.00	-6.58	QP
3	263.7485	66.30	-27.70	38.60	46.00	-7.40	QP
4	431.5868	62.72	-24.20	38.52	46.00	-7.48	QP


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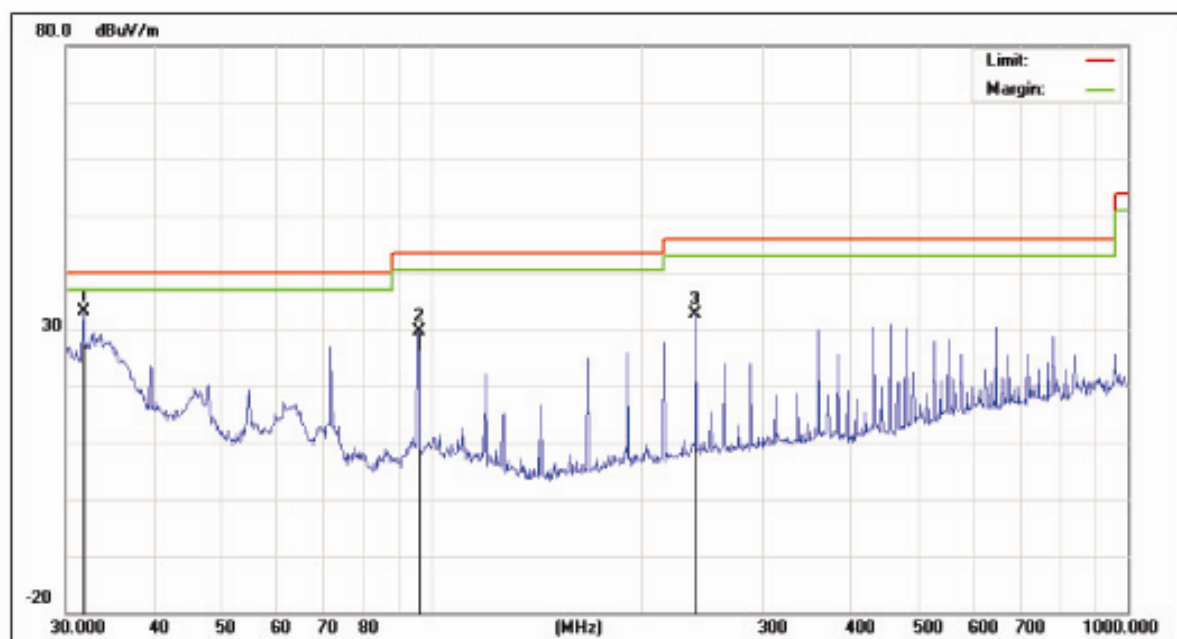
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Park, Nanshan District, Shenzhen 518057, China

Tel (86)755- 26014755

Fax: (86)755-26014720

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Job No.:	AT0906618F	Polarization:	Vertical
Standard:	FCC Class B 3M Radiation	Power Source:	AC 120V, 60Hz
Test item:	Radiation Test	Date:	2009/06/10
Temp.( C)/Hum.(%RH):	25( C)/56%RH	Time:	14:28:58
EUT:	GPS Guardian	Test By:	Jacky
Model:	GPSG01	Distance:	3m
Note: Charge via AC/DC Adapter			



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	31.7697	60.69	-27.55	33.14	40.00	-6.86	QP
2	95.9058	56.99	-27.45	29.54	43.50	-13.96	QP
3	239.7942	60.54	-27.83	32.71	46.00	-13.29	QP


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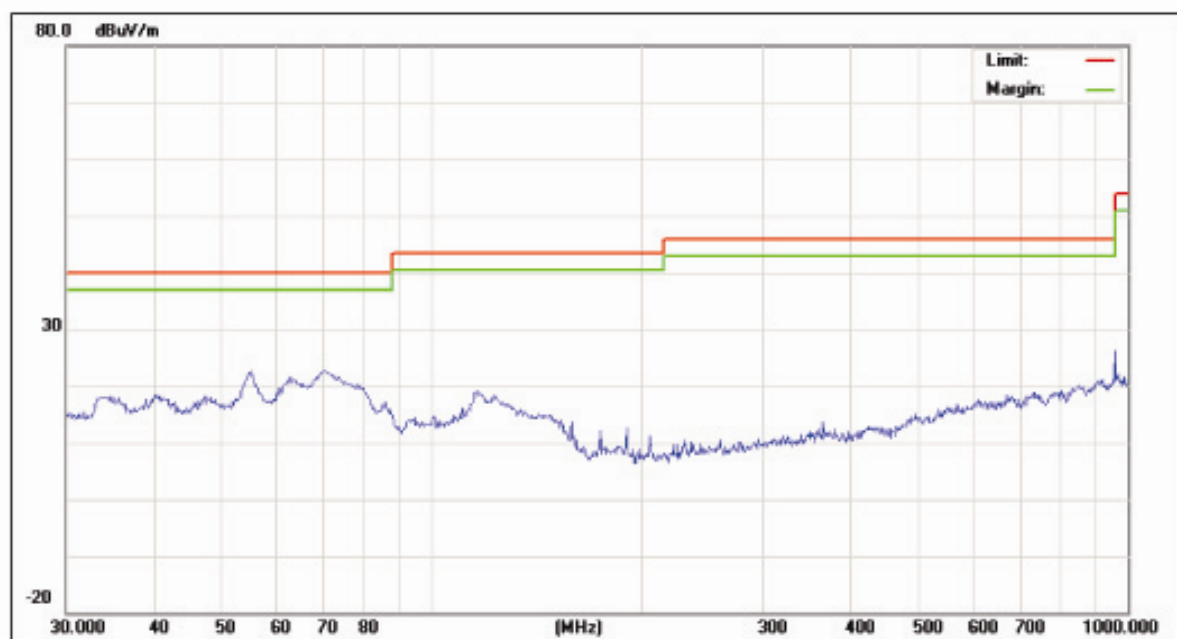
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Fax: (86)755-26014720

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Job No.:	AT0906618F	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiation	Power Source:	DC 12V Battery
Test item:	Radiation Test	Date:	2009/06/10
Temp.( C)/Hum.(%RH):	25( C)/56%RH	Time:	15:11:33
EUT:	GPS Guardian	Test By:	Jacky
Model:	GPSG01	Distance:	3m
Note: Charge via DC/DC Adapter			



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	


**Anbotek Compliance Laboratory Limited**

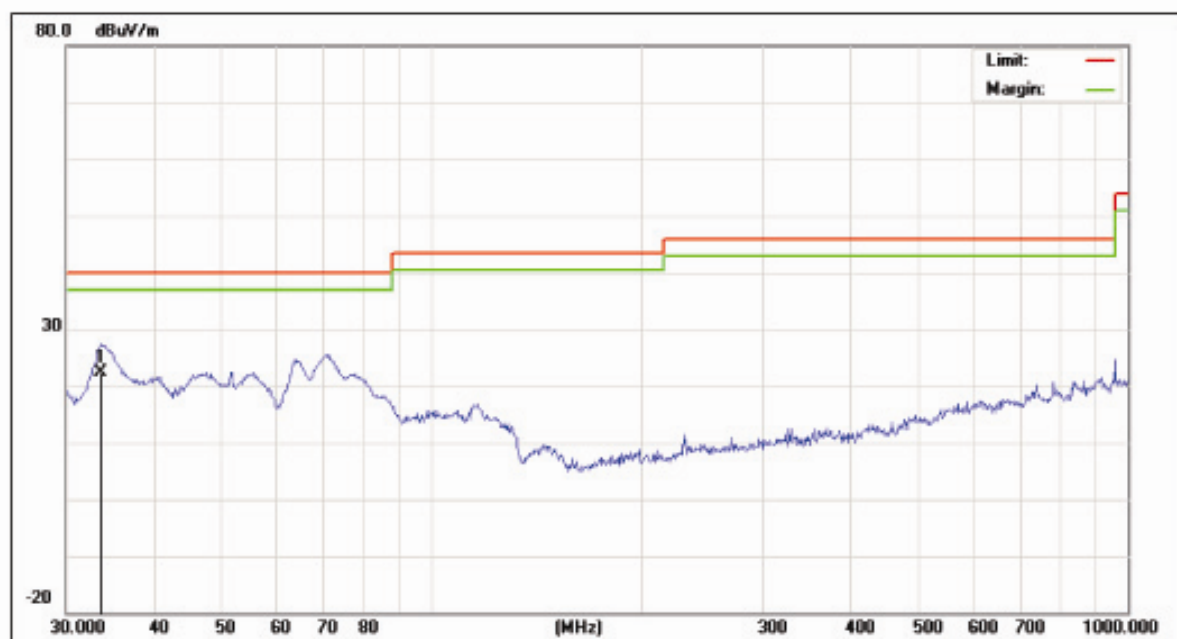
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Tel (86)755- 26014755

Fax: (86)755-26014720

Http://www.anbotek.com

Job No.:	AT0906618F	Polarization:	Vertical
Standard:	FCC Class B 3M Radiation	Power Source:	DC 12V
Test item:	Radiation Test	Date:	2009/06/10
Temp.( C)/Hum.(%RH):	25( C)/56%RH	Time:	15:06:54
EUT:	GPS Guardian	Test By:	Jacky
Model:	GPSG01	Distance:	3m
Note: Charge via DC/DC Adapter			



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	33.5194	49.85	-27.47	22.38	40.00	-17.62	QP


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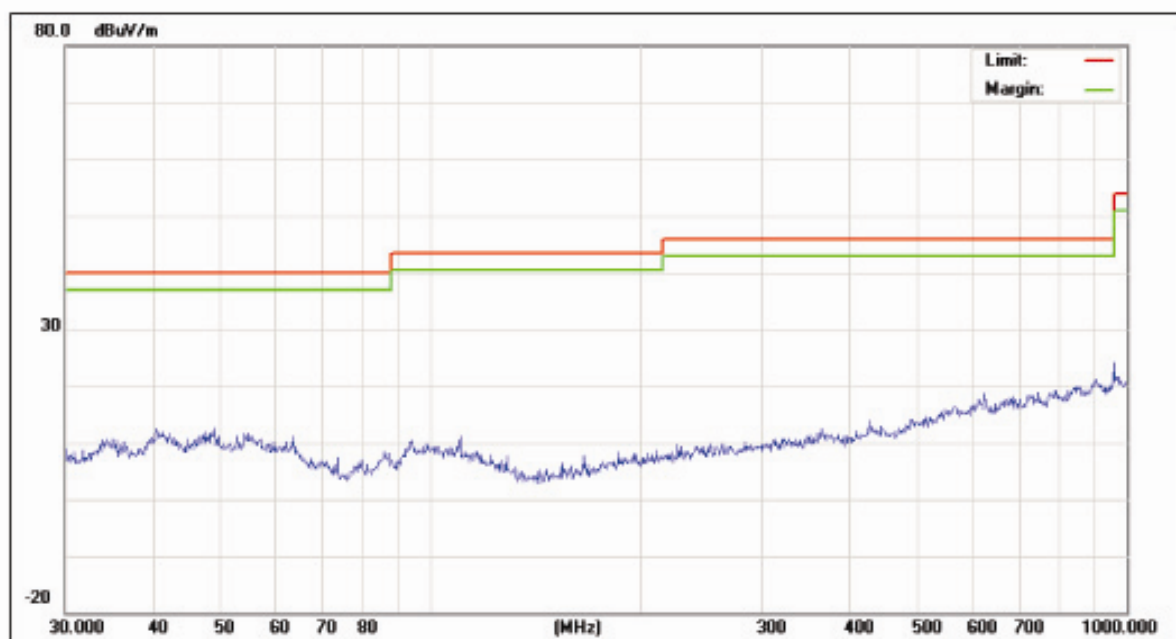
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Tel (86)755- 26014755

Fax: (86)755-26014720

Http://www.anbotek.com

Job No.:	AT0906618F	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiation	Power Source:	DC 3.7V via Battery
Test item:	Radiation Test	Date:	2009/06/10
Temp.( C)/Hum.(%RH):	25( C)/56%RH	Time:	14:39:48
EUT:	GPS Guardian	Test By:	Jacky
Model:	GPSG01	Distance:	3m
Note:	ON		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	


**Anbotek Compliance Laboratory Limited**

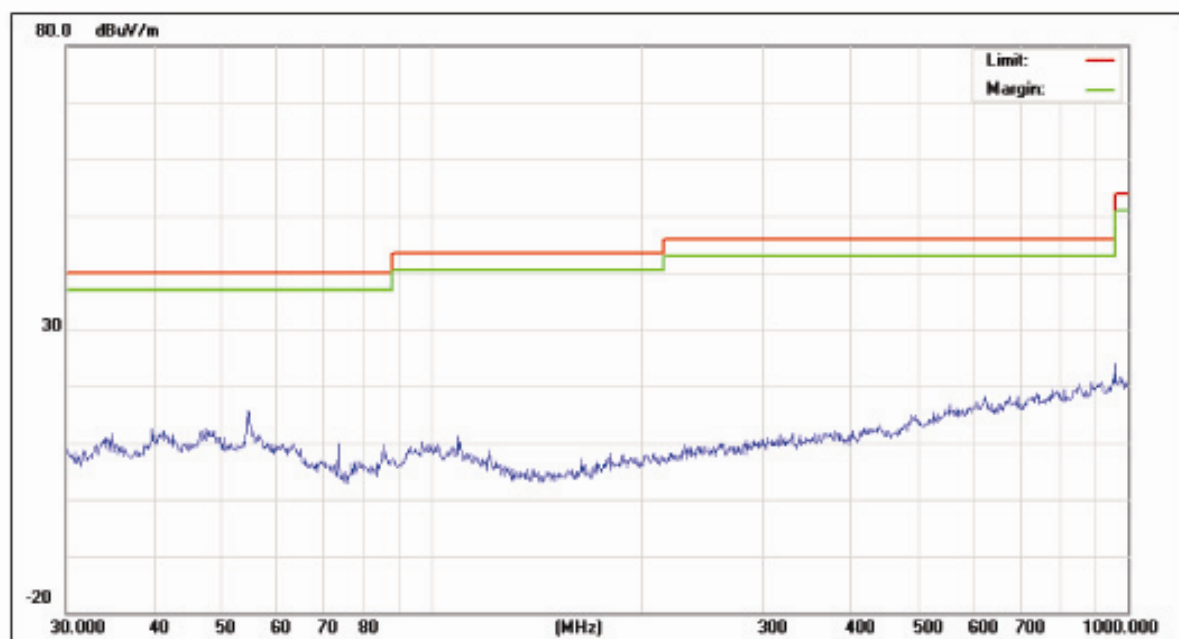
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Job No.:	AT0906618F	Polarization:	Vertical
Standard:	FCC Class B 3M Radiation	Power Source:	DC 3.7V via Battery
Test item:	Radiation Test	Date:	2009/06/10
Temp.( C)/Hum.(%RH):	25( C)/56%RH	Time:	14:38:06
EUT:	GPS Guardian	Test By:	Jacky
Model:	GPSG01	Distance:	3m
Note:	ON		



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV/m)	Factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	