



FCC CFR 47 PART 15 SUBPART C

TEST REPORT

For

Blackbird

Model: PMD-B100-CR

Trade Name: ALPINE

Issued to

Leadtek Research Inc.

**18F, No. 166, Chien-Yi Rd., Chung-Ho, Taipei Hsien,
Taiwan, (235) R.O.C.**

Issued by

Compliance Certification Services Inc.

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1. TEST RESULT CERTIFICATION

Applicant: Leadtek Research Inc.
18F, No. 166, Chien-Yi Rd., Chung-Ho,
Taipei Hsien, Taiwan, (235) R.O.C.

Equipment Under Test: Blackbird

Trade Name: ALPINE

Model: PMD-B100-CR

Date of Test: December 21, 2005

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
FCC 47 CFR Part 15 Subpart C	No non-compliance noted

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4: 2003 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.239.

The test results of this report relate only to the tested sample identified in this report.

Approved by:

Gavin Lim
Section Manager
Compliance Certification Services Inc.

Reviewed by:

Amanda Wu
Section Manager
Compliance Certification Services Inc.



2. EUT DESCRIPTION

Product	Blackbird
Trade Name	ALPINE
Model	PMD-B100-CR
Power Supply	Vehicle Battery Adapter: DC 12V, 2A
	Battery: PMD-BAT1 / 3.7V Li-Polymer Battery 1200mAh
Operate Frequency	88.3 ~ 88.9 MHz, 106.7~107.7MHz
Channel Spacing	200kHz
Number of Channels	10 Channels
Modulation Technique	FM
Antenna Specification	Antenna Type: Monopole antenna Antenna Gain: 2.14dBi

Remark:

- 1.The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.*
- 2.The product is a Transmitter. This submittal(s) (test report) is intended for FCC ID: **I2ILR9701C** filing to comply with Section 15.239 of the FCC Part 15 Subpart C Rules.*



3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4 and FCC CFR 47 Part 15 Subpart C.

3.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2 EUT EXERCISE

The calibrated antennas used to sample the radiated field strength are mounted on a non-conductive, motorized antenna mast 3 or 10 meters from the leading edge of the turntable.

3.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 7.1 of ANSI C63.4. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak detector mode.

Radiated Emissions

The EUT is placed on a turntable, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4.

3.4 FCC PART 15.205 RESTRICTED BANDS OF OPERATIONS

- (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	(²)
13.36 - 13.41	322 - 335.4		

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

- (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

3.5 DESCRIPTION OF TEST MODES

The EUT (model: PMD-B100-CR) had been tested under operating condition and tested in continuous transmitting mode.

During the test, boot into Windows CE, execute the player program and played a 1kHz tone mp3.

Audio signal is then modulated through the FM transmitter and Channel Low (88.3MHz), Channel Mid (106.7MHz) and Channel High (107.7MHz) were chosen for full testing.

The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis) and cradle mode. The worst emission was found in cradle mode and the worst case was recorded.



4. INSTRUMENT CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

4.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

Remark: Each piece of equipment is scheduled for calibration once a year.

Conducted Emissions Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360131	01/10/2006

3M Semi Anechoic Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US42510252	07/25/2006
Test Receiver	Rohde&Schwarz	ESCI	100064	06/28/2006
Switch Controller	TRC	Switch Controller	SC94050010	05/05/2006
4 Port Switch	TRC	4 Port Switch	SC94050020	05/05/2006
Horn-Antenna	TRC	HA-0502	06	06/02/2006
Horn-Antenna	TRC	HA-0801	04	05/05/2006
Bilog- Antenna	Sunol Sciences	JB3	A030205	03/09/2006
Turn Table	Max-Full	MFT-120S	T120S940302	N.C.R.
Antenna Tower	Max-Full	MFA-430	A440940302	N.C.R.
Controller	Max-Full	MF-CM886	CC-C-1F-13	N.C.R.
Site NSA	CCS	N/A	FCC: 965860 IC: IC 6106	09/26/2008
Test S/W	LABVIEW (V 6.1)			

Remark: The measurement uncertainty is less than $\pm 2.0065\text{dB}$ (30MHz ~ 1GHz), $\pm 3.0958\text{dB}$ (Above 1GHz) which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.



5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

☐ No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.

Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

☒ No.11, Wugong 6th Rd., Wugu Industrial Park, Taipei Hsien 248, Taiwan

Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045

☒ No.81-1, Lane 210, Bade 2nd Rd., Luchu Hsiang, Taoyuan Hsien 338, Taiwan

Tel: 886-3-324-0332 / Fax: 886-3-324-5235

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

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with preselectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.








Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

5.3 LABORATORY ACCREDITATIONS AND LISTINGS

The test facilities used to perform radiated and conducted emissions tests are accredited by National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code: 200600-0 to perform Electromagnetic Interference tests according to FCC PART 15 AND CISPR 22 requirements. No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government. In addition, the test facilities are listed with Federal Communications Commission (registration no: 93105 and 90471).

5.4 TABLE PF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	NVLAP*	EN 55011, EN 55014-1, AS/NZS 1044, CNS 13783-1, EN 55022, CNS 13438, EN 61000-3-2, EN 61000-3-3, ANSI C63.4, FCC OST/MP-5, AS/NZS CISPR 22, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11	 200600-0
USA	FCC	3/10 meter Open Area Test Sites (93105, 90471) / 3M Semi Anechoic Chamber (965860) to perform FCC Part 15/18 measurements	 93105, 90471 965860
Japan	VCCI	3/10 meter Open Area Test Sites to perform conducted/radiated measurements	 R-393/1066/725/879 C-402/747/912
Norway	NEMKO	EN 50081-1/2, EN 50082-1/2, IEC 61000-6-1/2, EN 50091-2, EN 50130-4, EN 55011, EN 55013, EN 55014-1/2, EN 55015, EN 55022, EN 55024, EN 61000-3-2/3, EN 61326-1, IEC 61000-4-2/3/4/5/6/8/11, EN 60601-1-2, EN 300 328-2, EN 300 422-2, EN 301 419-1, EN 301 489-01/03/07/08/09/17, EN 301 419-2/3, EN 300 454-2, EN 301 357-2	 ELA 124a ELA 124b ELA 124c
Taiwan	CNLA	EN 300 328-1/2, EN 300 220-1/2/3, EN 300 440-1/2, EN 61000-3-2, EN 61000-3-3, 47 CFR FCC Part 15 Subpart C/D/E, EN 55013, CNS 13439, EN 55014-1, CNS 13783-1, EN 55022, CNS 13438, CISPR 22, AS/NZS 3548, EN 61000-4-2/3/4/5/6/8/11, ENV 50204, IEEE Std 1528, FCC OET Bulletin, 65+Supplement C, EN50360, EN50361, EN50371, RSS102	 0363 ILAC MRA
Taiwan	BSMI	CNS 13438, CNS 13783-1, CNS 13439, CNS 14115	 SL2-IS-E-0014 SL2-IN-E-0014 SL2-A1-E-0014 SL2-R1-E-0014 SL2-R2-E-0014 SL2-L1-E-0014
Canada	Industry Canada	3/10 meter Open Area Test Sites (IC 3991-3, IC 3991-4) / 3M Semi Anechoic Chamber (IC 6106) to perform RSS 212 Issue 1	 IC 3991-3 IC 3991-4 IC 6106

* No part of this report may be used to claim or imply product endorsement by NVLAP or any agency of the US Government.

* Australia: MRA of NVLAP AS/NZS 4771 & AS/NZS 4268.



6. SETUP OF EQUIPMENT UNDER TEST

6.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

6.2 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.	FCC ID	Data Cable	Power Cord
	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Remark:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.*
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.*



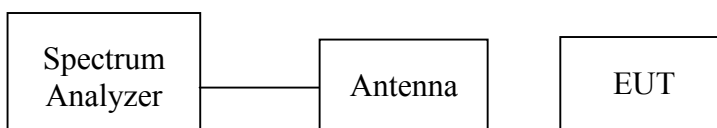
7. FCC PART 15.239 REQUIREMENTS

7.1 20 dB BANDWIDTH

LIMIT

According to §15.239(a), emissions from the intentional radiator shall be confined within a band 200kHz wide centered on the operating frequency. The 200kHz band shall lie wholly within the frequency range of 88-108 MHz.

Test Configuration



TEST PROCEDURE

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW=10kHz, VBW = RBW, Span = 1MHz, Sweep = auto.
4. Mark the peak frequency and 20dB (upper and lower) frequency.
5. Repeat until all the rest channels are investigated.

TEST RESULTS

No non-compliance noted

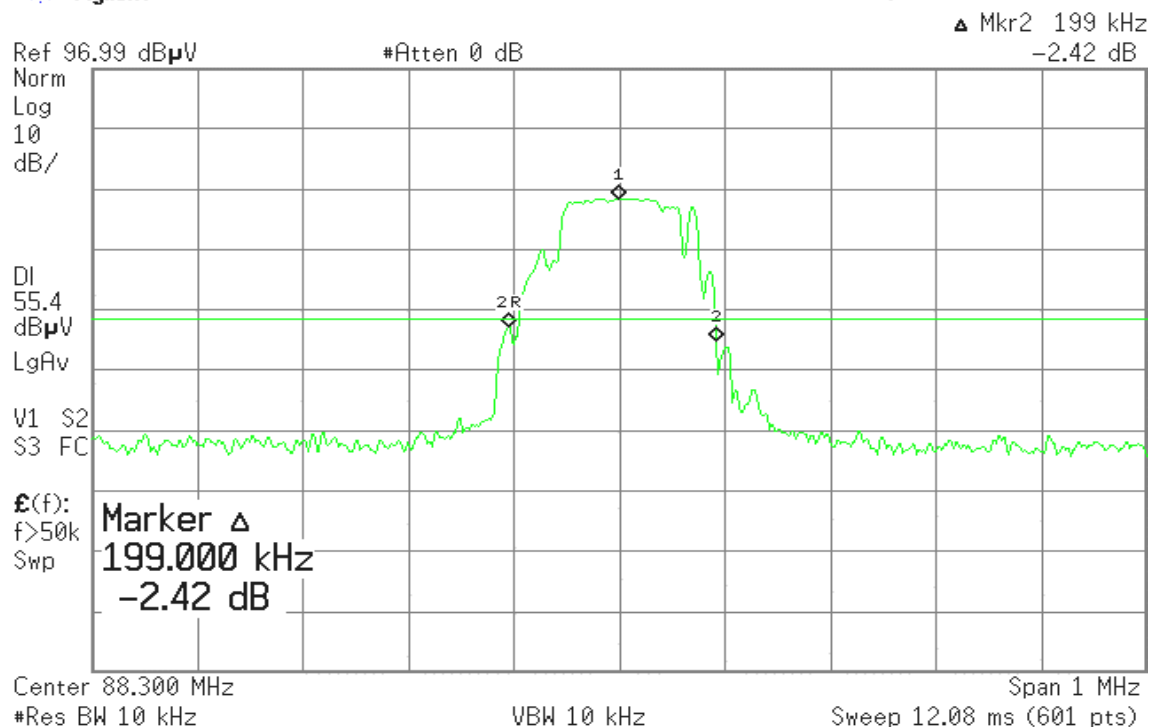
Test Data

Channel	Frequency (MHz)	Bandwidth (kHz)
Low	88.3	199.0
Mid	106.7	193.5
High	107.7	183.0

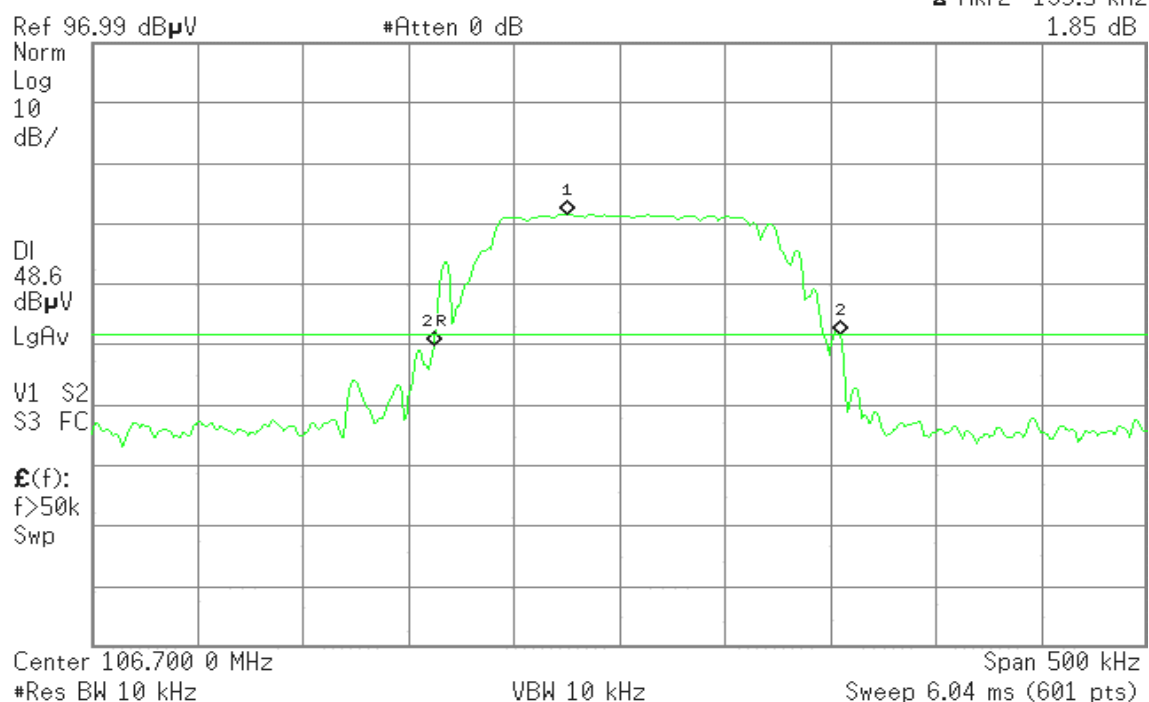
**Test Plot****CH Low**

Agilent

T

**CH Mid**

Agilent

 Δ Mkr2 193.5 kHz
1.85 dB



CH High

Agilent

R T

▲ Mkr2 183 kHz
1.99 dB

Ref 96.99 dB μ V

#Atten 0 dB

Norm
Log
10
dB/

DI
49.3
dB μ V
LgAv

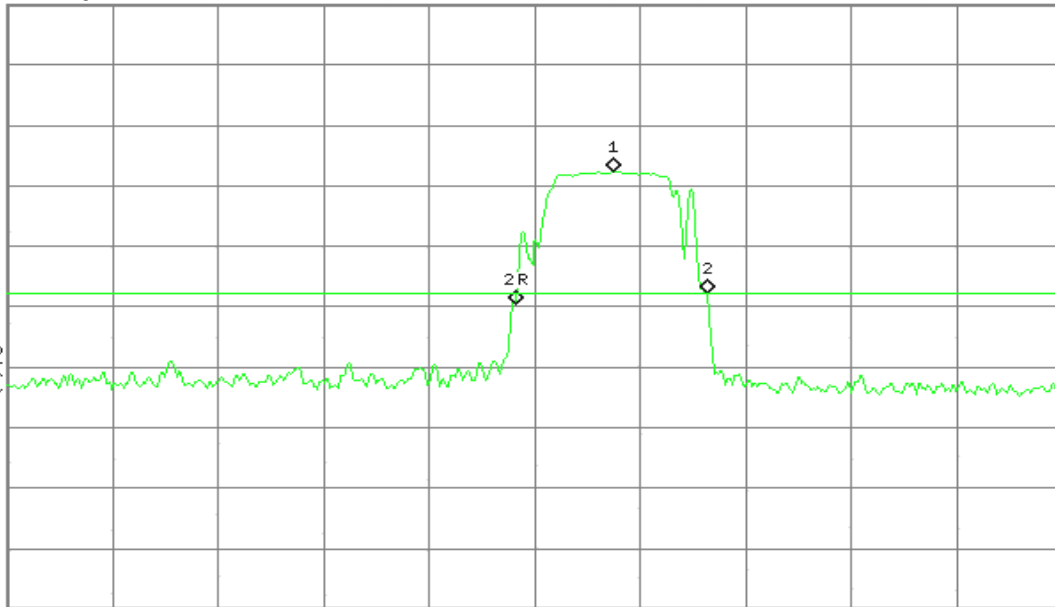
V1 S2
S3 FC

$\mathcal{E}(f)$:
f>50k
Swp

Center 107.635 MHz
#Res BW 10 kHz

VBW 10 kHz

Span 1 MHz
Sweep 12.08 ms (601 pts)

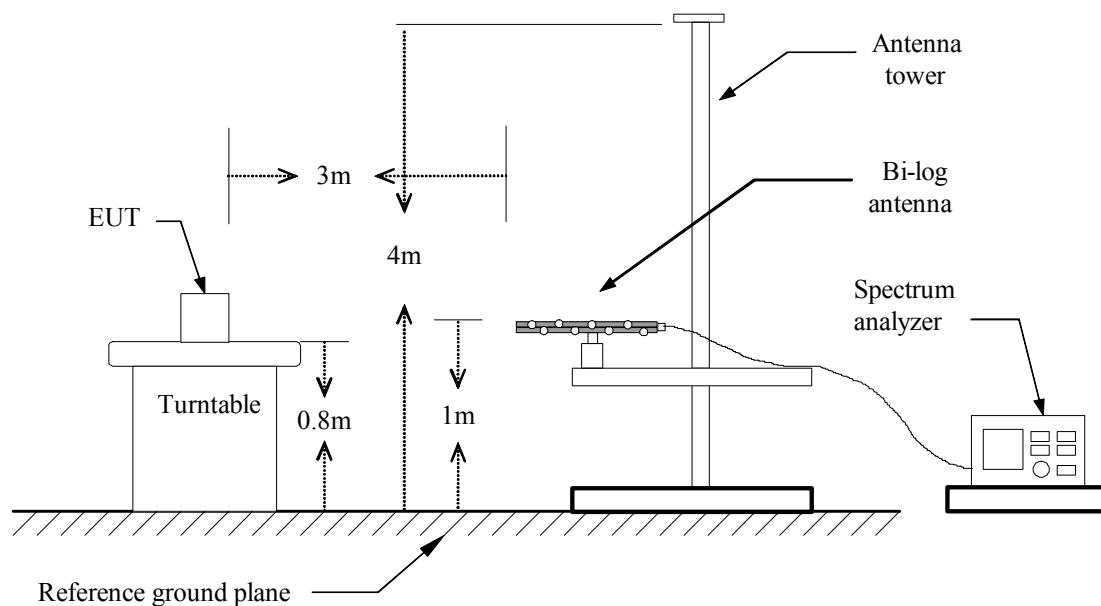


7.2 BAND EDGES MEASUREMENT

LIMIT

According to §15.239(c), the field strength of any emissions radiated on any frequency outside of the specified 200kHz band shall not exceed the general radiated emission limits in Section 15.209.

Test Configuration



TEST PROCEDURE

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 1 and measurement the turn on the EUT. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 100kHz and 100kHz respectively with a convenient frequency span including 200kHz bandwidth of the emission.
4. Mark the bandwidth of 200kHz points and plot the graph on spectrum analyzer.
5. Repeat the procedures until all measured frequencies were complete.

TEST RESULTS

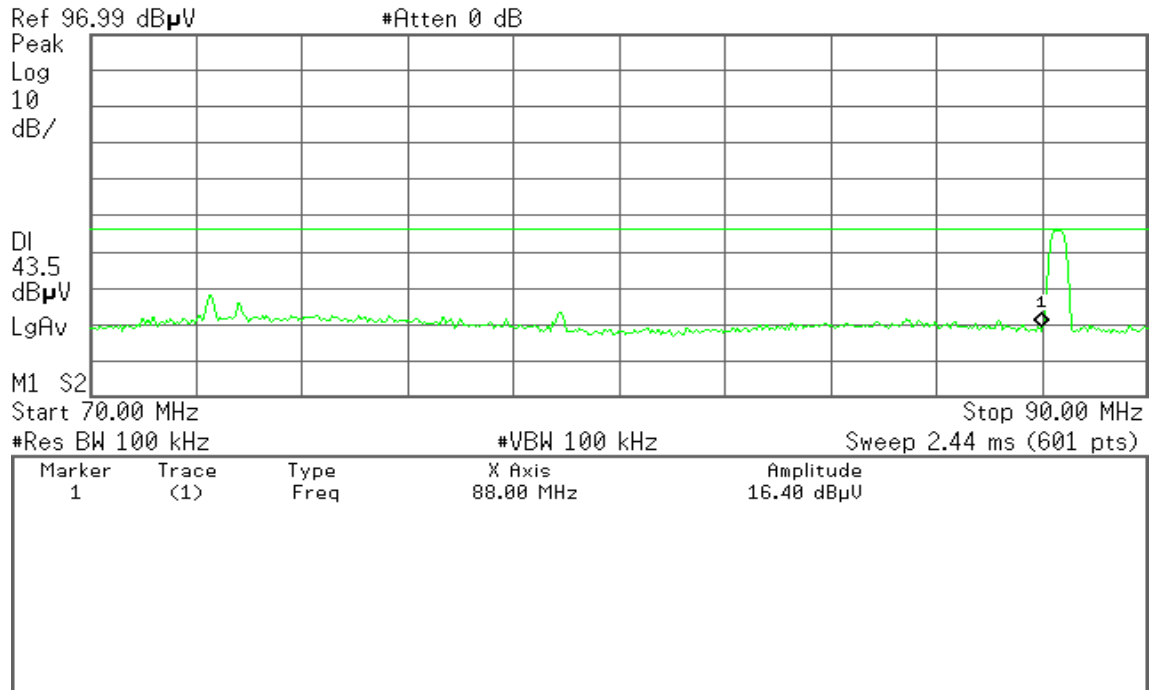
Refer to attach spectrum analyzer data chart.



Band Edges (CH Low)

Polarity: Vertical

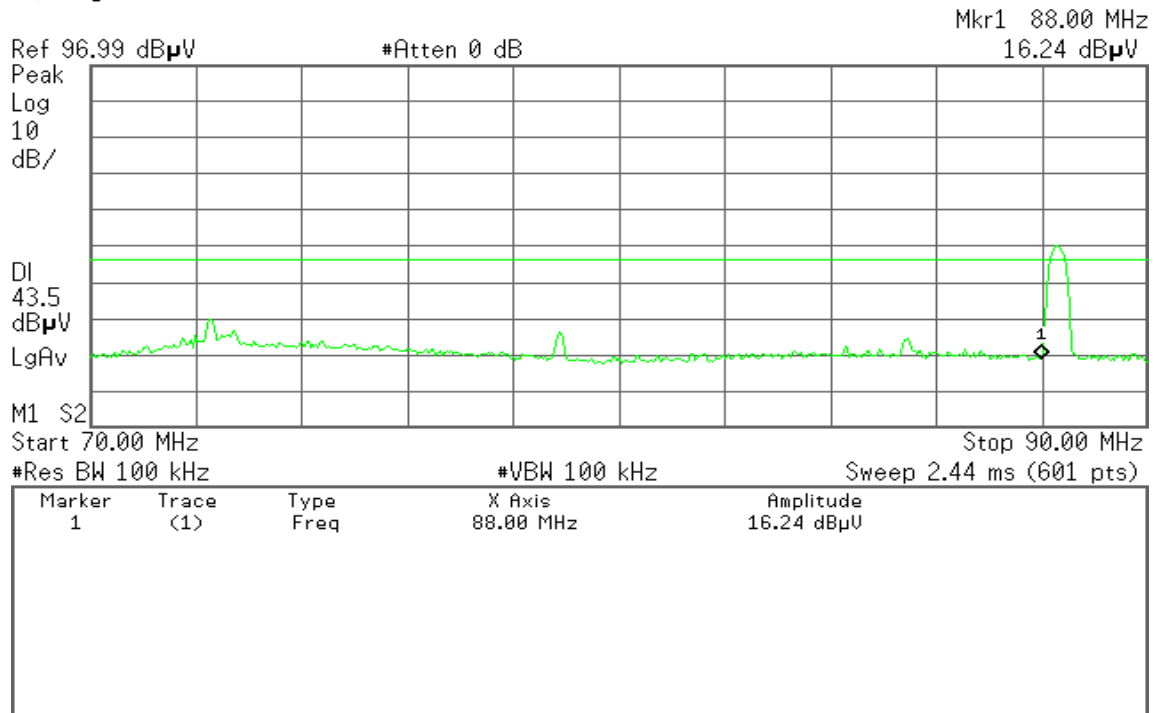
Agilent



Polarity: Horizontal

Agilent

R T



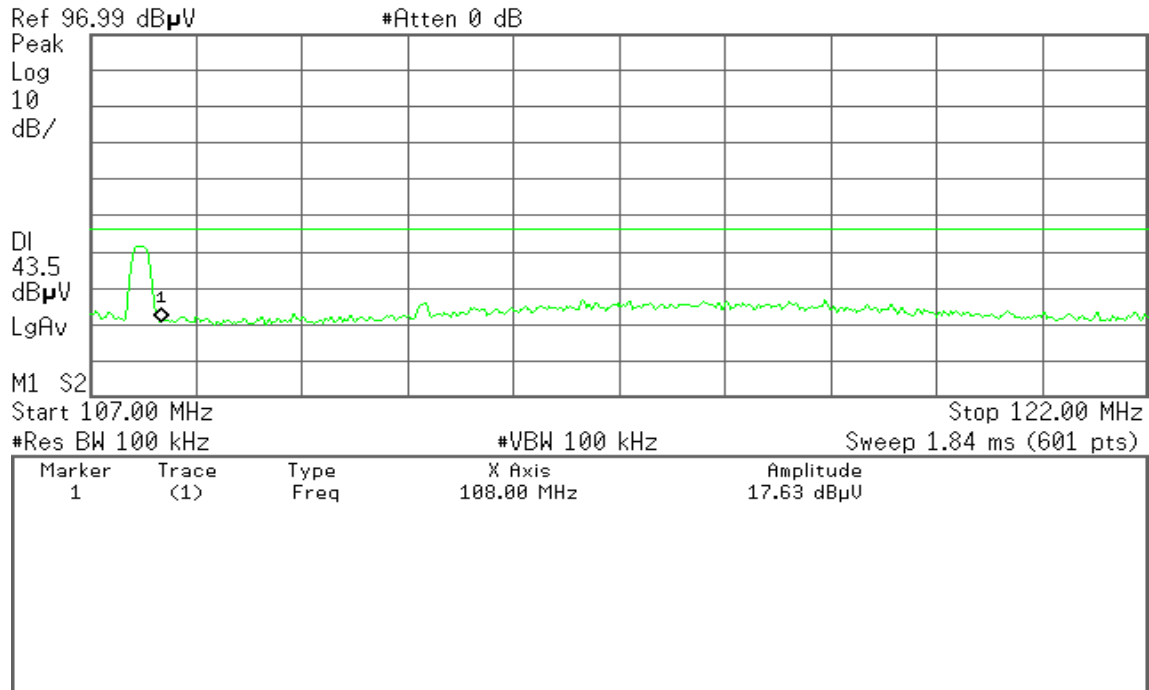


Band Edges (CH High)

Polarity: Vertical

Agilent

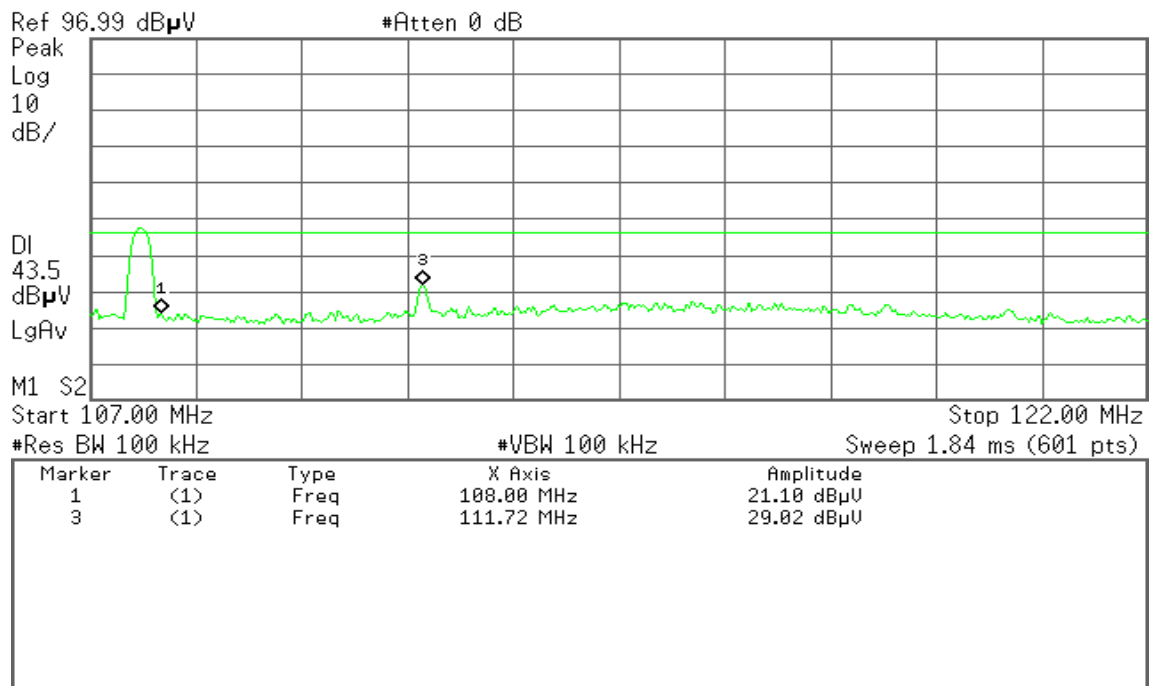
T



Polarity: Horizontal

Agilent

T





7.3 RADIATED EMISSIONS

LIMIT

1. The field strength of any emission within this band (section 15.239 frequency between 88 MHz –108 MHz) shall not exceed 250 microvolts /meter at 3 meters. (48dB μ V/m at 3m) The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in section 15.35 for limiting peak emissions apply.

The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in section 15.209(Intentional Radiators general limit), as below.

Frequency (MHz)	Field Strength (mV/m)	Measurement Distance (m)
1.705-30	30	30
30-88	100*	3
88-216	150*	3
216-960	200*	3
Above 960	500	3

Remark: Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

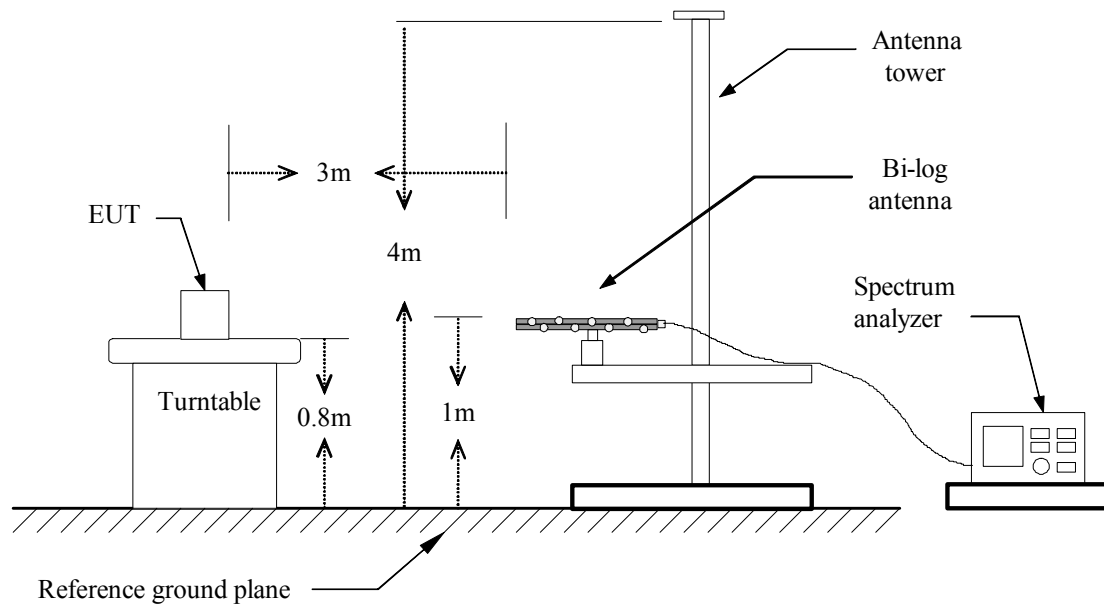
2. In the above emission table, the tighter limit applies at the band edges.

Frequency (MHz)	Field Strength (μ V/m at 3-meter)	Field Strength (dB μ V/m at 3-meter)
1.705-30	30	69.54
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

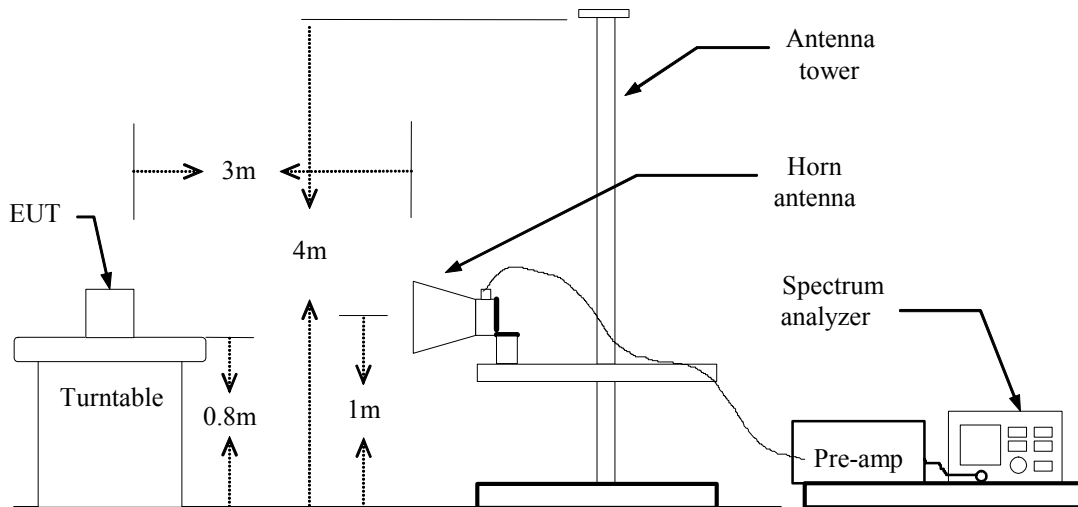


Test Configuration

Below 1 GHz



Above 1 GHz



TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Set the spectrum analyzer in the following setting as:

Below 1GHz:

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Above 1GHz:

(a) PEAK: RBW=VBW=1MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO

7. Repeat above procedures until the measurements for all frequencies are complete.

**TEST RESULTS****Test Data**

Operation Mode: CH Low **Test Date:** December 21, 2005
Temperature: 20°C **Tested by:** Rex Lai
Humidity: 52 % RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Ant.Pol · H/V	Detector Mode (Peak/QP/AVG)	Reading (dBuV)	Factor (dB/m)	Actual FS (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)
88.20	V	Peak	63.67	-25.69	37.98	68.00	-30.02
88.20	V	Average	63.65	-25.69	37.96	48.00	-10.06
183.58	V	QP	57.00	-21.62	35.38	43.50	-8.12
301.60	V	Peak	49.95	-18.46	31.48	46.00	-14.52
479.43	V	QP	50.50	-13.79	36.71	46.00	-9.29
513.38	V	QP	49.90	-13.37	36.53	46.00	-9.47
618.47	V	Peak	46.71	-11.63	35.08	46.00	-10.92
N/A							
88.20	H	Peak	71.00	-25.69	45.31	68.00	-22.69
88.20	H	Average	70.98	-25.69	45.29	48.00	-2.71
183.58	H	Peak	62.24	-21.62	40.62	43.50	-2.88
256.33	H	Peak	56.67	-20.24	36.43	46.00	-9.57
301.60	H	Peak	56.46	-18.46	38.00	46.00	-8.00
335.55	H	Peak	57.42	-17.60	39.82	46.00	-6.18
367.88	H	Peak	56.24	-16.66	39.59	46.00	-6.41
736.48	H	Peak	45.44	-10.10	35.34	46.00	-10.66

Remark:

- 1. Measuring frequencies from 30 MHz to the 1GHz.*
- 2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/Quasi-peak detector mode.*
- 3. Measurements above show only up to 6 maximum emissions noted, or would be lesser; with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*
- 4. The IF bandwidth of SPA from 30MHz to 1GHz was 100 kHz.*



Operation Mode: CH Mid **Test Date:** December 21, 2005
Temperature: 20°C **Tested by:** Rex Lai
Humidity: 52 % RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Ant.Pol H/V	Detector Mode (Peak/QP/AVG)	Reading (dBuV)	Factor (dB/m)	Actual FS (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)
105.98	V	Peak	60.91	-21.71	39.20	68.00	-28.80
105.98	V	Average	60.89	-21.71	39.18	48.00	-8.82
183.58	V	Peak	53.67	-21.62	32.04	43.50	-11.46
367.88	V	Peak	53.21	-16.66	36.56	46.00	-9.44
479.43	V	Peak	50.84	-13.79	37.04	46.00	-8.96
545.72	V	Peak	50.92	-13.02	37.91	46.00	-8.09
618.47	V	Peak	47.26	-11.63	35.63	46.00	-10.37
N/A							
105.98	H	Peak	68.02	-21.71	43.31	68.00	-24.69
105.98	H	Average	65.00	-21.71	43.29	48.00	-4.71
183.58	H	Peak	56.07	-21.62	34.45	43.50	-9.05
301.60	H	Peak	55.98	-18.46	37.52	46.00	-8.48
359.80	H	Peak	55.45	-16.76	38.70	46.00	-7.30
367.88	H	Peak	57.40	-16.66	40.74	46.00	-5.26
419.62	H	Peak	50.65	-15.48	35.17	46.00	-10.83
736.48	H	Peak	47.23	-10.10	37.12	46.00	-8.88

Remark:

1. Measuring frequencies from 30 MHz to the 1GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/Quasi-peak detector mode.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser; with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. The IF bandwidth of SPA from 30MHz to 1GHz was 100 kHz.



Operation Mode: CH High **Test Date:** December 21, 2005
Temperature: 20°C **Tested by:** Rex Lai
Humidity: 52 % RH **Polarity:** Ver. / Hor.

Freq. (MHz)	Ant.Pol H/V	Detector Mode (Peak/QP/AVG)	Reading (dBuV)	Factor (dB/m)	Actual FS (dBuV/m)	Limit 3m (dBuV/m)	Safe Margin (dB)
107.60	V	Peak	60.27	-21.40	38.87	68.00	-29.13
107.60	V	Average	60.25	-21.40	38.85	48.00	-9.15
183.58	V	QP	58.34	-21.62	36.72	43.50	-6.78
479.43	V	Peak	52.02	-13.79	38.23	46.00	-7.77
492.37	V	Peak	52.20	-13.48	38.72	46.00	-7.28
545.72	V	Peak	51.50	-13.02	38.48	46.00	-7.52
590.98	V	Peak	48.56	-12.33	36.23	46.00	-9.77
N/A							
107.60	H	Peak	64.59	-21.40	43.19	68.00	-24.81
107.60	H	Average	64.57	-21.40	43.17	48.00	-4.83
183.58	H	QP	63.31	-21.62	41.69	43.50	-1.81
322.62	H	Peak	58.41	-17.79	40.61	46.00	-5.39
359.80	H	Peak	57.23	-16.76	40.47	46.00	-5.53
367.88	H	QP	58.20	-16.66	41.54	46.00	-4.46
618.47	H	Peak	50.60	-11.63	38.98	46.00	-7.02
788.22	H	Peak	45.96	-9.36	36.60	46.00	-9.40

Remark:

1. Measuring frequencies from 30 MHz to the 1GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/Quasi-peak detector mode.
3. Measurements above show only up to 6 maximum emissions noted, or would be lesser; with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
4. The IF bandwidth of SPA from 30MHz to 1GHz was 100 kHz.



7.4 POWERLINE CONDUCTED EMISSIONS

LIMIT

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

TEST PROCEDURE

Since this EUT is battery powered, this test item is not applicable.

TEST RESULTS

Since this EUT is battery powered, this test item is not applicable.