FCC Part 95 Subpart G

EMI TEST REPORT

of

E.U.T. : Wireless Microphone (Transmitter)
MODEL : 340T
FCC ID. : BRG340T-216
Working Frequency : 216.025-216.975MHz

for

APPLICANT : Phonic Ear, Inc.
ADDRESS : 3880 Cypress Drive Petaluma, CA 94954-7600

Test Performed by

ELECTRONICS TESTING CENTER, TAIWAN
NO. 34, LIN 5, DING FU TSUN, LINKOU HSIANG
TAIPEI HSIEN, TAIWAN, R.O.C.
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Report Number : ET94R-08-141-01

TEST REPORT CERTIFICATION

Applicant	: Phonic Ear, Inc.
	3880 Cypress Drive Petaluma, CA 94954-7600
Manufacturer	: E-J Electronics Co., Ltd.
	4F, NO.11, Lane 125, Sec 1, Kuo Kwang Rd., Ta Li City,Taichung Hsien,Taiwan

Description of EUT

a) Type of EUT	: Wireless Microphone (Transmitter)
b) Trade Name	: PhonicEar
c) Model No.	: 340T
d) Power Supply	: DC 1.5V battery *2
e) Frequency Range	: 216.025-216.975MHz

Regulation Applied : FCC Rules and Regulations Part 95 Subpart G (2005)

I HEREBY CERTIFY THAT; The data shown in this report were made in accordance with the procedures given in ANSI C63.4 and the energy emitted by the device was founded to be within the limits applicable. I assume full responsibility for accuracy and completeness of these data.

Note: 1. The result of the testing report relate only to the item tested.
2. The testing report shall not be reproduced expect in full, without the written approval of ETC.

Issued Date : Nov. 10, 2005

Test Engineer : falcon Shi
(Falcon Shi)

Approve & Authorized Signer : Will Yauo
Will Yauo, Manager
EMC Dept. II of ELECTRONICS
TESTING CENTER, TAIWAN

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1 GENERAL INFORMATION

1.1 Product Description

a) Type of EUT : Wireless Microphone (Transmitter)

b) Trade Name : PhonicEar

c) Model No. : 340T

d) Power Supply : DC 1.5V battery *2

e) Frequency Range : 216.025-216.975MHz

1.2 Characteristics of Device:

1. Use of Product: Voice communications
2. Battery: AAA sized 1.5V *2
3. Operating Frequency Range: 216.025-216.975MHz
4. Channel: Total 19 channels as list below

Channel	Frequency (MHz)	Channel	Frequency (MHz)
41	216.025	52	216.575
42	216.075	53	216.625
43	216.125	54	216.675
44	216.175	55	216.725
45	216.225	56	216.775
46	216.275	57	216.825
47	216.325	58	216.875
48	216.375	59	216.925
49	216.425	60	216.975
51	216.525		

1.3 Test Methodology

Both Wireless Handheld Transmitter Microphone conducted and radiated testing were performed according to the procedures in chapter 13 of ANSI C63.4 (2003). and section 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, and 2.1055 of Part 2 of CFR 47

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the roof top of Building at No. 34, Lin 5, Ding Fu Tsun, Linkou Hsiang, Taipei Hsien, Taiwan, R.O.C.

This site has been fully described in a report submitted to your office, and accepted in a letter dated Oct. 20, 2005.

2 REQUIREMENTS OF PROVISIONS

2.1 Definition

Intentional radiator:
A device that intentionally generates and emits radio frequency energy by radiation or induction.

2.2 Frequencies Available

According to sec. 95.629(c) of Part 95, the following frequencies are available for Extra band channels:

Channel No.	Center frequency (MHz)
41	216.025
42	216.075
43	216.125
44	216.175
45	216.225
46	216.275
47	216.325
48	216.375
49	216.425
50	216.475
51	216.525
52	216.575
53	216.625
54	216.675
55	216.725
56	216.775
57	216.825
58	216.875
59	216.925
60	216.975

2.3 Requirements for Radio Equipment on Certification

(1) RF Output Power

According to sec. 95.639(e) of Part 95, the maximum transmitter output power authorized for LPRS stations is 100 mW.

(2) Modulation Characteristics

For Voice Modulated Communication Equipment, a curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted.

(3) Emission Bandwidth

According to sec. 95.633(d)(3) of Part 95, the channel bandwidth for extra band frequencies is 50 kHz.

(4) Unwanted Radiation

According to sec. 95.635(c)(2) of Part 95, emissions for LPRS transmitters operating on extra band channels (50 kHz) shall be attenuated below the unmodulated carrier in accordance with the following:

(i) Emissions 25 kHz to 35 kHz from the channel center frequency: at least 30 dB; and

(ii) Emissions more than 35 kHz away from the channel center frequency: at least 43 + 10log(carrier power in watts) dB.

(5) Frequencies Stability

According to sec. 95.629(c)(2) of Part 95, LPRS transmitters operating on extra band channels must be maintained within a frequency stability of 50 parts per million.

2.4 Labeling Requirement

Each equipment for which a type acceptance application is filed on or after May 1,1981, shall bear an identification plate or label pursuant to §2.925（Identification of equipment） and §2.926（FCC identifier）.

3 OUTPUT POWER MEASUREMENT

3.1 Provision Applicable

According to sec. 95.639(e) of Part 95, the maximum transmitter output power authorized for LPRS stations is 100 mW.

3.2 Measurement Procedure

1. Setup the configuration per figure 1 and 2 for frequencies measured below and above 1 GHz respectively, adjusting the input voltage to produce the maximum power.
2. Adjust the analyzer for each frequency measured in chapter 6 on a 1 MHz frequency span and 1MHz resolution bandwidth.
3. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0° to 360°, and record the highest value indicated on spectrum analyzer as reference value.
4. Repeat step 3 until all frequencies need to be measured were complete.
5. Repeat step 4 with search antenna in vertical polarized orientations.
6. Replace the EUT with a tuned dipole antenna (horn antenna for above 1 GHz) relative to each frequency in horizontally polarized orientation and as the same polarized orientation with search antenna. Connect the tuned dipole antenna to a standard signal generator (SG) via a low loss cable. Power on the SG and tune the right frequency in measuring as well as set SG at a appreciated output level. Rise and lower the search antenna to get the highest value on spectrum analyzer, and then hold this position. Adjust the SG output to get a identical value derived from step 3 on spectrum analyzer. Record this value for result calculated.

7. Repeat step 6 until all frequencies need to be measured were complete.

8. Repeat step 7 with both dipole antenna (horn antenna for above 1 GHz) and search antenna in vertical polarized orientations.

Figure 1 : Frequencies measured below 1 GHz configuration

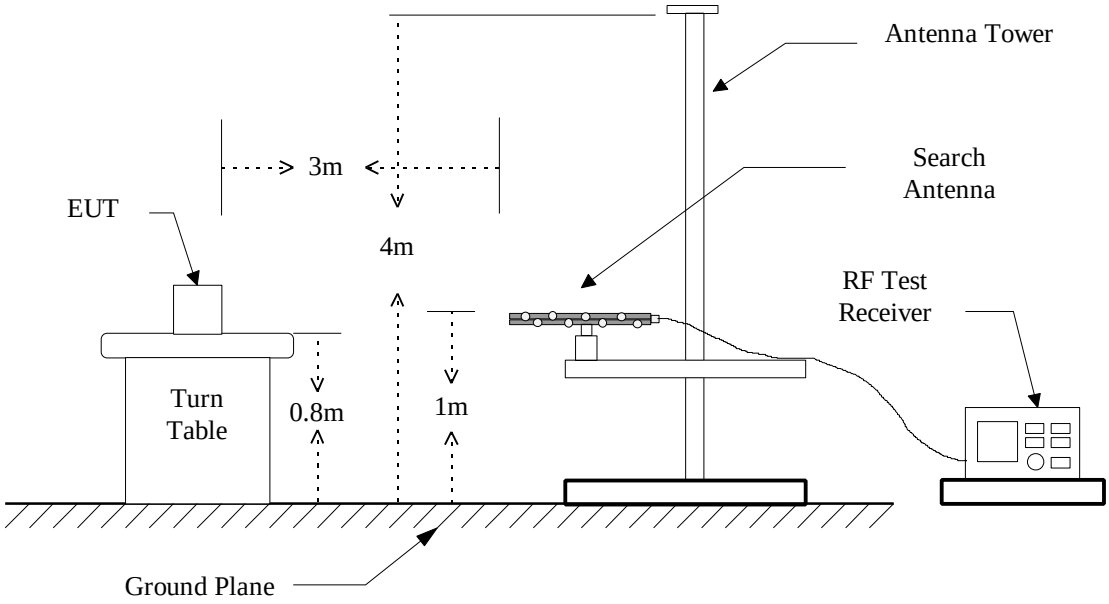
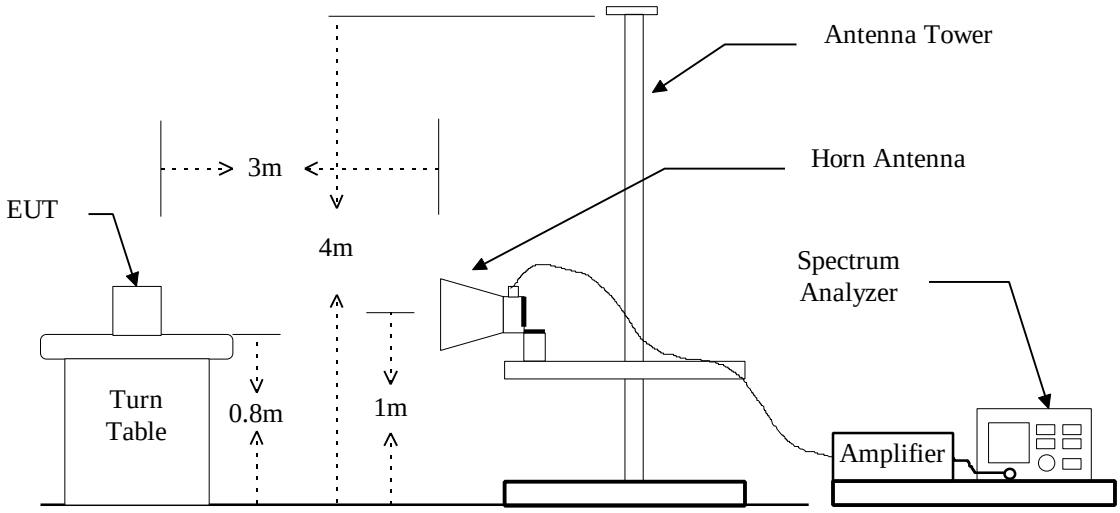


Figure 2 : Frequencies measured above 1 GHz configuration



3.3 Test Data

Channel 51 (ERP)

Operation Mode : TX Test Date : Oct. 27, 2005

Temperature : 26 °C Humidity : 68 %

Frequency (MHz)	Meter Reading (dBμV/m)	SG Reading (dBm)	Cable Loss (dB)	Antenna Gain	Result (dBm)	Output Power (mW)	Limit (mW)
216.5249	91.6	-5.6	-1.2	----	-6.8	0.209	100

Note: For measured frequency below 1GHz, a tuned dipole antenna is used.

3.4 Result Calculation

Result calculation is as following :

Result = SG Reading + Cable Loss + Antenna Gain Corrected

Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.

$$mW = \log^{-1}\left[\frac{Result(dBm)}{10}\right]$$

3.5 Measurement Instrument

Equipment	Manufacturer	Model No.	Next Cal. Date
Spectrum Analyzer	R&S	FSP40	07/05/2006
Dipole Antenna	EMCO	3121C	06/05/2006
Biconical Antenna	EMCO	3110B	10/05/2006
Signal generator	HP	8656B	11/07/2006

4 MODULATION CHARACTERISTICS

4.1 Provisions Applicable

According to sec. 2.1047 (a), for Voice Modulated Communication Equipment, the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be measured.

4.2 Measurement Method

A) Frequency response of audio circuits

1. Position the EUT as shown in figure 3.

2. Vary the modulating frequency from 100 Hz to 5000 Hz with varying the input voltage from 0V to maximum permitted input voltage, and observe the change in output.

B) Modulation Limit

1. Position the EUT as shown in figure 3, adjust the audio input frequency to 100 Hz and the input level from 0V to maximum permitted input voltage with recording each carrier frequency deviation responding to respective input level.

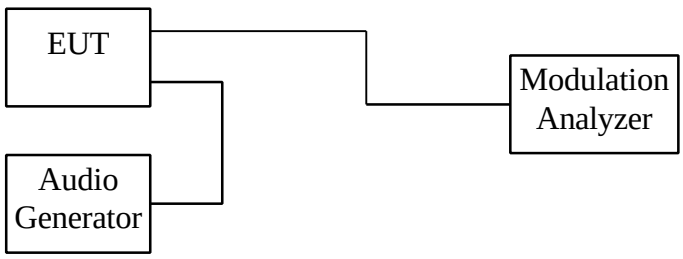
2. Repeat step 1 with changing the input frequency for 200, 500, 1000, 3000, and 5000 Hz in sequence.

C) Frequency response of all circuits

1. Position the EUT as shown in figure 3.

2. Vary the modulating frequency from 100 Hz to 15000 Hz with constant input voltage (derived from 5.4(a) of this test report), and observe the change in output.

Figure 3 : Modulation characteristic measurement configuration

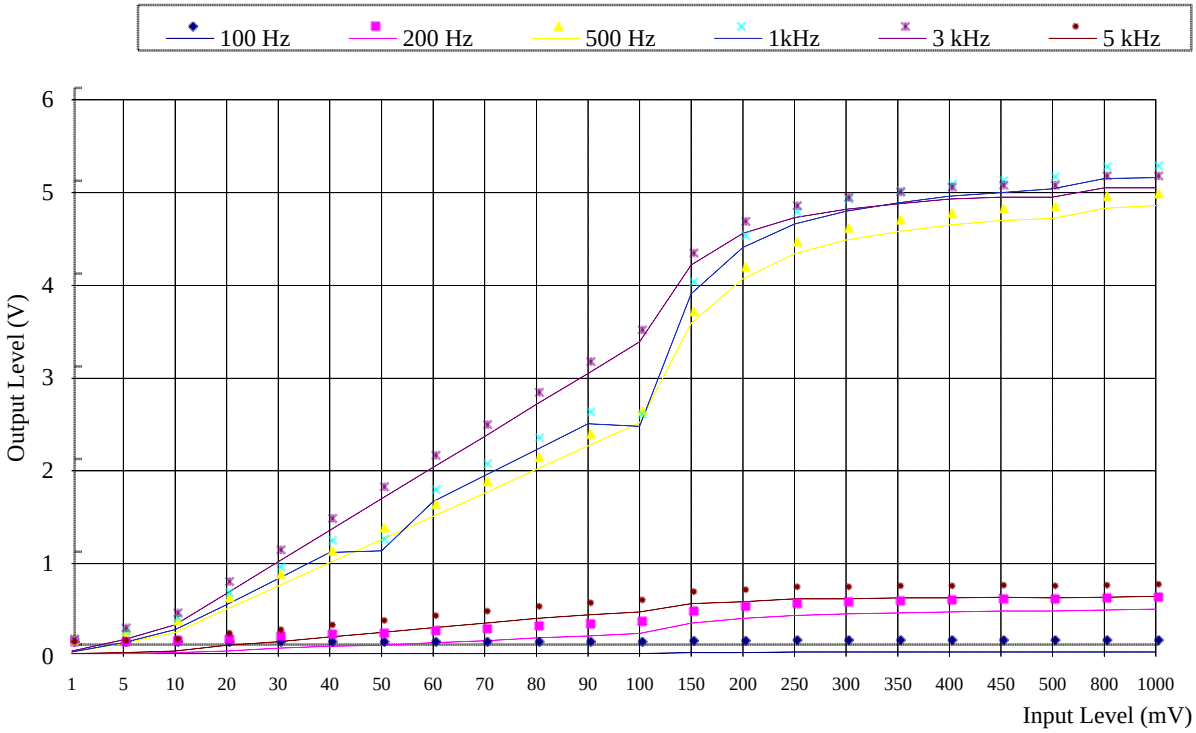


4.3 Measurement Instrument

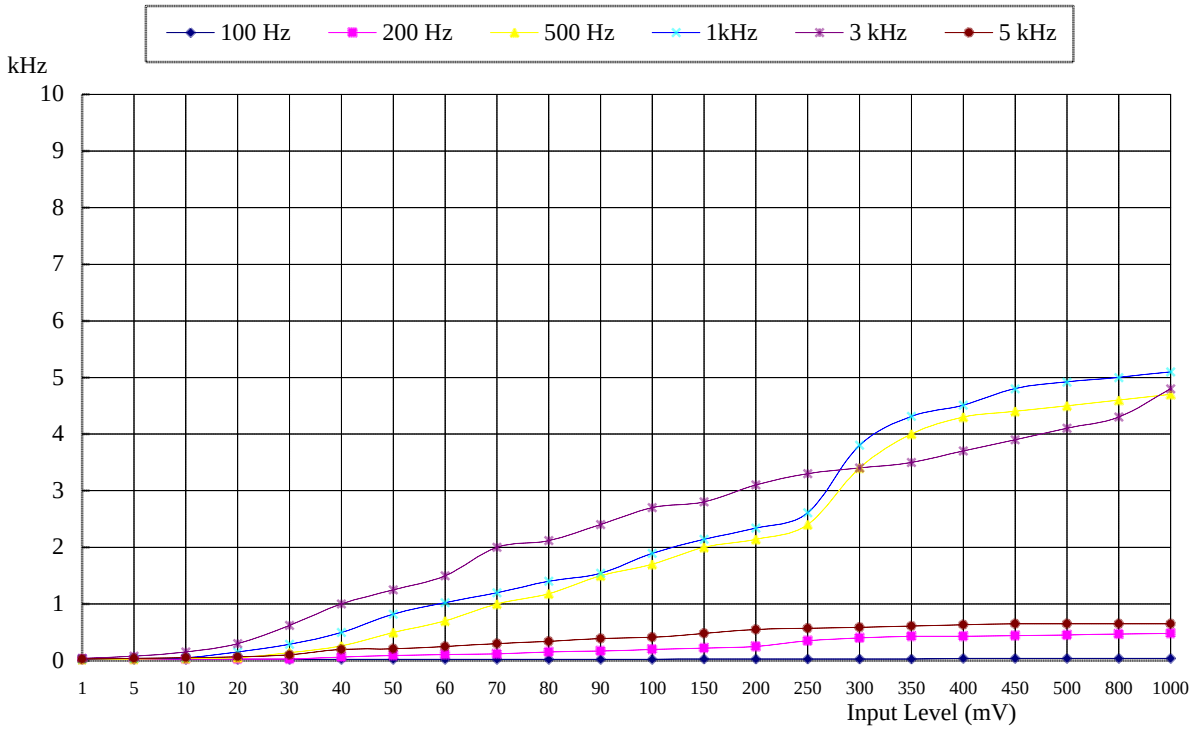
Equipment	Manufacturer	Model No.	Next Cal. Date
Modulation Analyzer	Hewlett-Packard	8901A	11/30/2005
Multifunction Synthesizer	Hewlett-Packard	8904A	12/23/2005
Oscillscope	Lecroy	9350A	07/04/2006
Preamplifier	Hewlett-Packard	8447D	08/03/2006
Spectrum Analyzer	R&S	FSP40	07/05/2006

4.4 Measurement Result

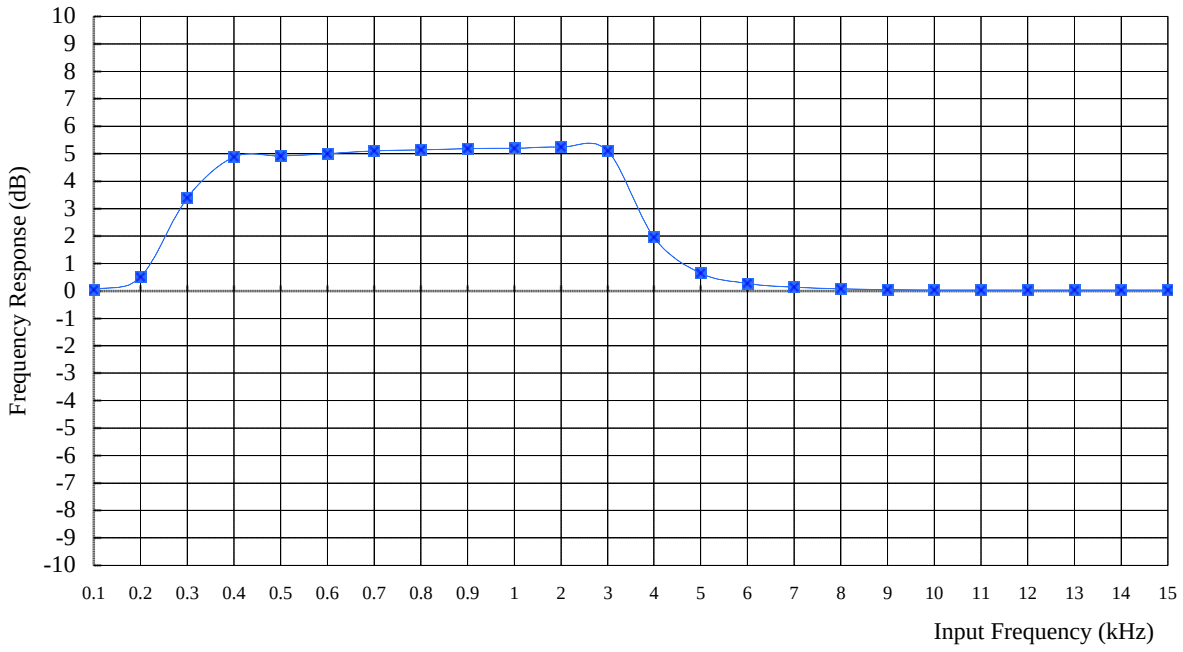
A). Frequency response



B). Modulation Limit



C). Frequency response of all circuits



5 EMISSION BANDWIDTH

5.1 Provisions Applicable

According to sec. 2.1049(c)(1), For radiotelephone transmitter, other than single sideband or indenpent sideband transmitter, when modulateed by a 2.5kHz tone at an input level 16 dB greater than that necessary to produce 50 percent modulation.
According to sec. 95.633(d)(3) of Part 95, the channel bandwidth for extra band frequencies is 50 kHz.

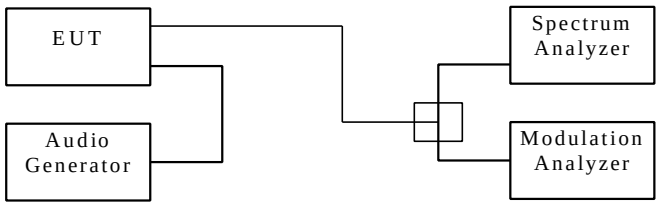
5.2 Measurement Method

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 4, and Install new batteries in the EUT. Turn on the EUT ant set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.

3. Apply a 2.5 kHz modulation signal to EUT and measure the frequencies of the modulated signal from the EUT where it is the specified number of dB below the reference level set in step 2. This is the occupied bandwidth specified.

Figure 4 : Occupied bandwidth measurement configuration



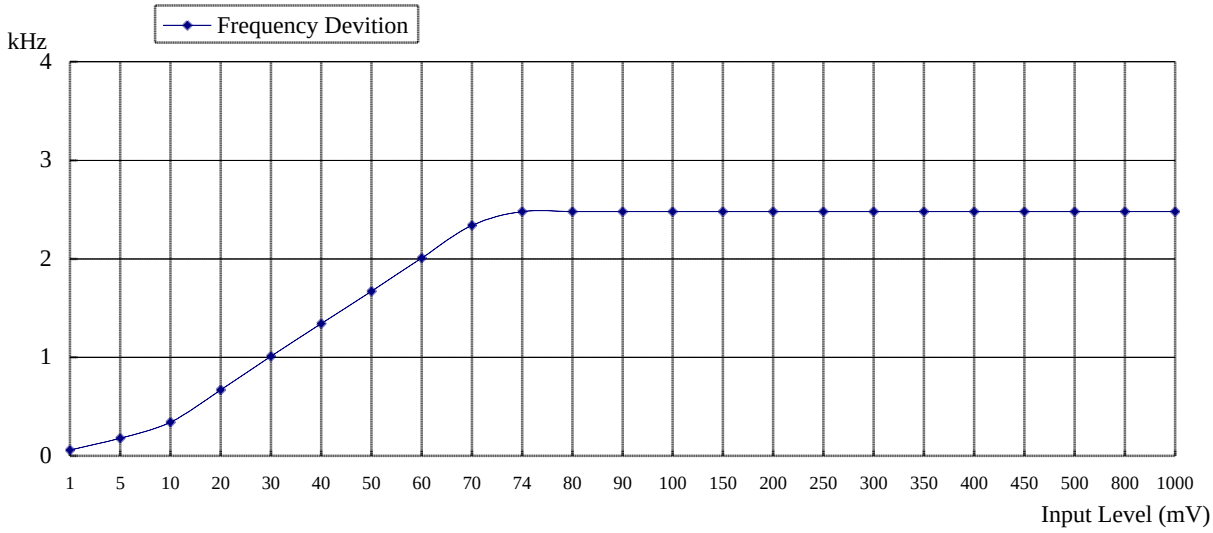
5.3 Measurement Instrument

Equipment	Manufacturer	Model No.	Next Cal. Date
Spectrum Analyzer	R&S	FSP40	07/05/2006
Modulation Analyzer	Hewlett-Packard	8901A	11/30/2005
Multifunction Synthesizer	Hewlett-Packard	8904A	12/23/2005
Plotter	Hewlett-Packard	7440A	N/A

5.4 Bandwidth Measured

5.4.1 Input Level Derived

Input Audio Frequency : 2.5 kHz, Sine Wave



The Level input to produce 50％modulation is 74 mV, therefore the magnitude 16 dB greater than the necessary to produce 50 percent modulation is 1.47 V.

5.4.2 Emission Bandwidth Plotted

Channel 51: The Occupied Bandwidth is 15.4 kHz.

Please see appendix 1 for plotted data.

6 UNWANTED RADIATION

6.1 Provisions Applicable

According to sec. 2.1053, measurements shall be made to detect spurious emission that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal condition of installation and operation. Information submitted shall include the relative radiated power of spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from a halfwave dipole antenna.

According to sec. 95.635(c)(2) of Part 95, emissions for LPRS transmitters operating on extra band channels (50 kHz) shall be attenuated below the unmodulated carrier in accordance with the following:

(i) Emissions 25 kHz to 35 kHz from the channel center frequency: at least 30 dB; and

(ii) Emissions more than 35 kHz away from the channel center frequency: at least 43 + 10log(carrier power in watts) dB.

6.2 Measurement Procedure

1. Setup the configuration per figure 1 and 2 for frequencies measured below and above 1 GHz respectively, adjusting the input voltage to produce the maximum power as measured in chapter 3.
2. Adjust the analyzer for each frequency measured in chapter 6 on a 1 MHz frequency span and 1MHz resolution bandwidth.
3. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0° to 360°, and record the highest value indicated on spectrum analyzer as reference value.
4. Repeat step 3 until all frequencies need to be measured were complete.
5. Repeat step 4 with search antenna in vertical polarized orientations.
6. Replace the EUT with a tuned dipole antenna (horn antenna for above 1 GHz) relative to each frequency in horizontally polarized orientation and as the same polarized orientation with search antenna. Connect the tuned dipole antenna to a standard signal generator (SG) via a low loss cable. Power on the SG and tune the right frequency in measuring as well as set SG at a appreciated output level. Rise and lower the search antenna to get the highest value on spectrum analyzer, and then hold this position. Adjust the SG output to get a identical value derived from step 3 on spectrum analyzer. Record this value for result calculated.

7. Repeat step 6 until all frequencies need to be measured were complete.
8. Repeat step 7 with both dipole antenna (horn antenna for above 1 GHz) and search antenna in vertical polarized orientations.

6.3 Measuring Instrument

Equipment	Manufacturer	Model No.	Next Cal. Date
Spectrum Analyzer	Hewlett-Packard	8564E	08/08/2006
Dipole Antenna	EMCO	3121C	06/05/2006
Horn Antenna	EMCO	3115	08/18/2006
Log periodic Antenna	EMCO	3146	10/10/2006
Biconical Antenna	EMCO	3110B	10/05/2006
Preamplifier	Hewlett-Packard	8449B	09/13/2006
Preamplifier	Hewlett-Packard	8447D	08/03/2006
Spectrum Analyzer	R&S	FSP40	07/05/2006

Measuring instrument setup in frequency band measured is as following :

Frequency Band (MHz)	Instrument	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	Spectrum Analyzer	Peak	100 kHz	100 kHz
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz

6.4 Measuring Data

A) Harmonics and spurious emissions

Channel 51

Operation Mode : TX Test Date : Oct. 27, 2005

Temperature : 26 °C Humidity : 68 %

Unmodulated carrier output power is –6.8 dBm , or 0.209 mW (ERP).

The limit of spurious or harmonics is calculated as following :

-6.8-[43+10log(carrier output power in W)], or -13dBm

Frequency (MHz)	Meter Reading (dBuV) H	V	SG Reading (dBm) H	V	Antenna Gain	Antenna Gain Corr'	Cable Loss (dB)	Result (dBm) H	V	Limit (dBm)	Margin (dB)
433.052	54.4	48.1	-48.5	-50.7	---	---	-1.8	-50.3	-52.5	-13.0	-37.3
649.578	63.4	49.1	-40.6	-53.3	---	---	-2.4	-43.0	-55.7	-13.0	-30.0
866.104	51.1	52.5	-51.9	-46.2	---	---	-2.8	-54.7	-49.0	-13.0	-36.0
1082.630	---	---	---	---	6.8	-2.0	-1.3	---	---	-13.0	---
1229.156	---	---	---	---	7.4	-2.0	-1.3	---	---	-13.0	---
1515.682	---	---	---	---	8.5	-2.0	-1.3	---	---	-13.0	---
1732.208	---	---	---	---	8.8	-2.0	-1.3	---	---	-13.0	---
1948.734	---	---	---	---	9.2	-2.0	-1.7	---	---	-13.0	---
2165.260	---	---	---	---	9.5	-2.0	-1.7	---	---	-13.0	---

Note :

1. Remark "---" means that the emission level is too weak to be detected.
2. For measured frequency below 1GHz, a tuned dipole antenna is used.
3. Result calculation is as following :

   Result = SG Reading +Cable Loss +Antenna Gain +Antenna Gain Corrected

   Antenna Gain Corrected : is used for antenna other than dipole to convert radiated power to ERP.
4. Spurious or harmonics above 1 GHz is too low to be detected or attenuated more than 60 dB from limit value.

B) Emission mask plots

Channel 51

Operation Mode : TX Test Date : Nov. 10, 2005

Temperature : 21 °C Humidity : 60 %

Please see appendix 2 for plotted data.

C) Other Emission

Mode: Charging

Test Date : Oct. 27, 2005 Temperature : 26 °C Humidity : 68 %

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (m)
30.000	H/V	---	-9.8	---	40.0	---	---	---
50.000	H/V	---	-14.1	---	40.0	---	---	---
150.000	H/V	---	-10.0	---	43.5	---	---	---
300.000	H/V	---	-0.8	---	46.0	---	---	---
500.000	H/V	---	-4.4	---	46.0	---	---	---
800.000	H/V	---	0.7	---	46.0	---	---	---

Note :

1. Remark "---" means that the emissions level is too low to be measured.

2. The expanded uncertainty of the radiated emission tests is 3.53 dB.

6.5 Radiated Measurement Photos

Mode: Tx

Mode: Charging

7 FREQUENCY STABILITY MEASUREMENT

7.1 Provisions Applicable

According to sec. 2.1055 (a)(1), the frequency stability shall be measured with variation of ambient temperature from -30°C to +50°C centigrade, and according to sec. 2.1055 (d)(2), the frequency stability shall be measured with reducing primary supply voltage to the battery operating end point which is specified by the manufacturer.

According to sec. 95.629(c)(2) of Part 95, LPRS transmitters operating on extra band channels must be maintained within a frequency stability of 50 parts per million.

7.2 Measurement Procedure

A) Frequency stability versus environmental temperature

1. Setup the configuration per figure 5 for frequencies measured at ambient temperature if it is within 15°C to 25°C. Otherwise, an environmental chamber set for a temperature of 20°C shall be used. Install new batteries in the EUT.

2. Turn on EUT and set SA center frequency to the right frequency needs to be measured. Then set SA RBW to 30 kHz, VBW to 100kHz and frequency span to 500 kHz. Record this frequency to be a reference.

3. Set the temperature of chamber to 50°C. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. While maintaining a constant temperature inside the chamber, turn the EUT on and measure the EUT operating frequency.

4. Repeat step 2 with a 10°C decreased per stage until the lowest temperature -30°C is measured, record all measurement frequencies.

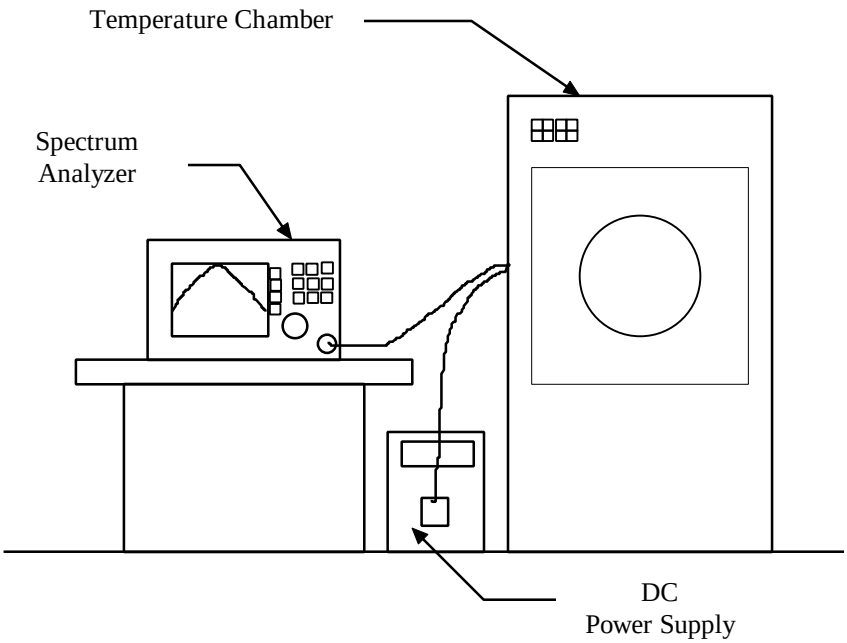
B) Frequency stability versus input voltage

1. Setup the configuration per figure 7 for frequencies measured at ambient temperature if it is within 15°C to 25°C. Otherwise, an environmental chamber set for a temperature of 20°C shall be used. Install new batteries in the EUT.

2. Set SA center frequency to the right frequency needs to be measured. Then set SA RBW to 30 kHz, VBW to 100kHz and frequency span to 500 kHz. Record this frequency to be a reference.

3. For battery operated only device, supply the EUT primary voltage at the battery operating end point which is specified by the manufacturer and record the frequency.

Figure 5 : Frequency stability measurement configuration



7.3 Measurement Instrument

Equipment	Manufacturer	Model No.	Next Cal. Date
Spectrum Analyzer	HP	8564E	08/08/2006
Temperature Chamber	MALLIER	MCT-2X-M	11/01/2006

7.4 Measurement Data

A1. Frequency stability versus enviroment tempture

Reference Frequency : 216.5250 MHz Limit：0.005%							
Enviroment Tempture (°C)	Power Supplied (Vdc)	Frequency measured with time elapsed					
		2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	3.0	216.5314	0.00293	216.5317	0.00309	216.5313	0.00291
40		216.5296	0.00212	216.5256	0.00026	216.5279	0.00134
30		216.5281	0.00142	216.5221	-0.00135	216.5177	-0.00337
20		216.5276	0.00119	216.5290	0.00183	216.5284	0.00157
10		216.5279	0.00133	216.5197	-0.00244	216.5323	0.00339
0		216.5288	0.00174	216.5223	-0.00124	216.5182	-0.00313
-10		216.5168	-0.00380	216.5279	0.00133	216.5243	-0.00034
-20		216.5248	-0.00009	216.5268	0.00083	216.5196	-0.00248
-30		216.5280	0.00138	216.5206	-0.00204	216.5305	0.00254

A2. Frequency stability versus end-point supplied voltage (1.9Vdc)

Reference Frequency : 216.5250 MHz Limit：0.005%							
Enviroment Tempture (°C)	Power Supplied (Vdc)	Frequency measured with time elapsed					
		2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
25	End-Point	216.5320	0.00323	216.5294	0.00203	216.5262	0.00057

8 CONDUCTED EMISSION MEASUREMENT

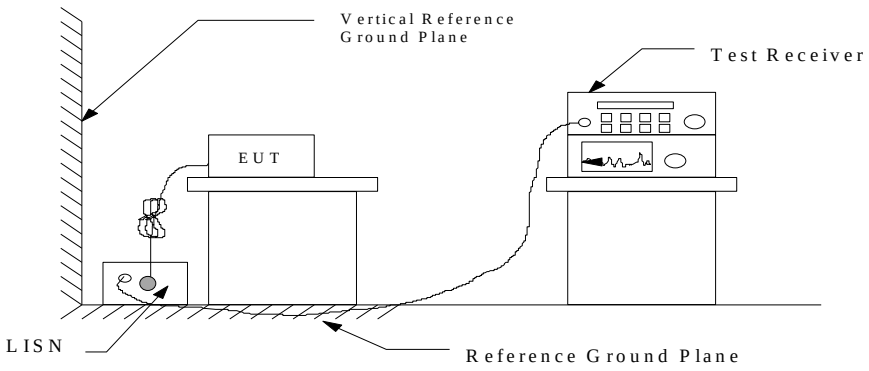
8.1 Description

For unintentional and intentional device, Line Conducted Emission Limits are in accordance to 15.107(a) and 15.207(a) respectively.

8.2 Measurement Procedure

1. Setup the configuration per figure 3.
2. A preliminary scan with a spectrum monitor is performed to identify the frequency of emission that has the highest amplitude relative to the limit by operating the EUT in selected modes of operation, typical cable positions, and with a typical system configuration.
3. Record the 6 or 8 highest emissions relative to the limit.
4. Measure each frequency obtained from step 3 by a test receiver set on quasi peak detector function, and then record the accuracy frequency and emission level. If all emissions measured in the specified band are attenuated more than 20 dB from the limit, this step would be ignored, and the peak detector function would be used.
5. Confirm the highest three emissions with variation of the EUT cable configuration and record the final data.
6. Repeat all above procedures on measuring each operation mode of EUT.

Figure 3 : Conducted emissions measurement configuration



8.3 Conducted Emission Data

Operation Mode : Charging Neutral

Test Date : Oct. 27, 2005 Temperature : 26 °C Humidity : 68 %

Frequency (MHz)	**Meter Reading** (dBμV)		**Factor** (dB)	**Result** (dBμV)		**Limit** (dBμV)		**Margin** (dBμV)	
	Q.P	AVG		Q.P	AVG	Q.P	AVG	Q.P	AVG
0.1578	18.3	---	0.2	19.6	---	65.6	55.6	-46.0	---
0.2125	15.8	---	0.2	15.5	---	63.1	53.1	-47.6	---
18.1953	12.0	---	1.3	14.3	---	60.0	50.0	-45.7	---
21.0078	12.5	---	1.4	14.7	---	60.0	50.0	-45.3	---
27.0703	14.6	---	1.8	16.5	---	60.0	50.0	-43.5	---
27.6211	13.6	---	1.9	16.3	---	60.0	50.0	-43.7	---

Note : The expanded uncertainty of the conducted emission tests is 2.45 dB.

Operation Mode : Charging Line

Test Date : Oct. 27, 2005 Temperature : 26 °C Humidity : 68 %

Frequency (MHz)	**Meter Reading** (dBμV)		**Factor** (dB)	**Result** (dBμV)		**Limit** (dBμV)		**Margin** (dBμV)	
	Q.P	AVG		Q.P	AVG	Q.P	AVG	Q.P	AVG
0.1656	15.6	---	0.2	15.8	---	65.2	55.2	-49.4	---
0.2164	16.8	---	0.2	17.0	---	63.0	53.0	-45.9	---
0.2477	11.1	---	0.2	11.3	---	61.8	51.8	-50.5	---
7.8359	12.6	---	0.7	13.3	---	60.0	50.0	-46.7	---
12.3438	12.0	---	0.9	13.0	---	60.0	50.0	-47.0	---
24.6992	13.8	---	1.5	15.3	---	60.0	50.0	-44.7	---

Note : The expanded uncertainty of the conducted emission tests is 2.45 dB.

Please see appendix 3 for plotted data.

8.4 Result Data Calculation

The result data is calculated by adding the LISN Factor to the measured reading. The basic equation with a sample calculation is as follows:

RESULT = READING + LISN FACTOR

Assume a receiver reading of 22.5 dBμV is obtained, and LISN Factor is 0.1 dB, then the total of disturbance voltage is 22.6 dBμV.

RESULT = 22.5 + 0.1 = 22.6 dBμV
Level in μV = Common Antilogarithm[(22.6 dBμV)/20]
= 13.48 μV

8.5 Conducted Measurement Equipment

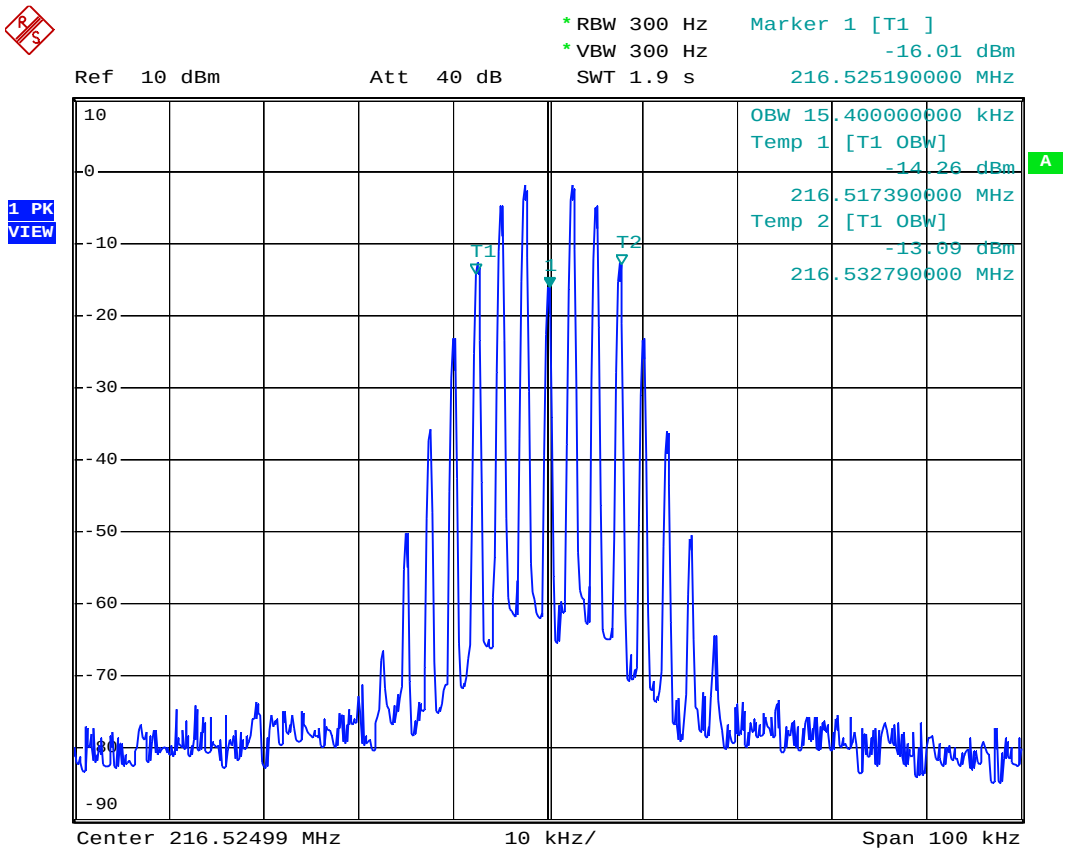
The following test equipment are used during the conducted test.

Equipment	Manufacturer	Model No.	Next Cal. Date
EMI Test Receiver	Rohde & Schware	ESCS 30	12/06/2005
LISN	Kyoritsu	KNW-407	12/25/2005
LISN	Rohde & Schwarz	ESH2-Z5	09/11/2006

8.6 Photos of Conduction Measuring Setup

Mode : Charging

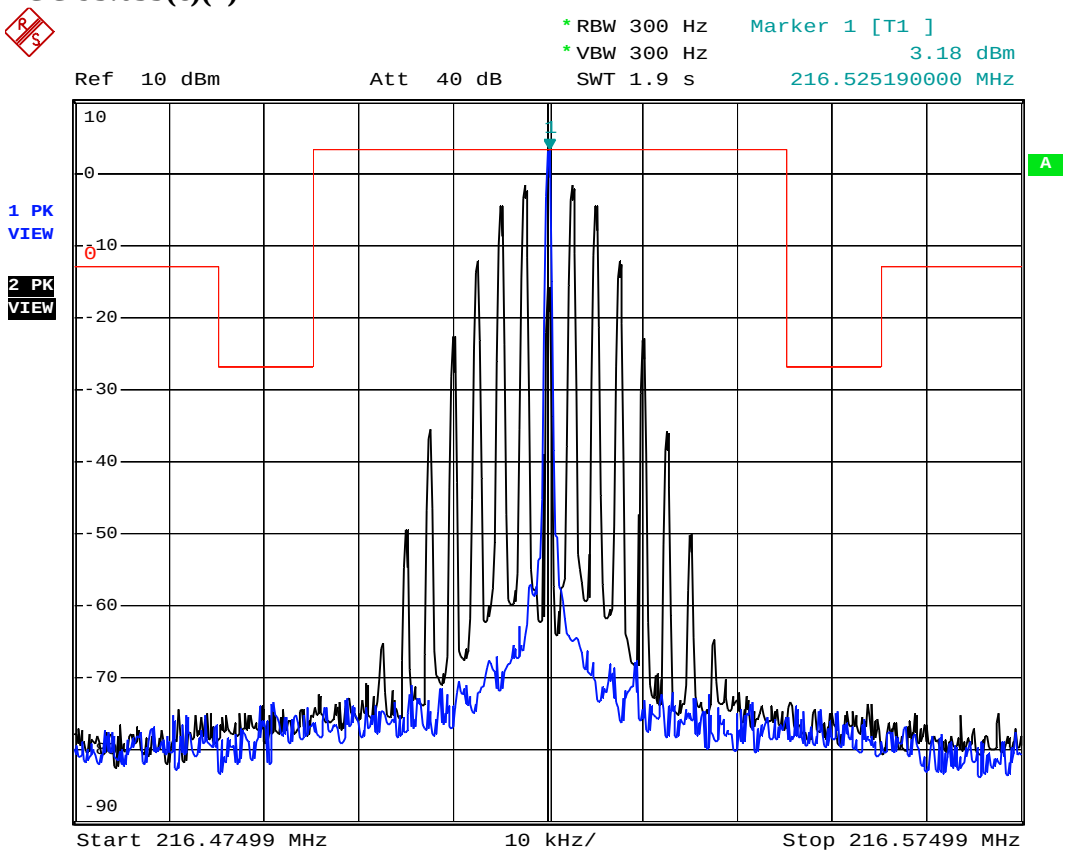
Appendix 1 : Emission Bandwidth Plotted Data



Date: 10.NOV.2005 11:11:19

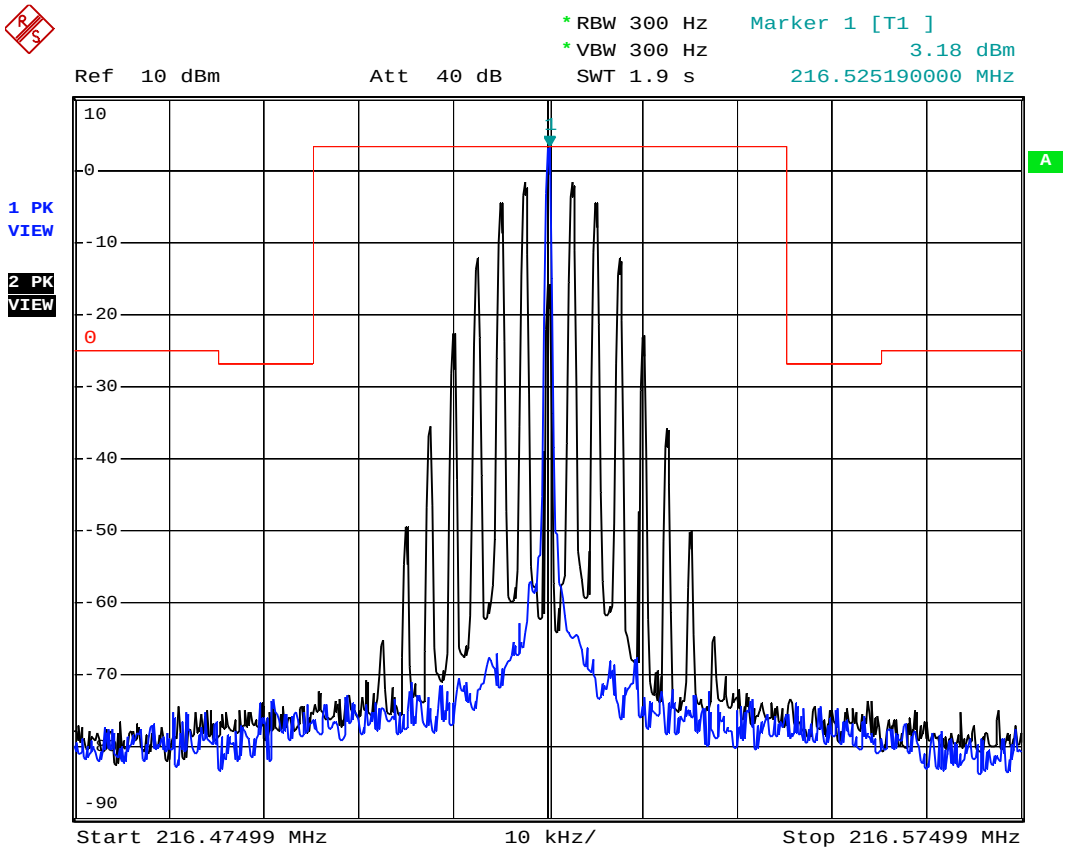
Appendix 2 : Emission Mask Plotted Data

FCC 95.635(c)(2)



Date: 10.NOV.2005 11:06:36

IC RSS-210 A4.3 Mask D



Date: 10.NOV.2005 11:10:03

Appendix 3 : Ploted Datas of Power Line Conducted Emissions

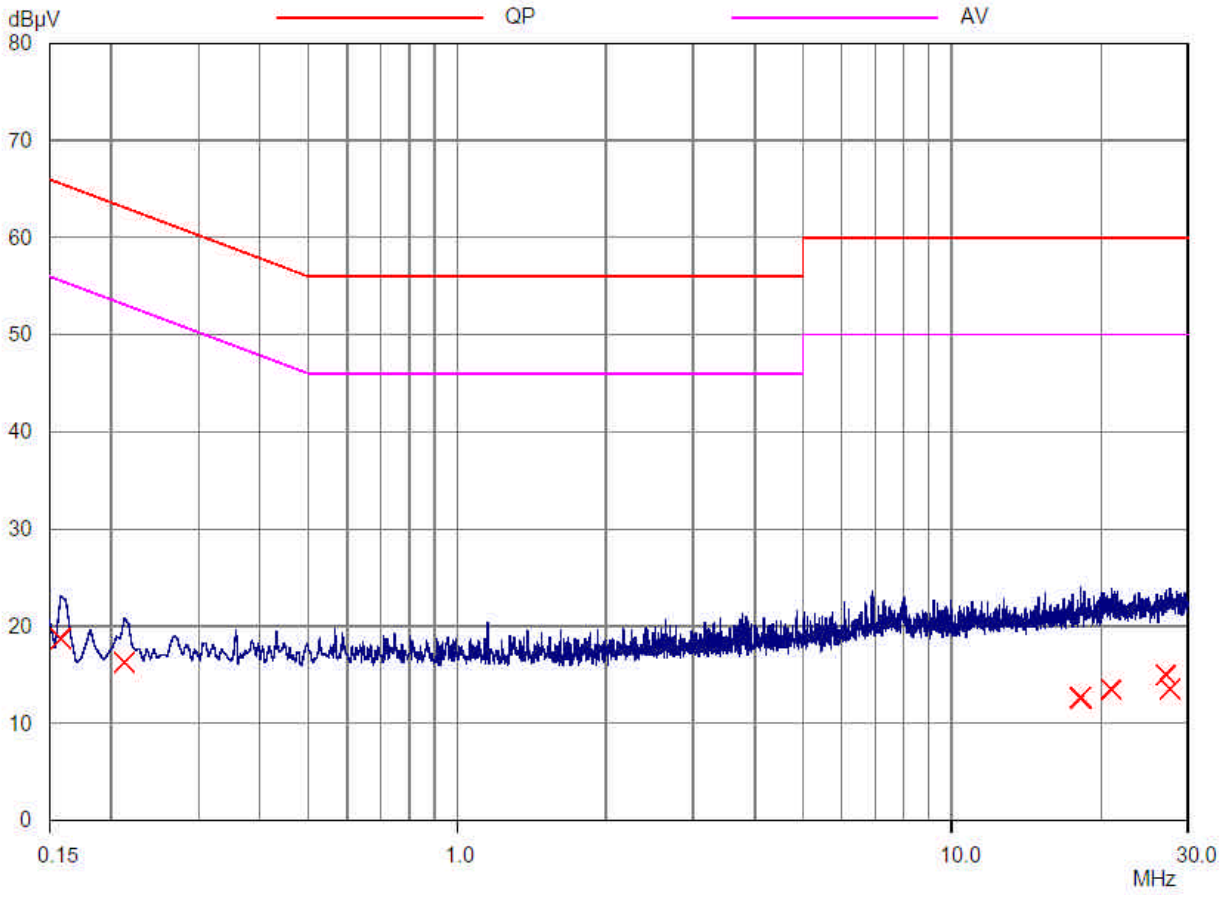
CONDUCTION EMISSION TEST

Peak Value

EUT:
Manuf:
Op Cond: Changing
Operator: 120V/60Hz
Test Spec:
Comment: N
THE MEASUREMENT POLT:PEAK VALUE

Final Measurement:

Detector:	X QP
Meas Time:	1sec
Peaks:	8
Acc Margin:	25 dB



CONDUCTION EMISSION TEST

Peak Value

EUT:
Manuf:
Op Cond: Changing
Operator: 120V/60Hz
Test Spec:
Comment: L1
THE MEASUREMENT POLT:PEAK VALUE

Final Measurement: Detector: X QP
Meas Time: 1sec
Peaks: 8
Acc Margin: 25 dB