NVLAP LAB CODE 200707-0

FCC PART 15.239

MEASUREMENT AND TEST REPORT

For

On Real Electronics (Shenzhen) Ltd.

No.3, Tangxiayong Industrial Zone, Song Gang, Baoan District,

Shenzhen, Guangdong, China

FCC ID: SRLFM17-2009OR

Report Type:	**Product Type:**
Original Report	FM Transmitter

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Report Number:	RSZ08091101
Report Date:	2009-05-22
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GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

The *On Real Electronics (Shenzhen) Ltd.'s* product, model: *FM-17 (FCC ID: SRLFM17-2009OR)* or the "EUT" as referred to in this report is a *FM Transmitter* which measures approximately 27.0 cm L x 2.5 cm W x 2.1 cm H, rated input voltage: DC 1.5 V powered by battery or DC 5 V powered by adapter.

Note: To adjust the frequencies manually use the up and down buttons to scan the channels by 0.1MHz per each press of the button. For automatic adjustment press and hold down the up and down buttons. So, the turned frequency range is 88.1MHz to 107.9MHz.

** All measurement and test data in this report was gathered from production sample serial number: 0809041 (Assigned by BACL, Shenzhen). The EUT was received on 2008-09-11.*

Objective

This Type approval report is prepared on behalf of *On Real Electronics (Shenzhen) Ltd.* in accordance with FCC Part 15, Subpart C, and section 15.203, 15.207, 15.209, and 15.239 rules.

Related Submittal(s)/Grant(s)

No Related Submittals

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4 - 2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0).

NVLAP LAB CODE 200707-0

The current scope of accreditations can be found at
http://ts.nist.gov/Standards/scopes/2007070.htm

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in a typical fashion (as normally used by a typical user).

Equipment Modifications

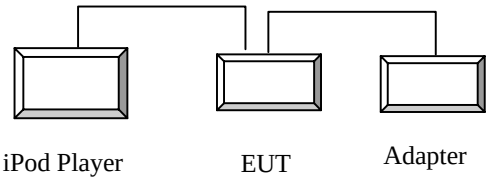
No modification was made to the unit tested.

Local Support Equipment List and Details

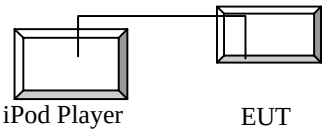
Manufacturer	Description	Model Number	Serial Number	FCC ID
Apple	iPod Player	A1285	5U8515443R0	DOC

Configuration of Test Setup

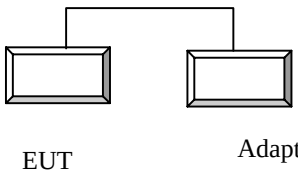
Transmitting Mode (Powered by Adapter):



Transmitting Mode (Powered by Battery):

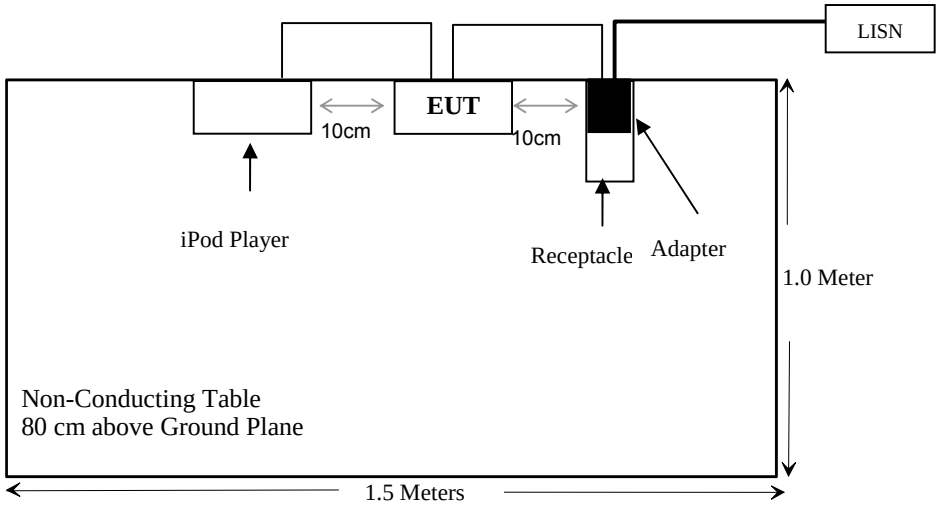


Charging Mode:

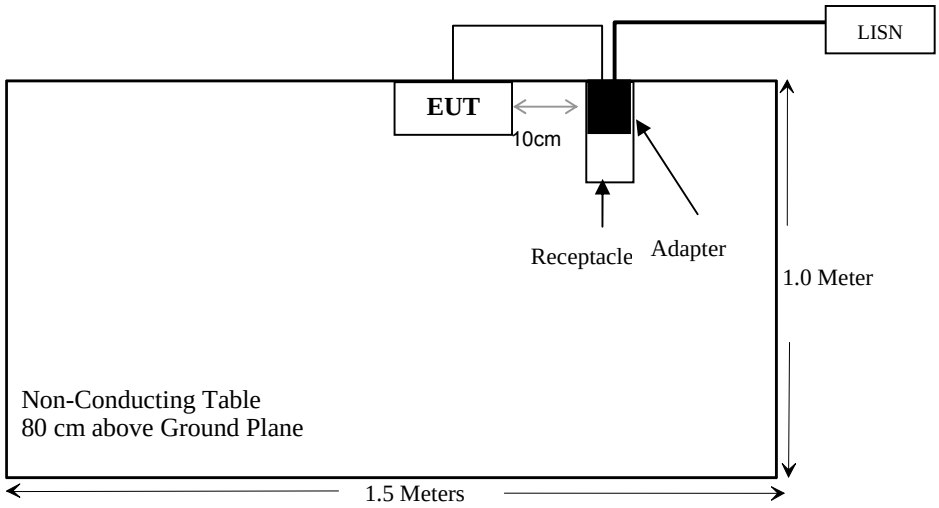


Block Diagram of Test Setup

Transmitting Mode (Powered by Adapter):



Charging Mode:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Test Result
§15.203	Antenna Requirement	Compliant
§15.207	Conducted Emission	Compliant
§15.209 §15.239	Radiated Emissions	Compliant
§15.239 (a)	Band Edges	Compliant
§15.239 (a)	Emission Bandwidth	Compliant

CFR47 §15.203 - ANTENNA REQUIREMENT

Applicable Standard

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

Result

Compliance.

Antenna Connector Construction

The EUT has permanently attached antenna, the maximum antenna gain is -2 dBi, which, in accordance to the above section, is considered sufficient to comply with the provision of this section, please see EUT photo for details.

CFR47 §15.207 – CONDUCTED EMISSION

Applicable Standard

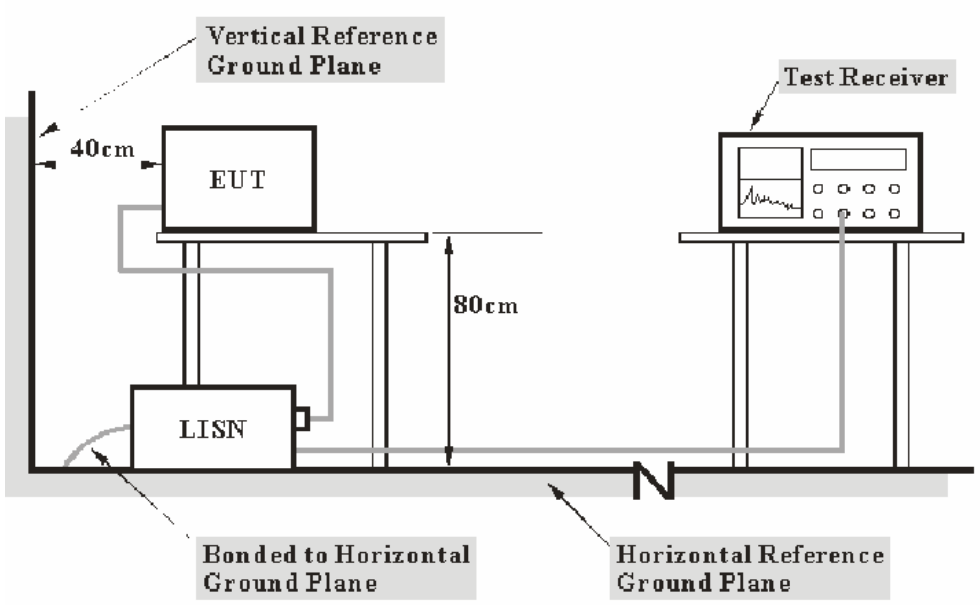
CFR 47 §15.207

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratory Corp. (Shenzhen) is ±2.4 dB.

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The adapter was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	***IF B/W***
150 kHz – 30 MHz	9 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12208	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCS30	DE25330	2009-03-25	2010-03-25
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2009-03-25	2010-03-25

***** Com-Power's LISN were used as the supporting equipment.
*** Statement of Traceability:** Bay Area Compliance Laboratory Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207, with the worst margin reading of:

13.00 dB at **0.295 MHz** in the **Neutral** conductor mode for transmitting

11.70 dB at **0.290 MHz** in the **Neutral** conductor mode for charging

Test Data

Test Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

** The testing was performed by Sula Huang on 2009-04-22.*

Test Mode: Transmitting

Line Conducted Emissions				FCC Part 15.207	
Frequency (MHz)	**Amplitude (dBµV)**	**Detector (QP/AV)**	**Conductor (Line/Neutral)**	**Limit (dBµV)**	**Margin (dB)**
0.295	47.40	QP	Neutral	60.40	13.00
0.690	42.90	QP	Line	56.00	13.10
0.730	42.60	QP	Neutral	56.00	13.40
0.405	44.30	QP	Line	57.80	13.50
0.375	44.80	QP	Neutral	58.40	13.60
1.010	41.80	QP	Neutral	56.00	14.20
1.285	41.60	QP	Neutral	56.00	14.40
1.015	41.60	QP	Line	56.00	14.40
0.305	45.40	QP	Line	60.10	14.70
0.180	47.40	QP	Neutral	64.50	17.10
0.205	45.80	QP	Line	63.40	17.60
0.295	32.30	AV	Neutral	50.40	18.10
0.180	46.30	QP	Line	64.50	18.20
0.730	25.10	AV	Neutral	46.00	20.90
0.375	27.30	AV	Neutral	48.40	21.10
1.010	23.20	AV	Neutral	46.00	22.80
1.285	22.10	AV	Neutral	46.00	23.90
0.305	25.20	AV	Line	50.10	24.90
0.180	29.00	AV	Neutral	54.50	25.50
0.405	19.60	AV	Line	47.80	28.20
0.690	17.60	AV	Line	46.00	28.40
1.015	17.30	AV	Line	46.00	28.70
0.180	23.30	AV	Line	54.50	31.20
0.205	20.80	AV	Line	53.40	32.60

Test Mode: Charging

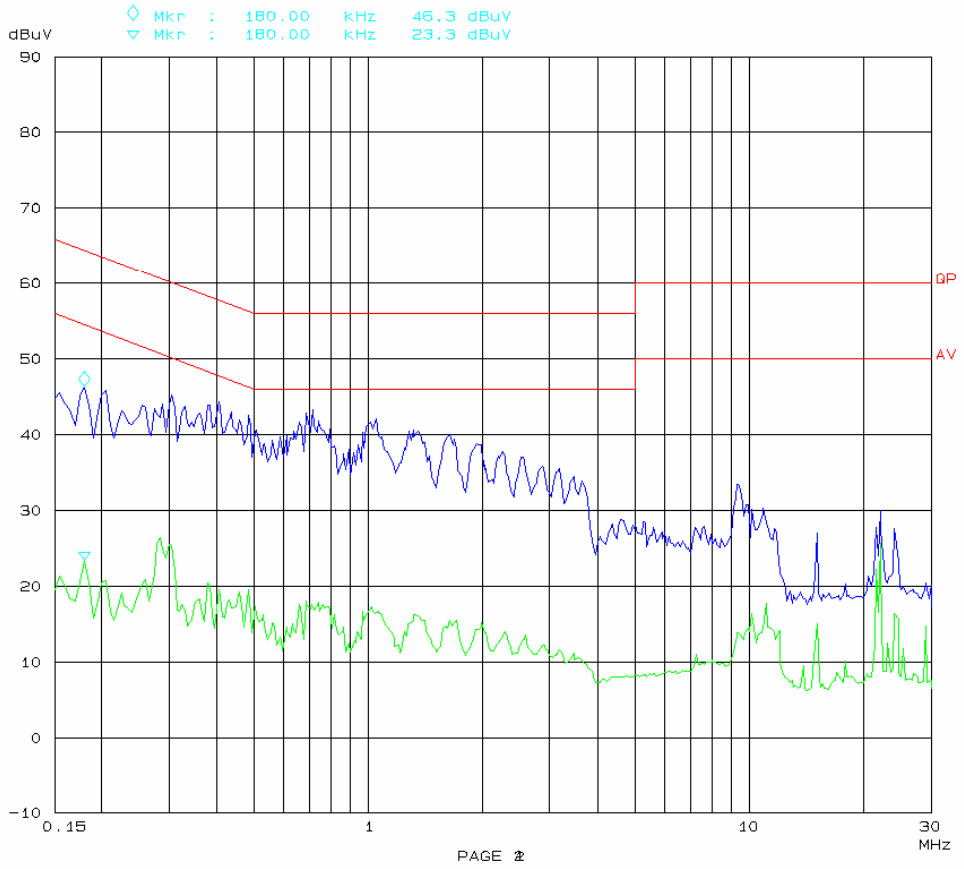
Line Conducted Emissions				FCC Part 15.207	
Frequency (MHz)	**Amplitude (dBμV)**	**Detector (QP/AV)**	**Conductor (Line/Neutral)**	**Limit (dBμV)**	**Margin (dB)**
0.290	38.80	AV	Neutral	50.50	11.70
0.290	46.60	QP	Neutral	60.50	13.90
0.295	45.60	QP	Line	60.40	14.80
0.295	34.90	AV	Line	50.40	15.50
0.695	29.80	AV	Neutral	46.00	16.20
0.385	31.80	AV	Neutral	48.20	16.40
0.760	39.50	QP	Line	56.00	16.50
1.035	29.30	AV	Neutral	46.00	16.70
0.690	39.20	QP	Neutral	56.00	16.80
1.035	39.20	QP	Neutral	56.00	16.80
0.385	41.00	QP	Neutral	58.20	17.20
1.030	38.80	QP	Line	56.00	17.20
1.335	28.50	AV	Neutral	46.00	17.50
1.345	38.10	QP	Neutral	56.00	17.90
1.360	38.10	QP	Line	56.00	17.90
1.730	27.80	AV	Neutral	46.00	18.20
1.685	37.20	QP	Line	56.00	18.80
1.730	37.00	QP	Neutral	56.00	19.00
0.165	43.40	QP	Line	65.20	21.80
0.760	24.20	AV	Line	46.00	21.80
1.025	23.70	AV	Line	46.00	22.30
1.365	23.00	AV	Line	46.00	23.00
1.685	22.20	AV	Line	46.00	23.80
0.165	29.40	AV	Line	55.20	25.80

Plot(s) of Test Data

Plot(s) of Test Data is presented hereinafter as reference.

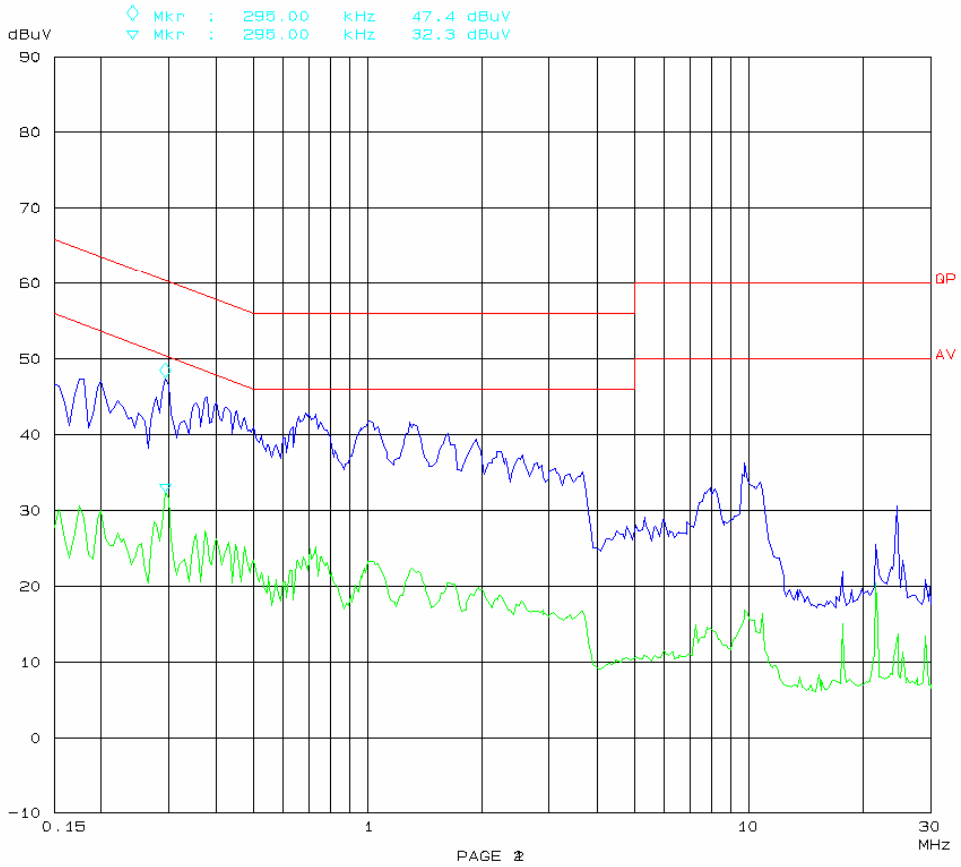
Conducted Emission
FCC Part15 Setion15.207

EUT:	FM Transmitter M/N: FM-17
Manuf:	ON REAL LIMITED.
Op Cond:	Transmitting (Mid Channel)
Operator:	Sula
Test Spec:	AC 120V/60Hz L
Comment:	Temp: 24 Hum: 50%
	BACL



Conducted Emission
FCC Part15 Setion15.207

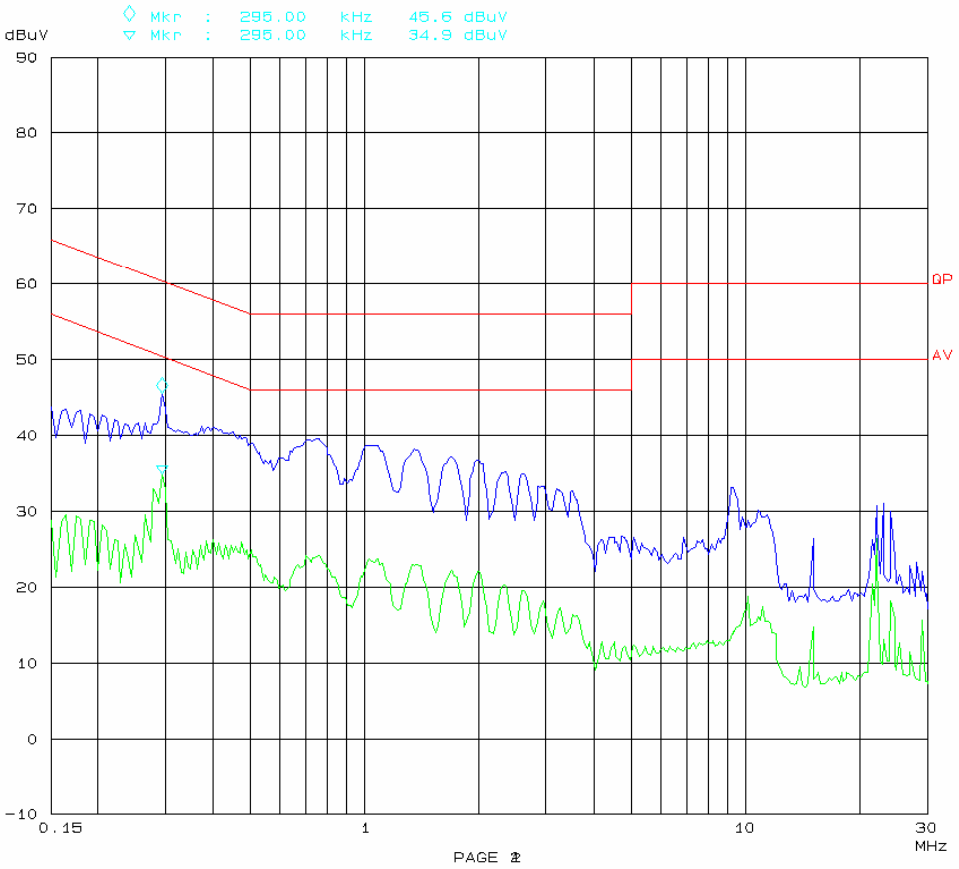
EUT:	FM Transmitter M/N: FM-17
Manuf:	ON REAL LIMITED.
Op Cond:	Transmitting (Mid Channel)
Operator:	Sula
Test Spec:	AC 120V/60Hz N
Comment:	Temp: 24 Hum: 50%
	BACL



Conducted Emission
FCC Part15 Setion15.207

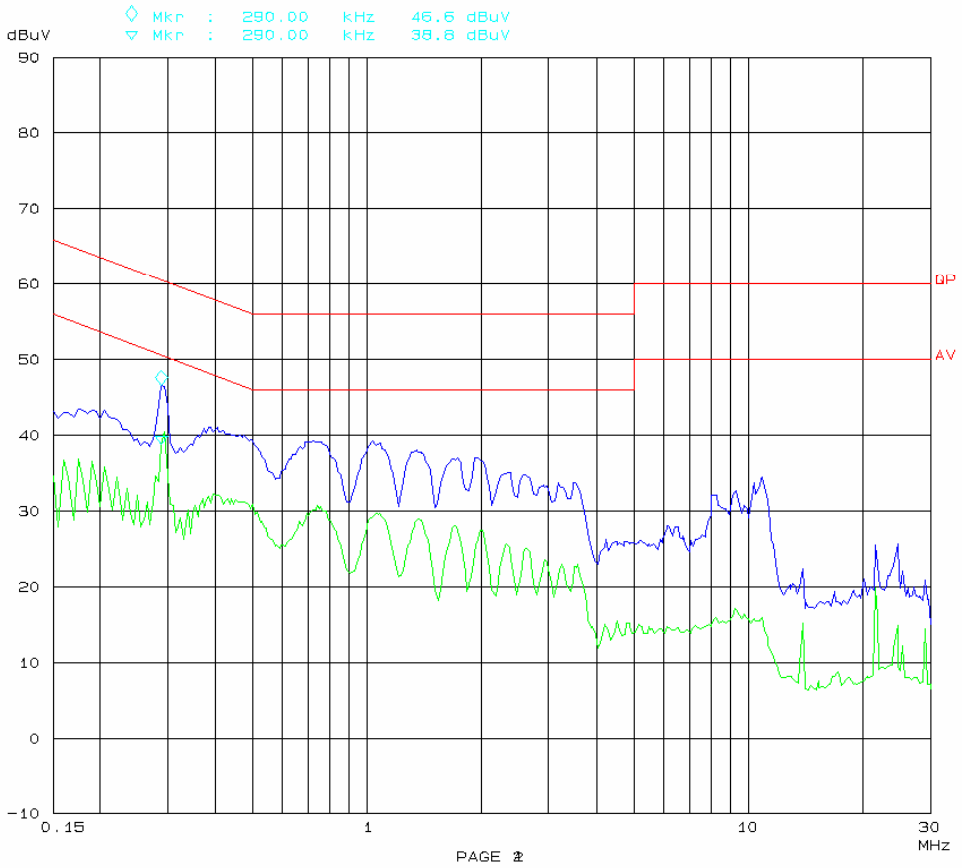
24. Apr 09 17:44

EUT: FM Transmitter M/N:FM-17
Manuf: ON REAL LIMITED.
Op Cond: Charging
Operator: Sula
Test Spec: AC 120V/60Hz L
Comment: Temp:24 Hum:50%
BACL



Conducted Emission
FCC Part15 Setion15.207

EUT:	FM Transmitter M/N: FM-17
Manuf:	ON REAL LIMITED.
Op Cond:	Charging
Operator:	Sula
Test Spec:	AC 120V/60Hz N
Comment:	Temp: 24 Hum: 50%
	BACL



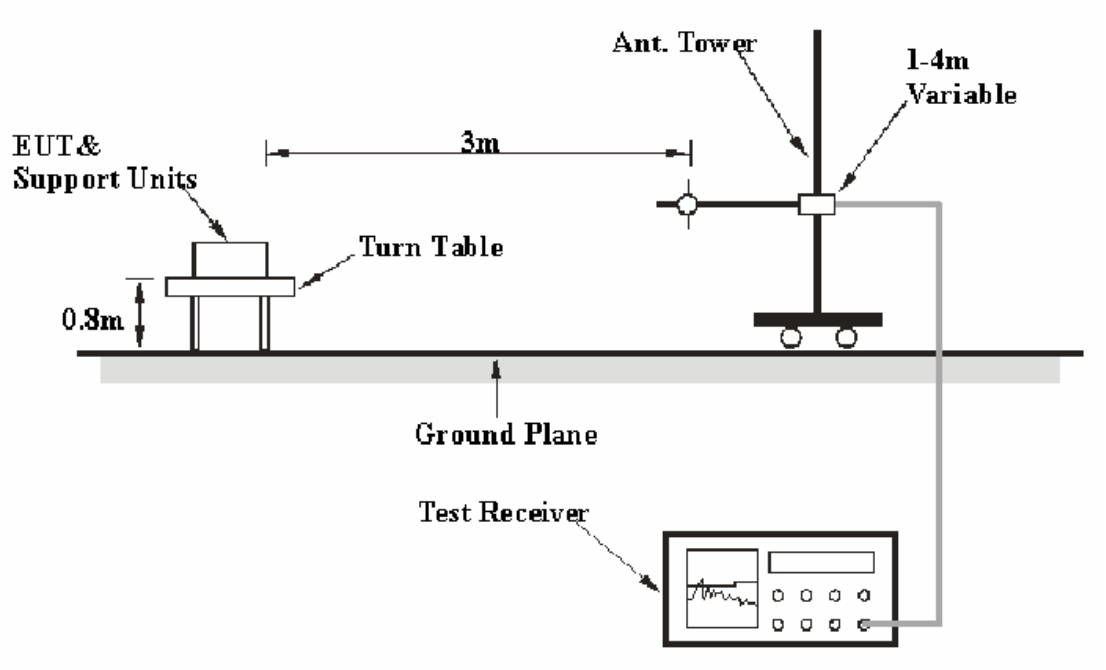
CFR47 §15.209 & §15.239- RADIATED EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is ±4.0 dB.

Test Setup



The radiated emission tests were performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.4 - 2003. The specification used was the FCC Part 15.209 and FCC Part 15.239.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 1000 MHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	***RBW***	***VBW***
30 – 1000 MHz	100 kHz	300 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	8447E	1937A01046	2008-11-15	2009-11-15
Rohde & Schwarz	EMI Test Receiver	ESCI	100224	2008-11-07	2009-11-06
Sunol Sciences	Bilog Antenna	JB1	A040904-2	2008-08-14	2009-08-14
HP	Amplifier	8449B	3008A00277	2008-09-29	2009-09-29
Sunol Sciences	Horn Antenna	DRH-118	A052604	2008-09-25	2009-09-25
Rohde & Schwarz	Spectrum Analyzer	FSEM30	849720/019	2008-05-09	2009-05-09

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude = Meter Reading + Antenna Loss + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 5.8dB means the emission is 5.8 dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.209 and 15.239, with the worst margin reading of:

Below 1 GHz:

11.5 dB at **35.335 MHz** in the **Vertical** polarization, 88.1MHz (low channel) Powered by Adapter

10.7 dB at **31.2125 MHz** in the **Horizontal** polarization, 98.1MHz (middle channel) Powered by Adapter

11.0 dB at **30.970 MHz** in the **Horizontal** polarization, 107.9MHz (high channel) Powered by Adapter

24.6 dB at **264.255000 MHz** in the **Horizontal** polarization, 88.1MHz (low channel) Powered by Battery

18.9 dB at **631.9945 MHz** in the **Horizontal** polarization, 98.1MHz (middle channel) Powered by Battery

18.4 dB at **952.010 MHz** in the **Vertical** polarization, 107.9MHz (high channel) Powered by Battery

25.1 dB at **40.842400 MHz** in the **Vertical** polarization for charging mode

Above 1 GHz:

14.59 dB at **1881.7MHz** in the **Vertical** polarization, High Channel for 107.9MHz Powered by adapter

15.05 dB at **1881.7 MHz** in the **Horizontal** polarization, High Channel for 107.9MHz powered by battery

Test Data

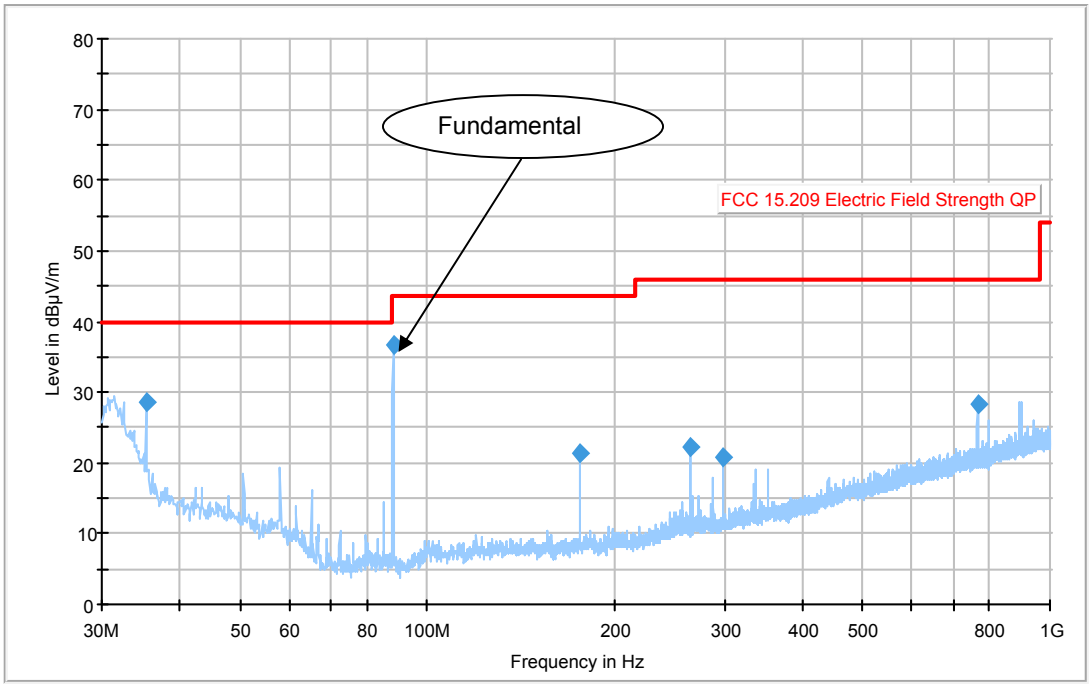
Test Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56%
ATM Pressure:	100.2kPa

The testing was performed by Chris Peng on 2009-04-21.

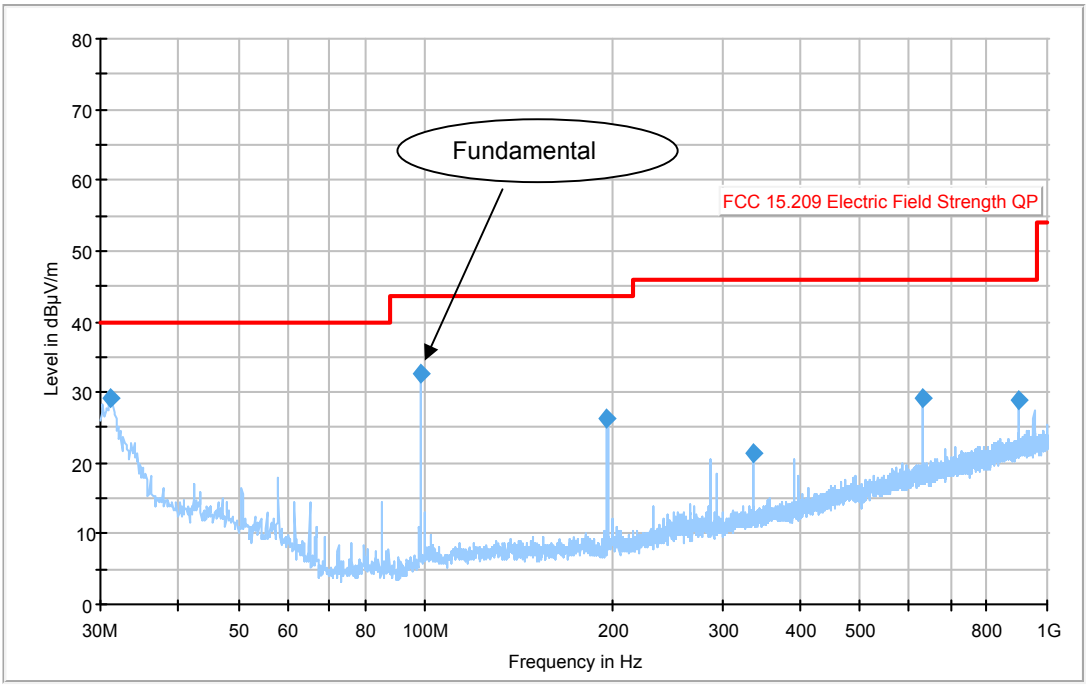
Below 1 GHz

1) Test Mode: Transmitting at 88.1MHz (Low Channel) Powered by Adapter



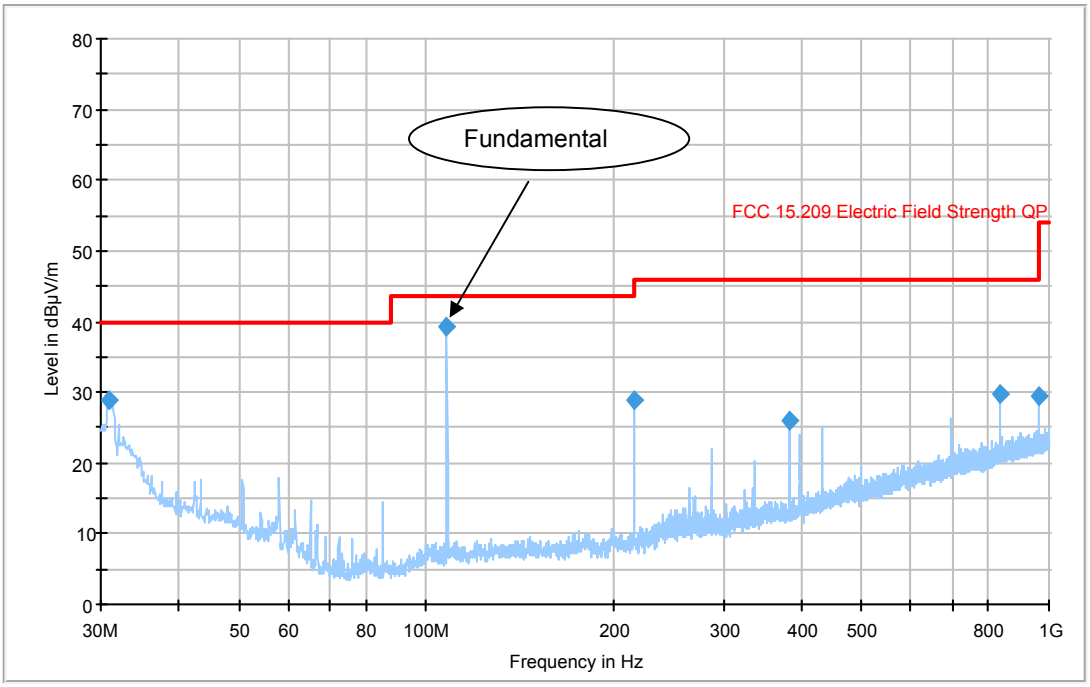
Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
35.335000	28.5	110.0	V	112.0	-4.5	40.0	11.5
764.753775	28.4	112.0	H	300.0	-5.8	46.0	17.6
176.106250	21.4	210.0	H	148.0	-11.3	43.5	22.1
264.255000	22.1	109.0	H	136.0	-9.6	46.0	23.9
299.175000	20.9	401.0	V	326.0	-3.9	46.0	25.1

2) Test Mode: Transmitting at 98.1 MHz (Middle Channel) Powered by Adaptor



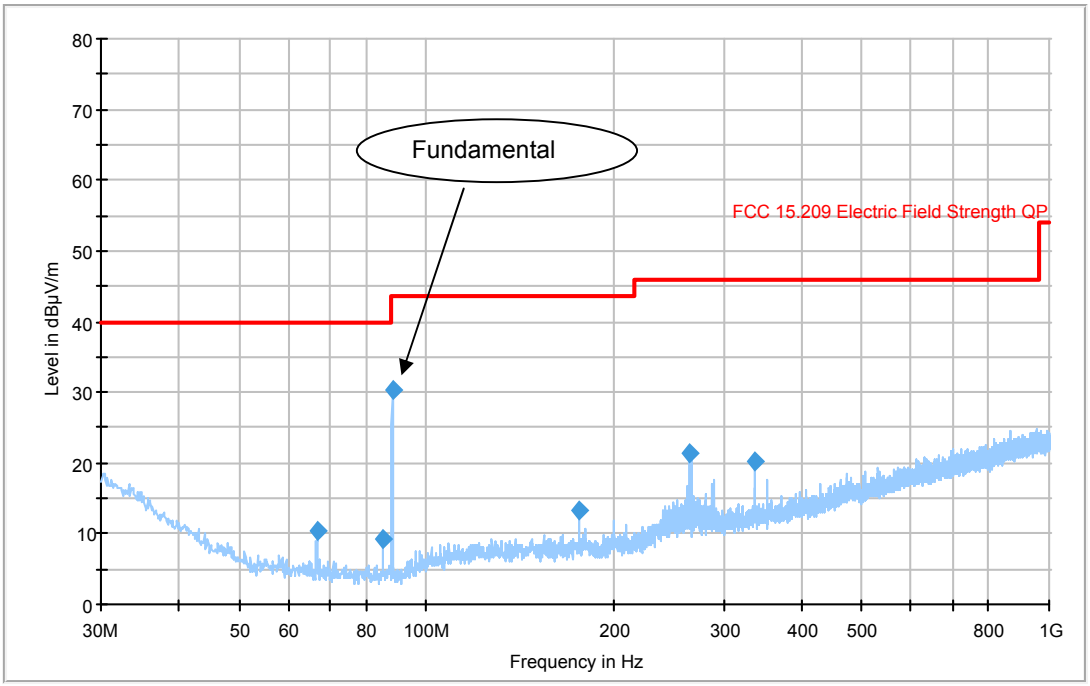
Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
31.212500	29.3	115.0	H	77.0	-9.2	40.0	10.7
631.848575	29.3	111.0	H	268.0	-7.7	46.0	16.7
901.936175	28.8	243.0	H	194.0	-3.8	46.0	17.2
196.112500	26.2	109.0	H	99.0	-17.3	43.5	17.3
336.035000	21.3	115.0	H	246.0	-4.5	46.0	24.7

3) Test Mode: Transmitting at 107.9 MHz (High Channel) Powered by Adapter



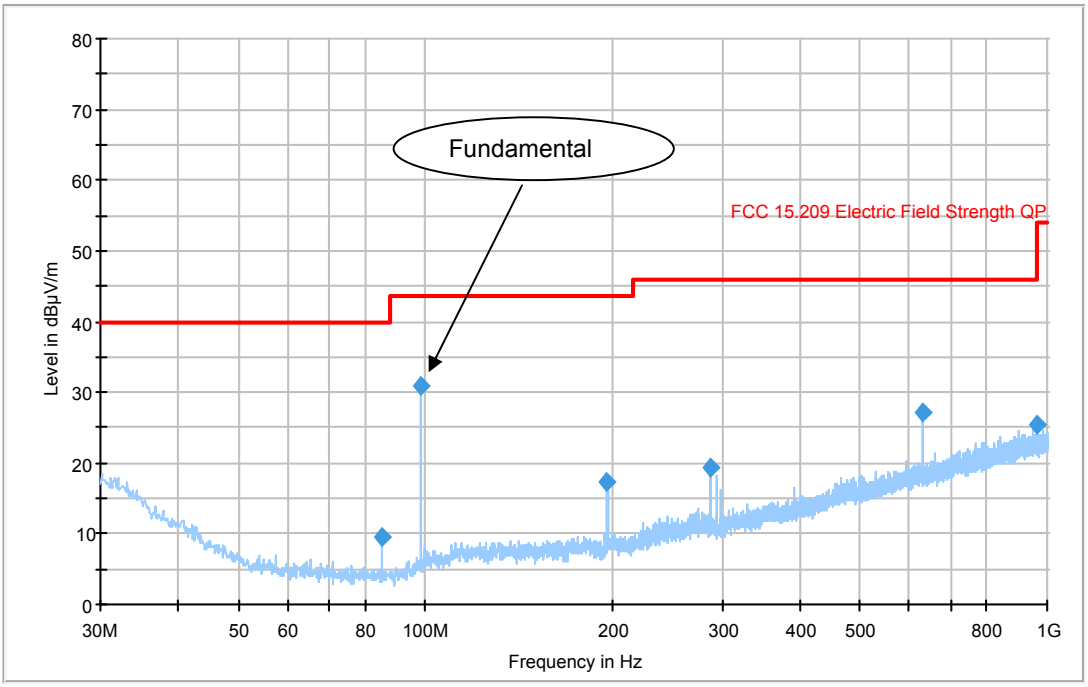
Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
30.970000	29.0	387.0	H	116.0	-9.3	40.0	11.0
215.808700	28.9	155.0	H	339.0	-17.3	43.5	14.6
831.111075	29.7	109.0	V	114.0	-4.9	46.0	16.3
384.043175	26.1	116.0	H	45.0	-12.8	46.0	19.9
964.352500	29.5	109.0	H	101.0	-6.9	53.9	24.4

4) Test Mode: Transmitting at 88.1 MHz (Low Channel) Powered by Battery



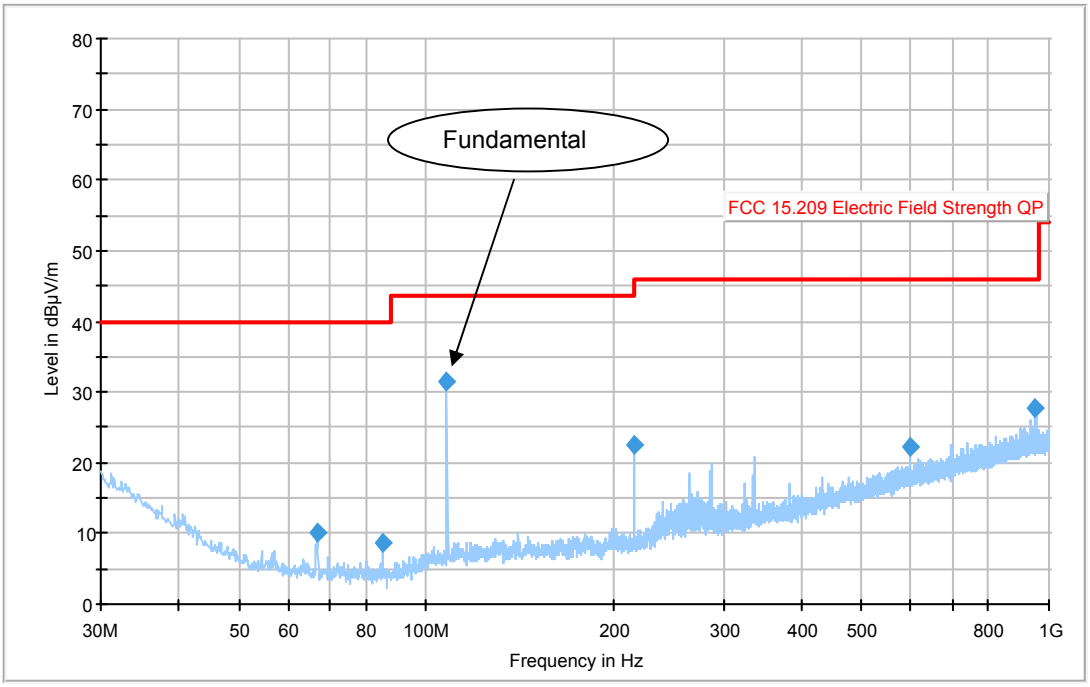
Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
264.255000	21.4	143.0	H	136.0	-9.6	46.0	24.6
336.035000	20.2	151.0	H	326.0	-3.9	46.0	25.8
66.860000	10.5	110.0	V	181.0	-21.0	40.0	29.5
176.227500	13.4	150.0	H	148.0	-11.3	43.5	30.1
85.000250	9.1	115.0	V	182.0	-19.1	40.0	30.9

5) Test Mode: Transmitting at 98.1 MHz (Middle Channel) Power by Battery



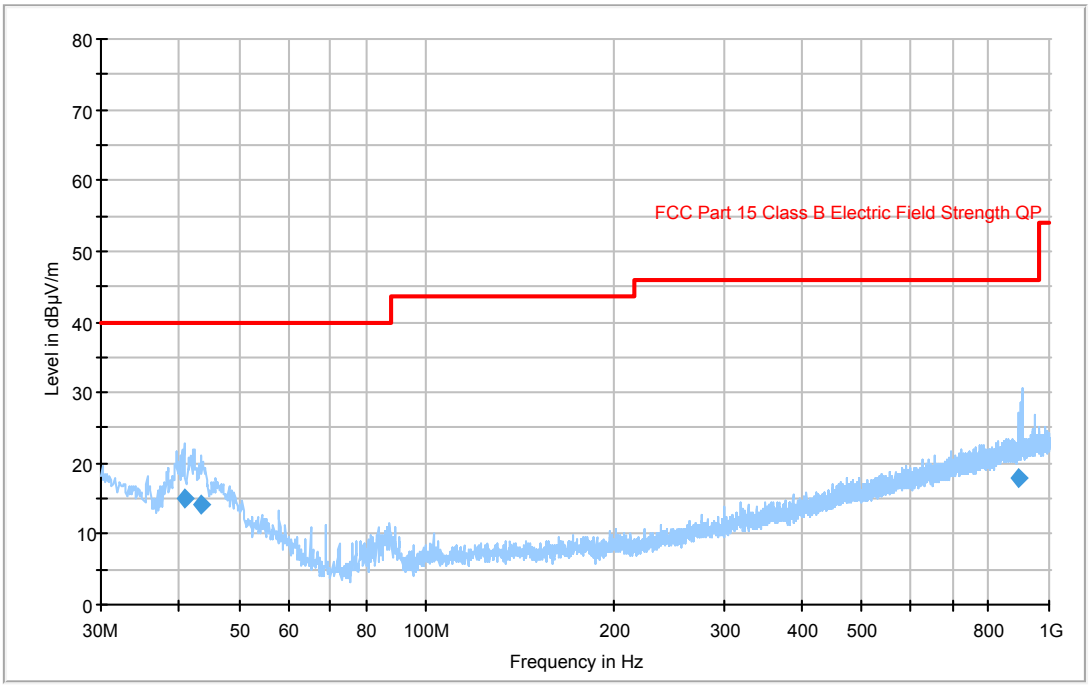
Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
631.993775	27.1	144.0	H	240.0	-7.7	46.0	18.9
196.112500	17.3	109.2	H	101.0	-17.3	43.5	26.2
288.020000	19.3	154.0	H	231.0	-19.4	46.0	26.7
963.988750	25.5	235.0	H	198.0	-2.9	53.9	28.4
85.000250	9.4	102.0	V	141	-18.9	40.0	30.6

6) Test Mode: Transmitting at 107.9 MHz (High Channel) Power by Battery



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
952.010100	27.6	164.0	V	207.0	-3.0	46.0	18.4
215.755000	22.5	155.0	H	338.0	-17.3	43.5	21.0
598.541250	22.3	121.0	H	250.0	-5.7	46.0	23.7
66.860000	10.2	110.0	V	212.0	-19.13	40.0	29.8
85.000250	8.7	210.0	V	251.1	-19.96	40.0	31.3

7) Test Mode: Charging



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Antenna Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
40.842400	14.9	106.0	V	196.0	-15.9	40.0	25.1
43.466025	14.1	138.0	V	111.0	-17.3	40.0	25.9
894.179575	18.0	121.0	V	36.0	-3.9	46.0	28.0

Field Strength of Fundamental

Frequency (MHz)	S.A. Reading (dBμV)	Detector PK/QP/AV	Direction Degree	Test Antenna			Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBμV/m)	FCC Part 15.239		
				Height (cm)	Polar (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	Note
Powered by Adapter												
107.9	53.83	PK	131	110	H	10.9	0.52	25.7	39.5	68	28.2	Fund.
88.1	56.86	PK	120	210	H	5.5	0.44	25.9	36.9	68	31.1	Fund.
98.1	51.84	PK	130	115	V	6.6	0.47	25.8	33.1	68	34.9	Fund.
107.9	53.33	AV	131	110	H	10.9	0.52	25.7	39.0	48	9.0	Fund.
88.1	56.56	AV	120	210	H	5.5	0.44	25.9	36.6	48	11.4	Fund.
98.1	51.24	AV	130	115	V	6.6	0.47	25.8	32.5	48	15.5	Fund.
Powered by Battery												
107.9	45.93	PK	170	280	H	10.9	0.52	25.7	31.6	68	36.4	Fund.
98.1	49.94	PK	130	215	V	6.6	0.47	25.8	31.2	68	36.8	Fund.
88.1	50.46	PK	345	355	H	5.5	0.44	25.9	30.5	68	37.5	Fund.
107.9	45.43	AV	170	280	H	10.9	0.52	25.7	31.1	48	16.9	Fund.
98.1	49.54	AV	130	215	V	6.6	0.47	25.8	30.8	48	17.2	Fund.
88.1	50.16	AV	345	355	H	5.5	0.44	25.9	30.2	48	17.8	Fund.

Note: Fund. - Fundamental

Above 1 GHz

Frequency (MHz)	S.A. Reading (dBμV)	Detector PK/QP/AV	Direction Degree	Test Antenna			Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBμV/m)	FCC Part 15.239/209		
				Height (cm)	Polar (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	Note
High Channel (107.9 MHz) Powered by Adapter												
1881.7	39.61	AV	0	122	V	29.0	5.00	34.2	39.41	54	14.59	spurious
1881.7	39.61	AV	182	151	H	29.0	5.00	34.2	39.09	54	14.91	spurious
1723.4	40.53	AV	360	150	V	26.5	4.75	34.7	37.08	54	16.92	spurious
1723.4	39.56	AV	271	160	H	26.5	4.75	34.7	36.11	54	17.89	spurious
1881.7	49.22	PK	182	151	H	29.0	5.00	34.2	49.02	74	24.98	spurious
1881.7	49.08	PK	0	122	V	29.0	5.00	34.2	48.88	74	25.12	spurious
1723.4	48.43	PK	271	160	H	26.5	4.75	34.7	44.98	74	29.02	spurious
1723.4	48.32	PK	360	150	V	26.5	4.75	34.7	44.87	74	29.13	spurious
High Channel (107.9 MHz) Powered by Battery												
1881.7	39.15	AV	0	152	H	29.0	5.00	34.2	38.95	54	15.05	spurious
1881.7	39.14	AV	352	125	V	29.0	5.00	34.2	38.94	54	15.06	spurious
1723.4	39.12	AV	92	200	H	26.5	4.75	34.7	35.67	54	18.33	spurious
1723.4	38.96	AV	183	155	V	26.5	4.75	34.7	35.51	54	18.49	spurious
1881.7	49.20	PK	0	152	H	29.0	5.00	34.2	49.00	74	25.00	spurious
1881.7	48.11	PK	352	125	V	29.0	5.00	34.2	47.91	74	26.09	spurious
1723.4	48.26	PK	92	200	H	26.5	4.75	34.7	44.81	74	29.19	spurious
1723.4	48.19	PK	183	155	V	26.5	4.75	34.7	44.74	74	29.26	spurious

CFR47 §15.239(a) – BAND EDGES

Applicable Standard

Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88–108 MHz.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100224	2008-11-07	2009-11-06
HP	Amplifier	8447E	1937A01046	2008-11-15	2009-11-15
Sunol Sciences	Bilog Antenna	JB1	A040904-2	2008-08-14	2009-08-14

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

Test Procedure

With the EUT's antenna attached, the EUT's radiated emission power was received by the test antenna which was connected to the spectrum analyzer with the START and STOP frequencies set to the EUT's operation band.

Test Data

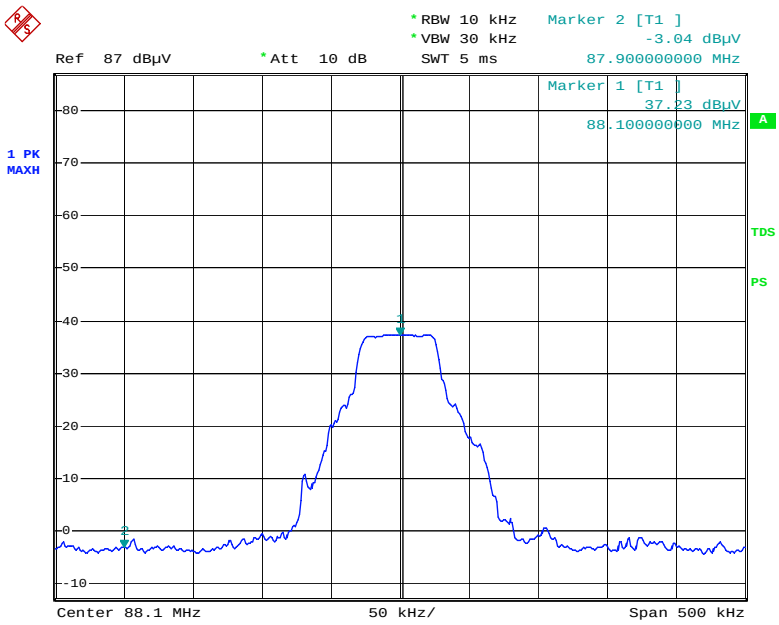
Test Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56%
ATM Pressure:	100.2kPa

The testing was performed by Sula Huang on 2009-05-04.

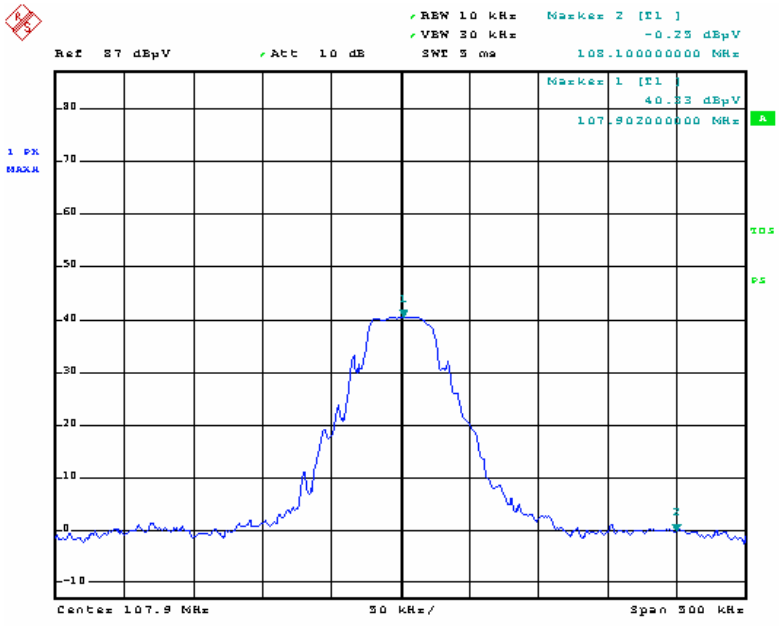
Please refer to the following plots

The tuning range of EUT has been checked, the tuning controls were manually adjusted to verified and found that the tuning range was within 88-108 MHz..



band left

Date: 9.MAY.2009 22:52:49



band right

Date: 9.MAY.2009 22:59:14

CFR47 §15.239(A) – EMISSION BANDWIDTH

Applicable Standard

Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88–108 MHz.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100224	2008-11-07	2009-11-06
HP	Amplifier	8447E	1937A01046	2008-11-15	2009-11-15
Sunol Sciences	Bilog Antenna	JB1	A040904-2	2008-08-14	2009-08-14

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed per the NVLAP requirements, traceable to NIST.

Test Procedure

With the EUT's antenna attached, the EUT's radiated emission power was received by the test antenna which was connected to the spectrum analyzer with the START and STOP frequencies set to the EUT's operation band.

Test Data

Test Environmental Conditions

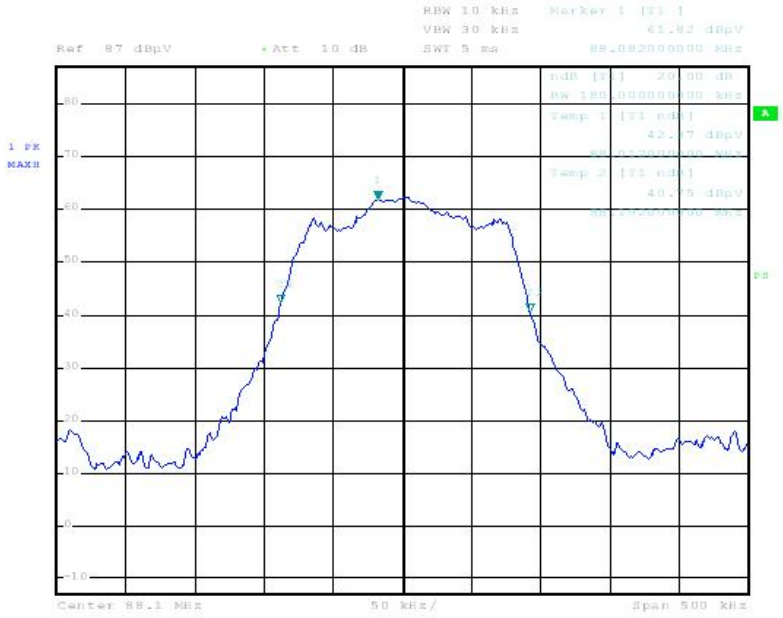
Temperature:	25 ° C
Relative Humidity:	56%
ATM Pressure:	100.2kPa

The testing was performed by Sula Huang on 2009-05-22.

Test Mode: Transmitting

Please refer to the following plots.

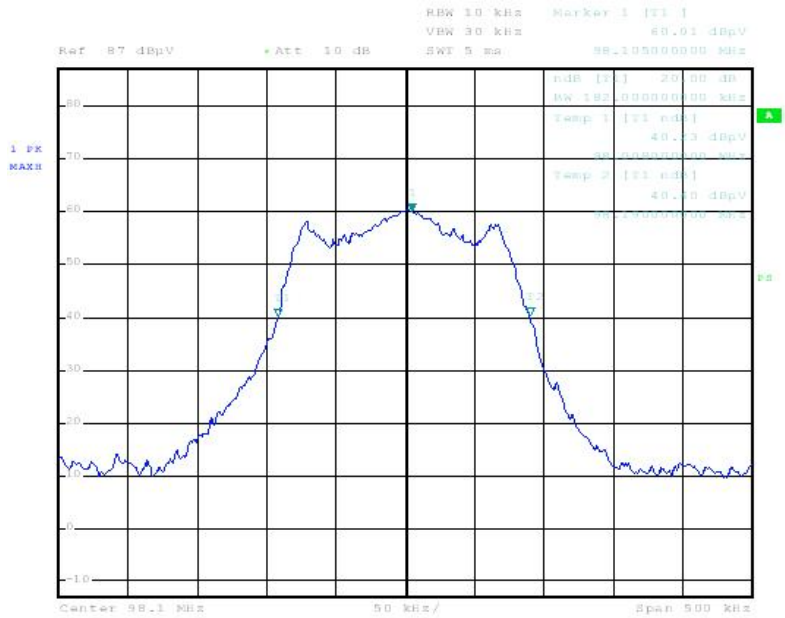
Low Channel



low channel

Date: 22.MAY.2009 11:57:12

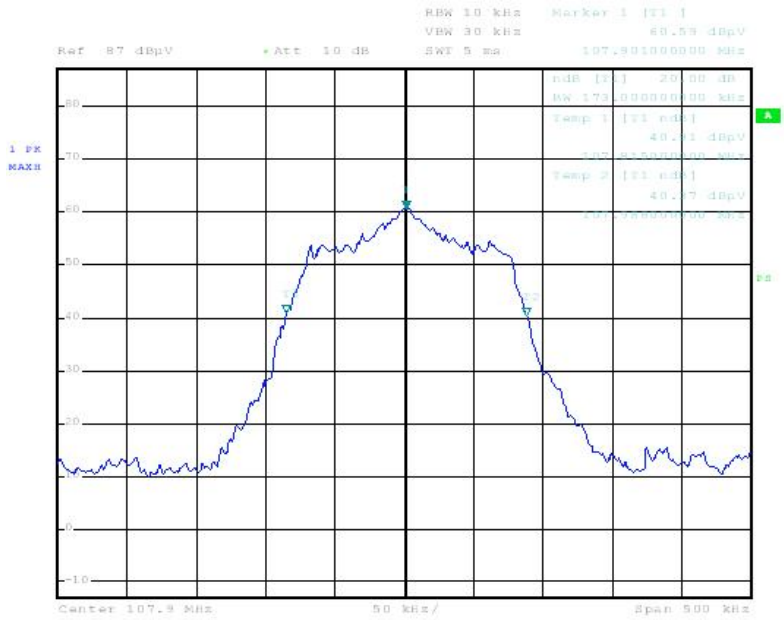
Middle Channel



middle channel

Date: 22.MAY.2009 11:39:56

High Channel



high channel

Date: 22.MAY.2009 11:02:01

******* END OF REPORT *******