



FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

CDMA MOBILE PHONE

MODEL NUMBER: C5133

FCC ID: V65C5133

REPORT NUMBER: 12U14622

ISSUE DATE: 2012-09-21

Prepared for
KYOCERA COMMUNICATIONS, INC.
8611 BALBOA AVENUE
SAN DIEGO
CA, 92123, USA

Prepared by
UL LLC
1285 WALT WHITMAN RD.
MELVILLE, NY 11747, U.S.A.
TEL: (631) 271-6200
FAX: (877) 854-3577

NVLAP[®]
NVLAP LAB CODE 100255-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	9/21/12	Initial Issue	M. Antola

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION	5
4. CALIBRATION AND UNCERTAINTY	5
4.1. <i>MEASURING INSTRUMENT CALIBRATION</i>	5
4.2. <i>SAMPLE CALCULATION</i>	5
4.3. <i>MEASUREMENT UNCERTAINTY</i>	5
5. EQUIPMENT UNDER TEST	6
5.1. <i>DESCRIPTION OF EUT</i>	6
5.2. <i>MAXIMUM OUTPUT POWER</i>	6
5.3. <i>DESCRIPTION OF AVAILABLE ANTENNAS</i>	6
5.4. <i>SOFTWARE AND FIRMWARE</i>	6
5.5. <i>WORST-CASE CONFIGURATION AND MODE</i>	6
5.6. <i>DESCRIPTION OF TEST SETUP</i>	7
6. TEST AND MEASUREMENT EQUIPMENT	9
7. RADIATED TEST RESULTS.....	11
7.1. <i>LIMITS AND PROCEDURE</i>	11
7.2. <i>TRANSMITTER ABOVE 1 GHz</i>	12
7.2.1. TRANSMITTER ABOVE 1 GHz FOR 802.11b MODE IN THE 2.4 GHz BAND ..	12
7.2.2. TRANSMITTER ABOVE 1 GHz FOR 802.11g MODE IN THE 2.4 GHz BAND ..	17
7.2.3. TRANSMITTER ABOVE 1 GHz FOR 802.11n HT20 MODE IN THE 2.4 GHz BAND	22
7.3. <i>WORST-CASE BELOW 1 GHz</i>	27
8. AC POWER LINE CONDUCTED EMISSIONS	29
9. SETUP PHOTOS.....	35

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: KYOCERA COMMUNICATIONS, INC.
8611 BALBOA AVENUE
SAN DIEGO, CA, 92123, USA

EUT DESCRIPTION: CDMA MOBILE PHONE

MODEL: C5133

SERIAL NUMBER: 268435457816728224

DATE TESTED: 2012-09-17 to 2012-09-21

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards, using test results reported in the test report documents referenced below and/or documentation furnished by the applicant. All indications of Pass/Fail in this report are opinions expressed by UL LLC based on interpretations of these calculations. The results show that the equipment is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation, as described by the referenced documents. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL By:



Bob DeLisi
WiSE Principle Engineer
UL LLC

Tested By:



Mike Antola
WiSE Lead Engineer
UL LLC

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003, FCC CFR 47 Part 2 and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 1285 Walt Whitman Rd. Melville, NY 11747, USA.

UL Melville is accredited by NVLAP, Laboratory Code 100255-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/1002550.htm>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	$\pm 3.3 \text{ dB}$
Radiated Disturbance, 30 to 1000 MHz	$\pm 4.00 \text{ dB}$

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an 802.11b/g/n transceiver.

The radio module is manufactured by Qualcomm.

5.2. MAXIMUM OUTPUT POWER

Refer to the manufacturers RF conducted report for measured maximum conducted output power values. Only radiated testing was performed as part of this investigation per request.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an integral antenna, with a maximum gain of -1.5 dBm.

5.4. SOFTWARE AND FIRMWARE

The Kernel version was 3.0.8-perf, release@release #1 and utilized Android version 4.0.4.

The EUT Build number was C5133-eng 4.0.4 IML77, release.20120806.113812 release-keys.

The Software version was 0.200NV, the Hardware version was 0101 and the Baseband version was 0.200NV.

The test utility software used during testing was FCC Test Application.

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario. The worse-case data rates were determined to be 11Mbps for 802.11b mode, 9 Mbps for 802.11g mode and MCS7 for 802.11n mode. Note: These data rates were determined by measuring the maximized radiated field strength at the fundamental frequency in each mode/modulation.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	USB	1	USB	Unshielded	<3M	
2	Headphone	1	Audio	Unshielded	<3M	

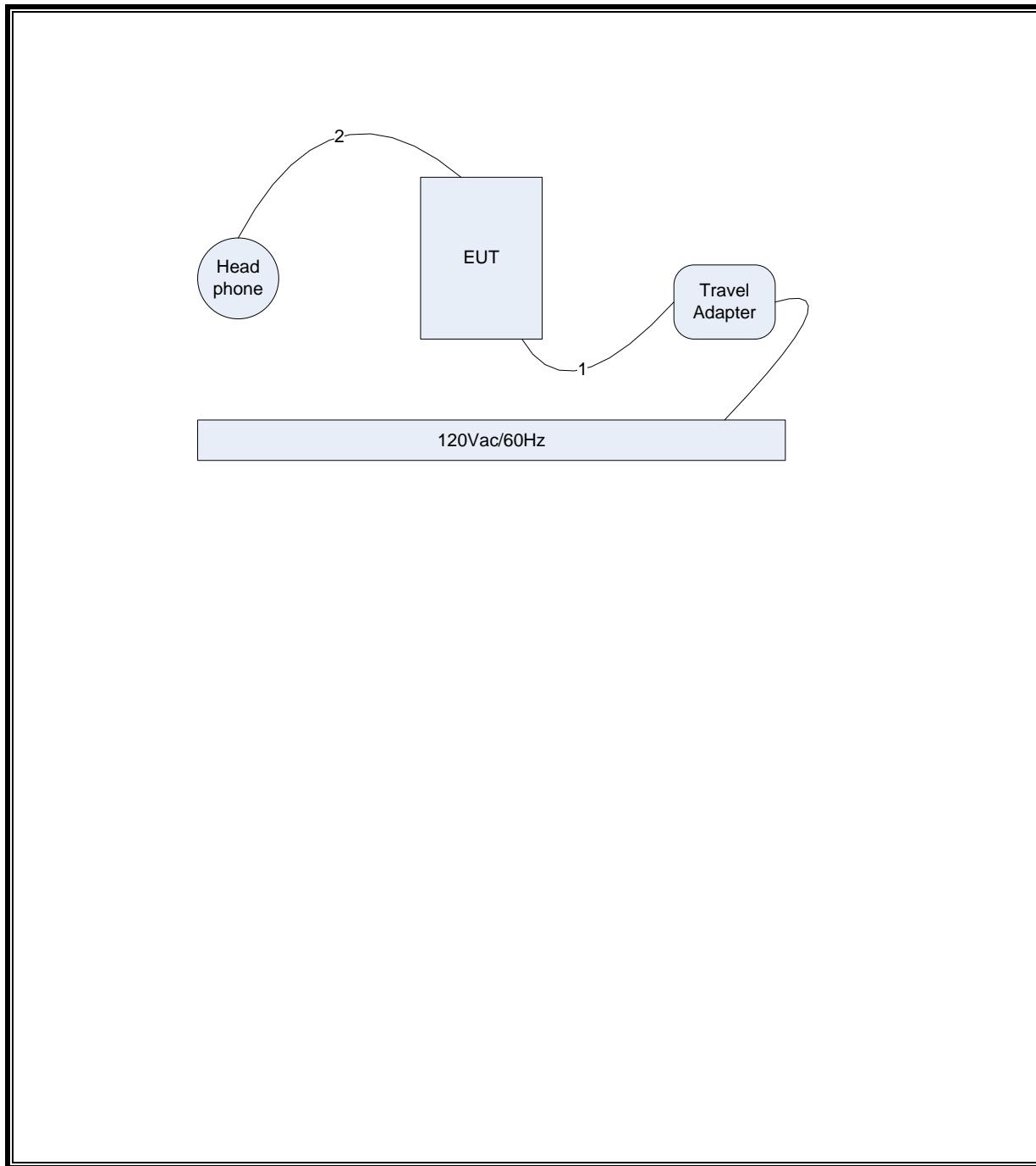
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	USB	1	USB	Unshielded	<3M	
2	Headphone	1	Audio	Unshielded	<3M	

TEST SETUP

The EUT is a stand-alone device.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Radiated Emissions					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
30-1000MHz					
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081	2012-01-30	2013-01-30
Bicon Antenna	Schaffner	VBA6106A	54	2012-04-10	2013-04-10
Log-P Antenna	Schaffner	UPA6109	44067	2012-05-16	2013-05-16
Switch Driver	HP	11713A	ME7A-627	N/A	N/A
System Controller	Sunol Sciences	SC99V	44396	N/A	N/A
Camera Controller	Panasonic	WV-CU254	44395	N/A	N/A
RF Switch Box	UL	1	44398	N/A	N/A
Measurement Software	UL	Version 9.5	44740	N/A	N/A
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2010-12-07	2012-12-07
Multimeter	Fluke	87V	64386	2012-02-01	2013-02-28
Above 1GHz (Band Optimized System)					
EMI Receiver	Rohde & Schwarz	ESIB40	34968	2012-03-06	2013-03-06
Horn Antenna (1-2 GHz)	ETS	3161-01 (26°)**	51442	2008-03-28	See * below
Horn Antenna (2-4 GHz)	ETS	3161-02 (22°)**	48107	2007-09-27	See * below
Horn Antenna (4-8 GHz)	ETS	3161-03 (22°)**	48106	2007-09-27	See * below
Horn Antenna (8-12 GHz)	ETS	3160-07 (26°)**	8933	2008-11-24	See * below
Horn Antenna (12-18 GHz)	ETS	3160-08 (26°)**	8932	2007-09-27	See * below
Horn Antenna (18-26.5 GHz)	ETS	3160-09 (27°)**	8947	2007-09-26	See * below
Signal Path Controller	HP	11713A	50250	N/A	N/A
Gain Controller	HP	11713A	50251	N/A	N/A
RF Switch / Preamp Fixture	UL	BOMS1	50249	N/A	N/A
System Controller	UL	BOMS2	50252	N/A	N/A
Measurement Software	UL	Version 9.5	44740	N/A	N/A
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	4268	2010-12-07	2012-12-07
Multimeter	Fluke	87V	64386	2012-02-01	2013-02-28

* - Note: As allowed by the calibration standard ANSI C63.4 Section 4.4.2, standard gain horns need only a one-time calibration. Only if physical damage occurs will the horn antenna require re-calibration.

Gain standard horn antennas (sometimes called standard gain horn antennas) need not be calibrated beyond that which is provided by the manufacturer unless they are damaged or deterioration is suspected, or they are used at a distance closer than $2D^2/\lambda$. Gain standard horn antennas have gains that are fixed by their dimensions and dimensional tolerances.

** - Number in parentheses denotes antenna beam width.

Conducted Emissions					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
Spectrum Analyzer	Agilent	E7402A	ME5B-123	2012-02-01	2013-02-28
Preamp (10kHz - 1.3GHz)	HP	8447D	ME7A-758	2012-02-01	2013-02-28
LISN	Solar	9252-50-R-24-BNC	47367	2012-02-03	2013-02-28
Switch Driver	HP	11713A	44403	N/A	N/A
RF Switch Box	UL	2	44400	N/A	N/A
Measurement Software	UL	Version 9.5	44743	N/A	N/A
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43736	2010-12-07	2012-12-07
Multimeter	Fluke	87V	64386	2012-02-01	2013-02-28

7. RADIATED TEST RESULTS

7.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 kHz for average measurements.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

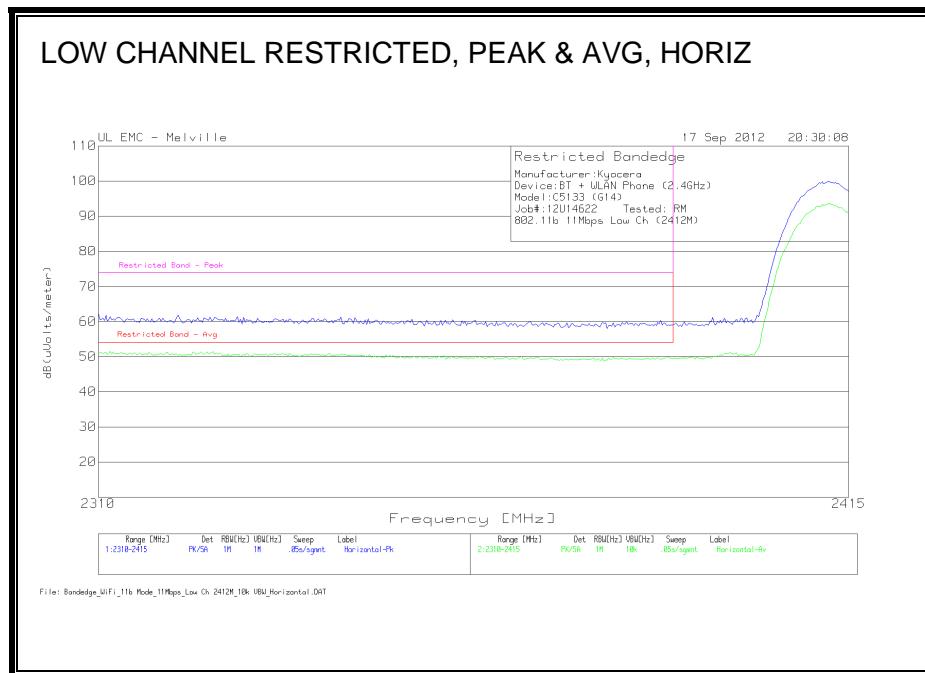
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

Note: For bandedge measurements, a 10 kHz VBW was used during testing.

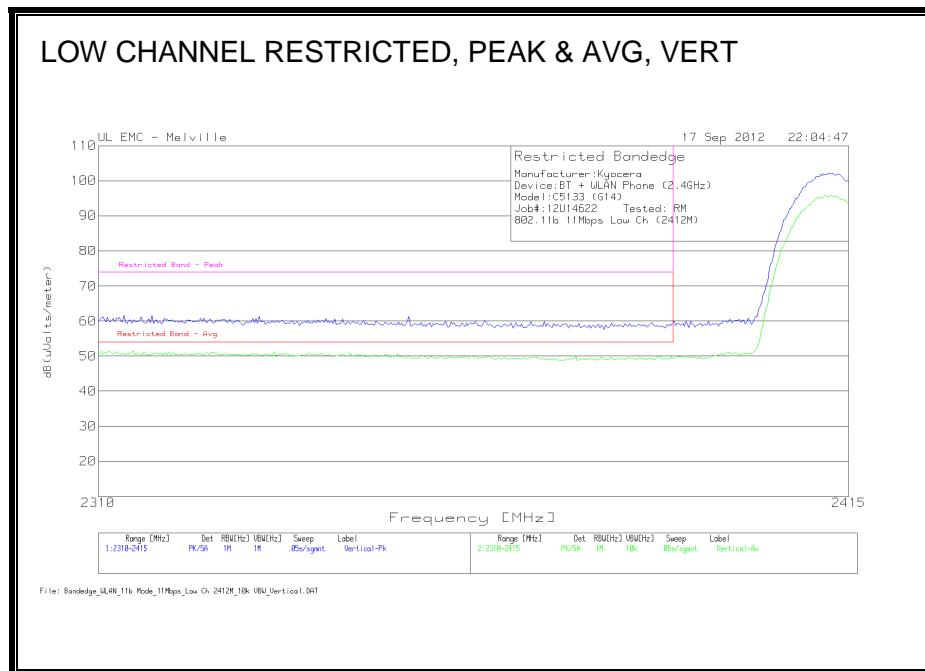
7.2. TRANSMITTER ABOVE 1 GHz

7.2.1. TRANSMITTER ABOVE 1 GHz FOR 802.11b MODE IN THE 2.4 GHz BAND

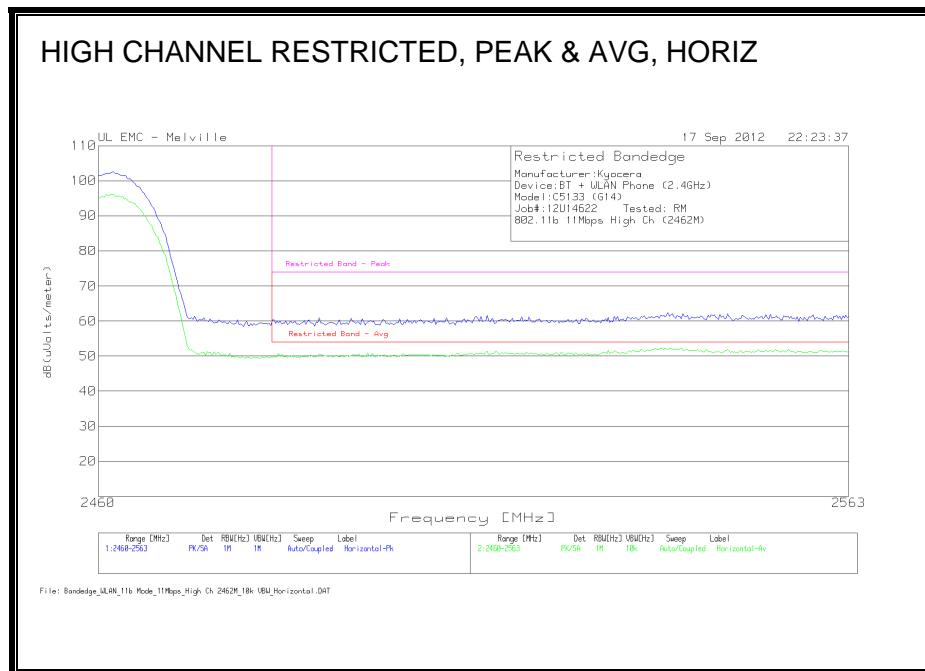
RESTRICTED BANDEdge (LOW CHANNEL, HORIZONTAL)



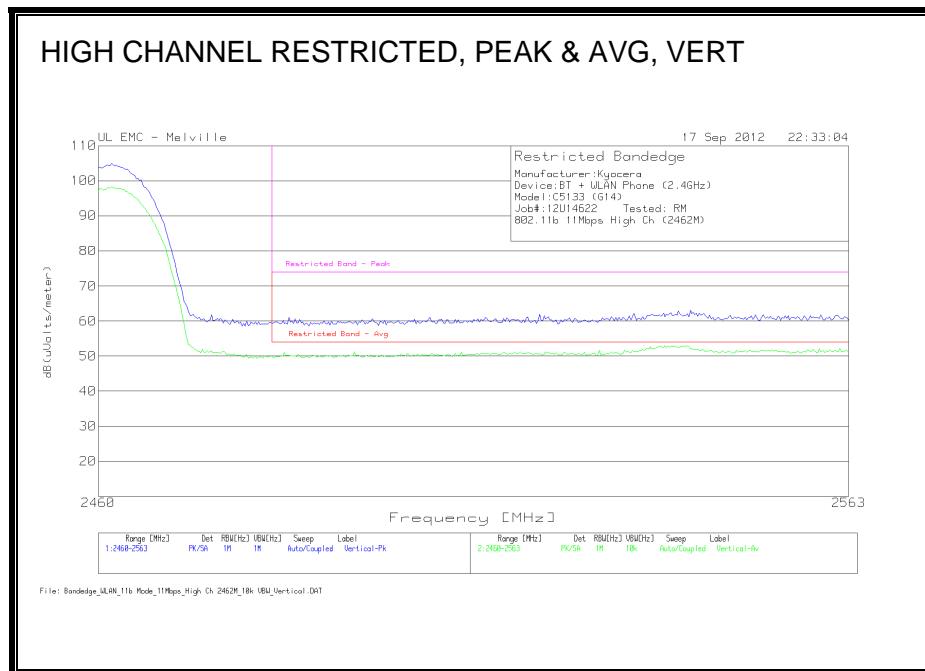
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



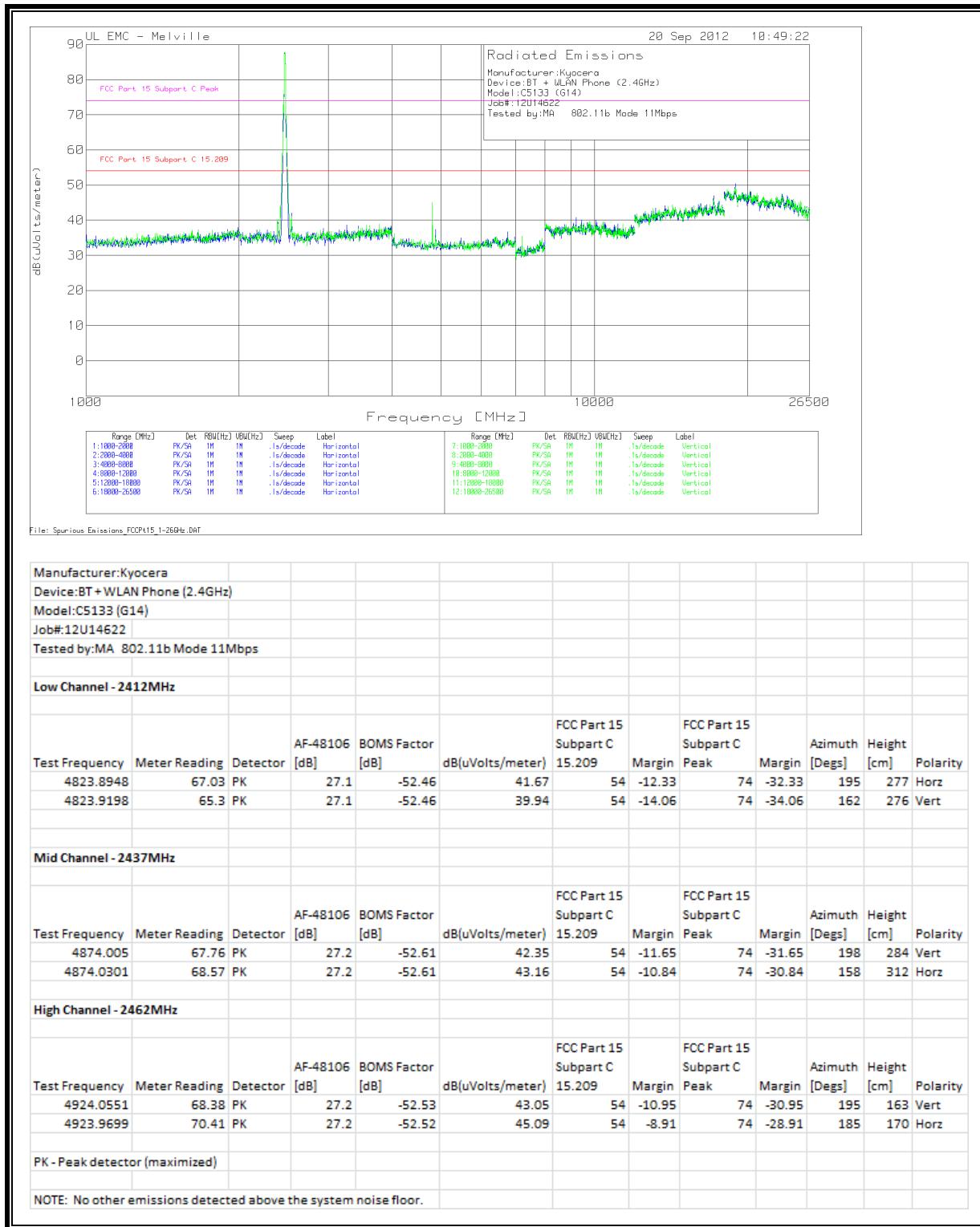
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

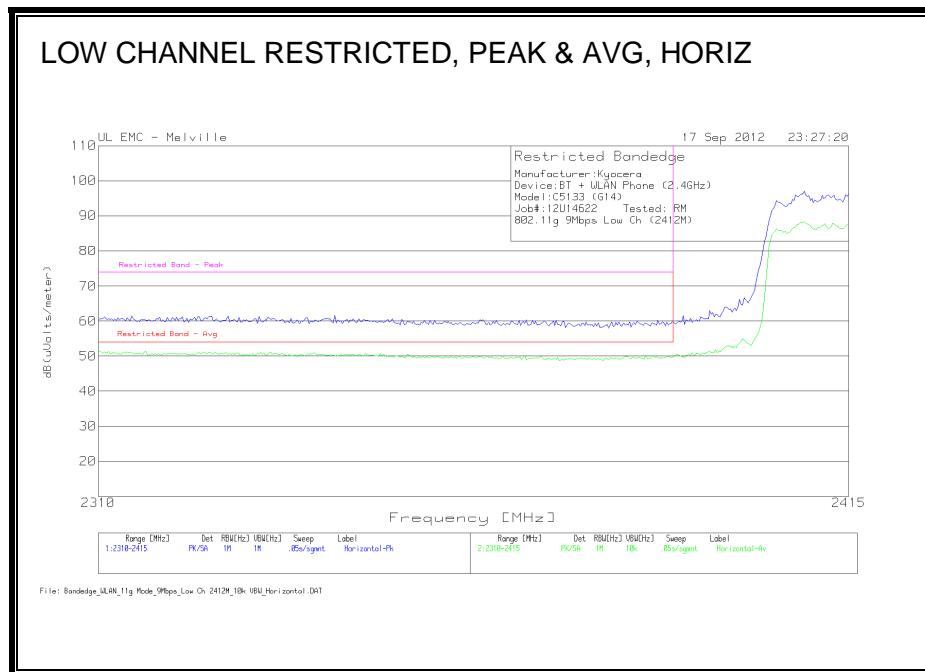


HARMONICS AND SPURIOUS EMISSIONS

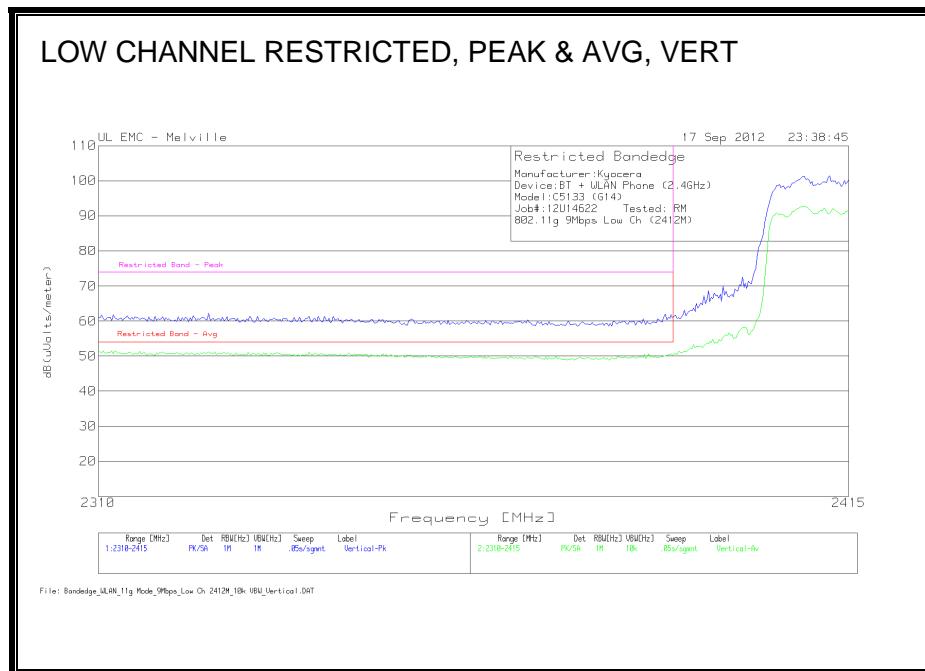


7.2.2. TRANSMITTER ABOVE 1 GHz FOR 802.11g MODE IN THE 2.4 GHz BAND

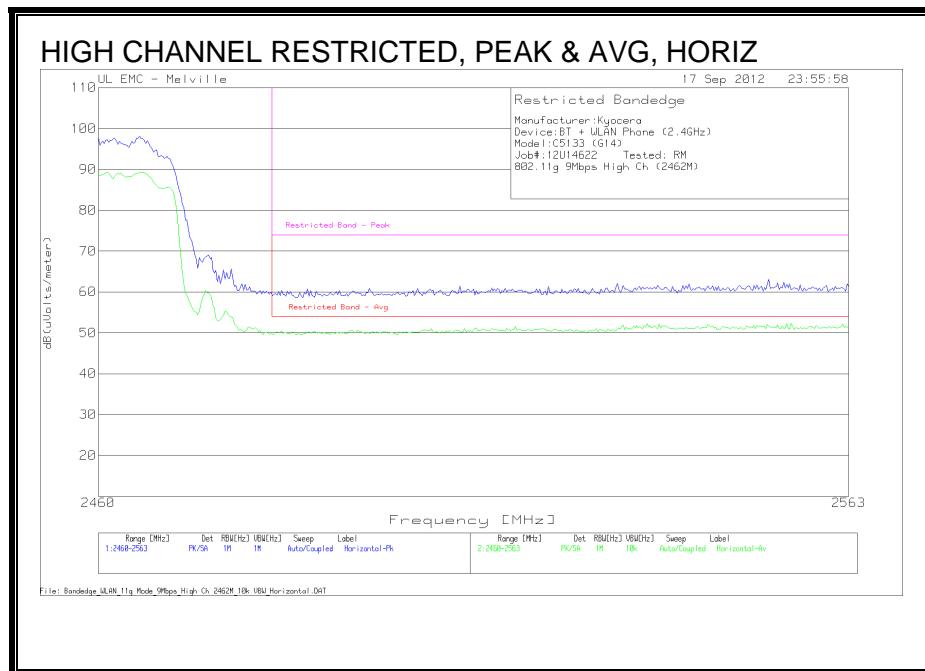
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



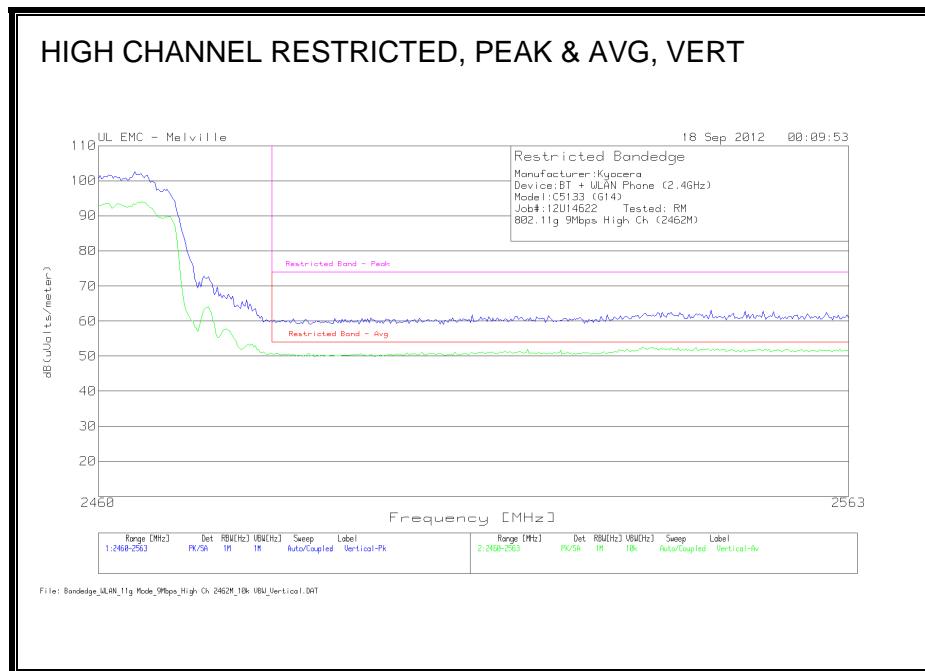
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



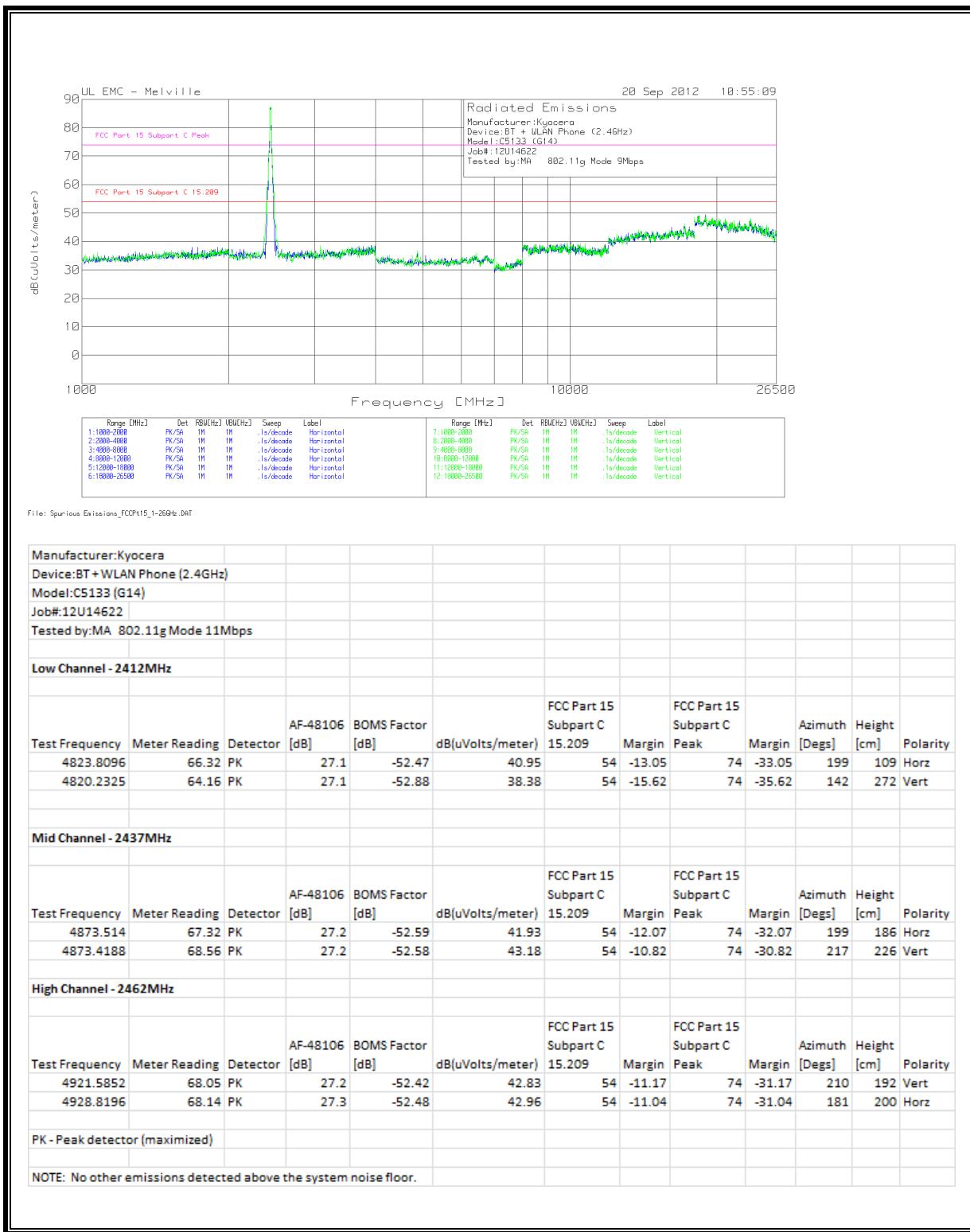
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

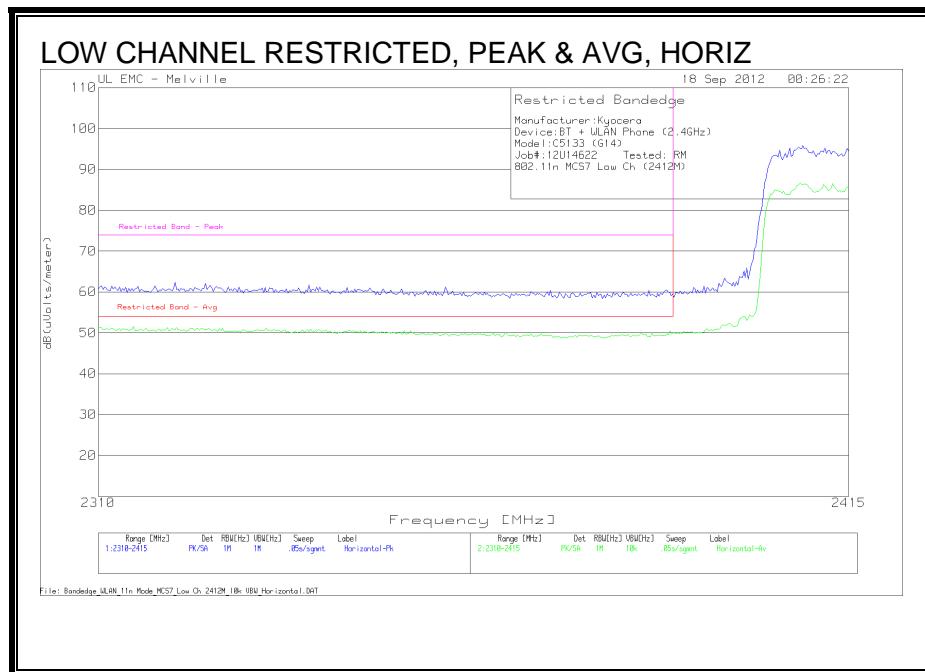


HARMONICS AND SPURIOUS EMISSIONS

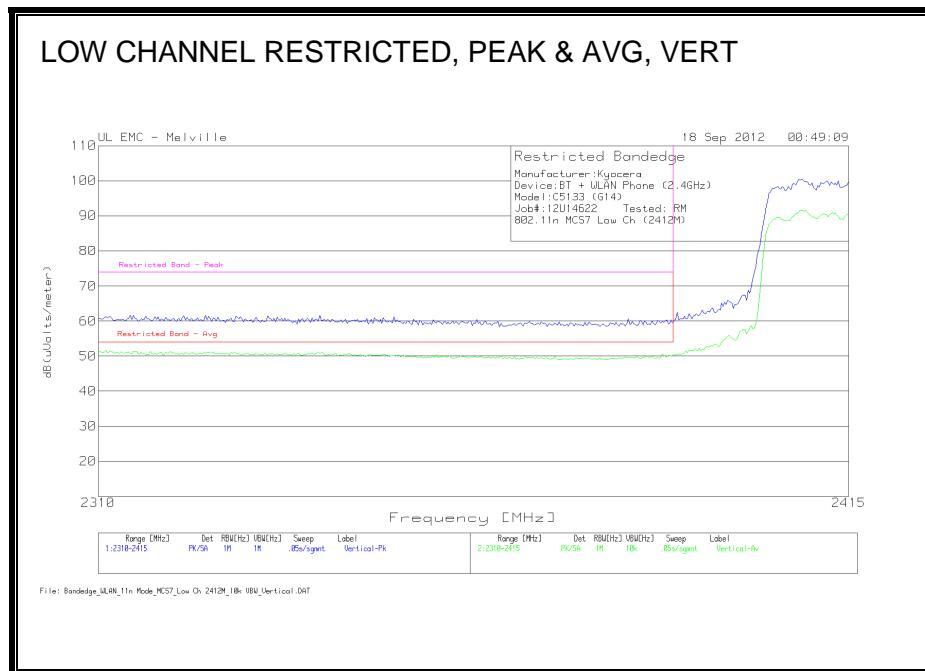


7.2.3. TRANSMITTER ABOVE 1 GHz FOR 802.11n HT20 MODE IN THE 2.4 GHz BAND

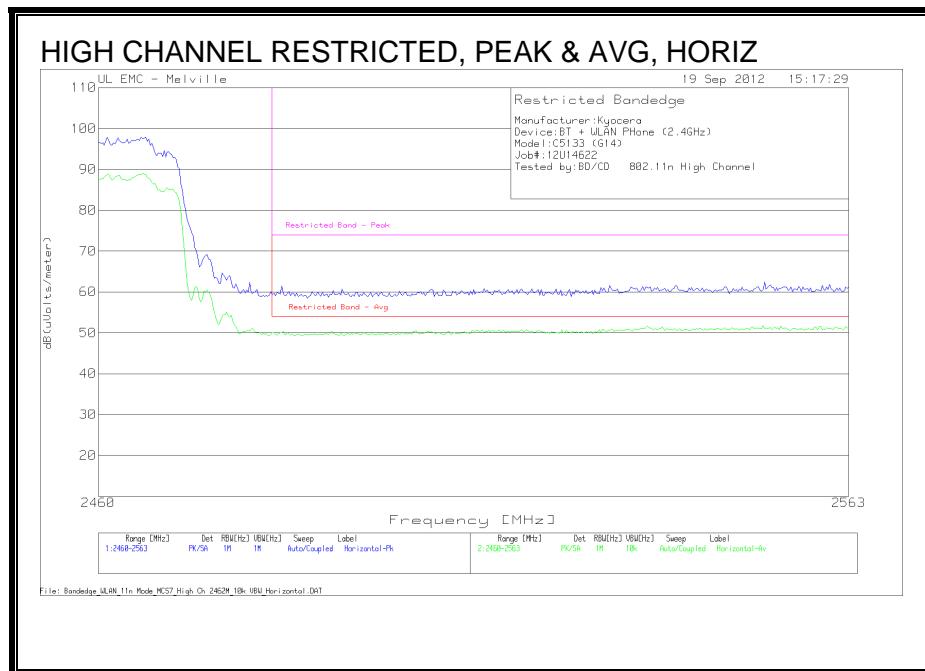
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



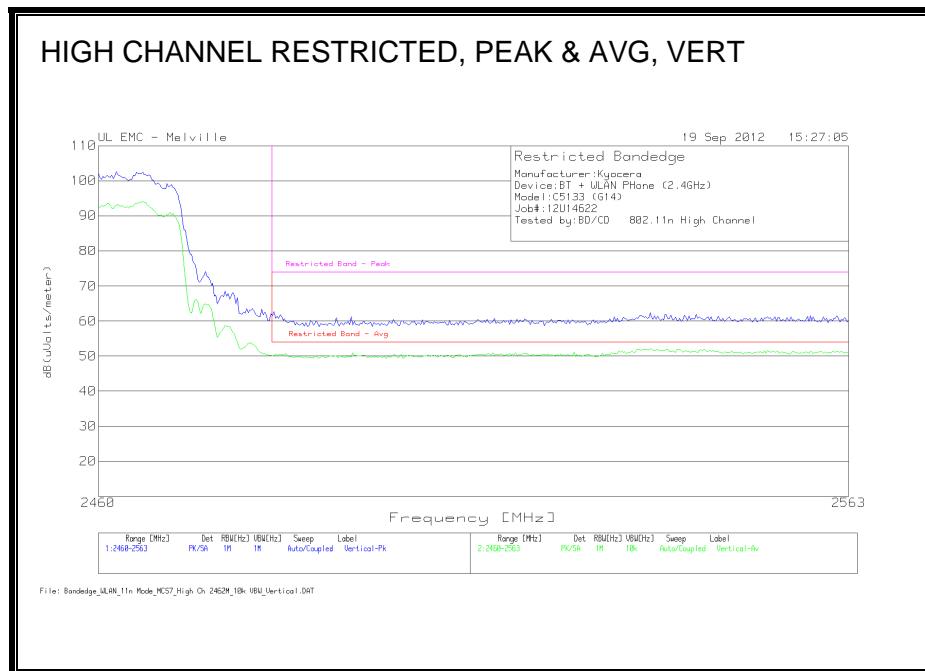
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



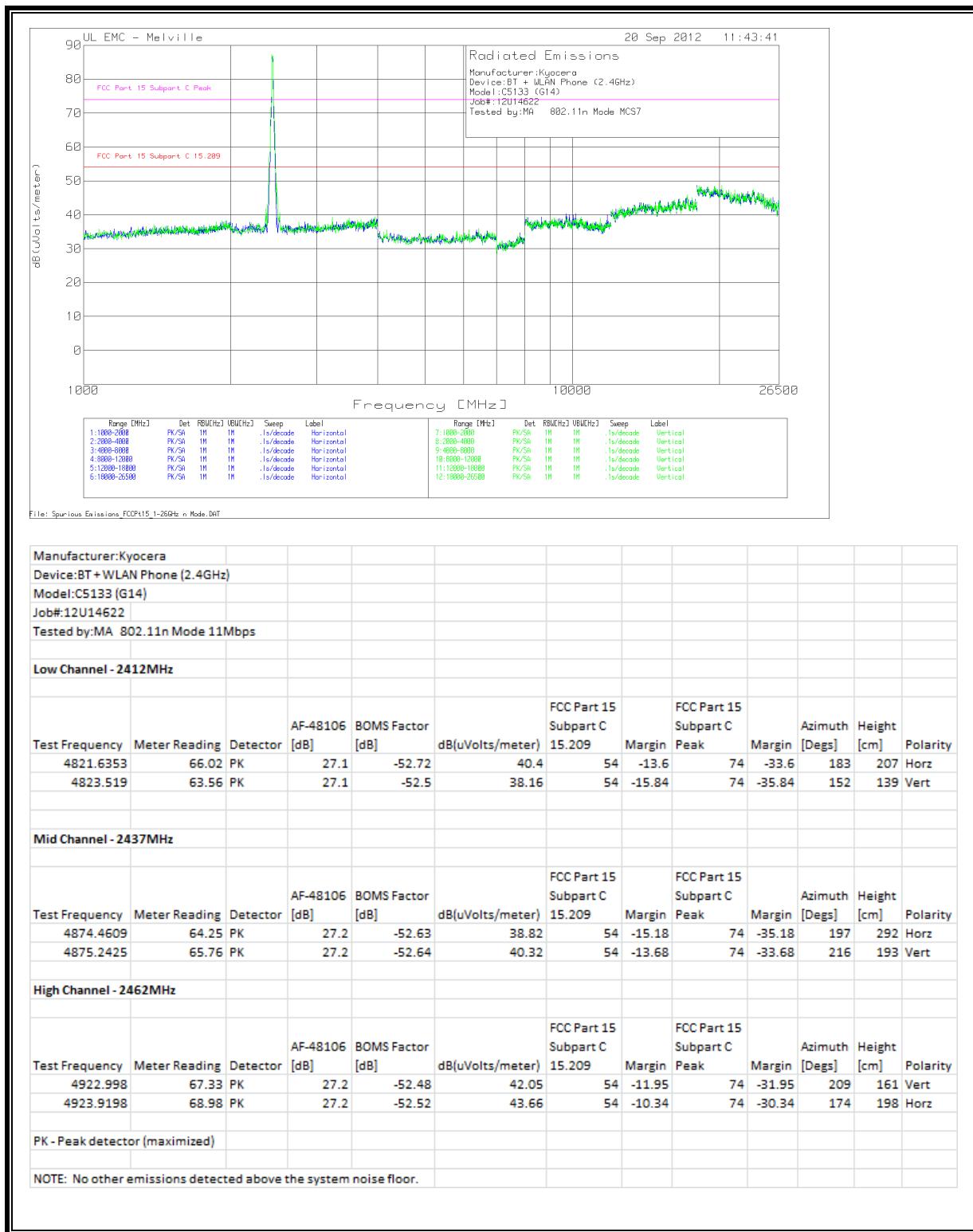
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

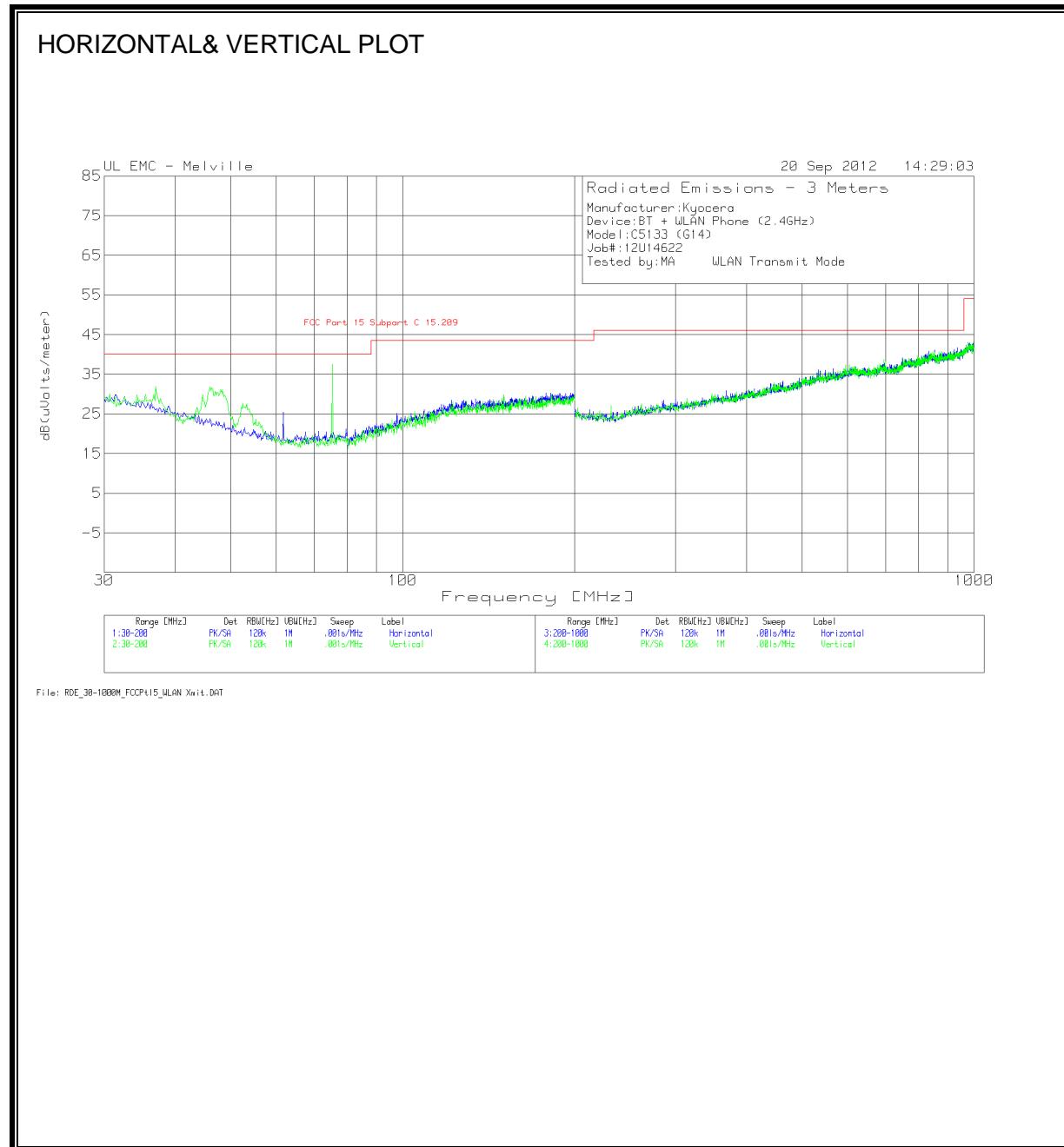


HARMONICS AND SPURIOUS EMISSIONS



7.3. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)



HORIZONTAL & VERTICAL DATA

8. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 [*]	56 to 46 [*]
0.5-5	56	46
5-30	60	50

^{*} Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

WORST EMISSIONS

NUMERICAL DATA – LINE 1

Manufacturer:Kyocera								
Device:BT+WLAN Phone (2.4GHz)								
Model:C5133 (G14)								
Job Number:12U14622								
Tested By:RM								
Line 1.15 -1MHz								
		47367 L1		FCC Part 15		FCC Part 15		
Test Frequency	Meter Reading	Detector	[dB]	[dB(uVolts)]	Class B QPk	Margin	Class B Avg	Margin
0.15233	74.28	PK	-17	57.28	65.9	-8.62	55.9	1.38
0.15382	74.76	PK	-17	57.76	65.8	-8.04	55.8	1.96
0.15551	74.91	PK	-17	57.91	65.7	-7.79	55.7	2.21
0.21318	66.27	PK	-17.6	48.67	63.1	-14.43	53.1	-4.43
0.21615	64.9	PK	-17.6	47.3	63	-15.7	53	-5.7
0.39234	59.13	PK	-18	41.13	58	-16.87	48	-6.87
0.4462	58.6	PK	-18.1	40.5	56.9	-16.4	46.9	-6.4
0.45319	61.06	PK	-18.1	42.96	56.8	-13.84	46.8	-3.84
0.46146	60.47	PK	-18.1	42.37	56.7	-14.33	46.7	-4.33
0.53058	57.32	PK	-18.1	39.22	56	-16.78	46	-6.78
Line 1.1 - 30MHz								
		47367 L1		FCC Part 15		FCC Part 15		
Test Frequency	Meter Reading	Detector	[dB]	[dB(uVolts)]	Class B QPk	Margin	Class B Avg	Margin
2.25867	58.44	PK	-18.2	40.24	56	-15.76	46	-5.76
2.85907	60.7	PK	-18.2	42.5	56	-13.5	46	-3.5
3.18459	60.5	PK	-18.2	42.3	56	-13.7	46	-3.7
3.50287	58.32	PK	-18.2	40.12	56	-15.88	46	-5.88
3.90072	58.53	PK	-18.2	40.33	56	-15.67	46	-5.67
4.47219	59.68	PK	-18.2	41.48	56	-14.52	46	-4.52
6.92442	62.2	PK	-17.9	44.3	60	-15.7	50	-5.7
7.51759	61.64	PK	-17.8	43.84	60	-16.16	50	-6.16
7.8431	62.43	PK	-17.8	44.63	60	-15.37	50	-5.37
8.11799	64.01	PK	-17.7	46.31	60	-13.69	50	-3.69
8.53031	65.48	PK	-17.7	47.78	60	-12.22	50	-2.22
8.70392	67.29	PK	-17.7	49.59	60	-10.41	50	-0.41
9.03667	64.58	PK	-17.7	46.88	60	-13.12	50	-3.12
9.11624	64.6	PK	-17.7	46.9	60	-13.1	50	-3.1
9.28985	67.84	PK	-17.6	50.24	60	-9.76	50	0.24
9.36942	64.99	PK	-17.6	47.39	60	-12.61	50	-2.61
9.6226	64.43	PK	-17.6	46.83	60	-13.17	50	-3.17
9.86131	63.95	PK	-17.6	46.35	60	-13.65	50	-3.65
10.21577	62.29	PK	-17.6	44.69	60	-15.31	50	-5.31
10.44001	61.6	PK	-17.6	44	60	-16	50	-6
6.6206	60.45	PK	-18	42.45	60	-17.55	50	-7.55
3.79945	56.92	PK	-18.2	38.72	56	-17.28	46	-7.28
4.21901	57.06	PK	-18.2	38.86	56	-17.14	46	-7.14
2.55525	56.34	PK	-18.2	38.14	56	-17.86	46	-7.86
3.14842	58.08	PK	-18.2	39.88	56	-16.12	46	-6.12
3.445	57.05	PK	-18.2	38.85	56	-17.15	46	-7.15
3.99476	57.6	PK	-18.2	39.4	56	-16.6	46	-6.6
8.47244	62.17	PK	-17.7	44.47	60	-15.53	50	-5.53
8.74732	64.59	PK	-17.7	46.89	60	-13.11	50	-3.11
10.15066	61.38	PK	-17.6	43.78	60	-16.22	50	-6.22
9.41282	62	PK	-17.6	44.4	60	-15.6	50	-5.6
PK - Peak detector								
Av - Average detector								

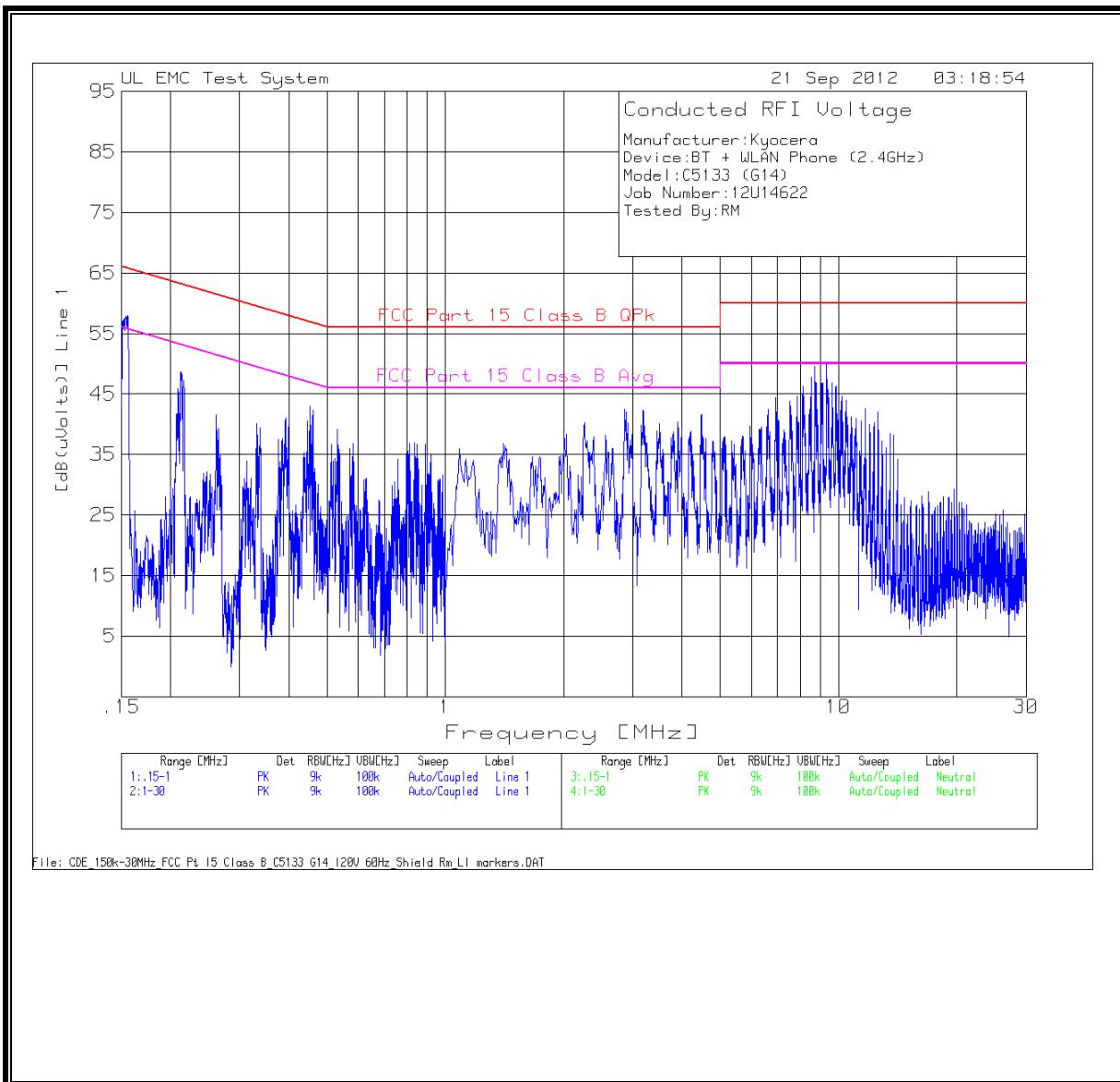
NUMERICAL DATA – LINE 1 (CONT)

Manufacturer:Kyocera							
Device:BT+WLAN Phone (2.4GHz)							
Model:C5133 (G14)							
Job Number:12U14622							
Tested By:RM							
Line 1.15 - 1MHz							
Test Frequency	Meter Reading	Detector	47367 L1 [dB]	FCC Part 15 [dB(uVolts)]	FCC Part 15 Class B QPk	FCC Part 15 Margin	FCC Part 15 Class B Avg
0.1538	55.53	Av	-17	38.53	65.79	-27.26	55.79
0.15471	55.33	Av	-17	38.33	65.74	-27.41	55.74
0.15509	55.66	Av	-17	38.66	65.72	-27.06	55.72
0.21383	49.85	Av	-17.6	32.25	63.06	-30.81	53.06
0.21483	50.1	Av	-17.6	32.5	63.02	-30.52	53.02
0.38732	49.53	Av	-18	31.53	58.12	-26.59	48.12
0.44773	50.1	Av	-18.1	32	56.92	-24.92	46.92
0.45171	49.92	Av	-18.1	31.82	56.84	-25.02	46.84
0.46059	50.53	Av	-18.1	32.43	56.68	-24.25	46.68
0.53145	46.91	Av	-18.1	28.81	56	-27.19	46
Line 1 1 - 30MHz							
Test Frequency	Meter Reading	Detector	47367 L1 [dB]	FCC Part 15 [dB(uVolts)]	FCC Part 15 Class B QPk	FCC Part 15 Margin	FCC Part 15 Class B Avg
2.23759	49	Av	-18.2	30.8	56	-25.2	46
2.84277	49.31	Av	-18.2	31.11	56	-24.89	46
3.19939	49.49	Av	-18.2	31.29	56	-24.71	46
3.5093	48.97	Av	-18.2	30.77	56	-25.23	46
3.89728	48.28	Av	-18.2	30.08	56	-25.92	46
4.46262	48.15	Av	-18.2	29.95	56	-26.05	46
6.95881	49.42	Av	-17.9	31.52	60	-28.48	50
7.49292	50.33	Av	-17.8	32.53	60	-27.47	50
7.83802	50.69	Av	-17.8	32.89	60	-27.11	50
8.12307	52.53	Av	-17.7	34.83	60	-25.17	50
8.54765	51.57	Av	-17.7	33.87	60	-26.13	50
8.69495	51.66	Av	-17.7	33.96	60	-26.04	50
9.06029	52.13	Av	-17.7	34.43	60	-25.57	50
9.07049	52.21	Av	-17.7	34.51	60	-25.49	50
9.34128	51.91	Av	-17.6	34.31	60	-25.69	50
9.36404	51.88	Av	-17.6	34.28	60	-25.72	50
9.6362	51.25	Av	-17.6	33.65	60	-26.35	50
9.85638	51.57	Av	-17.6	33.97	60	-26.03	50
10.2177	50.56	Av	-17.6	32.96	60	-27.04	50
10.4417	49.89	Av	-17.6	32.29	60	-27.71	50
6.60356	48.77	Av	-18	30.77	60	-29.23	50
3.82546	48.77	Av	-18.2	30.57	56	-25.43	46
4.21557	49.38	Av	-18.2	31.18	56	-24.82	46
2.53477	49.27	Av	-18.2	31.07	56	-24.93	46
3.13541	49.04	Av	-18.2	30.84	56	-25.16	46
3.46399	48.97	Av	-18.2	30.77	56	-25.23	46
4.00373	48.11	Av	-18.2	29.91	56	-26.09	46
8.45779	51.88	Av	-17.7	34.18	60	-25.82	50
8.73446	52.02	Av	-17.7	34.32	60	-25.68	50
10.1647	50.63	Av	-17.6	33.03	60	-26.97	50
9.43061	52.02	Av	-17.6	34.42	60	-25.58	50

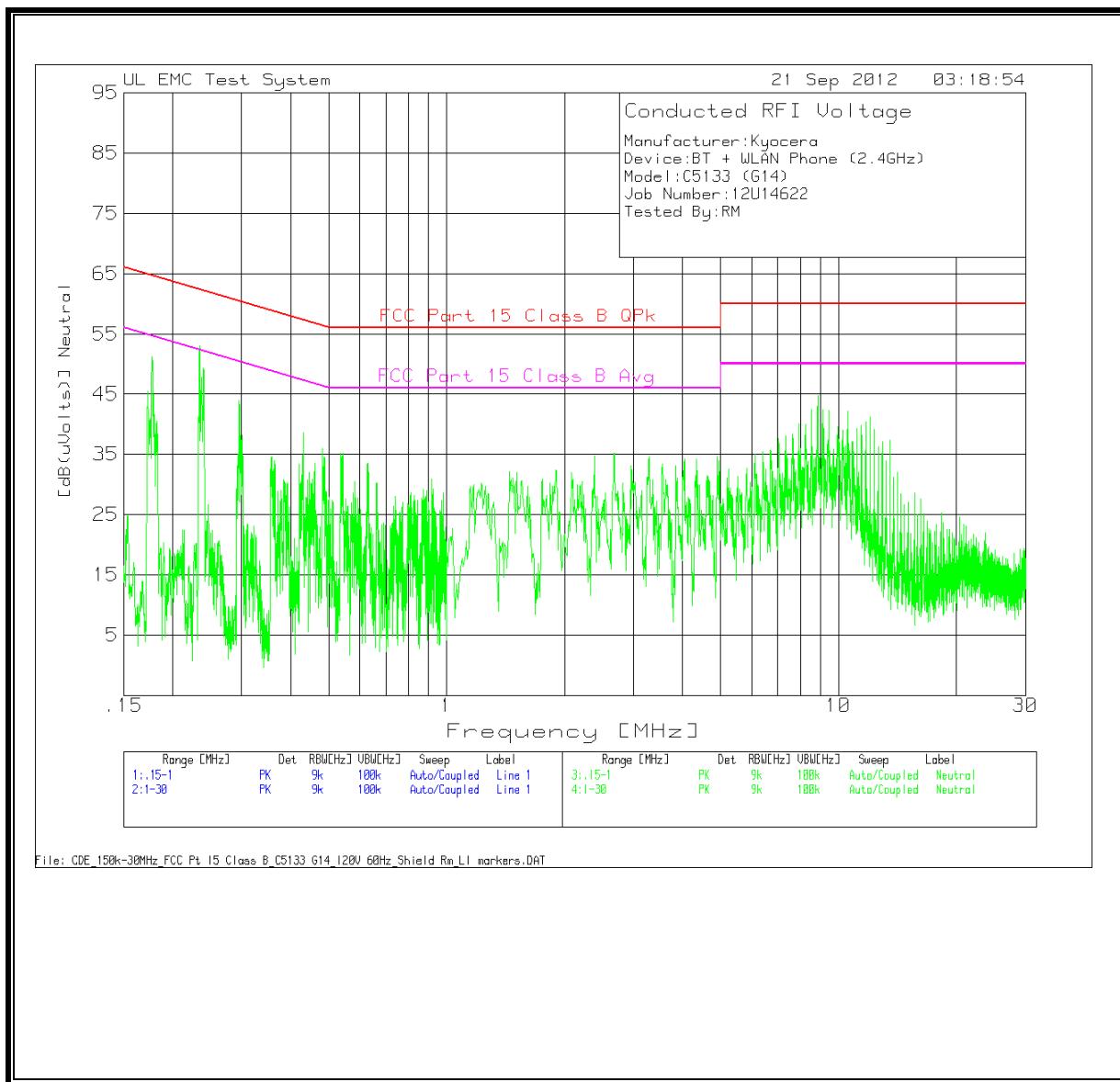
NUMERICAL DATA – LINE 2

Manufacturer:Kyocera							
Device:BT+WLAN Phone (2.4GHz)							
Model:C5133 (G14)							
Job Number:12U14622							
Tested By:RM							
Neutral .15 - 1MHz							
			47367 L2		FCC Part 15		FCC Part 15
Test Frequency	Meter Reading	Detector	[dB]	[dB(uVolts)]	Class B QPk	Margin	Class B Avg
0.17735	68.39	PK	-17.2	51.19	64.6	-13.41	54.6
0.2346	70.76	PK	-17.8	52.96	62.3	-9.34	52.3
0.23969	67.26	PK	-17.9	49.36	62.1	-12.74	52.1
0.29502	61.92	PK	-17.9	44.02	60.4	-16.38	50.4
0.43072	56.6	PK	-18	38.6	57.2	-18.6	47.2
0.23672	65.65	PK	-17.9	47.75	62.2	-14.45	52.2
Neutral 1 - 30MHz							
			47367 L2		FCC Part 15		FCC Part 15
Test Frequency	Meter Reading	Detector	[dB]	[dB(uVolts)]	Class B QPk	Margin	Class B Avg
7.94438	57.76	PK	-17.7	40.06	60	-19.94	50
8.23372	57.71	PK	-17.7	40.01	60	-19.99	50
8.53031	60.08	PK	-17.6	42.48	60	-17.52	50
8.84136	62.39	PK	-17.6	44.79	60	-15.21	50
9.14517	60.03	PK	-17.6	42.43	60	-17.57	50
9.42729	59.87	PK	-17.6	42.27	60	-17.73	50
10.54128	59.71	PK	-17.6	42.11	60	-17.89	50
11.74208	57.96	PK	-17.6	40.36	60	-19.64	50
12.0242	58.77	PK	-17.6	41.17	60	-18.83	50
Neutral .15 - 1MHz							
			47367 L2		FCC Part 15		FCC Part 15
Test Frequency	Meter Reading	Detector	[dB]	[dB(uVolts)]	Class B QPk	Margin	Class B Avg
0.17643	49.31	Av	-17.2	32.11	64.65	-32.54	54.65
0.23353	50.06	Av	-17.8	32.26	62.32	-30.06	52.32
0.23812	48.81	Av	-17.9	30.91	62.16	-31.25	52.16
0.29405	47.67	Av	-17.9	29.77	60.41	-30.64	50.41
0.42959	46.81	Av	-18	28.81	57.26	-28.45	47.26
0.23246	50.43	Av	-17.8	32.63	62.36	-29.73	52.36
Neutral 1 - 30MHz							
			47367 L2		FCC Part 15		FCC Part 15
Test Frequency	Meter Reading	Detector	[dB]	[dB(uVolts)]	Class B QPk	Margin	Class B Avg
7.96097	47.25	Av	-17.7	29.55	60	-30.45	50
8.20965	47.62	Av	-17.7	29.92	60	-30.08	50
8.53001	47.93	Av	-17.6	30.33	60	-29.67	50
8.85123	48.32	Av	-17.6	30.72	60	-29.28	50
9.15638	48.4	Av	-17.6	30.8	60	-29.2	50
9.45181	48.19	Av	-17.6	30.59	60	-29.41	50
10.5613	47.53	Av	-17.6	29.93	60	-30.07	50
11.7162	47.85	Av	-17.6	30.25	60	-29.75	50
12.0303	47.85	Av	-17.6	30.25	60	-29.75	50
PK - Peak detector							
Av - Average detector							

LINE 1 RESULTS

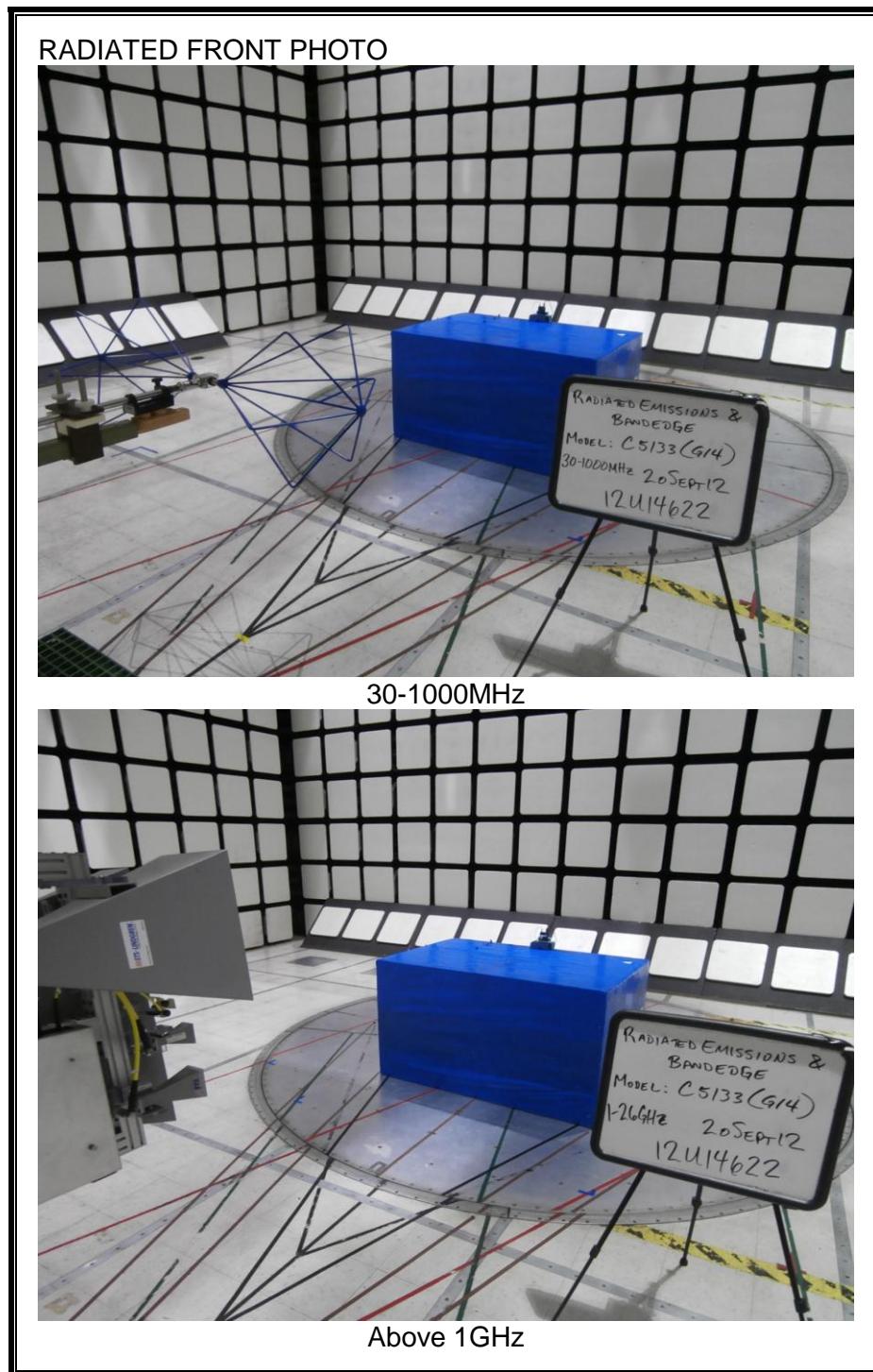


LINE 2 RESULTS

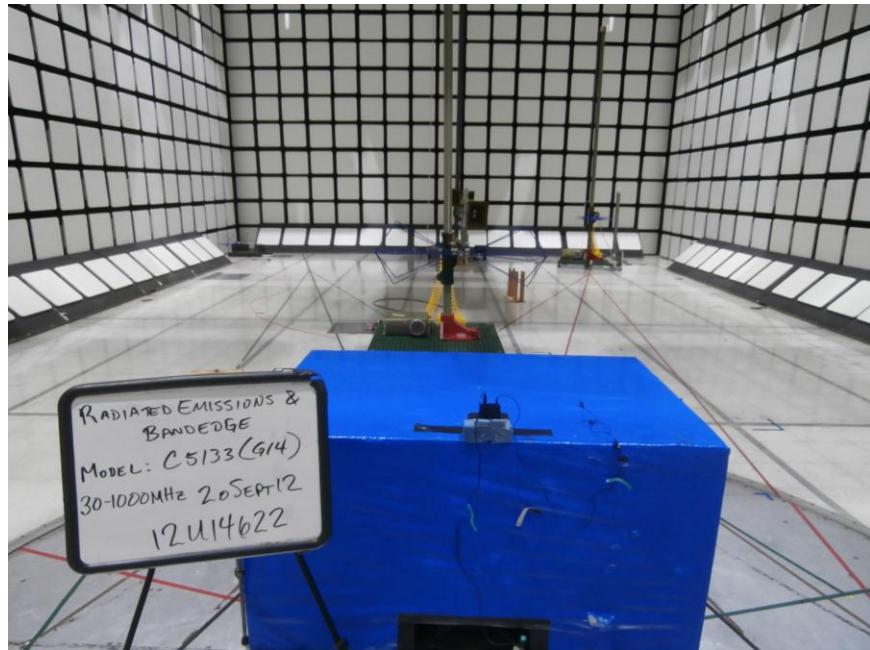


9. SETUP PHOTOS

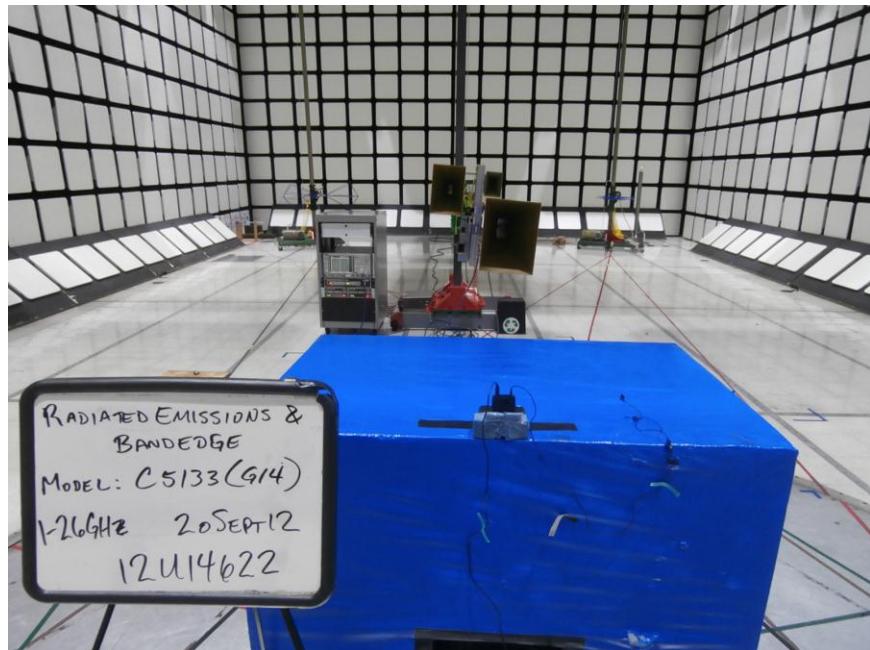
RADIATED RF MEASUREMENT SETUP



RADIATED BACK PHOTO

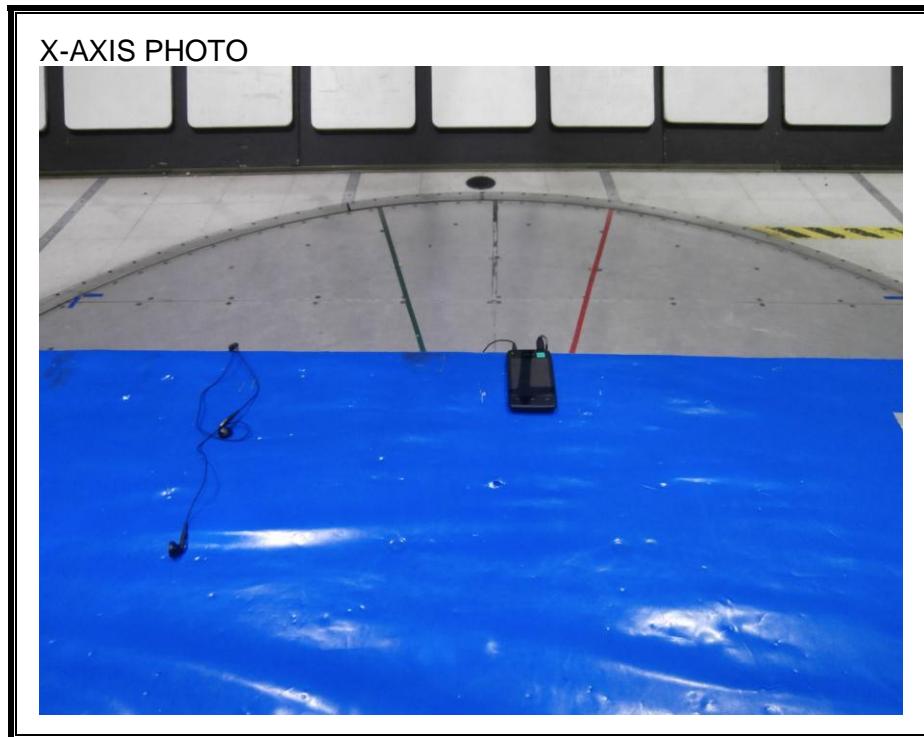


30-1000MHz

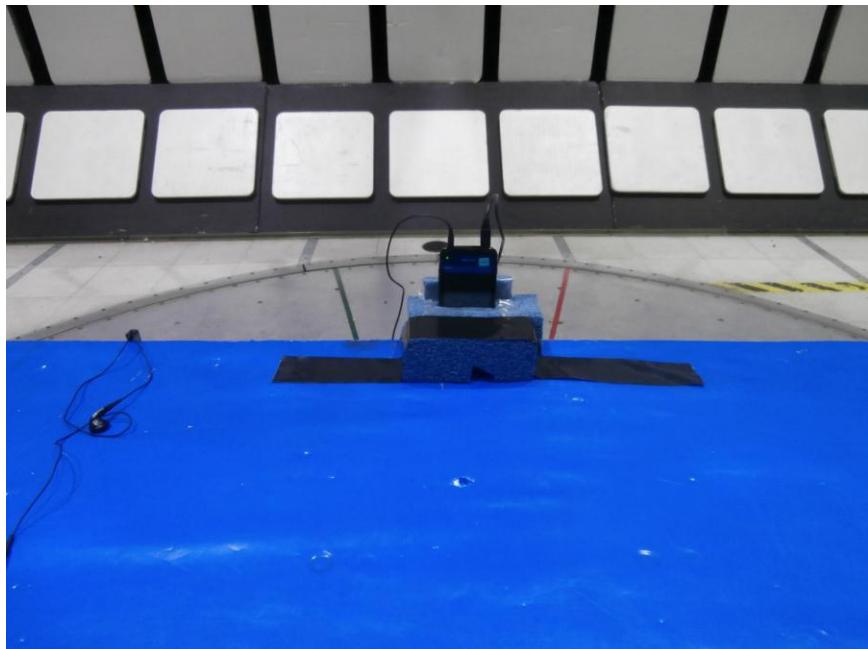


Above 1GHz

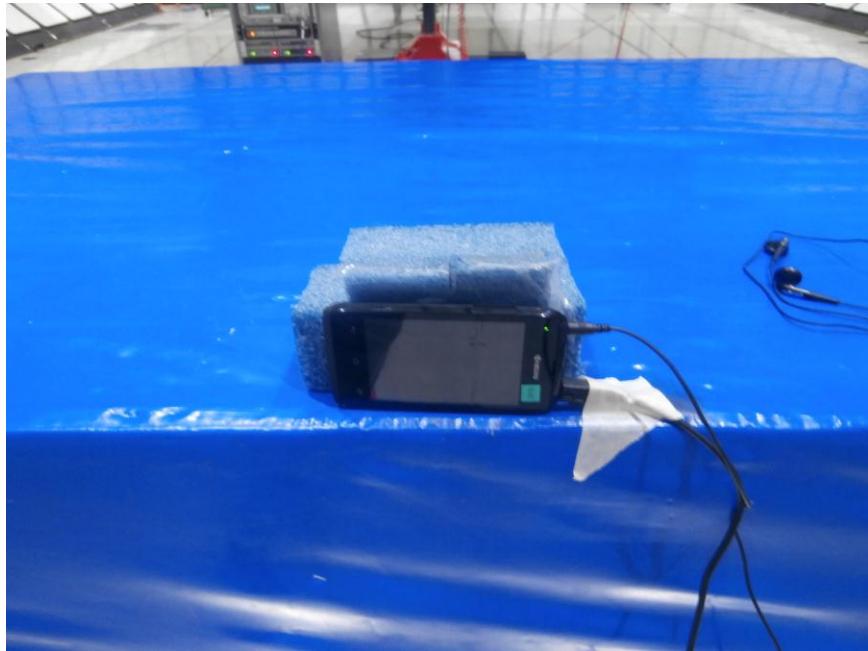
RADIATED RF MEASUREMENT SETUP FOR PORTABLE CONFIGURATION



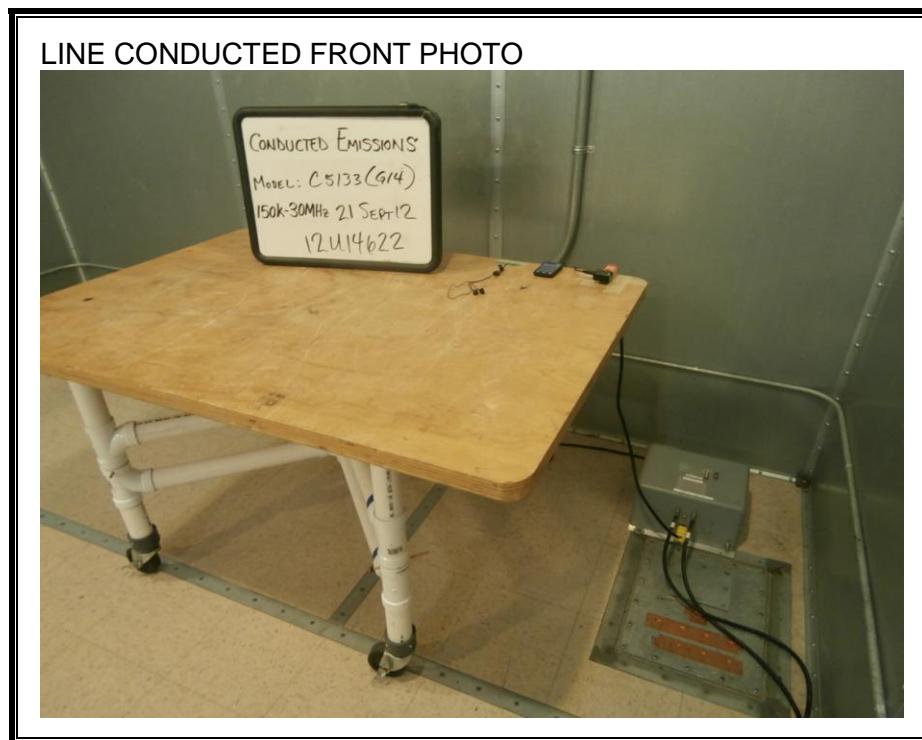
Y-AXIS PHOTO



Z-AXIS PHOTO



POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP



LINE CONDUCTED BACK PHOTO



END OF REPORT