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Project Number: 12U4325
FCC ID V65C5170
Date: March 26, 2012
Model: C5170

Electromagnetic Compatibility Test Report

For

KYOCERA Communications, Inc.

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FCC ID: V65C5170
Model Number: C5170
Client Name: Kyocera Communications

Test Report Details

Tests Performed By: **Underwriters Laboratories Inc.
333 Pfingsten Rd.
Northbrook, IL 60062**

Tests Performed For: **KYOCERA Communications, Inc.
8611 Balboa Ave
San Diego, CA 92123**

Applicant Contact: **Thuy To**
Title: **Senior Regulatory Engineer**
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Test Report Date: **March 26, 2012**

Product Type: **CDMA Mobile Phone with Bluetooth**

Product standards **FCC Part 15B**

Model Number: **C5170**
FCC ID **V65C5170**

EUT Category: **Digital Device**

Testing Start Date: **March 1, 2012**

Date Testing Complete: **March 15, 2012**

Overall Results: Compliant

UL LLC reports apply only to the specific samples tested under stated test conditions. All samples tested were in good operating condition throughout the entire test program. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. UL LLC shall have no liability for any deductions, inferences or generalizations drawn by the client or others from UL LLC issued reports. 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.

This report may contain test results that are not covered by the NVLAP or A2LA accreditation. The scope of accreditation is limited to the specific tests that are listed on the NVLAP and/or A2LA websites referenced at the end of this report.

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Report Revision History

Revision Date	Description	Revised By	Revision Reviewed By
None			

1 GENERAL - Product Description

1.1 Equipment Description

FCC V65C5170 Cell phone with BT and Wifi capabilities.

1.2 Equipment Marking Plate

N/A

1.3 Device Configuration During Test

1.3.1 Equipment Used During Test:

Use	Product Type	Manufacturer	Model	Comments
EUT	CDMA Mobile Phone	KYOCERA Communications, Inc.	C5170	None
EUT	Power Supply	KYOCERA Communications, Inc.	SCP-31ADT	Input:100-240Vac 50/60Hz 0.2A Output: 5Vdc 800mA
AE	Ear Phones	-	-	None

Note: **EUT** - Equipment Under Test, **AE** - Auxiliary/Associated Equipment, or **SIM** - Simulator (Not Subjected to Test)

1.3.2 Input/Output Ports:

Port #	Name	Type*	Cable Max. >3m (Y/N)	Cable Shielded (Y/N)	Comments
0	Enclosure	N/E	—	—	None
1	Mains	AC	N	N	None
2	Mains	Batt	-	-	3.7V Rechargeable battery
3	Headphone	I/O	N	N	None

Note:
 AC = AC Power Port DC = DC Power Port N/E = Non-Electrical
 I/O = Signal Input or Output Port (Not Involved in Process Control)
 TP = Telecommunication Ports

1.3.3 EUT Internal Operating Frequencies:

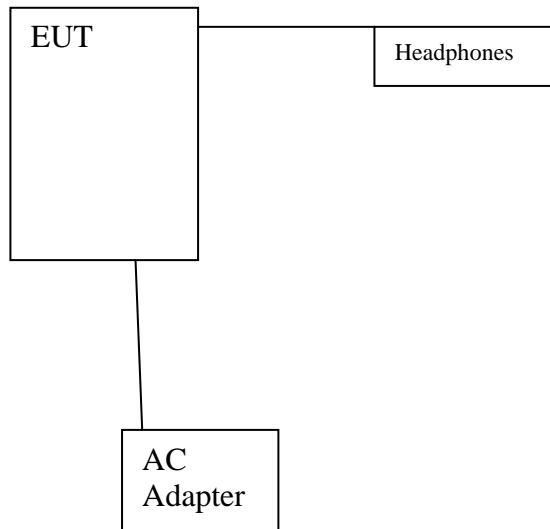
Frequency (MHz)	Description
2400	BT/Wifi

1.3.4 Power Interface:

Mode # /Rated	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Phases (#)	Comments
1	Battery Operated	-	-	DC	-	None
2	120Vac	-	-	60Hz	Single	None

1.4 Block Diagram:

The diagram below illustrates the configuration of the equipment above.



1.5 EUT Configurations

Mode #	Description
1	EUT was configured with headphones connected and either in Battery or AC mode as indicated in the caption of each plot

1.6 EUT Operation Modes

Mode #	Description
1	EUT was programmed to various operating modes indicated by the caption in each plot

1.7 Rational for EUT Configuration

Mode #	Description
1	The selected EUT configuration was chosen to maximize emissions

2 Summary

The tests listed in the Summary of Testing section of this report have been performed and the results recorded by UL LLC in accordance with the procedures stated in each test requirement and specification. The applicant determined the list of tests performed were applicable to the Equipment Under Test. As a result, the subject product has been verified to comply or not comply as noted in the Summary of Testing with each test specification. The test results relate only to the items tested.

2.1 Deviations from standard test methods

None

2.2 Device Modifications Necessary for Compliance

None

2.3 Reference Standards

Standard Number	Standard Name	Standard Date
FCC Part 15, Subpart B	Code of Federal Regulations, Part 15, Radio Frequency Devices	2011

2.4 Results Summary

This product is considered Class B

Requirement – Test	Result (Compliant / Non-Compliant)*
Conducted Emissions	Compliant
Radiated Emissions	Compliant

Test Engineer:



Michael Ferrer (Ext.41312)
Senior Project Engineer
International EMC Services
Conformity Assessment Services

Reviewer:



Mike Antola (Ext. 23053)
Senior Project Engineer
International EMC Services
Conformity Assessment Services

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

3 Calibration of Equipment Used for Measurement

All test equipment and test accessories are calibrated on a regular basis. The maximum time between calibrations is one year or the manufacturers' recommendation, whichever is less.

All test equipment calibrations are traceable to the National Institute of Standards and Technology (NIST); therefore, all test data recorded in this report is traceable to NIST.

4 EMISSIONS TEST RESULTS

The emissions tests were performed according to following regulations:

----- United States -----

Code of Federal Regulations Title 47	Part 15, Subpart b, Radio Frequency Devices
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Unless specified otherwise in the individual Methods, the tests shall be conducted under the following ambient conditions. Confirmation of these conditions shall be verified at the time the test is conducted.

Ambient Temperature, °C	22.5 ± 2.5	Relative Humidity, %	45 ± 15	Barometric Pressure, mBar	950 ± 150
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Measurement Uncertainty

Test	Uncertainty
Conducted Emissions	+/- 0.6dB (k=2)
Radiated Emissions	+/- 3.1dB (k=2)

Sample Calculations

Radiated Field Strength and Conducted Emissions data contained within this report is calculated on the following basis:

- Field Strength (dBuV/m) = Meter Reading (dBuV) + AF (dB/m) - Gain (dB) + Cable Loss (dB)
- Conducted Voltage (dBuV) = Meter Reading (dBuV) + Cable Loss (dB) + LISN IL (dB)
- Conducted Current (dBuA) = Meter Reading (dBuV) + Cable Loss (dB) - Transducer Factor (dBohms)

4.1

Test Conditions and Results – MAINS TERMINAL – CONDUCTED EMISSIONS

Test Description	Measurements were made on a ground plane. All power was connected to the system through Artificial Mains Network (AMN). Conducted voltage measurements on mains lines were made at the output of the AMN.	
Basic Standard	FCC Part 15	
UL LPG	80-EM-S0026	
	Frequency range on each side of line	Measurement Point
Fully configured sample scanned over the following frequency range	150kHz to 30MHz	Mains
Limits - Class B		
Frequency (MHz)	Limit (dBµV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Supplementary information: None		

Table 1 Conducted Emissions EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1
Supplementary information: None		

Table 2 Conducted Emissions Test Equipment

Description	Manufacturer	Model	Identifier	Cal Date	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC4328	12/28/11	12/28/12
Transient Limiter	Electro-Metrics	EM7600-2	EMC4224	N/A	N/A
HighPass Filter	Solar Electronics	2803-150	EMC4327	N/A	N/A
Attenuator	HP	8494B	2831A00838	N/A	N/A
LISN - L1	Solar	8602-50-TS-50-N	EMC4052	1/6/12	1/7/13
LISN - L2	Solar	8602-50-TS-50-N	EMC4064	1/6/12	1/7/13

Figure 1 Test Setup for Conducted Emissions

See Photos exhibit

Figure 2 Conducted Emissions Graph

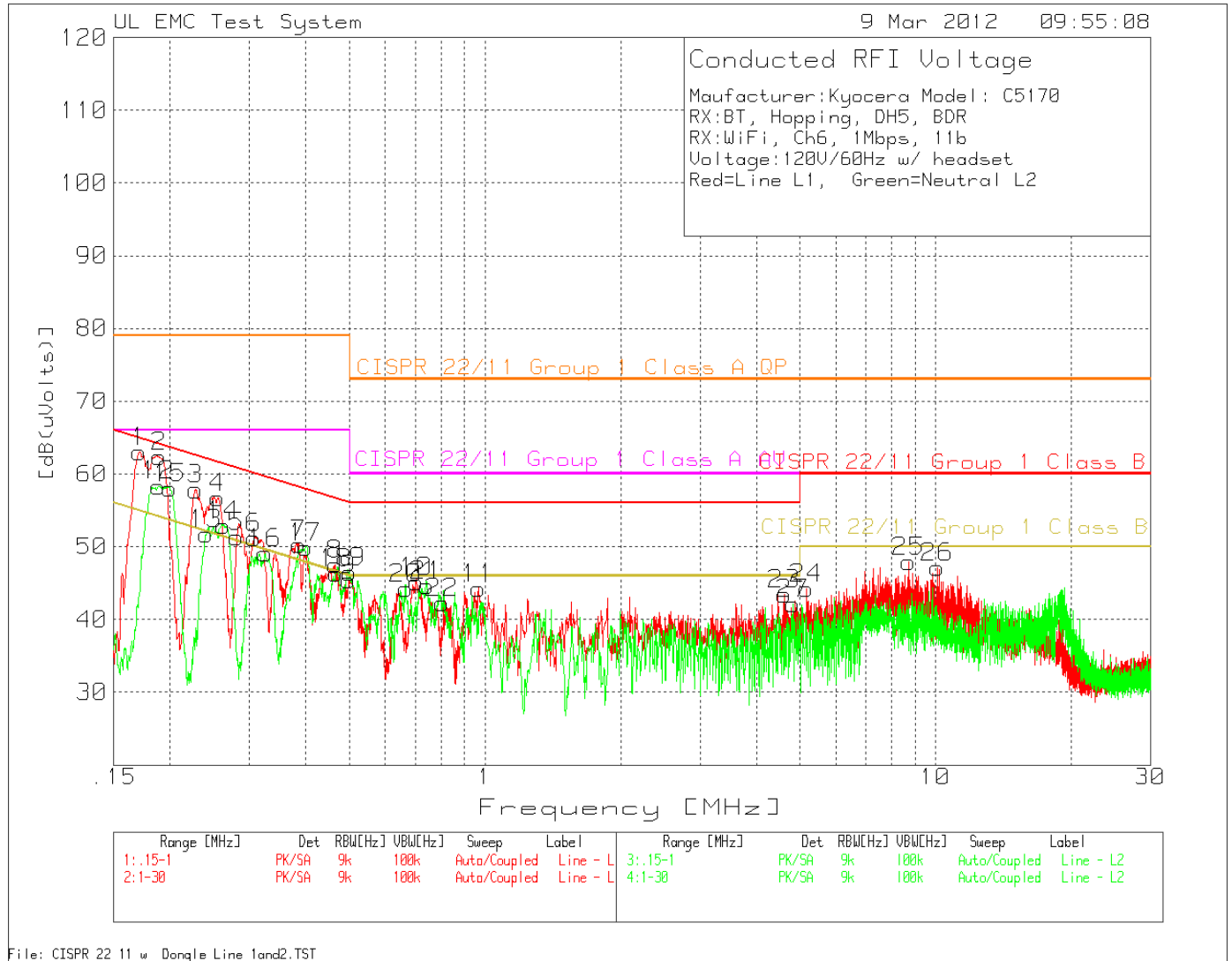


Table 3 Conducted Emissions Data Points

Manufacturer:Kyocera Model: C5170
 RX:BT, Hopping, DH5, BDR
 RX:WiFi, Ch6, 1Mbps, 11b
 Voltage:120V/60Hz w/ headset
 Red=Line L1, Green=Neutral L2

No.	Frequency [MHz]	Meter Reading [dB(uV)]	Transducer Factor [dB]	Gain/Loss Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6

Line - L1 .15 - 1MHz -----											
1	.17095	50.66 PK	.1	12.3	63.06	79	66	64.9	54.9	-	-
				Margin [dB]		-15.94	-2.94	-1.84	8.16	-	-
2	.18893	50.51 PK	.1	11.7	62.31	79	66	64.1	54.1	-	-
				Margin [dB]		-16.69	-3.69	-1.79	8.21	-	-
3	.22801	46.33 PK	.1	11.4	57.83	79	66	62.5	52.5	-	-
				Margin [dB]		-21.17	-8.17	-4.67	5.33	-	-
4	.25547	45.38 PK	.1	11.2	56.68	79	66	61.6	51.6	-	-
				Margin [dB]		-22.32	-9.32	-4.92	5.08	-	-
5	.28138	40.25 PK	.1	11	51.35	79	66	60.8	50.8	-	-
				Margin [dB]		-27.65	-14.65	-9.45	.55	-	-
6	.30715	40.17 PK	.1	10.9	51.17	79	66	60	50	-	-
				Margin [dB]		-27.83	-14.83	-8.83	1.17	-	-
7	.38558	39.42 PK	.1	10.8	50.32	79	66	58.2	48.2	-	-
				Margin [dB]		-28.68	-15.68	-7.88	2.12	-	-
8	.46457	36.68 PK	.1	10.7	47.48	79	66	56.6	46.6	-	-
				Margin [dB]		-31.52	-18.52	-9.12	.88	-	-
9	.49883	34.64 PK	.1	10.7	45.44	79	66	56	46	-	-
				Margin [dB]		-33.56	-20.56	-10.56	-.56	-	-
10	.7027	34.46 PK	.1	10.6	45.16	73	60	56	46	-	-
				Margin [dB]		-27.84	-14.84	-10.84	-.84	-	-
11	.96772	33.5 PK	.1	10.6	44.2	73	60	56	46	-	-
				Margin [dB]		-28.8	-15.8	-11.8	-1.8	-	-

Line - L1 1 - 30MHz -----											
23	4.61631	32.54 PK	.2	10.7	43.44	73	60	56	46	-	-
				Margin [dB]		-29.56	-16.56	-12.56	-2.56	-	-
24	5.17846	33.3 PK	.2	10.7	44.2	73	60	60	50	-	-
				Margin [dB]		-28.8	-15.8	-15.8	-5.8	-	-
25	8.70204	36.31 PK	.7	10.9	47.91	73	60	60	50	-	-
				Margin [dB]		-25.09	-12.09	-12.09	-2.09	-	-
26	10.11611	35.6 PK	.5	11	47.1	73	60	60	50	-	-
				Margin [dB]		-25.9	-12.9	-12.9	-2.9	-	-

Line - L2 .15 - 1MHz -----												
12	.18851	46.45	PK	.1	11.8	58.35	79	66	64.1	54.1	-	-
					Margin [dB]		-20.65	-7.65	-5.75	4.25	-	-
13	.24089	40.32	PK	.1	11.3	51.72	79	66	62.1	52.1	-	-
					Margin [dB]		-27.28	-14.28	-10.38	-3.38	-	-
14	.26298	41.63	PK	.1	11.2	52.93	79	66	61.3	51.3	-	-
					Margin [dB]		-26.07	-13.07	-8.37	1.63	-	-
15	.19983	46.38	PK	.1	11.5	57.98	79	66	63.6	53.6	-	-
					Margin [dB]		-21.02	-8.02	-5.62	4.38	-	-
16	.3247	38.05	PK	.1	10.9	49.05	79	66	59.6	49.6	-	-
					Margin [dB]		-29.95	-16.95	-10.55	-5.55	-	-
17	.39945	39.03	PK	.1	10.8	49.93	79	66	57.9	47.9	-	-
					Margin [dB]		-29.07	-16.07	-7.97	2.03	-	-
18	.46641	35.56	PK	.1	10.7	46.36	79	66	56.6	46.6	-	-
					Margin [dB]		-32.64	-19.64	-10.24	-2.24	-	-
19	.4994	35.71	PK	.1	10.7	46.51	79	66	56	46	-	-
					Margin [dB]		-32.49	-19.49	-9.49	.51	-	-
20	.66702	33.53	PK	.1	10.6	44.23	73	60	56	46	-	-
					Margin [dB]		-28.77	-15.77	-11.77	-1.77	-	-
21	.74375	33.92	PK	.1	10.6	44.62	73	60	56	46	-	-
					Margin [dB]		-28.38	-15.38	-11.38	-1.38	-	-
22	.80322	31.53	PK	.1	10.6	42.23	73	60	56	46	-	-
					Margin [dB]		-30.77	-17.77	-13.77	-3.77	-	-

Line - L2 1 - 30MHz -----												
27	4.83653	31.15	PK	.2	10.8	42.15	73	60	56	46	-	-
					Margin [dB]		-30.85	-17.85	-13.85	-3.85	-	-

- LIMIT 1: CISPR 22/11 Group 1 Class A QP
- LIMIT 2: CISPR 22/11 Group 1 Class A AV
- LIMIT 3: CISPR 22/11 Group 1 Class B QP
- LIMIT 4: CISPR 22/11 Group 1 Class B AV
- LIMIT 5: NONE
- LIMIT 6: NONE

Manufacturer:Kyocera Model: C5170
 RX:BT, Hopping, DH5, BDR
 RX:WiFi, Ch6, 1Mbps, 11b
 Voltage:120V/60Hz w/ headset
 Red=Line L1, Green=Neutral L2

Test	Meter	Transducer	Gain/Loss	Level	Limit:1	2	3	4	5	6
Frequency	Reading	Factor	Factor	[dB(uVolts)]						
[MHz]	[dB(uV)]	[dB]	[dB]							
=====										
Line - L1	.15 - 1MHz									
.17104	9.66 QP	.1	12.3	22.06	79	66	64.91	54.91	-	-
			Margin [dB]:		-56.94	-43.94	-42.85	-32.85	-	-
.19119	35.68 QP	.1	11.6	47.38	79	66	63.98	53.98	-	-
			Margin [dB]:		-31.62	-18.62	-16.6	-6.6	-	-
.22745	5.2 QP	.1	11.4	16.7	79	66	62.54	52.54	-	-
			Margin [dB]:		-62.3	-49.3	-45.84	-35.84	-	-
.25742	31.3 QP	.1	11.2	42.6	79	66	61.51	51.51	-	-
			Margin [dB]:		-36.4	-23.4	-18.91	-8.91	-	-
.27916	24.97 QP	.1	11	36.07	79	66	60.84	50.84	-	-
			Margin [dB]:		-42.93	-29.93	-24.77	-14.77	-	-
.30918	17.31 QP	.1	10.8	28.21	79	66	59.99	49.99	-	-
			Margin [dB]:		-50.79	-37.79	-31.78	-21.78	-	-
.38784	33.06 QP	.1	10.8	43.96	79	66	58.11	48.11	-	-
			Margin [dB]:		-35.04	-22.04	-14.15	-4.15	-	-
.46494	28.49 QP	.1	10.7	39.29	79	66	56.6	46.6	-	-
			Margin [dB]:		-39.71	-26.71	-17.31	-7.31	-	-
.50042	22.92 QP	.1	10.7	33.72	73	60	56	46	-	-
			Margin [dB]:		-39.28	-26.28	-22.28	-12.28	-	-
.70365	27.69 QP	.1	10.6	38.39	73	60	56	46	-	-
			Margin [dB]:		-34.61	-21.61	-17.61	-7.61	-	-
.9698	27.76 QP	.1	10.6	38.46	73	60	56	46	-	-
			Margin [dB]:		-34.54	-21.54	-17.54	-7.54	-	-
Line - L1	1 - 30MHz									
4.62678	28.03 QP	.2	10.7	38.93	73	60	56	46	-	-
			Margin [dB]:		-34.07	-21.07	-17.07	-7.07	-	-
5.17206	27.7 QP	.2	10.7	38.6	73	60	60	50	-	-
			Margin [dB]:		-34.4	-21.4	-21.4	-11.4	-	-
8.70156	27.73 QP	.7	10.9	39.33	73	60	60	50	-	-
			Margin [dB]:		-33.67	-20.67	-20.67	-10.67	-	-
10.12278	26.72 QP	.5	11	38.22	73	60	60	50	-	-
			Margin [dB]:		-34.78	-21.78	-21.78	-11.78	-	-

Line - L2 .15 - 1MHz										
.19064	32.27 QP	.1	11.7	44.07	79	66	64.01	54.01	-	-
			Margin [dB]:		-34.93	-21.93	-19.94	-9.94	-	-
.24222	11.93 QP	.1	11.3	23.33	79	66	62.02	52.02	-	-
			Margin [dB]:		-55.67	-42.67	-38.69	-28.69	-	-
.26523	31.61 QP	.1	11.1	42.81	79	66	61.27	51.27	-	-
			Margin [dB]:		-36.19	-23.19	-18.46	-8.46	-	-
.20141	37.18 QP	.1	11.5	48.78	79	66	63.55	53.55	-	-
			Margin [dB]:		-30.22	-17.22	-14.77	-4.77	-	-
.32677	30.21 QP	.1	10.8	41.11	79	66	59.53	49.53	-	-
			Margin [dB]:		-37.89	-24.89	-18.42	-8.42	-	-
.40152	34.48 QP	.1	10.8	45.38	79	66	57.82	47.82	-	-
			Margin [dB]:		-33.62	-20.62	-12.44	-2.44	-	-
.46839	28.79 QP	.1	10.7	39.59	79	66	56.54	46.54	-	-
			Margin [dB]:		-39.41	-26.41	-16.95	-6.95	-	-
.50134	22.29 QP	.1	10.7	33.09	73	60	56	46	-	-
			Margin [dB]:		-39.91	-26.91	-22.91	-12.91	-	-
.66883	26.96 QP	.1	10.6	37.66	73	60	56	46	-	-
			Margin [dB]:		-35.34	-22.34	-18.34	-8.34	-	-
.74193	29.32 QP	.1	10.6	40.02	73	60	56	46	-	-
			Margin [dB]:		-32.98	-19.98	-15.98	-5.98	-	-
.80475	28.25 QP	.1	10.6	38.95	73	60	56	46	-	-
			Margin [dB]:		-34.05	-21.05	-17.05	-7.05	-	-
Line - L2 1 - 30MHz										
4.81439	25.63 QP	.2	10.8	36.63	73	60	56	46	-	-
			Margin [dB]:		-36.37	-23.37	-19.37	-9.37	-	-

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

PK - Peak detector
 QP - Quasi-Peak detector
 LnAv - Linear average detector
 LgAv - average log detection
 Av - average detection
 CAV - CISPR average detection
 RMS - RMS detection
 CRMS - CISPR RMS detection

LIMIT 1: CISPR 22/11 Group 1 Class A QP
 LIMIT 2: CISPR 22/11 Group 1 Class A AV
 LIMIT 3: CISPR 22/11 Group 1 Class B QP
 LIMIT 4: CISPR 22/11 Group 1 Class B AV
 LIMIT 5: NONE
 LIMIT 6: NONE

Manufacturer:Kyocera Model: C5170
 RX:BT, Hopping, DH5, BDR
 RX:WiFi, Ch6, 1Mbps, 11b
 Voltage:120V/60Hz w/ headset
 Red=Line L1, Green=Neutral L2

Test	Meter	Transducer	Gain/Loss	Level	Limit:1	2	3	4	5	6
Frequency [MHz]	Reading [dB(uV)]	Factor [dB]	Factor [dB]	[dB(uVolts)]						
=====										
Line - L1 .15 - 1MHz										
.17104	-4.66 Av	.1	12.3	7.74	79	66	64.91	54.91	-	-
			Margin [dB]:		-71.26	-58.26	-57.17	-47.17	-	-
.19119	19.5 Av	.1	11.6	31.2	79	66	63.98	53.98	-	-
			Margin [dB]:		-47.8	-34.8	-32.78	-22.78	-	-
.22745	-7.23 Av	.1	11.4	4.27	79	66	62.54	52.54	-	-
			Margin [dB]:		-74.73	-61.73	-58.27	-48.27	-	-
.25742	14.93 Av	.1	11.2	26.23	79	66	61.51	51.51	-	-
			Margin [dB]:		-52.77	-39.77	-35.28	-25.28	-	-
.27916	9.03 Av	.1	11	20.13	79	66	60.84	50.84	-	-
			Margin [dB]:		-58.87	-45.87	-40.71	-30.71	-	-
.30918	.77 Av	.1	10.8	11.67	79	66	59.99	49.99	-	-
			Margin [dB]:		-67.33	-54.33	-48.32	-38.32	-	-
.38784	17.1 Av	.1	10.8	28	79	66	58.11	48.11	-	-
			Margin [dB]:		-51	-38	-30.11	-20.11	-	-
.46494	18.37 Av	.1	10.7	29.17	79	66	56.6	46.6	-	-
			Margin [dB]:		-49.83	-36.83	-27.43	-17.43	-	-
.50042	8.41 Av	.1	10.7	19.21	73	60	56	46	-	-
			Margin [dB]:		-53.79	-40.79	-36.79	-26.79	-	-
.70365	12.62 Av	.1	10.6	23.32	73	60	56	46	-	-
			Margin [dB]:		-49.68	-36.68	-32.68	-22.68	-	-
.9698	15.03 Av	.1	10.6	25.73	73	60	56	46	-	-
			Margin [dB]:		-47.27	-34.27	-30.27	-20.27	-	-
Line - L1 1 - 30MHz										
4.62678	16.82 Av	.2	10.7	27.72	73	60	56	46	-	-
			Margin [dB]:		-45.28	-32.28	-28.28	-18.28	-	-
5.17206	16.74 Av	.2	10.7	27.64	73	60	60	50	-	-
			Margin [dB]:		-45.36	-32.36	-32.36	-22.36	-	-
8.70156	17.8 Av	.7	10.9	29.4	73	60	60	50	-	-
			Margin [dB]:		-43.6	-30.6	-30.6	-20.6	-	-
10.12278	15.97 Av	.5	11	27.47	73	60	60	50	-	-
			Margin [dB]:		-45.53	-32.53	-32.53	-22.53	-	-

Line - L2 .15 - 1MHz										
.19064	14.09 Av	.1	11.7	25.89	79	66	64.01	54.01	-	-
			Margin [dB]:				-53.11	-40.11	-38.12	-28.12
.24222	-4.74 Av	.1	11.3	6.66	79	66	62.02	52.02	-	-
			Margin [dB]:				-72.34	-59.34	-55.36	-45.36
.26523	19.18 Av	.1	11.1	30.38	79	66	61.27	51.27	-	-
			Margin [dB]:				-48.62	-35.62	-30.89	-20.89
.20141	25.32 Av	.1	11.5	36.92	79	66	63.55	53.55	-	-
			Margin [dB]:				-42.08	-29.08	-26.63	-16.63
.32677	14.89 Av	.1	10.8	25.79	79	66	59.53	49.53	-	-
			Margin [dB]:				-53.21	-40.21	-33.74	-23.74
.40152	24.44 Av	.1	10.8	35.34	79	66	57.82	47.82	-	-
			Margin [dB]:				-43.66	-30.66	-22.48	-12.48
.46839	18.1 Av	.1	10.7	28.9	79	66	56.54	46.54	-	-
			Margin [dB]:				-50.1	-37.1	-27.64	-17.64
.50134	6.02 Av	.1	10.7	16.82	73	60	56	46	-	-
			Margin [dB]:				-56.18	-43.18	-39.18	-29.18
.66883	16.19 Av	.1	10.6	26.89	73	60	56	46	-	-
			Margin [dB]:				-46.11	-33.11	-29.11	-19.11
.74193	17.45 Av	.1	10.6	28.15	73	60	56	46	-	-
			Margin [dB]:				-44.85	-31.85	-27.85	-17.85
.80475	14.97 Av	.1	10.6	25.67	73	60	56	46	-	-
			Margin [dB]:				-47.33	-34.33	-30.33	-20.33
Line - L2 1 - 30MHz										
4.81439	14.64 Av	.2	10.8	25.64	73	60	56	46	-	-
			Margin [dB]:				-47.36	-34.36	-30.36	-20.36

NOTE: "+" - Indicates an emission level in excess of the applicable limit (s).

PK - Peak detector
 QP - Quasi-Peak detector
 LnAv - Linear average detector
 LgAv - average log detection
 Av - average detection
 CAV - CISPR average detection
 RMS - RMS detection
 CRMS - CISPR RMS detection

LIMIT 1: CISPR 22/11 Group 1 Class A QP
 LIMIT 2: CISPR 22/11 Group 1 Class A AV
 LIMIT 3: CISPR 22/11 Group 1 Class B QP
 LIMIT 4: CISPR 22/11 Group 1 Class B AV
 LIMIT 5: NONE
 LIMIT 6: NONE

4.2 Test Conditions and Results – RADIATED EMISSIONS

Test Description	Measurements were made in a 10-meter semi-anechoic chamber that complies to CISPR 16/ANSI C63.4. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 10-meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in both horizontal and vertical polarities. Final measurements (quasi-peak or average as noted) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4-meters. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable.	
Basic Standard	FCC Part 15	
UL LPG	80-EM-S0029	
	Frequency range	Measurement Point
Fully configured sample scanned over the following frequency range	30MHz – 1GHz	(10 meter measurement distance)
Fully configured sample scanned over the following frequency range	1GHz – 13GHz	(3 meter measurement distance)
Limits - Class B		
Frequency (MHz)	Limit (dBµV/m)	
	Quasi-Peak	Average
30-88	29.6	NA
88-216	33.1	NA
216-960	35.6	NA
960-1000	43.5	NA
1000-25000 (3m)	74 (Peak)	54
Supplementary information: If Emissions detected were at least 6dB below the limit no additional measurements were taken after prescan.		
Battery mode was considered worst case for above 1GHz		

Table 4 Radiated Emissions EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1
Supplementary information: None		

Table 5 Radiated Emissions Test Equipment

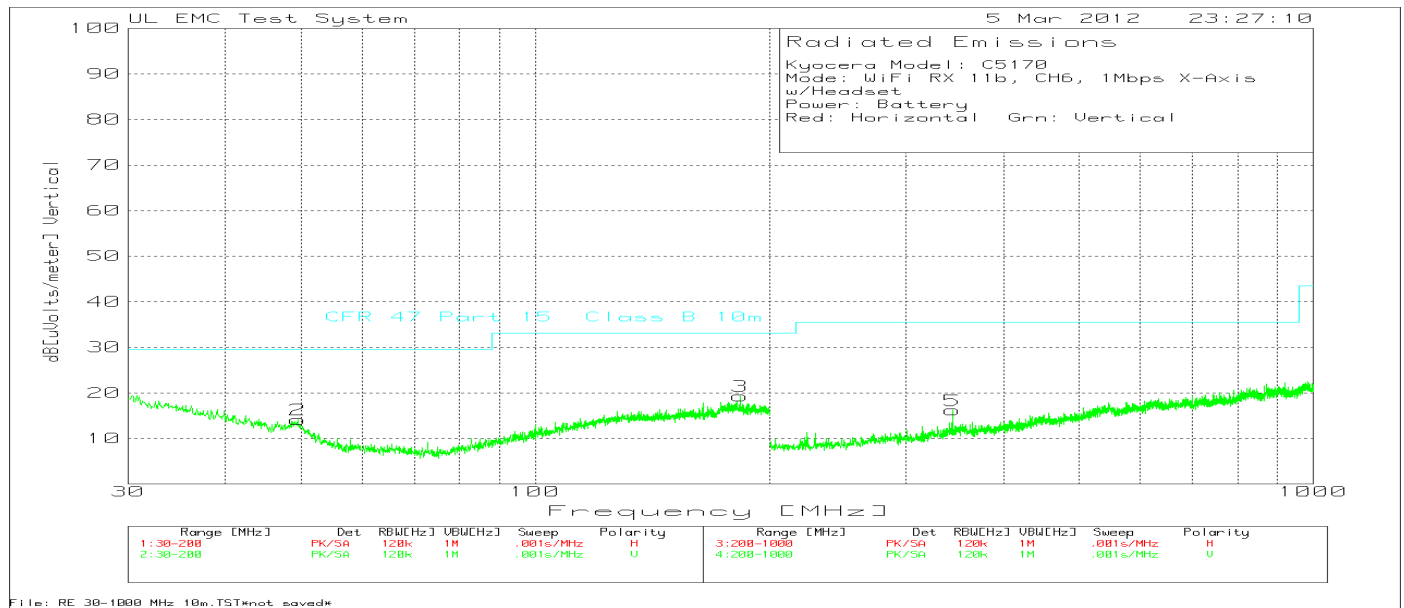
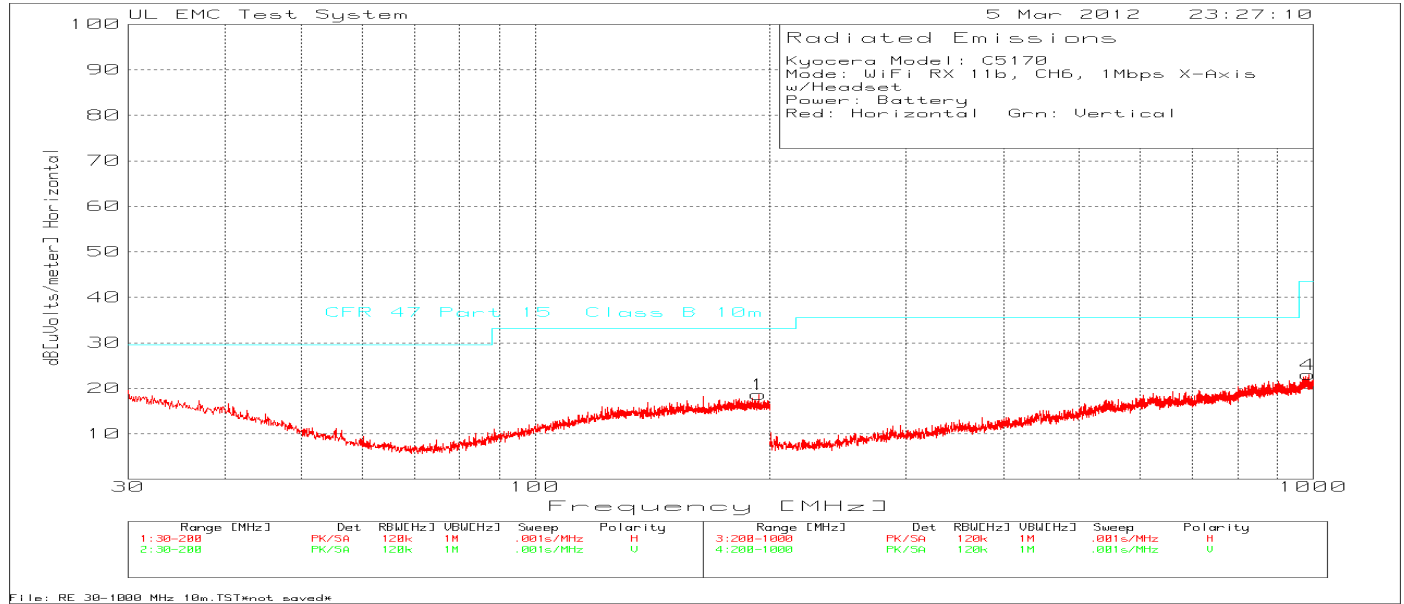
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESU	EMC4323	12/27/11	12/27/12
Bicon Antenna	Chase	VBA6106A	EMC4078	1/17/12	1/31/13
Log-P Antenna	Chase	UPA6109	EMC4313	6/29/11	6/29/12
Spectrum Analyzer	Rhode & Schwarz	FSEK	EMC4182	12/27/11	12/31/12
Antenna Array	UL	BOMS	EMC4276	1/2/2012	1/2/2013

Figure 3 Test setup for Radiated Emissions

See Photo Exhibit

4.2.1 Receiver and Digital Radiated Emissions, Battery Mode, 30MHz – 1GHz

Figure 4 Radiated Emissions Graph



FCC ID: V65C5170
 Model Number: C5170
 Client Name: Kyocera Communications

Table 6 Radiated Emissions Data Points

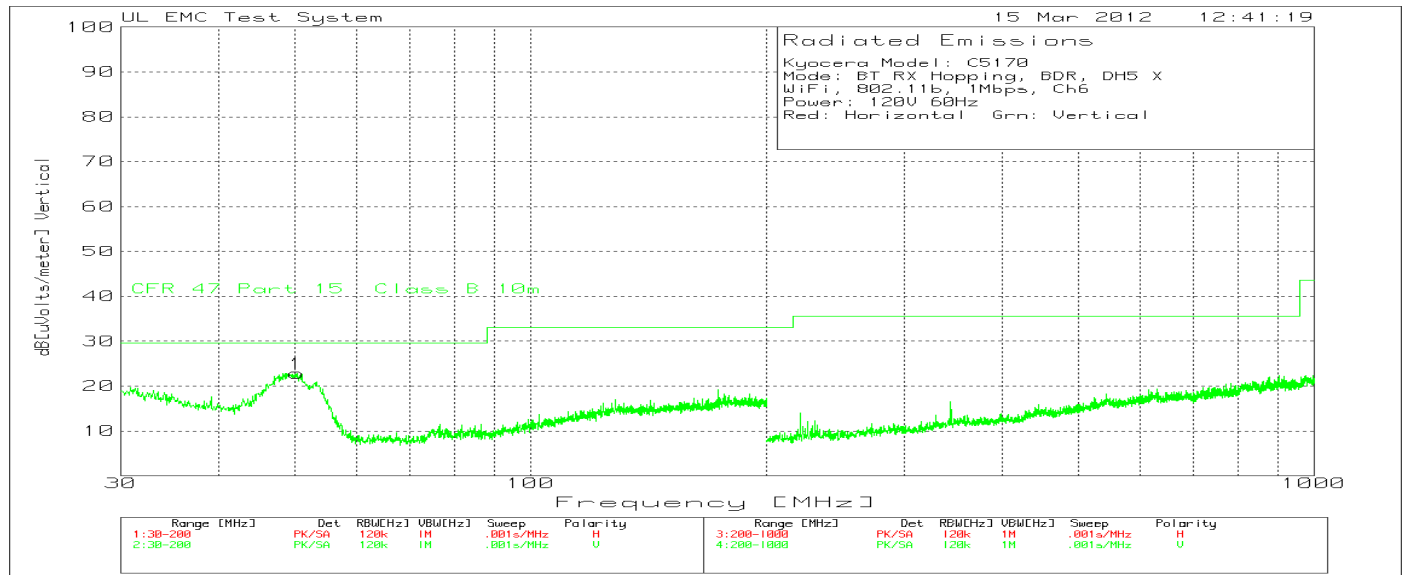
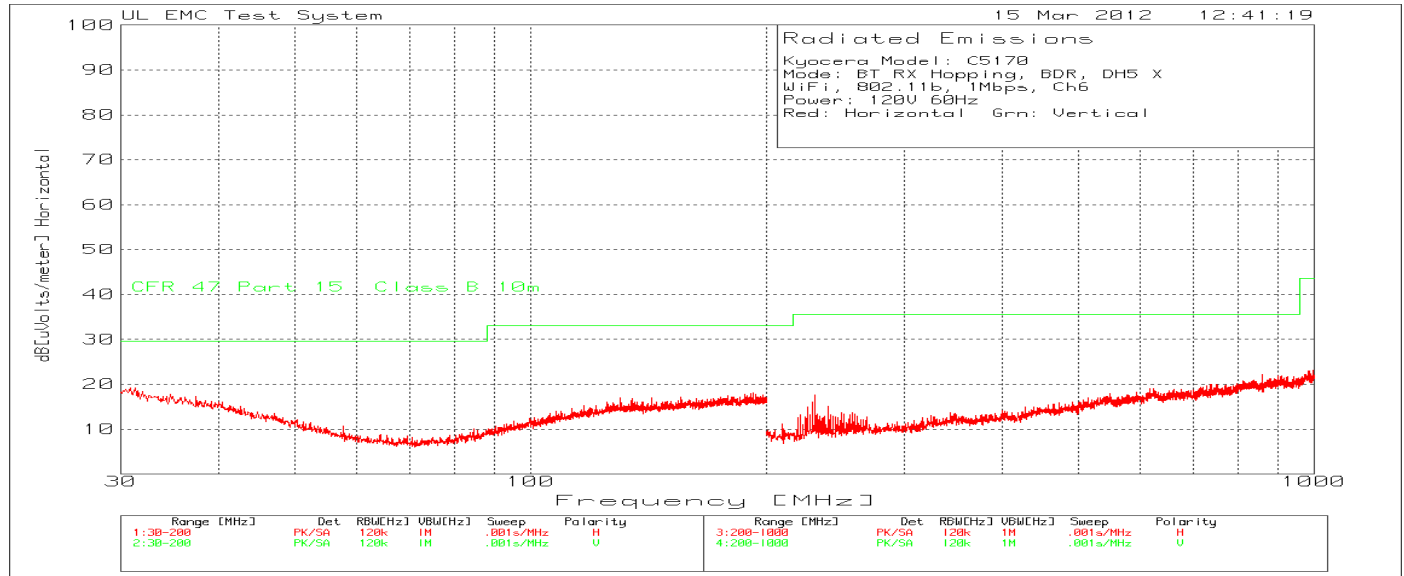
Kyocera Model: C5170
 Mode: WiFi RX 11b, CH6, 1Mbps X-Axis
 w/Headset
 Power: Battery
 Red: Horizontal Grn: Vertical

Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	dB[uV/m]	CFR 47 Part 15 Class B 10m	Margin	Height [cm]	Polarity
193.7981	31.45	PK	16	-28.8	18.65	33.1	-14.45	101	Horz
49.5402	33.41	PK	10.1	-29.4	14.11	29.6	-15.49	99	Vert
183.6882	32.27	PK	16	-29	19.27	33.1	-13.83	99	Vert
986.1426	29.91	PK	23.8	-30.7	23.01	43.5	-20.49	99	Horz
343.6376	34.29	PK	14.5	-32.6	16.19	35.6	-19.41	102	Vert

PK - Peak detector
 QP - Quasi-Peak detector

4.2.2 Receiver and Digital Radiated Emissions, Charging Mode, 30MHz – 1GHz

Figure 5 Radiated Emissions Graph



FCC ID: V65C5170
Model Number: C5170
Client Name: Kyocera Communications

Table 7 Radiated Emissions Data Points

Kyocera Model: C5170
Mode: BT RX Hopping, BDR, DH5 X
WiFi, 802.11b, 1Mbps, Ch6
Power: 120V 60Hz
Red: Horizontal Grn: Vertical

Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	dB [uV/m]	CFR 47 Part 15 Class B 10m	Margin	Height [cm]	Polarity
50.3048	42.44	PK	9.8	-29.4	22.84	29.6	-6.76	99	Vert

PK - Peak detector
QP - Quasi-Peak detector

4.2.3 Receiver and Digital Radiated Emissions, Battery Mode, 1GHz – 13GHz

Figure 6 Radiated Emissions Graph

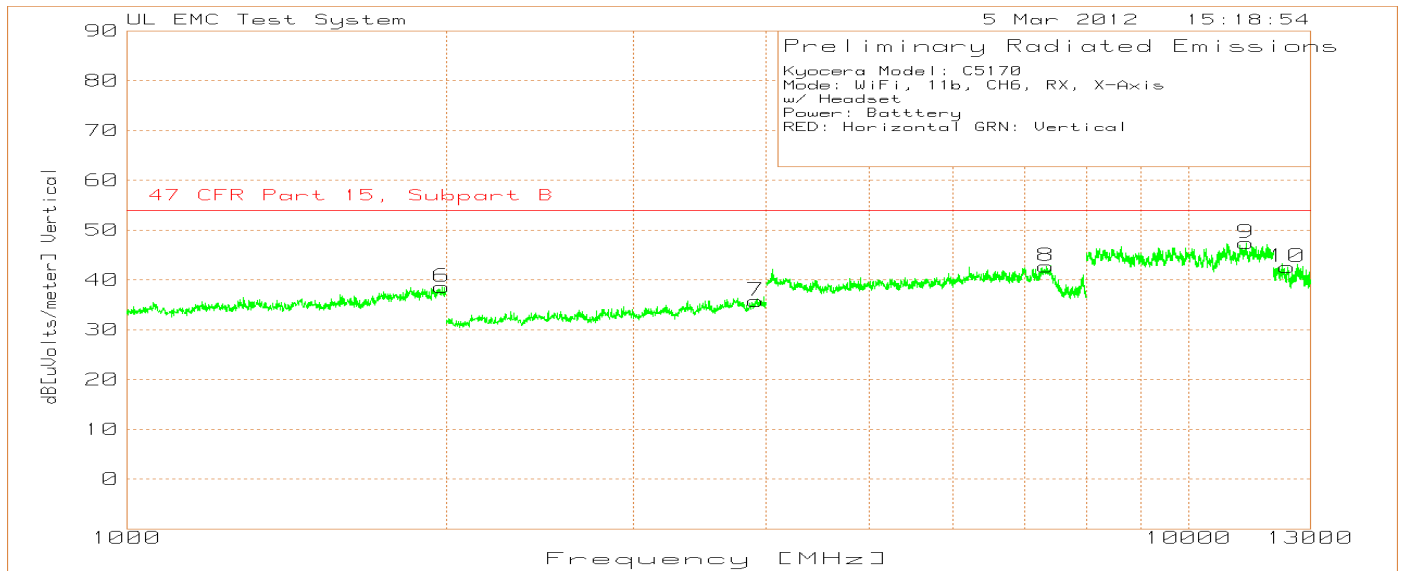
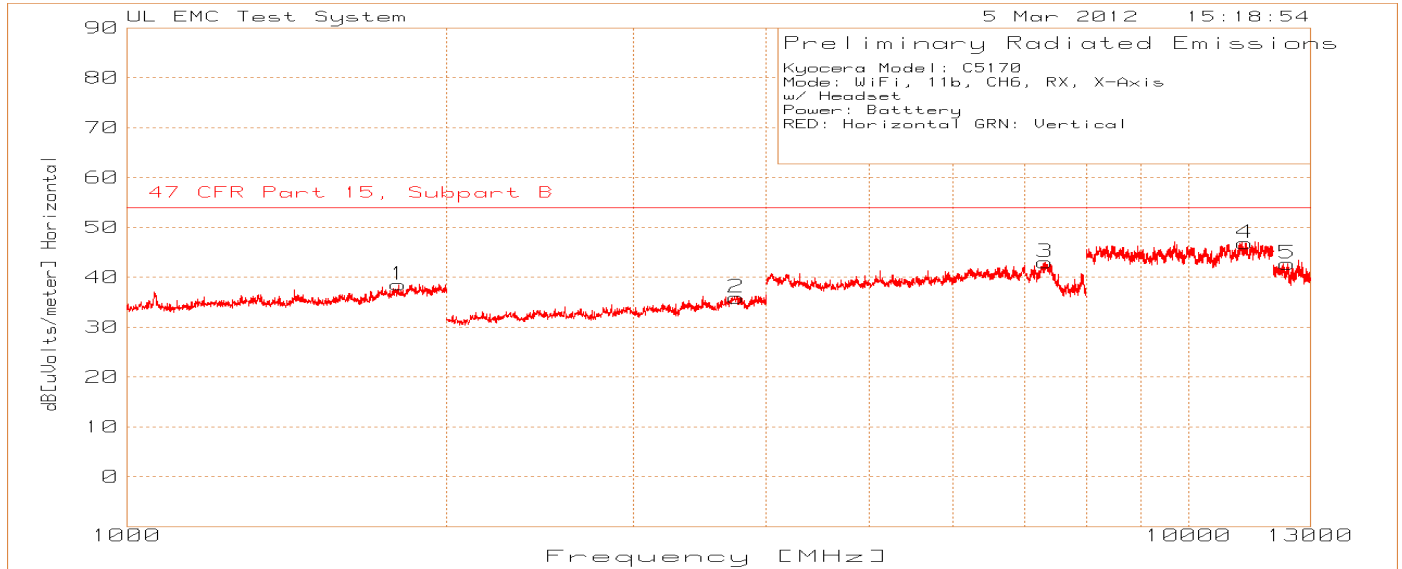


Table 8 Radiated Emissions Data Points

Kyocera Model: C5170
 Mode: WiFi, 11b, CH6, RX, X-Axis
 w/ Headset
 Power: Batttery
 RED: Horizontal GRN: Vertical

Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	dB [uV/m]	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
1801.802	66.71	PK	27	-55.15	38.56	54	-15.44	150	Horz
3747.748	63.28	PK	23.8	-51.1	35.98	54	-18.02	99	Horz
7327.552	58.57	PK	30.7	-46.26	43.01	54	-10.99	150	Horz
11295.53	57.54	PK	36.9	-47.62	46.82	54	-7.18	100	Horz
12382.766	48.7	PK	39.4	-45.32	42.78	54	-11.22	100	Horz
1982.983	64.91	PK	27.5	-53.79	38.62	54	-15.38	150	Vert
3911.912	63.51	PK	23.9	-51.59	35.82	54	-18.18	150	Vert
7335.557	58.49	PK	30.7	-46.4	42.79	54	-11.21	100	Vert
11311.541	57.97	PK	36.9	-47.38	47.49	54	-6.51	100	Vert
12394.79	48.72	PK	39.4	-45.52	42.6	54	-11.4	150	Vert

PK - Peak detector
 Av - Average detector

FCC ID: V65C5170
Model Number: C5170
Client Name: Kyocera Communications

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5 IMMUNITY TEST RESULTS

Immunity tests are not required per the standard

Appendix A

Accreditations and Authorizations



NVLAP Lab code: 100414-0

NVLAP: The National Institute of Standards and Technology (NIST) administers the National Voluntary Laboratory Accreditation Program (NVLAP). NVLAP is comprised of laboratory accreditation programs (LAPs) which are established on the basis of requests and demonstrated need. Each LAP includes specific calibration and/or test standards and related methods and protocols assembled to satisfy the unique needs for accreditation in a field of testing or calibration. NVLAP accredits public and private laboratories based on evaluation of their technical qualifications and competence to carry out specific calibrations or tests. Accreditation criteria are established in accordance with the U.S. Code of Federal Regulations (CFR, Title 15, Part 285), NVLAP Procedures and General Requirements, and encompass the requirements of ISO/IEC 17025. For a full scope listing see <http://ts.nist.gov/standards/scopes/1004140.htm>



FCC: Details of the measurement facilities used for these tests have been filed with the Federal Communications Commission's Laboratory in Columbia, Maryland (Ref. No. 91044).



Industry Canada Industrie Canada

Industry of Canada: Accredited by Industry Canada for performance of radiated measurements. Our test site complies with RSP 100, Issue 7, Section 3.3. File #: IC 2180



VCCI: Accepted as an Associate Member to the VCCI. The measurement facilities detailed in this test report have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. Registration Nos.: Radiated Emissions R-621, Conducted Emissions C-642.



ICASA: ICASA (Independent Communications Authority of South Africa) has appointed UL as a Designated Test Laboratory to test Telecommunications equipment for type approval in compliance with CISPR 22 to assist in fulfilling its mandate under section 54(1) of the Telecommunications Act, 1996 (Act 103 of 1996).



NIST/CAB: Validated by the European Commission as a U.S. Conformity Assessment Body (CAB) of the U.S.-EU Mutual Recognition Agreement (MRA) for the Electromagnetic Compatibility - Council Directive 2004/108/EC, Annex III (2-3). Also validated for the Telecommunication Equipment-Council Directive 99/5/EC, Annex III and IV, Identification Number: 0983.

NIST/CAB: Provisioned to act as a U.S. Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the Asia Pacific Economic Cooperation (APEC) MRA between the American Institute in Taiwan (AIT) and the United States. Our laboratory is considered qualified to test equipment subject to the applicable EMC regulations of the Chinese Taipei Bureau of Standards, Metrology and Inspection (BSMI) which require testing to CNS 13438 (CISPR 22).

NIST/CAB: Recognized by the Infocomm Development Authority of Singapore (IDA) under the Asia Pacific Economic Cooperation Mutual Recognition Agreement (APEC MRA). Our laboratory is provisionally designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC MRA. Our scope of designation includes IDA TS EMC (CISPR 22), IEC 61000-4-2, -4-3, -4-4, -4-5, and -4-6

