UL LLC 333 Pfingsten Rd. Northbrook, IL 60062

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Project Number: 12U4359

FCC ID V65C5155

Date: April 27, 2012

Model: C5155 G01

# **Electromagnetic Compatibility Test Report**

# For

# **KYOCERA Communications, Inc.**

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Model Number: C5155 G01

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

Phone: **858-882-2137** 

E-mail: thuy.to@kyocera.com

Test Report Date: April 27, 2012

Product Type: CDMA Mobile Phone with Bluetooth

Product standards FCC Part 15, Subpart C 15.247 – (15.207 and 15.209 tests),

Model Number: C5155 G01 FCC ID V65C5155

EUT Category: Transceiver

Testing Start Date: April 11, 2012

Date Testing Complete: April 27, 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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Model Number: C5155 G01

Client Name: Kyocera Communications

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Model Number: C5155 G01

**Equipment Description** 

Client Name: Kyocera Communications

Report Revision History

1.1

Revision Date	Description	Revised By	Revision Reviewed By
None			

# 1 GENERAL-Product Description

FCC V65C5155 Cell phone with BT and Wifi capabilities. Only Radiated Spurious Emissions, Bandedge, and Conducted Emissions AC mains were performed.

### 1.2 Equipment Marking Plate

IN/A

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C5155 G01 Model Number:

Client Name: **Kyocera Communications** 

#### **Device Configuration During Test** 1.3

### 1.3.1 Equipment Used During Test:I

Use	Product Type	Manufacturer	Model	Comments		
EUT CDMA Mobile Phone Co		KYOCERA Communications, Inc.	C5155	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)						

#### **Input/Output Ports:** 1.3.2

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 I/O TP N/E = Non-Electrical= AC Power Port DC = DC Power Port

= Signal Input or Output Port (Not Involved in Process Control)

= Telecommunication Ports

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Model Number: C5155 G01

Client Name: Kyocera Communications

# 1.3.3 EUT Internal Operating Frequencies:

Frequency (MHz)	Description
2400	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

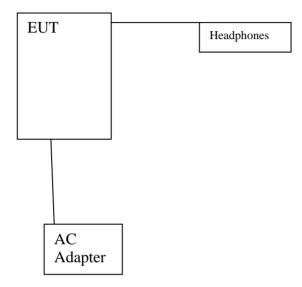
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Model Number: C5155 G01

Client Name: Kyocera Communications

### 1.4 Block Diagram:

The diagram below illustrates the configuration of the equipment above.



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Model Number: C5155 G01

Client Name: Kyocera Communications

## 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

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Model Number: C5155 G01

Client Name: Kyocera Communications

# 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

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Model Number: C5155 G01

Client Name: Kyocera Communications

#### 2.3 Reference Standards

Standard Number	Standard Name	Standard Date
FCC Part 15, Subpart C	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 including Bandedge	Compliant

Test Engineer:

Reviewer:

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

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Model Number: C5155 G01

Client Name: Kyocera Communications

## 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

Code of Federal Regulations Title 47	Part 15, Subpart C, Radio Frequency Devices

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

#### **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)

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Model Number: C5155 G01

Client Name: Kyocera Communications

#### 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 Stand	ard			FCC Part 1	5.207			
UL LPG				80-EM-S0	0026			
			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					
			Limit (	dΒμV)				
Frequency (	MHz)	Qua	asi-Peak	Average				
0.15-0.	5	60	6 to 56	56 to 46				
0.5-5			56	46				
5-30			60	50				
Supplement	ary info	rmation: 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** 

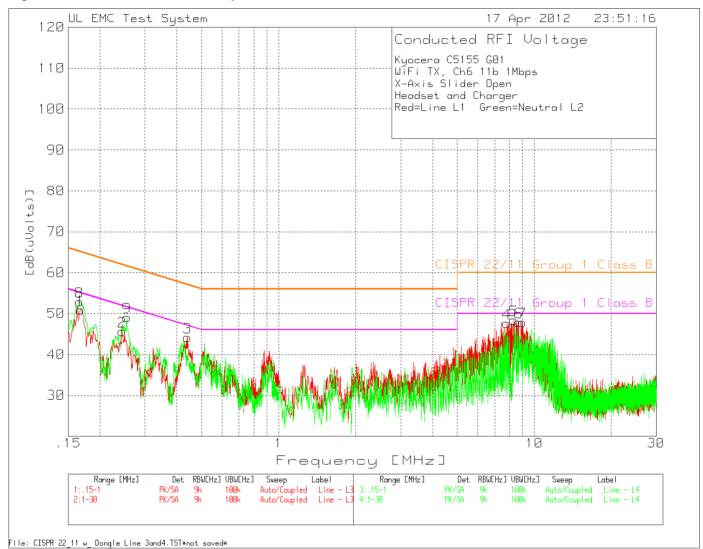
See Photos exhibit

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Model Number: C5155 G01

Client Name: Kyocera Communications

**Figure 2 Conducted Emissions Graph** 



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Model Number: C5155 G01

Client Name: Kyocera Communications

#### **Table 3 Conducted Emissions Data Points**

Kyocera C5155 G01 WiFi TX, Ch6 11b 1Mbps X-Axis Slider Open Headst and Charger

Red=Line L1 0										
	Meter Tr					2	3	4	5	6
No. Frequency										
	[dB(uV)]									
Line - L3 .15								======	======	=======
1 .16762	38.38 PK	.1	12.4	50.88	-	_	65.1	55.1	_	_
			Margin [	dB]	-	-	-14.22	-4.22	-	-
2 .2447	34.24 PK	.1	11.3	45.64	-	-	61.9	51.9	-	-
			Margin [	dB]	-	-	-16.26	-6.26	-	-
3 .43942	33.42 PK	.1	10.7	44.22	-	-	57.1	47.1	-	-
			Margin [	dB]	-	-	-12.88	-2.88	-	-
Line - L3 1 -										
4 7.81266	36.42 PK		.3		-		60		-	-
				dB]				-2.38		-
5 8.29437	37.09 PK	10.9		48.49			60			-
6 0 68466	0.6 0.4	40.0		dB]				-1.51		_
6 8.67466	36.31 PK	10.9		47.91				50		_
	0.6 0.5	40.0		[dB]				-2.09		
7 8.97165	36.37 PK	10.9		47.87			60			_
			Margin [	[dB]	-	_	-12.13	-2.13	-	-
Line - L4 .15	- 1MHz									
8 .16635	40.43 PK	. 1	12.4	52.93	_	_	65.1	55.1	_	_
				dB]		_	-12.17	-2.17	_	_
9 .2549	37.83 PK		-	49.13		_	61.6	51.6	_	_
			Margin [	dB]	-	_	-12.47	-2.47	_	_

LIMIT 3: CISPR 22/11 Group 1 Class B QP LIMIT 4: CISPR 22/11 Group 1 Class B AV

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Model Number: C5155 G01

Client Name: Kyocera Communications

Kyocera C5155 G01 WiFi TX, Ch6 11b 1Mbps X-Axis Slider Open Headset and Charger

Test Frequency		Transducer Factor	Gain/Loss Factor [dB [dB]			2	3	4	5	6
Line - L3	.15 - 1MHz									
.16761	34.54 QP	.1	12.4	47.04	_	_	65.08	55.08	_	_
			Margin [dB]:		-	-	-18.04	-8.04	-	-
.24494	27.21 QP	.1	11.3	38.61	_	-	61.93	51.93	-	-
			Margin [dB]:		-	-	-23.32	-13.32	-	-
.43992	29.33 QP	.1	10.7	40.13	-	-	57.06	47.06	-	-
			Margin [dB]:		-	-	-16.93	-6.93	-	-
Line - L3										
7.81217	31.89 QP	10.9	.3	43.09	-	-	60	50	-	-
			Margin [dB]:		-	-	-16.91		-	-
8.29447	30.53 QP	10.9	.5		-	-	60		-	-
			Margin [dB]:		-	-	-18.07		-	-
8.6748	31 QP	10.9	.7		-	-	60		-	-
			Margin [dB]:		-	-	-17.4		-	-
8.97172	31.12 QP	10.9	.6		-	-	60		-	-
			Margin [dB]:		-	-	-17.38	-7.38	-	-
	.15 - 1MHz									
.16756	33.5 QP	.1	12.3		-	-	65.08		-	-
			Margin [dB]:		-	-	23.20		-	-
.25298	29.6 QP	.1	11.2		-	-	01.00		-	-
			Margin [dB]:		-	-	-20.76	-10.76	-	-

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

QP - Quasi-Peak detector

LIMIT 3: CISPR 22/11 Group 1 Class B QP LIMIT 4: CISPR 22/11 Group 1 Class B AV FCC ID: V65C5155 Page 17 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

Kyocera C5155 G01 WiFi TX, Ch6 11b 1Mbps X-Axis Slider Open Headset and Charger

Test Frequency	Reading	Transducer	Factor [dB			2	3	4	5	6
Line - L3	.15 - 1MHz									
.16761	21.38 Av	.1	12.4	33.88	-	-	65.08	55.08	-	-
			Margin [dB]:		_	-	-31.2	-21.2	-	-
.24494	18.21 Av	.1	11.3	29.61	_	-	61.93	51.93	-	-
			Margin [dB]:		-	-	-32.32	-22.32	-	-
.43992	22.21 Av	.1	10.7	33.01	-	-	57.06	47.06	-	-
			Margin [dB]:		-	-	-24.05	-14.05	-	-
Line - L3										
7.81217	20.44 Av	10.9	.3		-	-	60		-	-
			Margin [dB]:		-	-		-18.36	-	-
8.29447	20.08 Av	10.9	. 5	31.48	-	-	60		-	-
			Margin [dB]:		-	-		-18.52	-	-
8.6748	20.32 Av	10.9	.7		-	-	60		-	-
			Margin [dB]:		-	-		-18.08	-	-
8.97172	21.21 Av	10.9	.6		-	-	60		-	-
			Margin [dB]:		-	-	-27.29	-17.29	-	-
Line - L4										
.16756	17.28 Av	.1	12.3		-	-	65.08	55.08	-	-
			Margin [dB]:		-	-	-35.4	-25.4	-	-
.25298	18.68 Av	.1	11.2		-	-	61.66		-	-
			Margin [dB]:		-	-	-31.68	-21.68	-	-

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

Av - average detection

LIMIT 3: CISPR 22/11 Group 1 Class B QP LIMIT 4: CISPR 22/11 Group 1 Class B AV FCC ID: V65C5155 Page 18 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

#### 4.2 Test Conditions and Results - RADIATED EMISSIONS

I	est	
С	Descri	ption

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 and 3 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 – 25GHz	(3 meter measurement distance)			

#### **Limits - Class B**

Limit (dBµV/m)					
Quasi-Peak	Average				
40	NA				
43.5	NA				
46	NA				
54	NA				
74 (Peak)	54				
	Quasi-Peak 40 43.5 46 54				

Supplementary information: If Emissions detected were at least 6dB below the limit no additional measurements were taken after prescan. The EUT was scanned in three orthogonal axis from 1GHz-25GHz set to 802.11b, 1Mbps, low, middle and high channels. In addition the EUT was set to 802.11g, 6Mbps and 802.11n, MCS0 to determine if any additional spurious emissions are generated by switching to different modulation. Band-edge scans were conducted at axis determined as worst case from initial 1GHz-25GHz scans in multiple modulation modes and data rates. Below 1GHz the EUT was scanned only in one axis, one modulation. No emissions related the transmitter were noted.

Emissions found near 1.9GHz is noise floor.

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Model Number: C5155 G01

Client Name: Kyocera Communications

# **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

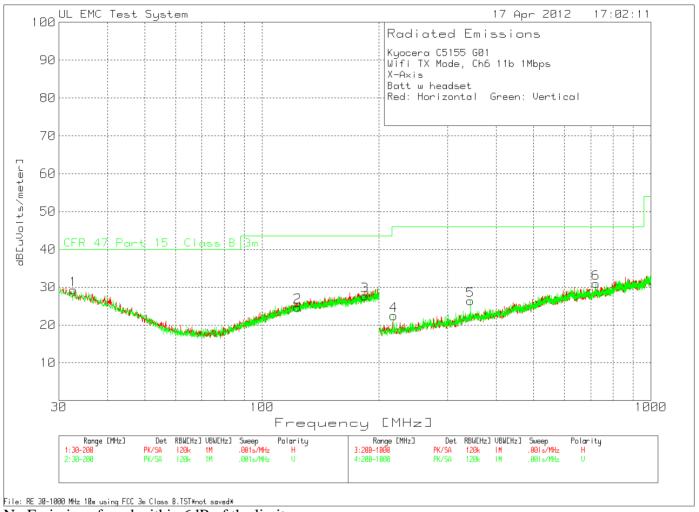
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Model Number: C5155 G01

Client Name: Kyocera Communications

# 4.2.1.1 Spurious, 802.11b, 1Mbps, Middle Channel, Battery Mode, 30MHz – 1GHz

Figure 4 Radiated Emissions Graph X-Axis



No Emissions found within 6dB of the limit

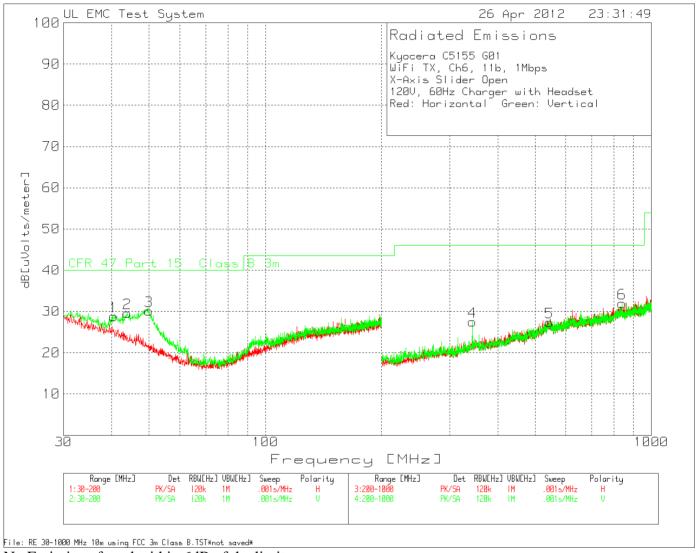
FCC ID: V65C5155 Page 21 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

# 4.2.1.2 Spurious, 802.11b, 1Mbps, Middle Channel, Charging Mode, 30MHz – 1GHz

Figure 5 Radiated Emissions Graph X-Axis



No Emissions found within 6dB of the limit

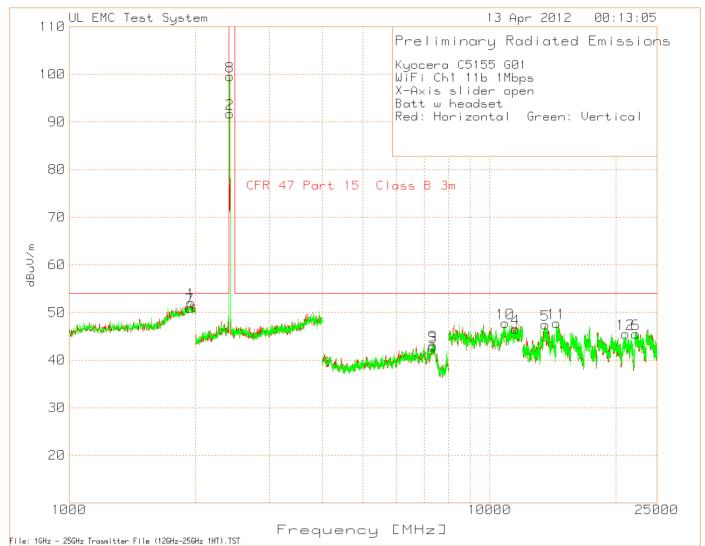
FCC ID: V65C5155 Page 22 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

# 4.2.1.3 Spurious, 802.11b, 1Mbps, Low Channel, 1GHz - 25GHz

## Figure 6 Radiated Emissions Graph X-Axis



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Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 6 Radiated Emissions Data Points X-Axis**

Kyocera C5155 G01 WiFi Ch1 11b 1Mbps X-Axis slider open Batt w headset

RED: Horizontal GRN: Vertical

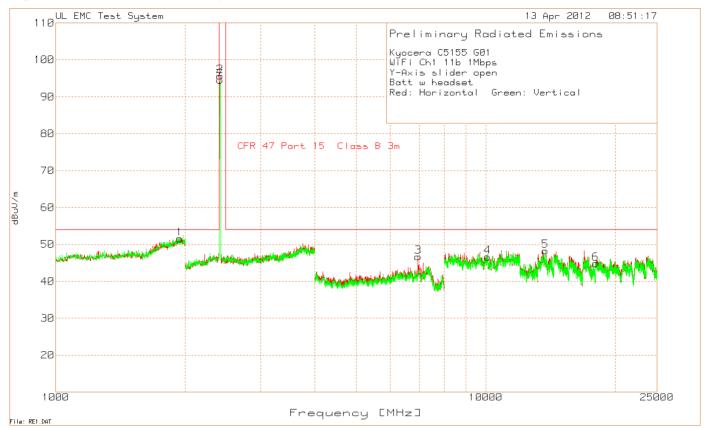
			Antenna	Path		CFR 47 Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1953.908	20.87	PK	27.4	3.79	52.06	54	-1.94	100	Horz
2412.412	66.05	PK	21.8	3.87	91.72		-	99	Horz
7343.562	58.59	PK	30.8	-46.65	42.74	54	-11.26	100	Horz
11541.03	56.37	PK	37.2	-47.06	46.51	54	-7.49	99	Horz
13570.23	48.23	PK	39.8	-40.58	47.45	54	-6.55	99	Horz
22268.91	57.63	PK	40.5	-52.64	45.49	54	-8.51	99	Horz
1939.88	19.64	PK	27.4	3.94	50.98	54	-3.02	101	Vert
2412.412	73.9	PK	21.8	3.87	99.57	-	1	150	Vert
7332.889	58.7	PK	30.7	-46.31	43.09	54	-10.91	150	Vert
10895.26	58.79	PK	36.3	-47.37	47.72	54	-6.28	101	Vert
14444.18	47.51	PK	39.8	-39.55	47.76	54	-6.24	102	Vert
21056.02	60.8	PK	40.1	-55.38	45.52	54	-8.48	100	Vert

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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 7 Radiated Emissions Graph Y-Axis



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Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 7 Radiated Emissions Data Points Y-Axis**

Kyocera C5155 G01 WiFi Ch1 11b 1Mbps Y-Axis slider open Batt w headset

RED: Horizontal GRN: Vertical

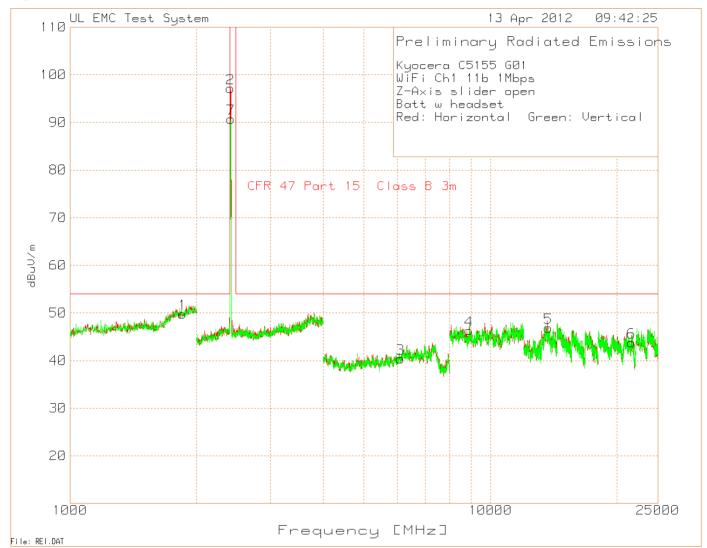
						CFR 47			
			Antenna	Path		Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1941.884	20.27	PK	27.4	3.92	51.59	54	-2.41	100	Horz
2410.41	69.92	PK	21.8	3.95	95.67	-	-	100	Horz
6959.306	64.03	PK	29.2	-46.56	46.67	54	-7.33	100	Horz
10100.07	59.41	PK	36.3	-49.05	46.66	54	-7.34	150	Horz
13750.3	48.54	PK	39.9	-40.16	48.28	54	-5.72	100	Horz
18000	66.2	PK	40	-61.35	44.85	54	-9.15	100	Horz
2410.41	68.79	PK	21.8	3.95	94.54	-	-	100	Vert

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Model Number: C5155 G01

Client Name: Kyocera Communications

### Figure 8 Radiated Emissions Graph Z-Axis



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Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 8 Radiated Emissions Data Points Z-Axis**

Kyocera C5155 G01 WiFi Ch1 11b 1Mbps Z-Axis slider open Batt w headset

RED: Horizontal GRN: Vertical

						CFR 47			
			Antenna	Path		Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1853.707	18.75	PK	27.2	3.83	49.78	54	-4.22	101	Horz
2410.41	71.38	PK	21.8	3.95	97.13	-	1	100	Horz
6116.077	60.79	PK	29	-49.35	40.44	54	-13.56	100	Horz
8899.266	60.39	PK	36.1	-50.14	46.35	54	-7.65	100	Horz
13728.69	46.7	PK	39.8	-39.67	46.83	54	-7.17	99	Horz
21655.46	57.82	PK	40.4	-54.4	43.82	54	-10.18	99	Horz
2412.412	65.06	PK	21.8	3.87	90.73	-	ı	100	Vert

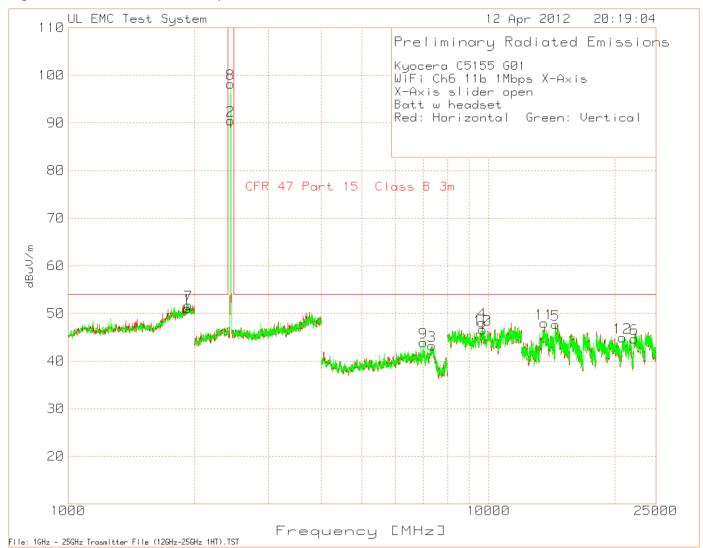
FCC ID: V65C5155 Page 28 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

# 4.2.2 Spurious, 802.11b, 1Mbps, Middle Channel, 1GHz – 25GHz

Figure 9 Radiated Emissions Graph X-Axis



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Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 9 Radiated Emissions Data Points X-Axis**

Kyocera C5155 G01

WiFi Ch6 11b 1Mbps X-Axis

X-Axis slider open

Batt w headset

RED: Horizontal GRN: Vertical

						CFR 47			
			Antenna	Path		Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1925.852	19.79	PK	27.4	3.91	51.1	54	-2.9	150	Horz
2438.438	64.44	PK	21.9	4.18	90.52	-	-	100	Horz
7332.889	58.8	PK	30.7	-46.31	43.19	54	-10.81	150	Horz
9673.115	60.43	PK	36.4	-48.67	48.16	54	-5.84	100	Horz
14436.98	47.58	PK	39.8	-39.67	47.71	54	-6.29	100	Horz
22260.5	56.91	PK	40.5	-52.72	44.69	54	-9.31	100	Horz
1933.868	20.34	PK	27.4	3.97	51.71	54	-2.29	150	Vert
2436.436	72.22	PK	21.9	4.1	98.22	-	-	100	Vert
6999.333	59.77	PK	29.3	-45.19	43.88	54	-10.12	100	Vert
9678.452	58.72	PK	36.4	-48.49	46.63	54	-7.37	150	Vert
13565.43	48.79	PK	39.8	-40.65	47.94	54	-6.06	101	Vert
20806.72	61.27	PK	40.2	-56.5	44.97	54	-9.03	101	Vert

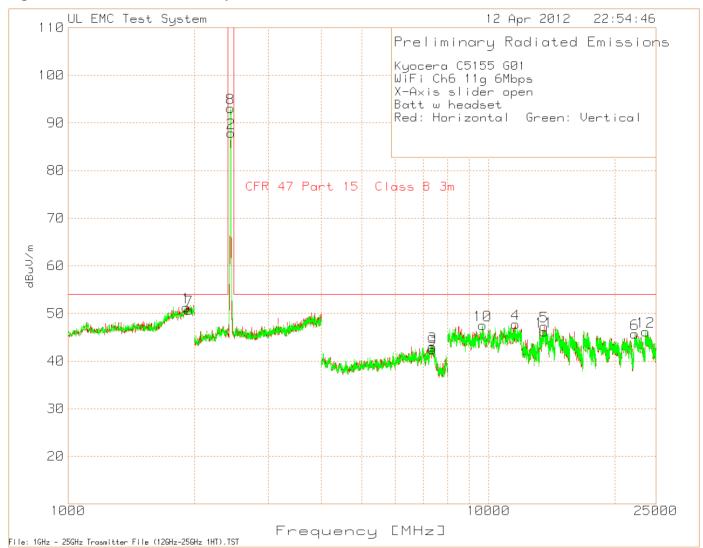
FCC ID: V65C5155 Page 30 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

# 4.2.3 Spurious, 802.11g, 6Mbps, Middle Channel, 1GHz - 25GHz

Figure 10 Radiated Emissions Graph X-Axis



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Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 10 Radiated Emissions Data Points X-Axis**

Kyocera C5155 G01 WiFi Ch6 11g 6Mbps X-Axis slider open Batt w headset

RED: Horizontal GRN: Vertical

			Antenna	Path		CFR 47 Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1913.828	20.11	PK	27.4	3.75	51.26	54	-2.74	150	Horz
2440.44	61.7	PK	21.9	4.25	87.85	-	1	100	Horz
7362.241	58.52	PK	30.9	-46.46	42.96	54	-11.04	100	Horz
11615.74	57.26	PK	37.4	-46.9	47.76	54	-6.24	150	Horz
13563.03	48.2	PK	39.8	-40.7	47.3	54	-6.7	99	Horz
22285.71	57.74	PK	40.5	-52.53	45.71	54	-8.29	99	Horz
1941.884	19.42	PK	27.4	3.92	50.74	54	-3.26	101	Vert
2438.438	67.04	PK	21.9	4.18	93.12	-	1	150	Vert
7359.573	57.97	PK	30.9	-46.41	42.46	54	-11.54	150	Vert
9681.121	59.58	PK	36.4	-48.44	47.54	54	-6.46	100	Vert
13565.43	46.99	PK	39.8	-40.65	46.14	54	-7.86	100	Vert
23647.06	58.53	PK	40.3	-52.65	46.18	54	-7.82	100	Vert

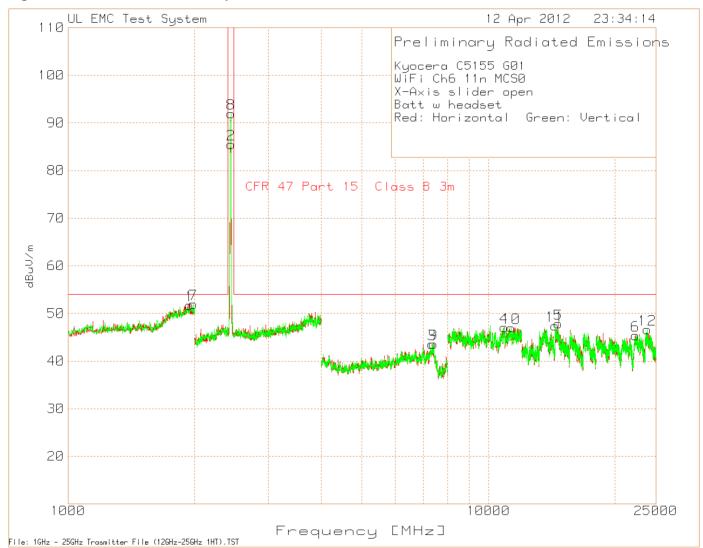
FCC ID: V65C5155 Page 32 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

# 4.2.4 Spurious, 802.11n, MCS0, Middle Channel, 1GHz - 25GHz

Figure 11 Radiated Emissions Graph X-Axis



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Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 11 Radiated Emissions Data Points X-Axis**

Kyocera C5155 G01 WiFi Ch6 11n MCS0 X-Axis slider open

Batt w headset

RED: Horizontal GRN: Vertical

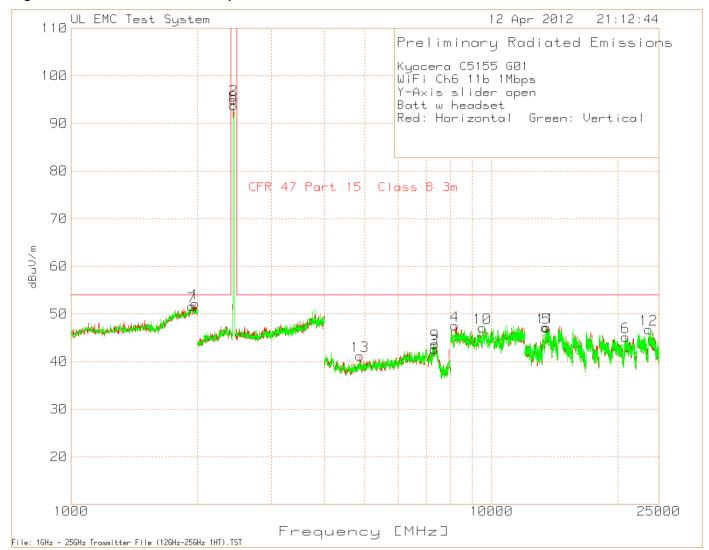
						CFR 47			
			Antenna	Path		Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1945.892	20.46	PK	27.4	3.88	51.74	54	-2.26	150	Horz
2440.44	59.36	PK	21.9	4.25	85.51	-	-	100	Horz
7332.889	59.2	PK	30.7	-46.31	43.59	54	-10.41	99	Horz
10900.6	58.11	PK	36.3	-47.34	47.07	54	-6.93	99	Horz
14662.67	46.43	PK	39.8	-38.4	47.83	54	-6.17	99	Horz
22341.74	57.56	PK	40.5	-52.64	45.42	54	-8.58	99	Horz
1985.972	20.38	PK	27.5	4.07	51.95	54	-2.05	102	Vert
2442.442	65.76	PK	21.9	4.33	91.99	-	-	100	Vert
7407.605	59.3	PK	31.1	-46.82	43.58	54	-10.42	102	Vert
11324.88	57.84	PK	36.9	-47.71	47.03	54	-6.97	150	Vert
14408.16	46.86	PK	39.8	-39.28	47.38	54	-6.62	100	Vert
23851.54	60.33	PK	40.3	-53.95	46.68	54	-7.32	100	Vert

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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 12 Radiated Emissions Graph Y-Axis



FCC ID: V65C5155 Page 35 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 12 Radiated Emissions Data Points Y-Axis**

Kyocera C5155 G01 WiFi Ch6 11b 1Mbps Y-Axis slider open Batt w headset

RED: Horizontal GRN: Vertical

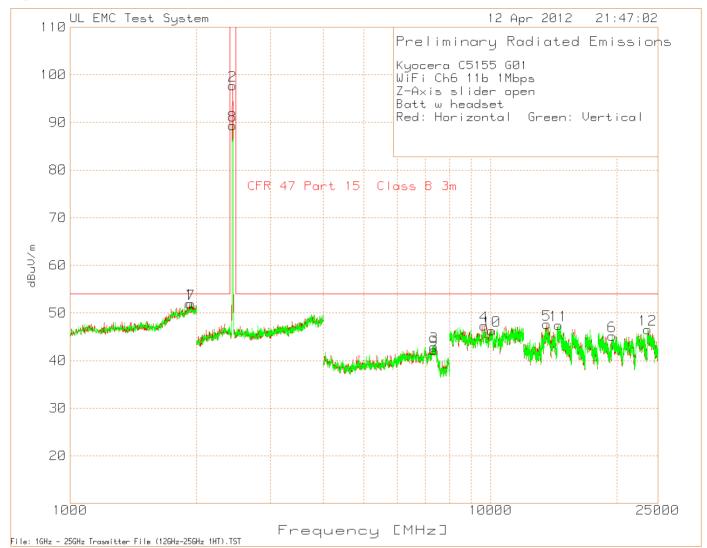
						CFR 47			
			Antenna	Path		Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1977.956	20.8	PK	27.5	3.91	52.21	54	-1.79	150	Horz
2434.434	69.15	PK	21.9	4.02	95.07	-	i	99	Horz
7311.541	58.54	PK	30.5	-46.35	42.69	54	-11.31	150	Horz
4872.582	64.66	PK	27.7	-51.18	41.18	54	-12.82	99	Horz
8184.123	60.26	PK	36.3	-48.98	47.58	54	-6.42	150	Horz
13536.62	48.67	PK	39.8	-41.35	47.12	54	-6.88	100	Horz
20809.52	61.49	PK	40.2	-56.51	45.18	54	-8.82	100	Horz
1941.884	20.25	PK	27.4	3.92	51.57	54	-2.43	100	Vert
2436.436	67.81	PK	21.9	4.1	93.81	-	1	101	Vert
7332.889	59.28	PK	30.7	-46.31	43.67	54	-10.33	100	Vert
9523.682	61.63	PK	36.4	-50.92	47.11	54	-6.89	150	Vert
13440.58	48.9	PK	39.8	-41.55	47.15	54	-6.85	100	Vert
23677.87	59.11	PK	40.3	-52.68	46.73	54	-7.27	100	Vert

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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 13 Radiated Emissions Graph Z-Axis



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Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 13 Radiated Emissions Data Points Z-Axis**

Kyocera C5155 G01 WiFi Ch6 11b 1Mbps Z-Axis slider open Batt w headset

RED: Horizontal GRN: Vertical

						CFR 47			
			Antenna	Path		Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1925.852	20.61	PK	27.4	3.91	51.92	54	-2.08	150	Horz
2436.436	71.71	PK	21.9	4.1	97.71	-	1	100	Horz
7340.894	58.72	PK	30.8	-46.59	42.93	54	-11.07	150	Horz
9654.436	60.29	PK	36.4	-49.35	47.34	54	-6.66	99	Horz
13596.64	48.94	PK	39.8	-41.14	47.6	54	-6.4	100	Horz
19439.78	65.8	PK	40.3	-60.92	45.18	54	-8.82	100	Horz
1937.876	20.56	PK	27.4	3.95	51.91	54	-2.09	100	Vert
2436.436	63.35	PK	21.9	4.1	89.35	-	-	101	Vert
7338.225	58	PK	30.7	-46.49	42.21	54	-11.79	150	Vert
10078.72	58.84	PK	36.3	-48.86	46.28	54	-7.72	150	Vert
14506.6	46.84	PK	39.8	-39.18	47.46	54	-6.54	102	Vert
23683.47	59.06	PK	40.3	-52.8	46.56	54	-7.44	100	Vert

PK - Peak detector

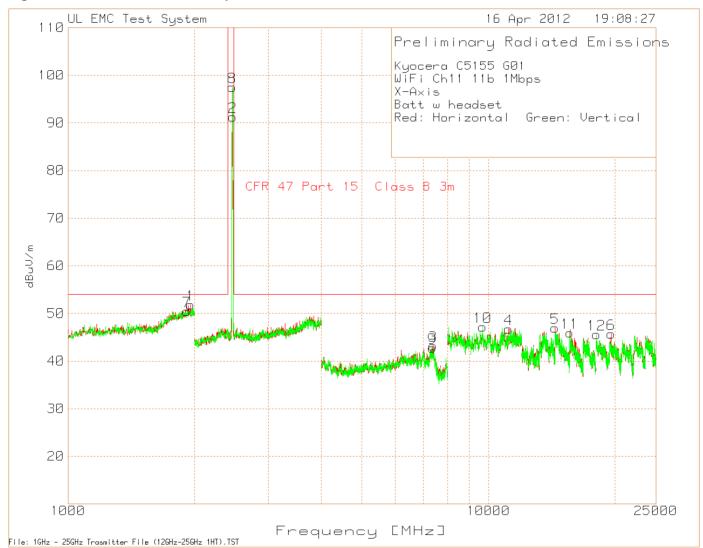
FCC ID: V65C5155 Page 38 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

# 4.2.5 Spurious, 802.11b, 1Mbps, High Channel, 1GHz - 25GHz

Figure 14 Radiated Emissions Graph X-Axis



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Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 14 Radiated Emissions Data Points X-Axis**

Kyocera C5155 G01

WiFi Ch11 11b 1Mbps

X-Axis

Batt w headset

RED: Horizontal GRN: Vertical

						CFR 47			
			Antenna	Path		Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1959.92	20.65	PK	27.4	3.75	51.8	54	-2.2	100	Horz
2464.464	65.21	PK	22	4.04	91.25	-	-	99	Horz
7386.258	58.6	PK	31.1	-46.46	43.24	54	-10.76	150	Horz
11172.78	57	PK	36.6	-46.88	46.72	54	-7.28	150	Horz
14405.76	46.44	PK	39.8	-39.25	46.99	54	-7.01	100	Horz
19568.63	66.36	PK	40.3	-60.95	45.71	54	-8.29	100	Horz
1919.84	19.29	PK	27.4	3.83	50.52	54	-3.48	150	Vert
2460.46	71.37	PK	22	4.14	97.51	-	-	150	Vert
7362.241	58.37	PK	30.9	-46.46	42.81	54	-11.19	100	Vert
9681.121	59.24	PK	36.4	-48.44	47.2	54	-6.8	150	Vert
15615.85	45.76	PK	40.1	-39.95	45.91	54	-8.09	101	Vert
18092.44	66.38	PK	40	-60.77	45.61	54	-8.39	101	Vert

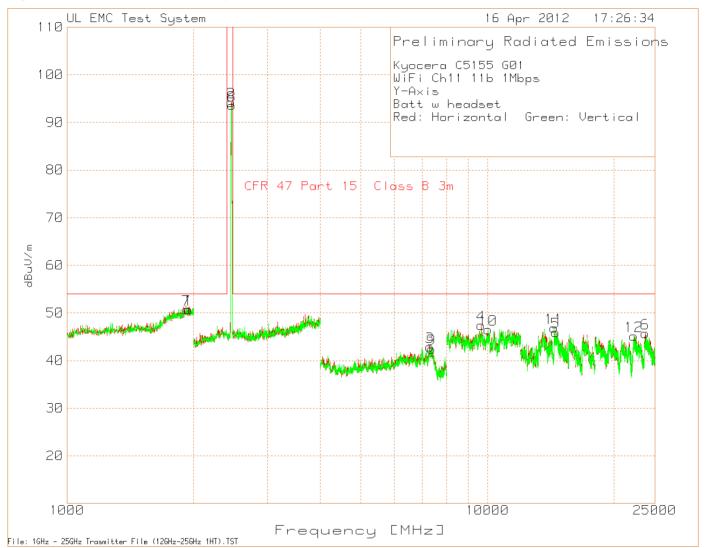
PK - Peak detector

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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 15 Radiated Emissions Graph Y-Axis



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Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 15 Radiated Emissions Data Points Y-Axis**

Kyocera C5155 G01 WiFi Ch11 11b 1Mbps

Y-Axis

Batt w headset

RED: Horizontal GRN: Vertical

						CFR 47			
			Antenna	Path		Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1943.888	19.45	PK	27.4	3.9	50.75	54	-3.25	100	Horz
2460.46	68.09	PK	22	4.14	94.23	-	-	99	Horz
7287.525	58.8	PK	30.4	-46.34	42.86	54	-11.14	100	Horz
9673.115	59.65	PK	36.4	-48.67	47.38	54	-6.62	150	Horz
14542.62	45.07	PK	39.8	-38.96	45.91	54	-8.09	99	Horz
23711.49	58.8	PK	40.3	-53.33	45.77	54	-8.23	99	Horz
1921.844	19.45	PK	27.4	3.86	50.71	54	-3.29	101	Vert
2462.462	67.52	PK	22	4.09	93.61	-	-	100	Vert
7364.91	58.05	PK	30.9	-46.49	42.46	54	-11.54	150	Vert
10041.36	58.83	PK	36.4	-48.74	46.49	54	-7.51	150	Vert
14405.76	46.28	PK	39.8	-39.25	46.83	54	-7.17	101	Vert
22288.52	57.19	PK	40.5	-52.57	45.12	54	-8.88	101	Vert

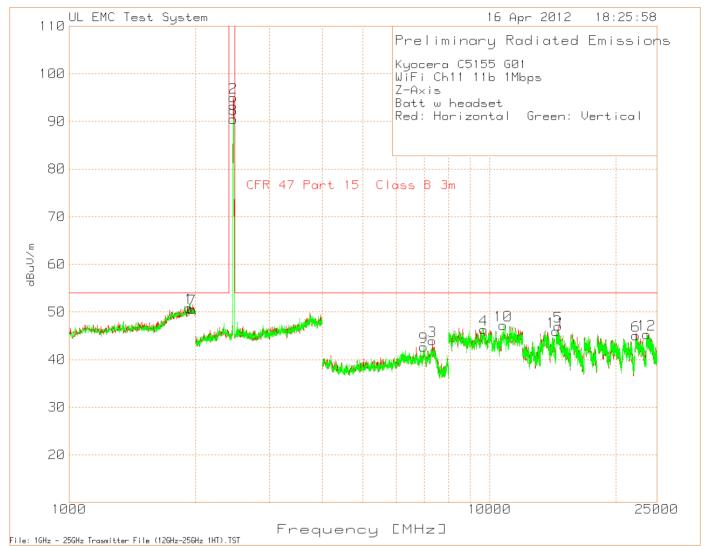
PK - Peak detector

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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 16 Radiated Emissions Graph Z-Axis



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Model Number: C5155 G01

Client Name: Kyocera Communications

### **Table 16 Radiated Emissions Data Points Z-Axis**

Kyocera C5155 G01 WiFi Ch11 11b 1Mbps

Z-Axis

Batt w headset

RED: Horizontal GRN: Vertical

						CFR 47			
			Antenna	Path		Part 15			
Test	Meter		Factor	Loss/Gain	Level	Class B		Height	
Frequency	Reading	Detector	dB	dB	dBuV/m	3m	Margin	[cm]	Polarity
1929.86	19.47	PK	27.4	3.94	50.81	54	-3.19	150	Horz
2460.46	68.92	PK	22	4.14	95.06	-	-	100	Horz
7316.878	59.65	PK	30.6	-46.28	43.97	54	-10.03	150	Horz
9699.8	58.85	PK	36.4	-48.9	46.35	54	-7.65	150	Horz
14561.83	45.95	PK	39.8	-38.72	47.03	54	-6.97	99	Horz
22299.72	57.31	PK	40.5	-52.74	45.07	54	-8.93	99	Horz
1961.924	19.37	PK	27.5	3.74	50.61	54	-3.39	101	Vert
2460.46	64.33	PK	22	4.14	90.47	-	1	150	Vert
6980.654	59.31	PK	29.3	-45.97	42.64	54	-11.36	100	Vert
10767.18	58.95	PK	36.4	-48.15	47.2	54	-6.8	150	Vert
14400.96	45.31	PK	39.8	-39.21	45.9	54	-8.1	100	Vert
23675.07	57.63	PK	40.3	-52.66	45.27	54	-8.73	100	Vert

PK - Peak detector

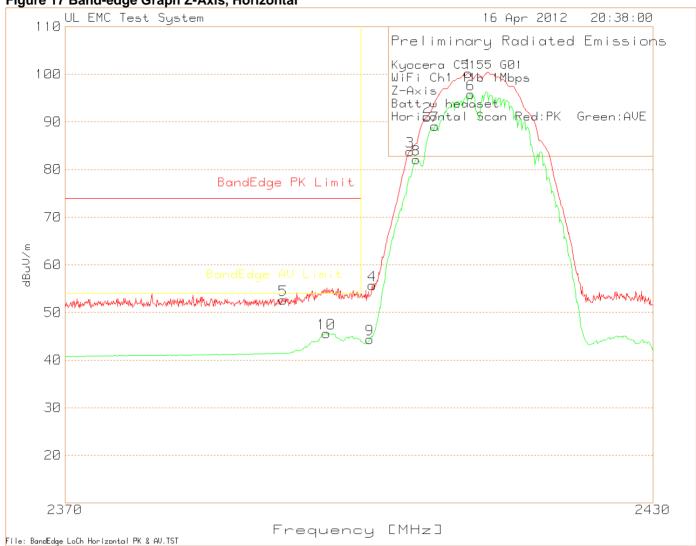
FCC ID: V65C5155 Page 44 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

## 4.2.6 Band-edge, 802.11b, 1Mbps, Low Channel

Figure 17 Band-edge Graph Z-Axis, Horizontal



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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 18 Band-edge Graph X-Axis, Vertical



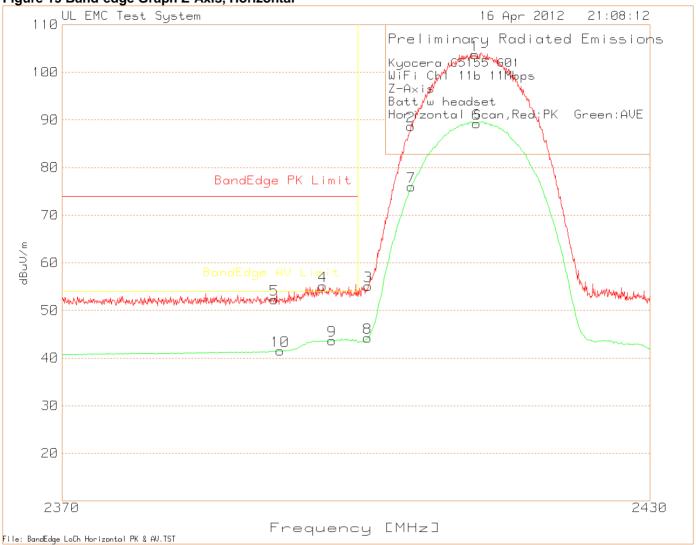
FCC ID: V65C5155 Page 46 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

## 4.2.7 Band-edge, 802.11b, 11Mbps, Low Channel

Figure 19 Band-edge Graph Z-Axis, Horizontal



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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 20 Band-edge Graph X-Axis, Vertical



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Model Number: C5155 G01

Client Name: Kyocera Communications

## 4.2.8 Band-edge, 802.11g, 6Mbps, Low Channel

Figure 21 Band-edge Graph Z-Axis, Horizontal



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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 22 Band-edge Graph X-Axis, Vertical



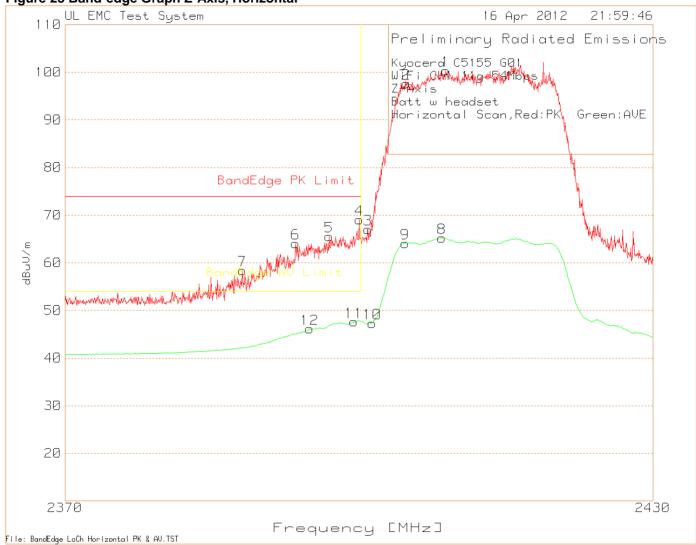
FCC ID: V65C5155 Page 50 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

## 4.2.9 Band-edge, 802.11g, 54Mbps, Low Channel

Figure 23 Band-edge Graph Z-Axis, Horizontal

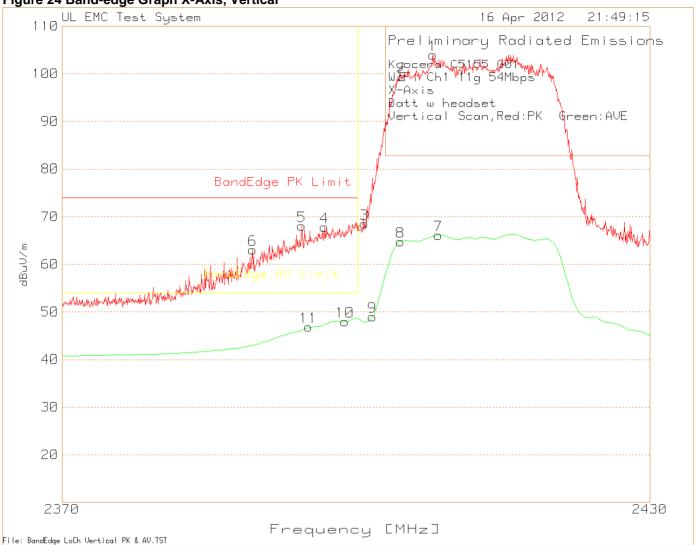


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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 24 Band-edge Graph X-Axis, Vertical



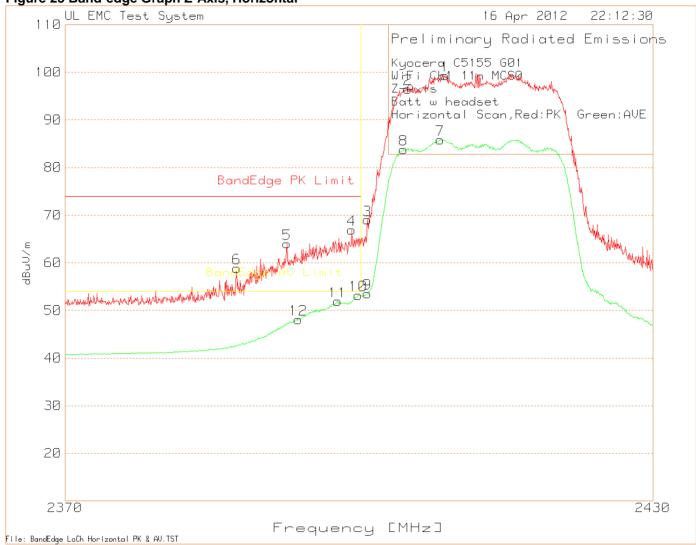
FCC ID: V65C5155 Page 52 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

## 4.2.10Band-edge, 802.11n, MCS0, Low Channel

Figure 25 Band-edge Graph Z-Axis, Horizontal



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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 26 Band-edge Graph X-Axis, Vertical



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Model Number: C5155 G01

Client Name: Kyocera Communications

## 4.2.11Band-edge, 802.11n, MCS7, Low Channel

Figure 27 Band-edge Graph Z-Axis, Horizontal



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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 28 Band-edge Graph X-Axis, Vertical



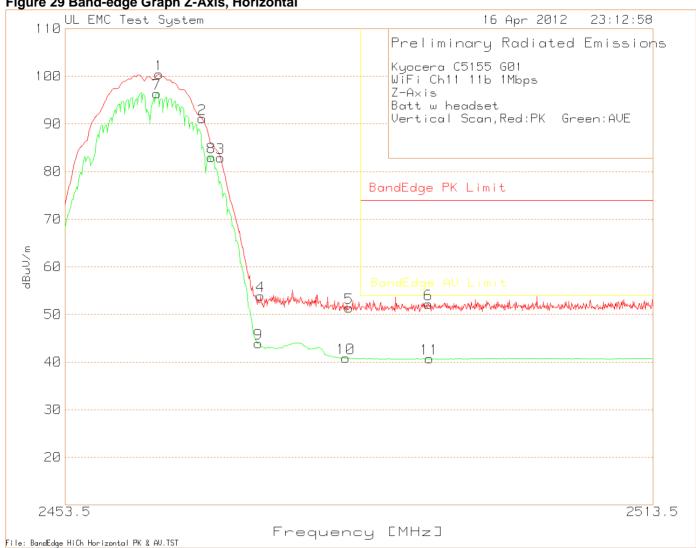
FCC ID: V65C5155 56 of 73 Page

Model Number: C5155 G01

Client Name: **Kyocera Communications** 

# 4.2.12Band-edge, 802.11b, 1Mbps, High Channel

Figure 29 Band-edge Graph Z-Axis, Horizontal



#### Table 17 Band-edge Data Z-Axis, Horizontal

Kyocera C5155 G01 WiFi Ch11 11b 1Mbps

Z-Axis

Batt w headset

Vertical Scan, Red: PK Green: AVE

vererear bean/kea:rk ereen:nve											
Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity		
Frequency	Reading		Factor	Loss/Gain		Limit		[cm]			
			dB	Factor dB							
2490.437	26.25	PK	22.1	3.81	52.16	74	-21.84	100	Horz		
2490.557	14.79	AV	22.1	3.82	40.71	54	-13.29	100	Horz		

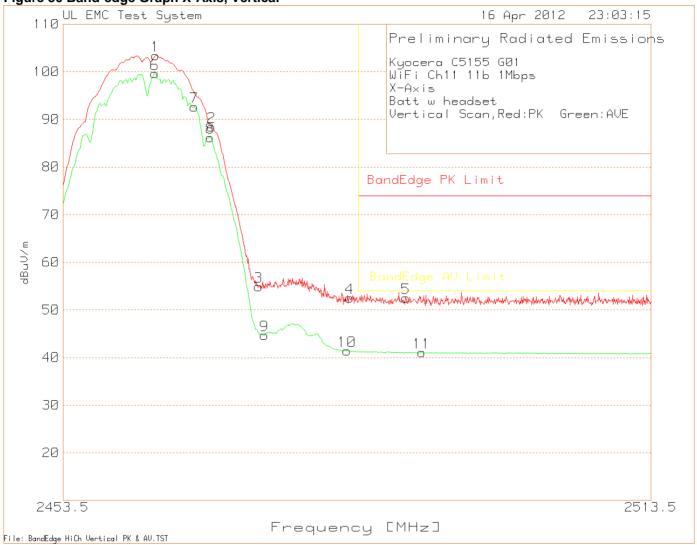
PK - Peak detector

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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 30 Band-edge Graph X-Axis, Vertical



#### Table 18 Band-edge Data X-Axis, Vertical

Kyocera C5155 G01 WiFi Chl1 11b 1Mbps

X-Axis

Batt w headset

Vertical Scan, Red: PK Green: AVE

Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity
Frequency	Reading		Factor dB	Loss/Gain		Limit		[cm]	
				Factor dB					
2488.335	26.66	PK	22.1	3.78	52.54	74	-21.46	150	Vert
2489.956	15.13	AV	22.1	3.81	41.04	54	-12.96	150	Vert

PK - Peak detector

FCC ID: V65C5155 Page 58 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

# 4.2.13Band-edge, 802.11b, 11Mbps, High Channel

Figure 31 Band-edge Graph Z-Axis, Horizontal



#### Table 19 Band-edge Data Z-Axis, Horizontal

Kyocera C5155 G01 WiFi Ch11 11g 6Mbps

Z-Axis

Batt w headset

Horizontal Scan, Red: PK Green: AVE

Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity			
Frequency	Reading		Factor dB	Loss/Gain		Limit		[cm]				
				Factor dB								
2484.491	33.21	PK	22.1	3.77	59.08	74	-14.92	150	Horz			
2490.857	30.24	PK	22.1	3.82	56.16	74	-17.84	100	Horz			
2487.554	15.55	PK	22.1	3.77	41.42	54	-12.58	100	Horz			

PK - Peak detector

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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 32 Band-edge Graph X-Axis, Vertical



#### Table 20 Band-edge Data X-Axis, Vertical

Kyocera C5155 G01
WiFi Ch11 11b 11Mbps
X-Axis

Batt w headset Vertical Scan, Red: PK Green: AVE

Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity
Frequency	Reading		Factor	Loss/Gain		Limit		[cm]	
			dB	Factor dB					
2492.359	26.32	PK	22.1	3.84	52.26	74	-21.74	150	Vert
2492.479	14.89	AV	22.1	3.85	40.84	54	-13.16	150	Vert

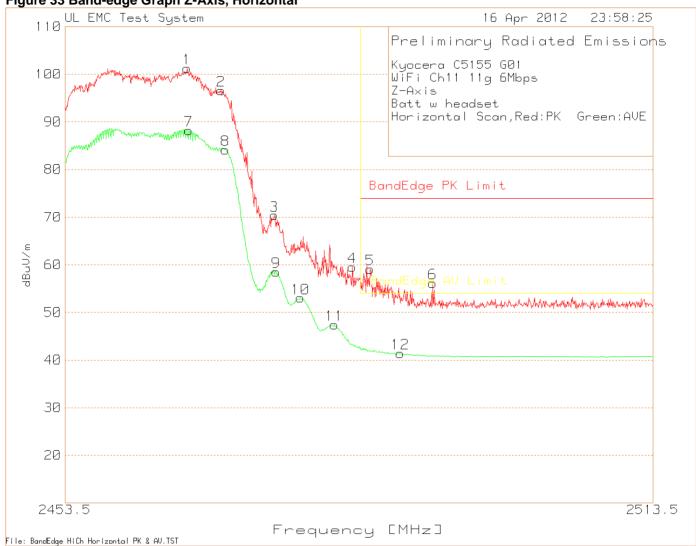
PK - Peak detector Av - Average detector FCC ID: V65C5155 Page 60 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

## 4.2.14Band-edge, 802.11g, 6Mbps, High Channel

Figure 33 Band-edge Graph Z-Axis, Horizontal



#### Table 21 Band-edge Data Z-Axis, Horizontal

Kyocera C5155 G01 WiFi Ch11 11g 6Mbps

Z-Axis

Batt w headset

Horizontal Scan, Red: PK Green: AVE

Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity
Frequency	Reading		Factor	Loss/Gain		Limit		[cm]	
			dB	Factor dB					
2484.491	33.21	PK	22.1	3.77	59.08	74	-14.92	150	Horz
2490.857	30.24	PK	22.1	3.82	56.16	74	-17.84	100	Horz
2487.554	15.55	AV	22.1	3.77	41.42	54	-12.58	100	Horz

PK - Peak detector

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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 34 Band-edge Graph X-Axis, Vertical



#### Table 22 Band-edge Data X-Axis, Vertical

Kyocera C5155 G01 WiFi Chl1 11g 6Mbps

X-Axis

Batt w headset

Vertical Scan, Red: PK Green: AVE

Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity
Frequency	Reading		Factor	Loss/Gain		Limit		[cm]	
			dB	Factor dB					
2484.911	36.53	PK	22.1	3.77	62.4	74	-11.6	150	Vert
2491.698	30.65	PK	22.1	3.83	56.58	74	-17.42	100	Vert
2487.644	16.01	AV	22.1	3.77	41.88	54	-12.12	103	Vert

PK - Peak detector

FCC ID: V65C5155 Page 62 of 73

Model Number: C5155 G01

Client Name: Kyocera Communications

## 4.2.15 Band-edge, 802.11g, 54Mbps, High Channel

Figure 35 Band-edge Graph Z-Axis, Horizontal



#### Table 23 Band-edge Data Z-Axis, Horizontal

Kyocera C5155 G01 WiFi Ch11 11g 54Mbps

Z-Axis

Batt w headset

Horizontal Scan, Red: PK Green: AVE

Test		Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity			
Freq	quency	Reading		Factor	Loss/Gain		Limit		[cm]				
				dB	Factor dB								
2484	.191	32.38	PK	22.1	3.77	58.25	74	-15.75	99	Horz			
2487	.434	29.79	PK	22.1	3.77	55.66	74	-18.34	99	Horz			
2487	.614	14.94	AV	22.1	3.77	40.81	54	-13.19	99	Horz			

PK - Peak detector

FCC ID: V65C5155 Page 63 of 73

Model Number: C5155 G01

Client Name: **Kyocera Communications** 

Figure 36 Band-edge Graph X-Axis, Vertical



#### Table 24 Band-edge Data X-Axis, Vertical

Kyocera C5155 G01 WiFi Chll 11g 54Mbps X-Axis

Batt w headset

Vertical Scan, Red: PK Green: AVE

Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity
Frequency	Reading		Factor dB	Loss/Gain Factor dB		Limit		[cm]	
2485.932	32.88	PK	22.1	3.77	58.75	74	-15.25	100	Vert
2489.956	29.64	PK	22.1	3.81	55.55	74	-18.45	150	Vert
2488.995	14.97	AV	22.1	3.79	40.86	54	-13.14	100	Vert

PK - Peak detector

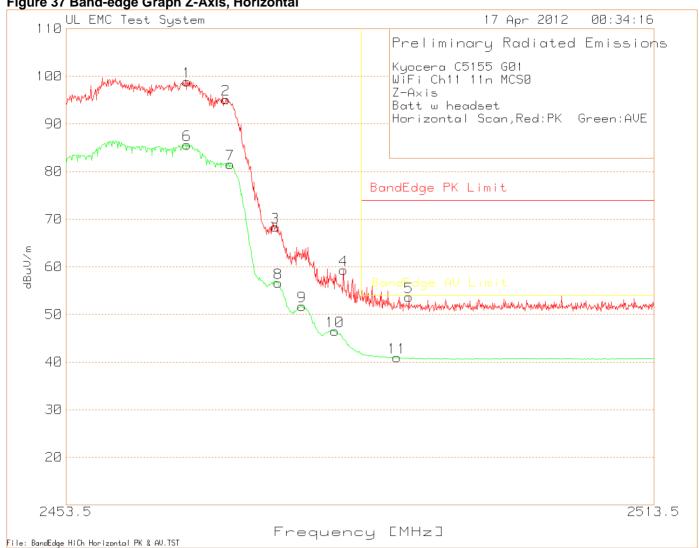
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Model Number: C5155 G01

Client Name: **Kyocera Communications** 

## 4.2.16Band-edge, 802.11n, MCS0, High Channel

Figure 37 Band-edge Graph Z-Axis, Horizontal



#### Table 25 Band-edge Data Z-Axis, Horizontal

Kyocera C5155 G01 WiFi Ch11 11n MCS0

Z-Axis

Batt w headset

Horizontal Scan, Red: PK Green: AVE

Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity
Frequency	Reading		Factor dB	Loss/Gain		Limit		[cm]	
				Factor dB					
2488.335	27.74	PK	22.1	3.78	53.62	74	-20.38	99	Horz
2487.134	15.05	AV	22.1	3.77	40.92	54	-13.08	99	Horz

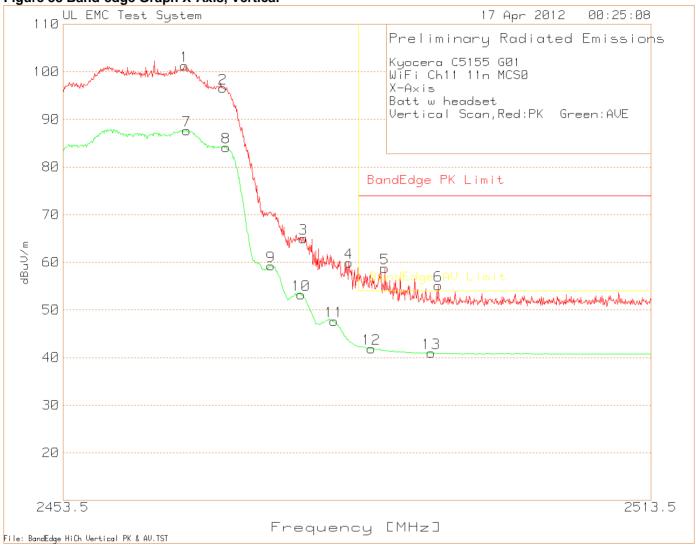
PK - Peak detector

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Model Number: C5155 G01

Client Name: Kyocera Communications

Figure 38 Band-edge Graph X-Axis, Vertical



#### Table 26 Band-edge Data X-Axis, Vertical

Kyocera C5155 G01 WiFi Ch11 11n MCS0

X-Axis

Batt w headset

Vertical Scan, Red: PK Green: AVE

Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity
Frequency	Reading		Factor dB	Loss/Gain		Limit		[cm]	
				Factor dB					
2486.173	32.91	PK	22.1	3.77	58.78	74	-15.22	150	Vert
2491.638	29.18	PK	22.1	3.83	55.11	74	-18.89	100	Vert
2484.791	15.99	AV	22.1	3.77	41.86	54	-12.14	100	Vert
2490.917	15.03	AV	22.1	3.82	40.95	54	-13.05	100	Vert

PK - Peak detector

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Model Number: C5155 G01

Client Name: Kyocera Communications

## 4.2.17 Band-edge, 802.11n, MCS7, High Channel

Figure 39 Band-edge Graph Z-Axis, Horizontal



#### Table 27 Band-edge Data Z-Axis, Horizontal

Kyocera C5155 G01 WiFi Ch11 11n MCS7

Z-Axis

Batt w headset

Horizontal Scan, Red: PK Green: AVE

Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity
Frequency	Reading		Factor	Loss/Gain		Limit		[cm]	
			dB	Factor dB					
2490.617	25.61	PK	22.1	3.82	51.53	74	-22.47	150	Horz
2488.335	14.76	AV	22.1	3.78	40.64	54	-13.36	99	Horz

PK - Peak detector

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Model Number: C5155 G01

Client Name: **Kyocera Communications** 

Figure 40 Band-edge Graph X-Axis, Vertical



#### Table 28 Band-edge Data X-Axis, Vertical

Kyocera C5155 G01 WiFi Ch11 11n MCS7 X-Axis

Batt w headset

Vertical Scan, Red: PK Green: AVE

Test	Meter	Detector	Antenna	Path	dBuV/m	BandEdge	Margin	Height	Polarity
Frequency	Reading		Factor	Loss/Gain		Limit		[cm]	
			dB	Factor dB					
2489.296	29.9	PK	22.1	3.8	55.8	74	-18.2	102	Vert
2487.014	14.97	AV	22.1	3.77	40.84	54	-13.16	150	Vert

PK - Peak detector

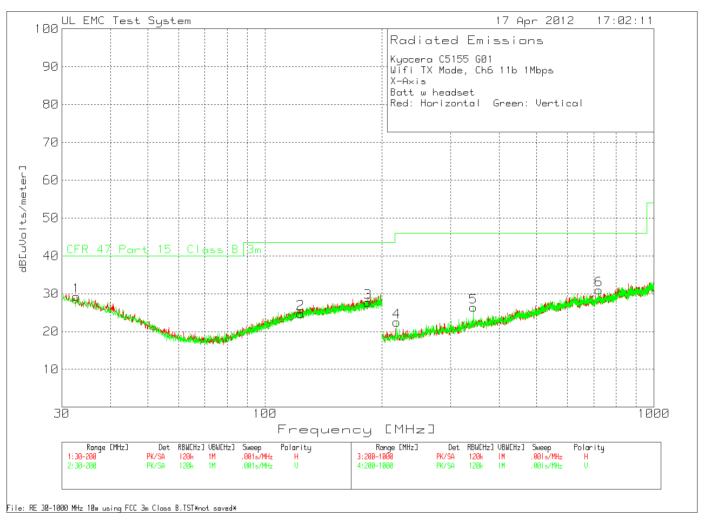
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Model Number: C5155 G01

Client Name: Kyocera Communications

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

**Figure 41 Radiated Emissions Graph** 



No Emissions found within 6dB to the limit

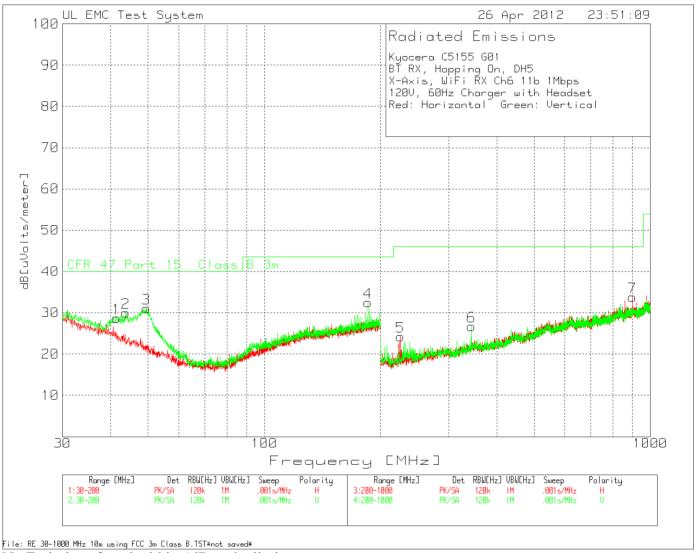
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Model Number: C5155 G01

Client Name: Kyocera Communications

### 4.2.19 Receiver and Digital Radiated Emissions, Charging Mode, 30MHz - 1GHz

Figure 42 Radiated Emissions Graph



No Emissions found within 6dB to the limit

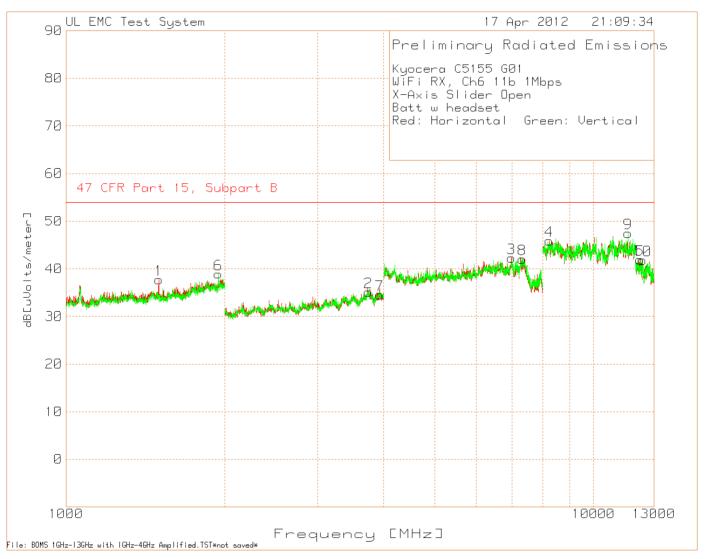
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Model Number: C5155 G01

Client Name: Kyocera Communications

# 4.2.20 Receiver and Digital Radiated Emissions, Battery Mode, 1GHz - 13GHz

**Figure 43 Radiated Emissions Graph** 



No Emissions detected above noise floor

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Model Number: C5155 G01

Client Name: Kyocera Communications

### 5 IMMUNITY TEST RESULTS

Immunity tests are not required per the standard

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Model Number: C5155 G01

Client Name: Kyocera Communications

### 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 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.

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Model Number: C5155 G01

Client Name: Kyocera Communications



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