

Underwriters Laboratories Inc. 333 Pfingsten Rd. Northbrook, IL 60062

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Project Number: 11U13914-4

FCC ID V65E4210

Date: July 19, 2011

Model: E4210

Electromagnetic Compatibility Test Report

For

KYOCERA Communications, Inc.

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FCC ID V65E4210 Page 2 of 35

Model Number: E4210

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: July 19, 2011

Product Type: CDMA Mobile Phone with Bluetooth

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

Model Number: **E4210**

Sample Serial Number: **268435457816720199**

EUT Category: Transmitter

Testing Start Date: July 7, 2011

Date Testing Complete: July 11, 2011

Overall Results: Compliant

Underwriters Laboratories Inc. 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. Underwriters Laboratories Inc. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from Underwriters Laboratories Inc. issued reports. This report shall not be used to claim, constitute or imply product certification, approval, or endorsement by NVLAP, NIST, A2LA, or any agency of the US government.

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Page 3 of 35

FCC ID V65E4210 Model Number: E4210

Client Name: Kyocera Communications

Report Directory

1.0	G E N E R A L - Product Description	4
1.1	Equipment Description	4
1.2	Equipment Marking Plate	
1 1	Device Configuration During Test 3.1 Equipment Used During Test: 3.2 Input/Output Ports: 3.3 EUT Internal Operating Frequencies: 3.4 Power Interface:	5 5 5
1.4	Block Diagram:	7
1.5	EUT Configurations	8
1.6	EUT Operation Modes	8
2.0	Summary	9
2.1	Deviations from standard test methods	9
2.2	Device Modifications Necessary for Compliance	9
2.3	Reference Standards	10
2.4	Results Summary	10
3.0	Calibration of Equipment Used for Measurement	11
4.0	EMISSIONS TEST RESULTS	11
4.1	Test Conditions and Results – MAINS TERMINAL – CONDUCTED EMISSIONS	12
4.2	Test Conditions and Results – RADIATED EMISSIONS	18
5.0	IMMUNITY TEST RESULTS	33
Appen	dix A	34
Λ 00	raditations and Authorizations	24

FCC ID V65E4210 Page 4 of 35

Model Number: E4210

Client Name: Kyocera Communications

Report Revision History

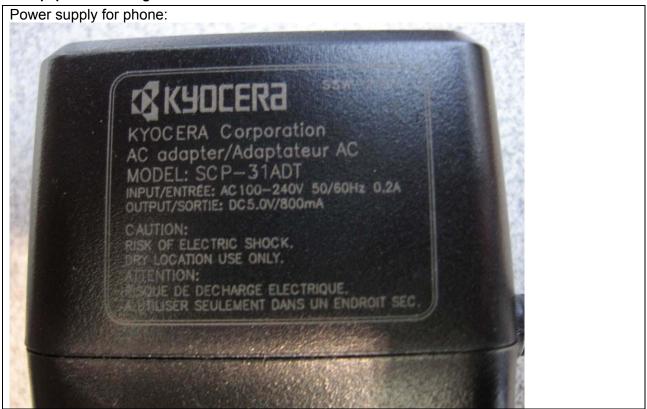
Revision Date	Description	Revised By	Revision Reviewed By
None	·		

1.0 GENERAL-Product Description

1.1 Equipment Description

• • •
The E4210 is a CDMA Mobile Phone with BlueTooth 2.1+EDR.

1.2 Equipment Marking Plate



FCC ID V65E4210 Page 5 of 35

Model Number: E4210

Kyocera Communications Client Name:

Device Configuration During Test 1.3

1.3.1 **Equipment Used During Test:**

Use	Product Type	Manufacturer	Model	Comments		
EUT	CDMA Mobile Phone	KYOCERA Communications, Inc.	E4210	None		
EUT	Power Supply	KYOCERA Communications, Inc.	SCP-31ADT	Input:100-240Vac 50/60Hz 0.2A Output: 5Vdc 800mA		
AE	Ear Phones	-	-	None		
AE	Laptop	Lenovo	T410	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	Ν	None
2	Mains	Batt	-	-	3.7V Rechargeable battery
3	Headphone	I/O	N	N	None
4	USB	I/O	N	N	None

DC = DC Power Port N/E = Non-Electrical = AC Power Port

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

Note: AC I/O TP

FCC ID V65E4210 Page 6 of 35

Model Number: E4210

Client Name: Kyocera Communications

1.3.3 EUT Internal Operating Frequencies:

Frequency (MHz)	Description
19.2	TCXO
26	Bluetooth

1.3.4 Power Interface:

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

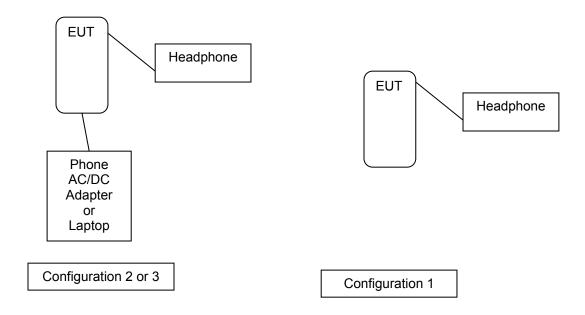
FCC ID V65E4210 Page 7 of 35

Model Number: E4210

Client Name: Kyocera Communications

1.4 Block Diagram:

The diagram below illustrates the configuration of the equipment above.



FCC ID V65E4210 Page 8 of 35

Model Number: E4210

Client Name: Kyocera Communications

1.5 EUT Configurations

Mode #	Description			
1	1 EUT configured in Battery Mode			
2	EUT configured in AC mode using AC adapter			
3	EUT configured with Laptop via USB cable			

Worst case was in Battery mode and the EUT is in Z-axis. This was determined with preliminary measurements

1.6 EUT Operation Modes

Mode #	Description				
1	EUT set to single channel, DH5, one modulation				
2	EUT set to hopping channel, DH5, one modulation				

FCC ID V65E4210 Page 9 of 35

Model Number: E4210

Client Name: Kyocera Communications

2.0 Summary

The tests listed in the Summary of Testing section of this report have been performed and the results recorded by Underwriters Laboratories Inc. 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					

FCC ID V65E4210 Page 10 of 35

Model Number: E4210

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 ServicesBartlomiej Mucha(Ext.41216) Staff Engineer International EMC Services Conformity Assessment Services

AMhulu

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FCC ID V65E4210 Page 11 of 35

Model Number: E4210

Client Name: Kyocera Communications

3.0 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.

4.0 EMISSIONS TEST RESULTS

The emissions tests were performed according to following regulations:

United States ----
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	45 ± 15	Barometric	950 ± 150
Temperature, °C	22.5 ± 2.5	Humidity, %	43 ± 13	Pressure, mBar	930 ± 130

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)

FCC ID V65E4210 Page 12 of 35

Model Number: E4210

Client Name: Kyocera Communications

4.1 Test Conditions and Results – MAINS TERMINAL – CONDUCTED EMISSIONS

Description t	through	usurements were made on a ground plane. All power was connected to the system ugh Artificial Mains Network (AMN). Conducted voltage measurements on mains lines e made at the output of the AMN.							
Basic Standa	rd			FCC Par	t 15				
UL LPG				80-EM-S0	0026				
			Frequency range on earline	ch side of	Measurement Point				
Fully configur the following		nple scanned over ncy range	150kHz to 30MHz		Mains				
			Limits - Class B						
			Limit (dΒμV)					
Frequency (M	/IHz)	Qua	asi-Peak	Average					
0.15-0.5	5	66	6 to 56	56 to 46					
0.5-5			56		46				
5-30			60		50				
Supplementa	ry info	mation: None							

FCC ID V65E4210 Page 13 of 35

Model Number: E4210

Client Name: Kyocera Communications

Table 1 Conducted Emissions EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
2	2	2
Supplementary information: AC m	ode considered worst case	

Table 2 Conducted Emissions Test Equipment

Description	Manufacturer	Model	Identifier	Cal Date	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC4328	12-28-10	12-30-11
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	1-6-11	1-6-12
LISN - L2	Solar	8602-50-TS-50-N	EMC4064	1-6-11	1-6-12

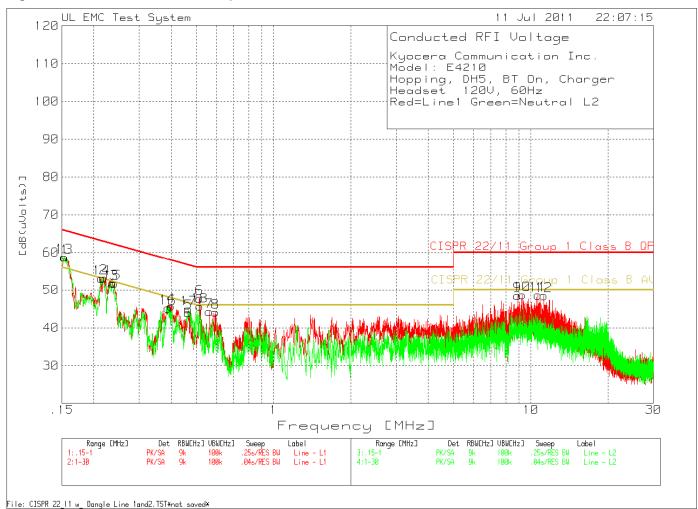
Figure 1 Test Setup for Conducted Emissions

See Photos Exhibit

FCC ID V65E4210 Page 14 of 35

Model Number: E4210

Figure 2 Conducted Emissions Graph



FCC ID V65E4210 Page 15 of 35

Model Number: E4210

Client Name: **Kyocera Communications**

Table 3 Conducted Emissions Data Points

Kyocera Communication Inc. Model: E4210 Hopping, DH5, BT On, Charger Headset 120V, 60Hz Red=Line1 Green=Neutral L2 Test Meter Transducer Gain/Loss Level Limit:1 2 3 4 5 6 No. Frequency Reading Factor Factor [dB(uVolts)] [MHz] [dB(uV)] [dB] [dB] _______ 58.68 - - 65.8 55.8

3B] - -7.12 2.88

53.17 - 62.9 52.9

3B] - -9.73 .27

51.71 - 62.1 52.1

3B] - -10.39 -39

45.71 - 57.9 47.9

3B] - -12.19 -2.19

43.95 - 56.6 46.6

3B] - -12.65 -2.65

47.77 - 56 46

3B] - -8.23 1.77

44.24 - 56 46

3B] - -11.76 -1.76

44.09 - 56 46

3B] - -11.91 Line - L1 .15 - 1MHz -----1 .15403 43.68 PK 1.8 13.2 Margin [dB] 2 .21784 40.67 PK 1.1 11.4 53 Margin [dB] 3 .23982 39.51 PK .9 11.3 51 Margin [dB] 34.41 PK .5 4 .39929 10.8 Margin [dB] 32.85 PK .4 5 .46554 10.7 Margin [dB] 6 .51459 36.67 PK .4 10.7 Margin [dB] 33.34 PK .3 7 .56194 10.6 Margin [dB] 33.19 PK .3 8 .594 10.6 44.09 Margin [dB] Line - L1 1 - 30MHz ------11 48.52 - - 60
Margin [dB] - - -11.4
11 48.7 - - 60
Margin [dB] - -11.3 9 8.89559 37.02 PK .5 50 Margin [dB] -11.48 -1.48 10 9.27951 37.3 PK . 4 5.0 Margin [dB] - - -11.3 -1.3 11 48.62 - - 60 50 Margin [dB] - - -11.38 -1.38 11 10.67029 37.22 PK .4 12 11.25521 37.09 PK .4 60 50 Margin [dB] -11.51 -1.51 Line - L2 .15 - 1MHz -----13 .1534 ...

14 .21434 40.46 PK 1.1 11.5 53.06

Margin [dB]

1 11.5 51.8 65.8 -7.04 55.8 13 .1534 2.96 5.3 -9.94 .06 52.2 -.4 -10.4 58.1 48.1 16 .38825 -12.92 -2.92 56.6 46.6 17 .46724 33.8 PK .4 46.6 -11.6 -1.6 45.69 - - -18 .51565 34.59 PK .3 10.8 56 46

-10.31 -.31

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

QP - Quasi-Peak detector

Margin [dB]

FCC ID V65E4210 16 of 35 Page

E4210 Model Number:

Kyocera Communications Client Name:

Kyocera Communication Inc.

Model: E4210

Hopping, DH5, BT On, Charger Headset 120V, 60Hz Red=Line1 Green=Neutral L2

Test Frequency [MHz]	Reading [dB(uV)]	ransducer Factor [dB]	Gain/Loss Factor [dB [dB]	(uVolts	3)]	2	3	4	5	6
Line - L1	.15 - 1MHz									
.15585	39.26 QP	1.8	13	54.06	-	-	65.68	55.68	-	-
			Margin [dB]:		-	-	-11.62		-	-
.22723	33.61 QP	1	11.4	46.01	-	-	62.55	52.55	-	-
02060	25 00 05	1	Margin [dB]:		-	-	-16.54		-	-
.23062	35.22 QP	1	11.4	47.62	-	-	62.43	52.43	-	-
20110	00 10 05	_	Margin [dB]:		-	-	-14.81		-	-
.39118	28.19 QP	.5	10.8	39.49	-	-	58.04	48.04	-	-
46204	21 22 25	4	Margin [dB]:		-	-	-18.55		-	-
.46394	31.22 QP	. 4	10.7	42.32	_	_	56.62	46.62	_	_
E0740	00 01 05	4	Margin [dB]:		-	_	-14.3	-4.3	-	_
.50748	28.81 QP	. 4	10.7	39.91	_	_	56	46 -6.09	_	_
E C E 1	22 21 25	2	Margin [dB]: 10.6	34.21	_	_	-16.09 56	-6.09 46	_	_
.5651	23.31 QP	.3	Margin [dB]:		-	_	-21.79		_	_
.60108	23.49 QP	.3	10.6	34.39	_	_	56	46	_	_
.00100	23.49 QF	. 3	Margin [dB]:		_	_	-21.61	-11.61	_	_
Line - L1	1 _ 30MU=		Margin [ub]:		_	_	-21.01	-11.01	_	_
8.90067	27.95 OP	.5	11	39.45	_	_	60	50	_	_
0.30007	27.55 QI	• 5	Margin [dB]:		_	_	-20.55	-10.55	_	_
9.28063	27.77 QP	. 4	Margin (db).	39.17	_	_	60	50	_	_
J.20003	27.77 QI	• 4	Margin [dB]:		_	_	-20.83	-10.83	_	_
10.67293	27.45 QP	. 4	11	38.85	_	_	60	50	_	_
10.07233	27.45 QI	• 4	Margin [dB]:		_	_		-11.15	_	_
11.25608	24.52 QP	. 4	11	35.92	_	_	60	50	_	_
11.20000	21.02 21	• •	Margin [dB]:	33.32	_	_	-24.08		_	_
Tine - T.2	.15 - 1MHz		nargin [ab].				21.00	11.00		
.15388	39.43 QP	1.8	13.4	54.63	_	_	65.79	55.79	_	_
.10000	03.10 21		Margin [dB]:		_	_	-11.16		_	_
.21266	33.56 OP	1.1	11.5	46.16	_	_	63.1	53.1	_	_
	~		Margin [dB]:		_	_	-16.94	-6.94	_	_
.22824	34.92 QP	1	11.5	47.42	_	_	62.51	52.51	_	_
	~		Margin [dB]:		_	_	-15.09		_	_
.38626	27.23 QP	.5	10.9	38.63	_	_	58.14	48.14	_	_
			Margin [dB]:		_	_	-19.51		_	-
.46172	26.79 QP	. 4	10.8	37.99	_	_	56.66	46.66	_	-
	- ~-		Margin [dB]:		_	_	-18.67		_	_
.50861	23.39 QP	.3	10.8	34.49	_	_	56	46	_	_
			Margin [dB]:		_	_	-21.51	-11.51	_	_
			2							

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 V65E4210 Page 17 of 35

E4210 Model Number:

Kyocera Communications Client Name:

Kyocera Communication Inc. Model: E4210 Hopping, DH5, BT On, Charger

Headset 120V, 60Hz

Test Frequency [MHz]	Reading [dB(uV)]	ransducer Factor [dB]	Gain/Loss Factor [dB [dB]	(uVolts		2	3	4	5	6
Line - L1	.15 - 1MHz									
.15585	22.31 Av	1.8	13	37.11	-	-	65.68	55.68	-	-
			Margin [dB]:		-	-	-28.57	-18.57	-	-
.22723	20.55 Av	1	11.4	32.95	-	-	62.55	52.55	-	-
			Margin [dB]:		-	-	-29.6	-19.6	-	-
.23062	21.8 Av	1	11.4	34.2	-	-	62.43	52.43	-	-
			Margin [dB]:		-	-	-28.23	-18.23	-	-
.39118	18.26 Av	.5	10.8	29.56	-	-	58.04	48.04	-	-
			Margin [dB]:		-	-	-28.48	-18.48	-	-
.46394	22.49 Av	. 4	10.7	33.59	-	-	56.62	46.62	-	-
			Margin [dB]:		-	-	-23.03	-13.03	-	-
.50748	17.03 Av	. 4	10.7	28.13	-	-	56	46	-	-
			Margin [dB]:		-	-	-27.87	-17.87	-	-
.5651	13.36 Av	.3	10.6	24.26	-	-	56	46	-	-
			Margin [dB]:		-	-	-31.74	-21.74	-	-
.60108	13.73 Av	.3	10.6	24.63	-	-	56	46	_	-
			Margin [dB]:		-	-	-31.37	-21.37	-	-
Line - L1	1 - 30MHz									
8.90067	17.8 Av	.5	11	29.3	-	-	60	50	-	-
			Margin [dB]:		-	-	-30.7	-20.7	-	-
9.28063	17.28 Av	. 4	11	28.68	-	-	60	50	-	-
			Margin [dB]:		-	-	-31.32	-21.32	-	-
10.67293	16.28 Av	. 4	11	27.68	-	-	60	50	-	-
			Margin [dB]:		-	-	-32.32	-22.32	-	-
11.25608	14.15 Av	. 4	11	25.55	_	_	60	50	-	_
			Margin [dB]:		-	-	-34.45	-24.45	-	-
Line - L2	.15 - 1MHz									
.15388	21 Av	1.8	13.4	36.2	-	-	65.79	55.79	-	-
			Margin [dB]:		-	-	-29.59	-19.59	-	-
.21266	15.48 Av	1.1	11.5	28.08	-	-	63.1	53.1	-	-
			Margin [dB]:		_	_	-35.02	-25.02	-	_
.22824	18.59 Av	1	11.5	31.09	_	_	62.51	52.51	-	_
			Margin [dB]:		_	_	-31.42	-21.42	-	_
.38626	12.12 Av	.5	10.9	23.52	_	_	58.14	48.14	-	_
			Margin [dB]:		-	_	-34.62	-24.62	_	_
.46172	16.83 Av	. 4	10.8	28.03	_	_	56.66	46.66	_	_
-		•	Margin [dB]:		_	_	-28.63		_	_
.50861	10.98 Av	.3	10.8	22.08	_	_	56	46	_	_
			Margin [dB]:		_	_		-23.92	_	_
_			- 5 - 11.							

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 V65E4210 Page 18 of 35

Model Number: E4210

Client Name: Kyocera Communications

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 and 3 meter as noted. 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

- 4411	Limit (dBμV/m)					
Frequency (MHz)	Quasi-Peak	Average				
30-88	29.6	NA				
88-216	33.1	NA				
216-960	35.6	NA				
960-1000	43.5	NA				
960-26500 (3m)	74 (Peak)	54				

Supplementary information: If Emissions detected were at least 6dB below the limit no additional measurements were taken after prescan.

Peak Measurements

RBW: 1MHz VBW: 1MHz

Average Measurements

RBW: 1MHz VBW: 10Hz

Bandedge Measurements: No Emissions detected within restricted bands

FCC ID V65E4210 Page 19 of 35

Model Number: E4210

Client Name: Kyocera Communications

Table 4 Radiated Emissions EUT Configuration Settings

Power Interface Mode #	EUT Configurations Mode #	EUT Operation Mode #
1	1	1,2
Supplementary information: None		

Table 5 Radiated Emissions Test Equipment

Description	Manufacturer	Model	Identifier	Cal Date	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESU	EMC4323	12-30-11	12-31-12
Bicon Antenna	Chase	VBA6106A	EMC4078	12-2-10	12-30-11
Log-P Antenna	Chase	UPA6109	EMC4258	8/20/10	8/31/11
Spectrum Analyzer	Rhode & Schwarz	FSEK	EMC4182	12-28-11	12-28-12
Antenna Array	UL	BOMS	EMC4276	10-20-10	10-20-11

Figure 3 Test setup for Radiated Emissions

See Photos Exhibit

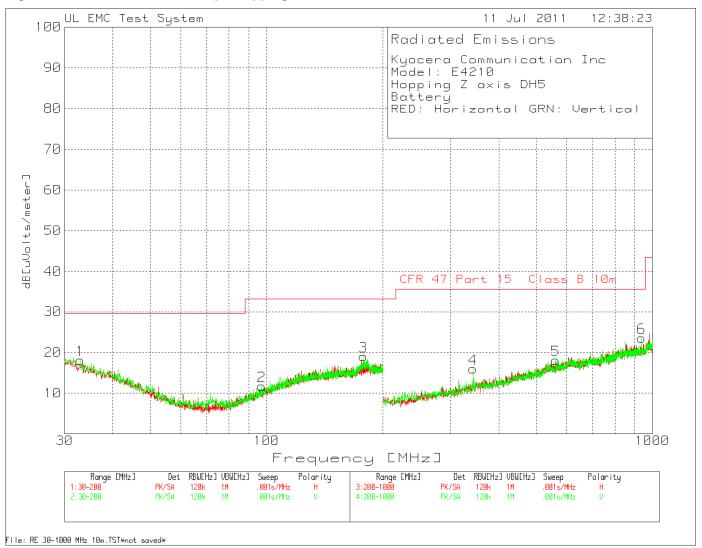
Z-axis See Photos Exhibit FCC ID V65E4210 Page 20 of 35

Model Number: E4210

Client Name: Kyocera Communications

30-1000MHz

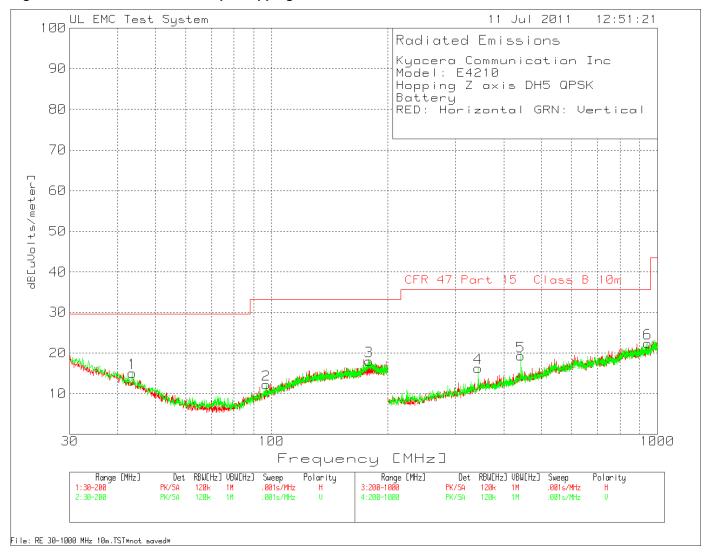
Figure 4 Radiated Emissions Graph Hopping Channel DH5



FCC ID V65E4210 Page 21 of 35

Model Number: E4210

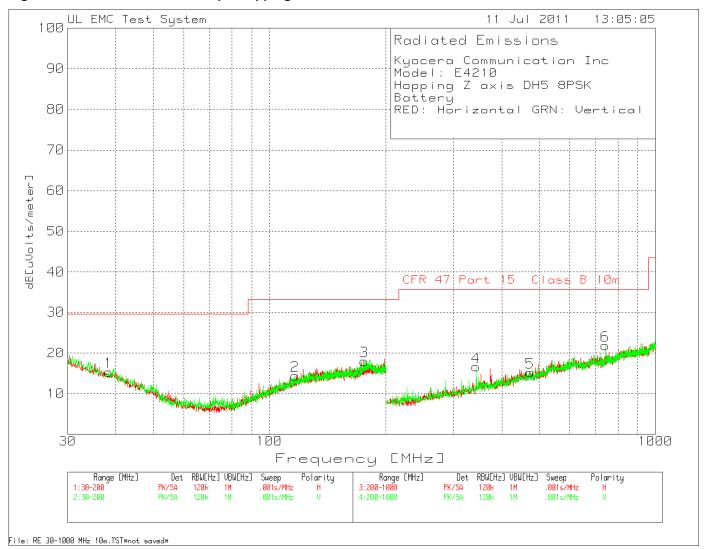
Figure 5 Radiated Emissions Graph Hopping Channel DH5 QPSK



FCC ID V65E4210 Page 22 of 35

Model Number: E4210

Figure 6 Radiated Emissions Graph Hopping Channel DH5 8PSK



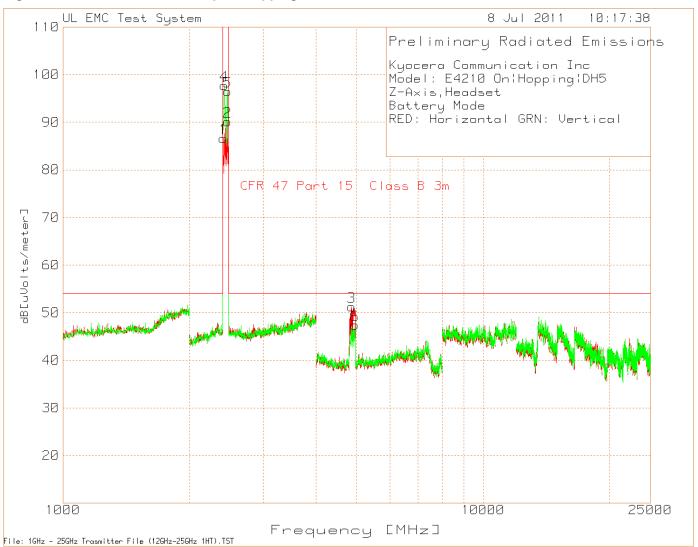
FCC ID V65E4210 Page 23 of 35

Model Number: E4210

Client Name: Kyocera Communications

1-25GHz

Figure 7 Radiated Emissions Graph - Hopping Channel DH5



See table 6 for data

FCC ID V65E4210 Page 24 of 35

Model Number: E4210

Client Name: Kyocera Communications

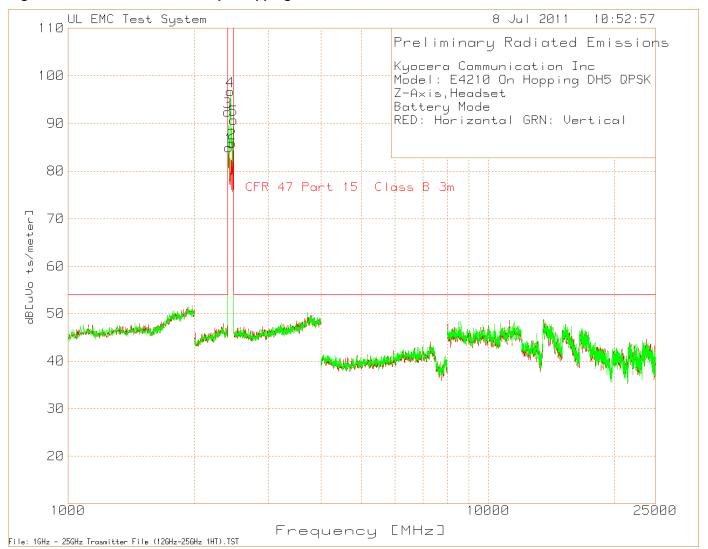
Table 6 Radiated Emissions Data Points

				BOMS						
Test	Meter		Antenna	Factor				Azimuth	Height	
Frequency	Reading	Detector	Factor	[dB]	Result	Limit	Margin	[Degs]	[cm]	Polarity
4803.991	69.15	LnAv	27.7	-51.08	45.77	54	-8.23	200	100	Horz
4803.991	59.81	LnAv	27.7	-51.08	36.43	54	-17.57	264	147	Vert
4882.029	63.53	LnAv	27.7	-50.55	40.68	54	-13.32	240	101	Vert
4882.005	68.63	LnAv	27.7	-50.55	45.78	54	-8.22	203	100	Horz
4960.043	67.91	LnAv	27.8	-50.58	45.13	54	-8.87	225	100	Horz
4960.007	64.72	LnAv	27.8	-50.58	41.94	54	-12.06	226	100	Vert
LnAv - Linea	ar Average	detector								

FCC ID V65E4210 Page 25 of 35

Model Number: E4210

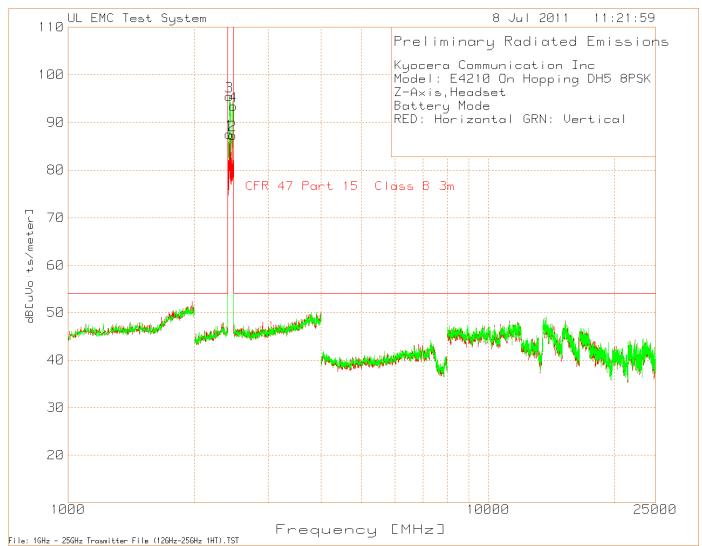
Figure 8 Radiated Emissions Graph Hopping Channel DH5 QPSK



FCC ID V65E4210 Page 26 of 35

Model Number: E4210

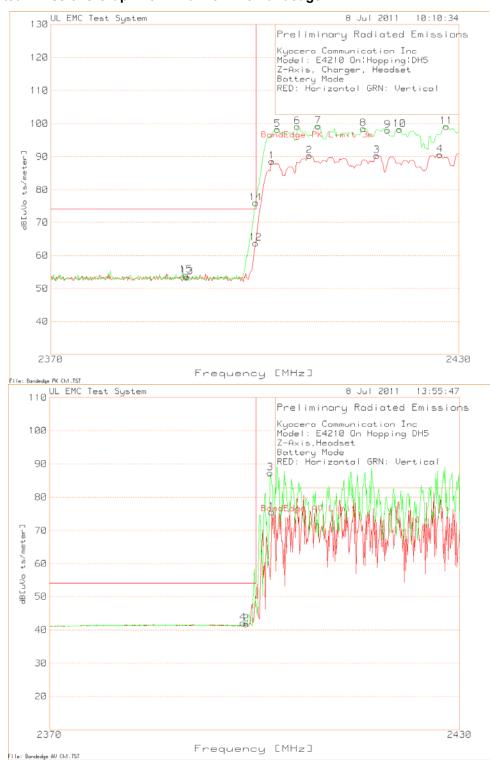
Figure 9 Radiated Emissions Graph Hopping Channel DH5 8PSK



FCC ID V65E4210 Page 27 of 35

Model Number: E4210

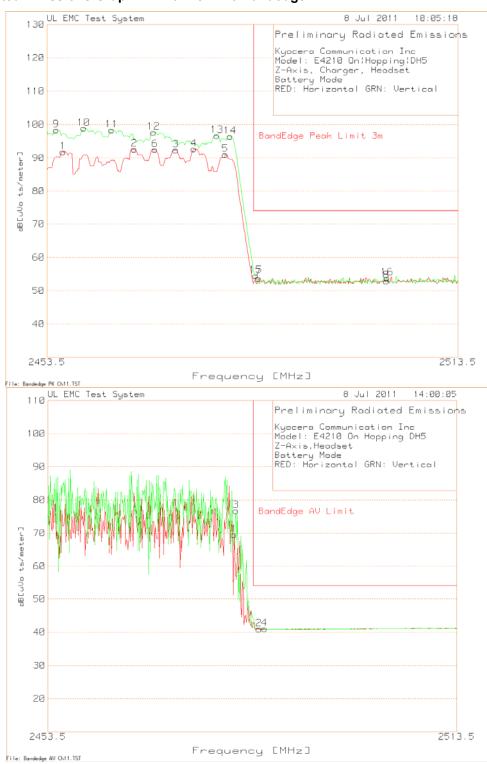
Figure 10 Radiated Emissions Graph Low Channel DH5 Bandedge



FCC ID V65E4210 Page 28 of 35

Model Number: E4210

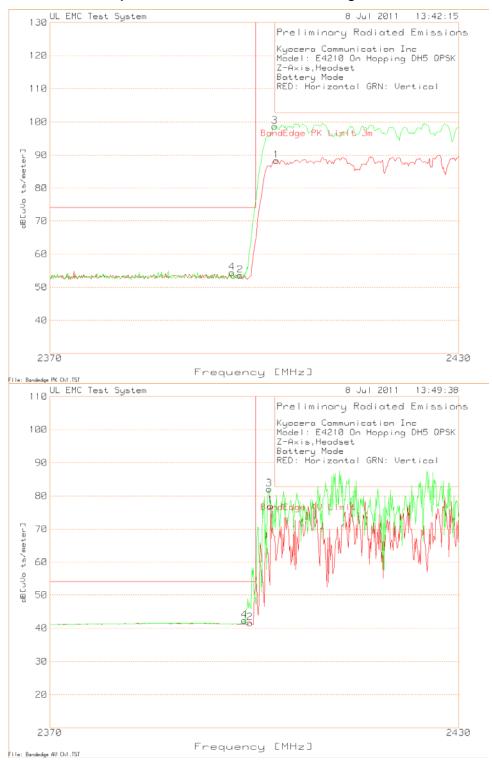
Figure 11 Radiated Emissions Graph Hi Channel DH5 Bandedge



FCC ID V65E4210 Page 29 of 35

Model Number: E4210

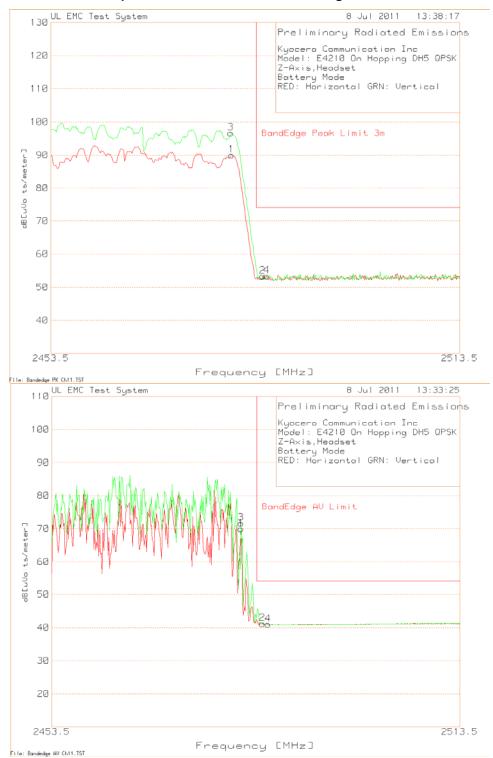
Figure 12 Radiated Emissions Graph Low Channel DH5 QPSK Bandedge



FCC ID V65E4210 Page 30 of 35

Model Number: E4210

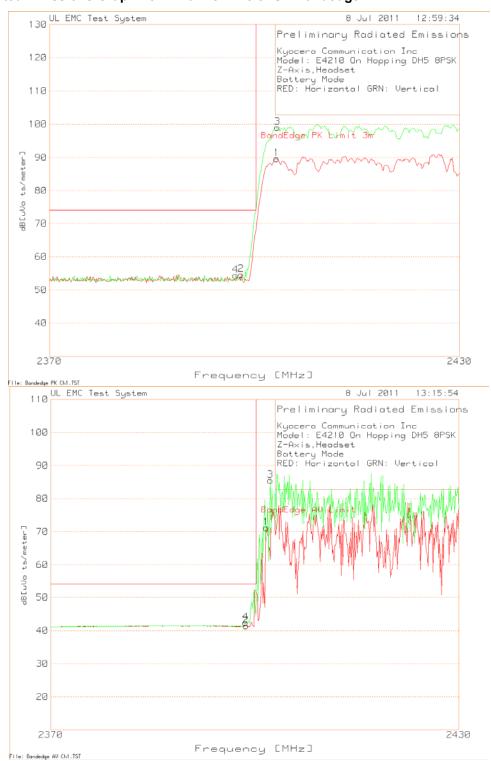
Figure 13 Radiated Emissions Graph Hi Channel DH5 QPSK Bandedge



FCC ID V65E4210 Page 31 of 35

Model Number: E4210

Figure 14 Radiated Emissions Graph Low Channel DH5 8PSK Bandedge



FCC ID V65E4210 Page 32 of 35

Model Number: E4210

Figure 15 Radiated Emissions Graph Hi Channel DH5 8PSK Bandedge



FCC ID V65E4210 Page 33 of 35

Model Number: E4210

Client Name: Kyocera Communications

5.0 IMMUNITY TEST RESULTS

Immunity tests are not required per the standard

FCC ID V65E4210 Page 34 of 35

Model Number: E4210

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/ts/htdocs/210/214/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.

FCC ID V65E4210 Page 35 of 35

Model Number: E4210

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

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