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Project Number:	11U13905-2
FCC ID	V65E4255
Date:	July 19, 2011
Model:	E4255

# **Electromagnetic Compatibility Test Report**

**For**

**KYOCERA Communications, Inc.**

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FCC ID V654255  
Model Number: E4255  
Client Name: Kyocera Communications

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## 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: **E4255**

Sample Serial Number: **268435457816722935**

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.

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			

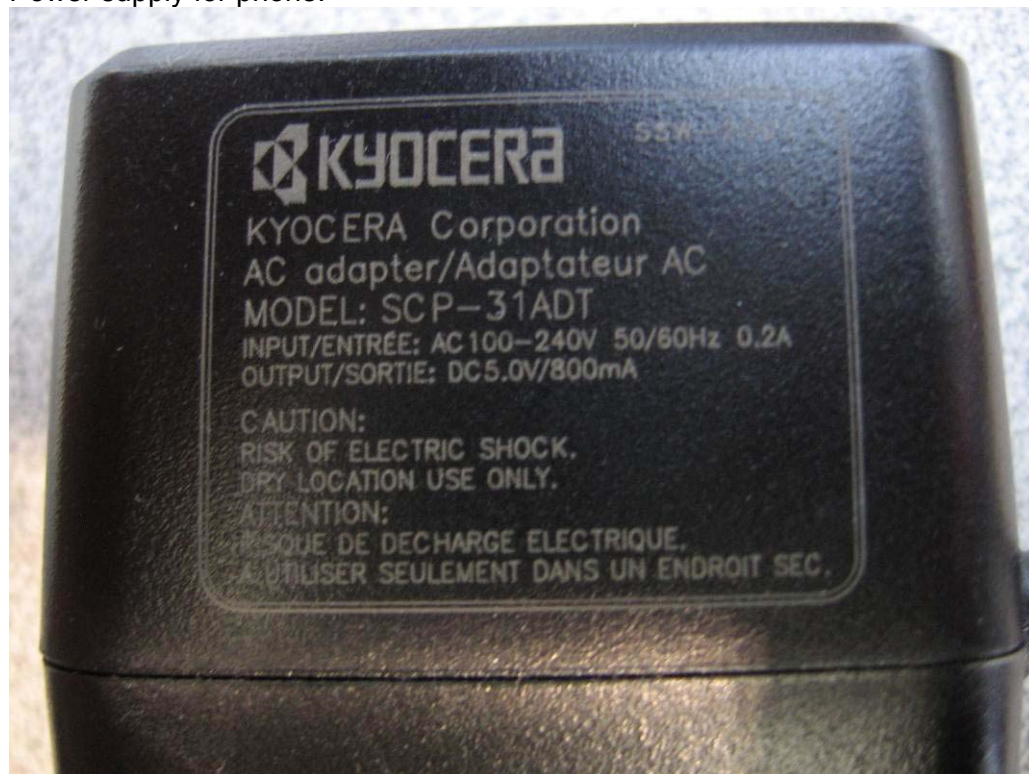
## 1.0 GENERAL - Product Description

### 1.1 Equipment Description

The E4255 is a CDMA Mobile Phone with BlueTooth 2.1+EDR.

### 1.2 Equipment Marking Plate

Power supply for phone:



### 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.	E4255	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)				

#### 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
4	USB	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:**

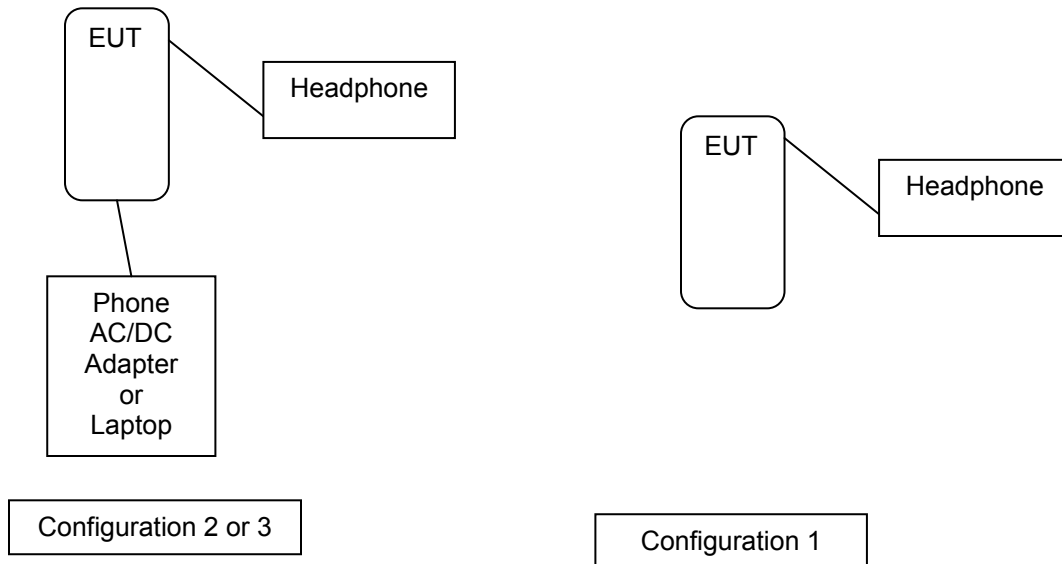
Frequency (MHz)	Description
19.2	TCXO
26	Bluetooth
200	BB

**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
3	USB	-	-	DC	-	Connected to Laptop

#### 1.4    **Block Diagram:**

The diagram below illustrates the configuration of the equipment above.



## 1.5 EUT Configurations

Mode #	Description
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 AC 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



## 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
------

### 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:



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

Reviewer:



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

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

### 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 Temperature, °C	22.5 ± 2.5	Relative Humidity, %	45 ± 15	Barometric 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)

#### 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
<b>Limits - Class B</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 #
2	2	2
Supplementary information: None		

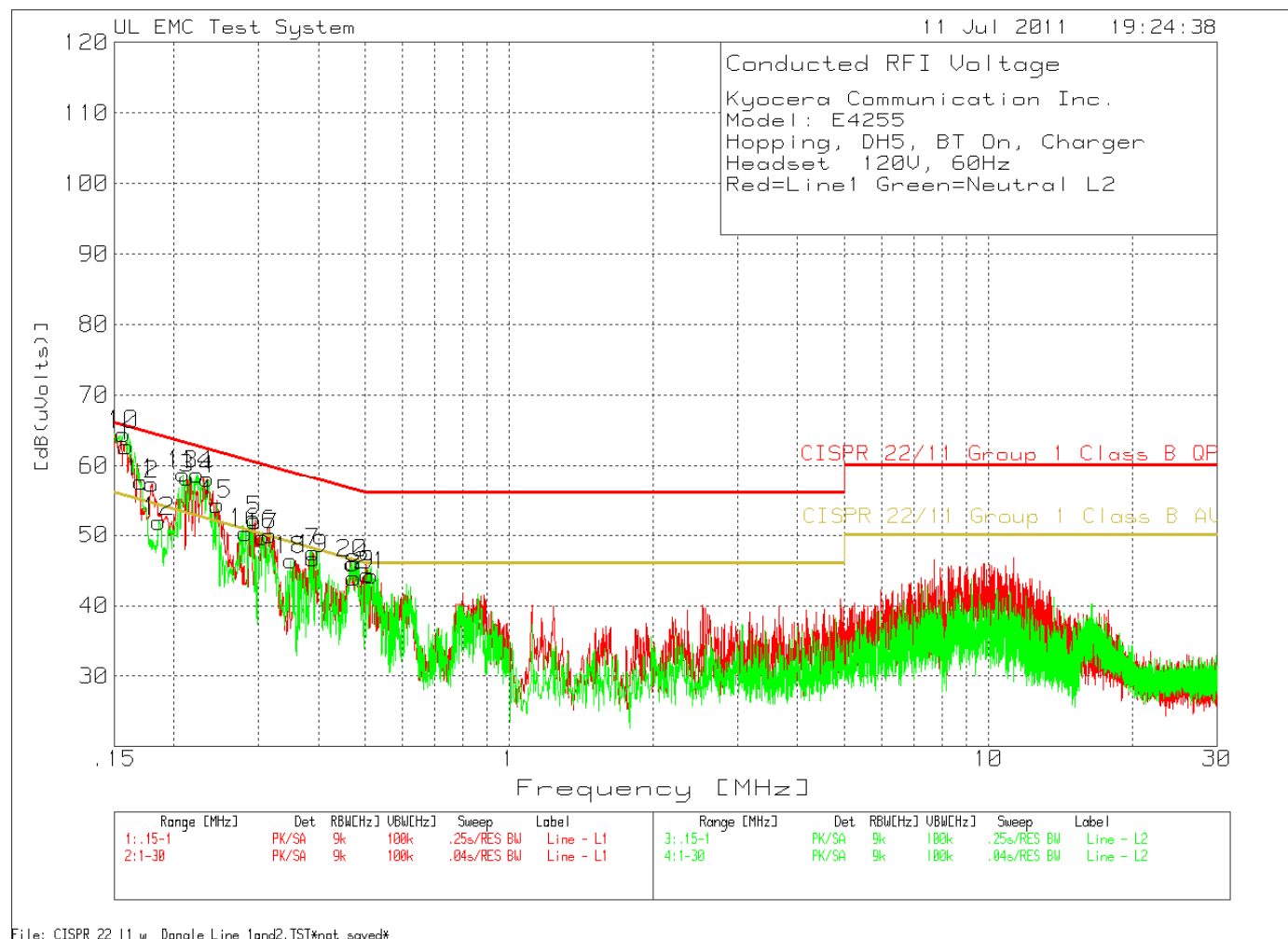
**Table 2 Conducted Emissions Test Equipment**

Description	Manufacturer	Model	Identifier	Cal Date	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC4328	12-28-10	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

**Figure 2 Conducted Emissions Graph**



**Table 3 Conducted Emissions Data Points**

Kyocera Communication Inc.

Model: E4255

Hopping, DH5, BT On, Charger

Headset 120V, 60Hz

Red=Line1 Green=Neutral L2

No.	Test 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	.15892	48.21 PK	1.7	12.8	62.71	-	-	65.5	55.5	-	-
				Margin [dB]		-	-	-2.79	7.21	-	-
2	.17973	44.04 PK	1.4	11.8	57.24	-	-	64.5	54.5	-	-
				Margin [dB]		-	-	-7.26	2.74	-	-
3	.21307	45.63 PK	1.1	11.4	58.13	-	-	63.1	53.1	-	-
				Margin [dB]		-	-	-4.97	5.03	-	-
4	.23472	45.62 PK	1	11.4	58.02	-	-	62.3	52.3	-	-
				Margin [dB]		-	-	-4.28	5.72	-	-
5	.29503	40.48 PK	.7	10.9	52.08	-	-	60.4	50.4	-	-
				Margin [dB]		-	-	-8.32	1.68	-	-
6	.31648	38.62 PK	.6	10.8	50.02	-	-	59.8	49.8	-	-
				Margin [dB]		-	-	-9.78	.22	-	-
7	.39016	36.23 PK	.5	10.8	47.53	-	-	58.1	48.1	-	-
				Margin [dB]		-	-	-10.57	-.57	-	-
8	.47446	32.84 PK	.4	10.7	43.94	-	-	56.4	46.4	-	-
				Margin [dB]		-	-	-12.46	-2.46	-	-
9	.50737	33.27 PK	.4	10.7	44.37	-	-	56	46	-	-
				Margin [dB]		-	-	-11.63	-1.63	-	-
Line - L2 .15 - 1MHz -----											
10	.1568	49.51 PK	1.8	13.1	64.41	-	-	65.6	55.6	-	-
				Margin [dB]		-	-	-1.19	8.81	-	-
11	.17081	43.77 PK	1.6	12.2	57.57	-	-	64.9	54.9	-	-
				Margin [dB]		-	-	-7.33	2.67	-	-
12	.1861	38.78 PK	1.4	11.7	51.88	-	-	64.2	54.2	-	-
				Margin [dB]		-	-	-12.32	-2.32	-	-
13	.20861	45.99 PK	1.2	11.5	58.69	-	-	63.3	53.3	-	-
				Margin [dB]		-	-	-4.61	5.39	-	-
14	.22368	46.16 PK	1	11.5	58.66	-	-	62.7	52.7	-	-
				Margin [dB]		-	-	-4.04	5.96	-	-
15	.24577	42.02 PK	.9	11.4	54.32	-	-	61.9	51.9	-	-
				Margin [dB]		-	-	-7.58	2.42	-	-
16	.28186	38.51 PK	.7	11.1	50.31	-	-	60.8	50.8	-	-
				Margin [dB]		-	-	-10.49	-.49	-	-
17	.3065	37.99 PK	.7	11	49.69	-	-	60.1	50.1	-	-
				Margin [dB]		-	-	-10.41	-.41	-	-
18	.35024	35.03 PK	.5	10.9	46.43	-	-	59	49	-	-
				Margin [dB]		-	-	-12.57	-2.57	-	-
19	.38952	35.25 PK	.5	10.9	46.65	-	-	58.1	48.1	-	-
				Margin [dB]		-	-	-11.45	-1.45	-	-
20	.47106	34.78 PK	.4	10.8	45.98	-	-	56.5	46.5	-	-
				Margin [dB]		-	-	-10.52	-.52	-	-
21	.51565	33.16 PK	.3	10.8	44.26	-	-	56	46	-	-
				Margin [dB]		-	-	-11.74	-1.74	-	-

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

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

PK - Peak detector

FCC ID V654255  
 Model Number: E4255  
 Client Name: Kyocera Communications

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Kyocera Communication Inc.  
 Model: E4255  
 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
Frequency	Reading	Factor	Factor	[dB(uVolts)]						
[MHz]	[dB(uV)]	[dB]	[dB]							
=====										
Line - L1 .15 - 1MHz										
.15468	41.55 QP	1.8	13.2	56.55	-	-	65.74	55.74	-	-
			Margin [dB]:		-	-	-9.19	.81	-	-
.17028	33.14 QP	1.5	12.1	46.74	-	-	64.95	54.95	-	-
			Margin [dB]:		-	-	-18.21	-8.21	-	-
.21848	35.05 QP	1.1	11.4	47.55	-	-	62.88	52.88	-	-
			Margin [dB]:		-	-	-15.33	-5.33	-	-
.22947	37.04 QP	1	11.4	49.44	-	-	62.47	52.47	-	-
			Margin [dB]:		-	-	-13.03	-3.03	-	-
.29961	27.4 QP	.7	10.9	39	-	-	60.25	50.25	-	-
			Margin [dB]:		-	-	-21.25	-11.25	-	-
.31121	29.8 QP	.7	10.8	41.3	-	-	59.94	49.94	-	-
			Margin [dB]:		-	-	-18.64	-8.64	-	-
.38808	26.61 QP	.5	10.8	37.91	-	-	58.1	48.1	-	-
			Margin [dB]:		-	-	-20.19	-10.19	-	-
.46824	27.36 QP	.4	10.7	38.46	-	-	56.55	46.55	-	-
			Margin [dB]:		-	-	-18.09	-8.09	-	-
.50158	26.89 QP	.4	10.7	37.99	-	-	56	46	-	-
			Margin [dB]:		-	-	-18.01	-8.01	-	-
Line - L2 .15 - 1MHz										
.15665	41.27 QP	1.8	13.1	56.17	-	-	65.64	55.64	-	-
			Margin [dB]:		-	-	-9.47	.53	-	-
.16152	39.76 QP	1.7	12.7	54.16	-	-	65.39	55.39	-	-
			Margin [dB]:		-	-	-11.23	-1.23	-	-
.17851	31.19 QP	1.5	11.9	44.59	-	-	64.55	54.55	-	-
			Margin [dB]:		-	-	-19.96	-9.96	-	-
.21358	34.58 QP	1.1	11.5	47.18	-	-	63.06	53.06	-	-
			Margin [dB]:		-	-	-15.88	-5.88	-	-
.23002	36.79 QP	1	11.5	49.29	-	-	62.45	52.45	-	-
			Margin [dB]:		-	-	-13.16	-3.16	-	-
.2378	36.01 QP	1	11.5	48.51	-	-	62.17	52.17	-	-
			Margin [dB]:		-	-	-13.66	-3.66	-	-
.27839	27.18 QP	.8	11.1	39.08	-	-	60.86	50.86	-	-
			Margin [dB]:		-	-	-21.78	-11.78	-	-
.30861	29.77 QP	.7	11	41.47	-	-	60.01	50.01	-	-
			Margin [dB]:		-	-	-18.54	-8.54	-	-
.35752	23.47 QP	.5	10.9	34.87	-	-	58.79	48.79	-	-
			Margin [dB]:		-	-	-23.92	-13.92	-	-
.38623	26.17 QP	.5	10.9	37.57	-	-	58.14	48.14	-	-
			Margin [dB]:		-	-	-20.57	-10.57	-	-
.4693	25.38 QP	.4	10.8	36.58	-	-	56.53	46.53	-	-
			Margin [dB]:		-	-	-19.95	-9.95	-	-
.51562	19.36 QP	.3	10.8	30.46	-	-	56	46	-	-
			Margin [dB]:		-	-	-25.54	-15.54	-	-

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 V654255  
 Model Number: E4255  
 Client Name: Kyocera Communications

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Kyocera Communication Inc.  
 Model: E4255  
 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
Frequency	Reading	Factor	Factor	[dB(uVolts)]						
[MHz]	[dB(uV)]	[dB]	[dB]							
=====										
Line - L1 .15 - 1MHz										
.15468	18.76 Av	1.8	13.2	33.76	-	-	65.74	55.74	-	-
			Margin [dB]:		-	-	-31.98	-21.98	-	-
.17028	14.93 Av	1.5	12.1	28.53	-	-	64.95	54.95	-	-
			Margin [dB]:		-	-	-36.42	-26.42	-	-
.21848	16.35 Av	1.1	11.4	28.85	-	-	62.88	52.88	-	-
			Margin [dB]:		-	-	-34.03	-24.03	-	-
.22947	17.65 Av	1	11.4	30.05	-	-	62.47	52.47	-	-
			Margin [dB]:		-	-	-32.42	-22.42	-	-
.29961	8.4 Av	.7	10.9	20	-	-	60.25	50.25	-	-
			Margin [dB]:		-	-	-40.25	-30.25	-	-
.31121	9.97 Av	.7	10.8	21.47	-	-	59.94	49.94	-	-
			Margin [dB]:		-	-	-38.47	-28.47	-	-
.38808	13.16 Av	.5	10.8	24.46	-	-	58.1	48.1	-	-
			Margin [dB]:		-	-	-33.64	-23.64	-	-
.46824	18.53 Av	.4	10.7	29.63	-	-	56.55	46.55	-	-
			Margin [dB]:		-	-	-26.92	-16.92	-	-
.50158	12.84 Av	.4	10.7	23.94	-	-	56	46	-	-
			Margin [dB]:		-	-	-32.06	-22.06	-	-
Line - L2 .15 - 1MHz										
.15665	17.91 Av	1.8	13.1	32.81	-	-	65.64	55.64	-	-
			Margin [dB]:		-	-	-32.83	-22.83	-	-
.16152	16.87 Av	1.7	12.7	31.27	-	-	65.39	55.39	-	-
			Margin [dB]:		-	-	-34.12	-24.12	-	-
.17851	11.95 Av	1.5	11.9	25.35	-	-	64.55	54.55	-	-
			Margin [dB]:		-	-	-39.2	-29.2	-	-
.21358	13.26 Av	1.1	11.5	25.86	-	-	63.06	53.06	-	-
			Margin [dB]:		-	-	-37.2	-27.2	-	-
.23002	15.22 Av	1	11.5	27.72	-	-	62.45	52.45	-	-
			Margin [dB]:		-	-	-34.73	-24.73	-	-
.2378	14.38 Av	1	11.5	26.88	-	-	62.17	52.17	-	-
			Margin [dB]:		-	-	-35.29	-25.29	-	-
.27839	6.47 Av	.8	11.1	18.37	-	-	60.86	50.86	-	-
			Margin [dB]:		-	-	-42.49	-32.49	-	-
.30861	7.8 Av	.7	11	19.5	-	-	60.01	50.01	-	-
			Margin [dB]:		-	-	-40.51	-30.51	-	-
.35752	3.7 Av	.5	10.9	15.1	-	-	58.79	48.79	-	-
			Margin [dB]:		-	-	-43.69	-33.69	-	-
.38623	7.69 Av	.5	10.9	19.09	-	-	58.14	48.14	-	-
			Margin [dB]:		-	-	-39.05	-29.05	-	-
.4693	12.7 Av	.4	10.8	23.9	-	-	56.53	46.53	-	-
			Margin [dB]:		-	-	-32.63	-22.63	-	-
.51562	4.48 Av	.3	10.8	15.58	-	-	56	46	-	-
			Margin [dB]:		-	-	-40.42	-30.42	-	-

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

#### 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. Radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).	
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)
<b>Limits - Class B</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
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.		

**Table 4 Radiated Emissions EUT Configuration Settings**

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

**Table 5 Radiated Emissions Test Equipment**

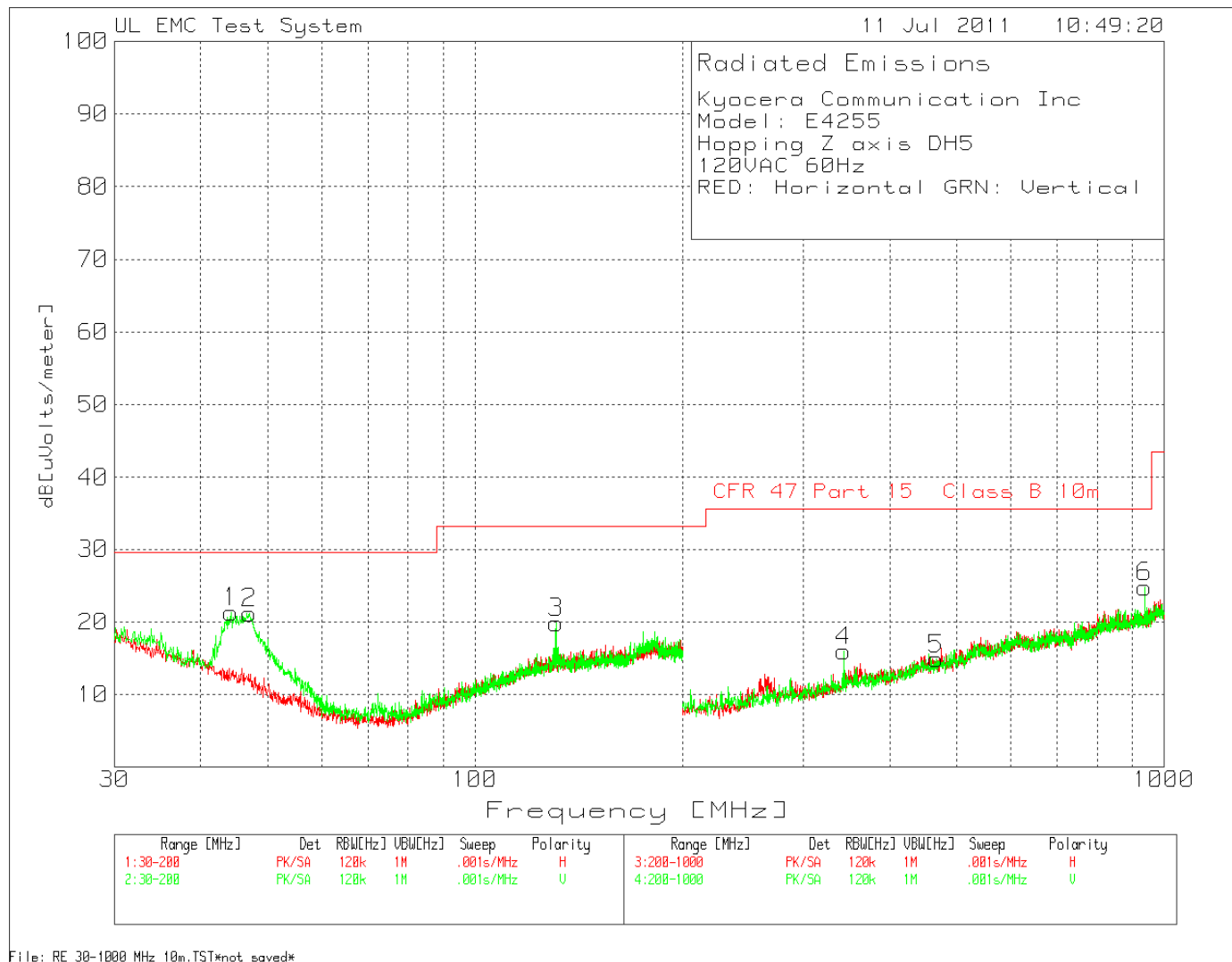
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESU	EMC4323	12-30-11	12-31-12
Bicon Antenna	Chase	VBA6106A	EMC4078	12-2-10	12-30-11
Log-P Antenna	Chase	UPA6109	EMC4258	8/20/10	8/31/11
Spectrum Analyzer	Rhode & Schwarz	FSEK	EMC4182	12-28-11	12-28-12
Antenna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

**Figure 3 Test setup for Radiated Emissions**

See Photo Exhibit

Z-axis  
See Photo Exhibit

#### Figure 4 Radiated Emissions Graph Hopping Channel DH5



UL EMC Test System

11 Jul 2011 11:03:04

Radiated Emissions

Kyocera Communication Inc

Model: E4255

Hopping Z axis DH5 QPSK

120VAC 60Hz

RED: Horizontal GRN: Vertical

CFR 47 Part 15 Class B 10m

1 2 3 4 5 6

dBUV/meter

Frequency [MHz]

Range [MHz]	Det	RBW[Hz]	VBW[Hz]	Sweep	Polarity	Range [MHz]	Det	RBW[Hz]	VBW[Hz]	Sweep	Polarity
1:30-200	PK/SA	120k	1M	.001s/MHz	H	3:200-1000	PK/SA	120k	1M	.001s/MHz	H
2:30-200	PK/SA	120k	1M	.001s/MHz	V	4:200-1000	PK/SA	120k	1M	.001s/MHz	V

File: RE 30-1000 MHz 10m.TST\*not saved\*

UL EMC Test System

11 Jul 2011 11:19:12

Radiated Emissions

Kyocera Communication Inc

Model: E4255

Hopping Z axis DH5 8PSK

120VAC 60Hz

RED: Horizontal GRN: Vertical

dBUV/meter

CFR 47 Part 15 Class B 10m

Frequency [MHz]

Range [MHz]	Det	RBW[Hz]	VBW[Hz]	Sweep	Polarity	Range [MHz]	Det	RBW[Hz]	VBW[Hz]	Sweep	Polarity
1:30-200	PK/SA	120k	1M	.001s/MHz	H	3:200-1000	PK/SA	120k	1M	.001s/MHz	H
2:30-200	PK/SA	120k	1M	.001s/MHz	V	4:200-1000	PK/SA	120k	1M	.001s/MHz	V

File: RE 30-1000 MHz 10m.TST\*not saved\*

See table 6 for data

UL EMC Test System 7 Jul 2011 15:16:20

Preliminary Radiated Emissions

Kyocera  
E4255  
Mid CH Z axis DH5  
120VAC 60Hz  
Red: Hoz Green: Vert

CFR 47 Part 15 Class B 3m

20.000

dB[uV] [ts/meter]

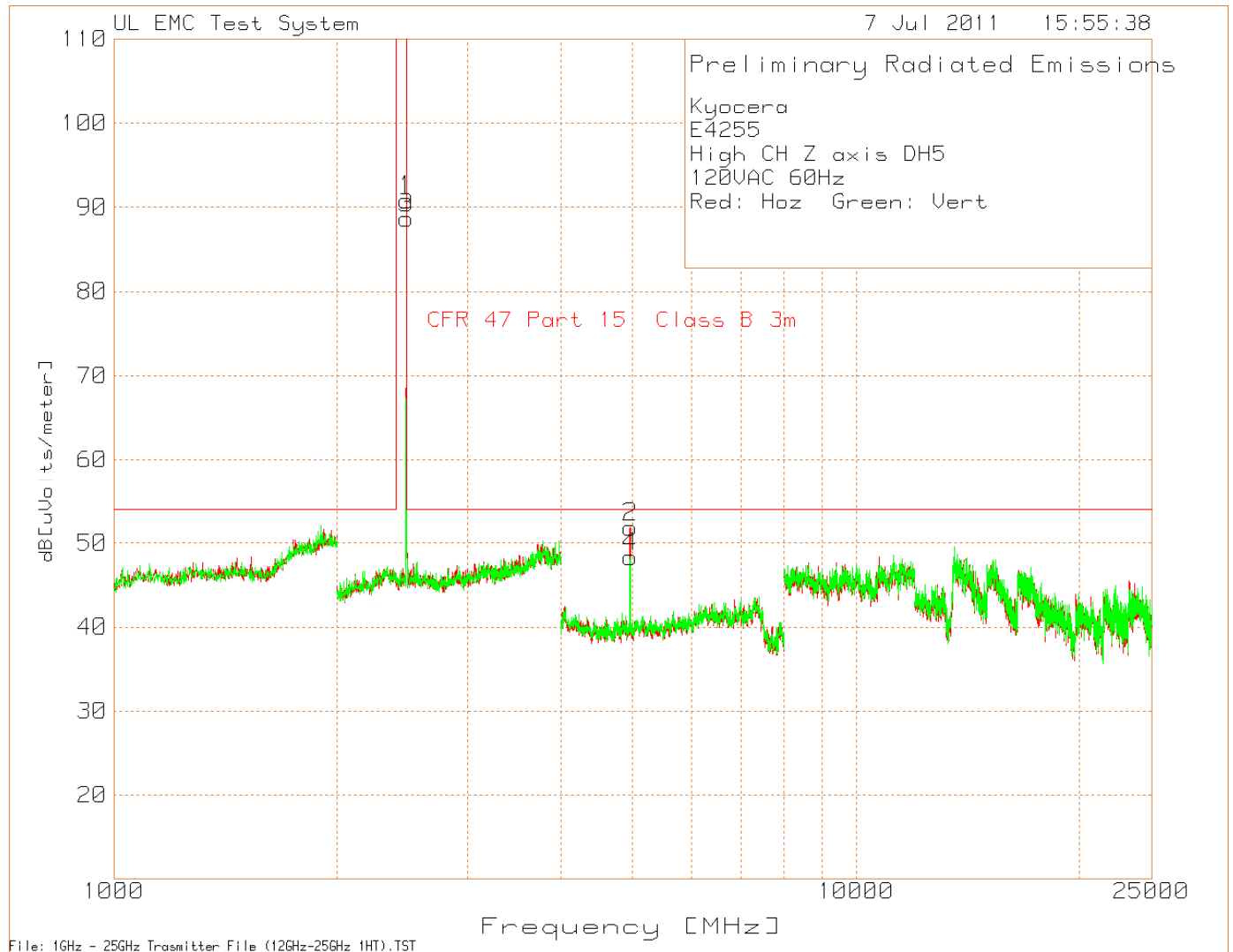
Frequency [MHz]

File: 16Hz - 25GHz Transmitter File (12GHz-25GHz 1HT).TST

See table 6 for data



**Figure 9 Radiated Emissions Graph Hi Channel DH5**



See table 6 for data

**Table 6 Radiated Emissions Data Points**

Test Frequency	Meter Reading	Detector	Antenna Factor	BOMS Factor [dB]	Result	Limit	Margin	Azimuth [Degs]	Height [cm]	Polarity
4804.314	61.77	LnAv	27.7	-51.07	38.4	54	-15.6	236	101	Vert
4804.344	67.63	LnAv	27.7	-51.07	44.26	54	-9.74	0	104	Horz
4882.324	67.75	LnAv	27.7	-50.55	44.9	54	-9.1	0	102	Horz
4882.312	63.48	LnAv	27.7	-50.55	40.63	54	-13.37	202	101	Vert
4960.28	65.15	LnAv	27.8	-50.58	42.37	54	-11.63	210	101	Vert
4960.364	68.28	LnAv	27.8	-50.58	45.5	54	-8.5	1	101	Horz
LnAv - Linear Average detector										

UL EMC Test System 7 Jul 2011 20:02:29

Preliminary Radiated Emissions

Kyocera  
E4255  
Lo CH Z axis DH5 QPSK  
120VAC 60Hz  
Red: Hoz Green: Vert

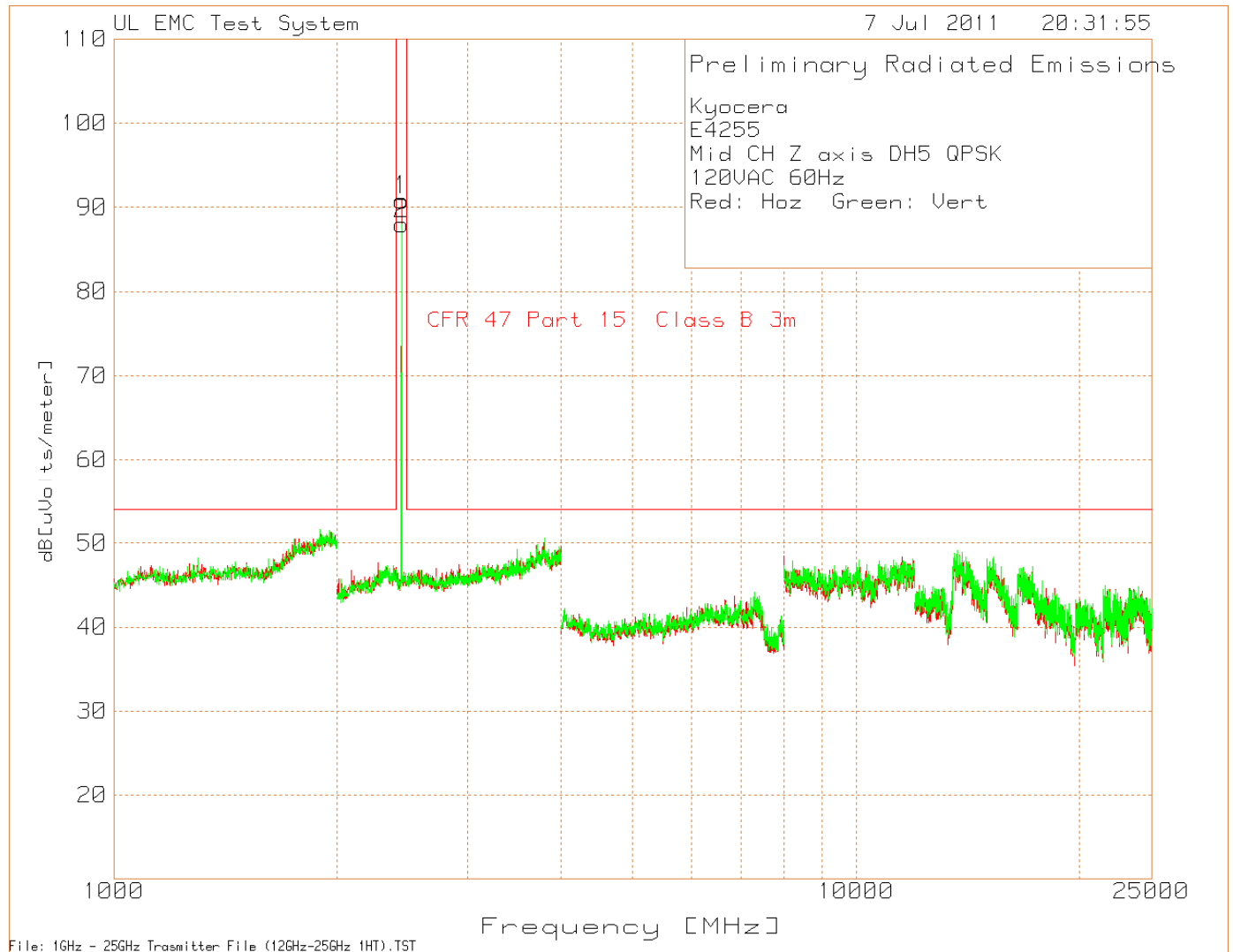
CFR 47 Part 15 Class B 3m

dB[uV/m]

Frequency [MHz]

File: 16Hz - 25GHz Transmitter File (120Hz-25GHz 1HT).TST

Figure 11 Radiated Emissions Graph Mid Channel DH5 QPSK



UL EMC Test System 7 Jul 2011 18:29:50

Preliminary Radiated Emissions

Kyocera  
E4255  
High CH Z axis DH5 QPSK  
120VAC 60Hz  
Red: Hoz Green: Vert

CFR 47 Part 15 Class B 3m

dB[uV/m]

Frequency [MHz]

File: 16Hz - 25GHz Transmitter File (120Hz-25GHz 1HT).TST

UL EMC Test System 7 Jul 2011 17:42:06

Preliminary Radiated Emissions

Kyocera  
E4255  
Lo CH Z axis DH5 8PSK  
120VAC 60Hz  
Red: Hoz Green: Vert

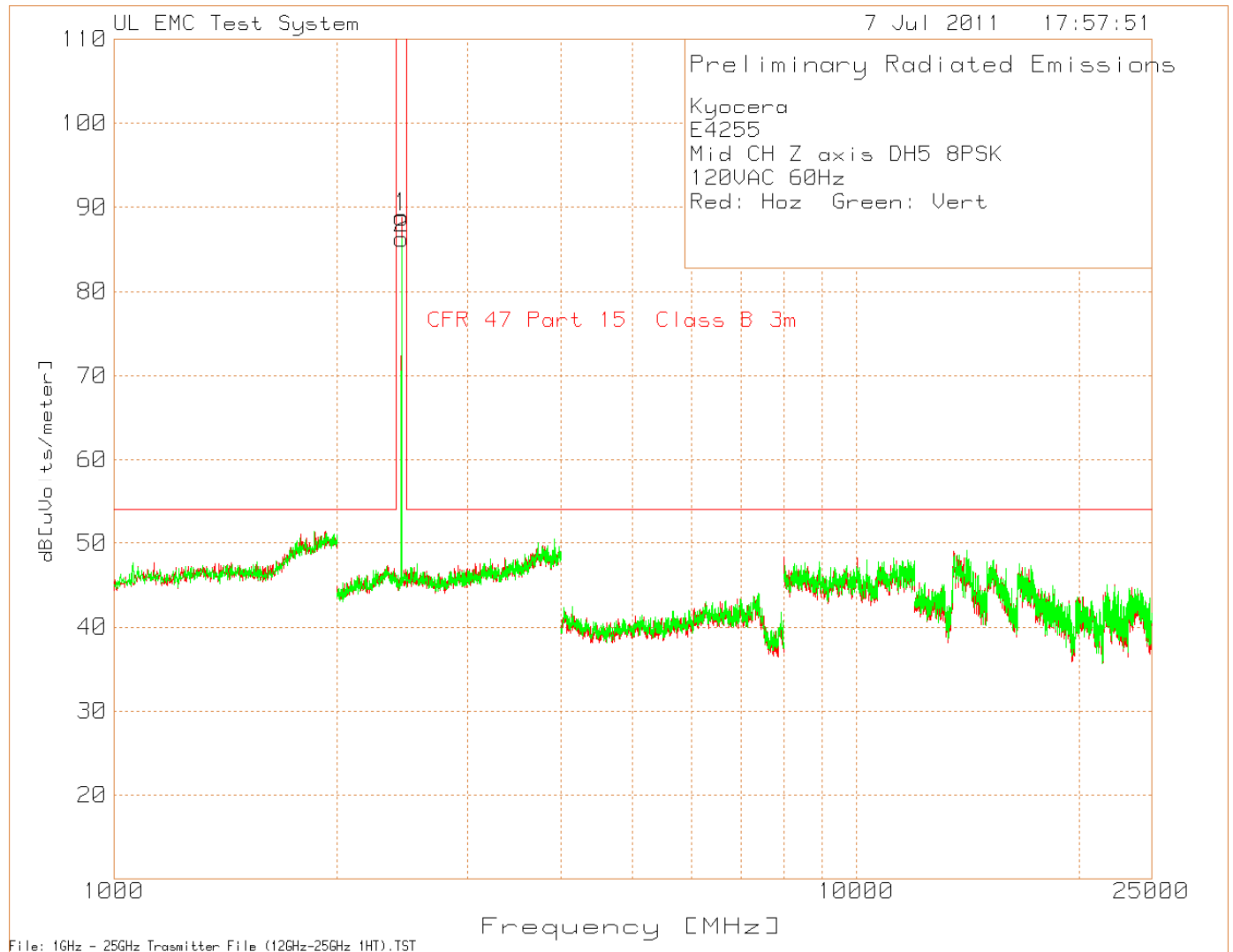
CFR 47 Part 15 Class B 3m

dB[u0]ts/meter

Frequency [MHz]

File: 16Hz - 25GHz Transmitter File (12GHz-25GHz 1HT).TST

Figure 14 Radiated Emissions Graph Mid Channel DH5 8PSK



UL EMC Test System 7 Jul 2011 19:25:44

Preliminary Radiated Emissions

Kyocera  
E4255  
High CH Z axis DH5 8PSK  
120VAC 60Hz  
Red: Hoz Green: Vert

CFR 47 Part 15 Class B 3m

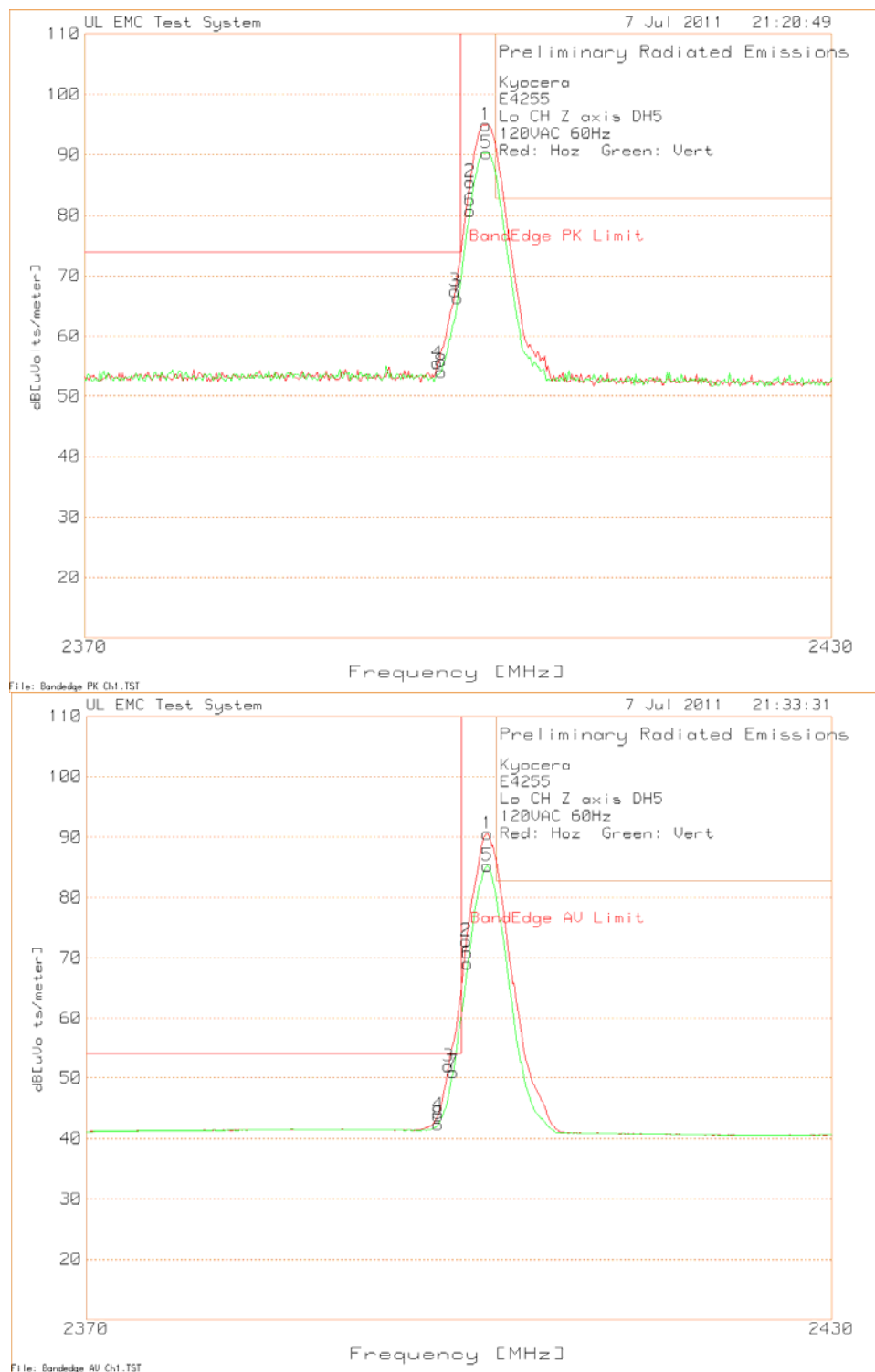
dB[u00b0A/meter]

Frequency [MHz]

File: 16Hz - 25GHz Transmitter File (12GHz-25GHz 1HT).TST

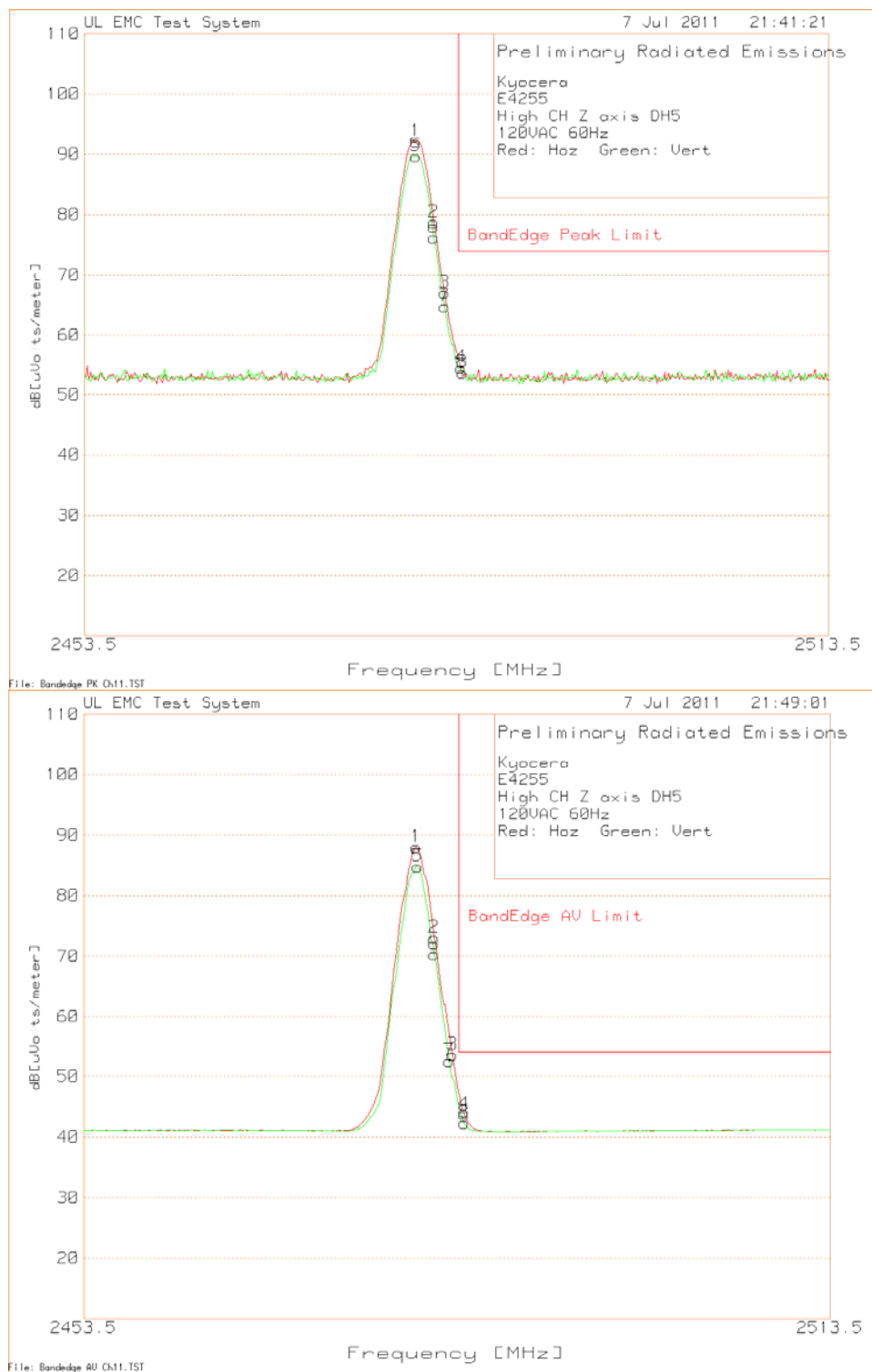


**Figure 16 Radiated Emissions Graph Low Channel DH5 Bandedge**

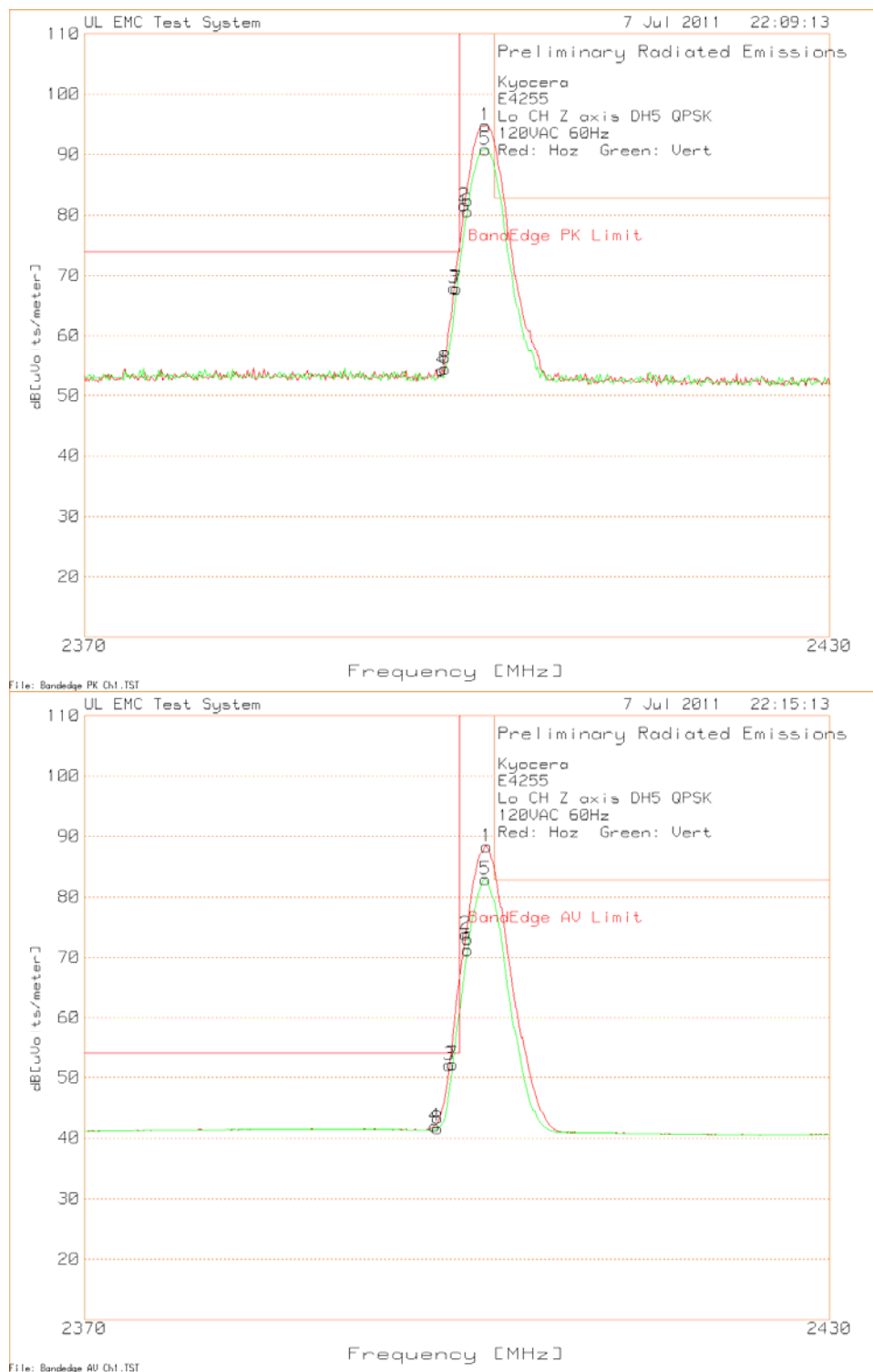


Kyocera e4255 Dual Band Phone Bluetooth Low Channel DH5 AC mode Z-Axis Red=Horizontal, Green=Vertical									
2 - 4GHz 2370 - 2430MHz									
Test Frequency	Meter Reading	Detector	Antenna Factor	BOMS Factor [dB]	Result dB[uV/m]	BandEdge PK Limit	Margin	Height [cm]	Polarity
2402.044	68.81	PK	21.8	4.32	94.93	-	-	100	Horz
2400.782	59.36	PK	21.8	4.35	85.51	-	-	100	Horz
2399.579	41.28	PK	21.8	4.38	67.46	74	-6.54	100	Horz
2398.136	29.25	PK	21.8	4.42	55.47	74	-18.53	100	Horz
2402.104	64.13	PK	21.8	4.32	90.25	-	-	101	Vert
2400.782	54.64	PK	21.8	4.35	80.79	-	-	101	Vert
2399.82	40.14	PK	21.8	4.38	66.32	74	-7.68	101	Vert
2398.497	27.77	PK	21.8	4.41	53.98	74	-20.02	101	Vert
2402.104	64.44	AV	21.8	4.32	90.56	-	-	100	Horz
2400.421	46.66	AV	21.8	4.36	72.82	-	-	100	Horz
2398.978	25.71	AV	21.8	4.4	51.91	54	-2.09	100	Horz
2398.136	17.63	AV	21.8	4.42	43.85	54	-10.15	100	Horz
2402.104	59.19	AV	21.8	4.32	85.31	-	-	100	Vert
2400.541	42.91	AV	21.8	4.36	69.07	-	-	100	Vert
2399.339	24.79	AV	21.8	4.39	50.98	54	-3.02	100	Vert
2398.136	16.11	AV	21.8	4.42	42.33	54	-11.67	100	Vert
PK – Peak detector									
Av - Average detector									

**Figure 17 Radiated Emissions Graph Hi Channel DH5 Bandedge**

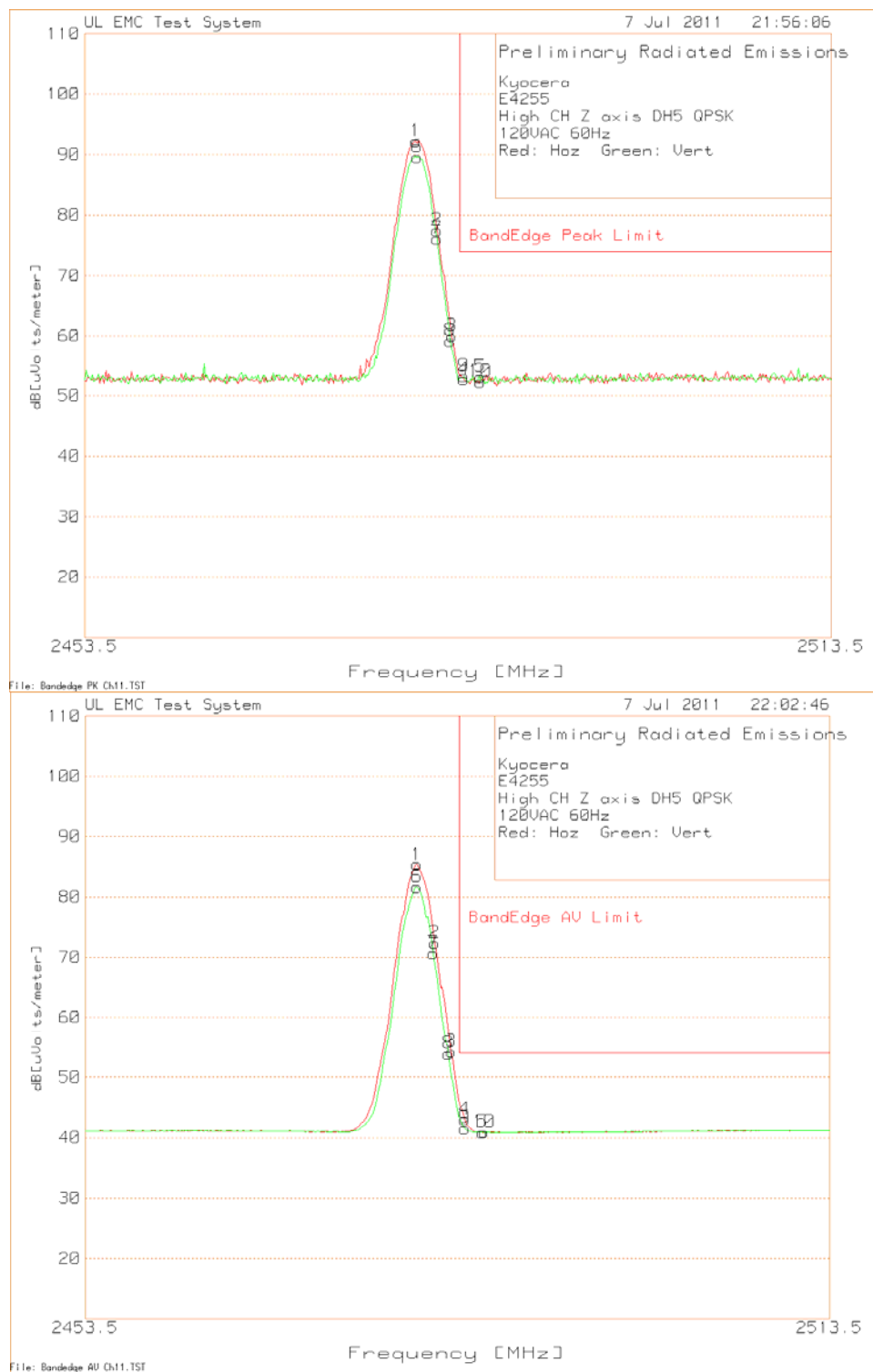


**Figure 18 Radiated Emissions Graph Low Channel DH5 QPSK Bandedge**

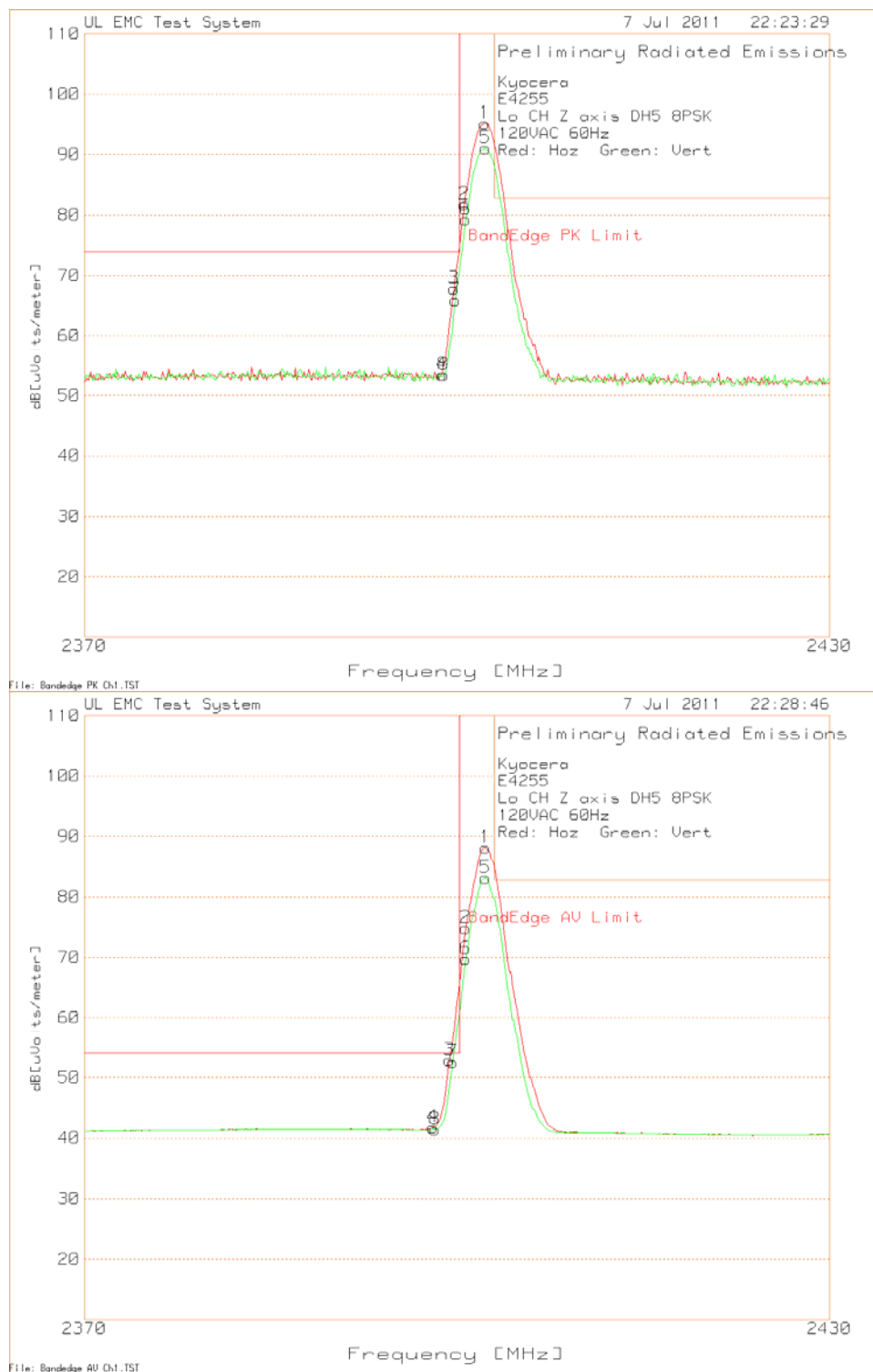


Kyocera E4255 Dual Band Phone Bluetooth Low Channel QPSK DH5 AC mode Z-Axis Red=Horizontal, Green=Vertical									
2 - 4GHz 2370 - 2430MHz									
Test Frequency	Meter Reading	Detector	Antenna Factor	BOMS Factor [dB]	Result dB[uV/m]	BandEdge PK Limit	Margin	Height [cm]	Polarity
2402.104	68.65	PK	21.8	4.32	94.77	-	-	100	Horz
2400.421	55.44	PK	21.8	4.36	81.6	-	-	100	Horz
2399.579	41.72	PK	21.8	4.38	67.9	74	-6.1	100	Horz
2398.617	28	PK	21.8	4.41	54.21	74	-19.79	100	Horz
2402.104	64.71	PK	21.8	4.32	90.83	-	-	100	Vert
2400.661	54.45	PK	21.8	4.36	80.61	-	-	100	Vert
2399.82	41.67	PK	21.8	4.38	67.85	74	-6.15	100	Vert
2398.858	28.21	PK	21.8	4.4	54.41	74	-19.59	100	Vert
2402.224	62.19	AV	21.8	4.32	88.31	-	-	100	Horz
2400.541	47.69	AV	21.8	4.36	73.85	-	-	100	Horz
2399.218	25.85	AV	21.8	4.39	52.04	54	-1.96	100	Horz
2398.016	15.73	AV	21.8	4.42	41.95	54	-12.05	100	Horz
2402.104	56.79	AV	21.8	4.32	82.91	-	-	100	Vert
2400.661	45.06	AV	21.8	4.36	71.22	-	-	100	Vert
2399.459	26.02	AV	21.8	4.39	52.21	54	-1.79	100	Vert
2398.257	15.38	AV	21.8	4.41	41.59	54	-12.41	100	Vert
PK – Peak detector									
Av - Average detector									

**Figure 19 Radiated Emissions Graph Hi Channel DH5 QPSK Bandedge**



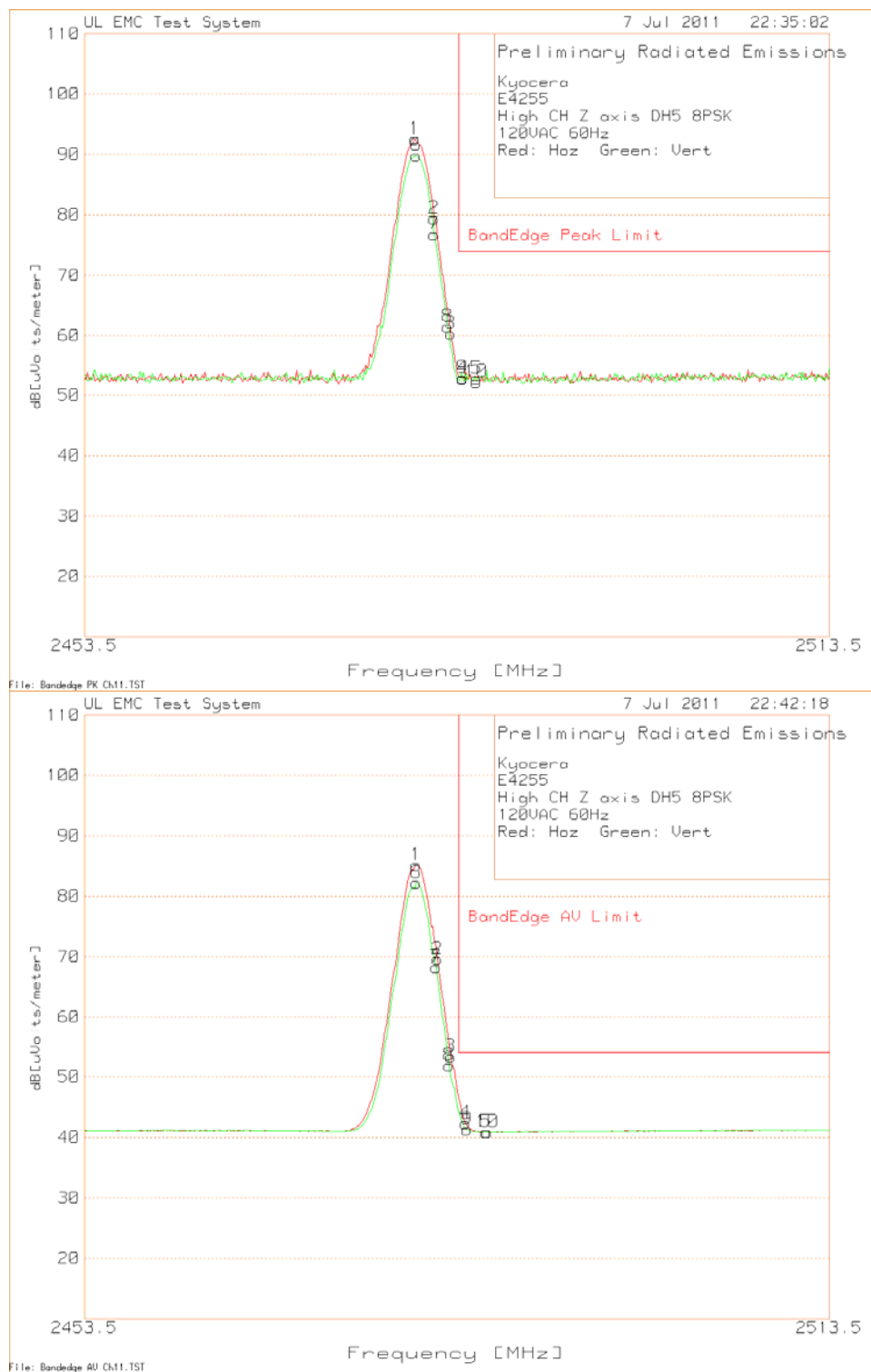
**Figure 20 Radiated Emissions Graph Low Channel DH5 8PSK Bandedge**



Kyocera E4255 Dual Band Phone Bluetooth Low Channel 8PSK DH5 AC mode Z-Axis Red=Horizontal, Green=Vertical									
2 - 4GHz 2370 - 2430MHz									
Test Frequency	Meter Reading	Detector	Antenna Factor	BOMS Factor [dB]	Result dB[uV/m]	BandEdge PK Limit	Margin	Height [cm]	Polarity
2402.044	68.99	PK	21.8	4.32	95.11	-	-	100	Horz
2400.421	55.59	PK	21.8	4.36	81.75	-	-	100	Horz
2399.579	41.64	PK	21.8	4.38	67.82	74	-6.18	100	Horz
2398.617	27.26	PK	21.8	4.41	53.47	74	-20.53	100	Horz
2402.104	64.92	PK	21.8	4.32	91.04	-	-	100	Vert
2400.541	53.1	PK	21.8	4.36	79.26	-	-	100	Vert
2399.699	39.73	PK	21.8	4.38	65.91	74	-8.09	100	Vert
2398.737	27.25	PK	21.8	4.4	53.45	74	-20.55	100	Vert
2402.104	62.02	AV	21.8	4.32	88.14	-	-	100	Horz
2400.541	48.68	AV	21.8	4.36	74.84	-	-	100	Horz
2399.218	26.65	AV	21.8	4.39	52.84	54	-1.16	100	Horz
2397.896	15.54	AV	21.8	4.42	41.76	54	-12.24	100	Horz
2402.104	57.02	AV	21.8	4.32	83.14	-	-	100	Vert
2400.541	43.63	AV	21.8	4.36	69.79	-	-	100	Vert
2399.459	26.31	AV	21.8	4.39	52.5	54	-1.5	100	Vert
2398.016	15.18	AV	21.8	4.42	41.4	54	-12.6	150	Vert
PK – Peak detector									
Av - Average detector									



**Figure 21 Radiated Emissions Graph Hi Channel DH5 8PSK Bandedge**



## 5.0 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/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 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

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