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Project Number: 12U4357
FCC ID V65C5155A1
Date: April 27, 2012
Model: C5155

Electromagnetic Compatibility Test Report

For

KYOCERA Communications, Inc.

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FCC ID: V65C5155A1
Model Number: C5155
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**
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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**
FCC ID **V65C5155A1**

EUT Category: **Transceiver**

Testing Start Date: **April 18, 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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Report Revision History

Revision Date	Description	Revised By	Revision Reviewed By
None			

1 GENERAL - Product Description

1.1 Equipment Description

FCC ID V65C5155A1 Cell phone with BT and Wifi capabilities. Only Radiated Spurious Emissions, Bandedge, and Conducted Emissions AC mains were performed.

1.2 Equipment Marking Plate

N/A

1.3 Device Configuration During Test

1.3.1 Equipment Used During Test:

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

1.3.2 Input/Output Ports:

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

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

1.3.3 EUT Internal Operating Frequencies:

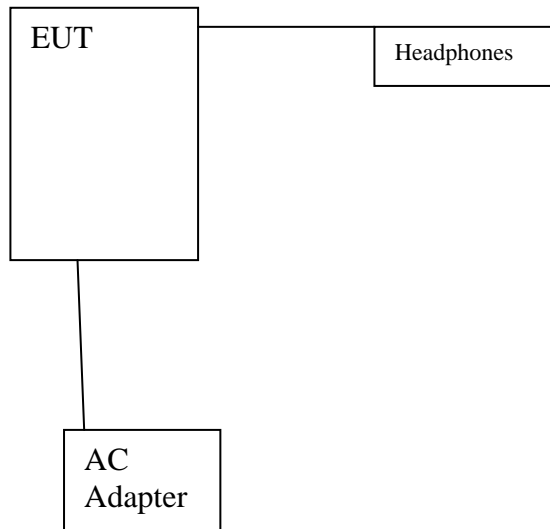
Frequency (MHz)	Description
2400	BT

1.3.4 Power Interface:

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

1.4 Block Diagram:

The diagram below illustrates the configuration of the equipment above.



1.5 EUT Configurations

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

1.6 EUT Operation Modes

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

1.7 Rational for EUT Configuration

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

2 Summary

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

2.1 Deviations from standard test methods

None

2.2 Device Modifications Necessary for Compliance

None

2.3 Reference Standards

Standard Number	Standard Name	Standard Date
FCC Part 15, Subpart 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:



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

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3 Calibration of Equipment Used for Measurement

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

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

4 EMISSIONS TEST RESULTS

The emissions tests were performed according to following regulations:

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

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

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

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

Sample Calculations

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

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Meter Reading (dBuV)} + \text{AF (dB/m)} - \text{Gain (dB)} + \text{Cable Loss (dB)} \\ \text{Conducted Voltage (dBuV)} &= \text{Meter Reading (dBuV)} + \text{Cable Loss (dB)} + \text{LISN IL (dB)} \\ \text{Conducted Current (dBuA)} &= \text{Meter Reading (dBuV)} + \text{Cable Loss (dB)} - \text{Transducer Factor (dBohms)} \end{aligned}$$

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 15.207	
UL LPG	80-EM-S0026	
	Frequency range on each side of line	Measurement Point
Fully configured sample scanned over the following frequency range	150kHz to 30MHz	Mains
Limits - Class B		
Frequency (MHz)	Limit (dBµV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50
Supplementary information: None		

Table 1 Conducted Emissions EUT Configuration Settings

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

Table 2 Conducted Emissions Test Equipment

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

Figure 1 Test Setup for Conducted Emissions

See Photos exhibit

Figure 2 Conducted Emissions Graph

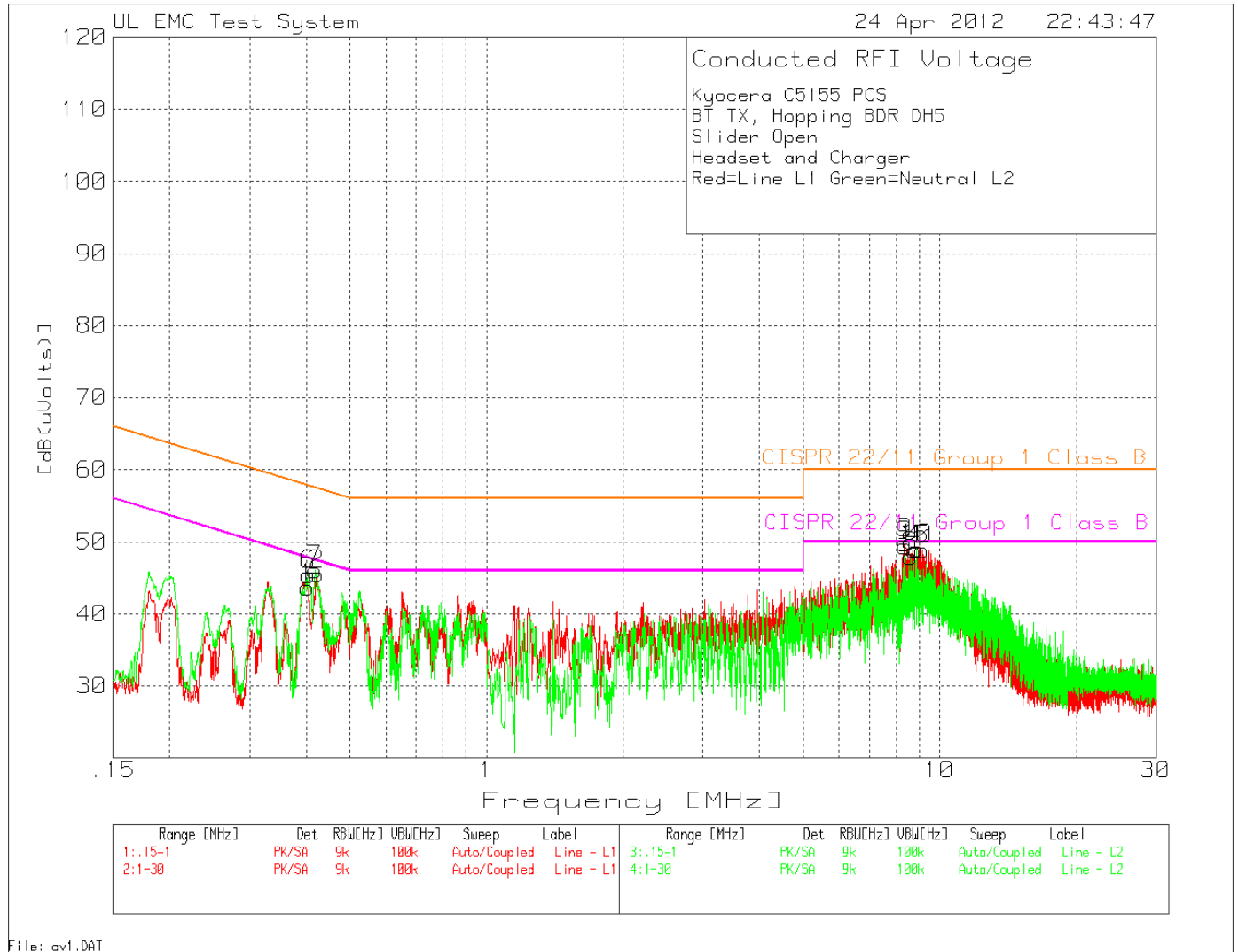


Table 3 Conducted Emissions Data Points

Kyocera C5155 PCS
 BT TX, Hopping BDR DH5
 Slider Open
 Headset and Charger
 Red=Line L1 Green=Neutral L2

No.	Frequency [MHz]	Meter Reading [dB(uV)]	Transducer Factor [dB]	Gain/Loss Factor [dB]	Level [dB(uVolts)]	Limit:1	2	3	4	5	6
Line - L1 .15 - 1MHz -----											
1	.40354	32.84 PK	0	10.8	43.64	-	-	57.8	47.8	-	-
				Margin [dB]		-	-	-14.16	-4.16	-	-
2	.42243	34.79 PK	0	10.7	45.49	-	-	57.4	47.4	-	-
				Margin [dB]		-	-	-11.91	-1.91	-	-
Line - L1 1 - 30MHz -----											
3	8.35956	38.67 PK	.2	10.9	49.77	-	-	60	50	-	-
				Margin [dB]		-	-	-10.23	-.23	-	-
4	8.81229	37.83 PK	.2	10.9	48.93	-	-	60	50	-	-
				Margin [dB]		-	-	-11.07	-1.07	-	-
5	9.15636	37.8 PK	.1	11	48.9	-	-	60	50	-	-
				Margin [dB]		-	-	-11.1	-1.1	-	-
Line - L2 .15 - 1MHz -----											
6	.4046	34.64 PK	0	10.8	45.44	-	-	57.8	47.8	-	-
				Margin [dB]		-	-	-12.36	-2.36	-	-
7	.41904	35.25 PK	0	10.8	46.05	-	-	57.5	47.5	-	-
				Margin [dB]		-	-	-11.45	-1.45	-	-
Line - L2 1 - 30MHz -----											
8	8.64206	36.73 PK	.2	11	47.93	-	-	60	50	-	-
				Margin [dB]		-	-	-12.07	-2.07	-	-
9	8.37043	38.19 PK	.2	11	49.39	-	-	60	50	-	-
				Margin [dB]		-	-	-10.61	-.61	-	-
10	8.87386	37.81 PK	.2	11	49.01	-	-	60	50	-	-
				Margin [dB]		-	-	-10.99	-.99	-	-

PK - Peak detector

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

Kyocera C5155 PCS
 BT TX, Hopping BDR DH5
 Slider Open
 Headset and Charger

Red=Line L1 Green=Neutral L2

Test	Meter	Transducer	Gain/Loss	Level	Limit:1	2	3	4	5	6
Frequency [MHz]	Reading [dB(uV)]	Factor [dB]	Factor [dB]	[dB(uVolts)]						
=====										
Line - L1 .15 - 1MHz										
.39909	32.07 QP	0	10.8	42.87	-	-	57.87	47.87	-	-
			Margin [dB]:		-	-	-15	-5	-	-
.42128	30.83 QP	0	10.7	41.53	-	-	57.42	47.42	-	-
			Margin [dB]:		-	-	-15.89	-5.89	-	-
Line - L1 1 - 30MHz										
8.3564	30.96 QP	.2	10.9	42.06	-	-	60	50	-	-
			Margin [dB]:		-	-	-17.94	-7.94	-	-
8.8122	30.58 QP	.2	10.9	41.68	-	-	60	50	-	-
			Margin [dB]:		-	-	-18.32	-8.32	-	-
9.15522	29.73 QP	.1	11	40.83	-	-	60	50	-	-
			Margin [dB]:		-	-	-19.17	-9.17	-	-
Line - L2 .15 - 1MHz										
.40077	30.41 QP	0	10.8	41.21	-	-	57.84	47.84	-	-
			Margin [dB]:		-	-	-16.63	-6.63	-	-
.42177	33.13 QP	0	10.8	43.93	-	-	57.41	47.41	-	-
			Margin [dB]:		-	-	-13.48	-3.48	-	-
Line - L2 1 - 30MHz										
8.64117	28.2 QP	.2	11	39.4	-	-	60	50	-	-
			Margin [dB]:		-	-	-20.6	-10.6	-	-
8.37013	28.82 QP	.2	11	40.02	-	-	60	50	-	-
			Margin [dB]:		-	-	-19.98	-9.98	-	-
8.87469	28.85 QP	.2	11	40.05	-	-	60	50	-	-
			Margin [dB]:		-	-	-19.95	-9.95	-	-

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

QP - Quasi-Peak detector

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

Kyocera C5155 PCS
 BT TX, Hopping BDR DH5
 Slider Open
 Headset and Charger

Red=Line L1 Green=Neutral L2

Test	Meter	Transducer	Gain/Loss	Level	Limit:1	2	3	4	5	6
Frequency [MHz]	Reading [dB(uV)]	Factor [dB]	Factor [dB]	[dB(uVolts)]						
=====										
Line - L1 .15 - 1MHz										
.39909	21.3 Av	0	10.8	32.1	-	-	57.87	47.87	-	-
			Margin [dB]:		-	-	-25.77	-15.77	-	-
.42128	17.48 Av	0	10.7	28.18	-	-	57.42	47.42	-	-
			Margin [dB]:		-	-	-29.24	-19.24	-	-
Line - L1 1 - 30MHz										
8.3564	20.94 Av	.2	10.9	32.04	-	-	60	50	-	-
			Margin [dB]:		-	-	-27.96	-17.96	-	-
8.8122	20.77 Av	.2	10.9	31.87	-	-	60	50	-	-
			Margin [dB]:		-	-	-28.13	-18.13	-	-
9.15522	20.62 Av	.1	11	31.72	-	-	60	50	-	-
			Margin [dB]:		-	-	-28.28	-18.28	-	-
Line - L2 .15 - 1MHz										
.40077	19.99 Av	0	10.8	30.79	-	-	57.84	47.84	-	-
			Margin [dB]:		-	-	-27.05	-17.05	-	-
.42177	16.77 Av	0	10.8	27.57	-	-	57.41	47.41	-	-
			Margin [dB]:		-	-	-29.84	-19.84	-	-
Line - L2 1 - 30MHz										
8.64117	19.19 Av	.2	11	30.39	-	-	60	50	-	-
			Margin [dB]:		-	-	-29.61	-19.61	-	-
8.37013	19.67 Av	.2	11	30.87	-	-	60	50	-	-
			Margin [dB]:		-	-	-29.13	-19.13	-	-
8.87469	19.13 Av	.2	11	30.33	-	-	60	50	-	-
			Margin [dB]:		-	-	-29.67	-19.67	-	-

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 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		
Frequency (MHz)	Limit (dBµV/m)	
	Quasi-Peak	Average
30-88	40	NA
88-216	43.5	NA
216-960	46	NA
960-1000	54	NA
1000-25000 (3m)	74 (Peak)	54
<p>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 BT BDR mode, low, middle and high channels. In addition the EUT was set to BT QPSK mode and BT 8PSK mode 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 to the transmitter were noted.</p> <p>For Bandedge Z-axis for horizontal polarity and X-axis for vertical polarity was found to be worst case. Emissions found near 1.9GHz is noise floor.</p>		

Table 4 Radiated Emissions EUT Configuration Settings

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

Table 5 Radiated Emissions Test Equipment

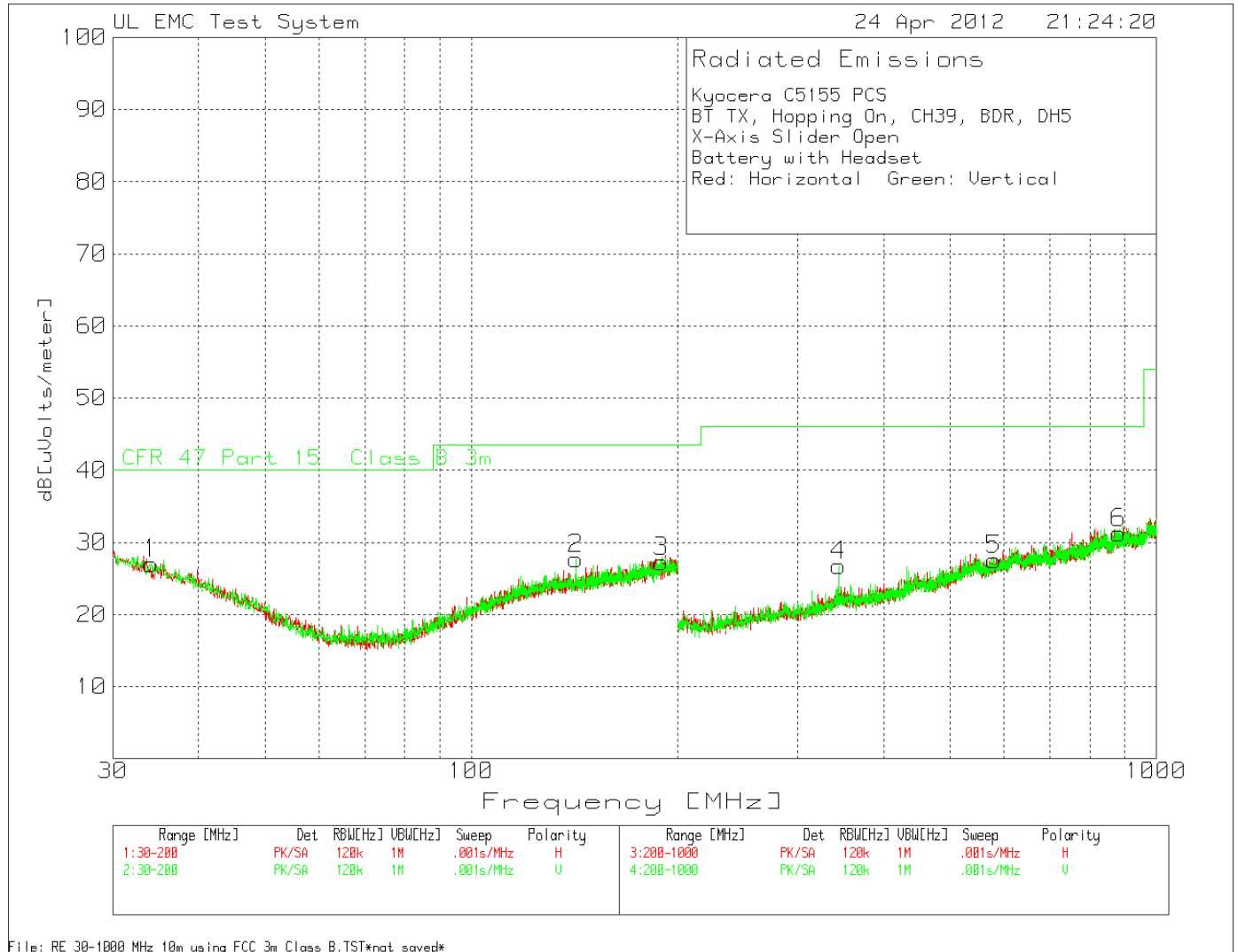
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESU	EMC4323	12/27/11	12/27/12
Bicon Antenna	Chase	VBA6106A	EMC4078	1/17/12	1/31/13
Log-P Antenna	Chase	UPA6109	EMC4313	6/29/11	6/29/12
Spectrum Analyzer	Rhode & Schwarz	FSEK	EMC4182	12/27/11	12/31/12
Antenna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

Figure 3 Test setup for Radiated Emissions

See Photo Exhibit

4.2.1.1 Spurious, BT, DH5, BDR, Hopping Channel, Battery Mode, 30MHz – 1GHz

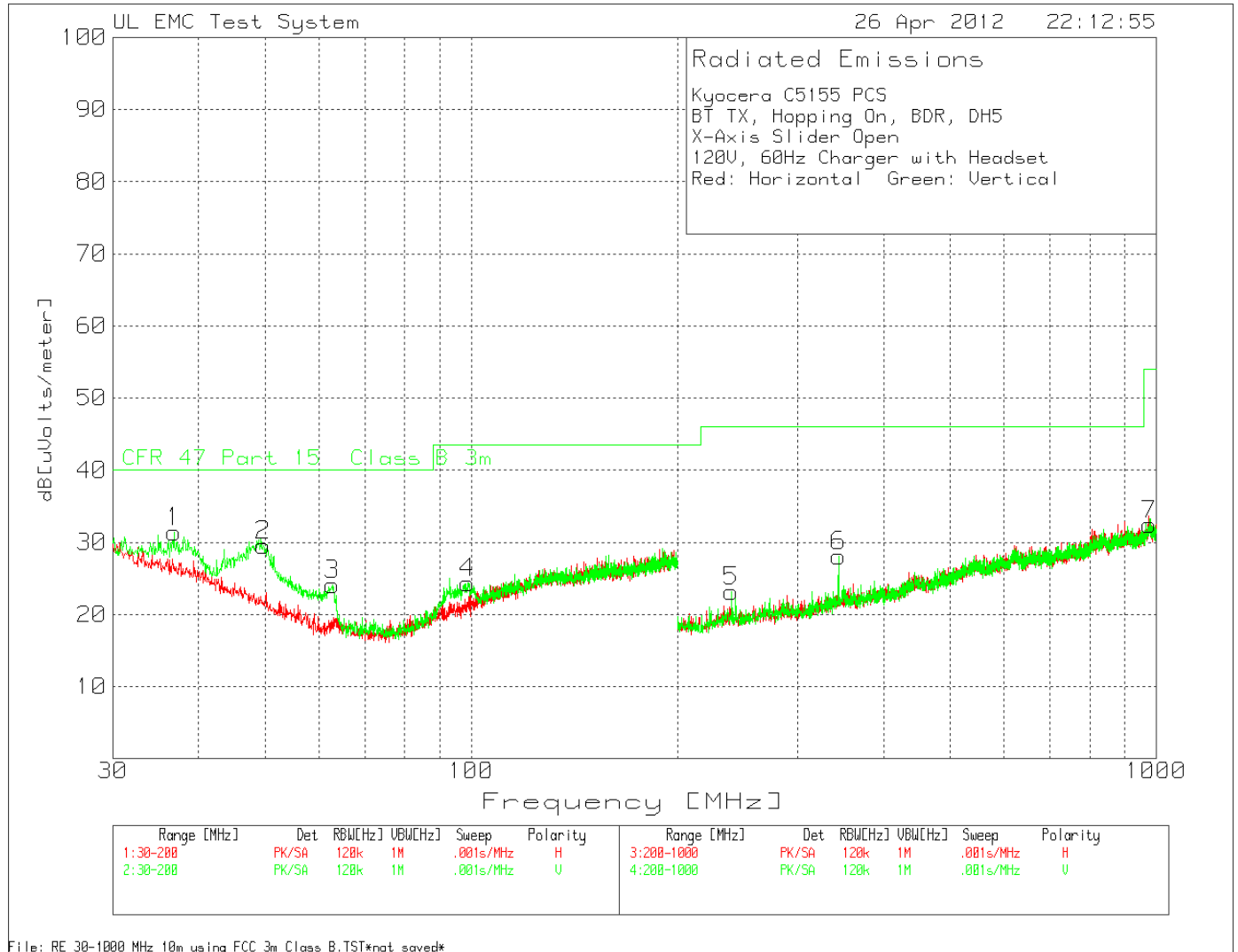
Figure 4 Radiated Emissions Graph X-Axis



No Emissions found within 6dB of the limit

4.2.2 Spurious, BT, BDR, Hopping Channel, Charging Mode, 30MHz – 1GHz

Figure 5 Radiated Emissions Graph X-Axis



No Emissions found within 6dB of the limit

4.2.3 Spurious, BT, BDR, Low Channel, 1GHz – 25GHz

Figure 6 Radiated Emissions Graph X-Axis

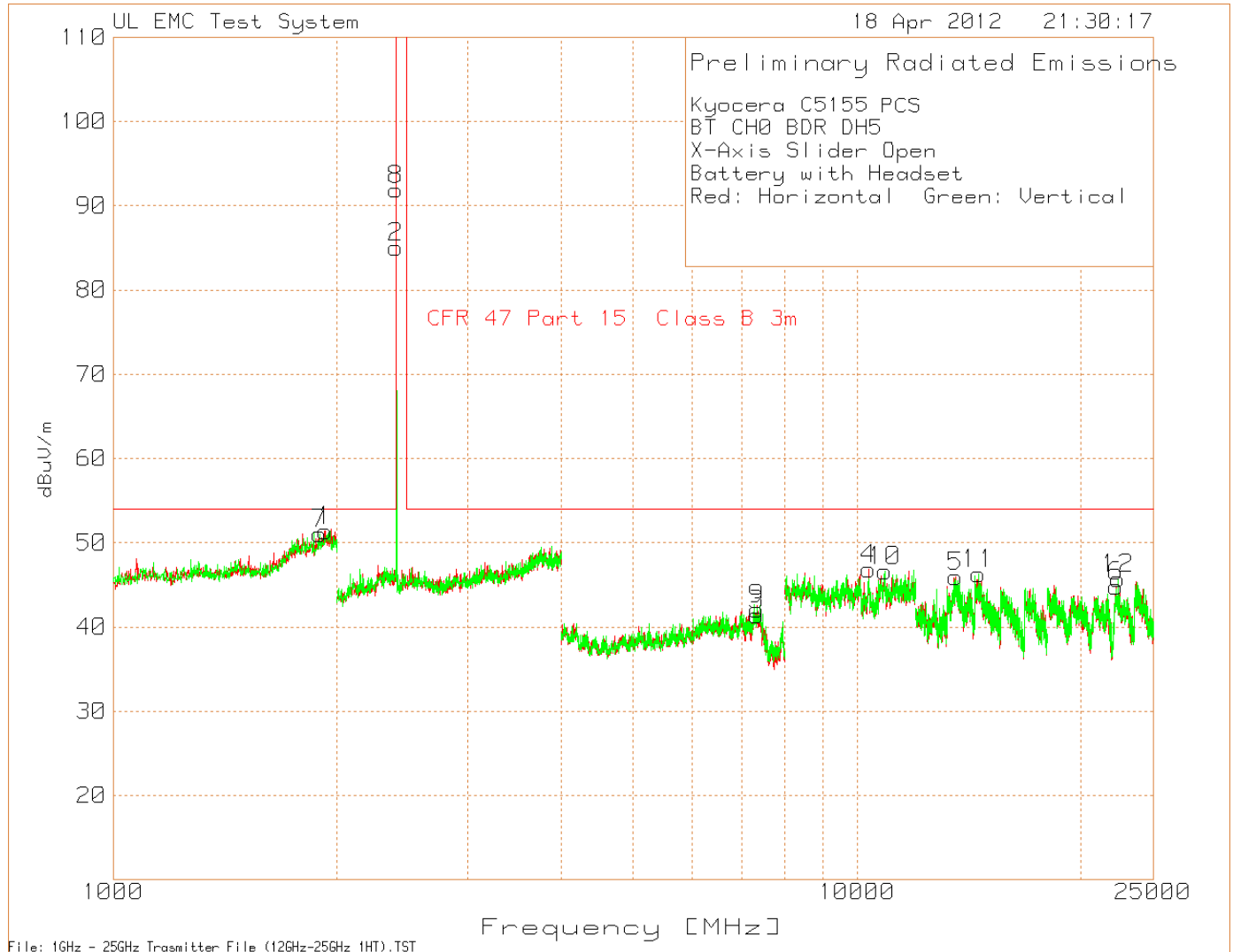


Table 6 Radiated Emissions Data Points X-Axis

Kyocera C5155 PCS BT CH0 BDR DH5 X-Axis Slider Open Battery with Headset RED: Horizontal GRN: Vertical									
Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	Level dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
1927.856	20.07	PK	27.4	3.92	51.39	54	-2.61	100	Horz
2400.4	58.96	PK	21.8	4.3	85.06	-	-	99	Horz
7338.225	57.17	PK	30.7	-46.49	41.38	54	-12.62	99	Horz
10361.57	58.57	PK	36.2	-47.94	46.83	54	-7.17	100	Horz
13563.03	46.85	PK	39.8	-40.7	45.95	54	-8.05	99	Horz
22285.71	56.9	PK	40.5	-52.53	44.87	54	-9.13	99	Horz
1893.788	19.84	PK	27.4	3.8	51.04	54	-2.96	102	Vert
2400.4	65.81	PK	21.8	4.3	91.91	-	-	100	Vert
7335.557	57.83	PK	30.7	-46.4	42.13	54	-11.87	102	Vert
10889.93	57.74	PK	36.3	-47.36	46.68	54	-7.32	150	Vert
14564.23	45.12	PK	39.8	-38.65	46.27	54	-7.73	100	Vert
22431.37	57.24	PK	40.5	-52.03	45.71	54	-8.29	100	Vert
PK - Peak detector									

Figure 7 Radiated Emissions Graph Y-Axis

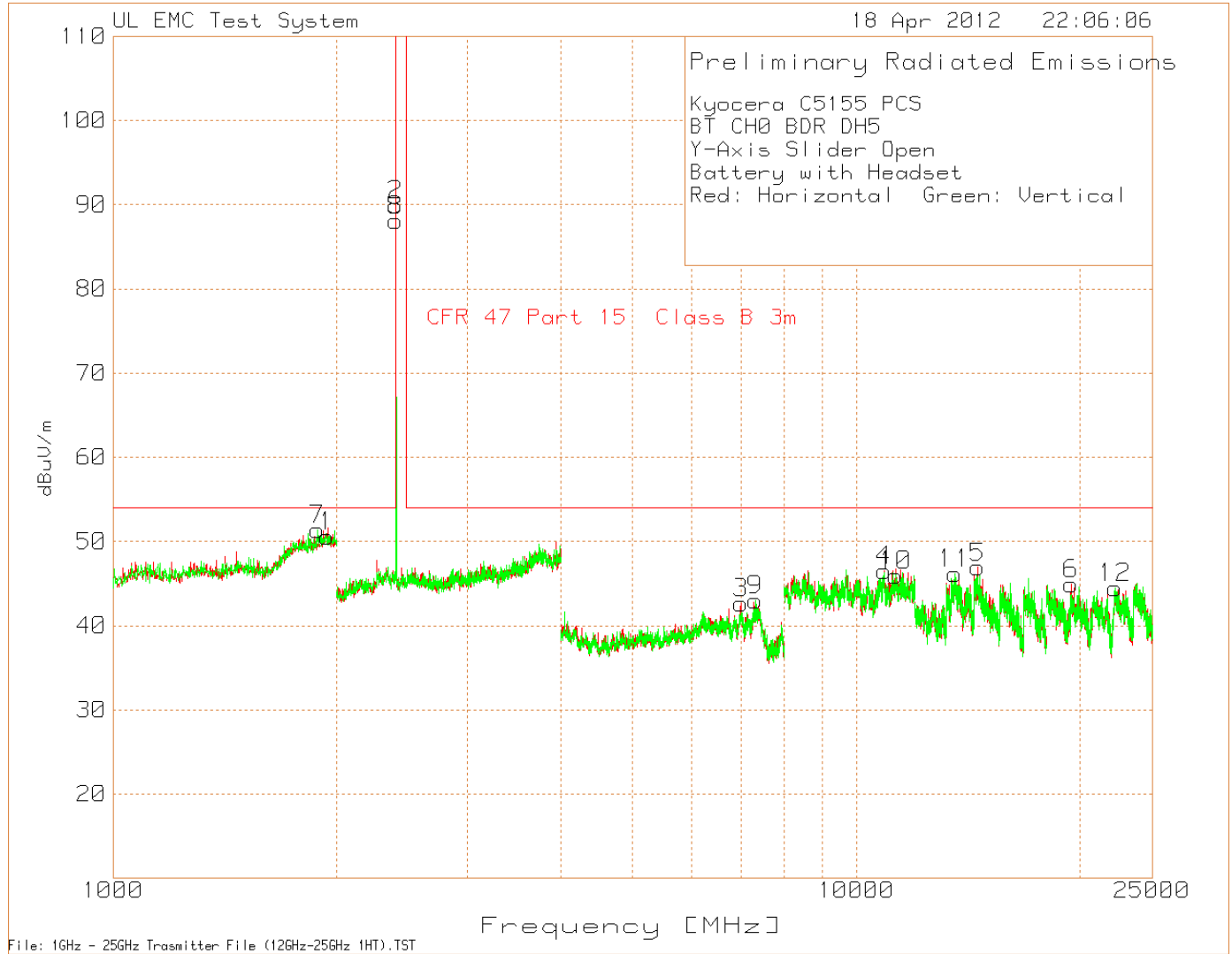


Table 7 Radiated Emissions Data Points Y-Axis

Kyocera C5155 PCS BT CH0 BDR DH5 Y-Axis Slider Open Battery with Headset RED: Horizontal GRN: Vertical									
Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	Level dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
1937.876	19.27	PK	27.4	3.95	50.62	54	-3.38	150	Horz
2400.4	63.83	PK	21.8	4.3	89.93	-	-	100	Horz
6991.328	58.73	PK	29.3	-45.41	42.62	54	-11.38	150	Horz
10903.27	57.6	PK	36.3	-47.35	46.55	54	-7.45	150	Horz
14559.42	45.9	PK	39.8	-38.78	46.92	54	-7.08	99	Horz
19467.79	65.67	PK	40.3	-61.04	44.93	54	-9.07	99	Horz
1883.768	20.28	PK	27.3	3.82	51.4	54	-2.6	150	Vert
2402.402	62.09	PK	21.8	4.25	88.14	-	-	100	Vert
7316.878	58.65	PK	30.6	-46.28	42.97	54	-11.03	150	Vert
11306.2	56.37	PK	36.9	-47.34	45.93	54	-8.07	100	Vert
13575.03	47.08	PK	39.8	-40.65	46.23	54	-7.77	102	Vert
22302.52	56.74	PK	40.5	-52.72	44.52	54	-9.48	100	Vert
PK - Peak detector									

Figure 8 Radiated Emissions Graph Z-Axis

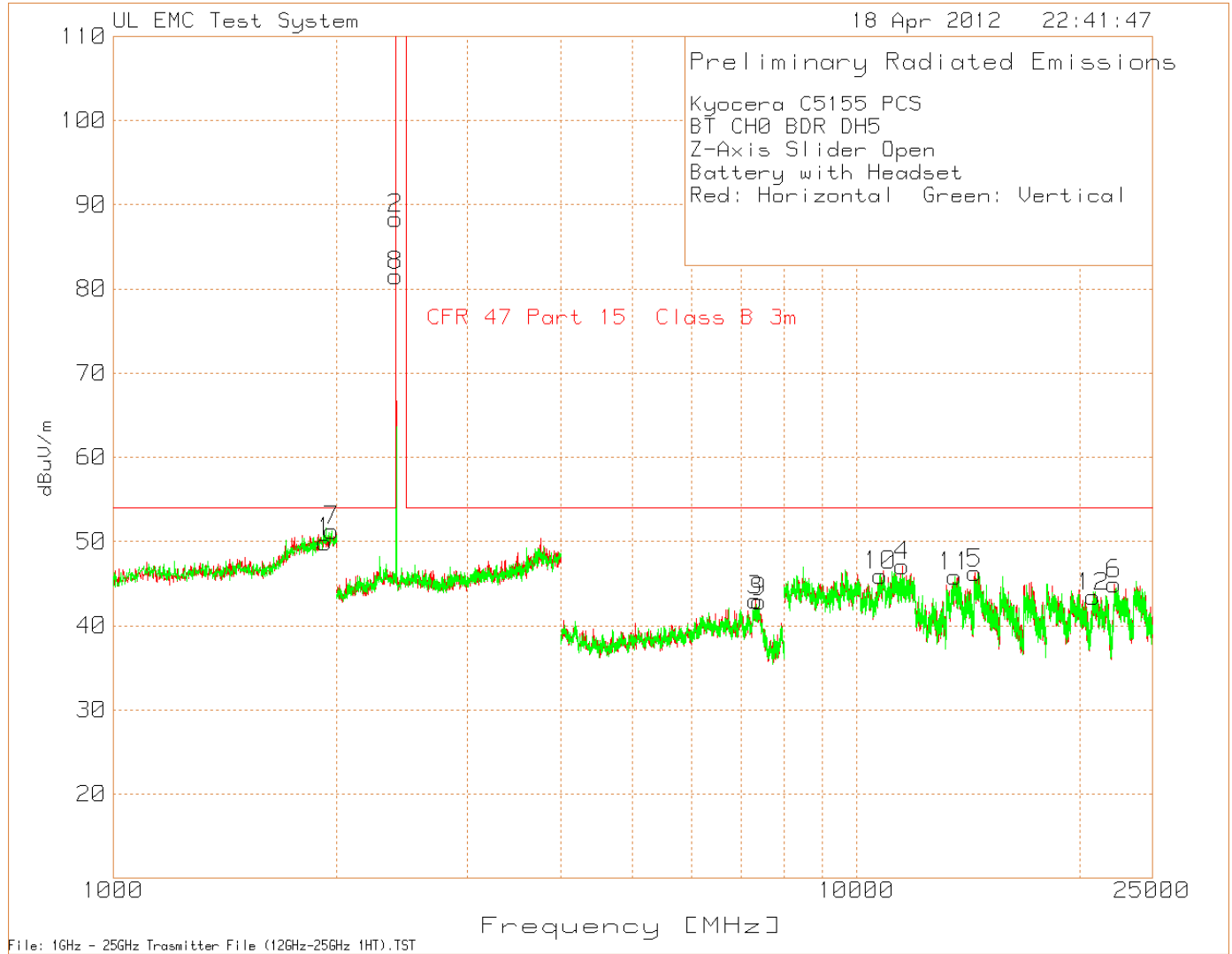


Table 8 Radiated Emissions Data Points Z-Axis

Kyocera C5155 PCS BT CH0 BDR DH5 Z-Axis Slider Open Battery with Headset RED: Horizontal GRN: Vertical									
Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	Level dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
1930.862	18.59	PK	27.4	3.95	49.94	54	-4.06	100	Horz
2402.402	62.31	PK	21.8	4.25	88.36	-	-	100	Horz
7324.883	58.6	PK	30.6	-46.24	42.96	54	-11.04	99	Horz
11535.69	57.34	PK	37.2	-47.47	47.07	54	-6.93	150	Horz
14439.38	45.95	PK	39.8	-39.51	46.24	54	-7.76	100	Horz
22260.5	57.12	PK	40.5	-52.72	44.9	54	-9.1	100	Horz
1967.936	20.05	PK	27.5	3.75	51.3	54	-2.7	150	Vert
2401.401	55.51	PK	21.8	4.28	81.59	-	-	150	Vert
7402.268	58.57	PK	31.2	-46.93	42.84	54	-11.16	100	Vert
10764.51	57.74	PK	36.4	-48.19	45.95	54	-8.05	100	Vert
13572.63	46.68	PK	39.8	-40.61	45.87	54	-8.13	100	Vert
20848.74	59.47	PK	40.2	-56.26	43.41	54	-10.59	100	Vert
PK - Peak detector									

4.2.4 Spurious, BT, BDR, Middle Channel, 1GHz – 25GHz

Figure 9 Radiated Emissions Graph X-Axis

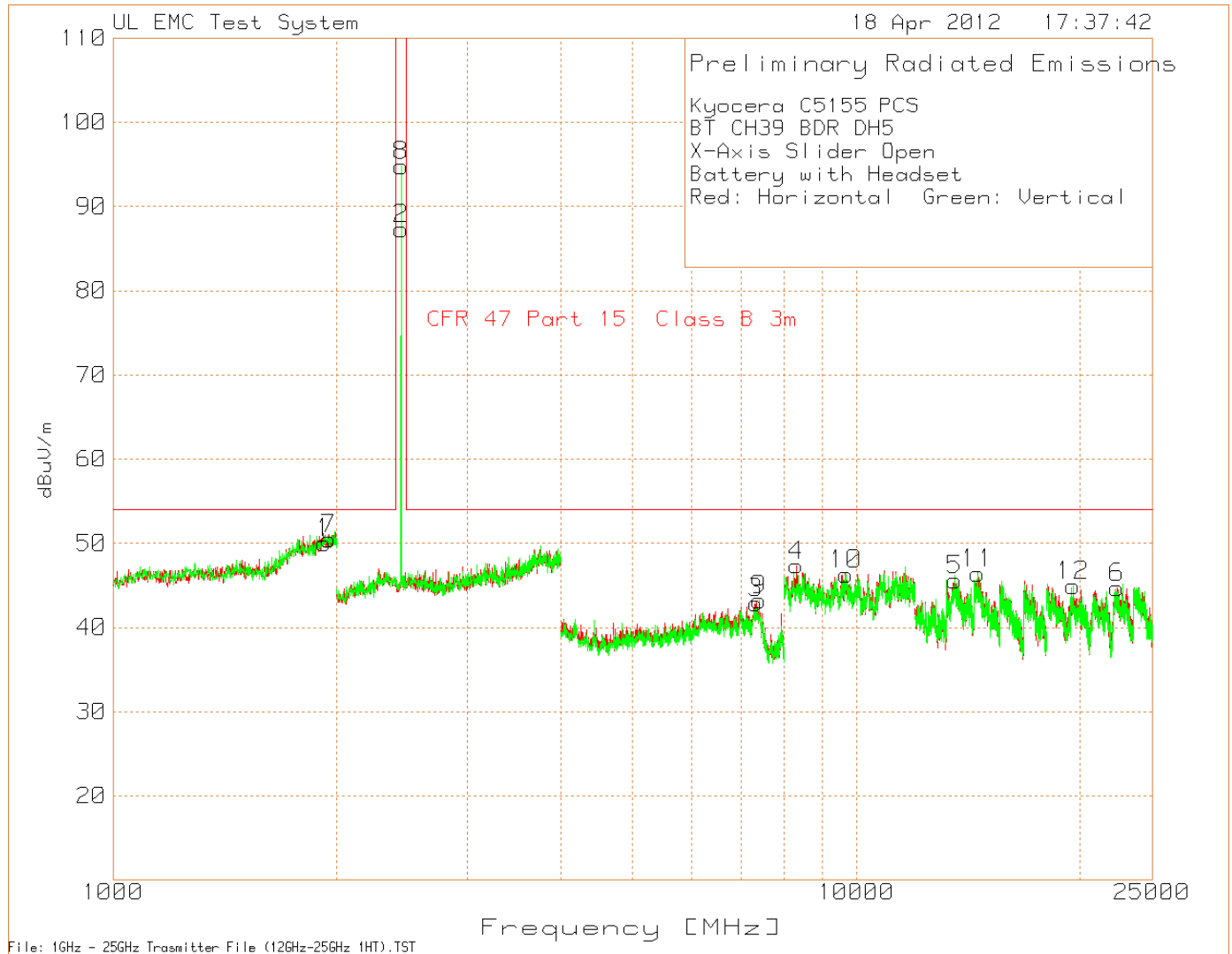


Table 9 Radiated Emissions Data Points X-Axis

Kyocera C5155 PCS BT CH39 BDR DH5 X-Axis Slider Open Battery with Headset RED: Horizontal GRN: Vertical									
Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	Level dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
1922.846	18.81	PK	27.4	3.87	50.08	54	-3.92	99	Horz
2440.44	61.14	PK	21.9	4.25	87.29	-	-	99	Horz
7327.552	58.49	PK	30.7	-46.26	42.93	54	-11.07	150	Horz
8309.54	59.93	PK	36.5	-49.06	47.37	54	-6.63	150	Horz
13555.82	46.74	PK	39.8	-40.92	45.62	54	-8.38	100	Horz
22436.98	56.2	PK	40.5	-52.01	44.69	54	-9.31	100	Horz
1953.908	19.28	PK	27.4	3.79	50.47	54	-3.53	150	Vert
2440.44	68.66	PK	21.9	4.25	94.81	-	-	100	Vert
7402.268	58.97	PK	31.2	-46.93	43.24	54	-10.76	150	Vert
9683.789	58.45	PK	36.4	-48.55	46.3	54	-7.7	150	Vert
14557.02	45.44	PK	39.8	-38.82	46.42	54	-7.58	100	Vert
19596.64	65.54	PK	40.3	-60.92	44.92	54	-9.08	100	Vert
PK - Peak detector									

4.2.5 Spurious, BT, QPSK, Middle Channel, 1GHz – 25GHz

Figure 10 Radiated Emissions Graph X-Axis

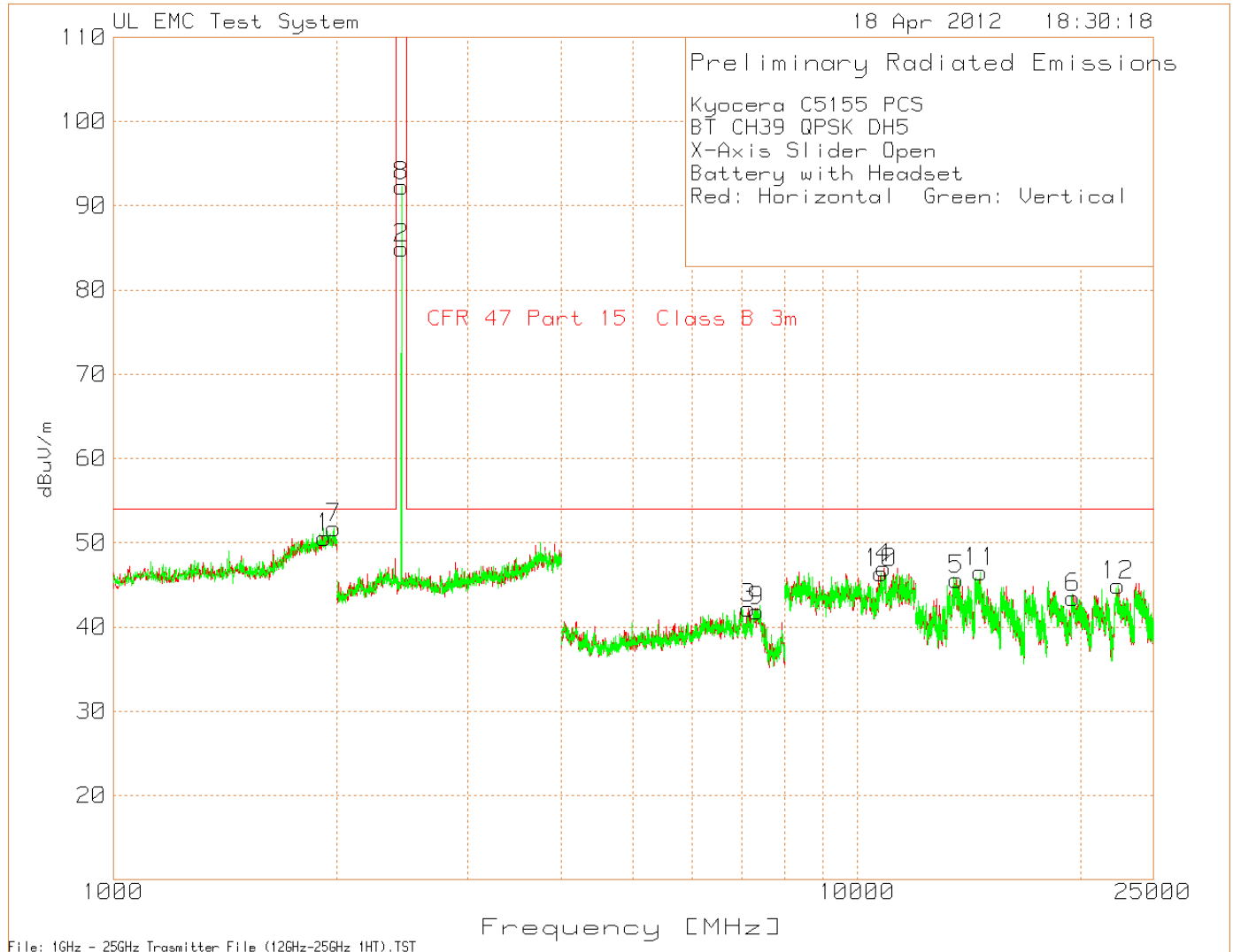


Table 10 Radiated Emissions Data Points X-Axis

Kyocera C5155 PCS BT CH39 QPSK DH5 X-Axis Slider Open Battery with Headset RED: Horizontal GRN: Vertical									
Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	Level dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
1923.848	19.28	PK	27.4	3.89	50.57	54	-3.43	150	Horz
2440.44	58.82	PK	21.9	4.25	84.97	-	-	100	Horz
7151.434	59.36	PK	29.6	-46.74	42.22	54	-11.78	100	Horz
10881.92	57.91	PK	36.3	-47.21	47	54	-7	150	Horz
13596.64	46.98	PK	39.8	-41.14	45.64	54	-8.36	99	Horz
19495.8	64.35	PK	40.3	-61.21	43.44	54	-10.56	99	Horz
1983.968	20.17	PK	27.5	4.03	51.7	54	-2.3	150	Vert
2440.44	66.13	PK	21.9	4.25	92.28	-	-	100	Vert
7330.22	57.48	PK	30.7	-46.28	41.9	54	-12.1	150	Vert
10791.19	58.36	PK	36.4	-48.39	46.37	54	-7.63	150	Vert
14660.26	45.15	PK	39.8	-38.43	46.52	54	-7.48	100	Vert
22459.38	56.48	PK	40.5	-52.06	44.92	54	-9.08	100	Vert
PK - Peak detector									

4.2.6 Spurious, BT, 8PSK, Middle Channel, 1GHz – 25GHz

Figure 11 Radiated Emissions Graph X-Axis

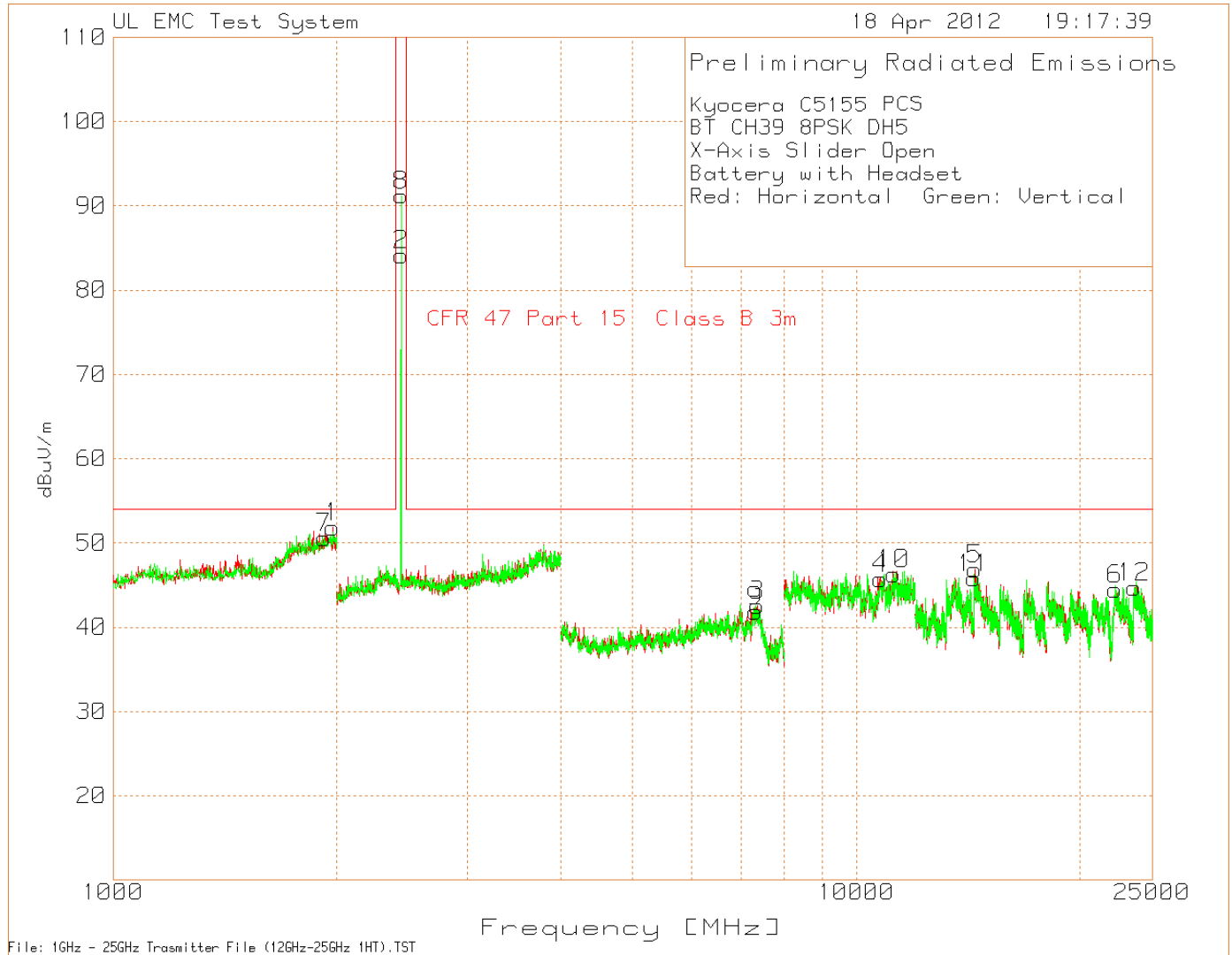


Table 11 Radiated Emissions Data Points X-Axis

Kyocera C5155 PCS BT CH39 8PSK DH5 X-Axis Slider Open Battery with Headset RED: Horizontal GRN: Vertical									
Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	Level dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
1973.948	20.54	PK	27.5	3.85	51.89	54	-2.11	150	Horz
2440.44	57.98	PK	21.9	4.25	84.13	-	-	100	Horz
7370.247	57.98	PK	31	-46.42	42.56	54	-11.44	99	Horz
10769.85	57.48	PK	36.4	-48.1	45.78	54	-8.22	150	Horz
14451.38	46.85	PK	39.8	-39.81	46.84	54	-7.16	100	Horz
22288.52	56.53	PK	40.5	-52.57	44.46	54	-9.54	100	Horz
1923.848	19.29	PK	27.4	3.89	50.58	54	-3.42	150	Vert
2440.44	65.08	PK	21.9	4.25	91.23	-	-	100	Vert
7324.883	57.51	PK	30.6	-46.24	41.87	54	-12.13	101	Vert
11223.48	56.98	PK	36.7	-47.38	46.3	54	-7.7	101	Vert
14400.96	45.2	PK	39.8	-39.21	45.79	54	-8.21	101	Vert
23663.87	57.08	PK	40.3	-52.62	44.76	54	-9.24	101	Vert
PK - Peak detector									

4.2.7 Spurious, BT, BDR, High Channel, 1GHz – 25GHz

Figure 12 Radiated Emissions Graph X-Axis

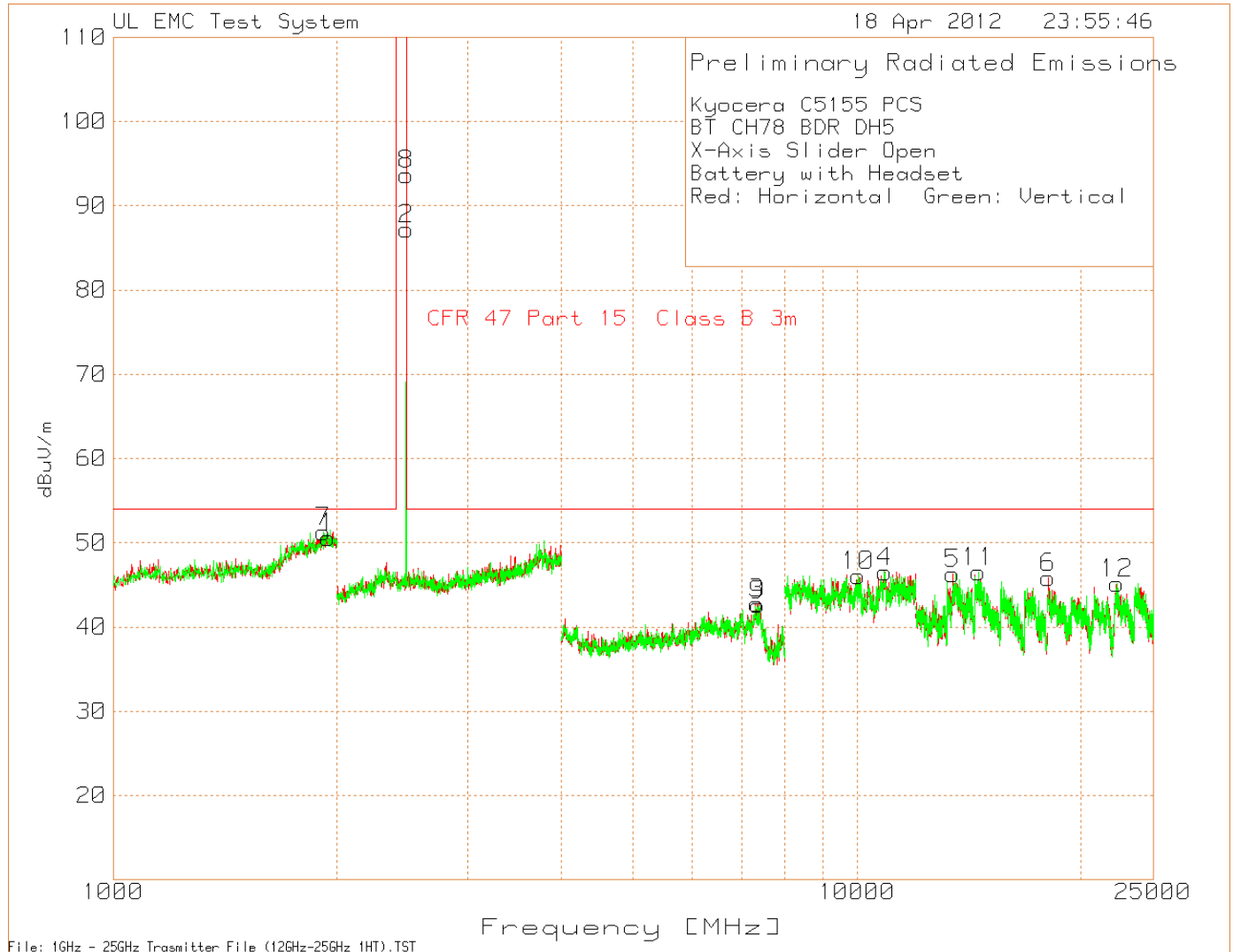


Table 12 Radiated Emissions Data Points X-Axis

Kyocera C5155 PCS BT CH78 BDR DH5 X-Axis Slider Open Battery with Headset RED: Horizontal GRN: Vertical									
Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	Level dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
1945.892	19.32	PK	27.4	3.88	50.6	54	-3.4	100	Horz
2480.48	61.42	PK	22	3.77	87.19	-	-	100	Horz
7346.231	58.58	PK	30.8	-46.56	42.82	54	-11.18	150	Horz
10900.6	57.61	PK	36.3	-47.34	46.57	54	-7.43	99	Horz
13466.99	48.13	PK	39.8	-41.59	46.34	54	-7.66	100	Horz
18092.44	66.65	PK	40	-60.77	45.88	54	-8.12	100	Horz
1915.832	20.06	PK	27.4	3.78	51.24	54	-2.76	150	Vert
2480.48	67.9	PK	22	3.77	93.67	-	-	102	Vert
7354.236	58.02	PK	30.9	-46.31	42.61	54	-11.39	102	Vert
10036.02	58.53	PK	36.4	-48.82	46.11	54	-7.89	150	Vert
14566.63	45.27	PK	39.8	-38.59	46.48	54	-7.52	101	Vert
22369.75	57.19	PK	40.5	-52.49	45.2	54	-8.8	101	Vert
PK - Peak detector									

Figure 13 Radiated Emissions Graph Y-Axis

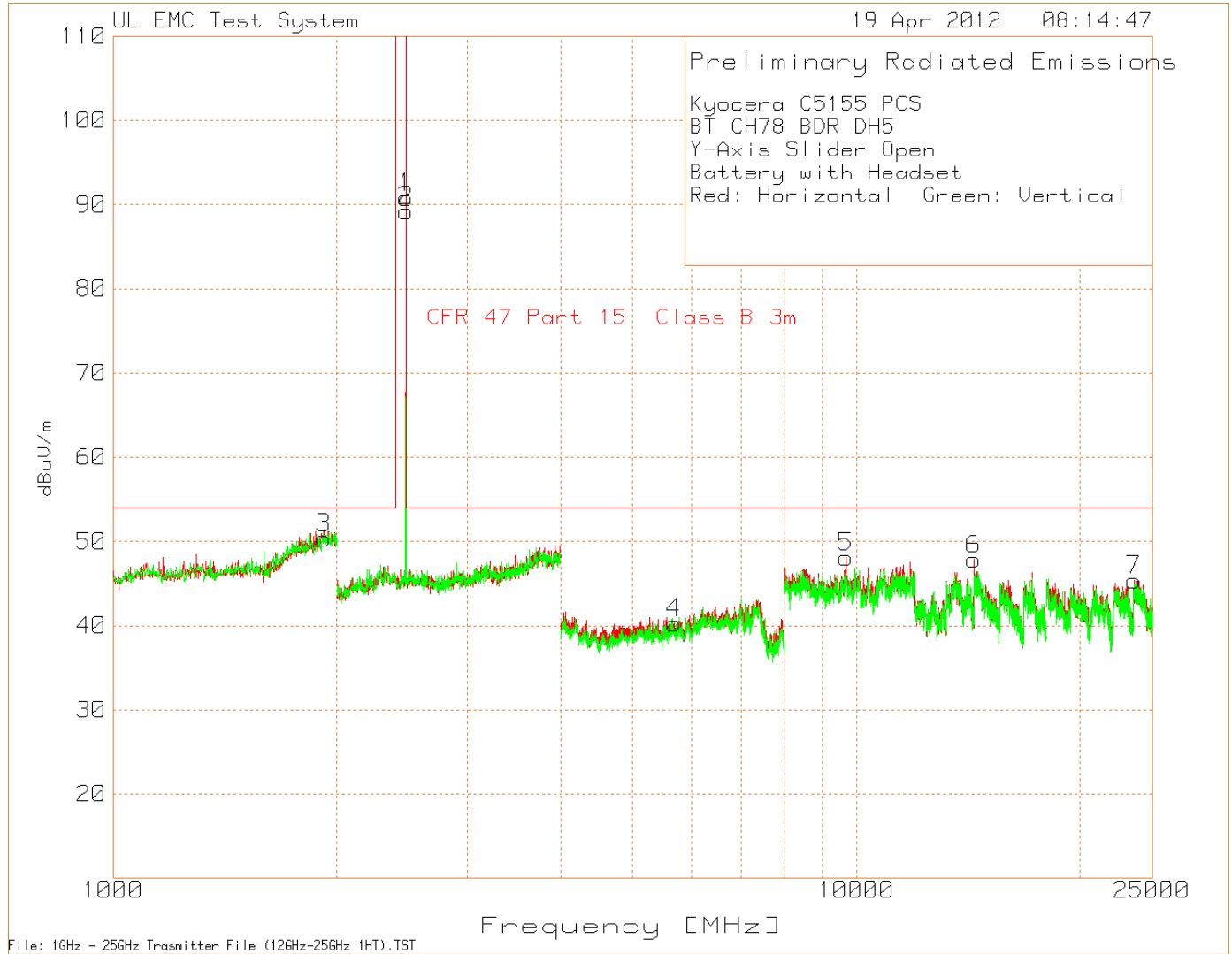


Table 13 Radiated Emissions Data Points Y-Axis

Kyocera C5155 PCS BT CH78 BDR DH5 Y-Axis Slider Open Battery with Headset RED: Horizontal GRN: Vertical									
Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	Level dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
1921.844	19.11	PK	27.4	3.86	50.37	54	-3.63	150	Horz
2480.48	65.1	PK	22	3.77	90.87	-	-	99	Horz
5691.795	62.01	PK	28.5	-50.23	40.28	54	-13.72	99	Horz
9681.121	60.15	PK	36.4	-48.44	48.11	54	-5.89	150	Horz
14403.36	47.26	PK	39.8	-39.23	47.83	54	-6.17	99	Horz
23675.07	57.73	PK	40.3	-52.66	45.37	54	-8.63	99	Horz
2478.478	63.45	PK	22	3.77	89.22	-	-	100	Vert
PK - Peak detector									

Figure 14 Radiated Emissions Graph Z-Axis

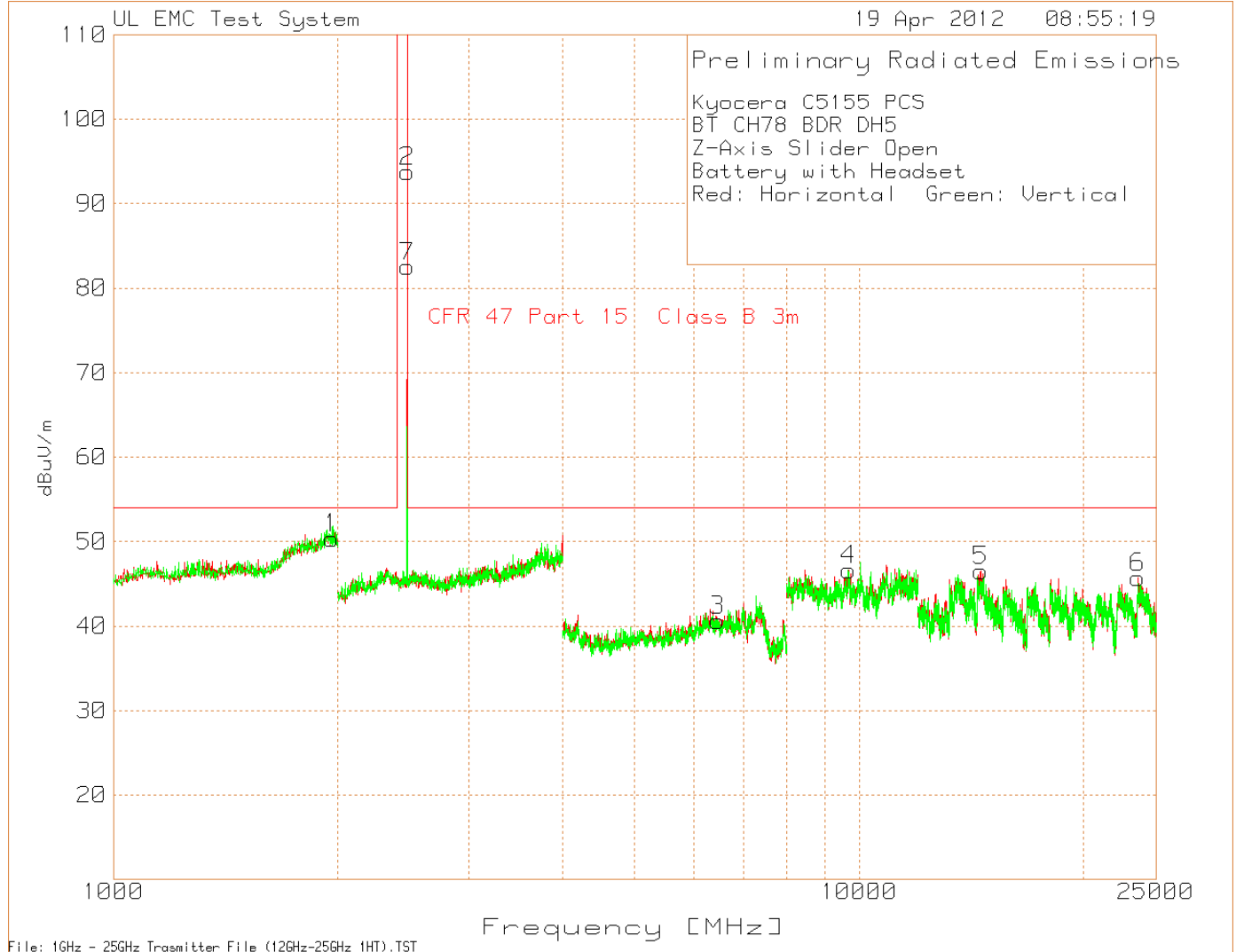
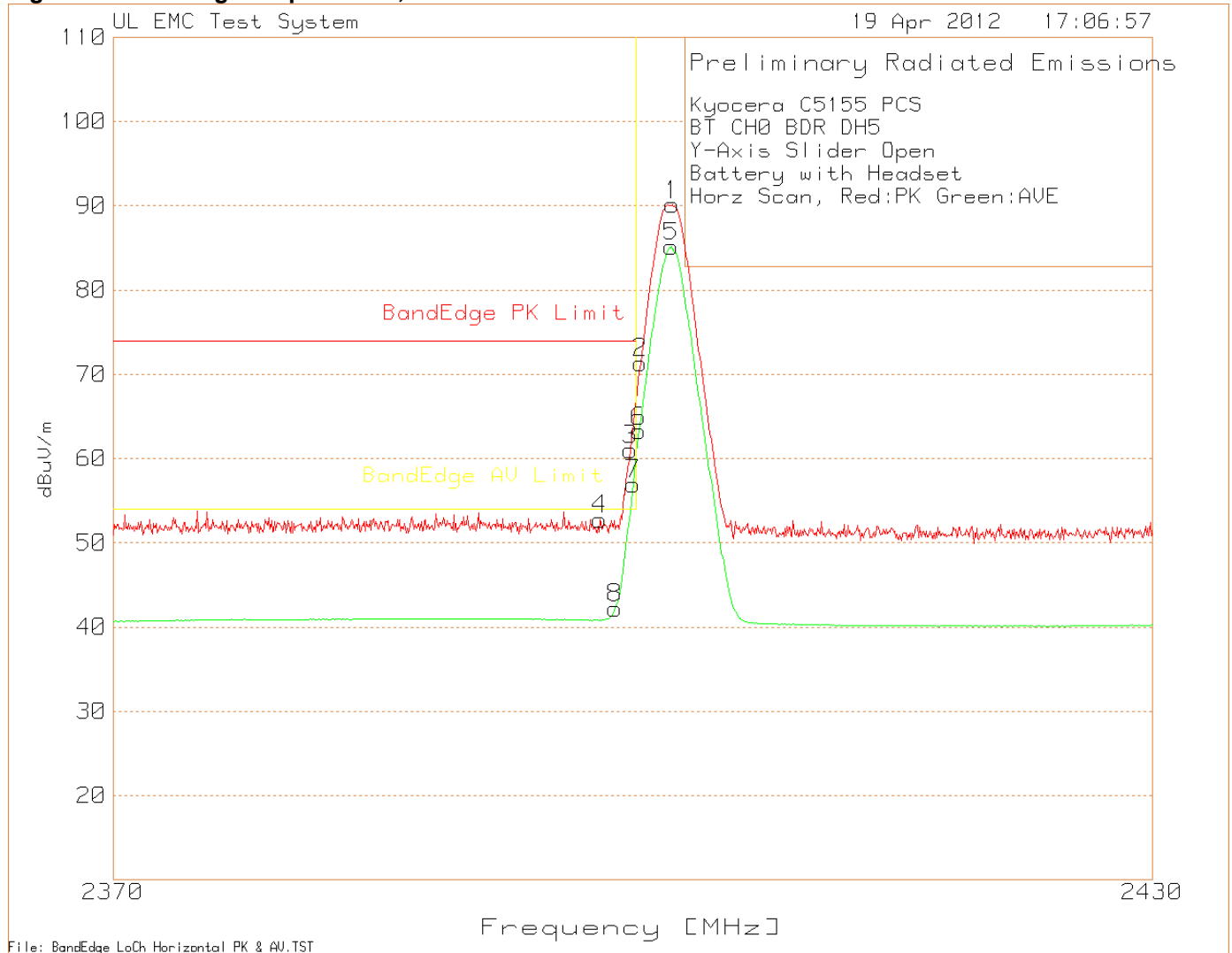


Table 14 Radiated Emissions Data Points Z-Axis

Kyocera C5155 PCS BT CH78 BDR DH5 Z-Axis Slider Open Battery with Headset RED: Horizontal GRN: Vertical									
Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain dB	Level dBuV/m	CFR 47 Part 15 Class B 3m	Margin	Height [cm]	Polarity
1963.928	19.12	PK	27.5	3.74	50.36	54	-3.64	100	Horz
2480.48	68.01	PK	22	3.77	93.78	-	-	99	Horz
6465.644	59.53	PK	29.1	-47.99	40.64	54	-13.36	150	Horz
9697.131	59.13	PK	36.4	-48.89	46.64	54	-7.36	150	Horz
14561.83	45.44	PK	39.8	-38.72	46.52	54	-7.48	99	Horz
23675.07	58.05	PK	40.3	-52.66	45.69	54	-8.31	99	Horz
2480.48	56.74	PK	22	3.77	82.51	-	-	150	Vert
PK - Peak detector									

4.2.8 Band-edge, BT, BDR, Low Channel

Figure 15 Band-edge Graph Y-Axis, Horizontal



File: BandEdge LoCh Horizontal PK & AV.TST

No Emissions were recorded in restricted band, see plot for data. Limit line stops at 2400MHz. Restricted Band ends 2390MHz

Figure 16 Band-edge Graph X-Axis, Vertical



No Emissions were recorded in restricted band, see plot for data. Limit line stops at 2400MHz. Restricted Band ends 2390MHz

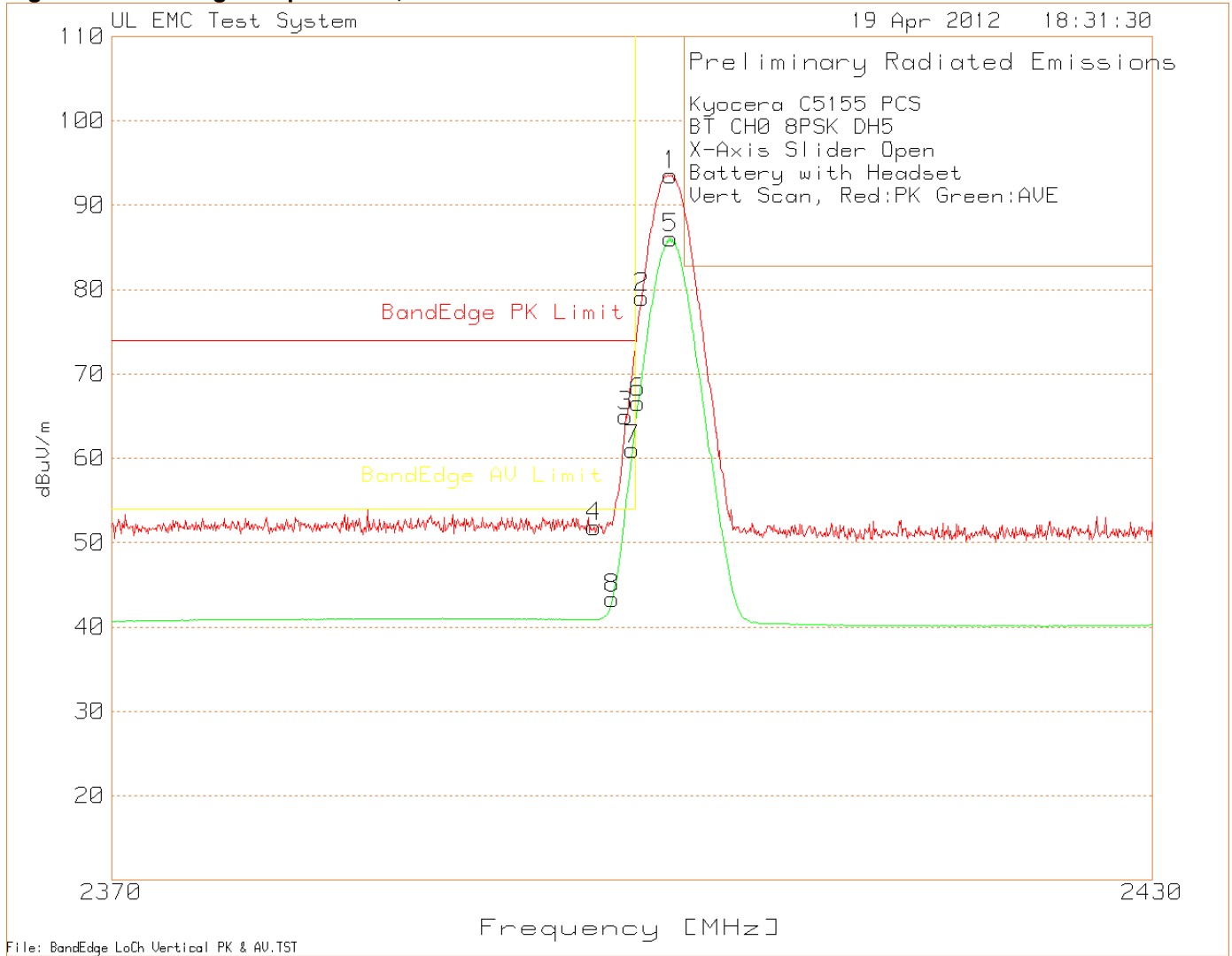
4.2.9 Band-edge, BT, 8PSK, Low Channel

Figure 17 Band-edge Graph Y-Axis, Horizontal



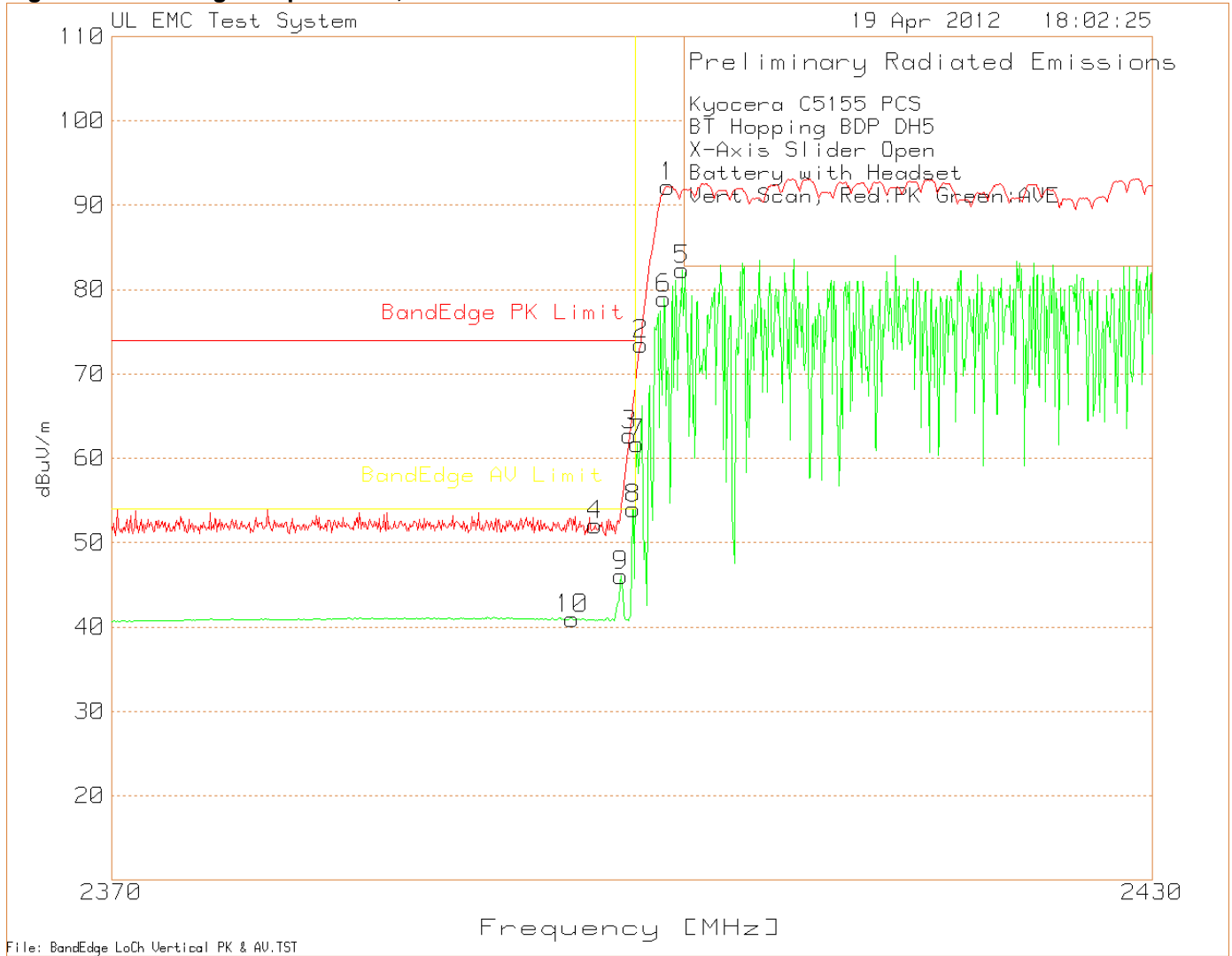
No Emissions were recorded in restricted band, see plot for data. Limit line stops at 2400MHz. Restricted Band ends 2390MHz

Figure 18 Band-edge Graph X-Axis, Vertical



No Emissions were recorded in restricted band, see plot for data. Limit line stops at 2400MHz. Restricted Band ends 2390MHz

Figure 20 Band-edge Graph X-Axis, Vertical



No Emissions were recorded in restricted band, see plot for data. Limit line stops at 2400MHz. Restricted Band ends 2390MHz

4.2.11 Band-edge, BT, BDR, High Channel

Figure 21 Band-edge Graph Z-Axis, Horizontal

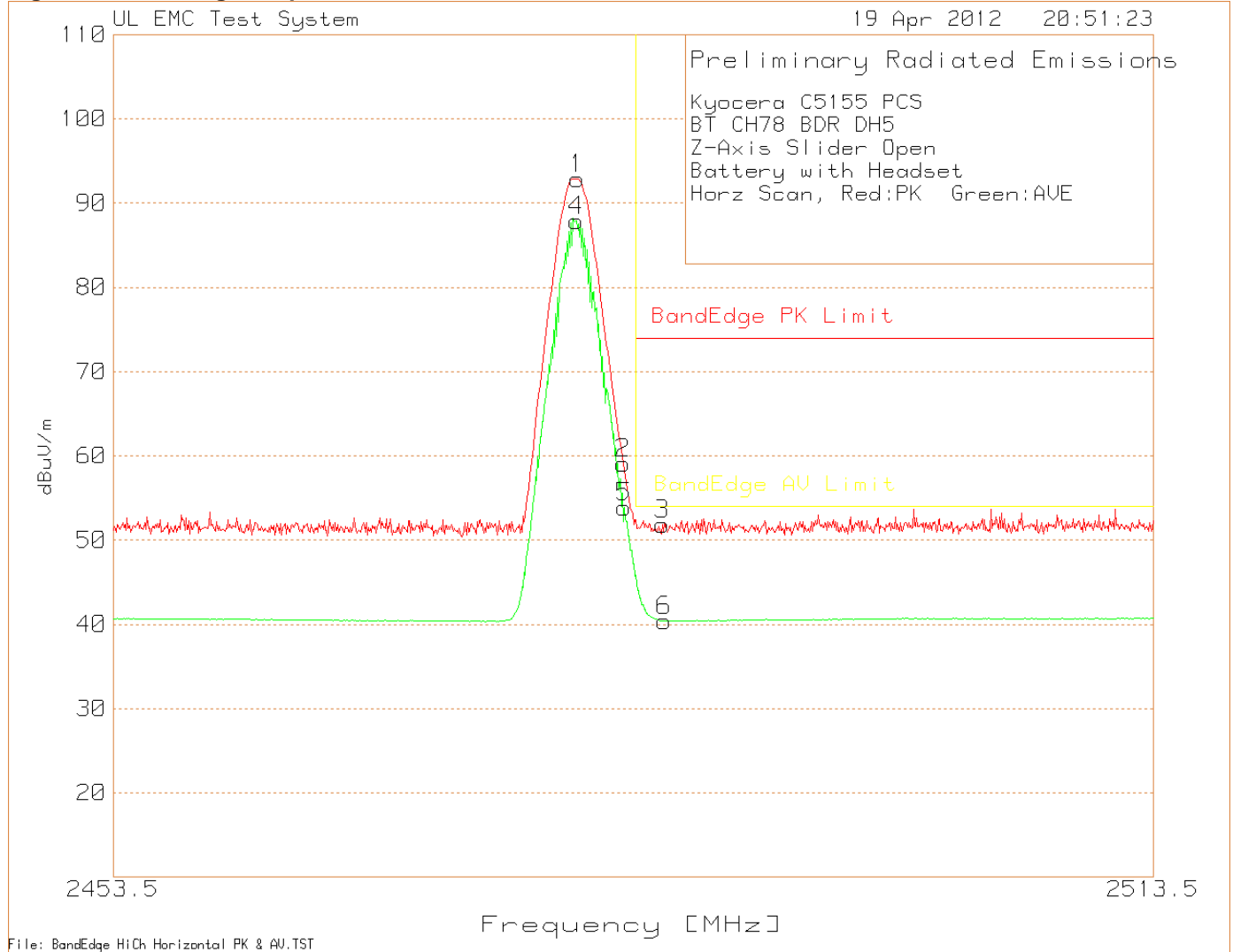


Table 15 Band-edge Data Z-Axis, Horizontal

Kyocera C5155 PCS
 BT CH78 BDR DH5
 Z-Axis Slider Open
 Battery with Headset
 Horz Scan, Red:PK Green:AVE

Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain Factor dB	dBuV/m	BandEdge Limit	Margin	Height [cm]	Polarity
2485.032	25.99	PK	22.1	3.77	51.86	74	-22.14	99	Horz
2485.152	14.57	AV	22.1	3.77	40.44	54	-13.56	99	Horz

PK - Peak detector
 Av - Average detector

Figure 22 Band-edge Graph X-Axis, Vertical

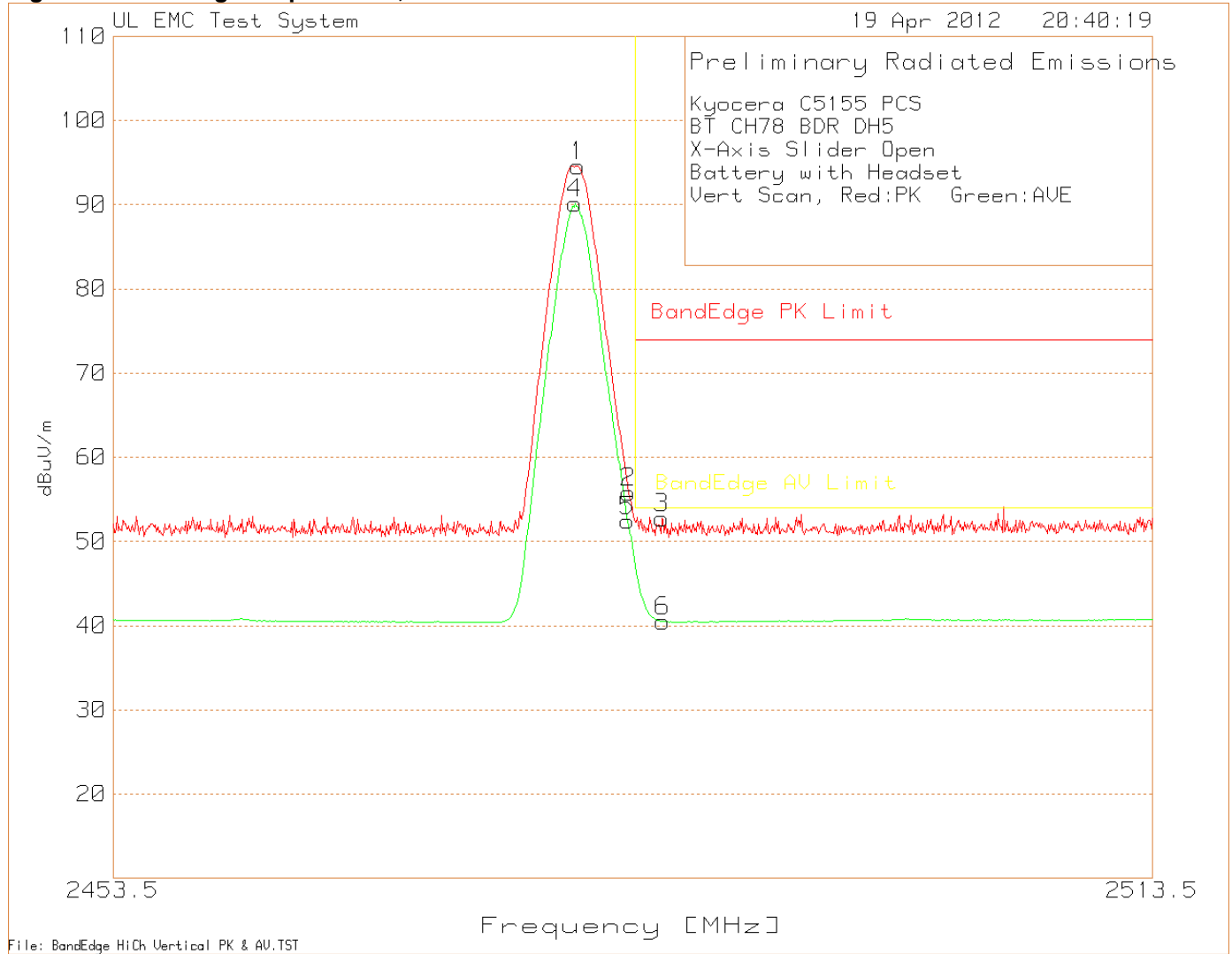


Table 16 Band-edge Data X-Axis, Vertical

Kyocera C5155 PCS
 BT CH78 BDR DH5
 X-Axis Slider Open
 Battery with Headset
 Vert Scan, Red:PK Green:AVE

Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain Factor dB	dBuV/m	BandEdge Limit	Margin	Height [cm]	Polarity
2485.032	26.89	PK	22.1	3.77	52.76	74	-21.24	101	Vert
2485.062	14.66	AV	22.1	3.77	40.53	54	-13.47	101	Vert

PK - Peak detector
 Av - Average detector

4.2.12 Band-edge, BT, 8PSK, High Channel

Figure 23 Band-edge Graph Z-Axis, Horizontal



File: BandEdge HiCh Horizontal PK & AV.TST

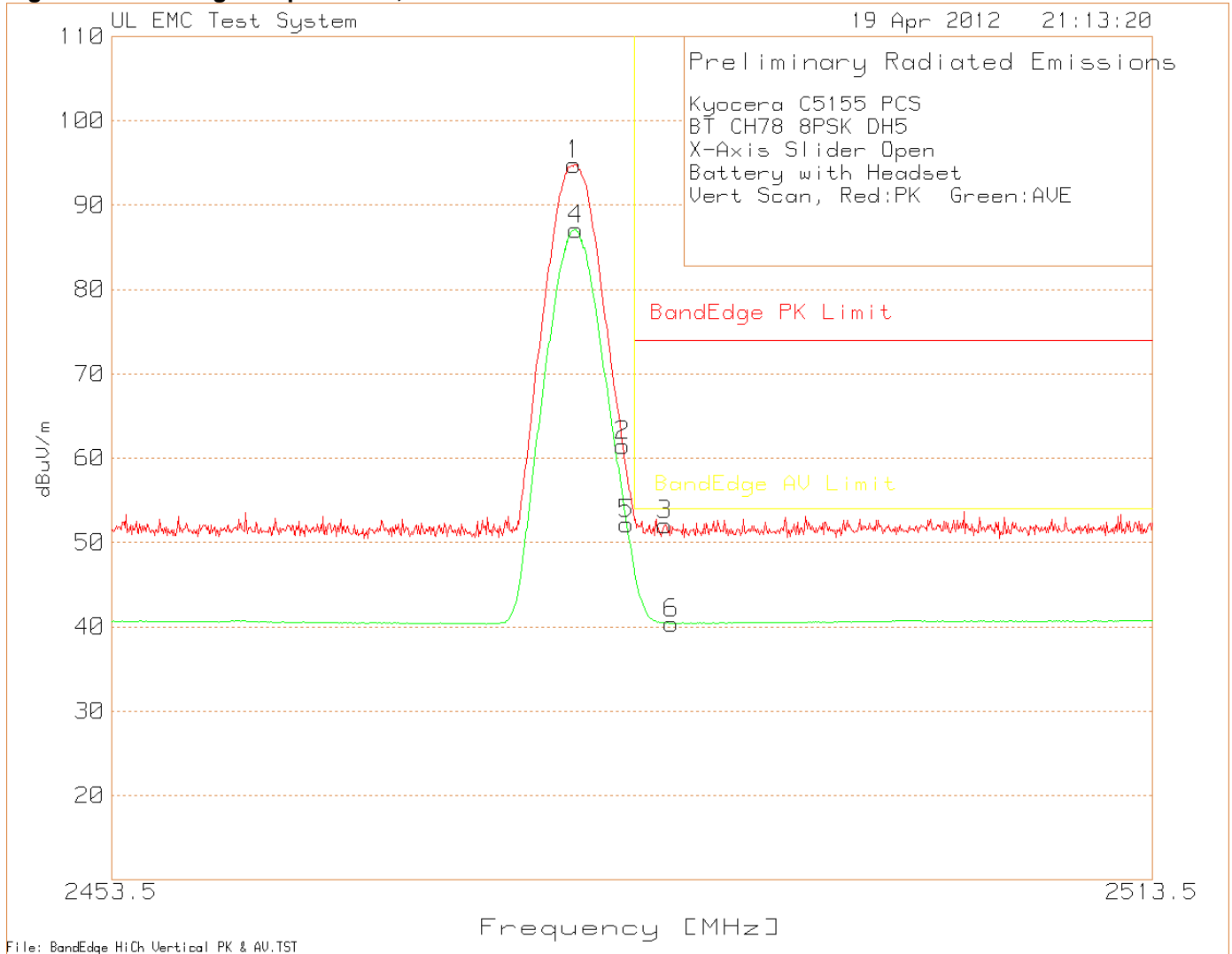
Table 17 Band-edge Data Z-Axis, Horizontal

Kyocera C5155 PCS
 BT CH78 8PSK DH5
 Z-Axis Slider Open
 Battery with Headset
 Horz Scan, Red:PK Green:AVE

Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain Factor dB	dBuV/m	BandEdge Limit	Margin	Height [cm]	Polarity
2484.491	26.61	PK	22.1	3.77	52.48	74	-21.52	150	Horz
2484.491	14.81	AV	22.1	3.77	40.68	54	-13.32	99	Horz

PK - Peak detector
 Av - Average detector

Figure 24 Band-edge Graph X-Axis, Vertical



File: BandEdge HiCh Vertical PK & AV.TST

Table 18 Band-edge Data X-Axis, Vertical

Kyocera C5155 PCS
 BT CH78 8PSK DH5
 X-Axis Slider Open
 Battery with Headset
 Vert Scan, Red:PK Green:AVE

Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain Factor dB	dBuV/m	BandEdge Limit	Margin	Height [cm]	Polarity
2485.212	26.22	PK	22.1	3.77	52.09	74	-21.91	100	Vert
2485.632	14.57	AV	22.1	3.77	40.44	54	-13.56	150	Vert

PK - Peak detector
 Av - Average detector

4.2.13 Band-edge, BT, BDR, Hopping Channel

Figure 25 Band-edge Graph Z-Axis, Horizontal



File: BandEdge HiCh Horizontal PK & AV.TST

Table 19 Band-edge Data Z-Axis, Horizontal

Kyocera C5155 PCS
 BT Hopping BDR DH5
 Z-Axis Slider Open
 Battery with Headset
 Horz Scan, Red:PK Green:AVE

Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain Factor dB	dBuV/m	BandEdge Limit	Margin	Height [cm]	Polarity
2488.335	25.79	PK	22.1	3.78	51.67	74	-22.33	150	Horz
2486.203	14.53	AV	22.1	3.77	40.4	54	-13.6	150	Horz

PK - Peak detector
 Av - Average detector

Figure 26 Band-edge Graph X-Axis, Vertical



Table 20 Band-edge Data X-Axis, Vertical

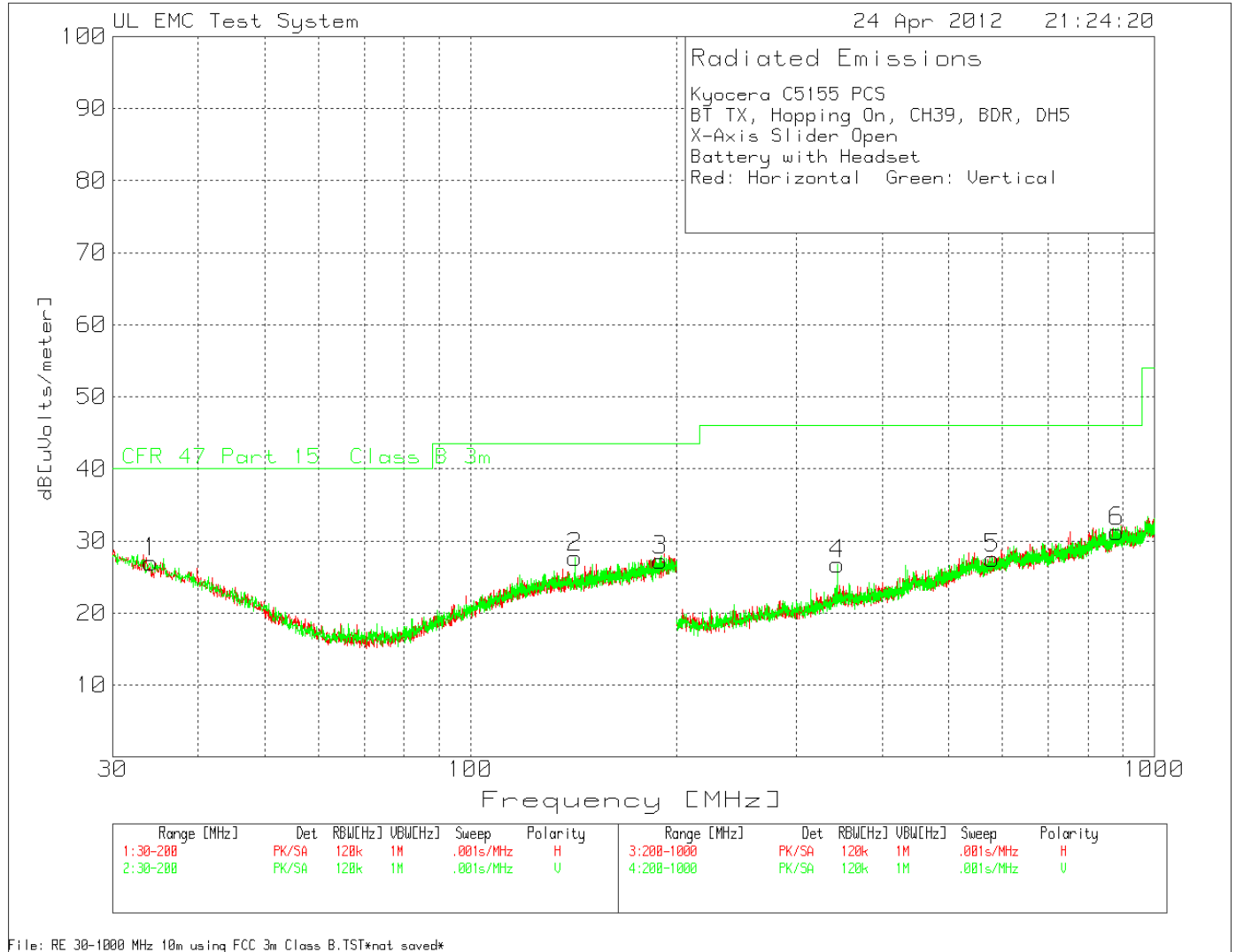
Kyocera C5155 PCS
 BT Hopping BDR DH5
 X-Axis Slider Open
 Battery with Headset
 Vert Scan, Red:PK Green:AVE

Test Frequency	Meter Reading	Detector	Antenna Factor dB	Path Loss/Gain Factor dB	dBuV/m	BandEdge Limit	Margin	Height [cm]	Polarity
2487.854	25.81	PK	22.1	3.77	51.68	74	-22.32	150	Vert
2485.152	14.64	AV	22.1	3.77	40.51	54	-13.49	102	Vert

PK - Peak detector
 Av - Average detector

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

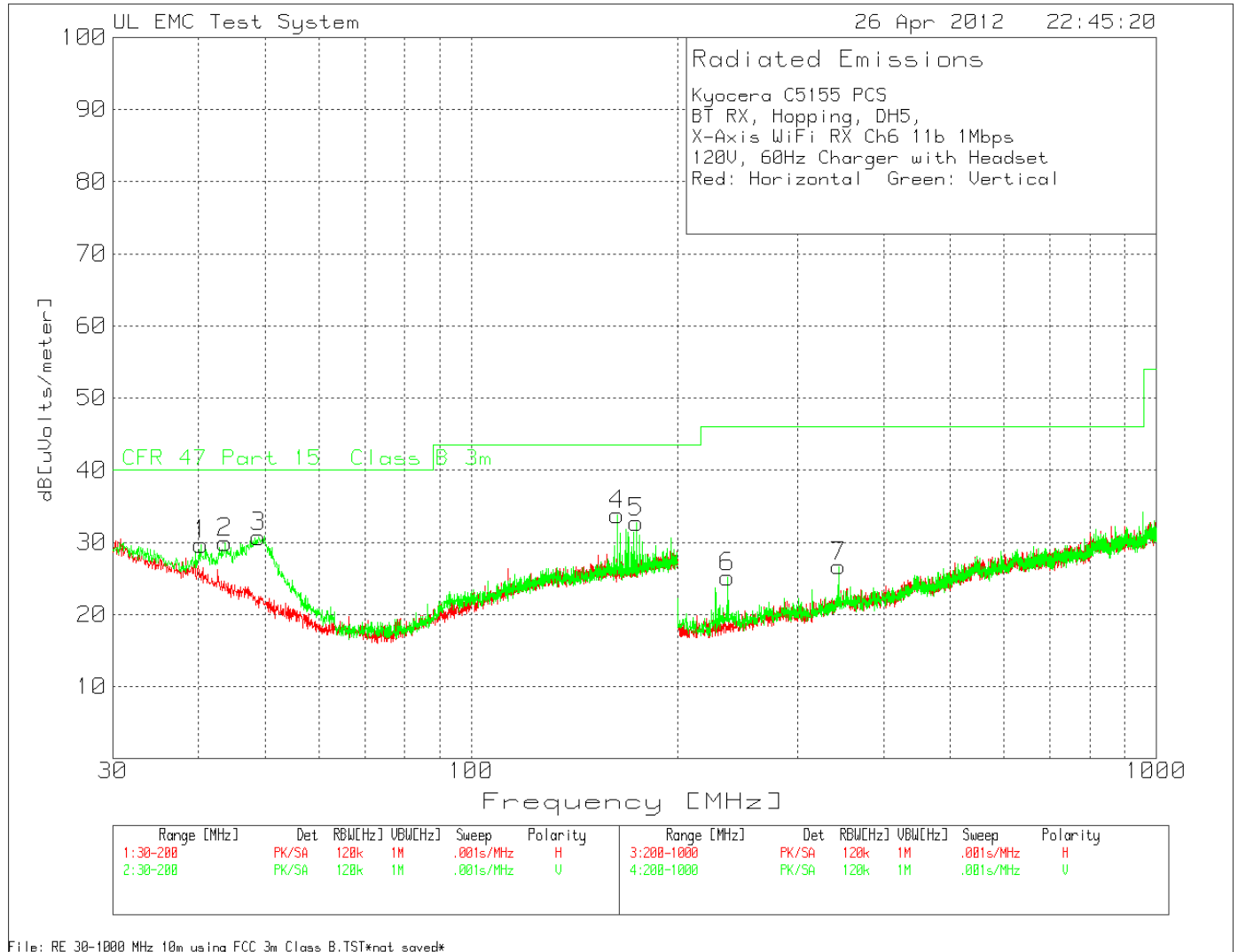
Figure 27 Radiated Emissions Graph



No Emissions found within 6dB to the limit

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

Figure 28 Radiated Emissions Graph

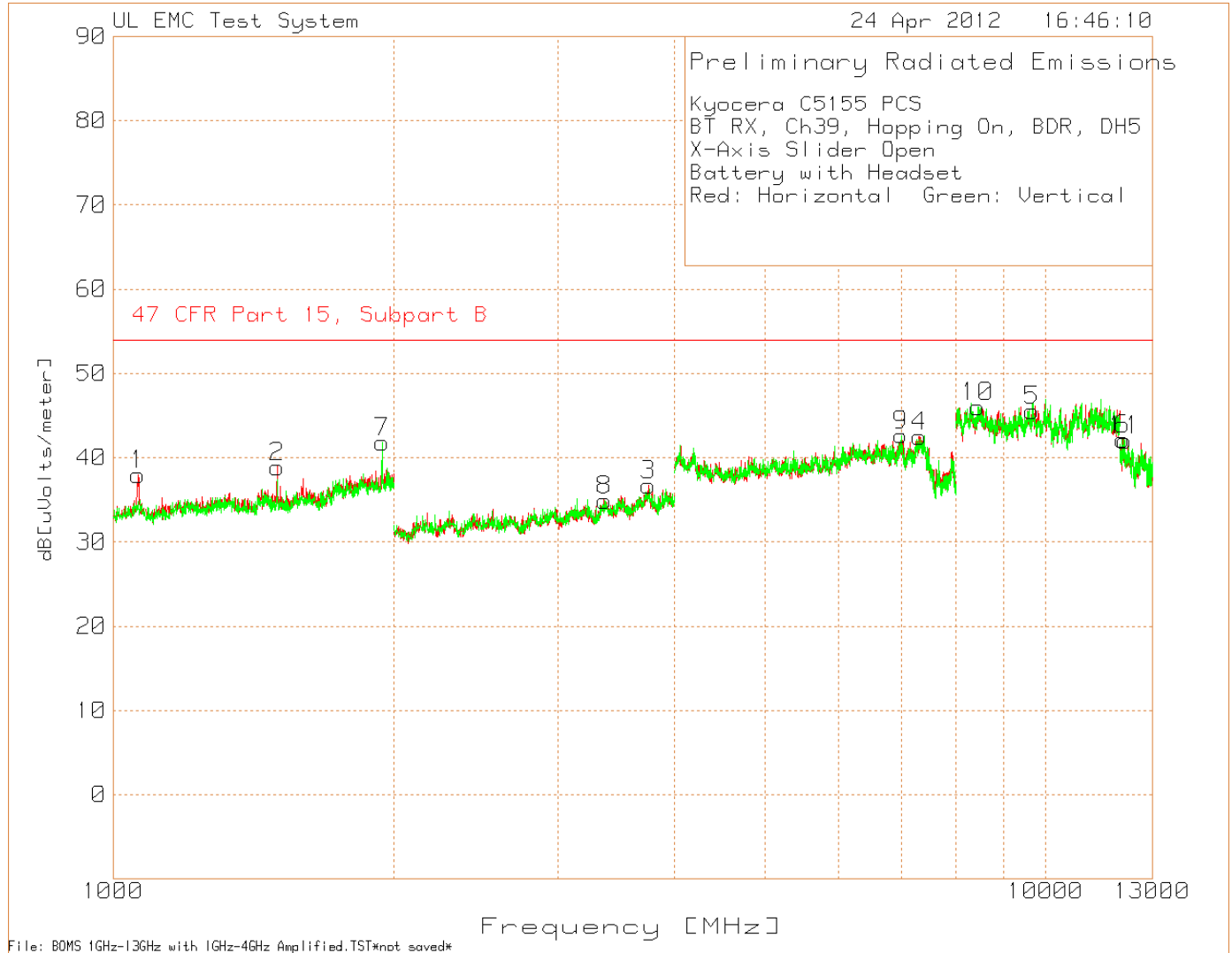


File: RE 30-1000 MHz 10m using FCC 3m Class B.TST*not saved*

No Emissions found within 6dB to the limit

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

Figure 29 Radiated Emissions Graph



No Emissions detected above noise floor

FCC ID: V65C5155A1
Model Number: C5155
Client Name: Kyocera Communications

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5 IMMUNITY TEST RESULTS

Immunity tests are not required per the standard

Appendix A

Accreditations and Authorizations



NVLAP Lab code: 100414-0

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



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



Industry Canada Industrie Canada

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



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



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



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

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

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

