



FCC CFR47 PART 15 SUBPART B & C

CERTIFICATION TEST REPORT

FOR

Tri Band CDMA Mobile Phone with WiFi/Bluetooth

MODEL NUMBER: C5215

FCC ID: V65C5215

REPORT NUMBER: 13U14946-3

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Prepared for
KYOCERA COMMUNICATIONS, INC
9520 TOWNE CENTER DRIVE
SAN DIEGO, CA 92121, USA

Prepared by
UL LLC
1285 WALT WHITMAN RD.
MELVILLE, NY 11747, U.S.A.
TEL: (631) 271-6200
FAX: (877) 854-3577



NVLAP LAB CODE 100255-0

Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
--	2013-04-15	Initial Issue	Joseph Danisi
1	2013-04-22	Remove Industry Canada Rules	Joseph Danisi

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: KYOCERA COMMUNICATONS, INC
8611 BALBOA AVENUE
SAN DIEGO, CA 92123, U.S.A

EUT DESCRIPTION: Tri Band CDMA Mobile Phone with WiFi/Bluetooth

MODEL: C5215

DATE TESTED: 2013-03-29 to 2013-04-04

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards, using test results reported in the test report documents referenced below and/or documentation furnished by the applicant. All indications of Pass/Fail in this report are opinions expressed by UL LLC based on interpretations of these calculations. The results show that the equipment is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation, as described by the referenced documents. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. 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.

Approved & Released For UL By:

Tested By:



Name: Bob DeLisi
Title: WiSE Principal Engineer
UL LLC

Name: Joseph Danisi
Title: WiSE Project Lead
UL LLC

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4, FCC CFR 47 Part 2, FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 1285 Walt Whitman Rd. Melville, NY 11747, USA.

UL Melville is accredited by NVLAP, Laboratory Code 100255-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/1002550.htm>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	± 3.3 dB
Radiated Disturbance, 30 to 1000 MHz	± 4.00 dB
Radiated Emissions, 1-6GHz	±5.44, k=2

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Bluetooth featured Tri Band CDMA Mobile Phone with WiFi/Bluetooth phone that is manufactured by Kyocera.

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a dipole (internal) antenna, with a maximum gain of -1.0 dBi.

5.3. SOFTWARE AND FIRMWARE

The test utility software used during testing was FCC Test Application version 0.110CR

5.4. WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined as the channel with the highest output power. Therefore Radiated and Conducted emissions were performed with EUT set to transmit at the channel determined as worst case.

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z, it was determined that X orientation was worst-case; therefore, all final Radiated testing was performed with the EUT in X orientation.

5.1. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC Adaptor	Kyocera	SCP-31ADT	N/A	N/A
Headset	N/A	N/A	N/A	N/A

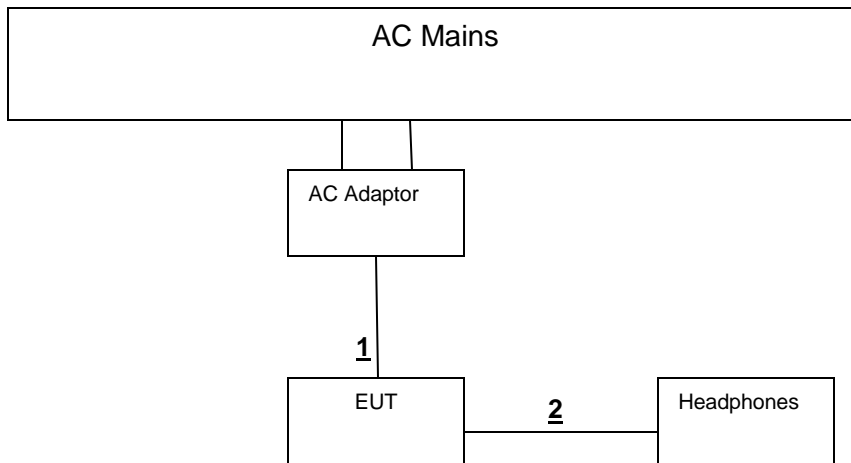
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	Mic	1	Earphone	Unsheilded	1.5m	N/A

TEST SETUP

The EUT is set up to transmit continuously

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Radiated Emissions					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
30-1000MHz					
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081	2013-01-29	2014-01-31
Log-P Antenna	Schaffner	UPA6109	44068	2013-04-03	2014-04-03
Bicon Antenna	Schaffner	VBA6106A	54	2013-04-03	2014-04-03
Bias Tee	Miteq	AM-1523-7687	44392	N/A	N/A
Bias Tee	Miteq	AM-1523-7687	44393	N/A	N/A
Preamp	Miteq	AM-3A-000110-7687	44391	N/A	N/A
Preamp	Miteq	AM-3A-000110-7687	44394	N/A	N/A
Switch Driver	HP	11713A	ME7A-627	N/A	N/A
System Controller	Sunol Sciences	SC99V	44396	N/A	N/A
Camera Controller	Panasonic	WV-CU254	44395	N/A	N/A
RF Switch Box	UL	1	44398	N/A	N/A
Measurement Software	UL	Version 9.5	44740	N/A	N/A
Multimeter	Fluke	83III	ME5B-305	N/A	N/A
Above 1GHz (Band Optimized System)					
EMI Receiver	Rohde & Schwarz	ESIB40	34968		
Horn Antenna (1-2 GHz)	ETS	3161-01 (26°)**	51442	2008-03-28	See * below
Horn Antenna (2-4 GHz)	ETS	3161-02 (22°)**	48107	2007-09-27	See * below
Horn Antenna (4-8 GHz)	ETS	3161-03 (22°)**	48106	2007-09-27	See * below
Horn Antenna (8-12 GHz)	ETS	3160-07 (26°)**	8933	2008-11-24	See * below
Horn Antenna (12-18 GHz)	ETS	3160-08 (26°)**	8932	2007-09-27	See * below
Horn Antenna (18-26.5 GHz)	ETS	3160-09 (27°)**	8947	2007-09-26	See * below
Horn Antenna (26.5-40 GHz)	ETS	3160-10 (27°)**	73004	2007-09-26	See * below
Signal Path Controller	HP	11713A	50250	N/A	N/A
Gain Controller	HP	11713A	50251	N/A	N/A
RF Switch / Preamp Fixture	UL	BOMS1	50249	N/A	N/A
System Controller	UL	BOMS2	50252	N/A	N/A
Measurement Software	UL	Version 9.5	44740	N/A	N/A
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43734	2012-03-13	2014-03-13
Multimeter	Fluke	83V	43443	2013-01-28	2014-01-31

Radiated Emissions					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
<p>* - Note: As allowed by the calibration standard ANSI C63.4 Section 4.4.2, standard gain horns need only a one-time calibration. Only if physical damage occurs will the horn antenna require re-calibration. Gain standard horn antennas (sometimes called standard gain horn antennas) need not be calibrated beyond that which is provided by the manufacturer unless they are damaged or deterioration is suspected, or they are used at a distance closer than $2D^2/\lambda$. Gain standard horn antennas have gains that are fixed by their dimensions and dimensional tolerances. ** - Number in parentheses denotes antenna beam width.</p>					

Conducted Emissions					
Description	Manufacturer	Model	Identifier	Cal Date	Cal Due Date
Conducted Emissions – GP 1					
EMI Receiver	Rohde & Schwarz	ESCI 7	75141	2013-01-30	2014-01-31
LISN	Solar	9252-50-R-24-BNC	ME5A-636	2013-02-01	2014-02-28
Switch Driver	HP	11713A	44397	N/A	N/A
RF Switch Box	UL	4	44404	N/A	N/A
Measurement Software	UL	Version 9.5	44736	N/A	N/A
Temp/Humidity/Pressure Meter	Cole Parmer	99760-00	43734	2012-03-13	2014-03-13
Multimeter	Fluke	83V	43443	2013-01-28	2014-01-31

7. RADIATED TEST RESULTS

7.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10KHz for average measurements worst case.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
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For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

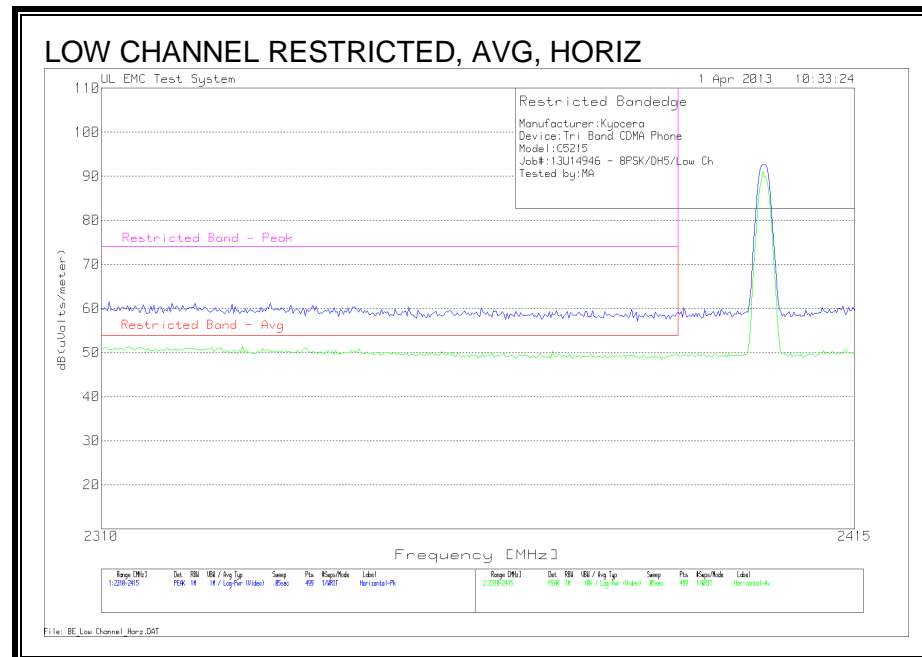
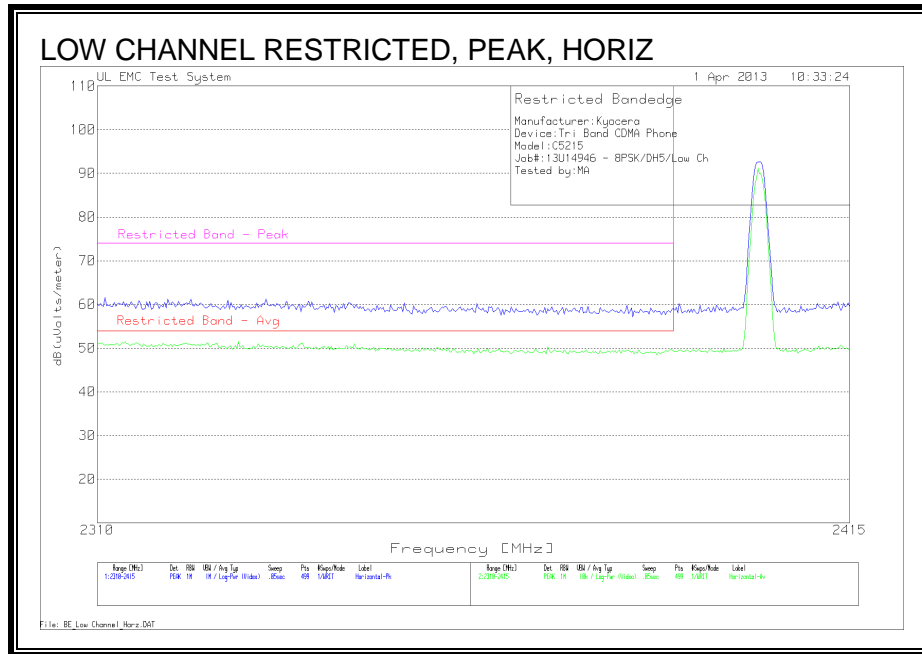
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The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

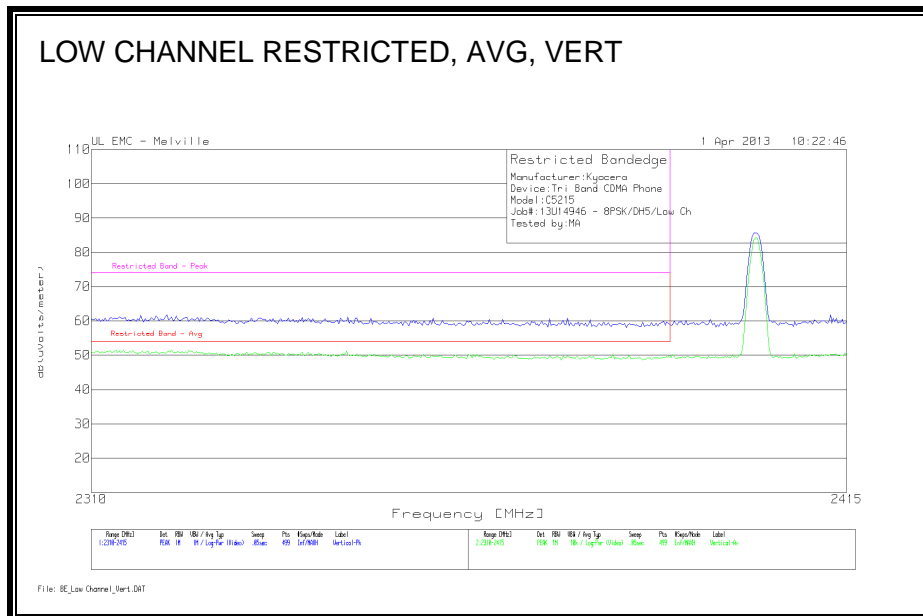
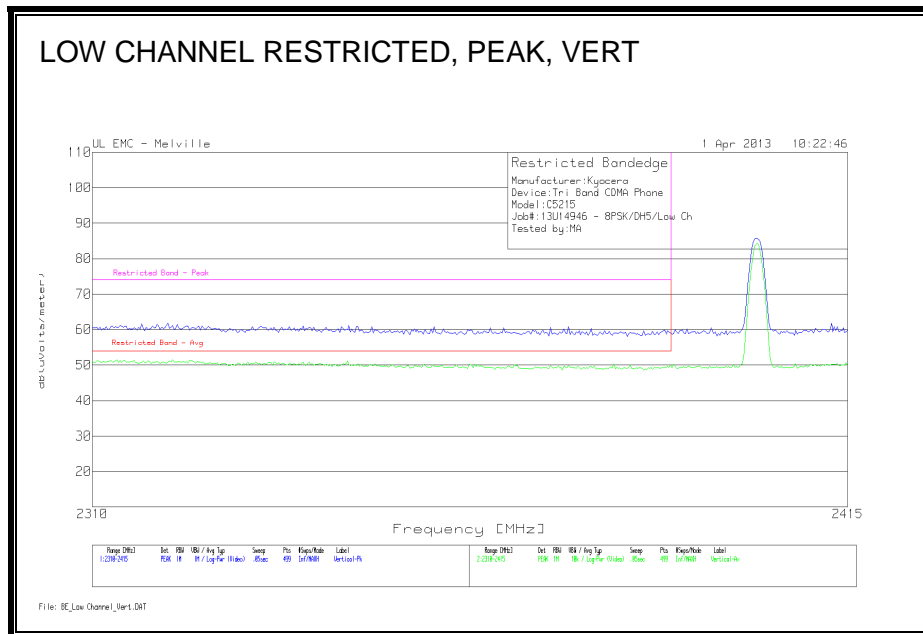
8.1. TRANSMITTER ABOVE 1 GHz

8.1.1. ENHANCED DATA RATE 8PSK MODULATION

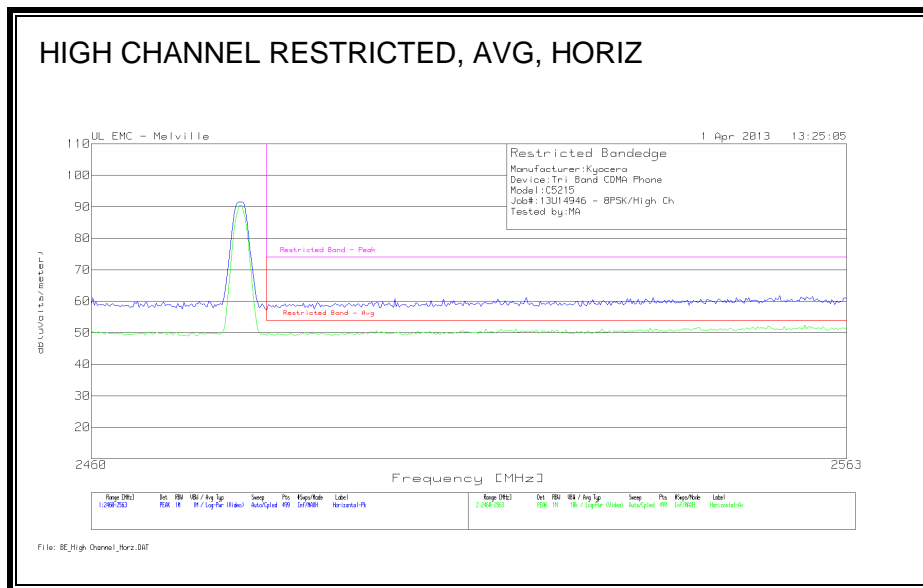
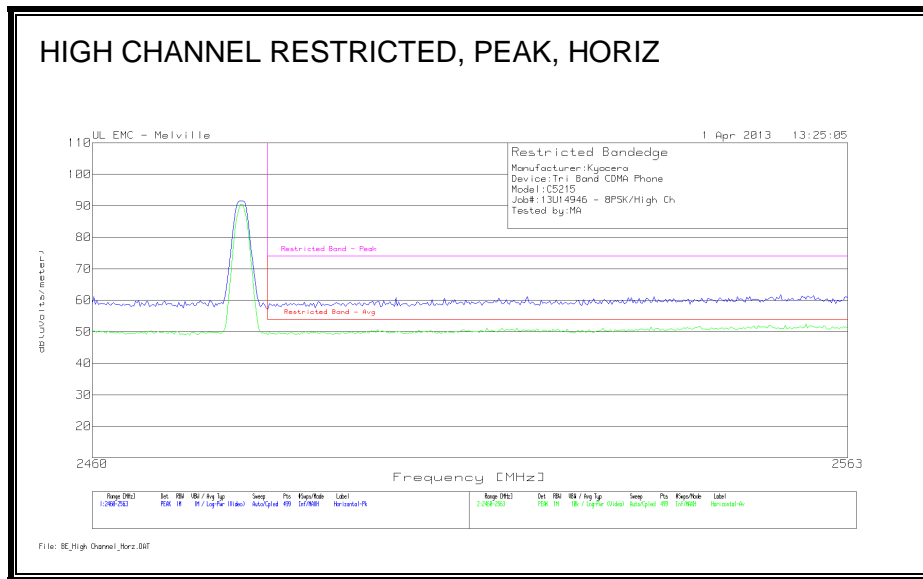
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



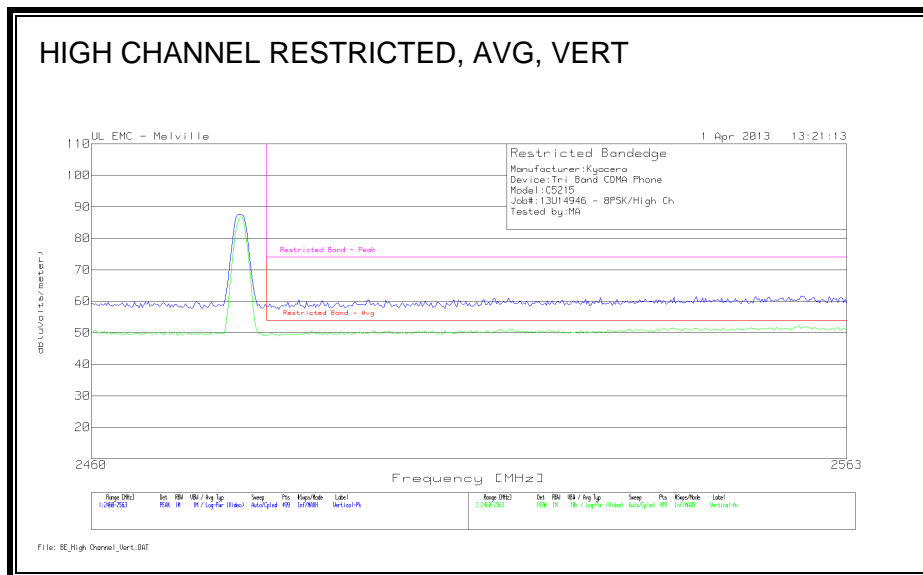
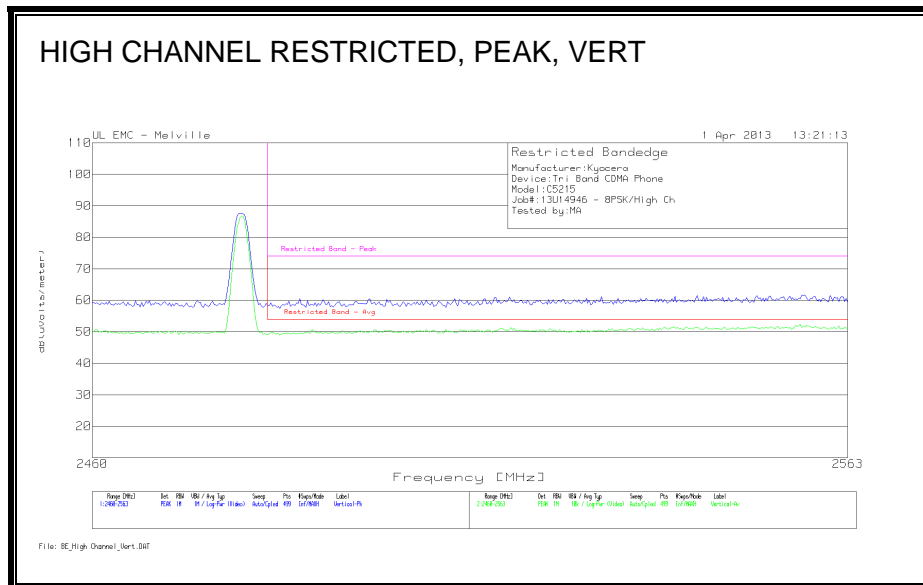
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



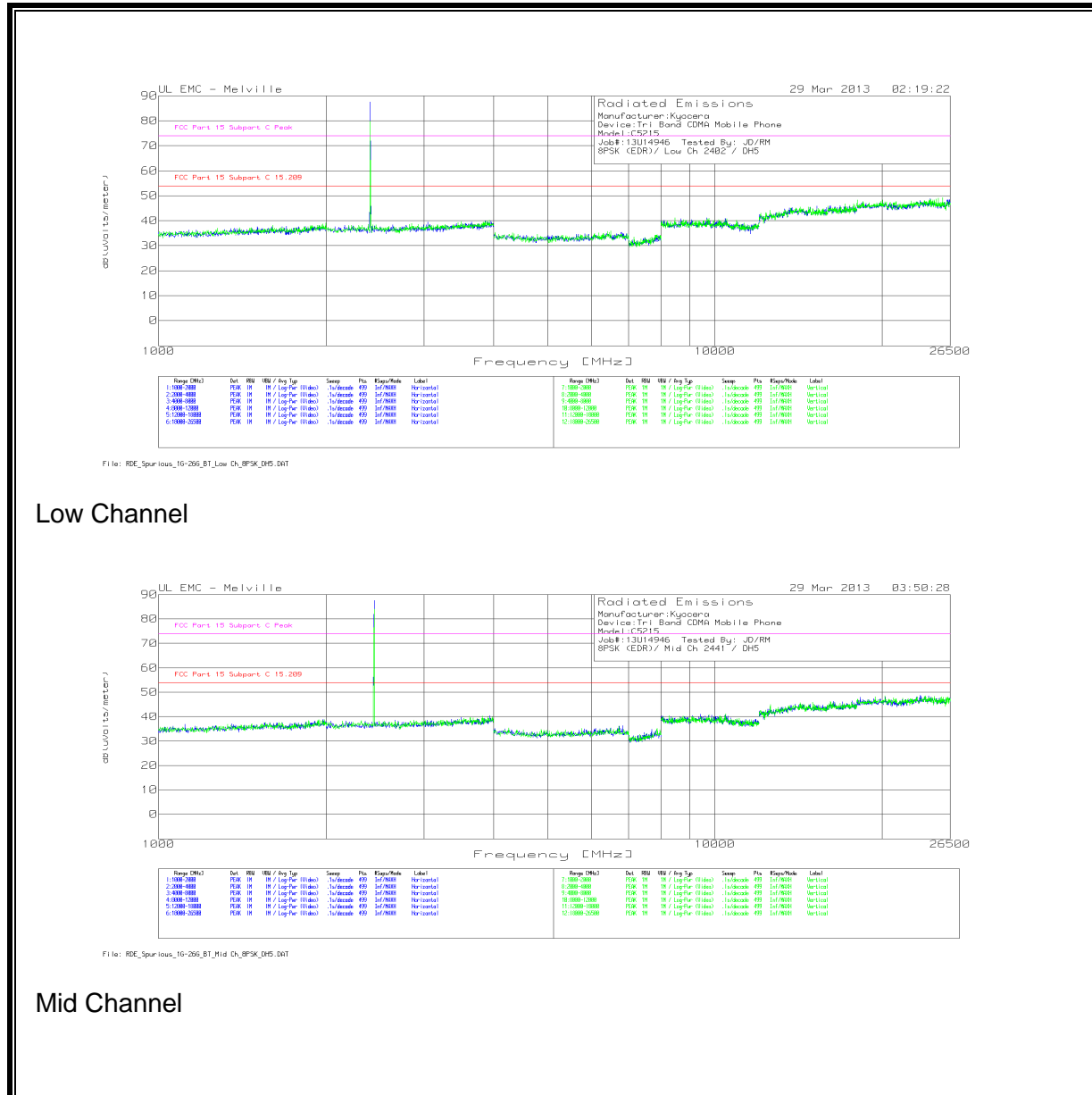
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



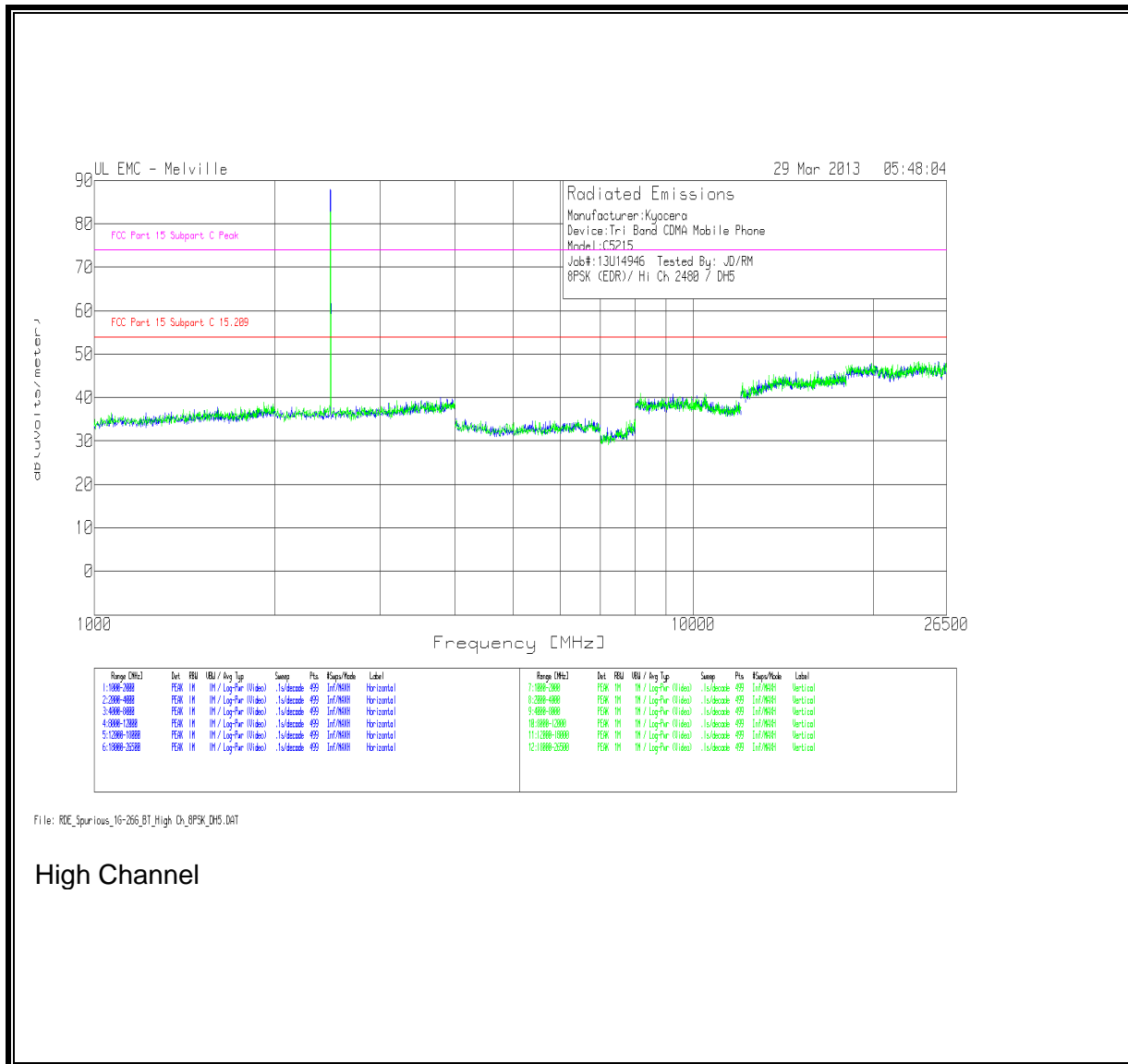
RESTRICTED BANDEGE (HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS



HARMONICS AND SPURIOUS EMISSIONS CONT.



DATA LOW CHANNEL

Manufacturer: Kyocera

Device: Tri Band CDMA Mobile Phone

Model: C5215

Job#:13U14946 Tested By: JD/RM

8PSK (EDR)/ Low Ch. 2402 / DH5

Horizontal 4000 - 8000MHz

Test Frequency	Meter Reading	Detector	AF-48106(dBm)	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15	Margin (dB)	FCC Part 15	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
						Subpart C 15.209		Subpart C Peak				
4804	63.19	PK	27.1	-53.31	36.98	54	-17.02	74	-37.02	270	136	Horz
4804	50.32	LnAv	27.1	-53.31	24.11	54	-29.89	74	-49.89	270	136	Horz
4804	63.06	PK	27.1	-53.31	36.85	54	-17.15	74	-37.15	318	210	Vert
4804	50.35	LnAv	27.1	-53.31	24.14	54	-29.86	74	-49.86	318	210	Vert

Horizontal 12000 - 18000MHz

Test Frequency	Meter Reading	Detector	AF-8932(dBm)	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15	Margin (dB)	FCC Part 15	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
						Subpart C 15.209		Subpart C Peak				
12010	58.42	PK	37.2	-49.26	46.36	54	-7.64	74	-27.64	290	326	Horz
12010	44.94	LnAv	37.2	-49.26	32.88	54	-21.12	74	-41.12	290	326	Horz
12010	58.28	PK	37.2	-49.26	46.22	54	-7.78	74	-27.78	199	243	Vert
12010	44.95	LnAv	37.2	-49.26	32.89	54	-21.11	74	-41.11	199	243	Vert

PK - Peak detector

QP - Quasi-Peak detector

LnAv - Linear Average detector

DATA MID. CHANNEL

Manufacturer: Kyocera

Device: Tri Band CDMA Mobile Phone

Model:C5215

Job#:13U14946 Tested By: JD/RM

8PSK (EDR)/ Mid Ch 2441 / DH5

Horizontal 4000 - 8000MHz

Test Frequency	Meter Reading	Detector	AF-48106 (dBm)	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15		FCC Part 15		Azimuth [Degs]	Height [cm]	Polarity
						Subpart C 15.209	Margin (dB)	Subpart C Peak	Margin (dB)			
4882	63	PK	27.2	-53.28	36.92	54	-17.08	74	-37.08	246	321	Horz
4882	50.23	LnAv	27.2	-53.28	24.15	54	-29.85	74	-49.85	246	321	Horz
4882	62.16	PK	27.2	-53.28	36.08	54	-17.92	74	-37.92	346	347	Vert
4882	50.02	LnAv	27.2	-53.28	23.94	54	-30.06	74	-50.06	346	347	Vert
7323	59.04	PK	28	-52.37	34.67	54	-19.33	74	-39.33	178	115	Horz
7323	46.76	LnAv	28	-52.37	22.39	54	-31.61	74	-51.61	178	115	Horz
7323	60.22	PK	28	-52.37	35.85	54	-18.15	74	-38.15	210	212	Vert
7323	47.31	LnAv	28	-52.37	22.94	54	-31.06	74	-51.06	210	212	Vert

PK - Peak detector

QP - Quasi-Peak detector

LnAv - Linear Average detector

LgAv - Log Average detector

Manufacturer: Kyocera

Device: Tri Band CDMA Mobile Phone

Model:C5215

Job#:13U14946 Tested By: JD/RM

8PSK (EDR)/ Mid Ch 2441 / DH5

Horizontal 2000 - 4000MHz

Horizontal 12000 - 18000MHz

Test Frequency	Meter Reading	Detector	AF-8932 (dBm)	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15		FCC Part 15		Azimuth [Degs]	Height [cm]	Polarity
						Subpart C 15.209	Margin (dB)	Subpart C Peak	Margin (dB)			
12205	57.49	PK	37.2	-48.52	46.17	54	-7.83	74	-27.83	58	307	Horz
12205	44.77	LnAv	37.2	-48.52	33.45	54	-20.55	74	-40.55	58	307	Horz
12205	58	PK	37.2	-48.52	46.68	54	-7.32	74	-27.32	101	168	Vert
12205	44.83	LnAv	37.2	-48.52	33.51	54	-20.49	74	-40.49	101	168	Vert

PK - Peak detector

QP - Quasi-Peak detector

LnAv - Linear Average detector

LgAv - Log Average detector

DATA HIGH CHANNEL

Manufacturer: Kyocera

Device: Tri Band CDMA Mobile Phone

Model:C5215

Job#:13U14946 Tested By: JD/RM

8PSK (EDR)/ Hi Ch 2480 / DH5

Horizontal 2000 - 4000MHz

Test Frequency	Meter Reading	Detector	AF-48106	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin (dB)	FCC Part 15 Subpart C Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
4960	63.82	PK	27.3	-53.13	37.99	54	-16.01	74	-36.01	267	236	Horz
4960	51.32	LnAv	27.3	-53.13	25.49	54	-28.51	74	-48.51	267	236	Horz
4960	63.34	PK	27.3	-53.13	37.51	54	-16.49	74	-36.49	154	247	Vert
4960	50.38	LnAv	27.3	-53.13	24.55	54	-29.45	74	-49.45	154	247	Vert

PK - Peak detector

QP - Quasi-Peak detector

LnAv - Linear Average detector

LgAv - Log Average detector

Manufacturer: Kyocera

Device: Tri Band CDMA Mobile Phone

Model:C5215

Job#:13U14946 Tested By: JD/RM

8PSK (EDR)/ Hi Ch 2480 / DH5

Horizontal 4000 - 8000MHz

Test Frequency	Meter Reading	Detector	AF-48106	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15	Margin (dB)	FCC Part 15	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
						Subpart C 15.209		Subpart C Peak				
7440	61.27	PK	28.1	-52.13	37.24	54	-16.76	74	-36.76	138	278	Horz
7440	48.68	LnAv	28.1	-52.13	24.65	54	-29.35	74	-49.35	138	278	Horz
7440	62.8	PK	28.1	-52.13	38.77	54	-15.23	74	-35.23	201	144	Vert
7440	50.12	LnAv	28.1	-52.13	26.09	54	-27.91	74	-47.91	201	144	Vert

Horizontal 12000 - 18000MHz

Test Frequency	Meter Reading	Detector	AF-8932 (dBm)	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15	Margin (dB)	FCC Part 15	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
						Subpart C 15.209		Subpart C Peak				
12400	57.55	PK	37.2	-48.94	45.81	54	-8.19	74	-28.19	265	114	Horz
12400	45.08	LnAv	37.2	-48.94	33.34	54	-20.66	74	-40.66	265	114	Horz
12400	57.84	PK	37.2	-48.94	46.1	54	-7.9	74	-27.9	277	277	Vert
12400	45.02	LnAv	37.2	-48.94	33.28	54	-20.72	74	-40.72	277	277	Vert

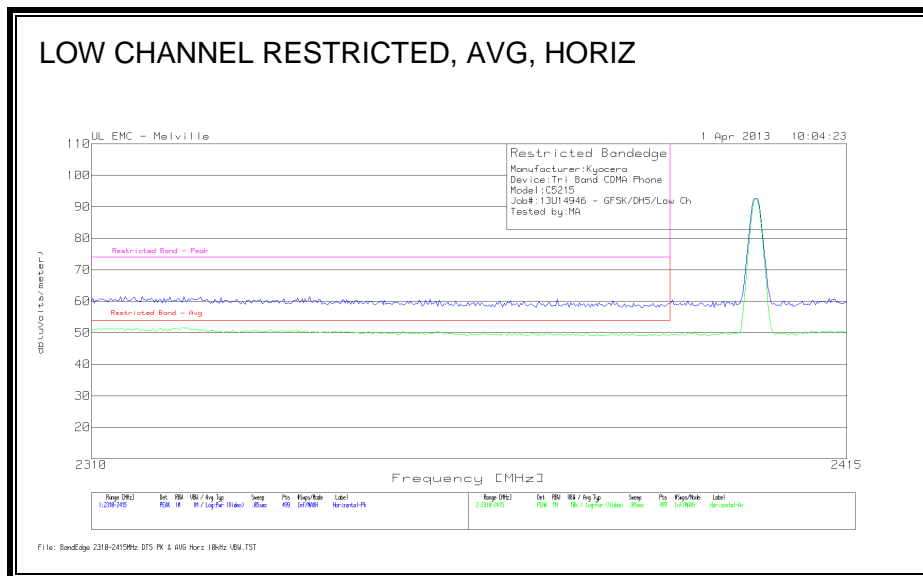
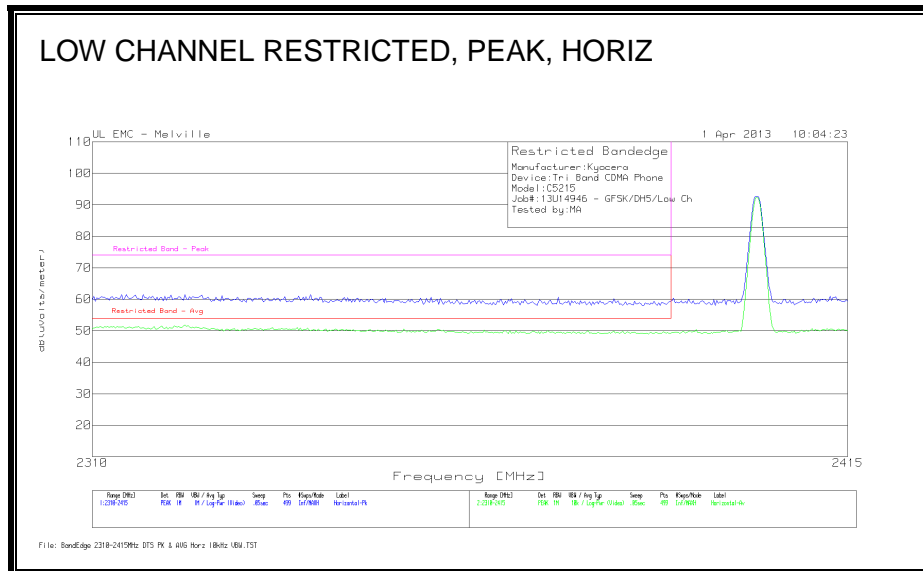
PK - Peak detector

QP - Quasi-Peak detector

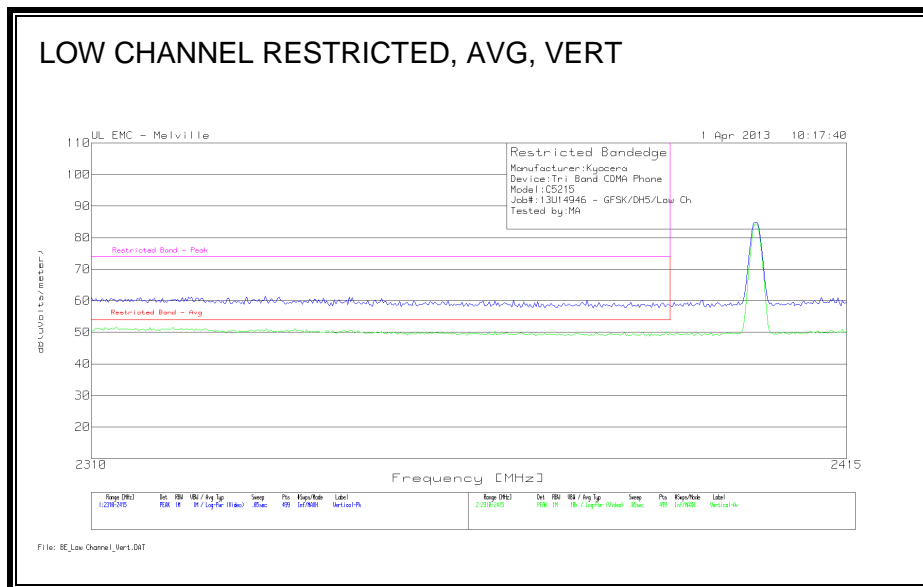
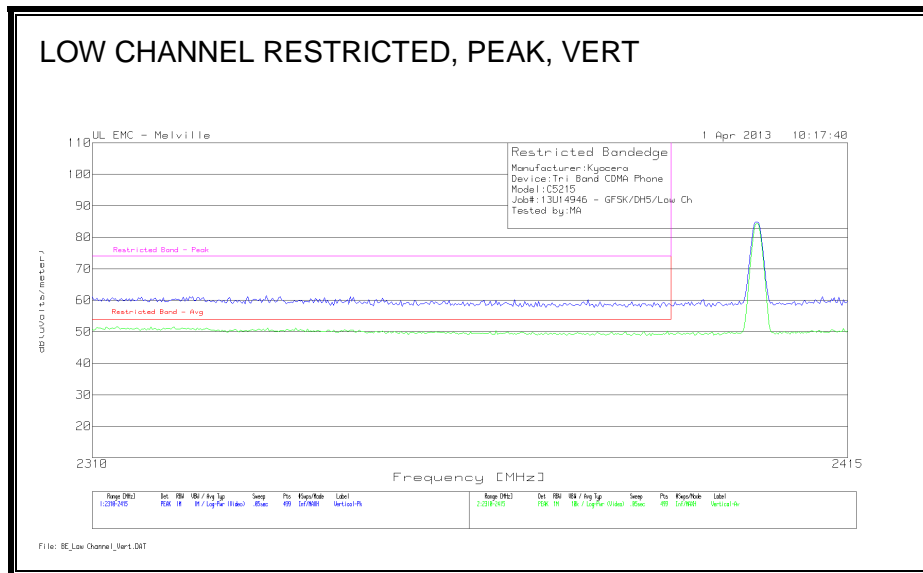
LnAv - Linear Average detector

8.2 BASIC DATA RATE GFSK MODULATION

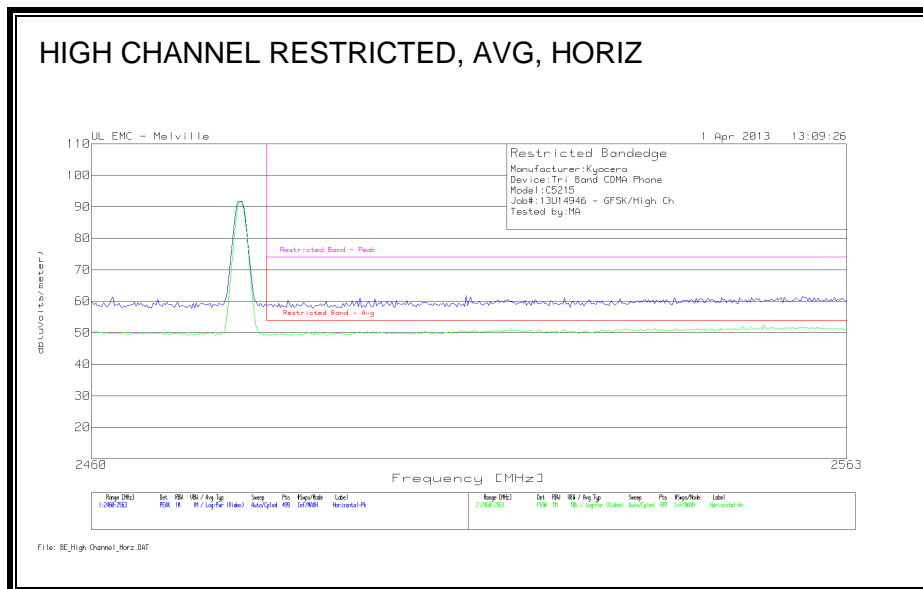
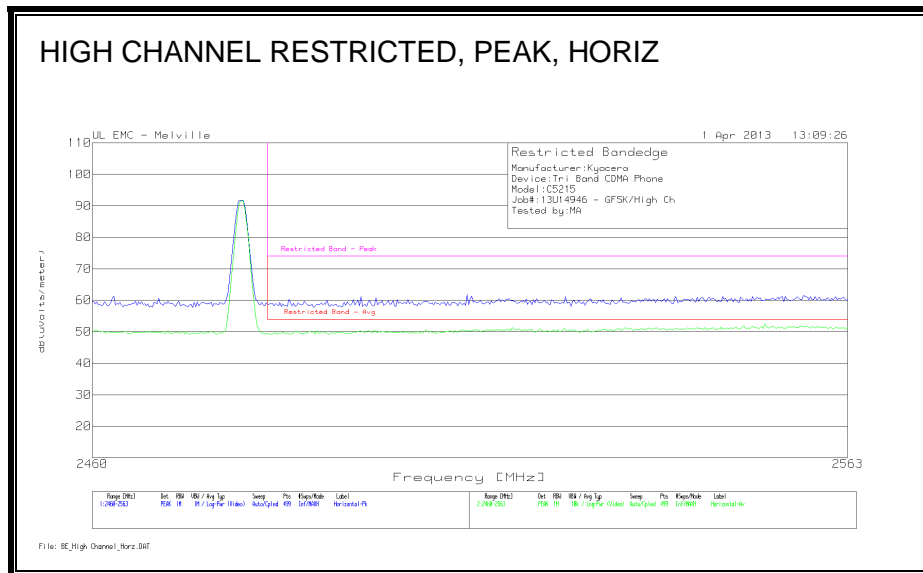
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



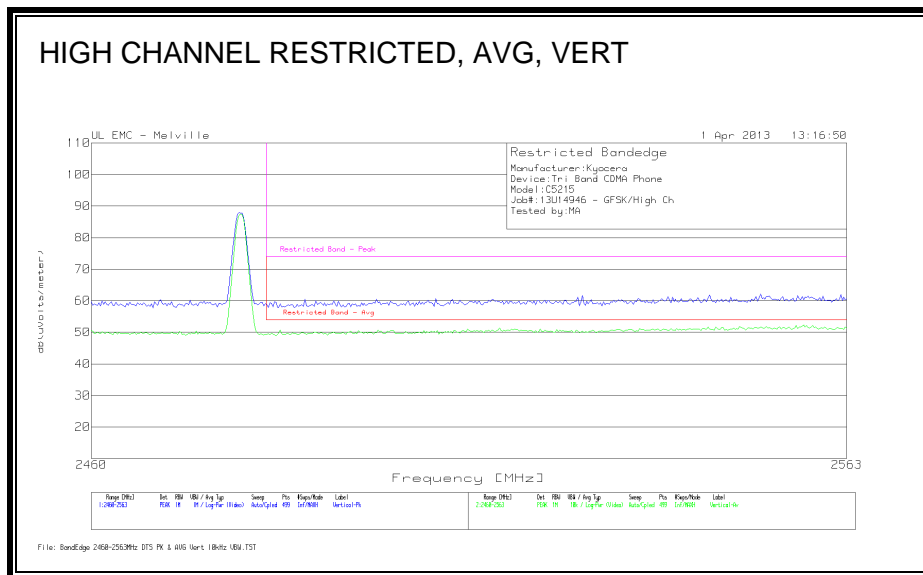
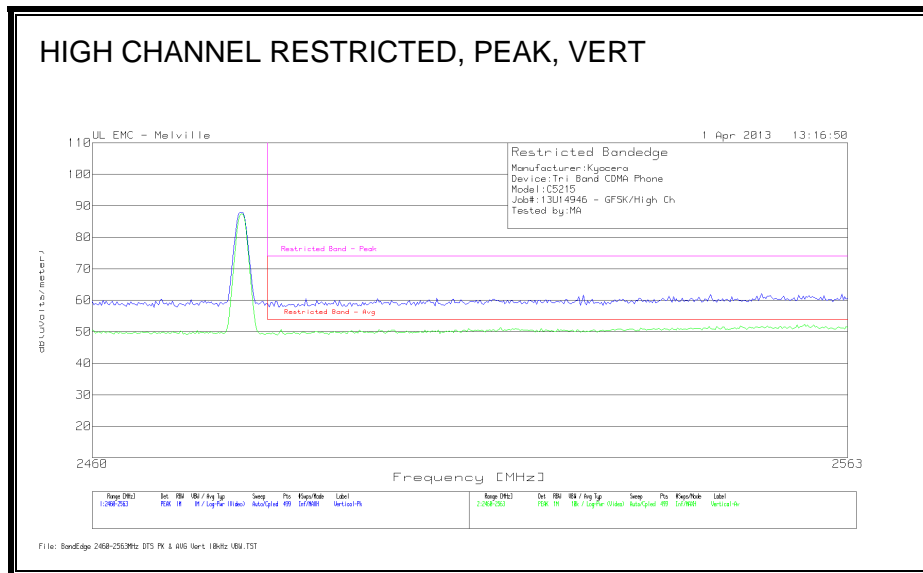
RESTRICTED BANDEGE (LOW CHANNEL, VERTICAL)



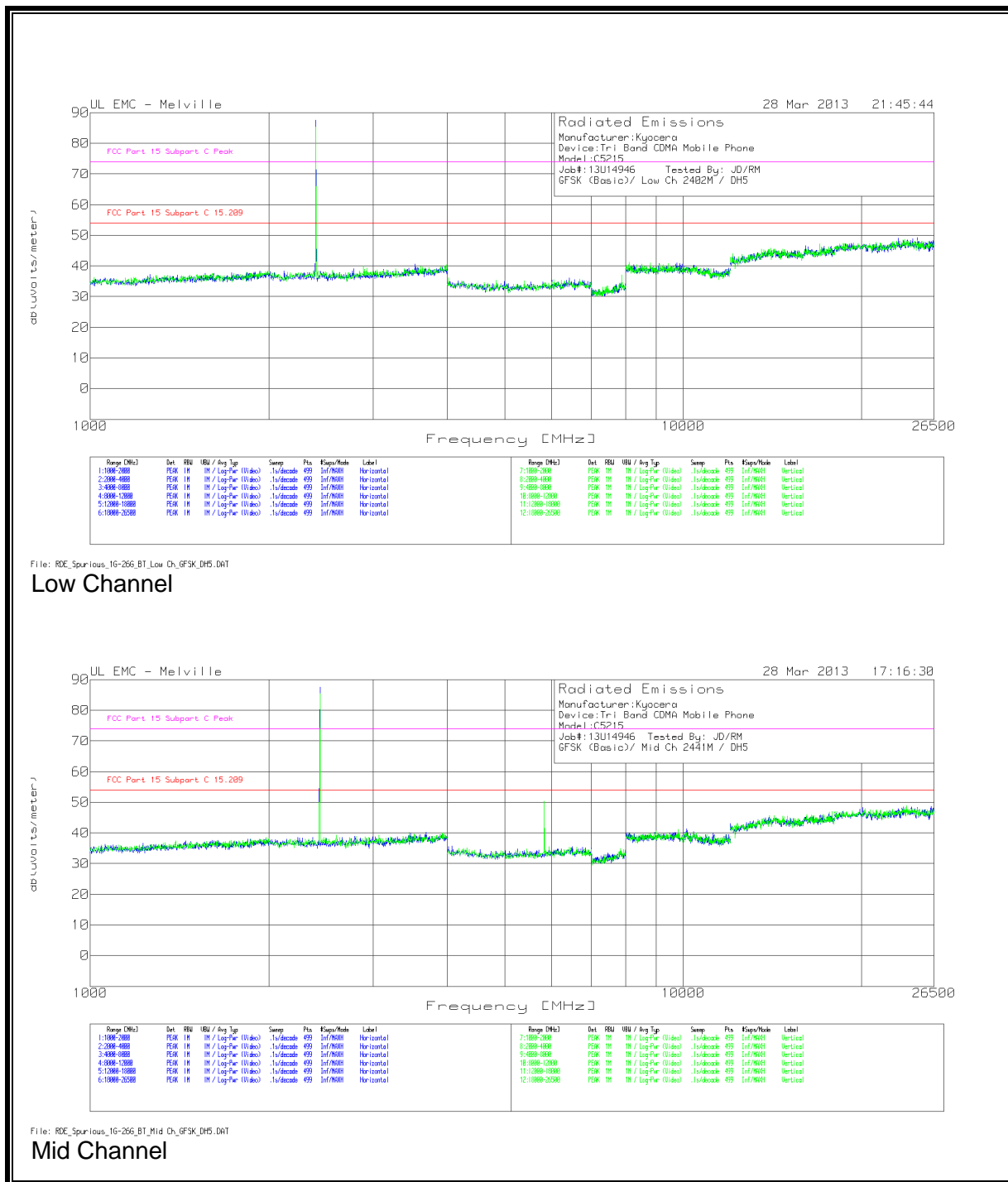
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



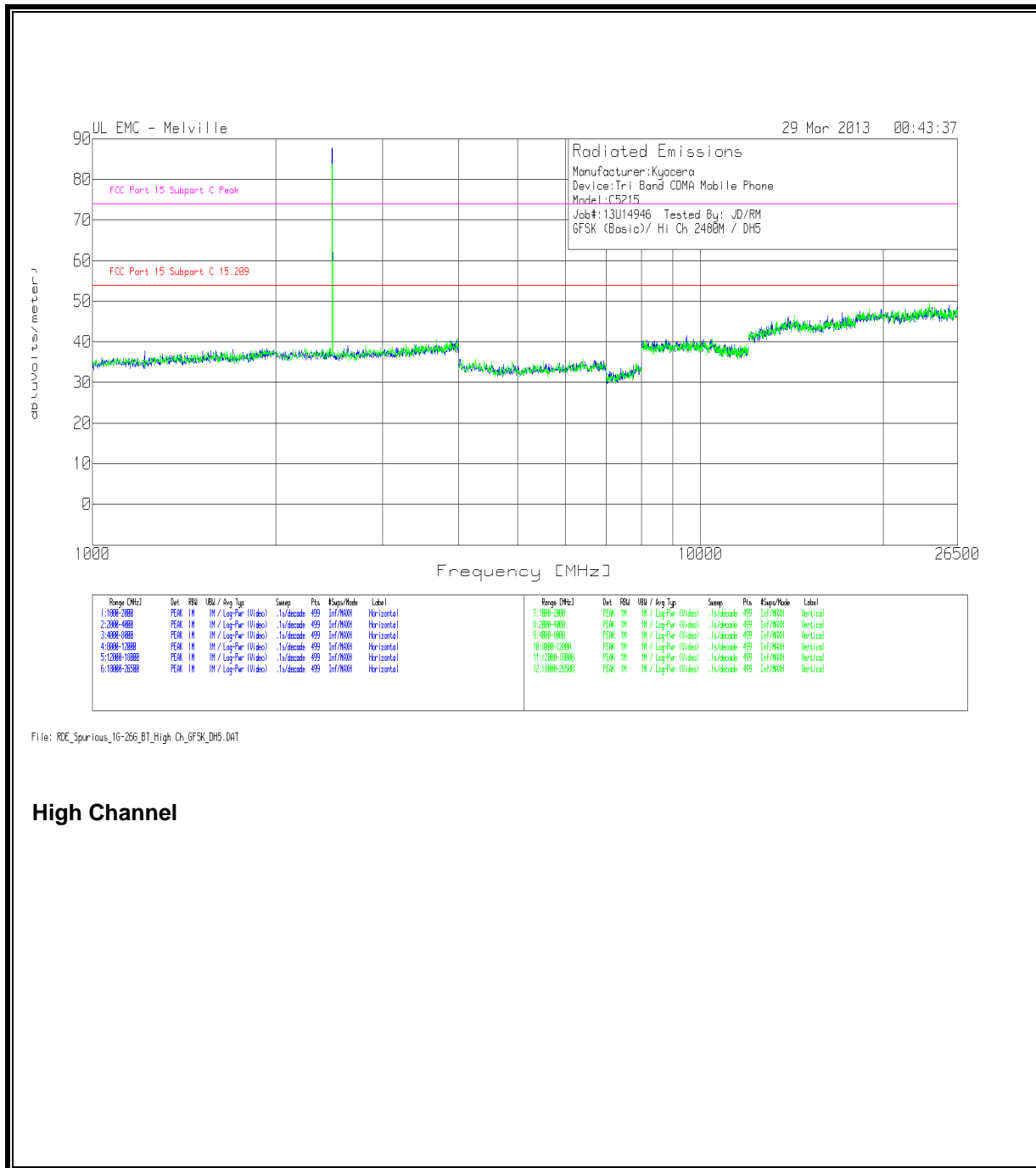
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS



HARMONICS AND SPURIOUS EMISSIONS



DATA LOW CHANNEL

Manufacturer: Kyocera

Device: Tri Band CDMA Mobile Phone

Model:C5215

Job#:13U14946 Tested By: JD/RM

GFSK (Basic)/ Low Ch 2402M / DH5

Horizontal 4000 - 8000MHz

Test Frequency	Meter Reading	Detector	AF-48106 (dbm)	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin (dB)	FCC Part 15 Subpart C Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
4804	62.84	PK	27.1	-53.31	36.63	54	-17.37	74	-37.37	333	141	Horz
4804	50.44	LnAv	27.1	-53.31	24.23	54	-29.77	74	-49.77	333	141	Horz
4804	63.49	PK	27.1	-53.31	37.28	54	-16.72	74	-36.72	296	265	Vert
4804	50.56	LnAv	27.1	-53.31	24.35	54	-29.65	74	-49.65	296	265	Vert

Horizontal 12000 - 18000MHz

Test Frequency	Meter Reading	Detector	AF-8932 (dbm)	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin (dB)	FCC Part 15 Subpart C Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
12010	58.71	PK	37.2	-49.26	46.65	54	-7.35	74	-27.35	237	187	Horz
12010	45.12	LnAv	37.2	-49.26	33.06	54	-20.94	74	-40.94	237	187	Horz
12010	58.36	PK	37.2	-49.26	46.3	54	-7.7	74	-27.7	174	230	Vert
12010	45.14	LnAv	37.2	-49.26	33.08	54	-20.92	74	-40.92	174	230	Vert

PK - Peak detector

QP - Quasi-Peak detector

LnAv - Linear Average detector

LgAv - Log Average detector

Av - Average detector

CAV - CISPR Average detector

RMS - RMS detection

CRMS - CISPR RMS detection

DATA MID CHANNEL

Manufacturer: Kyocera

Device: Tri Band CDMA Mobile Phone

Model:C5215

Job#:13U14946 Tested By: JD/RM

GFSK (Basic)/ Mid Ch 2441M / DH5

Horizontal 4000 - 8000MHz

Test Frequency	Meter Reading	Detector	AF-48106 (dbm)	BOMS Factor [dB]	dB(uVolts /meter)	FCC Part 15 Subpart C 15.209	Margin (dB)	FCC Part 15 Subpart C Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
5827.66	61.22	PK	27.6	-52.53	36.29	54	-17.71	74	-37.71	3	231	Vert
5827.66	49.73	LnAv	27.6	-52.53	24.8	54	-29.2	74	-49.2	3	231	Vert
4882	64.32	PK	27.2	-53.28	38.24	54	-15.76	74	-35.76	159	223	Horz
4882	52.21	LnAv	27.2	-53.28	26.13	54	-27.87	74	-47.87	159	223	Horz
4882	62.95	PK	27.2	-53.28	36.87	54	-17.13	74	-37.13	76	292	Vert
4882	50.91	LnAv	27.2	-53.28	24.83	54	-29.17	74	-49.17	76	292	Vert
7323	60.15	PK	28	-52.37	35.78	54	-18.22	74	-38.22	143	339	Horz
7323	47.04	LnAv	28	-52.37	22.67	54	-31.33	74	-51.33	143	339	Horz
7323	60.66	PK	28	-52.37	36.29	54	-17.71	74	-37.71	164	174	Vert
7323	47.77	LnAv	28	-52.37	23.4	54	-30.6	74	-50.6	164	174	Vert

Horizontal 12000 - 18000MHz

Test Frequency	Meter Reading	Detector	AF-8932 (dbm)	BOMS Factor [dB]	dB(uVolts/ meter)	FCC Part 15 Subpart C 15.209	Margin (dB)	FCC Part 15 Subpart C Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
12205	58	PK	37.2	-48.52	46.68	54	-7.32	74	-27.32	278	360	Horz
12205	44.75	LnAv	37.2	-48.52	33.43	54	-20.57	74	-40.57	278	360	Horz
12205	58.31	PK	37.2	-48.52	46.99	54	-7.01	74	-27.01	239	266	Vert
12205	44.74	LnAv	37.2	-48.52	33.42	54	-20.58	74	-40.58	239	266	Vert

PK - Peak detector

QP - Quasi-Peak detector

LnAv - Linear Average detector

LgAv - Log Average detector

Av - Average detector

CAV - CISPR Average detector

RMS - RMS detection

DATA HIGH CHANNEL

Manufacturer: Kyocera

Device: Tri Band CDMA Mobile Phone

Model:C5215

Job#:13U14946 Tested By: JD/RM

GFSK (Basic)/ Hi Ch 2480M / DH5

Horizontal 4000 - 8000MHz

Test Frequency	Meter Reading	Detector	AF-48106 (dbm)	BOMS Factor [dB]	dB(uVolts /meter)	FCC Part 15 Subpart C 15.209	Margin (dB)	FCC Part 15 Subpart C Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
4960	64.86	PK	27.3	-53.13	39.03	54	-14.97	74	-34.97	152	390	Horz
4960	53.19	LnAv	27.3	-53.13	27.36	54	-26.64	74	-46.64	152	390	Horz
4960	63.57	PK	27.3	-53.13	37.74	54	-16.26	74	-36.26	227	300	Vert
4960	51.67	LnAv	27.3	-53.13	25.84	54	-28.16	74	-48.16	227	300	Vert
7440	61.15	PK	28.1	-52.13	37.12	54	-16.88	74	-36.88	148	204	Horz
7440	48.93	LnAv	28.1	-52.13	24.9	54	-29.1	74	-49.1	148	204	Horz
7440	62.4	PK	28.1	-52.13	38.37	54	-15.63	74	-35.63	207	123	Vert
7440	52.14	LnAv	28.1	-52.13	28.11	54	-25.89	74	-45.89	207	123	Vert

Horizontal 12000 - 18000MHz

Test Frequency	Meter Reading	Detector	AF-8932 (dbm)	BOMS Factor [dB]	dB(uVolts/meter)	FCC Part 15 Subpart C 15.209	Margin (dB)	FCC Part 15 Subpart C Peak	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
12400	57.71	PK	37.2	-48.94	45.97	54	-8.03	74	-28.03	272	180	Horz
12400	44.92	LnAv	37.2	-48.94	33.18	54	-20.82	74	-40.82	272	180	Horz
12400	57.63	PK	37.2	-48.94	45.89	54	-8.11	74	-28.11	286	322	Vert
12400	44.84	LnAv	37.2	-48.94	33.1	54	-20.9	74	-40.9	286	322	Vert

PK - Peak detector

QP - Quasi-Peak detector

LnAv - Linear Average detector

LgAv - Log Average detector

Av - Average detector

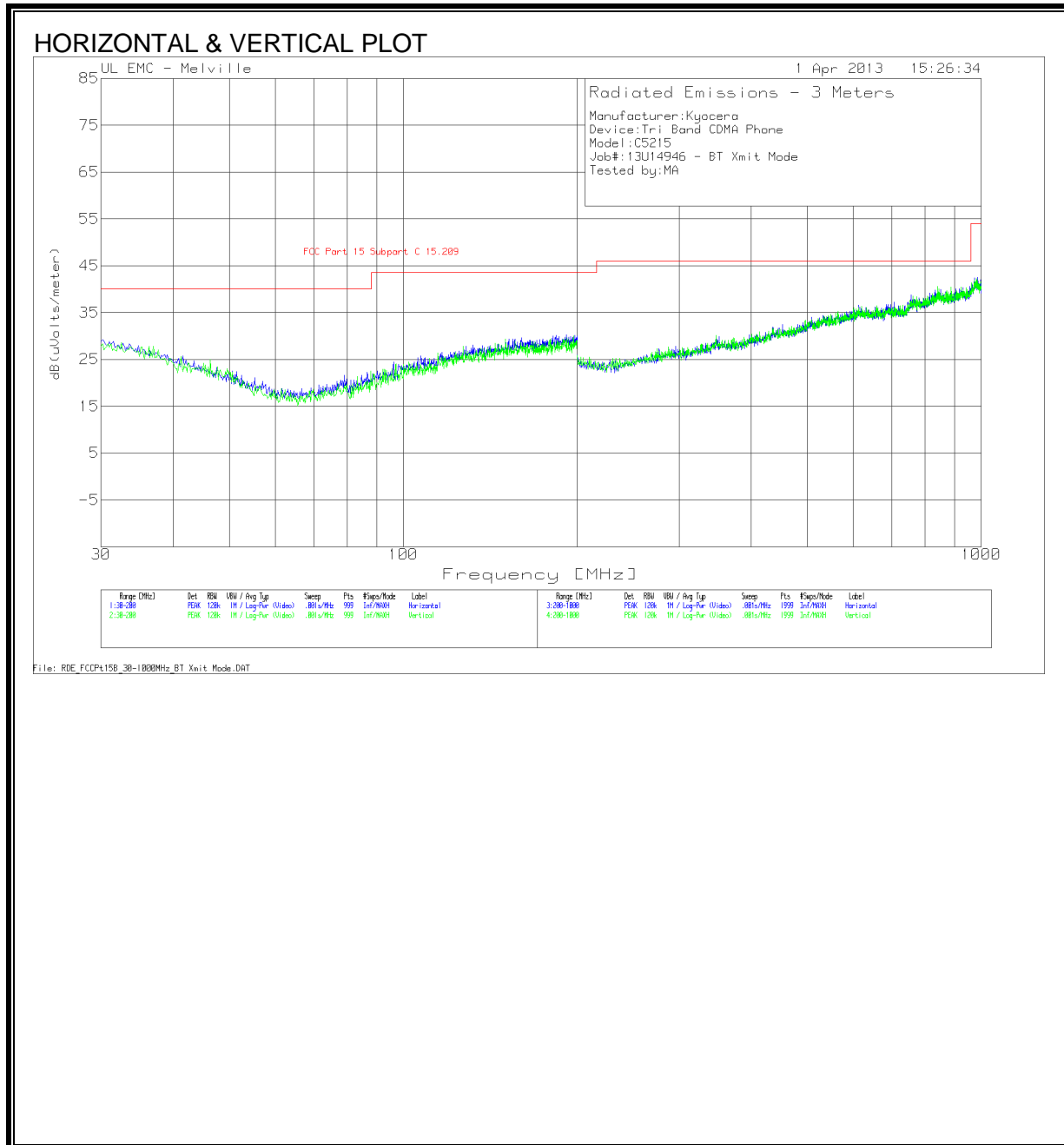
CAV - CISPR Average detector

RMS - RMS detection

CRMS - CISPR RMS detection

8.2. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL AND VERTICAL).



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL AND HORIZONTAL)

Manufacturer: Kyocera
 Device: Tri Band CDMA Phone
 Model:C5215
 Job#:13U14946 - BT Xmit Mode
 Tested by: MA

Horizontal 30 - 200MHz

Marker No.	Test Frequency	Meter Reading	Detector	AF-43441		dB(uVolts/meter)	FCC Part 15 Subpart	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
				GL-3M	C						
1	32.7227	11.64	PK	16.8	0	28.44	15.209 40	-11.56	88	200	Horz
2	41.5716	12.15	PK	13.5	0.1	25.75	15.209 40	-14.25	1	100	Horz
3	190.6406	13.08	PK	15.7	0.9	29.68	15.209 43.5	-13.82	60	300	Horz

Horizontal 200 - 1000MHz

Marker No.	Test Frequency	Meter Reading	Detector	AF-44067		dB(uVolts/meter)	FCC Part 15 Subpart	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
				GL-3M	C						
4	706.2531	15.21	PK	20.2	1.8	37.21	15.209 46	-8.79	358	400	Horz
5	759.8799	14.19	PK	21.6	2	37.79	15.209 46	-8.21	15	200	Horz
6	983.5918	14.69	PK	24.6	2.2	41.49	15.209 54	-12.51	81	300	Horz
7	814.7074	15.02	PK	22.1	2.1	39.22	15.209 46	-6.78	9	400	Horz

Vertical 200 - 1000MHz

Marker No.	Test Frequency	Meter Reading	Detector	AF-44067		dB(uVolts/meter)	FCC Part 15 Subpart	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
				GL-3M	C						
8	660.2301	14.51	PK	20	2	36.51	15.209 46	-9.49	328	400	Vert

PK - Peak detector
 QP - Quasi-Peak detector
 LnAv - Linear Average detector

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

PASS

6 WORST EMISSIONS

Manufacturer: Kyocera
 Device: Tri Band CDMA Mobile Phone
 Model:C5215 Bluetooth
 Job#:13U14946
 Tested by: CD/MA

Line 1 .15 - 1MHz

Marker No.	Test Frequency	Meter Reading	Detector	47367 L1 (dB)	8447D Preamp (dB)	(dB(uVolts))	FCC	Margin	FCC	Margin
							Part 15 Subpart C QPk	Part 15 Subpart C Avg	Part 15 Subpart C Avg	Part 15 Subpart C Avg
1	0.17862	64.31	PK	10.9	-27.2	48.01	64.5	-16.49	54.5	-6.49
2	0.39255	55.32	PK	10.3	-28	37.62	58	-20.38	48	-10.38
3	0.78692	49.53	PK	10.2	-28.2	31.53	56	-24.47	46	-14.47

Line 1 1 - 30MHz

Marker No.	Test Frequency	Meter Reading	Detector	47367 L1 (dB)	8447D Preamp (dB)	(dB(uVolts))	FCC	Margin	FCC	Margin
							Part 15 Subpart C QPk	Part 15 Subpart C Avg	Part 15 Subpart C Avg	Part 15 Subpart C Avg
4	1.45573	48.85	PK	10.1	-28.3	30.65	56	-25.35	46	-15.35
5	5.68022	47.58	PK	10.2	-28.3	29.48	60	-30.52	50	-20.52
6	1.22425	48.89	PK	10.1	-28.3	30.69	56	-25.31	46	-15.31

Neutral .15 - 1MHz

Marker No.	Test Frequency	Meter Reading	Detector	47367 L1 (dB)	8447D Preamp (dB)	(dB(uVolts))	FCC	Margin	FCC	Margin
							Part 15 Subpart C QPk	Part 15 Subpart C Avg	Part 15 Subpart C Avg	Part 15 Subpart C Avg
7	0.16039	65.63	PK	11.1	-27	49.73	65.4	-15.67	55.4	-5.67
8	0.40676	53.53	PK	10.3	-28.1	35.73	57.7	-21.97	47.7	-11.97
9	0.89865	65.73	PK	10.2	-28.2	47.73	56	-8.27	46	1.73

PK - Peak detector
 QP - Quasi-Peak detector
 LnAv - Linear Average detector
 LgAv - Log Average detector
 Av - Average detector

Manufacturer: Kyocera
 Device: Tri Band CDMA Mobile Phone
 Model:C5215 Bluetooth
 Job#:13U14946
 Tested by: CD/MA

Neutral 1 - 30MHz

Marker No.	Test Frequency	Meter Reading	Detector	47367 L1 (dB)	8447D Preamp (dB)	(dB(uVolts))	FCC	FCC		
							Part 15 Subpart C QPk	Margin	Part 15 Subpart C Avg	Margin
10	12.38588	45.7	PK	10.4	-28.3	27.8	60	-32.2	50	-22.2
11	15.2649	42.4	PK	10.4	-28.3	24.5	60	-35.5	50	-25.5
12	22.93989	47.11	PK	10.6	-28.3	29.41	60	-30.59	50	-20.59

PK - Peak detector
 QP - Quasi-Peak detector
 LnAv - Linear Average detector
 LgAv - Log Average detector
 Av - Average detector

Manufacturer: Kyocera
 Device: Tri Band CDMA Mobile Phone
 Model:C5215 Bluetooth
 Job#:13U14946
 Tested by: CD/MA

Line 1 .15 - 1MHz

Test Frequency	Meter Reading	Detector	47367 L1 [dB]	8447D Preamp [dB]	(dB(uVolts))	FCC Part 15 Subpart C		FCC Part 15 Subpart C	
						QPk	Margin	C Avg	Margin
0.17783	44.14	Av	11	-27.2	27.94	64.59	-36.65	54.59	-26.65
0.3938	42.09	Av	10.3	-28	24.39	57.98	-33.59	47.98	-23.59
0.78754	40.69	Av	10.2	-28.2	22.69	56	-33.31	46	-23.31

Line 1 1 - 30MHz

Test Frequency	Meter Reading	Detector	47367 L1 [dB]	8447D Preamp [dB]	(dB(uVolts))	FCC Part 15 Subpart C		FCC Part 15 Subpart C	
						QPk	Margin	C Avg	Margin
1.47756	40.89	Av	10.1	-28.3	22.69	56	-33.31	46	-23.31
5.70534	40.59	Av	10.2	-28.3	22.49	60	-37.51	50	-27.51
1.21842	40.49	Av	10.2	-28.3	22.39	56	-33.61	46	-23.61

Neutral .15 - 1MHz

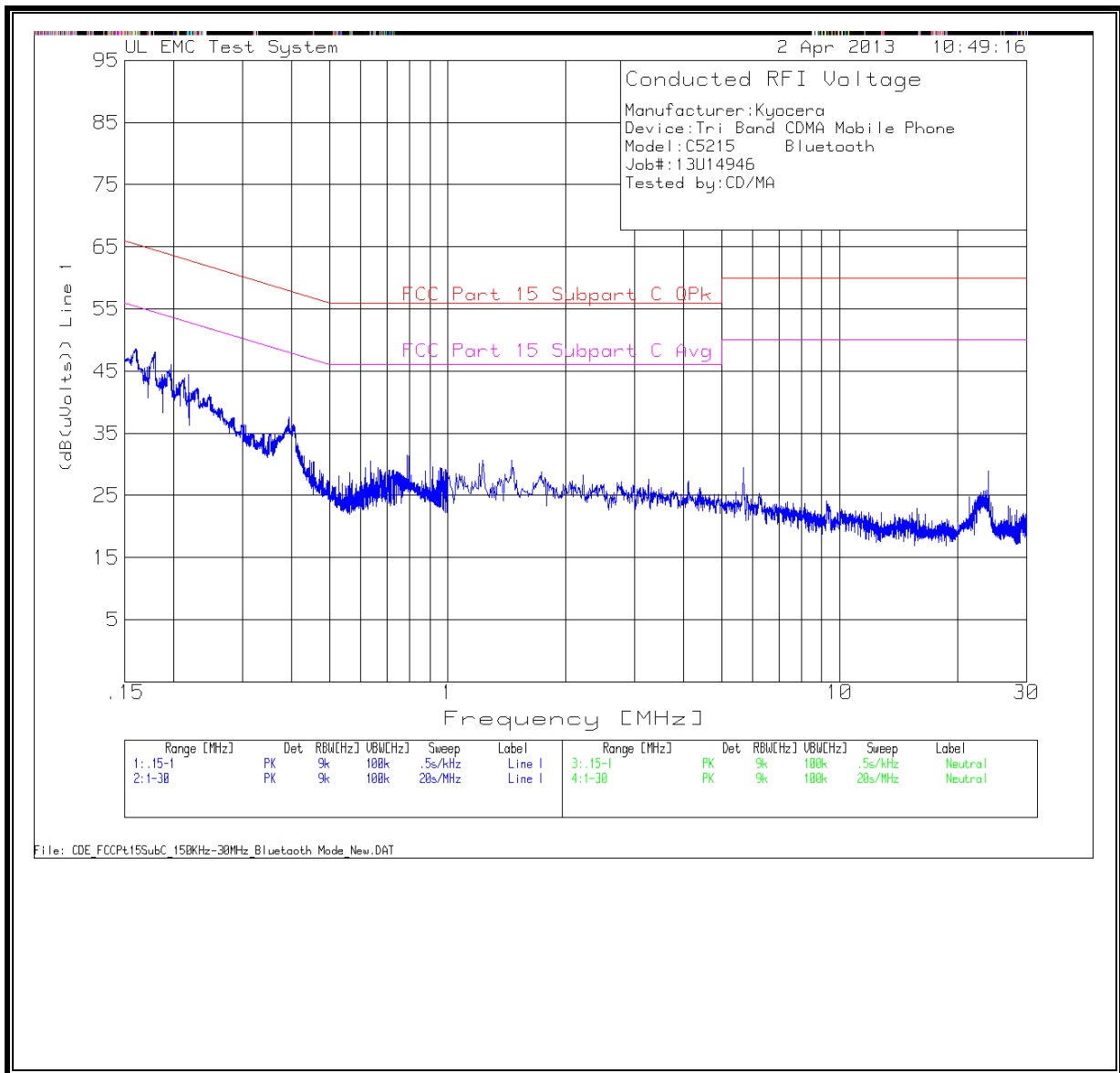
Test Frequency	Meter Reading	Detector	47367 L1 [dB]	8447D Preamp [dB]	(dB(uVolts))	FCC Part 15 Subpart C		FCC Part 15 Subpart C	
						QPk	Margin	C Avg	Margin
0.15909	46.3	Av	11.1	-27	30.4	65.51	-35.11	55.51	-25.11
0.40673	40.89	Av	10.3	-28.1	23.09	57.71	-34.62	47.71	-24.62
0.90005	40.69	Av	10.2	-28.2	22.69	56	-33.31	46	-23.31

Neutral 1 - 30MHz

Test Frequency	Meter Reading	Detector	47367 L1 [dB]	8447D Preamp [dB]	(dB(uVolts))	FCC Part 15 Subpart C		FCC Part 15 Subpart C	
						QPk	Margin	C Avg	Margin
12.3851	40.59	Av	10.4	-28.3	22.69	60	-37.31	50	-27.31
15.2975	40.99	Av	10.4	-28.3	23.09	60	-36.91	50	-26.91
22.9661	40.79	Av	10.6	-28.3	23.09	60	-36.91	50	-26.91

PK - Peak detector
 QP - Quasi-Peak detector
 LnAv - Linear Average detector
 LgAv - Log Average detector
 Av - Average detector

LINE 1 RESULTS



LINE 2 RESULTS

