MEASUREMENT AND TECHNICAL REPORT

KYOCERA WIRELESS CORPORATION
6455 Lusk Boulevard
San Diego, CA 92121

DATE: 17 December 2003

This Report Concerns:	Original Grant: X	Class II Change:
Equipment Type:	Kyocera Module 200	
Deferred grant requested per 47 CFR 0.457(d)(1)(ii)?	Yes: **Defer until:**	No: X
Company Name **agrees to notify the Commission by:** **of the intended date of announcement of the product so that the grant can be issued on that date.**	N/A	
Transition Rules Request per 15.37?	Yes:	No: X*

(*) FCC Part 22, Paragraph(s) **22.917(b)(2)**
(*) FCC Part 24, Paragraph(s) **24.238(a); 24.232(b); RSS 129 and RSS 133**

Report Prepared by:

TÜV AMERICA, INC
10040 Mesa Rim Road
San Diego, CA 92121-2912
Phone: 858 678 1400
Fax: 858 546 0364

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TÜV AMERICA, INC. 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone 858 678 1400 FAX 858 546 0364

1.0 GENERAL INFORMATION

1.1 Product Description

Not Available

1.2 Related Submittal Grant

None

1.3 Tested System Details

The FCC ID's for all equipment, plus descriptions of all cables used in the tested system are:

None

1.4 Test Methodology

Purpose of Test: To demonstrate compliance with the following tests.

TEST	FCC CFR 47#	PASS/FAIL
Radiated Spurious Emissions (Transmit)	22.917(b)(2); 24.238(a); 24.232(b)	Pass
Radiated Spurious Emissions (Receive)	RSS 129; RSS 133	Pass

Tests were performed according to the procedures in FCC/ANSI C63.4 and CSA 108.8-M1983.

1.5 Test Facility

The open area test site and conducted measurement data were tested by:

TÜV AMERICA, INC
10040 Mesa Rim Road
San Diego, CA 92121-2912
Phone: 858 678 1400
Fax: 858 546 0364

The Test Site Data and performance comply with ANSI C63.4 and are registered with the FCC, 7435 Oakland Mills Road, Columbia Maryland 21046. All Measurement Data is acquired according to the content of FCC Measurement Procedure and ANSI C63.4, unless supplemented with additional requirements as noted in the test report.

2.0 SYSTEM TEST CONFIGURATION

2.1 Justification

The EUT was initially tested for FCC emissions in the following configuration:

See Test Setup Photos Exhibit

2.2 EUT Exercise Software

None

2.3 Special Accessories

None

2.4 Equipment Modifications

None

2.5 Configuration of Test System

See Test Setup Photos Exhibit

3.0 RADIATED SPURIOUS EMISSIONS

3.1 EQUIPMENT

Test Conditions: RADIATED SPURIOUS EMISSIONS: FCC Part 22.917(b)(2) and Part 24.238(a)

The RADIATED SPURIOUS EMISSIONS measurements were performed at the San Diego Testing Facility:

☐ **- Test not applicable**

■ - Roof (Small Open Area Test Site)

Testing was performed at a test distance of:

■ - 3 meters

Test Equipment Used:

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Date Cal'ed
HP8566B	744	Spectrum Analyzer	Hewlett Packard	2618A02913	12/03
AMF-5D-010180-35-10P	719	PreAmplifier, 40 dB	Miteq	549460	NCR*
3115	251	Double Ridge Horn Antenna	EMCO	2495	12/03
FF 6548-2	783	2000 MHz High Pass Filter	Sage	008	NCR*
FF 6548-1	778	900 MHz Low Pass Filter	Sage	005	NCR*
8481A	554	Power Sensor	Hewlett Packard	1926A27807	09/02
436A	472	Power Meter	Hewlett Packard	2101A11117	04/04
8350B/85592C	6707	Sweep Oscillator/Signal Generator	Hewlett Packard	2328A00112	NCR*
VHF-MESS	6651	Dipole	Schwarzbeck	VHA9105	02/05

Remarks: One year calibration cycle for all test equipment and sites. (*) No Calibration Required.

3.2 DATA

REPORT No: SC305450 TESTER: Alan Laudani SPEC: FCC Part 24 para 24.238(a)

CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters

E U T: M200 w/R380.900.318 antenna TEST SITE: Roof

EUT MODE: Transmit PCS BICONICAL: N/A

DATE: Dec. 12, 2003 EIRP Factor 5.5 LOG: N/A

NOTES: HORN: 251

Transdata Mark-V

Part 24 - RBW 1 MHz

CF = Antenna Factor + Cable Loss - Preamplifier Gain

v.beta1a

FREQ (MHz)	VERTICAL (dBuv) pk	HORIZONTAL (dBuv) pk	CF (dB/m)	MAX LEVEL (dBm) pk	SPEC LIMIT (dBm) pk	MARGIN (dB) pk	EUT Rotation	Antenna Height	Notes
1851.25	92.2	79.5	32.0	**28.9**			266	1.4	Fundamental (Low Band)
3702.5	62.8	61.9	-0.4	**-32.9**	-13.0	-19.9	195	1.1	
5553.75	51.9	50.4	4.5	**-38.9**	-13.0	-25.9	160	1	
7405	46.7	47.5	8.2	**-39.6**	-13.0	-26.6		1	noise floor
9256.25	47.4	47.3	10.4	**-37.5**	-13.0	-24.5		1	noise floor
11107.5	44.8	45.5	13.1	**-36.6**	-13.0	-23.6		1	noise floor
12958.75	49.4	48.8	12.7	**-33.1**	-13.0	-20.1		1	noise floor
14810	49.1	49.5	16.1	**-29.6**	-13.0	-16.6		1	noise floor
16661.25	49	49	18.5	**-27.8**	-13.0	-14.8		1	noise floor
1880	92	73.9	32.2	**28.9**					Fundamental (Mid Band)
3760	62.3	58.9	-0.3	**-33.2**	-13.0	-20.2	156	1.1	
5640	50.8	50.6	4.7	**-39.8**	-13.0	-26.8	190	1.2	
7520	47.2	47.2	8.4	**-39.6**	-13.0	-26.6		1	noise floor
9400	47.8	47	10.0	**-37.5**	-13.0	-24.5		1	noise floor
11280	46.1	45.4	13.2	**-36.0**	-13.0	-23		1	noise floor
13160	50.3	49.9	13.2	**-31.8**	-13.0	-18.8		1	noise floor
15040	49.9	49.9	17.0	**-28.3**	-13.0	-15.3		1	noise floor
16920	49.1	49.2	19.5	**-26.6**	-13.0	-13.6		1	noise floor
1908.75	92.2	79.4	32.4	**29.3**					Fundamental (High Band)
3817.5	62.8	59	-0.1	**-32.6**	-13.0	-19.6	155	1.1	
5726.25	55.5	52.4	4.9	**-34.8**	-13.0	-21.8	278	1.2	
7635	48	47.8	8.5	**-38.7**	-13.0	-25.7	190	1.4	
9543.75	48.2	46.8	9.8	**-37.3**	-13.0	-24.3		1	noise floor
11452.5	45.6	44.8	13.3	**-36.4**	-13.0	-23.4		1	noise floor
13361.25	49.2	49.4	14.0	**-31.9**	-13.0	-18.9		1	noise floor
15270	48.8	49.9	17.3	**-28.0**	-13.0	-15		1	noise floor
17178.75	48.8	49	21.1	**-25.1**	-13.0	-12.1		1	noise floor

REPORT No: SC305450 TESTER: Alan Laudani SPEC: FCC Part 22 para 22.917(b)(2)

CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters

E U T: M200 w/R380.900.318 antenna TEST SITE: Roof

EUT MODE: Transmit FM BICONICAL: N/A

DATE: Dec. 12, 2003 ERP Factor 7 LOG: N/A

NOTES: HORN: 251

Part 22 - RBW 1 & VBW MHz

900 MHz high pass filter inserted before Preamplifier

CF = Antenna Factor + Cable Loss - Preamplifier Gain

v.beta1a

FREQ (MHz)	VERTICAL (dBuv) pk	HORIZONTAL (dBuv) pk	CF (dB/m)	MAX LEVEL (dBm) pk	SPEC LIMIT (dBm) pk	MARGIN (dB) pk	EUT Rotation	Antenna Height	Notes
824.04	100.7	90.3	22.9	**26.2**			215	1.2	Fundamental (Low Band)
1648.08	50.6	52.8	-9.2	**-53.7**	-13.0	-40.7	141	1.3	
2472.12	47.5	46.6	-4.4	**-54.3**	-13.0	-41.3	208	1.3	
3296.16	60.5	54.5	-1.5	**-38.3**	-13.0	-25.3	187	1.4	
4120.2	57.2	55.3	0.4	**-39.7**	-13.0	-26.7	191	1.5	
4944.24	53.2	52.5	0.7	**-43.5**	-13.0	-30.5	174	1.1	
5768.28	46.6	49.7	5.2	**-42.5**	-13.0	-29.5	83	1	
6592.32	52.9	55.8	5.9	**-35.7**	-13.0	-22.7	185	1	
7416.36	45.9	45.9	8.3	**-43.1**	-13.0	-30.1		1	noise floor
848.97	47.3	47.7	0.0	**-49.7**	-13.0	-36.7		1	noise floor
836.49	100.7	92	22.8	**26.2**			128	1.1	Fundamental (Mid Band)
1672.98	51.9	50.7	-9.0	**-54.4**	-13.0	-41.4	209	1	
2509.47	53.6	50.0	-4.3	**-48.0**	-13.0	-35.0	147	1.1	
3345.96	55.1	60.6	-1.3	**-38.0**	-13.0	-25.0	139	1	
4182.45	62.4	56.8	0.3	**-34.7**	-13.0	-21.7	88	1	
5018.94	54.2	56.1	0.9	**-40.3**	-13.0	-27.3	96	1	
5855.43	49.6	50.8	5.4	**-41.1**	-13.0	-28.1		1	noise floor
6691.92	51.7	52.3	6.2	**-38.8**	-13.0	-25.8	188	1	
7528.41	49	47.8	8.5	**-39.8**	-13.0	-26.8		1	noise floor
8364.9	48	47.5	10.0	**-39.4**	-13.0	-26.4		1	noise floor
848.97	99.9	94.9	23.2	**25.7**			254	1.1	Fundamental (High Band)
1697.94	55.6	52.8	-8.8	**-50.6**	-13.0	-37.6	100	1.4	
2546.91	55	50.6	-4.1	**-46.5**	-13.0	-33.5	100	1.2	
3395.88	59	57.6	-1.1	**-39.5**	-13.0	-26.5	180	1.1	
4244.85	58.5	60	0.2	**-37.2**	-13.0	-24.2	262	1.1	
5093.82	51.6	57	1.5	**-38.9**	-13.0	-25.9	210	1	
5942.79	49.6	50	5.7	**-41.7**	-13.0	-28.7		1	noise floor
6791.76	49.6	53.4	6.6	**-37.4**	-13.0	-24.4	230	1	
7640.73	46.9	47.2	8.7	**-41.5**	-13.0	-28.5		1	noise floor
8489.7	46.8	48.1	10.3	**-39.0**	-13.0	-26		1	noise floor

REPORT No: SC305450 TESTER: Alan Laudani SPEC: FCC Part 22 para 22.917(b)(2)

CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters

E U T: M200 w/R380.900.318 antenna TEST SITE: Roof

EUT MODE: Transmit CDMA BICONICAL: N/A

DATE: Dec. 12, 2003 ERP Factor 7 LOG: N/A

NOTES: HORN: 251

Part 22 - RBW 1 & VBW MHz

900 MHz high pass filter inserted before Preamplifier

CF = Antenna Factor + Cable Loss - Preamplifier Gain

v.beta1a

FREQ (MHz)	VERTICAL (dBuv) pk	HORIZONTAL (dBuv) pk	CF (dB/m)	MAX LEVEL (dBm) pk	SPEC LIMIT (dBm) pk	MARGIN (dB) pk	EUT Rotation	Antenna Height	Notes
824.7	97.6	92.3	22.9	**23.1**			83	1.2	Fundamental (Low Band)
1649.4	47.6	47.9	-9.2	**-58.6**	-13.0	-45.6	127	1	
2474.1	45.4	43.4	-4.4	**-56.4**	-13.0	-43.4		1	noise floor
3298.8	56.5	56.3	-1.5	**-42.3**	-13.0	-29.3	230	1.2	
4123.5	58.9	60.6	0.4	**-36.3**	-13.0	-23.3	236	1.1	
4948.2	49.2	51.5	0.7	**-45.2**	-13.0	-32.2	177	1.1	
5772.9	41.6	47.2	5.2	**-44.9**	-13.0	-31.9		1	noise floor
6597.6	49.3	49.6	5.9	**-41.9**	-13.0	-28.9		1	noise floor
7422.3	46.5	47.2	8.3	**-41.8**	-13.0	-28.8		1	noise floor
8247	47.2	47.2	9.7	**-40.5**	-13.0	-27.5		1	noise floor
836.49	97.7	91.3	22.8	**23.2**			340	1.1	Fundamental (Mid Band)
1672.98	47.8	47.1	-9.0	**-58.5**	-13.0	-45.5	220	1	
2509.47	48.4	45.3	-4.3	**-53.2**	-13.0	-40.2		1	noise floor
3345.96	55.3	46.5	-1.3	**-43.3**	-13.0	-30.3	148	1	
4182.45	53	45.7	0.3	**-44.1**	-13.0	-31.1	150	1	
5018.94	50.3	45.8	0.9	**-46.1**	-13.0	-33.1	157	1	
5855.43	47.1	47.8	5.4	**-44.1**	-13.0	-31.1		1	noise floor
6691.92	48.4	48.2	6.2	**-42.7**	-13.0	-29.7		1	noise floor
7528.41	47.4	48.8	8.5	**-40.0**	-13.0	-27.0		1	noise floor
8364.9	46.7	46.1	10.0	**-40.7**	-13.0	-27.7		1	noise floor
848.31	95.5	80.9	23.1	**21.3**					Fundamental (High Band)
1696.62	52.4	47.8	-8.8	**-53.8**	-13.0	-40.8	144	1.4	
2544.93	49.9	49.7	-4.1	**-51.6**	-13.0	-38.6	162	1	
3393.24	53.8	52.2	-1.1	**-44.7**	-13.0	-31.7	124	1	
4241.55	61.4	55.0	0.2	**-35.8**	-13.0	-22.8	80	1	
5089.86	51.7	50.6	1.5	**-44.2**	-13.0	-31.2	73	1	
5938.17	47.6	49.0	5.6	**-42.7**	-13.0	-29.7		1	noise floor
6786.48	49.1	49.8	6.6	**-41.0**	-13.0	-28.0		1	noise floor
7634.79	48.8	49.7	8.7	**-39.0**	-13.0	-26.0		1	noise floor
8483.1	47.9	46.9	10.3	**-39.2**	-13.0	-26.2		1	noise floor

Kyocera Substitution SC305450
Model: M200 w/R380.900.318 antenna
12/12/2003
Location: Roof Site

FCC 24.232(b) Output Power	Frequency MHz	target level dBuV/m	Horn Gain dBi	cable loss dB	Signal Generator dBm	Total (ERP/EIRP) dBm	Spec dBm	Margin Subst. dBm
FM low channel	824.04	100.7	0	3.5	26.72	23.3	33	-9.8
FM mid channel	836.49	100.7	0	3.6	28.77	25.2	33	-7.8
FM high channel	848.97	99.9	0	3.6	27.18	23.6	33	-9.5
CDMA low channel	824.70	97.6	0	3.5	25.40	21.9	33	-11.1
CDMA mid channel	836.49	97.7	0	3.6	25.38	21.8	33	-11.2
CDMA high channel	848.31	95.5	0	3.6	25.08	21.5	33	-11.6
PCS low channel	1851.25	92.2	7.8	5.3	24.28	26.8	33	-6.2
PCS mid channel	1880.00	92.0	7.8	5.4	24.19	26.6	33	-6.4
PCS high channel	1908.75	92.2	7.9	5.3	23.45	26.1	33	-7.0
FCC 24.238(a) Emission Limits								
TX PCS	3702.50	62.8	7.9	8	-39.7	-39.8	-13	-26.8
TX PCS	3817.50	62.8	7.8	8.1	-39.3	-39.6	-13	-26.6

Substitution Procedure:
1. Select emissions that pass with less than 20 dB margin, note the Target level -- reading on spectrum analyzer.
2. Duplicate this targeted reading with Signal Generator, allowing for antenna horn gain and cable insertion loss.
3. Compare calculated power output to specification.

Location: TUV 3-meter roof site

Tested by A. Laudani

TÜV AMERICA, INC. 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone 858 678 1400 FAX 858 546 0364

4.0 RADIATED SPURIOUS EMISSIONS (RECEIVE)

4.1 EQUIPMENT

Test Conditions: RADIATED SPURIOUS EMISSIONS: RSS 129 AND RSS 133

The RADIATED SPURIOUS EMISSIONS measurements were performed at the San Diego Testing Facility:

☐ **- Test not applicable**

■ - Roof (Small Open Area Test Site)

Testing was performed at a test distance of:

■ - 3 meters

Test Equipment Used:

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Date Cal'ed
E4440A	7500	Spectrum Analyzer	Agilent	3564	08/04
TUV 1 - 18 GHz	719	PreAmplifier	TUV	--	NCR*
3115	453	Horn Antenna	Electro Magnetics	2495	01/05
FF 6548-2	777	900 MHz High Pass Filter	Sage	006	NCR*
FF 6549-1	781	2000 MHz Low Pass Filter	Sage	004	NCR*

Remarks: One year calibration cycle for all test equipment and sites. (*) No Calibration Required.

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4.2 DATA

REPORT No: SC305450 TESTER: Alan Laudani SPEC: FCC Part 15 para 15.109(a) RSS129; RSS133

CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters

E U T: M200 w/ Radiall/Larsen antenna TEST SITE: Roof

EUT MODE: Receive LO CDMA BICONICAL: N/A

DATE: Dec. 22, 2003 LOG: N/A

NOTES: OTHER: 453

above 1GHz: RBW & VBW 1 MHz for Pk; RBW 1MHz and VBW 10Hz for AVG

Ambient Temp. 22°C RH 59%

CF = Antenna Factor + Cable Loss - Preamplifier Gain

v.beta1a

FREQ (MHz)	VERTICAL (dBuV) pk	VERTICAL (dBuV) av	HORIZONTAL (dBuV) pk	HORIZONTAL (dBuV) av	CF (dB/m)	MAX LEVEL (dBuV/m) pk	MAX LEVEL (dBuV/m) av	SPEC LIMIT (dBuV/m) pk	SPEC LIMIT (dBuV/m) av	MARGIN (dB) pk	MARGIN (dB) av	EUT Rotation	Antenna Height	Notes
1053.3	40.6	35.5	46.2	40.7	-14.80	**31.4**	**25.9**	74	54	-42.6	-28.1		1	ambient
2106.6	50.5	45.4	46.8	36.2	-7.04	**43.5**	**38.4**	74	54	-30.5	-15.6	344	1	
3159.9	27.9	17.5	27.3	17.6	-2.02	**25.9**	**15.6**	74	54	-48.1	-38.4		1	noise floor
4213.2	26.8	17.6	27.3	17.7	-0.82	**26.5**	**16.9**	74	54	-47.5	-37.1		1	noise floor
5266.5	29.3	19.8	28.6	20	2.21	**31.5**	**22.2**	74	54	-42.5	-31.8		1	noise floor
1065.09	41.7	35.7	54.4	47.3	-14.69	**39.7**	**32.6**	74	54	-34.3	-21.4		1	ambient
2130.18	48.3	41.9	49.3	38.1	-6.96	**42.3**	**34.9**	74	54	-31.7	-19.1	220	1	
3195.27	26.2	15.6	26.7	15.7	-1.90	**24.8**	**13.8**	74	54	-49.2	-40.2		1	noise floor
4260.36	24.9	15.4	26.7	15.5	-0.99	**25.7**	**14.5**	74	54	-48.3	-39.5		1	noise floor
5325.45	27	17.1	25.4	17.1	2.58	**29.6**	**19.7**	74	54	-44.4	-34.3		1	noise floor
1076.91	48.3	35.3	43.3	39.1	-14.58	**33.7**	**24.5**	74	54	-40.3	-29.5		1	ambient
2153.82	49.6	40.8	44.9	36.6	-6.88	**42.7**	**33.9**	74	54	-31.3	-20.1	350	1	
3230.73	25.3	15.4	26.2	15.5	-1.77	**24.4**	**13.7**	74	54	-49.6	-40.3		1	noise floor
4307.64	27.5	15.8	25.7	15.8	-1.15	**26.4**	**14.7**	74	54	-47.6	-39.3		1	noise floor
5384.55	23.8	17.3	26	17.3	2.96	**29.0**	**20.3**	74	54	-45	-33.7		1	noise floor

REPORT No: SC305450 TESTER: Alan Laudani SPEC: FCC Part 15 para 15.109(a) RSS 129; RSS 133

CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters

E U T: M200 w/ Radiali/Larsen antenna TEST SITE: Roof

EUT MODE: Receive LO PCS BICONICAL: N/A

DATE: Dec. 22, 2003 LOG: N/A

NOTES: OTHER: 453

above 1GHz: RBW & VBW 1 MHz for Pk; RBW 1MHz and VBW 10Hz for AVG

Ambient Temp. 13°C RH 92%

CF = Antenna Factor + Cable Loss - Preamplifier Gain

v.beta1a

FREQ (MHz)	VERTICAL (dBuV) pk	VERTICAL (dBuV) av	HORIZONTAL (dBuV) pk	HORIZONTAL (dBuV) av	CF (dB/m)	MAX LEVEL (dBuV/m) pk	MAX LEVEL (dBuV/m) av	SPEC LIMIT (dBuV/m) pk	SPEC LIMIT (dBuV/m) av	MARGIN (dB) pk	MARGIN (dB) av	EUT Rotation	Antenna Height	Notes
2114.85	63.3	51.4	66.9	54.2	-7.01	**59.9**	**47.2**	74	54	-14.1	-6.8		1	ambient
4229.7	42.0	34.6	40.0	29.9	-0.88	**41.1**	**33.7**	74	54	-32.9	-20.3	181	1	
6344.55	38.8	27.4	37.9	28.7	6.01	**44.8**	**34.7**	74	54	-29.2	-19.3		1	noise floor
8459.4	40.2	29.8	39.1	29.8	8.77	**49.0**	**38.6**	74	54	-25.0	-15.4		1	noise floor
10574.25	43.3	31.0	41.9	31	12.16	**55.5**	**43.2**	74	54	-18.5	-10.8		1	noise floor
2143.6	47.6	39.5	46.6	35.9	-6.91	**40.7**	**32.6**	74	54	-33.3	-21.4	341	1.1	
4287.2	37.4	28.5	35.1	26.2	-1.08	**36.3**	**27.4**	74	54	-37.7	-26.6	220	1	
6430.8	38.0	28.5	35.4	26.8	6.06	**44.1**	**34.6**	74	54	-29.9	-19.4	220	1	
8574.4	40.3	29.0	39.0	28.6	8.98	**49.3**	**38.0**	74	54	-24.7	-16.0		1	noise floor
10718	40.3	30.7	38.9	30.5	12.48	**52.8**	**43.2**	74	54	-21.2	-10.8		1	noise floor
2172.35	45.8	35.3	36.7	35.4	-6.81	**39.0**	**28.6**	74	54	-35.0	-25.4	240	1	
4344.7	30.6	22.0	30.0	21.6	-1.27	**29.3**	**20.7**	74	54	-44.7	-33.3	220	1	
6517.05	33.2	24.3	31.7	22.5	6.14	**39.3**	**30.4**	74	54	-34.7	-23.6	220	1	
8689.4	36.9	26.7	35.0	26.7	9.25	**46.2**	**36.0**	74	54	-27.8	-18.0		1	noise floor
10861.75	38.5	30.8	37.8	30.7	12.80	**51.3**	**43.6**	74	54	-22.7	-10.4		1	noise floor

REPORT No: SC305450 TESTER: Alan Laudani SPEC: FCC Part 15 para 15.109(a); RSS 129; RSS133

CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters

E U T: M200 w/ Radiall/Larsen antenna TEST SITE: Roof

EUT MODE: Receive LO FM BICONICAL: N/A

DATE: Dec. 22, 2003 LOG: N/A

NOTES: OTHER: 453

above 1GHz: RBW & VBW 1 MHz for Pk; RBW 1MHz and VBW 10Hz for AVG

Ambient Temp. 22°C RH 59%

CF = Antenna Factor + Cable Loss - Preamplifier Gain

v.beta1a

FREQ (MHz)	VERTICAL (dBuV) pk	av	HORIZONTAL (dBuV) pk	av	CF (dB/m)	MAX LEVEL (dBuV/m) pk	av	SPEC LIMIT (dBuV/m) pk	av	MARGIN (dB) pk	av	EUT Rotation	Antenna Height	Notes
1052.64	53.6	35.7	63.7	42.3	-14.81	**48.9**	**27.5**	74	54	-25.1	-26.5		1	ambient
2105.28	46.4	37.0	47.5	37.4	-7.04	**40.5**	**30.4**	74	54	-33.5	-23.6	325	1	
3157.92	23.9	15.1	24.6	15.1	-2.03	**22.6**	**13.1**	74	54	-51.4	-40.9		1	noise floor
4210.56	23.2	14.3	23.4	14.4	-0.82	**22.6**	**13.6**	74	54	-51.4	-40.4		1	noise floor
5263.2	25.2	16.0	23.3	16.1	2.18	**27.4**	**18.3**	74	54	-46.6	-35.7		1	noise floor
1065.09	42.8	35	51.1	46	-14.69	**36.4**	**31.3**	74	54	-37.6	-22.7		1	ambient
2130.18	47.6	37.5	48.8	36.1	-6.96	**41.8**	**30.5**	74	54	-32.2	-23.5	220	1	
3195.27	25.1	14.7	24.6	14.6	-1.90	**23.2**	**12.8**	74	54	-50.8	-41.2		1	noise floor
4260.36	25	13.6	24.3	13.6	-0.99	**24.0**	**12.6**	74	54	-50	-41.4		1	noise floor
5325.45	24.6	14.5	22.8	14.6	2.58	**27.2**	**17.2**	74	54	-46.8	-36.8		1	noise floor
1077.57	46.5	36.2	50.6	39	-14.57	**36.0**	**24.4**	74	54	-38.0	-29.6		1	ambient
2155.14	52.3	41.1	49.3	47.7	-6.87	**45.4**	**40.8**	74	54	-28.6	-13.2	290	1	
3232.71	24.4	14.5	25.9	14.5	-1.76	**24.1**	**12.7**	74	54	-49.9	-41.3		1	noise floor
4310.28	24.3	13.5	23.9	13.6	-1.15	**23.1**	**12.4**	74	54	-50.9	-41.6		1	noise floor
5387.85	24.3	14.1	23.9	14.1	2.98	**27.3**	**17.1**	74	54	-46.7	-36.9		1	noise floor

5.0 ATTESTATION STATEMENT

GENERAL REMARKS:

SUMMARY:

All tests were performed per CFR 47, Part(s) 22.917(b)(2), 24.238(a); and 24.232(b); RSS 129 and RSS 133.

■ - Performed

The Equipment Under Test

■ - **Fulfills** the requirements of CFR 47, Part(s) 22.917(b)(2), 24.238(a); and 24.232(b); RSS 129 and RSS 133.

Testing Start Date: 12 December 2003

Testing End Date: 22 December 2003

- TÜV AMERICA, INC. -

Responsible Engineer:

Jim Owen
(EMC Chief Engineer)

Responsible Engineer:

Alan Laudani
(EMC Engineer)

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