RADIATED EMISSIONS

DATA

FOR

KYOCERA WIRELESS
10300 Campus Point Drive
San Diego, CA 92121

Prepared by

TÜV AMERICA
10040 Mesa Rim Road
San Diego, CA 92121-2912

Measurement Requirements (CFR 47 Part 15, Paragraph 15.109(a))

The following measurements were performed by TÜV America. To the best of my knowledge these tests were conducted in accordance with the procedures outlined in Part 2 of the Commission's Rules and Regulations. The data presented below demonstrates compliance with the appropriate technical standards.

Floyd R. Fleury
EMC Manager

TÜV AMERICA, INC. 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone 858 546 3999 FAX 858 546 0364

Emissions Test Conditions: RADIATED EMISSIONS

Roof (small open area test site)

The *Radiated Emissions* measurements were performed using the following equipment:

Test Equipment Used:

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Cal Date
HP8566B	407	Spectrum Analyzer	Hewlett Packard	2311A02209	12/02
HP8566B	743	Spectrum Analyzer	Hewlett Packard	2618A02913	11/02
Cable 1	731	30' Cable	United Microwave Prod	--	NCR*
Cable 2	756	10" Cable	United Microwave Prod	--	NCR*
Cable 3	6788	3" Cable	United Microwave Prod	--	NCR*
Cable 4	6790	40' Cable	United Microwave Prod	--	NCR*
HP8350B	6707	Sweep Signal Generator	Hewlett Packard	2328A00112	NCR*
AMF-5D-010180-35-10P	719	Amplifier	Miteq	549460	NCR*
3115	453	Antenna, Horn	Electro Mechanics Co	3564	01/03
3115	251	Antenna, Horn	Electro Mechanics Co	2595	12/02
8481A	726	Power Sensor	Hewlett Packard	1926A27528	12/02
HP436A	775	Power Meter	Hewlett Packard	1918A05312	09/02
FF6549-2	783	2000 MHz High Pass Filter	Sage	008	NCR*
FF6549-1	778	900 MHz High Pass Filter	Sage	005	NCR*

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

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Technical Documentation

Test Data Sheets

and

Test Setups

TÜV AMERICA, INC. 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone 858 546 3999 FAX 858 546 0364

REPORT No: SC301623 TESTER: Alan Laudani SPEC: FCC Part 15 para 15.109(a)

CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters

E U T: KE424C TEST SITE: Roof

EUT MODE: Receive LO CDMA BICONICAL: N/A

DATE: April 3, 2003 LOG: N/A

OTHER: 251

NOTES: above 1GHz: RBW & VBW 1 MHz for Pk; RBW 1MHz and VBW 10Hz for AVG
No other emissions evident.
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	46	38.6	48.1	37.4	-13.61	**34.49**	**25**	74	54	-39.5	-29			noise floor
2106.6	54.5	49.5	51.3	41.9	-6.31	**48.19**	**43.2**	74	54	-25.8	-10.8	120	1.1	
3159.9	43.3	33	44.2	32.8	-2.22	**41.98**	**30.8**	74	54	-32	-23.2			noise floor
4213.2	47.9	37.5	45.6	34.1	-0.03	**47.87**	**37.5**	74	54	-26.1	-16.5	158	1.1	
5266.5	46.2	33.4	44.3	33.6	2.62	**48.82**	**36.2**	74	54	-25.2	-17.8			noise floor
6319.8	34.6	23.1	35.3	23.1	5.51	**40.81**	**28.6**	74	54	-33.2	-25.4			noise floor
1065.09	46.6	36.8	49.3	37.7	-13.52	**35.78**	**24.2**	74	54	-38.2	-29.8			noise floor
2130.18	54.3	50.5	53.8	42.8	-6.20	**48.1**	**44.3**	74	54	-25.9	-9.7	180	1.1	
3195.27	43.2	33.4	40.8	33.7	-2.10	**41.1**	**31.6**	74	54	-32.9	-22.4			noise floor
4260.36	48.3	41.2	45.6	34.5	-0.12	**48.18**	**41.1**	74	54	-25.8	-12.9	170	1	
5325.45	48.5	40.3	46.1	33.9	3.04	**51.54**	**43.3**	74	54	-22.5	-10.7	180	1	
6390.54	44.0	33.0	43.7	33.2	5.47	**49.47**	**38.7**	74	54	-24.5	-15.3			noise floor
1076.91	45.5	36.3	50.9	38.1	-13.43	**37.47**	**24.7**	74	54	-36.5	-29.3			noise floor
2153.82	56.2	52.2	50.7	42	-6.09	**50.11**	**46.1**	74	54	-23.9	-7.89	180	1	
3230.73	43.9	32.6	43.6	33.1	-1.97	**41.93**	**31.1**	74	54	-32.1	-22.9			noise floor
4307.64	48.7	41.4	46.9	36.7	-0.22	**48.48**	**41.2**	74	54	-25.5	-12.8	172	1.1	
5384.55	43.3	32.1	44	32.3	3.47	**47.47**	**35.8**	74	54	-26.5	-18.2			noise floor
6461.46	33.5	22.1	34.6	22.2	5.42	**40.02**	**27.6**	74	54	-34	-26.4			noise floor

REPORT No: SC301623 TESTER: Alan Laudani SPEC: FCC Part 15 para 15.109(a)

CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters

E U T: KE424C TEST SITE: Roof

EUT MODE: Receive LO FM BICONICAL: N/A

DATE: April 3, 2003 LOG: N/A

NOTES: OTHER: 251

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

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
1052.64	51.5	39.4	50.6	38.9	-13.61	**37.89**	**25.8**	74	54	-36.1	-28.2			noise floor
2105.28	57.6	42.6	52.0	41.4	-6.32	**51.28**	**36.3**	74	54	-22.7	-17.7	181	1.4	
3157.92	43.6	32.5	44.9	32.6	-2.23	**42.67**	**30.4**	74	54	-31.3	-23.6			noise floor
4210.56	43.8	37.3	46.5	33.9	-0.02	**46.48**	**37.3**	74	54	-27.5	-16.7	190	1.3	
5263.2	44.5	33.4	44.3	33.5	2.60	**47.1**	**36.1**	74	54	-26.9	-17.9			noise floor
6315.84	34.4	22.9	34.8	22.9	5.51	**40.31**	**28.4**	74	54	-33.7	-25.6			noise floor
1065.09	50.6	36.6	52.0	37.4	-13.52	**38.48**	**23.9**	74	54	-35.5	-30.1			noise floor
2130.18	55.0	50.5	57.2	44.0	-6.20	**51**	**44.3**	74	54	-23	-9.7	172	1.3	
3195.27	43.7	33.3	45.2	33.5	-2.10	**43.1**	**31.4**	74	54	-30.9	-22.6			noise floor
4260.36	48.5	40.0	45.5	34.4	-0.12	**48.38**	**39.9**	74	54	-25.6	-14.1	186	1.1	
5325.45	44.2	33.0	44.6	33.0	3.04	**47.64**	**36**	74	54	-26.4	-18			noise floor
6390.54	33.5	22.3	33.9	22.3	5.47	**39.37**	**27.8**	74	54	-34.6	-26.2			noise floor
1077.57	50.4	37.4	51.7	38.4	-13.43	**38.27**	**25**	74	54	-35.7	-29			noise floor
2155.14	57.9	52.8	52.1	46.6	-6.09	**51.81**	**46.7**	74	54	-22.2	-7.29	167	1	
3232.71	44.2	32.6	44.3	32.8	-1.96	**42.34**	**30.8**	74	54	-31.7	-23.2			noise floor
4310.28	50.0	42.2	47.3	35.8	-0.22	**49.78**	**42**	74	54	-24.2	-12	205	1.1	
5387.85	45.0	32.2	43.2	32.4	3.49	**48.49**	**35.9**	74	54	-25.5	-18.1			noise floor
6465.42	34.3	22.4	33.4	22.3	5.42	**39.72**	**27.8**	74	54	-34.3	-26.2			noise floor

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REPORT No: SC301623 TESTER: Alan Laudani SPEC: FCC Part 15 para 15.109(a)

CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters

E U T: KE424C TEST SITE: Roof

EUT MODE: Receive LO PCS BICONICAL: N/A

DATE: April 4, 2003 LOG: N/A

NOTES: OTHER: 251

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

No other emissions evident.

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	57	53.9	55.7	51.7	-6.27	**50.73**	**47.6**	74	54	-23.3	-6.37	170	1.4	
4229.7	48.7	40.5	46.4	36.4	-0.06	**48.64**	**40.4**	74	54	-25.4	-13.6	164	1.3	
6344.55	34.5	23.6	34.1	23.6	5.49	**39.99**	**29.1**	74	54	-34	-24.9			noise floor
8459.4	33.7	21.7	34.2	21.8	9.91	**44.11**	**31.7**	74	54	-29.9	-22.3			noise floor
10574.25	32.8	22.3	32.2	22.4	12.33	**45.13**	**34.7**	74	54	-28.9	-19.3			noise floor
12689.1	43.9	33.1	43.7	33.1	13.72	**57.62**	**46.8**	74	54	-16.4	-7.18			noise floor
2143.6	56.8	55.1	49.6	45.1	-6.14	**50.66**	**49**	74	54	-23.3	-5.04	150	1.4	
4287.2	48.9	40.2	46	34.6	-0.17	**48.73**	**40**	74	54	-25.3	-14	174	1.1	
6430.8	34.8	23.7	34.9	23.8	5.44	**40.34**	**29.2**	74	54	-33.7	-24.8			noise floor
8574.4	33.1	21.9	34	21.9	10.16	**44.16**	**32.1**	74	54	-29.8	-21.9			noise floor
10718	34	22.3	29.8	22.3	12.59	**46.59**	**34.9**	74	54	-27.4	-19.1			noise floor
12861.6	45.6	33.8	45.6	33.7	13.10	**58.7**	**46.9**	74	54	-15.3	-7.1			noise floor
2172.35	58.3	55.7	50.6	46.5	-6.01	**52.29**	**49.7**	74	54	-21.7	-4.31	184	1.7	
4344.7	45.3	34.9	46	35.8	-0.29	**45.71**	**35.5**	74	54	-28.3	-18.5	175	1.1	
6517.05	41.2	30.2	41.4	31.2	5.46	**46.86**	**36.7**	74	54	-27.1	-17.3			noise floor
8689.4	42.1	31.5	43.2	31.4	10.42	**53.62**	**41.9**	74	54	-20.4	-12.1			noise floor
10861.75	41.5	30.4	41.2	30.4	12.85	**54.35**	**43.3**	74	54	-19.6	-10.7			noise floor
13034.1	44.2	32.8	44.1	32.8	12.73	**56.93**	**45.5**	74	54	-17.1	-8.47			noise floor

Photograph of Test Setup

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Photograph of Test Setup

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