

RADIATED EMISSIONS

DATA

FOR

**QUALCOMM, INC.
10300 Campus Point Drive
San Diego, CA 92121**

Prepared by

**TÜV PRODUCT SERVICE
10040 Mesa Rim Road
San Diego, CA 92121-2912**

Measurement Requirements (CFR 47 Part 22, Paragraph 22.917(b)(2) and Part 24, Paragraph 24.238(a))

The following measurements were performed by TÜV Product Service. 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

Emissions Test Conditions: SPURIOUS RADIATED EMISSIONS

Roof (small open area test site)

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

Test Equipment Used:

Model No.	Prop. No.	Description	Manufacturer	Serial No.	Cal Due Date
8586B	721	Spectrum Analyzer	Hewlett Packard	2542A12099	06/02
PreAmp 2 – 20 GHz	752	PreAmp	TUV PS	--	N/A*
3115	251	Antenna, Horn	Electro Mechanics Co	2595	06/02
Cable 1	733	30' cable	Universal Microwave Prod	--	N/A*
Cable 2	655	6" cable	Universal Microwave Prod	--	N/A*
FF 6549-1	778	900 MHz High Pass Filter	Sage	5	N/A*
FF 6548-2	782	2000 MHz High Pass Filter	Sage	007	N/A*

Remarks: (*) Verified

Report No. SC202278-03



FCC Testing

REPORT No: SC202278 TESTER: Rodal Resolme SPEC: FCC 22.917(b)(2)
 CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters
 E UT: KWC-2345 s/n:D9-V-001LXY TEST SITE: Roof
 EUT MODE: Transmit - FM BICONICAL: N/A
 DATE: April 22, 2002 ERP/EIRP Facto 7 LOG: N/A

NOTES: No emissions detected from 30MHz to 1GHz.
 above 1GHz: RBW & VBW 1 MHz for Pk; RBW 1MHz and VBW 10Hz for AVG
 below 1GHz: RBW & VBW 100 kHz for Pk; RBW 100kHz and VBW 10Hz for AVG
 CF = Antenna Factor + Cable Loss - Preamp/loss Gain + Preselector Loss

FREQ (MHz)	VERTICAL (dBuV)		HORIZONTAL (dBuV)		CF (dB/m)	MAX LEVEL (dBm/dB)		SPEC LIMIT (dBm)		MARGIN (dB)		EUT Rotation	Antenna Height	Notes	dBuV/m	dBuV/m
	pk	av	pk	av		pk	av	pk	av	pk	av					
824.04	124				0.0	26.6		-13.0	-13.0	-40.3	-43.2	0	2.1	Fundamental (Low Band)	124.0	0.0
1648.08	52	47.6	53.3	50.4	-9.3	-53.3	-56.2	-13.0	-13.0	-33.7	-35.8	0	1.5		44.0	41.1
2472.12	52.3	49	55.3	53.2	-4.6	-46.7	-48.8	-13.0	-13.0	-34.7	-35.8	0	1.5		50.7	48.6
3296.16	56.2	53.7	64.7	64.4	-1.7	-34.4	-34.7	-13.0	-13.0	-21.4	-21.7	180	1.3		63.0	62.7
4120.2	58.8	57.2	53.6	50.6	0.2	-38.4	-40.0	-13.0	-13.0	-25.4	-27	167	1.3		59.0	57.4
4944.24	48.8	42.2	53.4	50.4	0.6	-43.4	-46.4	-13.0	-13.0	-30.4	-33.4	259	1		54.0	51.0
5768.28	55.6	53.8	56.2	53.7	5.1	-36.1	-38.5	-13.0	-13.0	-23.1	-25.5	353	1		61.3	58.9
6592.32	57.3	55.3	56.6	54.6	5.8	-34.3	-36.3	-13.0	-13.0	-21.3	-23.3	188	2		63.1	61.1
7416.36	46.4	36.2	47.4	39.6	8.2	-41.7	-49.5	-13.0	-13.0	-28.7	-36.5	146	1.1		55.6	47.8
8240.4	45.5	33.8	47.9	37.5	9.4	-40.0	-50.4	-13.0	-13.0	-27	-37.4	53	1.4		57.3	46.9
836.49	124				0.0	26.6				26.64				Fundamental (Mid Band)	124.0	0.0
1672.98	53.4	50.3	60.3	59.1	-9.1	-46.1	-47.3	-13.0	-13.0	-33.1	-34.3	184	1.8		51.2	50.0
2509.47	50.3	46.3	53.3	51	-4.5	-48.5	-50.8	-13.0	-13.0	-35.5	-37.8	171	1.6		48.8	46.5
3345.96	52.9	49.2	66.1	65.6	-1.6	-32.8	-33.3	-13.0	-13.0	-19.8	-20.3	171	1.4		64.5	64.0
4182.45	56.1	54.1	66.2	65.4	0.0	-31.1	-31.9	-13.0	-13.0	-18.1	-18.9	155	1.4		66.2	65.4
5018.94	54.9	52.5	59.8	58.3	0.8	-36.7	-38.2	-13.0	-13.0	-23.7	-25.2	319	1		60.6	59.1
5855.43	47.7	39.6	52.3	47.5	5.3	-39.8	-44.6	-13.0	-13.0	-26.8	-31.6	0	1.5		57.6	52.8
6691.92	55.3	52.5	54.7	51	6.1	-35.9	-38.7	-13.0	-13.0	-22.9	-25.7	136	1.3		61.4	58.6
7528.41	46.1	33.1	45.4	33	8.4	-42.8	-55.8	-13.0	-13.0	-29.8	-42.8	0	1		54.5	41.5
8364.9	45.8	33.3	45.6	33.8	9.7	-41.9	-53.9	-13.0	-13.0	-28.9	-40.9	0	1		55.5	43.5
848.97	124				0.0	26.6				26.64				Fundamental (High Band)	124.0	0.0
1697.94	56.4	54.7	59.1	57.2	-8.9	-47.2	-49.1	-13.0	-13.0	-34.2	-36.1	176	2		50.2	48.3
2546.91	52.4	44.6	52	48	-4.3	-49.3	-53.7	-13.0	-13.0	-36.3	-40.7	350	1.6		48.1	43.7
3395.88	53.4	50.8	64.3	63.8	-1.4	-34.4	-34.9	-13.0	-13.0	-21.4	-21.9	0	1.8		62.9	62.4
4244.85	56.9	55	56.4	54.2	-0.1	-40.5	-42.4	-13.0	-13.0	-27.5	-29.4	145	1		56.8	54.9
5093.82	53.9	51.1	59.4	58.6	1.4	-36.6	-37.4	-13.0	-13.0	-23.6	-24.4	329	1.7		60.8	60.0
5942.79	49.1	41.7	48.9	43.8	5.5	-42.7	-48.0	-13.0	-13.0	-29.7	-35	339	1.9		54.6	49.3
6791.76	51.6	47.8	50.9	48.5	6.5	-39.3	-42.4	-13.0	-13.0	-26.3	-29.4	142	1.2		58.1	55.0
7640.73	45.5	35.6	46.4	37.1	8.5	-42.4	-51.7	-13.0	-13.0	-29.4	-38.7	200	1.2		54.9	45.6
8489.7	45.9	36	47.4	37	10.0	-40.0	-50.4	-13.0	-13.0	-27	-37.4	51	1.4		57.4	47.0

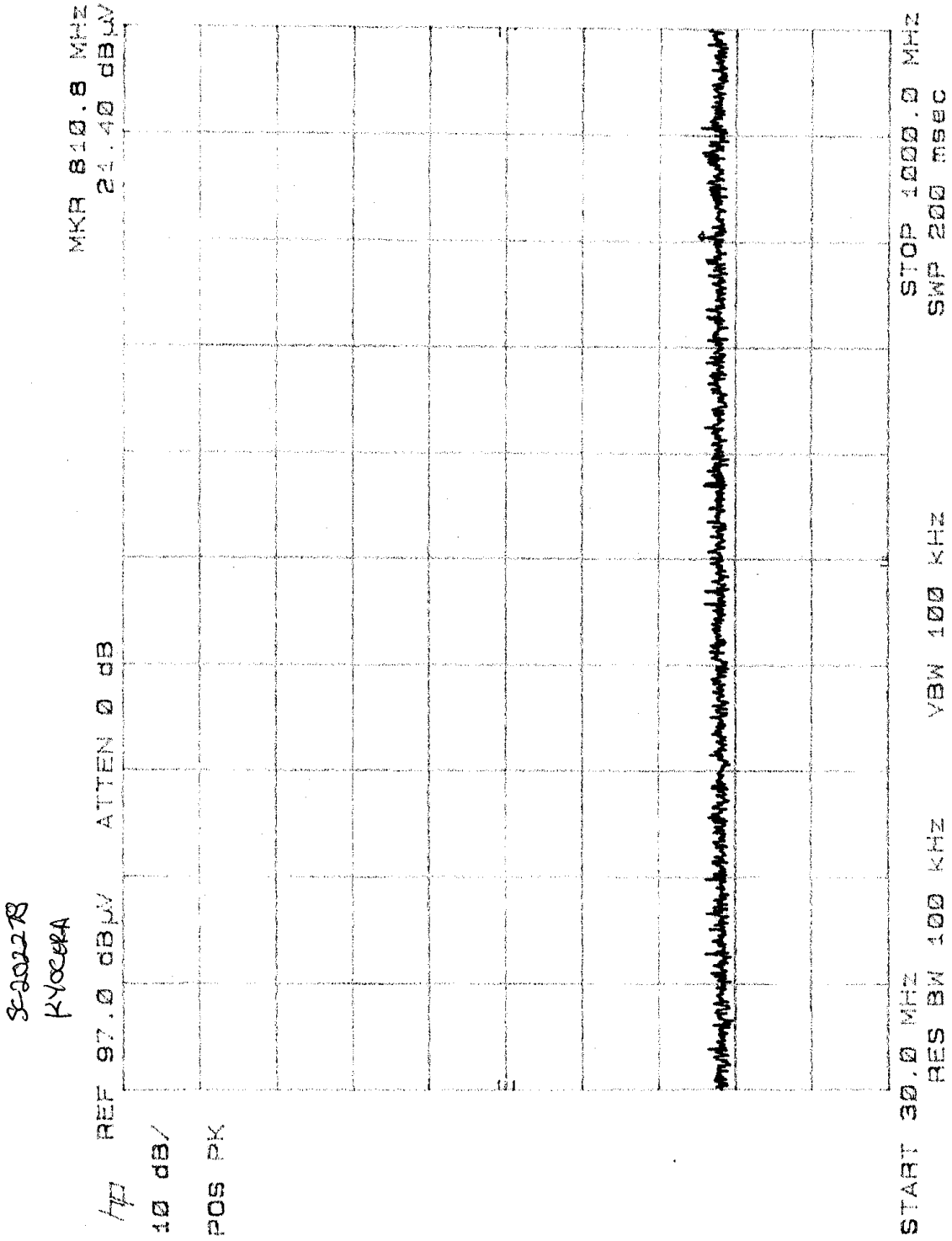
REPORT No: SC202278 TESTER: Rodet Resolme SPEC: FCC 22.917(b)(2)
 CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters
 E U T: KWC-2345 s/mD9V----001LXY TEST SITE: Roof
 EUT MODE: Transmit - CDMA BICONICAL: N/A
 DATE: April 22, 2002 ERP/EIRP Fact7 LOG: N/A
 NOTES: No emissions detected from 30Mhz to 1GHz. HORN: 251
 above 1GHz: RBW & VBW 1 MHz for Pk; RBW 1MHz and VBW 10Hz for AVG
 below 1GHz: RBW & VBW 100 kHz for Pk; RBW 100kHz and VBW 10Hz for AVG
 CF = Antenna Factor + Cable Loss - Pre-amplifier Gain + Preselector Loss

FREQ (MHz)	VERTICAL (dBuV)		HORIZONTAL (dBuV)		CF (dB/m)	MAX LEVEL (dBm(d))	SPEC LIMIT (dBm)		MARGIN (dB)		EUT Rotation	Antenna Height	Notes	dBuV/m	dBuV/m
	pk	av	pk	av			pk	av	pk	av					
824.7	123				0.0	25.6	-13.0	-13.0	-42.4	-51.7	74	2	Fundamental (Low Band)	123.0	0.0
1649.4	50.8	41.6	51.2	41.9	-9.3	-55.4	-13.0	-13.0	-42.4	-51.7	74	2		41.9	32.6
2474.1	53.9	46.6	51.9	43.9	-4.6	-48.1	-13.0	-13.0	-35.1	-42.4	235	1.1		49.3	42.0
3298.8	51.9	41.6	56.7	46.9	-1.7	-42.4	-13.0	-13.0	-29.4	-39.2	210	1.6		55.0	45.2
4123.5	52.4	41.7	53.2	43.1	0.2	-44.0	-13.0	-13.0	-31	-41.1	330	1.2		53.4	43.3
4948.2	49.9	39.4	52.9	42	0.6	-43.9	-13.0	-13.0	-30.9	-41.8	100	1		53.5	42.6
5772.9	51.2	40.3	53.9	43.3	5.1	-38.4	-13.0	-13.0	-25.4	-36	98	1.1		59.0	48.4
6597.6	51	37.8	49.8	37.6	5.8	-40.6	-13.0	-13.0	-27.6	-40.8	195	1.7		56.8	43.6
7422.3	46.1	32.4	47.5	34.5	8.2	-41.6	-13.0	-13.0	-28.6	-41.6	146	1.1		55.7	42.7
8247	44.4	33	44.4	32.9	9.4	-43.5	-13.0	-13.0	-30.5	-41.9	0	1		53.8	42.4
836.49	123				0.0	25.6	-13.0	-13.0	-39.4	-48.1	177	1.4	Fundamental (Mid Band)	123.0	0.0
1672.98	52.5	44	54	45.3	-9.1	-52.4	-13.0	-13.0	-38	-47.1	171	1.6		44.9	36.2
2509.47	49.8	34.7	50.8	41.7	-4.5	-51.0	-13.0	-13.0	-23.6	-32.6	169	1.4		60.7	37.2
3345.96	52.4	43	62.3	53.3	-1.6	-36.6	-13.0	-13.0	-28.6	-38.5	253	1		55.7	45.8
4182.45	55.7	45.8	54.3	44.9	0.0	-41.6	-13.0	-13.0	-26.6	-38.1	325	1.7		57.7	46.2
5078.94	52.3	41.1	56.9	45.4	0.8	-39.6	-13.0	-13.0	-26.6	-38.1	325	1.7		53.9	41.4
5855.43	46	34.6	48.6	36.1	5.3	-43.5	-13.0	-13.0	-30.5	-43	207	1		57.9	47.0
6691.92	51.7	40.92	51.8	40.1	6.1	-39.4	-13.0	-13.0	-26.4	-37.3	236	1.1		53.7	34.44
7528.41	45.2	33	45.3	33.6	8.4	-43.6	-13.0	-13.0	-30.6	-40.2	14	1		55.9	44.2
8364.9	45.9	34.5	46.2	33.3	9.7	-41.5	-13.0	-13.0	-28.5	-40.2	14	1		55.9	44.2
848.31	123				0.0	25.6	-13.0	-13.0	-34.5	-42.4	110	1.9	Fundamental (High Band)	123.0	0.0
1696.62	57.7	48.9	58.8	50.9	-8.9	-47.5	-13.0	-13.0	-35.2	-44.2	113	1.8		49.9	42.0
2544.93	53.5	44.5	51.9	41.6	-4.3	-48.2	-13.0	-13.0	-35.2	-44.2	113	1.8		49.2	40.2
3393.24	56.6	48.1	66.1	56.9	-1.4	-32.6	-13.0	-13.0	-19.6	-28.8	80	1.4		64.7	55.5
4241.55	57.6	48.2	53.9	44.1	-0.1	-39.8	-13.0	-13.0	-26.8	-36.2	67	1		57.5	48.1
5093.86	53.1	40.5	57.2	45.9	1.3	-38.8	-13.0	-13.0	-25.8	-37.1	266	1.5		56.5	47.2
5938.17	45.5	33.2	48.5	36.9	5.5	-43.3	-13.0	-13.0	-30.3	-42.9	267	1.4		54.0	41.4
6786.48	50.1	38	51.6	40.1	6.5	-39.3	-13.0	-13.0	-26.3	-37.8	85	1		58.1	46.6
7634.79	44.1	32.6	46.4	33.3	8.5	-42.4	-13.0	-13.0	-29.4	-42.5	0	1		54.9	41.8
8463.1	46	33.4	44.4	33.5	10.0	-41.4	-13.0	-13.0	-28.4	-40.9	0	1		56.0	43.5

REPORT No: sc202278 TESTER: Rodel Resolme SPEC: FCC 24.238(a)
 CUSTOMER: Kyocera Wireless TEST DIST: 3 Meters
 E U T: kwc-2345 s/in:DS9-V---001LXY TEST SITE: Roof
 EUT MODE: Transmit-PCS BICONICAL: N/A
 DATE: April 22, 2002 ERP/EIRP Facct 5.5 LOG: N/A
 HORN: 251

NOTES: No emissions detected from 30MHz to 1GHz.
 above 1GHz: RBW & VBW 1 MHz for Pk; RBW 1MHz and VBW 10Hz for AVG
 below 1GHz: RBW & VBW 100 kHz for Pk; RBW 100kHz and VBW 10Hz for AVG
 CF = Antenna Factor + Cable Loss - Preamp/Imp Gain + Preselector Loss

FREQ (MHz)	VERTICAL (dBuV)		HORIZONTAL (dBuV)		CF (dB/m)	MAX LEVEL (dBm(d))		SPEC LIMIT (dBm)		MARGIN (dB)	EUT Rotation	Antenna Height	Notes	dBuV/m	dBuV/m
	pk	av	pk	av		pk	av	pk	av						
1851.25	128				-7.8	24.9								120.2	-7.8
3702.5	50.4	42.3	54.5	46.3	-0.4	-41.2	-49.4	-13.0	-13.0	-28.2	-36.4	204	1.2	54.1	45.9
5553.75	55.1	47	60.4	53.2	4.5	-30.4	-37.6	-13.0	-13.0	-17.4	-24.6	200	1.6	64.9	57.7
7405	50.5	41.3	52.7	44.5	8.2	-34.4	-42.6	-13.0	-13.0	-21.4	-29.6	231	1.4	60.9	52.7
9256.25	47.3	36.5	45.9	33.3	10.4	-37.6	-48.4	-13.0	-13.0	-24.6	-35.4	165	1	57.7	46.9
11107.5	44	32.7	44.4	32.5	13.1	-37.7	-49.4	-13.0	-13.0	-24.7	-36.4	0	1	57.5	45.8
12958.75	50.1	38.4	49.2	37	12.7	-32.4	-44.1	-13.0	-13.0	-19.4	-31.1	160	1	62.8	51.1
14810	48.4	35.6	48.4	35.6	16.1	-30.7	-43.5	-13.0	-13.0	-17.7	-30.5	0	1	64.5	51.7
16651.25	47.3	36.2	47.9	36.3	18.5	-28.9	-40.5	-13.0	-13.0	-15.9	-27.5	0	1	66.4	54.8
18512.5	47.3	35.3	46.5	34.8	#REF!	#REF!	#REF!	-13.0	-13.0	#REF!	####	0	1	#REF!	#REF!
1880	128				-7.6	25.1				25.1				120.4	-7.6
3760	48.5	37.9	48.5	40.1	-0.3	-47.0	-55.4	-13.0	-13.0	-34	-42.4	132	1.1	48.2	39.8
5640	54.6	46.3	59.3	52.3	4.7	-31.3	-38.3	-13.0	-13.0	-18.3	-25.3	208	1.7	64.0	57.0
7520	49.2	39.6	50	39	8.4	-36.8	-47.2	-13.0	-13.0	-23.8	-34.2	19	1.2	58.4	48.0
9400	46.7	35.3	44.4	33.4	10.0	-38.6	-50.0	-13.0	-13.0	-25.6	-37	159	1	56.7	45.3
11280	44.4	33.1	44.4	32.8	13.2	-37.7	-49.0	-13.0	-13.0	-24.7	-36	0	1	57.6	46.3
13160	47.2	35.1	48.8	35.9	13.2	-33.3	-46.2	-13.0	-13.0	-20.3	-33.2	0	1	62.0	49.1
15040	47.7	36.5	47.9	36.4	17.0	-30.3	-41.7	-13.0	-13.0	-17.3	-28.7	0	1	64.9	53.5
16920	47.5	36.7	49.3	37.3	19.5	-26.5	-38.5	-13.0	-13.0	-13.5	-25.5	0	1	68.8	56.8
18800	51.9	39.9	51.3	40.4	#REF!	#REF!	#REF!	-13.0	-13.0	#REF!	####	0	1	#REF!	#REF!
1908.75	128				-7.4	25.3				25.3				120.6	-7.4
3817.5	48.9	39.4	49.4	40.7	-0.1	-46.0	-54.7	-13.0	-13.0	-33	-41.7	20	1	49.3	40.6
5726.25	54	46.3	57.7	50.6	4.9	-32.6	-39.7	-13.0	-13.0	-19.6	-26.7	332	1	62.6	55.5
7635	49.4	40.2	51.2	42.1	8.5	-35.5	-44.6	-13.0	-13.0	-22.5	-31.6	150	1	59.7	50.6
9543.75	46.4	33.7	45.8	34.2	9.8	-39.1	-51.3	-13.0	-13.0	-26.1	-38.3	0	1	56.2	44.0
11452.5	45.2	33	45.6	33.6	13.3	-36.4	-48.4	-13.0	-13.0	-23.4	-35.4	0	1	58.9	46.9
13361.25	47.1	35.8	47.7	36.2	14.0	-33.6	-45.1	-13.0	-13.0	-20.6	-32.1	0	1	61.7	50.2
15270	47.9	36.5	48	36.4	17.3	-29.9	-41.4	-13.0	-13.0	-16.9	-28.4	0	1	65.3	53.8
17178.75	47.7	36.5	47.7	36.9	21.1	-26.4	-37.2	-13.0	-13.0	-13.4	-24.2	0	1	68.8	58.0
19087.5	51.8	39	49.1	38.7	#REF!	#REF!	#REF!	-13.0	-13.0	#REF!	####	0	1	#REF!	#REF!



Photograph of Test Setup

