

RADIATED EMISSIONS

DATA

FOR

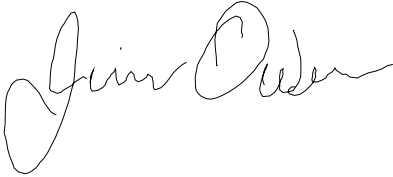
**KYOCERA WIRELESS
10300 Campus Point Drive
San Diego, CA 92121**

Prepared by

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

Measurement Requirements (CFR 47 Part 15, Paragraph 15.109(a); Part 22, Paragraph 22.917(b)(2); and Part 24, Paragraph 24.238(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.



Jim Owen
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.	Date Cal'ed
3115	6679	Double Ridge Guide Antenna	EMCO	2495	12/02
HP-8566B	6488	Spectrum Analyzer	Hewlett Packard	2618A02913	12/02
11975A	716	PreAmp	Hewlett Packard	2517A00639	NCR*
FF6549-2	783	2000 MHz High Pass Filter	Sage	008	NCR*
FF6549-1	778	900 MHz High Pass Filter	Sage	005	NCR*
E4440A	6814	Spectrum Analyzer	Hewlett Packard	MY42510441	08/03
CBL6111	6521	Bilog Antenna	Chase Electronics	1291	NCR*

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

Technical Documentation

Test Data Sheets

and

Test Setups

v.beta1a

v.beta1a

[illegible]

REPORT No: SC305131 TESTER: Alan Laudani SPEC: FCC Part 22 para 22.917(b)(2)

CUSTOMER: Kyocera Wireless

TEST DIST: 3 Meters

E U T: KX444

TEST SITE: Roof

EUT MODE: CDMA transmit

BICONICAL: N/A

DATE: 14-Nov-2003 ERP Factor 7 LOG: N/A

NOTES: Part 22 - RBW & VBW 1MHz HORN: 251

CF = Antenna Factor + Cable Loss - Preamplifier Gain

FREQ (MHz)	VERTICAL (dBuV) pk	HORIZONTAL (dBuV) pk	CF (dBm)	MAX LEVEL (dBm) pk	SPEC LIMIT (dBm) pk	MARGIN (dB) pk	EUT Rotation	Antenna Height	Notes
824.7									
1649.4	49.4	49.7	-9.3	-56.9	-13.0	-43.9	0	1.1	Fundamental (Low Band)
2474.1	55.3	51.9	-4.7	-46.8	-13.0	-33.8	233	1.1	
3298.8	48.5	45.6	-2.4	-51.2	-13.0	-38.2	230	1	
4123.5	46	46.7	-0.7	-51.3	-13.0	-38.3		1	noise level
4948.2	45.9	45.7	0.1	-51.3	-13.0	-38.3		1	noise level
5772.9	45.2	45.5	4.9	-46.9	-13.0	-33.9		1	noise level
6597.6	48.5	47.4	5.7	-43.2	-13.0	-30.2		1	noise level
7422.3	47.2	47.1	8.2	-41.9	-13.0	-28.9		1	noise level
8247	47.9	47.4	9.2	-40.3	-13.0	-27.3		1	noise level
836.49									
1672.98	50.2	49.6	-9.1	-56.2	-13.0	-43.2	220	1.1	Fundamental (Mid Band)
2509.47	55.9	56.1	-4.6	-45.8	-13.0	-32.8	232	1.4	
3345.96	46.3	46.2	-2.2	-53.3	-13.0	-40.3		1	noise level
4182.45	46.4	46.6	-0.8	-51.5	-13.0	-38.5		1	noise level
5018.94	47.3	45.4	0.4	-49.6	-13.0	-36.6		1	noise level
5855.43	48.1	48.8	5.2	-43.4	-13.0	-30.4		1	noise level
6691.92	47.3	47.3	6.0	-44.0	-13.0	-31		1	noise level
7528.41	46.2	46.9	8.4	-42.0	-13.0	-29		1	noise level
8364.9	46.8	47.5	9.4	-40.4	-13.0	-27.4		1	noise level
848.31									
1696.62	51.9	48.6	-8.9	-54.4	-13.0	-41.4	240	1	Fundamental (High Band)
2544.93	50	53.7	-4.5	-48.1	-13.0	-35.1	130	1	
3393.24	47	45.7	-2.1	-52.5	-13.0	-39.5		1	noise level
4241.55	46.8	46.4	-0.8	-51.4	-13.0	-38.4		1	noise level
5089.86	45.5	46	1.0	-50.4	-13.0	-37.4		1	noise level
5938.17	48.7	47.6	5.4	-43.2	-13.0	-30.2		1	noise level
6786.48	47.4	47.8	6.4	-43.2	-13.0	-30.2		1	noise level
7634.79	46.8	47.2	8.5	-41.7	-13.0	-28.7		1	noise level
8483.1	47.2	47.1	9.7	-40.5	-13.0	-27.5		1	noise level

REPORT No. SC305131 TESTER: Alan Laudani SPEC: FCC Part 22 para 22.917(b)(2)

CUSTOMER: Kyocera Wireless

TEST DIST: 3 Meters

E U T: KX444

TEST SITE: Roof

EUT MODE: FM transmit

BICONICAL: N/A

DATE: 14-Nov-2003 ERP Factor 7 LOG: N/A

HORN: 251

NOTES:

Part 22 - RBW & VBW 1MHz

CF = Antenna Factor + Cable Loss - Preampifier Gain

FREQ (MHz)	VERTICAL (dBuV) pk	HORIZONTAL (dBuV) pk	CF (dBm) pk	MAX LEVEL (dBm) pk	SPEC LIMIT (dBm) pk	MARGIN (dB) pk	EUT Rotation	Antenna Height	Notes
824.04									
1648.08	50.2	50.1	-9.3	-58.4	-13.0	-43.4	230	1	Fundamental (Low Band)
2472.12	51.8	57.3	-4.7	-44.8	-13.0	-31.8	230	1.4	
3296.16	50.1	46.7	-2.4	-49.6	-13.0	-36.6	75	1.5	
4120.2	46.6	46.1	-0.7	-51.4	-13.0	-38.4		1	noise level
4944.24	45.7	46.6	0.1	-50.6	-13.0	-37.6		1	noise level
5768.28	44.4	43.9	4.9	-48.1	-13.0	-35.1		1	noise level
6592.32	47.4	48.3	5.7	-43.4	-13.0	-30.4		1	noise level
7416.36	47.1	47.2	8.2	-42.0	-13.0	-29		1	noise level
8240.4	47.5	47.7	9.2	-40.5	-13.0	-27.5		1	noise level
836.49									
1672.98	49.4	51.3	-9.1	-55.1	-13.0	-42.1	181	1.6	Fundamental (Mid Band)
2509.47	53.6	54.1	-4.6	-47.8	-13.0	-34.8	235	1.3	
3345.96	47.2	46.7	-2.2	-52.4	-13.0	-39.4	116	1.1	
4182.45	46.4	46.4	-0.8	-51.7	-13.0	-38.7		1	noise level
5018.94	45	46	0.4	-50.9	-13.0	-37.9		1	noise level
5855.43	49	48.2	5.2	-43.2	-13.0	-30.2		1	noise level
6691.92	47	47.7	6.0	-43.6	-13.0	-30.6		1	noise level
7528.41	47.9	47.6	8.4	-41.0	-13.0	-28		1	noise level
8364.9	47.3	47	9.4	-40.6	-13.0	-27.6		1	noise level
848.97									
1697.94	52.1	50.4	0.0	-54.2	-13.0	-41.2	224	1.2	Fundamental (High Band)
2546.91	54.6	55.9	-4.5	-45.9	-13.0	-32.9	240	1.5	
3395.88	48.3	46.2	-2.1	-51.2	-13.0	-38.2	200	1.1	
4244.85	47.2	47.3	-0.8	-50.9	-13.0	-37.9		1	noise level
5093.82	45.3	45.7	1.0	-50.6	-13.0	-37.6		1	noise level
5942.79	47.8	47.9	5.4	-44.0	-13.0	-31		1	noise level
6791.76	47.2	47.7	6.4	-43.3	-13.0	-30.3		1	noise level
7640.73	46	46.7	8.5	-42.2	-13.0	-29.2		1	noise level
8488.7	46.9	47.1	9.7	-40.6	-13.0	-27.6		1	noise level

v.belara

REPORT No: SC305131 TESTER: A. Laudani SPEC: FCC Part 24 para 24.238(a)
 CUSTOMER: Kyocera Wireless
 E U T: KX444 TEST DIST: 3 Meters
 EUT MODE: PCS Transmit TEST SITE: Roof
 DATE: Nov. 14, 2003 EIRP Factor 5.5 LOG: N/A
 BICONICAL: N/A
 NOTES: HORN: 251

Part 24 - RBW 1 MHz									
CF = Antenna Factor + Cable Loss - Pre-amplifier Gain									
v_beta1a									
FREQ (MHz)	VERTICAL (dBuV) pk	HORIZONTAL (dBuV) pk	CF (dBm) pk	MAX LEVEL (dBm) pk	SPEC LIMIT (dBm) pk	MARGIN (dB) pk	EUT Rotation	Antenna Height	Notes
1851.25									Fundamental (Low Band)
3702.5	55.6	58.5	-1.4	-38.1	-13.0	-25.1	271	1.5	
5553.75	46.7	46	3.2	-45.3	-13.0	-32.3	273	1.1	
7405	47.5	47.3	6.6	-41.2	-13.0	-28.2		1	noise level
9256.25	47.7	47.2	8.6	-39.0	-13.0	-26.0		1	noise level
11107.5	46.4	45.8	11.0	-37.9	-13.0	-24.9		1	noise level
12958.75	49.2	49.9	10.7	-34.6	-13.0	-21.6		1	noise level
14810	49.8	50.1	13.9	-31.2	-13.0	-18.2		1	noise level
16661.25	50.9	49.7	15.8	-28.5	-13.0	-15.5		1	noise level
1880									Fundamental (Mid Band)
3760	58.2	59.1	-1.2	-37.4	-13.0	-24.4	253	1.3	
5640	48.7	45.6	3.5	-43.1	-13.0	-30.1	270	1	
7520	46.4	48.2	6.8	-40.2	-13.0	-27.2		1	noise level
9400	47.4	47.1	8.1	-39.7	-13.0	-26.7		1	noise level
11280	45.8	46.2	11.1	-38.0	-13.0	-25.0		1	noise level
13160	51.6	50.5	11.2	-32.5	-13.0	-19.5		1	noise level
15040	50.6	49.9	14.8	-29.8	-13.0	-16.8		1	noise level
16920	49.2	49	16.6	-29.4	-13.0	-16.4		1	noise level
1908.75									Fundamental (High Band)
3817.5	58.7	59.7	-1.1	-36.6	-13.0	-23.6	235	1.5	
5726.25	47	47.6	3.7	-44.0	-13.0	-31	230	1.2	
7635	47.2	47.4	6.9	-40.9	-13.0	-27.9		1	noise level
9543.75	47.2	46.9	7.9	-40.2	-13.0	-27.2		1	noise level
11452.5	45	45.1	11.2	-39.0	-13.0	-26		1	noise level
13361.25	50.3	50.3	11.9	-33.1	-13.0	-20.1		1	noise level
15270	49.7	50.7	15.1	-29.5	-13.0	-16.5		1	noise level
17178.75	50	49.4	18.2	-27.0	-13.0	-14		1	noise level

Photograph of Test Setup



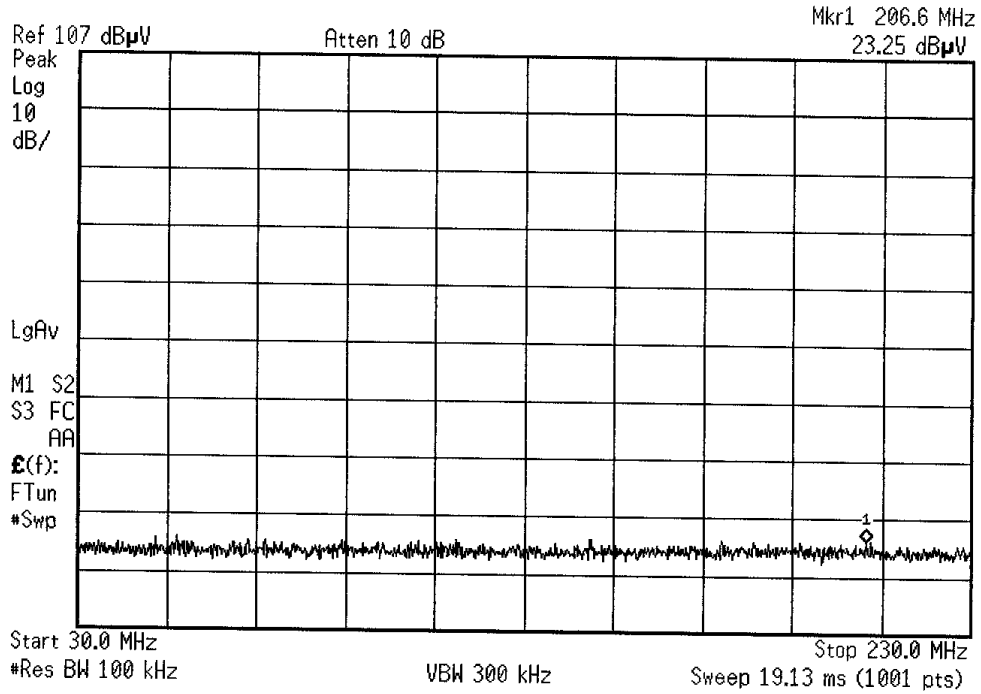
Photograph of Test Setup



Appendix

Supplemental Information

* Agilent 03:47:49 Nov 5, 2003



SC 305131

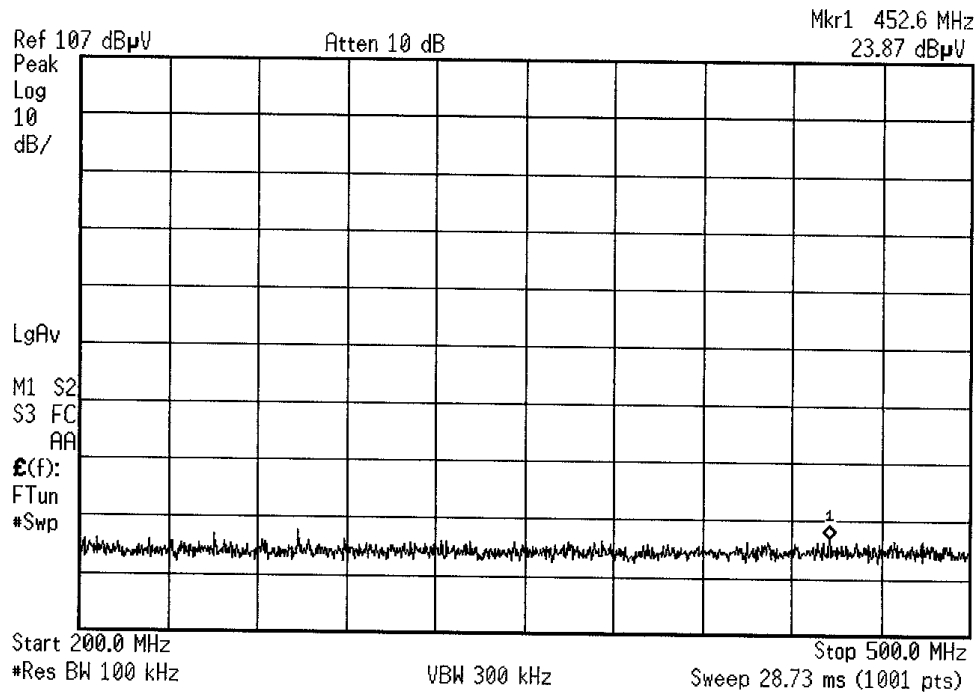
KX 444

Kyocera

SR3 11/14/03 AAG

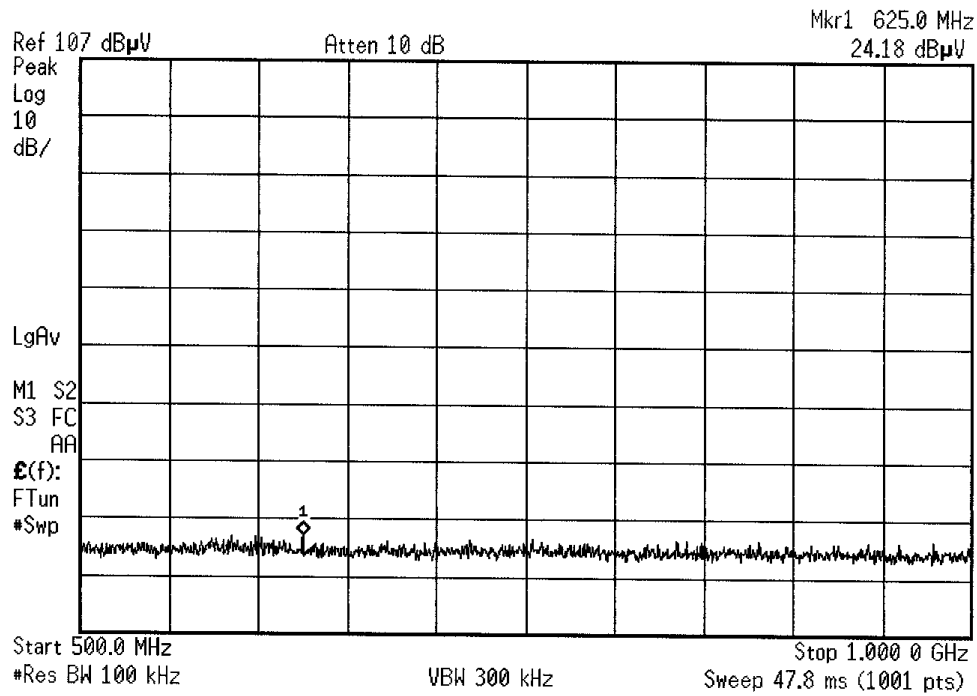
1 meter Precision
CDMA Mid channel

✱ Agilent 03:47:27 Nov 5, 2003



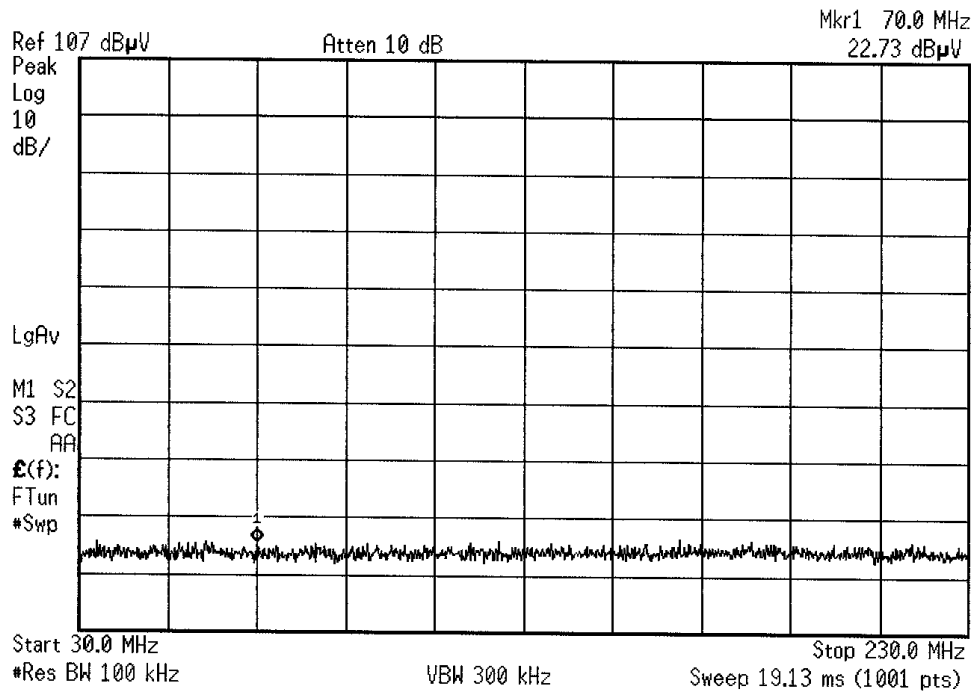
SC 305131
KX 444
Kyocera
SR3 11/14/03 AAP
CDMA Midchannel

* Agilent 03:47:10 Nov 5, 2003



SC305131
KX444
SR3 11/14/03 AKF
1 meter pre Scan
CDMA mid channel

✱ Agilent 03:44:56 Nov 5, 2003



SC305131

KX444

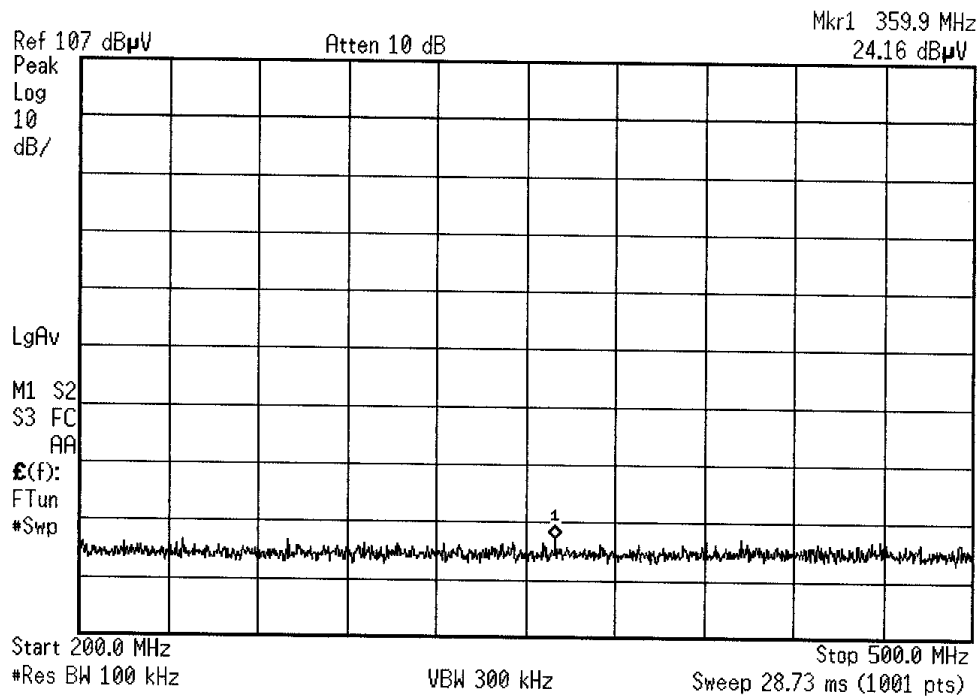
Kyocera

SR3 11/14/03 AAF

1 meter pre scan

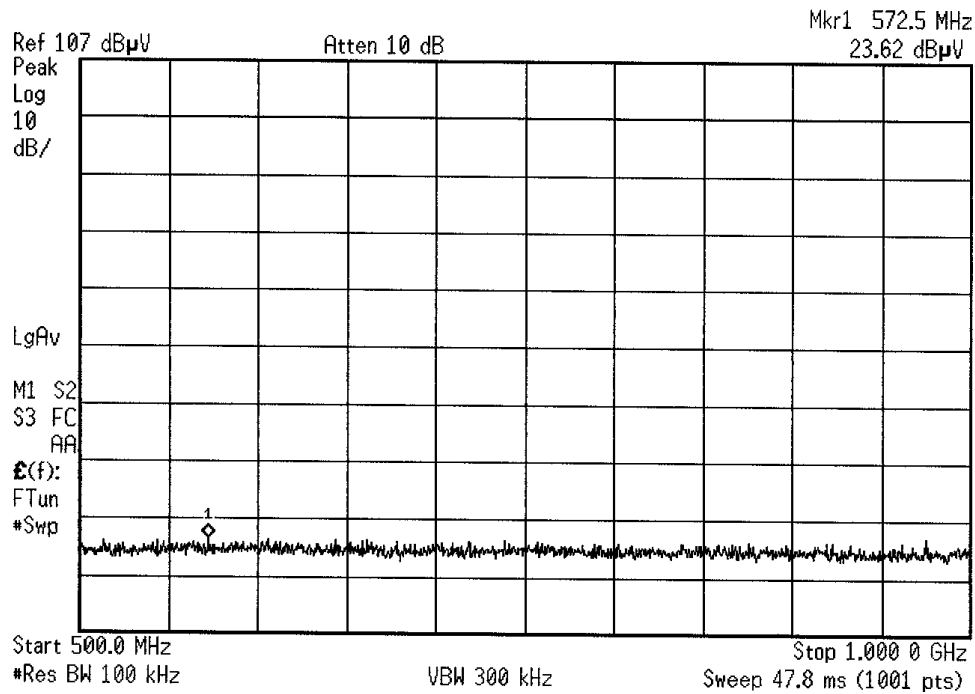
FM Midchannel

✱ Agilent 03:44:32 Nov 5, 2003



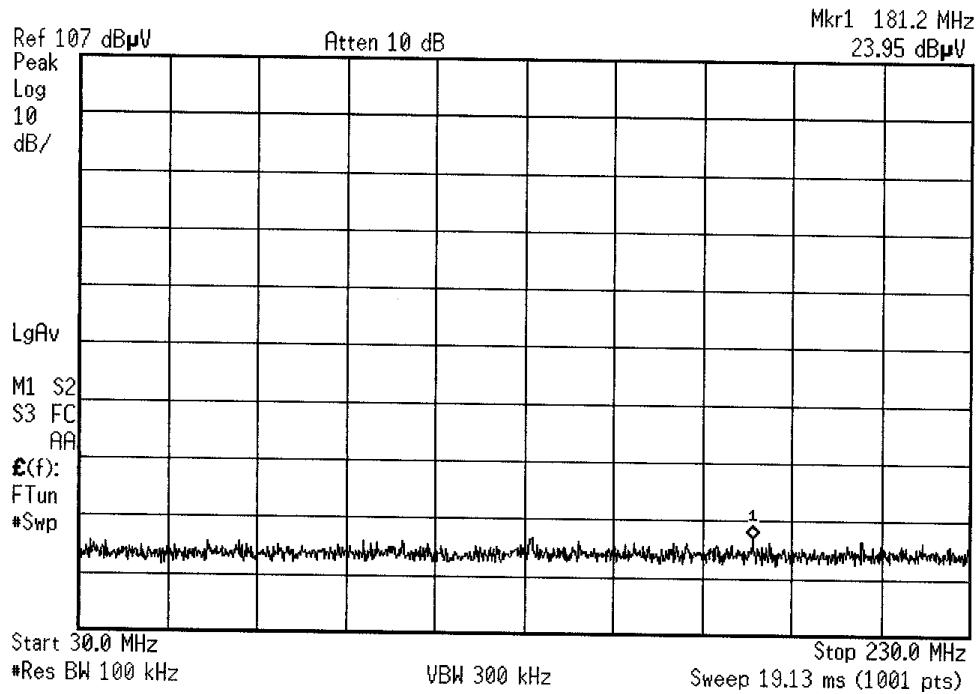
SC305131/
KX444
Kyocera
SR3 11/14/03 AAP
1-meter Pi+Scan
FM Mid channel

✱ Agilent 03:45:22 Nov 5, 2003



SC 305131
KX 444
Keyocera
SR3 11/14/03 AAP
1 meter Picostar
FM MIDCHANNEL

* Agilent 03:49:38 Nov 5, 2003



SC 305131

KX444

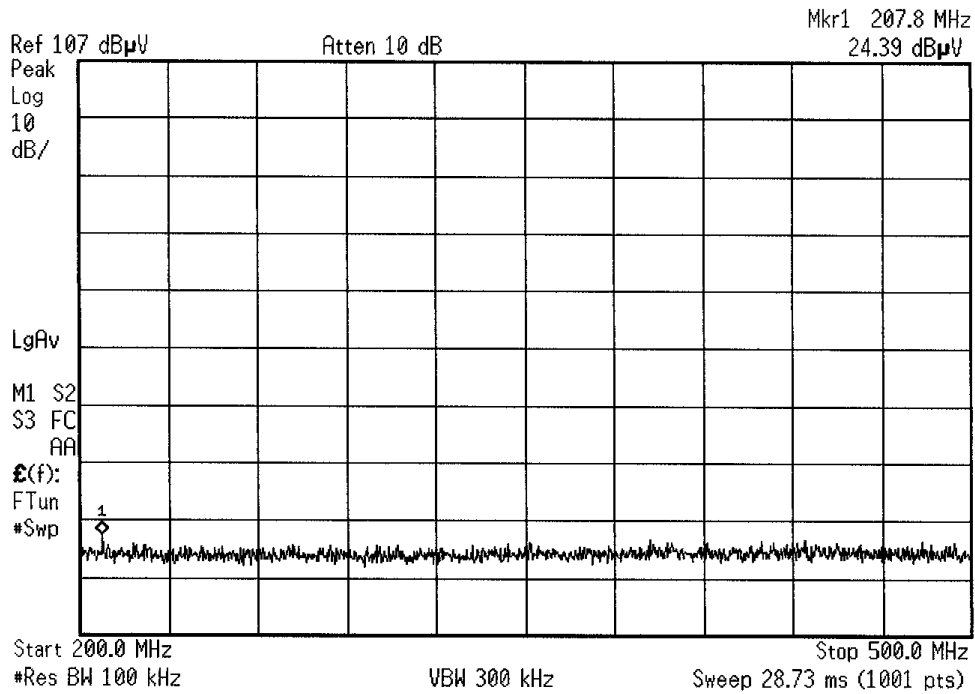
Kyocera

SR3 11/14/03 AAF

1 meter Prescan

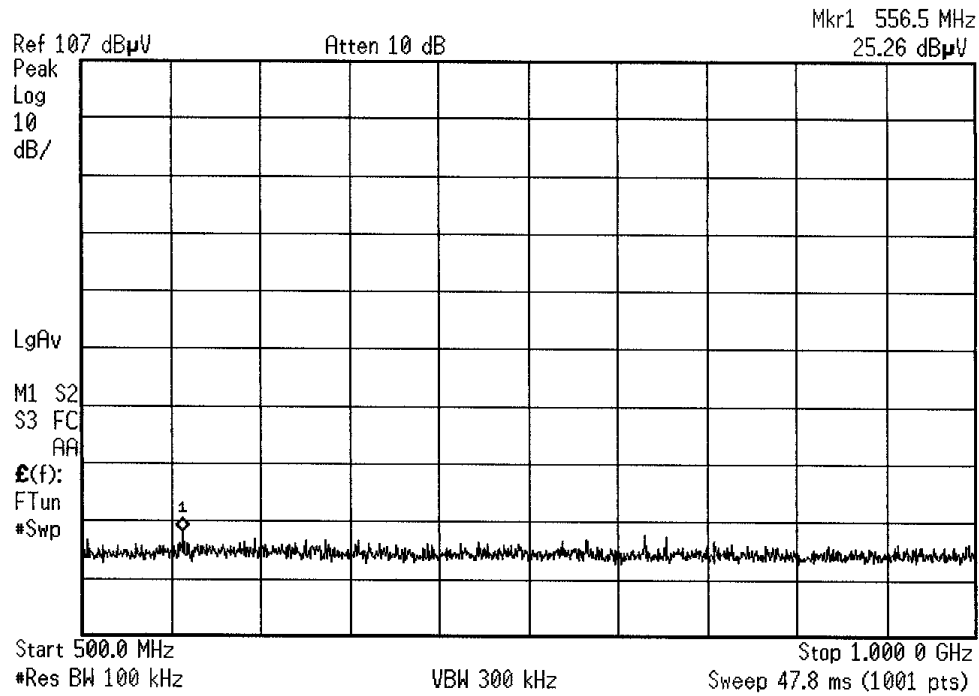
PCS mid channel

✱ Agilent 03:49:54 Nov 5, 2003



SC305131
KX444
Kyocera
SR3 11/14/03 *AP
1 meter PreScan
PCS midchannel

* Agilent 03:50:15 Nov 5, 2003



SC 305131
KX444
Kyocera
SR3 11/14/03 AAf
1 meter Prescan
PCS midchannel