CKC LABORATORIES, INC. Testing the Future

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EMC/SAFETY

SR TELECOM TEST REPORT

FOR THE

WIRELESS TERMINAL, 201-530075-001

FCC PART 15 SUBPART B SECTION 15.109 CLASS B AND SUBPART C SECTIONS 15.207 AND 15.247

COMPLIANCE

DATE OF ISSUE: SEPTEMBER 17, 2003

PREPARED FOR:

SR Telecom
9461 Willows Rd.
Redmond, WA 98052

PREPARED BY:

Mary Ellen Clayton
CKC Laboratories, Inc.
5473A Clouds Rest
Mariposa, CA 95338

W.O. No.: 81131

Date of test: August 4 -16, 2003

Report No.: FC03-060

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ADMINISTRATIVE INFORMATION

DATE OF TEST:	August 4 -16, 2003
DATE OF RECEIPT:	August 4, 2003
PURPOSE OF TEST:	To demonstrate the compliance of the Wireless Terminal, 201-530075-001, with the requirements for FCC Part 15 Subpart B Section 15.109 Class B and Subpart C Sections 15.207 and 15.247 devices.
TEST METHOD:	ANSI C63.4 (1992)
MANUFACTURER:	SR Telecom 8150 Trans-Canada Hwy. Montreal QC H4S 1M5 Canada
REPRESENTATIVE:	Keith Peavler
TEST LOCATION:	CKC Laboratories, Inc. 14797 NE 95th Redmond, WA 98052

SUMMARY OF RESULTS

As received, the SR Telecom Wireless Terminal, 201-530075-001 was found to be fully compliant with the following standards and specifications:

United States

- FCC Part 15 Subpart B Section 15.109 Class B
- FCC Part 15 Subpart C Sections 15.207 and 15.247
- ANSI C63.4 (1992) method

FCC Site No. 933805

Canada

RSS-210 using:

- FCC Part 15 Subpart B Section 15.109 Class B
- FCC Part 15 Subpart C Sections 15.207 and 15.247
- ANSI C63.4 (1992) method

Industry of Canada File No. IC 4653

CONDITIONS FOR COMPLIANCE

Ferrites added to the phone cables inside the EUT. Twisted the tip and ring wires of both phone lines. Repositioned the ferrite on the tip and ring wires. Made another ferrite reposition. Twisted the DC wires. Replaced the ferrites on the DC source wires with one alternative. No additional power line filtering on power supply. Added a ferrite to the power cord. Replaced added snap-on ferrite with a round one on the power cord.

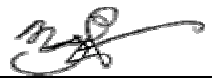
APPROVALS

Steve Behm, Director of Engineering Services

QUALITY ASSURANCE:

Joyce Walker, Quality Assurance Administrative Manager

TEST PERSONNEL:



Andrew Pace, Lab Manager

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The EUT tested by CKC Laboratories was a production unit.

FCC 15.31(e) Voltage Variations
The input voltage was varied from 85% - 115% of nominal during the radiated peak output power measurement. No variation in the radiated output power was observed.

FCC 15.31(m) Number Of Channels
This device was tested on three channels.

FCC 15.33(a) Frequency Ranges Tested
The frequency range under investigation is 30 MHz to 25 GHz. This covers the lowest frequency generated in the device up to beyond the tenth harmonics of the fundamental emissions. Spurious emissions data is only shown up to 18 GHz because no signals were observed beyond that frequency.

FCC 15.203 Antenna Requirements
The EUT does not incorporate a unique antenna connector. However, it complies with this requirement because a professional installation is required by the installation manual.

FCC 15.205 Restricted Bands
The fundamental operating frequency lies outside the restricted bands and therefore complies with the requirements of Section 15.205 of the FCC rules. Any spurious emission coming from the EUT was investigated to determine if any portion lies inside the restricted band. If any portion of a spurious emissions signal was found to be within a restricted band, investigation was performed to ensure compliance with Section 15.209.

Eut Operating Frequency
The EUT was operating at 2.4030 GHz to 2.480 GHz.

EQUIPMENT UNDER TEST

Wireless Terminal

Manuf: SR Telecom
Model: 201-530075-001
Serial: NA
FCC ID: pending

PERIPHERAL DEVICES

The EUT was tested with the following peripheral device(s):

Base Station

Manuf: SR Telecom
Model: 201-530125-001
Serial: NA
FCC ID: pending

MEASUREMENT UNCERTAINTY

TEST	HIGHEST UNCERTAINTY
Radiated Emissions	+/- 2.94 dB
Conducted Emissions	+/- 1.56 dB

Note: Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2. Statements of compliance are based on the nominal values only.

REPORT OF MEASUREMENTS

The following tables report the six highest worst case levels recorded during the tests performed on the EUT. All readings taken are peak readings unless otherwise noted. The data sheets from which these tables were compiled are contained in Appendix C.

Table 1: FCC 15.109 Six Highest Radiated Emission Levels

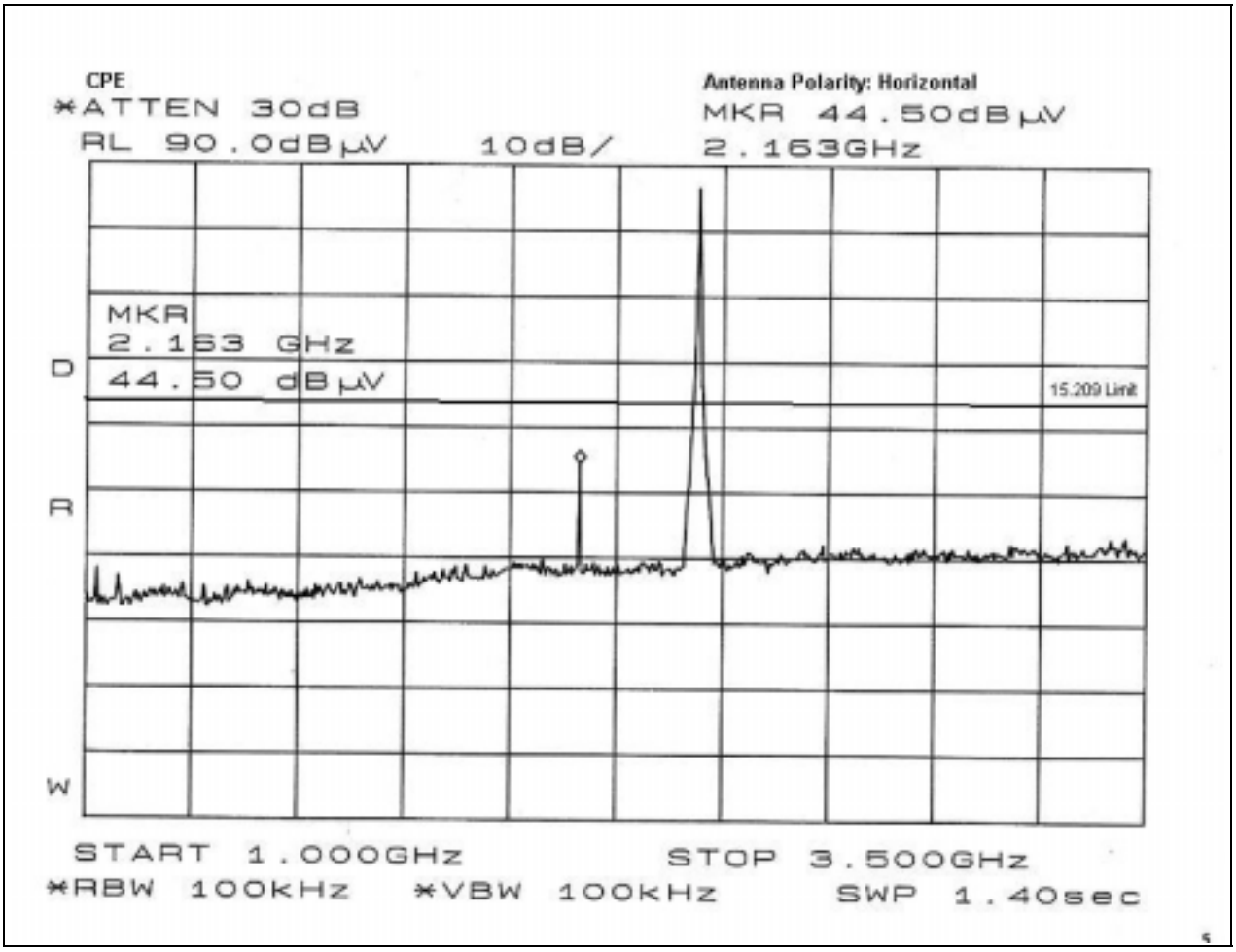
FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Ant dB		Cable dB	dB	CORRECTED READING dBµV/m	SPEC LIMIT dBµV/m	MARGIN dB	NOTES
84.319	28.9	8.2		0.7		37.8	40.0	-2.2	VQ
85.151	28.9	8.3		0.7		37.9	40.0	-2.1	HQ
460.800	26.6	17.4		1.8		45.8	46.0	-0.2	VQ
512.002	21.2	18.4		1.8		41.4	46.0	-4.6	VQ
563.179	20.1	19.5		1.9		41.5	46.0	-4.5	VQ
614.388	22.5	20.0		1.9		44.4	46.0	-1.6	VQ

Test Method: ANSI C63.4 (1992)
Spec Limit: FCC Part 15 Subpart B Section 15.109 Class B
Test Distance: 3 Meters

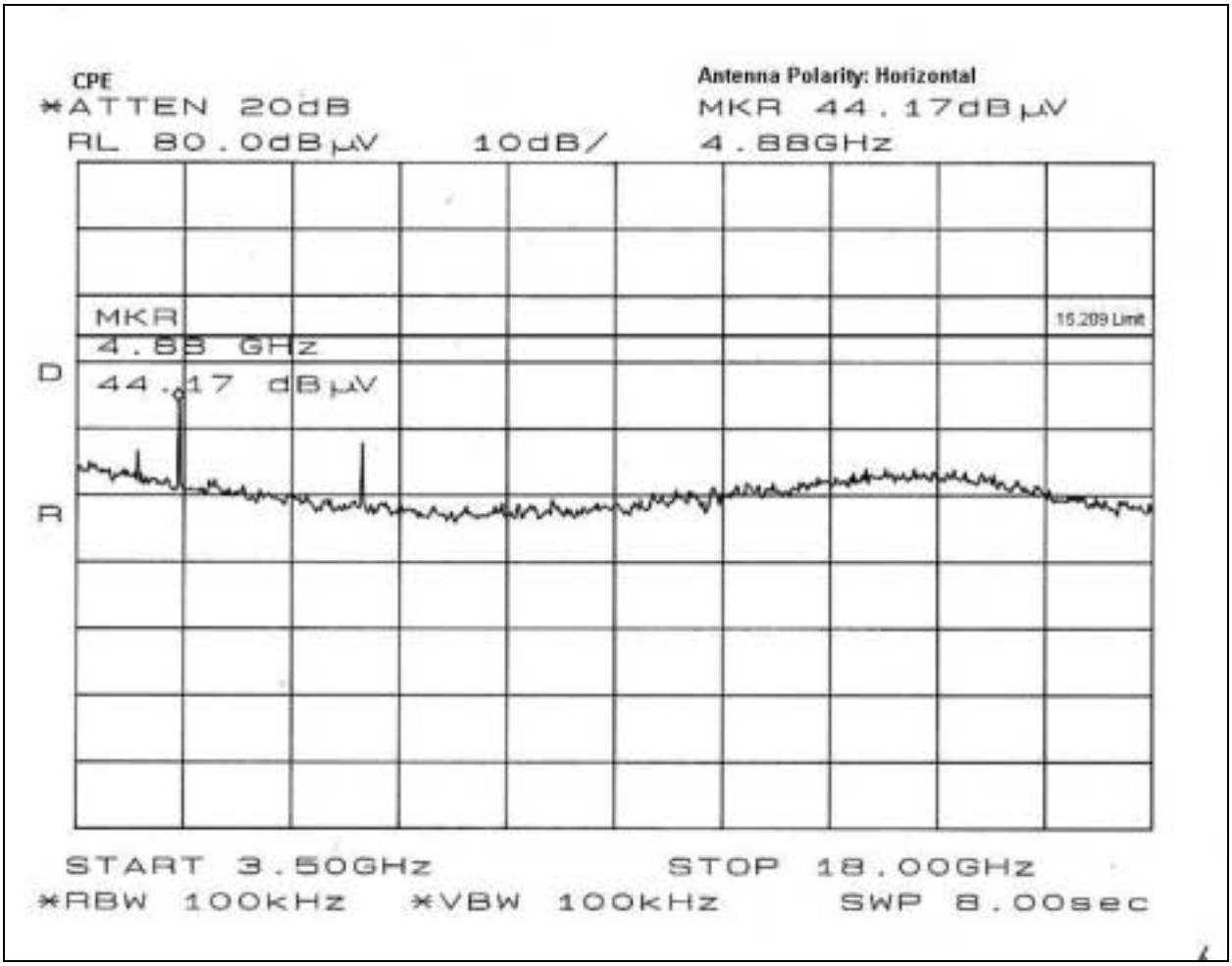
NOTES: H = Horizontal Polarization
V = Vertical Polarization
Q = Quasi Peak Reading

COMMENTS: 120V 60Hz. Vertical and Horizontal. Stride system. CPE. RF link between EUT and base station. Unmodified power supply. Phones connected to proper ports. Ferrites added to the phone cables inside the EUT. Twisted the tip and ring wires of both phone lines. Repositioned the ferrite on the tip and ring wires. Made another ferrite reposition. Twisted the DC wires. Replaced the ferrites on the DC source wires with one alternative. No additional power line filtering on power supply. Added a ferrite to the power cord. Replaced added snap-on ferrite with a round one on the power cord.

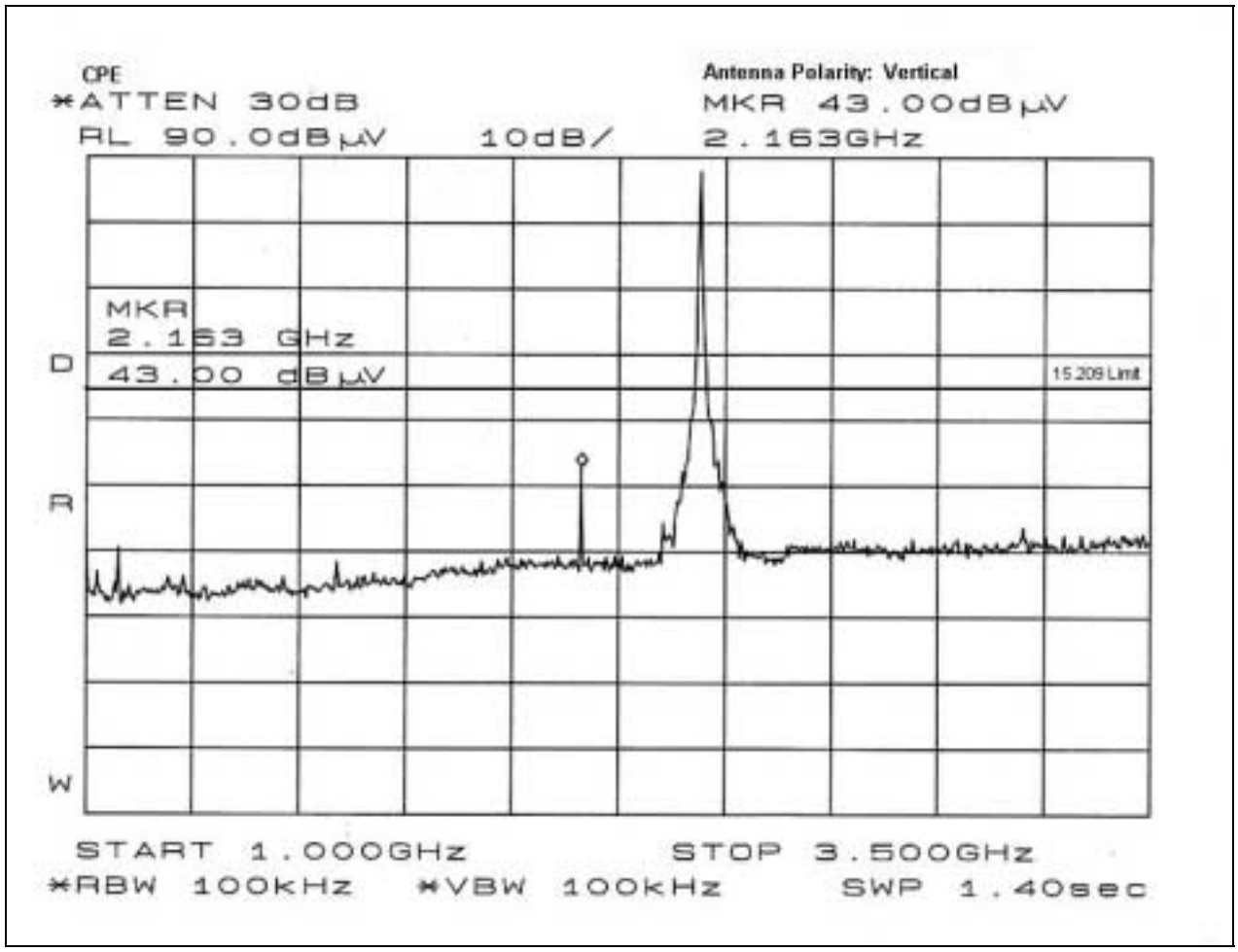
FCC 15.205 RESTRICTED BAND HORIZONTAL 1-3.5 GHz



FCC 15.205 RESTRICTED BAND HORIZONTAL 3.5-18 GHz



FCC 15.205 RESTRICTED BAND VERTICAL 1-3.5 GHz



FCC 15.205 RESTRICTED BAND VERTICAL 3.5-18 GHz

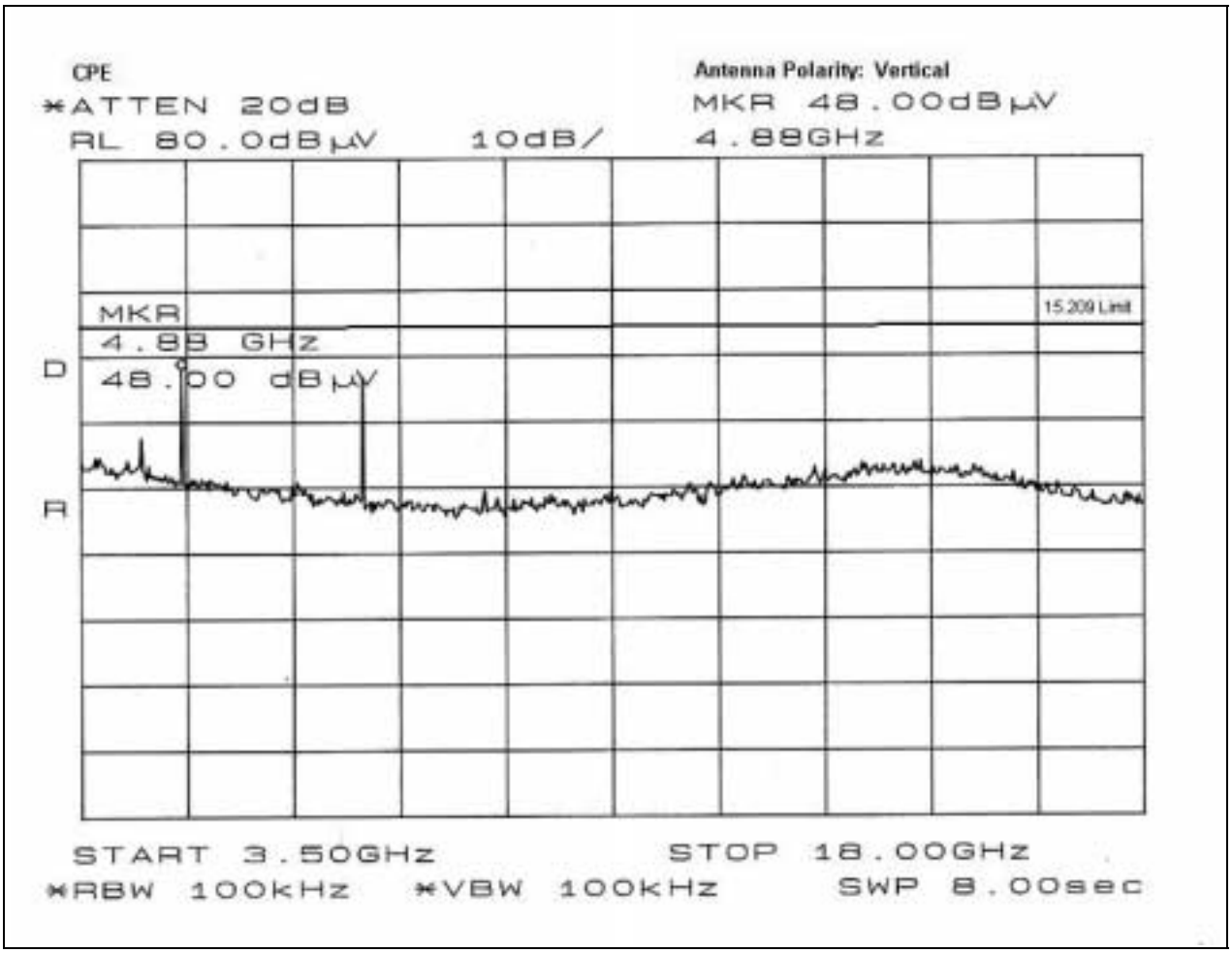


Table 2: FCC 15.207 Six Highest Conducted Emission Levels									
FREQUENCY MHz	METER READING dBµV	CORRECTION FACTORS Lisn dB	dB	dB	dB	CORRECTED READING dBµV	SPEC LIMIT dBµV	MARGIN dB	NOTES
0.208695	50.2	0.0				50.2	53.3	-3.1	BA
0.209995	46.5	0.0				46.5	53.2	-6.7	W
0.418735	42.4	0.0				42.4	47.5	-5.1	WA
0.521843	41.5	0.0				41.5	46.0	-4.5	BA
0.522929	42.6	0.0				42.6	46.0	-3.4	WA
0.635410	41.0	0.0				41.0	46.0	-5.0	WA

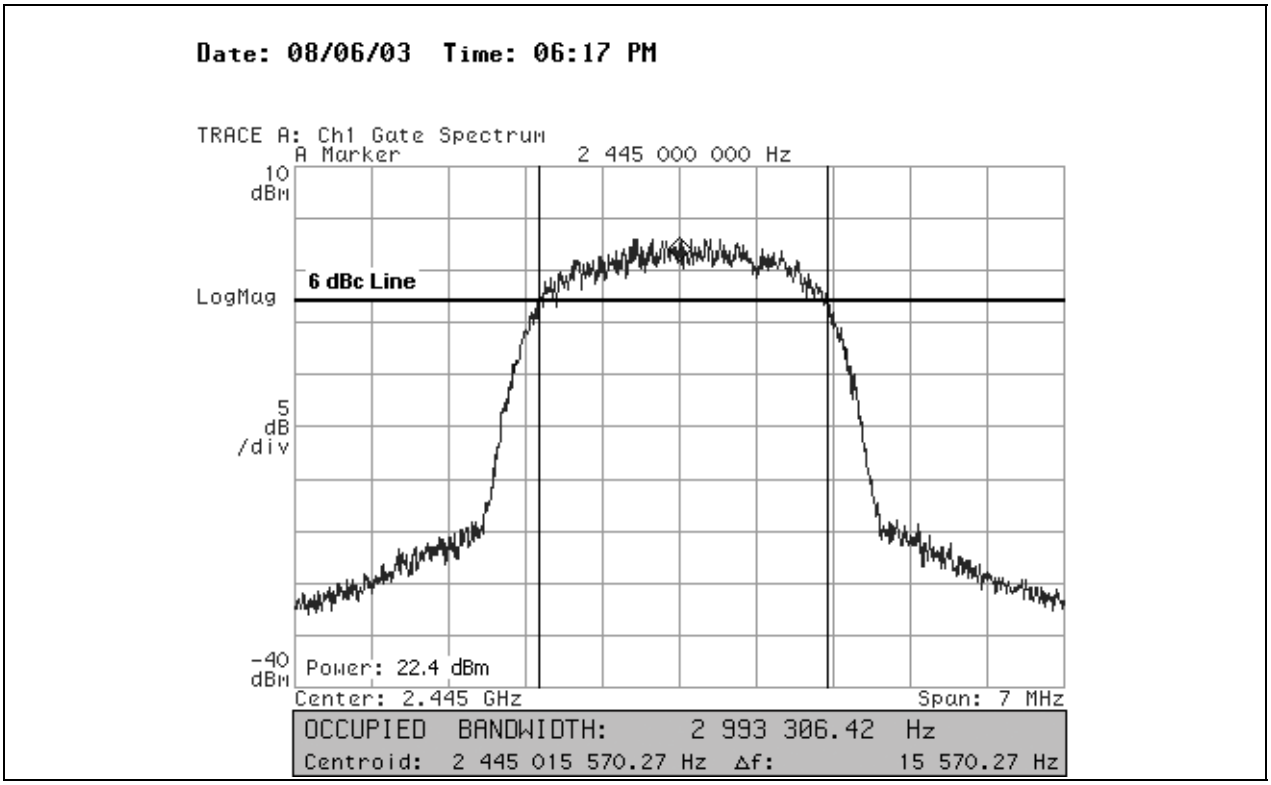
Test Method: ANSI C63.4 (1992)
Spec Limit: FCC Part 15 Subpart C Section 15.207

NOTES: A = Average Reading
B = Black Lead
W = White Lead

COMMENTS: 120V 60Hz. Line. Stride system. CPE. RF link between EUT and base station. Unmodified power supply. Phones connected to proper ports. Ferrites added to the phone cables inside the EUT. Twisted the tip and ring wires of both phone lines. Repositioned the ferrite on the tip and ring wires. Made another ferrite reposition. Twisted the DC wires. Replaced the ferrites on the DC source wires with one alternative. No additional power line filtering on power supply.

FCC 15.247(a)(2) BANDWIDTH PLOT

The 6dB bandwidth plot is taken in 100 kHz resolution bandwidth.



FCC 15.247(b)(4)(i) Radiated and Conducted Field Strength Readings

15.247(b)(4)(i) Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Gain	dB over 6dBi	Power output reduction
8 dBi	2	1 dB
14 dBi	8	3 dB

15.247(b)(1) limit is 1Watt or 30dBm.

Conducted Data:

Frequency	Conducted Output Power (dBm)	De-Facto Limit (dBm)	Results
Low	22.4	27	Pass
Middle	22.4	27	Pass
High	22.4	27	Pass

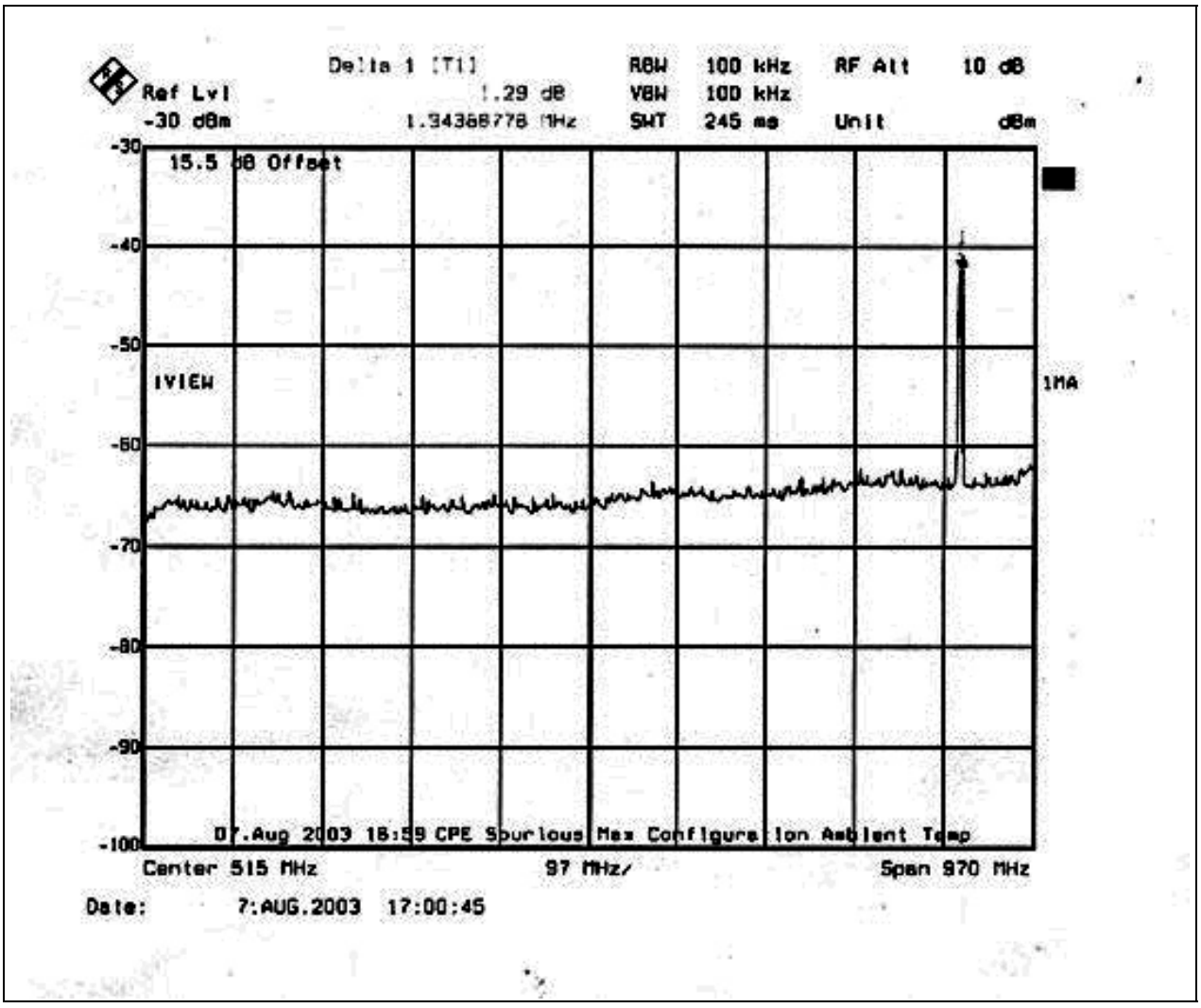
Antenna Gain: 8dBi

Frequency	Radiated Power (dBm EIRP)
Low	30.4
Middle	30.4
High	30.4

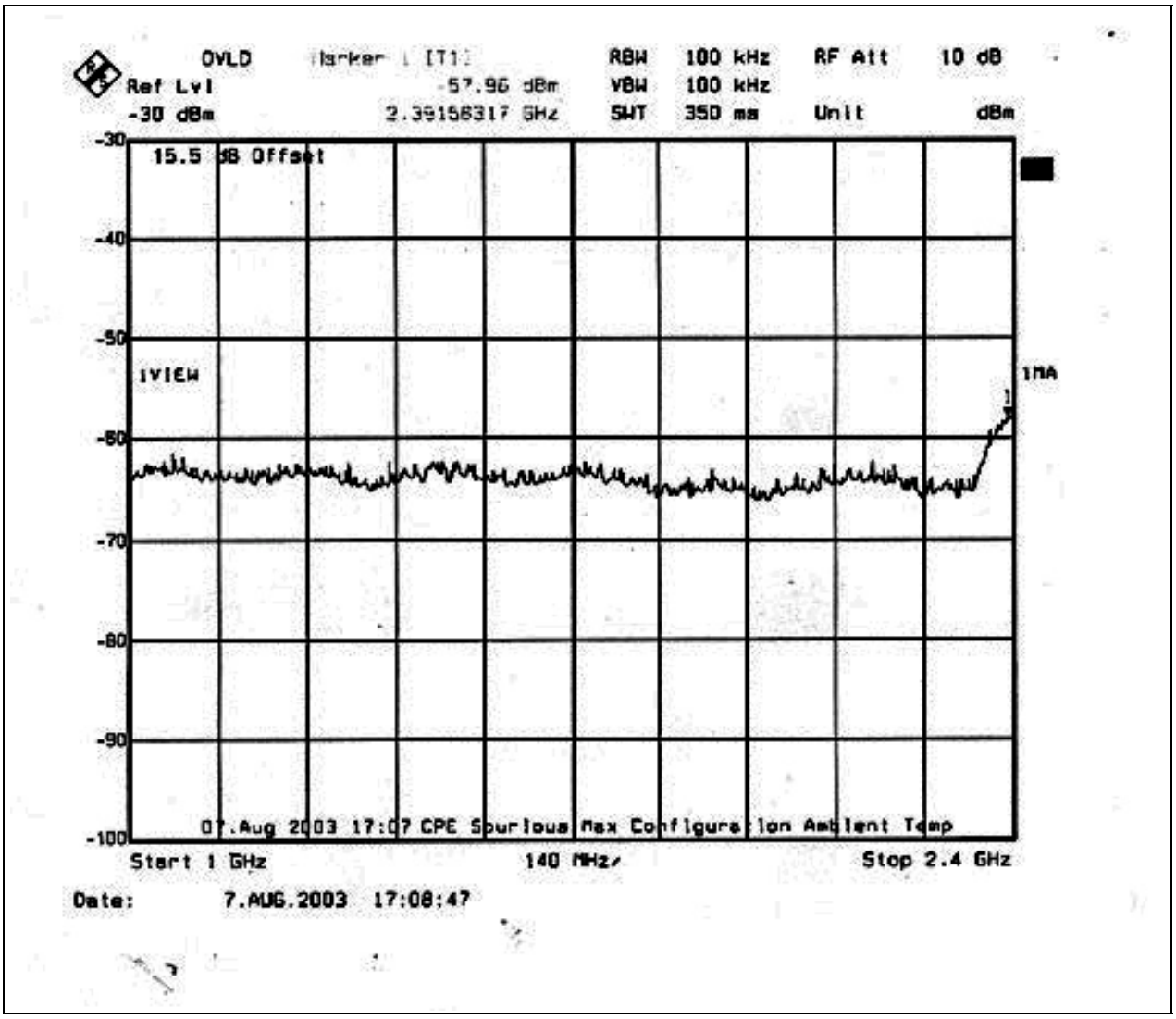
Antenna Gain: 14dBi

Frequency	Radiated Power (dBm EIRP)
Low	36.4
Middle	36.4
High	36.4

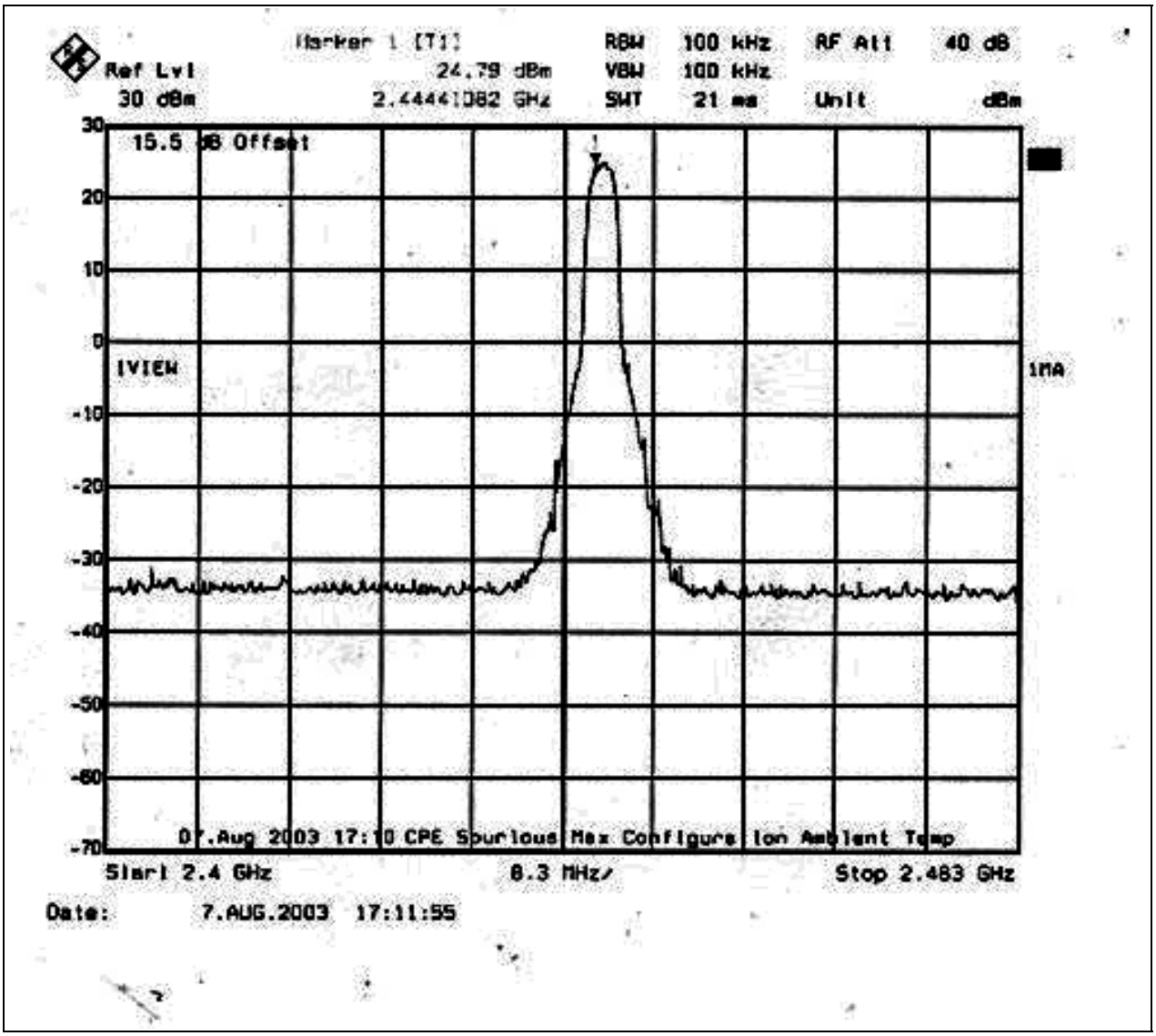
FCC 15.247(c) SPURIOUS EMISSIONS 30 MHz - 1 GHz



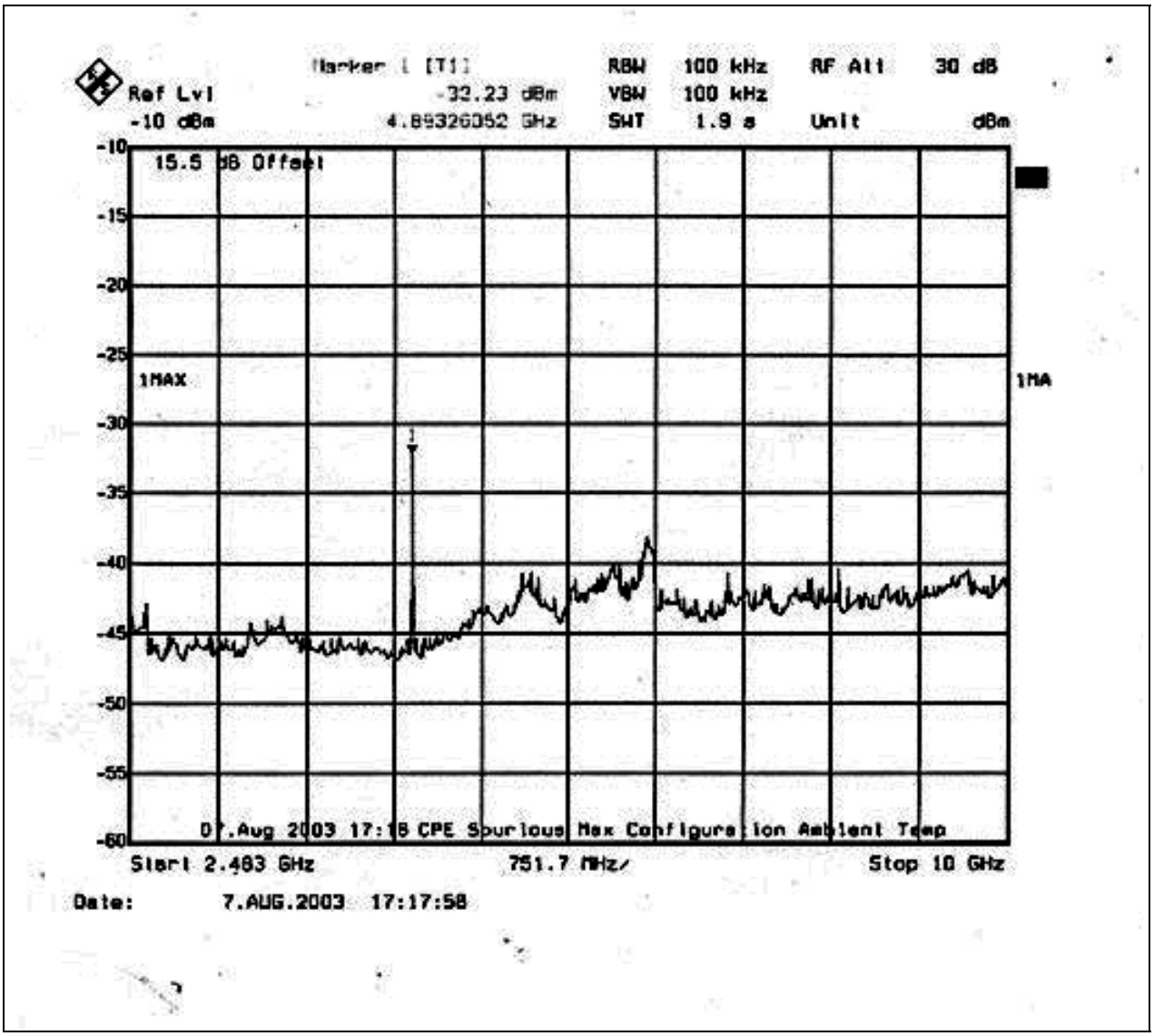
FCC 15.247(c) SPURIOUS EMISSIONS 1-2.4 GHz



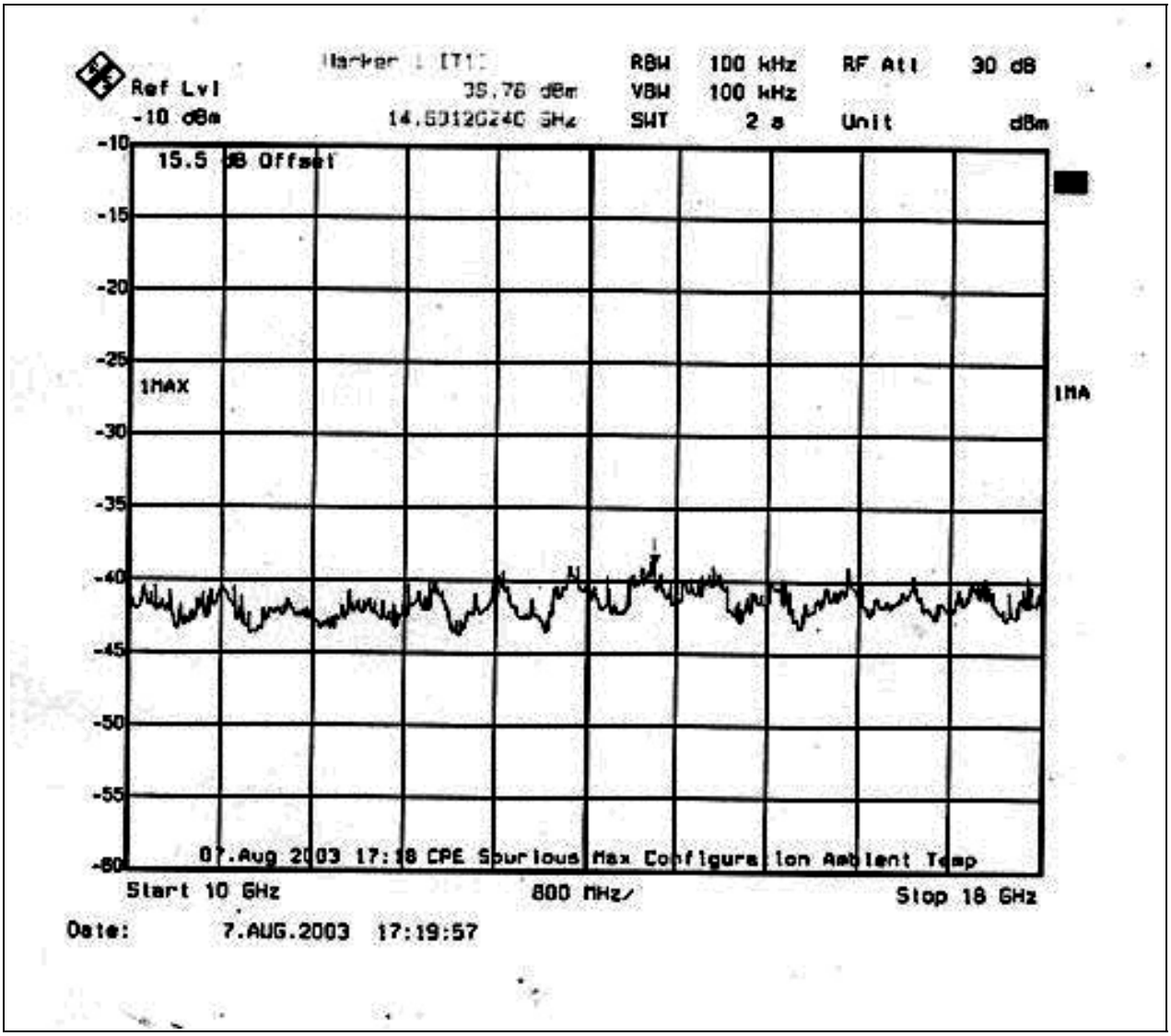
FCC 15.247(c) SPURIOUS EMISSIONS 2.4-2.483 GHz



FCC 15.247(c) SPURIOUS EMISSIONS 2.483-10 GHz

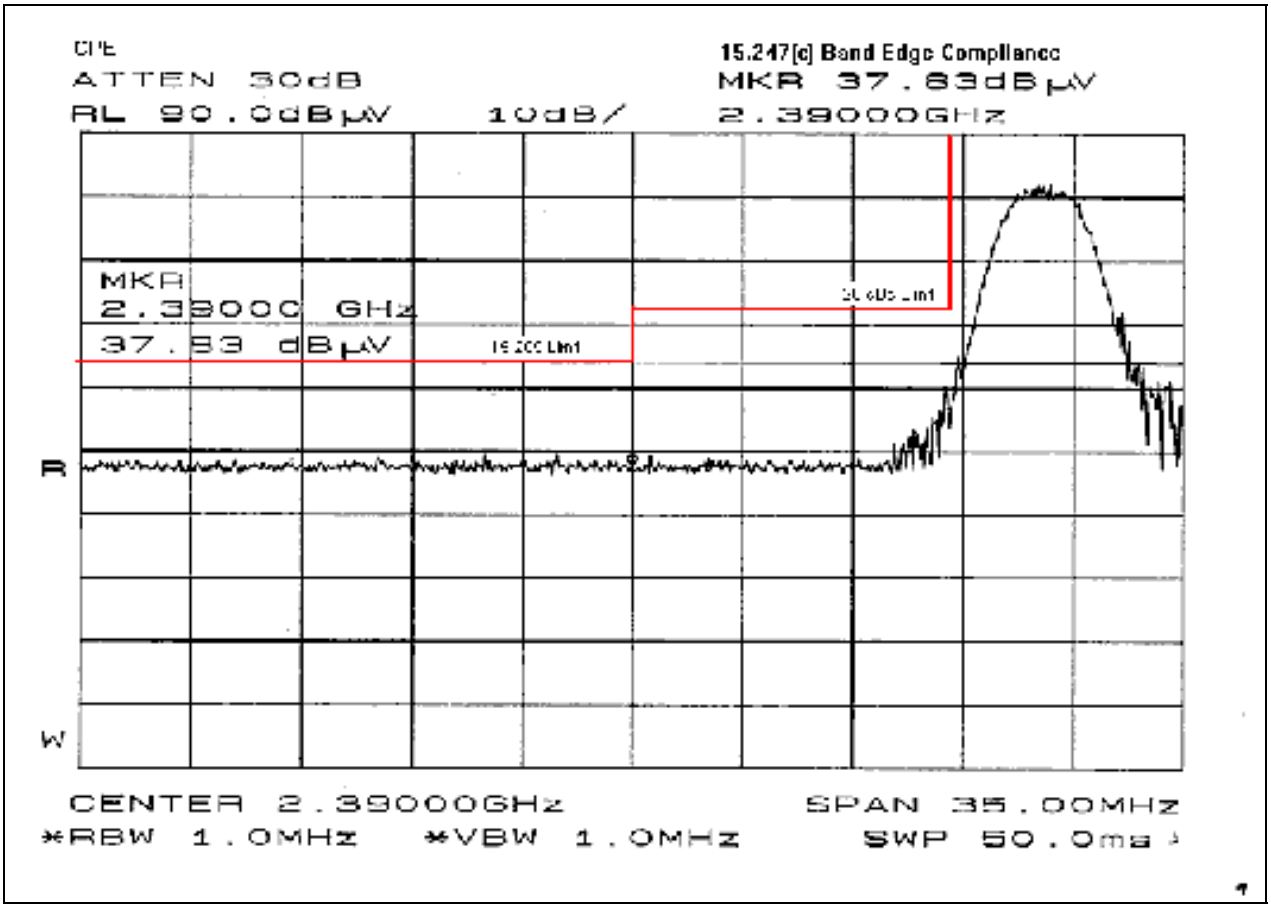


FCC 15.247(c) SPURIOUS EMISSIONS 10-18 GHz

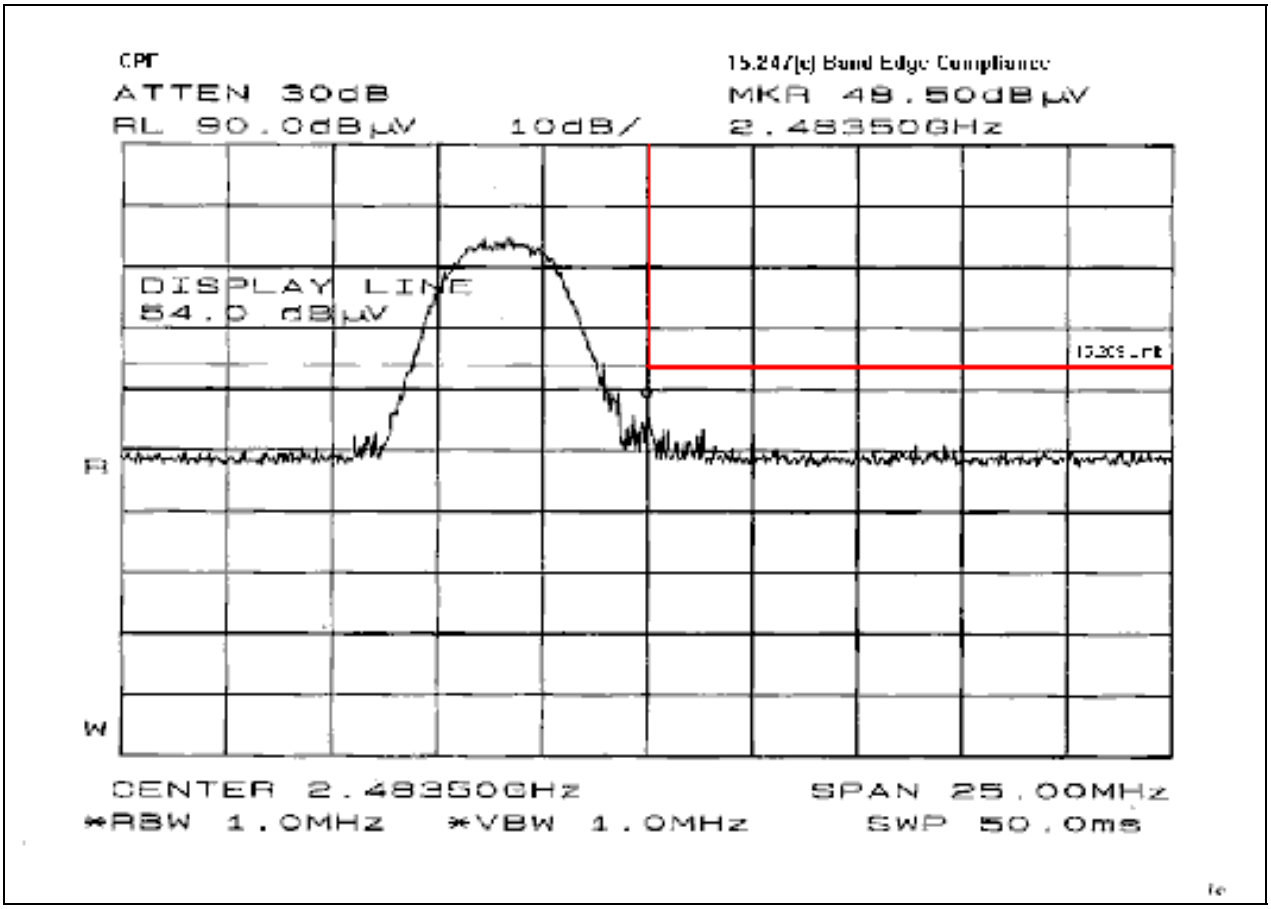


FCC 15.247(c) BAND EDGE LOW CHANNEL

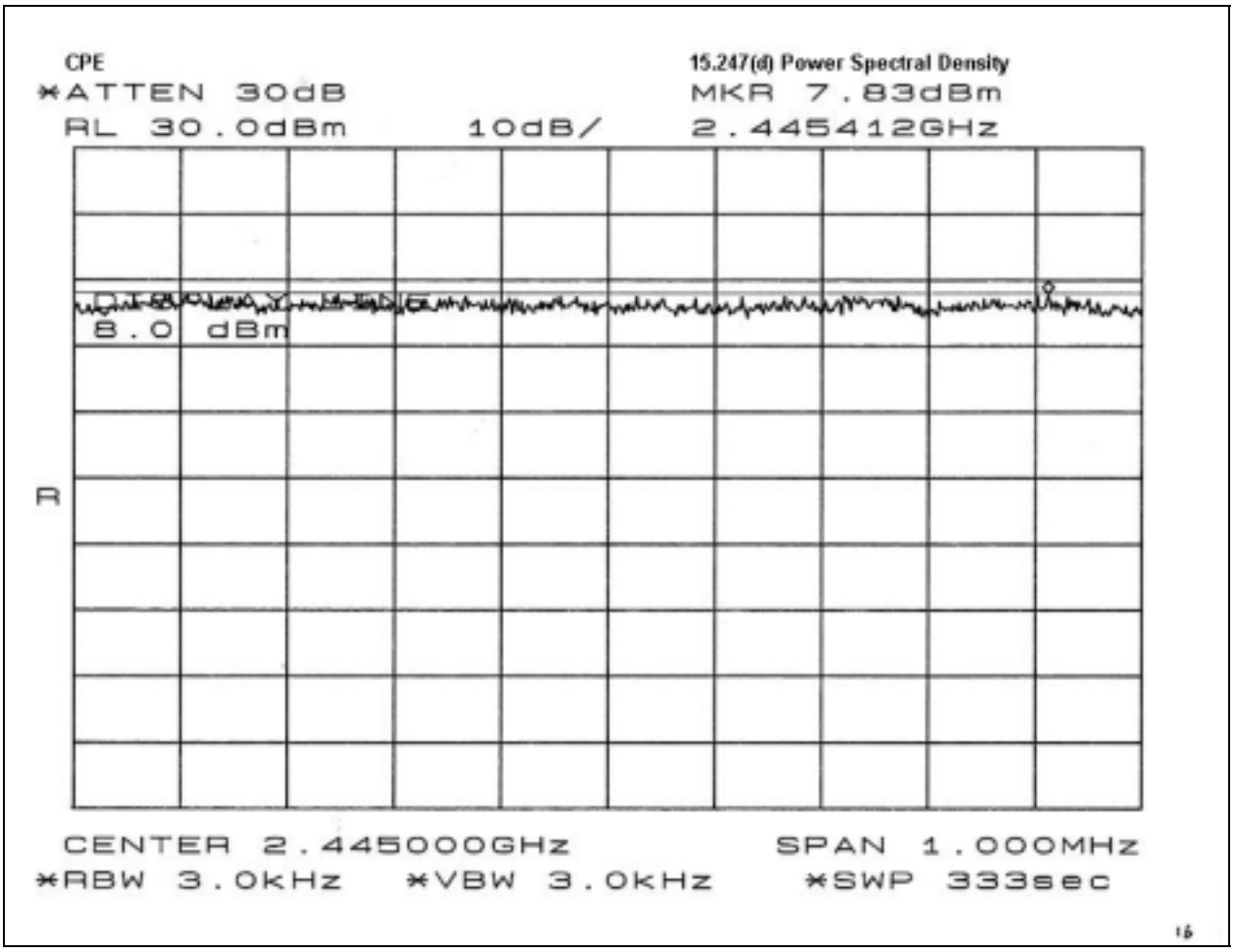
Band edge compliance at the lower and upper band edge demonstrated by the following plot.



FCC 15.247(c) BAND EDGE HIGH CHANNEL



FCC 15.247(d) PEAK POWER SPECTRAL DENSITY PLOT



Maximum Permissible Exposure Calculations

Calculations prepared for:

SR Telecom
9461 Willows Rd.
Redmond, WA 98052

Calculations prepared by:

Andrew Pace
CKC Laboratories, Inc.
5473A Clouds Rest Road
Mariposa, CA 95338

Model Number: 201-530075-001

Fundamental Operating Frequency: 2.445 GHz

Maximum Rated Output Power: 24 dBm
Measured Output Power: 36.4 dBm (EIRP)

MPE Limit in accordance with 1.1310(b): Limits for general population/uncontrolled exposure

MPE Limit = 1.00 (mW/cm^2)

EIRP (mW)	Distance (cm)	Power Density (mW/cm^2)	Result
4365.16	18.64	1.000	Pass

$$PowerDensity(mW/cm^2) = \frac{EIRP}{4\pi d^2}$$ Given: **EIRP** in *mW* and **d** in *cm*

As can be seen from the MPE results, this device passes the limits specified in 1.1310 at a distance of 18.6cm and at a output power of 22.4dBm with a 14dBi gain antenna.

TEMPERATURE AND HUMIDITY DURING TESTING

The temperature during testing was within +15°C and + 35°C.
The relative humidity was between 20% and 75%.

EUT SETUP

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the photographs in Appendix A. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables. The corrected data was then compared to the applicable emission limits to determine compliance.

The radiated and conducted emissions data of the EUT was taken with the HP Spectrum Analyzer. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in Table A.

Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in dBµV/m, the spectrum analyzer reading in dBµV was corrected by using the following formula in Table A. This reading was then compared to the applicable specification limit to determine compliance.

TABLE A: SAMPLE CALCULATIONS

	Meter reading	(dBµV)
+	Antenna Factor	(dB)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	(dBµV/m)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed in Table A were used to collect both the radiated and conducted emissions data for the EUT. For frequencies from 30 to 1000 MHz, the biconilog antenna was used. The horn antenna was used for frequencies above 1000 MHz. Conducted emissions tests required the use of the FCC type LISNs.

The HP spectrum analyzer was used for all measurements. Table B shows the analyzer bandwidth settings that were used in designated frequency bands. For conducted emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used. A 10 dB external attenuator was also used during conducted tests, with internal offset correction in the analyzer. During radiated testing, the measurements were made with 0 dB of attenuation, a reference level of 97 dBµV, and a vertical scale of 10 dB per division.

SPECTRUM ANALYZER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the Tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "Peak" mode. Whenever a "Quasi-Peak" or "Average" reading is listed as one of the six highest readings, this is indicated as a "Q" or an "A" in the appropriate table. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the Spectrum Analyzer or test engineer recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature of the analyzer called "peak hold," the analyzer had the ability to measure transients or low duty cycle transient emission peak levels. In this mode the analyzer made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

When the true peak values exceeded or were within 2 dB of the specification limit, quasi-peak measurements were taken using the HP Quasi-Peak Adapter for the HP Spectrum Analyzer. The detailed procedure for making quasi peak measurements contained in the HP Quasi-Peak Adapter manual were followed.

Average

For certain frequencies, average measurements may be made using the spectrum analyzer. To make these measurements, the test engineer reduces the video bandwidth on the analyzer until the modulation of the signal is filtered out. At this point the analyzer is set into the linear mode and the scan time is reduced.

EUT TESTING

Mains Conducted Emissions

During conducted emissions testing, the EUT was located on a wooden table measuring approximately 80 cm high, 1 meter deep, and 1.5 meters in length. Power to the EUT was provided through a LISN. The LISN was grounded to the ground plane. All other objects were kept a minimum of 80 cm away from the EUT during the conducted test.

The LISNs used were 50 µH-/+50 ohms. Above 150 kHz, a 0.15 µF series capacitor was added in-line prior to connecting the analyzer to restore the proper impedance for the range. A 30 to 50 second sweep time was used for automated measurements in the frequency bands of 150 kHz to 500 kHz, and 500 kHz to 30 MHz. All readings within 20 dB of the limit were recorded, and those within 6 dB of the limit were examined with additional measurements using a slower sweep time.

Antenna Conducted Emissions

For measuring the signal strength on the RF output port of the EUT, the spectrum analyzer was connected directly to the EUT. The sweep time of the analyzer was adjusted so that the spectrum analyzer readings were always in a calibrated range. All readings within 20 dB of the limit were recorded.

Radiated Emissions

The EUT was mounted on a nonconductive, rotating table 80 cm above the conductive grid. The nonconductive table dimensions were 1 meter by 1.5 meters.

During the preliminary radiated scan, the EUT was powered up and operating in its defined FCC test mode. For radiated measurements from 9 kHz to 30 MHz, the magnetic loop antenna was used. The frequency range of 30 MHz to 1000 MHz was scanned with the biconilog antenna located about 1.5 meter above the ground plane in the vertical polarity. During this scan, the turntable was rotated and all peaks at or near the limit were recorded. A scan of the FM band from 88 to 110 MHz was then made using a reduced resolution bandwidth and frequency span. The biconilog antenna was changed to the horizontal polarity and the above steps were repeated. For frequencies exceeding 1000 MHz, the horn antenna was used. Care was taken to ensure that no frequencies were missed within the FM and TV bands. An analysis was performed to determine if the signals that were at or near the limit were caused by an ambient transmission. If unable to determine by analysis, the equipment was powered down to make the final determination if the EUT was the source of the emission.

A thorough scan of all frequencies was made manually using a small frequency span, rotating the turntable as needed. The test engineer maximized the readings with respect to the table rotation and configuration of EUT. Maximizing of the EUT was achieved by monitoring the spectrum analyzer on a closed circuit television monitor.

TRANSMITTER CHARACTERISTICS

FCC 15.247(a)(2) Bandwidth Measurements (Direct Sequence)

The fundamental frequency was kept within the permitted band 2400-2483.5 MHz. The minimum 6dB bandwidth was at least 500 kHz. Refer to the following occupied bandwidth plots.

FCC 15.247(d) Peak Power Spectral Density

The peak power spectral density conducted from the EUT to the antenna was not greater than 8 dm in any 3 kHz band during any time interval of continuous transmission.

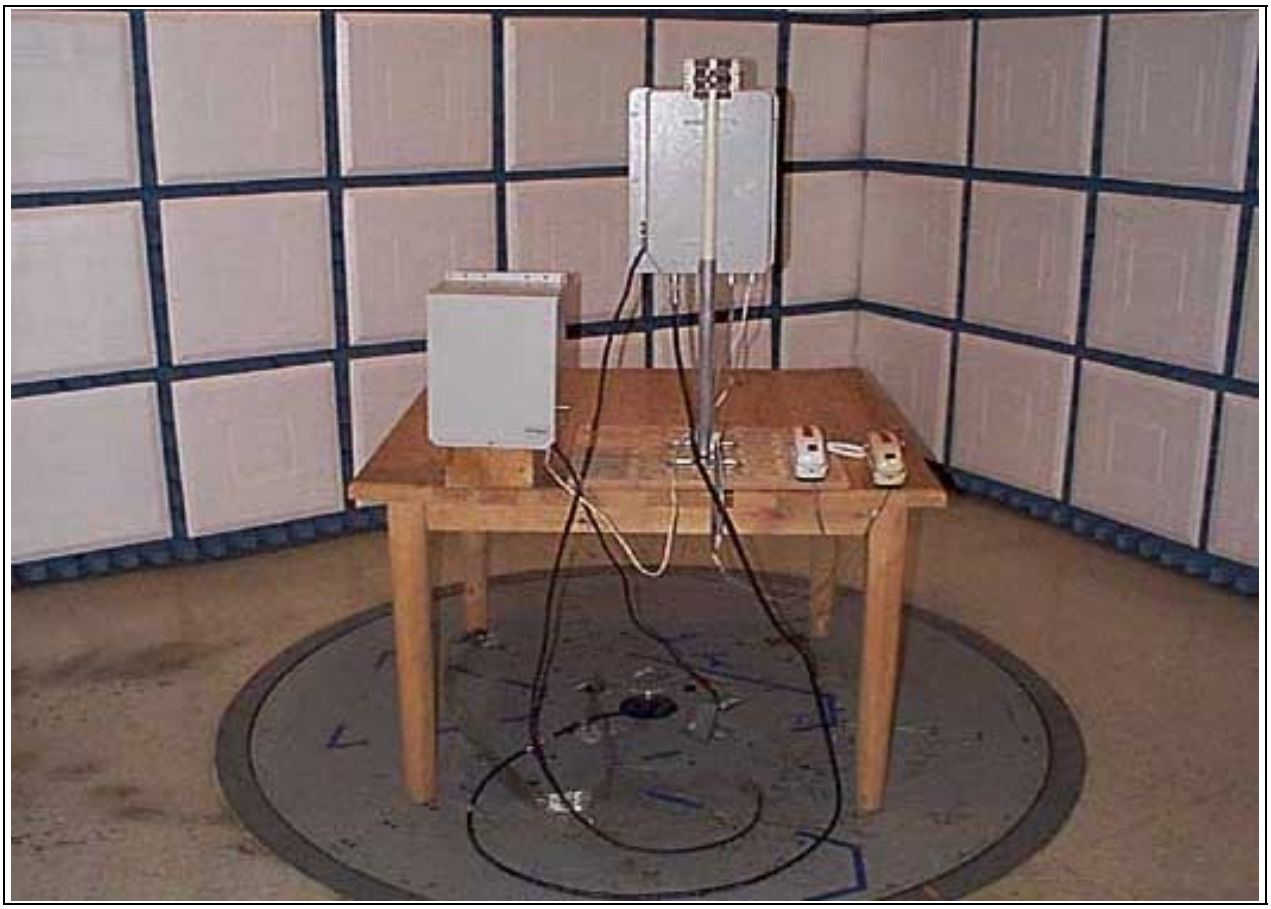
APPENDIX A

TEST SETUP DIAGRAMS AND PHOTOGRAPHS

PHOTOGRAPH SHOWING RADIATED EMISSIONS

Radiated Emissions - Front View

PHOTOGRAPH SHOWING RADIATED EMISSIONS

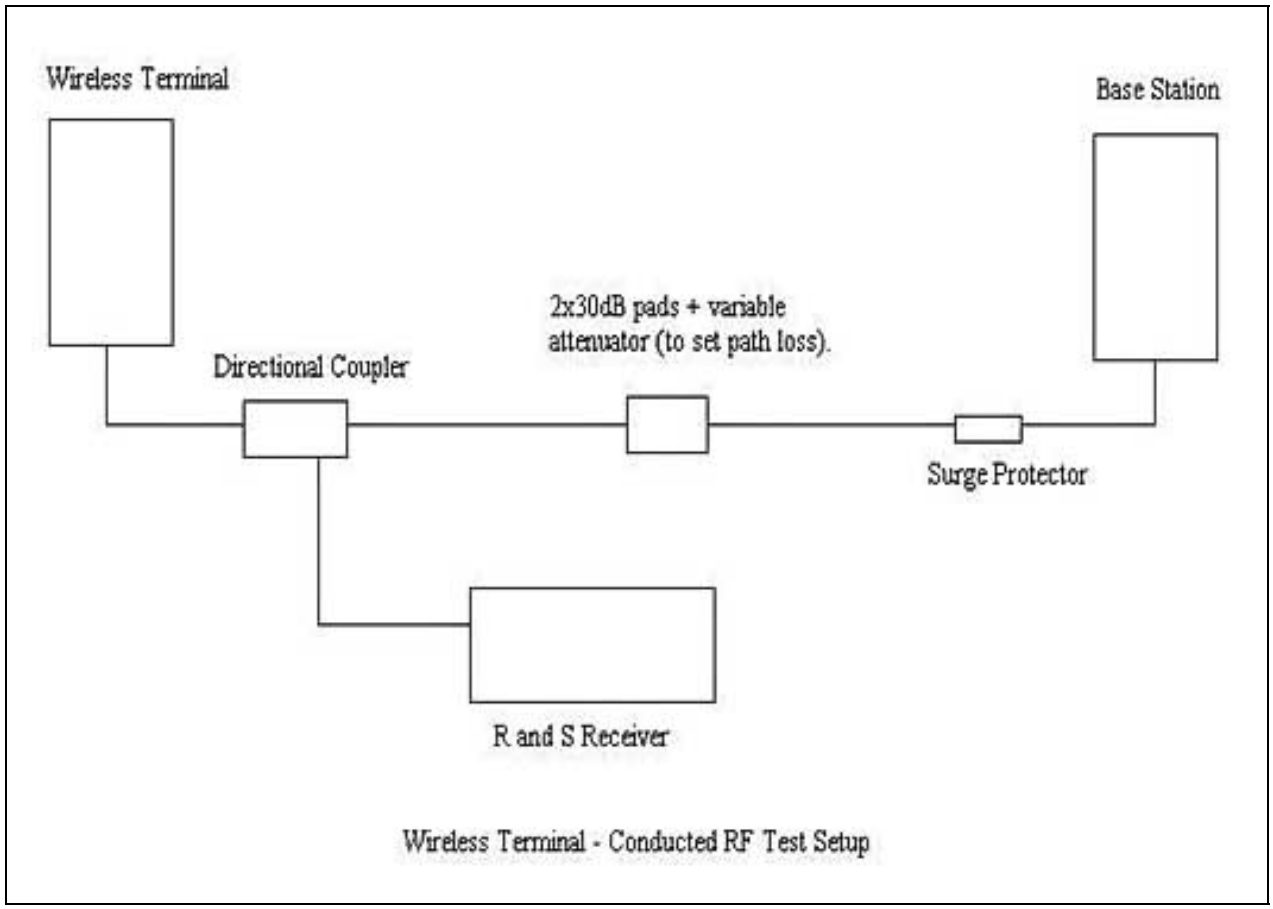


Radiated Emissions - Back View

PHOTOGRAPH SHOWING MAINS CONDUCTED EMISSIONS

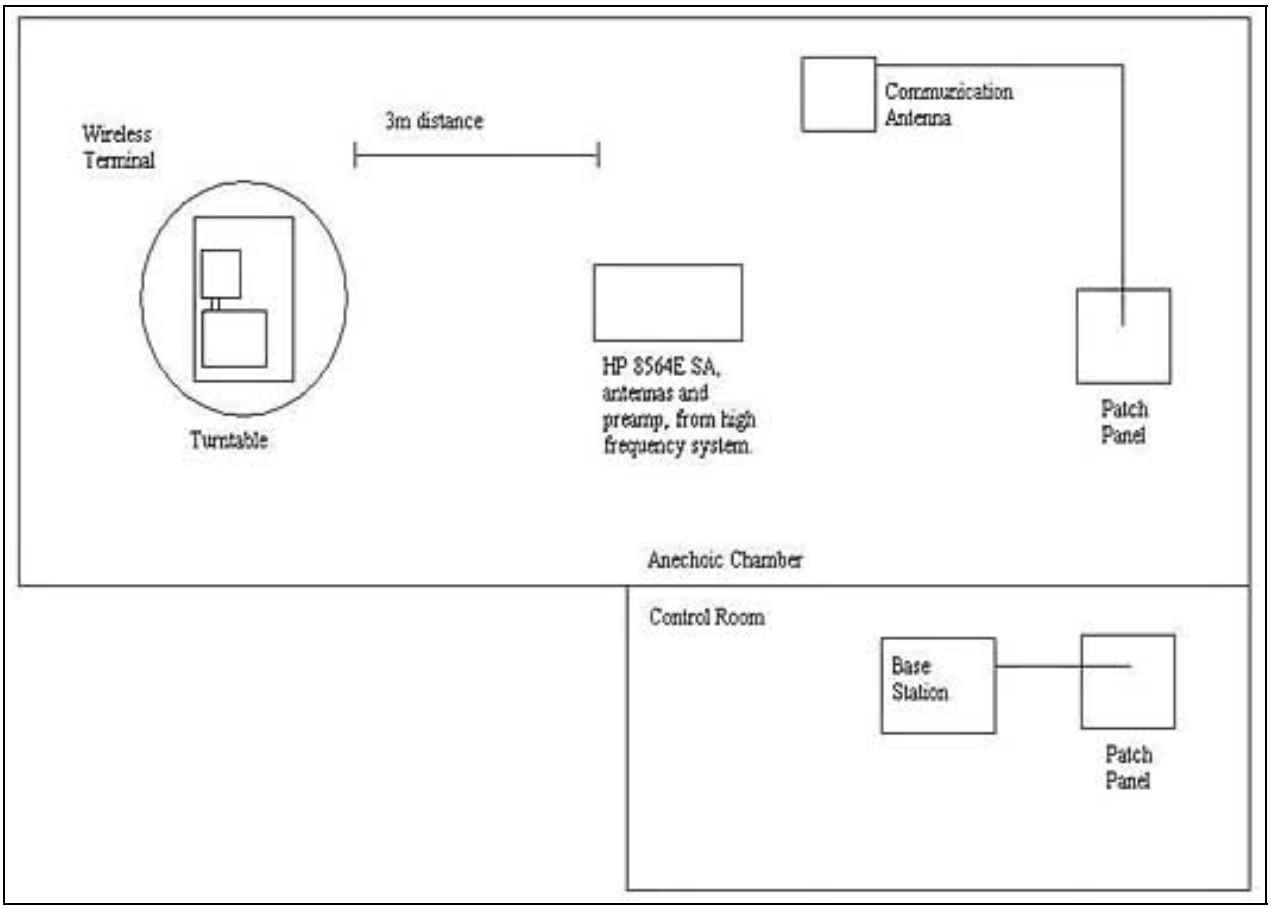
Mains Conducted Emissions - Front View

EQUIPMENT TEST SETUP DIAGRAM OF CONDUCTED RF POWER



Wireless Terminal - Conducted RF Test Setup

EQUIPMENT TEST SETUP DIAGRAM OF RADIATED RF POWER



APPENDIX B

TEST EQUIPMENT LIST

15.109

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8546A Spectrum Analyzer	3520A00260	07/19/2002	07/19/2004	0
HP 85460A Preselector	3448A00229	07/19/2002	07/19/2004	0
Chase CBL6111A Biconilog Antenna	1632	08/27/2002	08/27/2003	0
3m Chamber Gore Cable System	none	04/02/2003	04/02/2004	0

15.207

Function	S/N	Calibration Date	Cal Due Date	Asset #
HP 8546A Spectrum Analyzer	3520A00260	07/19/2002	07/19/2004	0
HP 85460A Preselector	3448A00229	07/19/2002	07/19/2004	0
LISN	9508-2452	10/04/2002	10/04/2003	0
3m Chamber Gore Cable System	none	04/02/2003	04/02/2004	0

15.247

Function	S/N	Calibration Date	Cal Due Date	Asset #
Spectrum Analyzer	3520A00260	07/19/2002	07/19/2004	Netro W2669
Preselector	3448A00229	07/19/2002	07/19/2004	Netro W2670
Antenna (Bilog)	1632	08/27/2002	08/27/2003	Netro W2955
Power Meter	3318A26810	08/28/2002	08/28/2003	Netro W3075
Receiver	DE14686	07/29/2003	07/29/2004	Netro W2654
Spectrum Analyzer	3551A00430	09/06/2002	09/06/2003	Netro W2660
Microwave system preamplifier	3551A00430	09/06/2003	09/06/2003	Netro W2660
LISN	9508-2452	04/02/2003	04/02/2004	Netro W2997
Spectrum Analyzer	3821A09031	10/25/2002	10/25/2003	Netro W3191
Horn Antenna (1-18GHz)	3551A00430	09/06/2002	09/06/2003	Netro W2660
Horn Antenna (18-26.5GHz)	3551A00430	09/06/2002	09/06/2003	Netro W2660
Variable AC Power Supply	none	NCR	NCR	Netro W2702
DMM	none	10/22/2002	10/22/2003	Netro W0244

NCR = No Calibration Required

APPENDIX C
MEASUREMENT DATA SHEETS

Test Location: CKC Laboratories, Inc. •14797 NE 95th Street • Redmond, WA 98052 • (425) 883-4757

Customer: **SR Telecom**
Specification: **FCC B RADIATED**
Work Order #: **80801** Date: 08/04/2003
Test Type: **Maximized Emissions** Time: 10:41:55
Equipment: **CPE (Wireless Terminal)** Sequence#: 33
Manufacturer: SR Telecom Tested By: Andrew Pace
Model: 201-530075-001
S/N: none

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
CPE (Wireless Terminal)*	SR Telecom	201-530075-001	none

Support Devices:

Function	Manufacturer	Model #	S/N
Base Station	SR Telecom	201-530125-001	none

Test Conditions / Notes:

120V 60Hz. Vertical. Stride system. CPE. RF link between EUT and base station. Unmodified power supply. Phones connected to proper ports. Ferrites added to the phone cables inside the EUT. Twisted the tip and ring wires of both phone lines. Repositioned the ferrite on the tip and ring wires. Made another ferrite reposition. Twisted the DC wires. Replaced the ferrites on the DC source wires with one alternative. No additional power line filtering on power supply. Added a ferrite to the power cord. Replaced added snap-on ferrite with a round one on the power cord.

Transducer Legend:

T1=Netro Gore System Cables	T2=Chase Bilog Ant S/N 1704

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	460.800M QP	26.6	+1.8	+17.4			+0.0	45.8	46.0	-0.2	Vert
^	460.798M	27.6	+1.8	+17.4			+0.0	46.8	46.0	+0.8	Vert
3	614.388M QP	22.5	+1.9	+20.0			+0.0	44.4	46.0	-1.6	Vert
^	614.398M	24.4	+1.9	+20.0			+0.0	46.3	46.0	+0.3	Vert
5	84.319M QP	28.9	+0.7	+8.2			+0.0	37.8	40.0	-2.2	Vert
^	84.319M	32.2	+0.7	+8.2			+0.0	41.1	40.0	+1.1	Vert
7	563.179M QP	20.1	+1.9	+19.5			+0.0	41.5	46.0	-4.5	Vert
^	563.196M	22.7	+1.9	+19.5			+0.0	44.1	46.0	-1.9	Vert
9	512.002M QP	21.2	+1.8	+18.4			+0.0	41.4	46.0	-4.6	Vert
^	511.997M	23.2	+1.8	+18.4			+0.0	43.4	46.0	-2.6	Vert

11	71.271M QP	26.1	+0.7	+7.2		+0.0	34.0	40.0	-6.0	Vert
^	71.271M	29.2	+0.7	+7.2		+0.0	37.1	40.0	-2.9	Vert
13	71.664M QP	26.1	+0.7	+7.2		+0.0	34.0	40.0	-6.0	Vert
^	71.684M	28.6	+0.7	+7.2		+0.0	36.5	40.0	-3.5	Vert
15	30.105M	13.7	+0.3	+19.7		+0.0	33.7	40.0	-6.3	Vert
16	359.080M	21.2	+1.5	+15.6		+0.0	38.3	46.0	-7.7	Vert
17	63.562M QP	25.3	+0.6	+6.3		+0.0	32.2	40.0	-7.8	Vert
^	63.507M	29.2	+0.6	+6.3		+0.0	36.1	40.0	-3.9	Vert
19	153.594M QP	23.1	+1.0	+11.6		+0.0	35.7	43.5	-7.8	Vert
^	153.599M	25.3	+1.0	+11.6		+0.0	37.9	43.5	-5.6	Vert
21	112.693M QP	23.3	+0.9	+11.3		+0.0	35.5	43.5	-8.0	Vert
^	112.693M	28.0	+0.9	+11.3		+0.0	40.2	43.5	-3.3	Vert
23	492.076M	18.0	+1.8	+17.9		+0.0	37.7	46.0	-8.3	Vert
24	551.918M	15.8	+1.9	+19.5		+0.0	37.2	46.0	-8.8	Vert
25	451.208M	17.7	+1.8	+17.2		+0.0	36.7	46.0	-9.3	Vert
26	205.399M	22.1	+1.2	+10.5		+0.0	33.8	43.5	-9.7	Vert
27	51.253M	21.0	+0.5	+8.4		+0.0	29.9	40.0	-10.1	Vert
28	102.428M	22.1	+0.8	+10.4		+0.0	33.3	43.5	-10.2	Vert
29	49.148M	20.0	+0.5	+9.2		+0.0	29.7	40.0	-10.3	Vert
30	92.056M	23.0	+0.8	+9.2		+0.0	33.0	43.5	-10.5	Vert
31	195.073M	21.1	+1.2	+10.1		+0.0	32.4	43.5	-11.1	Vert
32	94.078M	22.2	+0.8	+9.4		+0.0	32.4	43.5	-11.1	Vert
33	55.461M	20.4	+0.6	+7.2		+0.0	28.2	40.0	-11.8	Vert

34	256.424M	19.4	+1.3	+12.9	+0.0	33.6	46.0	-12.4	Vert
35	215.726M	18.3	+1.2	+11.1	+0.0	30.6	43.5	-12.9	Vert
36	230.304M	19.6	+1.3	+11.8	+0.0	32.7	46.0	-13.3	Vert
37	211.474M	17.0	+1.2	+10.8	+0.0	29.0	43.5	-14.5	Vert

Test Location: CKC Laboratories, Inc. •14797 NE 95th Street • Redmond, WA 98052 • (425) 883-4757

Customer: **SR Telecom**
Specification: **FCC B RADIATED**
Work Order #: **80801** Date: 08/04/2003
Test Type: **Maximized Emissions** Time: 10:59:54
Equipment: **CPE (Wireless Terminal)** Sequence#: 34
Manufacturer: SR Telecom Tested By: Andrew Pace
Model: 201-530075-001
S/N: none

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
CPE (Wireless Terminal)*	SR Telecom	201-530075-001	none

Support Devices:

Function	Manufacturer	Model #	S/N
Base Station	SR Telecom	201-530125-001	none

Test Conditions / Notes:

120V 60Hz. Horizontal. Stride system. CPE. RF link between EUT and base station. Unmodified power supply. Phones connected to proper ports. Ferrites added to the phone cables inside the EUT. Twisted the tip and ring wires of both phone lines. Repositioned the ferrite on the tip and ring wires. Made another ferrite reposition. Twisted the DC wires. Replaced the ferrites on the DC source wires with one alternative. No additional power line filtering on power supply. Added a ferrite to the power cord. Replaced added snap-on ferrite with a round one on the power cord.

Transducer Legend:

T1=Netro Gore System Cables	T2=Chase Bilog Ant S/N 1704

Measurement Data: Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	85.151M QP	28.9	+0.7	+8.3			+0.0	37.9	40.0	-2.1	Horiz
^	85.151M	32.8	+0.7	+8.3			+0.0	41.8	40.0	+1.8	Horiz
3	359.688M	23.1	+1.5	+15.6			+0.0	40.2	46.0	-5.8	Horiz
4	616.138M	18.2	+1.9	+20.1			+0.0	40.2	46.0	-5.8	Horiz
5	512.002M QP	19.8	+1.8	+18.4			+0.0	40.0	46.0	-6.0	Horiz
^	512.002M	22.2	+1.8	+18.4			+0.0	42.4	46.0	-3.6	Horiz
7	30.736M	13.7	+0.3	+19.4			+0.0	33.4	40.0	-6.6	Horiz
8	565.054M	17.7	+1.9	+19.5			+0.0	39.1	46.0	-6.9	Horiz
9	461.425M	19.6	+1.8	+17.4			+0.0	38.8	46.0	-7.2	Horiz

10	153.605M QP	22.5	+1.0	+11.6		+0.0	35.1	43.5	-8.4	Horiz
^	153.600M	24.5	+1.0	+11.6		+0.0	37.1	43.5	-6.4	Horiz
12	308.056M	20.8	+1.4	+14.0		+0.0	36.2	46.0	-9.8	Horiz
13	161.323M	21.1	+1.0	+11.0		+0.0	33.1	43.5	-10.4	Horiz
14	205.399M	21.2	+1.2	+10.5		+0.0	32.9	43.5	-10.6	Horiz
15	112.785M	20.6	+0.9	+11.3		+0.0	32.8	43.5	-10.7	Horiz
16	211.474M	20.6	+1.2	+10.8		+0.0	32.6	43.5	-10.9	Horiz
17	71.979M	21.1	+0.7	+7.2		+0.0	29.0	40.0	-11.0	Horiz
18	223.222M	21.4	+1.2	+11.5		+0.0	34.1	46.0	-11.9	Horiz
19	183.532M	19.2	+1.1	+10.0		+0.0	30.3	43.5	-13.2	Horiz
20	257.031M	18.4	+1.3	+12.9		+0.0	32.6	46.0	-13.4	Horiz
21	65.982M	18.7	+0.6	+6.6		+0.0	25.9	40.0	-14.1	Horiz
22	178.065M	17.9	+1.1	+9.9		+0.0	28.9	43.5	-14.6	Horiz
23	172.447M	16.6	+1.1	+10.2		+0.0	27.9	43.5	-15.6	Horiz

Test Location: CKC Laboratories, Inc. •14797 NE 95th Street • Redmond, WA 98052 • (425) 883-4757

Customer: **SR Telecom**
Specification: **FCC 15.207 - AVE**
Work Order #: **80801** Date: 08/03/2003
Test Type: **Conducted Emissions** Time: 15:35:53
Equipment: **CPE (Wireless Terminal)** Sequence#: 28
Manufacturer: SR Telecom Tested By: Andrew Pace
Model: 201-530075-001 120V 60Hz
S/N: none

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
CPE (Wireless Terminal)*	SR Telecom	201-530075-001	none

Support Devices:

Function	Manufacturer	Model #	S/N
Base Station	SR Telecom	201-530125-001	none

Test Conditions / Notes:

120V 60Hz. Line. Stride system. CPE. RF link between EUT and base station. Unmodified power supply. Phones connected to proper ports. Ferrites added to the phone cables inside the EUT. Twisted the tip and ring wires of both phone lines. Repositioned the ferrite on the tip and ring wires. Made another ferrite reposition. Twisted the DC wires. Replaced the ferrites on the DC source wires with one alternative. No additional power line filtering on power supply.

Transducer Legend:

T1=Netro Gore System Cables

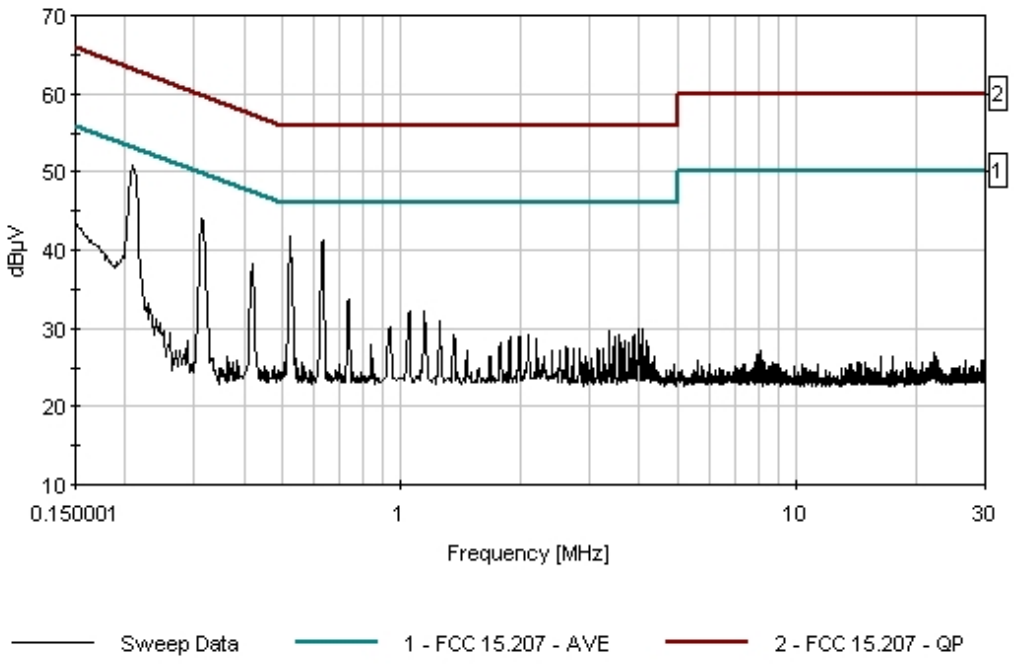
Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1	208.695k Ave	50.2	+0.0				+0.0	50.2	53.3	-3.1	Black
^	209.995k	50.9	+0.0				+0.0	50.9	53.2	-2.3	Black
3	521.843k Ave	41.5	+0.0				+0.0	41.5	46.0	-4.5	Black
^	522.693k	41.8	+0.0				+0.0	41.8	46.0	-4.2	Black
5	633.000k Ave	39.0	+0.0				+0.0	39.0	46.0	-7.0	Black
^	633.592k	41.3	+0.0				+0.0	41.3	46.0	-4.7	Black
7	313.022k Ave	42.4	+0.0				+0.0	42.4	49.9	-7.5	Black
^	313.622k	44.1	+0.0				+0.0	44.1	49.9	-5.8	Black
9	419.067k	38.2	+0.0				+0.0	38.2	47.5	-9.3	Black
10	150.001k	44.1	+0.0				+0.0	44.1	56.0	-11.9	Black
11	735.401k	33.7	+0.0				+0.0	33.7	46.0	-12.3	Black

12	1.049M	32.3	+0.0		+0.0	32.3	46.0	-13.7	Black
13	1.148M	32.3	+0.0		+0.0	32.3	46.0	-13.7	Black
14	1.256M	31.0	+0.0		+0.0	31.0	46.0	-15.0	Black
15	940.363k	30.2	+0.0		+0.0	30.2	46.0	-15.8	Black
16	3.981M	29.9	+0.0		+0.0	29.9	46.0	-16.1	Black
17	4.089M	29.9	+0.0		+0.0	29.9	46.0	-16.1	Black
18	3.358M	29.6	+0.0		+0.0	29.6	46.0	-16.4	Black
19	1.355M	29.2	+0.0		+0.0	29.2	46.0	-16.8	Black
20	2.095M	29.2	+0.0		+0.0	29.2	46.0	-16.8	Black
21	3.566M	29.2	+0.0		+0.0	29.2	46.0	-16.8	Black
22	3.882M	29.1	+0.0		+0.0	29.1	46.0	-16.9	Black
23	1.987M	29.0	+0.0		+0.0	29.0	46.0	-17.0	Black
24	1.888M	28.9	+0.0		+0.0	28.9	46.0	-17.1	Black
25	3.467M	28.9	+0.0		+0.0	28.9	46.0	-17.1	Black
26	2.194M	28.7	+0.0		+0.0	28.7	46.0	-17.3	Black
27	3.665M	28.4	+0.0		+0.0	28.4	46.0	-17.6	Black
28	4.188M	28.4	+0.0		+0.0	28.4	46.0	-17.6	Black
29	3.782M	28.2	+0.0		+0.0	28.2	46.0	-17.8	Black
30	1.779M	28.1	+0.0		+0.0	28.1	46.0	-17.9	Black
31	839.027k	28.0	+0.0		+0.0	28.0	46.0	-18.0	Black
32	1.464M	27.2	+0.0		+0.0	27.2	46.0	-18.8	Black
33	288.170k	28.3	+0.0		+0.0	28.3	50.6	-22.3	Black
34	8.122M	27.1	+0.0		+0.0	27.1	50.0	-22.9	Black
35	22.261M	26.7	+0.1		+0.0	26.8	50.0	-23.2	Black
36	7.951M	26.7	+0.0		+0.0	26.7	50.0	-23.3	Black

37	8.041M	26.7	+0.0	+0.0	26.7	50.0	-23.3	Black
38	16.315M	26.3	+0.0	+0.0	26.3	50.0	-23.7	Black
39	17.506M	26.3	+0.0	+0.0	26.3	50.0	-23.7	Black
40	26.618M	25.8	+0.2	+0.0	26.0	50.0	-24.0	Black
41	22.784M	25.8	+0.1	+0.0	25.9	50.0	-24.1	Black
42	14.393M	25.7	+0.0	+0.0	25.7	50.0	-24.3	Black
43	29.987M	25.4	+0.3	+0.0	25.7	50.0	-24.3	Black

CKC Laboratories, Inc. Date: 08/03/2003 Time: 15:35:53 Netro WO#: 80801
FCC 15.207 - AVE Test Lead: Black 120V 60Hz Sequence#: 28
120V 60Hz. Line. Stride system. CPE. RF link between EUT and base station. Unmodified power supply. Phones connecte



Test Location: CKC Laboratories, Inc. •14797 NE 95th Street • Redmond, WA 98052 • (425) 883-4757

Customer:	**SR Telecom**		
Specification:	**FCC 15.207 - AVE**		
Work Order #:	**80801**	Date:	08/03/2003
Test Type:	**Conducted Emissions**	Time:	15:49:47
Equipment:	**CPE (Wireless Terminal)**	Sequence#:	29
Manufacturer:	SR Telecom	Tested By:	Andrew Pace
Model:	201-530075-001		120V 60Hz
S/N:	none		

***Equipment Under Test* (* = EUT):**

Function	Manufacturer	Model #	S/N
CPE (Wireless Terminal)*	SR Telecom	201-530075-001	none

Support Devices:

Function	Manufacturer	Model #	S/N
Base Station	SR Telecom	201-530125-001	none

Test Conditions / Notes:

120V 60Hz. Neutral. Stride system. CPE. RF link between EUT and base station. Unmodified power supply. Phones connected to proper ports. Ferrites added to the phone cables inside the EUT. Twisted the tip and ring wires of both phone lines. Repositioned the ferrite on the tip and ring wires. Made another ferrite reposition. Twisted the DC wires. Replaced the ferrites on the DC source wires with one alternative. No additional power line filtering on power supply.

Transducer Legend:

T1=Netro Gore System Cables

Measurement Data: Reading listed by margin. Test Lead: White

#	Freq MHz	Rdng dBµV	T1 dB	dB	dB	dB	Dist Table	Corr dBµV	Spec dBµV	Margin dB	Polar Ant
1 Ave	522.929k	42.6	+0.0				+0.0	42.6	46.0	-3.4	White
^	526.329k	44.0	+0.0				+0.0	44.0	46.0	-2.0	White
3 Ave	635.410k	41.0	+0.0				+0.0	41.0	46.0	-5.0	White
^	635.410k	42.9	+0.0				+0.0	42.9	46.0	-3.1	White
5 Ave	418.735k	42.4	+0.0				+0.0	42.4	47.5	-5.1	White
^	420.885k	43.6	+0.0				+0.0	43.6	47.4	-3.8	White
7	209.995k	46.5	+0.0				+0.0	46.5	53.2	-6.7	White
8	737.219k	38.2	+0.0				+0.0	38.2	46.0	-7.8	White
9	1.049M	35.9	+0.0				+0.0	35.9	46.0	-10.1	White
10	848.117k	35.4	+0.0				+0.0	35.4	46.0	-10.6	White
11	4.098M	35.3	+0.0				+0.0	35.3	46.0	-10.7	White

12	1.157M	35.2	+0.0		+0.0	35.2	46.0	-10.8	White
13	3.999M	35.2	+0.0		+0.0	35.2	46.0	-10.8	White
14	3.891M	34.8	+0.0		+0.0	34.8	46.0	-11.2	White
15	940.363k	34.7	+0.0		+0.0	34.7	46.0	-11.3	White
16	1.256M	33.9	+0.0		+0.0	33.9	46.0	-12.1	White
17	1.364M	33.6	+0.0		+0.0	33.6	46.0	-12.4	White
18	4.207M	33.6	+0.0		+0.0	33.6	46.0	-12.4	White
19	150.001k	43.5	+0.0		+0.0	43.5	56.0	-12.5	White
20	3.810M	33.5	+0.0		+0.0	33.5	46.0	-12.5	White
21	3.467M	32.4	+0.0		+0.0	32.4	46.0	-13.6	White
22	4.306M	32.3	+0.0		+0.0	32.3	46.0	-13.7	White
23	3.367M	32.1	+0.0		+0.0	32.1	46.0	-13.9	White
24	3.268M	31.9	+0.0		+0.0	31.9	46.0	-14.1	White
25	3.575M	31.9	+0.0		+0.0	31.9	46.0	-14.1	White
26	1.788M	31.6	+0.0		+0.0	31.6	46.0	-14.4	White
27	2.528M	31.6	+0.0		+0.0	31.6	46.0	-14.4	White
28	3.683M	31.6	+0.0		+0.0	31.6	46.0	-14.4	White
29	1.996M	31.5	+0.0		+0.0	31.5	46.0	-14.5	White
30	3.160M	31.5	+0.0		+0.0	31.5	46.0	-14.5	White
31	2.420M	31.2	+0.0		+0.0	31.2	46.0	-14.8	White
32	2.628M	31.2	+0.0		+0.0	31.2	46.0	-14.8	White
33	4.423M	31.0	+0.0		+0.0	31.0	46.0	-15.0	White
34	1.464M	30.9	+0.0		+0.0	30.9	46.0	-15.1	White
35	1.888M	30.9	+0.0		+0.0	30.9	46.0	-15.1	White
36	2.104M	30.7	+0.0		+0.0	30.7	46.0	-15.3	White

37	2.736M	30.6	+0.0		+0.0	30.6	46.0	-15.4	White
38	2.213M	30.5	+0.0		+0.0	30.5	46.0	-15.5	White
39	2.844M	30.5	+0.0		+0.0	30.5	46.0	-15.5	White
40	2.312M	30.0	+0.0		+0.0	30.0	46.0	-16.0	White
41	3.602M	30.0	+0.0		+0.0	30.0	46.0	-16.0	White
42	1.680M	29.9	+0.0		+0.0	29.9	46.0	-16.1	White
43	315.440k	33.5	+0.0		+0.0	33.5	49.8	-16.3	White
44	4.486M	29.7	+0.0		+0.0	29.7	46.0	-16.3	White
45	3.052M	29.5	+0.0		+0.0	29.5	46.0	-16.5	White
46	1.572M	29.2	+0.0		+0.0	29.2	46.0	-16.8	White
47	4.594M	29.2	+0.0		+0.0	29.2	46.0	-16.8	White
48	2.943M	28.8	+0.0		+0.0	28.8	46.0	-17.2	White
49	3.945M	27.0	+0.0		+0.0	27.0	46.0	-19.0	White
50	3.394M	26.6	+0.0		+0.0	26.6	46.0	-19.4	White
51	21.918M	27.2	+0.1		+0.0	27.3	50.0	-22.7	White
52	21.467M	26.6	+0.1		+0.0	26.7	50.0	-23.3	White
53	22.531M	26.3	+0.1		+0.0	26.4	50.0	-23.6	White

CKC Laboratories, Inc. Date: 08/03/2003 Time: 15:49:47 Netro WO#: 80801
FCC 15.207 - AVE Test Lead: White 120V 60Hz Sequence#: 29
120V 60Hz. Neutral. Stride system. CPE. RF link between EUT and base station. Unmodified power supply. Phones conne