



**ANYDATA.NET INC.
ADDENDUM TO FC02-020**

FOR THE

CDMA DATA MODEM W/ DTSS-1900

**FCC PART 15 SUBPART B SECTIONS 15.107 AND 15.109 CLASS B
AND
FCC PART 24
COMPLIANCE**

DATE OF ISSUE: MARCH 29, 2002

PREPARED FOR:

AnyDATA.NET Inc.
Hanvit Bank Bldg. 7th Fl., 1-12, Byulyang-dong
Kwachon City, Kyunggi-do, Korea, 427-040

P.O. No.: ANY-0005
W.O. No.: 78335

PREPARED BY:

Joyce Walker
CKC Laboratories, Inc.
5473A Clouds Rest
Mariposa, CA 95338

Date of test: February 11 – March 28, 2002

Report No.: FC02-020A

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CKC Laboratories, Inc. has received Certificates of Accreditation from the following agencies:

A2LA (USA); BSMI (Taiwan); Nemko (Norway); and GOST (Russia).

CKC Laboratories, Inc has received test site Registration Acceptance from the following agencies:

FCC (USA); VCCI (Japan); and Industry Canada.

CKC Laboratories, Inc. has received Letters of Acceptance through an MRA for the following agencies:

ACA/NATA (Australia); SABS (South Africa); SWEDAC (Sweden); Radio Communications Agency (RA); HOKLAS (Hong Kong); Bakom (Swiss); BIPT (Belgium); Denmark Telestyrelsen; RvA (Netherlands); SEE (Luxembourg) SITTEL (Bolivia); and UKAS (UK).

ADMINISTRATIVE INFORMATION

DATE OF TEST: February 11 – March 28, 2002

DATE OF RECEIPT: February 11, 2002

PURPOSE OF TEST: To demonstrate the compliance of the CDMA Data Modem w/ DTSS-1900 with the requirements for FCC Part 15 Subpart B Sections 15.107 and 15.109 Class B and FCC Part 24 devices. Addendum A has corrected plots on pages 15-18.

TEST METHOD: ANSI C63.4 (1992), FCC Part 24, TIA/EIA 603, TIA/EIA 95A

FREQUENCY RANGE TESTED: 9 kHz – 20 GHz

MANUFACTURER: AnyDATA.NET Inc.
Hanvit Bank Bldg. 7th Fl., 1-12, Byulyang-dong
Kwachon City, Kyunggi-do, Korea, 427-040

REPRESENTATIVE: John Kim

TEST LOCATION: CKC Laboratories, Inc.
110 Olinda Place, Brea, CA 92621
5473A Clouds Rest, Mariposa, CA 95338

SUMMARY OF RESULTS

As received, the AnyDATA.NET Inc. CDMA Data Modem w/ DTSS-1900 was found to be fully compliant with the following standards and specifications:

United States

- FCC Part 15 Subpart B Sections 15.107 and 15.109 Class B
- ANSI C63.4 (1992) method
- FCC Part 24 also using TIA/EIA 603, TIA/EIA 95A

CONDITIONS FOR COMPLIANCE

No modifications to the EUT were necessary to comply.

APPROVALS

QUALITY ASSURANCE:

A handwritten signature in dark ink, appearing to read "Dennis Ward".

Dennis Ward, Quality Manager

A handwritten signature in dark ink, appearing to read "Chuck Kendall".

Chuck Kendall, EMC/Lab Manager

A handwritten signature in dark ink, appearing to read "Septimiu Apahidean".

Septimiu Apahidean, EMC/Lab Manager

TEST PERSONNEL:

A handwritten signature in dark ink, appearing to read "Randy Clark".

Randy Clark, EMC Engineer

A handwritten signature in dark ink, appearing to read "Eddie Wong".

Eddie Wong, EMC Engineer

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The EUT tested by CKC Laboratories was representative of a production unit. CDMA wireless external data modem transceiver. The EMII-1900 system contains the DTSS-1900.

EQUIPMENT UNDER TEST

CDMA Data Modem w/ DTSS-1900

Manuf: AnyDATA.NET Inc.
Model: EMII-1900
Serial: 0201K10190
FCC ID: P4M-DTSS-1900

PERIPHERAL DEVICES

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

Laptop

Manuf: Samsung
Model: Academy 680
Serial: 558791ANB00124
FCC ID: DoC

TEMPERATURE AND HUMIDITY DURING TESTING

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

MEASUREMENT UNCERTAINTY

Associated with data in this report is a ± 2.94 dB measurement uncertainty for radiated emissions and 1.56 dB measurement uncertainty for conducted emissions.

2.1033(c)(3) USER'S MANUAL

The necessary information is contained in a separate document.

2.1033 (c)(4) TYPE OF EMISSIONS

The emissions designator is 1M25F9W.

2.1033 (c)(5) FREQUENCY RANGE

The EUT was operating from 1851.3 – 1908.7 MHz.

2.1033 (c)(6) OPERATING POWER

The operating output power is 0.5 Watts, EIRP.

2.1033 (c)(7) MAXIMUM POWER RATING

Mobile/portable stations are limited to 2 Watts EIRP peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications

2.1033 (c)(8) DC VOLTAGES

The necessary information is contained in a separate document.

2.1033 (c)(9) TUNE-UP PROCEDURE

The necessary information is contained in a separate document.

2.1033(c)(10) SCHEMATICS AND CIRCUITRY DESCRIPTION

The necessary information is contained in a separate document.

2.1033(c)(11) LABEL AND PLACEMENT

The necessary information is contained in a separate document.

2.1033(c)(12) SUBMITTAL PHOTOS

The necessary information is contained in a separate document.

2.1033 (c)(13) MODULATION INFORMATION

The necessary information is contained in a separate document.

2.1033(c)(14)/2.1046/24.232(b) - RF POWER OUTPUT

Effective Isotropic Radiated Power.

“ Mobile/portable stations are limited to 2 Watts EIRP peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications”.

The EUT satisfies the above requirement by demonstrating the measured EIRP peak power is below the 2 Watts EIRP peak power limit.

Test performed with antenna substitution method in accordance with TIA/EIA 603 par 2.2.17.

Peak field strength at transmitting frequency of the EUT was measured with a spectrum analyzer. The EUT is then replaced by a substituting antenna. A signal generator feed transmits power to the substituting antenna. The power level is adjusted to produce the same field strength level generated by the EUT.

The power level generated by the signal generator is recorded as ERP

Freq in MHz	EUT field strength dBuV/M	Sig Gen level dBuV/M	Sig Gen Level V/m	ERP (Watts)	EIRP (Watts)
1851.3	129.1	128.9	2.8	0.2	0.256
1880.0	128.1	130.0	3.2	0.2	0.336
1908.7	128.6	131.7	3.8	0.3	0.474

Calculation:

dBuV to V

$$V = 1 \times 10^{-6} \times \text{Anti Log } 10 (\text{ dBuV} / 20)$$

$$\begin{aligned} \text{Power} &= V^2 / R \\ &= V^2 / 50 \end{aligned}$$

$$\text{EIRP} = 1.64 \times \text{ERP}.$$

Raw data used for conversion to ERP & EIRP:

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 24.232(b)**

Work Order #: **78335**

Date: 2/12/02

Test Type: **Radiated Scan**

Time: 13:52:17

Equipment: **External CDMA Data Modem**

Sequence#: 5

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. Correction factor using antenna substitution method applied. RBW=VBW=1MHz. Range of measurement: Fundamental Spec Limit = 2, Watts=140 dBuV, 12VDC, 23°C, 45% relative humidity. Both vertical and horizontal polarities were measured.

Transducer Legend:

T1=Ant substitution factor

Measurement Data: Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	dB	dB	dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	1908.750M	128.6	-0.6				+0.0 317	128.0	140.0	-12.0	Vert 100
2	1908.750M	127.9	-0.6				+0.0 1	127.3	140.0	-12.7	Vert 100
3	1908.750M	127.6	-0.6				+0.0 269	127.0	140.0	-13.0	Vert 100
4	1880.000M	128.1	-1.8				+0.0 91	126.3	140.0	-13.7	Vert 100
5	1880.000M	127.9	-1.8				+0.0 315	126.1	140.0	-13.9	Vert 100
6	1908.750M	126.6	-0.6				+0.0 180	126.0	140.0	-14.0	Vert 100
7	1880.000M	127.7	-1.8				+0.0 223	125.9	140.0	-14.1	Vert 100
8	1908.750M	126.3	-0.6				+0.0 226	125.7	140.0	-14.3	Vert 100
9	1908.750M	126.1	-0.6				+0.0 92	125.5	140.0	-14.5	Vert 100
10	1851.250M	129.1	-3.6				+0.0 317	125.5	140.0	-14.5	Vert 100
11	1851.250M	128.6	-3.6				+0.0	125.0	140.0	-15.0	Vert 100

12	1880.000M	126.5	-1.8	+0.0 182	124.7	140.0	-15.3	Vert 100
13	1908.750M	125.3	-0.6	+0.0 48	124.7	140.0	-15.3	Vert 100
14	1851.250M	128.3	-3.6	+0.0 90	124.7	140.0	-15.3	Vert 100
15	1880.000M	126.1	-1.8	+0.0 271	124.3	140.0	-15.7	Vert 100
16	1880.000M	126.1	-1.8	+0.0 -1	124.3	140.0	-15.7	Vert 100
17	1851.250M	127.9	-3.6	+0.0 181	124.3	140.0	-15.7	Vert 100
18	1851.250M	126.6	-3.6	+0.0 270	123.0	140.0	-17.0	Vert 100
19	1851.250M	126.1	-3.6	+0.0 45	122.5	140.0	-17.5	Vert 100
20	1851.250M	125.3	-3.6	+0.0 227	121.7	140.0	-18.3	Vert 100
21	1908.750M	121.3	-0.6	+0.0 136	120.7	140.0	-19.3	Vert 100
22	1880.000M	122.4	-1.8	+0.0 138	120.6	140.0	-19.4	Vert 100
23	1851.250M	122.2	-3.6	+0.0 135	118.6	140.0	-21.4	Vert 100
24	1880.000M	115.6	-1.8	+0.0 49	113.8	140.0	-26.2	Vert 100

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02467	Agilent	E7405A	US40240225	041001	041002
Signal Generator	02277	Marconi	2024	112282/515	080601	080602
Horn Antenna	0646	EMCO	3115	4683	022801	022802
Microwave Pre-amp	00786	HP	83017A	3123A00281	091201	091202
¼" Helix Coaxial Cable	NA	Andrew	LDF1-50	Cable#18 (70 ft)	091101	091102
Horn Antenna	0646	Emco	3115	9603-4683	022801	022802
Antenna cable	NA	Andrew	FSJ1-50A	Cable#13	07/17/01	07/17/02



OATS Test Setup – Front View



OATS Test Setup- Back View

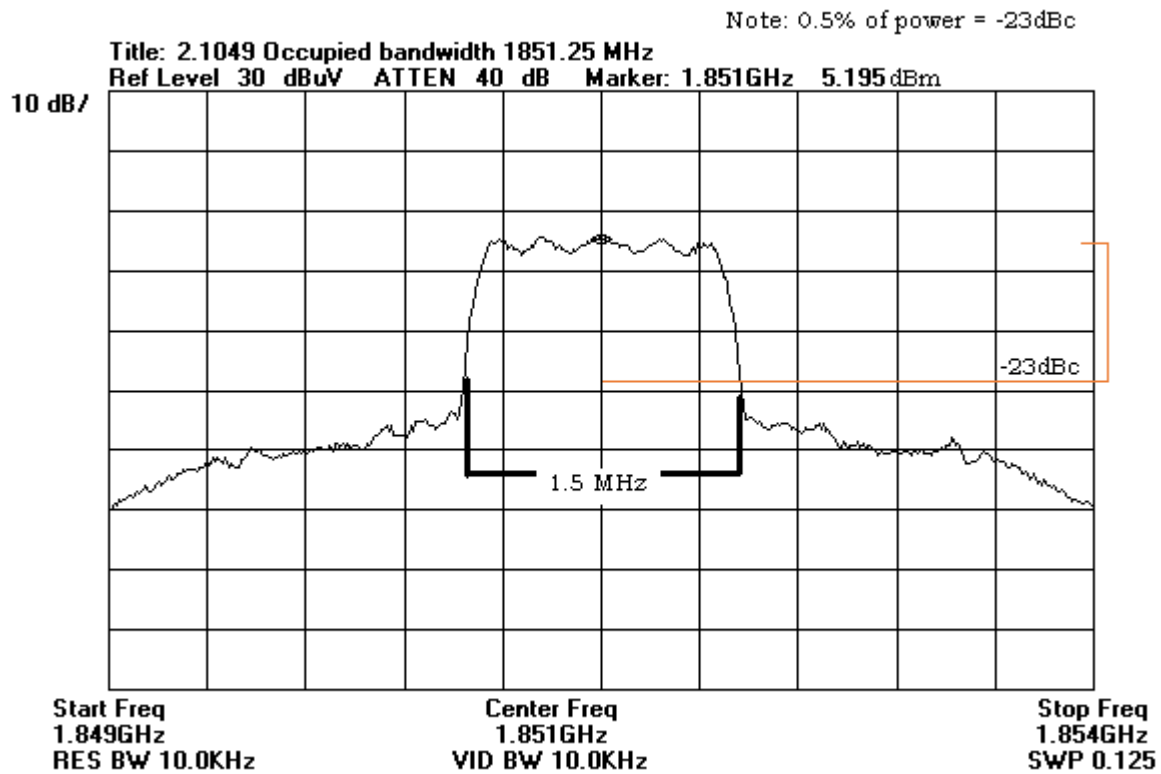
2.1033(c)(14)/2.1047(a) - MODULATION CHARACTERISTICS - AUDIO FREQUENCY RESPONSE

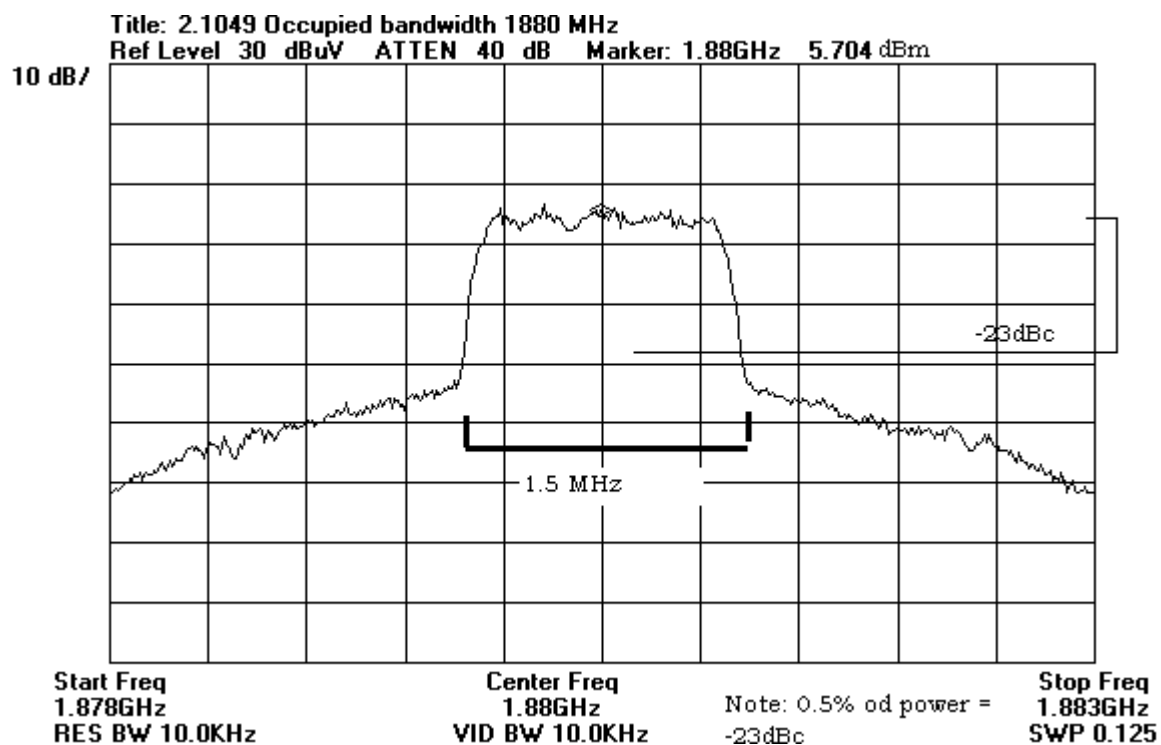
Not applicable to this unit.

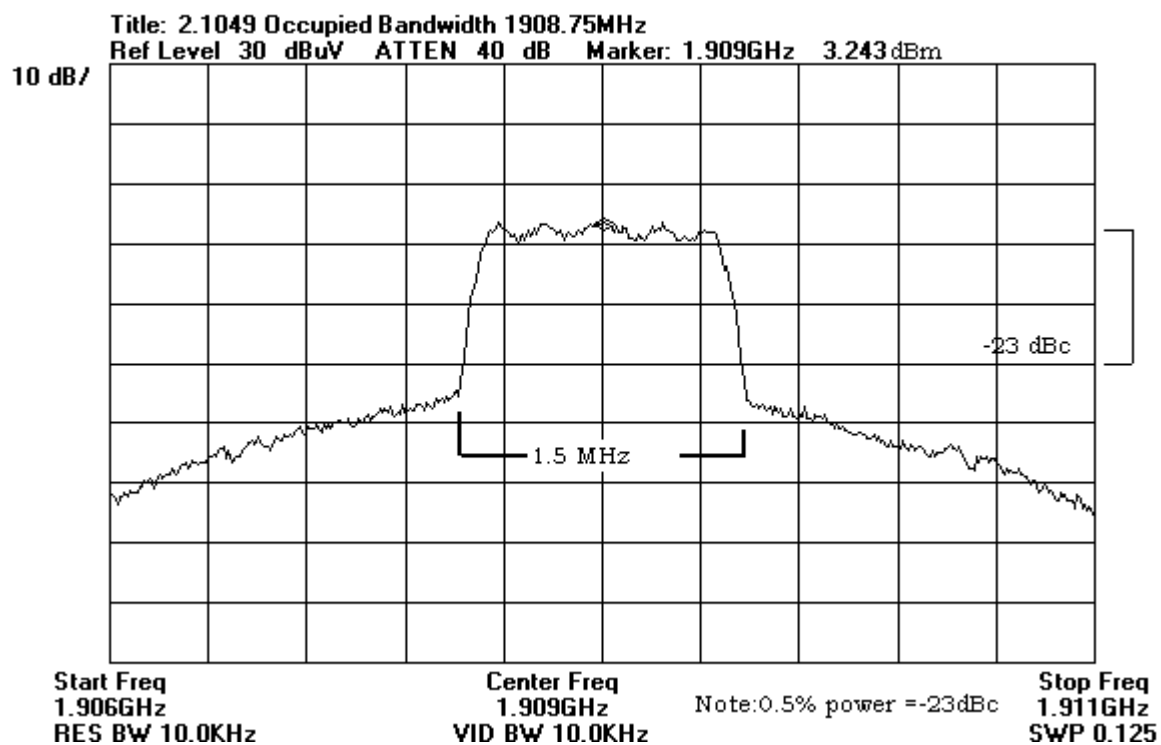
2.1033(c)(14)/2.1047(b) MODULATION CHARACTERISTICS– Modulation Limiting Response

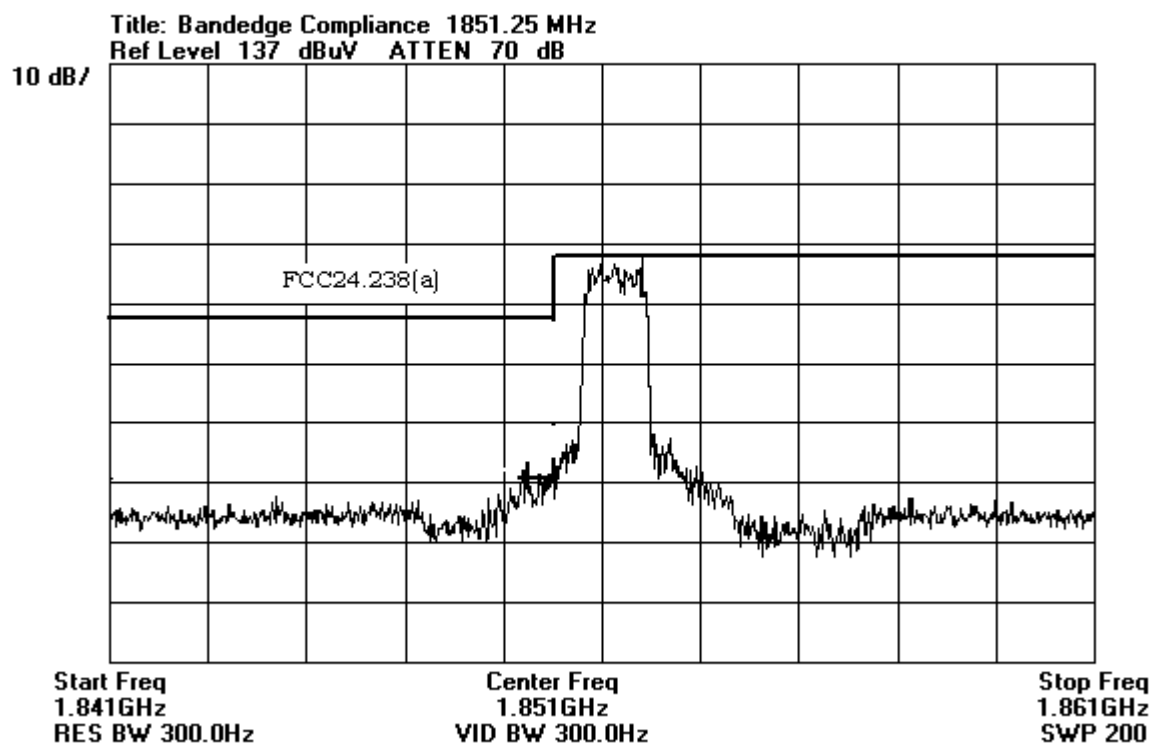
Not applicable to this unit.

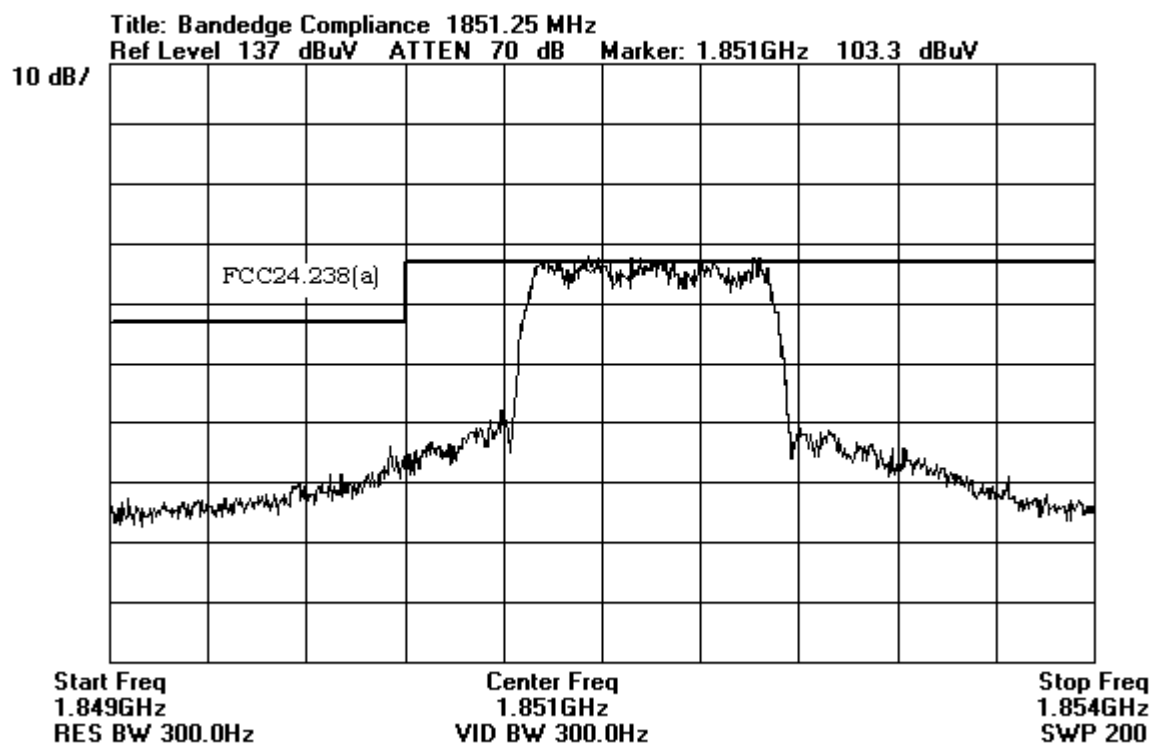
2.1033(c)(14)/2.1049(i)- OCCUPIED BANDWIDTH & BANDEDGE

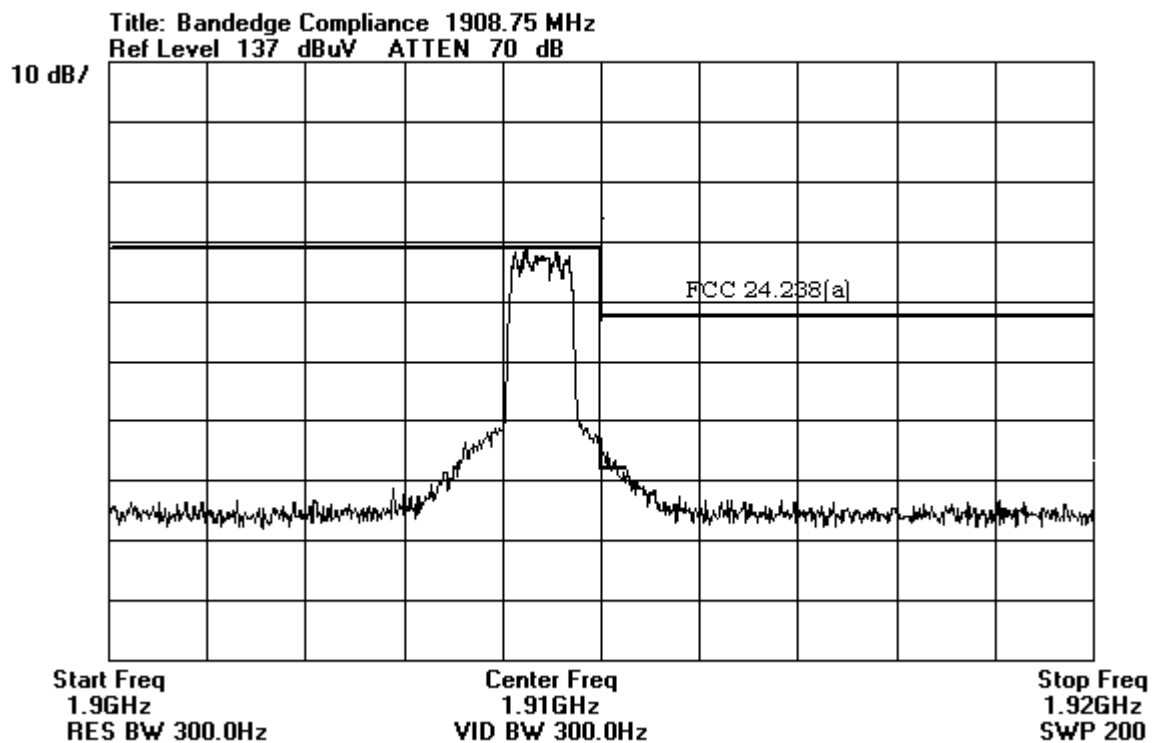


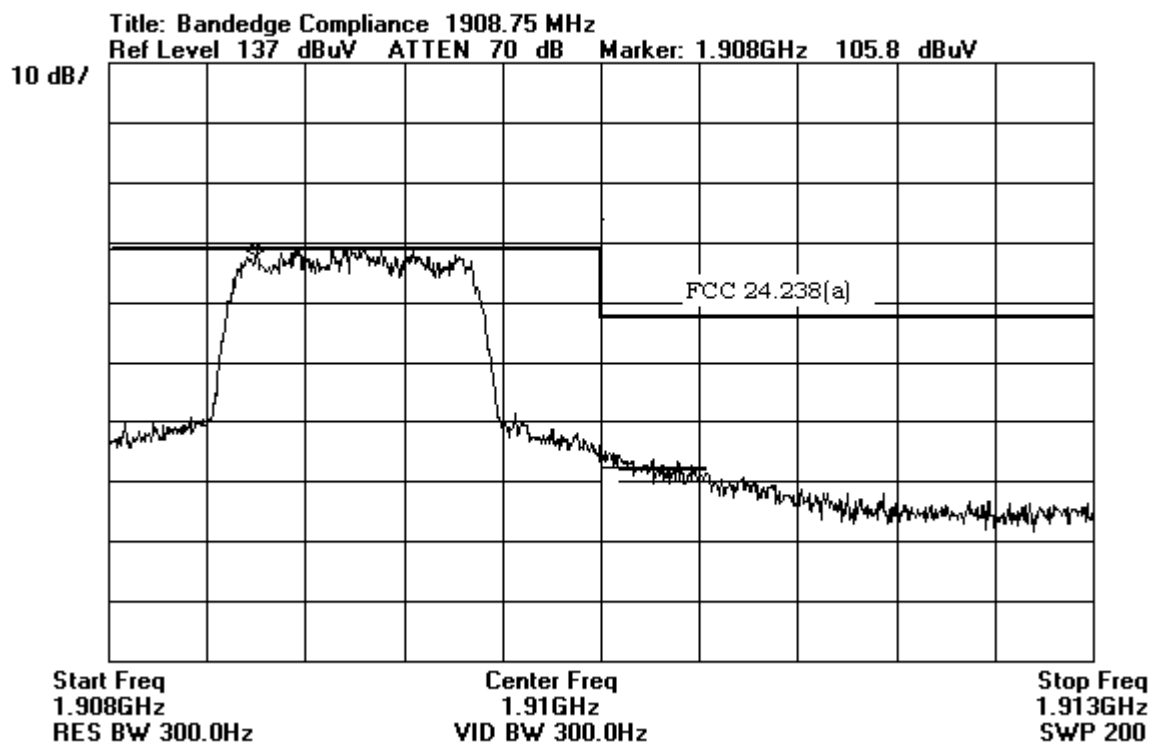












Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02467	Agilent	E7405A	US40240225	041001	041002



Direct Connect Test Setup

2.1033(c)(14)/2.1051/24.238 - SPURIOUS EMISSIONS AT ANTENNA TERMINAL

Emission limit

(a) On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmit power (P) by at least $43 + 10 \log(P)$ dB.

The EUT is qualifying for the following blocks

Block A	1850 – 1865 GHz
Block B	1870 – 1885 GHz
Block C	1895 – 1910 GHz
Block D	1865 – 1870 GHz
Block E	1885 – 1890 GHz
Block F	1890 – 1895 GHz

Out of band emission is measured at Antenna terminal (FCC 2.1051)

Range of measurement	=	9 kHz – 20 GHz
Resolution Bandwidth	=	1 MHz
Video Bandwidth	=	1 MHz

Sample Calculation:	Data Conversion: dBuV/ m to V/m
Transmit Frequency = 1851.25 MHz	
Measured emission at 1851.25 MHz = 131.2 dBuV = 3.63 V/m	$V/m = 1 \times 10^{-6} \times \text{AntiLog}_{10} \frac{\text{dBuV}}{20}$
Power = V^2 / R = $V^2 / 50 \text{ Ohm}$ = $(3.63)^2 / 50$ = 0.26watts.	$\text{Power} = \frac{V^2}{R}$ $= \frac{V^2}{50}$
Required attenuation = $43 + 10 \log(0.26)$ dB = -37dBc	
Out of band emission limit = $131.2 - 37$ dBuV = 94 dBuV = 0.050 V/m = 0.00005 Watts.	

Result

Out of band emission measured at Antenna terminal (FCC 2.1051)

1851.25 MHz

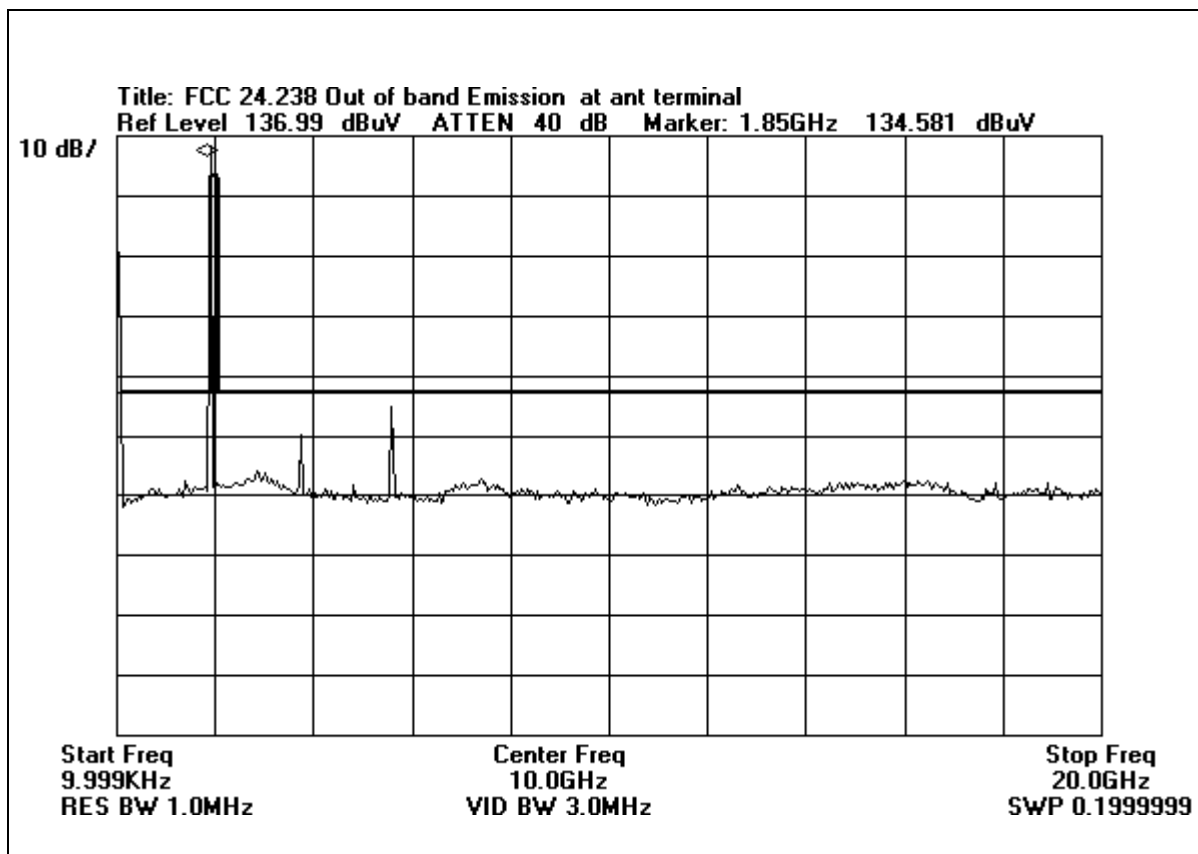
#	Freq in MHz	Meter dBuV/m	V/m	Power (watts)	Limit (Watts)	Margin	RType	Pass/Fail
1	415.65	71.2	0.0036	0.0000003	0.000050	-0.000050	Peak	Pass
2	1870.68	78.9	0.0088	0.0000016	0.000050	-0.000048	Peak	Pass
3	1877.03	78.1	0.0080	0.0000013	0.000050	-0.000049	Peak	Pass
4	3702.63	89	0.0282	0.0000159	0.000050	-0.000034	Peak	Pass
5	5554.43	93.9	0.0495	0.0000491	0.000050	-0.000001	Peak	Pass
6	5554.43	85.4	0.0186	0.0000069	0.000050	-0.000043	Ave	Pass

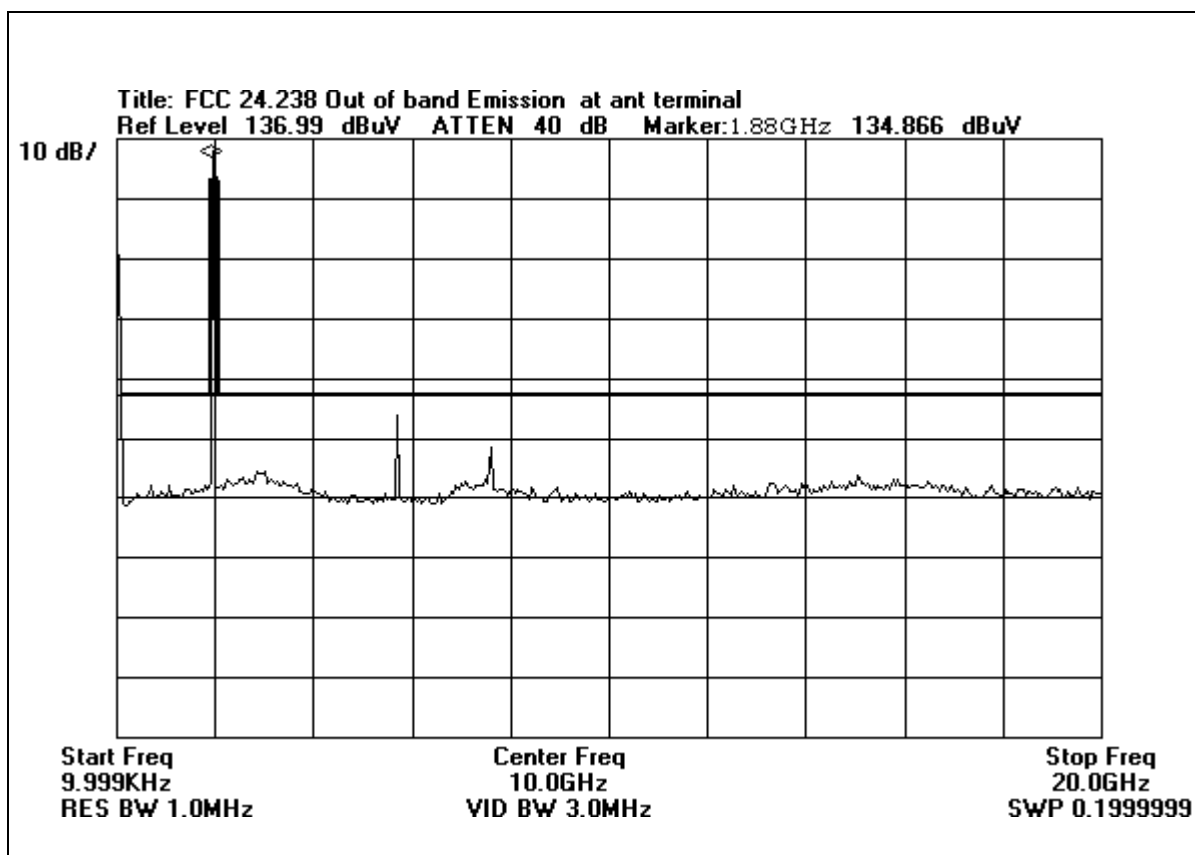
1880.00 MHz

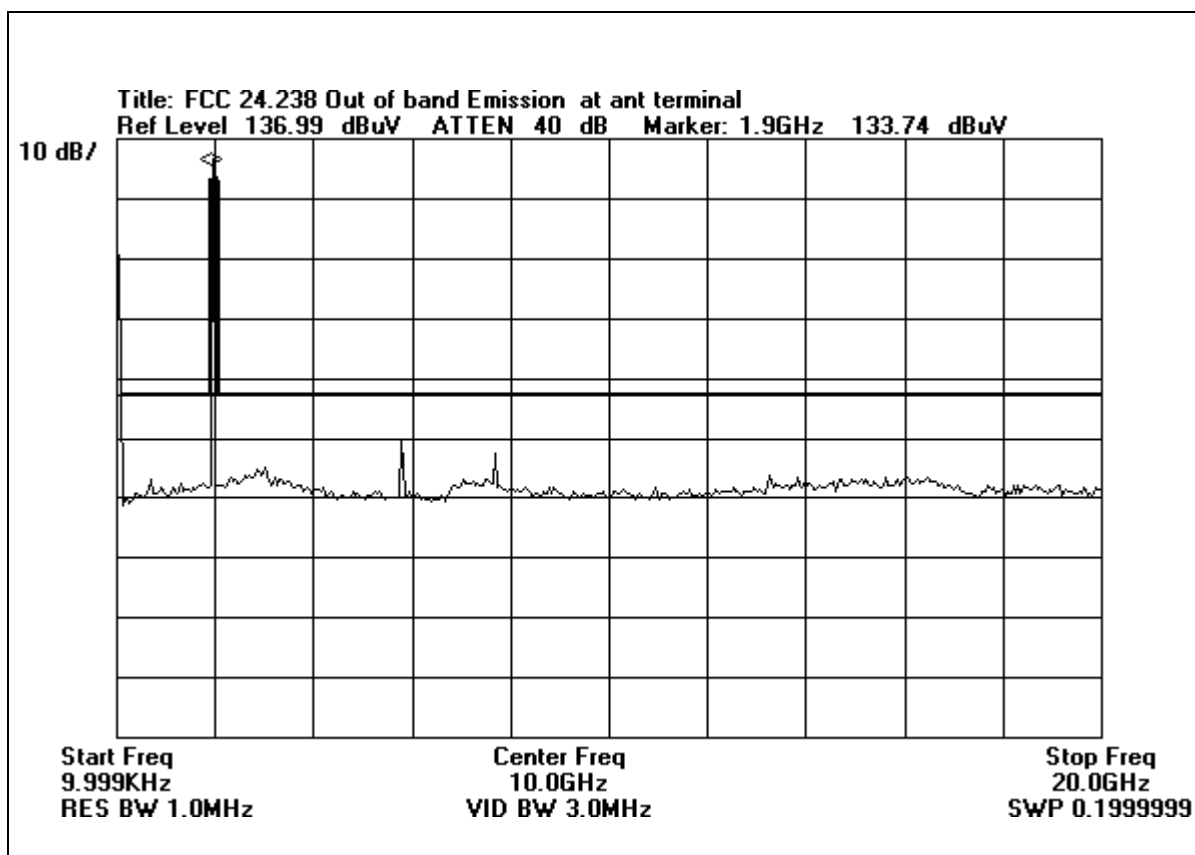
#	Freq in MHz	Meter dBuV/m	V/m	Power (watts)	Limit (Watts)	Margin	RType	Pass/Fail
1	989.91	73.4	0.0047	0.0000004	0.000050	-0.000050	Peak	Pass
2	1860.91	79	0.0089	0.0000016	0.000050	-0.000048	Peak	Pass
3	3759.81	74.8	0.0055	0.0000006	0.000050	-0.000049	Peak	Pass
4	5640.01	90.8	0.0347	0.0000240	0.000050	-0.000026	Peak	Pass
5	5640.01	82.4	0.0132	0.0000035	0.000050	-0.000047	Ave	Pass
6	11147.81	69.3	0.0029	0.0000002	0.000050	-0.000050	Peak	Pass
7	11279.41	76.3	0.0065	0.0000009	0.000050	-0.000049	Peak	Pass

1908.75 MHz

#	Freq in MHz	Meter dBuV/m	V/m	Power (watts)	Limit (Watts)	Margin	RType	Pass/Fail
1	763	70.9	0.0035	0.0000002	0.000050	-0.000050	Peak	Pass
2	1889.56	77.8	0.0078	0.0000012	0.000050	-0.000049	Peak	Pass
3	2395	70.5	0.0033	0.0000002	0.000050	-0.000050	Peak	Pass
4	5725.66	85.7	0.0193	0.0000074	0.000050	-0.000043	Peak	Pass
5	7635.11	83.5	0.0150	0.0000045	0.000050	-0.000046	Peak	Pass







Raw Data Used For Converting Data

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**
 Specification: **FCC 24.238 Spur Ant term**
 Work Order #: **78335**
 Test Type: **Conducted Emissions**
 Equipment: **External CDMA Data Modem**
 Manufacturer: AnyDATA.net Incorporated
 Model: EMII-1900
 S/N: 0201K10190

Date: 2/12/02
 Time: 09:14:28
 Sequence#: 2
 Tested By: Eddie Wong

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. Spurious emission at the antenna terminal. RBW=VBW=1MHz. Range of measurement: 9 kHz - 20 GHz. 1851.25MHz = 131.2dBuV = 0.26 Watt. Required attenuation = $43 + 10 \log(0.26) = -37 \text{ dBc}$. 12Vdc, 23D°C, 45%rh.

Transducer Legend:

--

Measurement Data: Reading listed by margin.

Test Lead: Antenna terminal

#	Freq MHz	Rdng dB μ V	dB	dB	dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	1851.200M	131.2					+0.0	131.2	131.2	+0.0	Anten
	Ave								Fundamental		
2	3702.630M	89.0					+0.0	89.0	94.0	-5.0	Anten
3	5554.430M	85.4					+0.0	85.4	94.0	-8.6	Anten
	Ave										
^	5554.430M	93.9					+0.0	93.9	94.0	-0.1	Anten
5	415.650M	71.2					+0.0	71.2	94.0	-22.8	Anten
6	1870.680M	78.9					+0.0	78.9	131.2	-52.3	Anten
7	1877.030M	78.1					+0.0	78.1	131.2	-53.1	Anten

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**
 Specification: **FCC 24.238 Spur Ant term**
 Work Order #: **78335**
 Test Type: **Conducted Emissions**
 Equipment: **External CDMA Data Modem**
 Manufacturer: AnyDATA.net Incorporated
 Model: EMII-1900
 S/N: 0201K10190

Date: 2/12/02
 Time: 10:11:28
 Sequence#: 3
 Tested By: Eddie Wong

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. Spurious emission at the antenna terminal. RBW=VBW=1MHz. Range of measurement: 9 kHz - 20 GHz. 1880.00MHz = 130.6dBuV = 0.23 Watt. Required attenuation = $43+10\text{Log}(0.23) = -37\text{dBc}$. 12Vdc, 23°C, 45%rh.

Transducer Legend:

--

Measurement Data: Reading listed by margin.

Test Lead: Antenna terminal

#	Freq MHz	Rdng dB μ V	dB	dB	dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	1880.000M	130.6					+0.0	130.6	130.6	+0.0	Anten
	Ave										
2	5640.010M	82.4					+0.0	82.4	93.6	-11.2	Anten
	Ave										
^	5640.010M	90.8					+0.0	90.8	93.6	-2.8	Anten
4	11279.410	76.3					+0.0	76.3	93.6	-17.3	Anten
	M										
5	3759.810M	74.8					+0.0	74.8	93.6	-18.8	Anten
6	989.910M	73.4					+0.0	73.4	93.6	-20.2	Anten
7	11147.810	69.3					+0.0	69.3	93.6	-24.3	Anten
	M										
8	1860.910M	79.0					+0.0	79.0	130.6	-51.6	Anten

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**
 Specification: **FCC 24.238 Spur Ant term**
 Work Order #: **78335**
 Test Type: **Conducted Emissions**
 Equipment: **External CDMA Data Modem**
 Manufacturer: AnyDATA.net Incorporated
 Model: EMII-1900
 S/N: 0201K10190

Date: 2/12/02
 Time: 11:11:02
 Sequence#: 4
 Tested By: Eddie Wong

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. Spurious emission at the antenna terminal. RBW=VBW=1MHz. Range of measurement: 9 kHz - 20 GHz. 1908.75MHz. 130.1dBuV = 0.20 Watt. Required attenuation = $43+10\log(0.20) = -36\text{dBc}$. 12Vdc, 23°C, 45%rh.

Transducer Legend:

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Measurement Data: Reading listed by margin.

Test Lead: Antenna terminal

#	Freq MHz	Rdng dB μ V	dB	dB	dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	1908.690M	130.1					+0.0	130.1	130.1	+0.0	Anten
	Ave								Fundamental		
2	5725.660M	85.7					+0.0	85.7	94.1	-8.4	Anten
3	7635.110M	83.5					+0.0	83.5	94.1	-10.6	Anten
4	763.000M	70.9					+0.0	70.9	94.1	-23.2	Anten
5	2395.000M	70.5					+0.0	70.5	94.1	-23.6	Anten
6	1889.560M	77.8					+0.0	77.8	130.1	-52.3	Anten

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	02467	Agilent	E7405A	US40240225	041001	041002



Direct Connect Test Setup

2.1033(c)(14)/2.1053/24.238 - FIELD STRENGTH OF SPURIOUS RADIATION

Emission limit

(a) On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmit power (P) by at least 43+10 Log (P) dB.

The EUT is qualifying for the following blocks:

Block A 1850 – 1865 GHz
 Block B 1870 – 1885 GHz
 Block C 1895 – 1910 GHz
 Block D 1865 – 1870 GHz
 Block E 1885 – 1890 GHz
 Block F 1890 – 1895 GHz

Out of band emission is measured at an Open Area Test Site (FCC 2.1053)

Range of measurement = 9 kHz – 20 GHz
 Resolution Bandwidth = 1 MHz
 Video Bandwidth = 1 MHz

Sample Calculation:	Data Conversion: dBuV/ m to V/m
Transmit Frequency = 1851.25 MHz	
Measured emission at 1851.25 MHz = 131.2 dBuV = 3.63 V/m	$V/m = 1 \times 10^{-6} \times \text{AntiLog}_{10} \frac{\text{dBuV}}{20}$
$\begin{aligned} \text{Power} &= V^2 / R \\ &= V^2 / 50 \text{ Ohm} \\ &= (3.63)^2 / 50 \\ &= 0.26 \text{ watts.} \end{aligned}$	$\begin{aligned} \text{Power} &= V^2 / R \\ &= V^2 / 50 \end{aligned}$
Required attenuation = 43 + 10 Log (0.26) dB = -37dBc	
Out of band emission limit = 131.2 – 37 dBuV = 94 dBuV = 0.050 V/m = 0.00005 Watts.	

1852.25 MHz

#	Freq in MHz	Meter dBuV/m	V/m	Power (watts)	Limit (Watts)	Margin	Pass/ Fail
1	3355.2	78.3	0.008222426	0.000001352	0.00005	-0.000049	Pass
2	1326.4	74.3	0.005188000	0.000000538	0.00005	-0.000049	Pass

1880.00MHz

#	Freq in MHz	Meter dBuV/m	V/m	Power (watts)	Limit (Watts)	Margin	Pass/ Fail
1	5640.5	82	0.012589254	0.000003170	0.00005	-0.000047	Pass

1908.75 MHz

#	Freq in MHz	Meter dBuV/m	V/m	Power (watts)	Limit (Watts)	Margin	Pass/ Fail
1	1951	75.2	0.005754399	0.000000662	0.00005	-0.000049	Pass

Raw Data Used For Converting Data

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: AnyDATA.net Incorporated

Specification: FCC 24.238 Spur RF

Work Order #: 78335

Date: 2/13/02

Test Type: Maximized Emissions

Time: 16:27:16

Equipment: External CDMA Data Modem

Sequence#: 12

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX antenna is connected to the antenna port. TX=1851.25MHz, RBW=VBW=1MHz. Range of measurement: 9kHz-30MHz. 120.3 dBuV = 0.0214Watt. Required attenuation = 43+10log (0.0214) dB = 26dBc. 12Vdc, 23°C, 45%rh.

Transducer Legend:

T1=Active Loop Antenna	T2=Cable #15 120602
------------------------	---------------------

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	22.385M	54.3	+9.8	+0.8			+0.0 53	64.9	94.0	-29.1	None 104
2	18.977M	45.2	+10.4	+0.8			+0.0 53	56.4	94.0	-37.6	None 104
3	19.798M	44.5	+10.2	+0.8			+0.0 53	55.5	94.0	-38.5	None 104
4	28.937M	42.4	+8.6	+1.0			+0.0 53	52.0	94.0	-42.0	None 104
5	3.680M	34.5	+11.3	+0.4			+0.0 267	46.2	94.0	-47.8	None 104
6	9.957M	30.4	+11.2	+0.5			+0.0 53	42.1	94.0	-51.9	None 104
7	4.840M	26.7	+11.3	+0.4			+0.0 26	38.4	94.0	-55.6	None 104

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 24.238 Spur RF**

Work Order #: **78335**

Date: 2/13/02

Test Type: **Maximized Emissions**

Time: 16:32:45

Equipment: **External CDMA Data Modem**

Sequence#: 13

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX antenna is connected to the antenna port. TX=1880.00MHz, RBW=VBW=1MHz. Range of measurement: 9kHz-30 MHz. 120.5 dBuV = 0.0224Watt. Required attenuation = 43+10log (0.0224) dB = 26.5dBc. 12Vdc, 23°C, 45%rh.

Transducer Legend:

T1=Active Loop Antenna	T2=Cable #15 120602
------------------------	---------------------

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	22.110M	54.6	+9.8	+0.8			+0.0 205	65.2	94.0	-28.8	None 104
2	22.110M	54.0	+9.8	+0.8			+0.0 340	64.6	94.0	-29.4	None 104
3	7.192M	52.8	+11.2	+0.5			+0.0 143	64.5	94.0	-29.5	None 104
4	13.935M	49.8	+11.1	+0.7			+0.0 14	61.6	94.0	-32.4	None 104
5	6.442M	48.8	+11.3	+0.4			+0.0 346	60.5	94.0	-33.5	None 104
6	4.656M	45.3	+11.3	+0.4			+0.0 360	57.0	94.0	-37.0	None 104

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 24.238 Spur RF**

Work Order #: **78335**

Date: 2/13/02

Test Type: **Maximized Emissions**

Time: 16:39:49

Equipment: **External CDMA Data Modem**

Sequence#: 14

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX antenna is connected to the antenna port. TX=1908.75MHz, RBW=VBW=1MHz. Range of measurement: 9kHz-30 MHz. 120.2 dBuV = 0.021Watt. Required attenuation = 43+10log (0.021) dB = 26.2dBc. 12Vdc, 23°C, 45%rh.

Transducer Legend:

T1=Active Loop Antenna	T2=Cable #15 120602
------------------------	---------------------

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	7.320M	51.7	+11.2	+0.5			+0.0 19	63.4	94.0	-30.6	None 104
2	11.990M	47.8	+11.2	+0.6			+0.0 197	59.6	94.0	-34.4	None 104
3	16.355M	39.8	+10.8	+0.7			+0.0 146	51.3	94.0	-42.7	None 104
4	26.310M	39.0	+9.1	+0.9			+0.0 255	49.0	94.0	-45.0	None 104
5	2.872M	32.2	+11.3	+0.3			+0.0 99	43.8	94.0	-50.2	None 104
6	29.990M	28.9	+8.4	+1.0			+0.0 281	38.3	94.0	-55.7	None 104

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 24.238 Spur RF**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Maximized Emissions**

Time: 11:12:17

Equipment: **External CDMA Data Modem**

Sequence#: 18

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX antenna is connected to the antenna port. TX=1851.25MHz, RBW=VBW=1MHz. Range of measurement: 30-1000MHz. 120.3 dBuV = 0.0214Watt. Required attenuation = 43+10log (0.0214) dB = 26dBc. 12Vdc, 23°C, 45%rh.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	

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

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	528.565M	54.6	+0.0 -28.6	+17.5	+0.4	+4.5	+0.0 360	48.4	94.0	-45.6	Vert 100
2	48.072M	63.0	+11.5 -28.3	+0.0	+0.1	+1.2	+0.0 99	47.5	94.0	-46.5	Vert 100
3	115.320M	52.6	+14.5 -28.4	+0.0	+0.2	+1.9	+0.0 266	40.8	94.0	-53.2	Horiz 123
4	527.060M	41.7	+0.0 -28.6	+17.5	+0.4	+4.5	+0.0 6	35.5	94.0	-58.5	Horiz 147
5	249.200M	39.9	+17.8 -28.2	+0.0	+0.3	+2.9	+0.0 51	32.7	94.0	-61.3	Vert 100
6	670.408M	28.1	+0.0 -27.9	+21.6	+0.4	+5.1	+0.0 227	27.3	94.0	-66.7	Horiz 100
7	265.350M	28.0	+19.2 -28.3	+0.0	+0.3	+3.0	+0.0 360	22.2	94.0	-71.8	Horiz 117
8	27.500M	45.4	+0.0 -28.5	+0.0	+0.1	+0.9	+0.0 331	17.9	94.0	-76.1	Vert 100
9	383.500M	24.9	+0.0 -28.3	+16.5	+0.4	+3.7	+0.0 76	17.2	94.0	-76.8	Vert 100

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 24.238 Spur RF**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Maximized Emissions**

Time: 11:42:12

Equipment: **External CDMA Data Modem**

Sequence#: 19

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX antenna is connected to the antenna port. TX=1880.00MHz, RBW=VBW=1MHz. Range of measurement: 1GHz - 20GHz. 120.5 dBuV = 0.0224Watt. Required attenuation = 43+10log (0.0224) dB = 26.5dBc. 12Vdc, 23°C, 45%rh.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	

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

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	116.000M	52.1	+14.6 -28.4	+0.0	+0.2	+1.9	+0.0 293	40.4	94.0	-53.6	Horiz 123
2	538.240M	43.5	+0.0 -28.6	+17.7	+0.4	+4.6	+0.0 4	37.6	94.0	-56.4	Horiz 121
3	537.900M	43.5	+0.0 -28.6	+17.7	+0.4	+4.6	+0.0 54	37.6	94.0	-56.4	Vert 104
4	902.760M	34.4	+0.0 -27.6	+23.0	+0.6	+6.0	+0.0 198	36.4	94.0	-57.6	Vert 104
5	114.980M	47.7	+14.4 -28.4	+0.0	+0.2	+1.9	+0.0 351	35.8	94.0	-58.2	Vert 104
6	319.950M	39.3	+0.0 -28.3	+20.9	+0.3	+3.4	+0.0 313	35.6	94.0	-58.4	Horiz 121

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 24.238 Spur RF**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Maximized Emissions**

Time: 12:09:53

Equipment: **External CDMA Data Modem**

Sequence#: 20

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX antenna is connected to antenna port. TX=1908.75MHz, RBW=VBW=1MHz. Range of measurement: 1GHz - 20GHz. 120.2 dBuV = 0.021Watt. Required attenuation = 43+10log (0.021) dB = 26.2dBc. 12Vdc, 23°C, 45%rh.

Transducer Legend:

T1=Bicon 092401	T2=Dipole#4 110902
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	141.220M	44.0	+17.1 -28.4	+12.0	+0.2	+2.1	+0.0 78	47.0	94.0	-47.0	Vert 110
2	621.040M	38.8	+0.0 -28.0	+24.1	+0.4	+5.0	+0.0 356	40.3	94.0	-53.7	Horiz 121
3	114.280M	48.4	+14.3 -28.4	+0.0	+0.2	+1.9	+0.0 251	36.4	94.0	-57.6	Horiz 110
4	563.460M	34.8	+0.0 -28.5	+25.0	+0.4	+4.7	+0.0 360	36.4	94.0	-57.6	Vert 110
5	141.220M	44.1	+17.1 -28.4	+0.0	+0.2	+2.1	+0.0 193	35.1	94.0	-58.9	Vert 110

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 24.238 Spur RF**

Work Order #: **78335**

Date: 2/13/02

Test Type: **Maximized Emissions**

Time: 11:58:06

Equipment: **External CDMA Data Modem**

Sequence#: 6

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX antenna is connected to the antenna port. TX=1851.25MHz, RBW=VBW=1MHz. Range of measurement: 1GHz - 20GHz. 120.3 dBuV = 0.0214Watt. Required attenuation = 43+10log (0.0214) dB = 26dBc. 12Vdc, 23°C, 45%rh.

Transducer Legend:

T1=Horn Antenna sn6246	T2=Helix #18 70' 11Sept2001
T3=HP3017A sn3123A00281 11-Sept-01	T4=3.5 GHz HPF
T5=18-26 HP Horn Antenna #1413	T6=HP 83051A-2.trn
T7=8.2GHz High Pass Filter Asset # 01417	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2 T6	T3 T7	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	1851.250M	129.2	+25.9 +0.0	+3.6 +0.0	-38.4 +0.0	+0.0	+0.0 275	120.3	120.3 Fundamental	+0.0	Vert 100
2	1850.850M	124.0	+25.9 +0.0	+3.6 +0.0	-38.4 +0.0	+0.0	+0.0 155	115.1	120.3 Fundamental	-5.2	Horiz 100
3	1950.900M	87.0	+26.2 +0.0	+3.8 +0.0	-38.4 +0.0	+0.0	+0.0 293	78.6	94.0	-15.4	Vert 105
4	3355.200M	79.2	+30.8 +0.0	+5.8 +0.0	-37.5 +0.0	+0.0	+0.0 231	78.3	94.0	-15.7	Vert 100
5	1326.400M	86.0	+24.3 +0.0	+3.1 +0.0	-39.1 +0.0	+0.0	+0.0 360	74.3	94.0	-19.7	Vert 100
6	10521.270 M	65.2	+37.4 +0.0	+9.8 +0.0	-38.8 +0.0	+0.0	+0.0	73.6	94.0	-20.4	Vert 100
7	2819.300M	76.2	+29.2 +0.0	+4.6 +0.0	-38.0 +0.0	+0.0	+0.0 58	72.0	94.0	-22.0	Horiz 100
8	10521.730 M	62.2	+37.4 +0.0	+9.8 +0.0	-38.8 +0.0	+1.0	+0.0 8	71.6	94.0	-22.4	Horiz 115

9	5553.690M	66.8	+33.7 +0.0	+7.1 +0.0	-36.7 +0.0	+0.0 30	+0.0	70.9	94.0	-23.1	Vert 110
10	3702.260M	70.2	+31.4 +0.0	+6.2 +0.0	-37.5 +0.0	+0.0 178	+0.0	70.3	94.0	-23.7	Vert 110
11	1324.300M	81.0	+24.3 +0.0	+3.1 +0.0	-39.2 +0.0	+0.0 89	+0.0	69.2	94.0	-24.8	Horiz 100
12	1951.500M	76.2	+26.2 +0.0	+3.8 +0.0	-38.4 +0.0	+0.0 10	+0.0	67.8	94.0	-26.2	Horiz 100
13	5553.700M	62.8	+33.7 +0.0	+7.1 +0.0	-36.7 +0.0	+0.4 24	+0.0	67.3	94.0	-26.7	Horiz 115
14	19565.000 M	49.8	+0.0 +40.5	+0.0 -28.9	+0.0 +0.0	+0.0 309	+0.0	61.4	94.0	-32.6	Vert 103
15	3702.730M	61.5	+31.4 +0.0	+6.2 +0.0	-37.5 +0.0	-0.2 352	+0.0	61.4	94.0	-32.6	Horiz 129
16	19080.000 M	49.8	+0.0 +40.2	+0.0 -28.9	+0.0 -0.2	+0.0 309	+0.0	60.9	94.0	-33.1	Horiz 103

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 24.238 Spur RF**

Work Order #: **78335**

Date: 2/13/02

Test Type: **Maximized Emissions**

Time: 14:04:00

Equipment: **External CDMA Data Modem**

Sequence#: 7

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX antenna is connected to the antenna port. TX=1880.00MHz, RBW=VBW=1MHz. Range of measurement: 1GHz - 20GHz. 120.5 dBuV = 0.0224Watt. Required attenuation = 43+10log (0.0224) dB = 26.5dBc. 12Vdc, 23°C, 45%rh.

Transducer Legend:

T1=Horn Antenna sn6246	T2=Helix #18 70' 11Sept2001
T3=HP3017A sn3123A00281 11-Sept-01	T4=3.5 GHz HPF
T5=18-26 HP Horn Antenna #1413	T6=HP 83051A-2.trn
T7=8.2GHz High Pass Filter Asset # 01417	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	T5	T6	T7		Table	dBμV/m	dBμV/m	dB	Ant
1	1880.430M	129.2	+26.0	+3.6	-38.3	+0.0	+0.0	120.5	120.5	+0.0	Vert
			+0.0	+0.0	+0.0		349		Fundamental		100
2	1879.730M	123.3	+26.0	+3.6	-38.3	+0.0	+0.0	114.6	120.5	-5.9	Horiz
			+0.0	+0.0	+0.0		268		Fundamental		100
3	5640.500M	77.6	+33.7	+7.1	-36.8	+0.4	+0.0	82.0	94.0	-12.0	Vert
			+0.0	+0.0	+0.0		11				153
4	1950.800M	83.0	+26.2	+3.8	-38.4	+0.0	+0.0	74.6	94.0	-19.4	Vert
			+0.0	+0.0	+0.0		125				131
5	5640.200M	69.1	+33.7	+7.1	-36.8	+0.4	+0.0	73.5	94.0	-20.5	Vert
	Ave		+0.0	+0.0	+0.0		11				153
6	5640.150M	68.2	+33.7	+7.1	-36.8	+0.4	+0.0	72.6	94.0	-21.4	Horiz
			+0.0	+0.0	+0.0		178				165
7	1950.800M	79.5	+26.2	+3.8	-38.4	+0.0	+0.0	71.1	94.0	-22.9	Horiz
			+0.0	+0.0	+0.0		356				100
8	7519.300M	63.1	+36.2	+8.1	-38.0	+0.5	+0.0	69.9	94.0	-24.1	Vert
			+0.0	+0.0	+0.0		187				100

9	1341.600M	81.1	+24.3 +0.0	+3.1 +0.0	-39.1 +0.0	+0.0 +0.0	69.4	94.0	-24.6	Vert 100
10	1341.800M	80.8	+24.3 +0.0	+3.1 +0.0	-39.1 +0.0	+0.0 +0.0	69.1	94.0	-24.9	Horiz 100
11	3760.000M	66.4	+31.5 +0.0	+6.1 +0.0	-37.5 +0.0	-0.4 +0.0	66.1	94.0	-27.9	Vert 100
12	11279.000 M	50.9	+38.6 +0.0	+11.5 +0.0	-37.0 +0.0	+0.9 +0.0	64.9	94.0	-29.1	Vert 100
13	19783.000 M	50.7	+0.0 +40.6	+0.0 -28.8	+0.0 +0.0	+0.0 +0.0	62.5	94.0	-31.5	Horiz 103
14	3759.200M	61.1	+31.5 +0.0	+6.1 +0.0	-37.5 +0.0	-0.4 +0.0	60.8	94.0	-33.2	Horiz 145
15	18783.000 M	49.3	+0.0 +40.2	+0.0 -28.9	+0.0 +0.0	+0.0 +0.0	60.6	94.0	-33.4	Vert 103
16	7519.900M	52.6	+36.2 +0.0	+8.1 +0.0	-38.0 +0.0	+0.5 +0.0	59.4	94.0	-34.6	Horiz 165
17	9400.500M	50.4	+37.3 +0.0	+9.3 +0.0	-41.4 +0.0	+0.7 +0.0	56.3	94.0	-37.7	Vert 100
18	4300.000M	47.4	+32.1 +0.0	+6.1 +0.0	-37.3 +0.0	+0.0 +0.0	48.3	94.0	-45.7	Vert 100
19	1860.800M	76.8	+25.9 +0.0	+3.6 +0.0	-38.4 +0.0	+0.0 +0.0	67.9	120.5	-52.6	Vert 100
20	11281.500 M	54.5	+0.0 +0.0	+0.0 -29.0	+0.0 -0.3	+0.9 +0.0	26.1	94.0	-67.9	Horiz 189

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**
 Specification: **FCC 24.238 Spur RF**
 Work Order #: **78335**
 Test Type: **Maximized Emissions**
 Equipment: **External CDMA Data Modem**
 Manufacturer: AnyDATA.net Incorporated
 Model: EMII-1900
 S/N: 0201K10190

Date: 2/13/02
 Time: 15:16:07
 Sequence#: 8
 Tested By: Eddie Wong

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX antenna is connected to antenna port. TX=1908.75MHz, RBW=VBW=1MHz. Range of measurement: 1GHz - 20GHz. 120.2 dBuV = 0.021Watt. Required attenuation = 43+10log (0.021) dB = 26.2dBc. 12Vdc, 23Deg°C, 45%rh.

Transducer Legend:

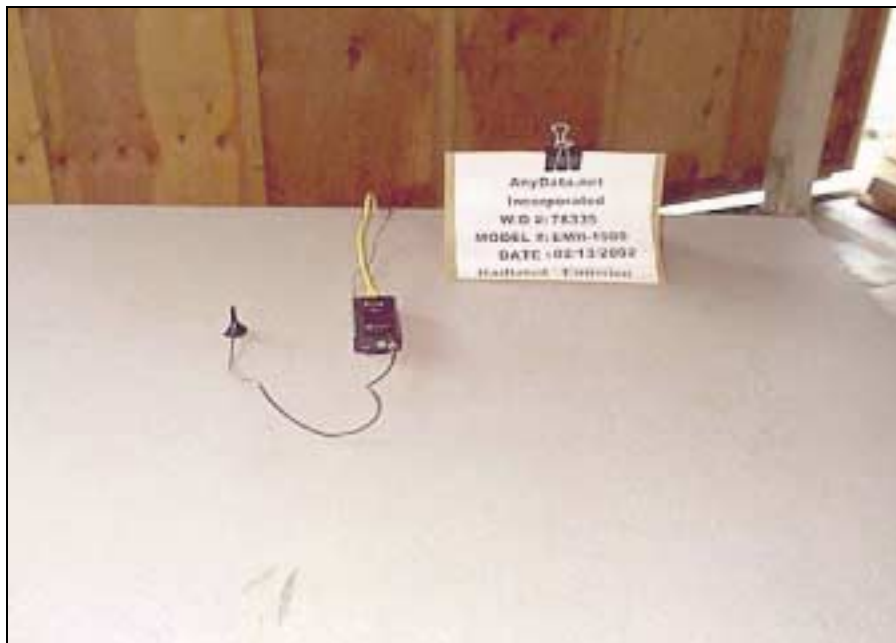
T1=Horn Antenna sn6246	T2=Helix #18 70' 11Sept2001
T3=HP3017A sn3123A00281 11-Sept-01	T4=3.5 GHz HPF
T5=HP 83051A-2.trn	T6=18-26 HP Horn Antenna #1413

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

#	Freq	Rdng	T1 T5	T2 T6	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dB μ V	dB	dB	dB	dB	Table	dB μ V/m	dB μ V/m	dB	Ant
1	1908.730M	128.8	+26.1 +0.0	+3.6 +0.0	-38.3	+0.0	+0.0 355	120.2	120.2	+0.0	Vert 104
2	1909.100M	119.5	+26.1 +0.0	+3.6 +0.0	-38.3	+0.0	+0.0 132	110.9	120.2	-9.3	Horiz 104
3	1951.000M	83.6	+26.2 +0.0	+3.8 +0.0	-38.4	+0.0	+0.0 23	75.2	94.0	-18.8	Vert 104
4	1950.900M	83.5	+26.2 +0.0	+3.8 +0.0	-38.4	+0.0	+0.0 355	75.1	94.0	-18.9	Vert 104
5	5726.200M	64.7	+33.7 +0.0	+7.2 +0.0	-36.9	+0.4	+0.0 71	69.1	94.0	-24.9	Vert 195
6	7634.800M	60.9	+36.1 +0.0	+8.2 +0.0	-38.0	+0.6	+0.0 157	67.8	94.0	-26.2	Vert 176
7	3817.400M QP	62.8	+31.6 +0.0	+6.1 +0.0	-37.5	-0.5	+0.0 2	62.5	94.0	-31.5	Vert 124
8	5726.800M	57.5	+33.7 +0.0	+7.2 +0.0	-36.9	+0.4	+0.0 163	61.9	94.0	-32.1	Horiz 103
9	5726.800M	57.5	+33.7 +0.0	+7.2 +0.0	-36.9	+0.4	+0.0 163	61.9	94.0	-32.1	Horiz 169

10	19783.000 M	49.6	+0.0 -28.8	+0.0 +40.6	+0.0	+0.0	+0.0	61.4	94.0	-32.6	Horiz
							309				103
11	18783.000 M	49.3	+0.0 -28.9	+0.0 +40.2	+0.0	+0.0	+0.0	60.6	94.0	-33.4	Horiz
							309				103
12	3816.000M	58.8	+31.6 +0.0	+6.1 +0.0	-37.5	-0.5	+0.0 88	58.5	94.0	-35.5	Horiz
							200				131
13	7635.000M	49.3	+36.1 +0.0	+8.2 +0.0	-38.0	+0.6	+0.0	56.2	94.0	-37.8	Horiz
							200				103
14	1889.800M	77.5	+26.0 +0.0	+3.6 +0.0	-38.3	+0.0	+0.0 84	68.8	120.2	-51.4	Vert
											104

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
9 kHz- 30 MHz						
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
QP Adapter	01437	HP	85650A	3303A01884	092801	092802
Pre-amp to SA cable	NA	Harbour	RG223/U	Cable#10	071601	071602
Pre-amp to SA cable	NA	Harbour	RG223/U	Cable#10	071601	071602
Active loop antenna	2014	Emco	6502	2014	073101	073102
30- 1000 MHz						
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
QP Adapter	01437	HP	85650A	3303A01884	092801	092802
Bicon Antenna	306	AH	SAS200/540	220	092401	092402
Log Periodic Antenna	331	AH	SAS 00/516	330	092401	092402
Pre-amp	00309	HP	8447D	1937A02548	090501	090502
Antenna cable	NA	NA	RG214	Cable#15	122001	122002
Pre-amp to SA cable	NA	Harbour	RG223/U	Cable#10	071601	071602
1000-18,000 MHz						
Spectrum Analyzer	02467	Agilent	E7405A	US40240225	041001	041002
Horn Antenna	0646	EMCO	3115	4683	022801	022802
Microwave Pre-amp	00786	HP	83017A	3123A00281	091201	091202
¼" Helix Coaxial Cable	NA	Andrew	LDF1-50	Cable#18 (70 ft)	091101	091102
18,000-20,000 MHz						
Spectrum Analyzer	02467	Agilent	E7405A	US40240225	041001	041002
8.2 GHz HPF	01417	HP	84300-80039	3643A00026	101701	101702
Microwave Pre-amp	NA	HP	8305	331A00238	022701	022701
Horn Antenna	01413	HP	RA42-K-F-4B-C	942126-003	070901	070902



OATS Test Setup – Front View



OATS Test Setup- Back View

2.1033(c)(14)/2.1055/24.235 - FREQUENCY STABILITY

Frequency Stability

Customer:	AnyData.net
WO:	78335
Model:	1900
FCC Part:	2.1055 / 24.235
Test Engineer:	Randal Clark

Ambient Temperature:	72	22.2 °C
Relative Humidity:	41	%
Authorized Band:	1850 - 1990	MHz
CH1 Operating Frequency in MHz:	1851.25	
CH2 Operating Frequency in MHz:	1880.00	
CH3 Operating Frequency in MHz:	1908.75	
CH1 Frequency Limit in Hz:	1250000	Must stay within authorized frequency block
CH2 Frequency Limit in Hz:	1250000	Must stay within authorized frequency block
CH3 Frequency Limit in Hz:	1250000	Must stay within authorized frequency block
Nominal Operating Voltage:	12.00	VDC
85% of Nominal (V-)	10.20	VDC
115% of Nominal (V+)	13.80	VDC

Maximum Deviation:	1500.00	Hz
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Temperature Stability

Channel 1		
Frequency MHz	Frequency Error Hz	Pass/Fail
-30°	1851.250000	0 PASS
-20°C	1851.249990	-10 PASS
-10°C	1851.250100	100 PASS
0°C	1851.251420	1420 PASS
+10°C	1851.251330	1330 PASS
+20°C	1851.251050	1050 PASS
+30°C	1851.251050	1050 PASS
+40°C	1851.251170	1170 PASS
+50°C	1851.249800	-200 PASS

Channel 2		
Frequency MHz	Frequency Error Hz	Pass/Fail
-30°	1880.000000	0 PASS
-20°C	1880.000130	130 PASS
-10°C	1880.001500	1500 PASS
0°C	1880.001400	1400 PASS
+10°C	1880.001370	1370 PASS
+20°C	1880.001100	1100 PASS
+30°C	1880.001250	1250 PASS
+40°C	1880.001310	1310 PASS
+50°C	1880.000170	170 PASS

Channel 3		
	Frequency MHz	Frequency Error Hz Pass/Fail
-30°	1908.750000	0 PASS
-20°C	1908.751300	1300 PASS
-10°C	1908.751400	1400 PASS
0°C	1908.751390	1390 PASS
+10°C	1908.751300	1300 PASS
+20°C	1908.751130	1130 PASS
+30°C	1908.751230	1230 PASS
+40°C	1908.751270	1270 PASS
+50°C	1908.750360	360 PASS

Voltage Variations

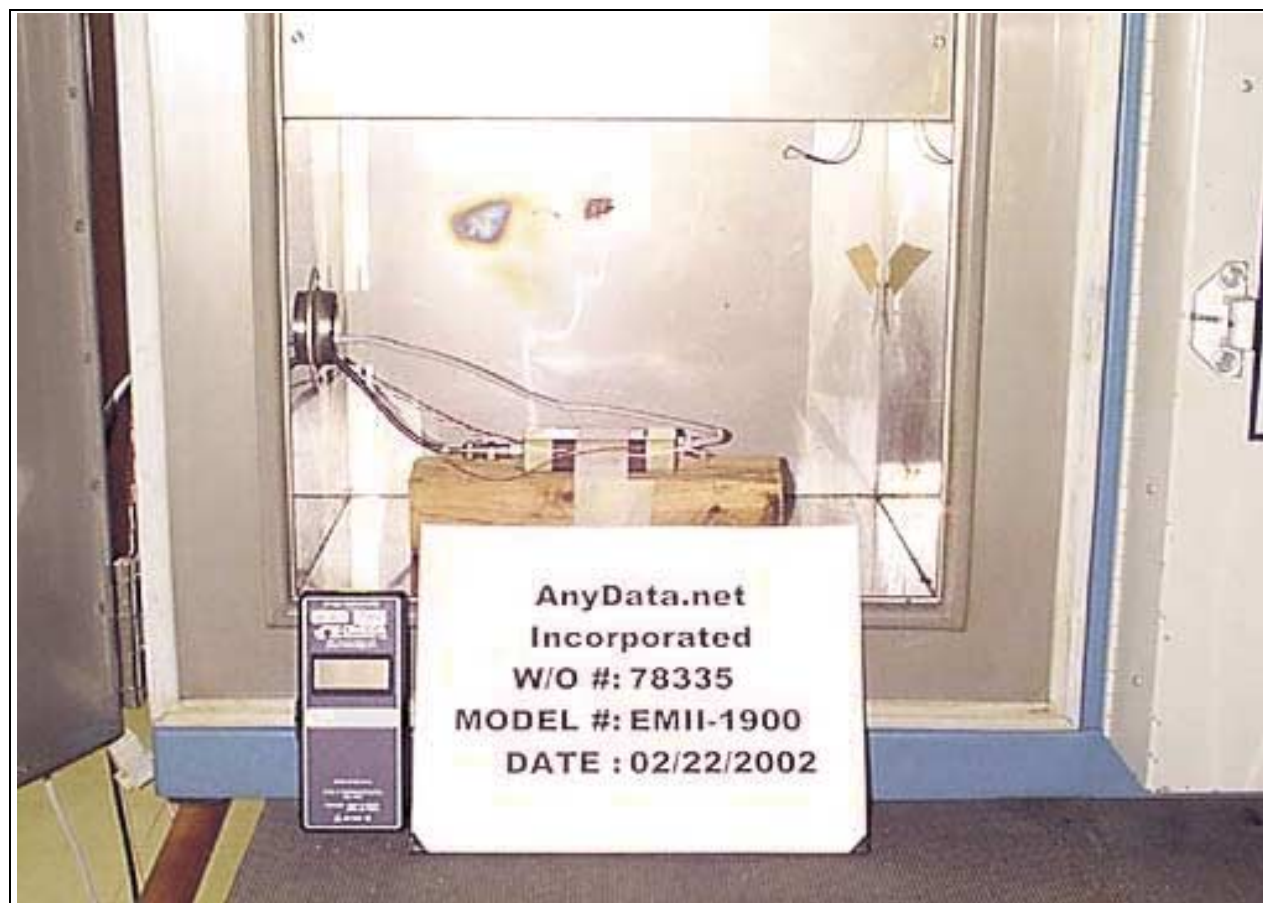
Ambient Temperature is 22.2 °C

Channel 1		
Voltage	Frequency MHz	Frequency Error Hz Pass/Fail
10.2	1851.251220	1220 PASS
12.0	1851.251180	1180 PASS
13.8	1851.251210	1210 PASS

Channel 2		
Voltage	Frequency MHz	Frequency Error Hz Pass/Fail
10.2	1880.001100	1100 PASS
12.0	1880.001190	1190 PASS
13.8	1880.001270	1270 PASS

Channel 3		
Voltage	Frequency MHz	Frequency Error Hz Pass/Fail
10.2	1908.751000	1000 PASS
12.0	1908.750820	820 PASS
13.8	1908.750880	880 PASS

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Frequency Counter	01253	HP	5340A	1532A03198	9/5/01	9/5/02
Power Supply, DC	00762	HP	6205C	2228A01775	5/31/01	5/31/02
QP Adapter	00478	HP	85650A	2811A01267	1/30/02	1/30/03
S/A Display	00489	HP	8566B	2403A08241	1/30/02	1/30/03
Spectrum Analyzer	00490	HP	8566B	2209A01404	1/30/02	1/30/03
Temp Chamber	01879	Thermotron	S-1.2 MiniMax	11899	3/29/01	3/29/02
Thermometer	02242	Omega	HH-26K	T-202884	7/26/01	7/26/02



Temperature Test Setup

2.1091 – MPE CALCULATIONS

Maximum Permissible Exposure Calculations

Date of Report: February 26th, 2002

Calculations prepared for:
AnyDATA.net Incorporated
18902 Bardeen Ave.
Irvine, CA 92612

Calculations prepared by:
Eddie Wong
110 N. Olinda Place
Brea, CA 9283

Model Number: EMII-1900

Fundamental Operating Frequency: 1850-1990

Maximum Rated Output Power: 0.28 watts
Measured Maximum Output Power: 0.3 Watts ERP

MPE limit in accordance with FCC part 1.1311, table 1

Limit for Maximum permissible exposure: (B) Limit for General population/uncontrolled Exposure.

For frequency range of 1500-100,00 MHz , the MPE is 1 (mW/cm²)

Power Output (Watts)	Distance (Meters)	Power Density (mW/cm ²)	Result
0.300	0.2	0.0978	PASS
0.28	0.2	0.0914	PASS

$$\text{Power Density (W/M}^2\text{)} = (30 * P_t * G) / (d^2 * Z_o)$$

P_t = Power Delivered to the Antenna

G = Antenna Gain

d = Distance in meters

Z_o = Impedance of Free Space

Under normal operating conditions, the antenna is designed to maintain a separation distance of 20 cm from all persons. As can be seen from the MPE results, this device passes the limits specified in 1.1311 at a distance of 20 cm and at the rated output power of 0.28 Watts .

15.107 – AC CONDUCTED EMISSIONS – RECEIVE MODE

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.107 Class B**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Conducted Emissions**

Time: 1:32:14 PM

Equipment: **External CDMA Data Modem**

Sequence#: 21

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1851.75MHz. Receiver mode: TX power turned off. RBW=VBW=9KHz. Range of measurement: 450kHz-30 MHz. 12Vdc, 18°C, 52%rh. Cond emission measurement at AC power input of the support DC power supply. Power supply input voltage = 110Vac, 60 Hz.

Transducer Legend:

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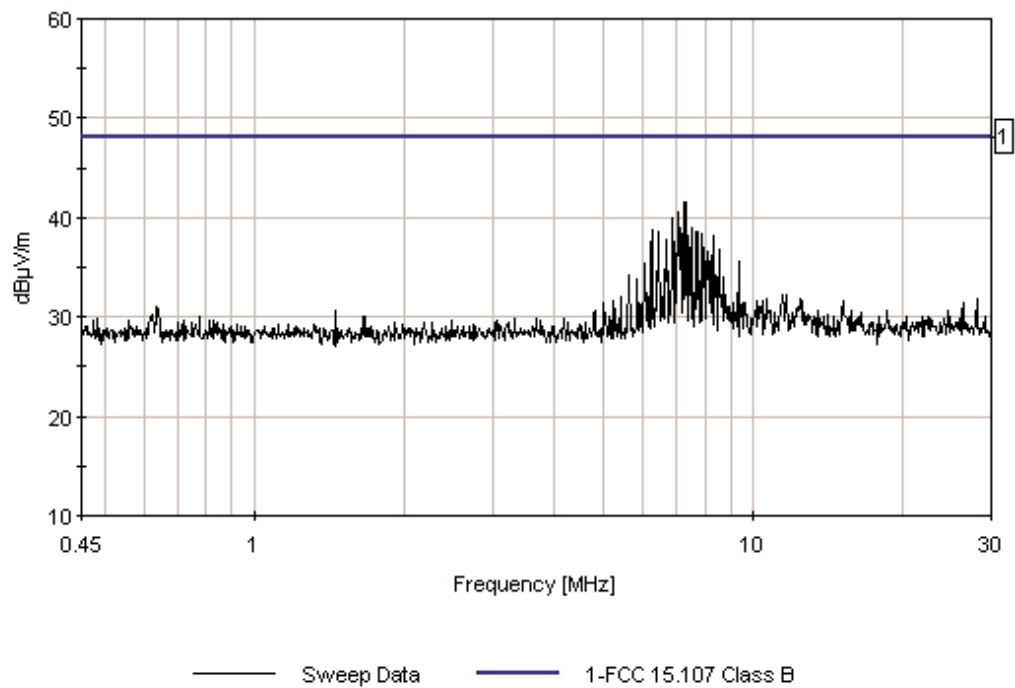
Measurement Data: Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dB μ V					Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	7.298M	41.6					+0.0	41.6	48.0	-6.4	Black
2	7.086M	40.5					+0.0	40.5	48.0	-7.5	Black
3	6.881M	40.0					+0.0	40.0	48.0	-8.0	Black
4	7.509M	39.0					+0.0	39.0	48.0	-9.0	Black
5	6.253M	38.8					+0.0	38.8	48.0	-9.2	Black
6	7.707M	38.5					+0.0	38.5	48.0	-9.5	Black
7	6.458M	38.5					+0.0	38.5	48.0	-9.5	Black
8	7.919M	38.4					+0.0	38.4	48.0	-9.6	Black
9	7.222M	38.4					+0.0	38.4	48.0	-9.6	Black
10	8.342M	38.2					+0.0	38.2	48.0	-9.8	Black

11	7.373M	38.2	+0.0	38.2	48.0	-9.8	Black
12	6.683M	37.7	+0.0	37.7	48.0	-10.3	Black
13	7.441M	36.9	+0.0	36.9	48.0	-11.1	Black
14	8.560M	36.7	+0.0	36.7	48.0	-11.3	Black
15	8.123M	36.5	+0.0	36.5	48.0	-11.5	Black

CKC Laboratories, Inc. Date: 02/15/2002 Time: 1:32:14 PM VWO#: 78335
FCC 15.107 Class B Test Lead: Black Sequence#: 21



Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.107 Class B**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Conducted Emissions**

Time: 1:36:08 PM

Equipment: **External CDMA Data Modem**

Sequence#: 22

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1851.75MHz Receiver mode: TX power turned off. RBW=VBW=9KHz. Range of measurement: 450kHz-30 MHz. 12Vdc, 18°C, 52%rh. Cond emission measurement at AC power input of the support DC power supply. Power supply input voltage = 110Vac, 60 Hz.

Transducer Legend:

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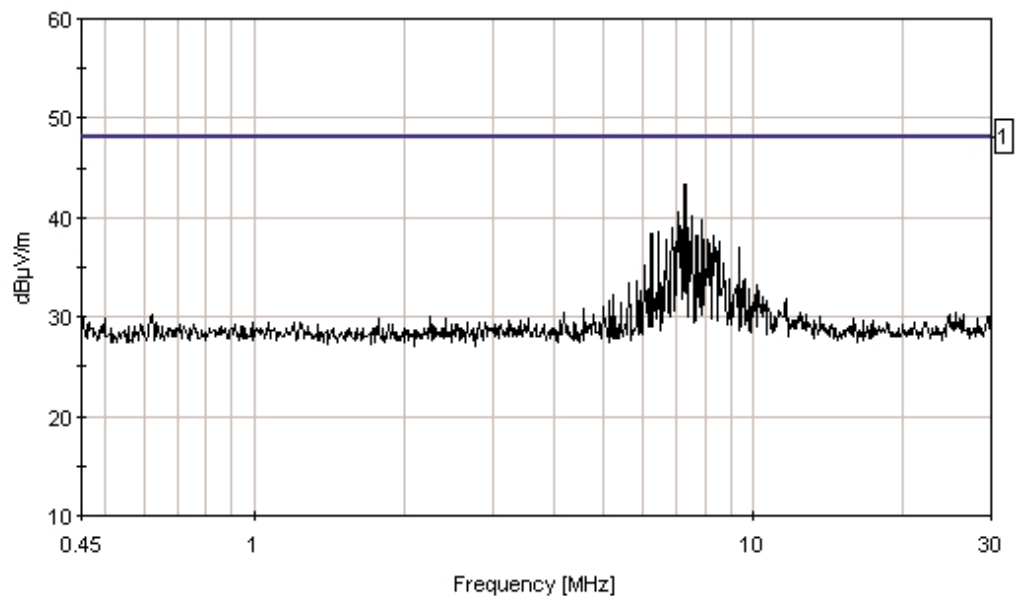
Measurement Data: Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dB μ V	dB	dB	dB	dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	7.291M	43.4					+0.0	43.4	48.0	-4.6	White
2	7.086M	40.5					+0.0	40.5	48.0	-7.5	White
3	7.509M	40.1					+0.0	40.1	48.0	-7.9	White
4	7.919M	39.7					+0.0	39.7	48.0	-8.3	White
5	7.373M	39.0					+0.0	39.0	48.0	-9.0	White
6	6.881M	38.9					+0.0	38.9	48.0	-9.1	White
7	7.222M	38.8					+0.0	38.8	48.0	-9.2	White
8	6.472M	38.5					+0.0	38.5	48.0	-9.5	White
9	6.247M	38.4					+0.0	38.4	48.0	-9.6	White
10	8.342M	38.2					+0.0	38.2	48.0	-9.8	White

11	7.707M	38.2	+0.0	38.2	48.0	-9.8	White
12	8.137M	37.8	+0.0	37.8	48.0	-10.2	White
13	6.677M	37.8	+0.0	37.8	48.0	-10.2	White
14	6.997M	37.6	+0.0	37.6	48.0	-10.4	White
15	7.454M	37.5	+0.0	37.5	48.0	-10.5	White

CKC Laboratories, Inc. Date: 02/15/2002 Time: 1:36:08 PM VWO#: 78335
FCC 15.107 Class B Test Lead: White Sequence#: 22



Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.107 Class B**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Conducted Emissions**

Time: 1:44:26 PM

Equipment: **External CDMA Data Modem**

Sequence#: 24

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1880.00MHz. Receiver mode: TX power turned off. RBW=VBW=9kHz Range of measurement: 450kHz-30 MHz. 12Vdc, 18°C, 52%rh. Cond emission measurement at AC power input of the support DC power supply. Power supply input voltage = 110Vac, 60 Hz.

Transducer Legend:

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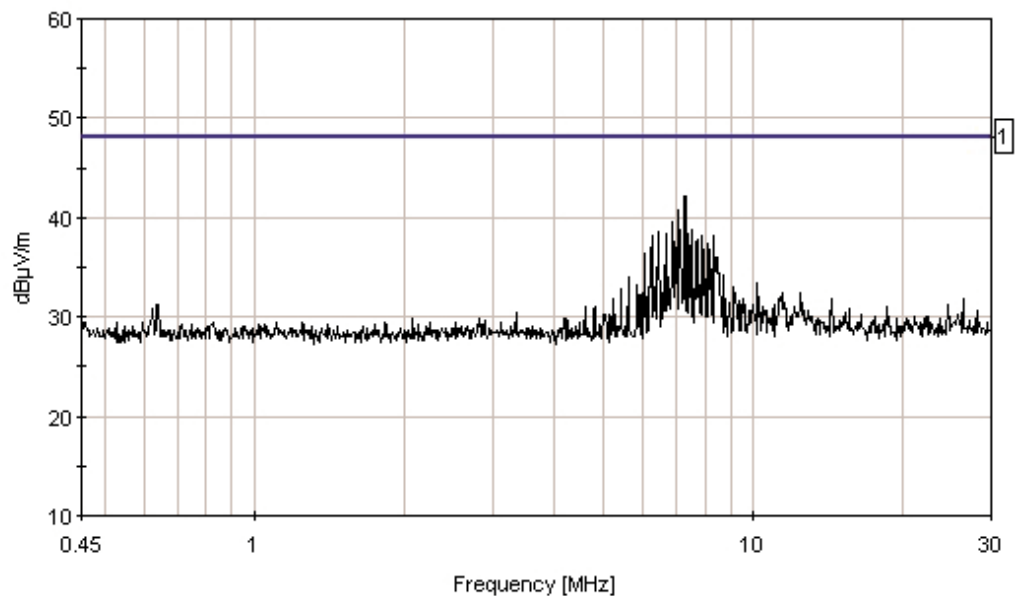
Measurement Data: Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dBμV	dB	dB	dB	dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	7.298M	42.2					+0.0	42.2	48.0	-5.8	Black
2	7.086M	40.8					+0.0	40.8	48.0	-7.2	Black
3	6.895M	39.6					+0.0	39.6	48.0	-8.4	Black
4	7.516M	38.7					+0.0	38.7	48.0	-9.3	Black
5	6.472M	38.6					+0.0	38.6	48.0	-9.4	Black
6	7.154M	38.5					+0.0	38.5	48.0	-9.5	Black
7	6.677M	38.4					+0.0	38.4	48.0	-9.6	Black
8	7.386M	38.3					+0.0	38.3	48.0	-9.7	Black
9	7.236M	38.3					+0.0	38.3	48.0	-9.7	Black
10	7.919M	38.2					+0.0	38.2	48.0	-9.8	Black

11	8.342M	38.1	+0.0	38.1	48.0	-9.9	Black
12	6.267M	38.1	+0.0	38.1	48.0	-9.9	Black
13	7.714M	37.7	+0.0	37.7	48.0	-10.3	Black
14	8.123M	37.3	+0.0	37.3	48.0	-10.7	Black
15	7.454M	37.1	+0.0	37.1	48.0	-10.9	Black

CKC Laboratories, Inc. Date: 02/15/2002 Time: 1:44:26 PM VWO#: 78335
FCC 15.107 Class B Test Lead: Black Sequence#: 24



— Sweep Data — 1-FCC 15.107 Class B

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**
 Specification: **FCC 15.107 Class B**
 Work Order #: **78335**
 Test Type: **Conducted Emissions**
 Equipment: **External CDMA Data Modem**
 Manufacturer: AnyDATA.net Incorporated
 Model: EMII-1900
 S/N: 0201K10190

Date: 2/15/02
 Time: 1:40:28 PM
 Sequence#: 23
 Tested By: Eddie Wong

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1880.00MHz. Receiver mode: TX power turned off. RBW=VBW=9kHz. Range of measurement: 450kHz-30 MHz. 12Vdc, 18°C, 52%rh. Cond emission measurement at AC power input of the support DC power supply. Power supply input voltage = 110Vac, 60 Hz.

Transducer Legend:

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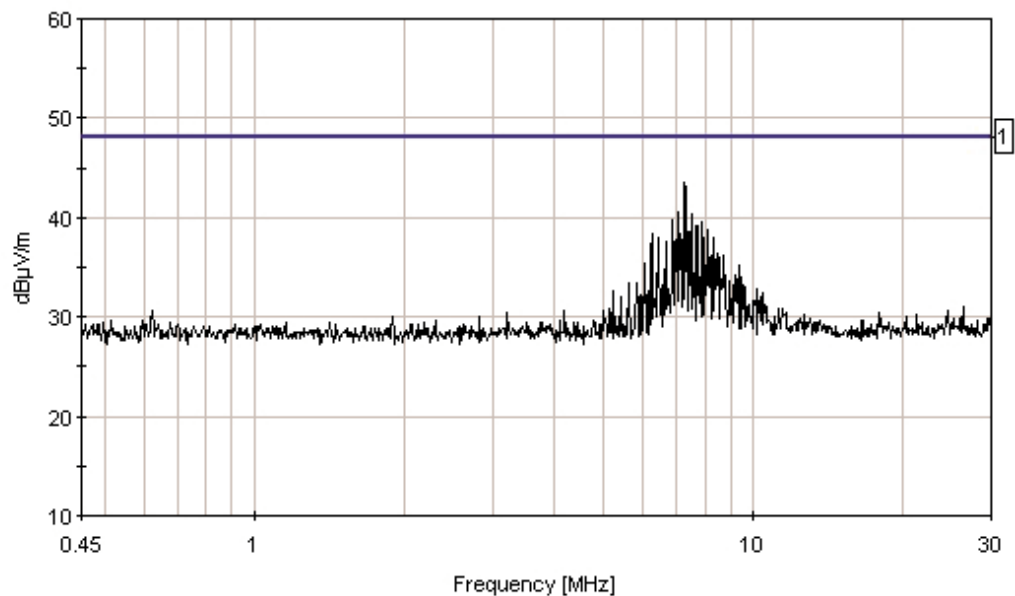
Measurement Data: Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBμV	dB	dB	dB	dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	7.291M	43.5					+0.0	43.5	48.0	-4.5	White
2	7.086M	40.6					+0.0	40.6	48.0	-7.4	White
3	7.509M	40.4					+0.0	40.4	48.0	-7.6	White
4	6.895M	39.7					+0.0	39.7	48.0	-8.3	White
5	7.919M	39.6					+0.0	39.6	48.0	-8.4	White
6	7.707M	39.2					+0.0	39.2	48.0	-8.8	White
7	8.137M	38.8					+0.0	38.8	48.0	-9.2	White
8	7.441M	38.6					+0.0	38.6	48.0	-9.4	White
9	7.373M	38.5					+0.0	38.5	48.0	-9.5	White
10	6.253M	38.4					+0.0	38.4	48.0	-9.6	White

11	6.458M	38.0	+0.0	38.0	48.0	-10.0	White
12	8.342M	37.9	+0.0	37.9	48.0	-10.1	White
13	7.222M	37.7	+0.0	37.7	48.0	-10.3	White
14	6.997M	37.7	+0.0	37.7	48.0	-10.3	White
15	6.677M	37.6	+0.0	37.6	48.0	-10.4	White

CKC Laboratories, Inc. Date: 02/15/2002 Time: 1:40:28 PM VWO#: 78335
FCC 15.107 Class B Test Lead: White Sequence#: 23



— Sweep Data — 1-FCC 15.107 Class B

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.107 Class B**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Conducted Emissions**

Time: 1:48:39 PM

Equipment: **External CDMA Data Modem**

Sequence#: 25

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1908.75MHz. Receiver mode: TX power turned off. RBW=VBW=9kHz. Range of measurement: 450kHz-30 MHz. 12Vdc, 18°C, 52%rh. Cond emission measurement at AC power input of the support DC power supply. Power supply input voltage = 110Vac, 60 Hz.

Transducer Legend:

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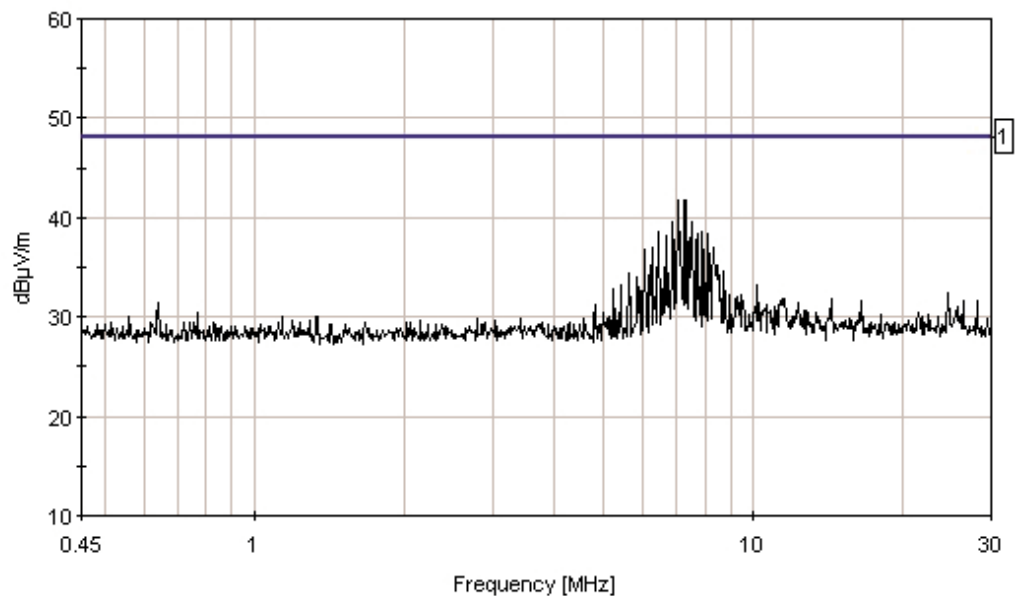
Measurement Data: Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dBμV	dB	dB	dB	dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	7.298M	41.7					+0.0	41.7	48.0	-6.3	Black
2	7.086M	41.7					+0.0	41.7	48.0	-6.3	Black
3	7.516M	39.6					+0.0	39.6	48.0	-8.4	Black
4	6.895M	39.5					+0.0	39.5	48.0	-8.5	Black
5	7.154M	38.6					+0.0	38.6	48.0	-9.4	Black
6	7.919M	38.5					+0.0	38.5	48.0	-9.5	Black
7	6.472M	38.5					+0.0	38.5	48.0	-9.5	Black
8	8.123M	38.3					+0.0	38.3	48.0	-9.7	Black
9	7.727M	38.3					+0.0	38.3	48.0	-9.7	Black
10	6.683M	38.1					+0.0	38.1	48.0	-9.9	Black

11	7.454M	37.9	+0.0	37.9	48.0	-10.1	Black
12	7.386M	37.5	+0.0	37.5	48.0	-10.5	Black
13	7.236M	37.5	+0.0	37.5	48.0	-10.5	Black
14	6.267M	37.0	+0.0	37.0	48.0	-11.0	Black
15	8.342M	36.9	+0.0	36.9	48.0	-11.1	Black

CKC Laboratories, Inc. Date: 02/15/2002 Time: 1:48:39 PM VWO#: 78335
FCC 15.107 Class B Test Lead: Black Sequence#: 25



— Sweep Data — 1-FCC 15.107 Class B

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.107 Class B**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Conducted Emissions**

Time: 2:01:06 PM

Equipment: **External CDMA Data Modem**

Sequence#: 26

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1908.75MHz. Receiver mode: TX power turned off. RBW=VBW=9kHz. Range of measurement: 450kHz-30 MHz. 12Vdc, 18°C, 52%rh. Cond emission measurement at AC power input of the support DC power supply. Power supply input voltage = 110Vac, 60 Hz.

Transducer Legend:

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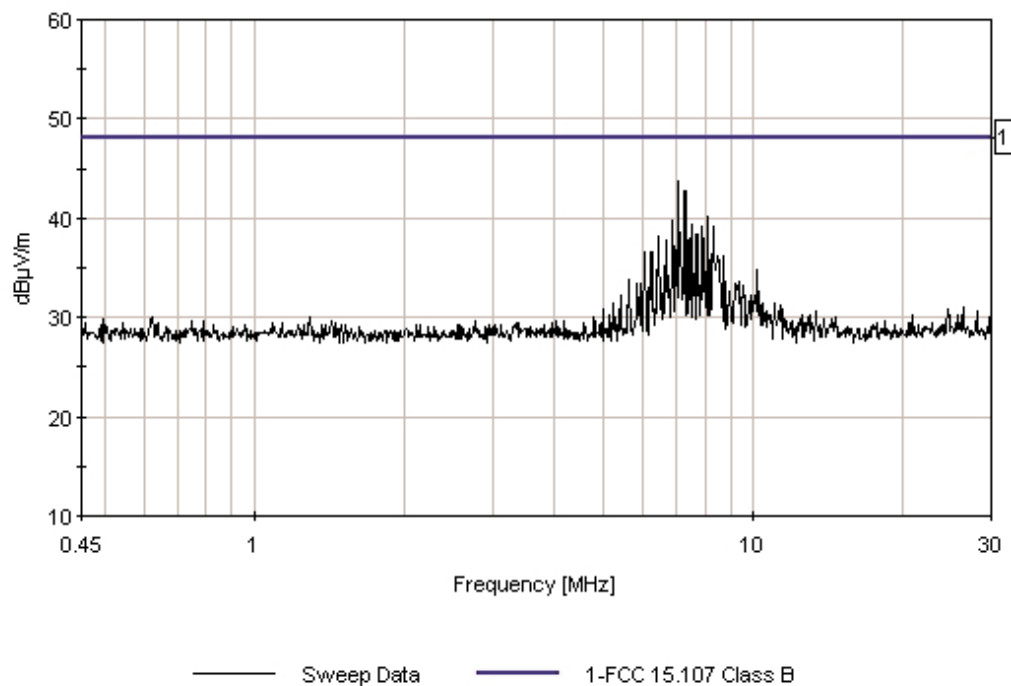
Measurement Data: Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBμV	dB	dB	dB	dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	7.086M	43.7					+0.0	43.7	48.0	-4.3	White
2	7.298M	42.8					+0.0	42.8	48.0	-5.2	White
3	8.123M	40.2					+0.0	40.2	48.0	-7.8	White
4	6.881M	39.8					+0.0	39.8	48.0	-8.2	White
5	7.509M	39.3					+0.0	39.3	48.0	-8.7	White
6	8.342M	39.2					+0.0	39.2	48.0	-8.8	White
7	7.919M	39.1					+0.0	39.1	48.0	-8.9	White
8	7.154M	38.5					+0.0	38.5	48.0	-9.5	White
9	7.707M	38.4					+0.0	38.4	48.0	-9.6	White
10	6.458M	38.1					+0.0	38.1	48.0	-9.9	White

11	7.454M	38.0	+0.0	38.0	48.0	-10.0	White
12	7.236M	37.9	+0.0	37.9	48.0	-10.1	White
13	7.386M	37.7	+0.0	37.7	48.0	-10.3	White
14	6.677M	37.7	+0.0	37.7	48.0	-10.3	White
15	7.004M	36.8	+0.0	36.8	48.0	-11.2	White

CKC Laboratories, Inc.	Date: 02/15/2002	Time: 2:01:06 PM	VWO#: 78335
FCC 15.107 Class B	Test Lead: White	Sequence#: 26	



Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
QP Adapter	01437	HP	85650A	3303A01884	092801	092802
LISN	02128	EMCO	3816/2NM	9809-1090	030701	030702
LISN	00847	EMCO	3816/2NM	1104	101501	101502



AC Conducted Emissions - Front View



AC Conducted Emissions - Side View

15.109 – RADIATED EMISSIONS – RECEIVE MODE

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.109 Class B**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Maximized Emissions**

Time: 09:57:40

Equipment: **External CDMA Data Modem**

Sequence#: 15

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1851.75MHz. Receiver mode: TX power turned off. RBW=VBW=120kHz. Range of measurement: 30-1000MHz. 12Vdc, 18°C, 52%rh.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	

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

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	955.910M	24.6	+0.0 -27.7	+23.7	+0.6	+6.3	+0.0 354	27.5	46.0	-18.5	Vert 101
2	111.576M	36.6	+13.8 -28.4	+0.0	+0.2	+1.9	+0.0 230	24.1	43.5	-19.4	Horiz 101
3	619.170M	25.4	+0.0 -28.0	+19.7	+0.4	+5.0	+0.0 126	22.5	46.0	-23.5	Horiz 142
4	280.386M	26.1	+20.6 -28.3	+0.0	+0.3	+3.1	+0.0 208	21.8	46.0	-24.2	Vert 101
5	581.034M	20.4	+0.0 -28.3	+18.5	+0.4	+4.8	+0.0 210	15.8	46.0	-30.2	Vert 101
6	433.170M	23.9	+0.0 -28.6	+16.0	+0.4	+3.9	+0.0 169	15.6	46.0	-30.4	Horiz 142

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.109 Class B**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Maximized Emissions**

Time: 10:24:45

Equipment: **External CDMA Data Modem**

Sequence#: 16

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1880.00MHz. Receiver mode: TX power turned off. RBW=VBW=120kHz. Range of measurement: 30-1000MHz. 12Vdc, 18°C, 52%rh.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	634.920M	25.2	+0.0 -27.9	+20.3	+0.4	+5.0	+0.0 294	23.0	46.0	-23.0	Vert 100
2	544.920M	27.9	+0.0 -28.6	+17.8	+0.4	+4.6	+0.0 282	22.1	46.0	-23.9	Vert 100
3	124.740M	29.6	+15.8 -28.4	+0.0	+0.2	+2.0	+0.0 232	19.2	43.5	-24.3	Vert 100
4	282.240M	25.0	+20.7 -28.3	+0.0	+0.3	+3.2	+0.0 294	20.9	46.0	-25.1	Horiz 100
5	326.700M	23.0	+0.0 -28.2	+20.4	+0.3	+3.4	+0.0 71	18.9	46.0	-27.1	Horiz 142
6	514.490M	6.2	+0.0 -28.5	+17.2	+0.4	+4.5	+0.0 352	-0.2	46.0	-46.2	Horiz 142

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.109 Class B**

Work Order #: **78335**

Date: 2/15/02

Test Type: **Maximized Emissions**

Time: 10:43:24

Equipment: **External CDMA Data Modem**

Sequence#: 17

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1908.75MHz. Receiver mode: TX power turned off. RBW=VBW=120kHz. Range of measurement: 30-1000MHz. 12Vdc, 18°C, 52%rh.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	717.420M	23.6	+0.0 -28.0	+22.5	+0.5	+5.3	+0.0 124	23.9	46.0	-22.1	Horiz 119
2	679.920M	23.5	+0.0 -27.9	+22.0	+0.5	+5.2	+0.0 359	23.3	46.0	-22.7	Vert 100
3	57.420M	33.6	+8.8 -28.5	+0.0	+0.1	+1.3	+0.0 165	15.3	40.0	-24.7	Horiz 100
4	987.420M	22.5	+0.0 -27.9	+24.1	+0.6	+6.9	+0.0 183	26.2	54.0	-27.8	Horiz 100
5	177.420M	23.0	+17.3 -28.2	+0.0	+0.3	+2.4	+0.0 155	14.8	43.5	-28.7	Vert 100
6	477.420M	24.0	+0.0 -28.6	+16.6	+0.4	+4.2	+0.0 290	16.6	46.0	-29.4	Vert 100

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.109 Class B**

Work Order #: **78335**

Date: 2/13/02

Test Type: **Maximized Emissions**

Time: 13:45:42

Equipment: **External CDMA Data Modem**

Sequence#: 9

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1851.75MHz. Receiver mode: TX power turned off. RBW=VBW=1MHz. Range of measurement: 1GHz - 20 GHz. 12Vdc, 23°C, 45%rh.

Transducer Legend:

T1=Horn Antenna sn6246	T2=Helix #18 70' 11Sept2001
T3=HP3017A sn3123A00281 11-Sept-01	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB		Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	7752.100M	42.2	+35.9	+8.3	-37.9		+0.0 135	48.5	54.0	-5.5	Vert 100
2	1720.850M	51.2	+25.4	+3.6	-38.6		+0.0 341	41.6	54.0	-12.4	Horiz 100
3	3004.300M	39.9	+29.9	+4.8	-37.6		+0.0 193	37.0	54.0	-17.0	Vert 100
4	1304.300M	48.3	+24.3	+3.1	-39.2		+0.0 360	36.5	54.0	-17.5	Horiz 100
5	1904.300M	42.8	+26.1	+3.6	-38.3		+0.0 360	34.2	54.0	-19.8	Vert 100
6	1002.100M	47.2	+23.9	+2.6	-40.7		+0.0 360	33.0	54.0	-21.0	Vert 100

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.109 Class B**

Work Order #: **78335**

Date: 2/13/02

Test Type: **Maximized Emissions**

Time: 14:34:38

Equipment: **External CDMA Data Modem**

Sequence#: 10

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX Antenna is connected to the antenna port. TX=1880.00MHz, Receiver mode: TX power turned off. RBW=VBW=1MHz Range of measurement: 1GHz - 20 GHz. 12Vdc, 23°C, 45%rh.

Transducer Legend:

T1=Horn Antenna sn6246	T2=Helix #18 70' 11Sept2001
T3=HP3017A sn3123A00281 11-Sept-01	

Measurement Data: Reading listed by margin.

Test Distance: 1 Meter

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB		Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	14723.000 M	37.0	+39.1	+14.4	-37.4		-10.0 360	43.1	54.0	-10.9	Horiz 108
2	1749.600M	56.8	+25.5	+3.6	-38.5		-10.0 360	37.4	54.0	-16.6	Vert 102
3	2843.350M	46.2	+29.3	+4.6	-38.0		-10.0 158	32.1	54.0	-21.9	Vert 102
4	1749.618M	51.5	+25.5	+3.6	-38.5		-10.0 272	32.1	54.0	-21.9	Horiz 108
5	2321.000M	44.5	+27.3	+4.2	-38.4		-10.0 128	27.6	54.0	-26.4	Vert 102
6	1377.300M	40.7	+24.4	+3.2	-39.0		-10.0 219	19.3	54.0	-34.7	Horiz 100
7	2217.700M	32.8	+27.0	+4.1	-38.3		-10.0 312	15.6	54.0	-38.4	Horiz 108

Test Location: CKC Laboratories, Inc. • 110 N. Olinda Place • Brea, CA 92823 • (714) 993-6112

Customer: **AnyDATA.net Incorporated**

Specification: **FCC 15.109 Class B**

Work Order #: **78335**

Date: 2/13/02

Test Type: **Maximized Emissions**

Time: 15:34:34

Equipment: **External CDMA Data Modem**

Sequence#: 11

Manufacturer: AnyDATA.net Incorporated

Tested By: Eddie Wong

Model: EMII-1900

S/N: 0201K10190

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
External CDMA Data Modem*	AnyDATA.net Incorporated	EMII-1900	0201K10190

Support Devices:

Function	Manufacturer	Model #	S/N
Laptop	Samsung	Academy 680	558791ANB00124

Test Conditions / Notes:

EUT placed on the bench. RS232 port connected to remote laptop. 12Vdc is obtained from a support power supply. Laptop running test software to exercise the EUT. TX/RX antenna is connected to the antenna port. TX=1908.75.00MHz, Receiver mode: TX power turned off. RBW=VBW=1MHz. Range of measurement: 1GHz - 20 GHz. 12Vdc, 23°C, 45%rh.

Transducer Legend:

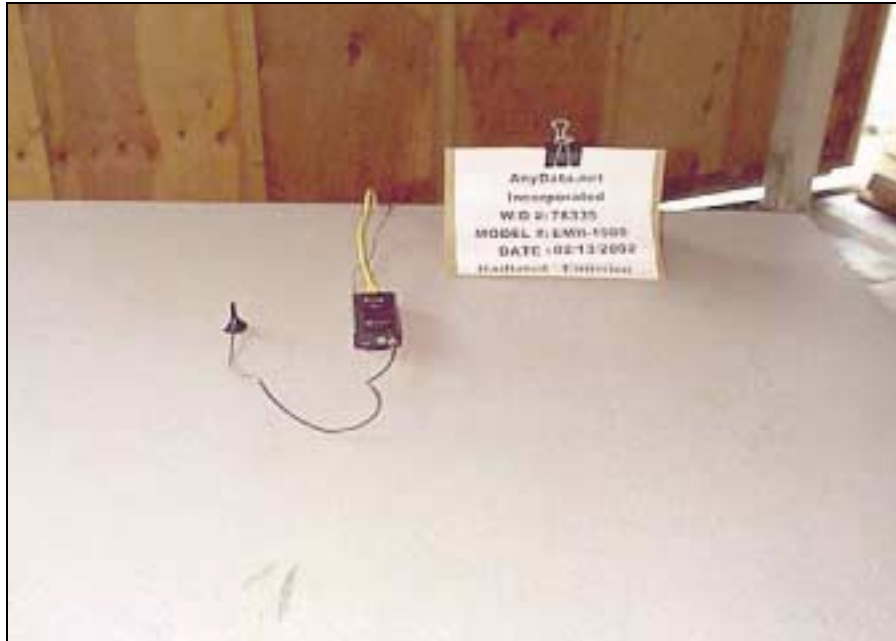
T1=Horn Antenna sn6246	T2=Helix #18 70' 11Sept2001
T3=HP3017A sn3123A00281 11-Sept-01	

Measurement Data: Reading listed by margin.

Test Distance: 1 Meter

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB		Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	12699.000 M	36.7	+39.1	+12.1	-35.6		-10.0	42.3	54.0	-11.7	Horiz
							136				104
2	8199.000M	38.4	+35.9	+8.8	-38.2		-10.0	34.9	54.0	-19.1	Horiz
							348				104
3	6849.000M	39.0	+35.1	+8.0	-37.8		-10.0	34.3	54.0	-19.7	Horiz
							95				104
4	1778.400M	52.6	+25.6	+3.6	-38.5		-10.0	33.3	54.0	-20.7	Horiz
							307				104
5	1778.400M	51.7	+25.6	+3.6	-38.5		-10.0	32.4	54.0	-21.6	Horiz
							97				104
6	6399.000M	38.4	+34.1	+7.9	-38.6		-10.0	31.8	54.0	-22.2	Horiz
							170				104
7	2340.000M	47.0	+27.4	+4.2	-38.4		-10.0	30.2	54.0	-23.8	Horiz
							155				104

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
9 kHz- 30 MHz						
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
QP Adapter	01437	HP	85650A	3303A01884	092801	092802
Pre-amp to SA cable	NA	Harbour	RG223/U	Cable#10	071601	071602
Pre-amp to SA cable	NA	Harbour	RG223/U	Cable#10	071601	071602
Active loop antenna	2014	Emco	6502	2014	073101	073102
30- 1000 MHz						
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
QP Adapter	01437	HP	85650A	3303A01884	092801	092802
Bicon Antenna	306	AH	SAS200/540	220	092401	092402
Log Periodic Antenna	331	AH	SAS 00/516	330	092401	092402
Pre-amp	00309	HP	8447D	1937A02548	090501	090502
Antenna cable	NA	NA	RG214	Cable#15	122001	122002
Pre-amp to SA cable	NA	Harbour	RG223/U	Cable#10	071601	071602
1000-18,000 MHz						
Spectrum Analyzer	02467	Agilent	E7405A	US40240225	041001	041002
Horn Antenna	0646	EMCO	3115	4683	022801	022802
Microwave Pre-amp	00786	HP	83017A	3123A00281	091201	091202
¼" Helix Coaxial Cable	NA	Andrew	LDF1-50	Cable#18 (70 ft)	091101	091102
18,000-20,000 MHz						
Spectrum Analyzer	02467	Agilent	E7405A	US40240225	041001	041002
8.2 GHz HPF	01417	HP	84300-80039	3643A00026	101701	101702
Microwave Pre-amp	NA	HP	8305	331A00238	022701	022701
Horn Antenna	01413	HP	RA42-K-F-4B-C	942126-003	070901	070902



OATS Test Setup – Front View



OATS Test Setup- Back View

APPENDIX A:

CUSTOMER SUPPLIED CDMA TEST DATA

Note: This data was supplied by the customer and CKC Laboratories does not certify its validity.

