



ANYDATA.NET, INCORPORATED TEST REPORT

FOR THE

CDMA WIRELESS DATA MODEM, EMIII-DUAL

FCC PART 22, PART 24 & PART 15 SUBPART B
SECTIONS 15.107 AND 15.109 CLASS B

COMPLIANCE

DATE OF ISSUE: APRIL 23, 2002

PREPARED FOR:

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

P.O. No.: ANY-0011
W.O. No.: 78691

PREPARED BY:

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

Date of test: April 4 – May 7, 2002

Report No.: FC02-038

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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: April 4 – May 7, 2002

DATE OF RECEIPT: April 4, 2002

PURPOSE OF TEST: To demonstrate the compliance of the CDMA Wireless Data Modem, EMIII-Dual with the requirements for FCC Part 22, Part 24 & Part 15 Subpart B Sections 15.107 and 15.109 Class B devices.

TEST METHOD: FCC Part 22, Part 24 & ANSI C63.4 (1992)

FREQUENCY RANGE TESTED: 9 kHz - 20 GHz

MANUFACTURER: AnyDATA.NET, Incorporated
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, Incorporated CDMA Wireless Data Modem, EMIII-Dual was found to be fully compliant with the following standards and specifications:

United States

- FCC Part 22, Part 24 & Part 15 Subpart B Sections 15.107 and 15.109 Class B
- FCC Part 22, Part 24 & ANSI C63.4 (1992) method

CONDITIONS FOR COMPLIANCE

Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

APPROVALS

QUALITY ASSURANCE:



Steve Behm, Manager of Engineering Services



Joyce Walker, Quality Assurance Administrative Manager



Septimiu Apahidean, EMC/Lab Manager



Chuck Kendall, EMC/Lab Manager

TEST PERSONNEL:



Eddie Wong, EMC Engineer



Dustin Oaks, EMC Engineer/
Evaluation Engineer



Randy Clark, EMC Engineer

EQUIPMENT UNDER TEST (EUT) DESCRIPTION

The EUT tested by CKC Laboratories was representative of a production unit. CDMA Data Modem with DT2000-Dual.

EQUIPMENT UNDER TEST

CDMA Wireless Data Modem

Manuf: AnyData.net Incorporated
Model: EMIII-Dual
Serial: NA
FCC ID: PM4 (pending)

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%.

2.1033(c)(3) USER'S MANUAL

The necessary information is contained in a separate document.

2.1033 (c)(4) TYPE OF EMISSIONS

1M25F9W

2.1033(c)(5) FREQUENCY RANGE

Part 22: CDMA: TX 824-04 – 848.97 MHz, RX 869.04 – 893.97 MHz

Part 24: PSC: TX 1851.25 – 1908.75 MHz, RX 1931.25 – 1988.75 MHz

2.1033(c)(6) OPERATING POWER

Part 22: 0.490 Watts

Part 24: 0.4324 Watts

2.1033(c)(7) MAXIMUM POWER RATING

Part 22: 7 Watts ERP

Part 24: 2 Watts EIRP

2.1033(c)(8) DC VOLTAGES

6-12V DC, 1A

2.1033(c)(9) TUNE-UP PROCEDURE

Output power is controlled by base station automatically.

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)/2.1046/22.913/24.232(b) - RF POWER OUTPUT

FCC 22.913 Effective Radiated Power Limit (Effective Radiated Power)

Antenna Substitution method (TIA/EIA 603 Par 2.2.17) was used. The peak RF field strength of the EUT was first measured with a tune dipole antenna. The EUT is then replaced with a transmitting tuned Dipole antenna. A signal generator fed RF signal to the transmitting antenna via a RF power amplifier. The signal level of the signal generator was adjusted to produce RF field strength equal to the transmitted field strength of the EUT.

The power level at the dipole antenna feed point is then measured with a spectrum analyzer, recorded and corrected for preamp and cable insertion losses.

RWB=VBW= 100kHz

Spec limit : *The ERP of mobile transmitter and auxiliary test transmitter must not exceed 7 Watts.*

The EUT satisfies the above requirement by demonstrating the measured EIRP peak power is below the 7 Watts ERP peak power limit.

Result

Frequency (MHz)	Sig Gen Setting (dBm)	Insertion Losses	Power delivered to substitution antenna	Power Output (Watts)
824.04	-14.7	41.6	26.9	0.490
836.52	-15.5	41.6	26.1	0.407
848.97	-15.3	41.6	26.3	0.427

EIRP = 1.64 x ERP.

FCC 22.913 Carrier Output Power to Antenna

Conducted measurement performed in accordance with 2.1046(a).

RF power to antenna was measured at the antenna terminal using a power meter

Freq in MHz	Power dBm	Power Watts
824.07	25.5	0.355
836.54	25.5	0.355
848.97	25.5	0.355

FCC 24.232 (b) 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 at the antenna feed point is measured with a spectrum analyzer and recorded as ERP after applicable conversion.

RWB=VBW= 3MHz

Freq in MHz	Sig Gen Level dBμV/M	Sig Gen Level V/m	ERP Watts	EIRP Watts
1,851.25	130.1	2.1989	0.2047	0.3356
1,880.00	130.8	3.4674	0.2405	0.3943
1,908.75	131.2	3.6308	0.2637	0.4324

Calculation:

Data Conversion:

dBuV to V

$$V = 1 \times 10^{-6} \times 10^{\frac{\text{dBuV}}{20}}$$

$$\text{Power} = \frac{V^2}{R}$$

$$= \frac{V^2}{50}$$

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

Test Equipment 22.913 Effective Radiated Power Limit: OATS

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
Signal Generator	02351	Marconi	2022D	119158/054	050901	050902
¼" Helix Coaxial Cable	NA	Andrew	LDF1-50	Cable#18 (70 ft)	091101	091102
Dipole Antenna X 2	NA	CKC	CKC	Set 4	110901	110902
Antenna cable (from bulkhead to antenna, high frequency hardline) (25ft)	NA	Andrew	FSJ1-50A	Cable#13	07/17/01	07/17/02
RF Amplifier	2160	AR	10S1G4A	24375	092701	092702

Test Equipment 22.913 Carrier Power to Antenna

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Power Meter	02082	HP	435B	2445A1881	082101	082102

Test Equipment 24.232 Effective Isotropic Radiated Power: OATS

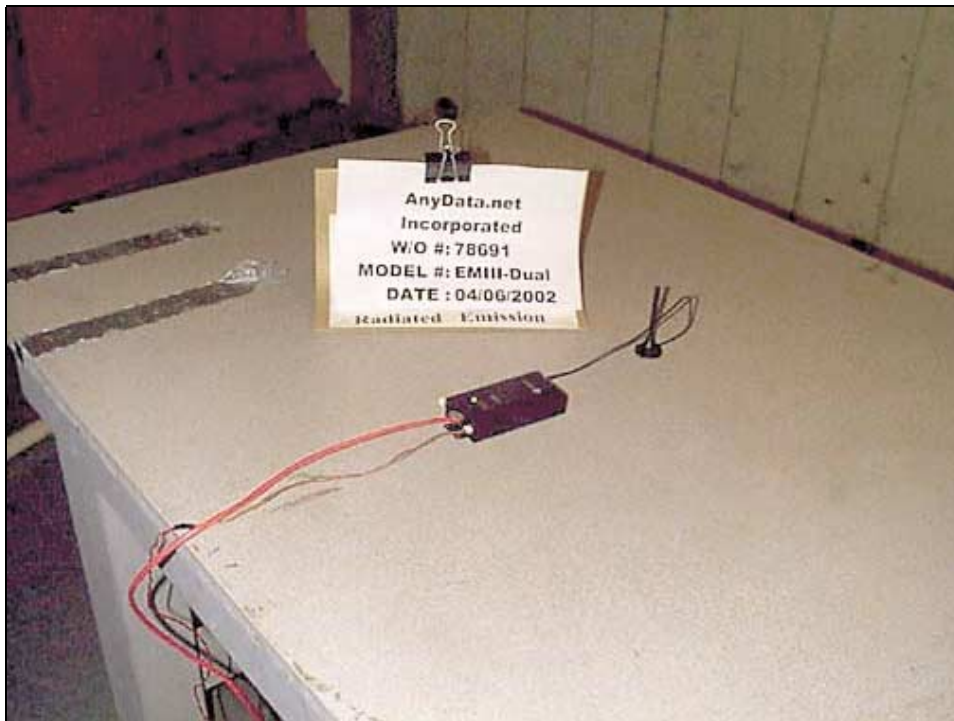
Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
Signal Doubler	02090	Miteq	MX2J0060	626883	NA	NA
RF Amplifier	2160	AR	10S1G4A	24375	092701	092702
Signal Generator	02351	Marconi	2022D	119158/054	050901	050902
Horn Antenna	0849	EMCO	3115	6246	091201	091202
Horn Antenna	01646	Emco	3115	9603-4683	031902	031903
¼" Helix Coaxial Cable	NA	Andrew	LDF1-50	Cable#18 (70 ft)	091101	091102
Antenna cable (from bulkhead to antenna, high frequency hardline) (25ft)	NA	Andrew	FSJ1-50A	Cable#13	07/17/01	07/17/02



Carrier Output Power Test Setup



OATS Test Setup - Front View



OATS Test Setup - Back View



OATS Test Setup - Side View



Horn Antenna Test Setup

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

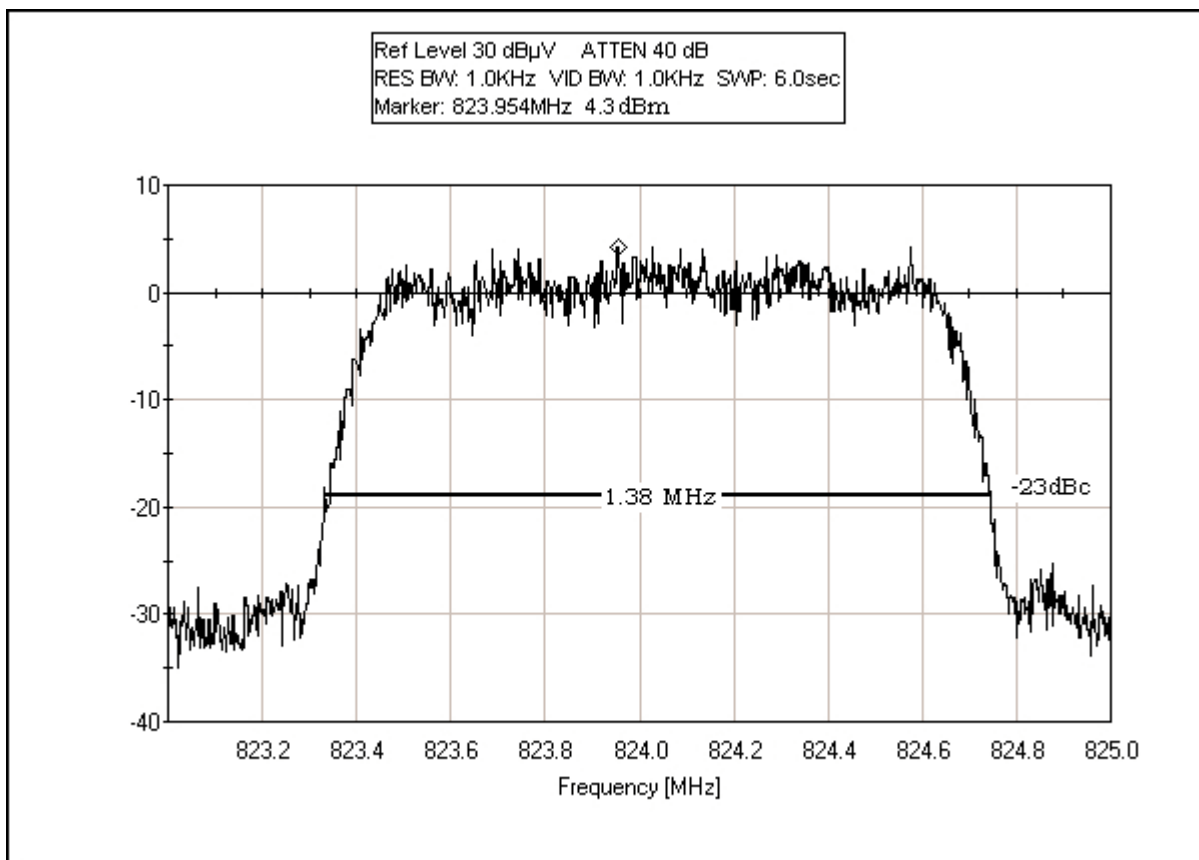
Not applicable to this unit.

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

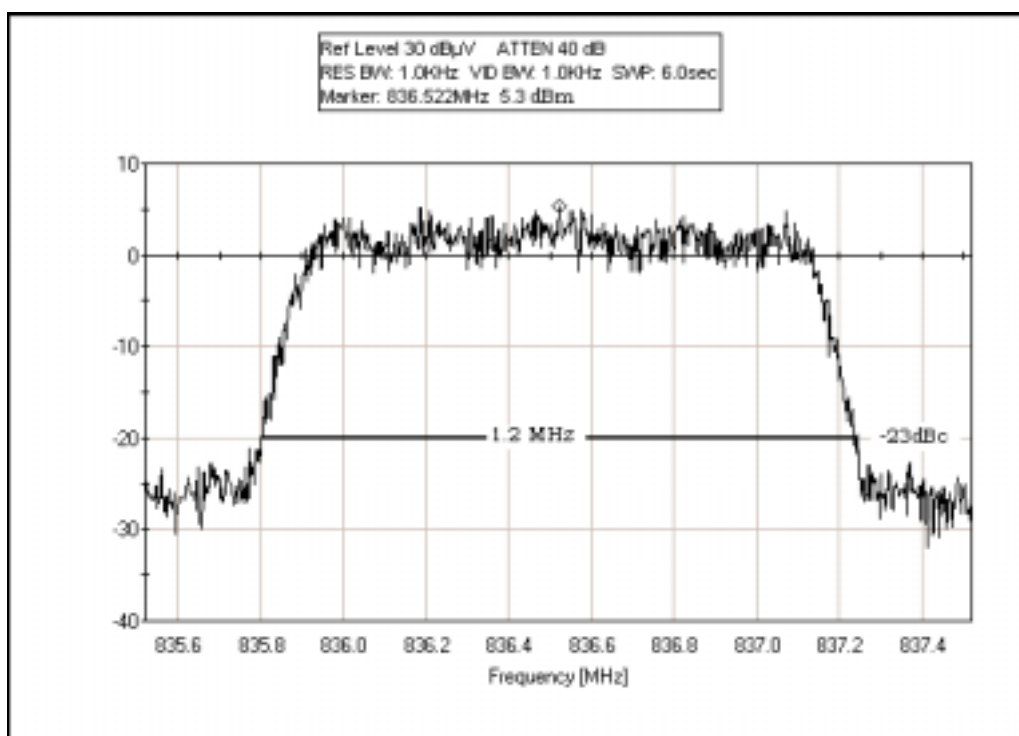
Not applicable to this unit.

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

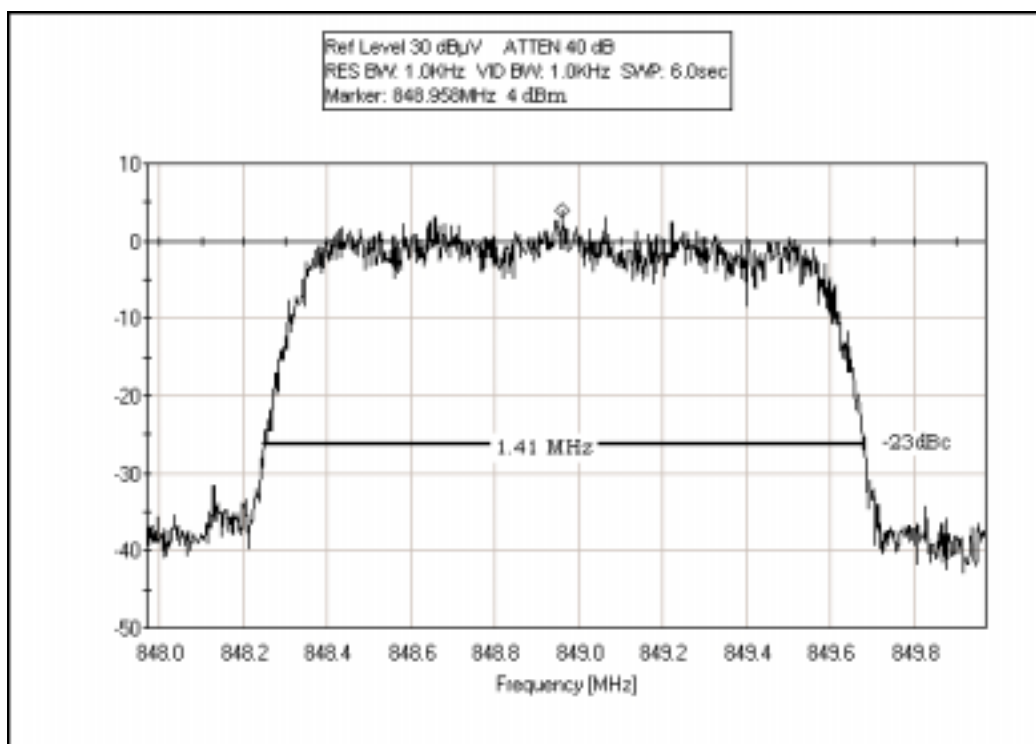
OCCUPIED BANDWIDTH - 824 MHz



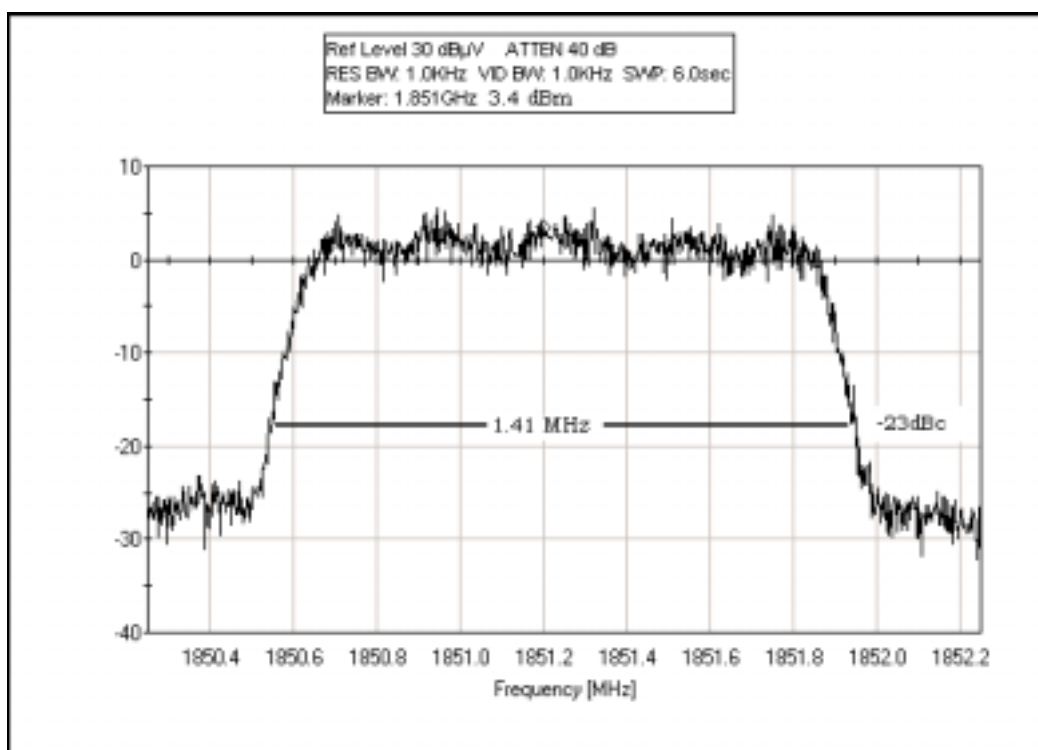
OCCUPIED BANDWIDTH - 836 MHz



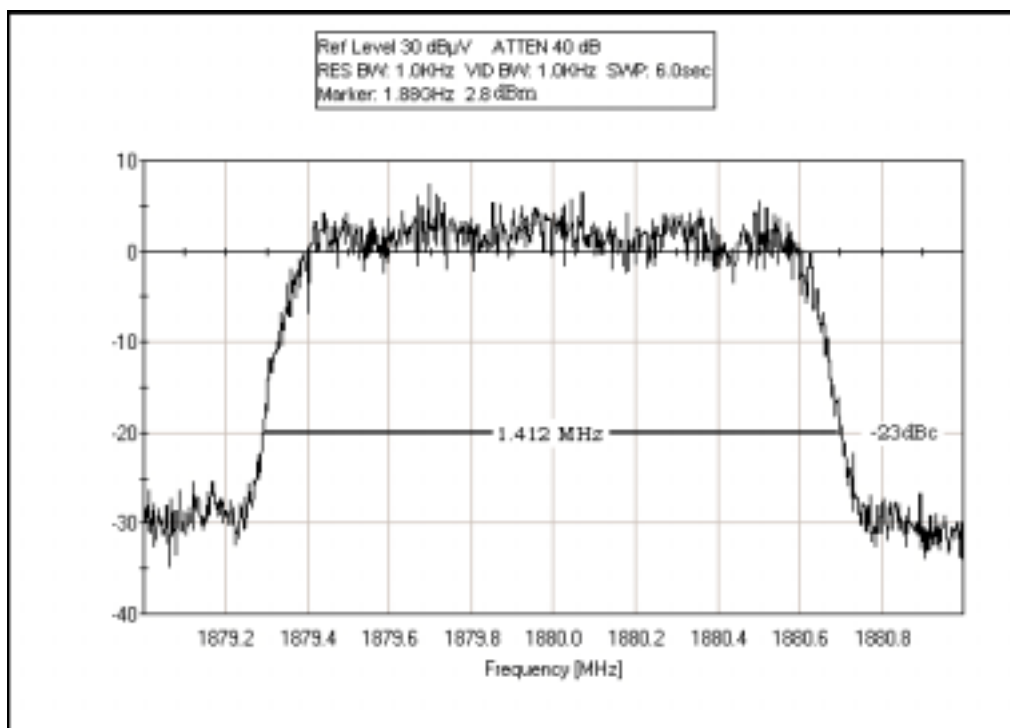
OCCUPIED BANDWIDTH - 848 MHz



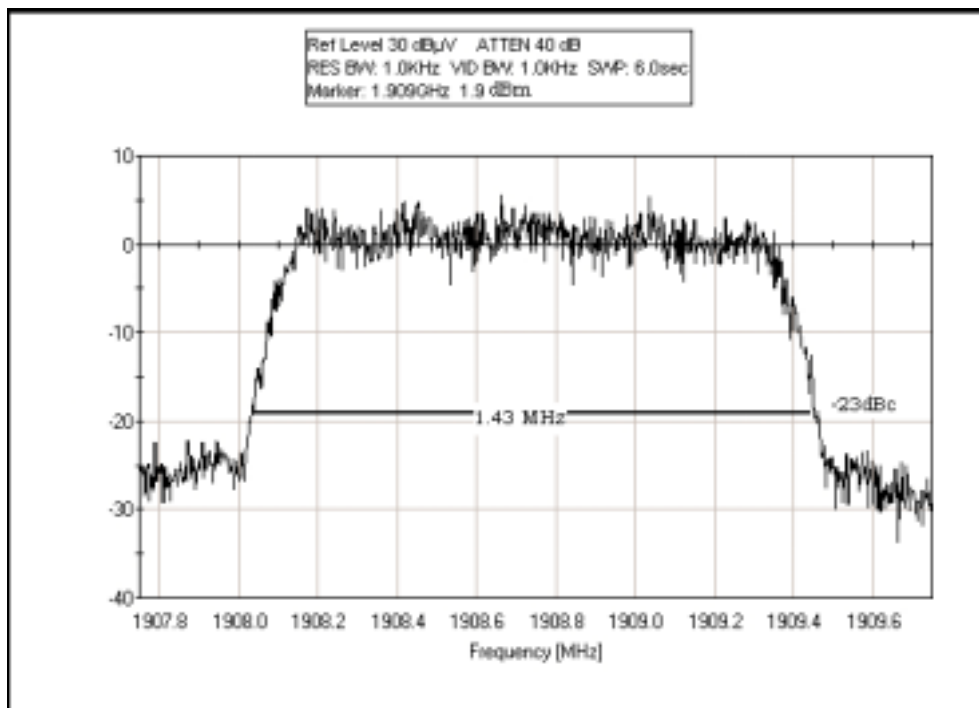
OCCUPIED BANDWIDTH - 1851 MHz



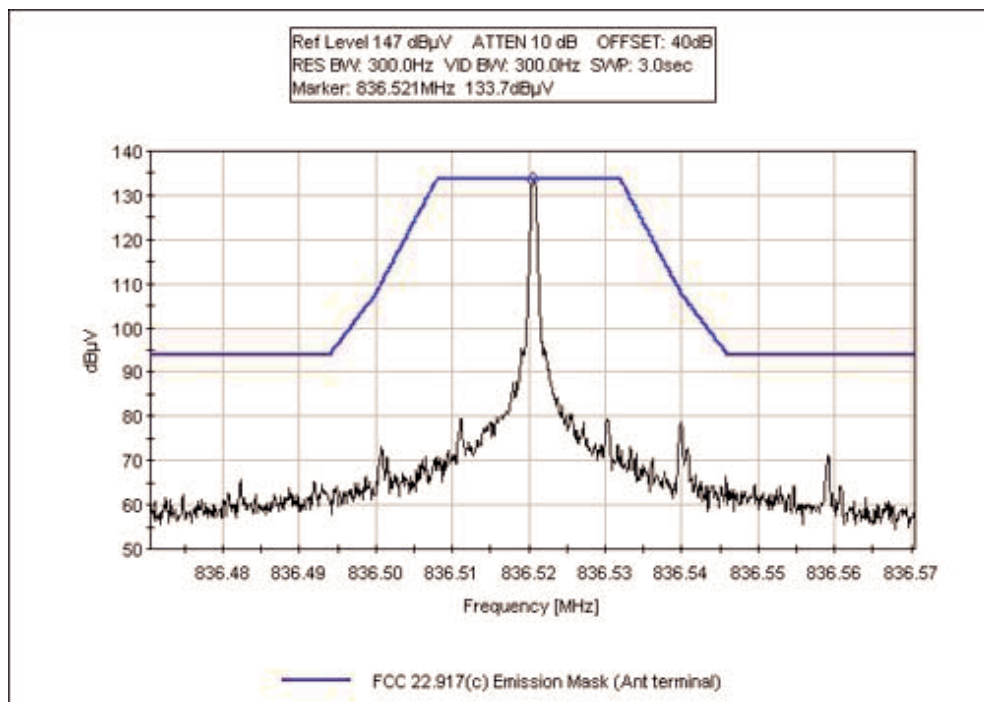
OCCUPIED BANDWIDTH - 1880 MHz



OCCUPIED BANDWIDTH - 1908 MHz



22.917(c) EMISSIONS MASK



Emissions Mask

Test Equipment 2.1049 Occupied bandwidth: Antenna terminal

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802



Direct Connect Test Setup

2.1033(c)(14)/2.1051/22.917(e)/24.238 - SPURIOUS EMISSIONS AT ANTENNA TERMINAL

Limit line for Spurious Emission

Required Attenuation = 43+10 Log P

Limit line (dBuV) = $V_{dBuV} - \text{Attenuation}$

$$\begin{aligned} V_{dBuV} &= 20 \text{Log} \frac{V}{1 \times 10^{-6}} \\ &= 20 (\text{Log} V - \text{Log} 1 \times 10^{-6}) \\ &= 20 \text{Log} V - 20 \text{Log} 1 \times 10^{-6} \\ &= 20 \text{Log} V - 20 (-6) \\ &= 20 \text{Log} V + 120 \end{aligned}$$

$$\begin{aligned} \text{Attenuation} &= 43 + 10 \text{Log} P \\ &= 43 + 10 \text{Log} \frac{V^2}{R} \\ &= 43 + 10 (\text{Log} V^2 - \text{Log} R) \\ &= 43 + 10 (2 \text{Log} V - \text{Log} R) \\ &= 43 + 20 \text{Log} V - 10 \text{Log} R \end{aligned}$$

$$\begin{aligned} \text{Limit line} &= V_{dBuV} - \text{Attenuation} \\ &= 20 \text{Log} V + 120 - (43 + 20 \text{Log} V - 10 \text{Log} R) \\ &= 20 \text{Log} V + 120 - 43 - 20 \text{Log} V + 10 \text{Log} R \\ &= 20 \text{Log} V + 120 - 43 - 20 \text{Log} V + 10 \text{Log} R \\ &= 120 - 43 + 10 \text{Log} 50 \quad \text{Note : } R = 50 \Omega \\ &= 120 - 43 + 16.897 \\ &= 94 \text{ dBuV at any power level} \end{aligned}$$

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

Customer: **AnyData.net Incorporated.**
 Specification: **FCC 22.917(e) Out of Band (Antenna term)**
 Work Order #: **78691** Date: 04/04/2002
 Test Type: **Conducted Emissions** Time: 12:23:02
 Equipment: **Dual Data Modem** Sequence#: 1
 Manufacturer: AnyData.net Incorporated Tested By: Eddie Wong
 Model: EMIII-Dual 12VDC
 S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 824.04 MHz. Range of measurement: 9 kHz - 9 GHz. RBW=VBW= 300 Hz for emissions not more than 60 kHz removed from the carrier frequency, RBW=VBW= 30 kHz for emissions more than 60 kHz removed from the carrier frequency. 12 Vdc, 19°C, 66% relative humidity.

Transducer Legend:

T1=1.5GHz High Pass Filter, A/N 01415

Measurement Data: Reading listed by margin. Test Lead: Antenna terminal

#	Freq MHz	Rdng dBμV	T1 dB	dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	3296.250M	70.5	+0.6				+0.0	71.1	94.0	-22.9	Anten
2	2472.450M	66.5	+0.6				+0.0	67.1	94.0	-26.9	Anten
3	843.182M	63.3					+0.0	63.3	94.0	-30.7	Anten
4	844.276M	61.4					+0.0	61.4	94.0	-32.6	Anten
5	1647.500M	52.5	+0.6				+0.0	53.1	94.0	-40.9	Anten
6	7416.400M	49.2	+1.0				+0.0	50.2	94.0	-43.8	Anten
7	5768.350M	47.8	+0.6				+0.0	48.4	94.0	-45.6	Anten
8	4120.100M	46.9	+1.1				+0.0	48.0	94.0	-46.0	Anten
9	6592.300M	45.4	+0.2				+0.0	45.6	94.0	-48.4	Anten
10	4944.900M	44.7	+0.9				+0.0	45.6	94.0	-48.4	Anten

11	3817.800M	35.0	+0.8	+0.0	35.8	94.0	-58.2	Anten
12	5726.900M	34.7	+0.6	+0.0	35.3	94.0	-58.7	Anten
13	2863.350M	31.0	+0.7	+0.0	31.7	94.0	-62.3	Anten
14	7114.000M	27.4	+0.6	+0.0	28.0	94.0	-66.0	Anten
15	8239.900M	25.3	+1.0	+0.0	26.3	94.0	-67.7	Anten
16	6681.100M	25.6	+0.2	+0.0	25.8	94.0	-68.2	Anten
17	3162.800M	25.0	+0.7	+0.0	25.7	94.0	-68.3	Anten
18	1909.000M	24.0	+0.8	+0.0	24.8	94.0	-69.2	Anten
19	2994.200M	21.2	+1.0	+0.0	22.2	94.0	-71.8	Anten
20	7635.500M	20.9	+0.9	+0.0	21.8	94.0	-72.2	Anten
21	4772.200M	17.3	+0.8	+0.0	18.1	94.0	-75.9	Anten
22	2602.300M	16.5	+0.6	+0.0	17.1	94.0	-76.9	Anten
23	5464.700M	15.0	+0.8	+0.0	15.8	94.0	-78.2	Anten
24	4641.700M	13.8	+0.9	+0.0	14.7	94.0	-79.3	Anten

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

Customer: **AnyData.net Incorporated.**
 Specification: **FCC 22.917(e) Out of Band (Antenna term)**
 Work Order #: **78691** Date: 04/04/2002
 Test Type: **Conducted Emissions** Time: 12:59:13
 Equipment: **Dual Data Modem** Sequence#: 2
 Manufacturer: AnyData.net Incorporated Tested By: Eddie Wong
 Model: EMIII-Dual 12VDC
 S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 836.52 MHz Range of measurement: 9 kHz - 9 GHz RBW=VBW= 300 Hz for emission not more than 60 kHz removed from the carrier frequency, RBW=VBW= 30 kHz for emission more than 60 kHz removed from the carrier frequency. 12 Vdc, 19°C, 66% relative humidity

Transducer Legend:

T1=1.5GHz High Pass Filter, A/N 01415

Measurement Data: Reading listed by margin. Test Lead: Antenna terminal

#	Freq MHz	Rdng dBμV	T1 dB	dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	1673.000M	66.4	+0.0				+0.0	66.4	94.0	-27.6	Anten
2	2504.000M	57.0	+0.6				+0.0	57.6	94.0	-36.4	Anten
3	3330.000M	53.4	+0.7				+0.0	54.1	94.0	-39.9	Anten
4	280.000M	45.8	+0.0				+0.0	45.8	94.0	-48.2	Anten
5	5766.000M	37.2	+0.6				+0.0	37.8	94.0	-56.2	Anten
6	3862.000M	35.9	+0.8				+0.0	36.7	94.0	-57.3	Anten
7	5850.000M	35.9	+0.5				+0.0	36.4	94.0	-57.6	Anten
8	4996.000M	30.8	+0.9				+0.0	31.7	94.0	-62.3	Anten
9	2896.000M	30.8	+0.8				+0.0	31.6	94.0	-62.4	Anten

10	4170.000M	29.9	+1.3	+0.0	31.2	94.0	-62.8	Anten
11	7516.000M	29.9	+1.1	+0.0	31.0	94.0	-63.0	Anten
12	7712.000M	27.7	+0.8	+0.0	28.5	94.0	-65.5	Anten
13	8678.000M	25.3	+1.6	+0.0	26.9	94.0	-67.1	Anten
14	6676.000M	23.0	+0.2	+0.0	23.2	94.0	-70.8	Anten
15	2770.000M	20.5	+0.5	+0.0	21.0	94.0	-73.0	Anten
16	3078.000M	20.1	+0.8	+0.0	20.9	94.0	-73.1	Anten
17	2518.000M	20.2	+0.6	+0.0	20.8	94.0	-73.2	Anten

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

Customer: **AnyData.net Incorporated.**
 Specification: **FCC 22.917(e) Out of Band (Antenna term)**
 Work Order #: **78691** Date: 04/04/2002
 Test Type: **Conducted Emissions** Time: 13:15:58
 Equipment: **Dual Data Modem** Sequence#: 3
 Manufacturer: AnyData.net Incorporated Tested By: Eddie Wong
 Model: EMIII-Dual 12VDC
 S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 848.97 MHz Range of measurement: 9 kHz - 9 GHz RBW=VBW= 300 Hz for emission not more than 60 kHz removed from the carrier frequency RBW=VBW= 30 kHz for emission more than 60 kHz removed from the carrier frequency. 12 Vdc, 19°C, 66% relative humidity

Transducer Legend:

T1=1.5GHz High Pass Filter, A/N 01415

Measurement Data: Reading listed by margin. Test Lead: Antenna terminal

#	Freq MHz	Rdng dBμV	T1 dB	dB	dB	dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	1699.000M	68.1	+0.0				+0.0	68.1	94.0	-25.9	Anten
2	2539.000M	58.8	+0.6				+0.0	59.4	94.0	-34.6	Anten
3	3386.000M	56.6	+0.9				+0.0	57.5	94.0	-36.5	Anten
4	7628.000M	42.2	+0.9				+0.0	43.1	94.0	-50.9	Anten
5	3904.000M	36.0	+0.8				+0.0	36.8	94.0	-57.2	Anten
6	5871.000M	35.3	+0.5				+0.0	35.8	94.0	-58.2	Anten
7	5066.000M	34.2	+0.9				+0.0	35.1	94.0	-58.9	Anten
8	5927.000M	31.2	+0.5				+0.0	31.7	94.0	-62.3	Anten
9	8790.000M	26.5	+1.6				+0.0	28.1	94.0	-65.9	Anten
10	2924.000M	27.0	+0.9				+0.0	27.9	94.0	-66.1	Anten

11	6774.000M	25.9	+0.3	+0.0	26.2	94.0	-67.8	Anten
12	3064.000M	25.0	+0.9	+0.0	25.9	94.0	-68.1	Anten
13	7810.000M	23.0	+0.7	+0.0	23.7	94.0	-70.3	Anten
14	8468.000M	21.0	+1.4	+0.0	22.4	94.0	-71.6	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 #: **78691**
 Test Type: **Conducted Emissions**
 Equipment: **Dual Data Modem**
 Manufacturer: AnyData.net Incorporated
 Model: EMIII-Dual
 S/N: NA

Date: 04/04/2002
 Time: 14:07:45
 Sequence#: 4
 Tested By: Eddie Wong
 12VDC

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 1851.25 MHz. Range of measurement: 9 kHz - 20 GHz RBW=VBW= 1 MHz. 12 Vdc, 19°C, 66% relative humidity.

Transducer Legend:

T1=3.5GHz High Pass Filter A/N 01416

Measurement Data: Reading listed by margin. Test Lead: Antenna terminal

#	Freq MHz	Rdng dB μ V	T1 dB	dB	dB	dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	3670.000M	87.2	+1.9				+0.0	89.1	94.0	-4.9	Anten
2	968.000M	78.8	+0.0				+0.0	78.8	94.0	-15.2	Anten
3	7360.000M	73.2	+2.9				+0.0	76.1	94.0	-17.9	Anten
4	40.000M	71.2	+0.0				+0.0	71.2	94.0	-22.8	Anten
5	672.000M	68.9	+0.0				+0.0	68.9	94.0	-25.1	Anten
6	9240.001M	65.1	+3.1				+0.0	68.2	94.0	-25.8	Anten
7	5530.000M	63.2	+4.1				+0.0	67.3	94.0	-26.7	Anten
8	3150.000M	51.4	+12.2				+0.0	63.6	94.0	-30.4	Anten
9	3190.000M	51.0	+9.9				+0.0	60.9	94.0	-33.1	Anten
10	14780.000M	56.0	+2.8				+0.0	58.8	94.0	-35.2	Anten

11	16620.000M	56.8	+1.5	+0.0	58.3	94.0	-35.7	Anten
12	12940.000M	54.1	+3.3	+0.0	57.4	94.0	-36.6	Anten
13	4200.000M	46.8	+3.5	+0.0	50.3	94.0	-43.7	Anten
14	18450.000M	48.2	+0.8	+0.0	49.0	94.0	-45.0	Anten
15	3550.000M	45.0	+2.0	+0.0	47.0	94.0	-47.0	Anten
16	11070.000M	43.3	+1.4	+0.0	44.7	94.0	-49.3	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 #: **78691**
 Test Type: **Conducted Emissions**
 Equipment: **Dual Data Modem**
 Manufacturer: AnyData.net Incorporated
 Model: EMIII-Dual
 S/N: NA

Date: 04/04/2002
 Time: 14:32:24
 Sequence#: 5
 Tested By: Eddie Wong
 12VDC

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 1880.00 MHz. Range of measurement: 9 kHz - 20 GHz RBW=VBW= 1 MHz. 12 Vdc, 19°C, 66% relative humidity.

Transducer Legend:

T1=3.5GHz High Pass Filter A/N 01416

Measurement Data: Reading listed by margin. Test Lead: Antenna terminal

#	Freq MHz	Rdng dB μ V	T1 dB	dB	dB	dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	3760.000M	88.3	+2.1				+0.0	90.4	94.0	-3.6	Anten
2	7510.000M	73.7	+2.7				+0.0	76.4	94.0	-17.6	Anten
3	68.000M	74.3	+0.0				+0.0	74.3	94.0	-19.7	Anten
4	15000.000M	69.5	+2.7				+0.0	72.2	94.0	-21.8	Anten
5	5600.000M	60.7	+4.0				+0.0	64.7	94.0	-29.3	Anten
6	5640.000M	60.6	+3.9				+0.0	64.5	94.0	-29.5	Anten
7	9340.000M	59.5	+2.7				+0.0	62.2	94.0	-31.8	Anten
8	11220.000M	60.2	+1.6				+0.0	61.8	94.0	-32.2	Anten
9	16870.000M	58.6	+1.4				+0.0	60.0	94.0	-34.0	Anten

10	13120.000M	54.7	+3.4	+0.0	58.1	94.0	-35.9	Anten
11	9380.000M	55.6	+2.5	+0.0	58.1	94.0	-35.9	Anten
12	3220.000M	47.4	+8.5	+0.0	55.9	94.0	-38.1	Anten
13	13160.000M	51.9	+3.4	+0.0	55.3	94.0	-38.7	Anten
14	18780.000M	52.3	+1.0	+0.0	53.3	94.0	-40.7	Anten
15	15030.000M	45.2	+2.7	+0.0	47.9	94.0	-46.1	Anten
16	4270.000M	44.0	+3.1	+0.0	47.1	94.0	-46.9	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 #: **78691**
 Test Type: **Conducted Emissions**
 Equipment: **Dual Data Modem**
 Manufacturer: AnyData.net Incorporated
 Model: EMIII-Dual
 S/N: NA

Date: 04/04/2002
 Time: 14:46:29
 Sequence#: 6
 Tested By: Eddie Wong
 12VDC

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 1908.75 MHz. Range of measurement: 9 kHz - 20 GHz RBW=VBW= 1 MHz. 12 Vdc, 19°C, 66% relative humidity.

Transducer Legend:

T1=3.5GHz High Pass Filter A/N 01416

Measurement Data:

Reading listed by margin.

Test Lead: Antenna terminal

#	Freq MHz	Rdng dB μ V	T1 dB	dB	dB	dB	Dist Table	Corr dB μ V	Spec dB μ V	Margin dB	Polar Ant
1	3817.340M	88.7	+2.2				+0.0	90.9	94.0	-3.1	Anten
2	7620.000M QP	73.3	+2.2				+0.0	75.5	94.0	-18.5	Anten
3	96.000M	73.5	+0.0				+0.0	73.5	94.0	-20.5	Anten
4	5710.000M QP	64.4	+3.8				+0.0	68.2	94.0	-25.8	Anten
5	11400.000M QP	61.2	+1.8				+0.0	63.0	94.0	-31.0	Anten
6	9490.000M QP	60.7	+2.0				+0.0	62.7	94.0	-31.3	Anten
7	15250.000M QP	59.5	+2.4				+0.0	61.9	94.0	-32.1	Anten
8	17120.000M QP	56.9	+1.3				+0.0	58.2	94.0	-35.8	Anten
9	3300.000M QP	51.6	+5.2				+0.0	56.8	94.0	-37.2	Anten

10	9520.000M QP	52.7	+2.0	+0.0	54.7	94.0	-39.3	Anten
11	19060.000M QP	52.3	+1.2	+0.0	53.5	94.0	-40.5	Anten
12	4300.000M QP	49.6	+3.0	+0.0	52.6	94.0	-41.4	Anten
13	8839.999M QP	44.5	+3.7	+0.0	48.2	94.0	-45.8	Anten
14	13340.000M QP	43.0	+3.4	+0.0	46.4	94.0	-47.6	Anten
15	18630.000M QP	42.5	+0.9	+0.0	43.4	94.0	-50.6	Anten

Test Equipment 22.917(e)/24.238(a) Emission Limits: Antenna terminal

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
9 kHz- 20GHz						
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
1.5 GHz HPF	01415	HP	8400-80037	3643A00026	030502	030503



Direct Connect Test Setup

2.1033(c)(14)/2.1053/22.917(e)/24.238 - FIELD STRENGTH OF SPURIOUS RADIATION

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

Customer: **AnyData.net Incorporated.**
 Specification: **FCC 22.917(e) Out of Band (RF)**
 Work Order #: **78691** Date: 04/06/2002
 Test Type: **Radiated Scan** Time: 09:10:03
 Equipment: **Dual Data Modem** Sequence#: 2
 Manufacturer: AnyData.net Incorporated Tested By: Eddie Wong
 Model: EMIII-Dual
 S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 824.04 MHz. Range of measurement: 9 kHz - 9 GHz RBW=VBW= 300 Hz for emission not more than 60 kHz removed from the carrier frequency. RBW=VBW= 30 kHz for emission more than 60 kHz removed from the carrier frequency. 12 Vdc, 19°C, 66% relative humidity. Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Log 331 092401	T2=Cable #10 071601
T3=Cable #15 120602	T4=Preamp 8447D 090501
T5=Horn Antenna sn6246	T6=Helix #18 70' 11Sept2001
T7=HP3017A sn3123A00281 11-Sept-01	T8=1.5GHz High Pass Filter, A/N 01415

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

#	Freq MHz	Rdng dBµV	Reading listed by margin.				Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			T1 dB	T2 dB	T3 dB	T4 dB					
1	824.048M	110.7	+21.9	+0.6	+5.7	-27.6	+0.0	111.3	111.3	+0.0	Vert
			+0.0	+0.0	+0.0	+0.0					
2	824.040M	109.4	+21.9	+0.6	+5.7	-27.6	+0.0	110.0	111.3	-1.3	Horiz
			+0.0	+0.0	+0.0	+0.0					
3	1650.000M	59.5	+0.0	+0.0	+0.0	+0.0	+0.0	50.2	94.0	-43.8	Vert
			+25.1	+3.6	-38.6	+0.6					
4	1648.000M	58.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.9	94.0	-45.1	Horiz
			+25.1	+3.5	-38.6	+0.6					
5	954.421M	45.2	+23.7	+0.6	+6.3	-27.7	+0.0	48.1	94.0	-45.9	Vert
			+0.0	+0.0	+0.0	+0.0					

6	843.160M	47.0	+22.2 +0.0	+0.6 +0.0	+5.8 +0.0	-27.7 +0.0	+0.0	47.9	94.0	-46.1	Vert
7	843.260M	46.0	+22.2 +0.0	+0.6 +0.0	+5.8 +0.0	-27.7 +0.0	+0.0	46.9	94.0	-47.1	Horiz
8	954.427M	43.4	+23.7 +0.0	+0.6 +0.0	+6.3 +0.0	-27.7 +0.0	+0.0	46.3	94.0	-47.7	Horiz
9	3297.000M	45.1	+0.0 +30.6	+0.0 +5.7	+0.0 -37.5	+0.0 +0.6	+0.0	44.5	94.0	-49.5	Vert
10	2472.000M	49.0	+0.0 +27.7	+0.0 +4.2	+0.0 -38.7	+0.0 +0.6	+0.0	42.8	94.0	-51.2	Vert
11	3297.000M	35.5	+0.0 +30.6	+0.0 +5.7	+0.0 -37.5	+0.0 +0.6	+0.0	34.9	94.0	-59.1	Horiz

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

Customer: **AnyData.net Incorporated.**
 Specification: **FCC 22.917(e) Out of Band (RF)**
 Work Order #: **78691**
 Test Type: **Maximized Emissions**
 Equipment: **Dual Data Modem**
 Manufacturer: AnyData.net Incorporated
 Model: EMIII-Dual
 S/N: NA

Date: 04/06/2002
 Time: 09:03:24
 Sequence#: 3
 Tested By: Eddie Wong

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 836.52 MHz. Range of measurement: 9 kHz - 9 GHz RBW=VBW= 300 Hz for emission not more than 60 kHz removed from the carrier frequency. RBW=VBW= 30 kHz for emission more than 60 kHz removed from the carrier frequency. 12 Vdc, 19°C, 66% relative humidity. Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Log 331 092401	T2=Cable #10 071601
T3=Cable #15 120602	T4=Preamp 8447D 090501
T5=Horn Antenna sn6246	T6=Helix #18 70' 11Sept2001
T7=HP3017A sn3123A00281 11-Sept-01	T8=1.5GHz High Pass Filter, A/N 01415

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

#	Freq MHz	Rdng dBµV	T1				T2				Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			T5 dB	T6 dB	T7 dB	T8 dB	T5 dB	T6 dB	T7 dB	T8 dB					
1	836.520M	111.6	+22.1 +0.0	+0.6 +0.0	+5.8 +0.0	-27.7 +0.0	+0.0	112.4	112.4	+0.0	Fundamental	Vert			
2	836.520M	107.1	+22.1 +0.0	+0.6 +0.0	+5.8 +0.0	-27.7 +0.0	+0.0	107.9	112.4	-4.5	Fundamental	Vert			
3	817.360M	52.1	+21.8 +0.0	+0.6 +0.0	+5.7 +0.0	-27.6 +0.0	+0.0	52.6	94.0	-41.4		Vert			
4	3347.000M	48.8	+0.0 +30.8	+0.0 +5.8	+0.0 -37.5	+0.0 +0.8	+0.0	48.7	94.0	-45.3		Vert			
5	1673.060M	55.3	+0.0 +25.2	+0.0 +3.6	+0.0 -38.6	+0.0 +0.6	+0.0	46.1	94.0	-47.9		Vert			
6	966.905M	42.7	+23.9 +0.0	+0.6 +0.0	+6.5 +0.0	-27.8 +0.0	+0.0	45.9	94.0	-48.1		Horiz			
7	1674.000M	54.3	+0.0 +25.2	+0.0 +3.6	+0.0 -38.6	+0.0 +0.6	+0.0	45.1	94.0	-48.9		Horiz			

8	817.390M	42.6	+21.8 +0.0	+0.6 +0.0	+5.7 +0.0	-27.6 +0.0	+0.0	43.1	94.0	-50.9	Horiz
9	966.907M	39.4	+23.9 +0.0	+0.6 +0.0	+6.5 +0.0	-27.8 +0.0	+0.0	42.6	94.0	-51.4	Vert
10	2508.500M	48.9	+0.0 +27.8	+0.0 +4.1	+0.0 -38.9	+0.0 +0.6	+0.0	42.5	94.0	-51.5	Vert
11	3347.000M	38.3	+0.0 +30.8	+0.0 +5.8	+0.0 -37.5	+0.0 +0.8	+0.0	38.2	94.0	-55.8	Horiz
12	2510.000M	43.5	+0.0 +27.8	+0.0 +4.1	+0.0 -38.9	+0.0 +0.6	+0.0	37.1	94.0	-56.9	Horiz
13	1531.000M	35.7	+0.0 +24.6	+0.0 +3.4	+0.0 -38.8	+0.0 +0.9	+0.0	25.8	94.0	-68.2	Horiz

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

Customer: **AnyData.net Incorporated.**
 Specification: **FCC 22.917(e) Out of Band (RF)**

Work Order #: **78691**

Date: 04/06/2002

Test Type: **Maximized Emissions**

Time: 08:59:28

Equipment: **Dual Data Modem**

Sequence#: 4

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 848.97 MHz. Range of measurement: 9 kHz - 9 GHz RBW=VBW= 300 Hz for emission not more than 60 kHz removed from the carrier frequency. RBW=VBW= 30 kHz for emission more than 60 kHz removed from the carrier frequency. 12 Vdc, 19°C, 66% relative humidity. Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Log 331 092401	T2=Cable #10 071601
T3=Cable #15 120602	T4=Preamp 8447D 090501
T5=Horn Antenna sn6246	T6=Helix #18 70' 11Sept2001
T7=HP3017A sn3123A00281 11-Sept-01	T8=1.5GHz High Pass Filter, A/N 01415

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1	T2	T3	T4	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
			T5 dB	T6 dB	T7 dB	T8 dB					
1	848.960M	108.6	+22.3 +0.0	+0.6 +0.0	+5.8 +0.0	-27.7 +0.0	+0.0	109.6	109.6 Fundamental	+0.0	Horiz
2	848.962M	108.6	+22.3 +0.0	+0.6 +0.0	+5.8 +0.0	-27.7 +0.0	+0.0	109.6	109.6 Fundamental	+0.0	Vert
3	1698.000M	61.6	+0.0 +25.3	+0.0 +3.6	+0.0 -38.6	+0.0 +0.5	+0.0	52.4	94.0	-41.6	Vert
4	829.807M	50.7	+22.0 +0.0	+0.6 +0.0	+5.8 +0.0	-27.7 +0.0	+0.0	51.4	94.0	-42.6	Horiz
5	979.344M	46.8	+24.0 +0.0	+0.6 +0.0	+6.7 +0.0	-27.8 +0.0	+0.0	50.3	94.0	-43.7	Horiz
6	829.950M	48.5	+22.0 +0.0	+0.6 +0.0	+5.8 +0.0	-27.7 +0.0	+0.0	49.2	94.0	-44.8	Vert
7	979.380M	40.7	+24.0 +0.0	+0.6 +0.0	+6.7 +0.0	-27.8 +0.0	+0.0	44.2	94.0	-49.8	Vert

8	1697.500M	53.3	+0.0 +25.3	+0.0 +3.6	+0.0 -38.6	+0.0 +0.5	+0.0	44.1	94.0	-49.9	Horiz
9	2547.000M	44.2	+0.0 +28.0	+0.0 +4.2	+0.0 -38.8	+0.0 +0.6	+0.0	38.2	94.0	-55.8	Vert
10	3397.000M	36.7	+0.0 +30.9	+0.0 +5.9	+0.0 -37.4	+0.0 +0.9	+0.0	37.0	94.0	-57.0	Vert
11	2547.000M	40.7	+0.0 +28.0	+0.0 +4.2	+0.0 -38.8	+0.0 +0.6	+0.0	34.7	94.0	-59.3	Horiz
12	3397.000M	31.0	+0.0 +30.9	+0.0 +5.9	+0.0 -37.4	+0.0 +0.9	+0.0	31.3	94.0	-62.7	Horiz

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

Customer: **AnyData.net Incorporated.**

Specification: **FCC 24.238 RF Spur**

Work Order #: **78691**

Date: 04/06/2002

Test Type: **Maximized Emissions**

Time: 09:28:50

Equipment: **Dual Data Modem**

Sequence#: 5

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = $43+10 \log P = 94$ dBuV. TX Frequency = 1851.25 MHz. Range of measurement: 9 kHz - 20 GHz RBW=VBW= 1 MHz. 12 Vdc, 19°C, 66% relative humidity.

Transducer Legend:

T1=Horn Antenna sn6246	T2=Helix #18 70' 11Sept2001
T3=HP3017A sn3123A00281 11-Sept-01	T4=3.5GHz High Pass Filter A/N 01416

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	1851.530M	126.5	+25.9	+3.6	-38.4	+0.0	+0.0	117.6	117.6	+0.0	Vert
Fundamental											
2	1851.280M	121.1	+25.9	+3.6	-38.4	+0.0	+0.0	112.2	117.6	-5.4	Horiz
Fundamental											
3	3703.000M	63.7	+31.4	+6.2	-37.5	+2.0	+0.0	65.8	94.0	-28.2	Horiz
4	7405.000M	42.9	+36.1	+8.1	-37.9	+2.8	+0.0	52.0	94.0	-42.0	Horiz
5	5554.000M	43.1	+33.7	+7.1	-36.7	+4.0	+0.0	51.2	94.0	-42.8	Horiz

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

Customer: **AnyData.net Incorporated.**

Specification: **FCC 24.238 RF Spur**

Work Order #: **78691**

Date: 04/06/2002

Test Type: **Radiated Scan**

Time: 09:38:24

Equipment: **Dual Data Modem**

Sequence#: 6

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 1880.00 MHz. Range of measurement: 9 kHz - 20 GHz RBW=VBW= 1 MHz. 12 Vdc, 19°C, 66% relative humidity. Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Horn Antenna sn6246	T2=Helix #18 70' 11Sept2001
T3=HP3017A sn3123A00281 11-Sept-01	T4=3.5GHz High Pass Filter A/N 01416

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	1880.280M	127.4	+26.0	+3.6	-38.3	+0.0	+0.0	118.7	118.7	+0.0	Vert
									Fundamental		
2	1880.280M	124.0	+26.0	+3.6	-38.3	+0.0	+0.0	115.3	118.7	-3.4	Horiz
									Fundamental		
3	3759.440M	61.1	+31.5	+6.1	-37.5	+2.1	+0.0	63.3	94.0	-30.7	Horiz

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

Customer: **AnyData.net Incorporated.**

Specification: **FCC 24.238 RF Spur**

Work Order #: **78691**

Date: 04/06/2002

Test Type: **Maximized Emissions**

Time: 09:49:52

Equipment: **Dual Data Modem**

Sequence#: 6

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Out of band emission on antenna terminal Limit = Required attenuation = 43+10 Log P = 94 dBuV. TX Frequency = 1908.75 MHz. Range of measurement: 9 kHz - 20 GHz RBW=VBW= 1 MHz. 12 Vdc, 19°C, 66% relative humidity. Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Horn Antenna sn6246	T2=Helix #18 70' 11Sept2001
T3=HP3017A sn3123A00281 11-Sept-01	T4=3.5GHz High Pass Filter A/N 01416

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

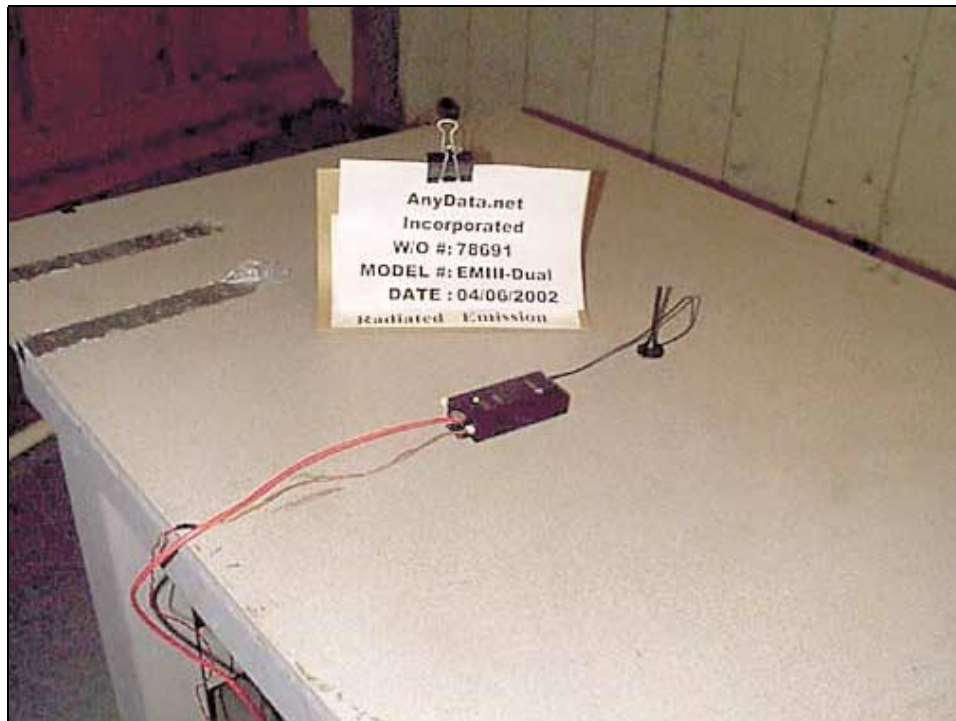
#	Freq MHz	Rdng dBµV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	1908.550M	125.9	+26.1	+3.6	-38.3	+0.0	+0.0	117.3	117.3	+0.0	Vert
Fundamental											
2	1908.550M	122.6	+26.1	+3.6	-38.3	+0.0	+0.0	114.0	117.3	-3.3	Horiz
Fundamental											
3	3818.000M	66.7	+31.6	+6.1	-37.5	+2.2	+0.0	69.1	94.0	-24.9	Vert
4	3818.000M	60.7	+31.6	+6.1	-37.5	+2.2	+0.0	63.1	94.0	-30.9	Horiz
5	5725.000M	43.6	+33.7	+7.2	-36.9	+3.8	+0.0	51.4	94.0	-42.6	Vert
6	7634.000M	42.9	+36.1	+8.2	-38.0	+2.2	+0.0	51.4	94.0	-42.6	Vert

Test Equipment 22.917(e)/24.238(a) Emission Limit: OATS

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
Active loop antenna	2014	Emco	6502	2014	073101	073102
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
30MHz-1000MHz						
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
1 GHz- 18 GHz						
Horn Antenna	0849	EMCO	3115	6246	091201	091202
Microwave Pre-amp	00786	HP	83017A	3123A00281	091201	091202
¼" Helix Coaxial Cable	NA	Andrew	LDF1-50	Cable#18 (70 ft)	091101	091102
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
3.5 GHz HPF	01416	HP	84300-800038	3643A00026	032502	032503
24.238 Testing Only:						
18GHz-20 GHz						
18-26 GHz Horn antenna	1413	BP	RA42-K-F-4B-C	942126-003	070901	070902
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
Pre amp	NA	HP	83051A	3331A00238	030502	030503
High Freq cable	NA	WL Gore	purple 65474	purple 65474	011402	011403



OATS Test Setup - Front View



OATS Test Setup - Back View



OATS Test Setup - Side View



Horn Antenna Test Setup

2.1033(c)(14)/2.1055/22.355/24.235- FREQUENCY STABILITY

Frequency Stability

Customer: Anydata
Date: 16-Apr-02
WO#: 78691

Test Engineer: Dustin Oaks

800 MHz Band		Channel 1 (MHz)	Dev. (MHz)	Channel 2 (MHz)	Dev. (MHz)	Channel 3 (MHz)	Dev. (MHz)
Channel Frequency:		824.04		836.52		848.97	
Temp (C)	Voltage						
-30	12	824.04098	0.00098	836.52102	0.00102	848.97106	0.00106
-20	12	824.04100	0.00100	836.52100	0.00100	848.97091	0.00091
-10	12	824.04093	0.00093	836.52090	0.00090	848.97096	0.00096
0	12	824.04102	0.00102	836.52095	0.00095	848.97091	0.00091
10	12	824.04106	0.00106	836.52096	0.00096	848.97100	0.00100
20	10.2	824.04059	0.00059	836.52032	0.00032	848.97024	0.00024
20	12	824.04065	0.00065	836.52030	0.00030	848.97032	0.00032
20	13.8	824.04052	0.00052	836.52045	0.00045	848.97025	0.00025
30	12	824.04070	0.00070	836.52070	0.00070	848.97063	0.00063
40	12	824.04042	0.00042	836.52021	0.00021	848.97010	0.00010
50	12	824.04004	0.00004	836.51991	0.00009	848.97008	0.00008

Max Deviation (MHz)	0.00106	0.00102	0.00106
Max Deviation (PPM)	1.28635	1.21934	1.24857
LIMIT = 2.5PPM	PASS	PASS	PASS

1800MHz Band		Channel 1 (MHz)	Dev. (MHz)	Channel 2 (MHz)	Dev. (MHz)	Channel 3 (MHz)	Dev. (MHz)
Channel Frequency:		1851.25		1880		1908.75	
Temp (C)	Voltage						
-30	12	1851.21	0.04	1879.93	0.07	1908.79	0.04
-20	12	1851.25	0	1879.98	0.02	1908.73	0.02
-10	12	1851.27	0.02	1879.97	0.03	1908.74	0.01
0	12	1851.26	0.01	1880.01	0.01	1908.79	0.04
10	12	1851.28	0.03	1879.99	0.01	1908.76	0.01
20	10.2	1851.24	0.01	1879.96	0.04	1908.77	0.02
20	12	1851.25	0	1880.03	0.03	1908.74	0.01
20	13.8	1851.30	0.05	1879.98	0.02	1908.73	0.02
30	12	1851.22	0.03	1880.02	0.02	1908.76	0.01
40	12	1851.22	0.03	1880.05	0.05	1908.77	0.02
50	12	1851.23	0.02	1880.01	0.01	1908.72	0.03

Max Deviation (MHz)	0.05	0.07	0.04
	PASS	PASS	PASS

Test Equipment 2.1033(c)(14)/2.1055/22.355/24.235- Frequency Stability

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
QP Adapter	00478	HP	85650A	2811A01267	1/30/02	1/30/03
SA Display Section	00489	HP	8566B	2403A08241	1/30/02	1/30/03
Spectrum Analyzer, RF Section	00490	HP	8566B	2209A01404	1/30/02	1/30/03
Temperature Chamber	01879	Thermotron Corp.	S-1.2 MINI MAX	11899	8/28/01	8/28/02



Temperature Testing

2.1091 - MAXIMUM PERMISSIBLE EXPOSURE CALCULATIONS

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: EMIII-Dual
FCC Identification: PM4 (pending)

Fundamental Operating Frequency: 824.04-848.97MHz, 1851.25 MHz-1908.75 MHz

Maximum Rated Output Power: 0.28Watts
Measured Maximum Output Power: 0.48 watts (Antenna terminal, 836.52 MHz)
0.55 Watts (Antenna terminal, 1880.00 MHz)

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 300-1500 MHz, the MPE is $f / 1500$ (mW/cm²)
For frequency range of 1500-100,000 MHz, the MPE is 1 (mW/cm²)*

Power Output	Distance	Power Density	Power Density	Limit	Result
Watts	Meter	W/M2	MW/cm2	MW/Cm2	
0.28	0.2	0.9135	0.0914	0.5573	PASS
0.48	0.2	1.5660	0.1566	0.5573	PASS
0.55	0.2	1.7944	0.1794	1	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 = 377 Ω

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

At measured output power at antenna terminal of 0.48 Watts and 0.55 watts, the EUT satisfies the requirement in both frequency ranges.

15.107 – AC CONDUCTED EMISSIONS – RECEIVER/DIGITAL

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 #: **78691** Date: 04/06/2002
 Test Type: **Conducted Emissions** Time: 1:36:46 PM
 Equipment: **Dual Data Modem** Sequence#: 8
 Manufacturer: AnyData.net Incorporated Tested By: Eddie Wong
 Model: EMIII-Dual 120V 60Hz
 S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 824.04 MHz. Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

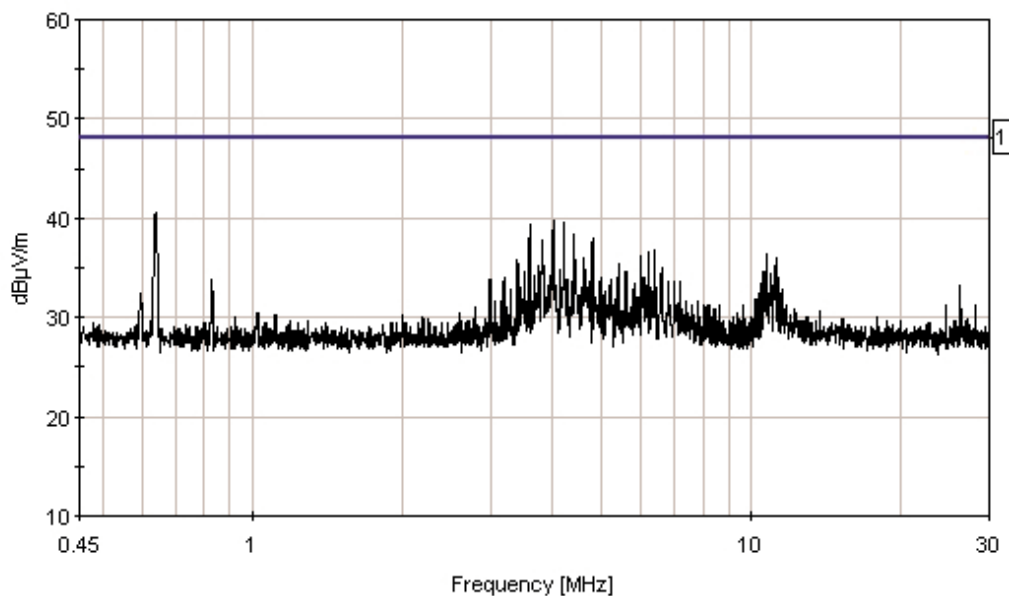
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Measurement Data: Reading listed by margin. Test Lead: Black

#	Freq MHz	Rdng dB μ V	dB				Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	638.891k	40.6					+0.0	40.6	48.0	-7.4	Black
2	4.015M	39.7					+0.0	39.7	48.0	-8.3	Black
3	4.206M	39.6					+0.0	39.6	48.0	-8.4	Black
4	3.595M	39.3					+0.0	39.3	48.0	-8.7	Black
5	4.418M	38.3					+0.0	38.3	48.0	-9.7	Black
6	4.807M	38.0					+0.0	38.0	48.0	-10.0	Black
7	3.810M	37.8					+0.0	37.8	48.0	-10.2	Black
8	6.404M	36.8					+0.0	36.8	48.0	-11.2	Black

9	6.206M	36.5	+0.0	36.5	48.0	-11.5	Black
10	10.744M	36.4	+0.0	36.4	48.0	-11.6	Black
11	6.015M	36.1	+0.0	36.1	48.0	-11.9	Black
12	4.609M	36.0	+0.0	36.0	48.0	-12.0	Black
13	11.192M	35.9	+0.0	35.9	48.0	-12.1	Black
14	3.395M	35.7	+0.0	35.7	48.0	-12.3	Black
15	5.407M	35.4	+0.0	35.4	48.0	-12.6	Black

CKC Laboratories, Inc. Date: 04/06/2002 Time: 1:36:46 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: Black 120V 60Hz Sequence#: 8



— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 1:44:18 PM

Equipment: **Dual Data Modem**

Sequence#: 9

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 824.04 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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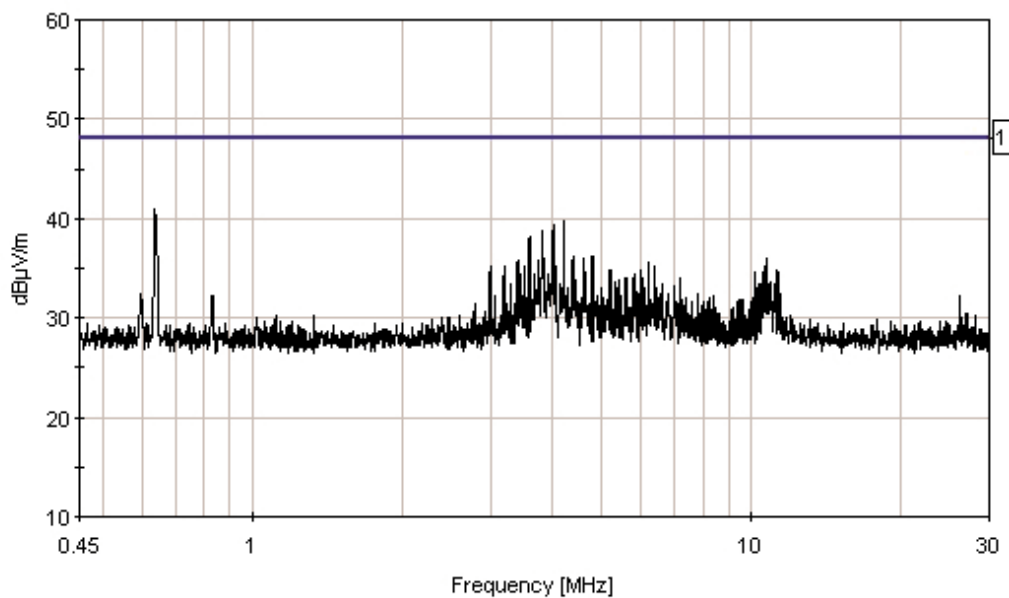
Measurement Data: Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBµV	dB	dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	636.383k	40.9					+0.0	40.9	48.0	-7.1	White
2	4.206M	39.8					+0.0	39.8	48.0	-8.2	White
3	4.008M	39.4					+0.0	39.4	48.0	-8.6	White
4	3.810M	38.8					+0.0	38.8	48.0	-9.2	White
5	3.598M	38.2					+0.0	38.2	48.0	-9.8	White
6	4.411M	36.1					+0.0	36.1	48.0	-11.9	White
7	4.800M	36.1					+0.0	36.1	48.0	-11.9	White
8	10.744M	36.0					+0.0	36.0	48.0	-12.0	White
9	4.609M	35.9					+0.0	35.9	48.0	-12.1	White
10	3.756M	35.8					+0.0	35.8	48.0	-12.2	White

11	4.356M	35.8	+0.0	35.8	48.0	-12.2	White
12	3.402M	35.7	+0.0	35.7	48.0	-12.3	White
13	6.213M	35.6	+0.0	35.6	48.0	-12.4	White
14	3.521M	35.2	+0.0	35.2	48.0	-12.8	White
15	10.607M	35.2	+0.0	35.2	48.0	-12.8	White

CKC Laboratories, Inc. Date: 04/06/2002 Time: 1:44:18 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: White 120V 60Hz Sequence#: 9



— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 1:54:13 PM

Equipment: **Dual Data Modem**

Sequence#: 11

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 836.52 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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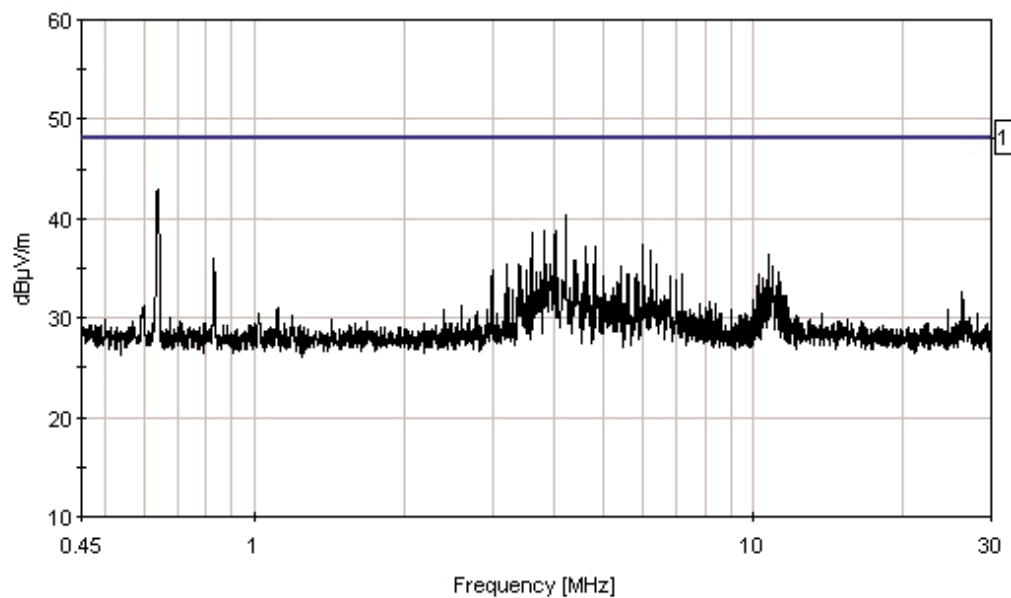
Measurement Data: Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dB μ V	dB				Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	640.562k	43.0					+0.0	43.0	48.0	-5.0	Black
2	4.206M	40.4					+0.0	40.4	48.0	-7.6	Black
3	3.810M	38.8					+0.0	38.8	48.0	-9.2	Black
4	4.008M	38.7					+0.0	38.7	48.0	-9.3	Black
5	3.595M	38.5					+0.0	38.5	48.0	-9.5	Black
6	6.015M	37.3					+0.0	37.3	48.0	-10.7	Black
7	4.807M	37.2					+0.0	37.2	48.0	-10.8	Black
8	4.609M	37.1					+0.0	37.1	48.0	-10.9	Black
9	6.213M	36.7					+0.0	36.7	48.0	-11.3	Black
10	10.744M	36.3					+0.0	36.3	48.0	-11.7	Black

11	3.981M	36.0	+0.0	36.0	48.0	-12.0	Black
12	829.453k	35.9	+0.0	35.9	48.0	-12.1	Black
13	4.363M	35.7	+0.0	35.7	48.0	-12.3	Black
14	4.411M	35.7	+0.0	35.7	48.0	-12.3	Black
15	6.410M	35.4	+0.0	35.4	48.0	-12.6	Black

CKC Laboratories, Inc. Date: 04/06/2002 Time: 1:54:13 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: Black 120V 60Hz Sequence#: 11



— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 1:50:32 PM

Equipment: **Dual Data Modem**

Sequence#: 10

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 836.52 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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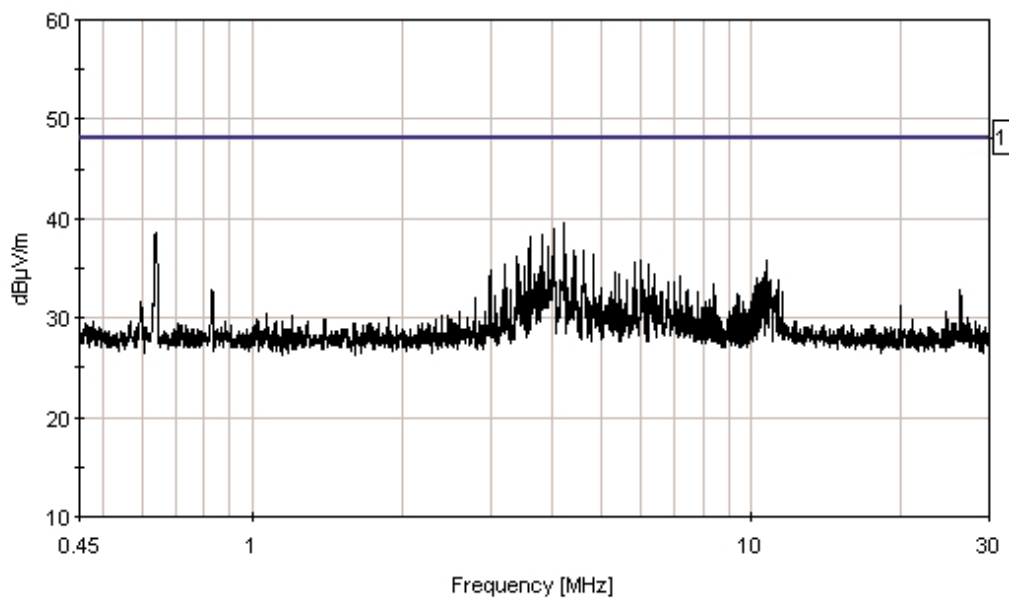
Measurement Data: Reading listed by margin.

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	4.213M	39.6					+0.0	39.6	48.0	-8.4	White
2	4.015M	38.9					+0.0	38.9	48.0	-9.1	White
3	639.727k	38.6					+0.0	38.6	48.0	-9.4	White
4	3.824M	38.3					+0.0	38.3	48.0	-9.7	White
5	3.595M	38.1					+0.0	38.1	48.0	-9.9	White
6	3.913M	37.1					+0.0	37.1	48.0	-10.9	White
7	4.425M	36.8					+0.0	36.8	48.0	-11.2	White
8	4.623M	36.7					+0.0	36.7	48.0	-11.3	White
9	4.814M	36.3					+0.0	36.3	48.0	-11.7	White
10	3.392M	36.1					+0.0	36.1	48.0	-11.9	White

11	6.021M	35.8	+0.0	35.8	48.0	-12.2	White
12	10.744M	35.8	+0.0	35.8	48.0	-12.2	White
13	5.824M	35.6	+0.0	35.6	48.0	-12.4	White
14	3.196M	35.4	+0.0	35.4	48.0	-12.6	White
15	6.219M	35.4	+0.0	35.4	48.0	-12.6	White

CKC Laboratories, Inc. Date: 04/06/2002 Time: 1:50:32 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: White 120V 60Hz Sequence#: 10



— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 2:01:14 PM

Equipment: **Dual Data Modem**

Sequence#: 12

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 848.97 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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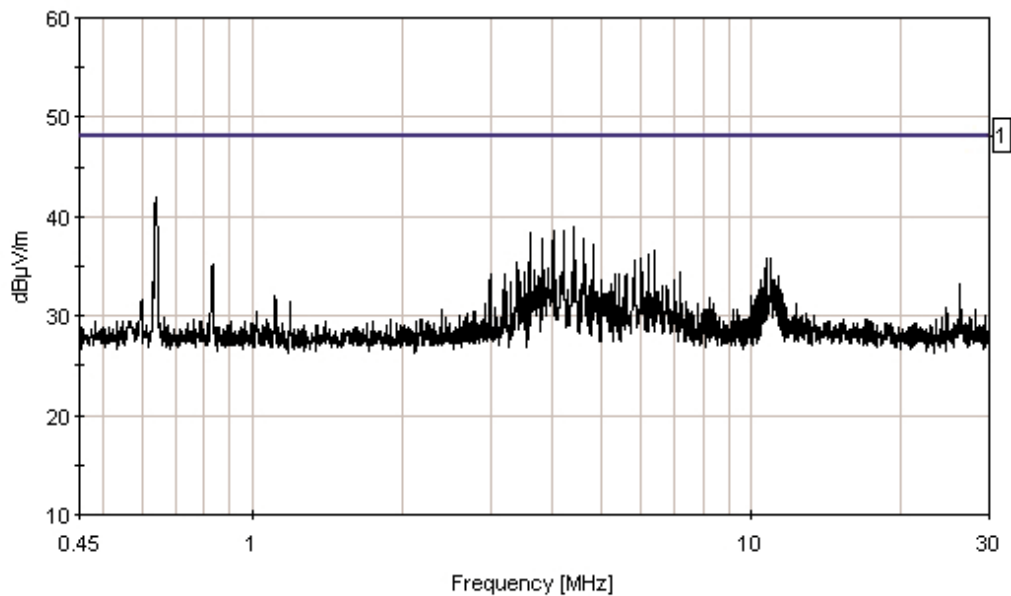
Measurement Data: Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dBμV	dB	dB	dB	dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	641.398k	41.9					+0.0	41.9	48.0	-6.1	Black
2	4.418M	38.9					+0.0	38.9	48.0	-9.1	Black
3	4.008M	38.5					+0.0	38.5	48.0	-9.5	Black
4	4.206M	38.5					+0.0	38.5	48.0	-9.5	Black
5	3.598M	38.3					+0.0	38.3	48.0	-9.7	Black
6	4.616M	37.8					+0.0	37.8	48.0	-10.2	Black
7	3.817M	37.7					+0.0	37.7	48.0	-10.3	Black
8	4.814M	37.2					+0.0	37.2	48.0	-10.8	Black
9	6.410M	36.5					+0.0	36.5	48.0	-11.5	Black
10	6.206M	36.1					+0.0	36.1	48.0	-11.9	Black

11	6.008M	35.8	+0.0	35.8	48.0	-12.2	Black
12	10.763M	35.8	+0.0	35.8	48.0	-12.2	Black
13	10.958M	35.8	+0.0	35.8	48.0	-12.2	Black
14	5.824M	35.6	+0.0	35.6	48.0	-12.4	Black
15	3.395M	35.4	+0.0	35.4	48.0	-12.6	Black

CKC Laboratories, Inc. Date: 04/06/2002 Time: 2:01:14 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: Black 120V 60Hz Sequence#: 12



— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 2:41:32 PM

Equipment: **Dual Data Modem**

Sequence#: 14

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 848.97 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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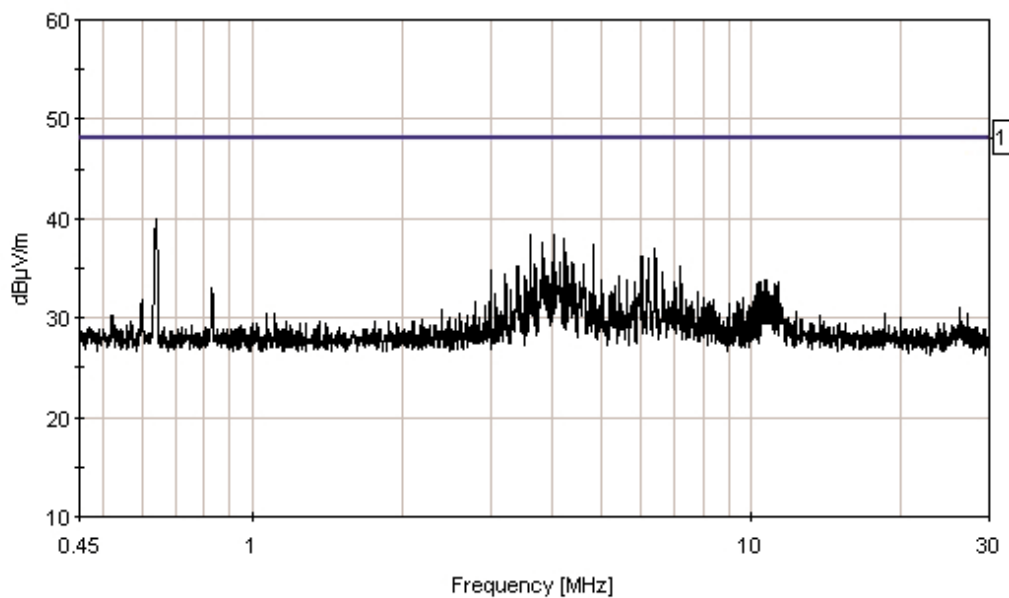
Measurement Data: Reading listed by margin.

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	639.727k	39.9					+0.0	39.9	48.0	-8.1	White
2	3.602M	38.4					+0.0	38.4	48.0	-9.6	White
3	4.015M	38.4					+0.0	38.4	48.0	-9.6	White
4	4.213M	38.0					+0.0	38.0	48.0	-10.0	White
5	3.817M	37.6					+0.0	37.6	48.0	-10.4	White
6	4.814M	37.3					+0.0	37.3	48.0	-10.7	White
7	6.417M	36.9					+0.0	36.9	48.0	-11.1	White
8	6.028M	36.2					+0.0	36.2	48.0	-11.8	White
9	3.845M	36.0					+0.0	36.0	48.0	-12.0	White
10	6.219M	36.0					+0.0	36.0	48.0	-12.0	White

11	4.145M	35.5	+0.0	35.5	48.0	-12.5	White
12	4.370M	35.5	+0.0	35.5	48.0	-12.5	White
13	4.616M	35.4	+0.0	35.4	48.0	-12.6	White
14	3.688M	35.3	+0.0	35.3	48.0	-12.7	White
15	4.425M	35.3	+0.0	35.3	48.0	-12.7	White

CKC Laboratories, Inc. Date: 04/06/2002 Time: 2:41:32 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: White 120V 60Hz Sequence#: 14



— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 2:13:57 PM

Equipment: **Dual Data Modem**

Sequence#: 15

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 1851.25 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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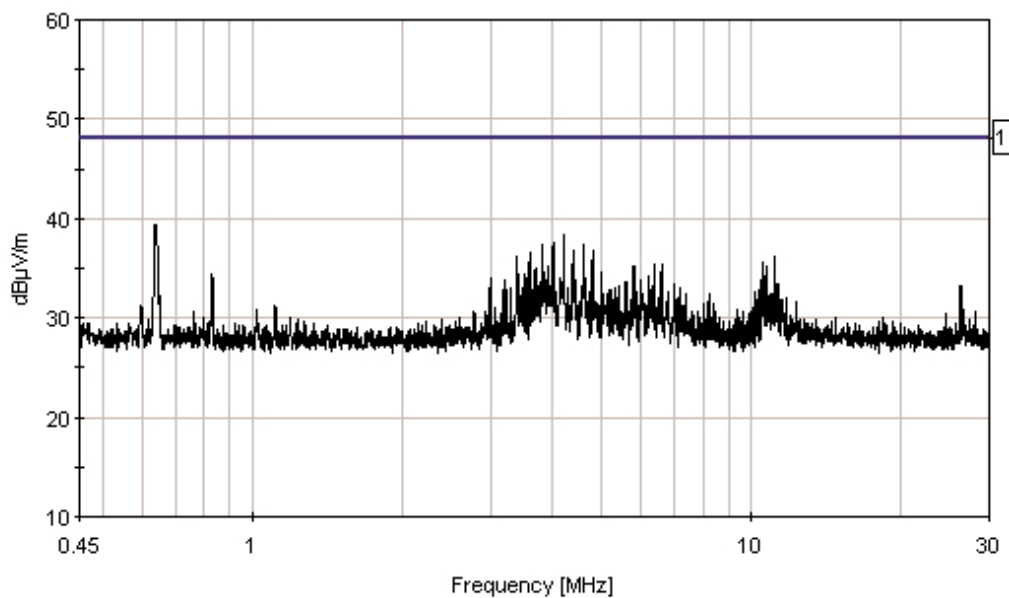
Measurement Data: Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dBµV	dB	dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	637.219k	39.4					+0.0	39.4	48.0	-8.6	Black
2	4.206M	38.4					+0.0	38.4	48.0	-9.6	Black
3	4.008M	37.6					+0.0	37.6	48.0	-10.4	Black
4	3.810M	37.4					+0.0	37.4	48.0	-10.6	Black
5	4.616M	37.3					+0.0	37.3	48.0	-10.7	Black
6	4.404M	36.8					+0.0	36.8	48.0	-11.2	Black
7	4.807M	36.7					+0.0	36.7	48.0	-11.3	Black
8	3.602M	36.6					+0.0	36.6	48.0	-11.4	Black
9	3.392M	36.2					+0.0	36.2	48.0	-11.8	Black
10	11.134M	36.1					+0.0	36.1	48.0	-11.9	Black

11	10.529M	35.6	+0.0	35.6	48.0	-12.4	Black
12	6.410M	35.4	+0.0	35.4	48.0	-12.6	Black
13	4.363M	35.3	+0.0	35.3	48.0	-12.7	Black
14	6.608M	35.3	+0.0	35.3	48.0	-12.7	Black
15	10.763M	35.1	+0.0	35.1	48.0	-12.9	Black

CKC Laboratories, Inc. Date: 04/06/2002 Time: 2:13:57 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: Black 120V 60Hz Sequence#: 15



— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 2:10:55 PM

Equipment: **Dual Data Modem**

Sequence#: 14

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 1851.25 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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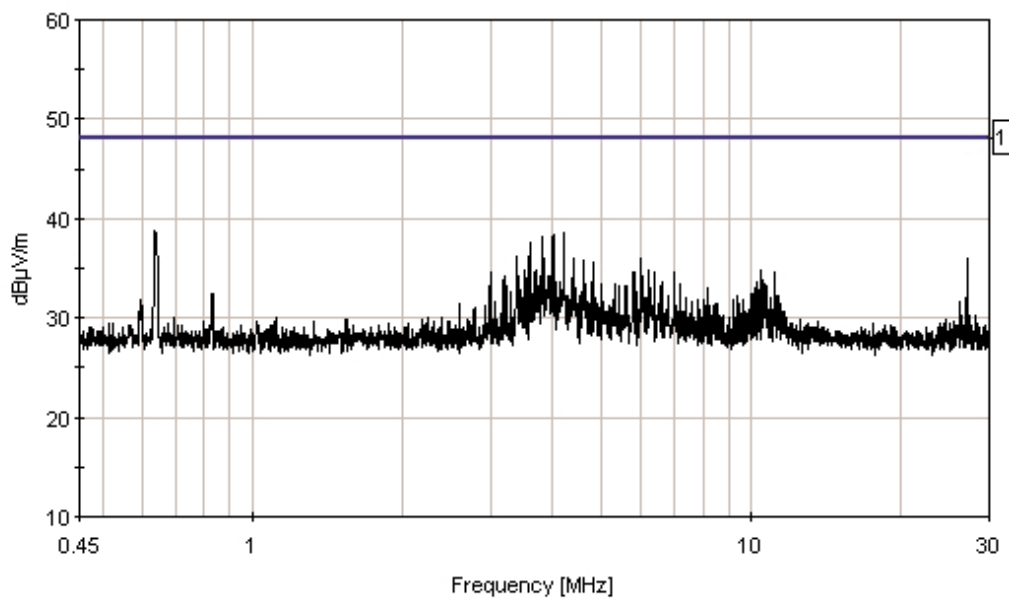
Measurement Data: Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBµV	dB	dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	637.219k	38.7					+0.0	38.7	48.0	-9.3	White
2	4.213M	38.6					+0.0	38.6	48.0	-9.4	White
3	4.008M	38.4					+0.0	38.4	48.0	-9.6	White
4	3.817M	38.2					+0.0	38.2	48.0	-9.8	White
5	3.600M	37.5					+0.0	37.5	48.0	-10.5	White
6	3.390M	36.1					+0.0	36.1	48.0	-11.9	White
7	3.845M	35.9					+0.0	35.9	48.0	-12.1	White
8	4.418M	35.9					+0.0	35.9	48.0	-12.1	White
9	6.021M	35.9					+0.0	35.9	48.0	-12.1	White
10	27.034M	35.9					+0.0	35.9	48.0	-12.1	White

11	4.609M	35.7	+0.0	35.7	48.0	-12.3	White
12	4.807M	35.6	+0.0	35.6	48.0	-12.4	White
13	3.524M	34.9	+0.0	34.9	48.0	-13.1	White
14	10.457M	34.9	+0.0	34.9	48.0	-13.1	White
15	6.219M	34.8	+0.0	34.8	48.0	-13.2	White

CKC Laboratories, Inc. Date: 04/06/2002 Time: 2:10:55 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: White 120V 60Hz Sequence#: 14



— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 2:17:58 PM

Equipment: **Dual Data Modem**

Sequence#: 16

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 1880.00 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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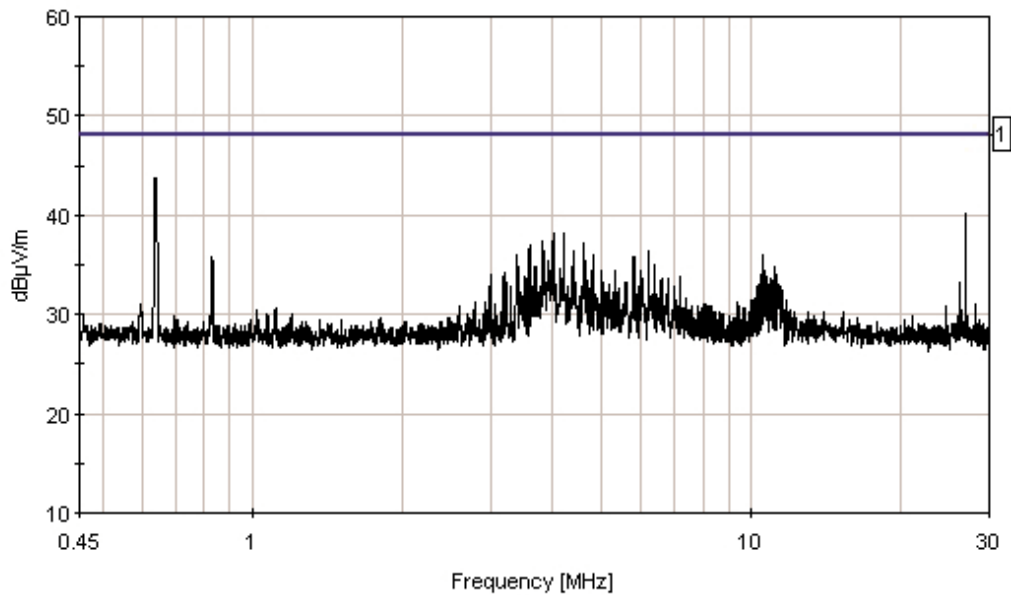
Measurement Data: Reading listed by margin.

Test Lead: Black

#	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	638.055k	43.7					+0.0	43.7	48.0	-4.3	Black
2	26.937M	40.2					+0.0	40.2	48.0	-7.8	Black
3	4.008M	38.1					+0.0	38.1	48.0	-9.9	Black
4	4.213M	38.1					+0.0	38.1	48.0	-9.9	Black
5	3.817M	37.4					+0.0	37.4	48.0	-10.6	Black
6	4.609M	37.1					+0.0	37.1	48.0	-10.9	Black
7	3.598M	37.0					+0.0	37.0	48.0	-11.0	Black
8	4.411M	36.4					+0.0	36.4	48.0	-11.6	Black
9	3.838M	36.3					+0.0	36.3	48.0	-11.7	Black

10	6.219M	36.3	+0.0	36.3	48.0	-11.7	Black
11	3.395M	36.0	+0.0	36.0	48.0	-12.0	Black
12	4.807M	36.0	+0.0	36.0	48.0	-12.0	Black
13	10.529M	35.9	+0.0	35.9	48.0	-12.1	Black
14	830.289k	35.8	+0.0	35.8	48.0	-12.2	Black
15	5.810M	35.8	+0.0	35.8	48.0	-12.2	Black

CKC Laboratories, Inc. Date: 04/06/2002 Time: 2:17:58 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: Black 120V 60Hz Sequence#: 16



— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 2:21:01 PM

Equipment: **Dual Data Modem**

Sequence#: 17

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 1880.00 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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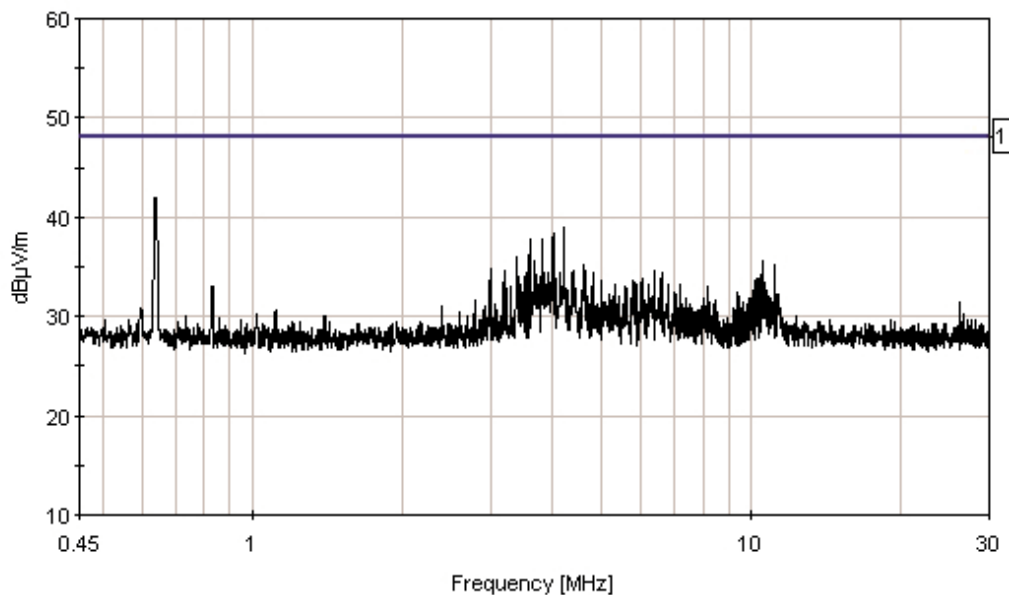
Measurement Data: Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBµV	dB	dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	637.219k	42.0					+0.0	42.0	48.0	-6.0	White
2	4.213M	38.9					+0.0	38.9	48.0	-9.1	White
3	4.008M	38.4					+0.0	38.4	48.0	-9.6	White
4	3.810M	37.8					+0.0	37.8	48.0	-10.2	White
5	3.600M	37.7					+0.0	37.7	48.0	-10.3	White
6	3.390M	35.9					+0.0	35.9	48.0	-12.1	White
7	3.688M	35.5					+0.0	35.5	48.0	-12.5	White
8	10.529M	35.5					+0.0	35.5	48.0	-12.5	White
9	4.609M	35.2					+0.0	35.2	48.0	-12.8	White

10	11.134M	35.2	+0.0	35.2	48.0	-12.8	White
11	2.996M	34.8	+0.0	34.8	48.0	-13.2	White
12	4.411M	34.7	+0.0	34.7	48.0	-13.3	White
13	6.410M	34.7	+0.0	34.7	48.0	-13.3	White
14	3.194M	34.6	+0.0	34.6	48.0	-13.4	White
15	6.608M	34.5	+0.0	34.5	48.0	-13.5	White

CKC Laboratories, Inc. Date: 04/06/2002 Time: 2:21:01 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: White 120V 60Hz Sequence#: 17



— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 2:31:38 PM

Equipment: **Dual Data Modem**

Sequence#: 20

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 1908.75 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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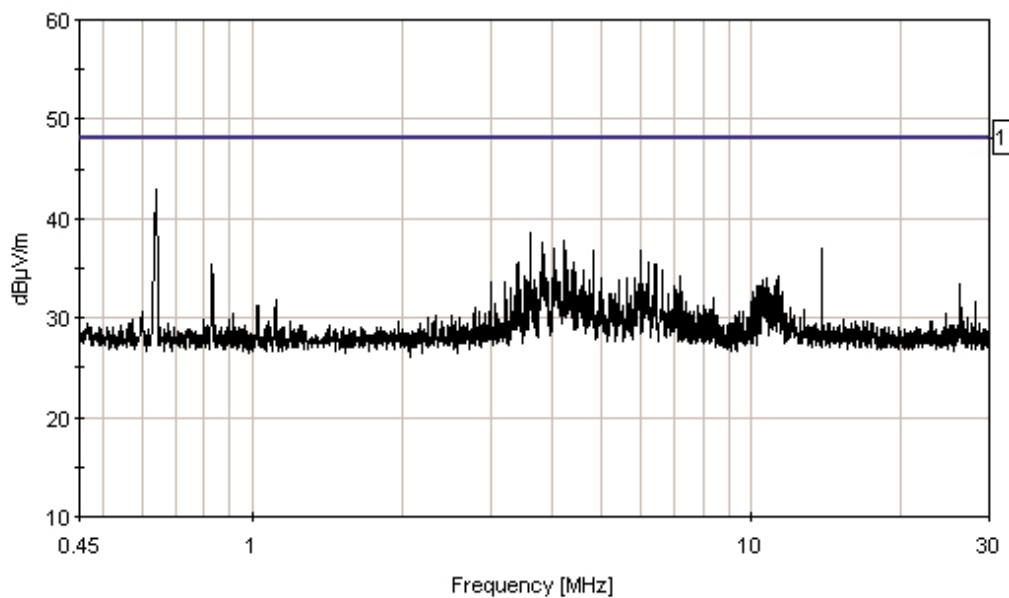
Measurement Data: Reading listed by margin.

Test Lead: Black

#	Freq MHz	Rdng dBµV	dB	dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	640.562k	42.9					+0.0	42.9	48.0	-5.1	Black
2	3.600M	38.5					+0.0	38.5	48.0	-9.5	Black
3	4.220M	37.7					+0.0	37.7	48.0	-10.3	Black
4	3.824M	37.5					+0.0	37.5	48.0	-10.5	Black
5	4.015M	37.0					+0.0	37.0	48.0	-11.0	Black
6	13.885M	36.9					+0.0	36.9	48.0	-11.1	Black
7	6.021M	36.8					+0.0	36.8	48.0	-11.2	Black
8	4.820M	36.7					+0.0	36.7	48.0	-11.3	Black
9	3.402M	35.6					+0.0	35.6	48.0	-12.4	Black
10	4.425M	35.6					+0.0	35.6	48.0	-12.4	Black

11	6.219M	35.6	+0.0	35.6	48.0	-12.4	Black
12	830.289k	35.3	+0.0	35.3	48.0	-12.7	Black
13	6.424M	35.3	+0.0	35.3	48.0	-12.7	Black
14	4.370M	34.9	+0.0	34.9	48.0	-13.1	Black
15	6.622M	34.9	+0.0	34.9	48.0	-13.1	Black

CKC Laboratories, Inc. Date: 04/06/2002 Time: 2:31:38 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: Black 120V 60Hz Sequence#: 20



—— 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 #: **78691**

Date: 04/06/2002

Test Type: **Conducted Emissions**

Time: 2:29:10 PM

Equipment: **Dual Data Modem**

Sequence#: 19

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

120V 60Hz

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 1908.75 MHz Range of measurement: 450 kHz-30 MHz RBW=VBW=9kHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

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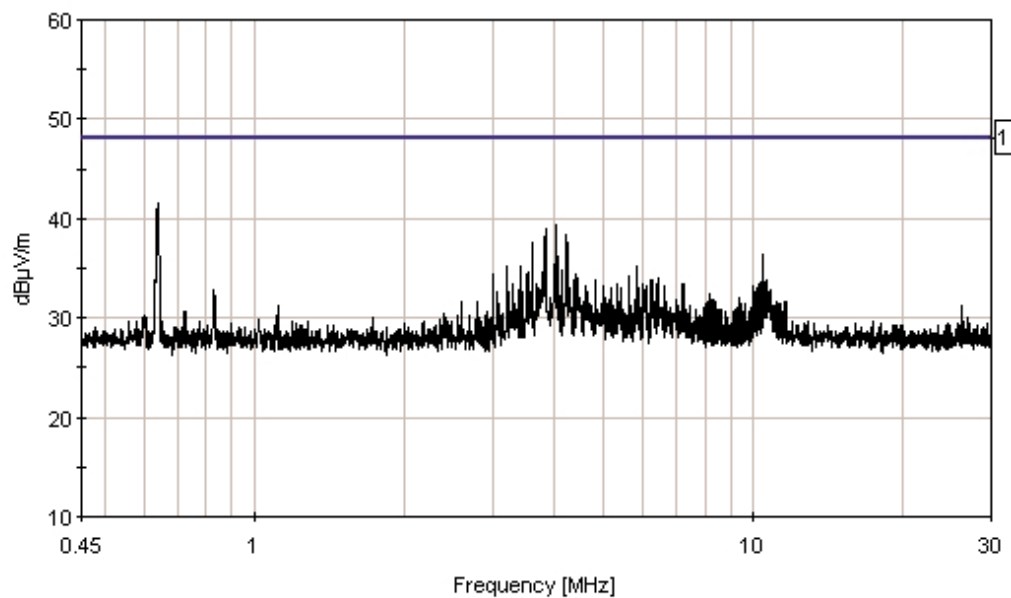
Measurement Data: Reading listed by margin.

Test Lead: White

#	Freq MHz	Rdng dBµV	dB	dB	dB	dB	Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
1	640.562k	41.5					+0.0	41.5	48.0	-6.5	White
2	4.029M	39.4					+0.0	39.4	48.0	-8.6	White
3	3.831M	39.0					+0.0	39.0	48.0	-9.0	White
4	4.220M	38.4					+0.0	38.4	48.0	-9.6	White
5	3.602M	37.5					+0.0	37.5	48.0	-10.5	White
6	10.464M	36.4					+0.0	36.4	48.0	-11.6	White
7	3.995M	35.4					+0.0	35.4	48.0	-12.6	White
8	3.409M	35.2					+0.0	35.2	48.0	-12.8	White
9	5.830M	35.2					+0.0	35.2	48.0	-12.8	White
10	3.211M	35.1					+0.0	35.1	48.0	-12.9	White

11	4.070M	34.9	+0.0	34.9	48.0	-13.1	White
12	4.138M	34.8	+0.0	34.8	48.0	-13.2	White
13	3.001M	34.4	+0.0	34.4	48.0	-13.6	White
14	4.425M	34.4	+0.0	34.4	48.0	-13.6	White
15	5.632M	34.3	+0.0	34.3	48.0	-13.7	White

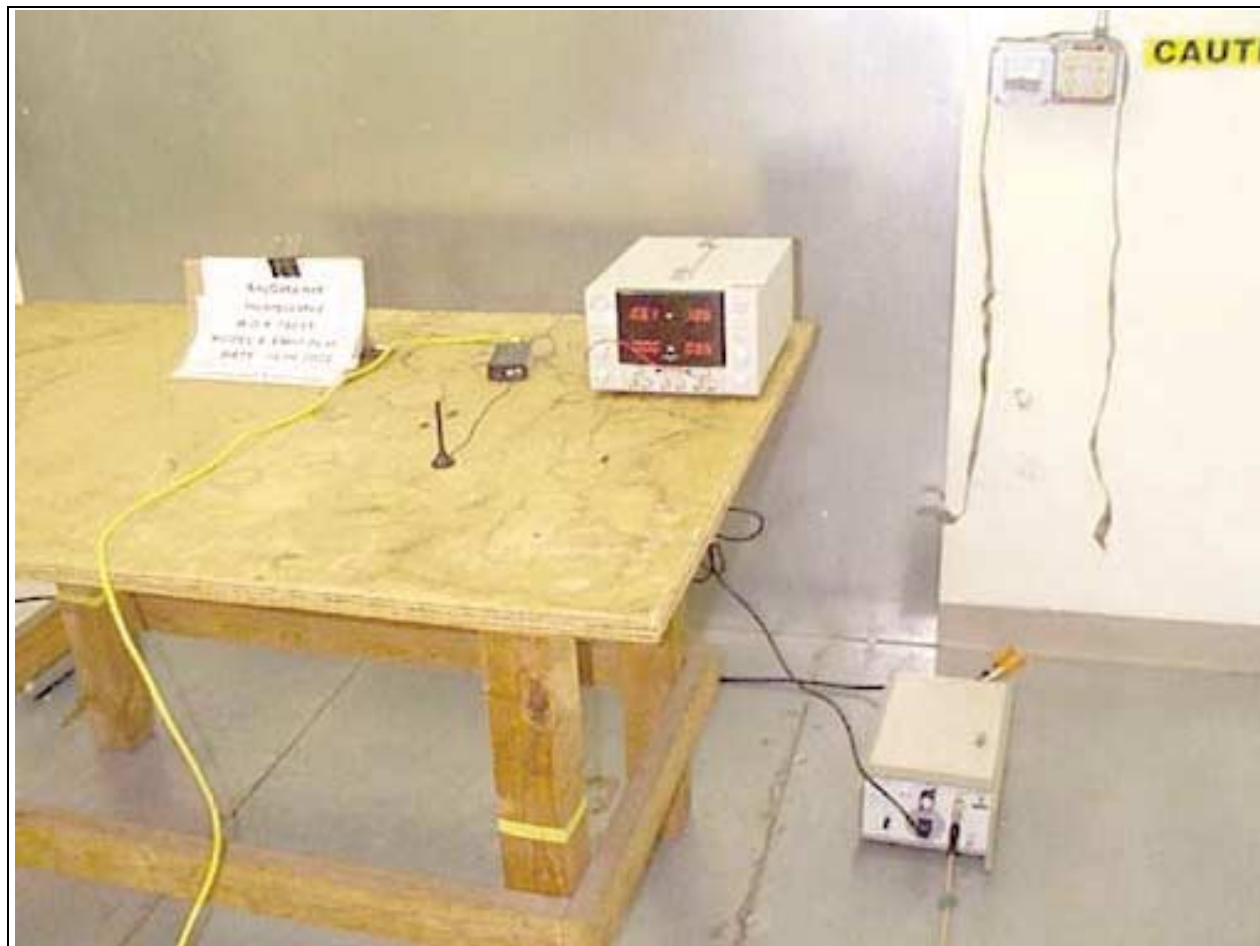
CKC Laboratories, Inc. Date: 04/06/2002 Time: 2:29:10 PM AnyData.net Incorporated. WFO#: 78691
 FCC 15.107 Class B Test Lead: White 120V 60Hz Sequence#: 19



— 1 - FCC 15.107 Class B

Test Equipment 15.107: AC Conducted

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
450 kHz- 30 MHz						
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
QP Adapter	01437	HP	85650A	3303A01884	092801	092802
LISN	00847	EMCO	3816/2NM	1104	101501	101502



Mains Conducted Emissions - Front View



Mains Conducted Emissions - Side View

15.109 – RADIATED EMISSIONS – RECEIVER/DIGITAL

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 #: **78691**

Date: 04/06/2002

Test Type: **Maximized Emissions**

Time: 04:02:01

Equipment: **Dual Data Modem**

Sequence#: 7

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 824.04 MHz. Range of measurement: 30 MHz- 9 GHz RBW=VBW=120 kHz: 30 - 1000MHz RBW=VBW= 1 MHz: 1GHz - 9 GHz. 12 Vdc, 19°C, 66% relative humidity. Note: Grounding integrity improved by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	T6=Horn Antenna sn6246
T7=Helix #18 70' 11Sept2001	T8=HP3017A sn3123A00281 11-Sept-01
T9=Dipole#4 110902	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	Reading listed by margin				Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			T1 dB	T2 dB	T3 dB	T4 dB					
1	954.408M	39.5	+0.0	+23.7	+0.6	+6.3	+0.0	42.4	46.0	-3.6	Horiz
			-27.7	+0.0	+0.0	+0.0					
			+0.0								
2	954.408M	35.5	+0.0	+23.7	+0.6	+6.3	+0.0	38.4	46.0	-7.6	Vert
			-27.7	+0.0	+0.0	+0.0					
			+0.0								
3	952.633M	30.7	+0.0	+23.7	+0.6	+6.2	+0.0	33.5	46.0	-12.5	Horiz
			-27.7	+0.0	+0.0	+0.0					
			+0.0								
4	119.985M	33.1	+15.3	+0.0	+0.2	+2.0	+0.0	22.2	43.5	-21.3	Horiz
			-28.4	+0.0	+0.0	+0.0					

5	261.329M	26.5	+18.9 -28.2	+0.0 +0.0	+0.3 +0.0	+3.0 +0.0	+0.0	20.5	46.0	-25.5	Vert
6	1594.000M	38.1	+0.0 +0.0 +0.0	+0.0 +24.9	+0.0 +3.5	+0.0 -38.6	+0.0	27.9	54.0	-26.1	Horiz
7	1187.899M	34.8	+0.0 +0.0 +0.0	+0.0 +24.2	+0.0 +2.9	+0.0 -39.7	+0.0	22.2	54.0	-31.8	Vert

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 #: **78691**

Date: 04/06/2002

Test Type: **Maximized Emissions**

Time: 03:55:36

Equipment: **Dual Data Modem**

Sequence#: 8

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 836.52 MHz. Range of measurement: 30 MHz- 9 GHz RBW=VBW=120 kHz: 30 - 1000MHz RBW=VBW= 1 MHz: 1GHz - 9 GHz. 12 Vdc, 19°C, 66% relative humidity. Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	T6=Horn Antenna sn6246
T7=Helix #18 70' 11Sept2001	T8=HP3017A sn3123A00281 11-Sept-01

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	966.884M	41.4	+0.0 -27.8	+23.9 +0.0	+0.6 +0.0	+6.5 +0.0	+0.0	44.6	54.0	-9.4	Horiz
2	966.914M	37.4	+0.0 -27.8	+23.9 +0.0	+0.6 +0.0	+6.5 +0.0	+0.0	40.6	54.0	-13.4	Vert
3	4920.000M	36.2	+0.0 +0.0	+0.0 +33.0	+0.0 +6.3	+0.0 -37.2	+0.0	38.3	54.0	-15.7	Horiz
4	5000.000M	35.6	+0.0 +0.0	+0.0 +33.1	+0.0 +6.3	+0.0 -37.2	+0.0	37.8	54.0	-16.2	Vert
5	298.838M	29.8	+22.1 -28.3	+0.0 +0.0	+0.3 +0.0	+3.3 +0.0	+0.0	27.2	46.0	-18.8	Vert
6	228.225M	29.7	+17.4 -28.3	+0.0 +0.0	+0.3 +0.0	+2.7 +0.0	+0.0	21.8	46.0	-24.2	Horiz

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 #: **78691**

Date: 04/06/2002

Test Type: **Maximized Emissions**

Time: 01:55:12

Equipment: **Dual Data Modem**

Sequence#: 9

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 848.97 MHz. Range of measurement: 30 MHz- 9 GHz RBW=VBW=120 kHz: 30 - 1000MHz RBW=VBW= 1 MHz: 1GHz - 9 GHz. 12 Vdc, 19°C, 66% relative humidity. Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	T6=Horn Antenna sn6246
T7=Helix #18 70' 11Sept2001	T8=HP3017A sn3123A00281 11-Sept-01

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	Reading listed by margin.				Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
			T1 dB	T2 dB	T3 dB	T4 dB					
1	979.358M	43.1	+0.0 -27.8	+24.0 +0.0	+0.6 +0.0	+6.7 +0.0	+0.0	46.6	54.0	-7.4	Horiz
2	2938.048M	43.5	+0.0 +0.0	+0.0 +29.7	+0.0 +4.7	+0.0 -37.7	+0.0	40.2	54.0	-13.8	Vert
3	979.364M	36.2	+0.0 -27.8	+24.0 +0.0	+0.6 +0.0	+6.7 +0.0	+0.0	39.7	54.0	-14.3	Vert
4	1958.677M	47.4	+0.0 +0.0	+0.0 +26.3	+0.0 +3.8	+0.0 -38.4	+0.0	39.1	54.0	-14.9	Vert
5	299.158M	28.1	+22.1 -28.3	+0.0 +0.0	+0.3 +0.0	+3.3 +0.0	+0.0	25.5	46.0	-20.5	Vert
6	126.586M	32.9	+15.9 -28.4	+0.0 +0.0	+0.2 +0.0	+2.0 +0.0	+0.0	22.6	43.5	-20.9	Horiz
7	122.282M	33.1	+15.5 -28.4	+0.0 +0.0	+0.2 +0.0	+2.0 +0.0	+0.0	22.4	43.5	-21.1	Horiz

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 #: **78691**

Date: 04/06/2002

Test Type: **Maximized Emissions**

Time: 03:42:05

Equipment: **Dual Data Modem**

Sequence#: 9

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 1851.25 MHz. Range of measurement: 30 MHz- 20 GHz RBW=VBW=120 kHz: 30 - 1000MHz RBW=VBW= 1 MHz: 1 - 20 GHz. 12 Vdc, 19°C, 66% relative humidity. Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	T6=Horn Antenna sn6246
T7=Helix #18 70' 11Sept2001	T8=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	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	1720.856M	59.8	+0.0	+0.0	+0.0	+0.0	+0.0	50.2	54.0	-3.8	Vert
	Ave		+0.0	+25.4	+3.6	-38.6					
^	1720.854M	60.9	+0.0	+0.0	+0.0	+0.0	+0.0	51.3	54.0	-2.7	Vert
			+0.0	+25.4	+3.6	-38.6					
3	1720.848M	58.3	+0.0	+0.0	+0.0	+0.0	+0.0	48.7	54.0	-5.3	Horiz
			+0.0	+25.4	+3.6	-38.6					
4	298.075M	29.7	+22.0	+0.0	+0.3	+3.3	+0.0	27.0	46.0	-19.0	Horiz
			-28.3	+0.0	+0.0	+0.0					
5	1534.495M	45.2	+0.0	+0.0	+0.0	+0.0	+0.0	34.5	54.0	-19.5	Vert
			+0.0	+24.7	+3.4	-38.8					
6	989.930M	26.4	+0.0	+24.2	+0.6	+6.9	+0.0	30.2	54.0	-23.8	Horiz
			-27.9	+0.0	+0.0	+0.0					
7	253.825M	28.0	+18.2	+0.0	+0.3	+2.9	+0.0	21.2	46.0	-24.8	Vert
			-28.2	+0.0	+0.0	+0.0					
8	974.700M	24.5	+0.0	+24.0	+0.6	+6.7	+0.0	28.0	54.0	-26.0	Horiz
			-27.8	+0.0	+0.0	+0.0					

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 #: **78691**

Date: 04/06/2002

Test Type: **Maximized Emissions**

Time: 03:39:06

Equipment: **Dual Data Modem**

Sequence#: 10

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 1880.00 MHz. Range of measurement: 30 MHz- 20 GHz RBW=VBW=120 kHz: 30 - 1000MHz RBW=VBW= 1 MHz: 1 - 20 GHz. 12 Vdc, 19°C, 66% relative humidity. Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	T6=Horn Antenna sn6246
T7=Heliac #18 70' 11Sept2001	T8=HP3017A sn3123A00281 11-Sept-01
T9=45MHz- 27GHz,Preamp1,HP-83051A	T10=18-26 HP Horn Antenna #1413
T11=HOL_HF_010_purple 65474	

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBµV	T1			T2		Dist Table	Corr dBµV/m	Spec dBµV/m	Margin dB	Polar Ant
			T5	T9	T11	T6	T10					
1	1749.606M	61.2	+0.0	+0.0	+0.0	+0.0	+0.0	51.8	54.0	-2.2	Horiz	
			+0.0	+25.5	+3.6	-38.5						
			+0.0	+0.0	+0.0							
2	1749.602M	59.4	+0.0	+0.0	+0.0	+0.0	+0.0	50.0	54.0	-4.0	Vert	
			+0.0	+25.5	+3.6	-38.5						
			+0.0	+0.0	+0.0							
3	841.767M	28.6	+0.0	+22.1	+0.6	+5.8	+0.0	29.4	46.0	-16.6	Vert	
			-27.7									
4	922.147M	26.1	+0.0	+23.3	+0.6	+6.1	+0.0	28.5	46.0	-17.5	Horiz	
			-27.6									

5	168.210M	26.9	+17.5 -28.3	+0.0	+0.3	+2.3	+0.0	18.7	43.5	-24.8	Horiz
6	266.917M	26.1	+19.4 -28.3	+0.0	+0.3	+3.0	+0.0	20.5	46.0	-25.5	Vert
7	14439.900M	5.6	+0.0 +0.0 +0.0	+0.0 +39.8 +0.0	+0.0 +14.6 +0.0	+0.0 -37.4	+0.0	22.6	54.0	-31.4	Horiz

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 #: **78691**

Date: 04/06/2002

Test Type: **Maximized Emissions**

Time: 04:11:45

Equipment: **Dual Data Modem**

Sequence#: 11

Manufacturer: AnyData.net Incorporated

Tested By: Eddie Wong

Model: EMIII-Dual

S/N: NA

Equipment Under Test (* = EUT):

Function	Manufacturer	Model #	S/N
Dual Data Modem*	AnyData.net Incorporated	EMIII-Dual	NA

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. Antenna port is connected to antenna Receiver mode. TX Frequency set to: 1908.75 MHz. Range of measurement: 30 MHz- 20 GHz RBW=VBW=120 kHz: 30 - 1000MHz RBW=VBW= 1 MHz: 1 - 20 GHz. 12 Vdc, 19C, 66% relative humidity. Note: Enhanced grounding integrity by bonding the CDMA modem to the ground plane of the PCB with copper tape.

Transducer Legend:

T1=Bicon 092401	T2=Log 331 092401
T3=Cable #10 071601	T4=Cable #15 120602
T5=Preamp 8447D 090501	T6=Horn Antenna sn6246
T7=Helix #18 70' 11Sept2001	T8=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	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	1778.308M Ave	61.3	+0.0 +0.0	+0.0 +25.6	+0.0 +3.6	+0.0 -38.5	+0.0	52.0	54.0 Third orthogonal side	-2.0	Vert
^	1778.308M	62.4	+0.0 +0.0	+0.0 +25.6	+0.0 +3.6	+0.0 -38.5	+0.0	53.1	54.0 Third orthogonal side	-0.9	Vert
^	1778.380M	61.5	+0.0 +0.0	+0.0 +25.6	+0.0 +3.6	+0.0 -38.5	+0.0	52.2	54.0	-1.8	Vert
4	1778.380M Ave	60.9	+0.0 +0.0	+0.0 +25.6	+0.0 +3.6	+0.0 -38.5	+0.0	51.6	54.0	-2.4	Vert
5	1778.374M	58.9	+0.0 +0.0	+0.0 +25.6	+0.0 +3.6	+0.0 -38.5	+0.0	49.6	54.0	-4.4	Horiz
6	3556.708M	39.9	+0.0 +0.0	+0.0 +31.2	+0.0 +6.2	+0.0 -37.4	+0.0	39.9	54.0	-14.1	Vert
7	800.017M	29.9	+0.0 -27.6	+21.5 +0.0	+0.6 +0.0	+5.7 +0.0	+0.0	30.1	46.0	-15.9	Horiz

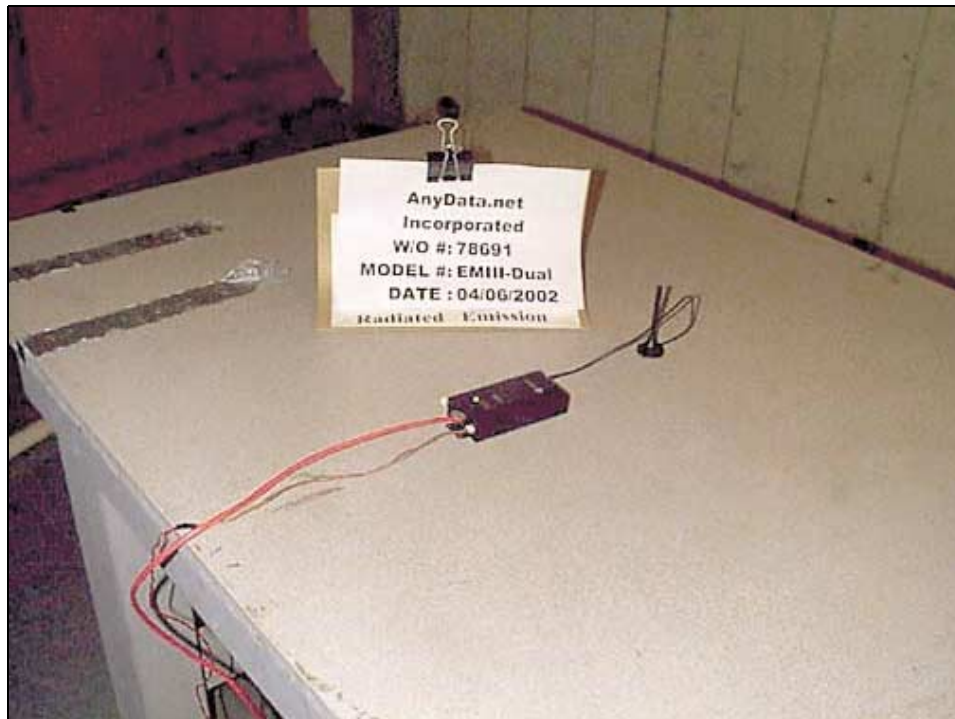
8	131.765M	32.5	+16.4 -28.4	+0.0 +0.0	+0.2 +0.0	+2.1 +0.0	+0.0	22.8	43.5	-20.7	Horiz
9	299.505M	26.5	+22.2 -28.3	+0.0 +0.0	+0.3 +0.0	+3.3 +0.0	+0.0	24.0	46.0	-22.0	Vert
10	10216.850M	34.5	+0.0 +0.0	+0.0 +37.5	+0.0 +9.9	+0.0 -40.4	-10.0	31.5	54.0	-22.5	Horiz
11	972.440M	24.3	+0.0 -27.8	+24.0 +0.0	+0.6 +0.0	+6.6 +0.0	+0.0	27.7	54.0	-26.3	Vert

Test Equipment 15.109 (b): OATS

Equipment	Asset #	Manufacturer	Model #	Serial #	Cal Date	Cal Due
30MHz-1000MHz						
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
1 GHz- 18 GHz						
Horn Antenna	0849	EMCO	3115	6246	091201	091202
Microwave Pre-amp	00786	HP	83017A	3123A00281	091201	091202
¼" Helix Coaxial Cable	NA	Andrew	LDF1-50	Cable#18 (70 ft)	091101	091102
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
18GHz-20 GHz						
18-26 GHz Horn antenna	1413	BP	RA42-K-F-4B-C	942126-003	070901	070902
Spectrum Analyzer	01865	HP	8566B	2532A02509	092801	092802
Pre amp	NA	HP	83051A	3331A00238	030502	030503
High Freq cable	NA	WL Gore	purple 65474	purple 65474	011402	011403



OATS Test Setup - Front View



OATS Test Setup - Back View



OATS Test Setup - Side View



Horn Antenna Test Setup