Nemko Test Report:	1L0435RUS2
Applicant:	Enfora, Inc. 661 East 18th Street Plano, TX 75074-5601
Equipment Under Test: (E.U.T.)	Enabler-A
FCC ID:	MIVCDP10EAM
In Accordance With:	**FCC Part 22, Subpart H** 800 MHz Cellular Subscriber Units
Tested By:	Nemko Dallas Inc. 802 N. Kealy Lewisville, TX 75057-3136
Authorized By:	 Tom Tidwell, EMC/Wireless Manager
Date:	9/10/01
Total Number of Pages:	43

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Section 1. Summary of Test Results

Manufacturer: Enfora

Model No.: Enabler-A

Serial No.: None

General: **All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 22, Subpart H.

☒ New Submission ☐ Production Unit

☐ Class II Permissive Change ☒ Pre-Production Unit

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.
See " Summary of Test Data".

NVLAP LAB CODE: 100426-0

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Summary Of Test Data

NAME OF TEST	PARA. NO.	SPEC.	RESULT
RF Power Output	2.1046	7W ERP	Complies
Audio Frequency Response	2.1047	6dB/Octave	N/A
Audio Low Pass Filter Response	2.1047	Graph	N/A
Modulation Limiting	2.1047	Graph	N/A
Occupied Bandwidth (Voice & SAT)	2.1049	Mask	N/A
Occupies Bandwidth (WB Data & SAT)	2.1049	Mask	N/A
Occupied Bandwidth (ST)	2.1049	Mask	Complies
Occupied Bandwidth (SAT)	2.1049	Mask	N/A
Occupied Bandwidth (SAT)	2.1049	Not Specified	N/A
Spurious Emissions at Antenna Terminals	2.1051	-13 dBm	Complies
Field Strength of Spurious Emissions	2.1053	82.3 dBµV/m	Complies
Frequency Stability	2.1055	2.5 ppm	Complies

This transmitter does not support analogue voice modulation.

.

Section 2. General Equipment Specification

Frequency Range:	824.04 MHz to 848.97 MHz
Tunable Bands:	824.04 MHz to 848.97 MHz
Necessary Bandwidth:	30 kHz
Type of Modulation and Designator:	DXW
Output Impedance:	50 ohms
RF Power Output (rated):	700 mW
Number of Channels:	832
Duty Cycle:	Continuous
Channel Spacing:	30 kHz
Operator Selection of Frequency:	Software Controlled
Power Output Adjustment Capability:	Software Controlled

Description of Modifications For Class II Permissive Change

Not Applicable

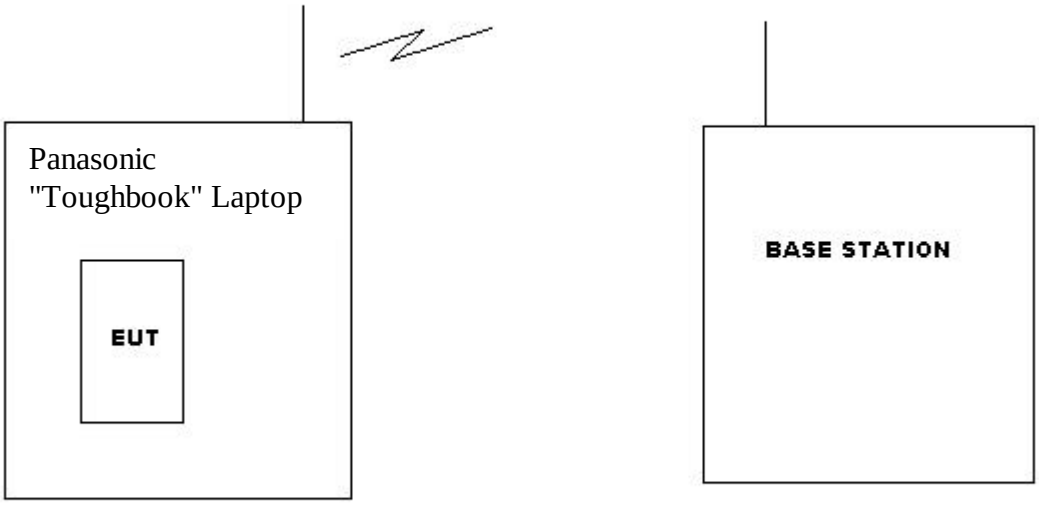
Modifications Made During Testing

Not Applicable

Operational Description

The Enabler_A CDPD modem is a full duplex wireless modem for embedded applications. The host supplies DC power and the antenna. The modem provides wide area access using the AMPS frequency band. The modulation used is a 0.5 GMSK format.

System Diagram



Section 3. RF Power Output

NAME OF TEST: RF Power Output	PARA. NO.: 2.1046
TESTED BY: David Light	DATE: 8/9/2001

Test Results: Complies.

Measurement Data:

Channel	Power at Antenna Terminal (dBm)	Antenna Gain (dBi)	Output Power (EIRP) (dBm)
991	28.5	0	28.5
367	28.0	0	28.0
799	27.6	0	27.6

Note – The device was tested at Nominal voltage (115 Vac), 98 Vac and 132 Vac (+/- 15%) with no change in output power. The AC adapter supplied with the host operates from 100-240 Vac.

Equipment Used: 1029-1030-1474-1082

Measurement Uncertainty: +/- 0.6 dB

Temperature: 22 °C

Relative Humidity: 50 %

Section 4. Occupied Bandwidth

NAME OF TEST: Occupied Bandwidth	PARA. NO.: 2.1047
TESTED BY: David Light	DATE:8/9/2001

Test Results: Complies.

Measurement Data: See attached graph.

Measurement Uncertainty: +/- 1.7 dB
$1x10^{-7}$ ppm

Test Data – Occupied Bandwidth – Wideband Data

Dallas Headquarters:
802 N. Kealy
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

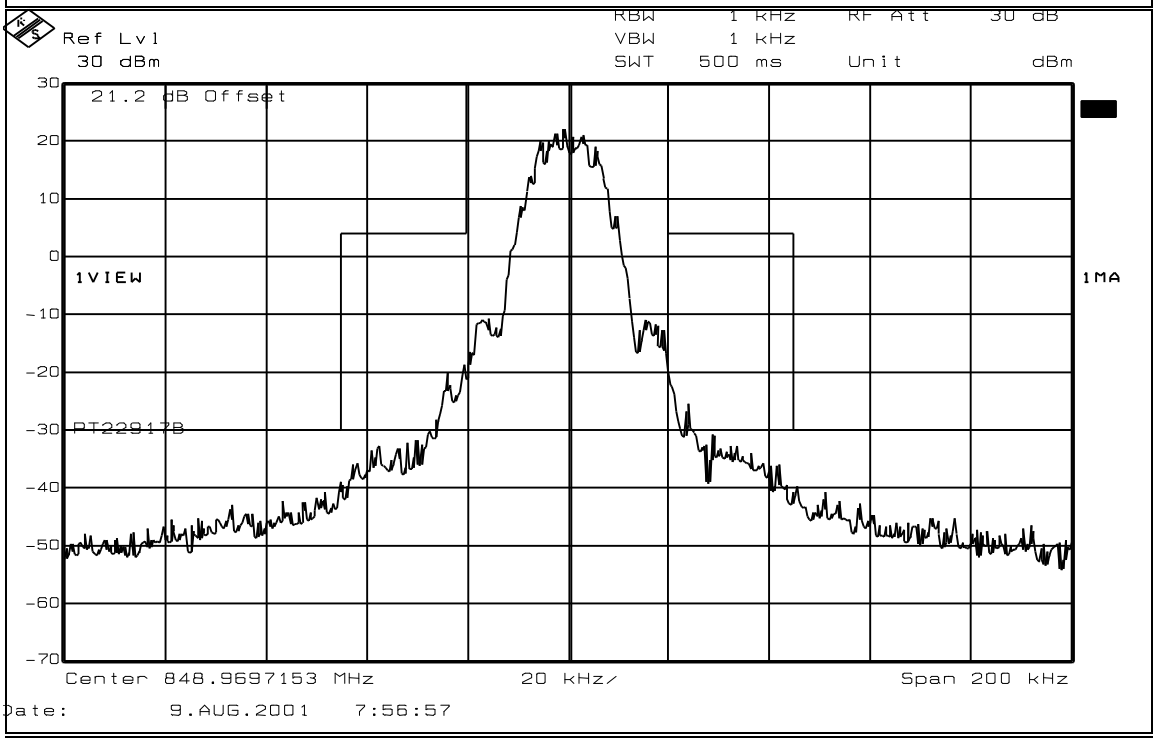
Data Plot — Occupied Bandwidth

Page 1 of 3 | Complete X | Preliminary

Job No.: 1L0435R | Date: 8/9/01
Specification: Part 22 | Temperature(°C): 22
Tested By: David Light | Relative Humidity(%) 50
E.U.T.: Enabler-A
Configuration: Transmit full power
Sample Number: S01
Location: Lab 1 | RBW: 1 kHz | Measurement
Detector Type: Peak | VBW: 1 kHz | Distance: N/A m

Test Equipment Used

Antenna: | Directional Coupler:
Pre-Amp: | Cable #1: 1082
Filter: | Cable #2:
Receiver: 1036 | Cable #3:
Attenuator #1 1474 | Cable #4:
Attenuator #2: | Mixer:
Additional equipment used:
Measurement Uncertainty: +/-1.7 dB



Notes: **CHANNEL 799**

Test Data – Occupied Bandwidth – Wideband Data

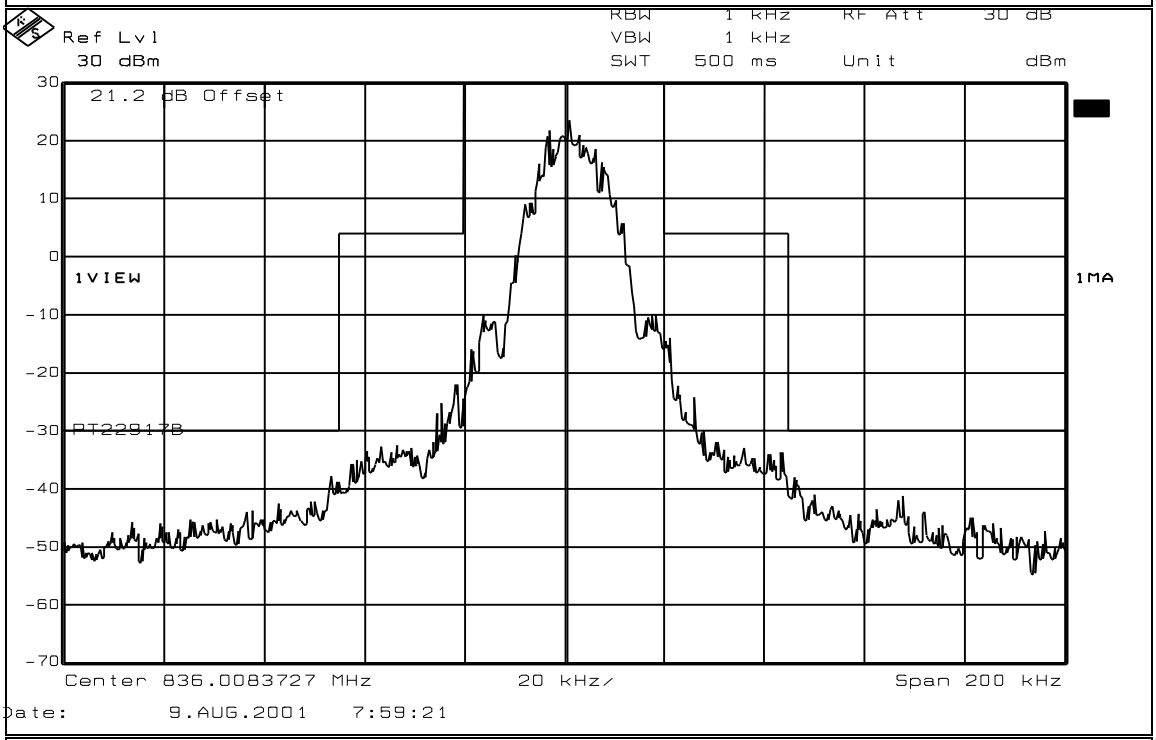
Dallas Headquarters:
802 N. Kealy
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

Data Plot Occupied Bandwidth

Page 2 of 3

Job No.:	1L0435R	Date:	8/9/01
Specification:	Part 22	Temperature(°C):	22
Tested By:	David Light	Relative Humidity(%)	50
E.U.T.:	Enabler-A		
Configuration:	Transmit full power		



Notes: **CHANNEL 367**

Test Data – Occupied Bandwidth – Wideband Data

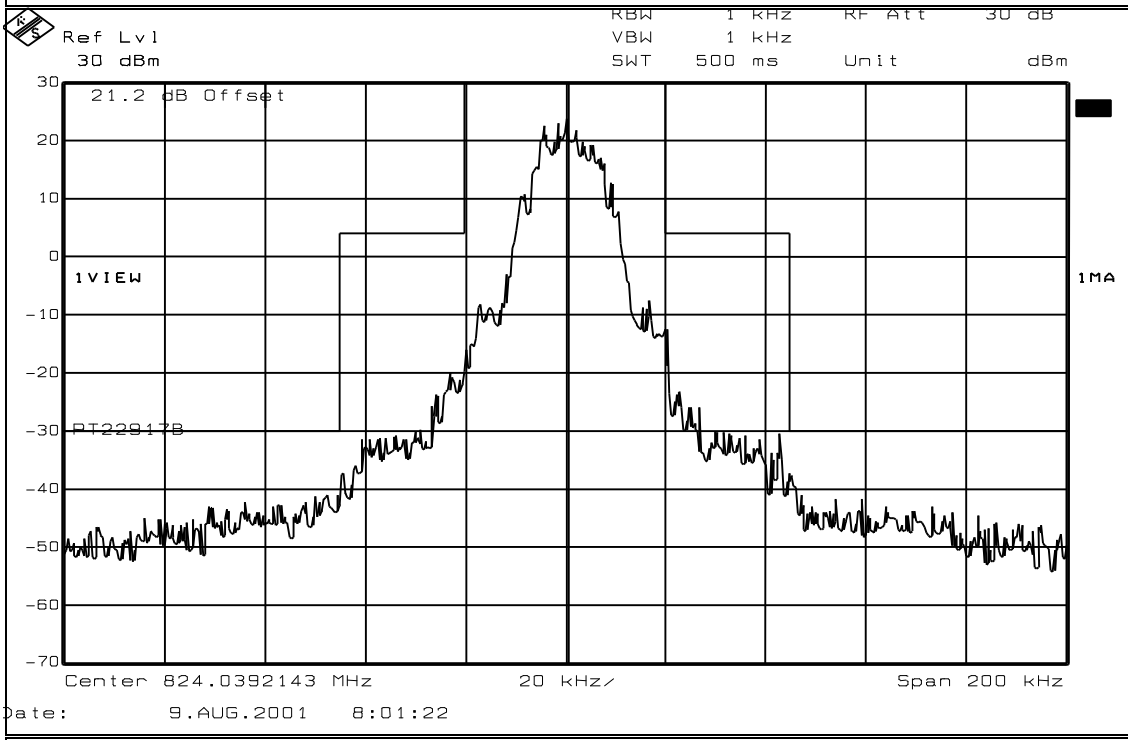
Dallas Headquarters:
802 N. Kealy
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

Data Plot Occupied Bandwidth

Page 3 of 3

Job No.: 1L0435R Date: 8/9/01
Specification: Part 22 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 50
E.U.T.: Enabler-A
Configuration: Transmit full power



Notes:

Section 5. Spurious Emissions at Antenna Terminals

NAME OF TEST: Spurious Emissions At Antenna Terminals	PARA. NO.: 2.1051
TESTED BY: David Light	DATE: 8/9/2001

Test Results: Complies.

Measurement Data: See attached graph.

Measurement Uncertainty: +/- 1.7 dB

Test Data – Spurious Emissions at Antenna Terminals

Dallas Headquarters:
802 N. Kealy
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

Data Plot — Antenna Port Surious Emissions

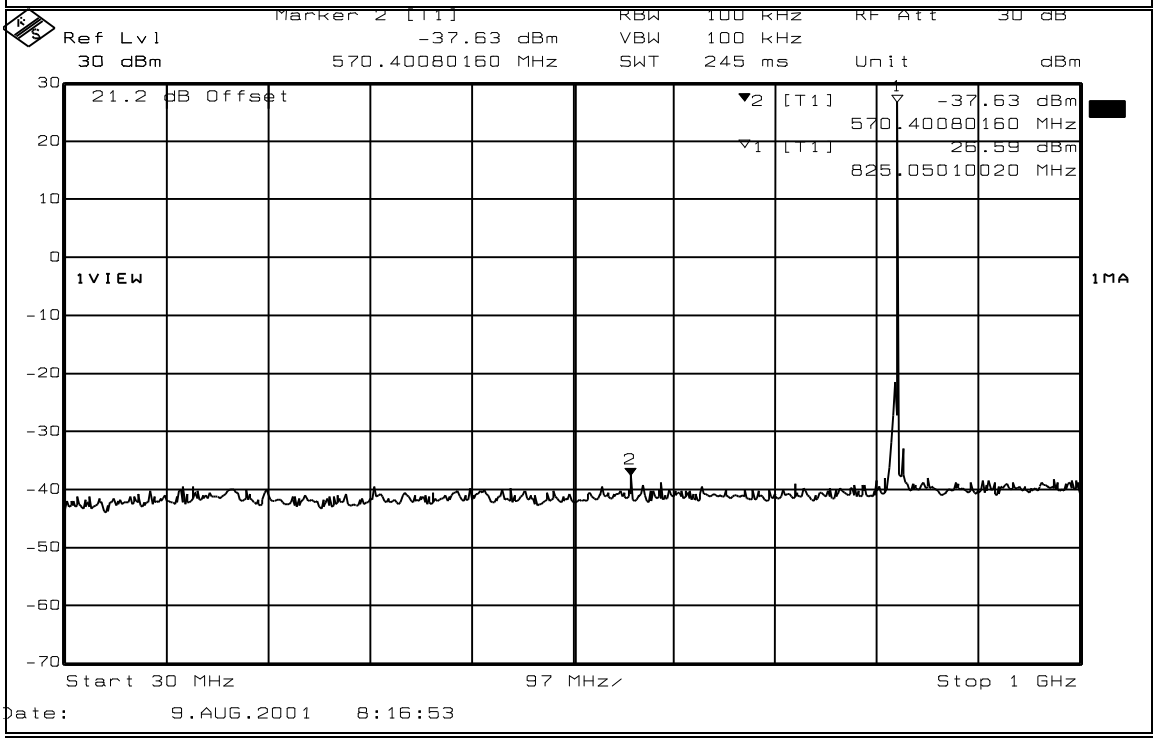
Page 1 of 6 | Complete X | Preliminary

Job No.: 1L0435R | Date: 8/9/2001
Specification: Part 22 | Temperature(°C): 22
Tested By: David Light | Relative Humidity(%) 50
E.U.T.: Enabler-A
Configuration: Continuous transmit
Sample Number: S01
Location: Lab 1 | RBW: Refer to plots | Measurement
Detector Type: Peak | VBW: Refer to plots | Distance: N/A m

Test Equipment Used

Antenna:		Directional Coupler:	
Pre-Amp:		Cable #1:	1082
Filter:		Cable #2:	
Receiver:	1036	Cable #3:	
Attenuator #1	1474	Cable #4:	
Attenuator #2:		Mixer:	

Additional equipment used:
Measurement Uncertainty: +/-3.6 dB



Notes: **CHANNEL 991**
MARKER ONE INDICATES CARRIER - MARKER TWO INDICATES HIGHEST EMISSION

Test Data – Spurious Emissions at Antenna Terminals

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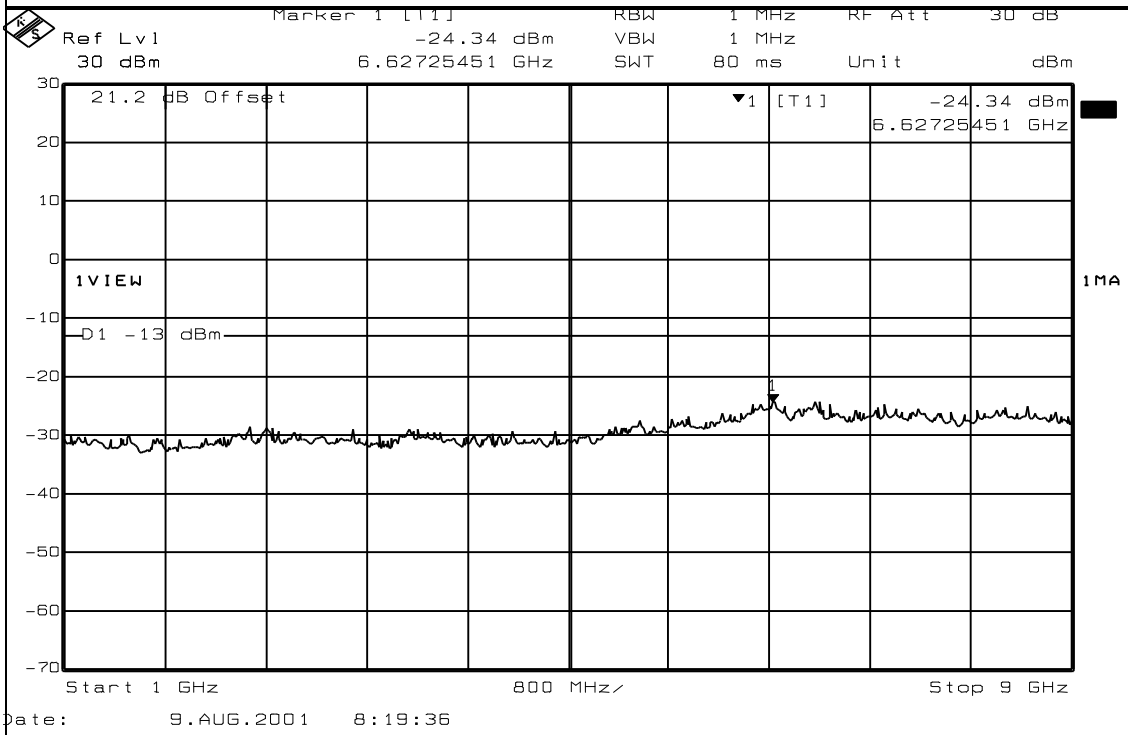
802 N. Kealy
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

Data Plot Antenna Port Surious Emissions

Page 2 of 6

Job No.:	1L0435R	Date:	8/9/2001
Specification:	Part 22	Temperature(°C):	22
Tested By:	David Light	Relative Humidity(%)	50
E.U.T.:	Enabler-A		
Configuration:	Continuous transmit		



Notes: **CHANNEL 991**

Test Data – Spurious Emissions at Antenna Terminals

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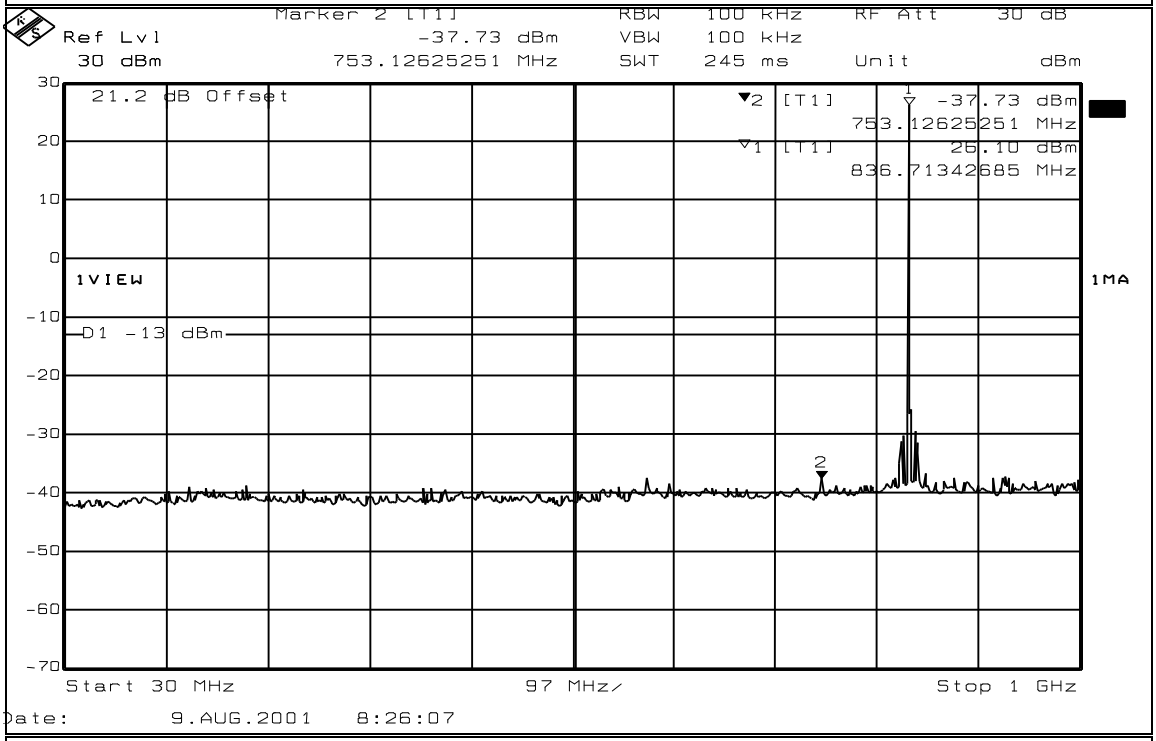
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

Data Plot Antenna Port Surious Emissions

Page 3 of 6

Job No.:	1L0435R	Date:	8/9/2001
Specification:	Part 22	Temperature(°C):	22
Tested By:	David Light	Relative Humidity(%)	50
E.U.T.:	Enabler-A		
Configuration:	Continuous transmit		



Notes: **CHANNEL 367**
MARKER ONE INDICATES CARRIER - MARKER TWO INDICATES HIGHEST EMISSION

Test Data – Spurious Emissions at Antenna Terminals

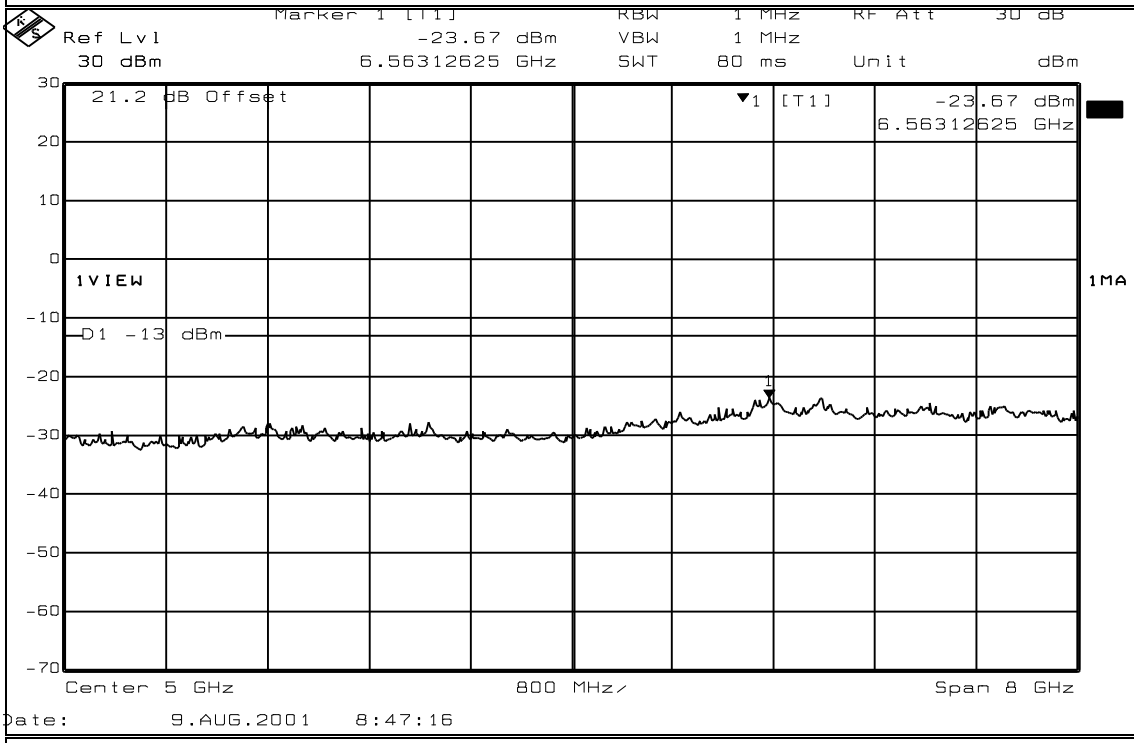
Dallas Headquarters:
802 N. Kealy
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

Test Plot: Antenna Port Surious Emissions

Page 4 of 6

Job No.: 1L0435R Date: 8/9/2001
Specification: Part 22 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 50
E.U.T.: Enabler-A
Configuration: Continuous transmit



Notes: **CHANNEL 367**

Test Data – Spurious Emissions at Antenna Terminals

Dallas Headquarters:
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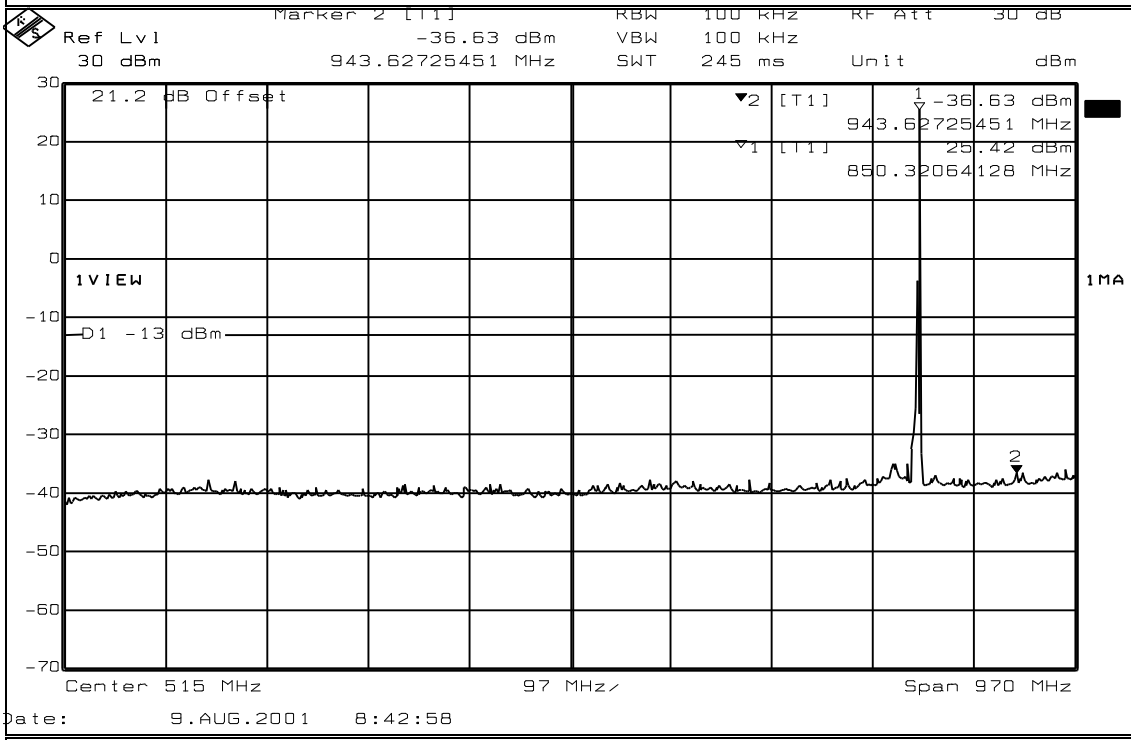
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

Test Plot: Antenna Port Surious Emissions

Page 5 of 6

Job No.: 1L0435R Date: 8/9/2001
Specification: Part 22 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 50
E.U.T.: Enabler-A
Configuration: Continuous transmit



Notes: **CHANNEL 799**
MARKER ONE INDICATES CARRIER - MARKER TWO INDICATES HIGHEST EMISSION

Test Data – Spurious Emissions at Antenna Terminals

Dallas Headquarters:
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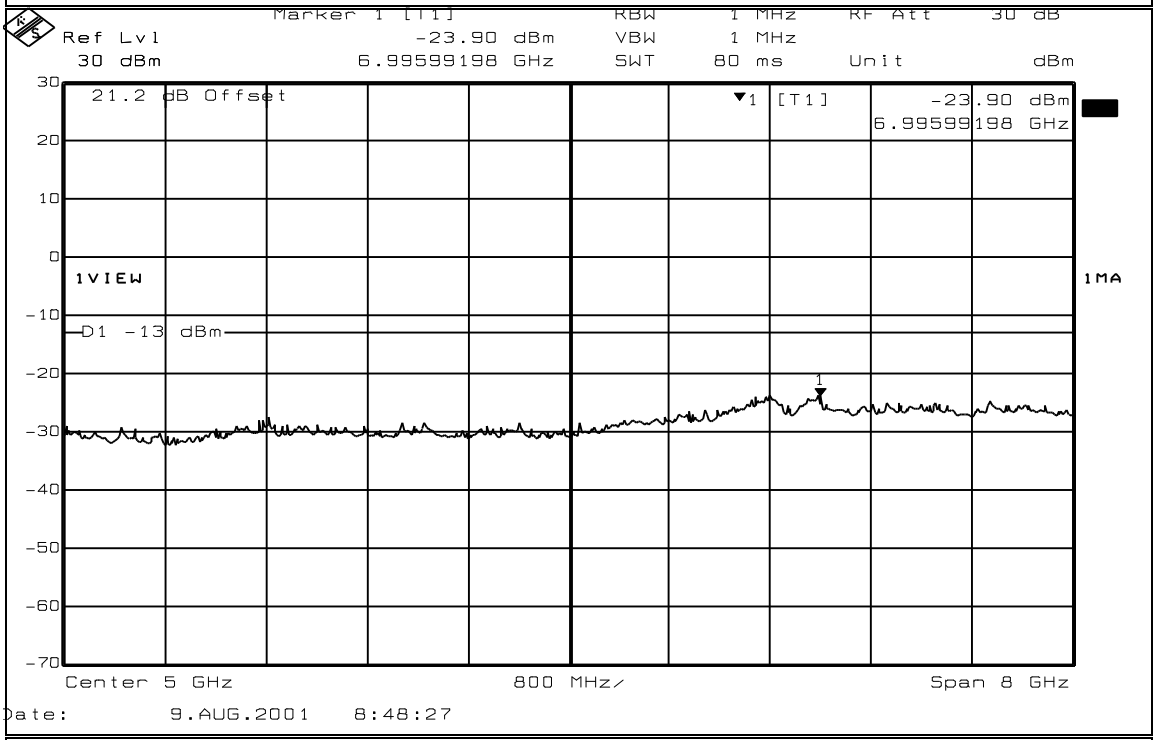
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

Test Plot: Antenna Port Surious Emissions

Page 6 of 6

Job No.:	1L0435R	Date:	8/9/2001
Specification:	Part 22	Temperature(°C):	22
Tested By:	David Light	Relative Humidity(%)	50
E.U.T.:	Enabler-A		
Configuration:	Continuous transmit		



Notes: **CHANNEL 799**

Test Data – Spurious Emissions at Antenna Terminals

Dallas Headquarters:
802 N. Kealy
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

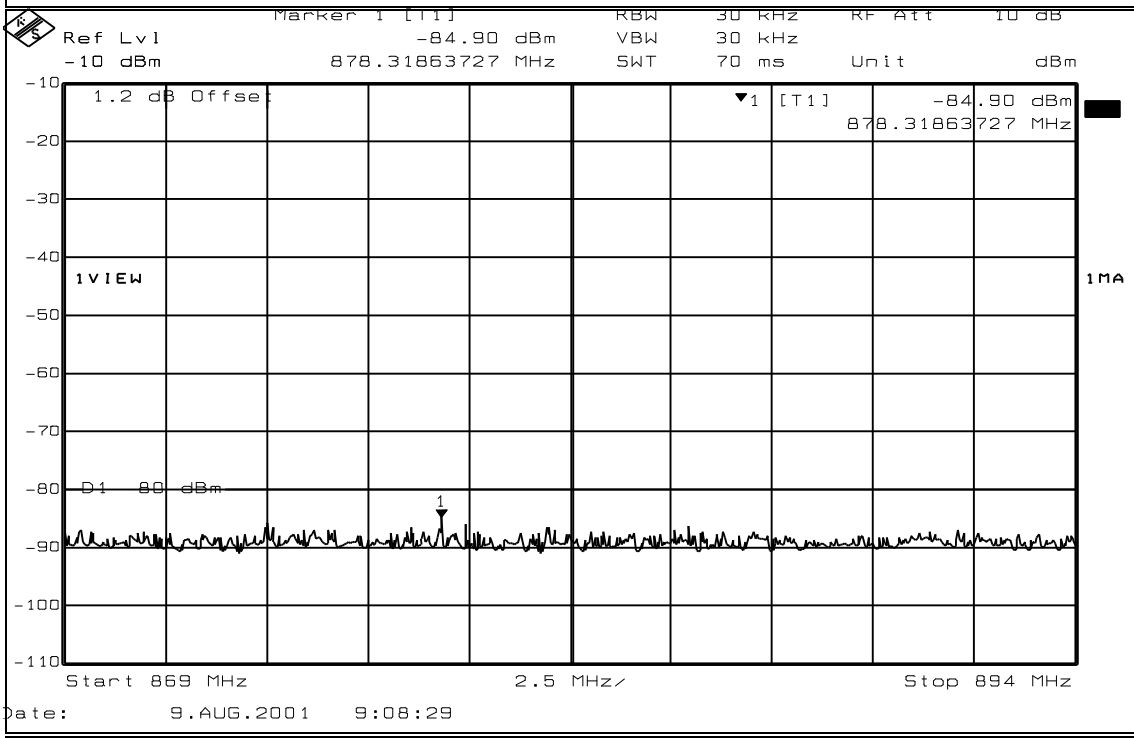
Data Plot — Spurious Emissions in Receive Band

Page 1 of 1 | Complete X | Preliminary

Job No.: 1L0435R | Date: 8/9/2001
Specification: Part 22 | Temperature(°C): 22
Tested By: David Light | Relative Humidity(%) 50
E.U.T.: Enabler_A
Configuration: Continuous Transmit
Sample Number: S01
Location: Lab 1 | RBW: Refer to plots | Measurement
Detector Type: Peak | VBW: Refer to plots | Distance: N/A m

Test Equipment Used

Antenna: | Directional Coupler:
Pre-Amp: | Cable #1: 1082
Filter: 1060 | Cable #2: 1043
Receiver: 1036 | Cable #3:
Attenuator #1 | Cable #4:
Attenuator #2: | Mixer:
Additional equipment used:
Measurement Uncertainty: +/-3.6 dB



Notes:

Section 6. Field Strength of Spurious

NAME OF TEST: Field Strength of Spurious	PARA. NO.: 2.1053
TESTED BY: Lance Walker	DATE:10/18/2001

Test Results: Complies.

Measurement Data: See attached table.

Measurement Uncertainty: +/- 3.6 dB

Test Data - Radiated Emissions

Dallas Headquarters:
802 N. Kealy
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

Field Strength of Spurious Emissions

Page 1 of 1 — Complete X

Job No.: 1L0???R — Date: 10/18/2001 — Preliminary

Specification: FCC Part — Temperature(°C): 22

Tested By: Lance Walker — Relative Humidity(%) 50

E.U.T.: Wireless LAN

Configuration: Normal Transmit

Sample No: S01

Location: AC 3 — RBW: 1 MHz — Measurement

Detector Type: Peak — VBW: 1 MHz — Distance: 3 m

Test Equipment Used

Antenna: 993 — Directional Coupler:

Pre-Amp: 1016 — Cable #1: 1484

Filter: — Cable #2: 1485

Receiver: — Cable #3: 1043

Attenuator #1 — Cable #4:

Attenuator #2: — Mixer:

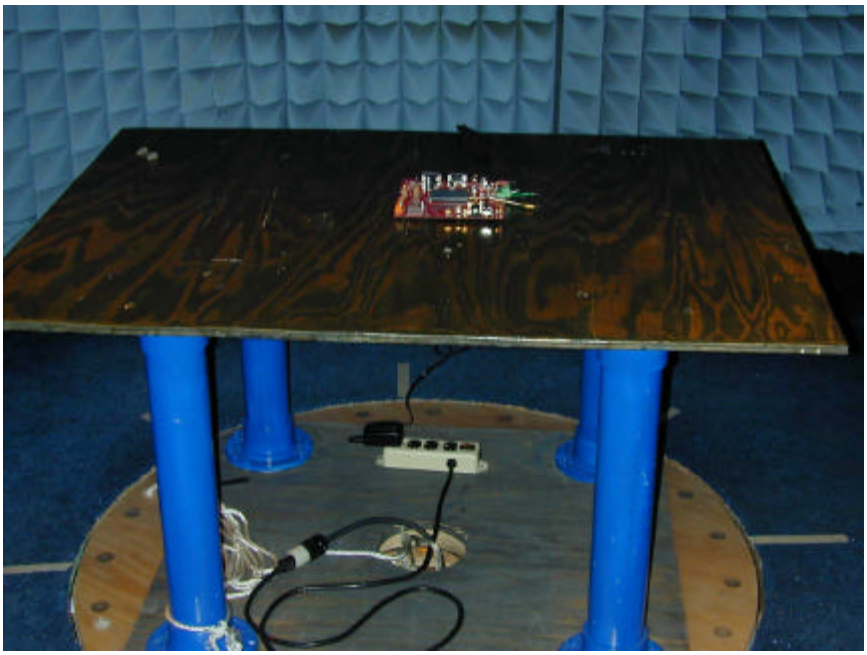
Additional equipment used:

Measurement Uncertainty: +/-3.6 dB

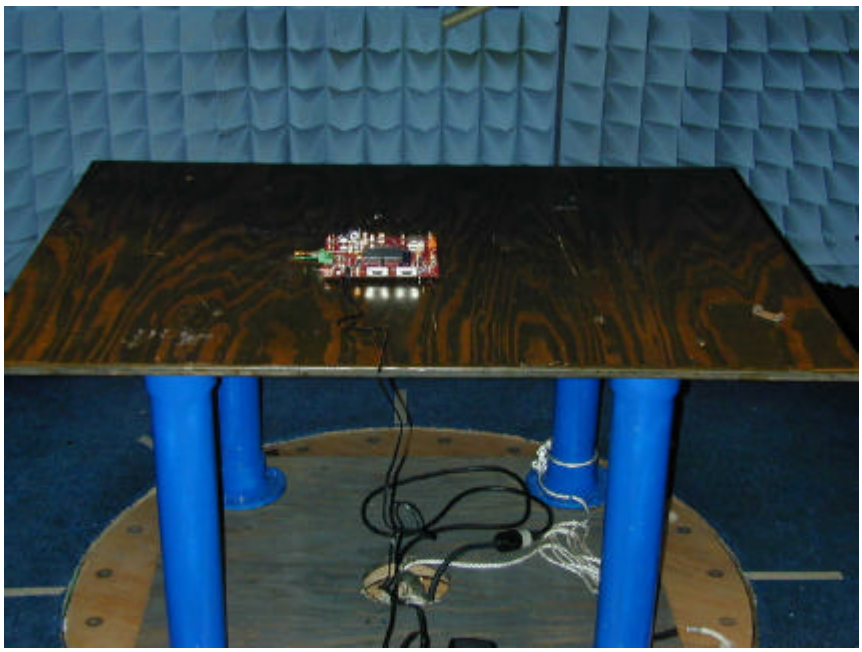
Frequency (MHz)	Meter Reading (dBm)	Correction Factor (dB)		Pre-Amp Gain (dB)	Substitution Antenna Gain (dBd)		ERP (dBm)	ERP (mW)	Polarity	Comments
1672	-37.0	29.9		33.3	6.4		-34.1	0.000389	V	
2508	-26.3	35.6		33.8	8.0		-16.6	0.022029	V	
3344	-40.1	37.1		33.8	8.1		-28.7	0.001349	V	
4180	-50.7	42.8		33.5	7.9		-33.5	0.000450	V	
5016	-42.3	40.6		33.5	9.1		-26.1	0.002438	V	
5852	-61.8	38.5		33.5	9.1		-47.7	0.000017	V	Noise Floor
6688	-62.2	38.3		32.8	10.1		-46.6	0.000022	V	Noise Floor
7524	-60.8	40.4		33	9.4		-43.9	0.000040	V	
8360	-61.8	41.6		34.2	9.7		-44.7	0.000034	V	Noise Floor
1672	-39.3	32.7		33.3	6.4		-33.6	0.000441	H	
2508	-29.2	34.6		33.8	8.0		-20.4	0.009078	H	
3344	-53.8	35.8		33.8	8.1		-43.7	0.000043	H	
4180	-57.2	35.2		33.5	7.9		-47.6	0.000017	H	
5016	-50.3	36.3		33.5	9.1		-38.5	0.000143	H	
5852	-61.8	36.0		33.5	9.1		-50.2	0.000009	H	Noise Floor
6688	-62.2	37.8		32.8	10.1		-47.0	0.000020	H	Noise Floor
7524	-61.8	39.8		33	9.4		-45.6	0.000028	H	Noise Floor
8360	-61.8	42.2		34.2	9.7		-44.1	0.000039	H	Noise Floor

Photographs of Test Setup

FRONT VIEW



REAR VIEW



Section 7. Frequency Stability

NAME OF TEST: Frequency Stability	PARA. NO.: 2.1055
TESTED BY: David Light	DATE:8/9/2001

Test Results: Complies.

Measurement Data: See attached table.

Standard Test Frequency: 836.01 MHz
Standard Test Voltage: 115 Vac

Equipment Used:

Measurement Uncertainty: $1x10^{-12}$ ppm

Temperature: 22 °C

Relative Humidity: 50 %

Test Data – Frequency Stability

Dallas Headquarters:
802 N. Kealy
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Frequency Stability

Client: Enfora W.O.# 1L0435R

EUT: Enabler-A S/N: None

Date: 8/9/2001 Tech: Light

Test Equipment used: 1026-283

Temperature	Voltage	Frequency Error
20 °C	115 VAC	-180 Hz
20 °C	98 VAC	-180 Hz
20 °C	132 VAC	-180 Hz
10 °C	115 Vac	+74 Hz
0 °C	115 Vac	+203 Hz
-10 °C	115 Vac	+84 Hz
-20 °C	115 Vac	-84 Hz
-30 °C	115 Vac	-95 Hz
30 °C	115 Vac	-177 Hz
40 °C	115 Vac	-166 Hz
50 °C	115 Vac	-175 Hz

Section 8. Test Equipment List

ASSET	Description	Manufacturer Model Number	Serial Number	Cal. Date	Cal. Due
1464	Spectrum analyzer	Hewlett Packard 8563E	3551A04428	01/02/01	01/02/02
1485	Cable 2.0-18.0 Ghz	Storm PR90-010-216	N/A	06/01/01	06/01/02
1484	Cable 2.0-18.0 Ghz	Storm PR90-010-072	N/A	06/01/01	06/01/02
1016	Pre-Amp	HEWLETT PACKARD 8449A	2749A00159	05/30/01	05/30/02
1029	PEAK POWER METER	HP 8900D	3303U0012	03/12/01	03/12/02
1030	PEAK POWER SENSOR	HP 84811A	2539A03573	03/12/01	03/12/02
1474	20db Attenuator DC 18 Ghz	MCL Inc. BW-S20W2	NONE	CBU	N/A
1082	CABLE 2m	Astrolab 32027-2-29094-72TC	N/A	06/01/01	06/01/02
1036	SPECTRUM ANALYZER	ROHDE & SCHWARZ FSEK30	830844/006	09/17/01	09/18/03
1474	20db Attenuator DC 18 Ghz	MCL Inc. BW-S20W2	NONE	CBU	N/A
1026	FREQUENCY COUNTER	HEWLETT PACKARD 5350B	8232A01493	08/17/01	08/17/02
283	ENVIROMENTAL CHAMBER	ENVIROTRONICS SH27	129010083	05/02/01	05/02/02

ANNEX A - TEST DETAILS

NAME OF TEST: RF Power Output **PARA. NO.: 1.1046**

Minimum Standard: Para. No. 22.913(a). The E.R.P. of mobile transmitter and auxiliary test transmitter must not exceed 7 watts.

EIA is 19B Para. No. 3.2.1.3. The transmitter shall be compiled of 8 distinct power levels.

The output power shown above shall be maintained within the range of +2 dB, -4 dB of nominal dBW value

PL	I	II	III
0	+6	+2	-2
1	+2	+2	-2
2	-2	-2	-2
3	-6	-6	-6
4	-10	-10	-10
5	-14	-14	-14
6	-18	-18	-18
7	-22	-22	-22

Method Of Measurement:

Detachable Antenna:
The power at antenna terminals is measured using an in-line power meter.

Integral Antenna:
If the antenna is not detachable from the circuit then the Power Output is derived from the radiated field strength of the fundamental emission by using the plane wave relation $GP/4\pi R^2 = E^2/120\pi$ and proceeding as follows:

$$P = \frac{E^2 R^2}{30G} = \frac{E^2 3^2}{30G}$$

where,
P = the equivalent radiated power in watts
E = the maximum measured field strength in V/m
R = the measurement range (3 meters)
G = the numeric gain of the transmit antenna in relation to a halfwave dipole antenna

NAME OF TEST: Audio Frequency Response **PARA. NO.: 2.1047**

Minimum Standard: Para. No. 15-19-B. From 300 to 3000 Hz the audio frequency response shall not vary more than +1 to –3 dB from a true 6dB octave pre-emphasis characteristic as referred to 1000 Hz level (with the exception of a permissible 6dB per octave roll-off from 2500 to 3000 Hz).

Method Of Measurement:

Operate the transmitter with the compressor disabled, and monitor the output with a frequency deviation meter or standard test receiver without standard 750-microsecond de-emphasis, with expander disabled, and without C-message weighted filter (see 6.6.2). Apply a sine wave audio input to the transmitter external audio input port, vary the modulating frequency from 300 to 3000 Hz and observe the input levels necessary to maintain a constant ±2.9 kHz system deviation.

NAME OF TEST: Audio Low Pass Filter Response PARA. NO.: 2.1047

Minimum Standard: Para. No. 22.915 (d). For mobile stations, signals must be attenuated as a function of frequency as follows:

i. In the frequency ranges 3.0 to 5.9 Hz and 6.1 to 15 kHz, 40 log (f/3) dB.
ii. In the frequency range 5.9 to 6.1 kHz, 35 dB
iii. In the frequency range above 15 kHz, 28 dB.

Method Of Measurement:

Adjust the audio input frequency to 1000 Hz and adjust the input level to 20 dB greater than that required to produce ±8 kHz deviation. Note the output level on the frequency deviation meter or standard test receiver. Using the output level as reference (0dB), vary the modulating frequency from 3000 Hz to 30,000 Hz and observe the change in output while maintaining a constant audio input level.

NAME OF TEST: Modulation Limiting **PARA. NO.: 2.1047**

Minimum Standard: Para. No. 22.915(b)

The levels of the modulating signals must be set to the values specified below and must be maintained within ±10% of these values.

Voice: ±12 kHz
SAT: ±2 kHz
Wideband Data: ±8 kHz
ST: ± 8 kHz

Method Of Measurement:

Voice: A 1 kHz audio tone is injected at levels between -45 and +20 dBVrms. The peak deviation is noted. This is repeated with a 300 Hz tone and a 3 kHz tone.

SAT: A SAT tone is generated by the mobile station and the peak deviation is measured.

Wideband Data: Wideband data is generated by the mobile station and the peak deviation is measured.

ST: ST data is generated by the mobile station and the peak deviation is measured.

NAME OF TEST: Occupied Bandwidth (Voice & SAT) PARA. NO.: 2.1049

Minimum Standard: 22.917(b) The mean power of any emission removed from the carrier frequency by a displacement frequency (f_d in kHz) must be attenuated below the mean power of the unmodulated carrier (P) as follows:

(i) On any frequency removed from the carrier frequency by more than 20 kHz but not more than 45 kHz: at least 26 dB

(ii) On any frequency removed from the carrier frequency by more than 45 kHz, up to the first multiple of the carrier frequency:

at least 60 dB or 43 + 10 log (P) dB, whichever is the lesser attenuation.

Method Of Measurement:

Spectrum Analyzer Settings:

RBW: 300 Hz
VBW: ≥ RBW
Span: 100 kHz
Sweep: Auto
Mask: CELLF3E

Input Signal Characteristics (F3E/F3D):

AF1 frequency: 2.5 kHz
AF1 level: 16 dB above the level sufficient to produce ±6 kHz deviation with a 1 kHz tone.
SAT: 6000 Hz SAT
SAT level: sufficient to produce ±2 kHz deviation.

NAME OF TEST: Occupied Bandwidth (WBD & SAT) PARA. NO.: 2.1049

Minimum Standard: 22.917(d) The mean power of any emission removed from the carrier frequency by a displacement frequency (f_d in kHz) must be attenuated below the mean power of the unmodulated carrier (P) as follows:

(1) On any frequency removed from the carrier frequency by more than 20 kHz but not more than 45 kHz:

at least 26 dB

(2) On any frequency removed from the carrier frequency by more than 45 kHz but not more than 90 kHz:

at least 45 dB

(3) On any frequency removed from the carrier frequency by more than 90 kHz, up to the first multiple of the carrier frequency:

at least 60 dB or 43 + 10 log (P) dB, whichever is the lesser attenuation.

Method Of Measurement:

Spectrum Analyzer Settings:
RBW: 300 Hz
VBW: ≥ RBW
Span: 200 kHz
Sweep: Auto
Mask: CELLF1D

Input Signal Characteristics:
RF level: Maximum recommended by manufacturer
10 kbps WBD + DAT
ST

NAME OF TEST: Spurious Emission at Antenna Terminals PARA. NO.: 2.1051

Minimum Standard: Para. No. 22.917(b). The mean power of emissions must be attenuated below the mean power of the unmodulated carrier on any frequency twice or more than twice the fundamental emission by at least 43 + 10 log P. This is equivalent to -13 dBm absolute power.

Method Of Measurement:

Spectrum Analyzer Settings:
RBW: 30 kHz (AMPS). As required for digital modulations.
VBW: ≥ RBW
Start Frequency: 0 MHz
Stop Frequency: 10 GHz
Sweep: Auto

NAME OF TEST: Field Strength of Spurious Radiation	**PARA. NO.: 2.1053**

Minimum Standard: Para. No. 22.917(b). The mean power of emissions must be attenuated below the mean power of the unmodulated carrier on any frequency twice or more than twice the fundamental emission by at least 43 + 10 log P. This is equivalent to -13 dBm absolute power.

Test Method: TIA/EIA-603-1992, Section 2.2.12

The antenna substitution method was used to determine the equivalent radiated power at spurious frequencies. The spurious emissions were measured at a distance of 3 meters. The EUT was then replaced with a reference substitution antenna with a known gain referenced to a dipole. This antenna was fed with a signal at the spurious frequency. The level of the signal was adjusted to repeat the previously measured level. The resulting erp is the signal level fed to the reference antenna corrected for gain referenced to a dipole.

The spectrum is searched to 10 GHz.

NAME OF TEST: Frequency Stability **PARA. NO.: 2.1055**

Minimum Standard: Para. No. 22.355. The transmitter carrier frequency shall remain within the tolerances given in Table C-1.

Freq. Range (MHz)	Mobile > 3 W	Mobile £ 3 W
821 to 896	2.5	2.5

Table C-1

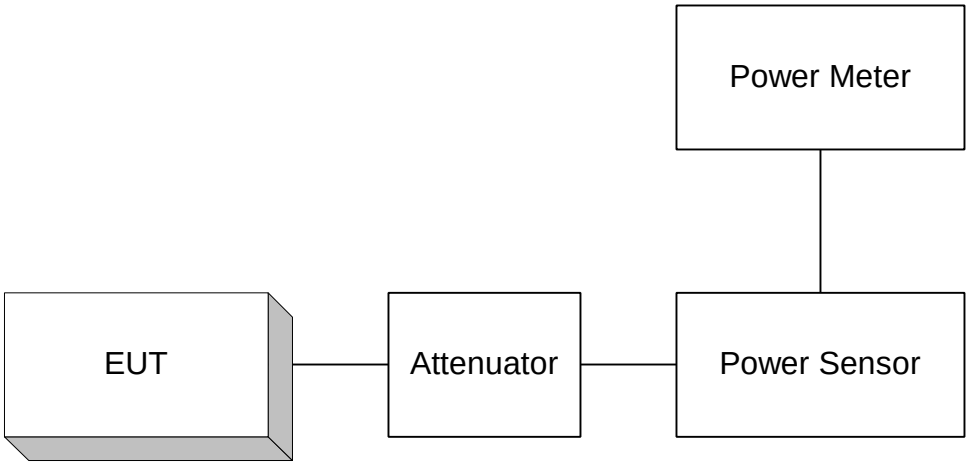
Method Of Measurement:

Frequency Stability With Voltage Variation:
The E.U.T. is placed in an environmental chamber and allowed to stabilize at +20 degrees Celsius for at least 15 minutes. The frequency counter and signal generator are phase locked with the same 10 MHz reference frequency by connecting the 10 MHz ref. out of the counter to the 10 MHz ref, in of the signal generator. With the voltage input to the E.U.T. set to 85% S.T.V., the frequency is measured in 30 second intervals for a period of 5 minutes. This procedure is repeated at 100% S.T.V. and 115% S.T.V.

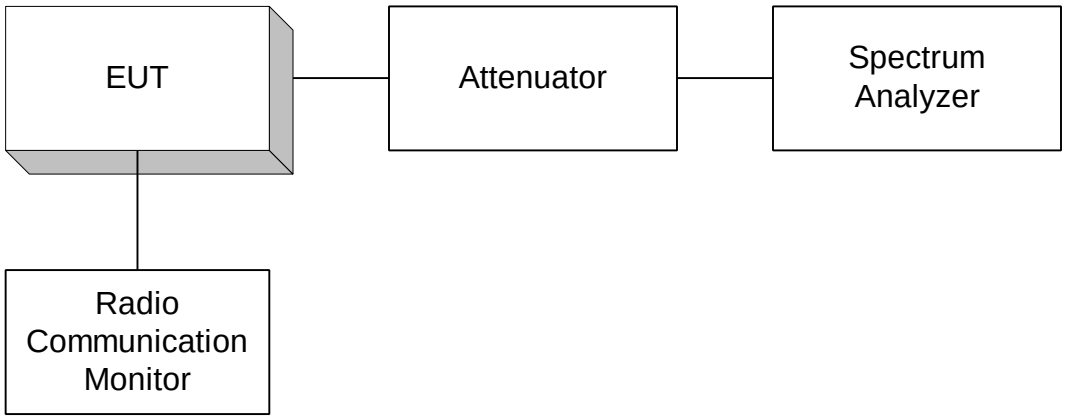
Frequency Stability With Temperature Variation:
The input voltage to the E.U.T. is set to S.T.V. and the temperature of the environmental chamber is varied in 10 degree steps from -30 degrees C to +50 degrees C. The E.U.T. is allowed to stabilize at each temperature and the frequency is measured in 30 second intervals for a period of 5 minutes.

ANNEX B - TEST DIAGRAMS

Para. No. 2.1046 - R.F. Power Output

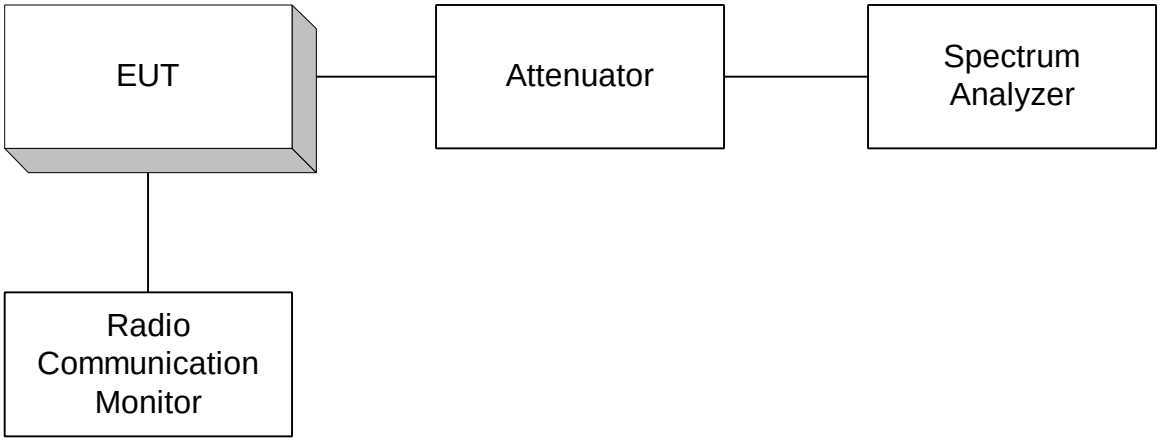


Para. No. 2.1049 - Occupied Bandwidth



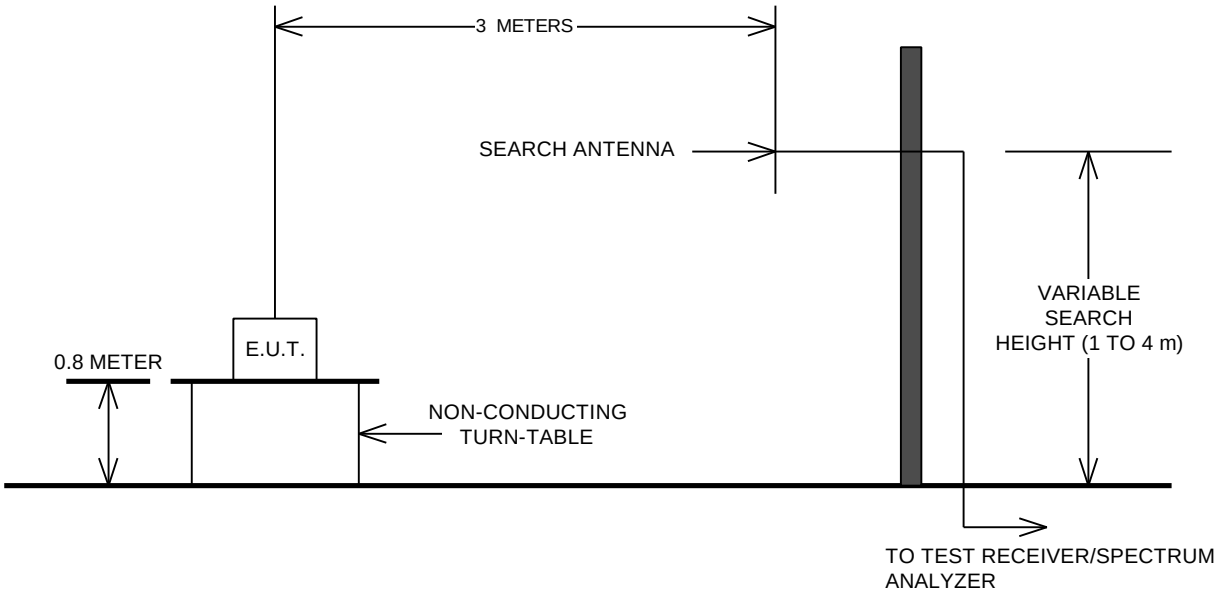
The Radio Communication Monitor is used only to provide modulation input for external modulation.

Para. No. 2.1051 Spurious Emissions at Antenna Terminals

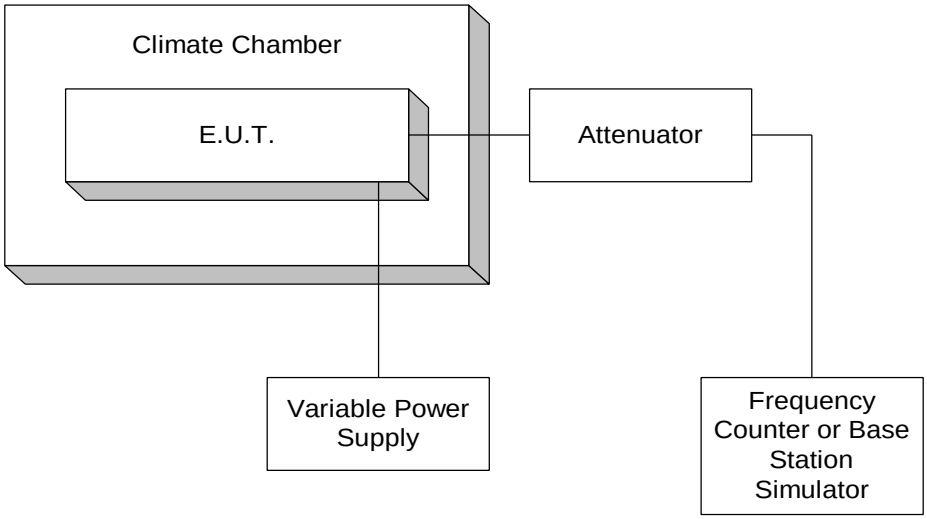
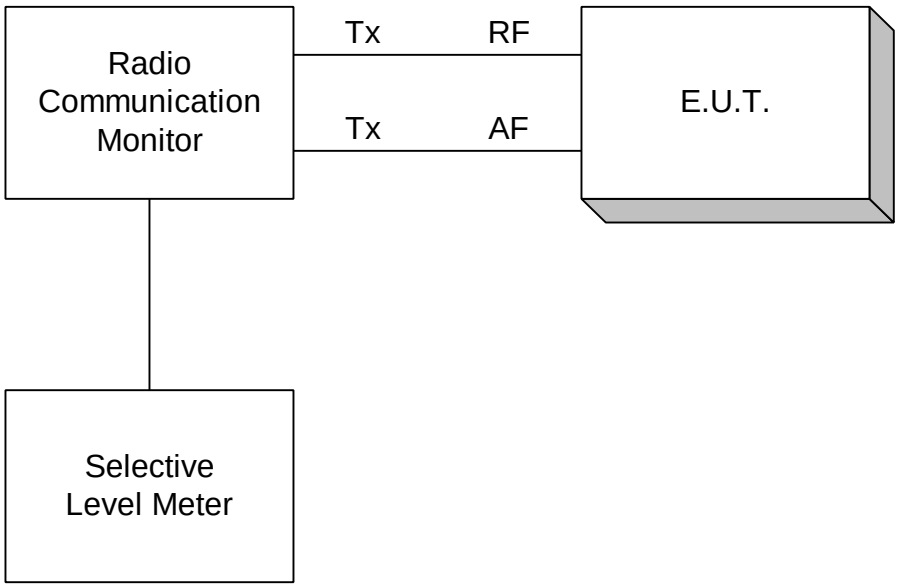


The Radio Communication Monitor is used only to provide modulation input for external modulation.

Para. No. 2.1053 - Field Strength of Spurious Radiation



Para. No. 2.1055 - Frequency Stability



Para. No. 2.1045 – Audio Frequency Response, Audio Low Pass Filter Response And Modulation Limiting