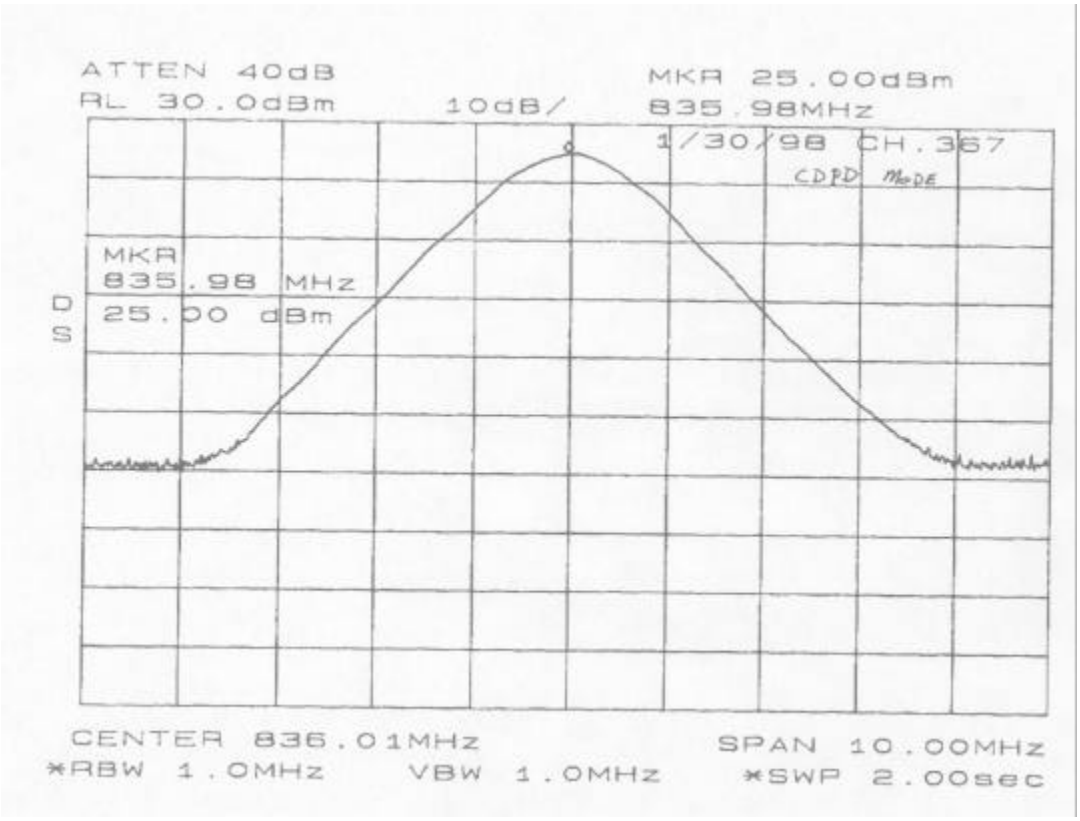
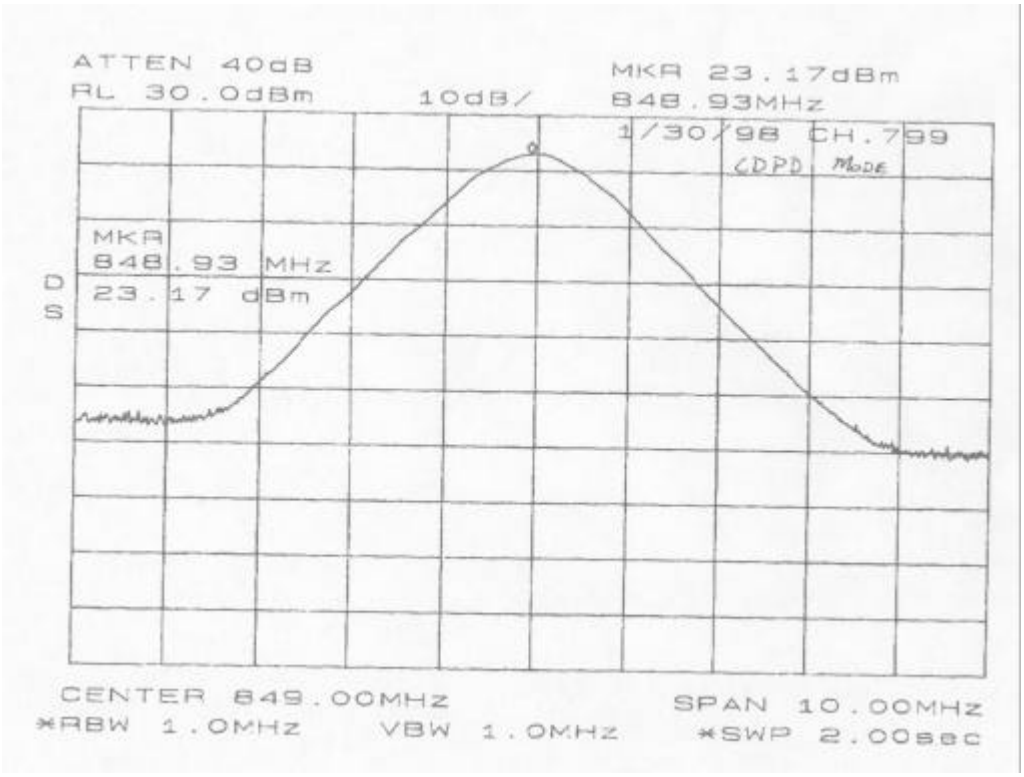
POWER AND OPERATIONAL MODE TEST CLAIRIFICATION

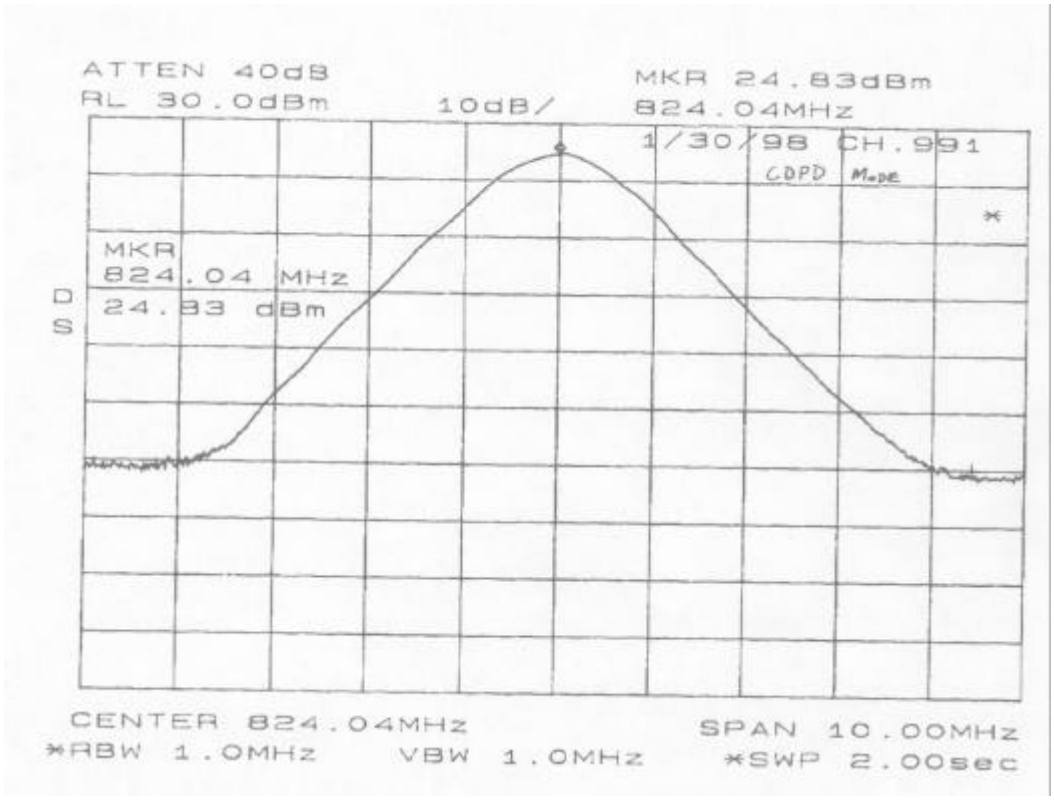
1.0 Conducted Power Clairification

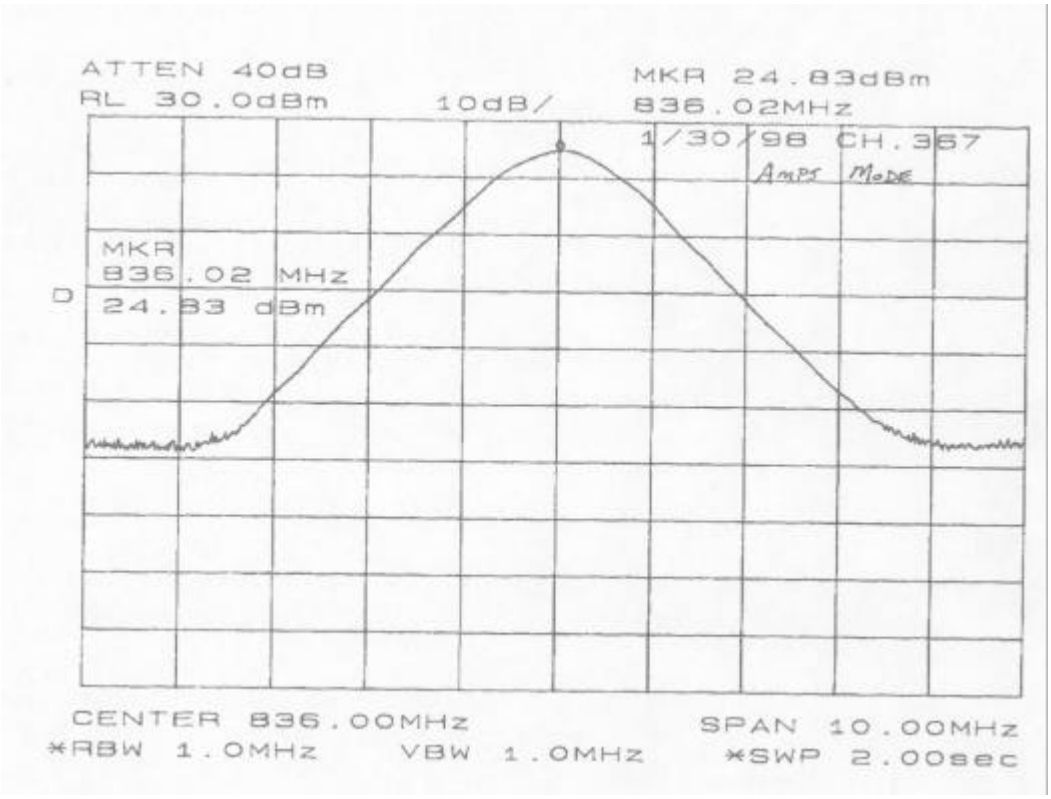
Revised data for the conducted power of the Inet Spider II Modem is shown in the following plots. These plots show the conducted output power for channels 367, 799 and 991 (836.010, 849.000 and 824.04 MHz) with the bandwidth increased to capture all power distributed due to spreading and modulation. These tests were run for both CDPD and AMPS mode of operation with the EUT in maximum output power mode. The conducted output power of the Inet Spider II modem based on these tests is summarized in the following table:

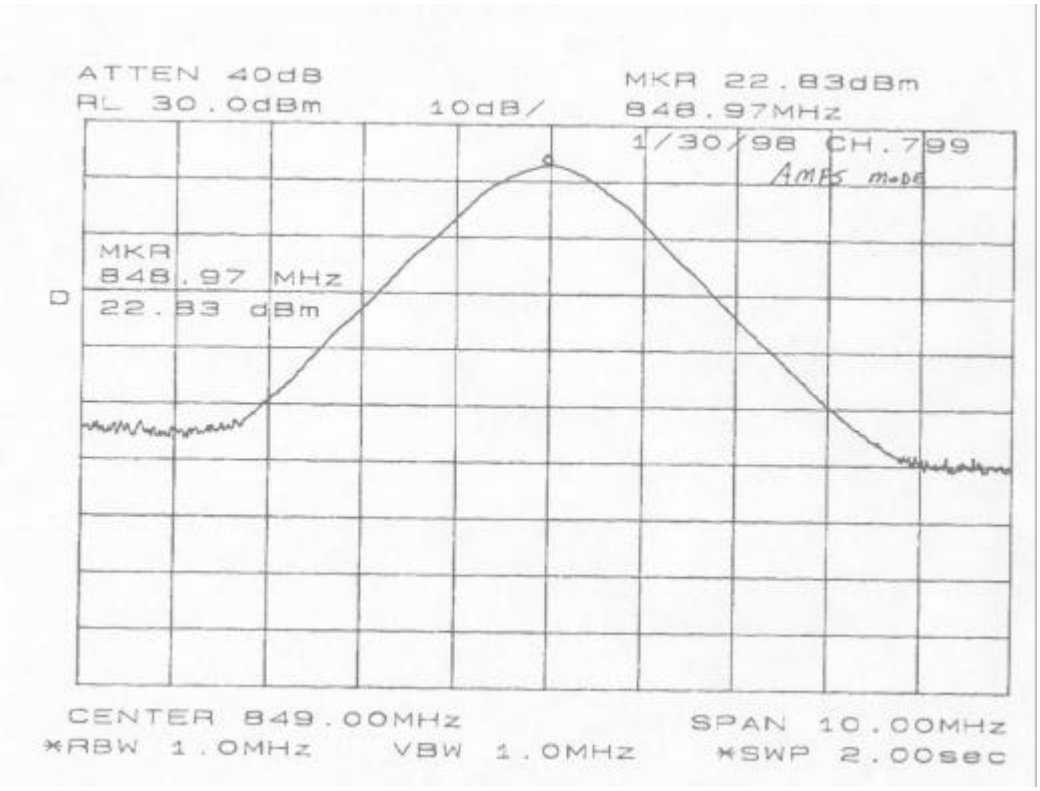
Mode	Channel	Power (dBm)	Power (watts)
CDPD	367	25.00	0.316
CDPD	799	23.17	0.207
CDPD	991	24.83	0.304
AMPS	367	24.83	0.304
AMPS	799	22.83	0.192
AMPS	991	24.83	0.304

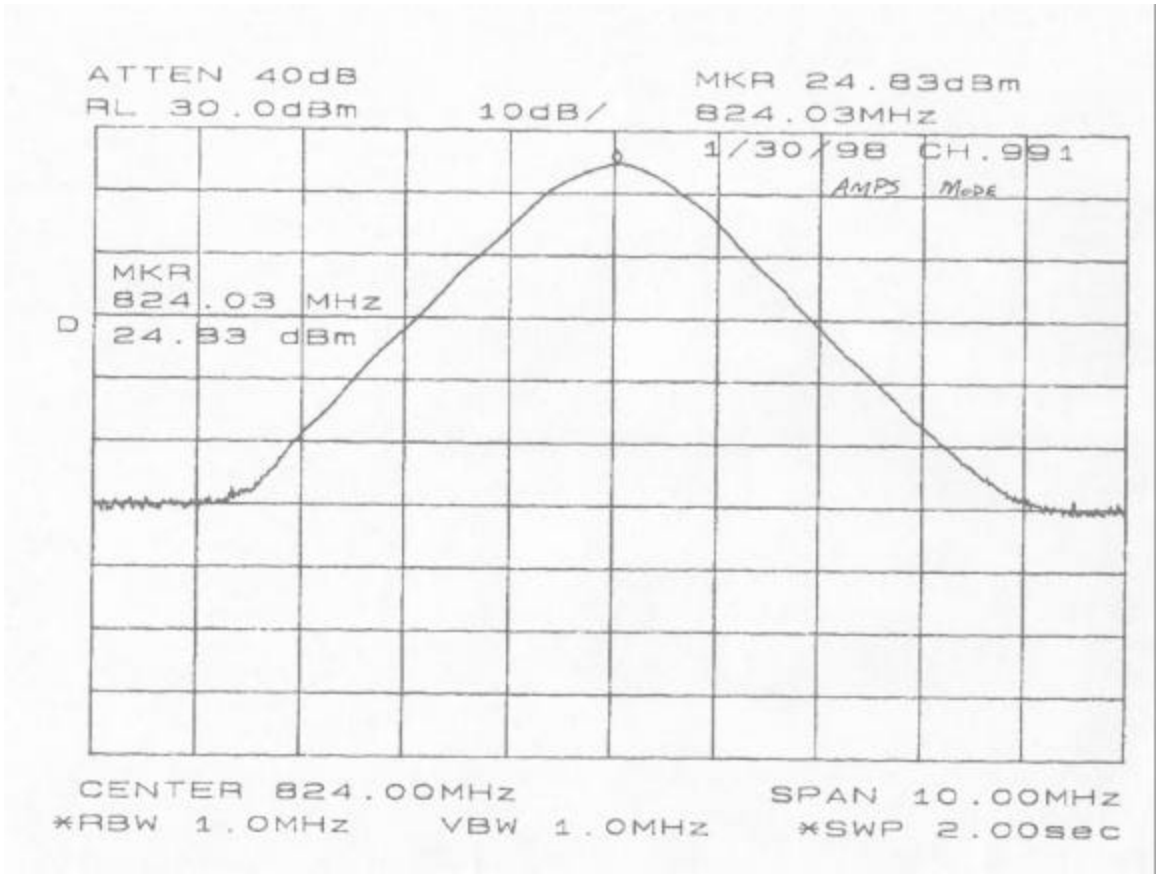



ATTEN 40dB
RL 30.0dBm
10dB/
MKR 23.17dBm
848.93MHz
1/30/98 CH.799
CDPD Mode
MKR
848.93 MHz
23.17 dBm
D
S
CENTER 849.00MHz
SPAN 10.00MHz
*RBW 1.0MHz
VBW 1.0MHz
*SWP 2.00sec


ATTEN 40dB
RL 30.0dBm
10dB/
MKR 24.83dBm
824.04MHz
1/30/98 CH.991
CDPD Mode
MKR
824.04 MHz
24.83 dBm
D
S
CENTER 824.04MHz
SPAN 10.00MHz
*RBW 1.0MHz
VBW 1.0MHz
*SWP 2.00sec


ATTEN 40dB
RL 30.0dBm
10dB/
MKR 24.83dBm
836.02MHz
1/30/98 CH.367
AMPS MODE
MKR
836.02 MHz
24.83 dBm
CENTER 836.00MHz
SPAN 10.00MHz
*RBW 1.0MHz
VBW 1.0MHz
*SWP 2.00sec


ATTEN 40dB
RL 30.0dBm
10dB/
MKR 22.83dBm
848.97MHz
1/30/98 CH.799
AMPS MODE
MKR
848.97 MHz
22.83 dBm
CENTER 849.00MHz
SPAN 10.00MHz
*RBW 1.0MHz
VBW 1.0MHz
*SWP 2.00sec


ATTEN 40dB
RL 30.0dBm
10dB/
MKR 24.83dBm
824.03MHz
1/30/98 CH.991
AMPS Mode
MKR
824.03 MHz
24.83 dBm
CENTER 824.00MHz
SPAN 10.00MHz
*RBW 1.0MHz
VBW 1.0MHz
*SWP 2.00sec

SAR TEST CLAIRIFICATION

PHOTOGRAPH SETUP DESCRIPTION

The antenna is connected to the CDPD/CS Modem which is inserted into a laptop computer. The antenna is located directly under the hole, which is the verification point beneath the center of the phantom. The antenna was orientated vertically with the base of the antenna approximately 2cm from the verification point under the phantom.

Testing was performed in two configurations.

1. The computer is facing **forward** with the antenna vertical approximately 2cm from the verification point under the phantom.

2. The computer is facing **backward** with the antenna vertical approximately 2cm from the verification point under the phantom.

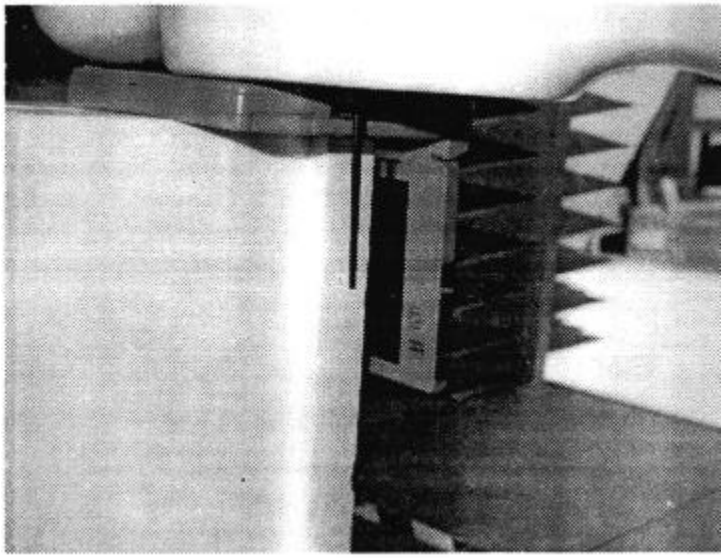
Photos of the SAR Setup are shown on the following 2 pages. This represents a worst case location setup. The photos show 3 different angles of the same test setup.

The test setup was derived from conversations with FCC personel as what is the appropriate test method for this type of non-phone cellular transmitter. The test was designed to simulate the modem operating in a computer resting in a human lap while the antenna was directly over the human leg. Further, the modem was placed in a continuous transmit mode at maximum power. CDPD is by design, a TDMA type system with a worst case transmit duty cycle of 25 to 30%. The probable reason for the low SAR values is because in practice, the portion of the human body which is less than 20cm from the transmitter is physically below the antenna ground plane.

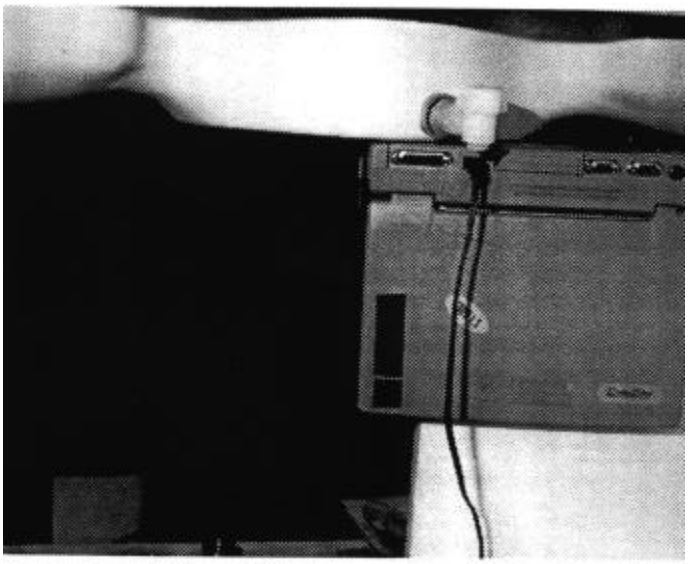
The dipole validation was re-run and the results are in this package.

Computer Facing Forward (Front View)

Computer Facing Forward (Side View)



Computer Facing Forward (Rear View)



SAR COMPLIANCE TEST REPORT

Equipment Under Test (EUT): CDPD/CS Modem

Model Number: **SPIDER II** **Serial Number:** 8

Company: INET, INC Worldwide Headquarters
1255 W. 15 Street
Plano, TX 75075

Manufacturer: INET, INC Worldwide Headquar
1255 W. 15 Street
Plano, TX 75075

Measurement Procedure: **ANSI / IEEE C95.1 (1991)**

Test Requirements: **FCC Rule Section 2.1091 and 2.1093**
Date Received: 4-14-98
Test Date(s): 4-14-98

TEST PERFORMED BY : Lucent Technologies
Bell Labs Innovations
Global Product Compliance Laboratory
101 Crawfords Corner Road
Holmdel, New Jersey 07733-3030 (USA)
(732) 834-1800, Fax (732) 834-1830

Lucent Technologies , Global Product Compliance Laboratories is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP®) for satisfactory compliance with the criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 as suppliers of calibration or test results.

NVLAP LAB CODE: 100275-0
Product Engineer(s): Scott Constien

TEST RESULTS:

CDPD/CD Modem as tested did meet the Specific Absorption Rate test requirements of the above listed specifications. The maximum Specific Absorption Rate was (0.0854) W/Kg over any 1g tissue.

Please note that manufacturer or party responsible must also follow the Code Of Federal Regulations 47 requirements for supplying the appropriate Labeling Information and/or Information to the user.

Report copies and other information not contained in this report are held at the Global Product Compliance Laboratory in Holmdel, NJ.

ENGINEER'S REPORT

INTRODUCTION

Specific Absorption Rate (SAR) measurements were performed on the **CDPD/CS Modem**, hereinafter referred to as the EUT. Testing was performed at the Lucent Technologies, Global Product Compliance Laboratory, (GPCL) located in Holmdel, New Jersey.

COMPLIANCE STATEMENT

This is to certify that the **CDPD/CS Modem** complies with the FCC Rule section 2.1091 and 2.1093, based on the test data obtained by using DASY2 dosimetric assessment system, ET3DV4 3D E-field probe and body phantom for dosimetric measurements commercially available from Schmid & Partner Engineering AG (SPEAG), Switzerland.

Frequency (MHz)	Test Data (W/kg)	Limits (W/kg)	Margin (W/kg)
836.01	0.0854	1.6	3.9146

SAR SPECIAL TEST CONSIDERATIONS

This page discusses any special test procedures or considerations.

(x) There were no special test considerations.
( ) The following special considerations occurred during the test.

SPECIFIC NOTES:

MITIGATION APPLIED TO EUT TO ATTAIN COMPLIANCE:

(x) No mitigation required for compliance.

( ) The following mitigation was applied to obtain compliance:

SAR TEST SUMMARY SHEET

Official Name of the EUT: **CDPD/CS Modem**	Serial Number: **8**
Test Date: 4/14/98	Test facility used: **SAR Room**
Operating Frequency: **836.01 MHz**	
EUT Ambient Temperature: **25°C**	EUT Relative Humidity: **39%**
Product Engineer: S. Constien	EMC Engineer: S. E. Gordon

Phantom Side	Frequency MHz	Reading (mW/g) over 1g tissue	Limit (mW/g) over 1g tissue	Margin mW/g
Body	836.01	0.0854	1.6	3.9146

Complete SAR profile for all configurations are provided as the data plots on the following pages.

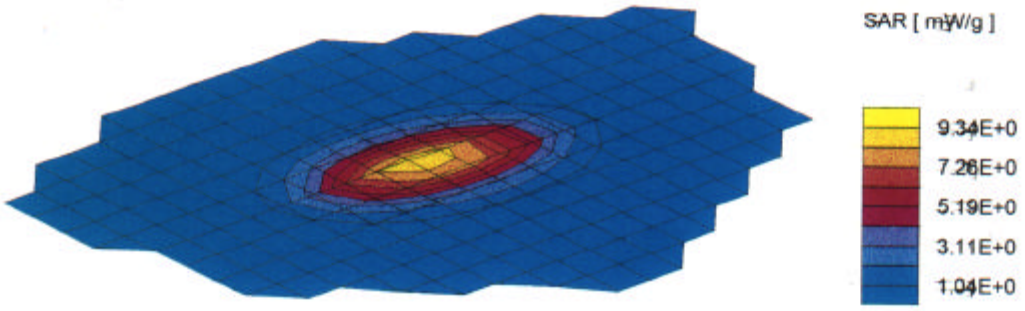
900 MHz Verification 9/1/98.MEA

σ = 0.83 [mho/m] ε_r = 41.3 ρ = 1.00 [g/cm^3]

Coarse Grid Dx = 15.0 Dy = 15.0 Dz = 0.0 [mm]

SAR [mW/g] Max: 9.34

Max at (154.50 ,130.50,4.00)



900 MHz Verification 9/1/98.MEA

σ = 0.83 [mho/m] ε_r = 41.3 ρ = 1.00 [g/cm^3]

Cube 5x5x7 Dx = 8.0 Dy = 8.0 Dz = 5.0 [mm]

SAR [mW/g] Max: 14.97

SAR (1g): 9.47 [mW/g] SAR (10g): 6.13 [mW/g]