

ATTACHMENT C – TEST REPORT



PCTEST Engineering Laboratory, Inc.

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CERTIFICATE OF COMPLIANCE FCC Part 24 Certification

TELSON Information & Communication Co., Ltd.
16th Floor, Telson Venture Tower, 949-3
Dogok-Dong, Kang Nam-Gu
Seoul, KOREA
Attn: Michael Song – Product Manager

Dates of Tests: February 12, 2001
Test Report S/N: 24.210206070.OBA
Test Site: PCTEST Lab, Columbia MD

FCC ID

OBAPCM-1930

APPLICANT

TELSON Information & Communication Co., Ltd.

Classification: Non-Broadcast Station Transmitter (TNB)
FCC Rule Part(s): §24(E); §2
EUT Type: Wireless LAN Network Adapter Card (PCMCIA)
Trade Name/Model: TELSON / PCM-1930
Tx Frequency Range: 1851.25MHz – 1908.75MHz (PCS CDMA)
Rx Frequency Range: 1931.25MHz – 1988.75MHz (PCS CDMA)
Max. RF Output Power: 0.398 W ERP (26.00 dBm)
Emission Designator(s): 1M25F9W

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

PCTEST certifies that no party to this application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862.

Randy Ortanez
President & Chief Engineer



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NVLAP[®]
LAB CODE 100431-0

TABLE OF CONTENTS

ATTACHMENT A: COVER LETTER

ATTACHMENT B: ATTESTATION STATEMENT(S)

ATTACHMENT C: TEST REPORT

1.1 SCOPE	1
2.1 INTRODUCTION (SITE DESCRIPTION)	2
3.1 INSERTS PER §2.1033	3
4.1 DESCRIPTION OF TESTS	4-5
5.1 TEST DATA (Equivalent Isotropic Radiated Power)	6
6.1 TEST DATA (RADIATED)	7-9
7.1 TEST DATA (FREQUENCY STABILITY)	10-11
8.1 PLOTS OF EMISSIONS	12
9.1 LIST OF TEST EQUIPMENT	13
10.1 SAMPLE CALCULATIONS	14
11.1 CONCLUSION	15

ATTACHMENT D: TEST PLOTS

ATTACHMENT E: FCC ID LABEL / LOCATION

ATTACHMENT F: TEST SETUP PHOTOGRAPHS

ATTACHMENT G: EXTERNAL PHOTOGRAPHS

ATTACHMENT H: INTERNAL PHOTOGRAPHS

ATTACHMENT I: BLOCK DIAGRAM(S)

ATTACHMENT J: SCHEMATIC DIAGRAM(S)

ATTACHMENT K: OPERATIONAL DESCRIPTION

ATTACHMENT L: PARTS LIST/TUNE UP PROCEDURE

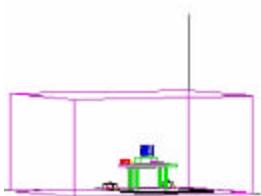
ATTACHMENT M: USER'S MANUAL

ATTACHMENT N: SAR MEASUREMENT REPORT

ATTACHMENT O: SAR TEST DATA

ATTACHMENT P: SAR TEST SETUP PHOTOGRAPHS

MEASUREMENT REPORT



1.1 Scope

Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission.

§2.1033 General Information

Applicant:	TELSON Information&Communication Co.,Ltd.
Address:	16 th Floor, Telson Venture Tower, 949-3 Dogok-Dong, Kang Nam-Gu, Seoul, KOREA
Attention:	Mr. Michael Song Product Manager

- FCC ID: **OBAPCM-1930**
- Quantity: Quantity production is planned
- Emission Designators: 1M25F9W
- Tx Freq. Range: 1851.25 – 1908.75 MHz
- Rx Freq. Range: 1931.25 – 1988.75 MHz
- Max. Power Rating: 0.398W EIRP (26.00 dBm)
- FCC Classification(s): Non-Broadcast Station Transmitter (TNB)
- Equipment (EUT) Type: Wireless LAN Network Adapter Card (PCMCIA)
- Modulation(s): PCS CDMA
- Frequency Tolerance: $\pm 0.00025\%$ (2.5 ppm)
- FCC Rule Part(s): § 24(E); §2
- Dates of Tests: February 12, 2001
- Place of Tests: PCTEST Lab, Columbia, MD U.S.A.
- Test Report S/N: 24.210206070.OBA

NVLAP
Lab Code 100431-0

2.1 INTRODUCTION

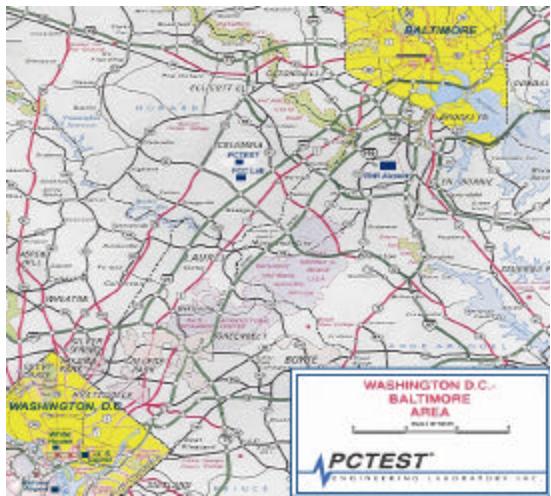


Figure 1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area.

These measurement tests were conducted at **PCTEST Engineering Laboratory, Inc.** facility in New Concept Business Park, Guilford Industrial Park, Columbia, Maryland. The site address is 6660-B Dobbin Road, Columbia, MD 21045. The test site is one of the highest points in the Columbia area with an elevation of 390 feet above mean sea level. The site coordinates are $39^{\circ} 11'15''$ N latitude and $76^{\circ} 49'38''$ W longitude. The facility is 1.5 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. There are no FM or TV transmitters within 15 miles of the site. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4 on October 19, 1992.

Procedure

Measurement

The radiated and spurious measurements were made outdoors at 3-meter test range (see Figure 2). The equipment under test is placed on the turntable connected to a RF wattmeter and a dummy RF load, and then its power is adjusted to its rated output. A receiving antenna located 2 meters from the turntable picks up any signal radiated from the transmitter. The turntable containing the system was rotated; the receiving antenna height was varied 1 to 4 meters and stopped at the azimuth or height producing the maximum emission. The testing procedure is repeated for both horizontal and vertical polarization of the receiving antenna. The actual radiated signal strength is obtained by substitution method with a signal generator with a calibrated output. The signal generator is adjusted in output until its reading is identical to that obtained when the receiving antenna is connected to the receiver. Signal strength is then read directly from the signal generator.

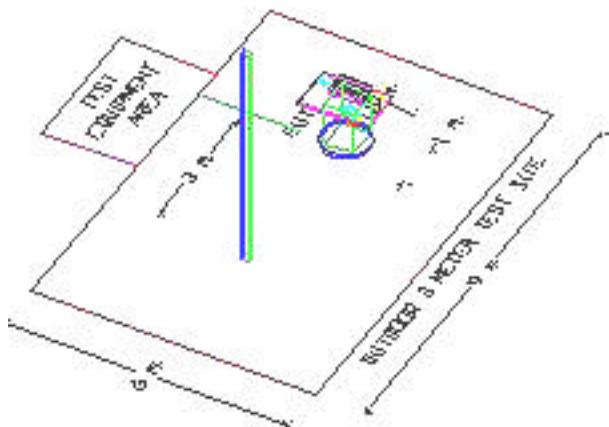


Figure 2. Diagram of 3-meter outdoor test range

3.1 INSERTS PER §2.1033(c)

§2.1033(c)(4) Function of Active Devices

The Function of active devices are shown in Attachment K.

§2.1033(c)(10) Block & Schematic Diagrams (Confidential)

The block diagrams are shown in Attachment I, and the schematic diagrams are shown in Attachment J.

§2.1033(c)(3) Operating Instructions

The instruction manual is shown in Attachment M.

§2.1033(c)(9) Parts List & Tune-Up Procedure

The parts list & tune-up procedure is shown in Attachment L.

§2.1033(c)(4) Description of Freq. Stabilization Circuit (Confidential)

The description of frequency stabilization circuit is shown in Attachment J.

§2.1033(c)(4) Description for Suppression of Spurious Radiation, for Limiting Modulation, and Harmonic Suppression Circuits (Confidential)

The description of suppression stabilization circuits is shown in Attachment J.

4.1 DESCRIPTION OF TESTS

4.1 §24.238 Occupied Bandwidth Emission Limits

- (a) On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB.
- (b) Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.
- (c) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.
- (d) The measurement of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

BLOCK	Freq. Range (MHz) Transmitter (Tx)	Freq. Range (MHz) Receiver (Rx)
A	1850 - 1865	1930 - 1945
B	1870 - 1885	1950 - 1965
C	1895 - 1910	1975 - 1990
D	1865 - 1870	1945 - 1950
E	1885 - 1890	1965 - 1970
F	1890 - 1895	1970 - 1975

Table 1. Broadband PCS Service Frequency Blocks.

4.1 DESCRIPTION OF TESTS (CONTINUED)

4.2 §24.229 Frequencies

At the input terminals of the spectrum analyzer, an isolator (RF pad), and a high-pass filter are connected between the test transceiver (for conducted tests) or the receive antenna (for radiated tests), and the analyzer. The high-pass filter (signals below 2 GHz) is to limit the fundamental frequency from interfering with the measurement of low-level spurious and harmonic emissions and to ensure that the preamplifier is not saturated.

4.3 §2.1053 Radiation Spurious and Harmonic Emissions

Radiation and harmonic emissions above 1 GHz is measured at out 3-meter indoor site. The EUT is placed on the turntable connected to a dummy load in normal operation using the intended power source. A receiving antenna located 3 meters from the turntable receives any signal radiated from the transmitter and its operating accessories. The antenna is varied from 1 to 4 meters and the polarization is varied (horizontal and vertical) to determine the worst-case emission level. To obtain actual radiated signal strength, a signal generator is adjusted in output until a reading identical to that obtained with the actual transmitter is obtained at the receiver. Signal strength is read directly from the generator and recorded on the attached table.

4.4 §24.135 Frequency Stability/Temperature Variation

The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the voltage normally at the input to the device or at the power supply terminals if cables are not normally supplied.

Specification – The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ± 0.0001 (± 1 ppm) of the center frequency.

NOTE: The EUT is tested down to the battery endpoint.

5.1 Test Data

5.2 § 24.232(b) Equivalent Isotropic Radiated Power (E.I.R.P.)

Radiated measurements at 3 meters

Supply Voltage: 3.8 VDC

Modulation: PCS CDMA

FREQ. (MHz)	LEVEL (dBm)	POL (H/V)	Azimuth (ø angle)	EIRP (dBm)	EIRP (W)	Battery
1851.25	-21.30	H	60.0	25.78	0.379	Standard
1880.00	-21.35	H	60.0	25.90	0.389	Standard
1908.75	-21.42	H	60.0	26.00	0.398	Standard

NOTES:

ERP Measurements by Substitution Method:

The EUT was placed on a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This ERP level is recorded. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.

6.1 Test Data (Cont)

6.2 Radiated Measurements

§ 2.1053 Field Strength of SPURIOUS Radiation (PCS CDMA)

OPERATING FREQUENCY: 1851.25 MHz
CHANNEL: 025 (Low)
MEASURED OUTPUT POWER: 26.00 dBm = 0.398 W
MODULATION SIGNAL: CDMA (Internal)
DISTANCE: 3 meters
LIMIT: $43 + 10 \log_{10} (W) = 39.00$ dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μ V/m)	EIRP (dBm)	(dBc)
3702.50	-84.5	44.4	H	2213.1	-28.33	54.3
5553.75	-88.1	49.7	H	2691.5	-26.63	52.6
7405.00	-117.8	53.7	H	140.4	-52.28	78.3
9256.25	-126.8	57.2	H	102.3	-55.03	81.0
11107.50	< -130					

NOTES:

1. The bandwidth is set per §24.238 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the EIRP is calculated using the formula:
$$\text{EIRP (dBm)} = 10 \log 10 \left(\left(\frac{r(\text{mV/m})}{1 \times 10^6} \right)^2 / 30.0 \right) / 10^3$$

$$\text{EIRP (dBm)} = 10 \log 10 \left[\left(\frac{3 \times \text{FS}}{1 \times 10^6} \right)^2 / (30.0 \times 1000) \right]$$

$$\text{EIRP (Watts)} = \left(\frac{3 \times \text{FS}}{1 \times 10^6} \right)^2 / 30.0$$

6.1 Test Data (Cont)

6.3 Radiated Measurements

§ 2.1053 Field Strength of SPURIOUS Radiation (PCS CDMA)

OPERATING FREQUENCY: 1880.00 MHz
CHANNEL: 600 (Middle)
MEASURED OUTPUT POWER: 26.00 dBm = 0.398 W
MODULATION SIGNAL: CDMA (Internal)
DISTANCE: 3 meters
LIMIT: $43 + 10 \log_{10} (W) = 39.00$ dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μ V/m)	EIRP (dBm)	(dBc)
3760.00	-82.5	44.7	H	2884.0	-26.03	52.0
5640.00	-87.6	49.9	H	2917.4	-25.93	51.9
7520.00	-116.2	54.0	H	173.8	-50.43	76.4
9400.00	-125.9	57.4	H	89.1	-56.23	82.2
11280.00	< -130					

NOTES:

1. The bandwidth is set per §24.238 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the EIRP is calculated using the formula:
EIRP (dBm) = $10 \log 10 ((r(mV/m)/1 \times 10^6)^2 / 30.0/1 \times 10^{-3})$
EIRP (dBm) = $10 \log 10 [(3 \times FS/1 \times 10^6)^2 / (30.0) \times 1000]$
EIRP (Watts) = $\{(3 \times FS)/1 \times 10^6\}^2 / 30.0$

6.1 Test Data (Cont)

6.4 Radiated Measurements

§ 2.1053 Field Strength of SPURIOUS Radiation (PCS CDMA)

OPERATING FREQUENCY: 1908.75 MHz
CHANNEL: 1175 (High)
MEASURED OUTPUT POWER: 26.00 dBm = 0.398 W
MODULATION SIGNAL: CDMA (Internal)
DISTANCE: 3 meters
LIMIT: $43 + 10 \log_{10} (W) =$ 39.00 dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μ V/m)	EIRP (dBm)	(dBc)
3817.50	-82.0	45.0	H	3162.3	-25.23	51.2
5726.25	-87.1	50.1	H	3162.3	-25.23	51.2
7635.00	-115.7	54.2	H	188.4	-49.73	75.7
9543.75	-125.0	57.7	H	76.7	-57.53	83.5
11452.50	< -130					

NOTES:

1. The bandwidth is set per §24.238 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the EIRP is calculated using the formula:

$$\text{EIRP (dBm)} = 10 \log 10 \left(\left(\frac{r}{mV/m} \right) / 1 \times 10^6 \right)^2 / 30.0 / 1 \times 10^3$$

$$\text{EIRP (dBm)} = 10 \log 10 \left[\left(\frac{3 \times \text{FS}}{1 \times 10^6} \right)^2 / (30.0) \times 1000 \right]$$

$$\text{EIRP (Watts)} = \left(\frac{3 \times \text{FS}}{1 \times 10^6} \right)^2 / 30.0$$

7.1 Test Data

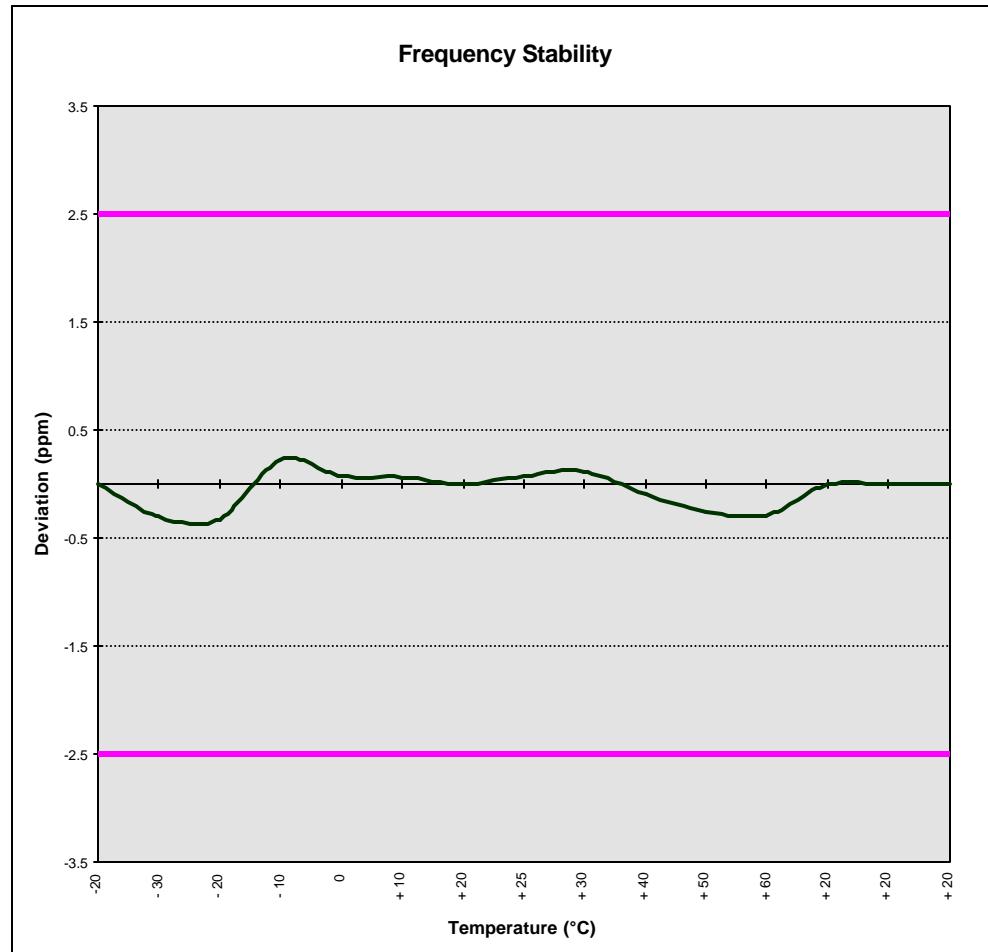
7.2 § 2.995 FREQUENCY STABILITY

OPERATING FREQUENCY: 1,880,000,023 Hz
CHANNEL: 600
REFERENCE VOLTAGE: 3.8 VDC
DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQ. (Hz)	Deviation (%)
100 %	3.80	+ 20 (Ref)	1,880,000,023	0.000000
100 %		- 30	1,880,000,587	-0.000030
100 %		- 20	1,880,000,625	-0.000032
100 %		- 10	1,879,999,591	0.000023
100 %		0	1,879,999,873	0.000008
100 %		+ 10	1,879,999,891	0.000007
100 %		+ 20	1,880,000,023	0.000000
100 %		+ 25	1,879,999,873	0.000008
100 %		+ 30	1,879,999,797	0.000012
100 %		+ 40	1,880,000,192	-0.000009
100 %		+ 50	1,880,000,493	-0.000025
100 %		+ 60	1,880,000,549	-0.000028
85 %	3.23	+ 20	1,880,000,023	0.000000
115 %	4.37	+ 20	1,880,000,023	0.000000
BATT. ENDPOINT	4.98	+ 20	1,880,000,023	0.000000

7.1 Test Data (Continued)

7.3 § 2.995 FREQUENCY STABILITY



8.1 PLOT(S) OF EMISSIONS

(SEE ATTACHMENT D)

9.1 TEST EQUIPMENT

Type	Model	Cal. Due Date	S/N
Microwave Spectrum Analyzer	HP 8566B (100Hz-22GHz)	12/05/01	3638A08713
Microwave Spectrum Analyzer	HP 8566B (100Hz-22GHz)	04/17/01	2542A11898
Spectrum Analyzer/Tracking Gen.	HP 8591A (9kHz-1.8GHz)		06/02/01
Spectrum Analyzer	HP 8591A (9kHz-1.8GHz)		10/15/01
Spectrum Analyzer	HP 8594A (9kHz-2.9GHz)		11/02/01
Signal Generator*	HP 8640B (500Hz-1GHz)	06/02/01	2232A19558
Signal Generator*	HP 8640B (500Hz-1GHz)	06/02/01	1851A09816
Rohde & Schwarz (0.1-1000MHz)	09/11/00 894215/012		Signal Generator*
Alltech/Eaton Receiver	NM 37/57A-SL (30-1000MHz)	04/12/01	0792-03271
Alltech/Eaton Receiver	NM 37/57A (30-1000MHz)	03/11/01	0805-03334
Alltech/Eaton Receiver	NM17/27A (0.1-32MHz)		09/17/01 0608-03241
Quasi-Peak Adapter	HP 85650A		08/09/01 2043A00301
Alltech/Eaton Adapter	CCA-7 CISPR/ANSI QP Adapter	03/11/01	0194-04082
RG58 Coax Test Cable	No. 167		n/a
Harmonic/Flicker Test System	HP 6841A (IEC 555-2/3)		3531A00115
Broadband Amplifier (2)	HP 8447D		1145A00470, 1937A03348
Broadband Amplifier	HP 8447F		2443A03784
Transient Limiter	HP 11947A (9kHz-200MHz)		2820A00300
Horn Antenna	EMCO Model 3115 (1-18GHz)		9704-5182
Horn Antenna	EMCO Model 3115 (1-18GHz)		9205-3874
Horn Antenna	EMCO Model 3116 (18-40GHz)		9203-2178
Biconical Antenna (4)	Eaton 94455/Eaton 94455-1/Singer 94455-1/Compliance Design 1295, 1332, 0355		
Log-Spiral Antenna (3)	Alltech/Eaton 93490-1		0608, 1103, 1104
Roberts Dipoles	Compliance Design (1 set) A100	08/25/001	5118
Alltech Dipoles	DM-105A (1 set)		33448-111
EMCO LISN (2)	3816/2		1077, 1079
EMCO LISN	3725/2		2009
Microwave Preamplifier 40dB Gain	HP 83017A (0.5-26.5GHz)		3123A00181
Microwave Cables	MicroCoax (1.0-26.5GHz)		
Alltech/Eaton Receiver	NM37/57A-SL		0792-03271
Spectrum Analyzer	HP 8591A		3034A01395
Modulation Analyzer	HP 8901A		2432A03467
NTSC Pattern Generator	Leader 408		0377433
Noise Figure Meter	HP 8970B		3106A02189
Noise Figure Meter	Alltech 7510		TE31700
Noise Generator	Alltech 7010		1473
Microwave Survey Meter	Holiday Model 1501 (2.450GHz)		0931
Digital Thermometer	Extech Instruments 421305		426966
Attenuator	HP 8495A (0-70dB) DC-4GHz		
Bi-Directional Coax Coupler	Narda 3020A (50-1000MHz)		
Shielded Screen Room	RF Lindgren Model 26-2/2-0		6710 (PCT270)
Shielded Semi-Anechoic Chamber	Ray Proof Model S81		R2437 (PCT278)
Environmental Chamber	Associated Systems Model 1025 (Temperature/Humidity)		PCT285

* Calibration traceable to the National Institute of Standards and Technology (NIST).

10.1 SAMPLE CALCULATIONS

A. EIRP Sample Calculation

$$\text{Level } \mu\text{Vm} @ 3 \text{ meters} = \frac{\text{Log}_{10}^{-1} (\text{dBm} + 107 + \text{AFCL})}{20}$$

$$\frac{\text{Log}_{10}^{-1} (-14 + 107 + 31.7)}{20}$$

1717908.4 μVm @ 3 meters

Sample Calculation (relative to a dipole)

$$\text{EIRP (dBm)} = 10 \text{ Log}_{10}(((r(\mu\text{V/m})1x10^6)^2/30.0/1x10^{-3})$$

$$\text{EIRP (dBm)} = 10 \text{ Log}_{10}(((3(1717908.4)1x10^6)^2/30.0/1x10^{-3})$$

EIRP (dBm) = 29.46

B. Emission Designator per §2.201

CDMA Sample

2M + 2DK

CDMA BW = 1.25 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

Emission Designator = 1M25F9W

11.1 CONCLUSION

The data collected shows that the **TELSON Wireless LAN Network Adapter Card (PCMCIA)** FCC ID: **OBAPCM-1930** complies with all the requirements of Parts 2 and 24 of the FCC rules.

ATTACHMENT D – TEST PLOTS

* Agilent 06:06:35 Feb 5, 2001

FCC ID:0BAPCM-1930 PWR OUT C-0025

Ref 25 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

V1 S2

S3 FC

AA

Center 1.851 GHz

*Res BW 3 MHz

Span 10 MHz

VBW 3 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq

1.85125000 GHz

Start Freq

1.84625000 GHz

Stop Freq

1.85625000 GHz

CF Step

1.00000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

* Agilent 06:08:26 Feb 5, 2001

FCC ID:0BAPCM-1930 PWR OUT C-0600

Ref 25 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

Center

1.880000000 GHz

V1 S2

S3 FC

AA

Center 1.88 GHz

*Res BW 3 MHz

Span 10 MHz

VBW 3 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq

1.88000000 GHz

Start Freq

1.87500000 GHz

Stop Freq

1.88500000 GHz

CF Step

1.00000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

* Agilent 06:09:46 Feb 5, 2001

FCC ID:0BAPCM-1930 PWR OUT C-1175

Ref 25 dBm Atten 35 dB

Peak
Log
10
dB/
Offst
1
dB

V1 S2
S3 FC
AA

Center 1.909 GHz
*Res BW 3 MHz

VBW 3 MHz

Span 10 MHz
Sweep 5 ms (401 pts)

Freq/Channel

Center Freq
1.90875000 GHz

Start Freq
1.90375000 GHz

Stop Freq
1.91375000 GHz

CF Step
1.00000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

* Agilent 06:11:53 Feb 5, 2001

FCC ID:0BAPCM-1930 PWR OUT C-1175

Ref 25 dBm Atten 35 dB

Samp
Log
10
dB/
Offst
1
dB

Center 1.909 GHz
*Res BW 30 kHz

*VBW 300 kHz

Span 3 MHz
Sweep 9.167 ms (401 pts)

Occupied Bandwidth Results (idle)

Occupied Bandwidth
1.253 MHz

Occ BW % Pwr 99.00 %

Transmit Freq Error -5.106 kHz

Measure

Meas Off

RCP

Channel Power

Occupied BW

Emission BW

Harmonic Dist

* Agilent 05:48:02 Feb 5, 2001

FCC ID:0BAPCM-1930 CON SPURS C-1175

Ref 25 dBm Atten 35 dB

Mkr1 2.295 GHz

-33.74 dBm

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Start 10 MHz

*Res BW 1 MHz

VBW 1 MHz

Stop 2.5 GHz

Sweep 6.225 ms (401 pts)

Freq/Channel

Center Freq

1.25500000 GHz

Start Freq

10.0000000 MHz

Stop Freq

2.500000000 GHz

CF Step

249.0000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

* Agilent 05:49:18 Feb 5, 2001

FCC ID:0BAPCM-1930 CON SPURS C-1175

Ref 25 dBm Atten 35 dB

Mkr1 14.93 GHz

-33.82 dBm

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Start 2.5 GHz

*Res BW 1 MHz

VBW 1 MHz

Stop 20 GHz

Sweep 175 ms (401 pts)

Freq/Channel

Center Freq

11.2500000 GHz

Start Freq

2.500000000 GHz

Stop Freq

20.0000000 GHz

CF Step

1.750000000 GHz

Auto Man

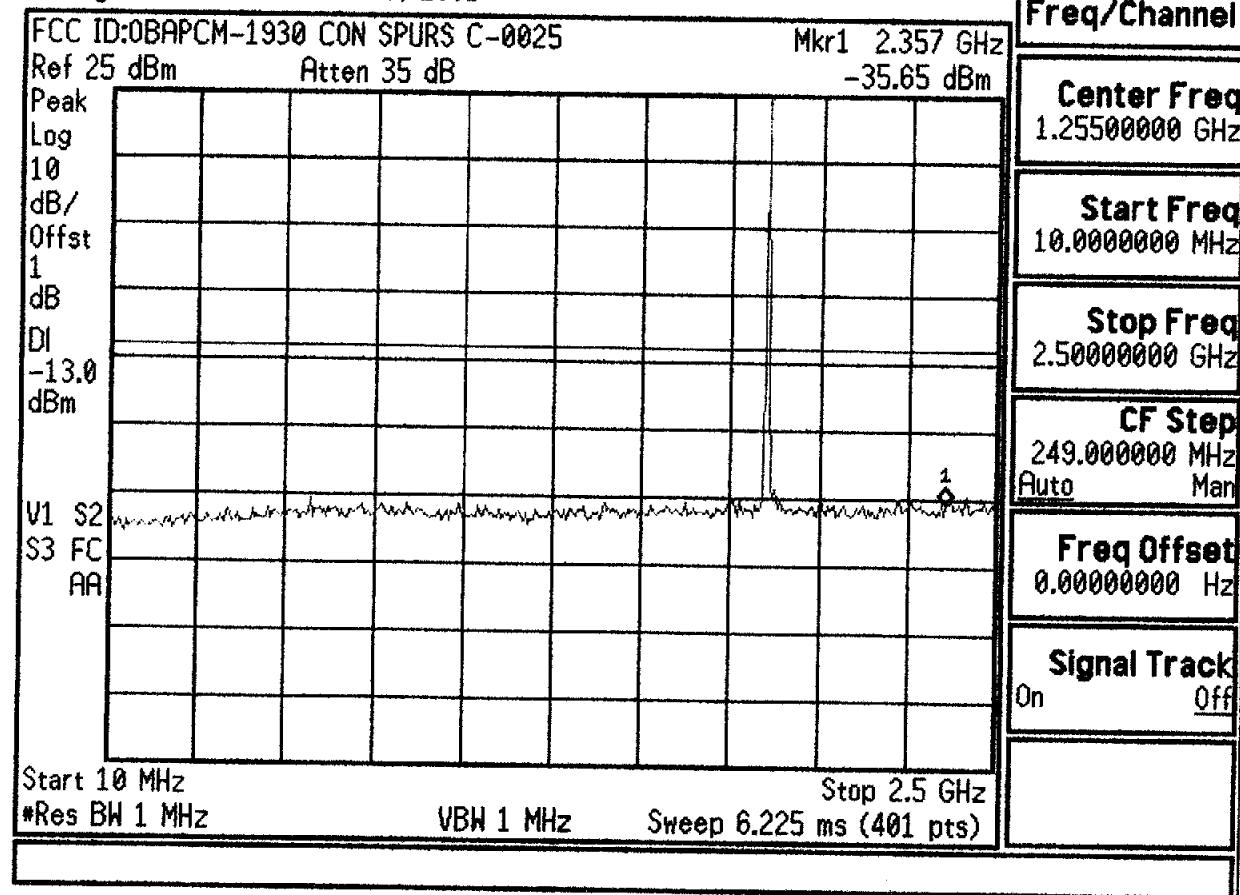
Freq Offset

0.00000000 Hz

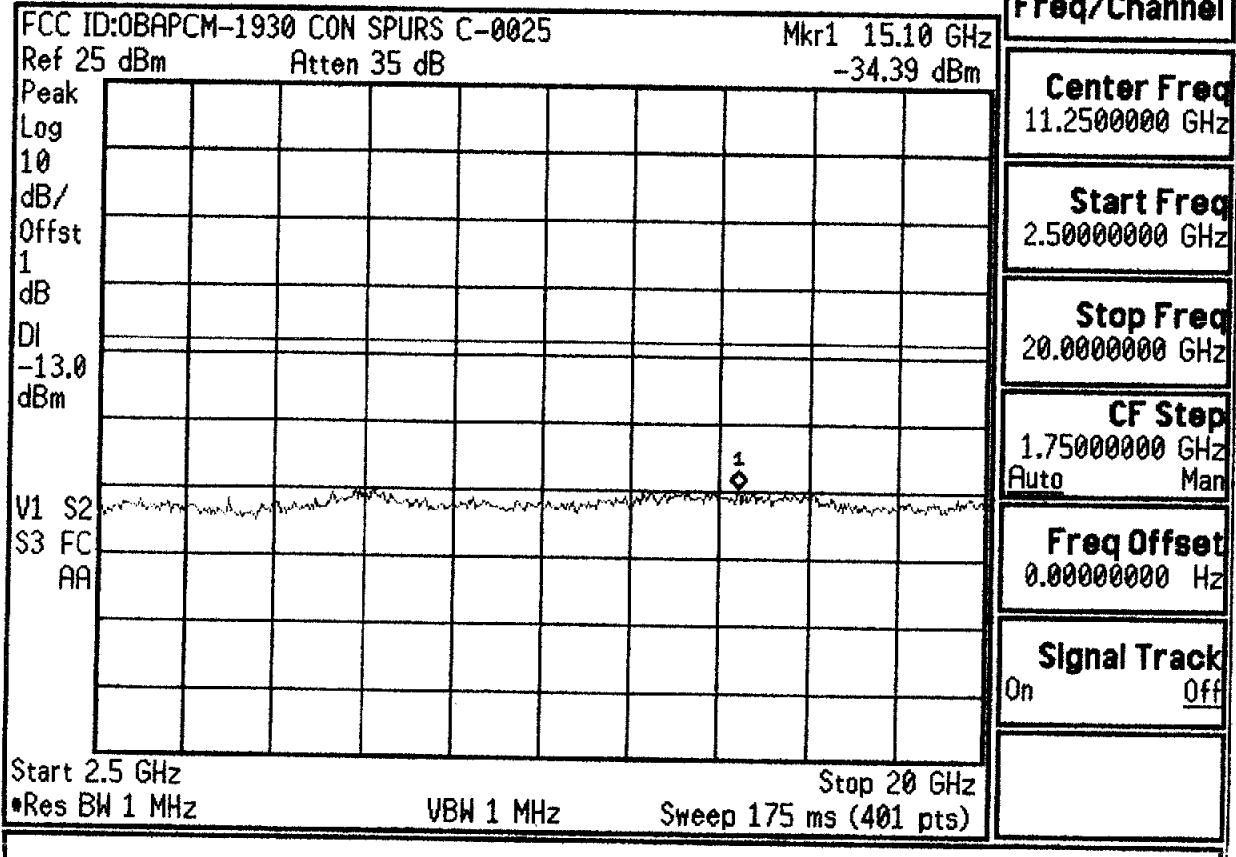
Signal Track

On Off

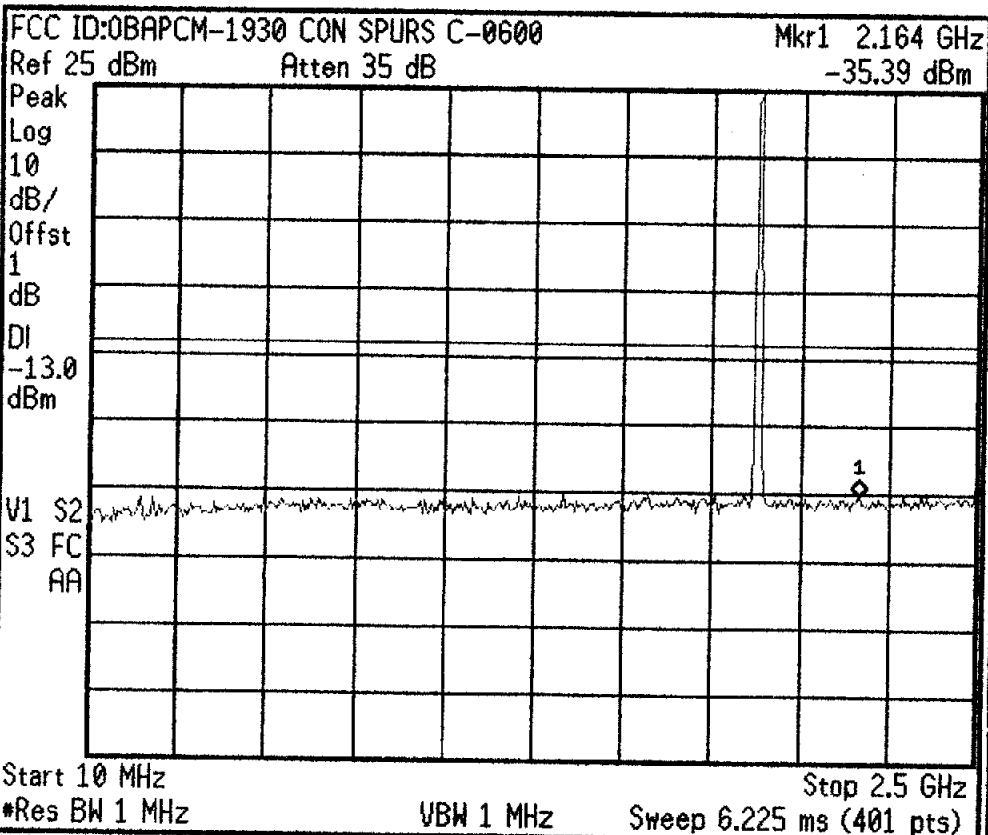
* Agilent 06:00:32 Feb 5, 2001



* Agilent 06:01:39 Feb 5, 2001

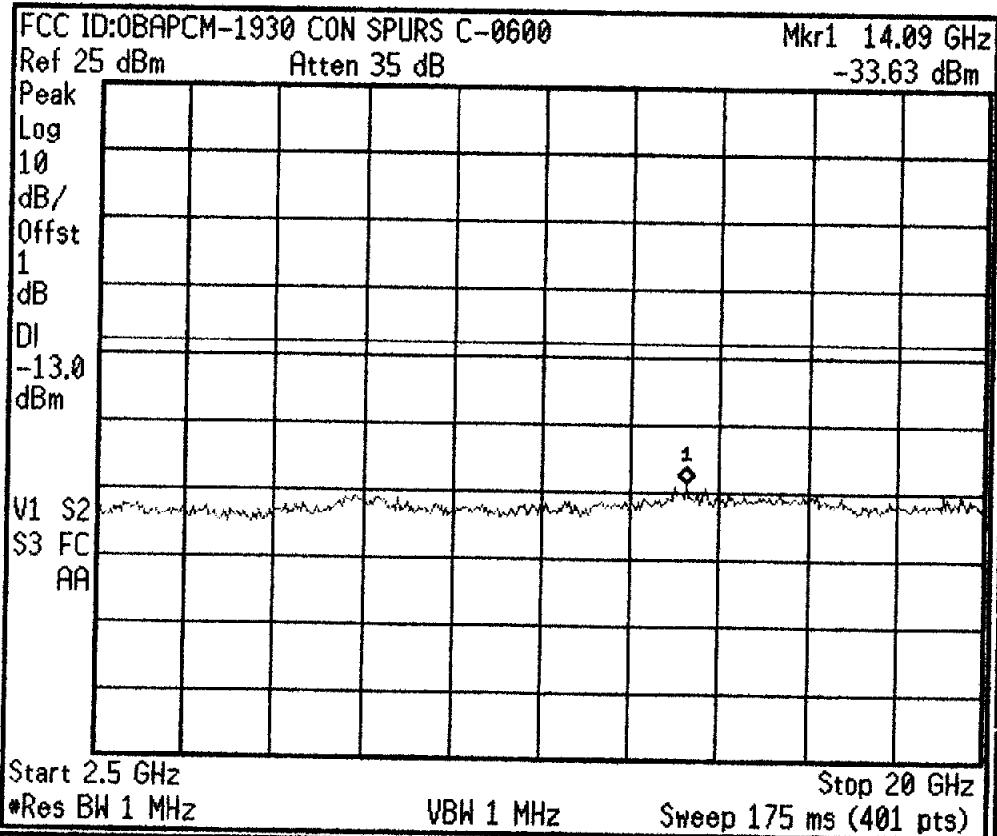


* Agilent 05:45:20 Feb 5, 2001



Freq/Channel
Center Freq 1.25500000 GHz
Start Freq 10.00000000 MHz
Stop Freq 2.50000000 GHz
CF Step 249.000000 MHz
Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

* Agilent 05:46:39 Feb 5, 2001



Freq/Channel
Center Freq 11.25000000 GHz
Start Freq 2.50000000 GHz
Stop Freq 20.00000000 GHz
CF Step 1.75000000 GHz
Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

* Agilent 06:14:43 Feb 5, 2001

FCC ID:0BAPCM-1930 BAND EDGE C-1175

Ref 25 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Center 1.91 GHz

#Res BW 30 kHz

VBW 30 kHz

Span 5 MHz

Sweep 13.89 ms (401 pts)

Freq/Channel

Center Freq

1.91000000 GHz

Start Freq

1.90750000 GHz

Stop Freq

1.91250000 GHz

CF Step

500.000000 kHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

On

Off

* Agilent 06:15:55 Feb 5, 2001

FCC ID:0BAPCM-1930 BAND EDGE C-0025

Ref 25 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Center 1.85 GHz

#Res BW 30 kHz

VBW 30 kHz

Span 5 MHz

Sweep 13.89 ms (401 pts)

Freq/Channel

Center Freq

1.85000000 GHz

Start Freq

1.84750000 GHz

Stop Freq

1.85250000 GHz

CF Step

500.000000 kHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

On

Off

* Agilent 06:25:57 Feb 5, 2001

FCC ID:0BAPCM-1930 BAND EDGE C-0025

Ref 25 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Center 1.845 GHz

#Res BW 1 MHz

VBW 1 MHz

Span 1 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq

1.84500000 GHz

Start Freq

1.84450000 GHz

Stop Freq

1.84550000 GHz

CF Step

1.00000000 MHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

* Agilent 06:26:54 Feb 5, 2001

FCC ID:0BAPCM-1930 BAND EDGE C-0025

Ref 25 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Center 1.844 GHz

#Res BW 1 MHz

VBW 1 MHz

Span 1 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq

1.84400000 GHz

Start Freq

1.84350000 GHz

Stop Freq

1.84450000 GHz

CF Step

1.00000000 MHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

* Agilent 06:21:21 Feb 5, 2001

FCC ID:0BAPCM-1930 BAND EDGE C-0025

Ref 25 dBm Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Start 1.847 GHz

#Res BW 1 MHz

VBW 1 MHz

Stop 1.847 GHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq

1.84700000 GHz

Start Freq

1.84650000 GHz

Stop Freq

1.84750000 GHz

CF Step

1.00000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

* Agilent 06:22:01 Feb 5, 2001

FCC ID:0BAPCM-1930 BAND EDGE C-0025

Ref 25 dBm Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Center 1.846 GHz

#Res BW 1 MHz

VBW 1 MHz

Span 1 MHz

Sweep 5 ms (401 pts)

Trace

Trace

1 2 3

Clear Write

Max Hold

Min Hold

View

Blank

More

1 of 2

* Agilent 06:28:47 Feb 5, 2001

FCC ID:0BAPCM-1930 BAND EDGE C-1175

Ref 25 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Start 1.913 GHz

#Res BW 1 MHz

VBW 1 MHz

Stop 1.913 GHz

Sweep 5 ms (401 pts)

Trace

1 2 3

Clear Write

Max Hold

Min Hold

View

Blank

More

1 of 2

* Agilent 06:29:24 Feb 5, 2001

FCC ID:0BAPCM-1930 BAND EDGE C-1175

Ref 25 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Center 1.914 GHz

#Res BW 1 MHz

VBW 1 MHz

Span 1 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq

1.91400000 GHz

Start Freq

1.91350000 GHz

Stop Freq

1.91450000 GHz

CF Step

1.00000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

Agilent 06:30:14 Feb 5, 2001

FCC ID:0BAPCM-1930 BAND EDGE C-1175

Ref 25 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2
S3 FC
AA

Center 1.915 GHz

*Res BW 1 MHz

VBW 1 MHz

Span 1 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq

1.91500000 GHz

Start Freq

1.91450000 GHz

Stop Freq

1.91550000 GHz

CF Step

1.00000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

Agilent 06:30:47 Feb 5, 2001

FCC ID:0BAPCM-1930 BAND EDGE C-1175

Ref 25 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1

dB

DI

-13.0

dBm

V1 S2
S3 FC
AA

Center 1.916 GHz

*Res BW 1 MHz

VBW 1 MHz

Span 1 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq

1.91600000 GHz

Start Freq

1.91550000 GHz

Stop Freq

1.91650000 GHz

CF Step

1.00000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off