

800 MHz : RF POWER OUTPUT

Para. 2.985 (a) and 22.913 (a)

The RF power measured at the output terminals (antenna connector) is plotted against supply voltage variation and temperature variations at the highest levels.

Supply

Exhibit	Voltage (V)	Temperature	TX Freq	Output (W)	Power Level	Analog/Digital
6A2	4.8	Varied	Mid Band	.4 W	0	Analog
6A3	Varied	+25 C	Mid Band	.4 W	0	Analog
6A4	4.8	Varied	Mid Band	.4 W	0	Digital
6A5	Varied	+25 C	Mid Band	.4 W	0	Digital

The measurements were made per IS-137A using a Hewlett Packard 8953DT North American Dual Mode Cellular Test System which includes the following equipment:

HP8958A Cellular Interface
HP6623A DC Power Supply
HP8596E Spectrum Analyzer
HP437B RF Power Meter
HP8901B Modulation Analyzer
HP8903B Audio Analyzer
Thermotron SM-8C Temperature Chamber

EFFECTIVE RADIATED POWER

The following is a description of the substitution method used in accordance with IS-137A to obtain accurate ERP readings at the carrier fundamental frequency:

- (1) EUT measurements are made at 3 m using calibrated antennas and equipment with known cable losses.
- (2) A peak measurement is made by raising and lowering the antenna and rotating the EUT 360 degrees. Horizontal and vertical polarization data is recorded.
- (3) A generator and dipole antenna are then substituted for the EUT. The dipole antenna is a half-wave dipole. If a dipole antenna cannot be used, then the designated antenna is referenced to a dipole antenna.
- (4) Measurements are made through the dipole antenna at known power levels to determine the system calibration factors at a given frequency.
- (5) At frequencies where no calibration data is taken, the value is interpolated between the closest data point above and below the transmit frequency. Calibration data is taken with a half-wave dipole antenna.

Measurements at a distance of 3 m from the source at the highest power level setting:

Frequency (MHz)	Rated Output Power (W)	EIRP (dBm)
836.49	0.4	25.87

Exhibit 6A2

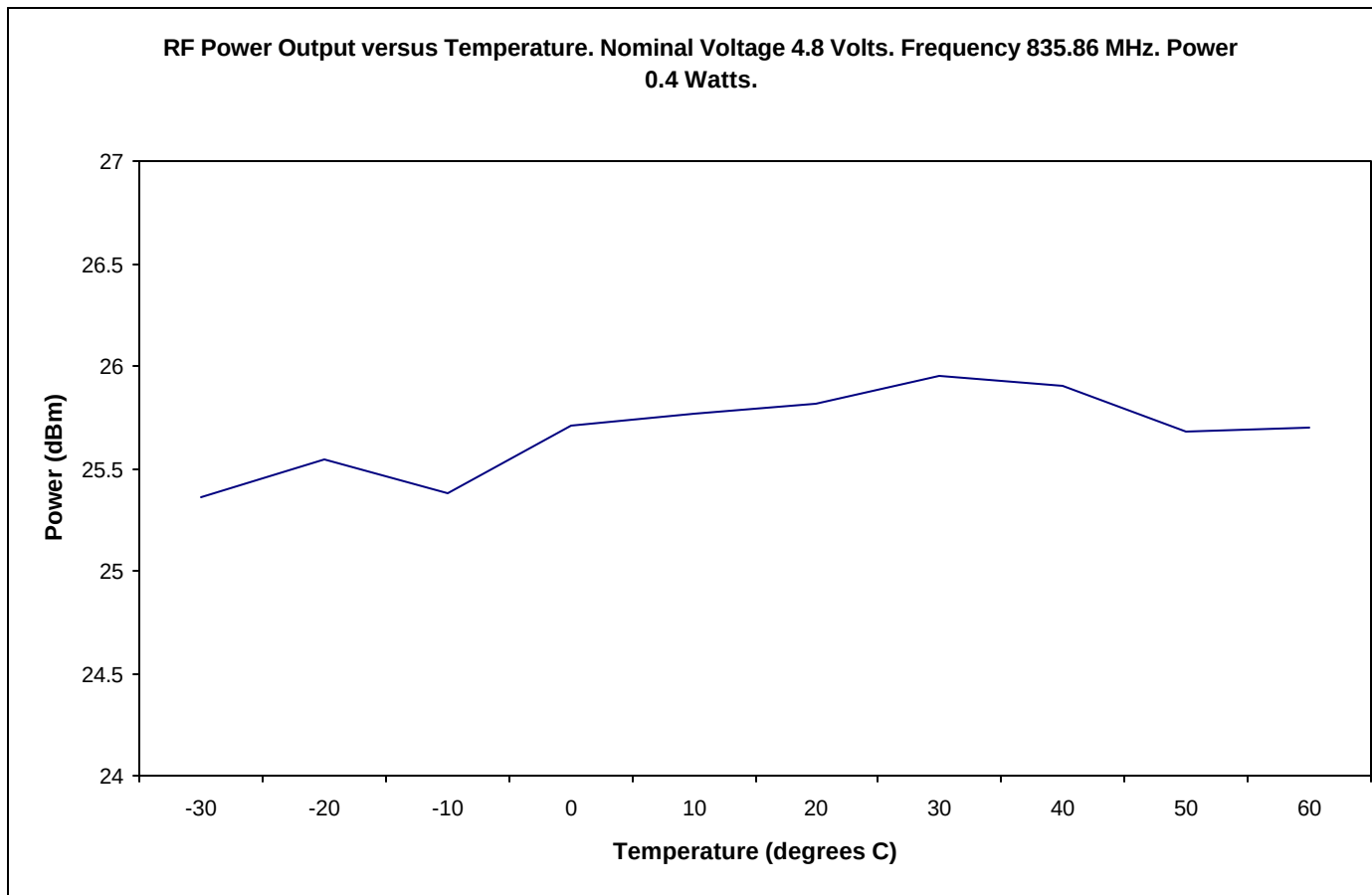


Exhibit 6A3

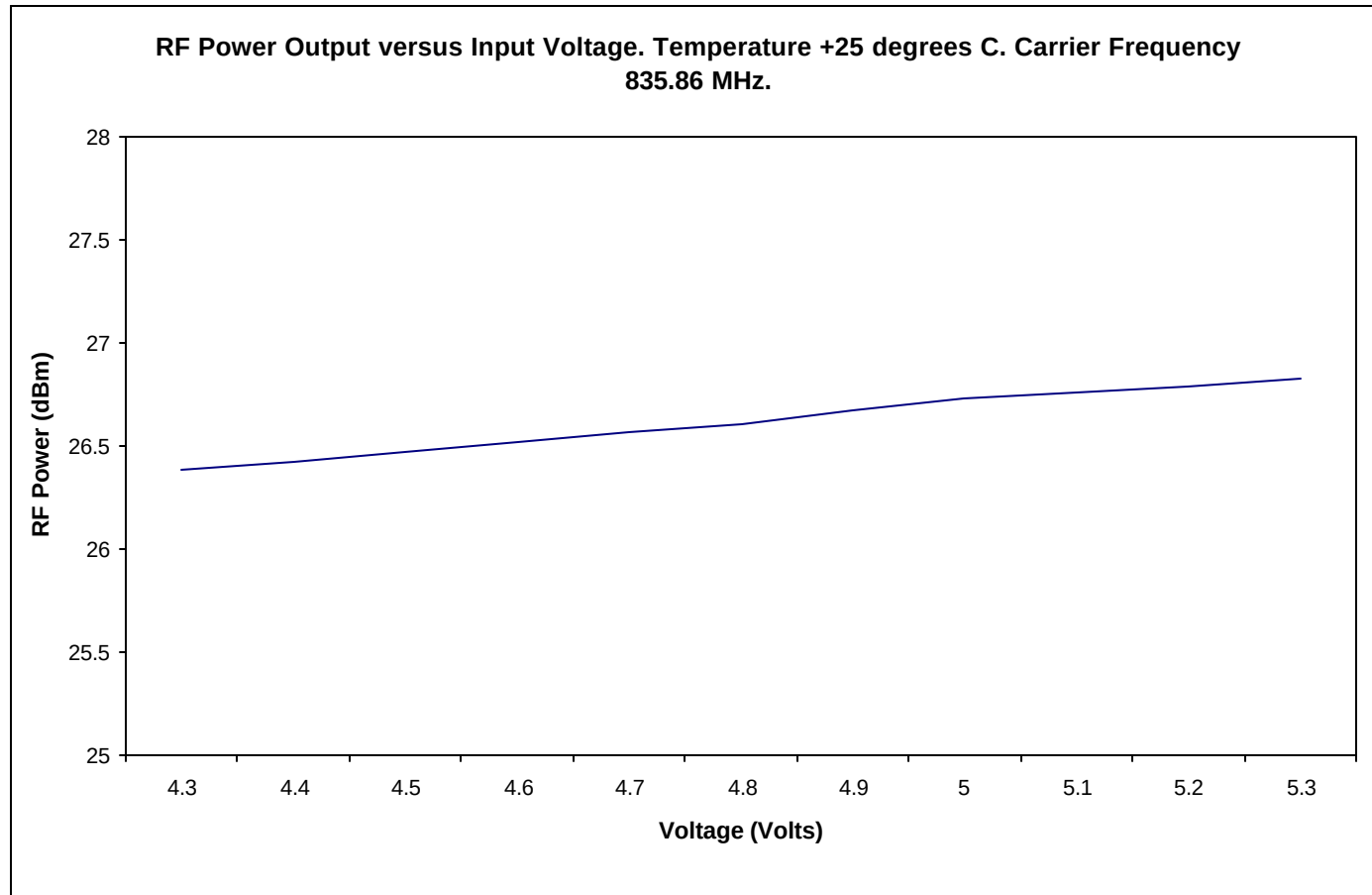


Exhibit 6A4

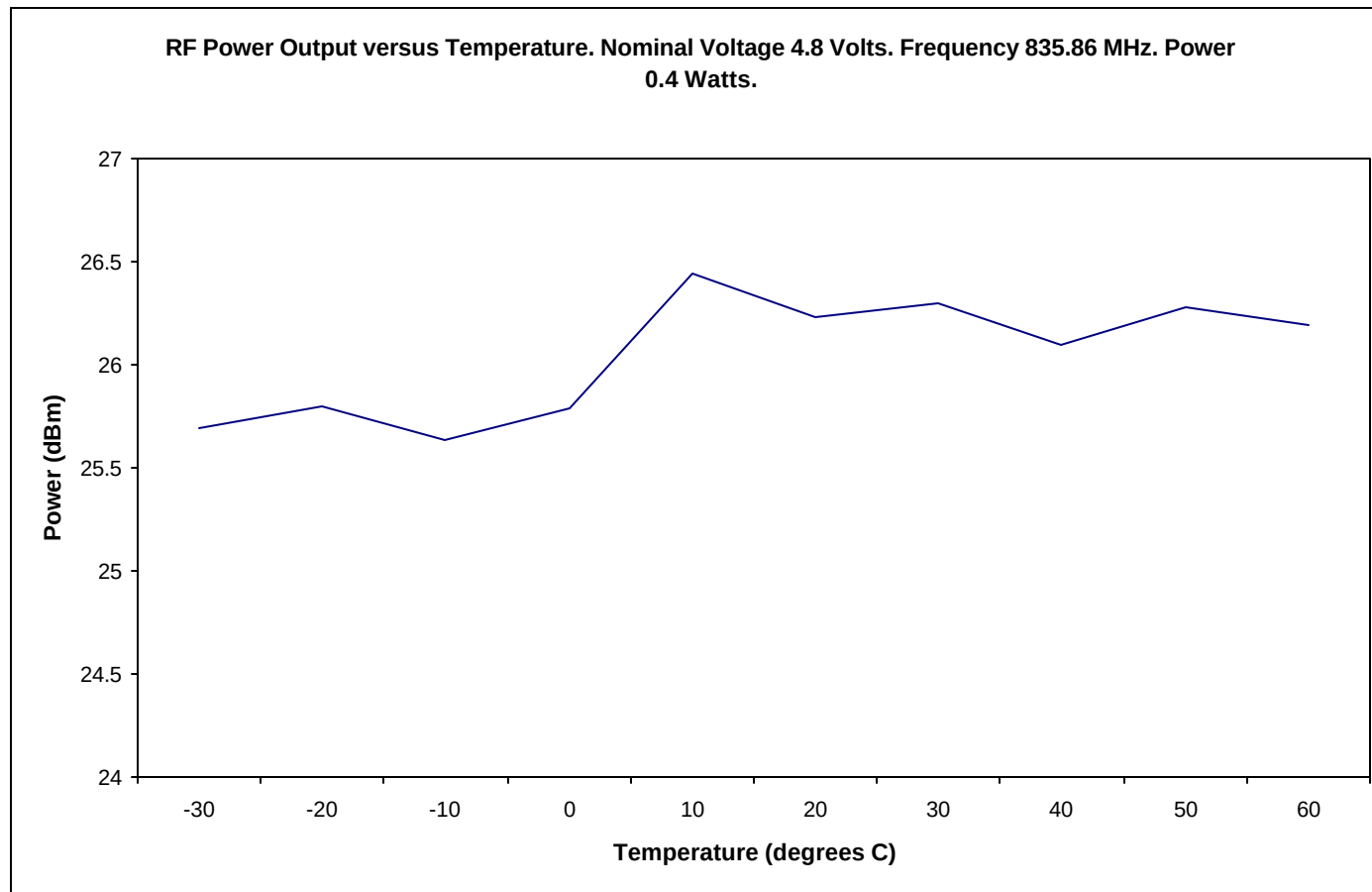


Exhibit 6A5

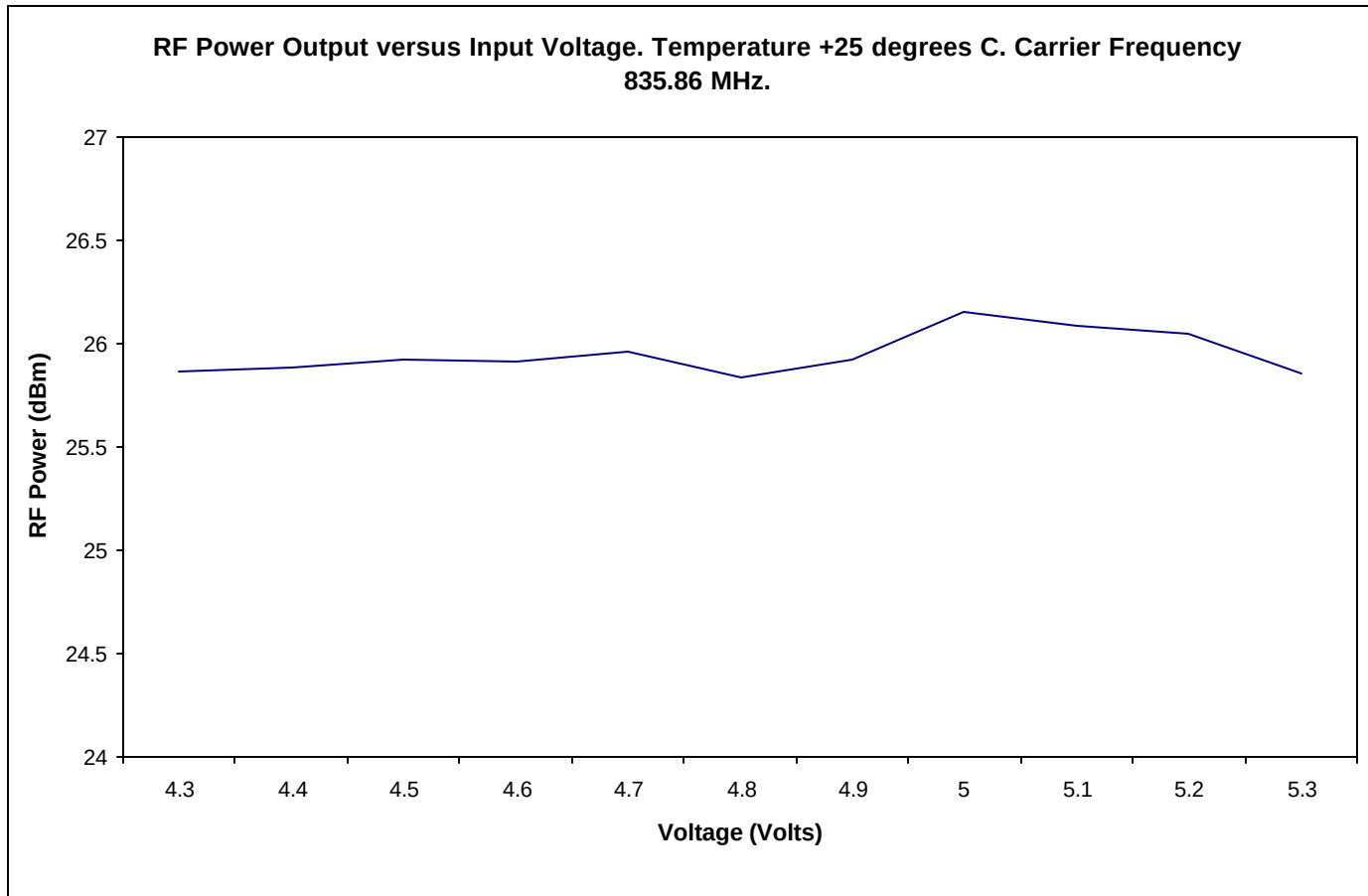


Exhibit 6B2

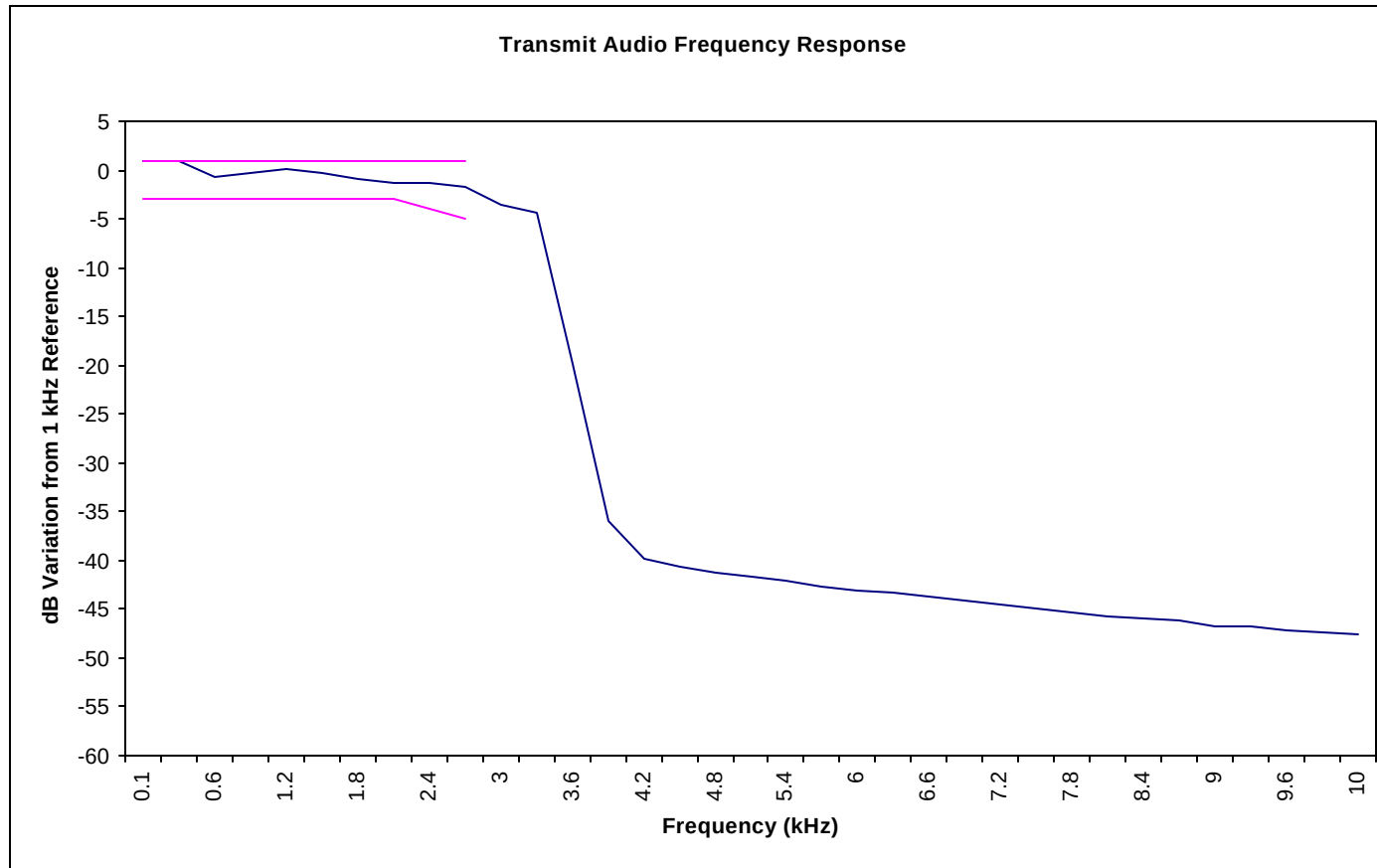
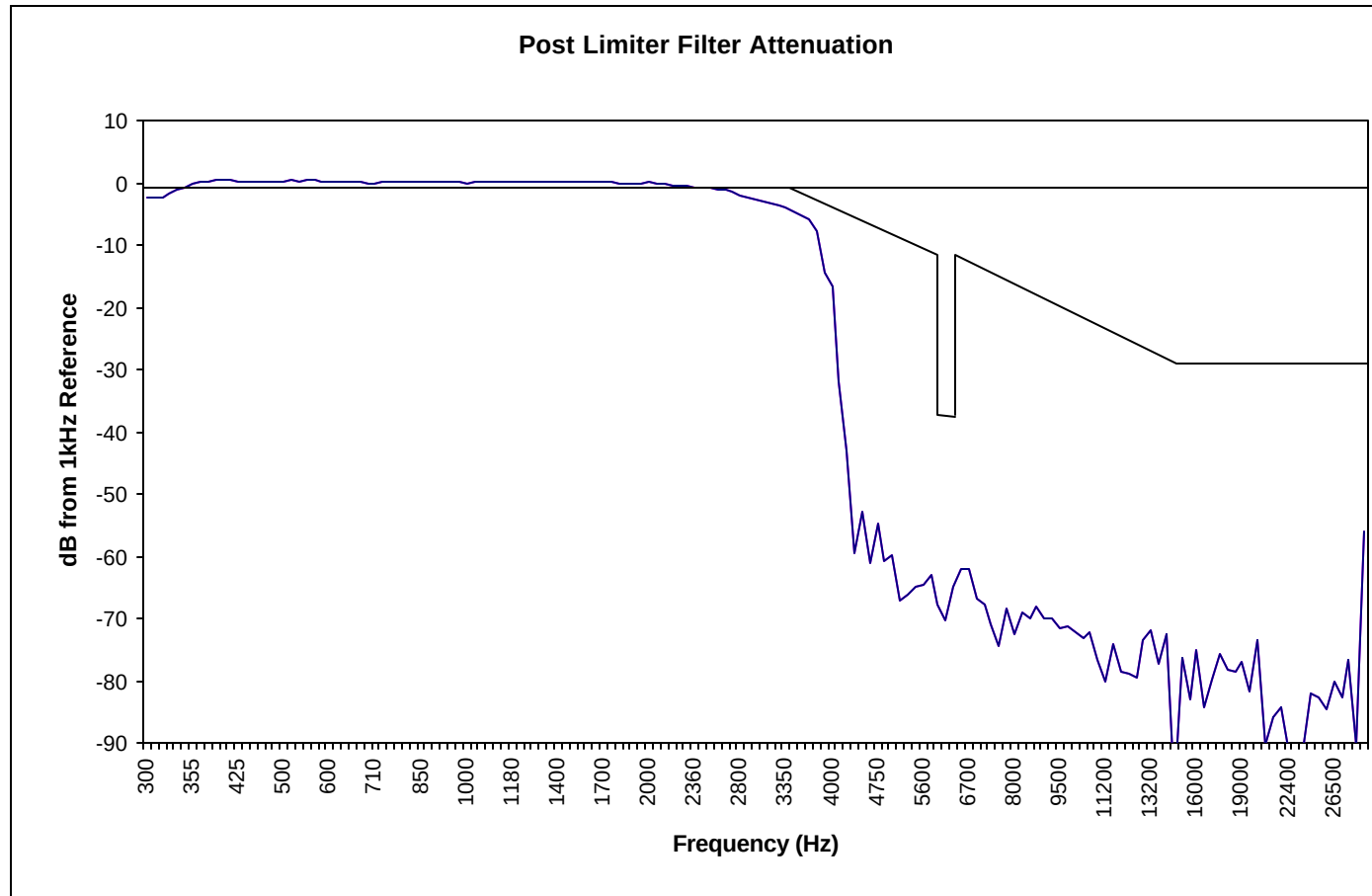


Exhibit 6B3



APPLICANT:
ERICSSON INC

FCC ID NO:
AXATR-387-A2

Exhibit 6B4

Modulation Limiting versus Frequency input as per 2.987 and 22.915

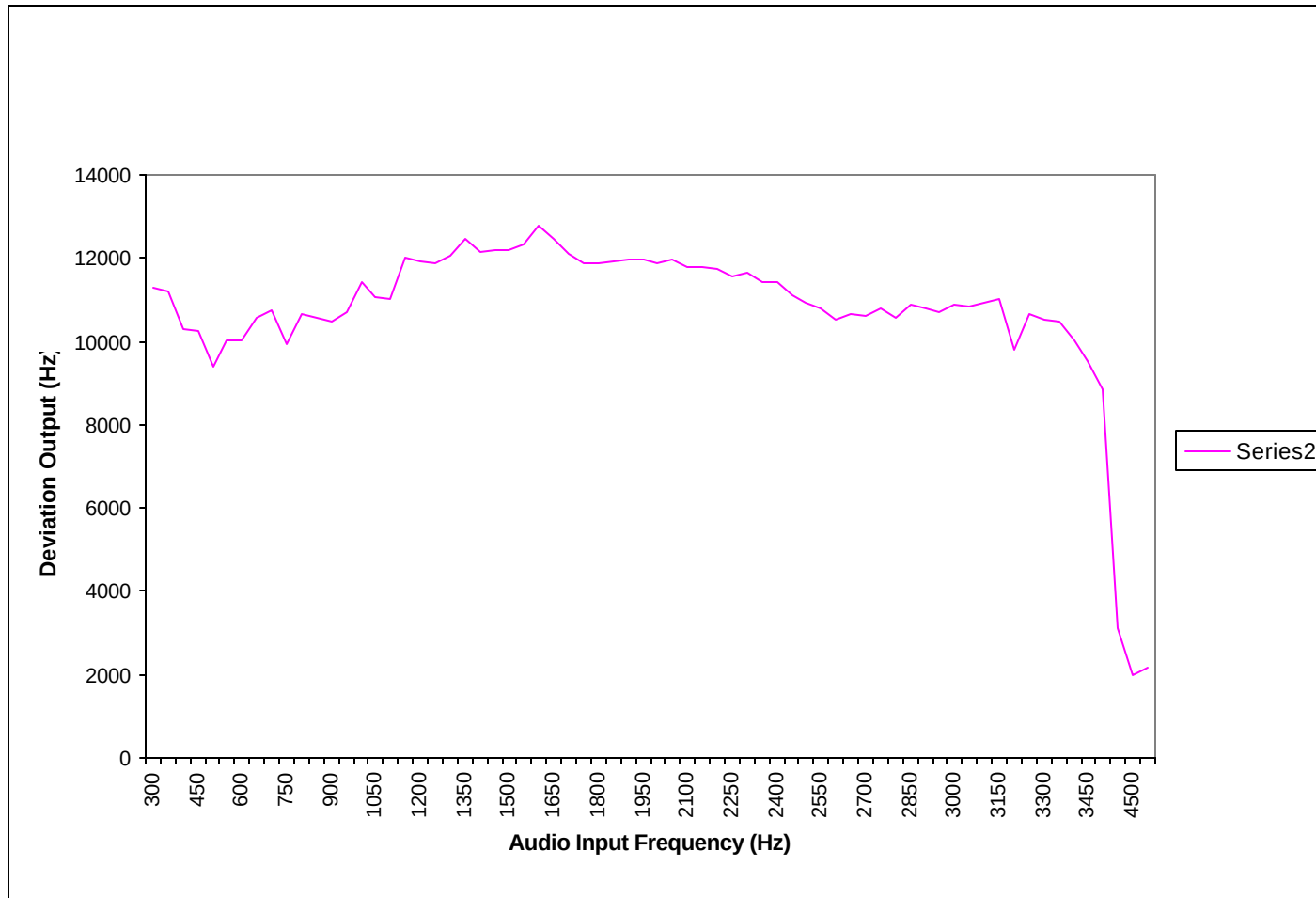
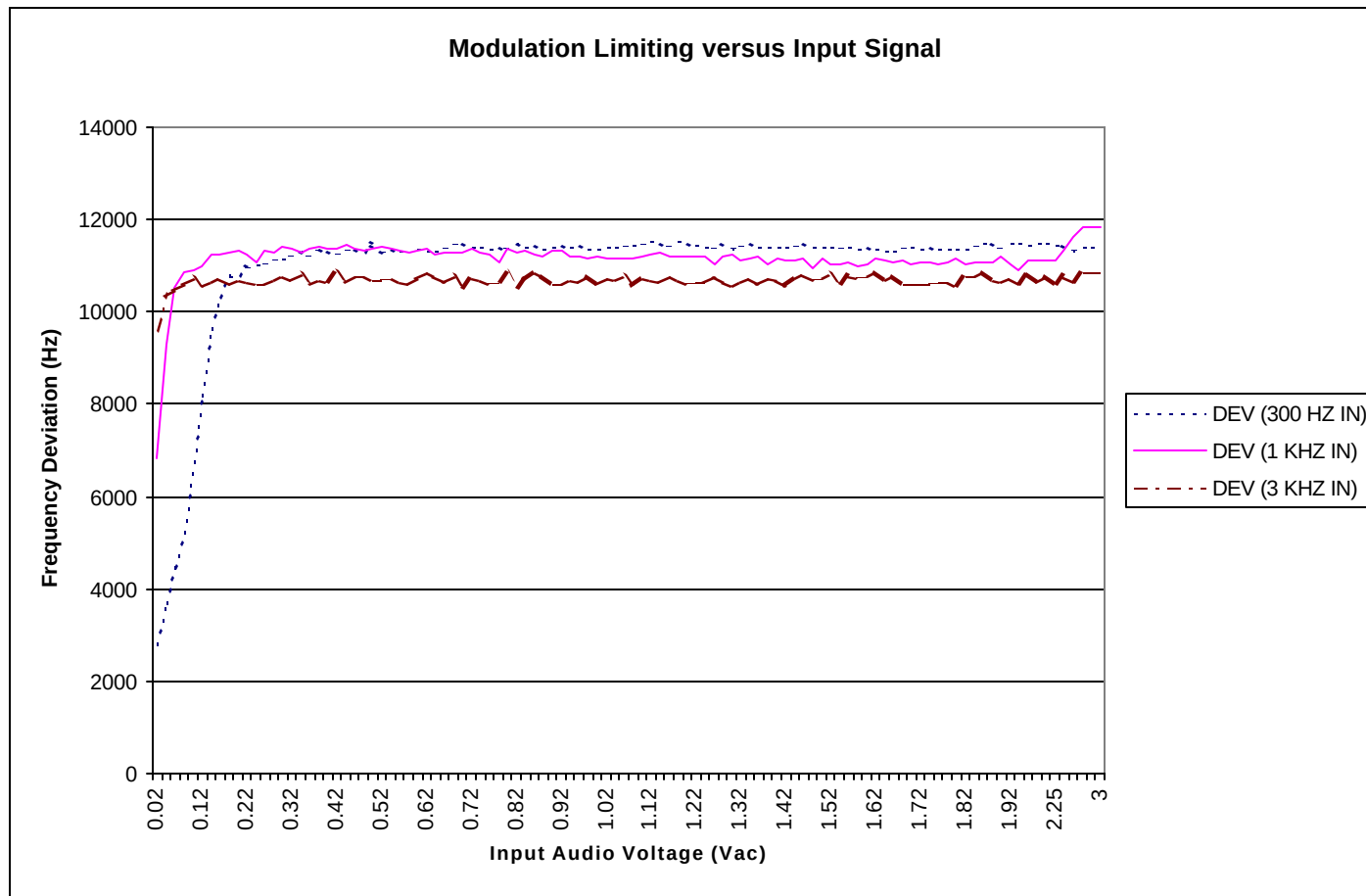


Exhibit 6B5



800 MHz : OCCUPIED BANDWIDTH

Per 2.989 (c), (1) (h) and 22.917 (d)(1) the exhibits presented show the modulations that co-exist in a cellular system:

<u>Exhibit #</u>	<u>Description</u>	<u>Power Level</u>
6C2	Unmodulated Carrier	0
6C3	SAT and Voice	0
6C4	SAT and Signal Tone	0
6C5	SAT and DTMF #3	0
6C6	SAT and 10kb/s Wideband Data 0	
6C7	Wideband Data 48.6 kb/s Data	0
6C8	Unmodulated Carrier	7
6C9	SAT and Voice	7
6C10	SAT and Signal Tone	7
6C11	SAT and DTMF #3	7
6C12	SAT and 10 kb/s Wideband Data	7
6C13	Wideband Data 48.6 kb/s Data	7

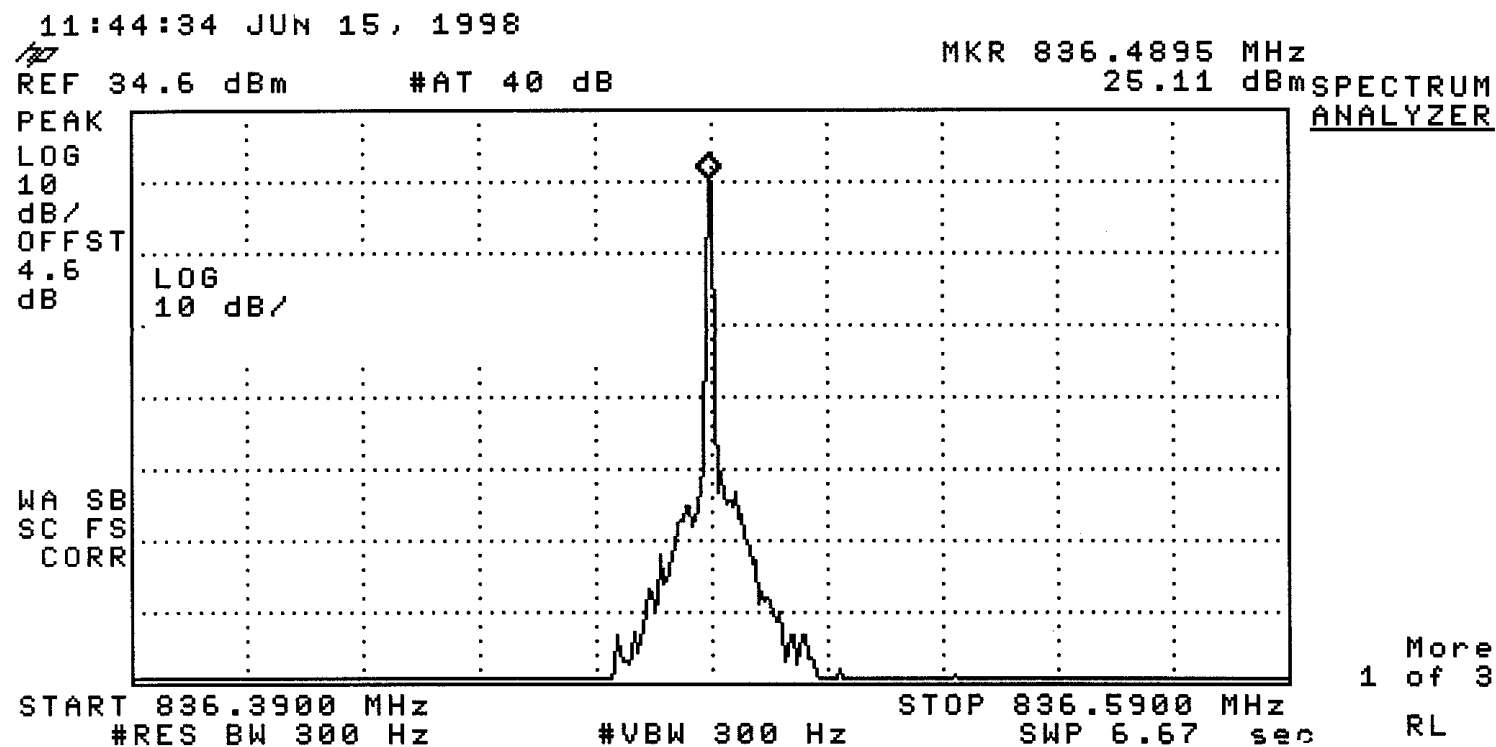
Note: The method of measuring occupied bandwidth of a US Digital Cellular signal is different from that of analog FM signal. The traditional method for specifying occupied bandwidth of a FM signal is to use a mask drawn over the spectral plot of the modulated signal.

A different method is employed for the US DAMPS system. This is described in the TIA IS137A document, section 3.4.1.2. The method used in the digital application is to measure average power within a 30KHz bandwidth corresponding to a channel bandwidth for the system. This measurement is used to determine and specify power in neighboring channels relative to the fundamental occupied channel (i.e.: The average power in the adjacent channels compared to the average power in the fundamental channel for specifying occupied bandwidth).

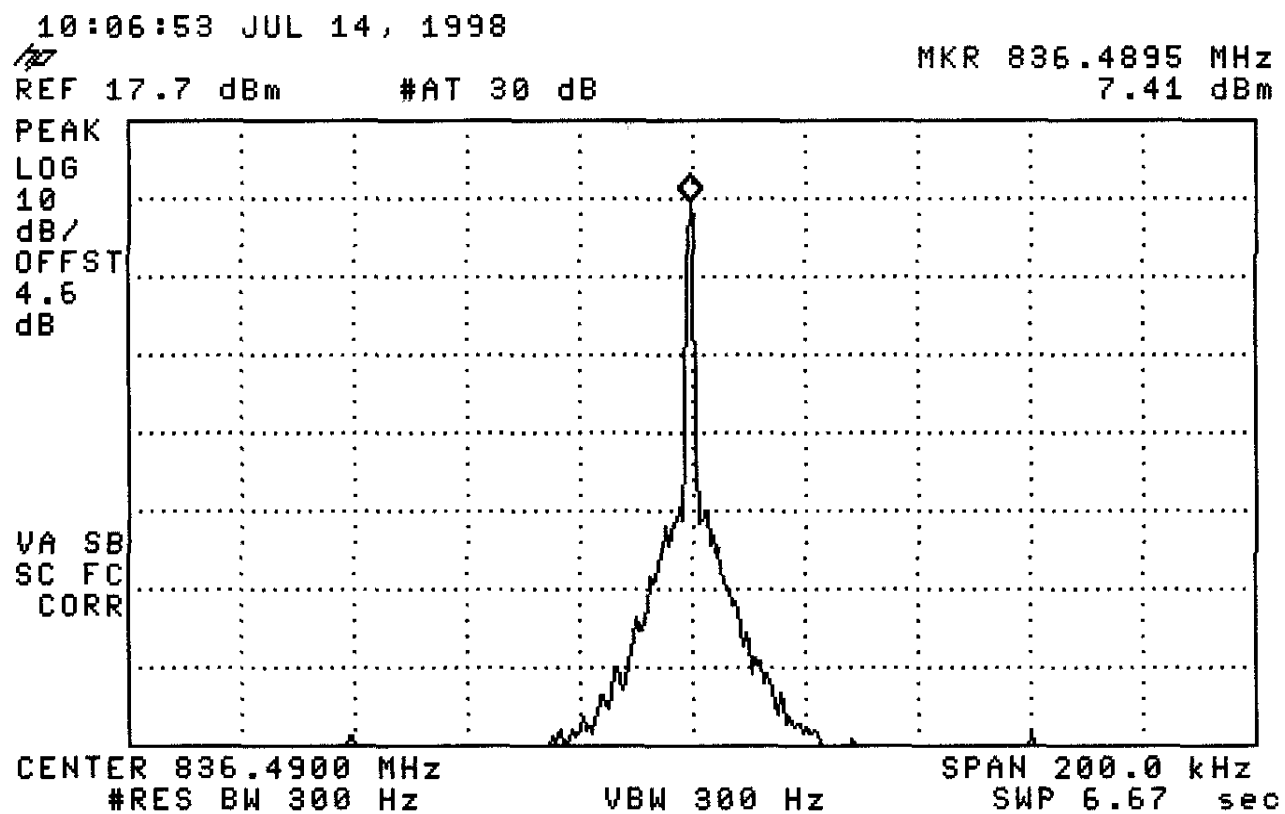
The power in each channel is an average of all the energy within the channel. This is less than peak levels within the channel due to the nature of an 'average' power measurement. This characteristic of measuring 'average' power prohibits the use of a spectral mask. The mask could only be drawn relative to the spectral peaks and would not give an indication of the average power as specified in IS137A, section 3.4.1.2. Consequently, the only way to accurately measure and specify occupied bandwidth of a US DAMPS signal is with special equipment designed to collect all energy within a specified bandwidth and display the average power of this energy. This cannot be done with a simple spectrum analyzer measurement as was traditionally possible for FM only signals.

These measurements were made per IS-137A using a HP 8953DT which includes the following equipment:

HP 8958A	Cellular Interface
HP 6623A	DC Power Supply
HP 8596E	Spectrum Analyzer
HP 437B	RF Power Meter
HP 8901B	Modulation Analyzer
HP 8903B	Audio Analyzer
Thermotron SM-8C	Temperature Chamber



Unmodulated Carrier. Power Level 0, Carrier Frequency 836.49 MHz, Carrier Power 25.11 dBm.



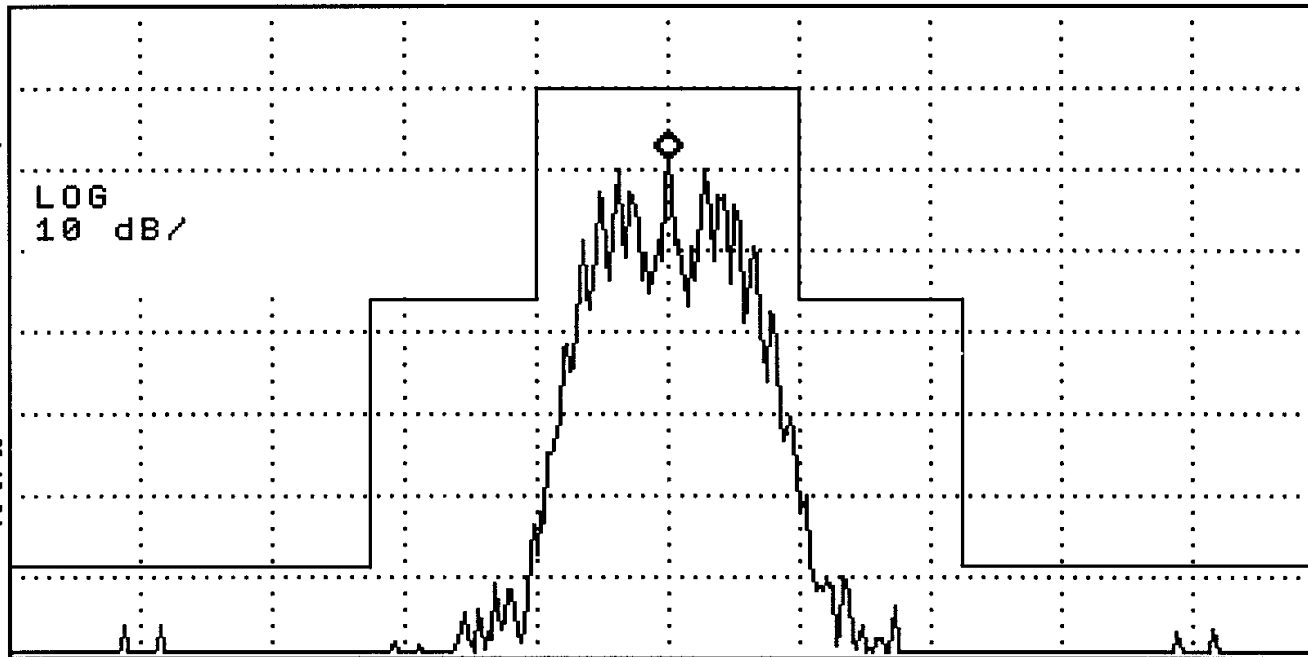
Unmodulated Carrier. Power Level 7, Carrier Frequency 836.49 MHz, Carrier Power 7.41 dBm.

11:49:15 JUN 15, 1998

REF 34.6 dBm #AT 40 dB

MKR 836.4900 MHz

15.71 dBm

SPECTRUM
ANALYZERPEAK
LOG
10
dB/
OFFST
4.6
dB

START 836.3900 MHz

#RES BW 300 Hz

#VBW 300 Hz

STOP 836.5900 MHz

SWP 6.67 sec

More
1 of 3
RT

SAT and Voice. Power Level 0, Carrier Frequency 836.49 MHz, Carrier Power 25.44 dBm. F3E Emissions Mask.

11:52:59 JUN 15, 1998

/

REF 34.6 dBm

#AT 40 dB

MKR 836.4900 MHz

24.00 dBm

SPECTRUM
ANALYZER

PEAK

LOG

10

dB/

OFFST

4.6

dB

LOG
10 dB/WA SB
SC FS
CORR

START 836.3900 MHz

#RES BW 300 Hz

#VBW 300 Hz

STOP 836.5900 MHz

SWP 6.67 sec

More
1 of 3
RT

SAT and Signalling Tone. Power Level 0, Carrier Frequency 836.49 MHz, Carrier Power 25.2 dBm. F3E Emissions Mask.

11:56:49 JUN 15, 1998

~~Hz~~

REF 34.6 dBm

#AT 40 dB

MKR 836.4815 MHz

15.94 dBm

SPECTRUM

PEAK

LOG

10

dB/

OFFST

4.6

dB

LOG
10 dB/WA SB
SC FS
CORR

START 836.3900 MHz

#RES BW 300 Hz

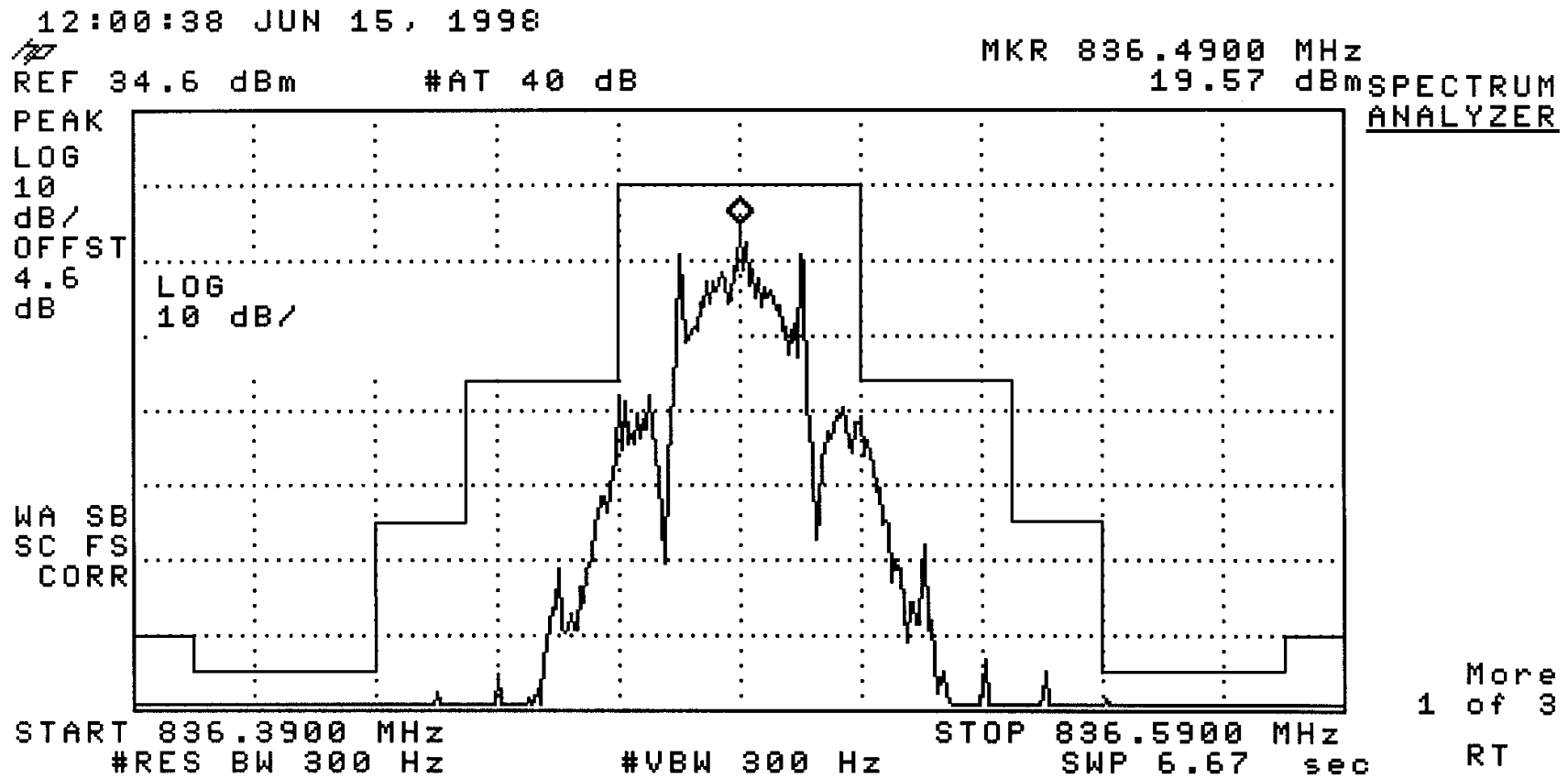
#VBW 300 Hz

STOP 836.5900 MHz

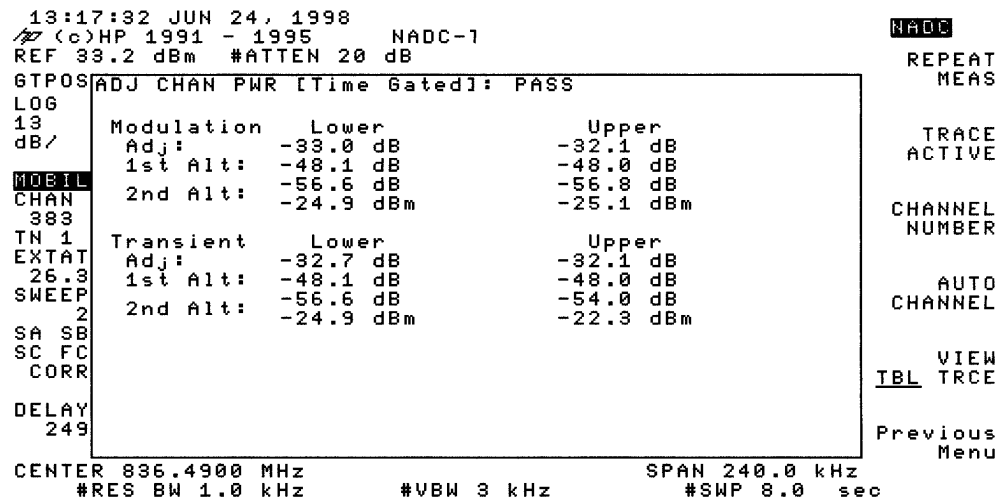
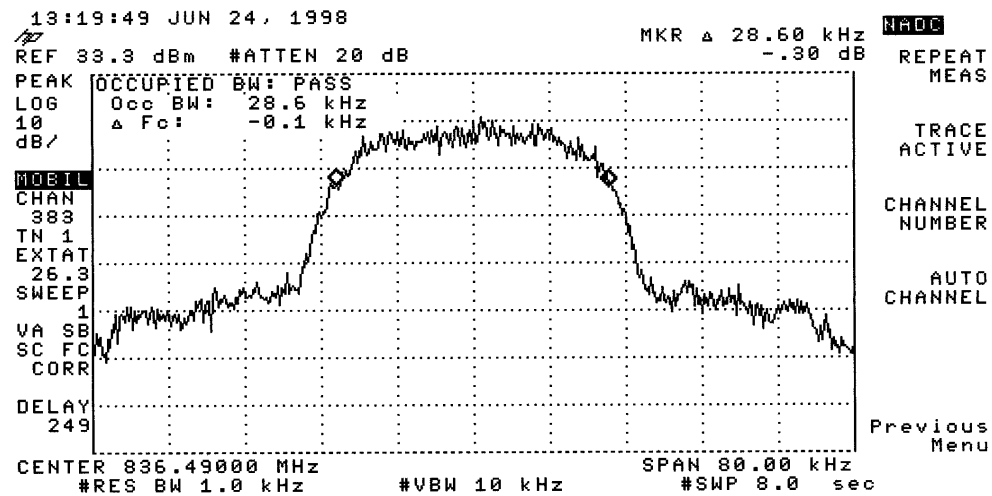
SWP 6.67 sec

More
1 of 3
RT

SAT and DTMF #3. Power Level 0, Carrier Frequency 836.49 MHz, Carrier Power 25.63 dBm. F3E Emissions Mask



SAT and Wideband 10 kb/S Digital data. Power Level 0, Carrier Frequency 836.49 MHz, Carrier Power 25.4 dBm. F1D Emissions Mask.



Wideband Data 48.6 kb/s switched (Data). Power Level 0, Carrier Frequency 836.49 MHz, Carrier Power 25.2 dBm.
Plots showing occupied bandwidth of 28.6 kHz and alternate and adjacent power

12:08:09 JUN 15, 1998

/

REF 17.7 dBm

#AT 30 dB

MKR 836.4980 MHz

-.85 dBm

SPECTRUM
ANALYZER

PEAK

LOG

10

dB/

OFFST

4.6

dB

LOG

10 dB/

WA SB
SC FS
CORR

START 836.3900 MHz

#RES BW 300 Hz

#VBW 300 Hz

STOP 836.5900 MHz

SWP 6.67 sec

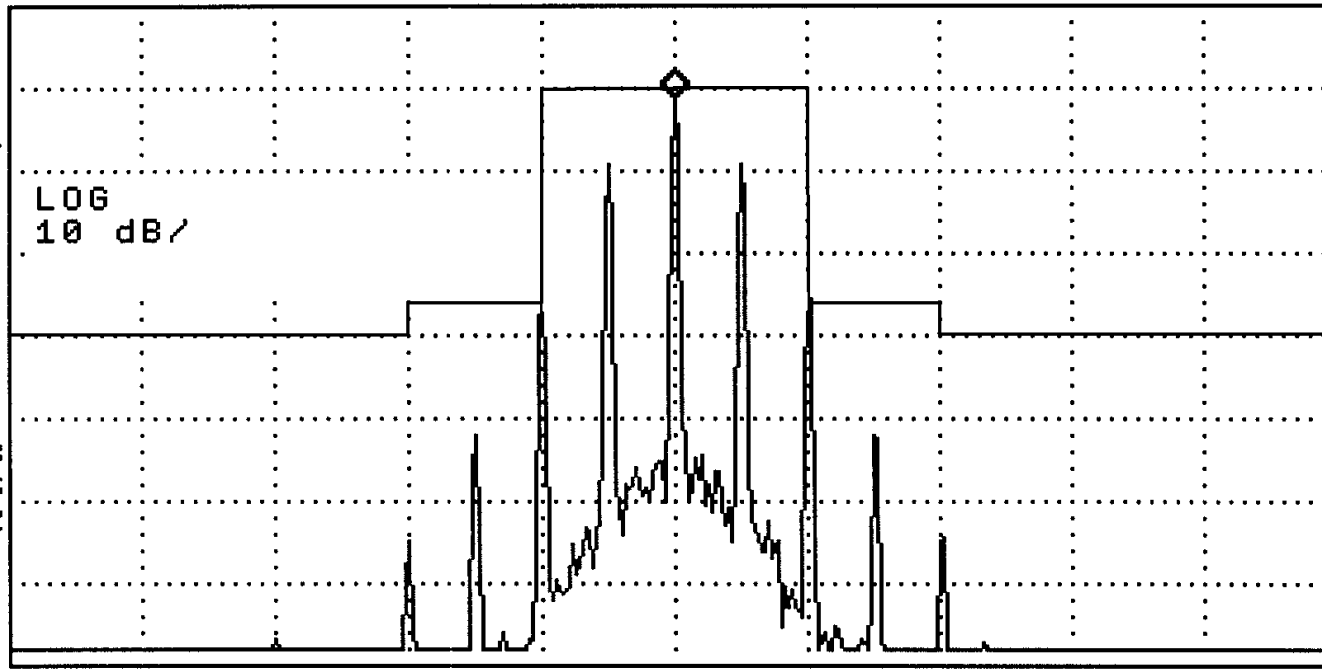
More
1 of 3
RT

SAT and Voice. Power Level 7, Carrier Frequency 836.49 MHz, Carrier Power 7.76 dBm. F3E Emissions Mask.

12:11:59 JUN 15, 1998

REF 17.8 dBm #AT 30 dB

MKR 836.4900 MHz

6.43 dBm SPECTRUM
ANALYZERPEAK
LOG
10
dB/
OFFST
4.6
dBSTART 836.3900 MHz
#RES BW 300 Hz

#VBW 300 Hz

STOP 836.5900 MHz
SWP 6.67 sec1 More
of 3
RT

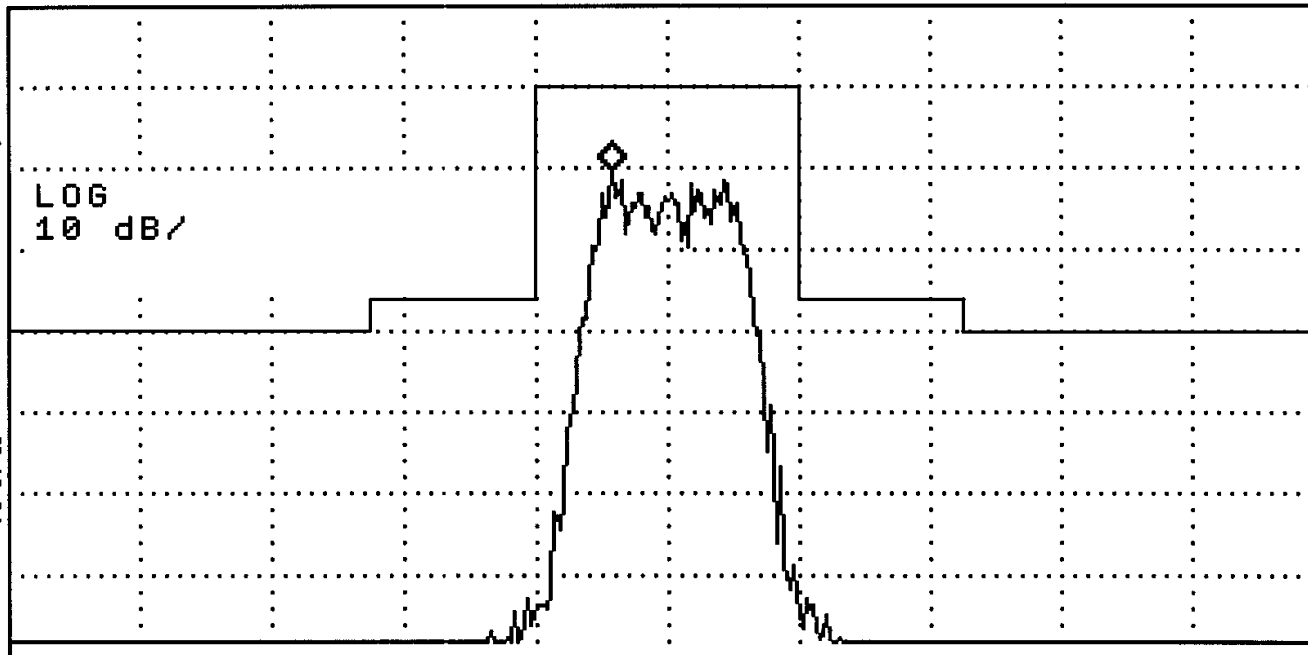
SAT and Signalling Tone. Power Level 7, Carrier Frequency 836.49 MHz, Carrier Power 7.76 dBm. F3E Emissions Mask.

12:15:55 JUN 15, 1998

REF 17.8 dBm #AT 30 dB

MKR 836.4815 MHz

-2.53 dBm

SPECTRUM
ANALYZERPEAK
LOG
10
dB/
OFFST
4.6
dB

START 836.3900 MHz

#RES BW 300 Hz

#VBW 300 Hz

STOP 836.5900 MHz

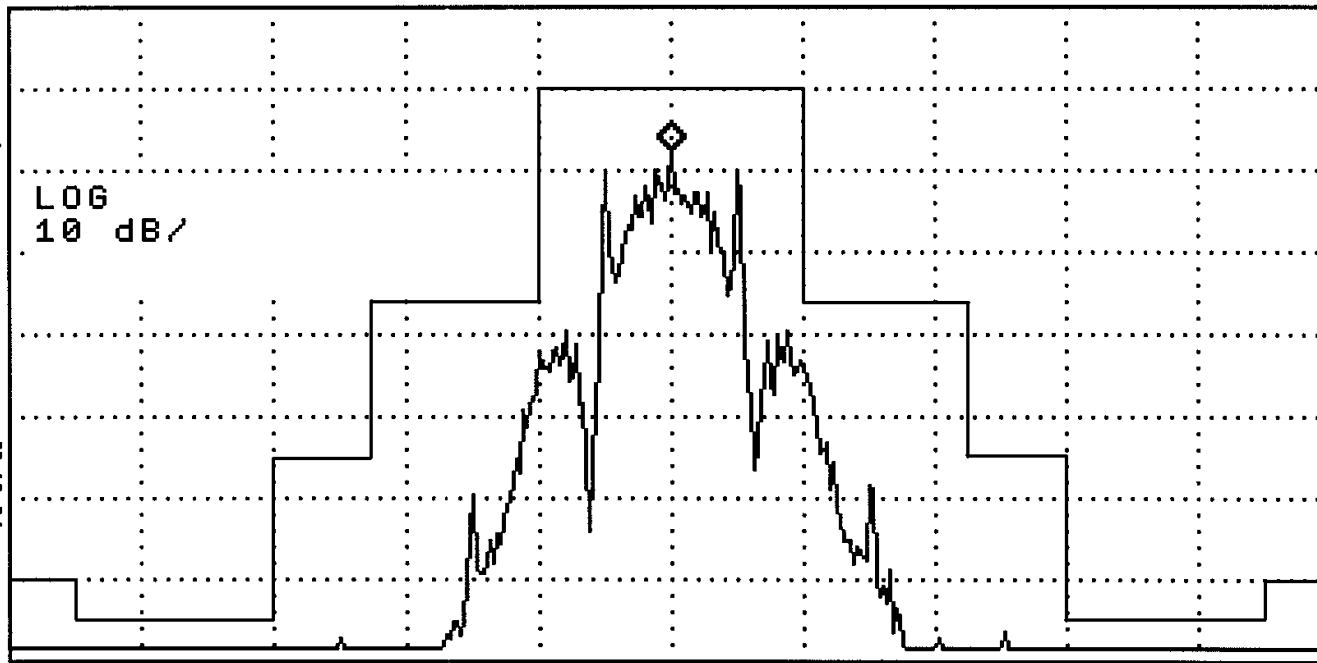
SWP 6.67 sec

More
1 of 3
RT

SAT and DTMF #3. Power Level 7, Carrier Frequency 836.49 MHz, Carrier Power 7.76 dBm. F3E Emissions Mask.

12:19:50 JUN 15, 1998

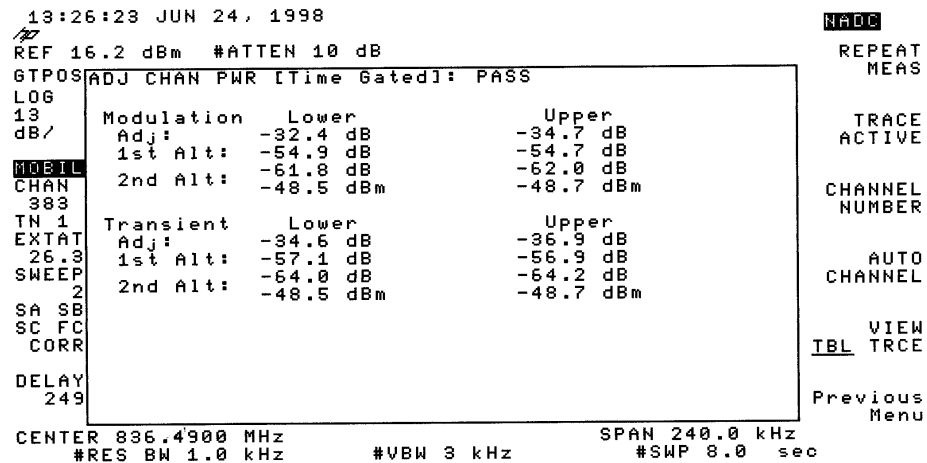
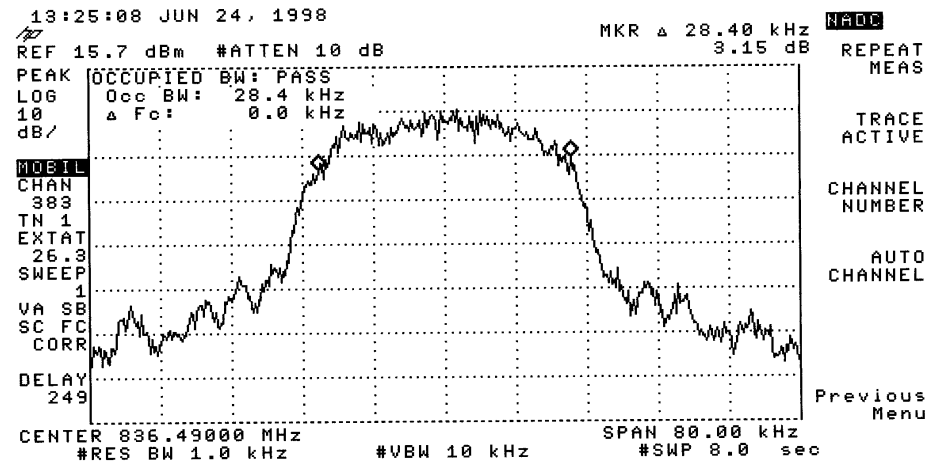
REF 17.8 dBm #AT 30 dB

MKR 836.4900 MHz
.38 dBmSPECTRUM
ANALYZERPEAK
LOG
10
dB/
OFFST
4.6
dBSTART 836.3900 MHz
#RES BW 300 Hz

#VBW 300 Hz

STOP 836.5900 MHz
SWP 6.67 secMore
1 of 3
RT

SAT and Wideband 10 kb/S Digital data. Power Level 7, Carrier Frequency 836.49 MHz, Carrier Power 7.76 dBm. F1D Emissions Mask.



Wideband Data 48.6 kb/s switched (Data). Power Level 7, Carrier Frequency 836.49 MHz, Carrier Power 7.76 dBm.
Plots showing occupied bandwidth of 28.4 kHz and alternate and adjacent power.

800 MHz : SPURIOUS EMISSIONS (CONDUCTED)

Per 2.991 Spurious emissions at the antenna terminals (conducted) when properly loaded with an appropriate artificial antenna were measured per IS-137A.

<u>EXHIBIT #</u>	<u>FREQUENCY</u>	<u>Output Power</u>
6D2	824.04	.0004
6D3	824.04	.4
6D4	848.97	.0004
6D5	848.97	.4

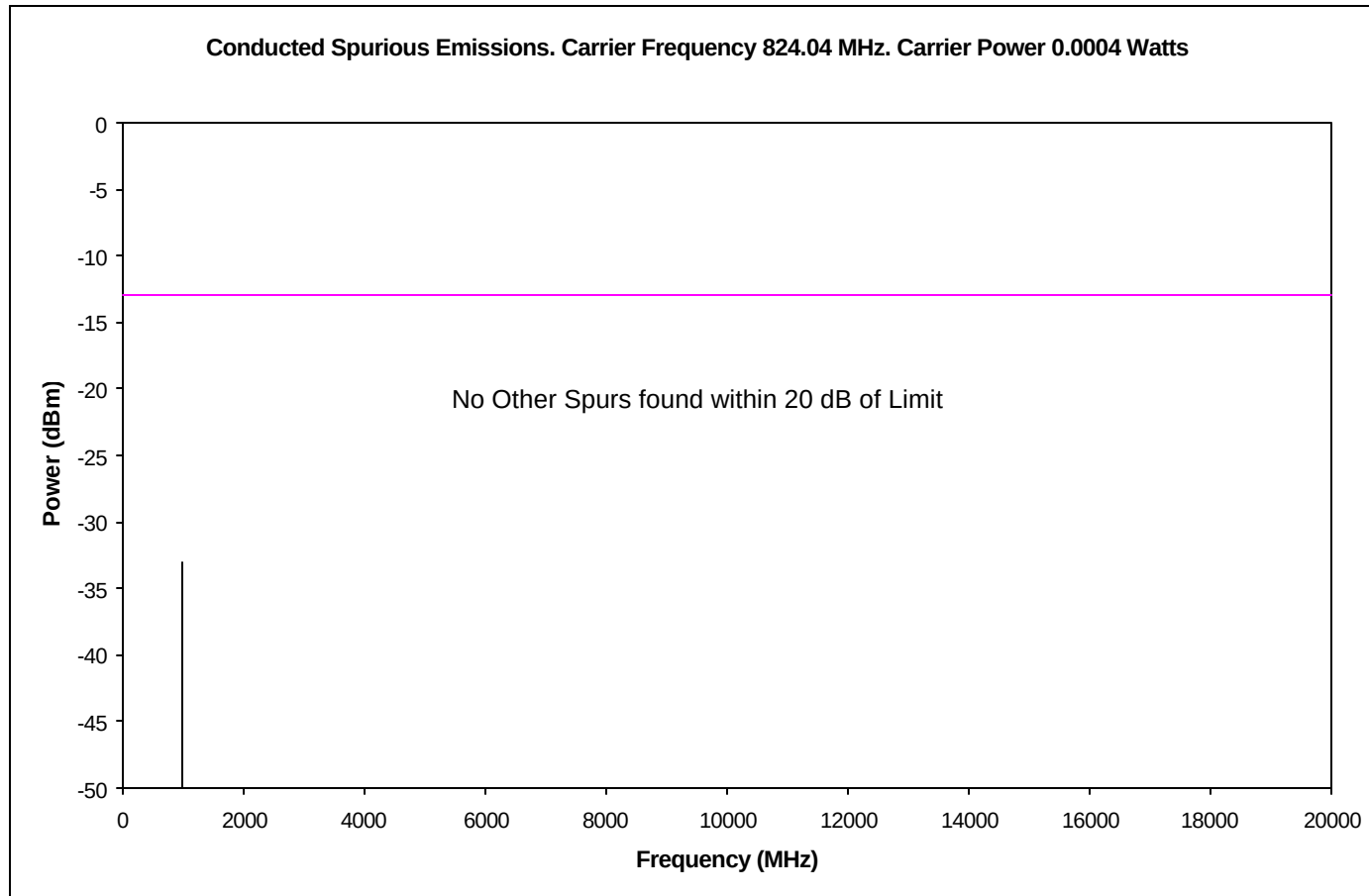
The measurements were made per IS-137A using the following equipment:

Hp 8958A	Cellular Interface
Hp 8901B	Modulation Analyzer
Hp 8559A	Spectrum Analyzer

APPLICANT:
ERICSSON INC

FCC ID NO:
AXATR-387-A2

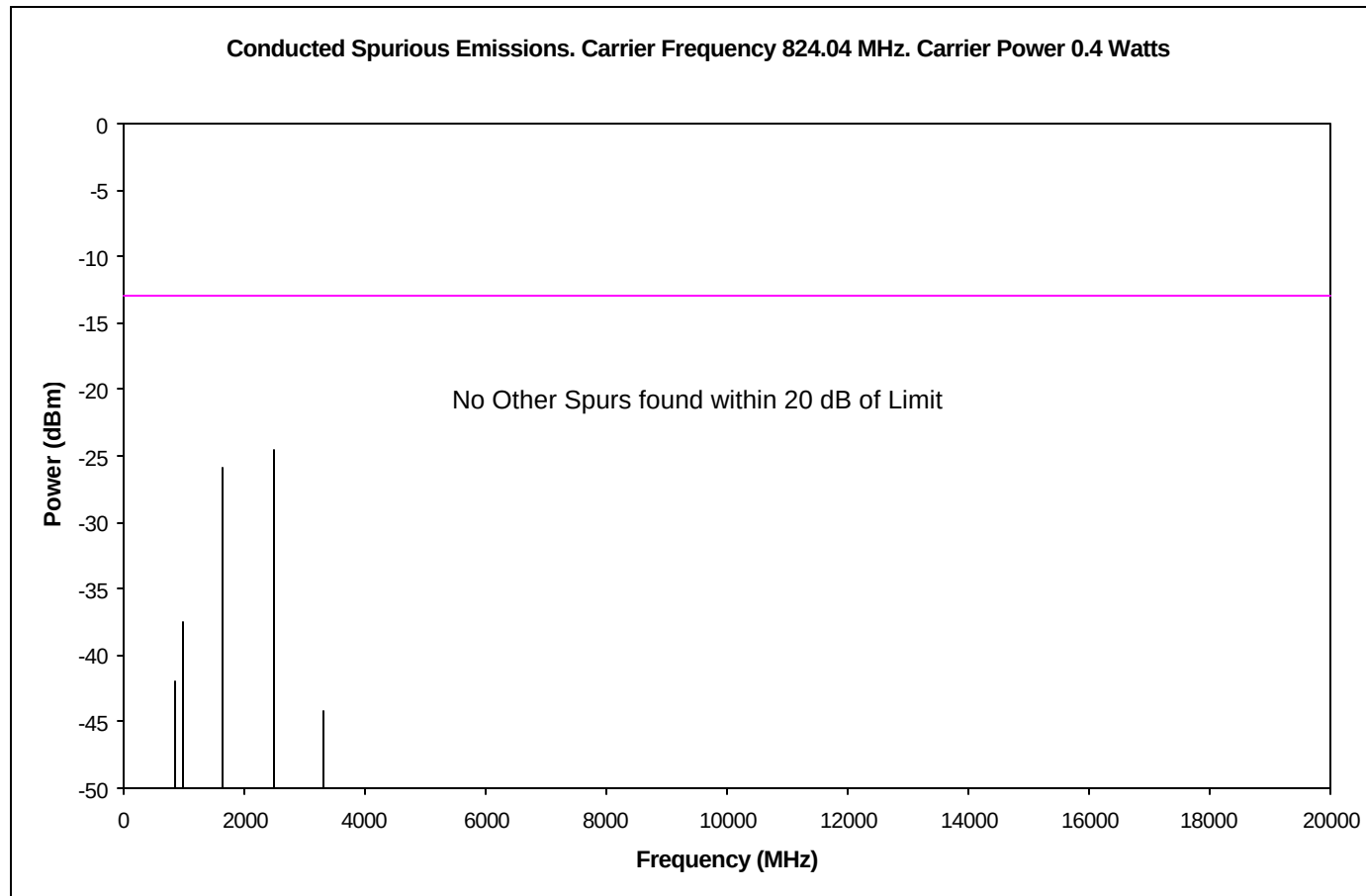
Exhibit 6D2



APPLICANT:
ERICSSON INC

FCC ID NO:
AXATR-387-A2

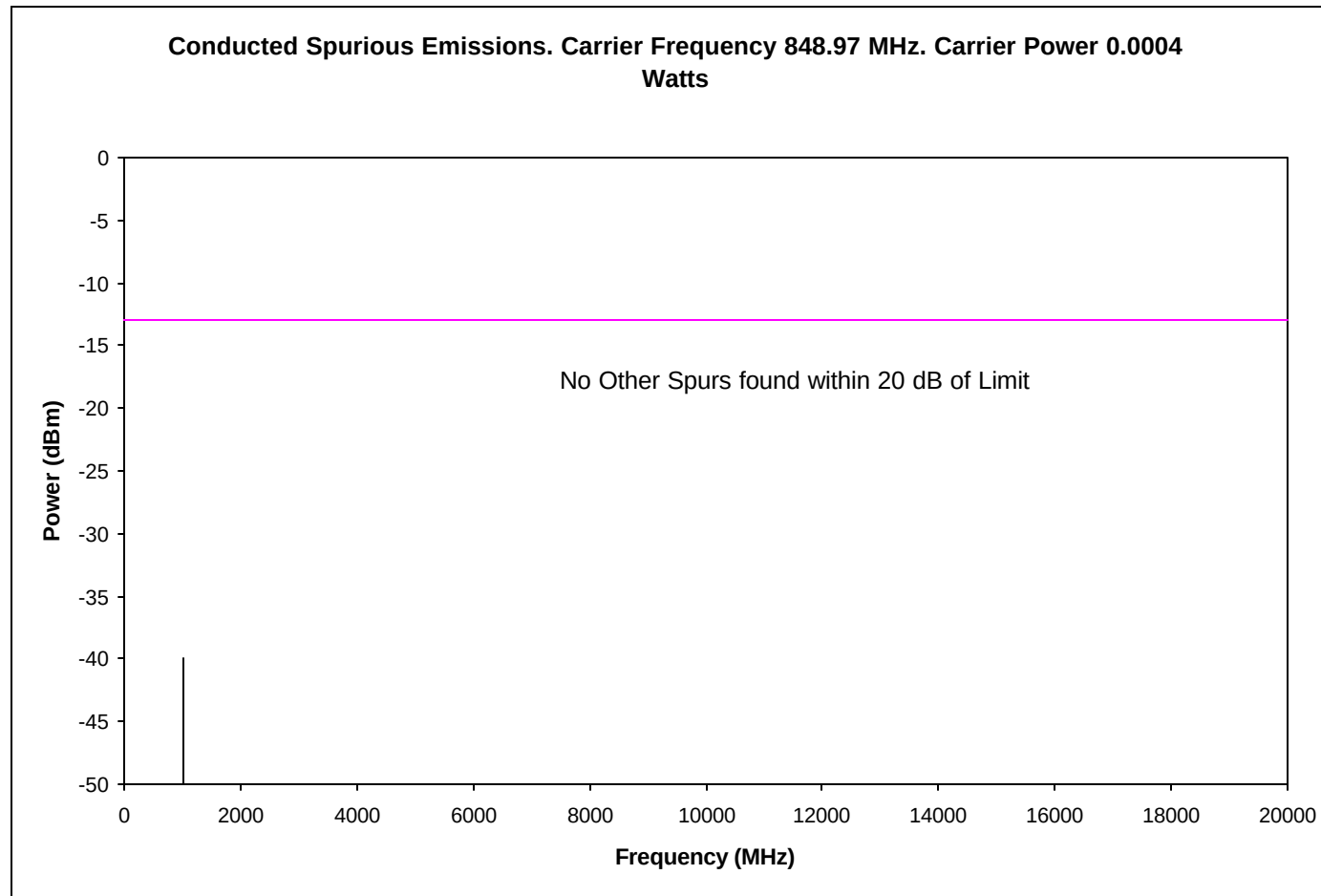
Exhibit 6D3



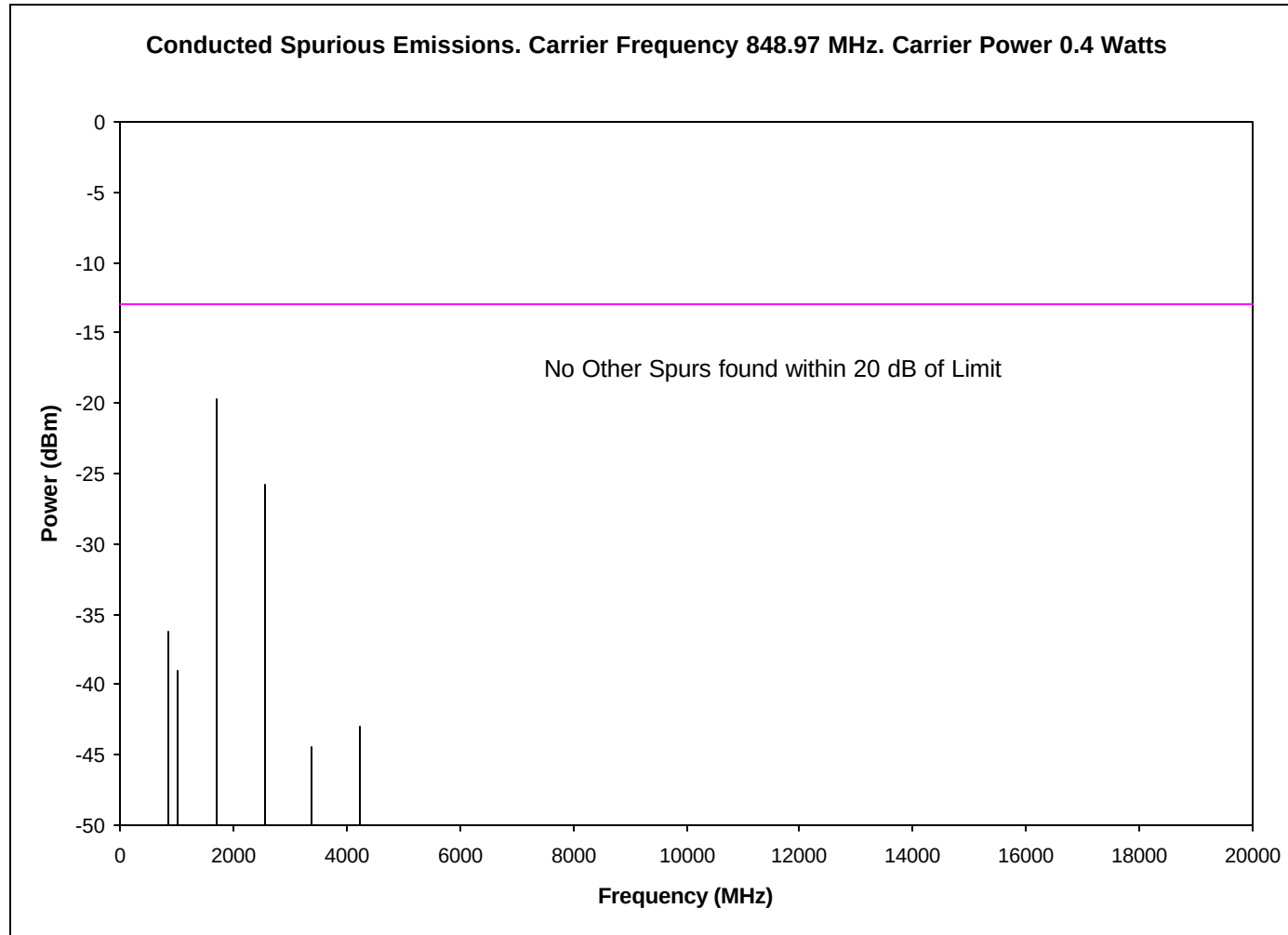
APPLICANT:
ERICSSON INC

FCC ID NO:
AXATR-387-A2

Exhibit 6D4



Ehibit 6D5



800 MHz: SPURIOUS EMISSIONS (Radiated)

Per 2.993 and 22.917 (e), field strength of spurious radiation was measured on Ericsson's 3 meter site in Lynchburg, VA. The site and equipment are described in the site description and attenuation measurements for the Ericsson Inc. 3 meter radiation site #2 filed with the FCC in Columbia, MD, on June 5, 1997. The measurement procedure is per EIA IS-19B but done on a 3 meter test site. Results are shown on the following Exhibits.

Note: The Spectrum was examined through the 10th harmonic of the carrier. All measurements were taken and recorded on the following plots, 11G – J. Measurements recorded are Peak measurements.

<u>EXHIBIT</u>	<u>FREQUENCY</u>	<u>OUTPUT POWER</u>
6E2	824.04	.4
6E3	824.04	.0004
6E4	848.97	.4
6E5	848.97	.0004

The measurements were made per IS-137A using the following equipment:

Hewlett Packard 8566B Spectrum Analyzer
Hewlett Packard 8559A Spectrum Analyzer

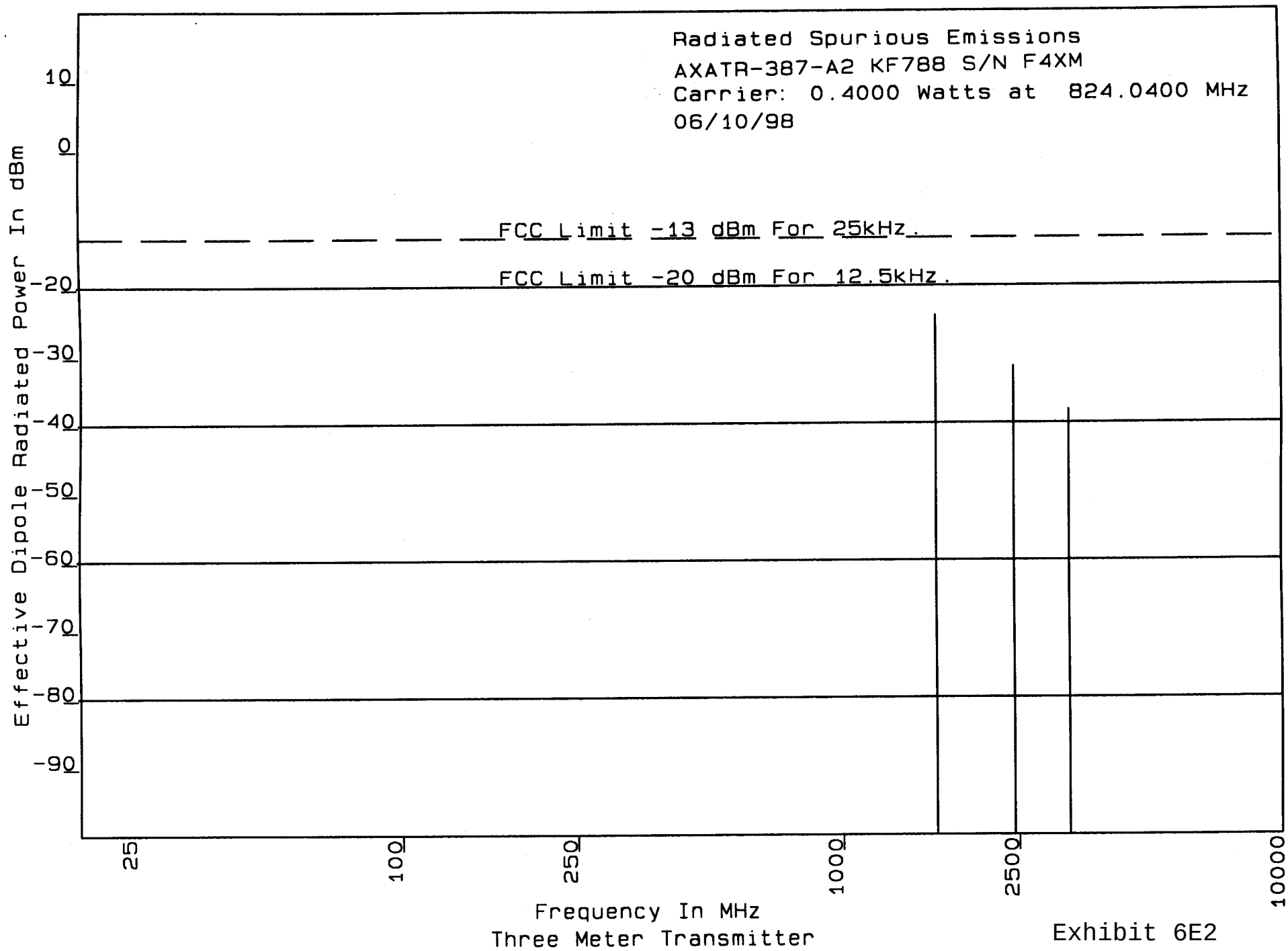


Exhibit 6E2

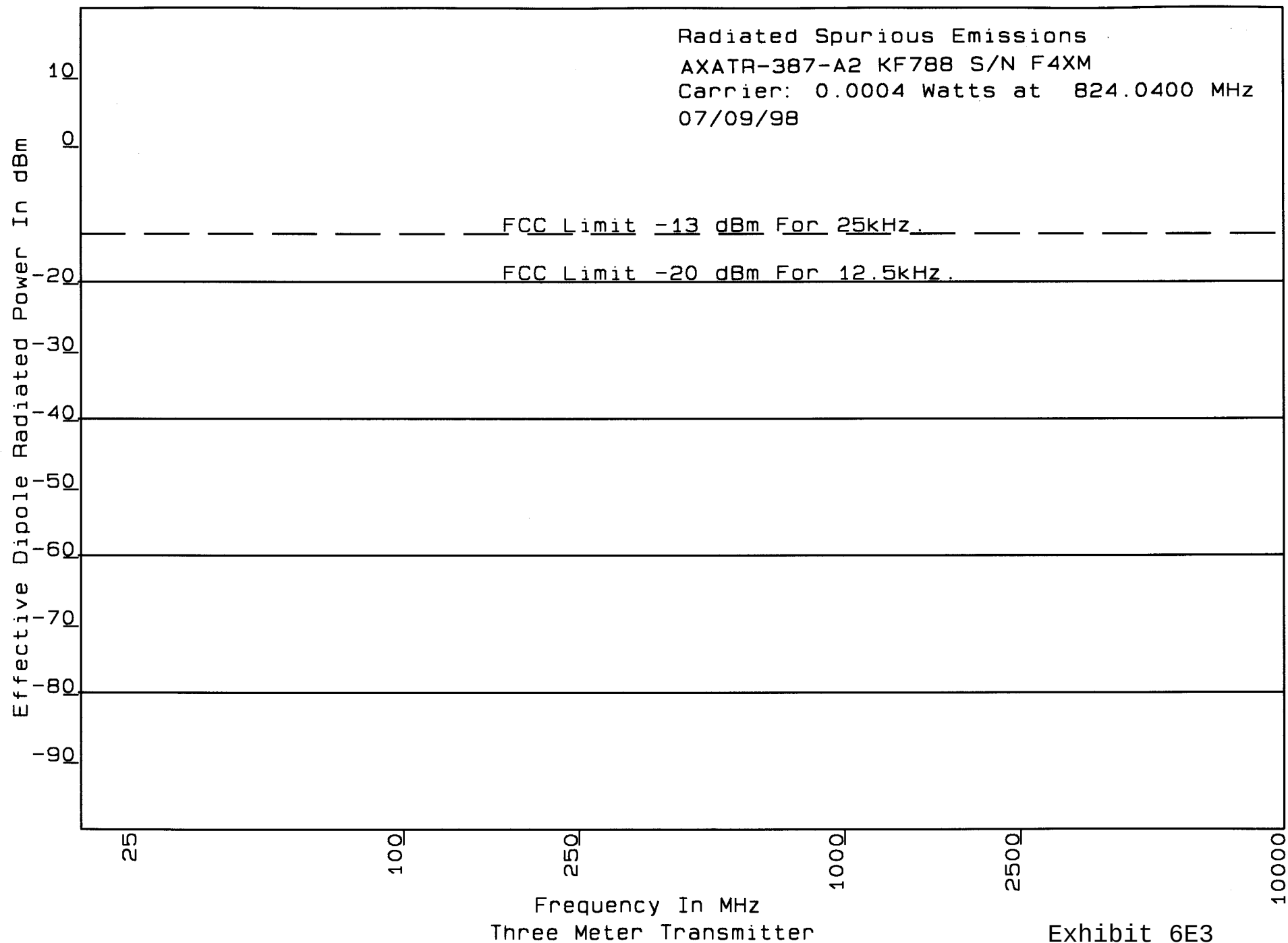
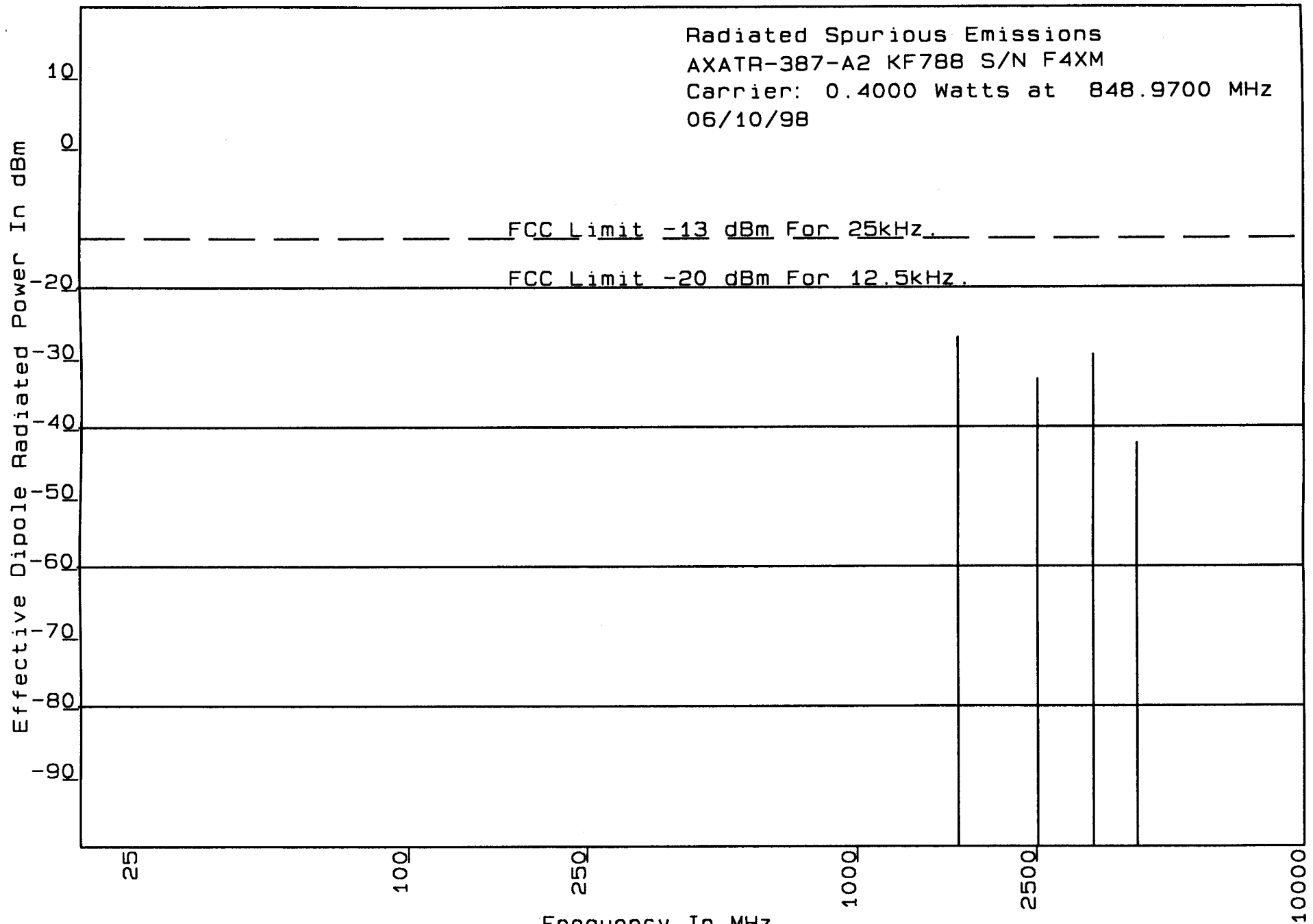
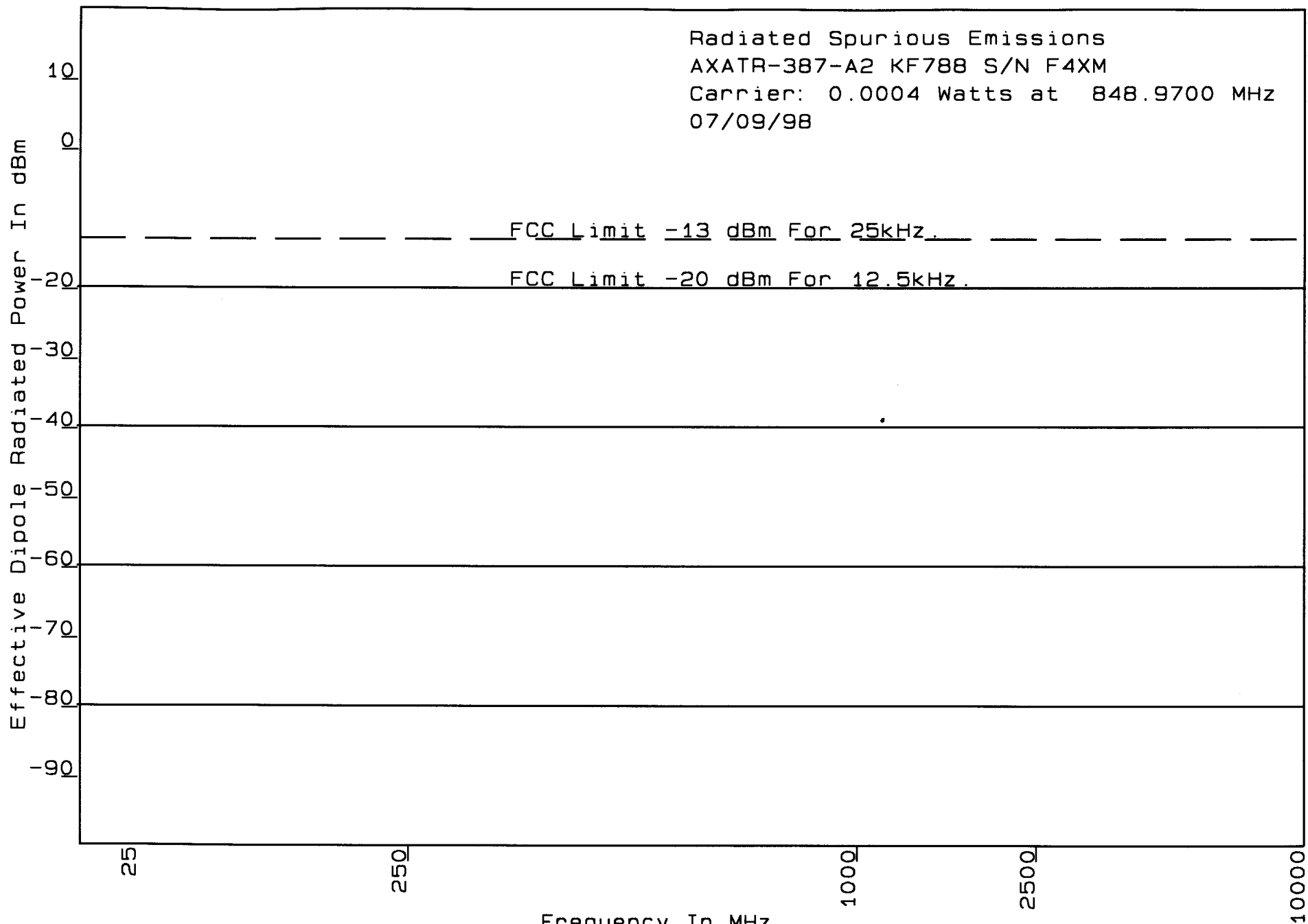


Exhibit 6E3



Three Meter Transmitter

Exhibit 6E4



Three Meter Transmitter

Exhibit 6E5

800 MHz : FREQUENCY STABILITY

Per 2.995 (a)(1),(b),(d)(1)

Per 2.995 (a)(1),(b),(d)(1), variation of output frequency as a result of Varying either voltage or temperature is shown in Exhibit 6F2 and 6F3 respectively.

<u>EXHIBIT #</u>	<u>Voltage</u>	<u>Temperature</u>
6F2	4.3 to 5.3 Volts (varied)	+25 C
6F3	4.8 Volts	Varied

Note: The manufacturers rated voltage for the battery is 4.3 VDC to 5.3 VDC.

The measurements were made per IS-137A using a Hewlett Packard 8953DT North American Dual Mode Cellular Test System which includes the following equipment:

HP8958A Cellular Interface
HP 6623A DC Power Supply
HP 8596E Spectrum Analyzer
HP 437B RF Power Meter
HP 8901B Modulation Analyzer
HP 8903B Audio Analyzer
Thermotron SM-8C Temperature Chamber

Exhibit 6F2

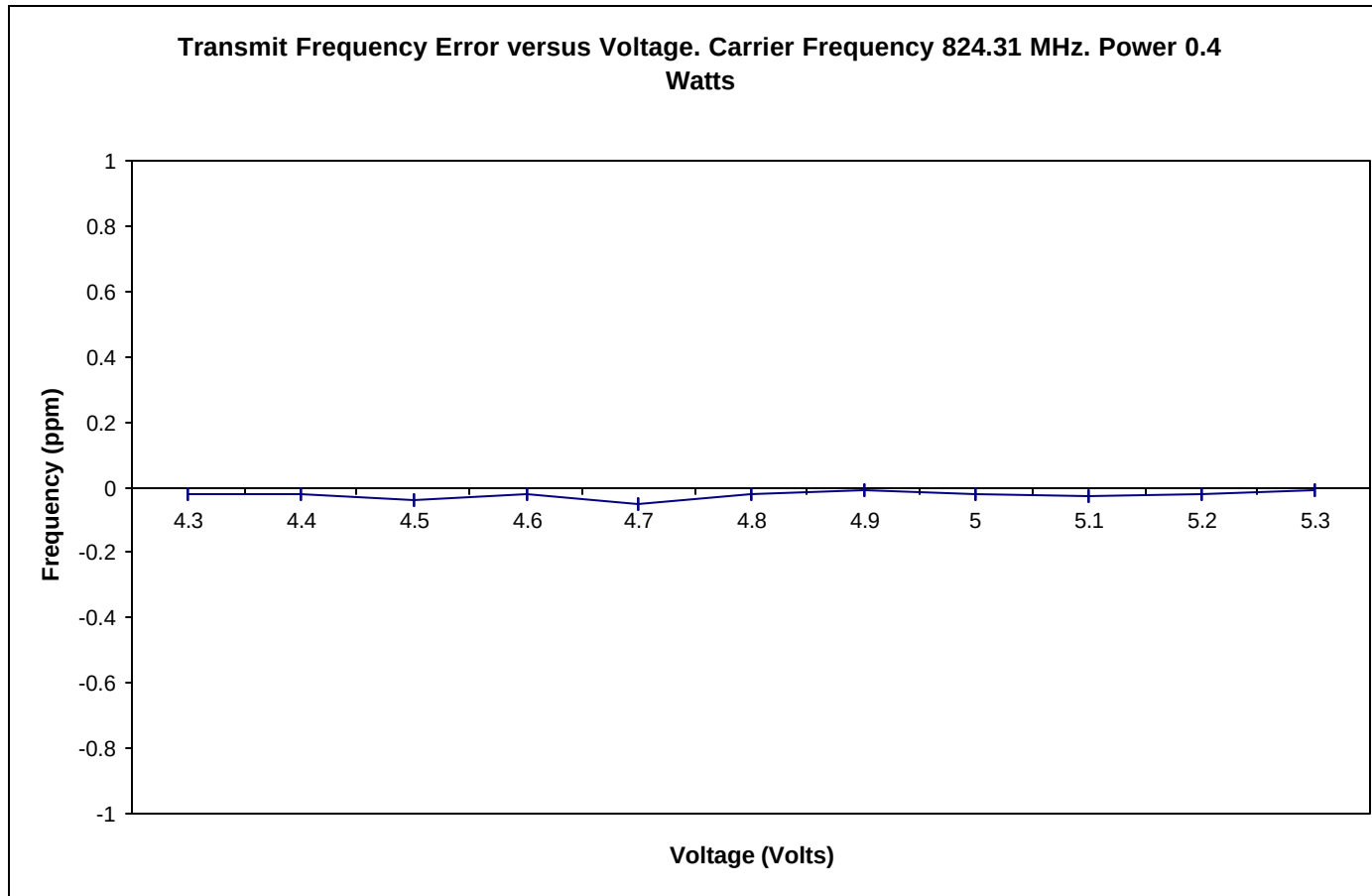
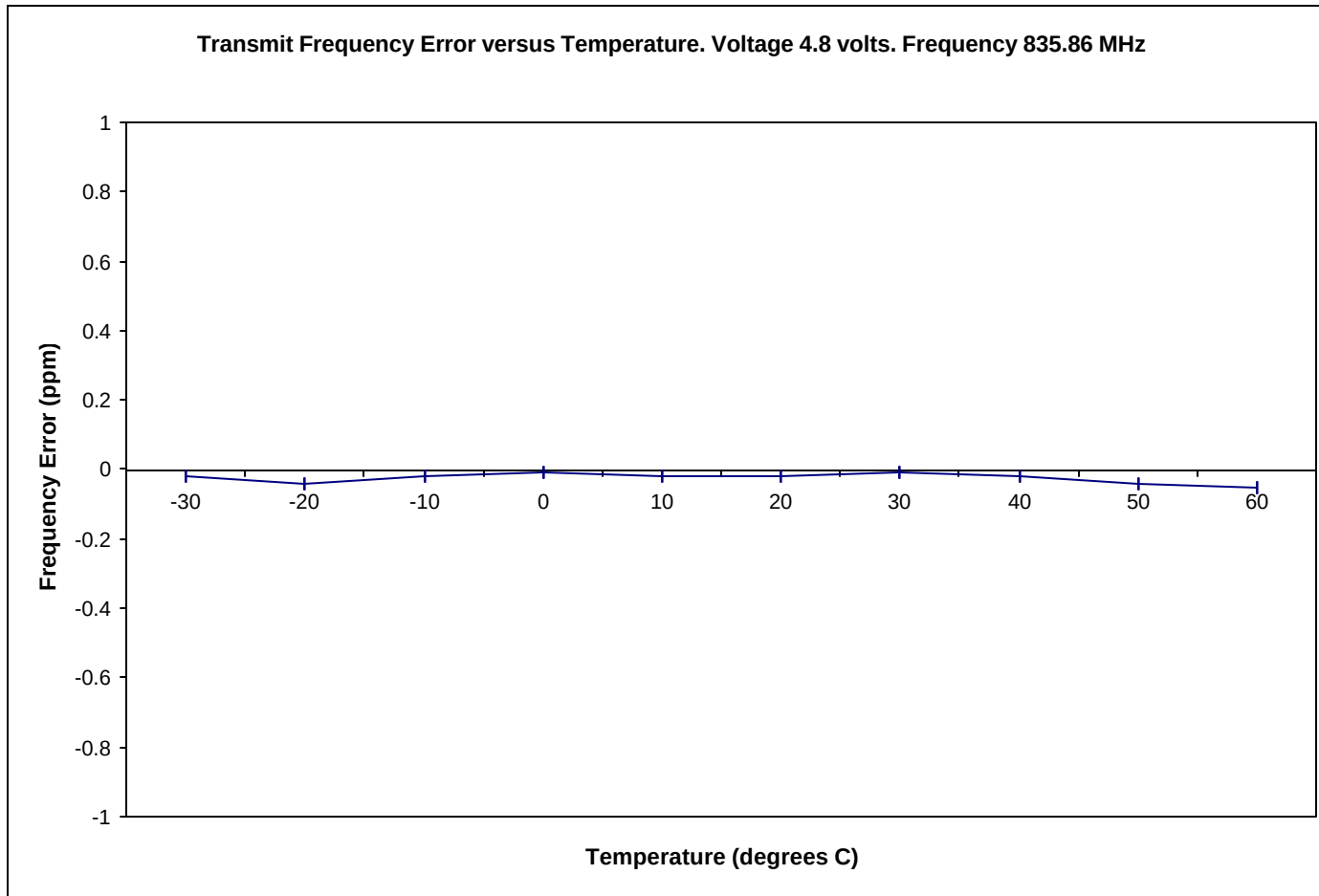


Exhibit 6F3



1900 MHz: RF POWER OUTPUT

Para. 2.985 (a)

The RF Power measured at the output terminals (antenna connector) is plotted against supply voltage variations at the highest levels.

EXHIBIT	SUPPLY VOLTAGE (V)	TEMPERATURE	POWER LEVEL	TX FREQ	Output (Watts)
6G2	4.8Volts	Varied	0	Mid Band	.4
6G3	Varied	+ 25 C	0	Mid Band	.4

Output power was measured conducted, via a standard antenna connector.

The measurements were made per IS137A using a Hewlett Packard 8922 M System Simulator with the following equipment:

Hewlett Packard 8922 M System Simulator
Hewlett Packard 8593 E Spectrum Analyzer
Hewlett Packard 8566 B Spectrum Analyzer

ESTIMATED ISOTROPIC RADIATED POWER

The following is a description of the substitution method used to obtain accurate EIRP readings at the carrier fundamental frequency:

- (1) EUT measurements are made at 3 m using calibrated antennas and equipment with known cable losses.
- (2) A peak measurement is made by raising and lowering the antenna and rotating the EUT 360 degrees. Horizontal and Vertical Polarization data is recorded.
- (3) A generator and dipole antenna are then substituted for the EUT. The dipole antenna is a half-wave dipole. If a dipole antenna cannot be used, then the designated antenna is referenced to a dipole antenna.
- (4) Measurements are made through the dipole antenna at known power levels to determine the system calibration factors at a given frequency.
- (5) At frequencies where no calibration data is taken, the value is interpolated between the closest data point above and below the transmit frequency. Calibration data is taken with a half-wave dipole antenna.

Measurements at a distance of 3 m from the source at the highest power level setting:

Frequency (MHz)	Rated Output Power (W)	EIRP (dBm)
1879.98	0.40	24.36

Exhibit 6G2

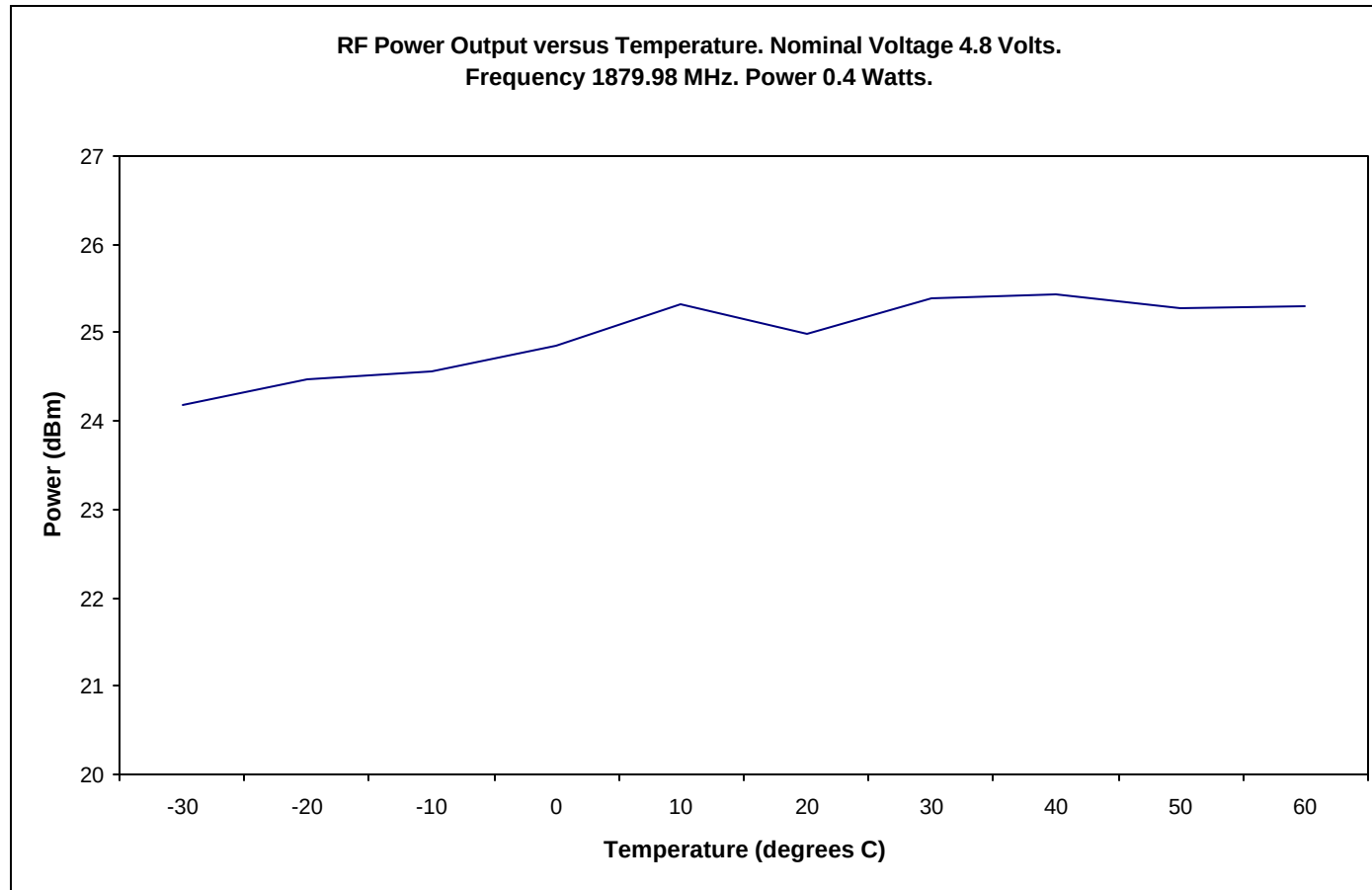
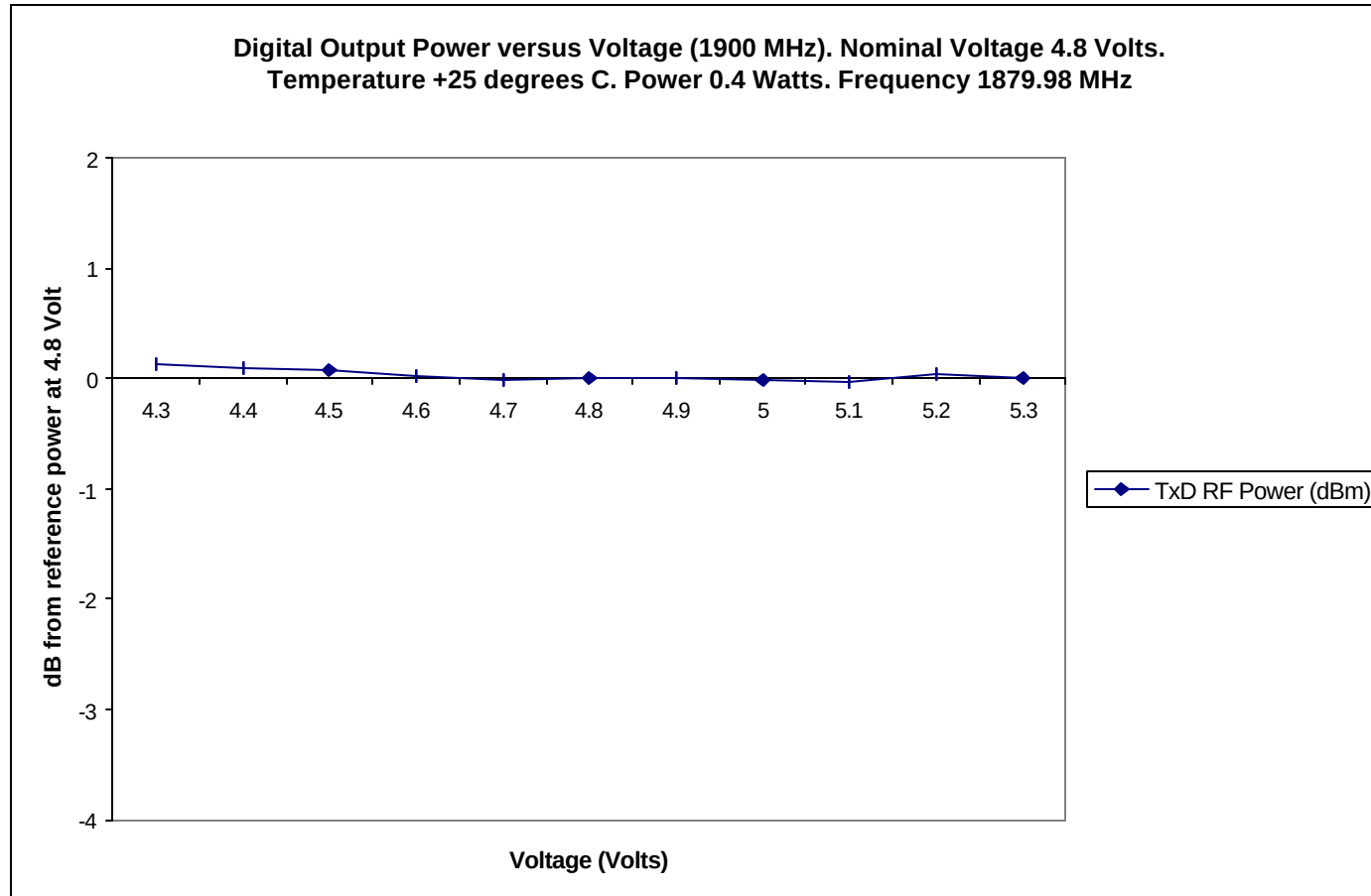


Exhibit 6G3



800/1900 MHz: MODULATION CHARACTERISTICS

Definition

The transceiver shall be capable of generating $\pi/4$ shifted differentially encoded quadrature phase shift keying signals. The transmitted signal is given by:

$$S(t) = \sum_n g(t-nT) \cos(\phi_n) \cos(\omega_c t) - \sum_n g(t-nT) \sin(\phi_n) \sin(\omega_c t)$$

where $g(t)$ is the pulse shaping function that corresponds to a square root raised cosine baseband filter with roll off factor of 0.35, ω_c is the radian carrier frequency, T is the symbol period, and ϕ_n is the absolute phase corresponding to the n th symbol interval. The symbol rate ($1/T$) is 24.3 k symbols /sec.

The modulation accuracy requirement is specified by setting limits on the RMS difference between the actual transmitted signal waveform and the ideal signal waveform. The ideal waveform is derived mathematically from the specification of modulation shown above. The specified requirement is error vector magnitude.

For this measurement, frequency accuracy shall meet the requirements of Section 3.1 prior to measurement.

The average carrier frequency error is the difference between the average carrier frequency of the actual transmitted waveform and the average signal waveform carrier frequency.

The ideal modulation is defined above. The definition is such that, observing an ideal transmitter through an ideal root raised-cosine receiver filter at the correct sampling instants one symbol apart would result in the sequence of values given by:

$$S(k) = S(k-1)e^{j\{\pi/4 + B(k)*\pi/2\}}$$

where $B(k) = 0, 1, 2, 3$ according to the following table:

Xk	Yk	B(k)
0	0	0
0	1	1
1	1	2
1	0	3

In the forward channel, $S(k)$ forms part of a continuous data stream. In the reverse channel, the transit bursts from the mobile are truncated by power up and down ramping. In this case, $S(6)$ is the first sample that enters into demodulation, which yields the first two information bits by comparing $S(6)$ with $S(7)$. The last information bits lie in the comparison of $S(162)$ and $S(161)$.

The ideal transmit and receive filters in cascade form a raised cosine Nyquist filter having an impulse response going through zero at symbol period intervals, so there is no inter-symbol interference at the ideal sampling points. The ideal signal sampler therefore, take on one of the eight values defined above, at the output of the receive filter.

This section defines how the output signal from a transmitter is to be evaluated against the ideal signal.

Let $Z(k)$ be the complex vectors produced by observing the real transmitter through an ideal measuring receive filter at instants k , one symbol period apart. With $S(k)$ defined as above, the transmitter is modeled as:

$$Z(k) = [C_0 + C_1 * [S(k) + E(k)]] * W^k$$

where:

$$k = n/24.3\text{KHz}$$

$$dr = jda$$

$W = e^{dr}$ accounts for both a frequency offset giving "da" radians per symbol phase rotation and an amplitude changes of "dr" nepers per symbol:

C_0 is a constant origin offset representing quadrature modulator imbalance,
 C_1 is a complex constant representing the arbitrary phase and output power of the transmitter, and
 $E(k)$ is the residual vector error on sample $S(k)$

The sum square vector error is then:

$$\sum_{k=\text{MIN}}^{k=\text{MAX}} |E(k)|^2 \quad \sum_{k=\text{MIN}}^{k=\text{MAX}} |[Z(k) * W^{-C_0/C_1} - S(k)]|^2$$

C_0 , C_1 and W shall be chosen to minimize this expression and are then used to compute the individual vector errors $E(k)$ on each symbol. The symbol timing phase of the receiver output samples used to compute the vector error shall also be chosen to give the lowest value.

The values of MAX and MIN for the reverse channel (mobile station transmitter) are:

$$\begin{aligned} \text{MIN} &= 6 \\ \text{MAX} &= 162 \end{aligned}$$

The RMS vector error is then computed as the square root of the sum-square vector divided by the number of symbols in the slot, (157 in the reverse direction).

Method of Measurement

Connect the mobile station to the Standard Test Source and Modulation Accuracy Equipment. Modulate the Standard Test Source with pseudo-random Data Field bits. The mobile station shall transpond the Data Field bits using the TDMAON command. Use the Modulation Accuracy Measurement Equipment to measure the modulation accuracy of the mobile station.

Minimum Standard

The RMS vector error in any burst shall be less than 12.5%. In addition, the normalized error vector magnitude during the first 10 symbols (20 bits) of a burst following the ramp-up, must have an RMS value of less than 25% when averaged over 10 bursts within a 1 minute interval. The minimum standard for frequency offset is specified in section 3.1.2.2.3 of IS 137. The origin offset in any burst shall be less than -20 dBc.

1900 MHz: OCCUPIED BANDWIDTH

Per 2.989 (c, l, h) the exhibits presented show the modulations that have to exist in a 1900 MHz Cellular System.

All the exhibits listed below are plots where the modulation condition is Psuedorandom Data (48.6 kb/s switched), operating in the DAMPS (TDMA) mode. All plots were taken while transmitting at Power Level 0. Any frequency span not covered at the exhibits below was found to be unaffected by the transmitter/modulation.

EXHIBIT

Lower Channel (Channel 2)

Normal bursted operation. Data rate 48.6 kb/s, Output power 0.4 Watts., 1850.04 MHz.

612 1 MHz Resolution Bandwidth reference plot.

613 Emission Bandwidth

614 1 MHz span, Center Frequency 1849.99 MHz.

Upper Channel (Channel 1998)

Normal bursted operation. Data rate 48.6 kb/s, Output power 0.4 Watts, 1850.04 MHz.

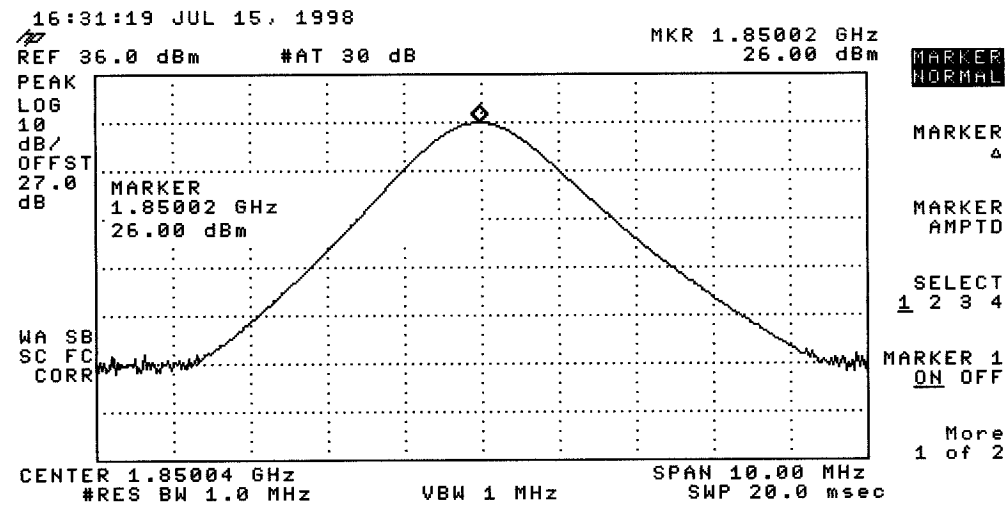
615 1 MHz Resolution Bandwidth reference plot.

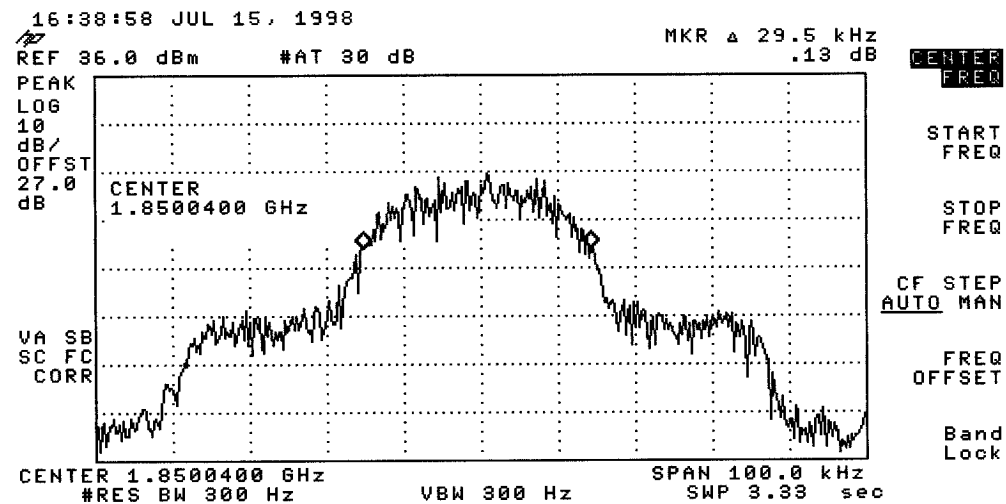
616 Emission Bandwidth

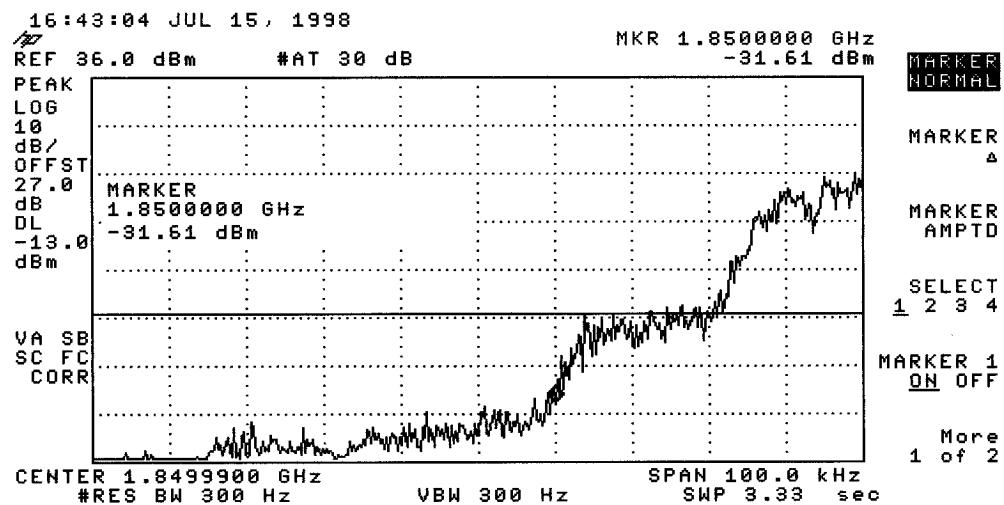
617 1 MHz span, Center Frequency 1909.97 MHz.

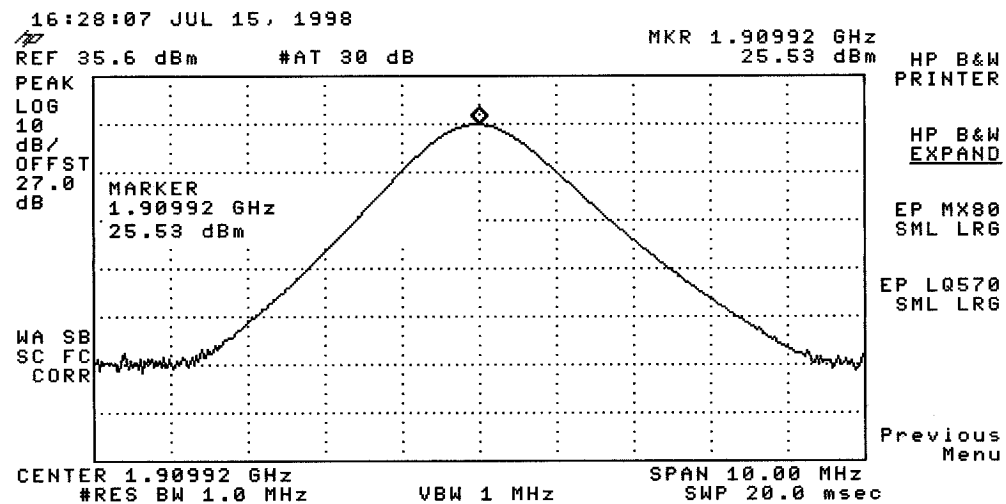
The measurements were made per CFR 47, part 24 using the following equipment:

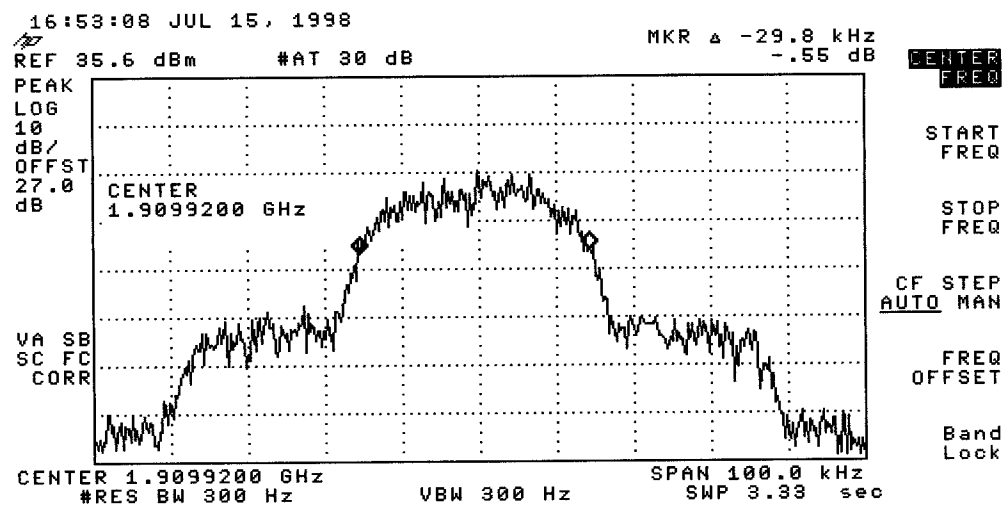
Hewlett Packard 8922 M System Simulator
Hewlett Packard 8593 E Spectrum Analyzer

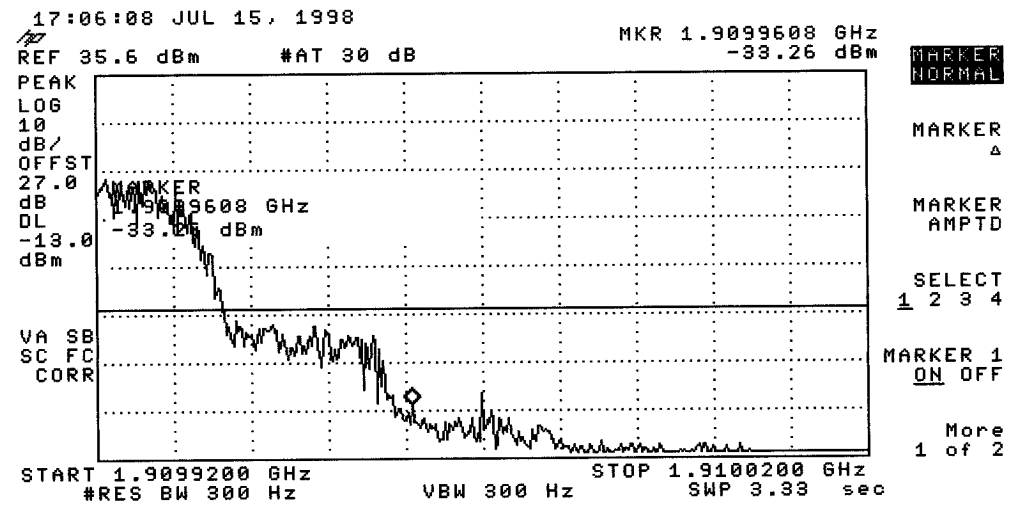












1900 MHz: SPURIOUS EMISSIONS (Conducted)

Para: 2.991 and Part 24

Per 2.991 Spurious emissions at the antenna terminals (conducted) when properly loaded with an appropriate artificial antenna were measured per IS137A.

<u>Exhibit</u>	<u>Frequency (MHz)</u>	<u>Output Power (W)</u>
6J2	1850.4	.4
6J3	1850.4	.0004
6J4	1909.92	.4
6J5	1909.92	.0004

The measurements were made using the following equipment:

HP8958A Cellular Interface
HP 6623A DC Power Supply
HP 8596E Spectrum Analyzer
Amr8801B Cellular System Simulator

Exhibit 6J2

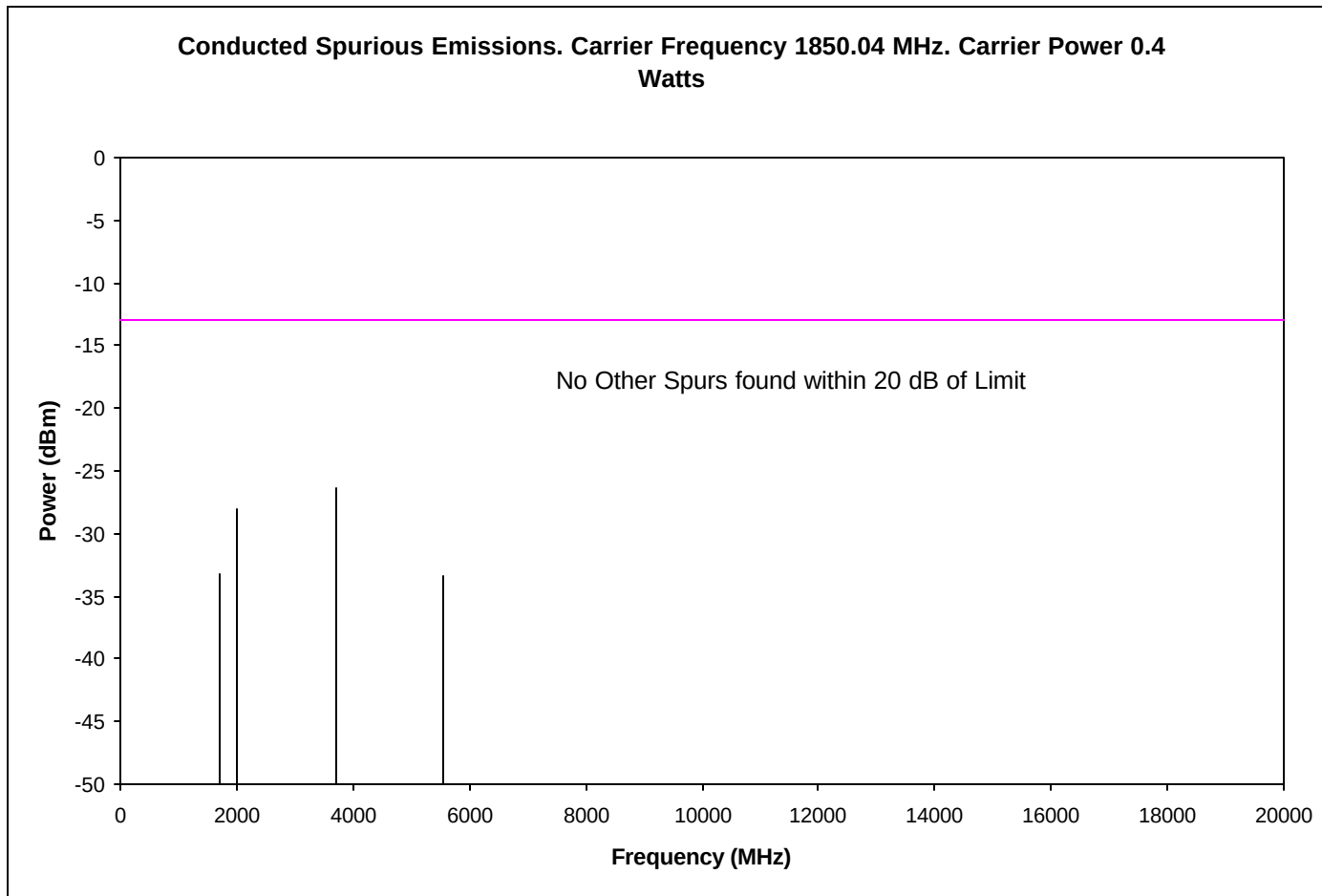


Exhibit 6J3

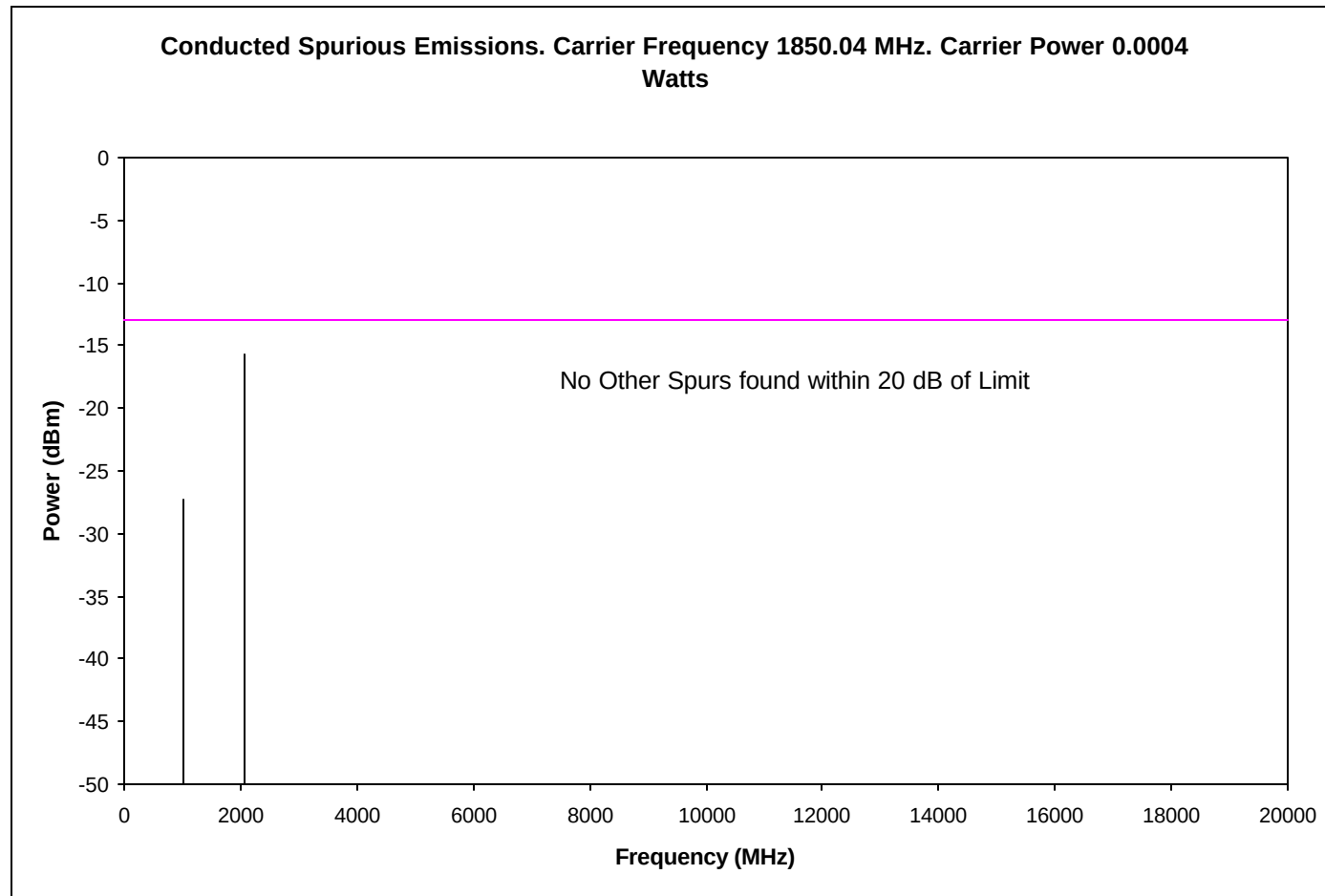


Exhibit 6J4

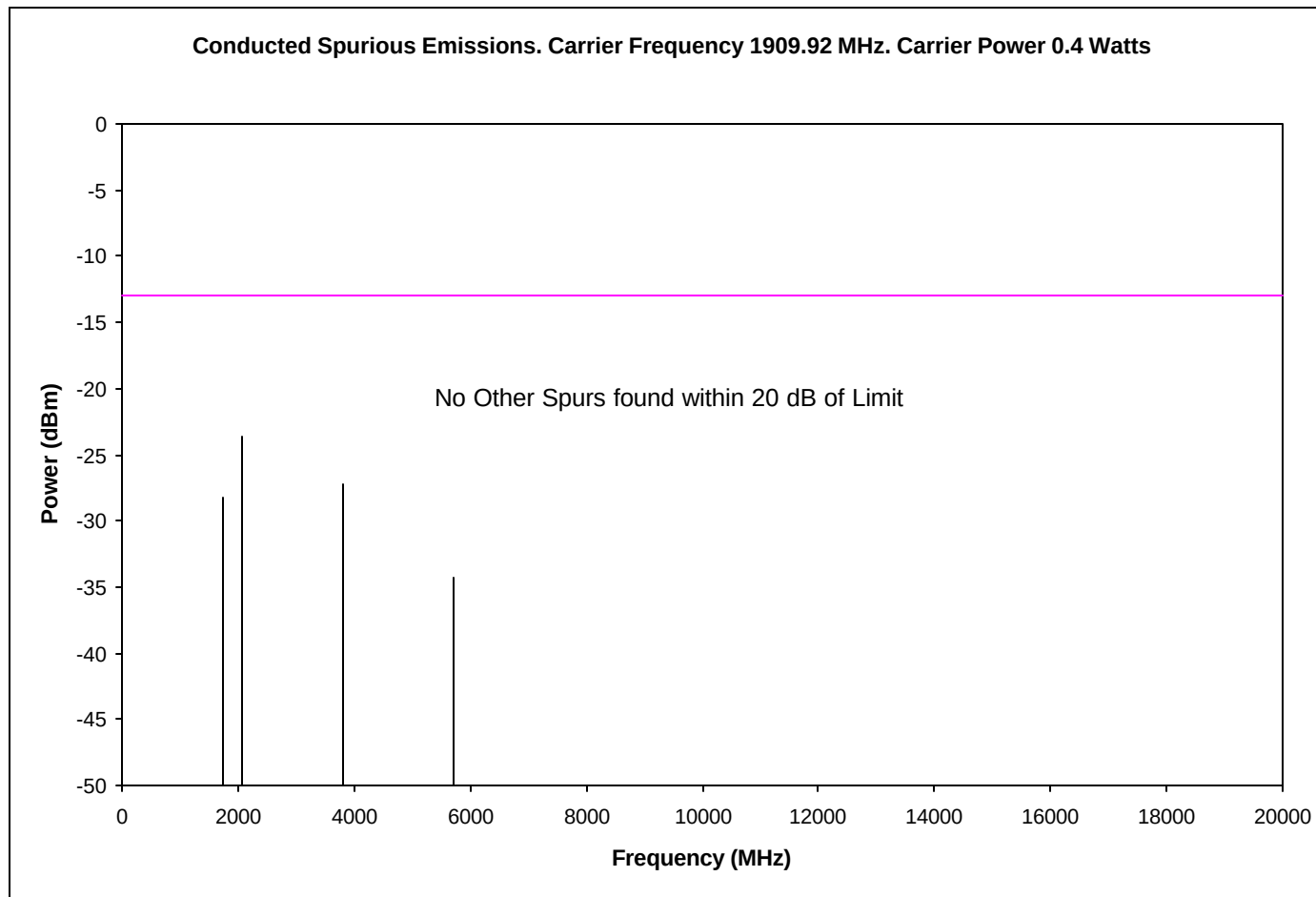
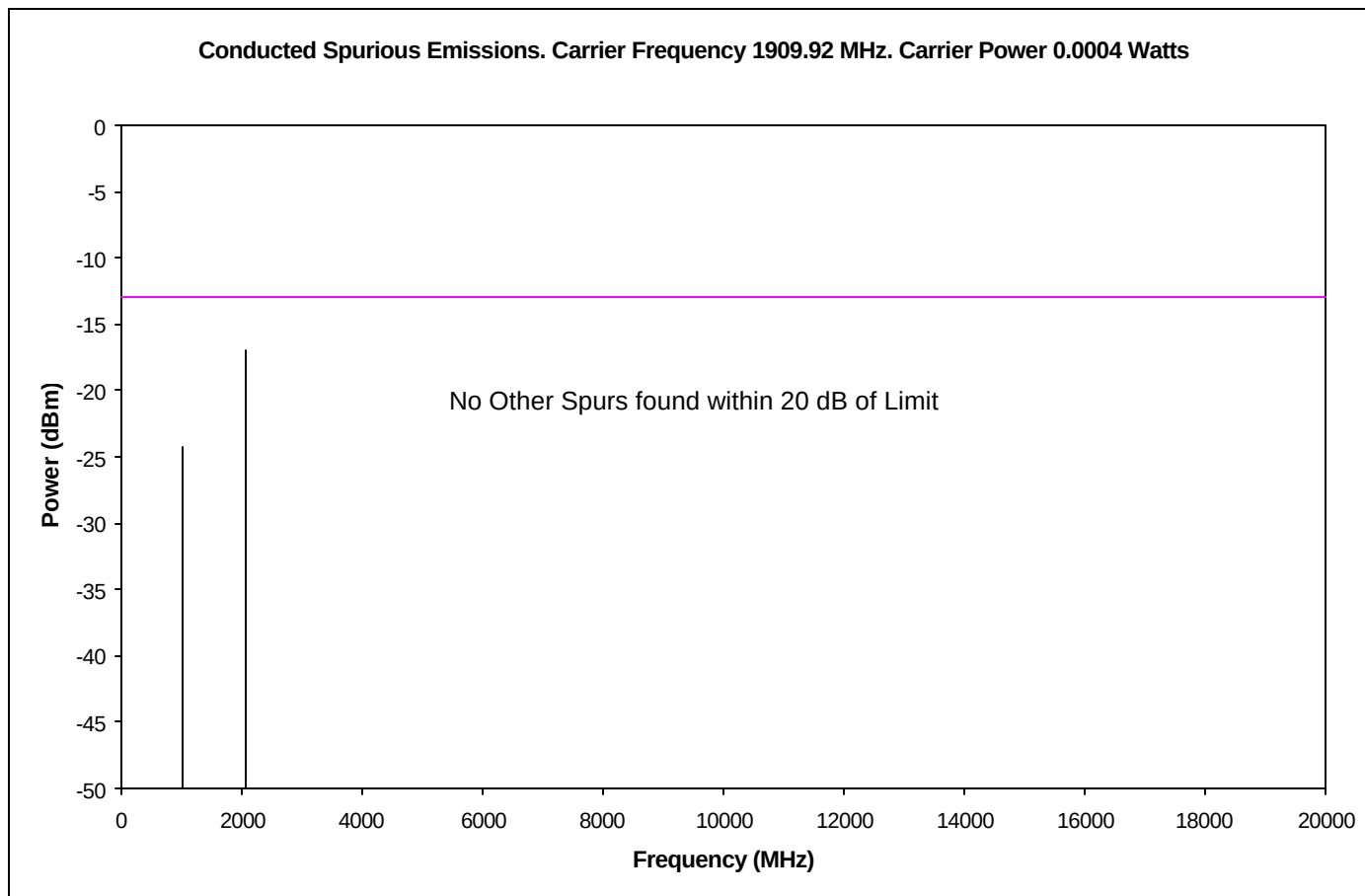


Exhibit 6J5



1900 MHz: SPURIOUS EMISSIONS. RADIATED

Para: 2.993 and Part 24

Per 2.993 and Part 24, field strength of spurious radiation was measured on Ericsson's 3 meter site in Lynchburg, VA. The site and equipment are described in the site description and attenuation measurements for the Ericsson Inc. 3 meter radiation site #2 filed with the FCC in Columbia, MD on June 5, 1997. The measurement procedure is per IS-137A but done on a 3 meter test site. Results are shown on the following exhibits:

<u>Exhibit</u>	<u>Frequency (MHz)</u>	<u>Output Power (W)</u>
6K2	1850.4	.4
6K3	1850.4	.0004
6K4	1909.92	.4
6K5	1909.92	.0004

The measurements were made using the following equipment:

HP437 B Power Meter
HP8563E S.A. (9kHz-26.5GHz)
HP 83732A Signal generator (10MHz-20GHz)
Rohde & Schwarz EMI test receiver ESBI (20Hz- 5GHz)
Adventest R3271H Spectrum Analyzer (100Hz- 26.5GHz)

Radiated Spurious Emissions
AXATR-387-A2 KF788 S/N F4XM
Carrier: 0.4000 Watts at 1850.0400 MHz
07/09/98

Effective Dipole Radiated Power In dBm

10
0
-20
-30
-40
-50
-60
-70
-80
-90

FCC Limit -13 dBm For 25kHz.

FCC Limit -20 dBm For 12.5kHz.

25

100

250

1000

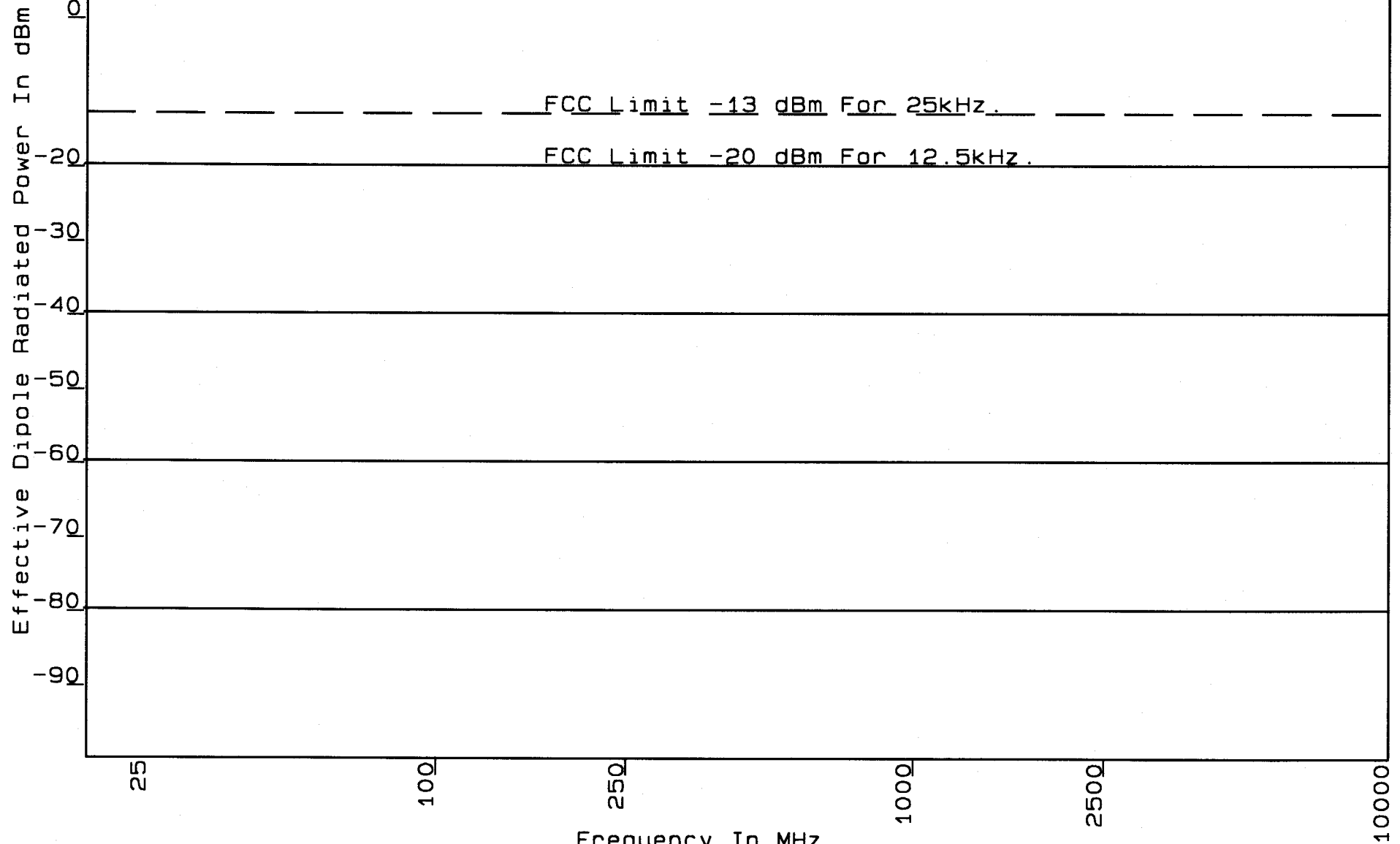
2500

10000

Frequency In MHz
Three Meter Transmitter

Exhibit 6K2

Radiated Spurious Emissions
IAXATR-387-A2 KF788 S/N F4XM
Carrier: 0.0004 Watts at 1850.0400 MHz
07/09/98



Frequency In MHz
Three Meter Transmitter

Exhibit 6K3

Radiated Spurious Emissions
AXATR-387-A2 KF788 S/N F4XM
Carrier: 0.4000 Watts at 1909.9200 MHz
07/09/98

Effective Dipole Radiated Power In dBm

FCC Limit -13 dBm For 25kHz.

FCC Limit -20 dBm For 12.5kHz.

10
0
-20
-30
-40
-50
-60
-70
-80
-90

25

100

250

1000

2500

10000

Frequency In MHz
Three Meter Transmitter

Exhibit 6K4

Radiated Spurious Emissions
AXATR-387-A2 KF788 S/N F4XM
Carrier: 0.0004 Watts at 1909.9200 MHz
07/09/98

Effective Dipole Radiated Power In dBm

FCC Limit -13 dBm For 25kHz.

FCC Limit -20 dBm For 12.5kHz.

Frequency In MHz
Three Meter Transmitter

Exhibit 6K5

1900 MHz : FREQUENCY STABILITY

Per 2.995 (a)(1),(b),(d)(1)

Per 2.995 (a)(1),(b),(d)(1), variation of output frequency as a result of Varying either voltage or temperature is shown in Exhibit 6F2 and 6F3 respectively.

<u>EXHIBIT #</u>	<u>Voltage</u>	<u>Temperature</u>
6F2	4.3 to 5.3 Volts (varied)	+25 C
6F3	4.8 Volts	Varied

Note: The manufacturers rated voltage for the battery is 4.3 VDC to 5.3 VDC.

The measurements were made per IS-137A using a Hewlett Packard 8953DT North American Dual Mode Cellular Test System which includes the following equipment:

HP8958A Cellular Interface
HP 6623A DC Power Supply
HP 8596E Spectrum Analyzer
HP 437B RF Power Meter
HP 8901B Modulation Analyzer
HP 8903B Audio Analyzer
Thermotron SM-8C Temperature Chamber

Exhibit 6L2

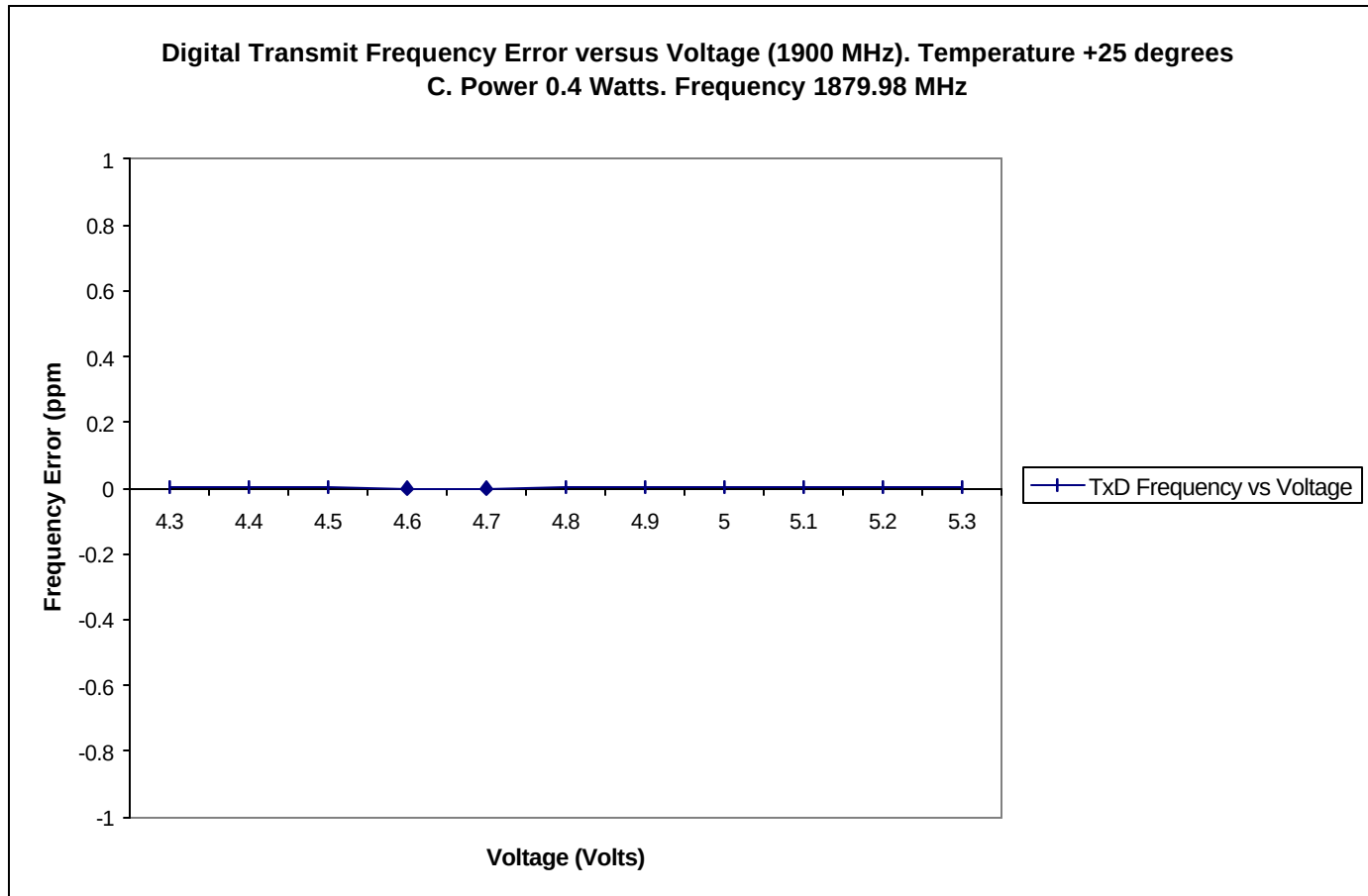


Exhibit 6L3

