

INDEX OF TEST RESULTS

<u>Exhibit #</u>	<u>Description</u>
6A	Not Applicable (NA), Reserved for the 800 band/Part 22 information
6B	Not Applicable (NA), Reserved for the 800 band/Part 22 information
6C	Not Applicable (NA), Reserved for the 800 band/Part 22 information
6D	Not Applicable (NA), Reserved for the 800 band/Part 22 information
6E	Not Applicable (NA), Reserved for the 800 band/Part 22 information
6F	Not Applicable (NA), Reserved for the 800 band/Part 22 information
6G	1900MHz/Part 24: RF Power
6H	1900MHz/Part 24: Modulation Characteristics
6I	1900MHz/Part 24: Occupied bandwidth
6J	1900MHz/Part 24: Spurious Emissions (conducted)
6K	1900MHz/Part 24: Spurious Emissions (radiated)
6L	1900MHz/Part 24: Frequency Stability

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.

EXHIBIT	SUPPLY VOLTAGE (V)	TEMPERATURE	POWER LEVEL	TX FREQ	Power (Watts)
6G2	Varied	+ 25 C	0	Mid Band	1
6G3	Varied	+ 25 C	15	Mid Band	.001

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

The measurements were made 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

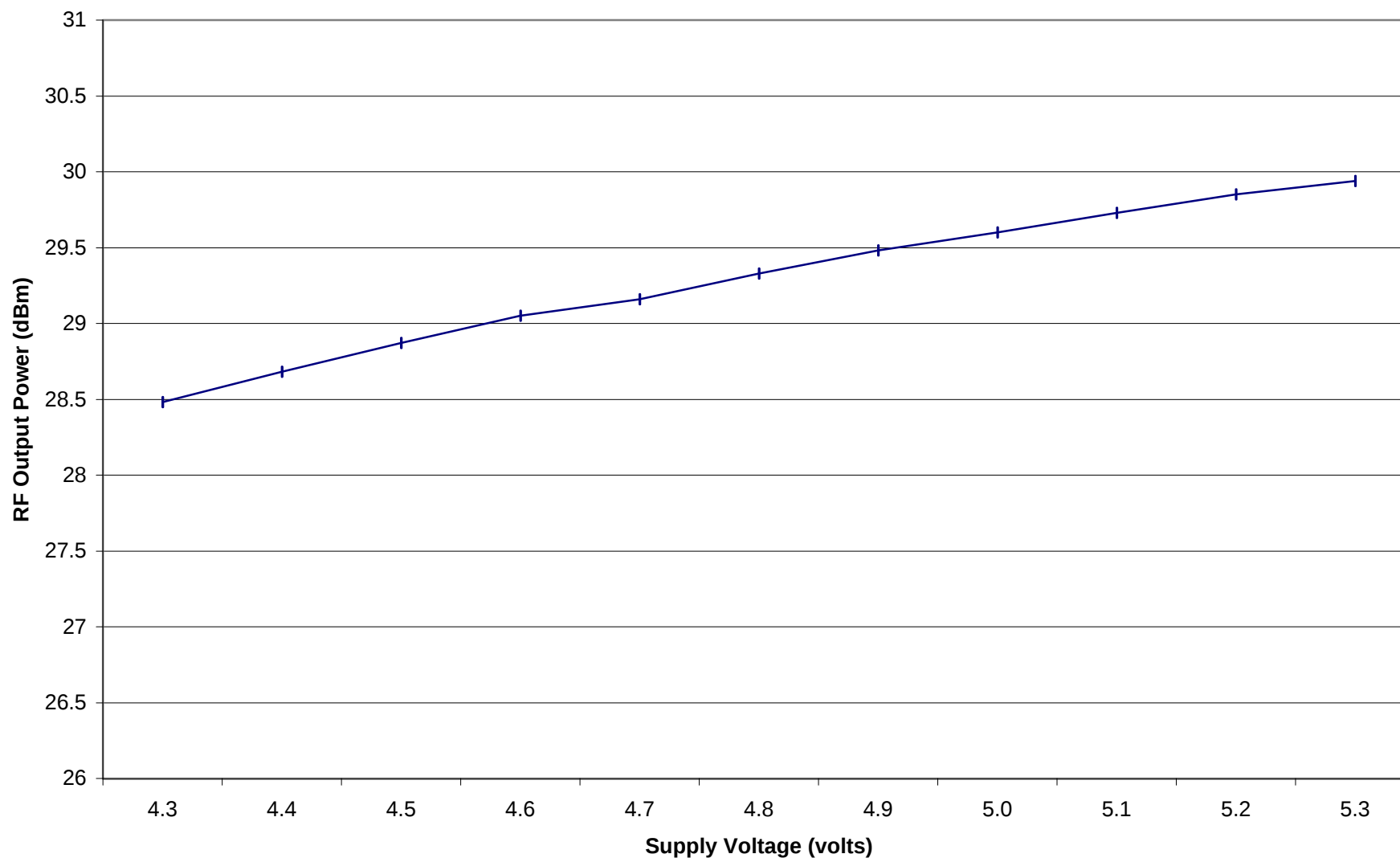
The following is a description of the substitution method used to obtain accurate EIRP readings at the carrier fundamental frequency:

- (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.

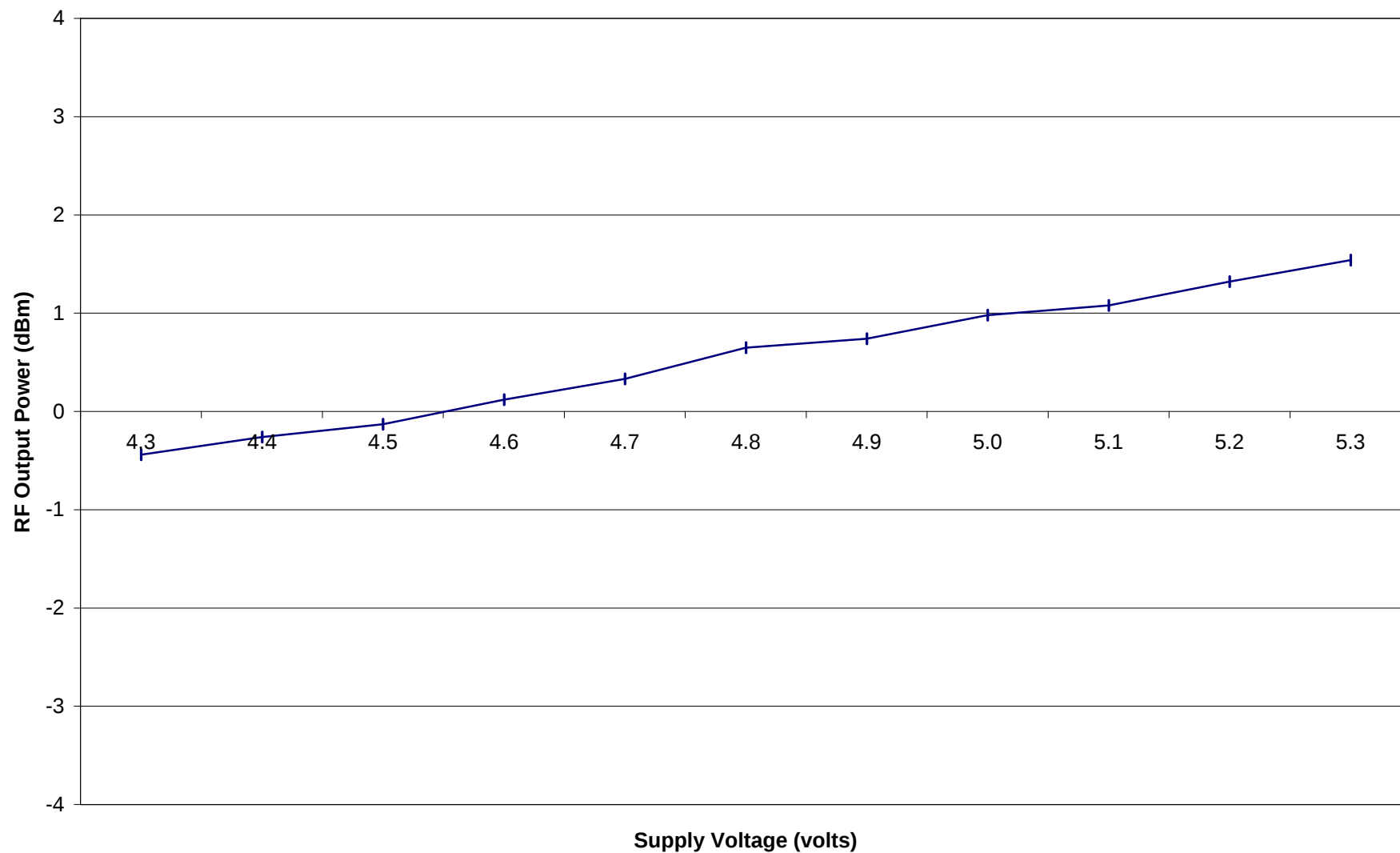
Measurements at a distance of 3 m from the source at the highest power level setting:

Frequency (MHz)	Rated Output Power (mW)	EIRP (dBm)
1880.8	832	29.2

RF Output Power vs. Supply Voltage, GSM Channel 660, Power Level 0



RF Output Power vs. Supply Voltage, GSM Channel 660, Power Level 15



APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

EXHIBIT 6H1

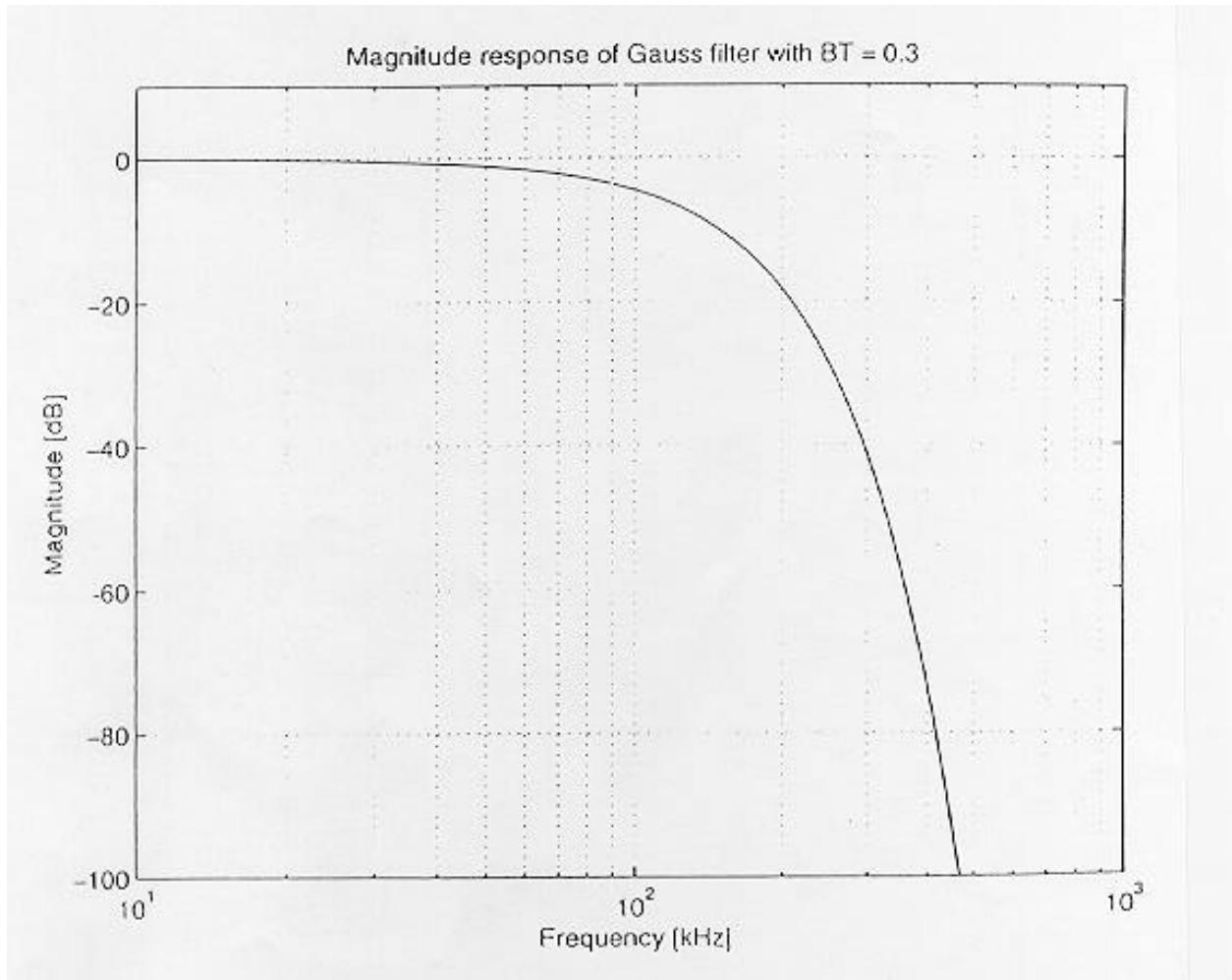
1900 MHz: MODULATION CHARACTERISTICS

Para: Part 2.987 (a)(b)(d) and 24

EXHIBIT

6H2	GAUSS FILTER CHARACTERISTICS (Modulation)
6H3	Modulation Characteristics
6H4	Differential Encoding

MODULATION CHARACTERISTIC



4. MODULATION

This chapter defines the theoretical requirements of the modulator, inclusive of the differential encoder. The modulator receives the bits from the encryption unit and produces an RF modulated signal. The information bits are first differentially encoded and then passed to the modulator. The modulation is GMSK (Gaussian Minimum Shift Keying) with a BT product of 0.3.

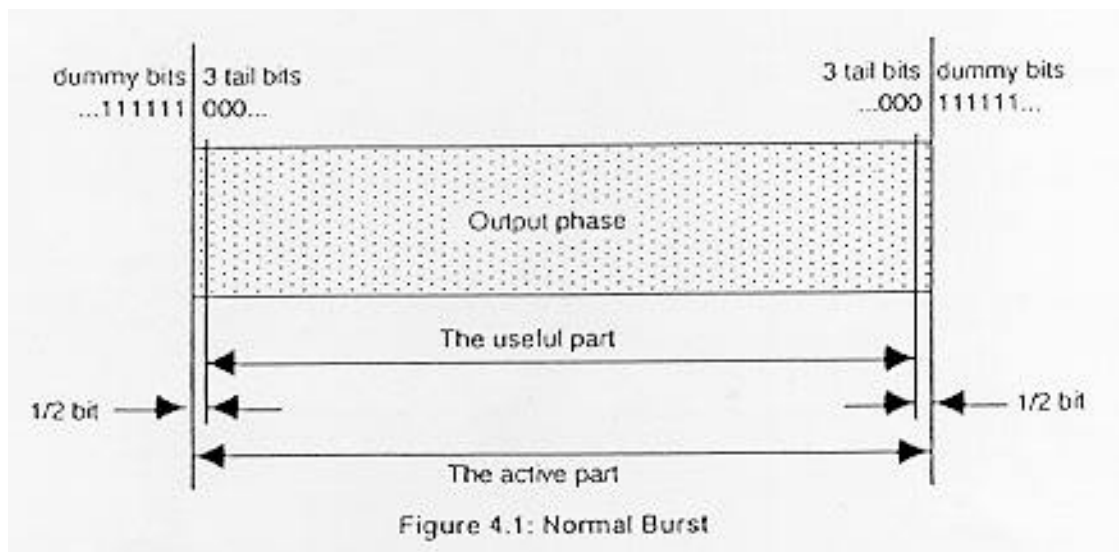
4.1 Modulation Format

4.1.1 Modulating Bit Rate

The modulating bit rate is $1/T = 1625/6$ kb/s (approximately 270.833 b/s).

4.1.2 Start And Stop Of The Burst

The bits contained within a burst are defined in chapter 2. For the purpose of the modulator specification that follows the bits entering the differential encoder prior to the first bit of the burst and following the last bit of the burst are consecutive logical ones and are denoted by the term dummy bits which define the start and end points of the useful and active pans of the burst as shown in Figure 4.1. The actual state of these bits is left to the manufacturer's implementation subject to the requirement that all performance specifications of this volume are met. Nothing is specified about the actual phase of the modulator output signal outside of the useful pan of the burst. Figure 4.1 depicts the relationship between the active and useful part of the burst the tail bits and dummy bits {or a normal burst. The useful part of the burst lasts for 147 modulating bits.



4.1.3 Differential Encoding

Each data value $d_i = (0,1)$ is differentially encoded. The output of the differential encoder is:

$$d_i = d_i \oplus d_{i-1}$$

where $\oplus$ denotes modulo-2 addition.

The modulating data value α_i input to the modulator is:

$$\alpha_i = 1 - 2d_i$$

where $\alpha_i \in \{-1, 1\}$

APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

EXHIBIT 611

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 (270,833kb/s) operating in the GSM (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.

<u>EXHIBIT</u>	<u>Lower Channel (1850.2MHz, power level 0)</u>
612	Plot showing 1MHz resolution bandwidth, peak power
613	Plot showing emissions bandwidth, center frequency at 1.8502GHz
614	Plot showing 100KHz span, resolution bandwidth 1% of necessary BW.
 <u>Upper Channel (1909.8MHz, power level 0)</u>	
615	Plot showing 1MHz resolution bandwidth, peak power
616	Plot showing emissions bandwidth, center frequency at 1.9098GHZ
617	Plot showing 100KHz span, resolution bandwidth 1% of necessary BW.

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

FCC ID NO:
AXATR-394-A2

Exhibit 612

APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

15:47:19 OCT 22, 1998

REF 40.0 dBm #AT 30 dB

MKR Δ -AMP 250 kHz
.00 dB

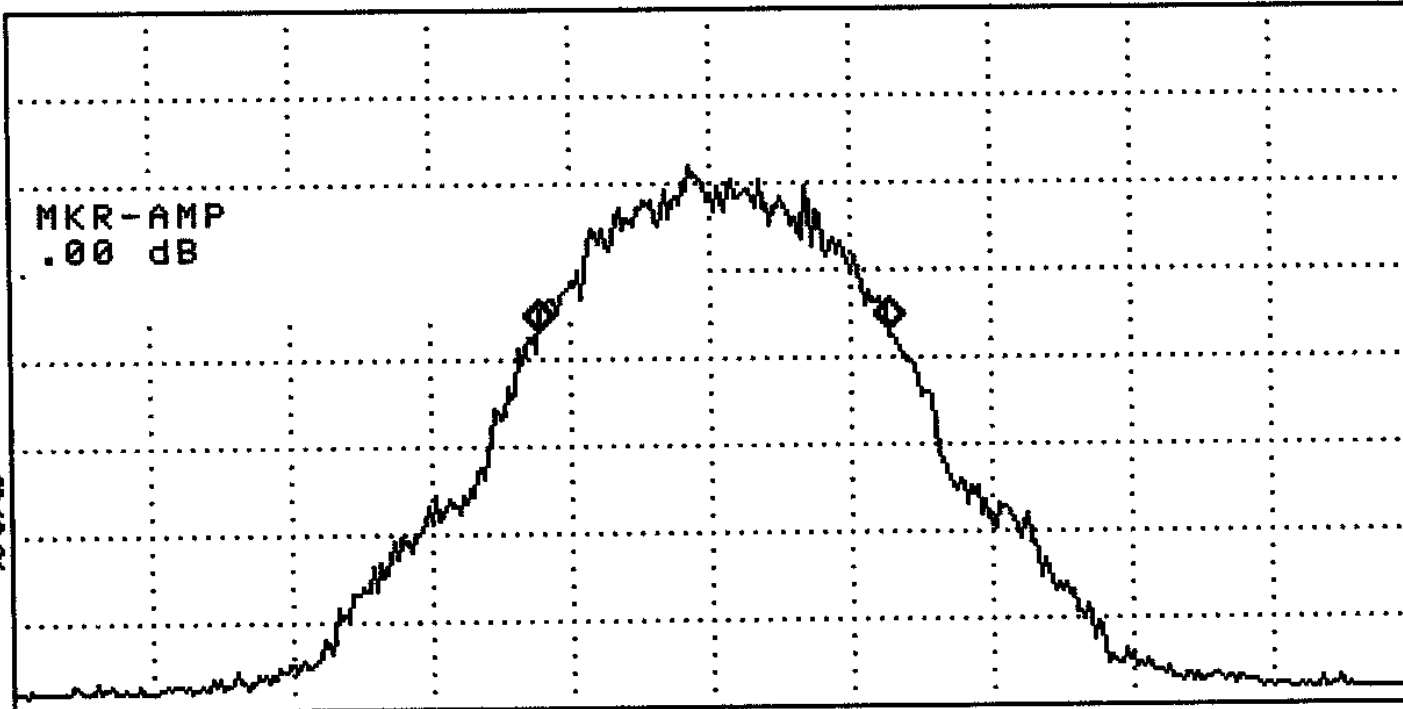
PEAK
LOG
10
dB/
OFFST
26.5
dB

SPECTRUM
ANALYZER

NADC
ANALYZER

PCS1900
ANALYZER

MA SB
SC FS
CORR



CENTER 1.850200 GHz
#RES BW 3.0 kHz

#VBW 3 kHz

SPAN 1.000 MHz
#SWP 5.00 sec

More
1 of 3
RL

Exhibit 613

APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

15:49:28 OCT 22, 1998

~~17~~
REF 40.0 dBm #AT 30 dB

MKR 1.8499973 GHz
-14.42 dBm

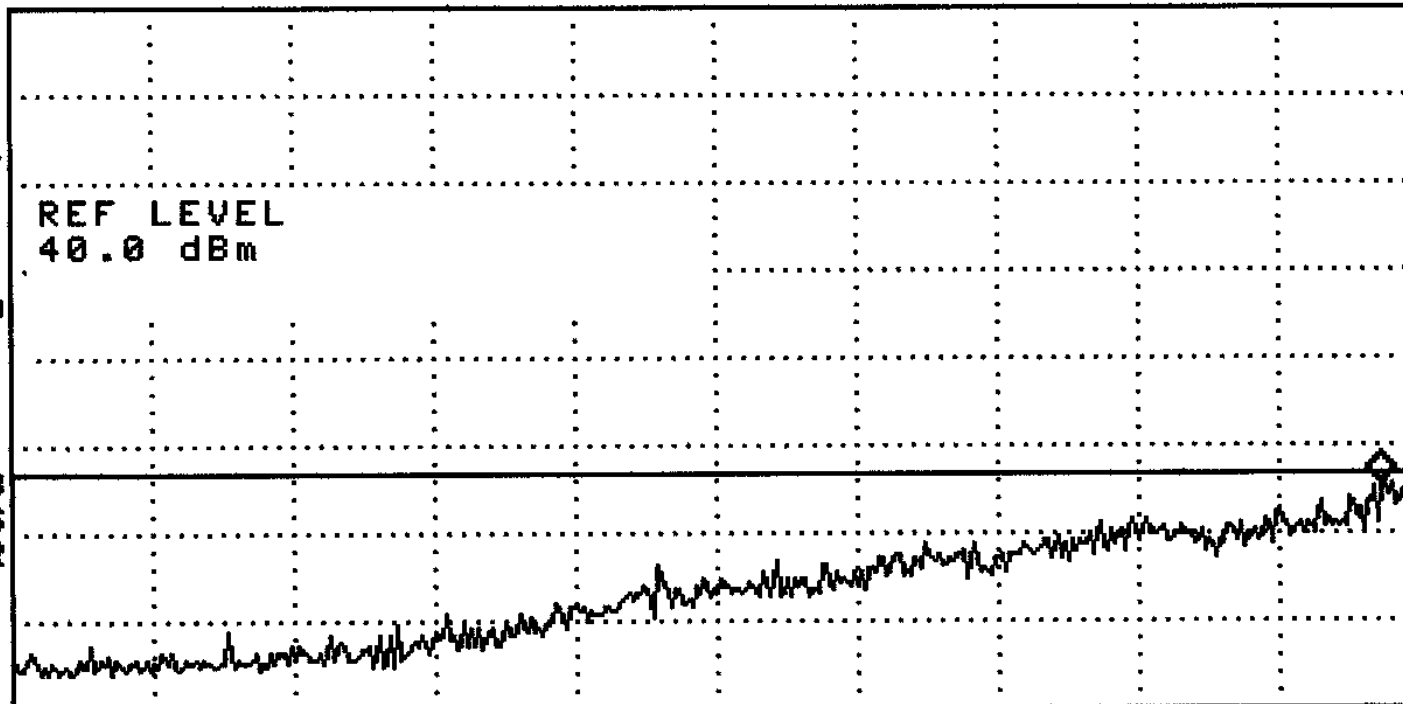
SPECTRUM
ANALYZER

PEAK
LOG
10
dB/
OFFST
26.5
dB
DL
-13.0
dBm

NADC
ANALYZER

PCS1900
ANALYZER

MA SB
SC FS
CORR



START 1.8499000 GHz
#RES BW 3.0 kHz

#VBW 3 kHz

STOP 1.8500000 GHz
#SWP 5.00 sec

More
1 of 3
RL

Exhibit 6i4

APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

15:50:12 OCT 22, 1998

REF 40.0 dBm

#AT 30 dB

MKR 1.909800 GHz

29.35 dBm

SPECTRUM
ANALYZER

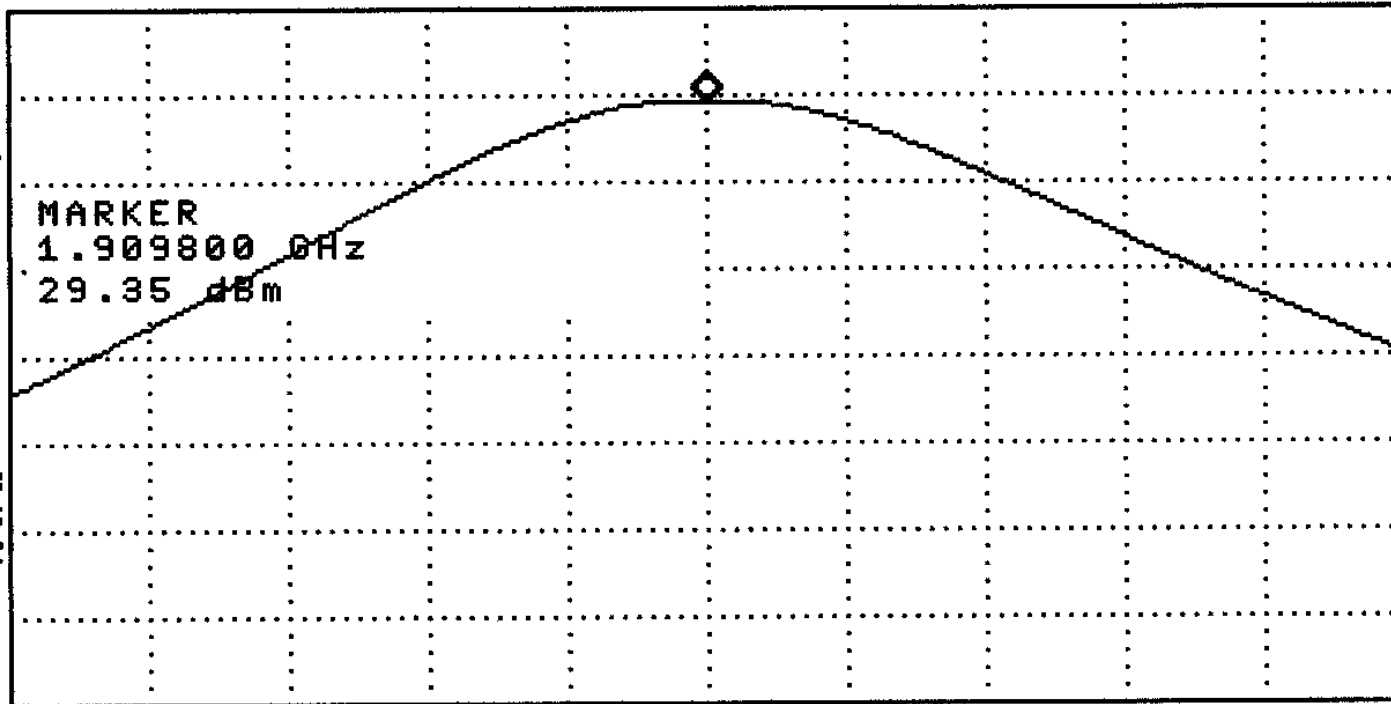
PEAK
LOG
10
dB/
OFFST
26.5
dB

MARKER
1.909800 GHz
29.35 dBm

NADC
ANALYZER

PCS1900
ANALYZER

MA SB
SC FS
CORR



CENTER 1.909800 GHz
#RES BW 1.0 MHz

#VBW 1 MHz

SPAN 5.000 MHz
#SWP 5.00 sec

More
1 of 3
RL

Exhibit 615

APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

Exhibit 616

15:50:55 OCT 22, 1998

MKR Δ -AMP 245 kHz
.00 dB

REF 40.0 dBm #AT 30 dB

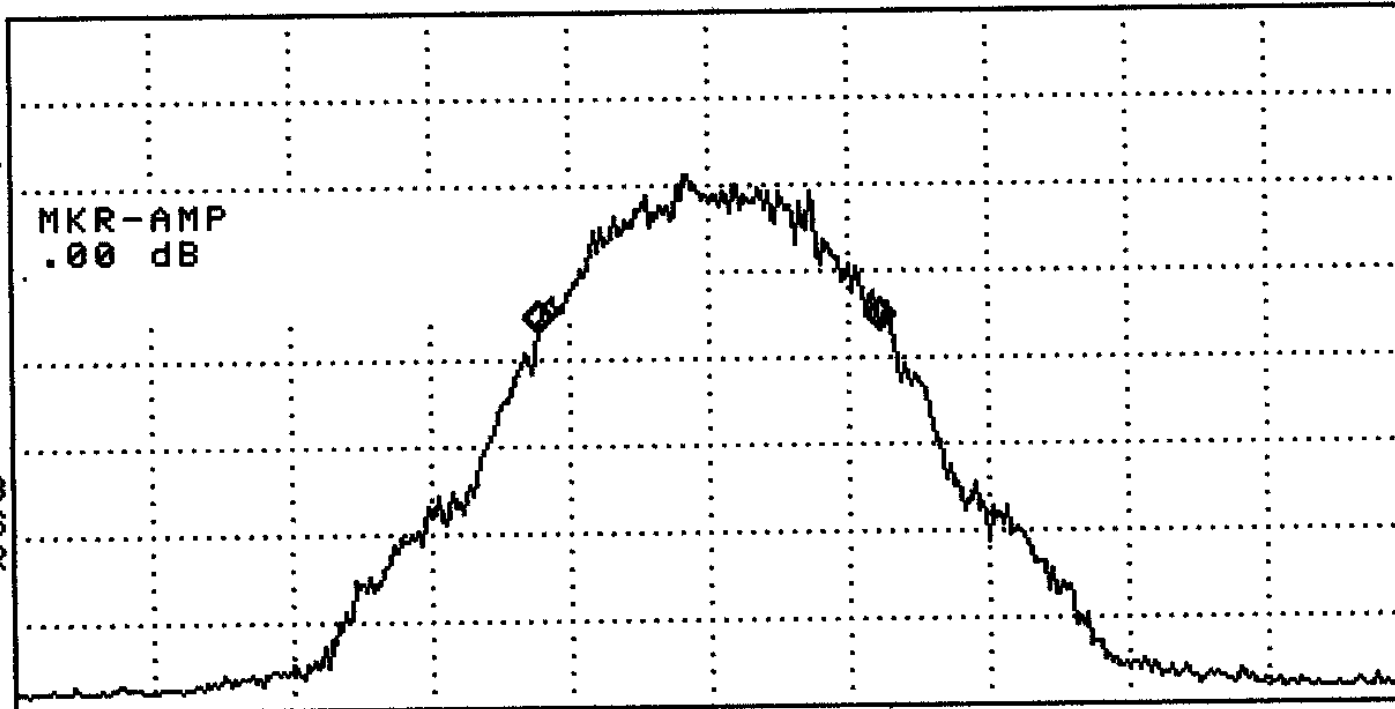
PEAK
LOG
10
dB/
OFFST
26.5
dB

SPECTRUM
ANALYZER

NADC
ANALYZER

PCS1900
ANALYZER

MA SB
SC FS
CORR



CENTER 1.909800 GHz
#RES BW 3.0 kHz

#VBW 3 kHz

SPAN 1.000 MHz
#SWP 5.00 sec

More
1 of 3
RL

APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

15:53:05 OCT 22, 1998

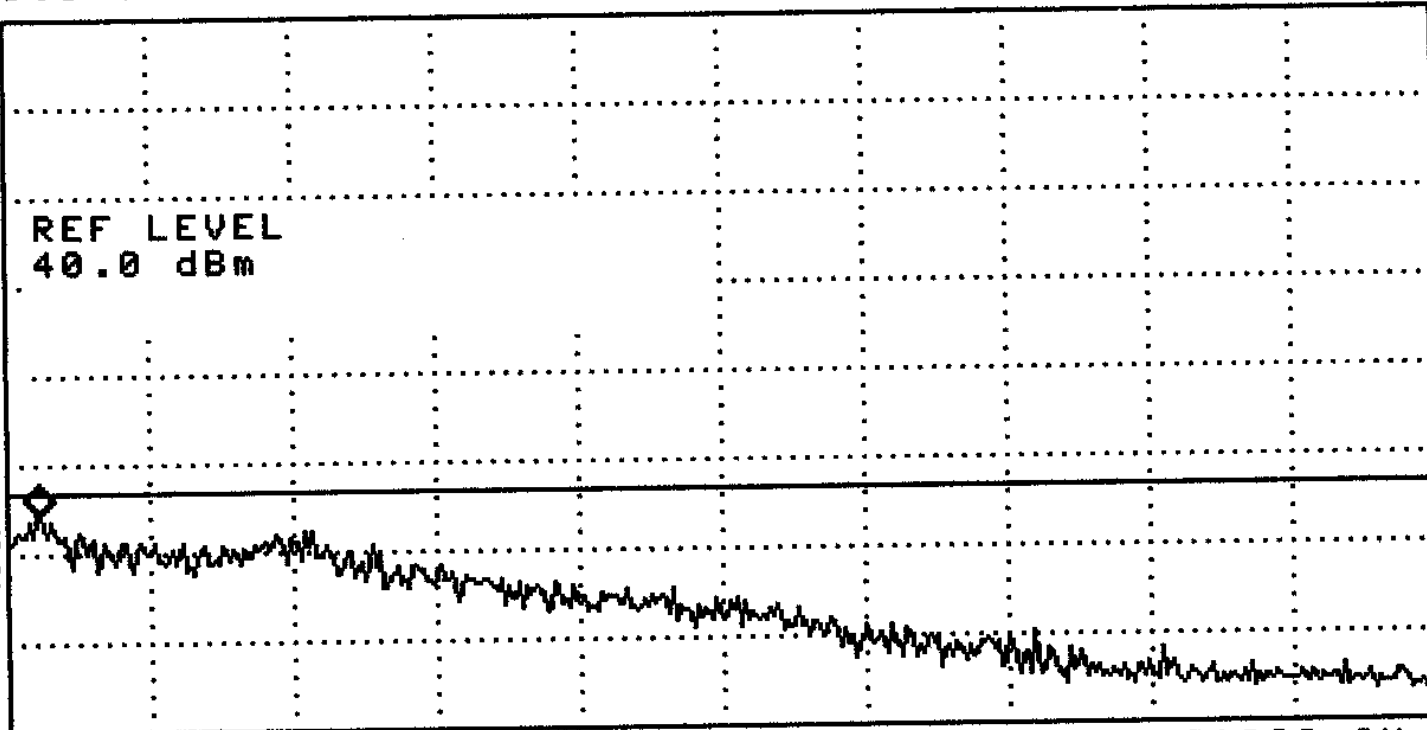
MKR 1.9100023 GHz
-15.57 dBm

REF 40.0 dBm #AT 30 dB

PEAK
LOG
10
dB/
OFFST
26.5
dB
DL
-13.0
dBm

REF LEVEL
40.0 dBm

MA SB
SC FS
CORR



SPECTRUM
ANALYZER

NADC
ANALYZER

PCS1900
ANALYZER

START 1.9100000 GHz
#RES BW 3.0 kHz

#VBW 3 kHz

STOP 1.9101000 GHz
#SWP 5.00 sec

More
1 of 3
RL

Exhibit 617

1900 MHz: SPURIOUS EMISSIONS (Conducted)

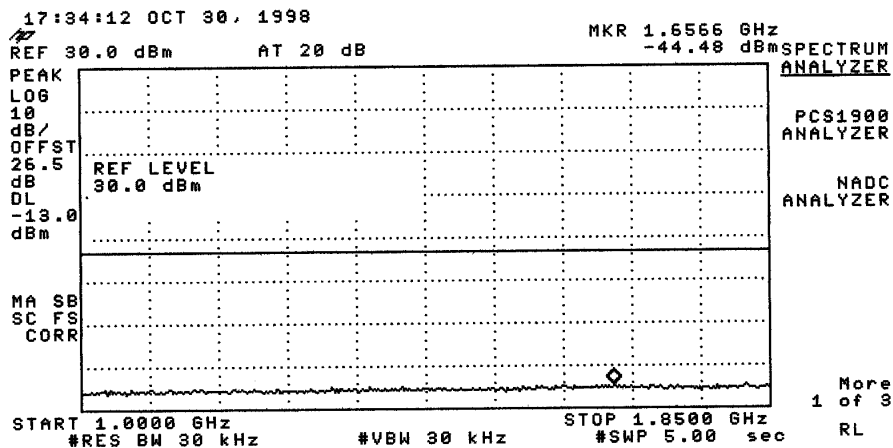
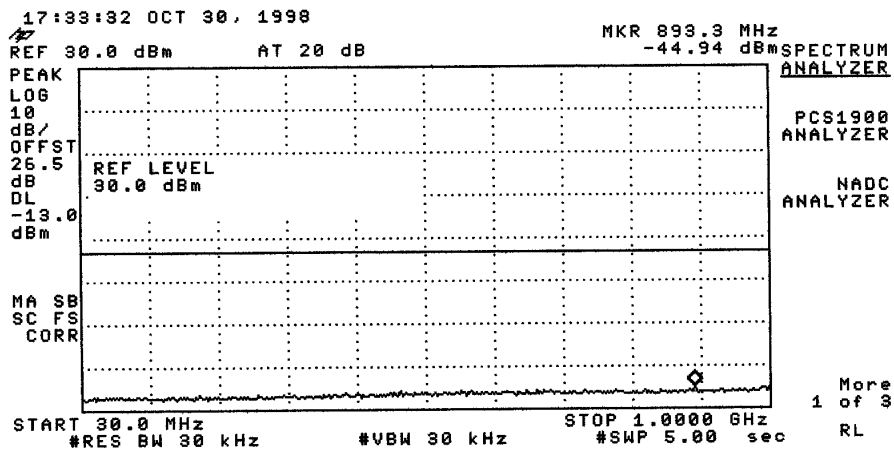
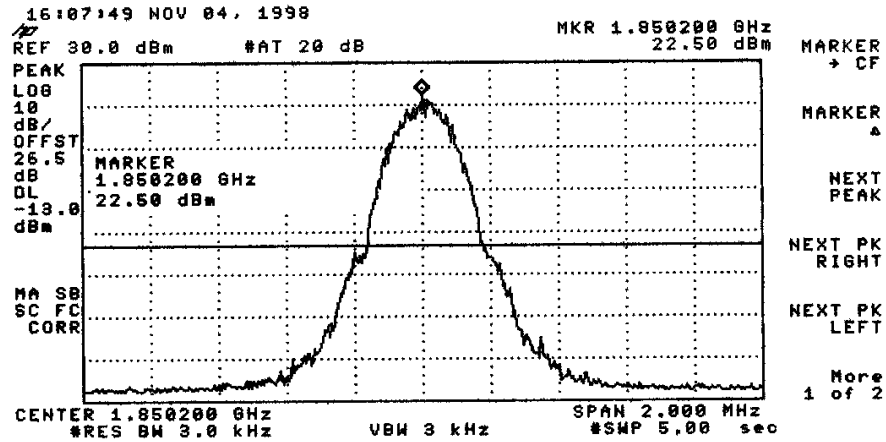
Para: 2.991 and Part 24

Per 2.991 Spurious emissions at the antenna terminals (conducted) when properly loaded with an appropriate artificial antenna were measured. A 3KHz bandwidth was used for the measurement detailing the carrier. A 30KHz bandwidth was used for all other plots as no spurs were detected within 20dB of the limit and to limit the number of plots.

<u>Exhibit</u>	<u>Frequency (MHz)</u>	<u>Output Power (W)</u>
6J2	1850.20	1
6J3	1909.98	1
6J4	1850.20	.001
6J5	1909.98	.001

The measurements were made using the following equipment:

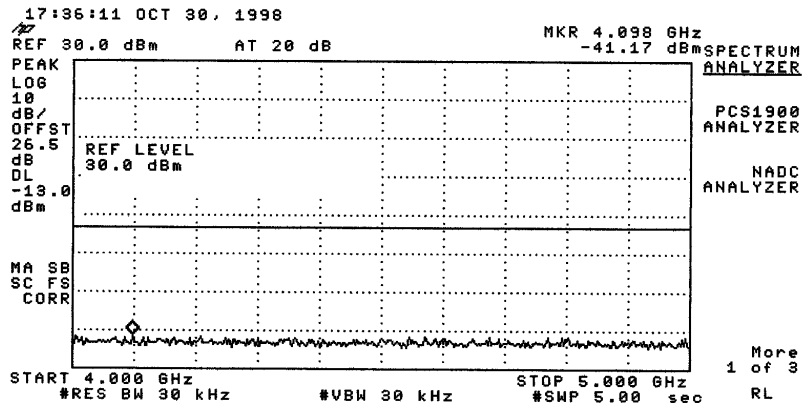
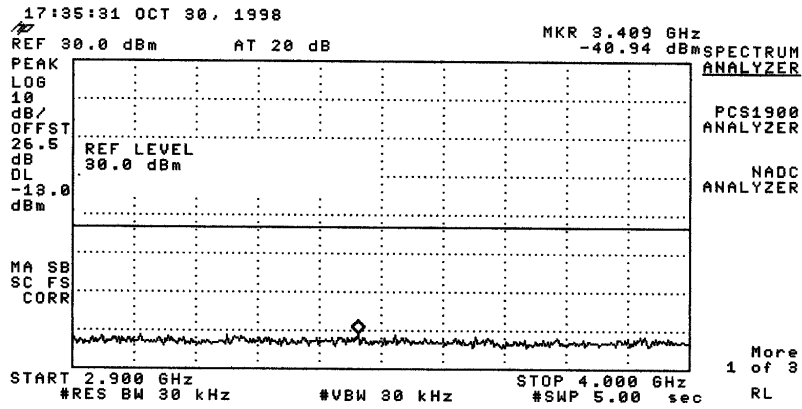
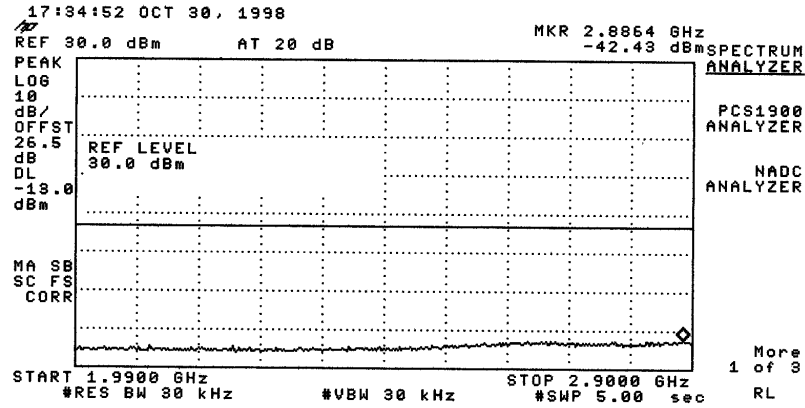
HP8958A Cellular Interface
HP 6623A DC Power Supply
HP 8596E Spectrum Analyzer
Amr8801B Cellular System Simulator



APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

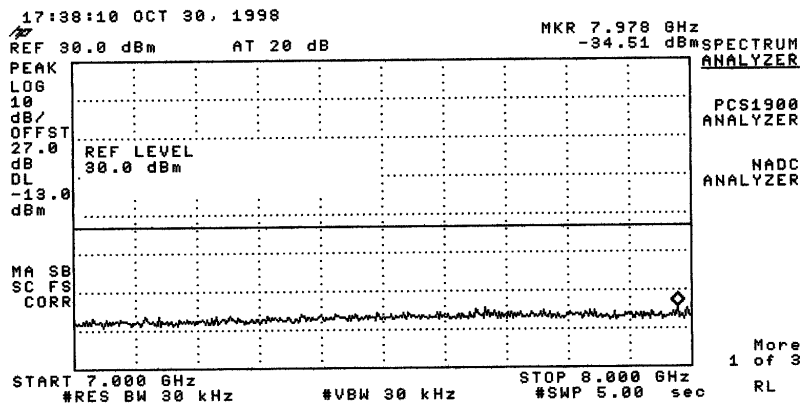
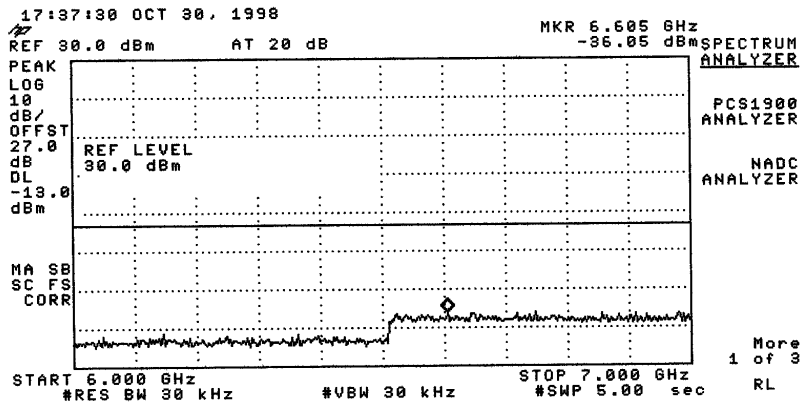
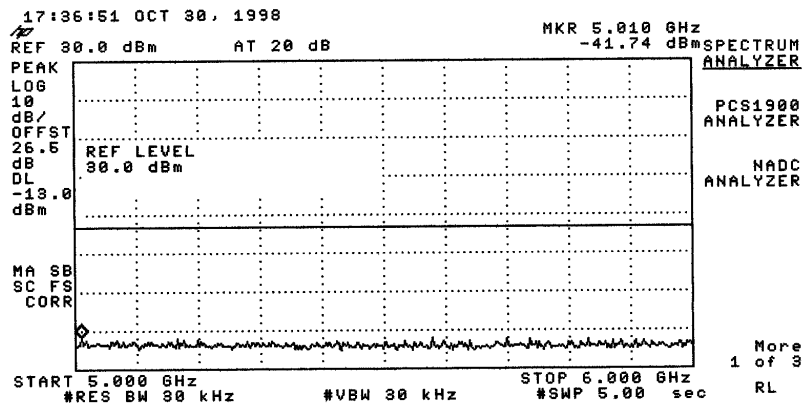
Exhibit 6J2

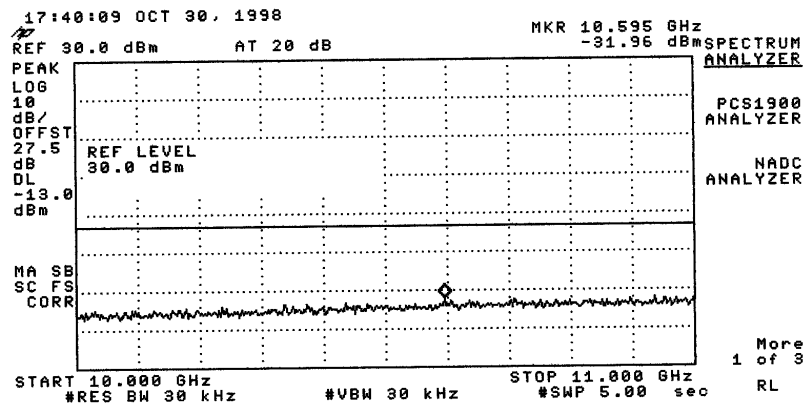
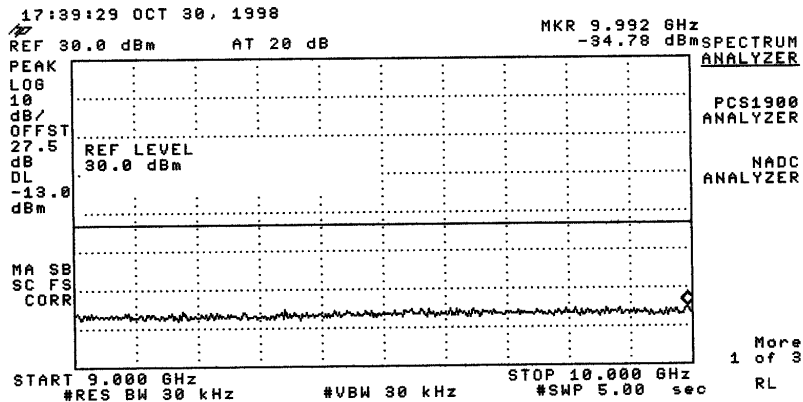
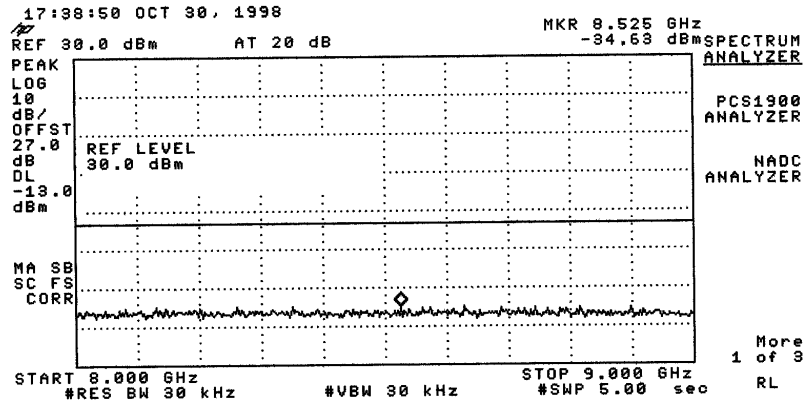


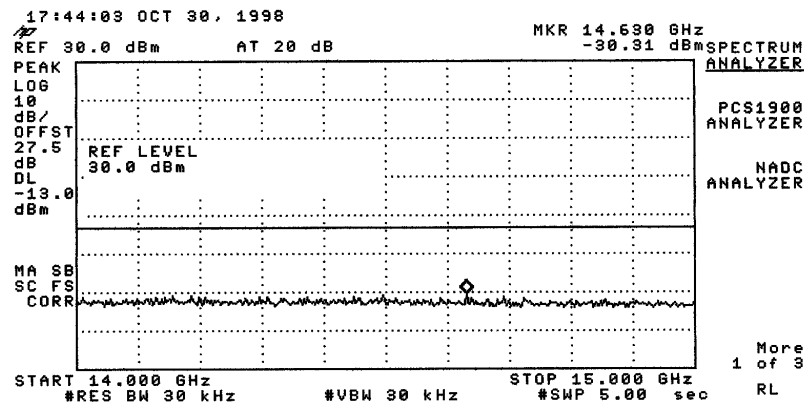
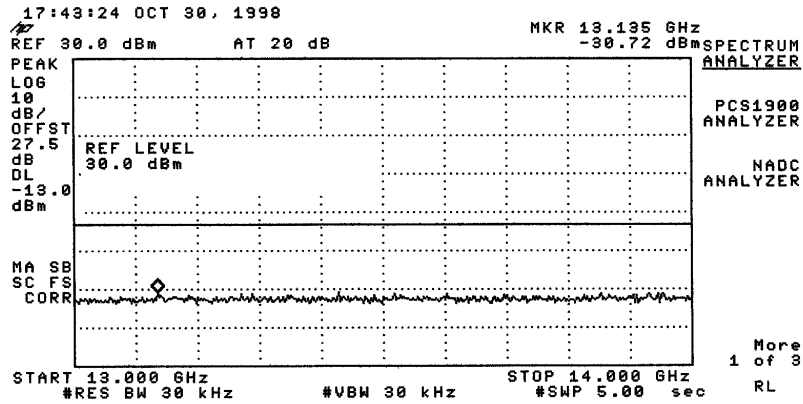
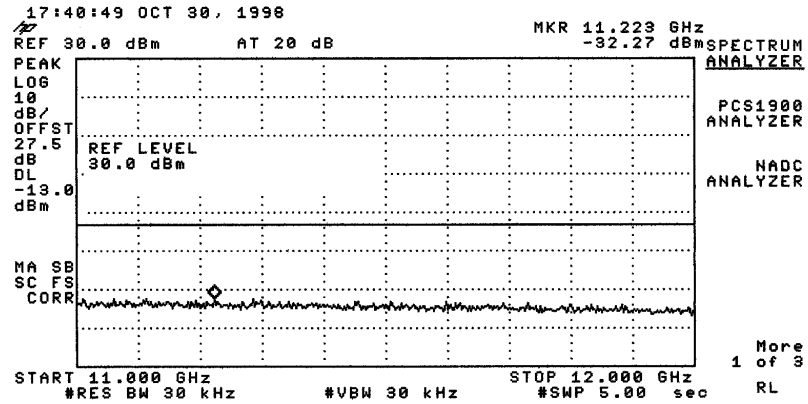
APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

Exhibit 6J2



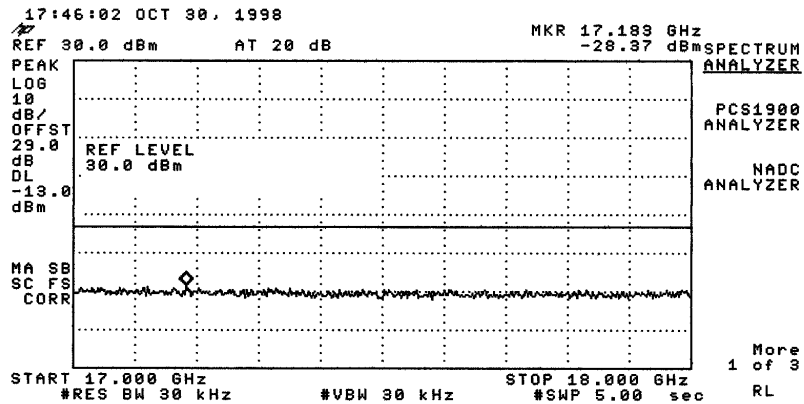
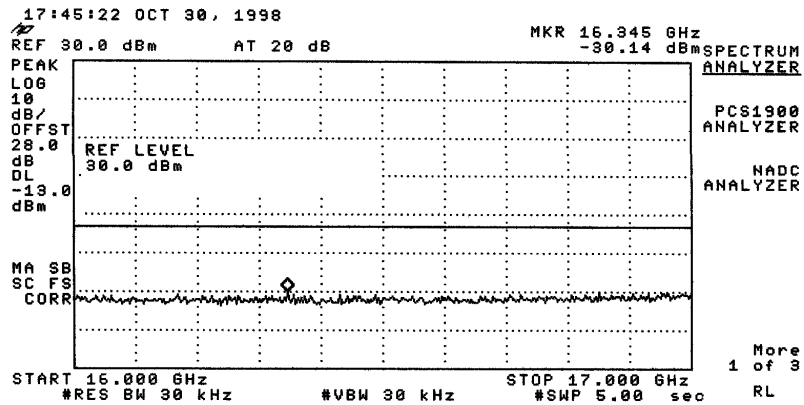
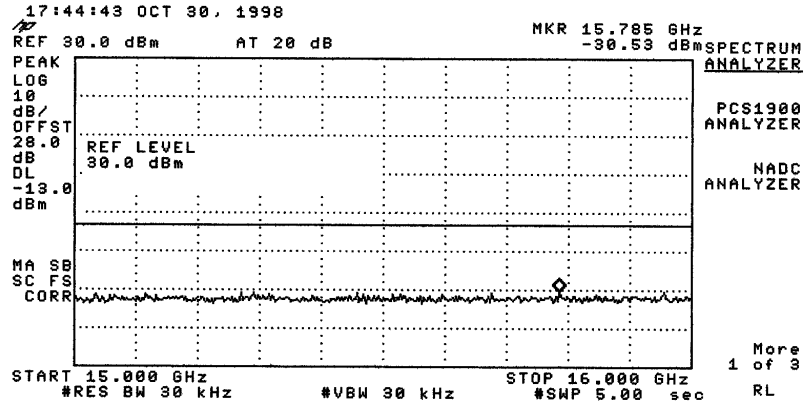


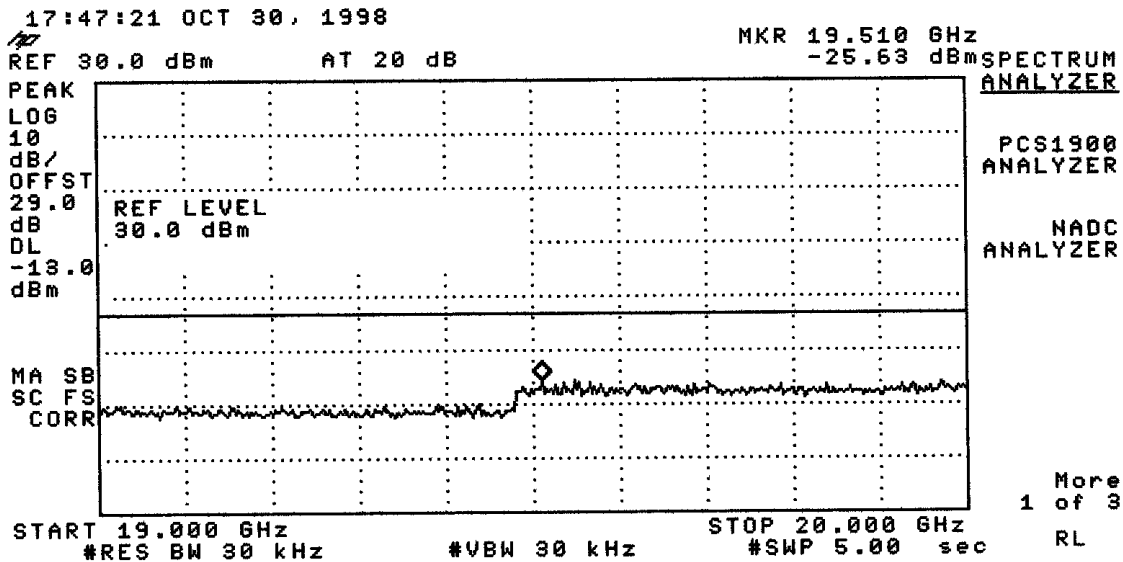
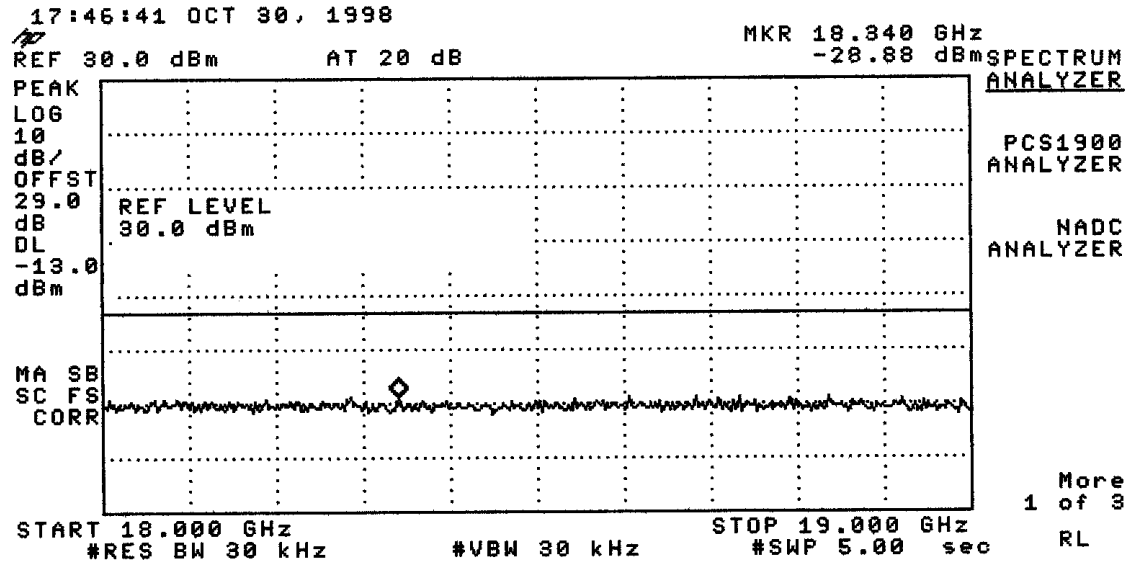


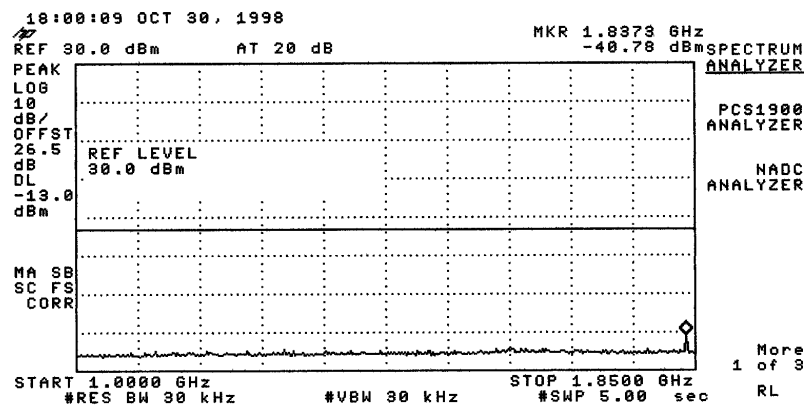
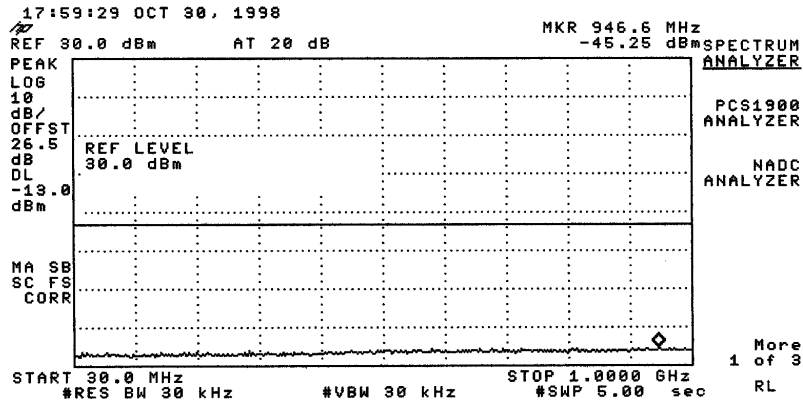
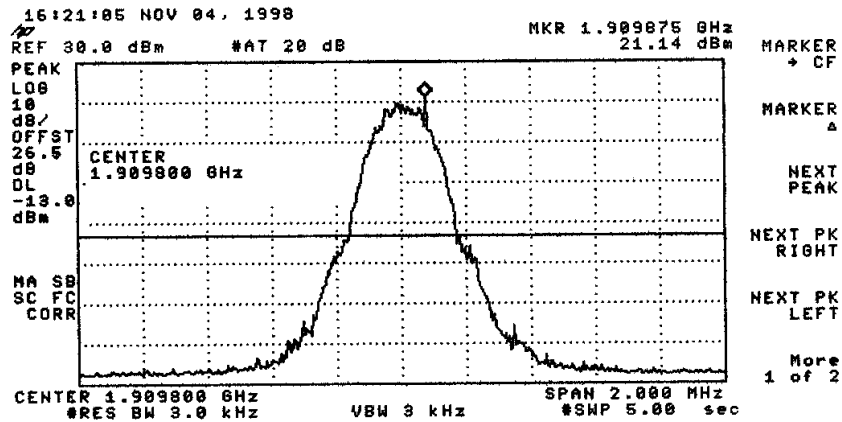
APPLICANT:
ERICSSON INC.

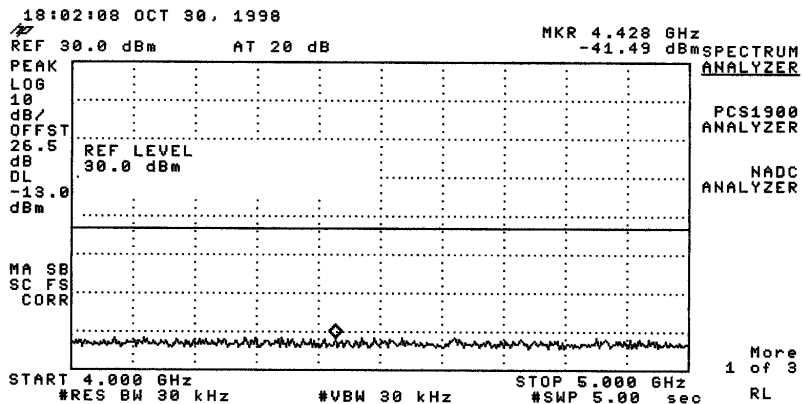
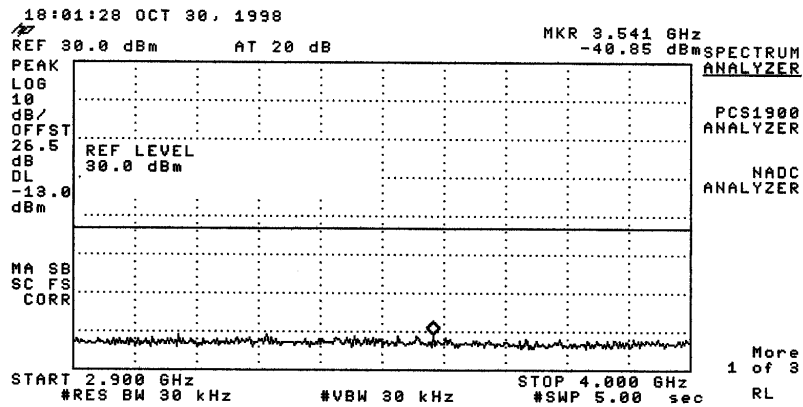
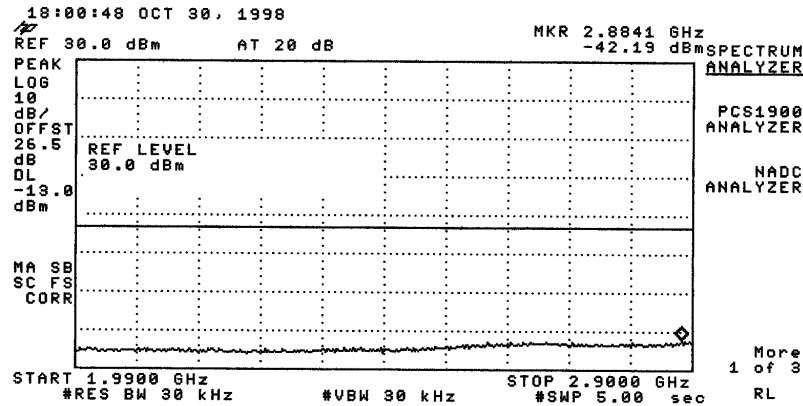
FCC ID NO:
AXATR-394-A2

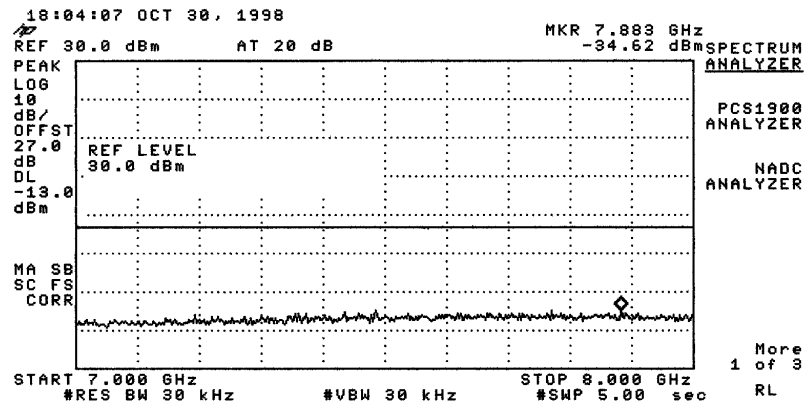
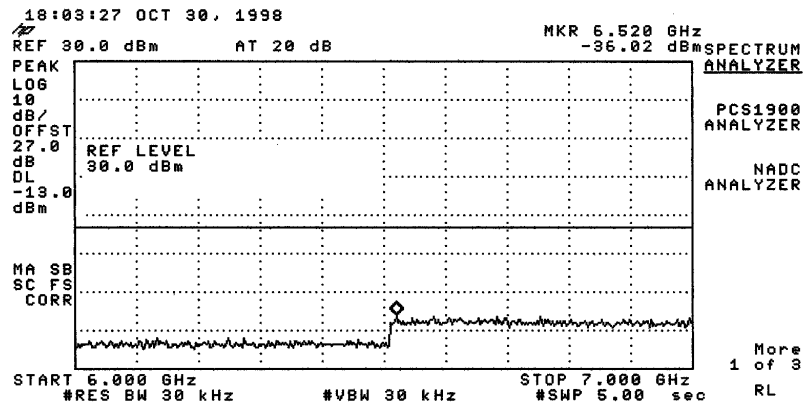
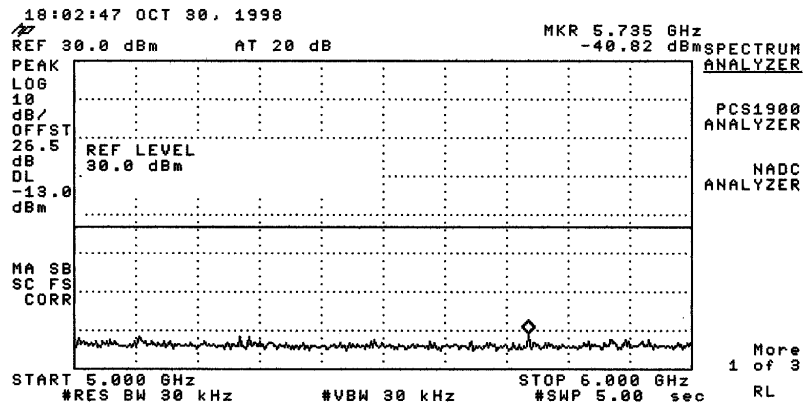
Exhibit 6J2











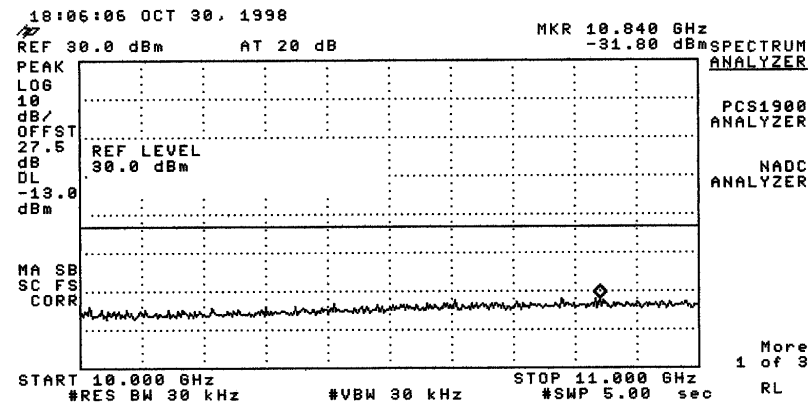
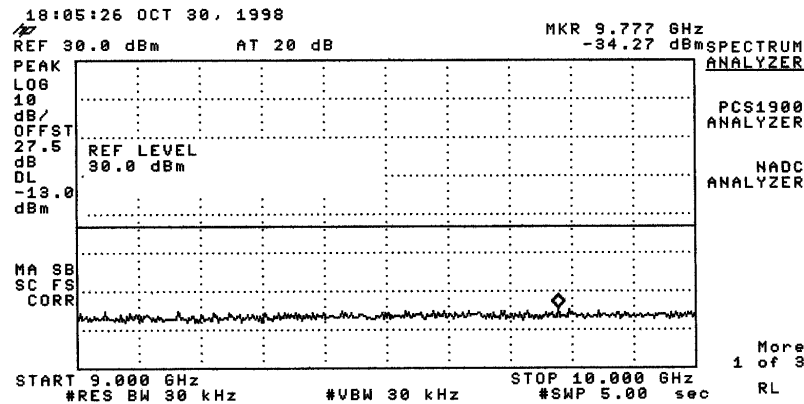
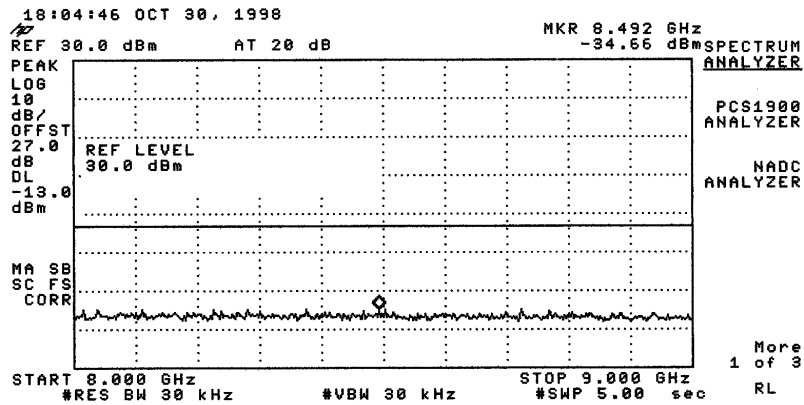
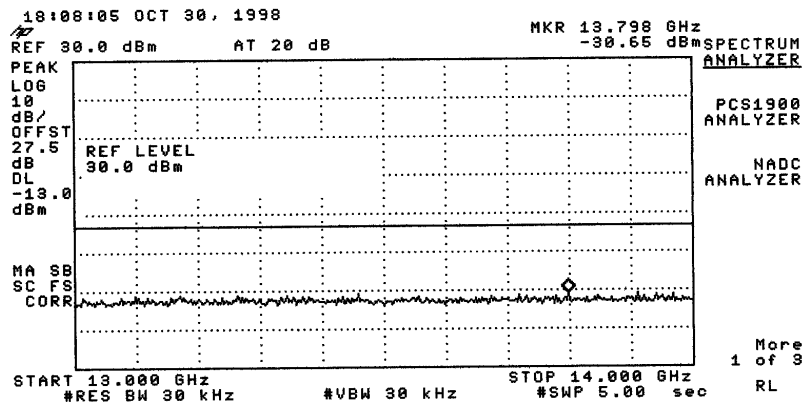
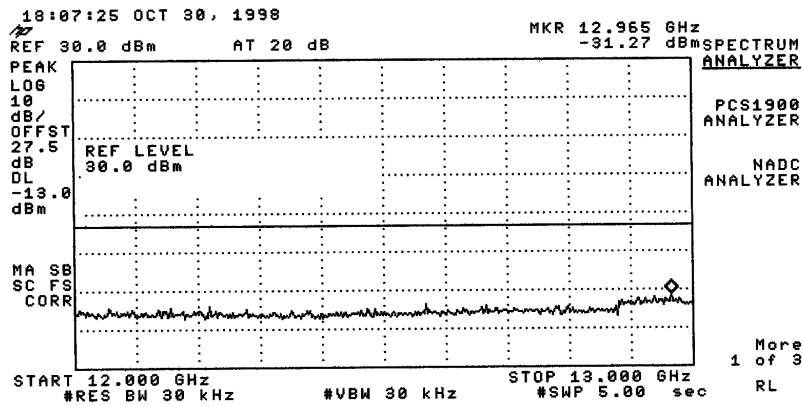
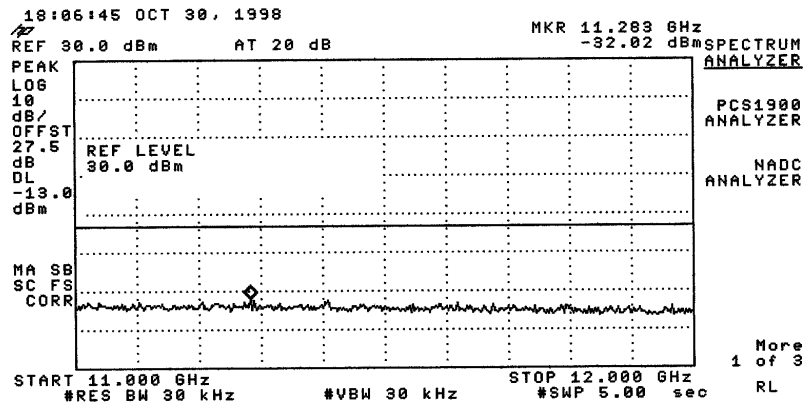


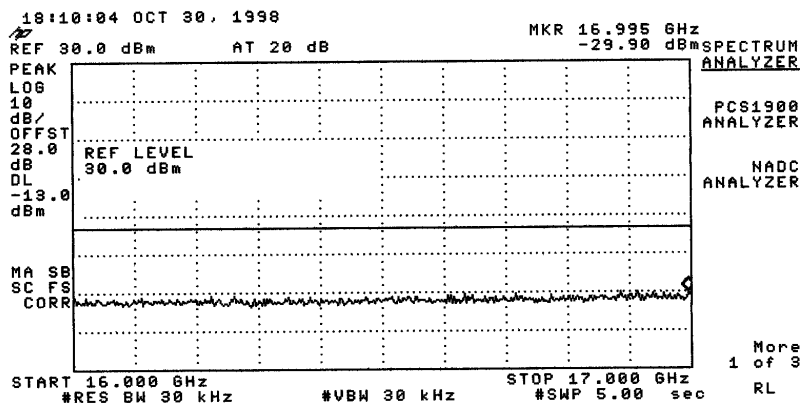
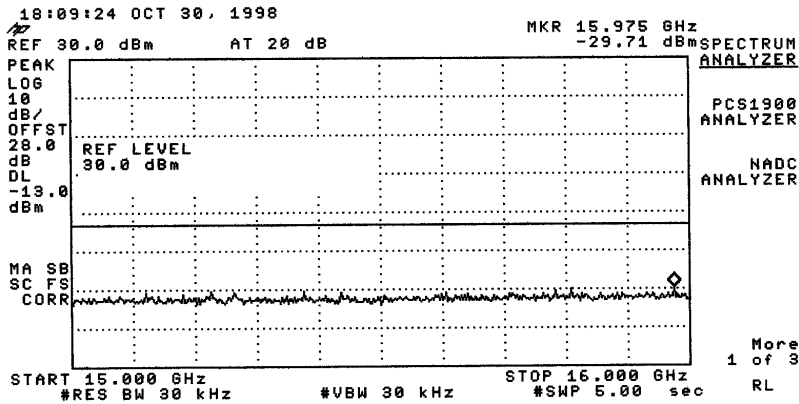
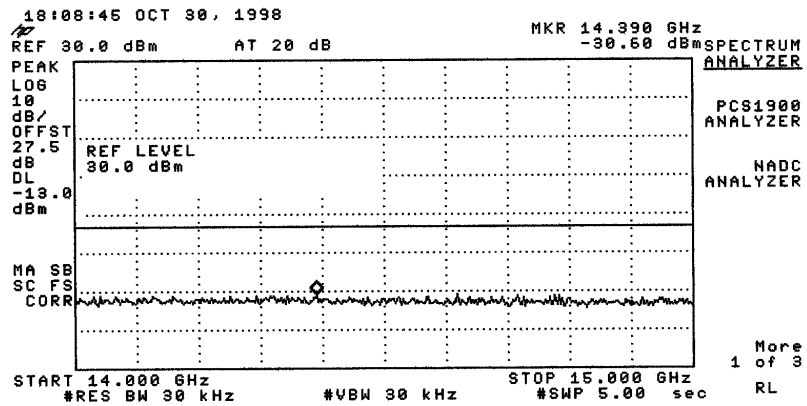
Exhibit 6J3



APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

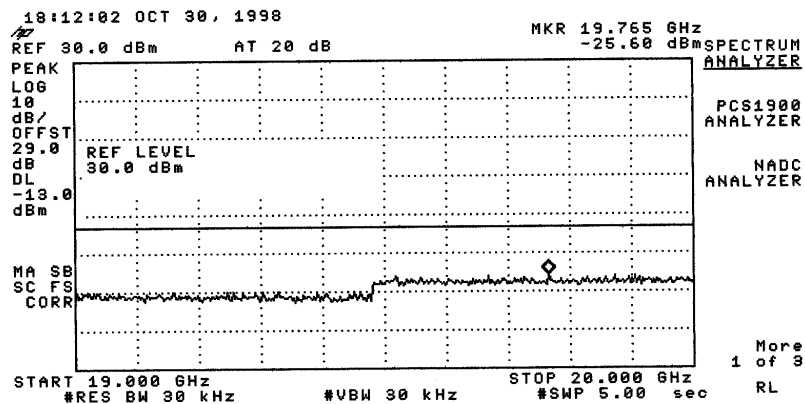
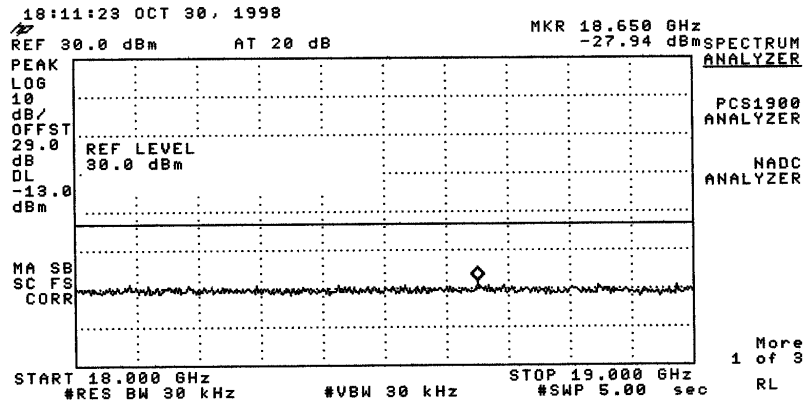
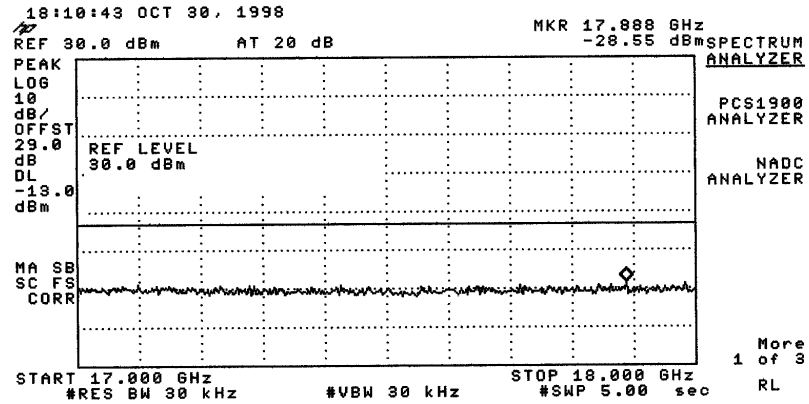
Exhibit 6J3



APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

Exhibit 6J3



APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

Exhibit 6J4

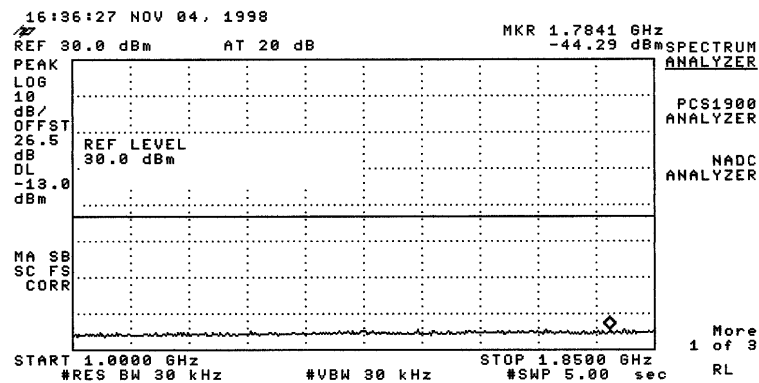
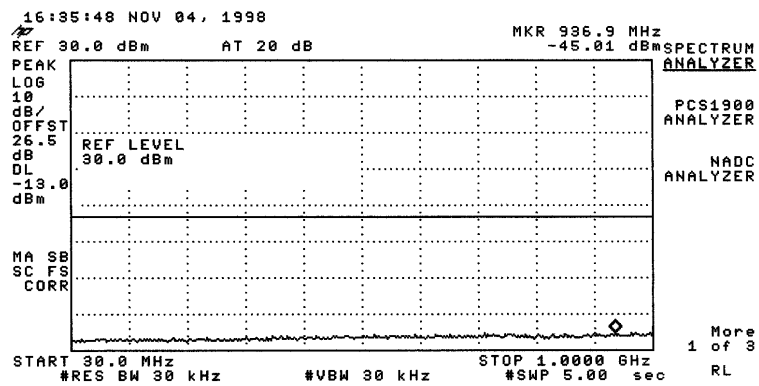
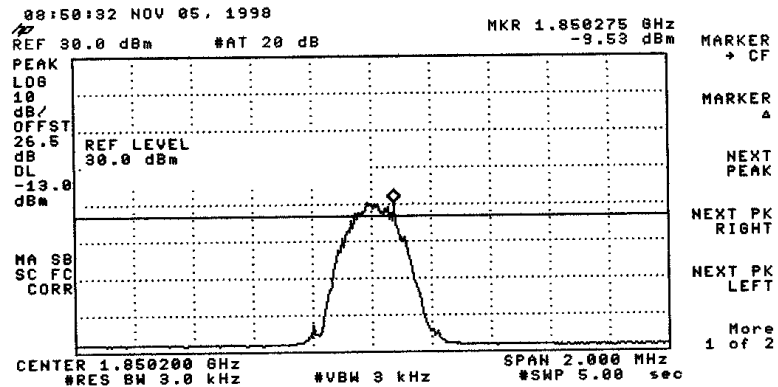


Exhibit 6J4

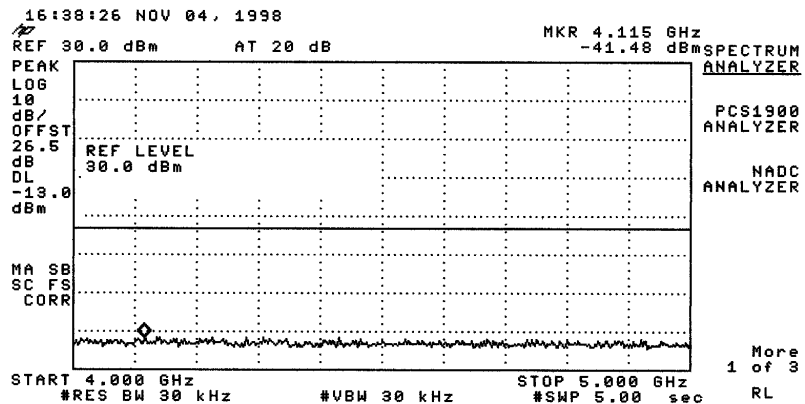
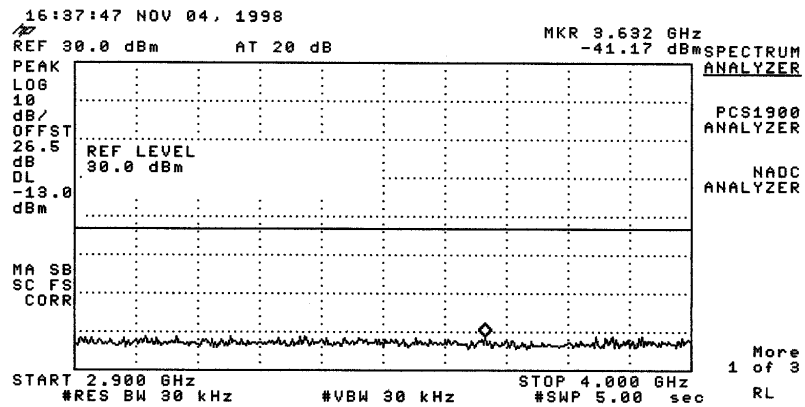
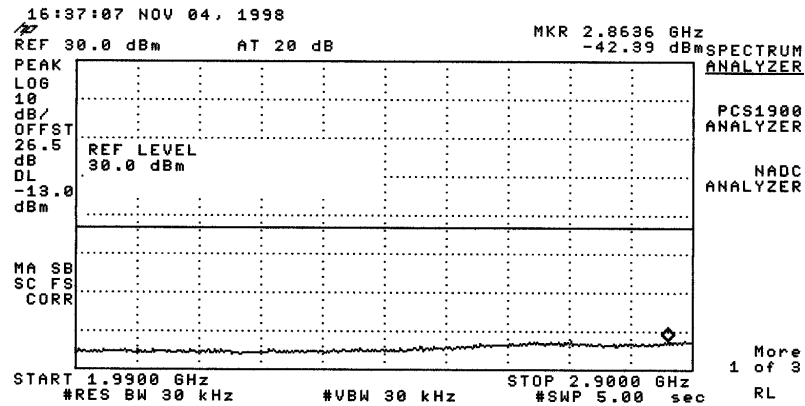
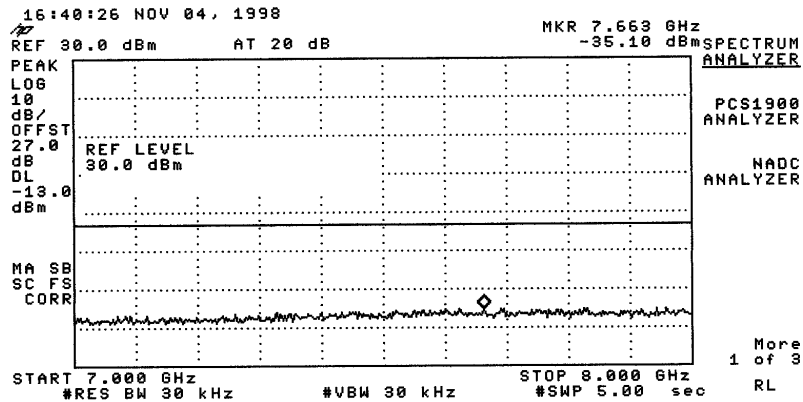
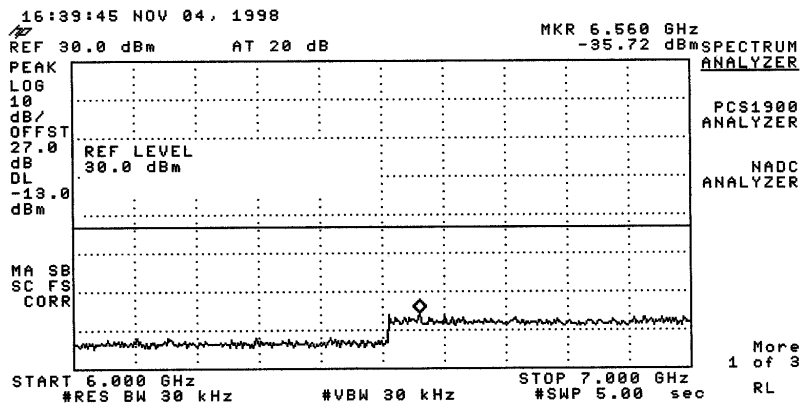
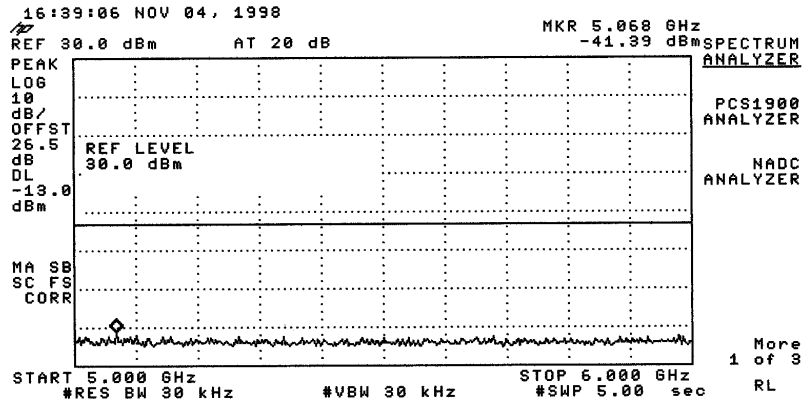


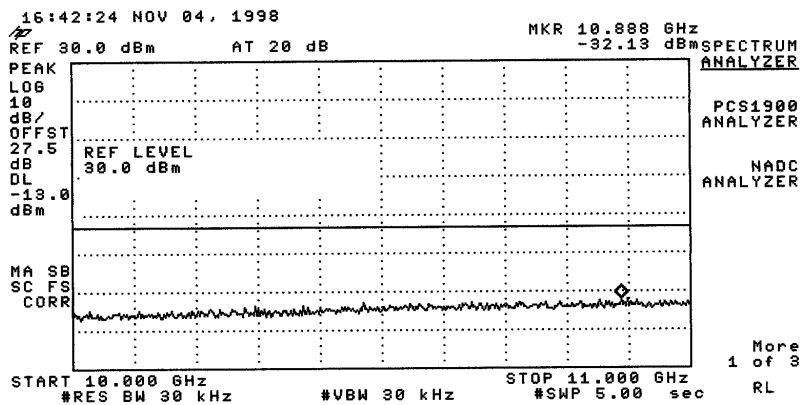
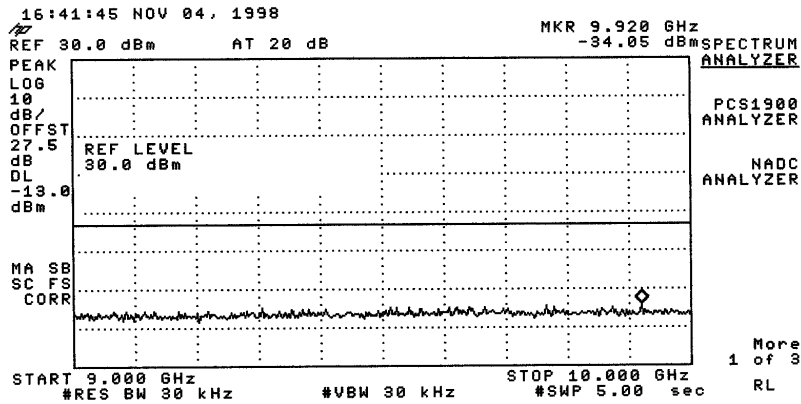
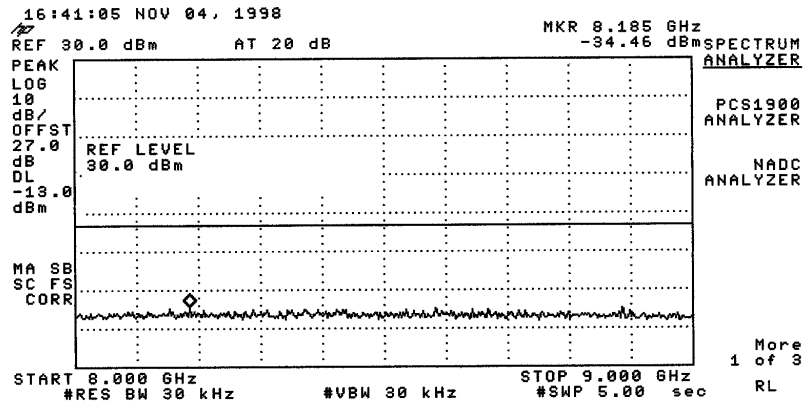
Exhibit 6J4

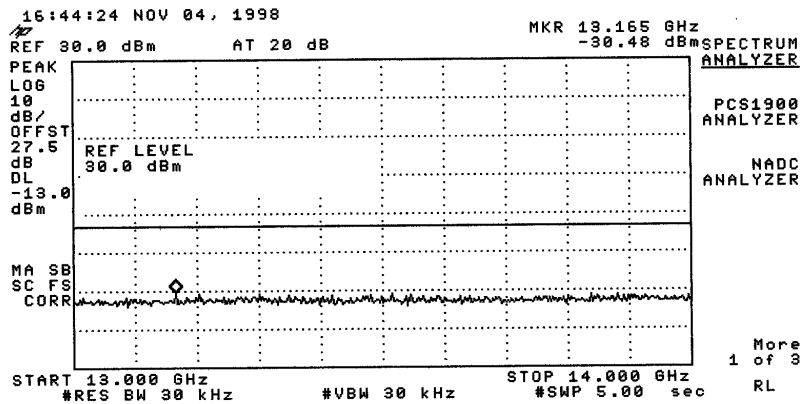
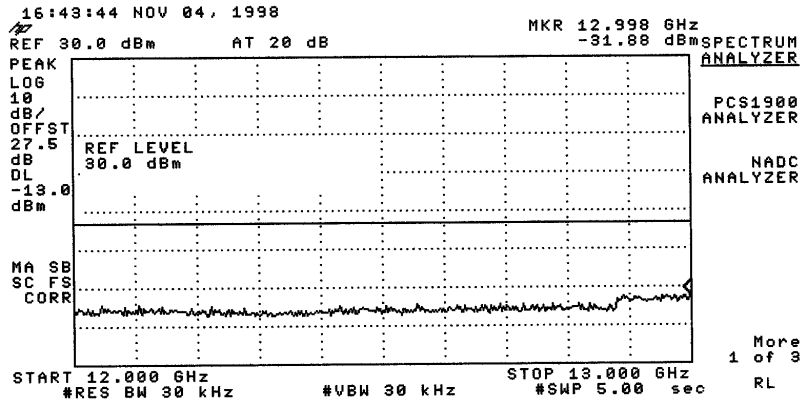
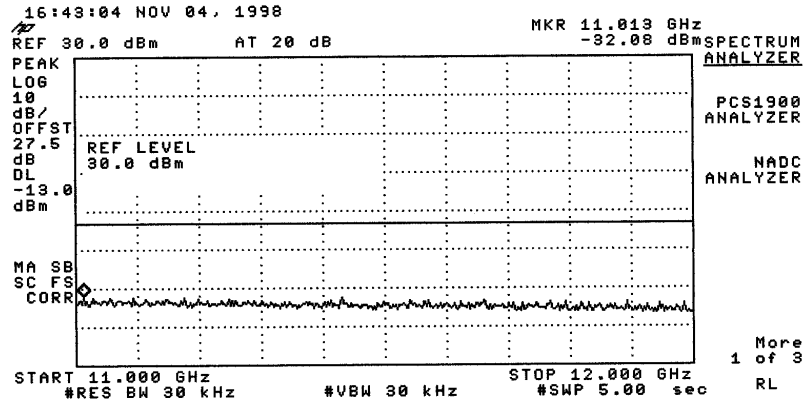


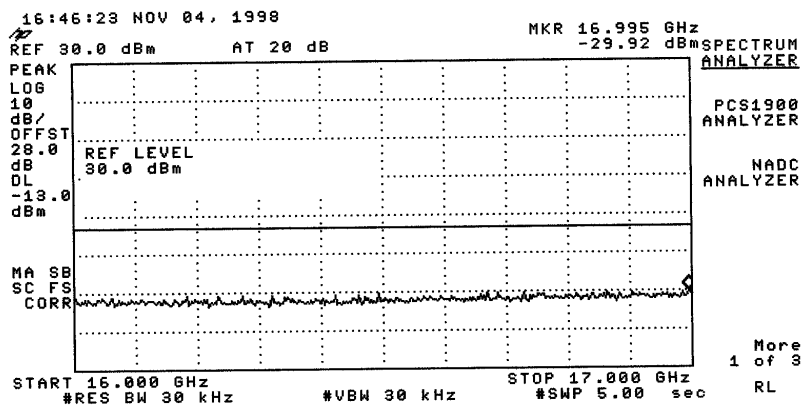
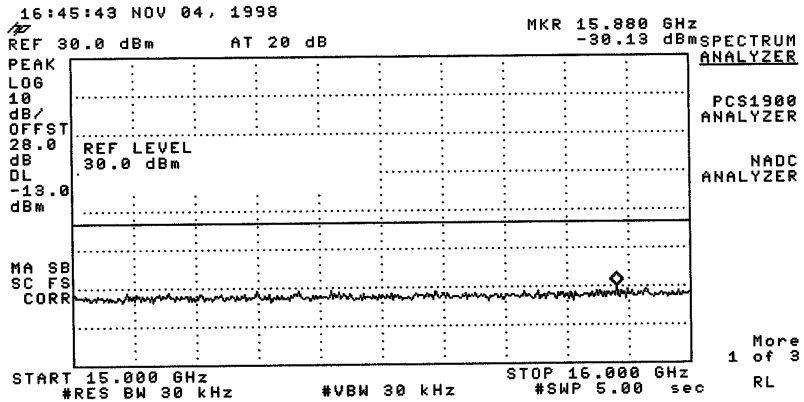
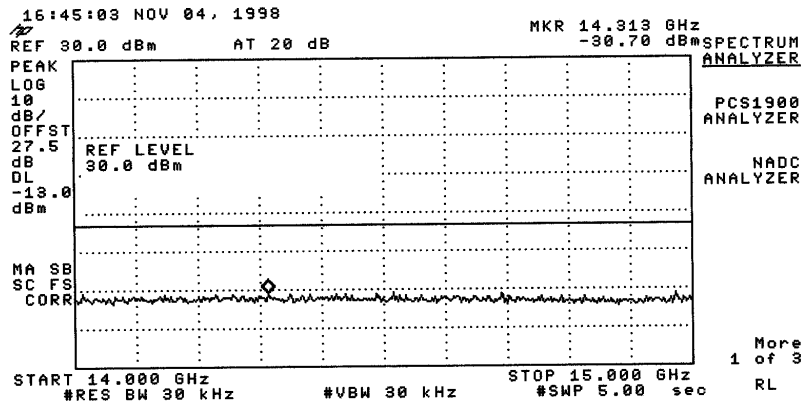
APPLICANT:
ERICSSON INC.

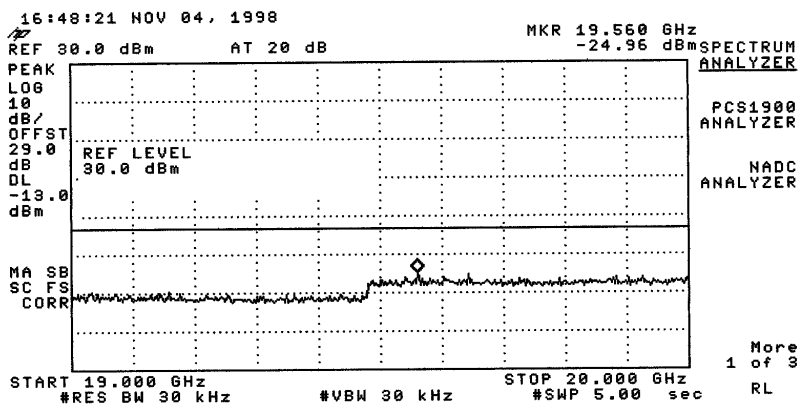
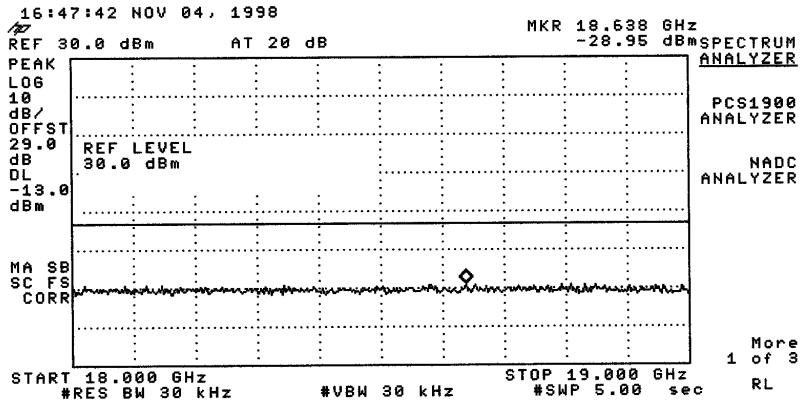
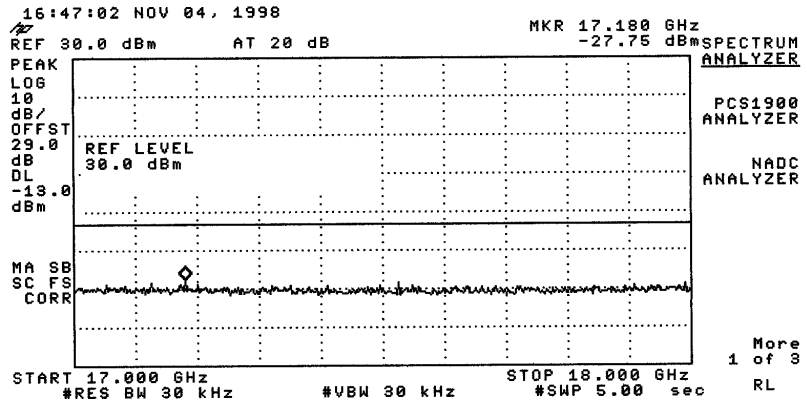
FCC ID NO:
AXATR-394-A2

Exhibit 6J4









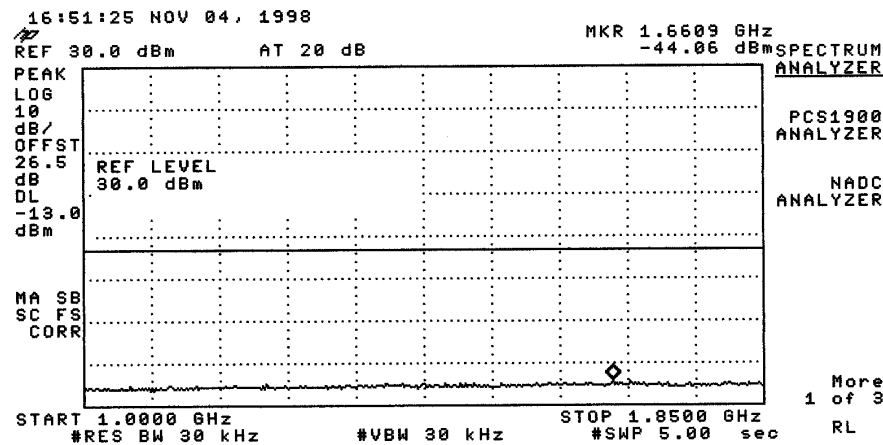
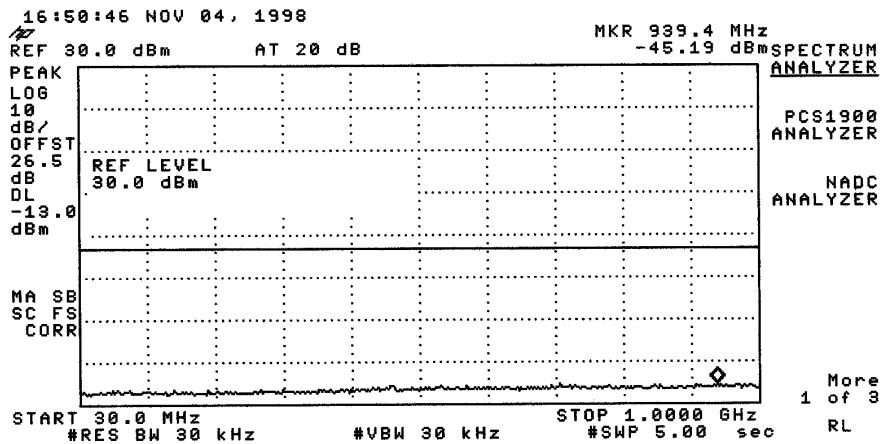
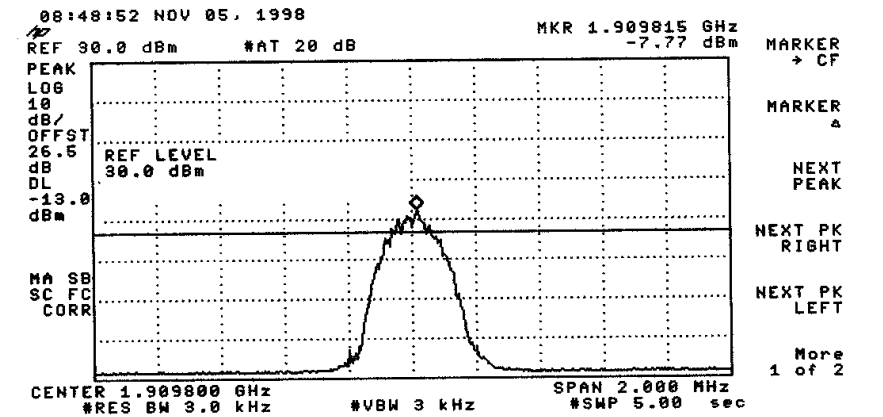
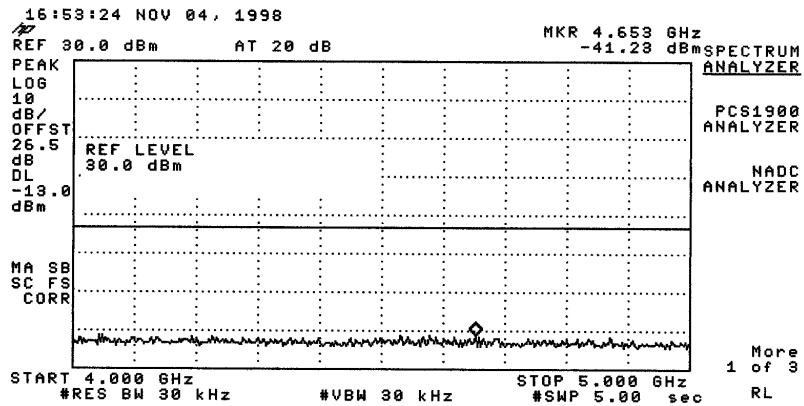
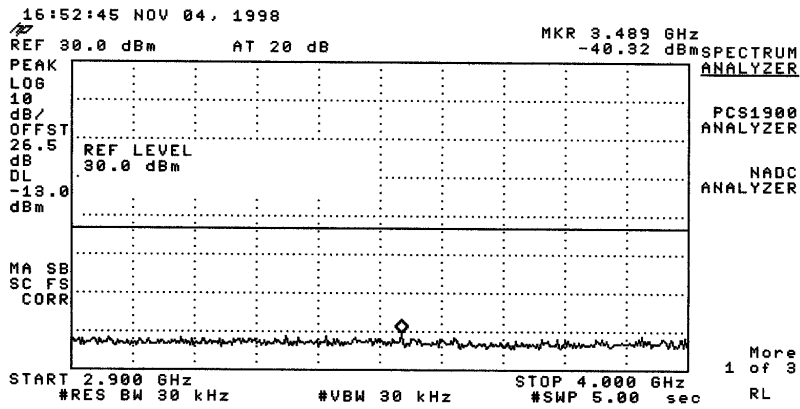
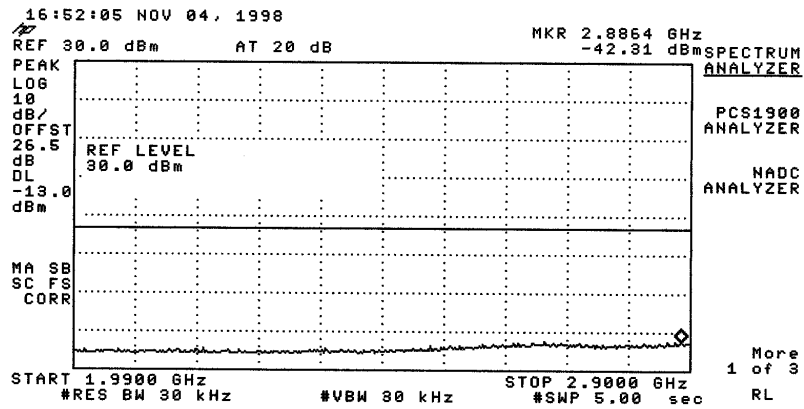


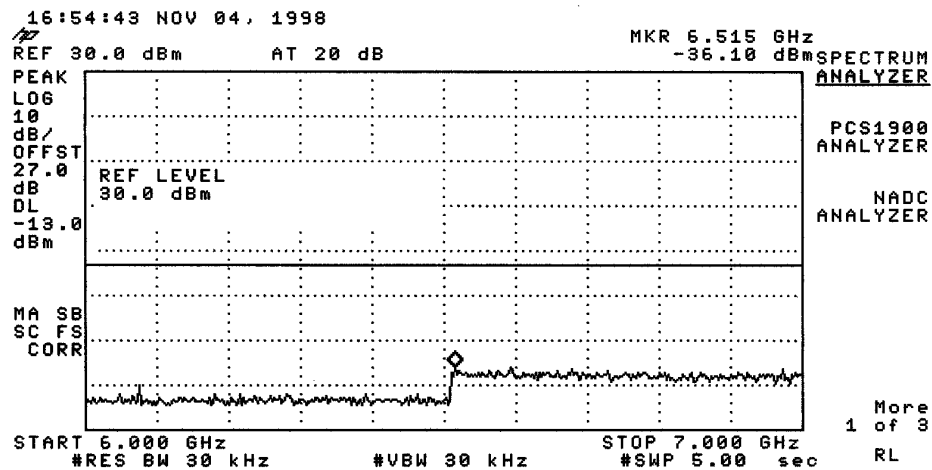
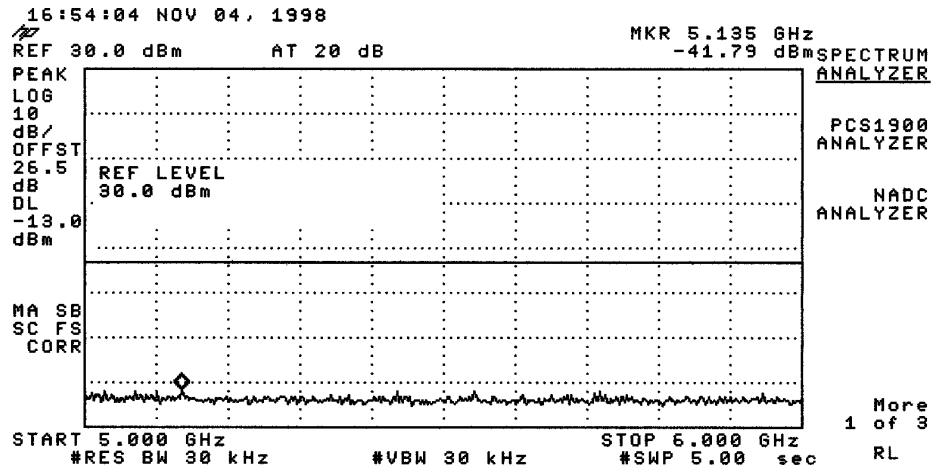
Exhibit 6J5

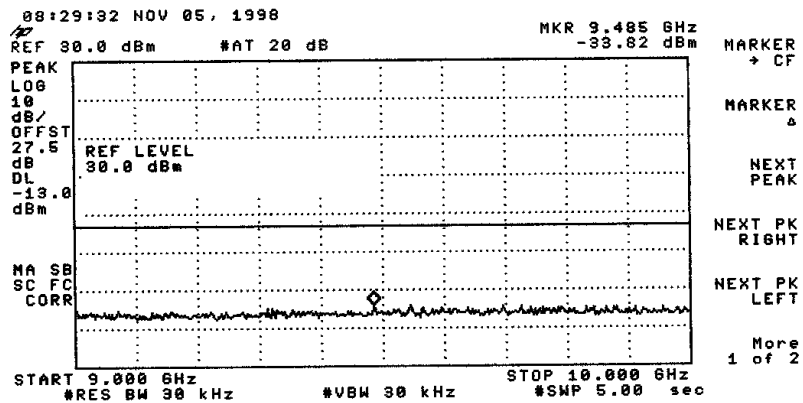
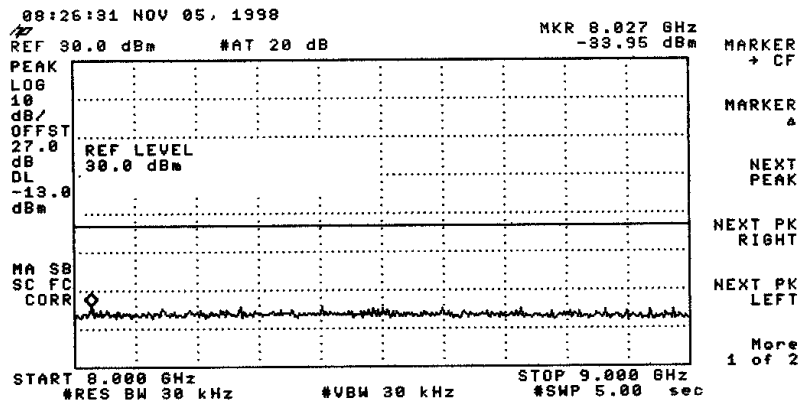
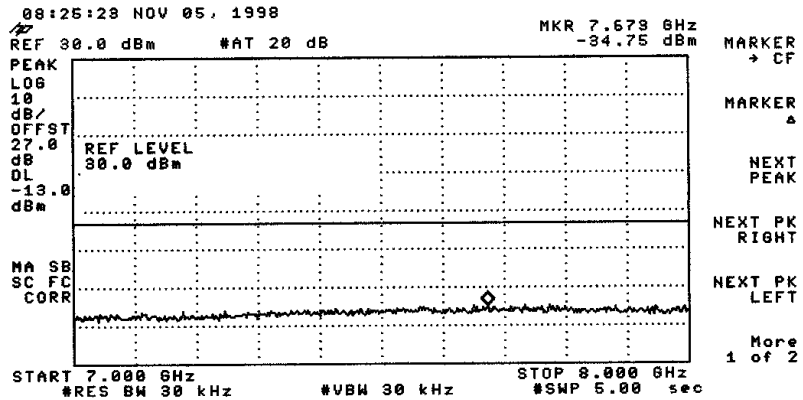


APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

Exhibit 6J5

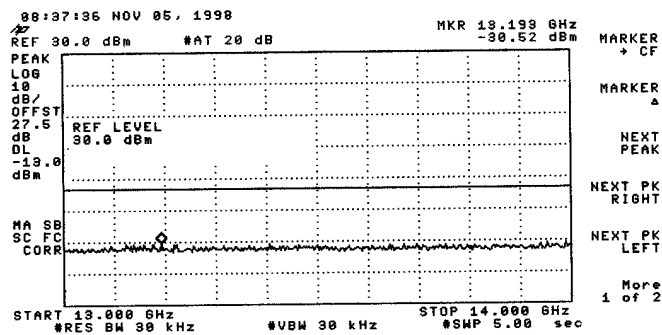
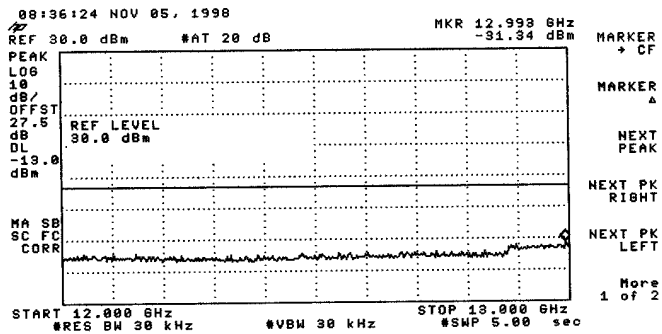
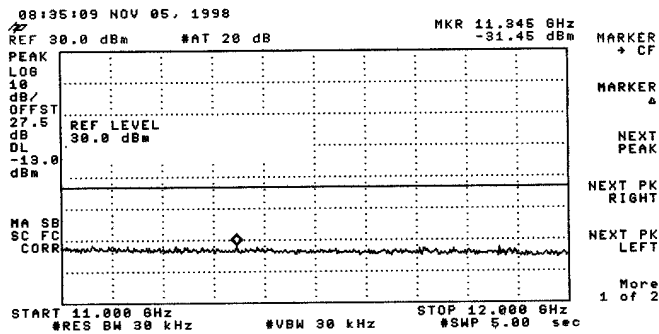
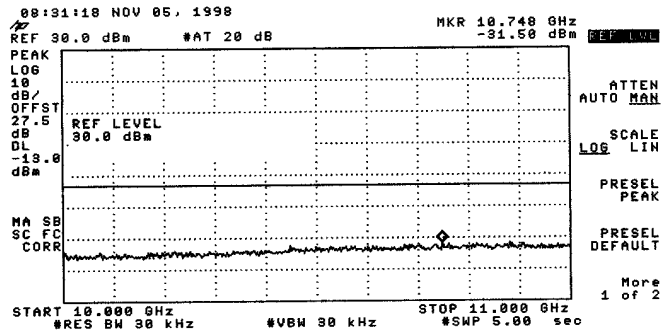


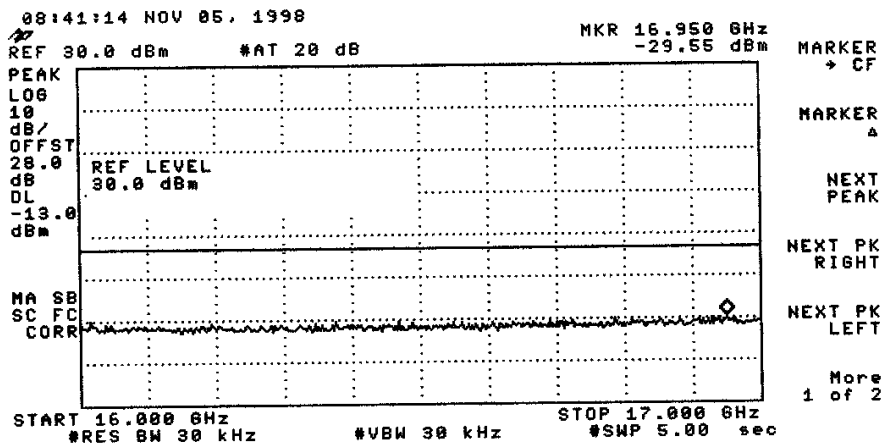
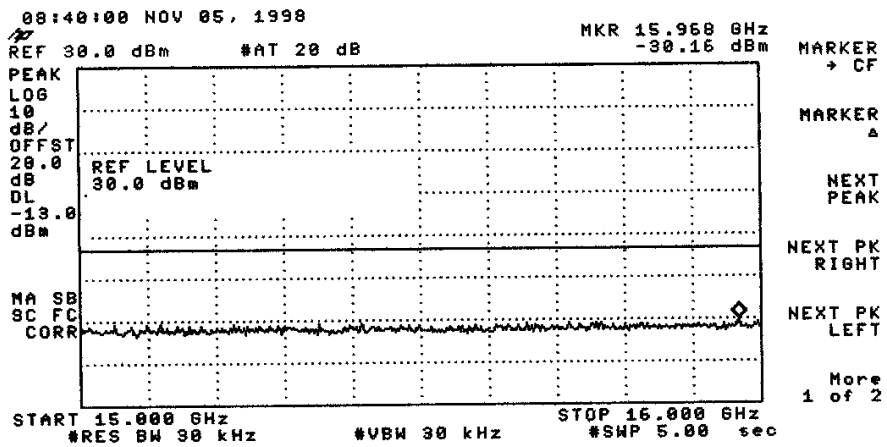
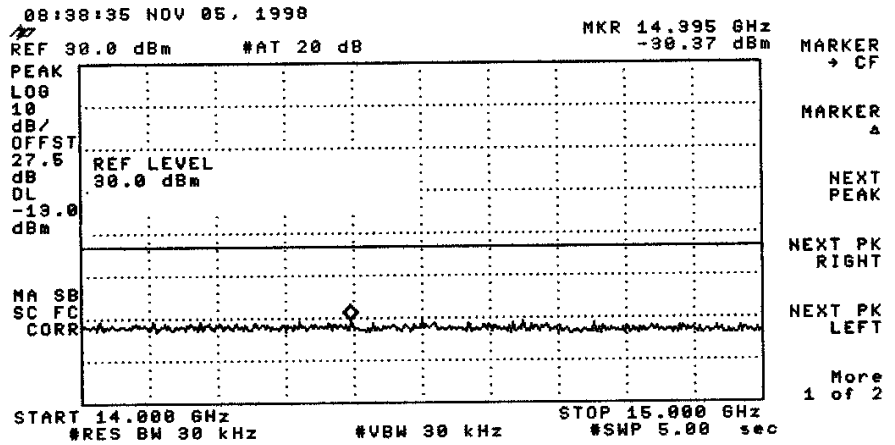


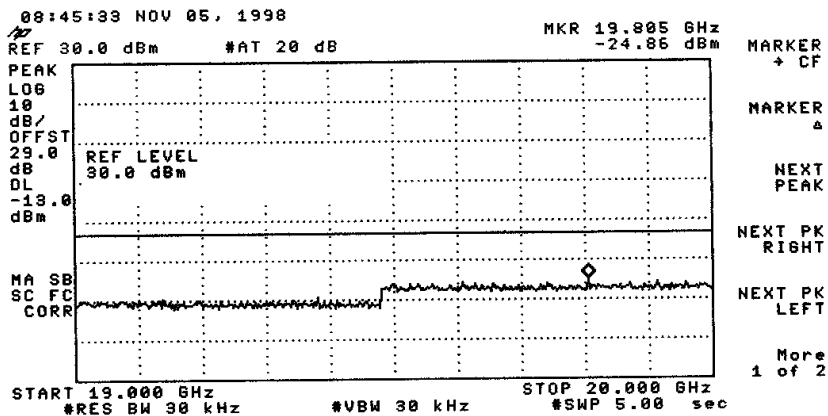
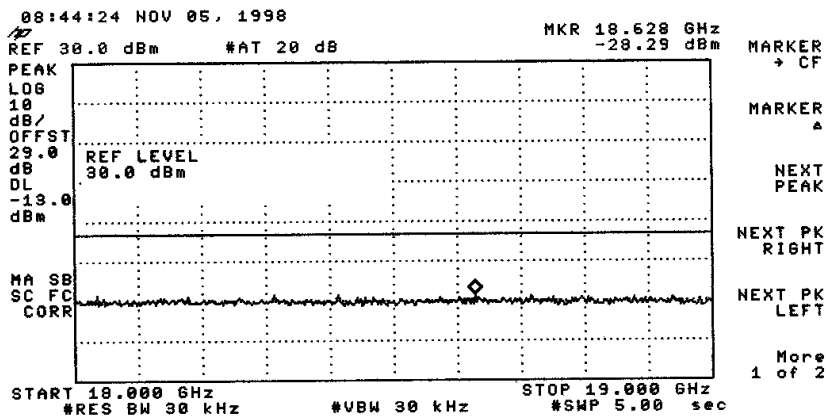
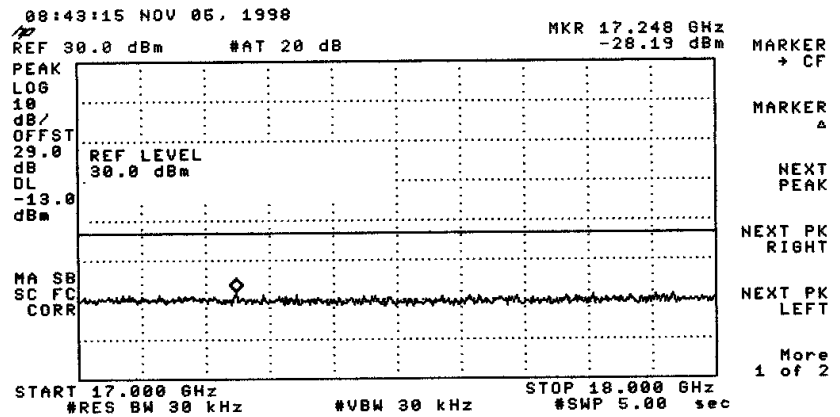
APPLICANT:
ERICSSON INC.

FCC ID NO:
AXATR-394-A2

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 #22 filed with the FCC in Colombia MD on June 5, 1997. The measurement procedure is per IS137A, 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	1850.2	1.0
6K3	1850.2	0.001
6K4	1880.8	1.0
6k5	1880.8	0.001
6K6	1909.8	1.0
6k7	1909.8	0.001

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

Hewlett Packard 8922 M System Simulator
Hewlett Packard 8593 E Spectrum Analyzer
Hewlett Packard 8566 B Spectrum Analyzer
Hewlett Packard 437B Power Meter

APPLICANT:
ERICSSON INC

FCC ID NO:
AXATR-394-A2

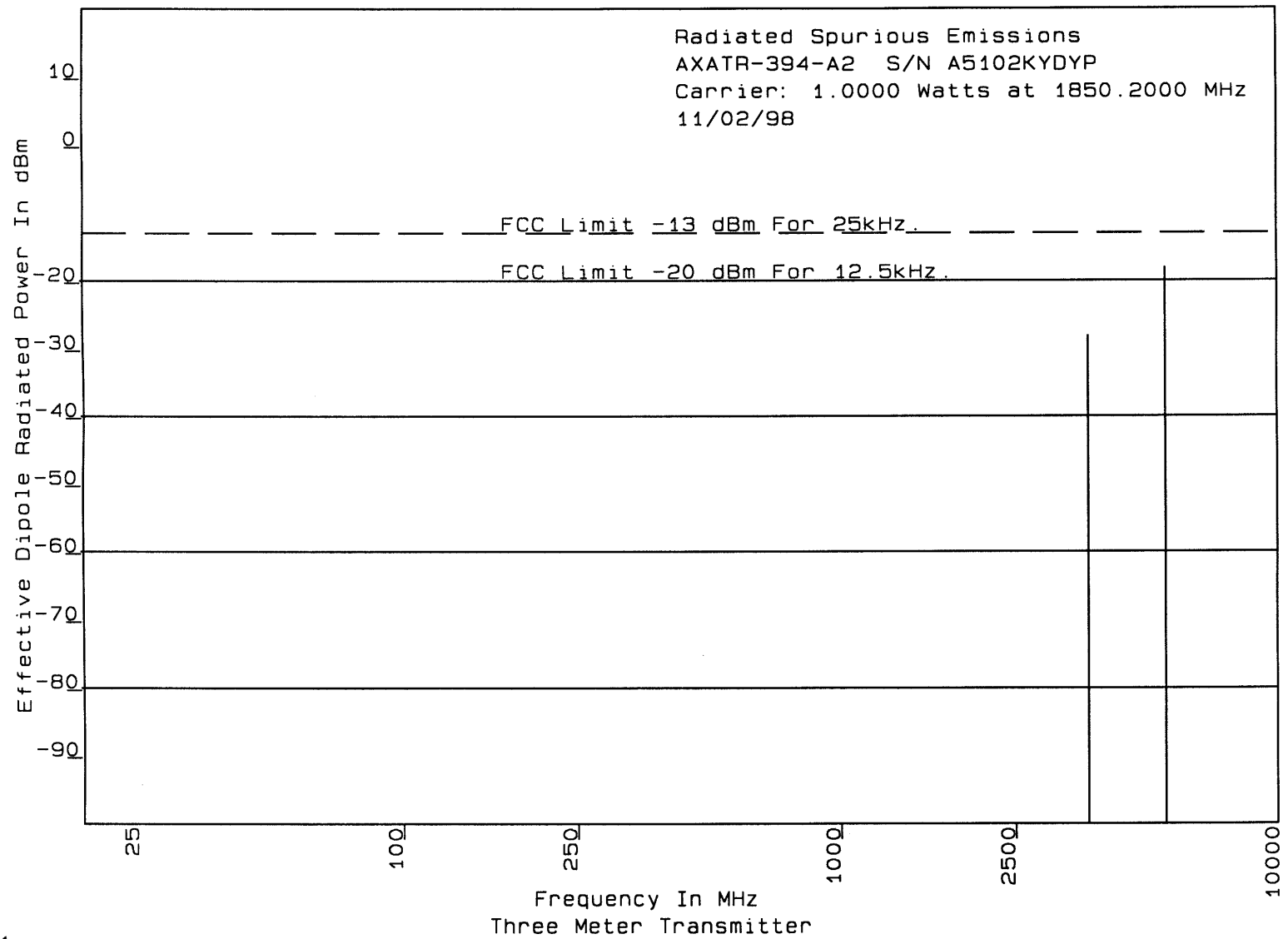


Exhibit 6K2

APPLICANT:
ERICSSON INC

FCC ID NO:
AXATR-394-A2

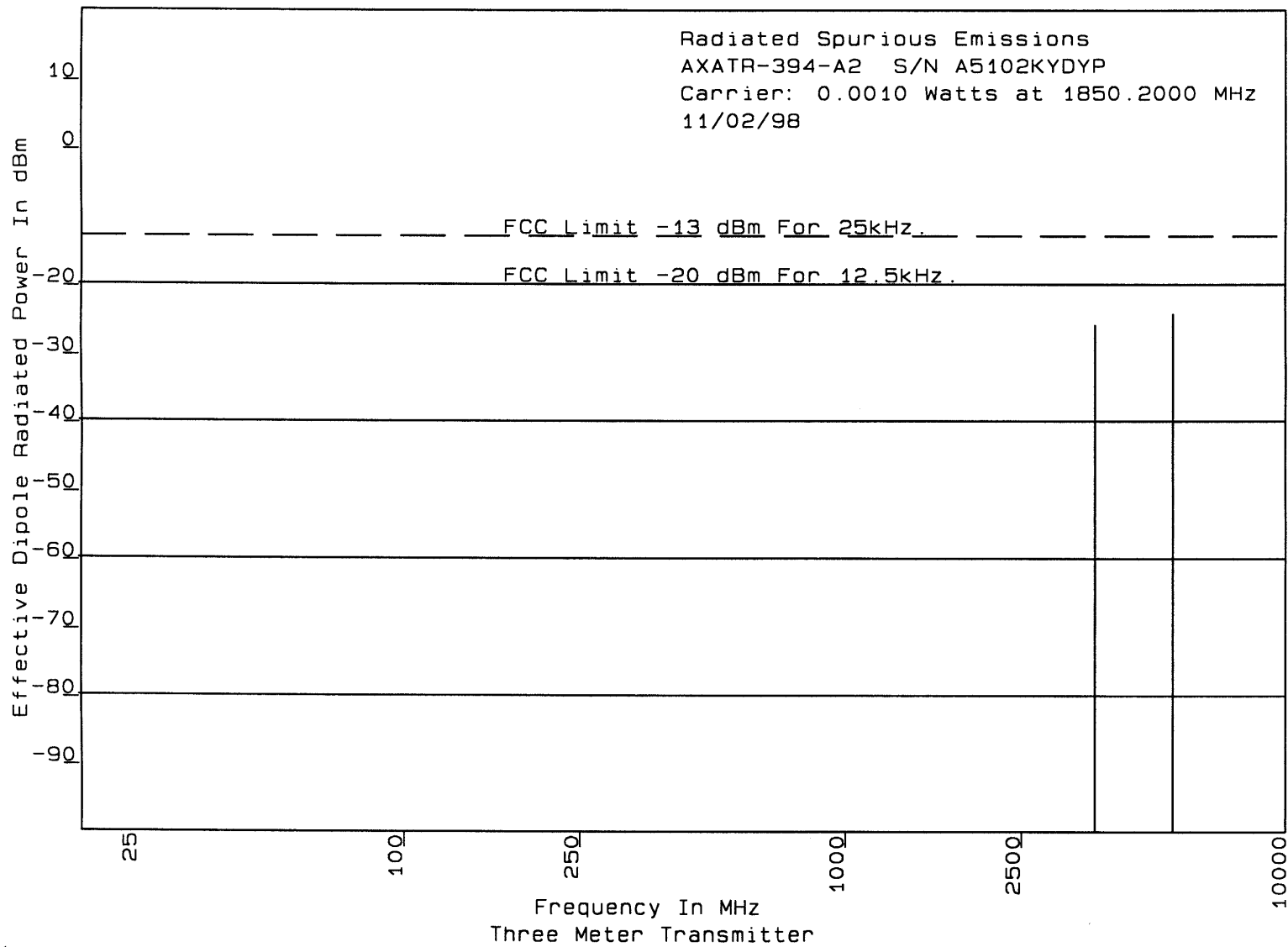


Exhibit 6K3

APPLICANT:
ERICSSON INC

FCC ID NO:
AXATR-394-A2

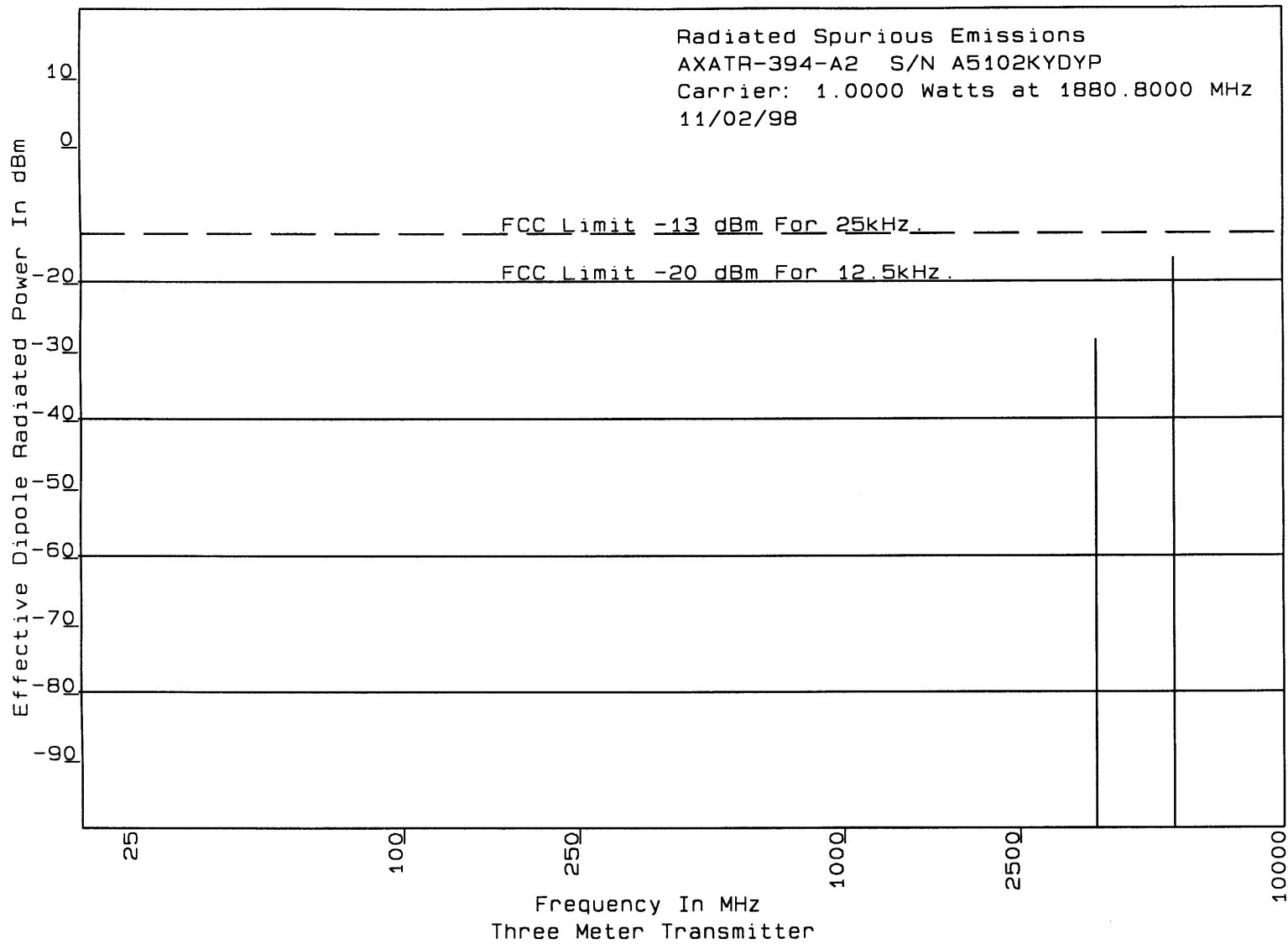


Exhibit 6k4

APPLICANT:
ERICSSON INC

FCC ID NO:
AXATR-394-A2

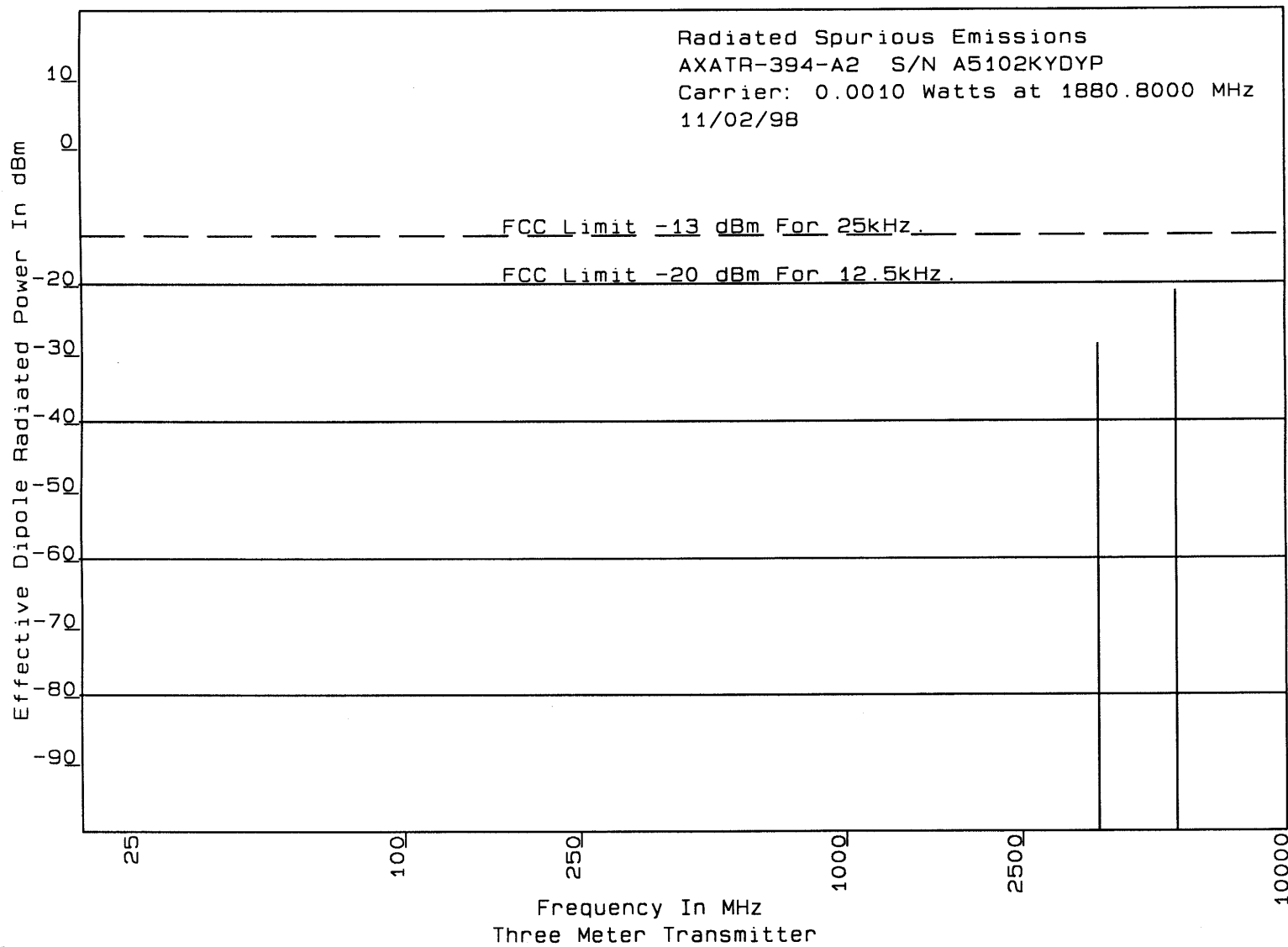


Exhibit 6K5

APPLICANT:
ERICSSON INC

FCC ID NO:
AXATR-394-A2

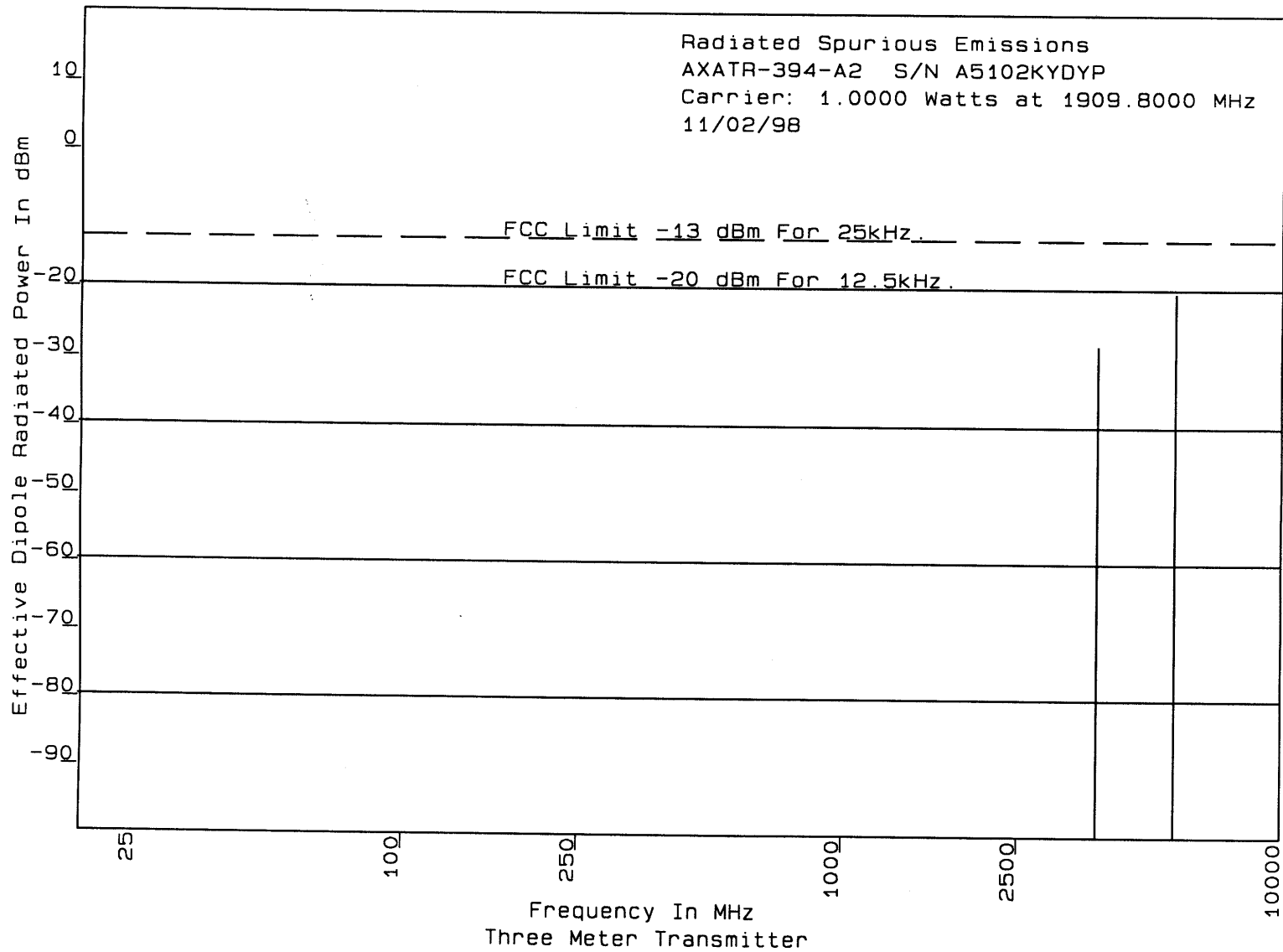


Exhibit 6k6

APPLICANT:
ERICSSON INC

FCC ID NO:
AXATR-394-A2

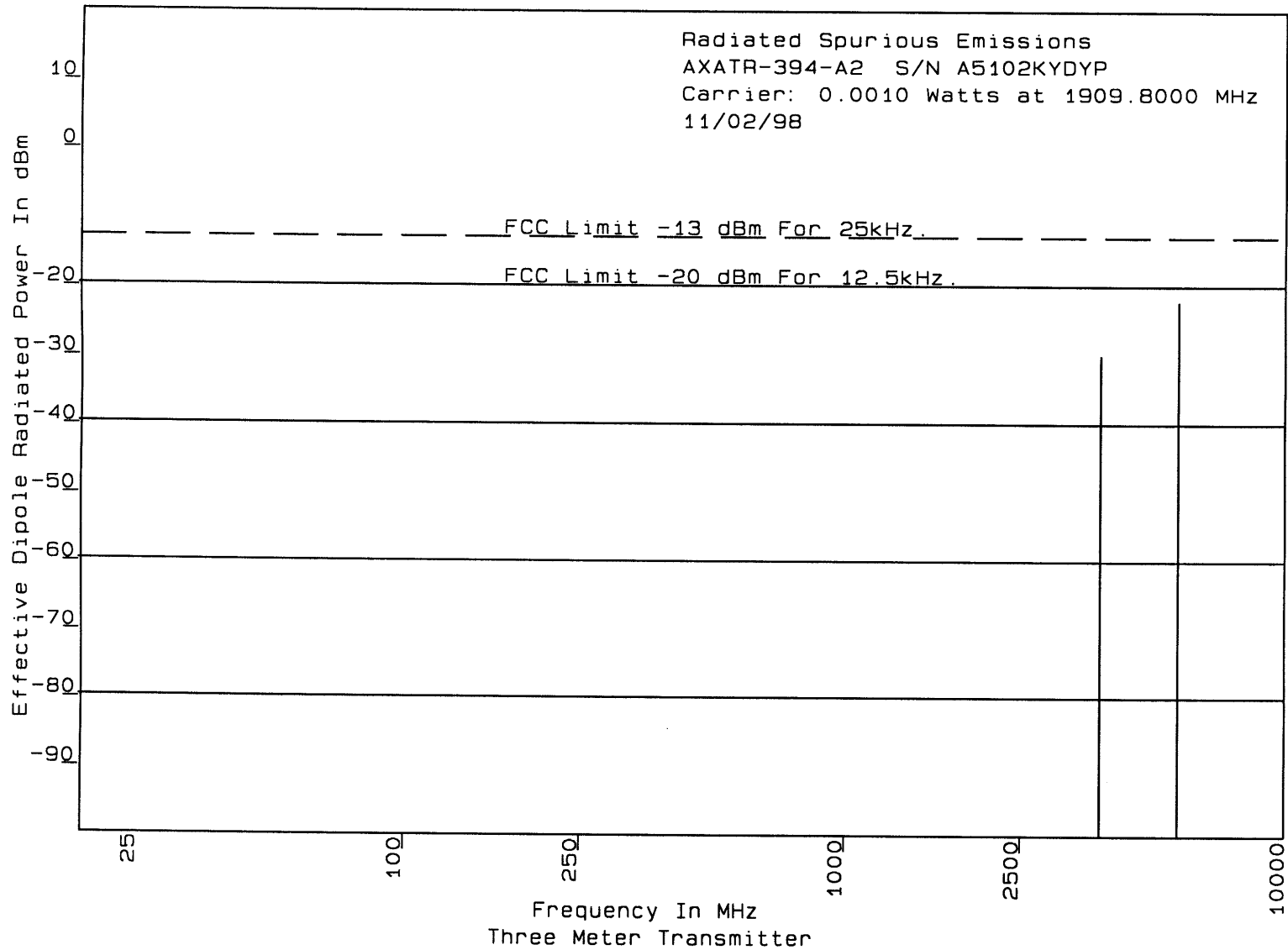


Exhibit6k7

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 6L2 and 6L3 respectively.

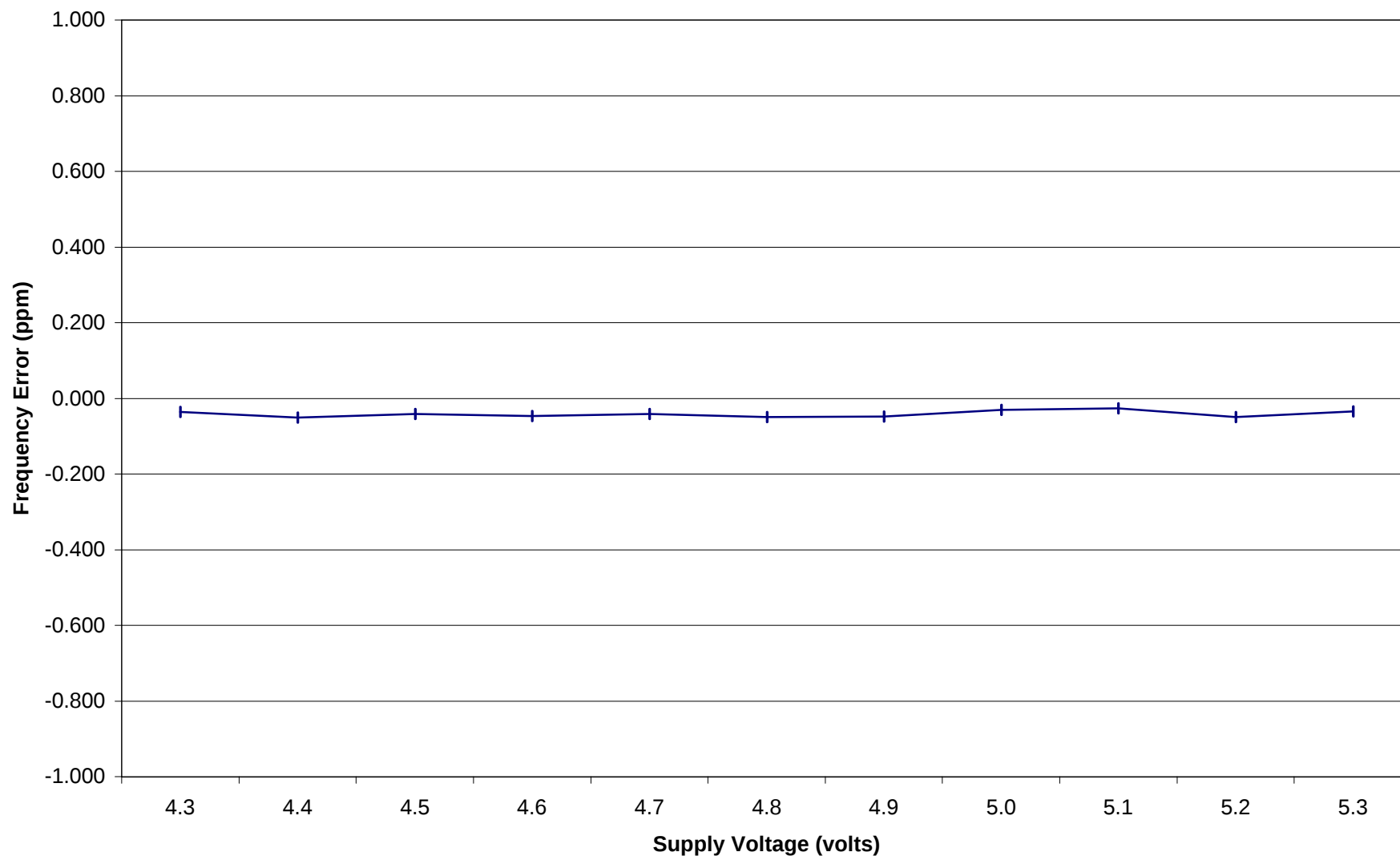
<u>EXHIBIT #</u>	<u>Voltage</u>	<u>Temperature</u>
6L2	4.3 to 5.3 Volts (varied)	+25 C
6L3	4.8 Volts	Varied

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

The measurements were made 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

Frequency Error vs. Supply Voltage, GSM Channel 660, Power Level 0



Frequency Error vs. Temperature, GSM Channel 660, Power Level 0

