Table of Contents for Exhibits 6 – Test report/data

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	Varied	+ 25 C	0	Mid Band	1

We are requesting an EIRP of 870mW for this radio, which incorporates the 20%variance allowed by the FCC on previous grants. The measured EIRP on this unit meets these tolerances.

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:

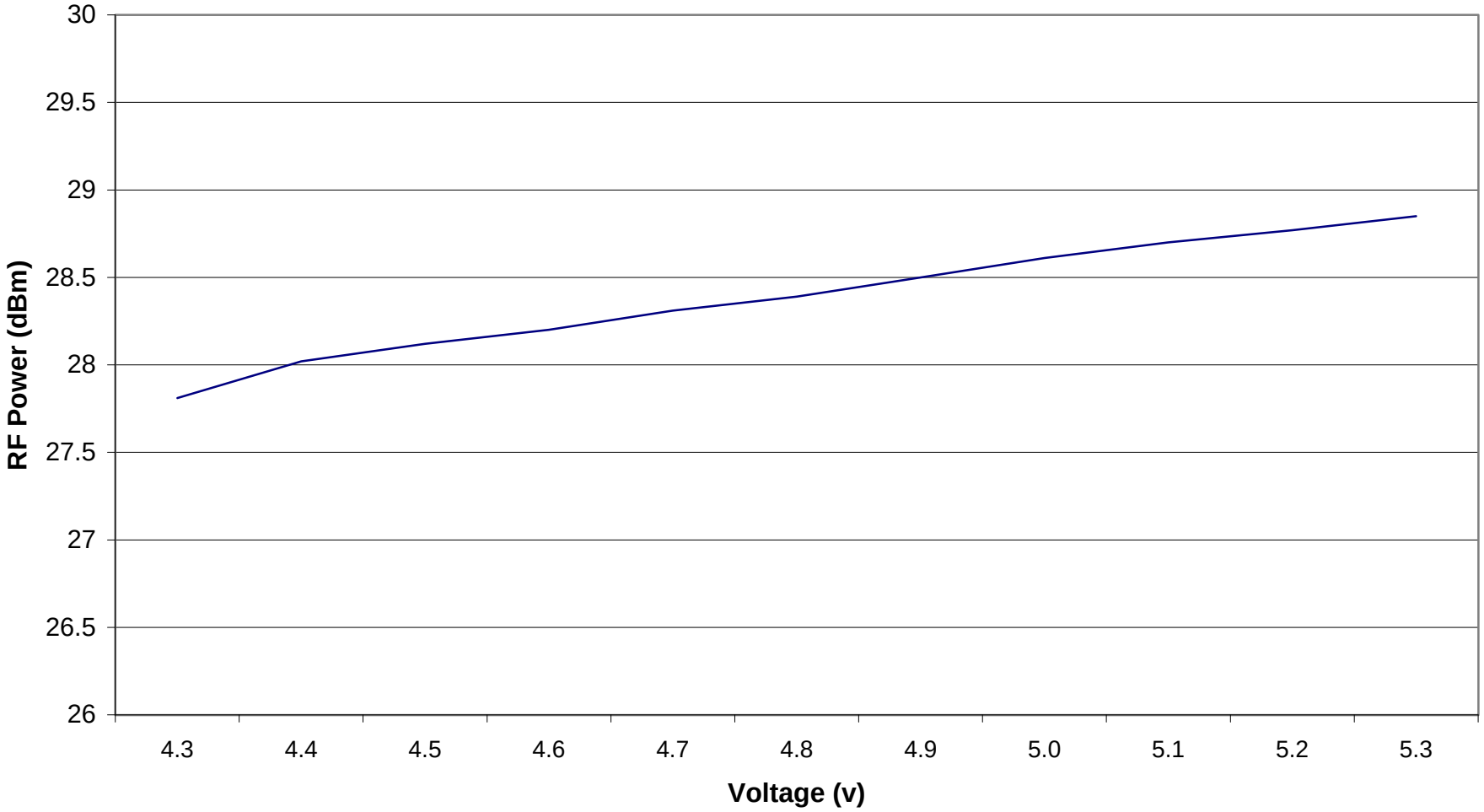
(1) EUT measurements are made at 3 m using calibrated antennas and equipment with known cable losses.
(2) A peak measurement is made by raising and lowering the antenna and rotating the EUT 360 degrees. Horizontal and Vertical Polarization data is recorded.
(3) A generator and dipole antenna are then 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 (W)	EIRP (dBm)
1880.8	1.0	29.4

RF Power versus Voltage

(Nominal temperature 25 deg C, Power level 0, Frequency 1880.8MHz)



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.

Exhibit	Frequency (MHz)	Output Power (W)	Antenna Position
6J2	1850.2	.0010	Extended
6J3	1850.2	.0010	Retracted
6J4	1850.2	1.0	Extended
6J5	1850.2	1.0	Retracted
6J6	1909.8	.0010	Extended
6J7	1909.8	.0010	Retracted
6J8	1909.8	1.0	Extended
6J9	1909.8	1.0	Retracted

The measurements were made using the following equipment:

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

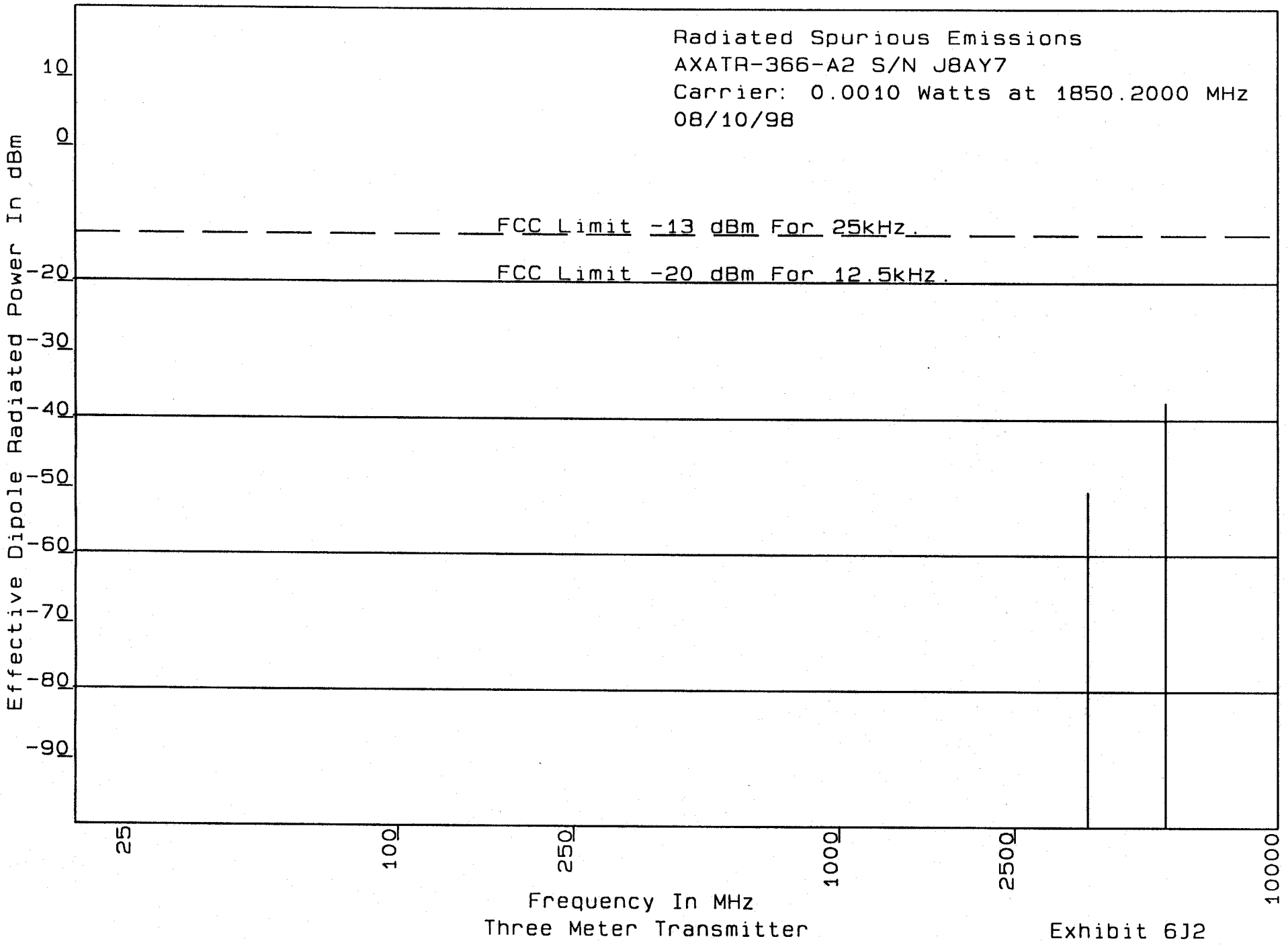

Radiated Spurious Emissions
AXATR-366-A2 S/N J8AY7
Carrier: 0.0010 Watts at 1850.2000 MHz
08/10/98
FCC Limit -13 dBm For 25kHz.
FCC Limit -20 dBm For 12.5kHz.
Effective Dipole Radiated Power In dBm
10
0
-20
-30
-40
-50
-60
-70
-80
-90
25
100
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter

Exhibit 6J2

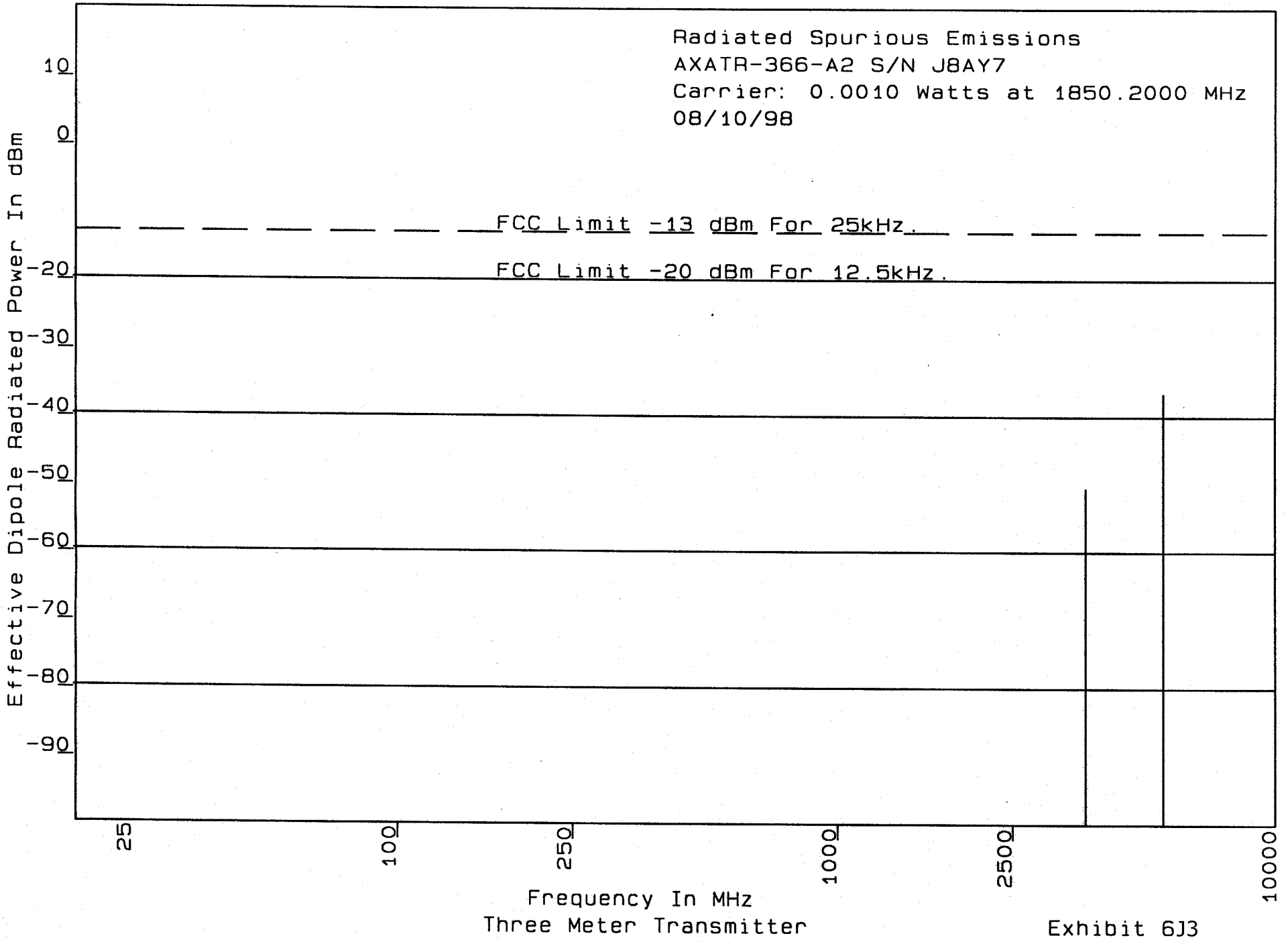
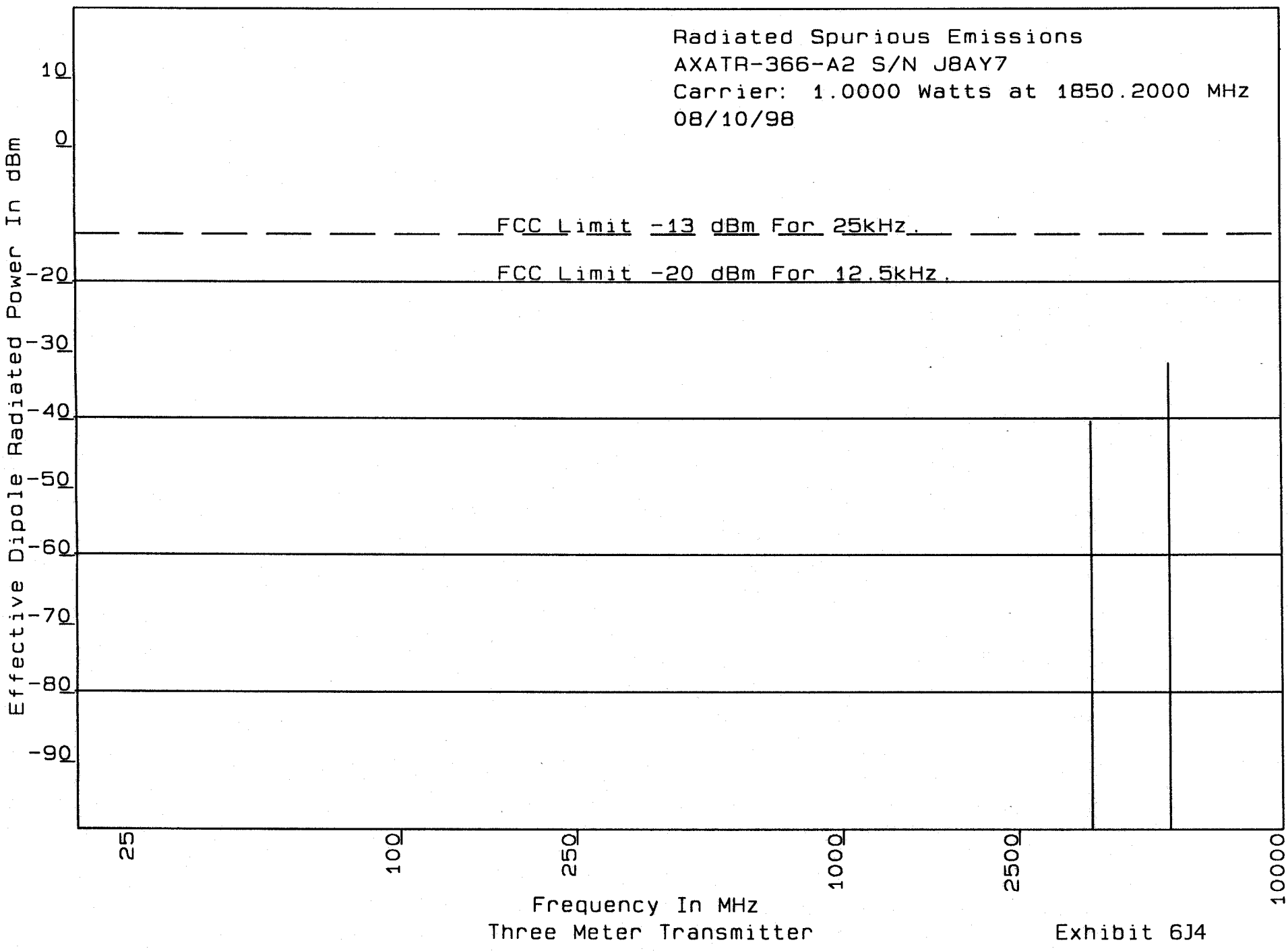

Radiated Spurious Emissions
AXATR-366-A2 S/N J8AY7
Carrier: 0.0010 Watts at 1850.2000 MHz
08/10/98
FCC Limit -13 dBm For 25kHz.
FCC Limit -20 dBm For 12.5kHz.
Effective Dipole Radiated Power In dBm
10
0
-20
-30
-40
-50
-60
-70
-80
-90
25
100
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter

Exhibit 6J3



Three Meter Transmitter

Exhibit 6J4

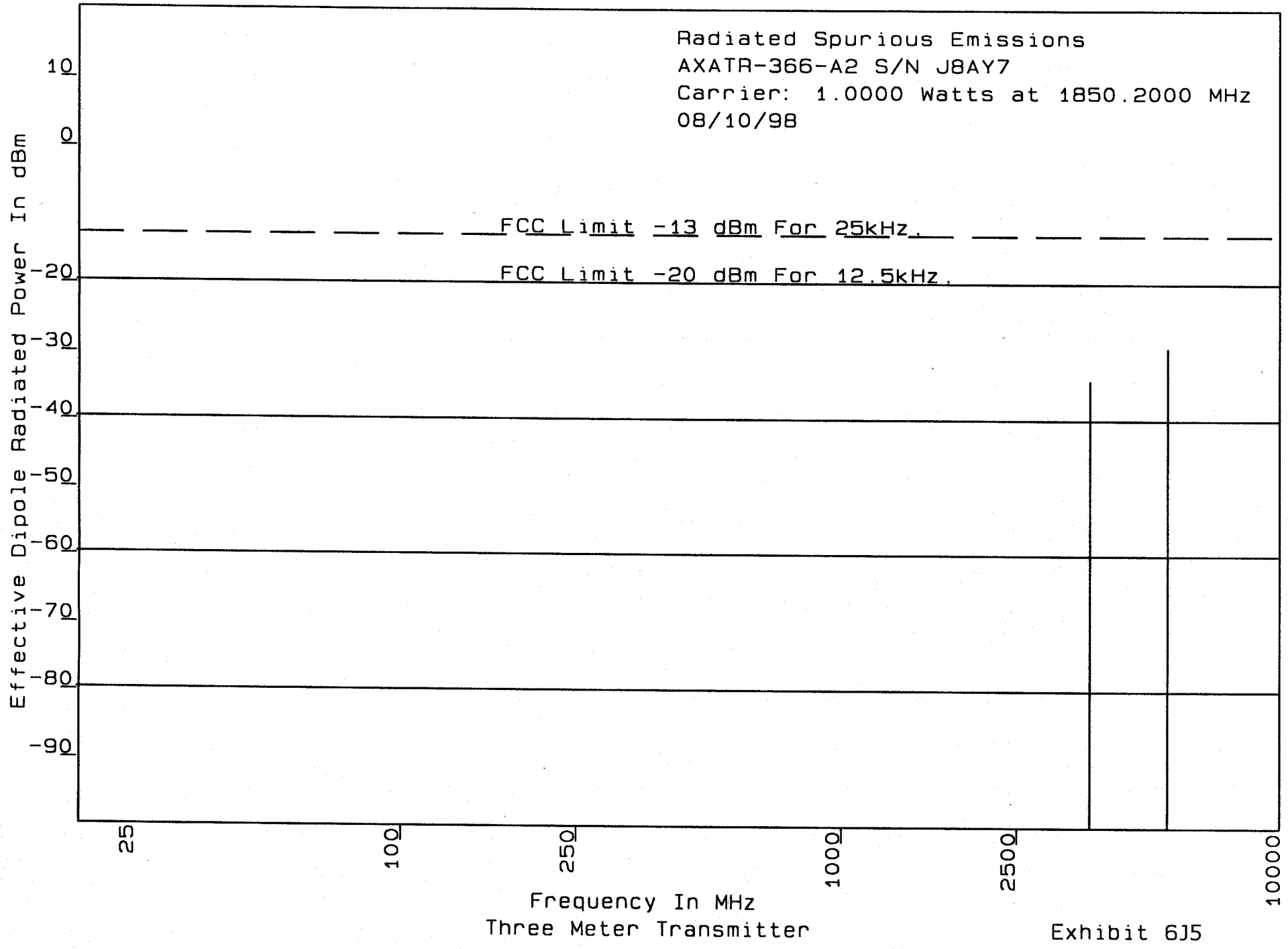

Radiated Spurious Emissions
AXATR-366-A2 S/N J8AY7
Carrier: 1.0000 Watts at 1850.2000 MHz
08/10/98
FCC Limit -13 dBm For 25kHz.
FCC Limit -20 dBm For 12.5kHz.
Effective Dipole Radiated Power In dBm
10
0
-20
-30
-40
-50
-60
-70
-80
-90
25
100
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter

Exhibit 6J5

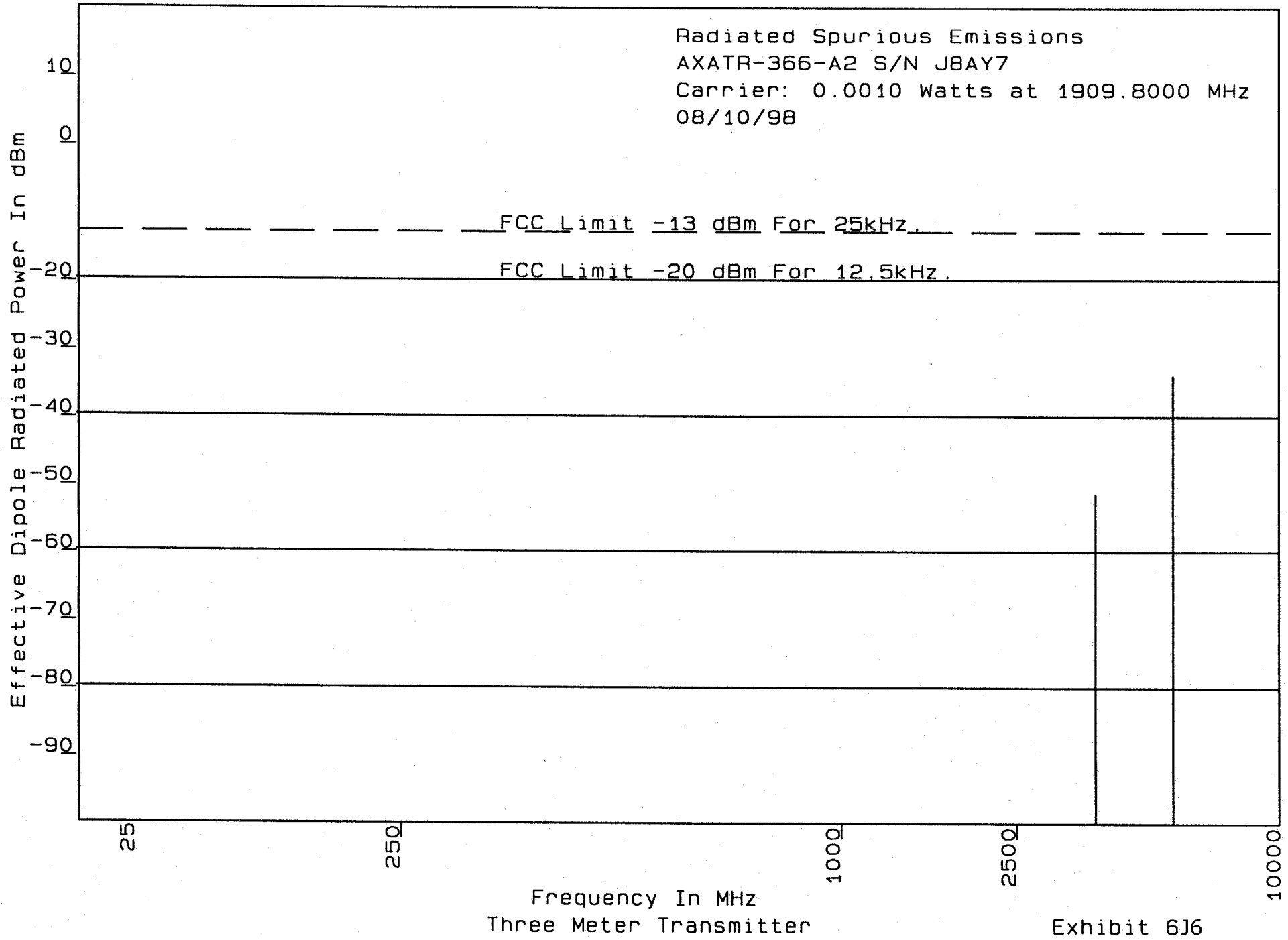
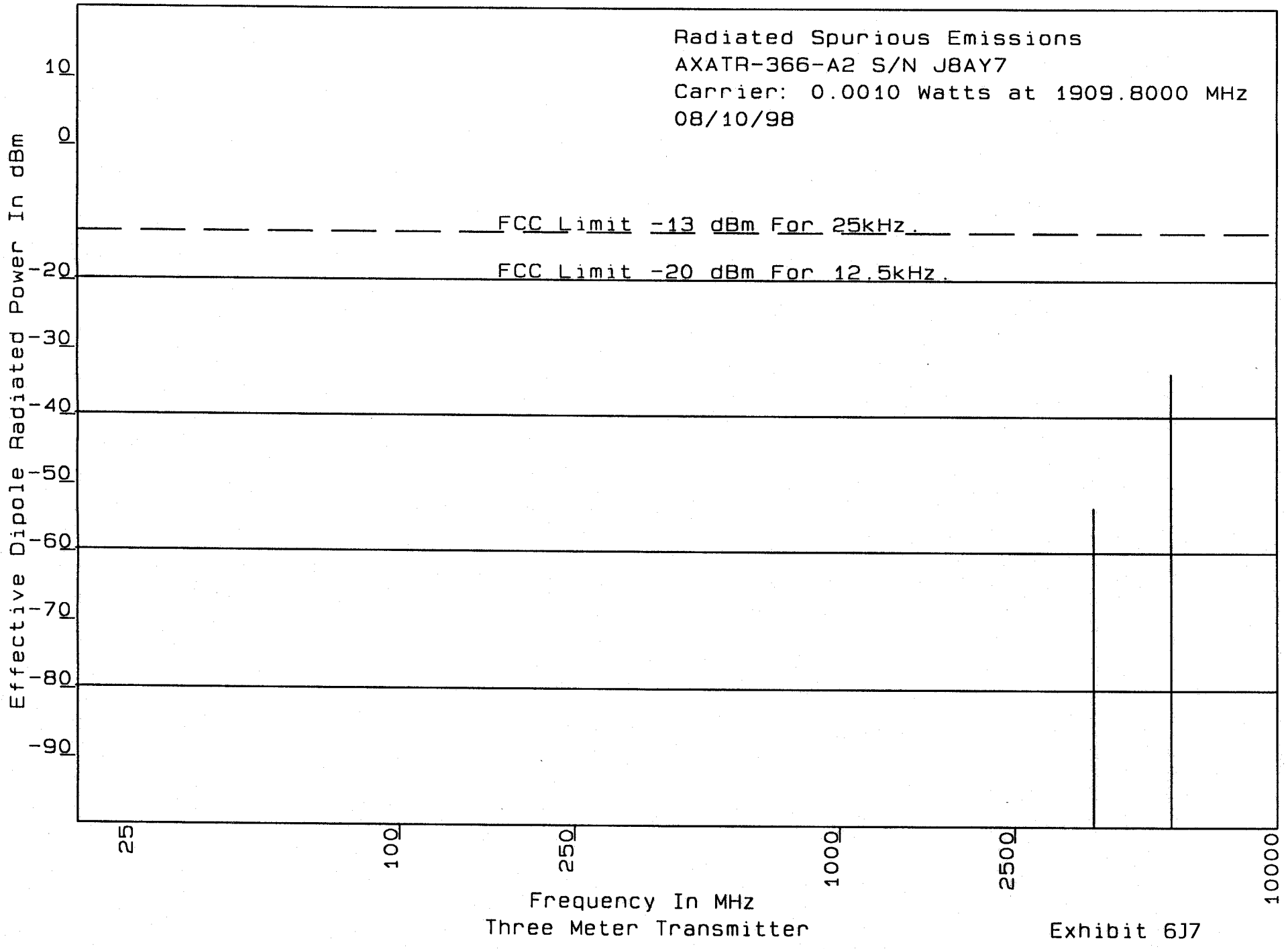

Radiated Spurious Emissions
AXATR-366-A2 S/N J8AY7
Carrier: 0.0010 Watts at 1909.8000 MHz
08/10/98
FCC Limit -13 dBm For 25kHz.
FCC Limit -20 dBm For 12.5kHz.
Effective Dipole Radiated Power In dBm
10
0
-20
-30
-40
-50
-60
-70
-80
-90
25
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter

Exhibit 6J6


Radiated Spurious Emissions
AXATR-366-A2 S/N J8AY7
Carrier: 0.0010 Watts at 1909.8000 MHz
08/10/98
FCC Limit -13 dBm For 25kHz.
FCC Limit -20 dBm For 12.5kHz.
Effective Dipole Radiated Power In dBm
10
0
-20
-30
-40
-50
-60
-70
-80
-90
25
100
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter
Exhibit 6J7

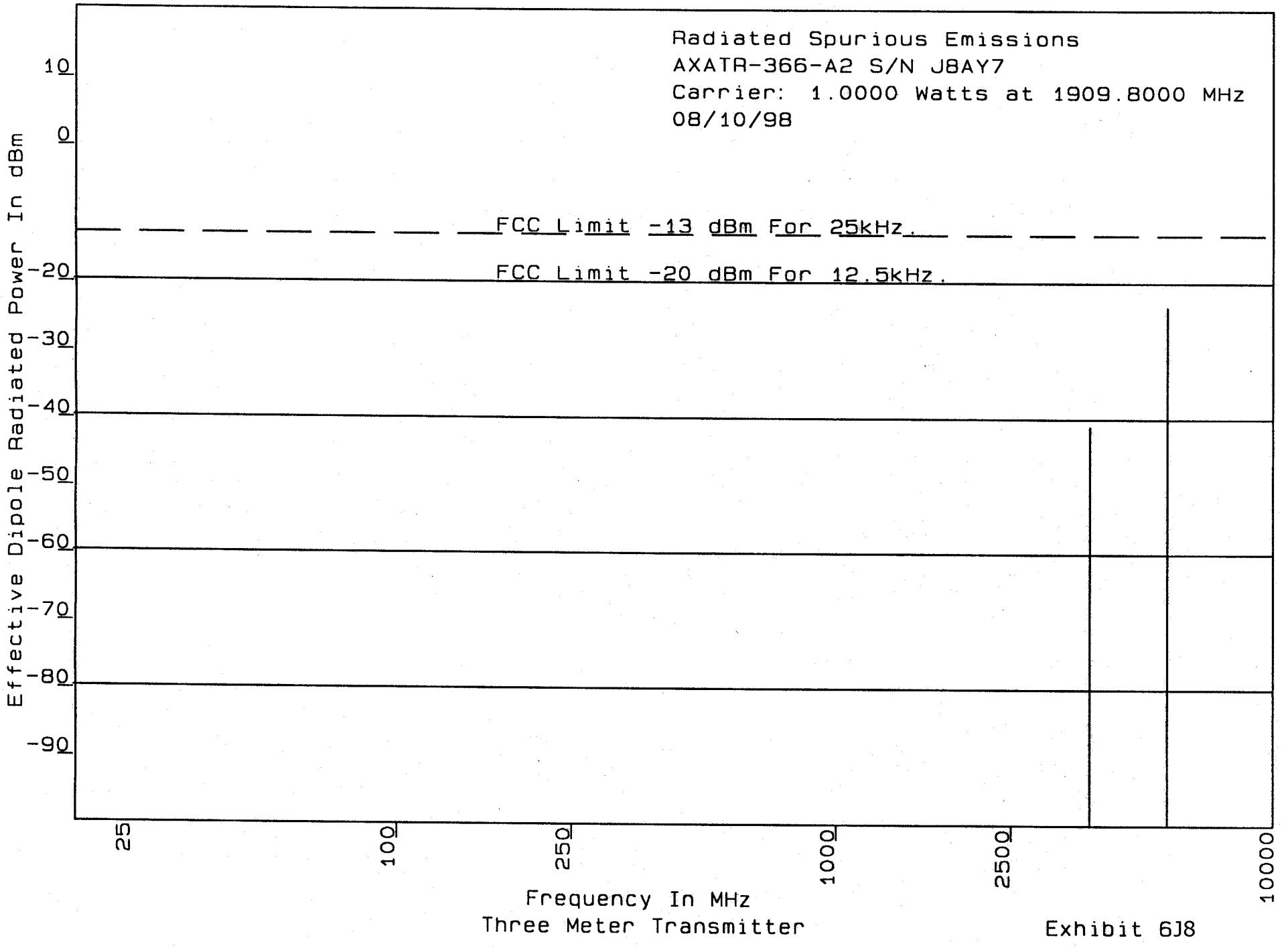

Radiated Spurious Emissions
AXATR-366-A2 S/N J8AY7
Carrier: 1.0000 Watts at 1909.8000 MHz
08/10/98
FCC Limit -13 dBm For 25kHz.
FCC Limit -20 dBm For 12.5kHz.
Effective Dipole Radiated Power In dBm
10
0
-20
-30
-40
-50
-60
-70
-80
-90
25
100
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter

Exhibit 6J8

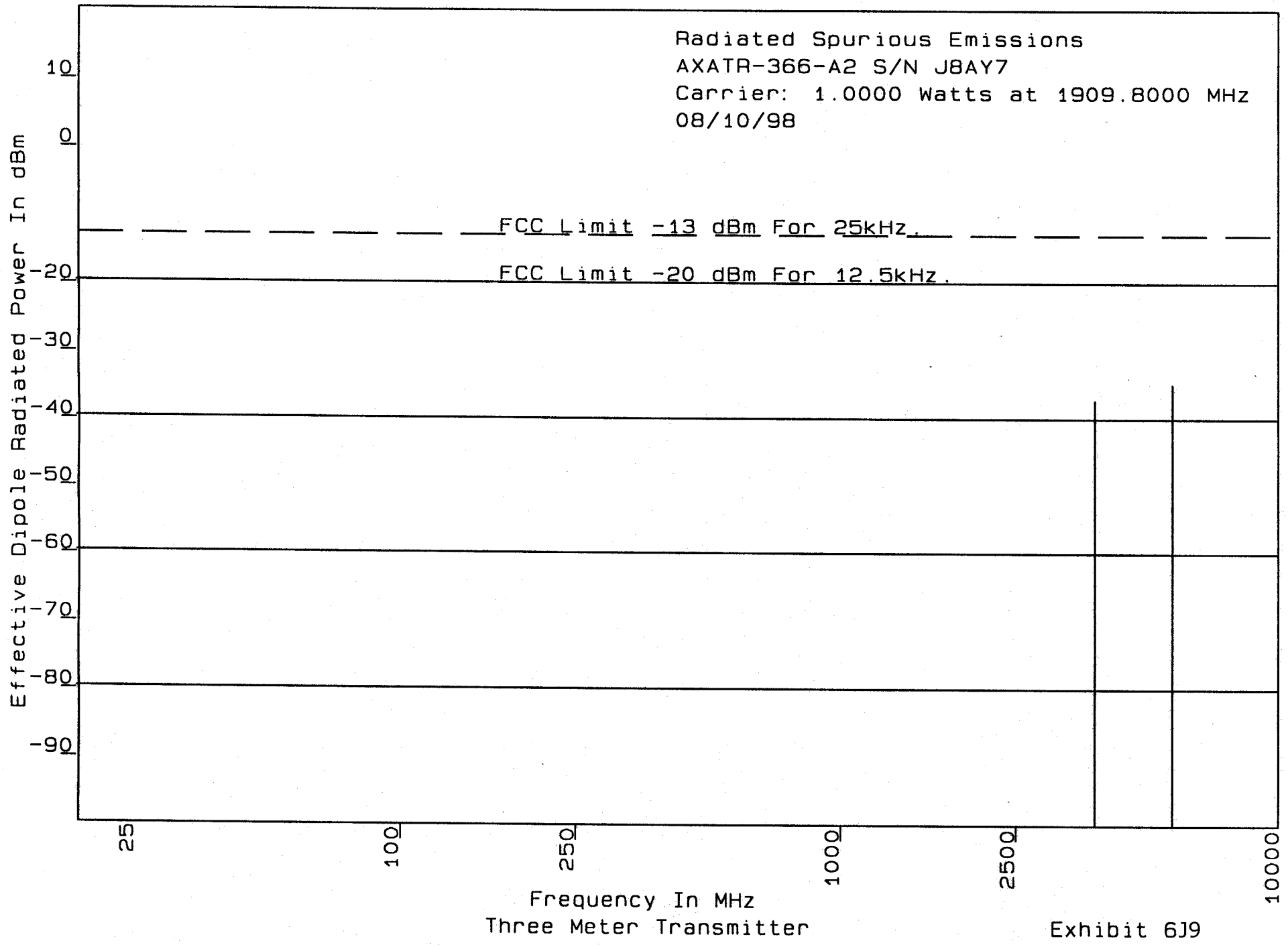

Radiated Spurious Emissions
AXATR-366-A2 S/N J8AY7
Carrier: 1.0000 Watts at 1909.8000 MHz
08/10/98
FCC Limit -13 dBm For 25kHz.
FCC Limit -20 dBm For 12.5kHz.
Effective Dipole Radiated Power In dBm
10
0
-20
-30
-40
-50
-60
-70
-80
-90
25
100
250
1000
2500
10000
Frequency In MHz
Three Meter Transmitter

Exhibit 6J9