

Table of Contents for Exhibits 6 – Test report/data

<u>Exhibit</u>	<u>Description</u>
6G1, 2	RF power output
6J1-9	Radiated spurious emissions

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:

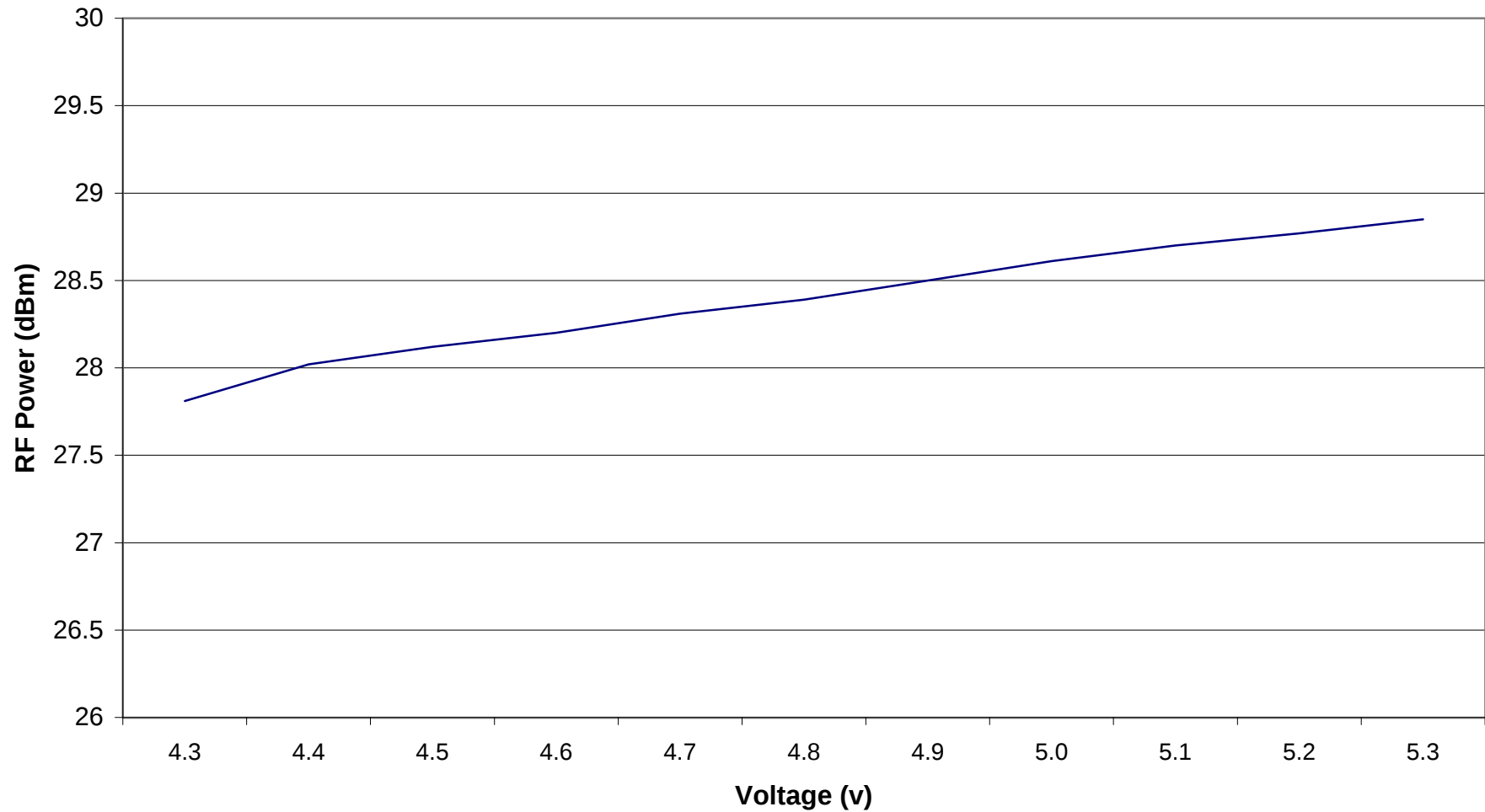
- (1) EUT measurements are made at 3 m using calibrated antennas and equipment with known cable losses.
- (2) A peak measurement is made by raising and lowering the antenna and rotating the EUT 360 degrees. Horizontal and Vertical Polarization data is recorded.
- (3) A generator and dipole antenna are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

<u>Exhibit</u>	<u>Frequency (MHz)</u>	<u>Output Power (W)</u>	<u>Antenna Position</u>
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

Effective Dipole Radiated Power In dBm

10
0
-10
-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 6J2

Radiated Spurious Emissions

AXATR-366-A2 S/N J8AY7

Carrier: 0.0010 Watts at 1850.2000 MHz

08/10/98

Effective Dipole Radiated Power In dBm

FCC Limit -13 dBm For 25kHz.

FCC Limit -20 dBm For 12.5kHz.

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

25

100

250

1000

2500

10000

Frequency In MHz
Three Meter Transmitter

Exhibit 6J3

Radiated Spurious Emissions

AXATR-366-A2 S/N JBAY7

Carrier: 1.0000 Watts at 1850.2000 MHz

08/10/98

Effective Dipole Radiated Power In dBm

10

0

FCC Limit -13 dBm For 25kHz.

FCC Limit -20 dBm For 12.5kHz.

-20

-30

-40

-50

-60

-70

-80

-90

25

100

250

1000

2500

10000

Frequency In MHz

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

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 6J5

Radiated Spurious Emissions

AXATR-366-A2 S/N J8AY7

Carrier: 0.0010 Watts at 1909.8000 MHz

08/10/98

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

250

1000

2500

10000

Frequency In MHz
Three Meter Transmitter

Exhibit 6J6

Radiated Spurious Emissions

AXATR-366-A2 S/N JBAY7

Carrier: 0.0010 Watts at 1909.8000 MHz
08/10/98

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 6J7

Radiated Spurious Emissions

AXATR-366-A2 S/N JBAY7

Carrier: 1.0000 Watts at 1909.8000 MHz

08/10/98

Effective Dipole Radiated Power In dBm

10
0
-10
-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 6J8

Radiated Spurious Emissions

AXATR-366-A2 S/N J8AY7

Carrier: 1.0000 Watts at 1909.8000 MHz
08/10/98

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 6J9