

1900MHz GSM RF POWER OUTPUT

Para. 2.1033 (c,6,7), 2.1046

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

For Canada/DOC use:

Exhibit	Voltage (V)	Temperature	TX Freq	Power Level
6A2	Varied	+25C	Mid Band	0
6A3	3.6	Varied	Mid Band	0

The measurements were made the following equipment:

HP6623A DC Power Supply	HP 8593 E Spectrum Analyzer
HP 8566 B Spectrum Analyzer	Thermotron SM-8C Temperature Chamber
HP 8922 M System Simulator	

EIRP

Table1: EIRP Power table

Mode	f (MHz)	Radiated (dBm)
GSM	1850	32.3
GSM	1880	32.0
GSM	1910	31.6

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) Readings were maximized 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.