

Test Data

§ 22.913 Effective Radiated Power Output

A. POWER: **Low (Analog Mode)**

Freq. Tuned (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μ V/m)	ERP (W)	ERP (dBm)	Battery Type
824.04	-34.00	31.65	V	170815	0.00535	7.27	Standard
836.49	-34.50	31.81	V	164175	0.00494	6.93	Standard
848.97	-33.80	31.96	V	181178	0.00602	7.78	Standard

B. POWER: **High (Analog Mode)**

Freq. Tuned (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μ V/m)	ERP (W)	ERP (dBm)	Battery Type
824.04	-14.00	31.65	V	1708146	0.53500	27.27	Standard
836.49	-14.50	31.81	V	1641747	0.49422	26.93	Standard
848.97	-13.80	31.96	V	1811783	0.60189	27.78	Standard
824.04	-14.20	31.65	V	1669264	0.51093	27.07	Extended

NOTES:

The EUT is placed 3m. away from the receiving antenna and the ERP is calculated using the formula:

$$\text{ERP (dBm)} = 10 \log_{10} \left(\left((r(\text{mV/m})/1 \times 10^6)^2 / 49.2/1 \times 10^{-3} \right) \right)$$

$$\text{ERP (dBm)} = 10 \log_{10} \left[(3 \times \text{FS}/1 \times 10^6)^2 / (49.2) \times 1000 \right]$$

$$\text{ERP (Watts)} = \{ (3 \times \text{FS})/1 \times 10^6 \}^2 / 49.2$$

Test Data

§ 24.232(b) Equivalent Isotropically Radiated Power (E.I.R.P.)

The RF output power is measured via HP436A Power Meter Sensor.

Supply Voltage: 3.6 VDC

Modulation: CDMA

FREQ. (MHz)	Level (dBm)	AFCL (dB)	POL (H/V)	Height (m)	Azimuth (° angle)	F/S (μV/m)	Margin (dBm)	EIRP (W)	Battery Type
1851.25	- 19.3	35.31	V/H	1.2	60	1414165	27.78	0.60000	Standard
1880.00	- 19.6	35.48	V/H	1.2	60	1393157	27.65	0.58226	Standard
1908.75	- 20.9	35.65	V/H	1.2	60	1106624	25.65	0.43200	Standard
1851.25	- 19.5	35.31	V/H	1.2	60	1381975	27.58	0.57431	Extended

Mobile / portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications

The EUT is placed 3m. away from the receiving antenna and the EIRP is calculated using the formula:

$$\text{EIRP (dBm)} = 10 \text{ Log } 10 \left(\left(\frac{r(\text{mV/m})}{1 \times 106} \right)^2 / 30.0 / 1 \times 10^{-3} \right)$$

$$\text{EIRP (dBm)} = 10 \text{ Log } 10 \left[\left(\frac{3 \times \text{FS}}{1 \times 106} \right)^2 / (30.0) \times 1000 \right]$$

$$\text{EIRP (dBm)} = \left\{ \left(\frac{3 \times \text{FS}}{1 \times 106} \right)^2 / 30.0 \right\}$$