

**FIELD STRENGTH OF SPURIOUS  
RADIATION**  
SECTION 2.1053

**MEASUREMENT 5****SECTION 2.1053****FIELD STRENGTH OF SPURIOUS RADIATION**

Field strength measurements of radiated spurious emissions were made at a ten meter Open Area Test Site (OATS) maintained by Lucent Technologies Bell Laboratories Global Product Compliance Laboratory in Holmdel, New Jersey. A complete description and full measurement data for the site is on file with the Commission. (FCC file31040/SIT)

The PCBR was assembled with an ICLA and all other associated equipment in an **FLEXENT®** CDMA Radio Frequency Unit Cabinet. The tests were repeated for each RF filter installed between antenna port terminal and ICLA RF Power output port. The spectrum from 10 MHz to the 10<sup>th</sup> harmonic of the carrier was searched for spurious radiation. Measurements were made according to ANSI C63.4. All emissions more than 20 dB below the specification limit were considered not reportable (Section 2.1057 (a) (c)).

The calculated emission levels were found by:

$$\text{Measured level (dB}\mu\text{V)} + \text{Cable Loss(dB)} + \text{Antenna Factor(dB)} = \text{Field Strength (dB}\mu\text{V/m)}$$

Section 22.917 and 2.1053 contains the requirements for the levels of spurious radiation as a function of the level of the unmodulated carrier. The reference level for the unmodulated carrier is calculated as the field produced by an ideal dipole excited by the transmitter output power according to the following relation taken from Reference Data for Radio Engineers, page 676, 4<sup>th</sup> edition, IT&T Corp.

$$E = [(49.2 * P)^{1/2}] / R$$
$$20 \log (E * 10^6) - (43 + 10 \log P) = 73.9 \text{ dB } \mu\text{V/meter}$$

E = Field Intensity in Volts/meter

P = Transmitted Power in Watts

R = Distance in meters = 10 m

**RESULTS:**

For this particular test, the field strength of any spurious radiation is required to be less than 73.9 dB $\mu$ V/meter. Reportable measurement levels are equal to or greater than 53.9 dB  $\mu$ V/meter. Over the spectrum investigated, 10 MHz to 10<sup>th</sup> harmonic of the carrier, no reportable spurious emissions were detected. This demonstrates that the (PCBR), the subject of this application, complies with Sections 2.1053, 22.917 and 2.1057 of the Rules.