

**Evaluation of the CSI Model 510_{amps} BDA
For
Compliance with FCC Guidelines
For Human Exposure to Radio Frequency
Electromagnetic Fields**

14 February 14, 2001

General

The CSI Model 510amps Bi-directional amplifier is considered to be a “mobile” device operating in the Cellular Service authorized under subpart H of part 22. As such, the equipment is required to be evaluated for RF exposure if operated below 1.5 GHz with an effective radiated power (ERP) of 1.5 watts or more, as defined in 2.1091 of FCC rules.

Downlink

For the downlink portion of the Model 510amps BDA, the maximum rated output power is +28dbm (631 mW). As stated in the Model 510amps Manual, the maximum authorized antenna gain is 3 dBi, corresponding to a typical Omni-Directional antenna. Neglecting cable losses, the worst-case EIRP will be 1.26 watts or an ERP of 0.77 watts, ($ERP=EIRP/1.64$). This is well below the 1.5 watts and therefore excludes the downlink from routine evaluation. The Cautions in the Model 510amps manual clearly define the antenna selection and installation criteria in order to maintain a minimum 20-centimeter separation.

Uplink

For the uplink portion of the Model 510amps BDA, the maximum rated output power is +28dbm (631 mW). As stated in the Model 510amps Manual, the maximum authorized antenna gain is 3 dBi, corresponding to a typical Omni-Directional antenna. Neglecting cable losses, the worst-case EIRP will be 1.26 watts or an ERP of 0.77 watts, ($ERP=EIRP/1.64$). This is well below the 1.5 watts and therefore excludes the uplink from routine evaluation. The Cautions in the Model 510amps manual clearly define the antenna selection and installation criteria in order to maintain a minimum 20-centimeter separation.