

**Evaluation of the CSI Model 610_{smr-900} BDA
For
Compliance with FCC Guidelines
For Human Exposure to Radio Frequency
Electromagnetic Fields**

7 November 2003

General

The CSI Model 610_{smr-900} Bi-directional amplifier is considered to be a “mobile” device operating in the Cellular Service authorized under Part 90. 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 610_{smr-900} BDA, the maximum rated output power is +30.2dbm (1.05 W). As stated in the Model 610_{smr-900} 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 2.10 watts or an ERP of 1.30 watts, (ERP=EIRP/1.64). This is below 1.5 watts and therefore excludes the downlink from routine evaluation. The Cautions in the Model 610_{smr-900} 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 610_{smr-900} BDA, the maximum rated output power is +28.1dbm (647 mW). As stated in the Model 610_{smr-900} 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 1.30 watts or an ERP of 0.79 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 610_{smr-900} manual clearly define the antenna selection and installation criteria in order to maintain a minimum 20-centimeter separation.