

**Evaluation of the CSI Model 610<sub>pcs</sub> BDA  
For  
Compliance with FCC Guidelines  
For Human Exposure to Radio Frequency  
Electromagnetic Fields**

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## ***General***

The CSI Model 610pcs Bi-directional amplifier is considered to be a “mobile” device operating in the Personal Communications Service authorized under part 24. As such, the equipment is required to be evaluated for RF exposure if operated above 1.5 GHz with an effective radiated power (ERP) of 3.0 watts or more, as defined in 2.1091 of FCC rules.

## ***Downlink***

For the downlink portion of the Model 610pcs BDA, the maximum rated output power is +26dBm (400 mW). As stated in the Model 610pcs Manual, the maximum authorized antenna gain is 8 dBi, corresponding to a Co-Linear Omni-Directional antenna. Neglecting cable losses, the worst-case EIRP will be 2.51 watts or an ERP of 1.53 watts, (ERP=EIRP/1.64). This is well below the 3.0 watts ERP limit and therefore excludes the downlink from routine evaluation. The Cautions in the Model 610pcs manual clearly define the antenna selection and installation criteria in order to maintain a minimum 20-centimeter separation.

## ***Uplink***

For the downlink portion of the Model 610pcs BDA, the maximum rated output power is +24.7dBm (300 mW). As stated in the Model 610pcs Manual, the maximum authorized antenna gain is 8 dBi, corresponding to a Co-Linear Omni-Directional antenna. Neglecting cable losses, the worst-case EIRP will be 1.86 watts or an ERP of 1.14 watts, (ERP=EIRP/1.64). This is well below the 3.0 watts ERP limit and therefore excludes the downlink from routine evaluation. The Cautions in the Model 610pcs manual clearly define the antenna selection and installation criteria in order to maintain a minimum 20-centimeter separation.

## ***Conclusion***

Because of the low output power and antenna gains, both the uplink and downlink will satisfy the requirements for RF Exposure per FCC rules 1.1311.