RF Exposure

1.0 INTRODUCTION

These calculations are based on the highest EIRP possible from the EUT considering maximum power and antenna gain. The highest output power of the EUT is 33 dBm and the gain of the max antenna is 3.8 dBi indoor and a 3 dBi outdoor antenna. The antennas will always be separated in actual use.

2.0 MINIMUM SEPARATION DISTANCE PER OET 65

The following information provides the minimum separation distance for the EUT, as calculated from **FCC OET 65 Appendix A, Table B** "Guidelines for General Population/Uncontrolled Exposure"

Transmitter	MHz	Max Power dBm	Max Ant Gain dBi	Duty Cycle %	EIRP W	(S) GP Limit mW/cm^2	MSD Meters	
Uplink	788	33.0	3.8	100.0	4.7863	0.525	0.2693	Part 90
Dowlink	758	33.0	3	100.0	3.9811	0.505	0.2504	Part 90
Uplink	806	33.0	3.8	100.0	4.7863	0.537	0.2662	Part 20
Dowlink	851	33.0	3	100.0	3.9811	0.567	0.2363	Part 20

The data above is the highest power levels for part 20 and 90

Notes on the above table:
   a. S is the power density General Population Limit from OET 65 table 1B
   b. EIRP Power is the Peak Effective Radiated Power.
      EIRP = (Conducted Power + Antenna gain) * Duty Cycle.
   c. MSD (Minimum Separation Distance) = $((EIRP*30)/3770*S))^{0.5}$

Conclusion:
Since the specified minimum distance between the external antenna and personnel is 0.3 meters, it meets the requirements.

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