FCC ID: NZLUAHLCD

RF Exposure/ S A R Statement
Applicant: Gentex Corporation
Model: UAHLCD

Calculations:

The following information provides the minimum separation distance for the antenna as part of the design for the "UAHLCD" as calculated from the FCC OET Bulletin 65, Appendix A, Table (B) Limits for General Population/Uncontrolled Exposure. This calculation is based on the highest EIRP possible from the system, considering maximum power and antenna gain, and considering an f/1500mW/cm$^2$ (0.601mW/cm$^2$) uncontrolled exposure limit. The power density formula used was:

$S = (P*G)/ (4*PI*r^2)$

Where
P = -7.89 dBm (Maximum DTS Power Output Power)
G = 2.5dBi (Numerical Antenna Gain, 2.5dBi)
R = 20.0cm

(P+G) = -5.39dBm + 1 (max tune-up tolerance)
Converting -4.39dBm to mW = 0.2 mW

The Power Density S = 0.00004mW/cm$^2$
This is less than the above limit as well as the RSS-102 limit in Section 2.5 Table 1 for a separation distance of 20mm of 30mW.

Where
P = -9.278 dBm (Maximum DSS Power Output Power)
G = 2.5dBi (Numerical Antenna Gain, 2.5dBi)
R = 20.0cm

(P+G) = -6.778dBm + 1 (max tune-up tolerance)
Converting -5.778dBm to mW = 0.26mW

The Power Density S = 0.00005mW/cm$^2$
This is less than the above limit as well as the RSS-102 limit in Section 2.5 Table 1 for a separation distance of 20mm of 30mW.

Where
P = -6.49 dBm (Maximum DSC Power Output Power)
G = 0dBi (Numerical Antenna Gain, 2.5dBi)
R = 20.0cm

(P+G) = -6.49dBm + 1 (max tune-up tolerance)
Converting -5.49dBm to mW = 0.28mW

The Power Density S = 0.00005mW/cm$^2$
This is less than the above limit as well as the RSS-102 limit in Section 2.5 Table 1 for a separation distance of 20mm of 30mW.

Simultaneous Transmission: 0.00004 + 0.00005 + .00005 = 0.00014mW/cm$^2$