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Client: Harris Corporation
Model: M7300,378-430MHz,50W
IDs: OWDTR-0061-E/3636B-0061
Standards: FCC Part 90/IC RSS-119
Report #: 2010129

Appendix A: FCC Part 1.1307, 1.1310, 2.1091, 2.1093: RF Exposure

Please refer to the MPE Report that follows.



HARRIS CORPORATION

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Mobile Radio MPE Evaluation Report

FCC Rule Part: 47 CFR §90; §2.1091; §1.1310
Device Classification: Licensed Non-Broadcast Station Transmitter (TNB)
Device Type: Mobile UHF Transceiver with Vehicle Rooftop Antenna
FCC ID: OWDTR-0061-E
Model Name: M7300 UHF-L mobile radio
Modulation: FM
Tx Frequency Range: 378 – 430 MHz (FCC: 406.1 – 454 MHz)
Max. RF Conducted Power: 50 W (nominal/rated, times 1.2; § 90.205(r))
Power Supply: 13.6 VDC
Antenna Type: AN-225003-001 and -004.
Antenna Gain: 2.15 dbi; 0 db transmission line loss.
Minimum Antenna Distance: 54 cm Limits for Occupational/Controlled Exposure.
120 cm Limits for General Population/Uncontrolled Exposure.

Calculation

$$S = \frac{PG}{4\pi R^2} \quad \text{therefore: } R = \sqrt{\frac{PG}{4\pi S}}$$

Where: S – power density (mW/cm²; as defined in 47 CFR § 1.1310), P – power input to antenna at 50% duty cycle (in mW), G – power gain of the antenna relative to isotropic (numeric value, not db), R – distance to center of antenna (result in cm).

S = 1.35/.27 (Controlled(f/300)/Uncontrolled(f/1500)) at Tx frequency 406.1 MHz (frequency when applicable).

Calculated controlled distance: 54 cm

Calculated uncontrolled distance: 120 cm

Daryl Popowitch
Regulatory Manager