



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: AQZ-XG-100M00  
Model Name: Unity Multiband mobile radio  
Modulation: FM  
Tx Frequency Range: 378 – 512 MHz (FCC: 406.1 – 454 MHz)  
Max. RF Conducted Power: 63 W (nominal/rated, times 1.2; § 90.205(r))  
Power Supply: 13.6 VDC  
Antenna Type: Multiband quarter wave vertical (Harris P/N 12099-0310-01)  
Antenna Gain: 3.1 dbi  
Minimum Antenna Distance: 62 cm Limits for Occupational/Controlled Exposure.  
138 cm Limits for General Population/Uncontrolled Exposure.

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Calculation

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

Where: S – power density (mW/cm<sup>2</sup>; 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: 61.572028 cm

Calculated uncontrolled distance: 137.67924 cm

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