HARRIS CORPORATION

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Vehicle Appliction - Mobile Radio MPE Evaluation
(One antenna)
Declaration of Compliance

FCC Rule Part:	47 CFR §90; §2.1091; §1.1310
Device Classification:	Licensed Non-Broadcast Station Transmitter (TNB)
Device Type:	Mobile VHF PTT Radio Transceiver with Vehicle Rooftop Antenna
FCC ID:	OWDTR-0075-E
Model Name:	XG-25M
Modulation:	FM
Tx Frequency Range:	136 – 174 MHz
Max. RF Conducted Power:	60.0 W (nominal/rated or lab report value, times 1.2; § 90.205(s))
Power Supply:	12 VDC
Antenna Type:	1/4 wave vertical (p/n AN-225002-001)
Antenna Gain:	2.15 dbi; 0 db transmission line loss.
Minimum Antenna Distance:	63 cm Limits for Occupational/Controlled Exposure.
	140 cm Limits for General Population/Uncontrolled Exposure.

Calculation

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

Where: S – power density (mW/cm^2; 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/.2 (Controlled/Uncontrolled) at Tx frequency 136 MHz.

Calculated controlled distance: 62.582902 cm

Calculated uncontrolled distance: 139.93962 cm

Daryl G. Popowitch

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