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FCC 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 Mount antenna
FCC ID:	OWDTR-0077-E
Model Name:	XG-25M UHF mobile radio
Modulation:	FM
Tx Frequency Range:	378-470 MHz
Max. RF Conducted Power:	60 W (Power times 1.2; § 90.205(r))
Power Supply:	13.6 VDC
Antenna Type:	AN-225003-005
Antenna Gain:	4.15 dbi; 0 db transmission line loss.
Minimum Antenna Distance:	70.2 cm Limits for Occupational/Controlled Exposure. 156.9 cm Limits for General Population/Uncontrolled Exposure.

Calculation

$$S = \frac{PG}{4\pi R^2}$$

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

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 = 1.26/.25 (Controlled(f/300)/Uncontrolled(f/1500)) at Tx frequency 378 MHz (frequency when applicable).

Calculated controlled distance: 70.2 cm

Calculated uncontrolled distance: 156.9 cm

Jeremy Johnson
Regulatory Manager