

tyco

Electronics

M/A-COM

*M/A-COM, Inc.
221 Jefferson Ridge Parkway
Lynchburg, VA 24501*

*Telephone: 434.455.9527
FAX: 434.455.6851
popowitda@tycoelectronics.com
www.macom.com*

Mobile Radio MPE Evaluation Report

(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 Motorcycle Mount
Antenna
FCC ID: OWDTR-0035-E
Model Name: M7100
Modulation: FM
Tx Frequency Range: 136 - 174 MHz
Max. RF Conducted Power: 51.52 W (nominal/rated or lab report value, times 1.2; § 90.205(r))
Power Supply: 12 VDC
Antenna Type: Half wave vertical (P/N SM-LE-OM150K.125/TNC)
Antenna Gain: 4.5 dbi
Minimum Antenna Distance: 83 cm Limits for Occupational/Controlled Exposure.
186 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 = 1.0/.2 (Controlled(f/300)/Uncontrolled(f/1500)) at Tx frequency MHz (frequency when applicable).

Calculated controlled distance: 83.29 cm

Calculated uncontrolled distance: 186.2 cm



Daryl Popowitch
Regulatory Manager,
Engineering Project Manager

M/A-COM, Inc. – Lynchburg, VA