



RF Exposure Evaluation Report

APPLICANT	FLORIDA, STATE OF
ADDRESS	DEPARTMENT OF TRANSPORTATION 605 SUWANNEE St MS 90 TALLAHASSEE FLORIDA 32399-0450 USA
FCC ID	2ALYPDR-06T
MODEL NUMBER	DR-06T
PRODUCT DESCRIPTION	VHF MOBILE TRANSCEIVER
DATE SAMPLE RECEIVED	05/17/2017
FINAL TEST DATE	04/23/2019
PREPARED BY	Franklin Rose
TEST RESULTS	<input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL

Report Number	Report Version	Description	Issue Date
858UT19 MPE_TestReport_	Rev1	Initial Issue	05/02/2019
858UT19 MPE_TestReport_	Rev2	Updated with High Power	09/16/2019

THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.



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GENERAL REMARKS

Summary

The device under test does:

- ☒ Fulfill the general approval requirements as identified in this test report and was selected by the customer.
- ☐ Not fulfill the general approval requirements as identified in this test report

Attestations

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report.

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025 requirements.

I attest that the necessary measurements were made at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669
Designation #: US1070

Prepared by:



Name and Title	Franklin Rose, Project Manager / EMC Specialist
Date	05/02/2019

GENERAL INFORMATION

EUT Description	VHF MOBILE TRANSCEIVER		
Model Number	DR-06T		
EUT Power Source	<input type="checkbox"/> 110–120Vac, 50–60Hz	<input checked="" type="checkbox"/> DC Power (13.8 VDC)	<input type="checkbox"/> Battery Operated
Test Item	<input type="checkbox"/> Engineering Prototype	<input type="checkbox"/> Pre-Production	<input checked="" type="checkbox"/> Production
Type of Equipment	<input type="checkbox"/> Fixed	<input checked="" type="checkbox"/> Mobile	<input type="checkbox"/> Portable
Antenna Connector	UHF Connector		
Test Conditions	The temperature was 26°C Relative humidity of 50%.		
Modification to the EUT	No Modification to EUT.		
Applicable Standards	FCC CFR 47 Part 2.1091		
Test Facility	Timco Engineering Inc. at 849 NW State Road 45 Newberry, FL 32669 USA. Designation #: US1070		

ANTENNA INFORMATION

Antenna is Provided	Type	Max Gain (dBi)
Yes	Monopole/Whip	0.63 dBi

POWER OUTPUT OF EUT

Tuned Frequency (MHz)	Power Mode	ERP (dBm)	Power Output (W)	Rated Power Output (dBm)	Tolerance (dBm)
44.96	Low	28.70	0.74	1.00	+/- 0.26
44.96	High	46.71	46.91	50.00	+/- 3.09
47.62	Low	30.46	1.11	1.00	+/- 0.11
47.62	High	47.00	50.08	50.00	+/- 0.08

MPE CALCULATION

The minimum separation distance is calculated as follows:

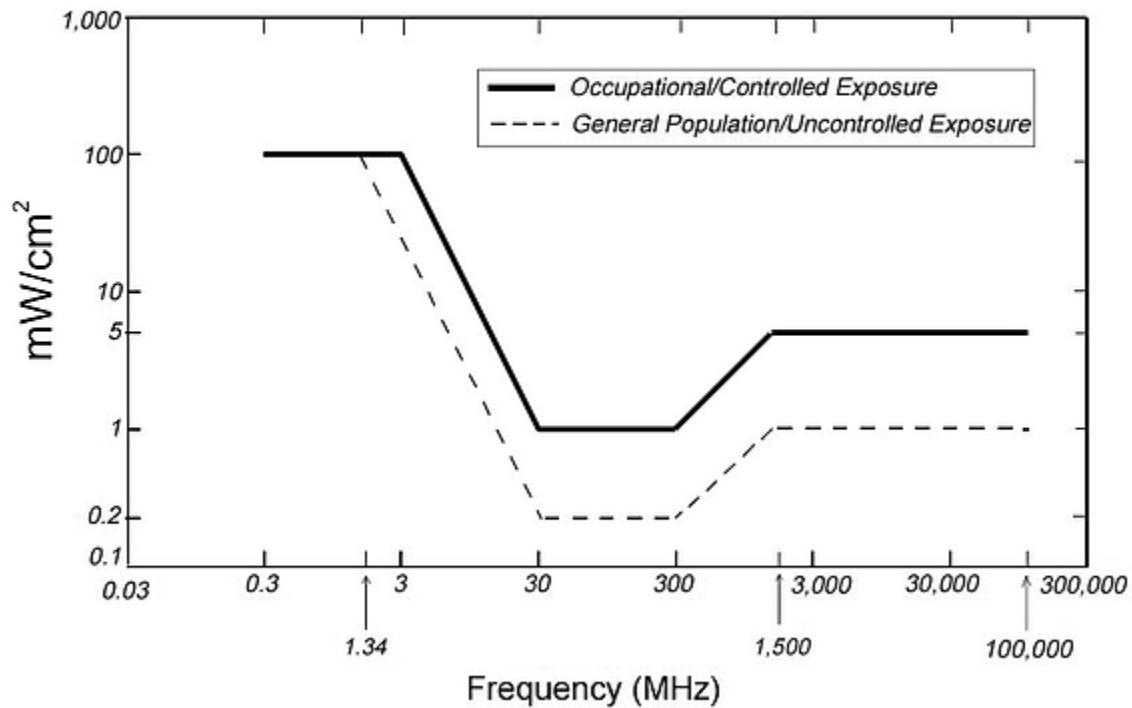
$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d}$$

$$\text{Power density: } P_d(mW/cm^2) = \frac{E^2}{3770}$$

MPE LIMITS

Figure 1. FCC Limits for Maximum Permissible Exposure (MPE)

Plane-wave Equivalent Power Density

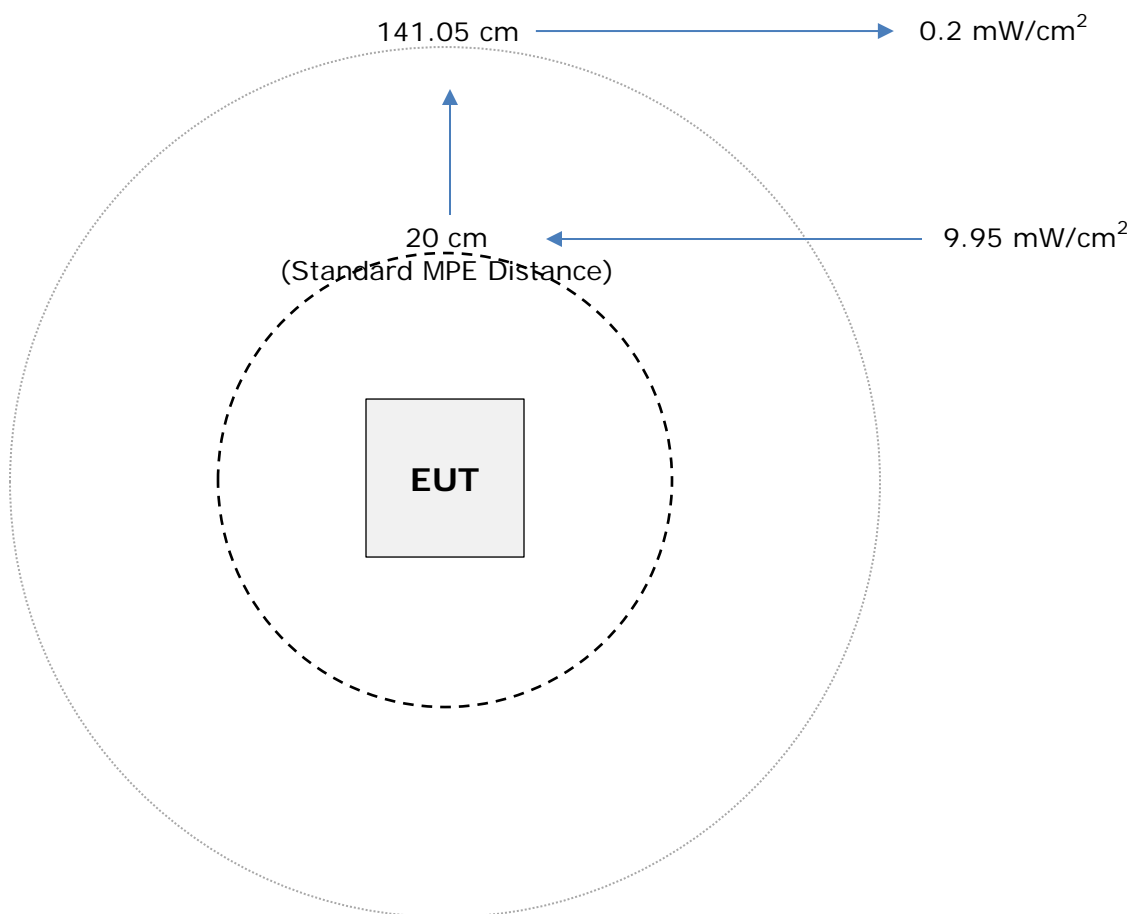


MPE Table

General Uncontrolled Exposure

The limit for General Uncontrolled Exposure Environment is calculated as shown in FCC Pt. 1.1310, Table B:

Variable	Value
Max Power	50.00 W
Frequency Range	44.96 – 47.62 MHz
Duty Cycle (at full power)	100%
Max Antenna Gain	0 dBi
Coax Loss	0 dB
Power Density	0.2 mW/cm ²
Minimum Separation Distance	141.05 cm



General Controlled Exposure

The limit for General Controlled Exposure Environment is calculated as shown in FCC Pt. 1.1310, Table A:

Variable	Value
Max Power	50.00 W
Frequency Range	44.96 – 47.62 MHz
Duty Cycle (at full power)	100%
Max Antenna Gain	0 dBi
Coax Loss	0 dB
Power Density	1.0 mW/cm ²
Minimum Separation Distance	63.08 cm

