



Test Report - FCC Part 1.1310/ MPE  
Applicant: KM3KM Electronics, LLC

Signature: \_\_\_\_\_

A handwritten signature in black ink, appearing to read "Tim Royer", is written over a horizontal line.

Sr. EMC Engineer  
EMC-003838-NE



Name & Title: \_\_\_\_\_  
Tim Royer, Lab Manager

Date of Signature \_\_\_\_\_  
1/23/2026

This test report relates only to the items tested as identified and is not valid for any subsequent changes or modifications made to the equipment under test.

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## 1. Applicant Information

Applicant: KM3KM Electronics ,LLC  
Address: 7901 SW 24th Street  
Miami, Florida 33155  
USA

## 2. Location of Testing

### 2.1 Test Laboratory

Timco Engineering Inc. is a subsidiary of Industrial Inspection & Analysis, Inc. ("IIA"). Testing was performed at IIA's permanent laboratory located at 13146 NW 86<sup>th</sup> Drive, Suite 400, Alachua, Florida 32615.

FCC test firm # 578780  
FCC Designation # US1070  
FCC site registration is under A2LA certificate # 0955.01  
CAB identifier number #US0111  
ISED Canada test site registration # 2056A  
EU Notified Body # 1177  
For all designations see A2LA scope # 0955.01

## 3. Test Sample(s) (EUT/DUT)

The test sample was received: 10/1/2025

Date(s) of Testing: 1/19/2026

### 3.1 Description of the EUT

A description as well as unambiguous identification of the EUT(s) tested. Where more than one sample is required for technical reasons (such as the use of connected units for the purpose of conducted output power testing where the product units will have integral antennas), each specific test shall identify which unit was tested.

| Identification    |                     |
|-------------------|---------------------|
| Brief Description | HF Linear Amplifier |
| FCC ID            | 2A3P6MERCURYLITE    |
| Model(s) #        | MERCURY LITE        |
| Firmware version  | N/A                 |
| Software version  | N/A                 |
| Serial Number     | N/A                 |

| Technical Characteristics    |                 |
|------------------------------|-----------------|
| Frequency Range              | 3.5MHz to 54MHz |
| Modulation                   | FM              |
| Bandwidth & Emission Class   | J3E             |
| Number of Channels           | N/A             |
| Duty Cycle                   | 100%            |
| Antenna Connector            | UHF             |
| Voltage Rating (AC or Batt.) | 52VDC battery   |

| Antenna Characteristics |                 |           |              |
|-------------------------|-----------------|-----------|--------------|
| Antenna                 | Frequency Range | Mode / BW | Antenna Gain |
| 1                       | 39-54 MHz       | n/a       | 0 dBi        |

- Note: Information such as antenna gain, firmware/software numbers are provided by manufacturer and cannot be validated by the test lab.

## 4. Test methods & Applicable Regulatory Limits

### 4.1 Test methods/Standards/Guidance:

The following guidance FCC KDB 447498 D01 General RF Exposure Guidance v06 was used for RF exposure evaluation as per FCC Part 1.1310 and FCC Part 2.1091 and part 2.1093. Full test results are available in this report.

#### 4.1.1 FCC Limits for Maximum Permissible Exposure (MPE)

| Frequency Range (MHz)                                        | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging Time (minutes) |
|--------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>A Limits for Occupational/Controlled Exposure</b>         |                               |                               |                                     |                          |
| 0.3-3.0                                                      | 614                           | 1.63                          | *(100)                              | ≤6                       |
| 3.0-30                                                       | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | <6                       |
| 30-300                                                       | 61.4                          | 0.163                         | 1.0                                 | <6                       |
| 300-1,500                                                    |                               |                               | f/300                               | <6                       |
| 1,500-100,000                                                |                               |                               | 5                                   | <6                       |
| <b>B Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 0.3-1.34                                                     | 614                           | 1.63                          | *(100)                              | <30                      |
| 1.34-30                                                      | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | <30                      |
| 30-300                                                       | 27.5                          | 0.073                         | 0.2                                 | <30                      |
| 300-1,500                                                    |                               |                               | f/1500                              | <30                      |
| 1,500-100,000                                                |                               |                               | 1.0                                 | <30                      |

## 4.2 Equations

### POWER DENSITY

$$E(V/m) = \text{SQRT} ( 30 * P * G ) / d$$

$$Pd(W/m^2) = E^2 / 377$$

$$S = \text{EIRP} / ( 4 * \text{Pi} * D^2v )$$

Where:

S = Power density, in mW/cm<sup>2</sup>

EIRP = Equivalent Isotropic Radiated Power, in mW

D = Separation distance in cm

Power density is converted from units of mW/cm<sup>2</sup> to units of W/m<sup>2</sup> by multiplying by 10.

### DISTANCE

$$D = \text{SQRT} ( \text{EIRP} / ( 4 * \text{Pi} * S ) )$$

Where:

D = Separation distance in cm

EIRP = Equivalent Isotropic Radiated Power, in mW

S = Power density in mW/cm<sup>2</sup>

**SOURCE-BASED DUTY CYCLE** (When applicable (for example, multi-slot mobile phone applications) A duty cycle factor may be applied.)

$$\text{Source-based time-average EIRP} = ( DC / 100 ) * \text{EIRP}$$

Where:

DC = Duty Cycle in % as applicable.

EIRP = Equivalent Isotropic radiated Power, in mW

## 5. RF Exposure Results

### *MPE*

| Frequency Band | Evaluation Distance (cm) | Max Power + Tolerance (dBm) | Antenna Gain (dBi) | Duty Cycle (%) | EIRP (W) | Power Density              | Limit for Uncontrolled Exposure | Limit for Controlled Exposure | Distance Required to meet Uncontrolled Exposure Limit (cm) |
|----------------|--------------------------|-----------------------------|--------------------|----------------|----------|----------------------------|---------------------------------|-------------------------------|------------------------------------------------------------|
| 3.5-54 MHz     | 20                       | 57.78                       | 0.00               | 100%           | 599.7911 | 119.325 mW/cm <sup>2</sup> | 0.2 mW/cm <sup>2</sup>          | 1 mW/cm <sup>2</sup>          | 488.52                                                     |

RESULT: Pass at DISTANCE 488.52 cm

## 6. History of Test Report Changes

| Test Report #                | Revision # | Description         | Date of Issue |
|------------------------------|------------|---------------------|---------------|
| TR_24212-25_FCC 1.1310_MPE_1 | 1          | Initial release     | 7/15/2026     |
|                              |            | Add FCC ID (page 4) | 7/21/2026     |
|                              |            |                     |               |

END OF TEST REPORT