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TIMCO ENGINEERING, Inc.

An IIA Company

RF Exposure Evaluation Report

APPLICANT	**KP ELECTRONIC SYSTEMS LTD.**
FCC ID	**H78KPRFM200U**
MODEL NUMBER	**RFM200UN**
PRODUCT DESCRIPTION	**BASE STATION TRANSCEIVER**
DATE SAMPLE RECEIVED	**12/16/2019**
FINAL TEST DATE	**12/30/2019**
TEST RESULTS	☒ PASS ☐ FAIL

Report Number	Report Version	Description	Issue Date
3438AUT19 MPETestReport_	Rev1	Initial Issue	1/6/2020
	Rev2	Revised DC Power and output power	4/15/2020

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	Tim Royer, Project Manager / EMC Engineer
Date	1/6/2020

GENERAL INFORMATION

EUT Description	BASE STATION TRANSCEIVER		
Model Number	RFM200UN		
Modified for Testing	☐ If so, Explain:		
Antenna Connector	☒ UHF	☐ BNC	☒ N
	☐ TNC	☐ SMA	☒ Other
EUT Power Source	☐ AC Power (110-120 V)	☒ DC Power (12.5 V)	☐ DC Battery (7.4 V)
Test Item	☐ Engineering Prototype	☒ Pre-Production	☐ Post-Production
Type of Equipment	☒ Fixed	☐ Mobile	☐ Portable

ANTENNA INFORMATION

Antenna is Provided	Type	Max Gain (dBi)
No	n/a	**0.0**

RF POWER OUTPUT

Maximum Power Output: 5 W.

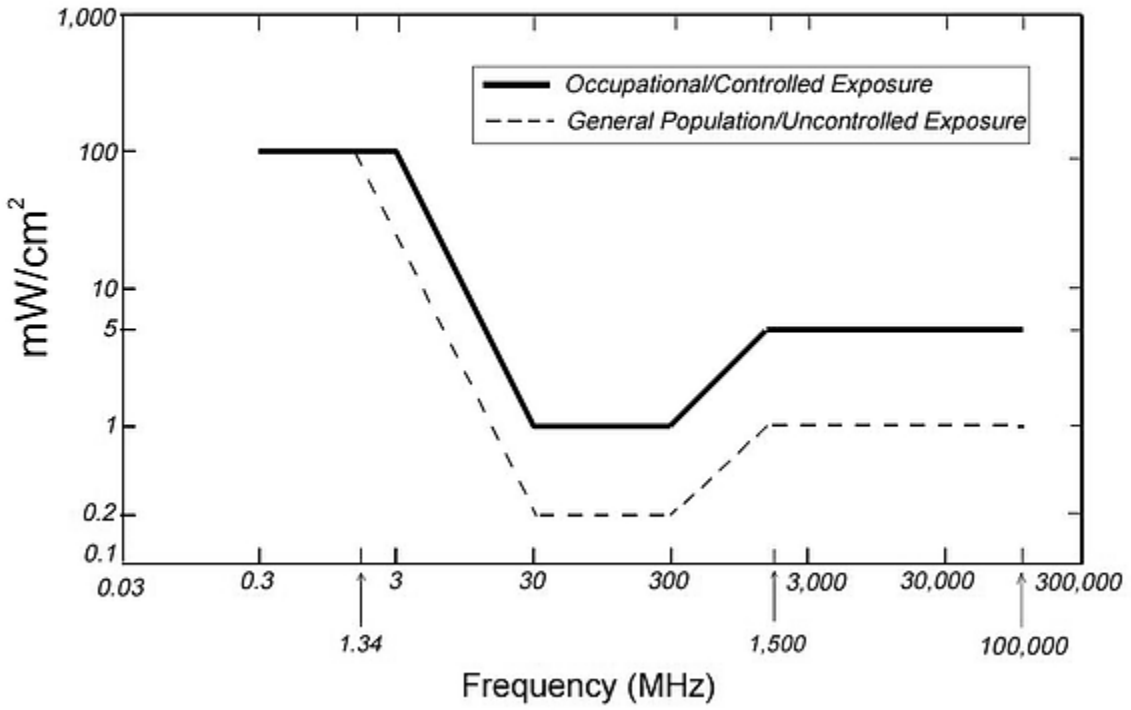
MPE CALCULATION

The minimum separation distance is calculated as follows:

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power density: } P_d(mW/cm^2) = \frac{E^2}{3770}$$

MPE LIMITS

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

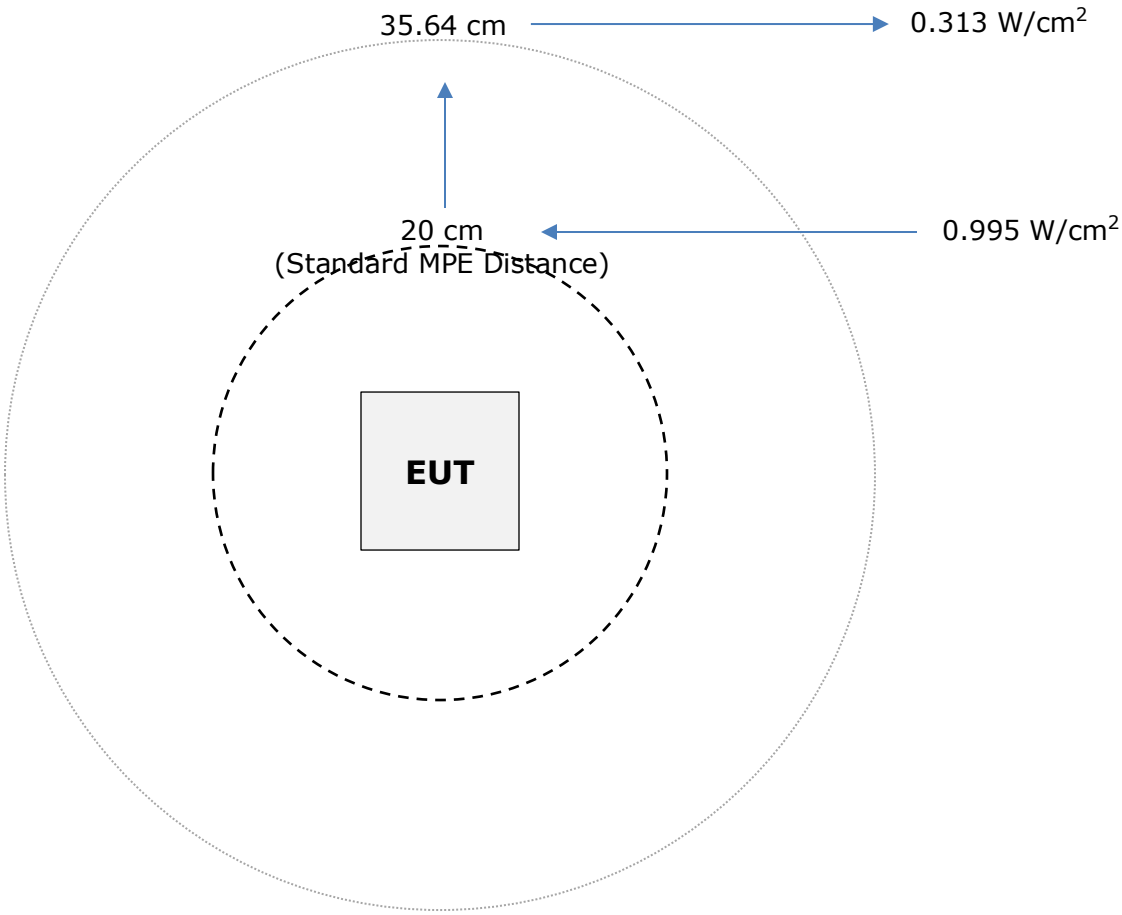


MPE Table

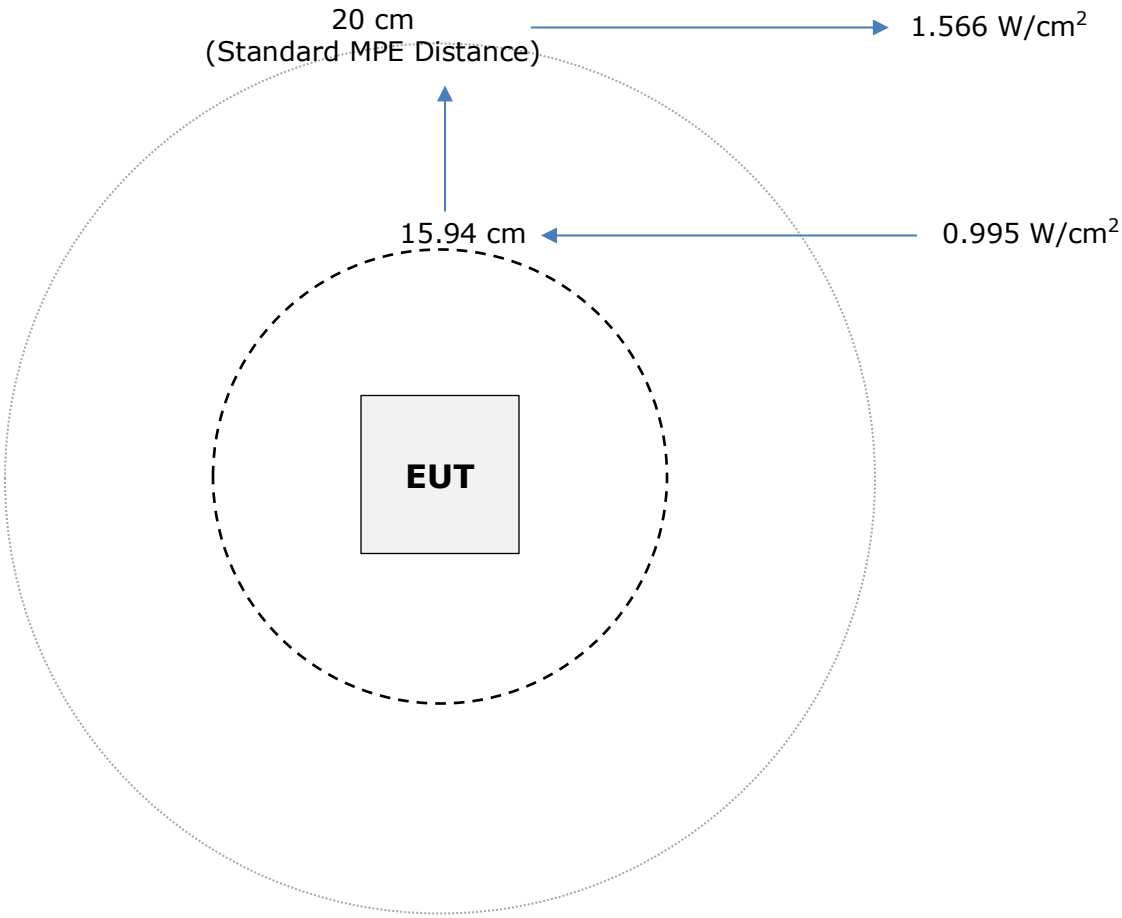
General Uncontrolled Exposure

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

Variable	Value
Max Power	5 W
Frequency Range	430 - 471 MHz
Duty Cycle (at full power)	100%
Max Antenna Gain	0 dBi
Coax Loss	0 dB
Power Density	0.3133 W/cm^2
Minimum Separation Distance	35.64 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	5 W
Frequency Range	430 - 470 MHz
Duty Cycle (at full power)	100%
Max Antenna Gain	0 dBi
Coax Loss	0 dB
Power Density	1.566 W/cm^2
Minimum Separation Distance	15.94 cm