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TIMCO ENGINEERING, Inc.

An IIA Company

RF Exposure Evaluation Report

APPLICANT	CRESTRON ELECTRONICS INC
ADDRESS	15 VOLVO DRIVE ROCKLEIGH NJ 07647 USA
FCC ID	EROCWD7787
MODEL NUMBER	M201910001
PRODUCT DESCRIPTION	RF WIRELESS ZIGBEE TRANSCEIVER
DATE SAMPLE RECEIVED	12/5/2019
FINAL TEST DATE	12/5/2019
PREPARED BY	Tim Royer
TEST RESULTS	☒ PASS ☐ FAIL

Report Number	Report Version	Description	Issue Date
3315UT19 MPETestReport_	---	Initial Issue	1/21/2020

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 Testing Engineer
Date	01/21/2020

GENERAL INFORMATION

EUT Description	CRESTRON ELECTRONICS INC		
Model Number	M201910001		
EUT Power Source	☒110–120Vac, 50–60Hz	☐ DC Power	☐ Battery Operated
Test Item	☐ Engineering Prototype	☐ Pre-Production	☒ Production
Type of Equipment	☐ Fixed	☒ Mobile	☐ Portable
Antenna Connector	SMA		
Test Conditions	The temperature was 26ºC 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)
No	n/a	**0.0**

POWER OUTPUT OF EUT

Tuned Frequency (MHz)	Power Output (dBm)
2405	19.46
2445	19.22
2480	19.25

Measured Power Output = 0.88 W

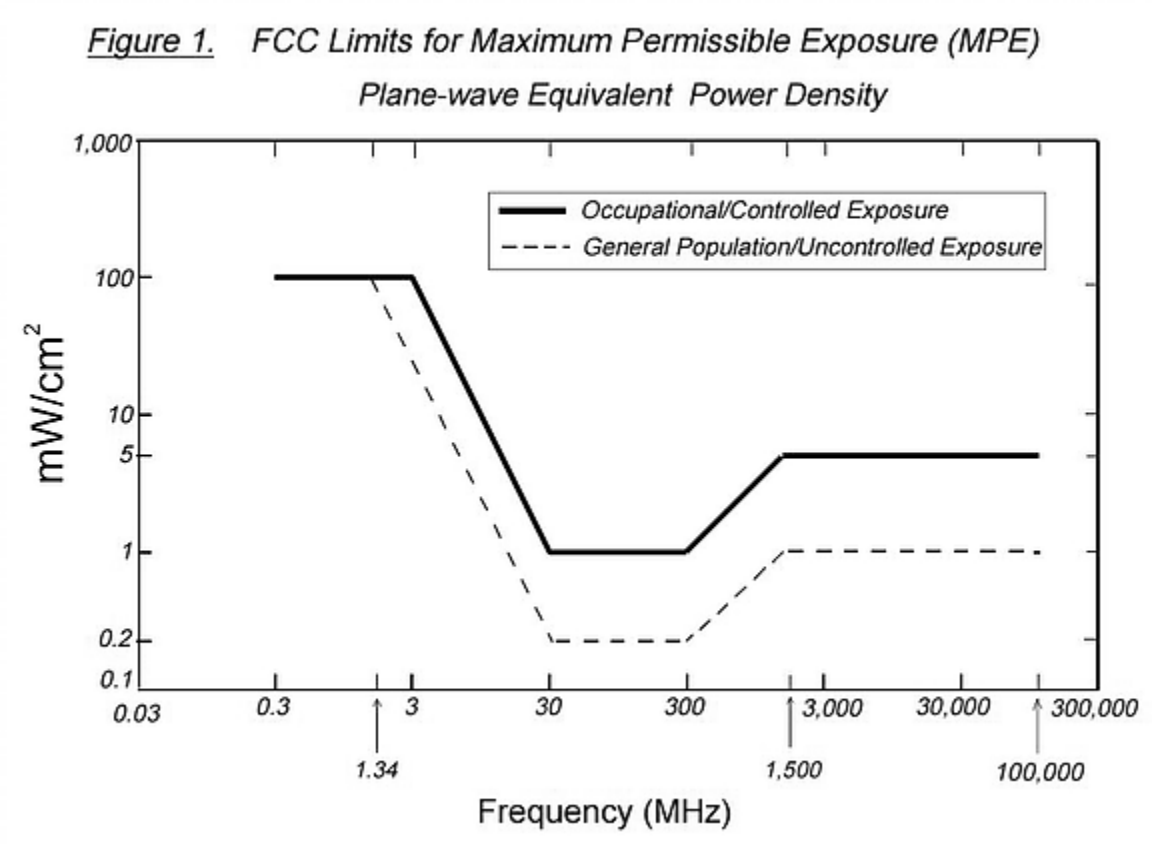
MPE CALCULATION

The minimum separation distance is calculated as follows:

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

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

MPE LIMITS

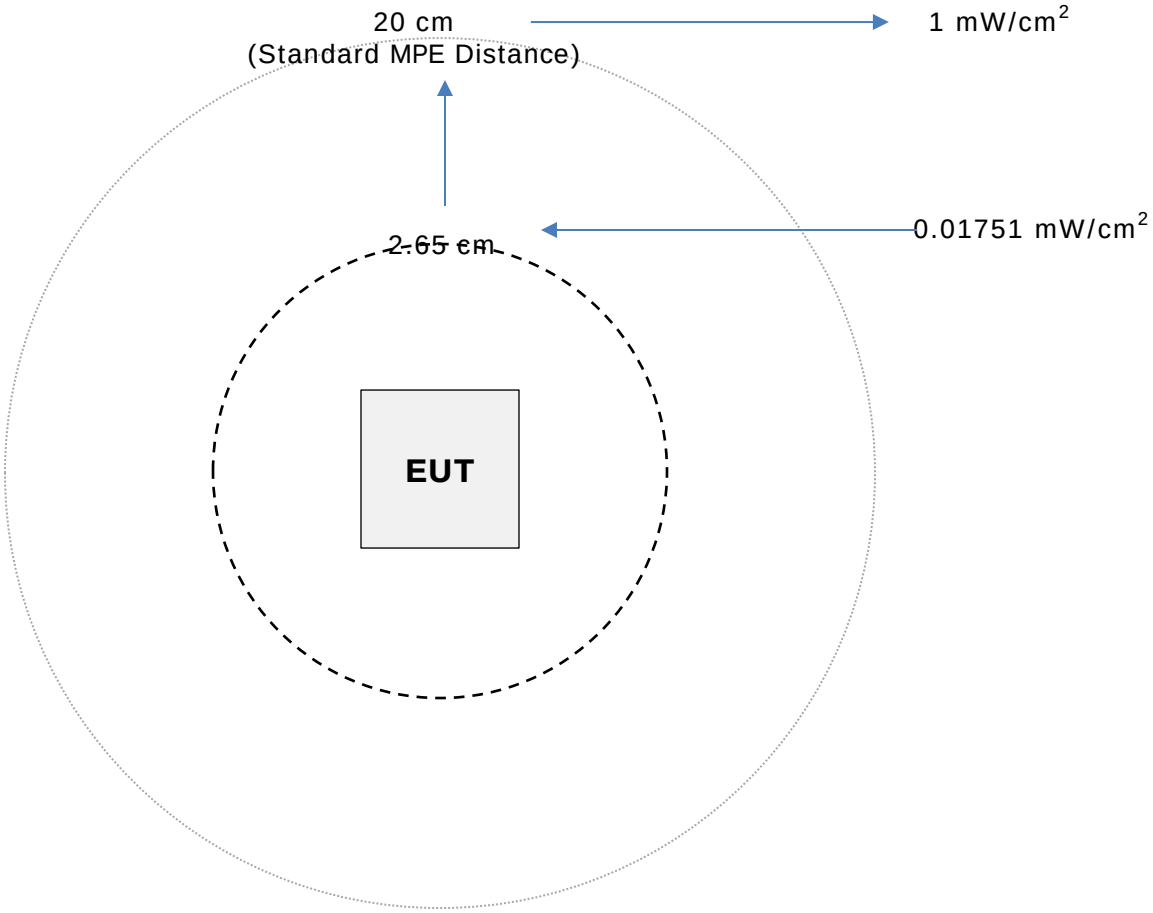


MPE Table

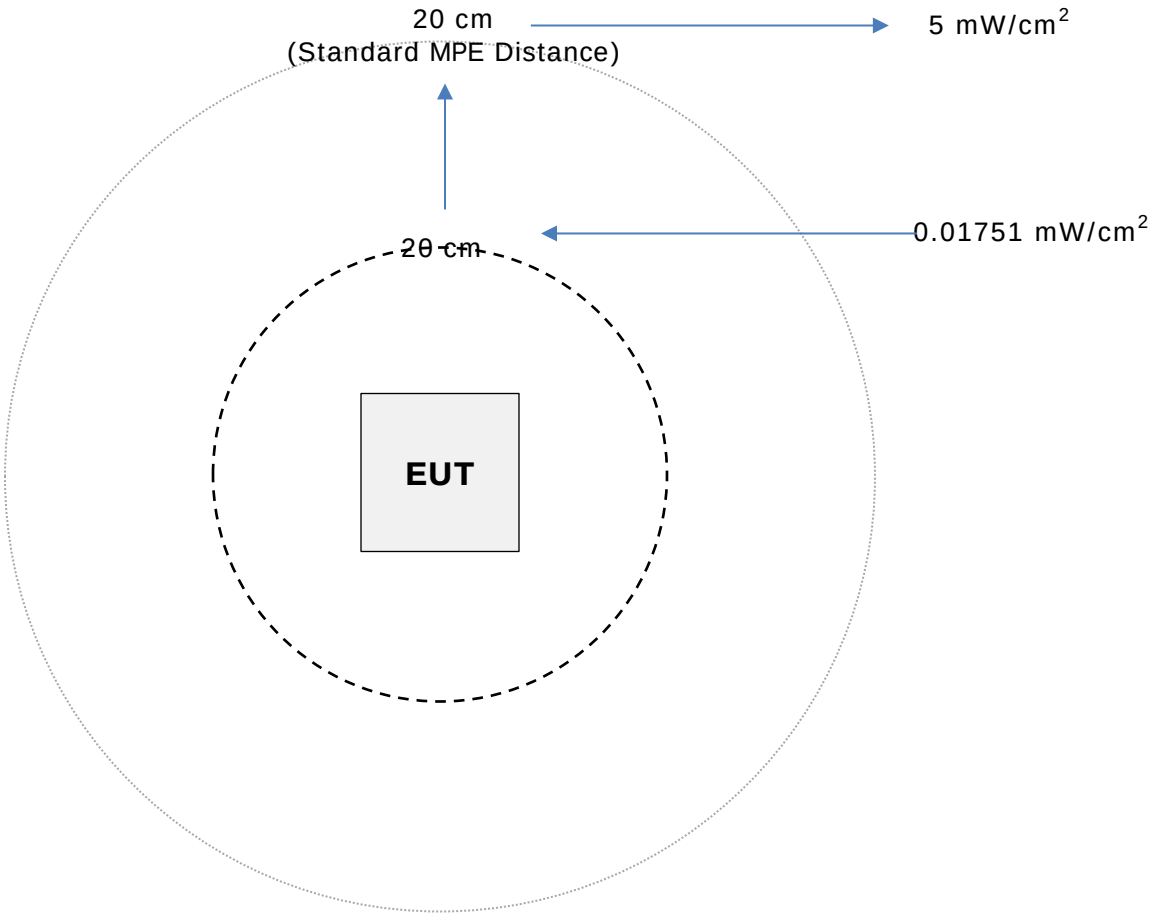
General Uncontrolled Exposure

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

Variable	Value
Max Power	0.088 W
Frequency Range	2400 – 2483.5 MHz
Duty Cycle (at full power)	100%
Max Antenna Gain	0 dBi
Coax Loss	0 dB
Power Density	1 mW/cm^2
Minimum Separation Distance	20 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	0.088 W
Frequency Range	2400 – 2483.5 MHz
Duty Cycle (at full power)	100%
Max Antenna Gain	0 dBi
Coax Loss	0 dB
Power Density	5 mW/cm^2
Minimum Separation Distance	20 cm