849 NW STATE ROAD 45
NEWBERRY, FL 32669 USA

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TIMCO ENGINEERING, Inc.

An IIA Company

RF Exposure Evaluation Report

APPLICANT	FIPLEX COMMUNICATIONS INC.
ADDRESS	2101 NW 79th Ave. MIAMI FL 33122 USA
FCC ID	P3THRHU1444S-B
MODEL NUMBER	HRHU1444S-B
PRODUCT DESCRIPTION	MULTI-BAND REMOTE INDUSTRIAL BOOSTER
DATE SAMPLE RECEIVED	05/06/2019
FINAL TEST DATE	05/15/2019
PREPARED BY	Franklin Rose
TEST RESULTS	☒ PASS ☐ FAIL

Report Number	Report Version	Description	Issue Date
1118AUT19 MPE_	Rev1	Initial Issue	05/15/2019
1118AUT19 MPE_	Rev2	Revised for Co-located transmitters	05/30/2019

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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	05/15/2019

GENERAL INFORMATION

EUT Description	MULTI-BAND REMOTE INDUSTRIAL BOOSTER		
Model Number	HRHU1444S-B		
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	N Type		
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

Manufacturer Provides Antenna	Type	Max Gain (dBi)
No	Unspecified	**0 dBi**

Output Power, Co-located Transmitters

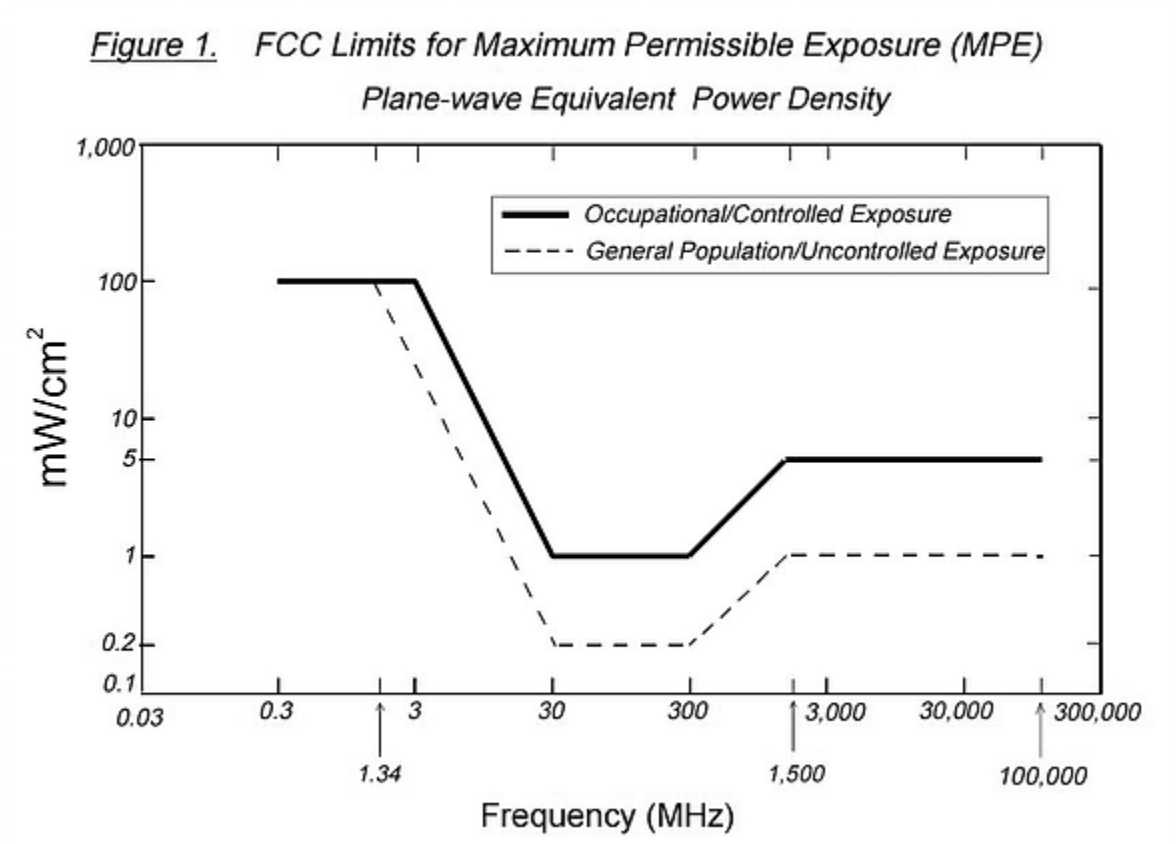
Transmitter	Output Power + Tune Up Tolerance (dBm)	Max Power Out (W)	Combined Max Power Output (W)	Combined Max Power Output (dBm)
VHF	32.5	1.78	28.04	44.48
UHF Low	38.5	7.08		
UHF Mid	37.5	5.62		
UHF High	37.5	5.62		
800 Mhz	39.0	7.94		

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

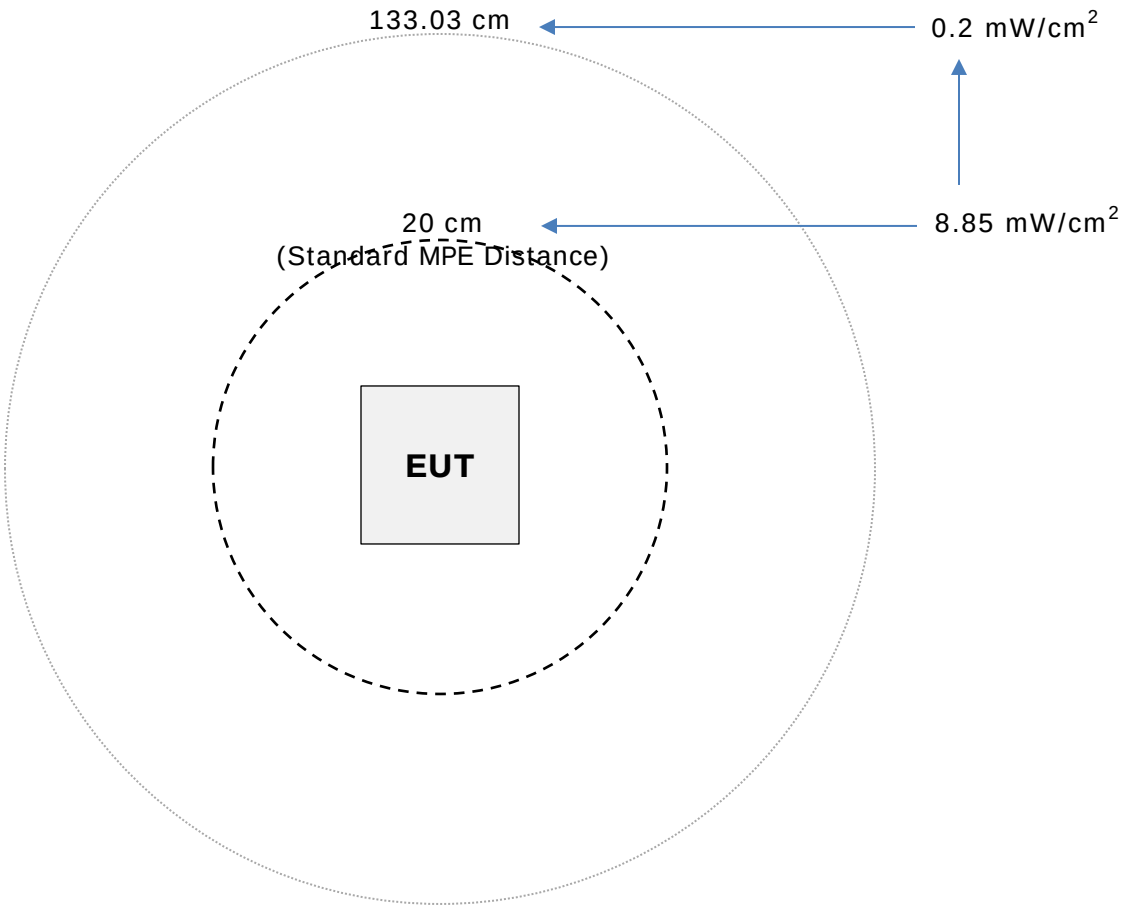


MPE Table

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	44.48 W
Frequency Range	150.8 – 869 MHz
Worst-case Frequency	150.8 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	133.03 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	44.48 W
Frequency Range	150.8 – 869 MHz
Worst-case Frequency	150.8 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	59.49 cm