FCC MPE TEST REPORT

Project Number	**: EA1910C-048**
Test Report Number	**: TR-W1910-008**
Type of Equipment	**: 2.4GHz LoRa Modem**
Model Name	**: PLS100WF**
FCC ID	**: 2AUV6-PLS100WF**
Multiple Model Name	**: N/A**
Applicant	**: PLNetworks, Inc.**
Address	**: #210, HANA EZ Tower, 10, Seongnam-daero 43beon-gil,Bundang-gu, Seongnam-si, Gyeonggi-do, Korea(13636)**
Manufacturer	**: PLNetworks, Inc.**
Address	**: #210, HANA EZ Tower, 10, Seongnam-daero 43beon-gil,Bundang-gu, Seongnam-si, Gyeonggi-do, Korea(13636)**
Regulation	**: FCC Part 15 Subpart C Section 15.247**
Total page of Report	**: 5 Pages**
Date of Receipt	**: 2019-10-15**
Date of Issue	**: 2019-10-31**
Test Result	**: PASS**

This test report only contains the result of a single test of the sample supplied for the examination.
It is not a generally valid assessment of the features of the respective products of the mass-production.

Prepared by Song, In-young / Senior Engineer _____ (Signature) 2019-10-31 (Date)

Reviewed by Choi, Yeong-min / Technical Manager _____ (Signature) 2019-10-31 (Date)

CONTENTS

Page

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Release Control Record

Issue Report No.	Issued Date	Revisions	Effect Section
TR-W1910-008	2019-10-31	Initial Release	All

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1. EUT (Equipment Under Test) INFORMATION

1.1 General Description

The PLNetworks, Inc., Model PLS100WF (referred to as the EUT in this report) is a 2.4GHz LoRa Modem. The EUT is a device for transferring GFSK signal to a Wireless Device through wireless communication. The product specification described herein was obtained from product data sheet or user's manual.

Operating Frequency	2 412 MHz ~ 2 472 MHz
Kind of Class	DTS – Digital Transmission System
Generated or used Freq. in EUT	32.768 kHz, 32 MHz, 52 MHz
Operating Temperature	-30 °C ~ + 70 °C
Normal Test Voltage	DC 3.6 V
Electrical Rating	DC 3.6 V
Software Version	V1.0
Hardware Version	V1.0

1.2 Additional Model

None

2. TEST RESULT

2.1 Measured RF Output Level

Operating Mode	Conducted Output Power (dBm)	Antenna Gain (dBi)	EIRP	
			(dBm)	(mW)
GFSK	6.01	3.49	9.50	8.91

Note: EIRP = Conducted Output Power + Antenna Gain

2.2 MPE Evaluation

The EUT will only be used with a separation of 20 centimeters or greater between the antenna and the body of the user.

The MPE sample calculation for this exposure is shown below.

S = EIRP / (4 x R^2 x π)

= 8.91 / (4 x 20^2 x π)

= 0.001 773 mW/cm^2

Note: S= Power density (mW/cm^2)

EIRP= Equivalent Isotropic Radiated Power (mW)

R= Distance to the center of the radiation of the antenna

$\pi \approx 3.1416$

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric Field strength (V/m)	Magnetic field strength (A/m)	Power Density (mW/cm^2)	Averaging time (minutes)
0.3 – 1.34	614	1.63	*100	30
1.34 – 30	824 / f	2.19 / f	*180 / f^2	30
30 – 300	27.5	0.073	0.2	30
300 – 1 500			f / 1500	30
1 500 – 100 000			1.0	30