

RF Exposure Evaluation declaration

Product Name : CADENCE SPEED FLOW SENSOR

Model No. : CADENCE SPEED FLOW SENSOR

FCC ID : 2AD4S-LEZYNE-CS01

Applicant : Lezyne USA, Incorporated

Address : 645 Tank Farm Road Unit F San Luis Obispo California
93401 United States

Date of Receipt : Jul. 26, 2016

Date of Declaration : Aug. 25, 2016

Report No. : 1680007R-RFUSP01V00

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

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Issued Date: Aug. 25, 2016
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Applicant	Lezyne USA, Incorporated
Address	645 Tank Farm Road Unit F San Luis Obispo California 93401 United States
Manufacturer	Lezyne USA, Incorporated
Model No.	CADENCE SPEED FLOW SENSOR
FCC ID.	2AD4S-LEZYNE-CS01
EUT Rated Voltage	DC 3V (Power by Battery)
EUT Test Voltage	DC 3V (Power by Battery)
Trade Name	LEZYNE
Applicable Standard	FCC 47 CFR 1.1310
Test Result	Complied

Documented By : Jinn Chen
(Senior Adm. Specialist / Jinn Chen)

Tested By : Steven Tsai
(Engineer / Steven Tsai)

Approved By : Vincent Lin
(Director / Vincent Lin)

1. RF Exposure Evaluation

1.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product : CADENCE SPEED FLOW SENSOR
Test Item : RF Exposure Evaluation

Operation Frequency	2402 – 2480MHz
Maximum Conducted output power	4.25 dBm
Antenna gain	-2.4 dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)
2.66072506	0.000305

Power density is lower than the limit (1 mW/cm²).