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Report No.: 1608RSU00802  
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## RF Exposure Evaluation Declaration

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**FCC ID:** 2AGN8-P22N14

**APPLICANT:** Sengled Co., Ltd.

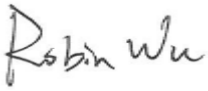
**Application Type:** Certification


**Product:** Solo Pro

**Model No.:** P22-N14

**Brand Name:** Sengled

**FCC Classification:** FCC Part 15 Spread Spectrum Transmitter(DSS)

Reviewed By :   
Manager : \_\_\_\_\_  
( Robin Wu )

Approved By :   
CEO : \_\_\_\_\_  
( Marlin Chen )



The test results relate only to the samples tested.

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

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### Revision History

Report No.	Version	Description	Issue Date	Note
1608RSU00802	Rev. 01	Initial report	08-23-2016	Valid

## 1. PRODUCT INFORMATION

Product Name	Solo Pro
Model No.	P22-N14
Brand Name	Sengled
Bluetooth Specification	v2.1 + EDR
Operating Frequency	2402~2480MHz
Type of modulation	FHSS
Data Rate	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps (8DPSK)
Antenna Type	PCB Antenna
Antenna Gain	0.4dBi

## 2. RF Exposure Evaluation

### 2.1. 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 <sup>2</sup> )	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

Calculation Formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

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

$P_d$  is the limit of MPE, 1mW/cm<sup>2</sup>. 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.

## 2.2. Test Result of RF Exposure Evaluation

Product	Solo Pro
Test Item	RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 0.4dBi for 2.4GHz in logarithm scale.

### For 2.4G ISM Band:

Test Mode	Frequency Band (MHz)	Maximum Output Power (dBm)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
Bluetooth	2402 ~ 2480	0.444	0.0002	1

### CONCULISON:

Therefore, the Max Power Density at R (20 cm) =  $0.0002\text{mW/cm}^2 < 1\text{mW/cm}^2$ .

So the EUT complies with the requirement.

\_\_\_\_\_ The End \_\_\_\_\_