



RF Exposure Evaluation Declaration

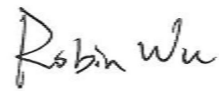
FCC ID: 2ASC3WA0867A
APPLICANT: Positec Technology (China) Co., Ltd.
Application Type: Certification
Product: Gateway
Model No.: WA0867.A
Brand Name: WORX
FCC Classification: Digital Transmission System (DTS)
Test Procedure(s): KDB 447498 D01v06
Test Date: December 27, 2019

Reviewed By:



(Kevin Guo)

Approved By:



(Robin Wu)



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.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
1908RSU009-U2	Rev. 01	Initial Report	02-27-2020	Valid

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name:	Gateway
Model No.:	WA0867.A
Brand Name:	WORX
Operating Frequency:	911MHz
Wi-Fi Specification:	802.11b/g/n
Working Voltage:	AC 120V/60Hz

1.2. Product Specification Subjective to this Report

Operating Frequency:	911MHz
Type of Modulation:	ASK
Channel Number:	1
Antenna Information:	Refer to section .3

1.3. Description of Available Antennas for Gateway

Antenna No.	Type	Frequency Band (MHz)	Max Peak Gain (dBi)
1	Dipole	911	1.3dBi
2			1.3dBi

Note: The EUT supports SISO only.

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 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

Calculation 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, 1mW/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.

2.2. Test Result of RF Exposure Evaluation

Product	Gateway
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
ASK	911	10.52	0.0063	0.6073
Wi-Fi	2412 ~ 2462	36.00	0.7958	1

CONCLUSION:

Both of the 911MHz Band and WLAN Band can transmit simultaneously.

CPD = Calculation Power Density, LPD = Limit of Power Density

$CPD1/LPD1 + CPD2/LPD2 = 0.0063/0.6073 + 0.7958/1 = 0.8062 < 1$

Therefore, the Min Safety Distance is 20cm.

_____ The End _____

Appendix A – EUT Photograph

Refer to “1908RSU009-UE” file.