



Maximum Permissible Exposure

FCC ID: 2AHU2WVRX2AP

APPLICANT: ASA Electronics Shenzhen Limited

Application Type: Certification

Product: Digital Wireless Receiver

Model No.: WVRX2AP

Brand Name: Voyager

FCC Rule Part(s): Part 2.1091 (Mobile)

Received Date: July 15 ,2021

Test Date: August 24 ,2021

Reviewed By

: 

(Paddy Chen)

Approved By

: 

(Chenz Ker)



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report. Test results reported herein relate only to the item(s) tested.

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

Revision History

Report No.	Version	Description	Issue Date
2107TW5503-U3	1.0	Original Report	2021-08-27

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	Digital Wireless Receiver
Model No.	WVRX2AP
Trademark	Voyager
Supports Radios Spec.	FHSS (QPSK)

1.2. Antenna Description

No.	Brand	Part No.	Antenna Type	Peak Gain
1	Master Wave Technology Co., Ltd	98152MSAX004	Dipole	3.91dBi

2. Maximum Permissible Exposure(MPE)

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				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
0.3-1.4	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
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

Note : (1) f= Frequency in MHz , (2) * = Plane-wave equivalent power density

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

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

Under normal use condition, is at least 20cm away from the body of the user .

So, this device is classified as **Mobile Device**.

2.2. Test Result

Frequency Band (MHz)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2403~2472	20.07	101.62	3.91	20	0.0497	1

Therefore, the maximum calculations are less than the “1” limit. Complies with FCC radiation exposure requirement specified in the FCC Rule 2.1091.

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