

TEST REPORT

Reference No...... : WTD21D07072927W002
FCC ID : 2AX9TMSPDAS268XX
Applicant..... : Velocity Commerce
Address..... : 49 Viking Way, Bar Hill, Cambridge, CB23 8EL
Manufacturer : AJS Electronics Limited
Address..... : Unit E, 29F China Energy Storage Tower, No.3099, Keyuan Road,
Nanshan District, Shenzhen, China
Product..... : Sierra Plus 2.1.2CH Soundbar and Subwoofer with Dolby ATMOS
Model(s) : 1000002680, 1000002681, 1000002682
Standards..... : FCC Part 2.1091
Date of Receipt sample : 2021-07-22
Date of Test : 2021-07-22 to 2021-08-17
Date of Issue..... : 2021-08-23
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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3. Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD21D07072927 W002	2021-07-22	2021-07-22 to 2021-08-17	2021-08-23	Original	-	Valid

4. General Information

4.1. General Description of E.U.T.

Product:	Sierra Plus 2.1.2CH Soundbar and Subwoofer with Dolby ATMOS
Model(s):	1000002680, 1000002681, 1000002682
Model difference:	Only the model name are difference. The test sample model is 1000002680.
Operation Frequency:	2402-2480MHz, 79 Channels in total
Max. RF output power:	1.23dBm
Antenna installation:	PCB Printed Antenna
Antenna Gain:	-0.58dBi
Type of Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK
Hardware Version:	FS91W Ver1.0
Software Version:	FDY_SUBW_FS Xbar95W2.1.2 (Majority Sierra Plus)_U(3)_20210702_83B6

4.2. Details of E.U.T.

Ratings:	AC 110-240V, 50/60Hz
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4.3. Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

5. Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	FCC Part 2.1091	PASS

6. RF Exposure

Test Requirement: FCC Part 2.1091

Evaluation Method: FCC Part 2.1091 & KDB 447498 D01 General RF Exposure Guidance v06

6.1. Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

6.2. The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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 Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz; *Plane-wave equivalent power density

6.3. MPE Calculation Method

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

P = output power to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

From the peak EUT RF output power, the minimum mobile separation distance, R=20cm, as well as the gain of the used antenna, the RF power density can be obtained

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. conducted Output Power (dBm)	Max. conducted Output Power (mW)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
-0.58	0.875	1.23	1.33	0.000231	1	complies

6.4. Result: Compliance

No SAR measurement is required.

=====End of Report=====