

TEST REPORT

Product Name : ONN. BT SPORT
Brand Mark : onn.
Model No. : AABLK100074912
Extension Model : SMBT-10125A, AALAV100074912
FCC ID : 2ADZH-BWD021
Report Number : BLA-EMC-202208-A0603
Date of Sample Receipt : 2022/8/1
Date of Test : 2022/8/1 to 2022/8/11
Date of Issue : 2022/8/11
Test Standard : 47 CFR Part 15, Part1.1307
47 CFR Part 15, Part2.1093
KDB447498D04 General RF Exposure
Guidance v01
Test Result : Pass

Prepared for:

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No.10 North 7th Street, Qiaodong road, Qiaotou town, Dongguan,
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Prepared by:

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Date: 2022/8/11



REPORT REVISE RECORD

Version No.	Date	Description
00	2022/8/11	Original

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1 TEST SUMMARY

Test item	Test Requirement	Test Method	Class/Severity	Result
RF Exposure	47 CFR Part 1.1307, Part 2.1093, KDB 447498	CFR 47 Part 2.1093	CFR 47 Part 2.1093	PASS

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2 GENERAL INFORMATION

Applicant	Dongguan Siyoto Electronics Co., Ltd.
Address	No.10 North 7th Street, Qiaodong road, Qiaotou town, Dongguan, Guangdong, China
Manufacturer	Dongguan Siyoto Electronics Co., Ltd.
Address	No.10 North 7th Street, Qiaodong road, Qiaotou town, Dongguan, Guangdong, China
Factory	Dongguan Siyoto Electronics Co., Ltd.
Address	No.10 North 7th Street, Qiaodong road, Qiaotou town, Dongguan, Guangdong, China
Product Name	ONN. BT SPORT
Test Model No.	AABLK100074912
Extension Model	SMBT-10125A, AALAV100074912
Remark	All above models are identical in the same PCB layout, interior structure and electrical circuits. The differences are model name for commercial purpose.

3 GENERAL DESCRIPTION OF E.U.T.

Hardware Version	V2.2
Software Version	V0.1
Bluetooth version	V5.3
Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK, pi/4DQPSK
Channel Spacing:	1MHz
Number of Channels:	79
Antenna Type:	Ceramic Antenna
Antenna Gain:	5.54dBi(Provided by the customer)

4 LABORATORY LOCATION

All tests were performed at:

BlueAsia of Technical Services(Shenzhen) Co., Ltd.

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No tests were sub-contracted.

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5 RF EXPOSURE COMPLIANCE REQUIREMENT

5.1 RF EXPOSURE COMPLIANCE REQUIREMENT

Standard Requirement

According to 447498 D04 Interim General RF Exposure Guidance v01

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

Limits

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B.2})$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

Example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
	5	10	15	20	25	30	35	40	45	50	
300	39	65	88	110	129	148	166	184	201	217	
450	22	44	67	89	112	135	158	180	203	226	
835	9	25	44	66	90	116	145	175	207	240	
1900	3	12	26	44	66	92	122	157	195	236	
2450	3	10	22	38	59	83	111	143	179	219	
3600	2	8	18	32	49	71	96	125	158	195	
5800	1	6	14	25	40	58	80	106	136	169	

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

$$EIRP = p_t \times g_t = (EXd)^2/30$$

where:

p_t = transmitter output power in watts,

g_t = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m, --- $10((dBuV/m)/20)/106$

d = measurement distance in meters (m)---3m

$$S_{opt} = (EXd)^2/30 \times g_t$$

Ant gain = 5.54 dBi

Max Output power = -0.266dBm @ 2402MHz

$$ERP = -0.266dBm + 5.54dBi - 2.15 = 3.124dBm$$

So

ERP is worse case

$$10^{0.3124} = 2.05 \text{ mW} < 2.79 \text{ mW}$$

Then SAR evaluation is not required

----END OF REPORT----

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