



Aibo Standard Technology (Shenzhen) Co., Ltd.

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BLE TEST REPORT

Report No.....	AB25060015R
Applicant.....	NSS Inc
Address.....	1-10-40, Otogana, Onojo, Fukuoka, 816-0902
Manufacturer.....	Shenzhen YDstrong Smart Health Technology Co., LTD
Address.....	Room 1101, Floor 11, Block C, Konka Technology Center, Guangming District, Shenzhen, 518107, China
Product Name.....	EMS power box
Trade Mark.....	/
Model/Type reference.....	EPS-P200
Listed Model(s)	/
Standard.....	Article 2 paragraph 1 item 19 Notice No.88 Annex 43
Date of Receipt.....	2025.06.18
Date of Test Date.....	2025.06.19-2025.06.22
Date of issue.....	2025.06.23
Test result.....	PASS
Compiled by: (Printedname+signature)	Huaijie Li <i>Huaijie Li</i>
Supervised by: (Printedname+signature)	Jay Liu <i>Jay Liu</i>
Approved by: (Printedname+signature)	Mic Cheng <i>Mic Cheng</i>
Testing Laboratory Name	Aibo Standard Technology (Shenzhen) Co., Ltd.
Address.....	101, Building B, Tuori New Energy Industrial Park, High-tech Park, Tianliao Community, Yutang Street, Guangming District, Shenzhen City, Guangdong Province, China
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EUT.....	EMS power box
Test Model.....	EPS-P200
Applicant.....	NSS Inc
Address.....	1-10-40, Ootogana, Onojo, Fukuoka, 816-0902
Telephone.....	/
Fax.....	/
Manufacturer.....	Shenzhen YDstrong Smart Health Technology Co.,LTD
Address.....	Room 1101, Floor 11, Block C, Konka Technology Center, Guangming District, Shenzhen, 518107, China
Telephone.....	/
Fax.....	/
Factory.....	Shenzhen YDstrong Smart Health Technology Co.,LTD
Address.....	Room 1101, Floor 11, Block C, Konka Technology Center, Guangming District, Shenzhen, 518107, China
Telephone.....	/
Fax.....	/

Test Result	Positive
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Version No.	Date	Description
00	2025.06.23	Original

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3 Test Summary

MIC Notice No.88 Appendix No.43 Article 2 Paragraph 1 Item 19		
Clause	Test Item	Result
3	Frequency Error	Pass
6	Antenna Power	Pass
6	Tolerances for antenna power	Pass
4	Transmission rate	Pass
4	99% Occupied Bandwidth	Pass
4	Spread Spectrum Bandwidth	Pass
11	Spurious Emissions Intensity	Pass
7	Limit of Secondary Radiated Emissions	Pass
12	Interference Suppression	Pass

Pass: The EUT complies with the carrier sense capability and radio interference prevention capability.

N/A: means not applicable

4 General Information

4.1 General Description of EUT

Product Name:	EMS power box
Main Model:	EPS-P200
Series Models:	/
Operation Frequency:	2402MHz~2480MHz
Channel Numbers:	40
Channel Separation:	2MHz
Modulation Type:	GFSK
Rated Power:	1.00 mW
Antenna Type:	Integral Antenna
Antenna Gain:	-2.31dBi
Hardware Version:	V1.9
Software Version:	V1.4.2.1
Power supply:	DC 3.7V,by battery charged from adapter
Input:	DC 5.0V, 1A

4.2 Channel list

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

Test Channel	Frequency(MHz)
Lowest channel	2402.00
Middle channel	2440.00
Highest channel	2480.00

4.3 Test mode

Software used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

POWER	Frequency		
	2402MHz	2440MHz	2480MHz
	Default	Default	Default

4.4 Test condition

Note: The EUT has its own voltage regulator principle from LC1482CB5331, the output voltage of the chip is 3.3V and the fluctuation of power supply to the RF circuit of EUT is equal to or less than +/- 1%. So exempt extremely high and low supply voltage condition tests, EUT only operated in normal voltage to test all regulations.

During the input supply voltage to the EUT from the external power source is varied by +/-10%, EUT only operated in normal, High and Low voltage to test all regulations.

External power supply	RF IC power supply
Normal voltage:DC 3.70V	DC 3.3V
High voltage:DC 4.07V	DC 3.3V
Low voltage:DC 3.33V	DC 3.3V
Temperature:	25 °C
Humidity:	79%
Atmospheric Pressure	1009hPa

4.5 Test Location

All tests were performed at:

Test Lab: Aibo Standard Technology (Shenzhen) Co., Ltd.

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Tel.: +(86) 0755 85250797

E-mail: aibonorm@aibonorm.com

Website: www.aibonorm.com

4.6 Other Information Requested by the Customer

None.

4.7 Test Instruments list

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	EMI Test Receiver	R&S	ESCI	101196	01/20/2025	01/19/2026
2	Loop Antenna	Schwarzbeck	FMZB 1519	1519-025	07/02/2024	07/01/2025
3	Power Amplifier	HZEMC	HPA-9K0133	HYP A23029	02/19/2025	02/18/2026
4	Broadband Antenna	Schwarzbeck	VULB 9168	01763	02/19/2025	02/18/2026
5	Attenuator	PRM	ATT50-6-3	ATT50-6-3	01/20/2025	01/19/2026
6	Spectrum Analyzer	R&S	FSV40-N	101365	01/20/2025	01/19/2026
7	Horn Antenna	Schwarzbeck	BBHA 9120 D	02786	02/19/2025	02/18/2026
8	Horn Antenna	Schwarzbeck	ZLB7-18-40G-777	072410839	02/19/2025	02/18/2026
9	Power Amplifier	HZEMC	PA0118-43	HYP A23030	02/19/2025	02/18/2026
10	Power Amplifier	HZEMC	PA01840-45	HYP A23031	02/19/2025	02/18/2026
11	Spectrum Analyzer	R&S	FSV40-N	101365	01/20/2025	01/19/2026
12	MXG Vector Signal Generator	Agilent	N5182A	MY47070153	01/20/2025	01/19/2026
13	MXA Signal Analyzer	Keysight	N9020A	MY52091389	01/20/2025	01/19/2026
14	RF Automatic Test System (Included Power Sensor)	MWRFTest	MW100-RFCB	MW220802AB-44	01/20/2025	01/19/2026
15	Analog Signal Source	Keysight	N5173B	MY60403029	01/20/2025	01/19/2026
16	Vector Signal Generator	R&S	SMCV100B	106103	01/20/2025	01/19/2026
17	MXA Signal Analyzer	Keysight	N9020A	MY56060242	01/20/2025	01/19/2026
18	WIDEBAND RADIO COMMUNICATION TESTER	Starpoint	SP9500	SP9500-20445,C1.0.9.36+SP1	01/20/2025	01/19/2026
19	WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	118780	01/20/2025	01/19/2026
20	DC POWER SUPPLY	MAISHENG	MT-305DS	2021040016	02/28/2025	02/27/2026
21	Const Temp. & Humidity Chamber	GRT	GR-HWX-150L	/	01/20/2025	01/19/2026
22	Digital Phosphor Oscilloscope	UNI-T	UPO3502CS	110401307680X	01/20/2025	01/19/2026

Note: The Cal. Interval was one year. The equipments were calibrated by CCIC (Shenzhen) Metrology & Testing Service CO.,LTD.

Calibration by the calibration agencies listed in the table correspond to paragraph 4 (ii) (c) of Article 24-2 in the Radio Law".

Test Software		
Software name	Model	Version
Radiated Emission Measurement Software	FASLAB	V4.1
Bluetooth and WIFI Test System	MTS 8310	V3.0.0.0

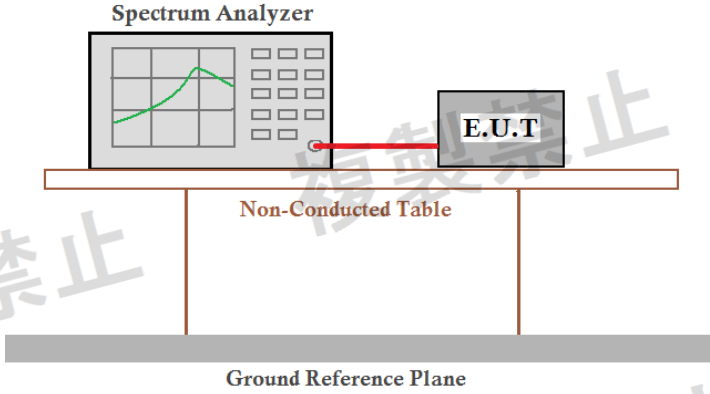
4.8 Measurement uncertainty

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR100028-1 [2] and shall correspond to an expansion factor (coverage factor) $K=1.96$ or $K=2$ (which provide confidence levels of respectively 95% and 95.5% in the case where the distributions characterizing the actual measurement uncertainties are normal).

Parameter	Uncertainty
RF frequency	$\pm 6 \times 10^{-7}$
Total RF power, conducted	$\pm 0.8\text{dB}$
Spurious emissions, conducted	$\pm 0.8\text{dB}$
DC and low frequency voltages	$\pm 3\%$
Humidity	$\pm 5\%$
Temperature	$\pm 1^\circ\text{C}$

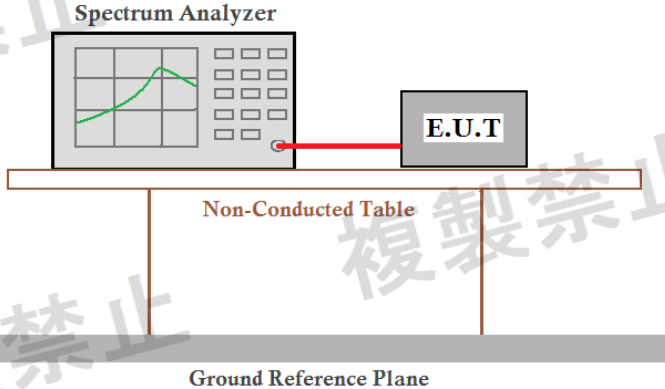
5 Test results and Measurement Data

5.1 Frequency Error

Test condition:	Without modulation, continuously transmitting.
Spectrum set:	Test Frequency: test channel, RBW=VBW=10KHz, Span=1MHz, Sweep time=Auto, Detector mode=Positive peak
Limit:	$\pm 50\text{ppm}$
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 5.7 for details
Test results:	Pass

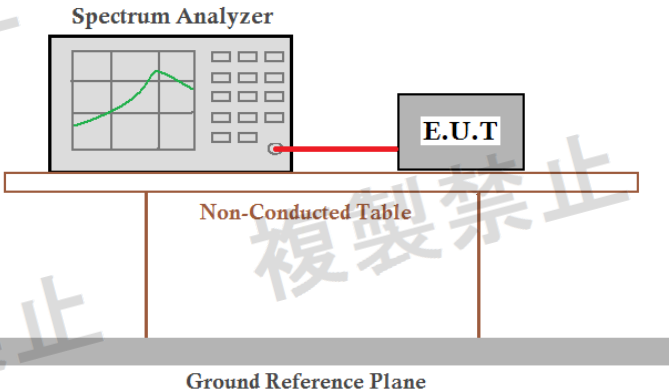
Measurement Data: The detailed test data see Appendix A

5.2 Antenna Power

Test condition:	Test diffusion code and modulate with standard coding test signal
Spectrum set:	Measurement procedure - Search Frequency of Peak Power Test Frequency: test channel, RBW=VBW$\geq$OBW, Span$\geq$OBW, Sweep time=Auto, Detector mode=Positive peak - Measure of average burst power Test Frequency: frequency of peak power RBW=VBW$\geq$OBW, Span=0Hz, Sweep time=Auto, Detector mode=Positive peak - Antenna power= average burst power
Limit:	10mW
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 5.7 for details
Test results:	Pass

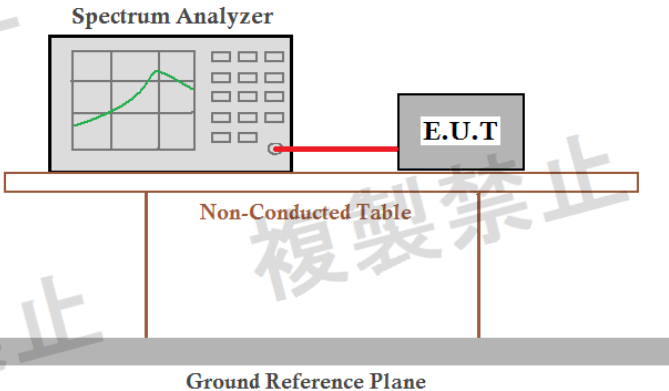
Measurement Data: The detailed test data see Appendix A

5.3 Occupy Bandwidth (99%)

Test condition:	Test diffusion code and modulate with standard coding test signal
Spectrum set:	Test Frequency: test channel, RBW=VBW=300KHz, Span=3MHz, Sweep time=Auto, Detector mode=Positive peak
Limit:	26MHz or less
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 5.7 for details
Test mode:	Transmitting mode
Test results:	Pass

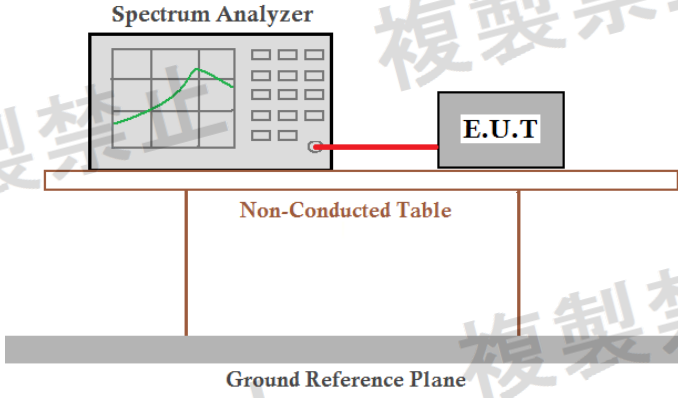
Measurement Data: The detailed test data see Appendix A

5.4 Spread Spectrum Bandwidth (90%)

Test condition:	Test diffusion code and modulate with standard coding test signal
Spectrum set:	Test Frequency: test channel, RBW=VBW=300KHz, Span=3MHz, Sweep time=Auto, Detector mode=Positive peak
Limit:	N/A
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 5.7 for details
Test mode:	Transmitting mode
Test results:	Pass

Measurement Data: The detailed test data see Appendix A

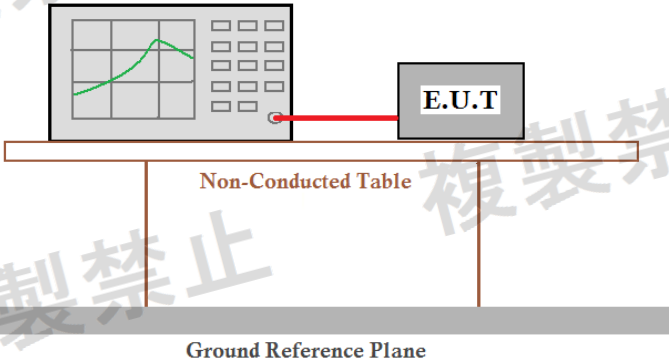
5.5 Spurious emission intensity

Test condition:	Test diffusion code and modulate with standard coding test signal
Measurement procedure:	Step 1 All spurious are measured from 30MHz to 13GHz by peak mode. Step 2 If the value measured by Step1 is 3dB or less to the limit, measure in average mode.
Spectrum set:	Step 1: Test Frequency: test channel, RBW=VBW=1MHz, Sweep time=Auto, Detector mode=Positive peak Step 2: Test Frequency: spurious frequency RBW=VBW=1MHz, Sweep time=Auto, Detector mode=Sample, Span=0Hz
Limit:	Below 2387 MHz: 2.5 μ W/MHz or less 2387 to 2400 MHz: 25 μ W/MHz or less 2483.5 through 2496.5 MHz: 25 μ W/MHz or less Over 2496.5 MHz: 2.5 μ W/MHz or less
Test setup:	
Test Instruments:	Refer to section 5.7 for details
Test results:	Pass

Note 1: SA set to from 2.4965GHz to 13GHz, plot shows from 2.497GHz to 13GHz as of SA' s default format.

Note 2: Measurement Data: The detailed test data see Appendix A

5.6 Secondary radiated emissions

Test condition:	Receiving mode
Measurement procedure:	Step 1 All spurious are measured from 30MHz to 13GHz by peak mode. Step 2 If the value measured by Step1 is 3dB or less to the limit, measure in average mode.
Spectrum set:	Step 1: Test Frequency: test channel, Below 1GHz, RBW=VBW=100KHz; Above 1GHz, RBW=VBW=1MHz, Sweep time=Auto, Detector mode=Positive peak Step 2: Test Frequency: spurious frequency Test Frequency: test channel, Below 1GHz, RBW=VBW=100KHz; Above 1GHz, RBW=VBW=1MHz, Sweep time=Auto, Detector mode=Sample, Span=0Hz
Limit:	Below 1GHz: 4.0nW or less Above 1GHz: 20nW or less
Test setup:	Spectrum Analyzer  Non-Conducted Table Ground Reference Plane
Test Instruments:	Refer to section 5.7 for details
Test results:	Pass

Measurement Data: The detailed test data see Appendix A

5.7 Interference suppression

Measurement procedure:	(1) The radio equipment with automatic transmitting function of identification code a) Transmit the assigned identification code from the radio equipment. b) Confirm the identification code received by the demodulator. (2) The radio equipment with automatic receiving function of identification code a) Transmit the assigned identification code from the opposite equipment. b) Confirm that the usual communication is available. c) Transmit the identification code distinct from the assigned one from the opposite equipment. d) Confirm that the radio equipment is stopped or an indication is displayed as the identification code is different.		
Test setup:	Radio equipment Dummy load Attenuator) Demodulator		
Test Instruments:	Refer to section 5.7 for details		
Test results:	Pass		

Measurement data:

Identification function:	Good; The MAC address is FC:08:10:DD:7D:62
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6 Test Setup Photo

Please refer to separated files for Appendix B test setup photos.

7 EUT Constructional Details

Please refer to separated files for Appendix C photos of EUT.

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