RF TEST REPORT

Applicant :	Shenzhen Shenlan Yuanwang Technology Co., Ltd.
Address:	Apartment 2803, Unit 3, Building 1, Xuefu Langyuan, Lisonglang Community, Gongming Subdistrict, Guangming District, Shenzhen
Manufacturer:	Shenzhen Xiaoman Sleep Aid Technology Co., Ltd.
Address:	Unit 1707, Building 9, Phase 6, Huaqiang Creative Industry Park, Guangming New District, Shenzhen
EUT Name:	Sunrise Alarm Clock White Noise Machine
Trade mark:	--
Model:	FN20, FN20S, FN20-A, FN20-B, FN20-C, FN20-D
FCC ID:	2BXGZ-FN20
Rating:	DC 12V
Sample Received Date:	Jul. 14, 2026
Test Date:	Jul. 14, 2026~Jul. 24, 2026
Applicable Standards:	CFR 47, FCC Part 2.1091
Test Result	Pass

Prepared by: Jojo Wu

Jojo Wu/Project Engineer

Approved by: Bruce zhang

Bruce Zhang/Technical Manager

HD Testing Technology (GuangDong) Co., Ltd.

Building 1, No.18, Shihuan Road, Dongcheng Subdistrict,

Dongguan, Guangdong, China

Tel: +86-0769-22221088

E-mail: info@hdt-lab.com

Website: www.hdt-lab.com

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Revision History

Version	Date of Issue	Description
V00	Jul. 24, 2026	Original Version

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1. EUT DESCRIPTION

Product:	Sunrise Alarm Clock White Noise Machine
Test Model:	FN20
Additional Model:	FN20S, FN20-A, FN20-B, FN20-C, FN20-D
Rating:	DC 12V
FCC ID:	2BXGZ-FN20
Antenna Type:	PCB Antenna
Antenna Gain:	3.37 dbi
Operation Frequency:	2402-2480MHz
Number of Channels:	79
Modulation Type:	GFSK, π/4-DQPSK, 8DPSK
Adapter Information:	MODEL:J012-1201000UX INPUT:AC 100-240V 50/60Hz 0.6A OUTPUT:DC 12.0V 1.0A 12.0W
Hardware Version:	V1.0
Software Version:	V1.0

Note:
1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2) Antenna gain was provided by the applicant/ manufacturer, and the applicant/ manufacturer is responsible for its validity.
3) The product model is FN20 the same PCB layout, electronic schematic and Antenna with FN20S, FN20-A, FN20-B, FN20-C, FN20-D .Only the models are difference.
4) The test results in the report only apply to the tested sample.

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2. RF EXPOSURE EVALUATION

2.1. Requirement

According to ANSI/IEEE C95.1-1992, the criteria listed in Table as below shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in 1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	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				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

2.2. Calculation method

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S: Power density(mW/cm^2)

P: power input to antenna (Watt)

G: is the antenna gain relative to an isotropic antenna;

R: is the distance from observation point to the antenna

Note:

1) P (Watts)=(10 ^ (dBm /10))/1000

2) G (Antenna gain in numeric) = 10^ (Antenna gain in dBi /10)

3) π=3.142

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2.3. Tune-up Result

Test mode	Maximum Conducted Output Power(dBm)	Tune-up Power(dBm)
Bluetooth	5.636	5±1

2.4. Evaluation Result

Mode	Maximum Tune up Power (dBm)	Maximum Tune up (mW)	Antenna Gain (dBi)	Antenna Gain (linear)	Power density (mW/cm^2)	Power density Limit (mW/cm^2)	Result
Bluetooth	6	3.9811	3.37	2.17	0.0017	1	PASS

2.5. Conclusion

According to 47 CFR 2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.

End of Report

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