



MPE Report

Report No.:STS2512464H01

Issued for

NEXXT SOLUTIONS

3505 N.W 107TH AVE. MIAMI, Florida 33178, United States

Product Name: Xmas string lights

Brand Name: N/A

Model Name: NHB-XL20

Series Model(s): N/A

FCC ID: X4YHABXL20

Test Standard: FCC Part15.247

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the ShenZhen STS Test Services Co., Ltd.

**TEST REPORT****Applicant's Name**.....: NEXXT SOLUTIONS

Address: 3505 N.W 107TH AVE. MIAMI, Florida 33178, United States

Manufacturer's Name.....: Sungale Electronics (Shenzhen) Limited

Address: No. 1302, DaHong High-Tech Park, No. 6-18, Xinhe Road, Xinqiao, BaoAn, Shenzhen 518125, CHINA

Product Description

Product Name.....: Xmas string lights

Brand Name: N/A

Model Name: NHB-XL20

Series Model(s).....: N/A

Test Standards: FCC 47CFR §2.1091

447498 D01 Interim General RF Exposure Guidance v06

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Date of Test

Date of receipt of test item.....: 22 Dec. 2025

Date (s) of performance of tests: 22 Dec. 2025 to 24 Dec. 2025

Date of Issue.....: 24 Dec. 2025

Test Result.....: **Pass**

Testing Engineer :

Stan Deng

(Star Deng)

Technical Manager :

Brave Wu

(Brave Wu)

Authorized Signatory :

Bovey Yang

(Bovey Yang)





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**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	24 Dec. 2025	STS2512464H01	ALL	Initial Issue



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Xmas string lights	
Brand Name	N/A	
Model Name	NHB-XL20	
Series Model(s)	N/A	
Model Difference	N/A	
Product Description	The EUT is a Xmas string lights	
	Operation Frequency:	802.11b/g/n 20: 2412~2462 MHz 802.11n:2422~2452MHz
	Modulation Type:	802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM, 64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM, 64-QAM
	Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6Mbps 802.11n(20MHz): 65/58.5/52/39/26/19.5/13/6.5Mbps 802.11n(40MHz): 135/121.5/108/81/54/40.5/37/13.5Mbps
	Number of Channel:	802.11b/g/n: 11CH 802.11n 40: 7CH
	Antenna Type:	Internal antenna
	Antenna Gain (dBi):	2.21
Power Rating	DC 5V From Adapter	
Adapter	Manufacturer: Zhongshan MLS Electrical Appliance Co.,Ltd. Model: M050100-SB6USU Brand: N/A Input: AC 100-240V 50/60Hz 0.5A Output: 5V---1A 5W	
Battery	N/A	
Hardware Version	N/A	
Software Version	N/A	

1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A



A2LA Certificate No.: 4338.01

2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the 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)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
3.0-30	1842/f	4.89/f	*(900/f ²)
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1.34-30	824/f	2.19/f	*(180f ²)
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

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 the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.



2.3 TEST RESULT

Tune up

Mode	Detector	Tune up Power
2.4G WIFI	PK	14±1dBm

Protocol	Fre. (GHz)	Separati on distance (cm)	Max Tune up power (dBm)	ANT Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Power Density (mW/cm ²)	Limit (mW/ cm ²)	Ratio	Result
2.4G WIFI	2.437	20	15	2.21	17.21	52.60	0.0105	1	0.0105	Pass

Note: 1. The Maximum power is less than the limit, complies with the exemption requirements.

2. ERP = EIRP - 2.15

*****END OF THE REPORT*****