



MPE Report

Report No.: STS2512125H01

Issued for

Shenzhen Shimmeron Technology Co., Ltd

C-601, Building 7, Zone B, Vanke Yuncheng Phase III, Shigu
Road, Xili Community, Shenzhen, China

Product Name: Relaxation Galaxy Projector

Brand Name: N/A

Model Name: PRZM01

Series Model(s): N/A

FCC ID: 2BRBY-PRZM01

Test Standard: FCC 47CFR §2.1091

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: Shenzhen Shimmeron Technology Co., Ltd
Address: C-601, Building 7, Zone B, Vanke Yuncheng Phase III, Shigu Road,
Xili Community, Shenzhen, China
Manufacturer's Name: Shenzhen Shimmeron Technology Co., Ltd
Address: C-601, Building 7, Zone B, Vanke Yuncheng Phase III, Shigu Road,
Xili Community, Shenzhen, China

Product Description

Product Name: Relaxation Galaxy Projector
Brand Name: N/A
Model Name: PRZM01
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: 11 Dec. 2025
Date (s) of performance of tests: 11 Dec. 2025 to 14 Dec. 2025
Date of Issue: 14 Dec. 2025
Test Result: **Pass**

Testing Engineer :

Aaron Bu

(Aaron Bu)

Technical Manager :

Skylar Li

(Skylar Li)

Authorized Signatory :

Bovey Yang

(Bovey Yang)





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**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	14 Dec. 2025	STS2512125H01	ALL	Initial Issue



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Relaxation Galaxy Projector	
Brand Name	N/A	
Model Name	PRZM01	
Series Model(s)	N/A	
Model Difference	N/A	
Product Description	The EUT is Relaxation Galaxy Projector	
	Operation Frequency:	2402 – 2480 MHz
	Modulation Type:	BLE(1Mbps, 2Mbps)
	Antenna Type:	PCB
	Antenna Gain	-4.08dBi (For Module: Antenna Gain is 1.3dBi)
Power Rating	Input: DC 5V	
Adapter	Manufacture: sunshiny Model No.: XSD-0503000NCND Input: 100-240V AC 50/60Hz 0.5A Max Output: DC 5V, 3000mA	
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
GFSK	AV	1±1dBm

Protocol	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
GFSK	20	2	-4.08	-2.08	0.619	0.0001	1	0.0001	Pass

For Module:

Tune up

Mode	Detector	Tune up Power
GFSK	AV	7±1dBm
2.4G WIFI	AV	23±1dBm

Protocol	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
GFSK	20	8	1.3	9.30	8.511	0.0017	1	0.0017	Pass
2.4G WIFI	20	24	1.3	25.30	338.844	0.0674	1	0.0674	Pass

Bluetooth and 2.4G Wi-Fi can transmit simultaneously.

For simultaneous transmission: the ratio= $0.0017/1+0.0674/1=0.0691 \leq 1$

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

2. ERP = EIRP - 2.15

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