



MPE Report

Report No.:STS2603084H04

Issued for

Par Breaker LLC

10817 Renner Blvd, Lenexa, KS 66219, United States

Product Name: Swing Pulse

Brand Name: N/A

Model Name: X10

Series Model(s): N/A

FCC ID: 2BUUX-X10

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**.....: Par Breaker LLC

Address: 10817 Renner Blvd, Lenexa, KS 66219, United States

Manufacturer's Name.....: Muniu Technology (Shanghai) Co., Ltd.Address: Floor 2,Building12,No.14,Lane 258,Yinlong Road, Jiading District,
Shanghai City, 201814,China**Product Description**

Product Name.....: Swing Pulse

Brand Name: N/A

Model Name: X10

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 Mar. 2026

Date (s) of performance of tests: 11 Mar. 2026 ~ 20 Apr. 2026

Date of Issue.....: 20 Apr. 2026

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

Testing Engineer : _____

Aaron Bu

(Aaron Bu)

Technical Manager : _____

Skylar Li

(Skylar Li)

Authorized Signatory : _____

Bovey Yang

(Bovey Yang)





TABLE OF CONTENTS

1. GENERAL INFORMATION	5
1.1 GENERAL DESCRIPTION OF THE EUT	5
1.2 TEST FACTORY	7
2. FCC 47CFR §2.1091 REQUIREMENT	8
2.1 TEST STANDARDS	8
2.2 LIMIT	8
2.3 TEST RESULT	9

**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	20 Apr. 2026	STS2603084H04	ALL	Initial Issue



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Swing Pulse	
Brand Name	N/A	
Model Name	X10	
Series Model(s)	N/A	
Model Difference	N/A	
Product Description	The EUT is Swing Pulse	
	Operation Frequency:	BT / BLE: 2402~2480 MHz 2.4G WLAN: 802.11b/g/n(20MHz): 2412~2462MHz 802.11n(40MHz):2422~2452MHz 5.2G RLAN: 802.11a/n/ac (20MHz): 5180~5240MHz 802.11n /ac(40MHz):5190~5230MHz 802.11ac (80MHz):5210MHz 5.3G RLAN: 802.11a/n/ac (20MHz): 5260~5320MHz 802.11n /ac(40MHz):5270~5310MHz 802.11ac (80MHz):5290MHz 5.6G RLAN: 802.11a/n/ac (20MHz): 5500~5700MHz 802.11n /ac(40MHz):5510~5670MHz 802.11ac (80MHz):5530~5610MHz 5.8G RLAN: 802.11a/n/ac (20MHz): 5745~5825MHz 802.11n /ac (40MHz):5755~5795MHz 802.11ac (80MHz):5775MHz 24G: 24.080~24.168GHz
	Modulation Type:	BT: BT BR(1Mbps): GFSK BT EDR(2Mbps): $\pi/4$ -DQPSK BT EDR(3Mbps): 8DPSK BLE: GFSK 2.4G WLAN: 802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM, 64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM, 64-QAM 5G RLAN: 802.11a(OFDM):BPSK,QPSK,16-QAM, 64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM, 64-QAM 802.11ac(OFDM): BPSK,QPSK,16-QAM,64-QAM,256-QAM 24G: CW



	Antenna gain:	BT / BLE: 1.42dBi 2.4G WLAN: 1.38dBi 5.2G RLAN: 1.15dBi 5.3G RLAN: 0.18dBi 5.6G RLAN: 0.54dBi 5.8G RLAN: -0.96dBi 24G: 11.7dBi
	Antenna Designation:	BT / BLE / 2.4G WLAN / 5G RLAN : Multilayer Chip 24G: Comb antenna array
Power Rating	Input: DC 5V 2A	
Adapter	N/A	
Battery	Model: SL30S Brand: N/A Rated Voltage: 3.6V Charge Limit Voltage: 4.2 V Capacity: 9.5Ah	
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	Power (dBuV/m) @3m	Power (dBm)	Tune up Power
24G	PK	120.43	25.23	25±1dBm

Note: Power(dBm) = dBuV/m@3m -95.2

RF Function	Tune Up Power (dBm)	Tune Up Power (dBm)
BLE	4±1	4.64
BT	5±1	5.46
2.4G WLAN	20±1	20.96
5G RLAN	14±1	14.78

RF Function	Frequency (MHz)	Separation distance (cm)	Max Tune Up Power (dBm)	ANT Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Power Density (mW/cm²)	Limit (mW/cm²)	Ratio	Result
24G	24080	20	26.00	/	26.00	398.107	0.0792	1	0.0792	Pass
BLE	2440	20	5.00	1.42	6.42	4.385	0.0009	1	0.0009	Pass
BT	2480	20	6.00	1.42	7.42	5.521	0.0011	1	0.0011	Pass
2.4G WLAN	2437	20	21.00	1.42	22.42	174.582	0.0347	1	0.0347	Pass
5G RLAN	5240	20	15.00	1.15	16.15	41.21	0.0082	1	0.0082	Pass

Multiple transmission:

$$24G+BT+2.4G\text{ WLAN}+5G\text{ RLAN}=0.0792+0.0011+0.0347+0.0082 < 1$$

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

$$2\text{ ERP} = \text{EIRP} - 2.15$$

※※※※※END OF THE REPORT※※※※※