

RF Exposure Evaluation Report

Report Reference No......: **MTEB22111694-H**

FCC ID.....: **2A9LT-YXHUBZM-1**

Compiled by

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Representative Laboratory Name .: **Shenzhen Most Technology Service Co., Ltd.**

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Applicant's name.....: **Shen Zhen Eyslttime Intelligent LTD.**

Address: 21 Wulian Road, Longxi Street, Longgang District, Shenzhen
Guangdong China

Test specification/ Standard: **47 CFR Part 1.1307**

47 CFR Part 2.1093

TRF Originator.....: Shenzhen Most Technology Service Co., Ltd.

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Test item description: Smart home

Trade Mark: Eyslttime

Model/Type reference.....: YXHUBZM-1

Listed Models: YXZBPIR-1,YXZBD-1,YXZBW-1,YXNETIR-1,YXZBTHP-
1,YXZBRB-58,YXZBRB-24,YXZBRB-79,YXZBZHS-
A,YXZB86S,YXZB86N

Modulation Type: O-QPSK

CCK/DSSS/ OFDM

Operation Frequency.....: From 2405MHz ~ 2480MHz

Rating: DC 5V by USB Port

Hardware version: 1.0

Software version: 1.1.9

Result.....: **PASS**

TEST REPORT

Equipment under Test : Smart home

Model /Type : YXHUBZM-1

Listed Models : YXZBPIR-1,YXZBD-1,YXZBW-1,YXNETIR-1,YXZBTHP-1,YXZBRB-58,YXZBRB-24,YXZBRB-79, YXZBZHS-A,YXZB86S,YXZB86N

Remark : Only the model names are different, and everything else is the same.

Applicant : Shen Zhen Eyslttime Intelligent LTD.

Address : 21 Wulian Road, Longxi Street, Longgang District, Shenzhen Guangdong China

Manufacturer : Shen Zhen Eyslttime Intelligent LTD.

Address : 21 Wulian Road, Longxi Street, Longgang District, Shenzhen Guangdong China

Test Result:	PASS
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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.

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2022.11.30	Initial Issue	Alisa Luo

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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/f ²)	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/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$ 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 center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.1.3 EUT RF Exposure

Measurement Data

Antenna Gain (dBi): 1

O-QPSK

O-QPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2405MHz)	2.784	2.784 ± 1	3.784
Middle(2440MHz)	3.004	3.004 ± 1	4.004
Highest(2480MHz)	3.125	3.125 ± 1	4.125

Worst case: O-QPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum Peak Conducted Output Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Highest(2480MHz)	4.125	2.58	1	0.0006	1.0	Pass

Note: 1) Refer to report **MTEB22111694-R** for EUT test Max Conducted average Output Power value.

Note: 2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (2.58 * 1.25) / (4 * 3.1416 * 20^2) = 0.0006$

Note: 3) EUT's Bluetooth module is more than 20cm away from the human body.

All TX at same time output power:

TX	Maximum Peak Conducted Output Power (MW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
BT Antenna	4.5	1	0.081	1.0	Pass
WIFI Antenna	198.6	1			
Zigbee Antenna	2.58	1			

Note: 1) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (205.68 * 1.99) / (4 * 3.1416 * 20^2) = 0.081$

.....THE END OF REPORT.....