

## 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 Eysltime 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 .....: Eysltime

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

<b>Test Result:</b>	<b>PASS</b>
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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 <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3–3.0 .....	614	1.63	*(100)	6
3.0–30 .....	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300 .....	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3–1.34 .....	614	1.63	*(100)	30
1.34–30 .....	824/f	2.19/f	*(180/f <sup>2</sup> )	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:  $P_d = (P_{out} * G) / (4 * \pi * R^2)$  Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

G = gain of antenna in linear scale

$\pi$  = 3.1416

R = distance between observation point and center of the radiator in cm

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. 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	$2.784 \pm 1$	3.784
Middle(2440MHz)	3.004	$3.004 \pm 1$	4.004
Highest(2480MHz)	3.125	$3.125 \pm 1$	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 <sup>2</sup> )	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)  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2) = (2.58 \cdot 1.25) / (4 \cdot 3.1416 \cdot 20^2) = 0.0006$

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 <sup>2</sup> )	Limit	Result
BT Antenna	4.5	1	0.081	1.0	Pass
WIFI Antenna	198.6	1			
Zigbee Antenna	2.58	1			

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

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