



RF Exposure Evaluation Report

Application No.: DNT2407190168-0322-00236

Applicant: Shenzhen xiaoxiang supply chain technology co., ltd

Address of Applicant: 2801A, West Tower, Xinghe Twin Tower, No. 8, Yaxing Road, Nankeng Community, Bantian Street, Longgang District, Shenzhen, China

EUT Description: XT88PRO ERAZER Wireless Earbud XT88PRO
ERAZER XT88PRO, XT85PRO, XT86PRO, XT90PRO, XT92PRO, XT98PRO,
Model No.: X16PRO, XP1, XP3, XP5, XP6, XP7, XP8, XP9, XP10, XP11, XP12, XP13, XP15,
XP16, XP18, XP19

FCC ID: 2BHJR-XT88PRO

Power supply DC 3.7V From Battery

Charging Voltage: DC 5V

Standards: 47 CFR Part 2.1093
FCC KDB 447498 D04 v01

Trade Mark: ERAZER

Date of Receipt: 2024/7/18

Date of Test: 2024/7/19 to 2024/7/25

Date of Issue: 2024/7/30

Test Result: **PASS**

Prepared By: Wayne Lin (Testing Engineer)

Reviewed By: Pengfei Chen (Project Engineer)

Approved By: Yanmei Chen (Manager)



Dongguan DN Testing Co., Ltd.

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V2.0	/	Jul.30, 2024	Valid	Original Report



Contents

RF EXPOSURE EVALUATION REPORT	1
1 GENERAL INFORMATION	4
1.1 TEST LOCATION	4
1.2 GENERAL DESCRIPTION OF EUT	4
2 RF EXPOSURE EVALUATION	5
2.1 RF EXPOSURE COMPLIANCE REQUIREMENT	5



1 General Information

1.1 Test Location

Company:	Dongguan DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xinfu Road, Wusha Liwu, Chang 'an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

1.2 General Description of EUT

Manufacturer:	Dingju Innovation (Beijing) Technology Co., Ltd
Address of Manufacturer:	Yongan Road, Shilong Economic Development Zone, Mentougou District, Beijing, Room A-T0508, Building 3, No. 20
EUT Description:	XT88PRO ERAZER Wireless Earbud XT88PRO
Test Model No.:	ERAZER XT88PRO
Additional Model(s):	XT85PRO,XT86PRO,XT90PRO,XT92PRO,XT98PRO,X16PRO,XP1,XP3,XP5,XP6,XP7,XP8,XP9,XP10,XP11,XP12,XP13,XP15,XP16,XP18,XP19
Chip Type:	AD6973D
Serial number:	PR2407190168-0322
Power Supply:	DC 3.7V From Battery
Charging Voltage:	DC 5V
Trade Mark:	ERAZER
Hardware Version:	V1.0
Software Version:	V1.0
Sample Type:	☒ Portable Device, ☐ Module, ☐ Mobile Device
Antenna Type:	☐ External, ☒ Integrated
Antenna Gain:	☒ Provided by applicant
	1.7dBi

Remark:

*Since the above data and/or information is provided by the applicant relevant results or conclusions of this report are only made for these data and/or information , DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.



2 RF Exposure Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Limits

Human exposure to RF emissions from portable devices (47 CFR §2.1093), as defined by the FCC, must be evaluated with respect to the FCC-adopted limits for SAR. Evaluation of mobile devices, as defined by the FCC, may also be performed with respect to SAR limits, but in such cases it is usually simpler and more cost-effective to evaluate compliance with respect to field strength or power density limits. For certain devices that are designed to be used in both mobile and portable configurations similar to those described in 47 CFR §2.1091(d)(4), such as certain desktop phones and wireless modem modules, compliance for mobile configurations is also satisfied when the same device is evaluated for SAR compliance in portable configurations.

Refer to 47 CFR §2.1093:

A portable device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that the RF source's radiating structure(s) is/are within 20 centimeters of the body of the user.

Evaluation of compliance with the exposure limits in § 1.1310 of this chapter, and preparation of an EA if the limits are exceeded, is necessary for portable devices having single RF sources with more than an available maximum time-averaged power of 1 mW, more than the ERP listed in Table 1 to § 1.1307(b)(3)(i)(C), or more than the P_{th} in the following formula, whichever is greater. The following formula shall only be used in conjunction with portable devices not exempt by § 1.1307(b)(3)(i)(C) at distances from 0.5 centimeters to 20 centimeters and frequencies from 0.3 GHz to 6 GHz.



$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}}(d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B.2})$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
	5	10	15	20	25	30	35	40	45	50	
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 300 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.



2.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually

2.1.3 EUT RF Exposure Evaluation

Mode	Fre (MHz)	Peak Conducted output Power (dBm)	Target power (dBm)	Antenna Gain (dBi)	Max. E.R.P (dBm)	Max. Target power (mW)	SAR Test Exemption Limit (mW)
GFSK	2402	-10.55	-10±1	1.7	-9.45	0.114	3
	2441	-9.89	-9±1	1.7	-8.45	0.143	3
	2480	-10.14	-10±1	1.7	-9.45	0.114	3
π/4-DQPSK	2402	-10.08	-10±1	1.7	-9.45	0.114	3
	2441	-9.47	-9±1	1.7	-8.45	0.143	3
	2480	-9.78	-9±1	1.7	-8.45	0.143	3

Note:

1. E.R.P=Conducted output Power+Antenna Gain -2.15.
2. SAR Test Exclusion Thresholds is 3mW for separation distance 5mm. Therefore, SAR test is not required.

The End Report