



RF EXPOSURE EVALUATION REPORT

APPLICANT : Xiamen Padmate Technology Co.,LTD

PRODUCT NAME : Bluetooth Headset

MODEL NAME : X16

BRAND NAME : Padmate

FCC ID : 2AJEO-X16

STANDARD(S) : KDB 447498 D01v06
47 CFR§2.1093

TEST DATE : 2018-12-19

ISSUE DATE : 2018-12-20

Prepared by: *Lion Xiao*
Lion Xiao(Project engineer)

Approved by: *Anne Liu*
Anne Liu(Supervisor)

NOTE: 1.The report is invalid when there is no the approver signature and the special stamp for test report. 2.The test report shall not be reproduced except in full without prior written permission of the company. 3.The report copy is invalid when there is no the special stamp for test repor. 4.The altered report is invalid. 5.The entrust test is responsibility for the received sample only.



DIRECTORY

- 1. Technical Information..... 3
- 1.1. Applicant and manufacturer information 3
- 1.2. Equipment under test (EUT) description 3
- 1.3. Applied reference documents..... 3
- 2. Device category and RF exposure limit..... 4
- 3. Measurement of conducted output power 5
- 4. RF exposure evaluation 5
- Annex A General Information 6

Change History		
Issue	Date	Reason for change
1.0	2018-12-19	First edition



1. Technical Information

Note: Provide by manufacturer.

1.1. Applicant and manufacturer information

Applicant:	Xiamen Padmate Technology Co.,LTD
Applicant Address:	RM 201, Huli Park No.37, Industrial Zone, Tong'an District, Xiamen, China
Manufacturer:	Xiamen Padmate Technology Co.,LTD
Manufacturer Address:	RM 201, Huli Park No.37, Industrial Zone, Tong'an District, Xiamen, China

1.2. Equipment under test (EUT) description

EUT Type:	Bluetooth Headset
Hardware Version:	V1.3
Software Version:	V21
Frequency Bands:	Bluetooth : 2402-2480MHz;
Modulation Mode:	Bluetooth: FHSS GFSK(1Mbps), $\pi/4$ -DQPSK(EDR 2Mbps), 8-DPSK(EDR 3Mbps)
Antenna type:	Ceramic Antenna

1.3. Applied reference documents

Leading reference documents for testing:

No.	Identity	Document Title
1	47 CFR§2.1093	Radiofrequency Radiation Exposure Evaluation: portable devices
2	KDB 447498 D01v06	General RF Exposure Guidance



2. Device category and RF exposure limit

Per user manual, this device is a Bluetooth Headset. Based on 47CFR 2.1093, this device belongs to portable device category with General Population/Uncontrolled exposure.

Portable Devices:

47CFR 2.1093(b)

For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

GENERAL POPULATION / UNCONTROLLED EXPOSURE

47CFR 2.1093(d) (2)

Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.

3. Measurement of conducted peak output power

Bluetooth peak output power

Band	Channel	Measured Output Peak Power (dBm)		
		GFSK	$\pi/4$ -DQPSK	8-DPSK
BT 2.1+EDR	0	1.33	3.57	3.77
	39	2.24	4.40	4.61
	78	3.40	5.49	5.71
Maximum tune-up limit power: 6.0dBm				

4. RF exposure evaluation

The device only incorporates a Bluetooth transmitter, so standalone SAR evaluation is required for Bluetooth and simultaneous SAR is not required.

Standalone transmission SAR evaluation

According to KDB 447498 section 4.3.1, the 1-g SAR test exclusion thresholds at test separation Distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$

The maximum tune-up limit power is **6.0dBm (3.98mW) @ 2.480GHz**

When Bluetooth Headset is used on the head, so use **5mm** as the most conservative minimum test separation distance,

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] = 1.25 \leq 3.0$

So SAR evaluation is not required for this device.



Annex A General Information

1. Identification of the Responsible Testing Laboratory

Company Name:	Kehu-Morlab Test Laboratory
Address:	Unit 101, No.1732 Gangzhong Road, Xiamen Area, Pilot Free Trade Zone (Fujian), P. R. China
Responsible Test Lab Manager:	Mr. Di Dehai
Telephone:	+86-592-5612050
Facsimile:	+86-592-5612095

2. Identification of the Responsible Testing Location

Name:	Kehu-Morlab Test Laboratory
Address:	Unit 101, No.1732 Gangzhong Road, Xiamen Area, Pilot Free Trade Zone (Fujian), P. R. China

————— END OF REPORT —————