



# RF Exposure Evaluation

## FCC ID: 2BBW8-IKFT1

### 1. Client Information

<b>Applicant</b>	:	Dongguan Oumu Technology Co., Ltd.
<b>Address</b>	:	Room 318, Building 4, No. 86, Hongtu Road, Nancheng Street, Dongguan City, Guangdong Province, China
<b>Manufacturer</b>	:	Dongguan Oumu Technology Co., Ltd.
<b>Address</b>	:	Room 318, Building 4, No. 86, Hongtu Road, Nancheng Street, Dongguan City, Guangdong Province, China

### 2. General Description of EUT

<b>EUT Name</b>	:	Wireless Headphone
<b>Model(s) No.</b>	:	iKF T1, iKF T1 Pro
<b>Model Different</b>	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is appearance.
<b>Sample ID</b>	:	202306-0300-1-1# & 202306-0300-1-2#
<b>Product Description</b>	:	Operation Frequency: Bluetooth V5.3(BDR+EDR): 2402MHz~2480MHz Bluetooth 5.3(BLE): 2402MHz~2480MHz
	:	Number of Channel: Bluetooth V5.3: 79 channels Bluetooth 5.3(BLE): 40 channels
	:	Antenna Gain: 1.9dBi PCB Antenna
<b>Power Supply</b>	:	Input: DC 5V
<b>Li-ion Polymer Battery</b>	:	DC 3.7V by 400mAh Rechargeable Li-ion battery
<b>Software Version</b>	:	V134
<b>Hardware Version</b>	:	V1.2
<b>Remark:</b> The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.		

**Note:** More test information about the EUT please refer the RF Test Report.



## The RF Exposure Evaluation for FCC:

### SAR Test Exclusion Calculations

FCC: According to 447498 D04 Interim General RF Exposure Guidance v01.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold  $P_{th}$  (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive).  $P_{th}$  is given by Formula (B.2).

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

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





**Calculation:**

Test separation: 5mm					
Bluetooth Mode (GFSK)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mW)	Limit P <sub>th</sub> (mW)
2.402	3.026	3±1	4	2.512	3
2.441	2.937	2±1	3	1.995	3
2.480	2.532	2±1	3	1.995	3
Bluetooth Mode (π/4-DQPSK)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Limit P <sub>th</sub> (mW)
2.402	3.920	3±1	4	2.512	3
2.441	3.744	3±1	4	2.512	3
2.480	3.337	3±1	4	2.512	3
Bluetooth Mode (8-DPSK)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Limit P <sub>th</sub> (mW)
2.402	4.377	3.5±1	4.5	2.818	3
2.441	4.288	3.5±1	4.5	2.818	3
2.480	3.869	3±1	4	2.512	3
BLE (1Mbps)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Limit P <sub>th</sub> (mW)
2.402	2.721	2±1	3	1.995	3
2.440	2.516	2±1	3	1.995	3
2.480	2.071	2±1	3	1.995	3
BLE (2Mbps)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Limit P <sub>th</sub> (mW)
2.402	2.949	2±1	3	1.995	3
2.440	2.813	2±1	3	1.995	3
2.480	2.38	2±1	3	1.995	3

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 D04, No SAR is required.

-----END OF THE REPORT-----

