

# RF Exposure Evaluation

## FCC ID: 2BBW8-IKF-R2

### 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 Headphones
<b>Model(s) No.</b>	:	iKF R2, iKF R2 Pro, iKF R2 +, iKF R2 Plus
<b>Model Difference</b>	:	All PCB boards and circuit diagrams are the same, the only difference is that appearance.
<b>Product Description</b>	:	Operation Frequency: Bluetooth V5.3: 2402MHz~2480MHz Bluetooth 5.3(BLE): 2402MHz~2480MHz
	:	Number of Channel: Bluetooth 5.3: 79 channels Bluetooth 5.3(BLE):40 channels
	:	Antenna Gain: 0.88dBi PCB Antenna
	:	Modulation Type: GFSK, Pi/4-DQPSK, 8-DPSK Bluetooth LE:1Mbps&2Mbps
	:	Bit Rate of Transmitter: 1/2/3Mbps
<b>Power Supply</b>	:	Input: DC 5V
<b>Li-ion Polymer Battery</b>	:	3.7V by 400mAh Rechargeable Li-ion battery
<b>Software Version</b>	:	V1
<b>Hardware Version</b>	:	V1.1

**Remark:** 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.

## SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

(1) Clause 4.3: General SAR test reduction and exclusion guidance

Sub clause 4.31: Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance  $\leq 5$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation, mm})] * [\sqrt{f(\text{GHz})}] \leq 7.5.0$  for 10-g SAR

**2. 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)	Calculation Value	Threshold Value
2.402	2.121	2±1	3	1.995	0.618	3.0
2.441	2.1	2±1	3	1.995	0.623	3.0
2.480	2.14	2±1	3	1.995	0.628	3.0
Bluetooth Mode (Pi/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)	Calculation Value	Threshold Value
2.402	2.969	3±1	4	2.512	0.779	3.0
2.441	2.914	3±1	4	2.512	0.785	3.0
2.480	2.927	3±1	4	2.512	0.791	3.0
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)	Calculation Value	Threshold Value
2.402	3.631	4±1	5	3.162	0.980	3.0
2.441	3.569	4±1	5	3.162	0.988	3.0
2.480	3.579	4±1	5	3.162	0.996	3.0
Bluetooth LE Mode(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)	Calculation Value	Threshold Value
2.402	2.078	2±1	3	1.995	0.618	3.0
2.440	2.039	2±1	3	1.995	0.623	3.0
2.480	2.145	2±1	3	1.995	0.628	3.0
Bluetooth LE Mode(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)	Calculation Value	Threshold Value
2.402	2.389	2±1	3	1.995	0.618	3.0
2.440	2.316	2±1	3	1.995	0.623	3.0
2.480	2.346	2±1	3	1.995	0.628	3.0

**Conclusion:**

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 v06.

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