

FCC RF EXPOSURE REPORT

FCC ID: RWO-RZ040322

Project No. : 2004C118
Equipment : Gaming Headset
Brand Name : RAZER
Test Model : RZ04-0322
Series Model : RZ04-0322XXXX-XXXX (X can be 0~9, A~Z)
Applicant : Razer Inc.
Address : 9 Pasteur, Suite 100, Irvine, CA92618, USA.
Manufacturer : Razer (Asia-Pacific) Pte.,Ltd.
Address : 514 Chai Chee Lane, #07-01-06,Singapore 469029
Factory : RAZER TECHNOLOGY AND DEVELOPMENT (SHENZHEN) CO., LTD
Address : East Wing, 3rd Floor, Block 2, Phase 1 of Vision Shenzhen Business Park Keji South Road, Hi-Tech Industrial Park, Shenzhen 518057, China
Date of Receipt : Apr. 17, 2020
Date of Test : Apr. 17, 2020 ~ Jun. 22, 2020
Issued Date : Jul. 13, 2020
Report Version : R00
Test Sample : Sample No.: DG20200420196 for conducted, DG2020042222 for radiated.
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & KDB447498 D01

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.



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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Jul. 13, 2020

1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF EUT

Equipment	Gaming Headset	
Brand Name	RAZER	
Test Model	RZ04-0322	
Series Model	RZ04-0322XXXX-XXXX (X can be 0~9, A~Z)	
Model Difference(s)	It is the same as the basic model and X is used to define which country it is for under the same family series.	
Power Source	1# Supplied from PC USB port. 2# Supplied from battery. Model: PL503450	
Power Rating	1# DC 5V 2# DC 3.7V 1200mAh 4.44Wh	
Product Description	Operation Frequency	2403.35 MHz ~ 2477.35 MHz
	Modulation Technology	$\pi/4$ -DQPSK
	Bit Rate of Transmitter	2 Mbps
	Max. Output Power	3.67 dBm (0.0023 W)

Note:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2403.35	20	2441.35
02	2405.35	21	2443.35
03	2407.35	22	2445.35
04	2409.35	23	2447.35
05	2411.35	24	2449.35
06	2413.35	25	2451.35
07	2415.35	26	2453.35
08	2417.35	27	2455.35
09	2419.35	28	2457.35
10	2421.35	29	2459.35
11	2423.35	30	2461.35
12	2425.35	31	2463.35
13	2427.35	32	2465.35
14	2429.35	33	2467.35
15	2431.35	34	2469.35
16	2433.35	35	2471.35
17	2435.35	36	2473.35
18	2437.35	37	2475.35
19	2439.35	38	2477.35

3. Table for Filed Antenna:

Ant.	Manufacturer	Model	Antenna Type	Connector	Gain (dBi)
1	Shenzhen Horn Audio Co., Ltd.	N/A	PIFA	N/A	3.90
2	Shenzhen Horn Audio Co., Ltd.	N/A	PIFA	N/A	2.11

Note:

- (1) Smart antenna systems with two transmit/receive chains, but operating in a mode where only one transmit/receive chain is used.
- (2) Both Ant.1 and Ant.2 had been tested, but the data of Ant.1 were the worst case, so only data of Ant.1 had been recorded in this test report.

2. GENERAL CONCLUSION

According to FCC KDB447498 D01, Appendix A, SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

 ≤ 3.0 for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Appendix A - SAR Test Exclusion Thresholds for 100 MHz - 6 GHz and ≤ 50 mm											
MHz	5	10	15	20	25	30	35	40	45	50	mm
150	39	77	116	155	194	232	271	310	349	387	SAR Test Exclusion Thresholds (mW)
300	27	55	82	110	137	164	192	219	246	274	
450	22	45	67	89	112	134	157	179	201	224	
835	16	33	49	66	82	98	115	131	148	164	
900	16	32	47	63	79	95	111	126	142	158	
1500	12	24	37	49	61	73	86	98	110	122	
1900	11	22	33	44	54	65	76	87	98	109	
2450	10	19	29	38	48	57	67	77	86	96	
3600	8	16	24	32	40	47	55	63	71	79	
5200	7	13	20	26	33	39	46	53	59	66	
5400	6	13	19	26	32	39	45	52	58	65	
5800	6	12	19	25	31	37	44	50	56	62	

3. TEST RESULTS

Max. Output Power (dBm)	Max. Output Power (mW)	Limit (mW)
4.17	2.61	10

Note:

- (1) Output power including tune up tolerance(tune up tolerance: $\pm 0.5\text{dBm}$).
 - (2) The maximum measured output peak power of this EUT is 5.85 mW, less than 10mW at 5mm distance.
- Conclusion: No SAR evaluation required since transmitter power is below FCC threshold.

End of Test Report