

FCC SAR Exclusion Report


FCC ID: RWO-RZ0605010L

Report No. : BTL-FCCP-1-2304C094
Equipment : VR Controller
Model Name : RZ06-05010L, RZ06-05010LXX-XXXX (X can be 0-9 or A-Z)
Brand Name : RAZER
Applicant : Razer Inc.
Address : 9 Pasteur, Suite 100, Irvine, CA92618, USA
Manufacturer : Razer (Asia-Pacific) Pte., Ltd.
Address : 1 one-north Crescent, #02-01 Singapore 138538

FCC Rule Part(s) : 47 CFR § 2.1093
FCC Guidelines for Human Exposure IEEE C95.1

Date of Receipt : N/A
Date of Evaluation : 2023/7/6
Issued Date : 2023/11/22

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

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**BTL Inc.**

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REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-1-2304C094	R00	Original Report.	2023/7/12	Valid
BTL-FCCP-1-2304C094	R01	Revise TCB's command	2023/11/22	Valid

1. EVALUATION FACILITY

The test locations stated below are under the TAF Accreditation Number 0659.
 The test location(s) used to collect the test data in this report are:
 No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
 (FCC DN: TW0659)
 SAR01

2. GENERAL CONCLUSION

According to KDB 447498 D04 Interim General RF Exposure Guidance v01

A more comprehensive exemption, considering a variable power threshold that depends on both the separation distance and power, is provided in § 1.1307(b)(3)(i)(B). This exemption is applicable to the frequency range between 300 MHz and 6 GHz, with test separation distances between 0.5 cm and 40 cm, and for all RF sources in fixed, mobile, and portable device exposure conditions. Accordingly, a RF source is considered an RF exempt device if its available maximum time-averaged (matched conducted) power or its effective radiated power (ERP), whichever is greater, are below a specified threshold.

§ 1.1307(b)(3)(i)(B):

Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

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

Where

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

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

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	

Note: If RF exposure testing requirements for a specific device are covered in a KDB publication, those requirements must be satisfied before applying any SAR test exemption provisions. For example, this is the case for handheld PTT two-way radios, handsets, laptops, and tablets, etc.9 Finally, when 10-g extremity SAR applies, SAR test exemption may be considered by applying a factor of 2.5 to the SAR-based exemption thresholds.

3. TABLE FOR FILED ANTENNA

Ant.	Manufacturer	Part No.	Antenna Type	Connector	Gain (dBi)
1	INPAQ	VR Controller (L)	PIFA	N/A	2.62

Note: The above Antenna information are derived from the antenna data sheet provided by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

4. MAXIMUM RF OUTPUT POWER

Mode	Maximum Average Output Power (dBm)	Tolerance (dB)	Maximum Tune-up Power (dBm)
SRD	4.51	+/- 0.5	5.01

Note: The values are adopted from test report: 2306TWE903-U1.

5. CALCULATED RESULT

Frequency (GHz)	Max Tune-up power (dBm)	Max Tune-up power (mW)	distance (mm)	Result	Limit
2.480	5.01	3.17	5.0	1.00	7.5mW (Note)

Note: This equipment is handheld device.

According to KDB 447498 D04 Interim General RF Exposure Guidance v01
When 10-g extremity SAR applies, SAR test exemption may be considered by applying a factor of 2.5 to the SAR-based exemption thresholds.

Therefore, standalone SAR measurements are not required for both head and body.

End of Test Report