



Maximum Permissible Exposure Evaluation

FCC ID: XGB-250508WH

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b).

EUT Specification

Product Name:	VelocityOne Race KD3 Rim
Trade Mark:	TURTLE BEACH
Model/Type Reference:	VelocityOne Race KD3 Rim
Listed Model(s):	/
Model Differences:	/
Frequency Band (Operating)	2.4G Transmitter: 2402MHz ~ 2480MHz
Device Category	<input type="checkbox"/> Portable (<5mm separation) <input type="checkbox"/> Mobile (>20cm separation) <input checked="" type="checkbox"/> Fixed (<5mm separation) <input type="checkbox"/> Others ____
Exposure Classification	<input type="checkbox"/> Occupational/Controlled exposure ($S=5\text{mW}/\text{cm}^2$) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure ($S=1\text{mW}/\text{cm}^2$)
Antenna Diversity	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
Antenna Gain (Max)	2.4G Transmitter: 1.26dBi
Evaluation Applied	<input type="checkbox"/> MPE Evaluation <input checked="" type="checkbox"/> SAR Evaluation

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**Limits**

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR, and ≤ 7.5 for 10-g extremity SAR

Where:

-f(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

-The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

Calculation Method

$$\text{eirp} = \text{pt} \times \text{gt} = (\text{E} \times \text{d})^2 / 30$$

where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m, --- $10^{((\text{dBuV/m})/20)/10^6}$

d = measurement distance in meters (m), --- 3m

$$\text{So pt} = (\text{E} \times \text{d})^2 / (30 \times \text{gt})$$

Measurement Result

2.4G Transmitter 2402MHz Field strength = 82.87 dBuV/m @3m

Ant gain = 1.26dBi, Ant numeric gain = 1.34

$$\text{So pt} = \{[10^{(82.87/20)/10^6} \times 3]^2 / (30 \times 1.34)\} \times 1000 \text{ mW} = 0.04 \text{ mW} = -13.62 \text{ dBm}$$

Mode	Frequency (MHz)	Max. Measured Power (dBm)	Result	Limit	Verdict
2.4G Transmitter	2402	-13.62	0.08	3	Pass

Note:

1. Calculate in the worst-case mode.

2. For a more detailed features description, please refer to the RF Test Report.

*****THE END*****