

RF Exposure Evaluation Report

Product : Ion Pro RT
Trade mark : BONTRAGER
Model/Type reference : 552373
Serial Number : N/A
Report Number : EED32K00141202
FCC ID : 2AHXD-552373
Date of Issue : Jul. 26, 2018
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1093
KDB 447498 D01 General RF Exposure Guidance v06
Test result : PASS

Prepared for:

Trek Bicycle Corporation
801 West Madison Street, Waterloo WI 53594

Prepared by:

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2 Version

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4 General Information

4.1 Client Information

Applicant:	Trek Bicycle Corporation
Address of Applicant:	801 West Madison Street, Waterloo WI 53594
Manufacturer:	Trek Bicycle Corporation
Address of Manufacturer:	801 West Madison Street, Waterloo WI 53594
Factory:	EISO ENTERPRISE CO., LTD.
Address of Factory:	NO.2, JHONGHUA LANE, SHANYING RD., GUEISHAN DIST., TAOYUAN CITY 333, TAIWAN

4.2 General Description of EUT

Product Name:	Ion Pro RT
Model No.(EUT):	552373
Trade mark:	BONTRAGER
EUT Supports Radios application:	BT 4.0 single mode, 2402-2480MHz
Modulation Type:	GFSK
Antenna Type:	Integral Antenna
Antenna Gain:	-1.52dBi
Power Supply:	DC 3.6V, 4800mAh
Test Voltage:	DC 3.6V, 4800mAh
Test Power Grade:	N/A(manufacturer declare)
Test Software of EUT:	nRFgo Studio.exe(manufacturer declare)
USB cable:	22cm (unshielded)
Conducted Peak Output Power:	-1.893dBm The Conducted Peak Output Power data refer to the report EED32K00141201
Sample Received Date:	Jun. 06, 2018
Sample tested Date:	Jun. 06, 2018 to Jul. 26, 2018
The tested samples and the sample information are provided by the client.	

4.3 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 3368 3668 Fax: +86 (0) 755 3368 3385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.4 Deviation from Standards

None.

4.5 Abnormalities from Standard Conditions

None.

4.6 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v05
Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

5.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion

5.1.3 EUT RF Exposure

The Max Conducted Peak Output Power is -1.893dBm in highest channel(2.402GHz);

The best case gain of the antenna is -1.52dBi.

$\text{EIRP} = -1.893\text{dBm} + (-1.52\text{dBi}) = -3.413\text{dBm}$

-3.413dBm logarithmic terms convert to numeric result is nearly 0.46mW

According to the formula. calculate the EIRP test result:

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

General RF Exposure = $(0.46\text{mW} / 5 \text{ mm}) \times \sqrt{2.402\text{GHz}} = 0.14$ ①

SAR requirement:

S= 3.0

② ;

① < ②.

So the SAR report is not required.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32K00141201 for EUT external and internal photos.

*** End of Report ***

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