



SAR Evaluation Report

Application No.: SZCR2104020551ME
Applicant: NormaTec Industries LP
Address of Applicant: 480 Pleasant St. Ste A200, Watertown, Massachusetts, 02472 United States
Manufacturer: NormaTec Industries LP
Address of Manufacturer: 480 Pleasant St. Ste A200, Watertown, Massachusetts, 02472 United States
Factory: Ryder Electronics (Xinfeng) Ltd.
Address of Factory: East Shuidong Avenue, Industrial Park, Xinfeng Town, Ganzhou City, Jiangxi Province, P.R. China 341600

Equipment Under Test (EUT):
EUT Name: Normatec 3
Model No.: REJ6
Trade mark: Normatec, Hyperice
FCC ID: 2AY3Y-NT3
Standards: 47 CFR Part 1.1307
 47 CFR Part 2.1093
 KDB447498D01 General RF Exposure Guidance v06

Date of Receipt: 2021-04-15
Date of Test: 2021-04-16 to 2021-04-29
Date of Issue: 2021-05-06

Test Result :	Pass*
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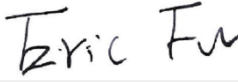
* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu
 EMC Laboratory Manager



2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2021-05-06		Original

Authorized for issue by:			
			
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		Damon Su/Project Engineer	
			
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		Eric Fu/Reviewer	



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4 General Information

4.1 General Description of EUT

Power supply:	DC 7.4V or DC 7.2V by lithium-ion battery, and recharged by DC 15V 1.6A. Adapter Model: PEAMW24I-13-BNL24 Input: AC 100-240V, 50/60Hz Output: 15V 1.6A
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.0 LE
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Data Rate:	1Mbps and 2Mbps
Antenna Type:	PIFA Antenna
Antenna Gain:	1.3dBi

Remark: The EUT with 2 different batteries, all the batteries have been tested, only record the worst case(battery1#) in the report.

Battery1# Model: BPI 18650 2S1P	
Battery capacity:	7.4V, 3200mAh
Manufacturer:	SHENZHEN BETTERPOWER BATTERY CO LTD
Battery2# Model: HV-Gen5	
Battery capacity:	7.2V, 3100mAh
Manufacturer:	Fujian SCUD Power Technology Co., Ltd.



4.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China
518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

4.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.4 Deviation from Standards

None.

4.5 Abnormalities from Standard Conditions

None.

4.6 Other Information Requested by the Customer

None.



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5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. 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:

$$\left[\frac{\text{(max. power of channel, including tune-up tolerance, mW)}}{\text{(min. test separation distance, mm)}} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0$$
 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 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 Exemption Limit calculate at separation distance of ≤ 5 mm.

The Max. power (including tune-up tolerance and the manual) is ≤ 4 dBm on the highest channel 2.48 GHz (*)
 4.00 dBm logarithmic terms convert to numeric result is nearly 2.51 mW

According to the formula. calculate the test exclusion thresholds:

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

$$\text{General RF Exposure} = (2.51 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.48 \text{ GHz}} = 0.79 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) $<$ (2)

So the SAR report is not required.

(*) Max. power refer to Report No.:SZCR210402055102

- End of the Report -



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