

RF Exposure Report

Report No.: SA160217E17

FCC ID: UZ7RS6000

Test Model: RS6000

Received Date: Feb. 17, 2016

Test Date: Mar. 09, 2016

Issued Date: Apr. 01, 2016

Applicant: Zebra Technologies Corporation

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Manufacturer: Zebra Technologies Corporation

Address: 1 Zebra Plaza, Holtsville, NY 11742

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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Table of Contents

Release Control Record.....	3
1 Certificate of Conformity.....	4
2 Evaluation Result.....	5
3 Antenna Gain.....	5
4 SAR Test Exclusion Thresholds.....	6
5 Conclusion	6



A D T

Release Control Record

Issue No.	Description	Date Issued
SA160217E17	Original release.	Apr. 01, 2016

1 Certificate of Conformity

Product: Ring Scanner

Brand: Zebra

Test Model: RS6000

Sample Status: ENGINEERING SAMPLE

Applicant: Zebra Technologies Corporation

Test Date: Mar. 09, 2016

Standards: FCC Part 2 (Section 2.1093)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-2005

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :



Date:

Apr. 01, 2016

Midoli Peng / Specialist

Approved by :



Date:

Apr. 01, 2016

May Chen / Manager

2 Evaluation Result

Following FCC KDB 447498 D01 "General SAR test exclusion guidance"

The corresponding SAR Exclusion Threshold condition, listed below:

- 1) 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:

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

$$\leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
 - $f(\text{GHz})$ 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. 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.
- 2) At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following:
 - a) [Threshold at 50 mm in step 1) + (test separation distance - 50mm) \cdot (f(MHz)/150)] mW, at 100MHz to 1500 MHz
 - b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) \cdot 10] mW at > 1500 MHz and ≤ 6 GHz
- 3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.
 - a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by $[1 + \log(100/f(\text{MHz}))]$ for test separation distances > 50 mm and < 200 mm.
 - b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$ for test separation distances ≤ 50 mm.
 - c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

3 Antenna Gain

The antennas provided to the EUT, please refer to the following table:

Antenna Type	Antenna Connector	Antenna Gain (dBi)	Frequency (GHz to GHz)
PIFA	NA	-0.15	2.4~2.4835

4 SAR Test Exclusion Thresholds

Power table for Bluetooth

Mode	Data Rate	Channel	Frequency (MHz)	Avg (dBm)	Peak (dBm)
BT-EDR GFSK	DH5	0	2402	8.30	9.06
		39	2441	8.14	8.97
		78	2480	8.25	8.96
BT-EDR 8DPSK	3DH5	0	2402	7.94	12.03
		39	2441	7.79	11.90
		78	2480	7.89	11.87
BT-LE GFSK	1Mbps	0	2402	9.32	9.36
		19	2440	9.44	9.67
		39	2480	9.30	9.49

Maximum power for Bluetooth

Mode	Frequency (MHz)	Peak Conducted power (dBm)	Average Conducted power (dBm)	Average Conducted power (mW)
BT-EDR	2402	9.06	8.3	6.761
BT-LE	2440	9.67	9.44	8.79

SAR Test Exclusion Thresholds

Mode	Frequency (MHz)	Average EIRP power (mW)	Min. test separation distance (mm)	SAR test exclusion calculation value ^(NOTE 2)	10-g extremity SAR test exclusion thresholds	Result
BT-EDR	2402	6.761	5	2.09569189	7.5	Pass
BT-LE	2440	8.79	5	2.74608379	7.5	Pass

NOTE: 1. The antenna type is PIFA antenna with -0.15dBi gain.
2. Calculate SAR test exclusion thresholds from condition "1" formulas.

5 Conclusion

Since Source-base time average power is below SAR test exclusion power thresholds, the SAR evaluation is not required.

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