RF Exposure Evaluation Report

APPLICANT: Zebra Technologies Corporation

EQUIPMENT: Cordless 1D/2D Handheld Imager

BRAND NAME: Zebra

MODEL NAME : DS2278

FCC ID : UZ7DS2278

STANDARD : 47 CFR Part 2.1093

FCC KDB 447498 D01 v06

We, SPORTON INTERNATIONAL INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1093 and pass the limit. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Eric Huang / Manager

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Jones/sur

Approved by: Jones Tsai / Manager





Report No. : FA720928

SPORTON INTERNATIONAL INC.

No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.)

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: UZ7DS2278 Page Number : 1 of 5
Report Issued Date : Apr. 24, 2017

Report Version : Rev. 01

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA720928	Rev. 01	Initial issue of report	Apr. 24, 2017

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1. Administration Data

Testing Laboratory				
Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978			

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Applicant			
Company Name Zebra Technologies Corporation			
Address 1 Zebra Plaza, Holtsville, NY 11742-1300, USA			

Manufacturer				
Company Name Zebra Technologies Corporation				
Address 1 Zebra Plaza, Holtsville, NY 11742-1300, USA				

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2. General Information

2.1 Description of Device Under Test (DUT)

Product Feature & Specification				
EUT Type	ordless 1D/2D Handheld Imager			
Brand Name	Zebra			
Model Name	DS2278			
FCC ID	UZ7DS2278			
Wireless Technology and Frequency Range	Bluetooth: 2402 MHz ~ 2480 MHz			
Mode	Bluetooth BR/EDR/LE			
Antenna Gain	2.96dBi			
HW Version	A			
SW Version	REV A			
MFD	15FEB17			
EUT Stage	Identical Prototype			

Remark: The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

3. Maximum RF output power among production units

Mode	Channel	Frequency (MHz)	Average power (dBm)		
			1Mbps	2Mbps	3Mbps
	CH 00	2402	0.36	0.26	0.18
BR / EDR	CH 39	2441	-0.96	-0.83	-0.85
	CH 78	2480	-1.18	-1.06	-1.07
Tune-up Limit			0.5	0.5	0.5

Mode	Channel	Frequency (MHz)	Average power (dBm)	
ivioue			GFSK	
	CH 00	2402	0.1	
LE	CH 19	2440	-0.95	
	CH 39	2480	-1.18	
Tune-up Limit			0.5	

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4. RF Exposure Evaluation

Bluetooth	mW	Separation	Frequency	Exclusion
Max Power (dBm)		Distance (mm)	(GHz)	Thresholds
0.5	1.00	5	2.48	0.31

Note:

1. Per KDB 447498 D01v06 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:

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

- 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

Conclusion: Per KDB 447498 D01v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 0.31 which is <= 3, SAR testing is not required.

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