RF EXPOSURE EVALUATION REPORT

FCC ID	:	UZ7FX9600
Equipment	:	RFID READER
Brand Name	:	ZEBRA
Model Name	:	FX9600
Applicant	:	Zebra Technologies Corporation 1 Zebra Plaza, Holtsville, NY 11742
Manufacturer	:	Zebra Technologies Corporation 1 Zebra Plaza, Holtsville, NY 11742
Standard	:	47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full

Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA442926	Rev. 01	Initial issue of report	May. 28, 2024

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	RFID READER
Brand Name	ZEBRA
Model Name	FX9600
FCC ID	UZ7FX9600
Wireless Technology and Frequency Range	UHF RFID:902 MHz ~ 928 MHz
Mode	ASK
HW Version	0.0.5.0
SW Version	OS version : 2.2.10.0 Radio Firmware : 2.4.2.0 Radio RF Board : 13.0.0.0
EUT Stage	Identical Prototype

Reviewed by: Jason Wang

Report Producer: Jasmine Ku

2. Maximum RF average output power among production units

Mode		Maximum Average power(dBm)
UHF RFID	ASK	25.16

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:
S = Power Density
P = Output Power at Antenna Terminals
G = Gain of Transmit Antenna (linear gain)
R = Distance from Transmitting Antenna

4. RF Exposure Evaluation

4.1. Power Density Calculations

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm^2)	Limit (mW/cm^2)
UHF RFID ASK	8.60	25.16	33.8	2.38	2376.84	0.473	0.601

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.