RF EXPOSURE EVALUATION REPORT

FCC ID	:	S9GT750
Equipment	:	Access point
Brand Name	:	RUCKUS
Model Name	:	T750
Applicant	:	Ruckus Wireless Inc. 350 W. Java Dr., Sunnyvale CA 94089 USA
Manufacturer	:	Ruckus Wireless Inc. 350 W. Java Dr., Sunnyvale CA 94089 USA
Standard	:	47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 2.1091 and it complies with applicable limit.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

Sporton Lab is accredited to ISO 17025 by A2LA (Code: 1250) and the FCC designation No. US1250 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

Approved by: Ken Chen

Sporton International (USA) Inc.

1175 Montague Expressway, Milpitas, CA 95035

Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FA190621001	Rev. 01	Initial issue of report	Dec. 06, 2019

1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Access point
Brand Name	RUCKUS
Model Name	T750
FCC ID	S9GT750
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz Zigbee: 2405 MHz ~ 2475 MHz
Mode	WLAN: 802.11a/b/g/n/ac/ax HT20 / HT40 / VHT20 / VHT40 / VHT80 / VHT160 / HE20 / HE40 / HE80 / HE160 Bluetooth LE Zigbee: BPSK
EUT Stage	Identical Prototype

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

Reviewed by: Jason Wang

Report Producer: Wan Liu

2. Maximum RF average output power among production units

Mode		Maximum Average Power (dBm)
BLE 1M		19.00
ZigBee		19.00
2.4GHz WLAN (MIMO)	802.11b	30.00
	802.11g	29.50
	802.11n-HT20	28.50
	802.11n-HT40	25.50
	802.11n-HE20	28.50
	802.11n-HE40	25.50
5GHz WLAN B1 (MIMO)	802.11a	28.00
	802.11n-HT20	27.50
	802.11n-HT40	28.50
	802.11ac-VHT20	27.50
	802.11ac-VHT40	28.50
	802.11ac-VHT80	24.00
	802.11ax-HE20	27.50
	802.11ax-HE40	28.50
	802.11ax-HE80	24.50
5GHz WLAN B4 (MIMO)	802.11a	25.50
	802.11n-HT20	26.00
	802.11n-HT40	27.50
	802.11ac-VHT20	26.00
	802.11ac-VHT40	27.50
	802.11ac-VHT80	28.00
	802.11ax-HE20	26.50
	802.11ax-HE40	27.50
	802.11ax-HE80	28.00

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. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Frequency (MHz)	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)	Power Density / Limit
2.4GHz WLAN	2412.0	1.60	30.00	31.600	1.445	1445.440	0.288	1.000	0.288
5GHz WLAN	5180.0	3.40	28.50	31.900	1.549	1548.817	0.308	1.000	0.308
Bluetooth	2402.0	1.00	19.00	20.000	0.100	100.000	0.020	1.000	0.020
ZigBee	2405.0	1.00	19.00	20.000	0.100	100.000	0.020	1.000	0.020

Note: For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band

4.2. Collocated Power Density Calculation

2.4GHz WLAN Power Density / Limit	5GHz WLAN Power Density / Limit	Bluetooth Power Density / Limit	Zigbee Power Density / Limit	∑(Power Density / Limit) of WLAN+Bluetooth+Zigbee
0.288	0.308	0.020	0.020	0.636

Note:

1. ∑(Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WLAN + Bluetooth + Zigbee.
2. Considering all the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 4 collocated transmitters is compliant

Conclusion:

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