



# 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.**  
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### History of this test report

| Report No.     | Version | Description             | Issued Date   |
|----------------|---------|-------------------------|---------------|
| FA190621001-01 | Rev. 01 | Initial issue of report | Dec. 25, 2019 |
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**1. Description of Equipment Under Test (EUT)**

| Product Feature & Specification  |  |
|--|--|
| <b>EUT Type</b>  | Access point   |
| <b>Brand Name</b>  | RUCKUS   |
| <b>Model Name</b>  | T750   |
| <b>FCC ID</b>  | S9GT750  |
| <b>Wireless Technology and Frequency Range</b>   | WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz<br>WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz<br>WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz<br>WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz<br>WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz<br>Bluetooth: 2402 MHz ~ 2480 MHz<br>Zigbee: 2405 MHz ~ 2475 MHz |
| <b>Mode</b>  | WLAN: 802.11a/b/g/n/ac/ax HT20 / HT40 / VHT20 / VHT40 / VHT80 / HE20 / HE40 / HE80<br>Bluetooth LE<br>Zigbee: BPSK   |
| <b>EUT Stage</b>   | Identical Prototype  |
| <b>Remark:</b><br>1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.<br>2. Variant report to enable 5.3GHz and 5.5GHz WLAN. |  |

**Reviewed by: Jason Wang**

**Report Producer: Wan Liu**



**2. Maximum RF average output power among production units**

|                        | Mode           | Maximum Average Power (dBm) |
|------------------------|----------------|-----------------------------|
| 5GHz WLAN B2<br>(MIMO) | 802.11a        | 22.00                       |
|                        | 802.11n-HT20   | 21.50                       |
|                        | 802.11n-HT40   | 24.00                       |
|                        | 802.11ac-VHT20 | 21.50                       |
|                        | 802.11ac-VHT40 | 24.00                       |
|                        | 802.11ac-VHT80 | 21.00                       |
|                        | 802.11ax-HE20  | 21.50                       |
|                        | 802.11ax-HE40  | 24.00                       |
|                        | 802.11ax-HE80  | 21.50                       |
| 5GHz WLAN B3<br>(MIMO) | 802.11a        | 22.00                       |
|                        | 802.11n-HT20   | 22.00                       |
|                        | 802.11n-HT40   | 24.00                       |
|                        | 802.11ac-VHT20 | 22.00                       |
|                        | 802.11ac-VHT40 | 24.00                       |
|                        | 802.11ac-VHT80 | 23.50                       |
|                        | 802.11ax-HE20  | 22.00                       |
|                        | 802.11ax-HE40  | 24.00                       |
|                        | 802.11ax-HE80  | 24.00                       |



### 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 <sup>2</sup> ) | Averaging time (minutes) |
|--|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(A) Limits for Occupational/Controlled Exposures</b>        |                               |                               |                                     |                          |
| 0.3-3.0  | 614                           | 1.63                          | *(100)                              | 6                        |
| 3.0-30   | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | 6                        |
| 30-300   | 61.4                          | 0.163                         | 1.0                                 | 6                        |
| 300-1500   |                               |                               | f/300                               | 6                        |
| 1500-100,000   |                               |                               | 5                                   | 6                        |
| <b>(B) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 0.3-1.34   | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34-30  | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 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

Table with 10 columns: 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. Row 1: 5.3GHz/5.5GHz WLAN, 5260.0, 3.40, 24.00, 27.400, 0.550, 549.541, 0.109, 1.000, 0.109

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

Table with 5 columns: 2.4GHz WLAN Power Density / Limit, 5GHz WLAN Power Density / Limit, Bluetooth Power Density / Limit, Zigbee Power Density / Limit, Σ (Power Density / Limit) of WLAN+Bluetooth+Zigbee. Row 1: 0.288, 0.308, 0.020, 0.020, 0.636

Note:

- 1. For 2.4GHz WLAN / 5.2GHz WLAN / 5.8GHz WLAN ,Bluetooth and Zigbee standalone power density calculation can refer to Sporton RF Exposure Evaluation Original Report, Report No: FA190621001 (FCC ID: S9GT750).
2. Σ (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.
3. 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.