


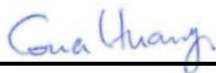
# RF EXPOSURE EVALUATION REPORT

FCC ID : TVE-3901M12  
Equipment : Network Security Gateway  
Brand Name :   
Model Name : FortiWiFi 50G-5Gxxxxxxxxxx, FORTIWIFI-50G-5Gxxxxxxxxxx,  
FWF-50G-5Gxxxxxxxxxx,  
FortiWiFi 51G-5Gxxxxxxxxxx, FORTIWIFI-51G-5Gxxxxxxxxxx,  
FWF-51G-5Gxxxxxxxxxx  
  
(where “x” can be used as “A-Z”, or “0-9”, or “-”, or blank for software purposes or marketing purposes only)  
Marketing Name : FortiWiFi 50G-5G, FortiWiFi 51G-5G  
Applicant : Fortinet Inc.  
899 KIFER RD  
SUNNYVALE CA 94086  
UNITED STATES  
Manufacturer : Fortinet Inc.  
899 KIFER RD  
SUNNYVALE CA 94086  
UNITED STATES  
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



**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**  
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### History of this test report

| Report No. | Version | Description             | Issued Date   |
|------------|---------|-------------------------|---------------|
| FA3D0631   | Rev. 01 | Initial issue of report | Feb. 10, 2024 |
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1. Description of Equipment Under Test (EUT)

| Product Feature & Specification         |   |
|---|---|
| EUT Type                                | Network Security Gateway  |
| Brand Name                              | FORTINET   |
| Model Name                              | FortiWiFi 50G-5Gxxxxxxxxxx, FORTIWIFI-50G-5Gxxxxxxxxxx, FWF-50G-5Gxxxxxxxxxx, FortiWiFi 51G-5Gxxxxxxxxxx, FORTIWIFI-51G-5Gxxxxxxxxxx, FWF-51G-5Gxxxxxxxxxx<br>(where "x" can be used as "A-Z", or "0-9", or "-", or blank for software purposes or marketing purposes only) |
| Marketing Name                          | FortiWiFi 50G-5G, FortiWiFi 51G-5G  |
| FCC ID                                  | TVE-3901M12   |
| Wireless Technology and Frequency Range | WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz<br>WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz<br>WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz  |
| Mode                                    | WLAN 11a/b/g/n HT20/HT40<br>WLAN 11ac VHT20/VHT40/VHT80<br>WLAN 11ax HE20/HE40/HE80   |
| EUT Stage                               | Production Unit   |

| Integrated Bluetooth Module             |  |
|---|--|
| Brand Name                              | FORTINET    |
| Model Name                              | FBLE-2024TI  |
| Wireless Technology and Frequency Range | Bluetooth: 2400 MHz ~ 2483.5 MHz   |
| Mode                                    | Bluetooth LE   |
| Remark:                                 | 1. The Bluetooth operation is also integrated into this host, additional power density result Sim-Tx analysis is meet FCC requirement. The Bluetooth RF Exposure were referred from Sporton report, report number FA3D0610, FCC ID: TVE-110T17 |



| Integrated WWAN Module  |   |
|---|---|
| <b>Wireless Technology and Frequency Range</b>  | WCDMA Band II: 1850 MHz ~ 1910 MHz<br>WCDMA Band IV: 1710 MHz ~ 1755 MHz<br>WCDMA Band V: 824 MHz ~ 849 MHz<br>LTE Band 2: 1850 MHz ~ 1910 MHz<br>LTE Band 4: 1710 MHz ~ 1755 MHz<br>LTE Band 5: 824 MHz ~ 849 MHz<br>LTE Band 7: 2500 MHz ~ 2570 MHz<br>LTE Band 12: 699 MHz ~ 716 MHz<br>LTE Band 13: 777 MHz ~ 787 MHz<br>LTE Band 14: 788 MHz ~ 798 MHz<br>LTE Band 17: 704 MHz ~ 716 MHz<br>LTE Band 25: 1850 MHz ~ 1915 MHz<br>LTE Band 26: 814 MHz ~ 849 MHz<br>LTE Band 30: 2305 MHz ~ 2315 MHz<br>LTE Band 38: 2570 MHz ~ 2620 MHz<br>LTE Band 41: 2496 MHz ~ 2690 MHz<br>LTE Band 42: 3450 MHz ~ 3550 MHz, 3550 MHz ~ 3600 MHz<br>LTE Band 43: 3600 MHz ~ 3700 MHz<br>LTE Band 48: 3550 MHz ~ 3700 MHz<br>LTE Band 66: 1710 MHz ~ 1780 MHz<br>LTE Band 71: 663 MHz ~ 698 MHz<br>5G NR n2 : 1850 MHz ~ 1910 MHz<br>5G NR n5 : 824 MHz ~ 849 MHz<br>5G NR n7 : 2500 MHz ~ 2570 MHz<br>5G NR n25 : 1850 MHz ~ 1915 MHz<br>5G NR n30 : 2305 MHz ~ 2315 MHz<br>5G NR n38 : 2570 MHz ~ 2620 MHz<br>5G NR n41 : 2496 MHz ~ 2690 MHz<br>5G NR n48 : 3550 MHz ~ 3700 MHz<br>5G NR n66 : 1710 MHz ~ 1780 MHz<br>5G NR n71 : 663 MHz ~ 698 MHz<br>5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz<br>5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz |
| <b>Mode</b>   | RMC 12.2Kbps<br>HSDPA<br>HSUPA<br>DC-HSDPA<br>LTE: QPSK, 16QAM, 64QAM, 256QAM<br>5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM   |
| <b>Remark:</b>  |   |
| 1. The WWAN operation is also integrated into this host, additional power density result Sim-Tx analysis is meet FCC requirement. |   |

**Reviewed by: Jason Wang**

**Report Producer: Wan Liu**



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

<WLAN2.4GHz non-Beamforming mode>

| 2.4GHz WLAN        | Mode              | Channel | Frequency (MHz) | Port 3+6 (3) Tune-up Limit | Port 3+6 (6) Tune-up Limit | Port 3+6 Tune-up Limit |
|--------------------|-------------------|---------|-----------------|----------------------------|----------------------------|------------------------|
|                    | 802.11b 1Mbps     | 1       | 2412            | 22.00                      | 22.00                      | 25.00                  |
|                    |                   | 6       | 2437            | 23.50                      | 23.50                      | 26.50                  |
|                    |                   | 10      | 2457            | 20.50                      | 20.50                      | 23.50                  |
|                    |                   | 11      | 2462            | 20.00                      | 20.00                      | 23.00                  |
|                    | 802.11g 6Mbps     | 1       | 2412            | 19.50                      | 19.50                      | 22.50                  |
|                    |                   | 6       | 2437            | 21.50                      | 21.50                      | 24.50                  |
|                    |                   | 10      | 2457            | 18.50                      | 18.50                      | 21.50                  |
|                    |                   | 11      | 2462            | 17.50                      | 17.50                      | 20.50                  |
|                    | 802.11n-HT20 MCS0 | 1       | 2412            | 18.50                      | 18.50                      | 21.50                  |
| 6                  |                   | 2437    | 21.00           | 21.00                      | 24.00                      |                        |
| 10                 |                   | 2457    | 18.50           | 18.50                      | 21.50                      |                        |
| 11                 |                   | 2462    | 17.00           | 17.00                      | 20.00                      |                        |
| 802.11n-HT40 MCS0  | 3                 | 2422    | 17.00           | 17.00                      | 20.00                      |                        |
|                    | 6                 | 2437    | 18.00           | 18.00                      | 21.00                      |                        |
|                    | 9                 | 2452    | 17.00           | 17.00                      | 20.00                      |                        |
| 802.11ax-HE20 MCS0 | 1                 | 2412    | 18.50           | 18.50                      | 21.50                      |                        |
|                    | 2                 | 2417    | 19.00           | 19.00                      | 22.00                      |                        |
|                    | 6                 | 2437    | 21.50           | 21.50                      | 24.50                      |                        |
|                    | 10                | 2457    | 18.50           | 18.50                      | 21.50                      |                        |
|                    | 11                | 2462    | 18.00           | 18.00                      | 21.00                      |                        |
| 802.11ax-HE40 MCS0 | 3                 | 2422    | 17.00           | 17.00                      | 20.00                      |                        |
|                    | 6                 | 2437    | 18.00           | 18.00                      | 21.00                      |                        |
|                    | 9                 | 2452    | 17.00           | 17.00                      | 20.00                      |                        |



**<WLAN5GHz non-Beamforming mode>**

| 5.2GHz WLAN         | Mode                | Channel | Frequency (MHz) | Port 3+6 (3) Tune-up Limit | Port 3+6 (6) Tune-up Limit | Port 3+6 Tune-up Limit |
|---------------------|---------------------|---------|-----------------|----------------------------|----------------------------|------------------------|
|                     | 802.11a 6Mbps       | 36      | 5180            | 21.50                      | 21.50                      | 24.50                  |
|                     |                     | 44      | 5220            | 24.00                      | 24.00                      | 27.00                  |
|                     |                     | 48      | 5240            | 25.50                      | 25.50                      | 28.50                  |
|                     | 802.11n-HT20 MCS0   | 36      | 5180            | 21.50                      | 21.50                      | 24.50                  |
|                     |                     | 44      | 5220            | 24.00                      | 24.00                      | 27.00                  |
|                     |                     | 48      | 5240            | 24.00                      | 24.00                      | 27.00                  |
|                     | 802.11n-HT40 MCS0   | 38      | 5190            | 19.00                      | 19.00                      | 22.00                  |
|                     |                     | 46      | 5230            | 21.00                      | 21.00                      | 24.00                  |
|                     | 802.11ac-VHT20 MCS0 | 36      | 5180            | 22.00                      | 22.00                      | 25.00                  |
|                     |                     | 44      | 5220            | 23.50                      | 23.50                      | 26.50                  |
|                     |                     | 48      | 5240            | 24.50                      | 24.50                      | 27.50                  |
| 802.11ac-VHT40 MCS0 | 38                  | 5190    | 19.50           | 19.50                      | 22.50                      |                        |
|                     | 46                  | 5230    | 21.00           | 21.00                      | 24.00                      |                        |
| 802.11ac-VHT80 MCS0 | 42                  | 5210    | 15.50           | 15.50                      | 18.50                      |                        |
| 802.11ax-HE20 MCS0  | 36                  | 5180    | 22.00           | 22.00                      | 25.00                      |                        |
|                     | 44                  | 5220    | 23.50           | 23.50                      | 26.50                      |                        |
|                     | 48                  | 5240    | 25.50           | 25.50                      | 28.50                      |                        |
| 802.11ax-HE40 MCS0  | 38                  | 5190    | 19.00           | 19.00                      | 22.00                      |                        |
|                     | 46                  | 5230    | 21.00           | 21.00                      | 24.00                      |                        |
| 802.11ax-HE80 MCS0  | 42                  | 5210    | 15.00           | 15.00                      | 18.00                      |                        |

| 5.8GHz WLAN        | Mode                | Channel | Frequency (MHz) | Port 3+6 (3) Tune-up Limit | Port 3+6 (6) Tune-up Limit | Port 3+6 Tune-up Limit |
|--------------------|---------------------|---------|-----------------|----------------------------|----------------------------|------------------------|
|                    | 802.11a 6Mbps       | 149     | 5745            | 26.80                      | 26.80                      | 29.80                  |
|                    |                     | 157     | 5785            | 26.70                      | 26.70                      | 29.70                  |
|                    |                     | 165     | 5825            | 26.50                      | 26.50                      | 29.50                  |
|                    | 802.11n-HT20 MCS0   | 149     | 5745            | 26.90                      | 26.90                      | 29.90                  |
|                    |                     | 157     | 5785            | 26.70                      | 26.70                      | 29.70                  |
|                    |                     | 165     | 5825            | 25.50                      | 25.50                      | 28.50                  |
|                    | 802.11n-HT40 MCS0   | 151     | 5755            | 25.50                      | 25.50                      | 28.50                  |
|                    |                     | 159     | 5795            | 24.50                      | 24.50                      | 27.50                  |
|                    | 802.11ac-VHT20 MCS0 | 149     | 5745            | 26.90                      | 26.90                      | 29.90                  |
|                    |                     | 157     | 5785            | 26.70                      | 26.70                      | 29.70                  |
|                    |                     | 165     | 5825            | 25.50                      | 25.50                      | 28.50                  |
|                    | 802.11ac-VHT40 MCS0 | 151     | 5755            | 25.50                      | 25.50                      | 28.50                  |
|                    |                     | 159     | 5795            | 24.50                      | 24.50                      | 27.50                  |
|                    | 802.11ac-VHT80 MCS0 | 155     | 5775            | 22.00                      | 22.00                      | 25.00                  |
| 802.11ax-HE20 MCS0 | 149                 | 5745    | 26.90           | 26.90                      | 29.90                      |                        |
|                    | 157                 | 5785    | 26.70           | 26.70                      | 29.70                      |                        |
|                    | 165                 | 5825    | 25.50           | 25.50                      | 28.50                      |                        |
| 802.11ax-HE40 MCS0 | 151                 | 5755    | 25.50           | 25.50                      | 28.50                      |                        |
|                    | 159                 | 5795    | 24.50           | 24.50                      | 27.50                      |                        |
| 802.11ax-HE80 MCS0 | 155                 | 5775    | 20.50           | 20.50                      | 23.50                      |                        |



**<WLAN2.4GHz Beamforming mode>**

|             | Mode               | Channel | Frequency (MHz) | Port 3+6 (3) Tune-up Limit | Port 3+6 (6) Tune-up Limit | Port 3+6 Tune-up Limit |
|-------------|--------------------|---------|-----------------|----------------------------|----------------------------|------------------------|
| 2.4GHz WLAN | 802.11n-HT20 MCS0  | 1       | 2412            | 18.50                      | 18.50                      | 21.50                  |
|             |                    | 6       | 2437            | 21.00                      | 21.00                      | 24.00                  |
|             |                    | 10      | 2457            | 18.50                      | 18.50                      | 21.50                  |
|             |                    | 11      | 2462            | 17.00                      | 17.00                      | 20.00                  |
|             | 802.11n-HT40 MCS0  | 3       | 2422            | 17.00                      | 17.00                      | 20.00                  |
|             |                    | 6       | 2437            | 18.00                      | 18.00                      | 21.00                  |
|             |                    | 9       | 2452            | 17.00                      | 17.00                      | 20.00                  |
|             | 802.11ax-HE20 MCS0 | 1       | 2412            | 18.50                      | 18.50                      | 21.50                  |
|             |                    | 2       | 2417            | 19.00                      | 19.00                      | 22.00                  |
|             |                    | 6       | 2437            | 21.50                      | 21.50                      | 24.50                  |
|             |                    | 10      | 2457            | 18.50                      | 18.50                      | 21.50                  |
|             |                    | 11      | 2462            | 18.00                      | 18.00                      | 21.00                  |
|             | 802.11ax-HE40 MCS0 | 3       | 2422            | 17.00                      | 17.00                      | 20.00                  |
|             |                    | 6       | 2437            | 18.00                      | 18.00                      | 21.00                  |
|             |                    | 9       | 2452            | 17.00                      | 17.00                      | 20.00                  |





**<WLAN5GHz Beamforming mode>**

| 5.2GHz WLAN        | Mode                | Channel | Frequency (MHz) | Port 3+6 (3) Tune-up Limit | Port 3+6 (6) Tune-up Limit | Port 3+6 Tune-up Limit |
|--------------------|---------------------|---------|-----------------|----------------------------|----------------------------|------------------------|
|                    | 802.11n-HT20 MCS0   | 36      | 5180            | 21.50                      | 21.50                      | 24.50                  |
|                    |                     | 44      | 5220            | 24.00                      | 24.00                      | 27.00                  |
|                    |                     | 48      | 5240            | 24.00                      | 24.00                      | 27.00                  |
|                    | 802.11n-HT40 MCS0   | 38      | 5190            | 19.00                      | 19.00                      | 22.00                  |
|                    |                     | 46      | 5230            | 21.00                      | 21.00                      | 24.00                  |
|                    | 802.11ac-VHT20 MCS0 | 36      | 5180            | 22.00                      | 22.00                      | 25.00                  |
|                    |                     | 44      | 5220            | 23.50                      | 23.50                      | 26.50                  |
|                    |                     | 48      | 5240            | 24.50                      | 24.50                      | 27.50                  |
|                    | 802.11ac-VHT40 MCS0 | 38      | 5190            | 19.50                      | 19.50                      | 22.50                  |
|                    |                     | 46      | 5230            | 21.00                      | 21.00                      | 24.00                  |
|                    | 802.11ac-VHT80 MCS0 | 42      | 5210            | 15.50                      | 15.50                      | 18.50                  |
| 802.11ax-HE20 MCS0 | 36                  | 5180    | 22.00           | 22.00                      | 25.00                      |                        |
|                    | 44                  | 5220    | 23.50           | 23.50                      | 26.50                      |                        |
|                    | 48                  | 5240    | 25.50           | 25.50                      | 28.50                      |                        |
| 802.11ax-HE40 MCS0 | 38                  | 5190    | 19.00           | 19.00                      | 22.00                      |                        |
|                    | 46                  | 5230    | 21.00           | 21.00                      | 24.00                      |                        |
| 802.11ax-HE80 MCS0 | 42                  | 5210    | 15.00           | 15.00                      | 18.00                      |                        |

| 5.8GHz WLAN | Mode                | Channel | Frequency (MHz) | Port 3+6 (3) Tune-up Limit | Port 3+6 (6) Tune-up Limit | Port 3+6 Tune-up Limit |
|-------------|---------------------|---------|-----------------|----------------------------|----------------------------|------------------------|
|             | 802.11n-HT20 MCS0   | 149     | 5745            | 26.90                      | 26.90                      | 29.90                  |
|             |                     | 157     | 5785            | 26.70                      | 26.70                      | 29.70                  |
|             |                     | 165     | 5825            | 25.50                      | 25.50                      | 28.50                  |
|             | 802.11n-HT40 MCS0   | 151     | 5755            | 25.50                      | 25.50                      | 28.50                  |
|             |                     | 159     | 5795            | 24.50                      | 24.50                      | 27.50                  |
|             | 802.11ac-VHT20 MCS0 | 149     | 5745            | 26.90                      | 26.90                      | 29.90                  |
|             |                     | 157     | 5785            | 26.70                      | 26.70                      | 29.70                  |
|             |                     | 165     | 5825            | 25.50                      | 25.50                      | 28.50                  |
|             | 802.11ac-VHT40 MCS0 | 151     | 5755            | 25.50                      | 25.50                      | 28.50                  |
|             |                     | 159     | 5795            | 24.50                      | 24.50                      | 27.50                  |
|             | 802.11ac-VHT80 MCS0 | 155     | 5775            | 22.00                      | 22.00                      | 25.00                  |
|             | 802.11ax-HE20 MCS0  | 149     | 5745            | 26.90                      | 26.90                      | 29.90                  |
|             |                     | 157     | 5785            | 26.70                      | 26.70                      | 29.70                  |
|             |                     | 165     | 5825            | 25.50                      | 25.50                      | 28.50                  |
|             | 802.11ax-HE40 MCS0  | 151     | 5755            | 25.50                      | 25.50                      | 28.50                  |
|             |                     | 159     | 5795            | 24.50                      | 24.50                      | 27.50                  |
|             | 802.11ax-HE80 MCS0  | 155     | 5775            | 20.50                      | 20.50                      | 23.50                  |



**Integrated WWAN operation**

| Mode    |         | Maximum Average power(dBm) |
|---------|---------|----------------------------|
| WCDMA   | Band II | 24.5                       |
|         | Band IV | 24.5                       |
|         | Band V  | 24.5                       |
| LTE     | Band 2  | 24                         |
|         | Band 4  | 24                         |
|         | Band 5  | 24                         |
|         | Band 7  | 24                         |
|         | Band 12 | 24                         |
|         | Band 13 | 24                         |
|         | Band 14 | 24                         |
|         | Band 17 | 24                         |
|         | Band 25 | 24                         |
|         | Band 26 | 24                         |
|         | Band 30 | 23                         |
|         | Band 38 | 24                         |
|         | Band 41 | 26.5                       |
|         | Band 42 | 22.5                       |
|         | Band 43 | 22.5                       |
| Band 48 | 22.5    |                            |
| NR      | Band 66 | 24                         |
|         | Band 71 | 24                         |
|         | Band 2  | 24.5                       |
|         | Band 5  | 24.5                       |
|         | Band 7  | 24.5                       |
|         | Band 25 | 24.5                       |
|         | Band 30 | 23                         |
|         | Band 38 | 25                         |
|         | Band 41 | 27.5                       |
|         | Band 48 | 22.5                       |
| Band 66 | 24.5    |                            |
| Band 71 | 24.5    |                            |
| Band 77 | 27.5    |                            |
| Band 78 | 27.5    |                            |



### 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 26 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

<WWAN>

Table with 9 columns: Band, Antenna Gain (dBi), Maximum Power (dBm), Maximum EIRP (dBm), Maximum EIRP (W), Average EIRP (mW), Power Density at 26cm (mW/cm^2), Limit (mW/cm^2), Power Density / Limit. Rows include WCDMA and LTE bands 2, 4, 5, 7, 12, 13, 14, 17, 25, 26, 30, 38, 41, 42, 43, 48, 66, 71, and 5G NR bands 2, 5, 7, 25, 30, 38, 41, 48, 66, 71, 77, 78.



**<non-Beamforming mode>**

| Band            | Antenna Gain (dBi) | Maximum Power (dBm) | Maximum EIRP (dBm) | Maximum EIRP (W) | Average EIRP (mW) | Power Density at 26cm (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | Power Density / Limit |
|-----------------|--------------------|---------------------|--------------------|------------------|-------------------|---|-----------------------------|-----------------------|
| WLAN2.4GHz Band | 0.31               | 26.50               | 26.81              | 0.48             | 479.73            | 0.057                                       | 1.000                       | 0.057                 |
| WLAN5.2GHz Band | 2.54               | 28.50               | 31.04              | 1.27             | 1270.57           | 0.150                                       | 1.000                       | 0.150                 |
| WLAN5.8GHz Band | 2.50               | 29.90               | 32.40              | 1.74             | 1737.80           | 0.205                                       | 1.000                       | 0.205                 |

**<Beamforming mode>**

| Band            | Antenna Gain (dBi) | Maximum Power (dBm) | Maximum EIRP (dBm) | Maximum EIRP (W) | Average EIRP (mW) | Power Density at 26cm (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | Power Density / Limit |
|-----------------|--------------------|---------------------|--------------------|------------------|-------------------|---|-----------------------------|-----------------------|
| WLAN2.4GHz Band | 3.32               | 24.50               | 27.82              | 0.61             | 605.34            | 0.071                                       | 1.000                       | 0.071                 |
| WLAN5.2GHz Band | 5.55               | 28.50               | 34.05              | 2.54             | 2540.97           | 0.299                                       | 1.000                       | 0.299                 |
| WLAN5.8GHz Band | 5.51               | 29.90               | 35.41              | 3.48             | 3475.36           | 0.409                                       | 1.000                       | 0.409                 |

**Note:**

1. This device supports Beamforming for WLAN 2.4GHz VHT20/VHT40/HE20/HE40 and WLAN 5GHz HT20/HT40/VHT20/VHT40/VHT80/HE20/HE40/HE80 only; therefore, in the table above which consider maximum directional Gain 3.32dBi for WLAN 2.4GHz Beamforming mode and 5.55dBi and 5.51dBi for WLAN 5GHz Beamforming mode.

**4.2. Collocated Power Density Calculation**

**<non-Beamforming mode>**

| EN-DC                     |                             | 2.4GHz WLAN Power Density / Limit | 5GHz WLAN Power Density / Limit | Bluetooth Power Density / Limit | Σ(Power Density / Limit) |
|---------------------------|-----------------------------|-----------------------------------|---------------------------------|---------------------------------|--------------------------|
| LTE Power Density / Limit | 5G NR Power Density / Limit |                                   |                                 |                                 |                          |
| 0.096                     | 0.121                       | 0.057                             | 0.205                           | 0.002                           | 0.481                    |

**<Beamforming mode>**

| EN-DC                     |                             | 2.4GHz WLAN Power Density / Limit | 5GHz WLAN Power Density / Limit | Bluetooth Power Density / Limit | Σ(Power Density / Limit) |
|---------------------------|-----------------------------|-----------------------------------|---------------------------------|---------------------------------|--------------------------|
| LTE Power Density / Limit | 5G NR Power Density / Limit |                                   |                                 |                                 |                          |
| 0.096                     | 0.121                       | 0.071                             | 0.409                           | 0.002                           | 0.699                    |

**Note:**

1. Σ(Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for LTE + 5G NR + WLAN + Bluetooth.
2. Considering all the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 5 collocated transmitters is compliant

**Conclusion:**

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