

# RF Exposure Evaluation Report

APPLICANT : Flo Technologies Inc.  
EQUIPMENT : Flo by Moen Cellular Antenna  
BRAND NAME : Flo by Moen  
MODEL NAME : 920-007  
FCC ID : 2AU5H-920007  
STANDARD : 47 CFR Part 2.1091

We, Sporton International (ShenZhen) Inc., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091, and pass the limit. Without written approval of Sporton International (ShenZhen) Inc., the test report shall not be reproduced except in full.

Hank Huang

Reviewed by: Hank Huang / Supervisor

Johnny Chen

Approved by: Johnny Chen / Manager



**Sporton International (ShenZhen) Inc.**

**1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055**  
**People's Republic of China**



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**Sporton International (Shenzhen) Inc.**



## **1. Administration Data**

### **1.1. Testing Laboratory**

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

| Testing Laboratory |                                                                                                                                                                            |                                |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Test Firm          | Sporton International (Shenzhen) Inc.                                                                                                                                      |                                |
| Test Site Location | 1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055<br>People's Republic of China<br>TEL: +86-755-86379589<br>FAX: +86-755-86379595 |                                |
| Test Site No.      | FCC Designation No.                                                                                                                                                        | FCC Test Firm Registration No. |
|                    | CN1256                                                                                                                                                                     | 421272                         |

| Applicant    |                                                                        |
|--------------|------------------------------------------------------------------------|
| Company Name | Flo Technologies Inc.                                                  |
| Address      | 3750 S. Robertson Blvd, Suite 202, Culver City, California, 90232, USA |

| Manufacturer |                                                                        |
|--------------|------------------------------------------------------------------------|
| Company Name | Trend Power Limited                                                    |
| Address      | Workshop F, 12/F., Reason Group Tower, 403 Castle Peak Road, Hong Kong |

## 2. Description of Equipment Under Test (EUT)

| Product Feature & Specification                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EUT Type                                                                                                                                                                                                                                                                                                                                          | Flo by Moen Cellular Antenna                                                                                                                                                                                                                                                                      |
| Brand Name                                                                                                                                                                                                                                                                                                                                        | Flo by Moen                                                                                                                                                                                                                                                                                       |
| Model Name                                                                                                                                                                                                                                                                                                                                        | 920-007                                                                                                                                                                                                                                                                                           |
| IMEI                                                                                                                                                                                                                                                                                                                                              | 014760000031610                                                                                                                                                                                                                                                                                   |
| FCC ID                                                                                                                                                                                                                                                                                                                                            | 2AU5H-920007                                                                                                                                                                                                                                                                                      |
| Wireless Technology and Frequency Range                                                                                                                                                                                                                                                                                                           | WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz<br>WCDMA Band V: 826.4 MHz ~ 846.6 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 12: 699 MHz ~ 716 MHz<br>WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz<br>Bluetooth: 2402 MHz ~ 2480 MHz |
| Mode                                                                                                                                                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>· RMC 12.2Kbps</li> <li>· HSDPA</li> <li>· HSUPA</li> <li>· HSPA+ (16QAM uplink is not supported)</li> <li>· LTE: QPSK, 16QAM</li> <li>· 802.11b/g/n HT20/HT40</li> <li>· Bluetooth v4.1 LE(Uplink Only)</li> </ul>                                        |
| HW Version                                                                                                                                                                                                                                                                                                                                        | D54A15-FLO v1.0                                                                                                                                                                                                                                                                                   |
| SW Version                                                                                                                                                                                                                                                                                                                                        | D54A15-FLO MPSS: v16.02 APSS: v05.04_OE2.0                                                                                                                                                                                                                                                        |
| EUT Stage                                                                                                                                                                                                                                                                                                                                         | Identical Prototype                                                                                                                                                                                                                                                                               |
| Note:<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. For all LTE Bands, 10M 16QAM, 50RB Offset 0 is disabled .<br>3. The device has no voice function.<br>4. WLAN supports search capabilities, but unable to connect to other devices. |                                                                                                                                                                                                                                                                                                   |

| Comments and Explanations:                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.<br>2. The maximum RF output tune up power, antenna gain also the safe distance used for evaluate RF exposure were declared by manufacturer. |

**3. Maximum RF Tune Up power among production units****<WCDMA>**

| Band        |                 | WCDMA Band II | WCDMA Band V |
|-------------|-----------------|---------------|--------------|
| Mode        |                 | Tune-up       |              |
| 3GPP Rel 99 | RMC 12.2Kbps    | 25.00         | 25.00        |
| 3GPP Rel 6  | HSDPA Subtest-1 | 23.50         | 23.50        |
| 3GPP Rel 6  | HSDPA Subtest-2 | 23.50         | 23.50        |
| 3GPP Rel 6  | HSDPA Subtest-3 | 23.00         | 23.00        |
| 3GPP Rel 6  | HSDPA Subtest-4 | 23.00         | 23.00        |
| 3GPP Rel 6  | HSUPA Subtest-1 | 23.00         | 23.00        |
| 3GPP Rel 6  | HSUPA Subtest-2 | 22.00         | 22.50        |
| 3GPP Rel 6  | HSUPA Subtest-3 | 22.00         | 22.50        |
| 3GPP Rel 6  | HSUPA Subtest-4 | 22.00         | 23.00        |
| 3GPP Rel 6  | HSUPA Subtest-5 | 23.00         | 23.50        |

**<LTE>**

| LTE Band 12        |          |         |            |              |
|--------------------|----------|---------|------------|--------------|
| average power(dBm) |          |         |            |              |
| Modulation         | BW (MHz) | RB size | Target MPR | Target Power |
| QPSK               | 10       | ≤ 12    | 0          | 24.50        |
| QPSK               | 10       | > 12    | 0-1        | 23.50        |
| 16QAM              | 10       | ≤ 12    | 0-1        | 23.50        |
| 16QAM              | 10       | > 12    | 0-2        | 22.50        |
| QPSK               | 5        | ≤ 8     | 0          | 24.50        |
| QPSK               | 5        | > 8     | 0-1        | 23.50        |
| 16QAM              | 5        | ≤ 8     | 0-1        | 23.50        |
| 16QAM              | 5        | > 8     | 0-2        | 22.50        |
| QPSK               | 3        | ≤ 4     | 0          | 24.50        |
| QPSK               | 3        | > 4     | 0-1        | 23.50        |
| 16QAM              | 3        | ≤ 4     | 0-1        | 23.50        |
| 16QAM              | 3        | > 4     | 0-2        | 22.50        |
| QPSK               | 1.4      | ≤ 5     | 0          | 24.50        |
| QPSK               | 1.4      | > 5     | 0-1        | 23.50        |
| 16QAM              | 1.4      | ≤ 5     | 0-1        | 23.50        |
| 16QAM              | 1.4      | > 5     | 0-2        | 22.50        |

| LTE Band 5         |          |         |            |              |
|--------------------|----------|---------|------------|--------------|
| average power(dBm) |          |         |            |              |
| Modulation         | BW (MHz) | RB size | Target MPR | Target Power |
| QPSK               | 10       | ≤ 12    | 0          | 24.00        |
| QPSK               | 10       | > 12    | 0-1        | 23.00        |
| 16QAM              | 10       | ≤ 12    | 0-1        | 23.00        |
| 16QAM              | 10       | > 12    | 0-2        | 22.00        |
| QPSK               | 5        | ≤ 8     | 0          | 24.00        |
| QPSK               | 5        | > 8     | 0-1        | 23.00        |
| 16QAM              | 5        | ≤ 8     | 0-1        | 23.00        |
| 16QAM              | 5        | > 8     | 0-2        | 22.00        |
| QPSK               | 3        | ≤ 4     | 0          | 24.00        |
| QPSK               | 3        | > 4     | 0-1        | 23.00        |
| 16QAM              | 3        | ≤ 4     | 0-1        | 23.00        |
| 16QAM              | 3        | > 4     | 0-2        | 22.00        |
| QPSK               | 1.4      | ≤ 5     | 0          | 24.00        |
| QPSK               | 1.4      | > 5     | 0-1        | 23.00        |
| 16QAM              | 1.4      | ≤ 5     | 0-1        | 23.00        |
| 16QAM              | 1.4      | > 5     | 0-2        | 22.00        |



| LTE Band 4         |          |         |            |              |
|--------------------|----------|---------|------------|--------------|
| average power(dBm) |          |         |            |              |
| Modulation         | BW (MHz) | RB size | Target MPR | Target Power |
| QPSK               | 20       | ≤ 18    | 0          | 24.50        |
| QPSK               | 20       | > 18    | 0-1        | 23.50        |
| 16QAM              | 20       | ≤ 18    | 0-1        | 23.50        |
| 16QAM              | 20       | > 18    | 0-2        | 22.50        |
| QPSK               | 15       | ≤ 16    | 0          | 24.50        |
| QPSK               | 15       | > 16    | 0-1        | 23.50        |
| 16QAM              | 15       | ≤ 16    | 0-1        | 23.50        |
| 16QAM              | 15       | > 16    | 0-2        | 22.50        |
| QPSK               | 10       | ≤ 12    | 0          | 24.50        |
| QPSK               | 10       | > 12    | 0-1        | 23.50        |
| 16QAM              | 10       | ≤ 12    | 0-1        | 23.50        |
| 16QAM              | 10       | > 12    | 0-2        | 22.50        |
| QPSK               | 5        | ≤ 8     | 0          | 24.50        |
| QPSK               | 5        | > 8     | 0-1        | 23.50        |
| 16QAM              | 5        | ≤ 8     | 0-1        | 23.50        |
| 16QAM              | 5        | > 8     | 0-2        | 22.50        |
| QPSK               | 3        | ≤ 4     | 0          | 24.50        |
| QPSK               | 3        | > 4     | 0-1        | 23.50        |
| 16QAM              | 3        | ≤ 4     | 0-1        | 23.50        |
| 16QAM              | 3        | > 4     | 0-2        | 22.50        |
| QPSK               | 1.4      | ≤ 5     | 0          | 24.50        |
| QPSK               | 1.4      | > 5     | 0-1        | 23.50        |
| 16QAM              | 1.4      | ≤ 5     | 0-1        | 23.50        |
| 16QAM              | 1.4      | > 5     | 0-2        | 22.50        |

| LTE Band 2         |          |         |            |              |
|--------------------|----------|---------|------------|--------------|
| average power(dBm) |          |         |            |              |
| Modulation         | BW (MHz) | RB size | Target MPR | Target Power |
| QPSK               | 20       | ≤ 18    | 0          | 24.00        |
| QPSK               | 20       | > 18    | 0-1        | 23.00        |
| 16QAM              | 20       | ≤ 18    | 0-1        | 23.00        |
| 16QAM              | 20       | > 18    | 0-2        | 22.00        |
| QPSK               | 15       | ≤ 16    | 0          | 24.00        |
| QPSK               | 15       | > 16    | 0-1        | 23.00        |
| 16QAM              | 15       | ≤ 16    | 0-1        | 23.00        |
| 16QAM              | 15       | > 16    | 0-2        | 22.00        |
| QPSK               | 10       | ≤ 12    | 0          | 24.00        |
| QPSK               | 10       | > 12    | 0-1        | 23.00        |
| 16QAM              | 10       | ≤ 12    | 0-1        | 23.00        |
| 16QAM              | 10       | > 12    | 0-2        | 22.00        |
| QPSK               | 5        | ≤ 8     | 0          | 24.00        |
| QPSK               | 5        | > 8     | 0-1        | 23.00        |
| 16QAM              | 5        | ≤ 8     | 0-1        | 23.00        |
| 16QAM              | 5        | > 8     | 0-2        | 22.00        |
| QPSK               | 3        | ≤ 4     | 0          | 24.00        |
| QPSK               | 3        | > 4     | 0-1        | 23.00        |
| 16QAM              | 3        | ≤ 4     | 0-1        | 23.00        |
| 16QAM              | 3        | > 4     | 0-2        | 22.00        |
| QPSK               | 1.4      | ≤ 5     | 0          | 24.00        |
| QPSK               | 1.4      | > 5     | 0-1        | 23.00        |
| 16QAM              | 1.4      | ≤ 5     | 0-1        | 23.00        |
| 16QAM              | 1.4      | > 5     | 0-2        | 22.00        |

**<Bluetooth>**

| Mode              | Maximum Average Power (dBm) |
|-------------------|-----------------------------|
| Bluetooth v4.1 LE | 4.00                        |

**<2.4GHz WLAN>**

| Mode         | Maximum Average Power (dBm) |
|--------------|-----------------------------|
| 802.11b      | 16.00                       |
| 802.11g      | 15.00                       |
| 802.11n-HT20 | 15.00                       |
| 802.11n-HT40 | 13.00                       |

| Summarized necessary items addressed in KDB 941225 D05 v02r05 |                                                                                                                                                                                                        |                                                 |         |       |        |        |          |        |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------|-------|--------|--------|----------|--------|
| FCC ID                                                        | 2AU5H-920007                                                                                                                                                                                           |                                                 |         |       |        |        |          |        |
| EUT                                                           | Flo by Moen Cellular Antenna                                                                                                                                                                           |                                                 |         |       |        |        |          |        |
| Operating Frequency Range of each LTE transmission band       | LTE Band 12: 699.7 MHz ~ 715.3 MHz<br>LTE Band 4: 1710.7 MHz ~ 1754.3 MHz<br>LTE Band 2: 1850.7 MHz ~ 1909.3 MHz<br>TE Band 5: 824 MHz ~ 849 MHz                                                       |                                                 |         |       |        |        |          |        |
| Channel Bandwidth                                             | LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz<br>LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz<br>LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz<br>LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz              |                                                 |         |       |        |        |          |        |
| Uplink modulations used                                       | QPSK and 16QAM                                                                                                                                                                                         |                                                 |         |       |        |        |          |        |
| LTE MPR permanently built-in by design                        | Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3                                                                                                                                         |                                                 |         |       |        |        |          |        |
|                                                               | Modulation                                                                                                                                                                                             | Channel bandwidth / Transmission bandwidth (RB) |         |       |        |        | MPR (dB) |        |
|                                                               |                                                                                                                                                                                                        | 1.4 MHz                                         | 3.0 MHz | 5 MHz | 10 MHz | 15 MHz |          | 20 MHz |
|                                                               | QPSK                                                                                                                                                                                                   | > 5                                             | > 4     | > 8   | > 12   | > 16   | > 18     | ≤ 1    |
|                                                               | 16 QAM                                                                                                                                                                                                 | ≤ 5                                             | ≤ 4     | ≤ 8   | ≤ 12   | ≤ 16   | ≤ 18     | ≤ 1    |
|                                                               | 16 QAM                                                                                                                                                                                                 | > 5                                             | > 4     | > 8   | > 12   | > 16   | > 18     | ≤ 2    |
| LTE -MPR                                                      | In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI).         |                                                 |         |       |        |        |          |        |
| Spectrum plots for RB configuration                           | A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report. |                                                 |         |       |        |        |          |        |
| LTE Release Version                                           | R10                                                                                                                                                                                                    |                                                 |         |       |        |        |          |        |
| CA Supports                                                   | NO                                                                                                                                                                                                     |                                                 |         |       |        |        |          |        |



| Transmission (H, M, L) channel numbers and frequencies in each LTE band |                   |             |                 |             |                 |             |                  |             |                  |             |                  |             |
|-------------------------------------------------------------------------|-------------------|-------------|-----------------|-------------|-----------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|
| LTE Band 12                                                             |                   |             |                 |             |                 |             |                  |             |                  |             |                  |             |
|                                                                         | Bandwidth 1.4 MHz |             | Bandwidth 3 MHz |             | Bandwidth 5 MHz |             | Bandwidth 10 MHz |             |                  |             |                  |             |
|                                                                         | Ch. #             | Freq. (MHz) | Ch. #           | Freq. (MHz) | Ch. #           | Freq. (MHz) | Ch. #            | Freq. (MHz) | Ch. #            | Freq. (MHz) |                  |             |
| L                                                                       | 23017             | 699.7       | 23025           | 700.5       | 23035           | 701.5       | 23060            | 704         |                  |             |                  |             |
| M                                                                       | 23095             | 707.5       | 23095           | 707.5       | 23095           | 707.5       | 23095            | 707.5       |                  |             |                  |             |
| H                                                                       | 23173             | 715.3       | 23165           | 714.5       | 23155           | 713.5       | 23130            | 711         |                  |             |                  |             |
| LTE Band 4                                                              |                   |             |                 |             |                 |             |                  |             |                  |             |                  |             |
|                                                                         | Bandwidth 1.4 MHz |             | Bandwidth 3 MHz |             | Bandwidth 5 MHz |             | Bandwidth 10 MHz |             | Bandwidth 15 MHz |             | Bandwidth 20 MHz |             |
|                                                                         | Ch. #             | Freq. (MHz) | Ch. #           | Freq. (MHz) | Ch. #           | Freq. (MHz) | Ch. #            | Freq. (MHz) | Ch. #            | Freq. (MHz) | Ch. #            | Freq. (MHz) |
| L                                                                       | 19957             | 1710.7      | 19965           | 1711.5      | 19975           | 1712.5      | 20000            | 1715        | 20025            | 1717.5      | 20050            | 1720        |
| M                                                                       | 20175             | 1732.5      | 20175           | 1732.5      | 20175           | 1732.5      | 20175            | 1732.5      | 20175            | 1732.5      | 20175            | 1732.5      |
| H                                                                       | 20393             | 1754.3      | 20385           | 1753.5      | 20375           | 1752.5      | 20350            | 1750        | 20325            | 1747.5      | 20300            | 1745        |
| LTE Band 2                                                              |                   |             |                 |             |                 |             |                  |             |                  |             |                  |             |
|                                                                         | Bandwidth 1.4 MHz |             | Bandwidth 3 MHz |             | Bandwidth 5 MHz |             | Bandwidth 10 MHz |             | Bandwidth 15 MHz |             | Bandwidth 20 MHz |             |
|                                                                         | Ch. #             | Freq. (MHz) | Ch. #           | Freq. (MHz) | Ch. #           | Freq. (MHz) | Ch. #            | Freq. (MHz) | Ch. #            | Freq. (MHz) | Ch. #            | Freq. (MHz) |
| L                                                                       | 18607             | 1850.7      | 18615           | 1851.5      | 18625           | 1852.5      | 18650            | 1855        | 18675            | 1857.5      | 18700            | 1860        |
| M                                                                       | 18900             | 1880        | 18900           | 1880        | 18900           | 1880        | 18900            | 1880        | 18900            | 1880        | 18900            | 1880        |
| H                                                                       | 19193             | 1909.3      | 19185           | 1908.5      | 19175           | 1907.5      | 19150            | 1905        | 19125            | 1902.5      | 19100            | 1900        |
| LTE Band 5                                                              |                   |             |                 |             |                 |             |                  |             |                  |             |                  |             |
|                                                                         | Bandwidth 1.4 MHz |             | Bandwidth 3 MHz |             | Bandwidth 5 MHz |             | Bandwidth 10 MHz |             |                  |             |                  |             |
|                                                                         | Ch. #             | Freq. (MHz) | Ch. #           | Freq. (MHz) | Ch. #           | Freq. (MHz) | Ch. #            | Freq. (MHz) | Ch. #            | Freq. (MHz) |                  |             |
| L                                                                       | 20407             | 824.7       | 20415           | 825.5       | 20425           | 826.5       | 20450            | 829         |                  |             |                  |             |
| M                                                                       | 20525             | 836.5       | 20525           | 836.5       | 20525           | 836.5       | 20525            | 836.5       |                  |             |                  |             |
| H                                                                       | 20643             | 848.3       | 20635           | 847.5       | 20625           | 846.5       | 20600            | 844         |                  |             |                  |             |

## 4. 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



## **5. Radio Frequency Radiation Exposure Evaluation**

### **5.1. 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 <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | Power Density / Limit |
|---------------|-----------------|--------------------|---------------------|--------------------|------------------|-------------------|---------------------------------------------|-----------------------------|-----------------------|
| WCDMA Band V  | 826.4           | 1.0                | 25.0                | 26.000             | 0.398            | 398.107           | 0.079                                       | 0.551                       | 0.144                 |
| WCDMA Band II | 1852.4          | 4.0                | 25.0                | 29.000             | 0.794            | 794.328           | 0.158                                       | 1.000                       | 0.158                 |
| LTE Band 12   | 699.7           | 2.0                | 24.5                | 26.500             | 0.447            | 446.684           | 0.089                                       | 0.466                       | <b>0.191</b>          |
| LTE Band 5    | 824.7           | 1.0                | 24.0                | 25.000             | 0.316            | 316.228           | 0.063                                       | 0.550                       | 0.114                 |
| LTE Band 4    | 1710.7          | 4.0                | 24.5                | 28.500             | 0.708            | 707.946           | 0.141                                       | 1.000                       | 0.141                 |
| LTE Band 2    | 1850.7          | 4.0                | 24.0                | 28.000             | 0.631            | 630.957           | 0.126                                       | 1.000                       | 0.126                 |
| Bluetooth     | 2402.0          | 1.0                | 4.0                 | 5.000              | 0.003            | 3.162             | 0.001                                       | 1.000                       | 0.001                 |
| WLAN          | 2412.0          | 1.0                | 16.0                | 17.000             | 0.050            | 50.119            | 0.010                                       | 1.000                       | 0.010                 |

**Note:**

1. For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band
2. Chose the maximum power to do MPE analysis.

## 5.2. Collocated Power Density Calculation

| Mode      | Frequency        | Maximum EIRP (dBm) | Calculated Power Density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | Power Density / Limit | LTE Band 12 Power Density / Limit | $\Sigma$ (Power Density / Limit) of WWAN+ Bluetooth/ WWAN+ WLAN |
|-----------|------------------|--------------------|------------------------------------------------|-----------------------------|-----------------------|-----------------------------------|-----------------------------------------------------------------|
| Bluetooth | 2402MHz ~2480MHz | 5.000              | 0.001                                          | 1                           | 0.001                 | 0.191                             | 0.192                                                           |
| WLAN      | 2412MHz ~2462MHz | 17.000             | 0.010                                          | 1                           | 0.010                 |                                   | 0.201                                                           |

### Note:

1. For colocation analysis, LTE Band 12 is chosen for summation due to the highest (power density/limit) among all WWAN wireless modes.
2.  $\Sigma$ (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WWAN + Bluetooth, WWAN + WLAN.
3. Bluetooth and WLAN share the same antenna, and cannot transmit simultaneously.

### Conclusion:

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

-----THE END-----