

# FCC SAR Test Report

APPLICANT : Motorola Mobility LLC  
EQUIPMENT : Mobile Cellular Phone  
BRAND NAME : Motorola  
MODEL NAME : XT1925-3  
FCC ID : IHDT56XD6  
STANDARD : FCC 47 CFR Part 2 (2.1093)  
ANSI/IEEE C95.1-1992  
IEEE 1528-2013

We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures and had been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.



Approved by: Mark Qu / Manager



**Sporton International (Kunshan) Inc.**

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## Revision History

| REPORT NO.  | VERSION | DESCRIPTION             | ISSUED DATE   |
|-------------|---------|-------------------------|---------------|
| FA7D2507-02 | Rev. 01 | Initial issue of report | Feb. 09, 2018 |
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## 1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Motorola Mobility LLC, Mobile Cellular Phone, XT1925-3**, are as follows.

| Highest 1g SAR Summary  |                |                  |                                                     |                             |                               |                                                        |
|-------------------------|----------------|------------------|-----------------------------------------------------|-----------------------------|-------------------------------|--------------------------------------------------------|
| Equipment Class         | Frequency Band |                  | Head<br>(Separation 0mm)                            | Hotspot<br>(Separation 5mm) | Body-worn<br>(Separation 5mm) | Highest Simultaneous<br>Transmission<br>1g SAR (W/kg)  |
|                         |                |                  | 1g SAR (W/kg)                                       |                             |                               |                                                        |
| Licensed                | GSM            | GSM850           | 0.42                                                | 1.14                        | 1.14                          | 1.56                                                   |
|                         |                | GSM1900          | 0.15                                                | 1.07                        | 0.79                          |                                                        |
|                         | WCDMA          | Band V           | 0.44                                                | 0.94                        | 0.94                          |                                                        |
|                         |                | Band II          | 0.32                                                | 1.06                        | 0.68                          |                                                        |
|                         | LTE            | Band 5           | 0.36                                                | 1.05                        | 1.05                          |                                                        |
|                         |                | Band 7           | 0.86                                                | 0.96                        | 0.96                          |                                                        |
| DTS                     | WLAN           | 2.4GHz WLAN      | 0.74                                                | 0.43                        | 0.43                          | 1.47                                                   |
| NII                     |                | 5GHz WLAN        | 0.99                                                | 0.82                        | 0.85                          | 1.56                                                   |
| DSS                     | Bluetooth      | 2.4GHz Bluetooth |                                                     | 0.11                        | 0.11                          | 1.22                                                   |
| Highest 10g SAR Summary |                |                  |                                                     |                             |                               |                                                        |
| Equipment Class         | Frequency Band |                  | Product Specific 10g SAR (W/kg)<br>(Separation 0mm) |                             |                               | Highest Simultaneous<br>Transmission<br>10g SAR (W/kg) |
| Licensed                | GSM            | GSM1900          | 3.40                                                |                             |                               | 3.67                                                   |
|                         | WCDMA          | Band II          | 2.86                                                |                             |                               |                                                        |
|                         | LTE            | Band 7           | 1.11                                                |                             |                               |                                                        |
| NII                     | WLAN           | 5GHz WLAN        | 0.54                                                |                             |                               | 3.67                                                   |
| Date of Testing:        |                |                  | 2018/1/7–2018/1/20                                  |                             |                               |                                                        |

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

## 2. Administration Data

| Testing Laboratory |                                                                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Site          | Sporton International (Kunshan) Inc.                                                                                                             |
| Test Site Location | No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province<br>215335 China<br>TEL : +86-512-57900158<br>FAX : +86-512-57900958 |

| Applicant    |                                                    |
|--------------|----------------------------------------------------|
| Company Name | Motorola Mobility LLC                              |
| Address      | 222 W,Merchandise Mart Plaza, Chicago IL 60654 USA |

| Manufacturer |                                                     |
|--------------|-----------------------------------------------------|
| Company Name | Motorola Mobility LLC                               |
| Address      | 222 W, Merchandise Mart Plaza, Chicago IL 60654 USA |

## 3. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r03
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01

## 4. Equipment Under Test (EUT) Information

### 4.1 General Information

| Product Feature & Specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Mobile Cellular Phone                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Brand Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Motorola                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Model Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | XT1925-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| FCC ID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | IHDT56XD6                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Wireless Technology and Frequency Range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | GSM850: 824.2 MHz ~ 848.8 MHz<br>GSM1900: 1850.2 MHz ~ 1909.8 MHz<br>WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz<br>WCDMA Band V: 826.4 MHz ~ 846.6 MHz<br>LTE Band 5: 824.7 MHz ~ 848.3 MHz<br>LTE Band 7: 2502.5 MHz ~ 2567.5 MHz<br>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 ~ 5700 MHz<br>WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz<br>Bluetooth: 2402 MHz ~ 2480 MHz |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | GSM/GPRS/EGPRS<br>RMC/AMR 12.2Kbps<br>HSDPA<br>HSUPA<br>DC-HSDPA<br>HSPA+ (16QAM uplink is not supported)<br>LTE: QPSK, 16QAM, 64QAM<br>WLAN 2.4GHz 802.11b/g/n HT20<br>WLAN 5GHz 802.11a/n HT20/HT40<br>Bluetooth v3.0+EDR, Bluetooth v4.0 LE, Bluetooth v4.1 LE, Bluetooth v4.2 LE                                                                                                                                                                                          |
| HW Version                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DVT1-B                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| SW Version                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ali_n-userdebug 8.0.0 OPS27.55 1276 intcfg,test-keys                                                                                                                                                                                                                                                                                                                                                                                                                          |
| GSM / (E)GPRS Transfer mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.                                                                                                                                                                                                                                                                                                            |
| EUT Stage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Identical Prototype                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Remark:</b> <ol style="list-style-type: none"> <li>This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.</li> <li>This device 2.4GHz WLAN support hotspot operation and Bluetooth support tethering applications.</li> <li>This device 2.4GHz WLAN/5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WiFi Direct (GC/GO), and 5.3GHz / 5.5GHz supports WiFi Direct (GC only).</li> <li>This device does not support DTM operation and supports GRPS/EGRPS mode up to multi-slot class 12.</li> <li>When operating in any other radiated condition, the device uses the default power which is the same as full power level.</li> <li>The device employs proximity sensors that detect the presence of the user's body at the front or back faces of the device. When front or back body worn condition is detected, GSM1900, WCDMA band II and LTE band 7 reduced power will be active. (P-sensor can't work at detecting presence of the user's body at the four edges of the device.)</li> <li>When hotspot mode is enabled, power reduction will be activated to limit the maximum power of GSM1900, WCDMA band II, LTE band 7.</li> <li>This device hotspot reduced power and P-sensor reduced power level are the same. So only show one reduced power level for hotspot reduced power and P-sensor reduced power for this application.</li> <li>P-sensor can detect handheld state, for product specific 10g SAR condition, GSM1900, WCDMA band II reduced powers will be active. For LTE band 7, the power level is the same as the full power.</li> <li>When the phone is in talking mode and receiver worked, then power reduction will be implemented immediately at WLAN5.2/5.3GHz.</li> <li>This device has three WWAN transmitter antennas. WWAN antenna 1 is located at the middle of bottom edge of the device, WWAN antenna 2 is located at the right side of bottom edge of the device, and WWAN antenna 3 is located at the left side of bottom edge of the device which can refer to antenna location chapter. WWAN antenna 1 frequency bands include GSM850/1900, WCDMA Band II /V, LTE band 5, WWAN antenna 2 frequency band only includes LTE band 7 and WWAN antenna 3 frequency band also only includes LTE band 7.</li> </ol> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



12. The device is capable of switching between the WWAN antenna 2 and WWAN antenna 3 based on signal strength. When WWAN antenna 2 acted as a transmitter, then WWAN antenna 3 acted as a receiver. The same as the reversed.
13. This device implements antenna tuning techniques for several WWAN (cellular) operating modes and frequencies for the purpose of improving antenna efficiency over a broad range of frequencies. Specifically, these techniques are employed in the GSM, WCDMA and LTE modes of WWAN antenna 1.
14. This is a variant report for XT1925-3. Based on the similarity between two models, WWAN bands and WLAN 2.4GHz /BT were leveraged from reference test report (Sporton Report Number FA7D2507 as Appendix A) and WLAN 5GHz were leveraged from reference test report (Sporton Report Number FA7D2507-03 as Appendix A)

## 4.2 General LTE SAR Test and Reporting Considerations

| Summarized necessary items addressed in KDB 941225 D05 v02r05 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                               |         |       |        |        |        |          |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------|-------|--------|--------|--------|----------|
| FCC ID                                                        | IHDT56XD6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                               |         |       |        |        |        |          |
| Equipment Name                                                | Mobile Cellular Phone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                               |         |       |        |        |        |          |
| Operating Frequency Range of each LTE transmission band       | LTE Band 5: 824.7 MHz ~ 848.3 MHz<br>LTE Band 7: 2502.5 MHz ~ 2567.5 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                               |         |       |        |        |        |          |
| Channel Bandwidth                                             | LTE Band 5:1.4MHz, 3MHz, 5MHz, 10MHz<br>LTE Band 7: 5MHz, 10MHz, 15MHz, 20MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                               |         |       |        |        |        |          |
| Uplink Modulations Used                                       | QPSK and 16QAM and 64QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                               |         |       |        |        |        |          |
| LTE Voice / Data requirements                                 | Voice and Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                               |         |       |        |        |        |          |
| LTE Release Version                                           | R8, Cat4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                               |         |       |        |        |        |          |
| CA Support                                                    | Not Supported                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                               |         |       |        |        |        |          |
| LTE MPR permanently built-in by design                        | Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                               |         |       |        |        |        |          |
|                                                               | Modulation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Channel bandwidth / Transmission bandwidth (N <sub>RB</sub> ) |         |       |        |        |        | 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      |
|                                                               | 64 QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | ≤ 5                                                           | ≤ 4     | ≤ 8   | ≤ 12   | ≤ 16   | ≤ 18   | ≤ 2      |
|                                                               | 64 QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | > 5                                                           | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 3      |
|                                                               | 256 QAM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ≥ 1                                                           |         |       |        |        |        | ≤ 5      |
| LTE A-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.                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                               |         |       |        |        |        |          |
| Power reduction applied to satisfy SAR compliance             | Yes<br>1. When hotspot mode is enabled, power reduction will be activated to limit the maximum power of LTE band /7.<br>2. The device employs proximity sensors that detect the presence of the user's body at the front or back faces of the device. When front or back body worn condition is detected LTE band /7 reduced power will be active. (P-sensor can't work at detecting presence of the user's body at the four edges of the device.)<br>3. P-sensor can detect handheld state, for product specific 10g SAR condition LTE band 7 reduced powers will be active, the power levels are the same as the full power. |                                                               |         |       |        |        |        |          |

| Transmission (H, M, L) channel numbers and frequencies in each LTE band |                   |             |                  |             |                  |             |                  |             |
|-------------------------------------------------------------------------|-------------------|-------------|------------------|-------------|------------------|-------------|------------------|-------------|
| 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) |
| 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         |
| LTE Band 7                                                              |                   |             |                  |             |                  |             |                  |             |
|                                                                         | Bandwidth 5 MHz   |             | Bandwidth 10 MHz |             | Bandwidth 15 MHz |             | Bandwidth 20 MHz |             |
|                                                                         | Ch. #             | Freq. (MHz) | Ch. #            | Freq. (MHz) | Ch. #            | Freq. (MHz) | Ch. #            | Freq. (MHz) |
| L                                                                       | 20775             | 2502.5      | 20800            | 2505        | 20825            | 2507.5      | 20850            | 2510        |
| M                                                                       | 21100             | 2535        | 21100            | 2535        | 21100            | 2535        | 21100            | 2535        |
| H                                                                       | 21425             | 2567.5      | 21400            | 2565        | 21375            | 2562.5      | 21350            | 2560        |

## **5. Re-use of Measured Data**

### **5.1 Introduction Section**

This application re-uses data collected on a similar device. The subject device of this application (Model: XT1925-3, FCC ID: IHDT56XD6) is electrically identical to the reference device (Model: XT1925-6, XT1925-12, XT1925DL, FCC ID: IHDT56XD1 for WWAN Bands, WLAN 2.4GHz, Bluetooth and Model: XT1925-2, XT1925-1, FCC ID: IHDT56XD5 for WLAN 5GHz) for the portions of the circuitry corresponding to the data being re-used, as treated by KDB Publication 178919 D01.

### **5.2 Difference Section**

The re-used RF data includes the following bands provided in Appendix A

- a. Sporton SAR Report No. FA7D2507 for the reference device Model: XT1925-6, XT1925-12, XT1925DL, FCC ID: IHDT56XD1 for WWAN Bands, WLAN 2.4GHz, Bluetooth.
  - GSM850/1900
  - WCDMA Band V/II
  - LTE Band 5/7
  - WLAN/Bluetooth
- b. Sporton SAR Report No. FA7D2507-03 for the reference device XT1925-2, XT1925-1, FCC ID: IHDT56XD5 for WLAN 5GHz.
  - WLAN 5GHz

Spot check for WWAN and BT/WLAN are performed for ensure that SAR measurement for both device are the same. So, the original SAR value can represent this application.



### 5.3 Spot Check Verification Data Section

| Band          | BW (MHz) | Modulation | RB Size | RB Offset | Mode            | Test Position | Gap (mm) | Power Mode | Ch.   | Freq. (MHz) | Original model (FCC ID: IHDT56XD1) |                     |                        |                        | Spot check model (FCC ID: IHDT56XD6) |                     |                        |                        | Deviation |
|---------------|----------|------------|---------|-----------|-----------------|---------------|----------|------------|-------|-------------|------------------------------------|---------------------|------------------------|------------------------|--------------------------------------|---------------------|------------------------|------------------------|-----------|
|               |          |            |         |           |                 |               |          |            |       |             | Average Power (dBm)                | Tune-Up Limit (dBm) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) | Average Power (dBm)                  | Tune-Up Limit (dBm) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |           |
| GSM850        | -        | -          | -       | -         | GPRS 2 Tx slots | Front         | 5        | Full       | 251   | 848.8       | 30.85                              | 31.5                | 0.983                  | 1.142                  | 30.85                                | 31.5                | 0.965                  | 1.121                  | -1.84%    |
| GSM1900       | -        | -          | -       | -         | GPRS 2 Tx slots | Bottom Side   | 5        | Hotspot On | 810   | 1909.8      | 24.13                              | 24.50               | 0.985                  | 1.073                  | 24.13                                | 24.50               | 0.885                  | 0.964                  | -10.16%   |
| WCDMA Band V  | -        | -          | -       | -         | RMC 12.2Kbps    | Front         | 5        | Full       | 4233  | 846.6       | 22.43                              | 24.00               | 0.655                  | 0.940                  | 22.43                                | 24.00               | 0.630                  | 0.904                  | -3.83%    |
| WCDMA Band II | -        | -          | -       | -         | RMC 12.2Kbps    | Bottom Side   | 5        | Hotspot On | 9538  | 1907.6      | 16.10                              | 16.50               | 0.967                  | 1.060                  | 16.10                                | 16.50               | 0.830                  | 0.910                  | -14.15%   |
| LTE Band 26   | 15M      | QPSK       | 1       | 74        |                 | Front         | 5        | Full       | 26865 | 831.5       | 23.82                              | 24                  | 1.010                  | 1.053                  |                                      |                     |                        |                        |           |
| LTE Band 5    | 10M      | QPSK       | 1       | 49        |                 | Front         | 5        | Full       | 20600 | 836.5       |                                    |                     |                        |                        | 23.42                                | 24.00               | 0.850                  | 0.971                  | -7.79%    |
| LTE Band 7    | 20M      | QPSK       | 1       | 0         |                 | Front         | 5        | Hotspot On | 20850 | 2510        | 18.25                              | 18.50               | 0.907                  | 0.961                  | 18.25                                | 18.50               | 0.758                  | 0.803                  | -16.44%   |
| WLAN2.4GHz    | -        | -          | -       | -         | 802.11b 1Mbps   | Left Tilted   | 0        | Full       | 6     | 2437        | 17.44                              | 18.00               | 0.637                  | 0.740                  | 17.44                                | 18.00               | 0.518                  | 0.602                  | -18.65%   |
| Bluetooth     |          |            |         |           | 1Mbps           | Back          | 5        | Full       | 39    | 2441        | 11.63                              | 12.00               | 0.093                  | 0.110                  | 11.63                                | 12.00               | 0.085                  | 0.1                    | -9.09%    |

**Note:** In the table above, all the deviation of SAR test results are compliant with uncertainty budget.

| Band        | BW (MHz) | Modulation | RB Size | RB Offset | Mode          | Test Position | Gap (mm) | Power Mode  | Ch. | Freq. (MHz) | Original model (FCC ID: IHDT56XD5) |                     |                        |                        | Spot check model (FCC ID: IHDT56XD6) |                     |                        |                        | Deviation |
|-------------|----------|------------|---------|-----------|---------------|---------------|----------|-------------|-----|-------------|------------------------------------|---------------------|------------------------|------------------------|--------------------------------------|---------------------|------------------------|------------------------|-----------|
|             |          |            |         |           |               |               |          |             |     |             | Average Power (dBm)                | Tune-Up Limit (dBm) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) | Average Power (dBm)                  | Tune-Up Limit (dBm) | Measured 1g SAR (W/kg) | Reported 1g SAR (W/kg) |           |
| WLAN5.3GHz  | -        | -          | -       | -         | 802.11a 6Mbps | Left Cheek    | 0        | Receiver On | 52  | 5260        | 12.54                              | 13.00               | 0.781                  | 0.993                  | 12.54                                | 13.00               | 0.68                   | 0.865                  | -12.89%   |
| WLAN5.5GHz  | -        | -          | -       | -         | 802.11a 6Mbps | Left Cheek    | 0        | Full        | 124 | 5620        | 14.94                              | 15.5                | 0.686                  | 0.893                  | 14.94                                | 15.5                | 0.65                   | 0.846                  | -5.26%    |
| WLAN 5.8GHz | -        | -          | -       | -         | 802.11a 6Mbps | Back          | 5        | Full        | 157 | 5785        | 15.31                              | 15.5                | 0.517                  | 0.618                  | 15.31                                | 15.5                | 0.489                  | 0.584                  | -5.50%    |

### 5.4 Reference detail Section

| Reference FCC ID | Folder Test/RF Exposure  | Report Title/Section                                         |
|------------------|--------------------------|--------------------------------------------------------------|
| IHDT56XD1        | RF Exposure(FA7D2507)    | All sections applicable (WWAN Bands, WLAN 2.4GHz, Bluetooth) |
| IHDT56XD5        | RF Exposure(FA7D2507-03) | All sections applicable WLAN 5GHz                            |

## 6. Simultaneous Transmission Analysis

| No. | Simultaneous Transmission Configurations | Portable Handset |           |         |                          | Note                       |
|-----|------------------------------------------|------------------|-----------|---------|--------------------------|----------------------------|
|     |                                          | Head             | Body-worn | Hotspot | Product specific 10g SAR |                            |
| 1.  | GSM Voice + WLAN2.4GHz                   | Yes              | Yes       |         |                          |                            |
| 2.  | GPRS/EDGE + WLAN2.4GHz                   | Yes              | Yes       | Yes     | Yes                      | WLAN Hotspot               |
| 3.  | WCDMA + WLAN2.4GHz                       | Yes              | Yes       | Yes     | Yes                      | WLAN Hotspot               |
| 4.  | LTE + WLAN2.4GHz                         | Yes              | Yes       | Yes     | Yes                      | WLAN Hotspot               |
| 5.  | GSM Voice + WLAN5.3/5.5GHz               | Yes              | Yes       |         |                          |                            |
| 6.  | GPRS/EDGE + WLAN5.3/5.5GHz               | Yes              | Yes       |         | Yes                      | WLAN Direct (GC only)      |
| 7.  | WCDMA + WLAN5.3/5.5GHz                   | Yes              | Yes       |         | Yes                      | WLAN Direct (GC only)      |
| 8.  | LTE + WLAN5.3/5.5GHz                     | Yes              | Yes       |         | Yes                      | WLAN Direct (GC only)      |
| 9.  | GSM Voice + WLAN5.2/5.8GHz               | Yes              | Yes       |         |                          |                            |
| 10. | GPRS/EDGE + WLAN5.2/5.8GHz               | Yes              | Yes       | Yes     | Yes                      | WLAN Hotspot/Direct(GC/GO) |
| 11. | WCDMA + WLAN5.2/5.8GHz                   | Yes              | Yes       | Yes     | Yes                      | WLAN Hotspot/Direct(GC/GO) |
| 12. | LTE + WLAN5.2/5.8GHz                     | Yes              | Yes       | Yes     | Yes                      | WLAN Hotspot/Direct(GC/GO) |
| 13. | GSM Voice + Bluetooth                    |                  | Yes       |         |                          |                            |
| 14. | GPRS/EDGE + Bluetooth                    |                  | Yes       | Yes     | Yes                      | BT Tethering               |
| 15. | WCDMA + Bluetooth                        |                  | Yes       | Yes     | Yes                      | BT Tethering               |
| 16. | LTE + Bluetooth                          |                  | Yes       | Yes     | Yes                      | BT Tethering               |

**General Note:**

- This device supports VoIP in GPRS, EGPRS, WCDMA and LTE (e.g. for 3rd-party VoIP), LTE supports VoLTE operation.
- EUT will choose each GSM, WCDMA, and LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
- This device WLAN 2.4GHz supports hotspot operation and Bluetooth support tethering applications.
- This device 2.4GHz WLAN/ 5.2GHz WLAN/5.8GHz WLAN support hotspot operation, and 5.2GHz WLAN/5.8GHz WLAN supports WLAN Direct (GC/GO), and 5.3GHz / 5.5GHz supports WLAN Direct (GC only).
- EUT will choose either WLAN 2.4GHz or WLAN 5GHz according to the network signal condition; therefore, 2.4GHz WLAN and 5GHz WLAN will not operate simultaneously at any moment though they have independent antenna.
- WLAN 2.4GHz and Bluetooth share the same antenna so can't transmit simultaneously.
- According to the EUT character, WLAN 5GHz and Bluetooth can't transmit simultaneously.
- Chose the worst zoom scan SAR of WLAN correspondingly for co-located with WWAN analysis.
- The reported SAR summation is calculated based on the same configuration and test position.
- Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
  - Scalar 1g SAR summation < 1.6W/kg and 10g Scalar SAR summation < 4.0W/kg.
  - $SPLSR = (SAR1 + SAR2)^{1.5} / (\min. \text{ separation distance, mm})$ , and the peak separation distance is determined from the square root of  $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$ , where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
  - If  $SPLSR \leq 0.04$  for 1g SAR,  $SPLSR \leq 0.10$  for 10g SAR simultaneously transmission SAR measurement is not necessary.
  - Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg and 10g SAR < 4.0W/kg.
  - The SPLSR calculated results please refer to section 6.5.

## 6.1 Head Exposure Conditions

| WWAN Band |         | Exposure Position | 1    |                  | 2                | 3                | 1+2<br>Summed<br>1g SAR<br>(W/kg) | 1+3<br>Summed<br>1g SAR<br>(W/kg) |
|-----------|---------|-------------------|------|------------------|------------------|------------------|-----------------------------------|-----------------------------------|
|           |         |                   | WWAN |                  | 2.4GHz WLAN      | 5GHz WLAN        |                                   |                                   |
|           |         |                   | Ant. | 1g SAR<br>(W/kg) | 1g SAR<br>(W/kg) | 1g SAR<br>(W/kg) |                                   |                                   |
| GSM       | GSM850  | Right Cheek       | 1    | 0.418            | 0.740            | 0.721            | 1.16                              | 1.14                              |
|           |         | Right Tilted      | 1    | 0.263            | 0.740            | 0.758            | 1.00                              | 1.02                              |
|           |         | Left Cheek        | 1    | 0.327            | 0.472            | 0.993            | 0.80                              | 1.32                              |
|           |         | Left Tilted       | 1    | 0.223            | 0.740            | 0.830            | 0.96                              | 1.05                              |
|           | GSM1900 | Right Cheek       | 1    | 0.151            | 0.740            | 0.721            | 0.89                              | 0.87                              |
|           |         | Right Tilted      | 1    | 0.068            | 0.740            | 0.758            | 0.81                              | 0.83                              |
|           |         | Left Cheek        | 1    | 0.134            | 0.472            | 0.993            | 0.61                              | 1.13                              |
|           |         | Left Tilted       | 1    | 0.063            | 0.740            | 0.830            | 0.80                              | 0.89                              |
| WCDMA     | Band V  | Right Cheek       | 1    | 0.440            | 0.740            | 0.721            | 1.18                              | 1.16                              |
|           |         | Right Tilted      | 1    | 0.309            | 0.740            | 0.758            | 1.05                              | 1.07                              |
|           |         | Left Cheek        | 1    | 0.344            | 0.472            | 0.993            | 0.82                              | 1.34                              |
|           |         | Left Tilted       | 1    | 0.266            | 0.740            | 0.830            | 1.01                              | 1.10                              |
|           | Band II | Right Cheek       | 1    | 0.308            | 0.740            | 0.721            | 1.05                              | 1.03                              |
|           |         | Right Tilted      | 1    | 0.156            | 0.740            | 0.758            | 0.90                              | 0.91                              |
|           |         | Left Cheek        | 1    | 0.319            | 0.472            | 0.993            | 0.79                              | 1.31                              |
|           |         | Left Tilted       | 1    | 0.139            | 0.740            | 0.830            | 0.88                              | 0.97                              |

| WWAN Band |        | Exposure Position | 1    |                  | 2                | 3                | 1+2                        |       |         | 1+3                        |       |         |
|-----------|--------|-------------------|------|------------------|------------------|------------------|----------------------------|-------|---------|----------------------------|-------|---------|
|           |        |                   | WWAN |                  | 2.4GHz WLAN      | 5GHz WLAN        | Summed<br>1g SAR<br>(W/kg) | SPLSR | Case No | Summed<br>1g SAR<br>(W/kg) | SPLSR | Case No |
|           |        |                   | Ant. | 1g SAR<br>(W/kg) | 1g SAR<br>(W/kg) | 1g SAR<br>(W/kg) |                            |       |         |                            |       |         |
| LTE       | Band 5 | Right Cheek       | 1    | 0.360            | 0.740            | 0.721            | 1.10                       |       |         | 1.08                       |       |         |
|           |        | Right Tilted      | 1    | 0.198            | 0.740            | 0.758            | 0.94                       |       |         | 0.96                       |       |         |
|           |        | Left Cheek        | 1    | 0.275            | 0.472            | 0.993            | 0.75                       |       |         | 1.27                       |       |         |
|           |        | Left Tilted       | 1    | 0.189            | 0.740            | 0.830            | 0.93                       |       |         | 1.02                       |       |         |
|           | Band 7 | Right Cheek       | 2    | 0.427            | 0.740            | 0.721            | 1.17                       |       |         | 1.15                       |       |         |
|           |        | Right Tilted      | 2    | 0.311            | 0.740            | 0.758            | 1.05                       |       |         | 1.07                       |       |         |
|           |        | Left Cheek        | 2    | 0.864            | 0.472            | 0.993            | 1.34                       |       |         | 1.86                       | 0.03  | #1      |
|           |        | Left Tilted       | 2    | 0.195            | 0.740            | 0.830            | 0.94                       |       |         | 1.03                       |       |         |
|           |        | Right Cheek       | 3    | 0.724            | 0.740            | 0.721            | 1.46                       |       |         | 1.45                       |       |         |
|           |        | Right Tilted      | 3    | 0.187            | 0.740            | 0.758            | 0.93                       |       |         | 0.95                       |       |         |
|           |        | Left Cheek        | 3    | 0.340            | 0.472            | 0.993            | 0.81                       |       |         | 1.33                       |       |         |
|           |        | Left Tilted       | 3    | 0.241            | 0.740            | 0.830            | 0.98                       |       |         | 1.07                       |       |         |



## 6.2 Hotspot Exposure Conditions

| WWAN Band |         | Exposure Position | 1    |               | 2             | 3             | 4             | 1+2                  |       |         | 1+3                  |       |         | 1+4                  |       |         |
|-----------|---------|-------------------|------|---------------|---------------|---------------|---------------|----------------------|-------|---------|----------------------|-------|---------|----------------------|-------|---------|
|           |         |                   | WWAN |               | 2.4GHz WLAN   | 5GHz WLAN     | Bluetooth     | Summed 1g SAR (W/kg) | SPLSR | Case No | Summed 1g SAR (W/kg) | SPLSR | Case No | Summed 1g SAR (W/kg) | SPLSR | Case No |
|           |         |                   | Ant. | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) |                      |       |         |                      |       |         |                      |       |         |
| GSM       | GSM850  | Front             | 1    | 1.142         | 0.171         | 0.493         | 0.078         | 1.31                 |       |         | 1.64                 | 0.01  | #2      | 1.22                 |       |         |
|           |         | Back              | 1    | 0.929         | 0.427         | 0.817         | 0.110         | 1.36                 |       |         | 1.75                 | 0.01  | #3      | 1.04                 |       |         |
|           |         | Left Side         | 1    | 0.400         |               |               |               | 0.40                 |       |         | 0.40                 |       |         | 0.40                 |       |         |
|           |         | Right Side        | 1    | 0.646         | 0.427         | 0.161         | 0.018         | 1.07                 |       |         | 0.81                 |       |         | 0.66                 |       |         |
|           |         | Top Side          | 1    |               | 0.427         | 0.304         | 0.072         | 0.43                 |       |         | 0.30                 |       |         | 0.07                 |       |         |
|           |         | Bottom Side       | 1    | 0.553         |               |               |               | 0.55                 |       |         | 0.55                 |       |         | 0.55                 |       |         |
|           | GSM1900 | Front             | 1    | 0.785         | 0.171         | 0.493         | 0.078         | 0.96                 |       |         | 1.28                 |       |         | 0.86                 |       |         |
|           |         | Back              | 1    | 0.645         | 0.427         | 0.817         | 0.110         | 1.07                 |       |         | 1.46                 |       |         | 0.76                 |       |         |
|           |         | Left Side         | 1    | 0.110         |               |               |               | 0.11                 |       |         | 0.11                 |       |         | 0.11                 |       |         |
|           |         | Right Side        | 1    | 0.032         | 0.427         | 0.161         | 0.018         | 0.46                 |       |         | 0.19                 |       |         | 0.05                 |       |         |
|           |         | Top Side          | 1    |               | 0.427         | 0.304         | 0.072         | 0.43                 |       |         | 0.30                 |       |         | 0.07                 |       |         |
|           |         | Bottom Side       | 1    | 1.073         |               |               |               | 1.07                 |       |         | 1.07                 |       |         | 1.07                 |       |         |
| WCDMA     | Band V  | Front             | 1    | 0.940         | 0.171         | 0.493         | 0.078         | 1.11                 |       |         | 1.43                 |       |         | 1.02                 |       |         |
|           |         | Back              | 1    | 0.553         | 0.427         | 0.817         | 0.110         | 0.98                 |       |         | 1.37                 |       |         | 0.66                 |       |         |
|           |         | Left Side         | 1    | 0.262         |               |               |               | 0.26                 |       |         | 0.26                 |       |         | 0.26                 |       |         |
|           |         | Right Side        | 1    | 0.539         | 0.427         | 0.161         | 0.018         | 0.97                 |       |         | 0.70                 |       |         | 0.56                 |       |         |
|           |         | Top Side          | 1    |               | 0.427         | 0.304         | 0.072         | 0.43                 |       |         | 0.30                 |       |         | 0.07                 |       |         |
|           |         | Bottom Side       | 1    | 0.464         |               |               |               | 0.46                 |       |         | 0.46                 |       |         | 0.46                 |       |         |
|           | Band II | Front             | 1    | 0.675         | 0.171         | 0.493         | 0.078         | 0.85                 |       |         | 1.17                 |       |         | 0.75                 |       |         |
|           |         | Back              | 1    | 0.549         | 0.427         | 0.817         | 0.110         | 0.98                 |       |         | 1.37                 |       |         | 0.66                 |       |         |
|           |         | Left Side         | 1    | 0.100         |               |               |               | 0.10                 |       |         | 0.10                 |       |         | 0.10                 |       |         |
|           |         | Right Side        | 1    | 0.029         | 0.427         | 0.161         | 0.018         | 0.46                 |       |         | 0.19                 |       |         | 0.05                 |       |         |
|           |         | Top Side          | 1    |               | 0.427         | 0.304         | 0.072         | 0.43                 |       |         | 0.30                 |       |         | 0.07                 |       |         |
|           |         | Bottom Side       | 1    | 1.060         |               |               |               | 1.06                 |       |         | 1.06                 |       |         | 1.06                 |       |         |

| WWAN Band |        | Exposure Position | 1    |               | 2             | 3             | 4             | 1+2                  |       |         | 1+3                  |       |         | 1+4                  |       |         |
|-----------|--------|-------------------|------|---------------|---------------|---------------|---------------|----------------------|-------|---------|----------------------|-------|---------|----------------------|-------|---------|
|           |        |                   | WWAN |               | 2.4GHz WLAN   | 5GHz WLAN     | Bluetooth     | Summed 1g SAR (W/kg) | SPLSR | Case No | Summed 1g SAR (W/kg) | SPLSR | Case No | Summed 1g SAR (W/kg) | SPLSR | Case No |
|           |        |                   | Ant. | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) |                      |       |         |                      |       |         |                      |       |         |
| LTE       | Band 5 | Front             | 1    | 1.053         | 0.171         | 0.493         | 0.078         | 1.22                 |       |         | 1.55                 |       |         | 1.13                 |       |         |
|           |        | Back              | 1    | 1.042         | 0.427         | 0.817         | 0.110         | 1.47                 |       |         | 1.86                 | 0.02  | #4      | 1.15                 |       |         |
|           |        | Left Side         | 1    | 0.260         |               |               |               | 0.26                 |       |         | 0.26                 |       |         | 0.26                 |       |         |
|           |        | Right Side        | 1    | 0.651         | 0.427         | 0.161         | 0.018         | 1.08                 |       |         | 0.81                 |       |         | 0.67                 |       |         |
|           |        | Top Side          | 1    |               | 0.427         | 0.304         | 0.072         | 0.43                 |       |         | 0.30                 |       |         | 0.07                 |       |         |
|           |        | Bottom Side       | 1    | 0.697         |               |               |               | 0.70                 |       |         | 0.70                 |       |         | 0.70                 |       |         |
|           | Band 7 | Front             | 2    | 0.833         | 0.171         | 0.493         | 0.078         | 1.00                 |       |         | 1.33                 |       |         | 0.91                 |       |         |
|           |        | Back              | 2    | 0.621         | 0.427         | 0.817         | 0.110         | 1.05                 |       |         | 1.44                 |       |         | 0.73                 |       |         |
|           |        | Left Side         | 2    | 0.526         |               |               |               | 0.53                 |       |         | 0.53                 |       |         | 0.53                 |       |         |
|           |        | Right Side        | 2    |               | 0.427         | 0.161         | 0.018         | 0.43                 |       |         | 0.16                 |       |         | 0.02                 |       |         |
|           |        | Top Side          | 2    |               | 0.427         | 0.304         | 0.072         | 0.43                 |       |         | 0.30                 |       |         | 0.07                 |       |         |
|           |        | Bottom Side       | 2    | 0.100         |               |               |               | 0.10                 |       |         | 0.10                 |       |         | 0.10                 |       |         |
|           |        | Front             | 3    | 0.961         | 0.171         | 0.493         | 0.078         | 1.13                 |       |         | 1.45                 |       |         | 1.04                 |       |         |
|           |        | Back              | 3    | 0.664         | 0.427         | 0.817         | 0.110         | 1.09                 |       |         | 1.48                 |       |         | 0.77                 |       |         |
|           |        | Right Side        | 3    | 0.562         | 0.427         | 0.161         | 0.018         | 0.99                 |       |         | 0.72                 |       |         | 0.58                 |       |         |
|           |        | Top Side          | 3    |               | 0.427         | 0.304         | 0.072         | 0.43                 |       |         | 0.30                 |       |         | 0.07                 |       |         |
|           |        | Bottom Side       | 3    | 0.069         |               |               |               | 0.07                 |       |         | 0.07                 |       |         | 0.07                 |       |         |

### 6.3 Body-Worn Accessory Exposure Conditions

| WWAN Band |         | Exposure Position | 1    |               | 2             | 3             | 4             | 1+2                  |       |         | 1+3                  |       |         | 1+4                  |       |         |
|-----------|---------|-------------------|------|---------------|---------------|---------------|---------------|----------------------|-------|---------|----------------------|-------|---------|----------------------|-------|---------|
|           |         |                   | WWAN |               | 2.4GHz WLAN   | 5GHz WLAN     | Bluetooth     | Summed 1g SAR (W/kg) | SPLSR | Case No | Summed 1g SAR (W/kg) | SPLSR | Case No | Summed 1g SAR (W/kg) | SPLSR | Case No |
|           |         |                   | Ant. | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) | 1g SAR (W/kg) |                      |       |         |                      |       |         |                      |       |         |
| GSM       | GSM850  | Front             | 1    | 1.142         | 0.171         | 0.511         | 0.078         | 1.31                 |       |         | 1.65                 | 0.01  | #5      | 1.22                 |       |         |
|           |         | Back              | 1    | 0.929         | 0.427         | 0.849         | 0.110         | 1.36                 |       |         | 1.78                 | 0.02  | #6      | 1.04                 |       |         |
|           | GSM1900 | Front             | 1    | 0.785         | 0.171         | 0.511         | 0.078         | 0.96                 |       |         | 1.30                 |       |         | 0.86                 |       |         |
|           |         | Back              | 1    | 0.645         | 0.427         | 0.849         | 0.110         | 1.07                 |       |         | 1.49                 |       |         | 0.76                 |       |         |
| WCDMA     | Band V  | Front             | 1    | 0.940         | 0.171         | 0.511         | 0.078         | 1.11                 |       |         | 1.45                 |       |         | 1.02                 |       |         |
|           |         | Back              | 1    | 0.553         | 0.427         | 0.849         | 0.110         | 0.98                 |       |         | 1.40                 |       |         | 0.66                 |       |         |
|           | Band II | Front             | 1    | 0.675         | 0.171         | 0.511         | 0.078         | 0.85                 |       |         | 1.19                 |       |         | 0.75                 |       |         |
|           |         | Back              | 1    | 0.549         | 0.427         | 0.849         | 0.110         | 0.98                 |       |         | 1.40                 |       |         | 0.66                 |       |         |
| LTE       | Band 5  | Front             | 1    | 1.053         | 0.171         | 0.511         | 0.078         | 1.22                 |       |         | 1.56                 |       |         | 1.13                 |       |         |
|           |         | Back              | 1    | 1.042         | 0.427         | 0.849         | 0.110         | 1.47                 |       |         | 1.89                 | 0.02  | #7      | 1.15                 |       |         |
|           | Band 7  | Front             | 2    | 0.833         | 0.171         | 0.511         | 0.078         | 1.00                 |       |         | 1.34                 |       |         | 0.91                 |       |         |
|           |         | Back              | 2    | 0.621         | 0.427         | 0.849         | 0.110         | 1.05                 |       |         | 1.47                 |       |         | 0.73                 |       |         |
|           |         | Front             | 3    | 0.961         | 0.171         | 0.511         | 0.078         | 1.13                 |       |         | 1.47                 |       |         | 1.04                 |       |         |
|           |         | Back              | 3    | 0.664         | 0.427         | 0.849         | 0.110         | 1.09                 |       |         | 1.51                 |       |         | 0.77                 |       |         |

**6.4 Product specific 10g SAR Exposure Conditions**

| WWAN Band |         | Exposure Position | 1           |                | 2              | 1+2                   |       |         |
|-----------|---------|-------------------|-------------|----------------|----------------|-----------------------|-------|---------|
|           |         |                   | WWAN Bottom |                | 5GHz WLAN      | Summed 10g SAR (W/kg) | SPLSR | Case No |
|           |         |                   | Ant.        | 10g SAR (W/kg) | 10g SAR (W/kg) |                       |       |         |
| GSM       | GSM1900 | Front             | 1           | 3.131          | 0.536          | 3.67                  |       |         |
|           |         | Back              | 1           | 2.582          | 0.536          | 3.12                  |       |         |
|           |         | Bottom Side       | 1           | 3.403          |                | 3.40                  |       |         |
|           | Band II | Front             | 1           | 2.446          | 0.536          | 2.98                  |       |         |
|           |         | Back              | 1           | 1.886          | 0.536          | 2.42                  |       |         |
|           |         | Bottom Side       | 1           | 2.861          |                | 2.86                  |       |         |
| LTE       | Band 7  | Front             | 2           | 1.092          | 0.536          | 1.63                  |       |         |
|           |         | Back              | 2           | 1.033          | 0.536          | 1.57                  |       |         |
|           |         | Left Side         | 2           | 0.975          |                | 0.98                  |       |         |
|           |         | Front             | 3           | 1.004          | 0.536          | 1.54                  |       |         |
|           |         | Back              | 3           | 1.108          | 0.536          | 1.64                  |       |         |
|           |         | Right Side        | 3           | 0.824          | 0.536          | 1.36                  |       |         |

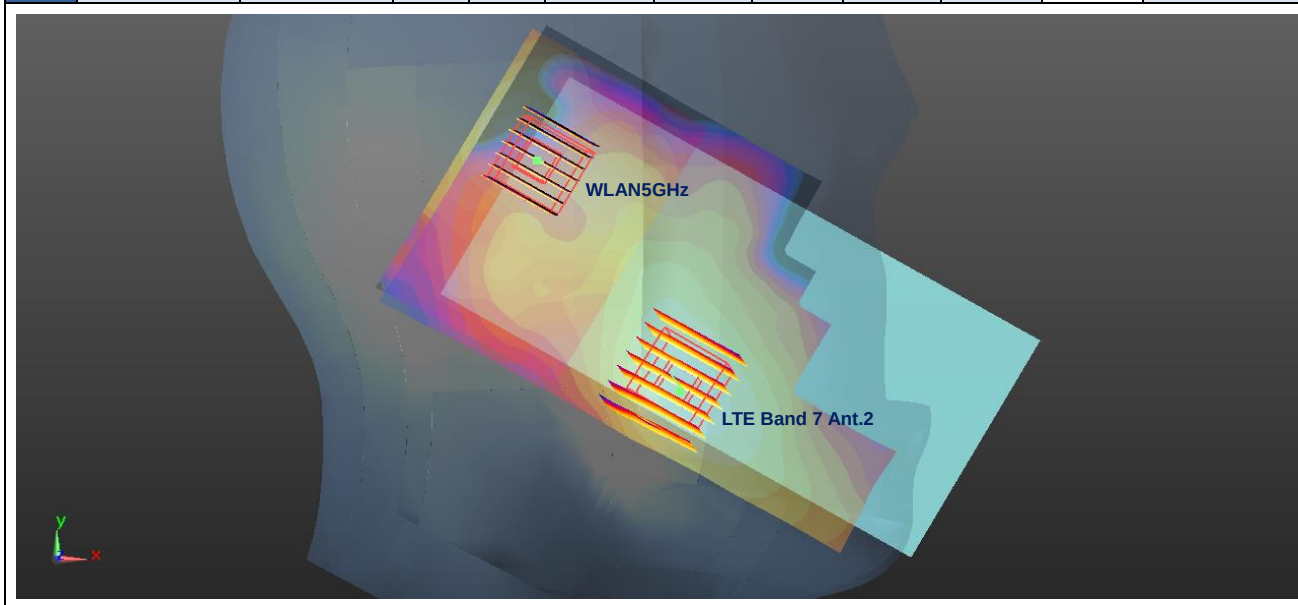
**Remark:** For Bluetooth Product specific 10g stand-alone SAR is not required for a transmitter or antenna, due to 1g hotspot SAR is <1.2W/kg.

## 6.5 SPLSR Evaluation and Analysis

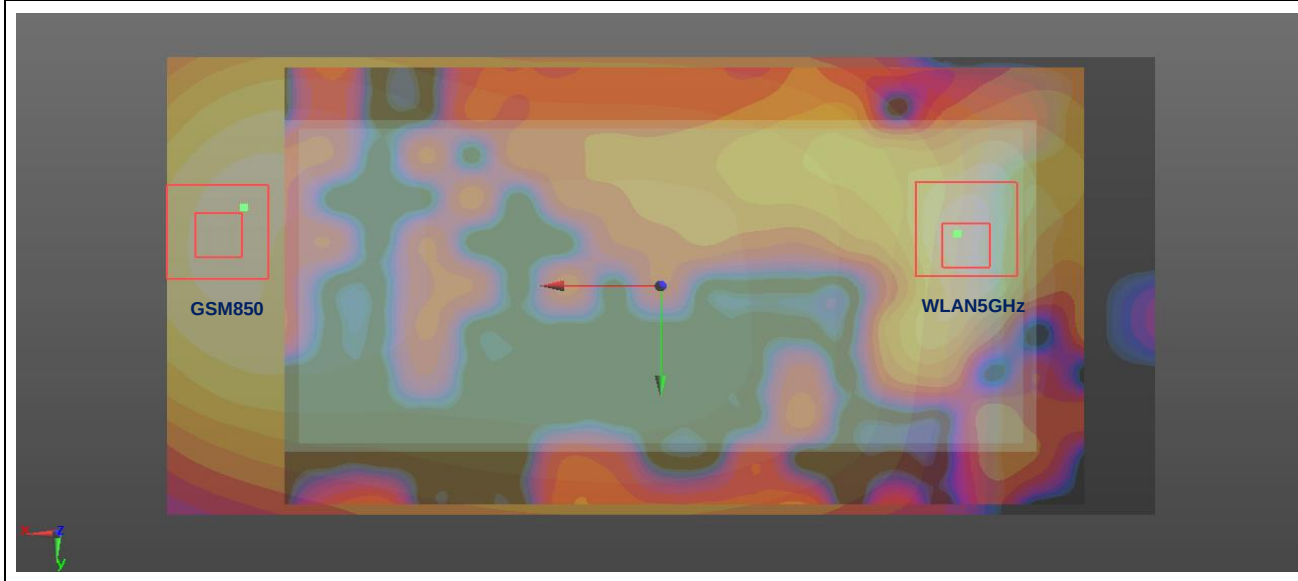
### General Note:

- When standalone SAR is measured for both antennas in the pair, the peak location separation distance is computed by the square root of  $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$ , where  $(x_1, y_1, z_1)$  and  $(x_2, y_2, z_2)$  are the coordinates in the area scans or extrapolated peak SAR locations in the zoom scans, as appropriate.
- $SPLSR = (SAR_1 + SAR_2)^{1.5} / (\text{min. separation distance, mm})$ . If  $SPLSR \leq 0.04$  for 1g SAR and  $SPLSR \leq 0.10$  for 10g SAR, simultaneously transmission SAR measurement is not necessary.

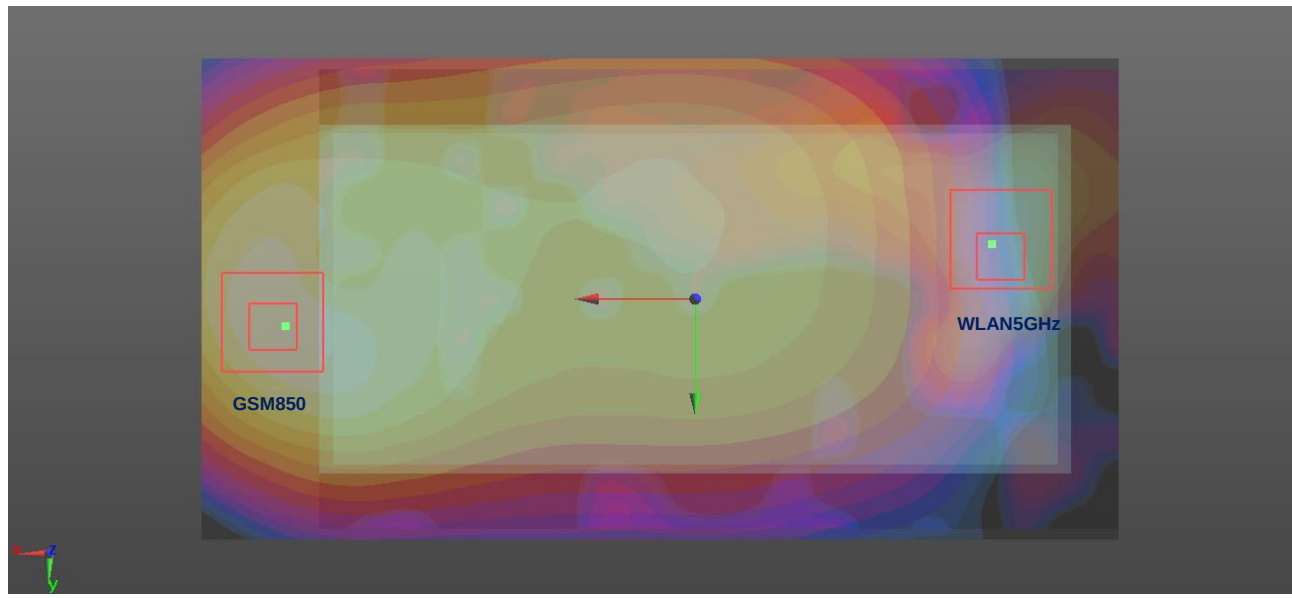
| Case #1 | Band             | Position   | 1g SAR (W/kg) | Gap (mm) | SAR peak location (cm) |       |       | 3D distance (mm) | Summed 1g SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---------|------------------|------------|---------------|----------|------------------------|-------|-------|------------------|----------------------|---------------|------------------|
|         |                  |            |               |          | X                      | Y     | Z     |                  |                      |               |                  |
|         | LTE Band 7 Ant.2 | Left Cheek | 0.864         | 0        | 4.51                   | -5.92 | -0.19 | 83.03            | 1.86                 | 0.03          | Not required     |
|         | WLAN5GHz         |            | 0.993         | 0        | 0.41                   | 1.3   | -0.17 |                  |                      |               |                  |



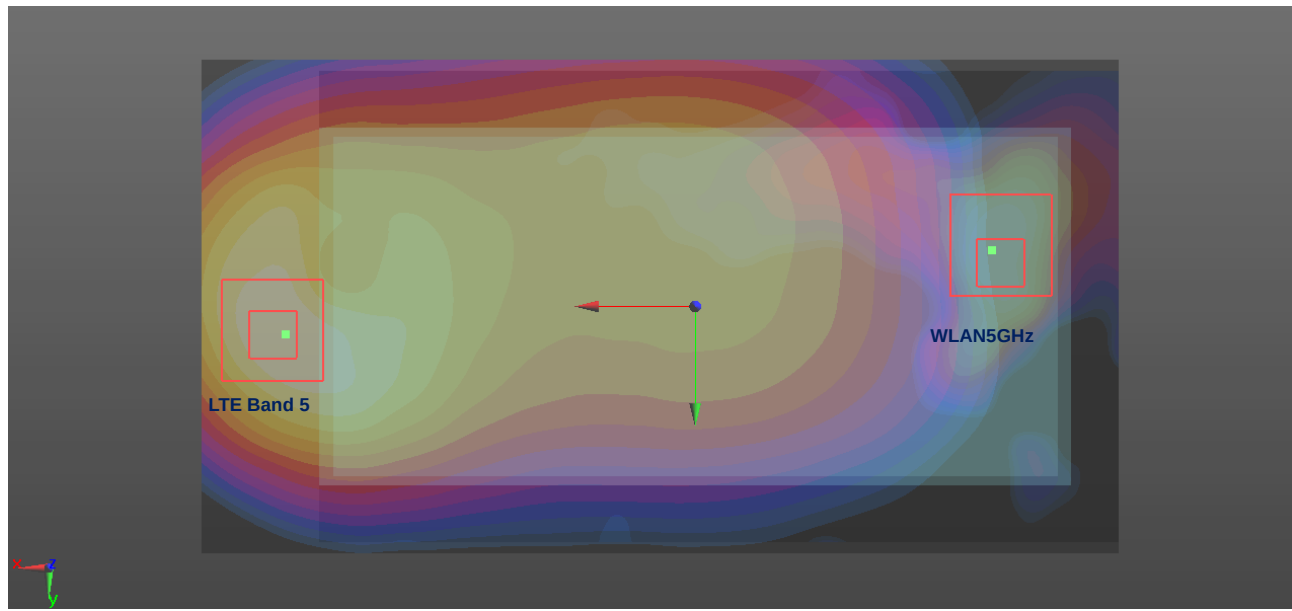
| Case #2 | Band     | Position | 1g SAR (W/kg) | Gap (mm) | SAR peak location (cm) |       |      | 3D distance (mm) | Summed 1g SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---------|----------|----------|---------------|----------|------------------------|-------|------|------------------|----------------------|---------------|------------------|
|         |          |          |               |          | X                      | Y     | Z    |                  |                      |               |                  |
|         | GSM850   | Front    | 1.142         | 5        | 9.33                   | -1.16 | 0.4  | 158.36           | 1.64                 | 0.01          | Not required     |
|         | WLAN5GHz |          | 0.493         | 5        | -6.41                  | 0.58  | 0.35 |                  |                      |               |                  |



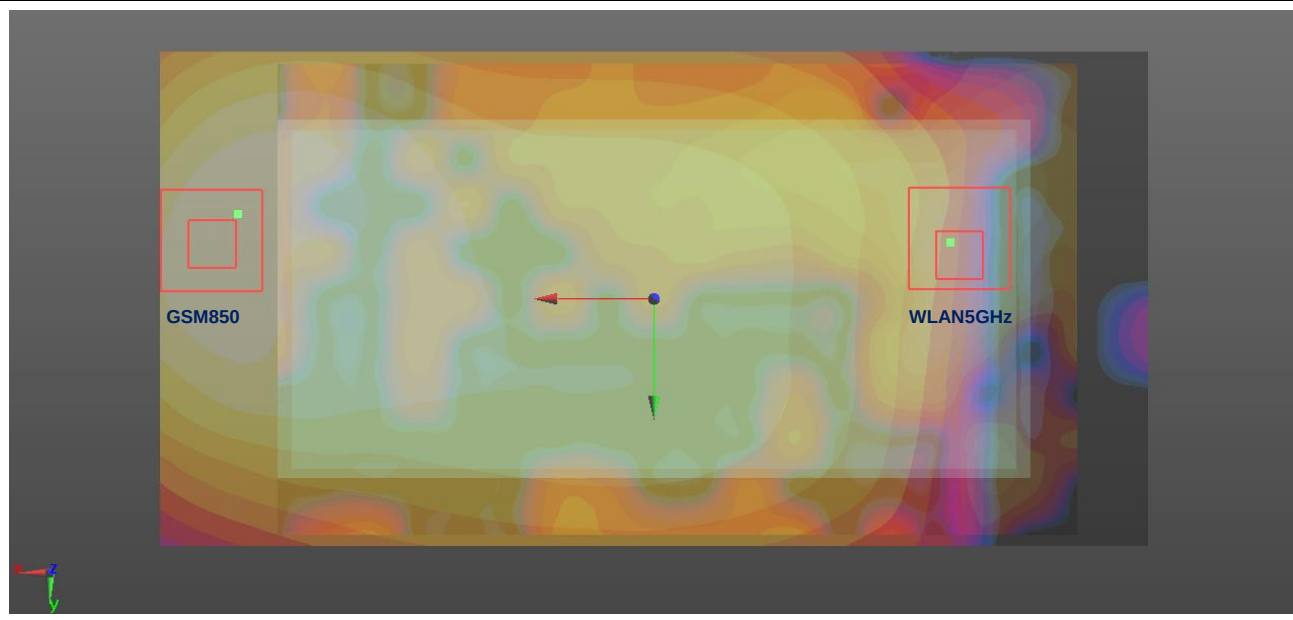
| Case #3 | Band     | Position | 1g SAR (W/kg) | Gap (mm) | SAR peak location (cm) |      |     | 3D distance (mm) | Summed 1g SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---------|----------|----------|---------------|----------|------------------------|------|-----|------------------|----------------------|---------------|------------------|
|         | GSM850   | Back     | 0.929         | 5        | X                      | Y    | Z   | 155.63           | 1.75                 | 0.01          | Not required     |
|         | WLAN5GHz |          | 0.817         | 5        | -6.48                  | -0.8 | 0.4 |                  |                      |               |                  |



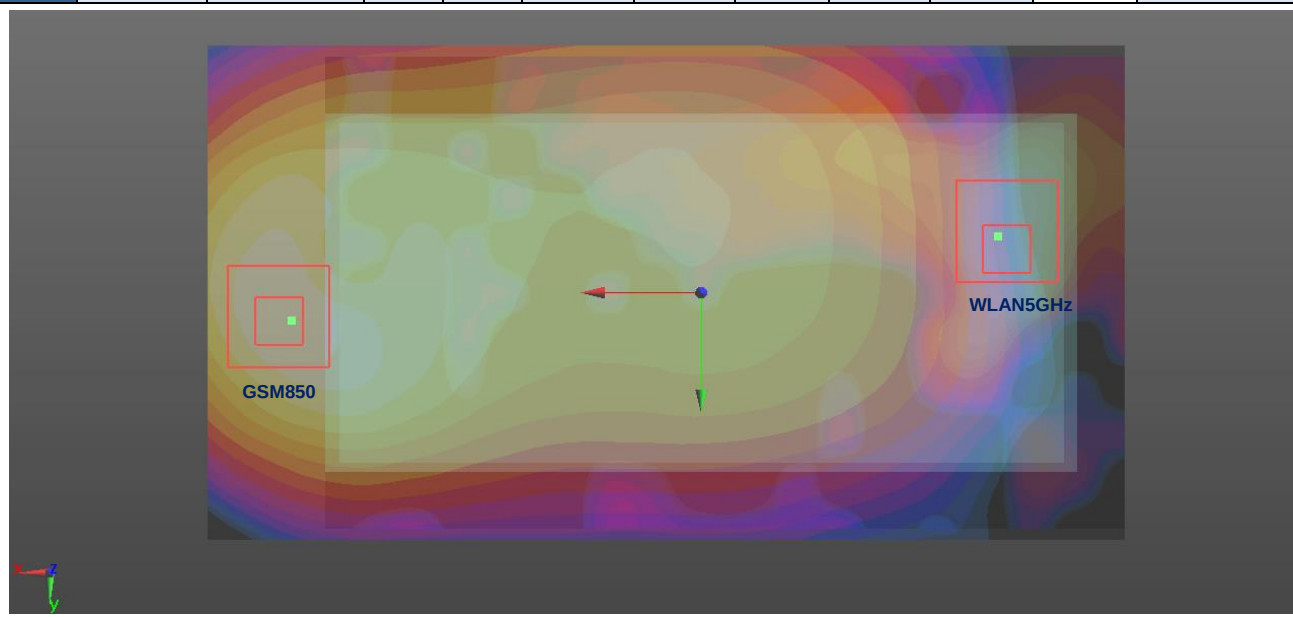
| Case #4 | Band       | Position | 1g SAR (W/kg) | Gap (mm) | SAR peak location (cm) |      |     | 3D distance (mm) | Summed 1g SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---------|------------|----------|---------------|----------|------------------------|------|-----|------------------|----------------------|---------------|------------------|
|         | LTE Band 5 | Back     | 1.042         | 5        | X                      | Y    | Z   | 141.02           | 1.86                 | 0.02          | Not required     |
|         | WLAN5GHz   |          | 0.817         | 5        | -6.48                  | -0.8 | 0.4 |                  |                      |               |                  |



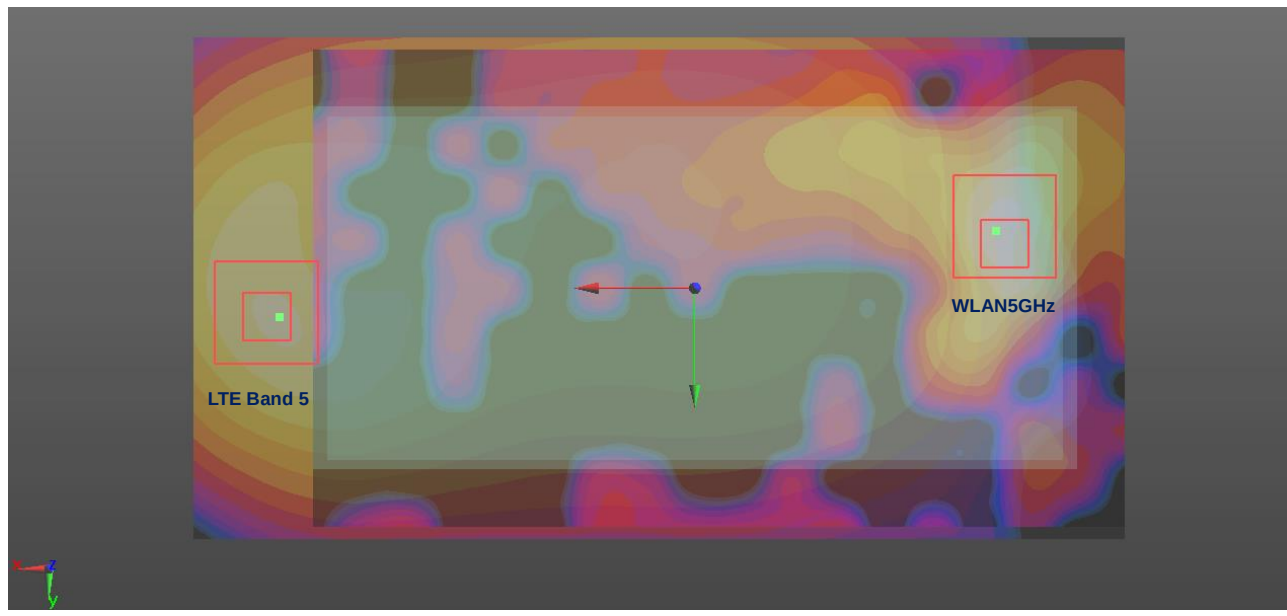
| Case #5 | Band     | Position | 1g SAR (W/kg) | Gap (mm) | SAR peak location (cm) |      |      | 3D distance (mm) | Summed 1g SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---------|----------|----------|---------------|----------|------------------------|------|------|------------------|----------------------|---------------|------------------|
|         | GSM850   | Front    | 1.142         | 5        | X                      | Y    | Z    | 158.28           | 1.65                 | 0.01          | Not required     |
|         | WLAN5GHz |          | 0.511         | 5        | -6.32                  | 1.20 | 0.25 |                  |                      |               |                  |



| Case #6 | Band     | Position | 1g SAR (W/kg) | Gap (mm) | SAR peak location (cm) |      |     | 3D distance (mm) | Summed 1g SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---------|----------|----------|---------------|----------|------------------------|------|-----|------------------|----------------------|---------------|------------------|
|         | GSM850   | Back     | 0.929         | 5        | X                      | Y    | Z   | 155.81           | 1.78                 | 0.02          | Not required     |
|         | WLAN5GHz |          | 0.849         | 5        | -6.56                  | 0.78 | 0.4 |                  |                      |               |                  |



| Case #7 | Band       | Position | 1g SAR (W/kg) | Gap (mm) | SAR peak location (cm) |      |      | 3D distance (mm) | Summed 1g SAR (W/kg) | SPLSR Results | Simultaneous SAR |
|---------|------------|----------|---------------|----------|------------------------|------|------|------------------|----------------------|---------------|------------------|
|         |            |          |               |          | X                      | Y    | Z    |                  |                      |               |                  |
|         | LTE Band 5 | Back     | 1.042         | 5        | 7.35                   | 1.95 | 0.55 | 139.60           | 1.89                 | 0.02          | Not required     |
|         | WLAN5GHz   |          | 0.849         | 5        | -6.56                  | 0.78 | 0.4  |                  |                      |               |                  |



**Test Engineer:** Nick Hu



## **7. Uncertainty Assessment**

Pre KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg. The expanded SAR measurement uncertainty must be  $\leq 30\%$ , for a confidence interval of  $k = 2$ . If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg. Therefore, the measurement uncertainty table is not required in this report.

## **8. References**

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [6] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.
- [7] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [8] FCC KDB 648474 D04 v01r03, "SAR Evaluation Considerations for Wireless Handsets", Oct 2015.
- [9] FCC KDB 248227 D01 v02r02, "SAR Guidance for IEEE 802.11 (WiFi) Transmitters", Oct 2015.
- [10] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [11] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [12] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.



## ***Appendix A. Reference Report***

Please refer to Sporton report number FA7D2507 and FA7D2507-03 which are issued separately.