

# FCC SAR Compliance Test Report

For

TECNO MOBILE LIMITED

FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET

FOTAN NT HONGKONG

Model: KM7

Test Engineer: Jiang Xuling *Jiang Xuling*

Report Number: WSCT-ANAB-R&E250400030A-SAR

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FCC ID: 2ADYY-KM7

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## Table of contents

|      |                                                        |    |
|------|--------------------------------------------------------|----|
| 1    | General information .....                              | 5  |
| 1.1  | Notes .....                                            | 5  |
| 1.2  | Application details .....                              | 5  |
| 1.3  | Statement of Compliance .....                          | 6  |
| 1.4  | EUT Information .....                                  | 8  |
| 2    | Testing laboratory .....                               | 10 |
| 3    | ACCREDITATIONS .....                                   | 10 |
| 4    | Test Environment .....                                 | 10 |
| 5    | Applicant and Manufacturer .....                       | 10 |
| 6    | Test standards: .....                                  | 11 |
| 6.1  | RF exposure limits .....                               | 12 |
| 6.2  | SAR Definition .....                                   | 12 |
| 7    | SAR Measurement System .....                           | 13 |
| 7.1  | The Measurement System .....                           | 13 |
| 7.2  | Robot .....                                            | 14 |
| 7.3  | Probe .....                                            | 15 |
| 7.4  | DAE .....                                              | 16 |
| 7.5  | Phantom .....                                          | 17 |
| 7.6  | Device Holder .....                                    | 18 |
| 7.7  | SAR Scan General Requirement .....                     | 19 |
| 7.8  | Measurement procedure .....                            | 20 |
| 7.9  | Tissue simulating liquids: dielectric properties ..... | 21 |
| 7.10 | Tissue simulating liquids: parameters .....            | 22 |
| 8    | System Check .....                                     | 23 |
| 8.1  | System check procedure .....                           | 23 |
| 8.2  | System check results .....                             | 24 |
| 9    | Test Position Configurations .....                     | 25 |

|         |                                      |    |
|---------|--------------------------------------|----|
| 9.1     | Head Exposure Conditions.....        | 25 |
| 9.2     | Body Exposure Condition.....         | 27 |
| 10      | SAR Test Configuration .....         | 28 |
| 10.1    | GSM Test Configurations.....         | 28 |
| 10.2    | UMTS Test Configuration.....         | 28 |
| 10.3    | LTE Test Configuration .....         | 30 |
| 10.4    | Wi-Fi Test Configuration.....        | 32 |
| 10.5    | Wi-Fi 2.4G SAR Test Procedures.....  | 32 |
| 11      | Detailed Test Results.....           | 34 |
| 11.1    | Conducted Power measurements.....    | 34 |
| 11.1.1  | Conducted Power of GSM.....          | 34 |
| 11.1.2  | Conducted Power of WCDMA.....        | 35 |
| 11.1.3  | Conducted Power of LTE Band 2 .....  | 36 |
| 11.1.4  | Conducted Power of LTE Band 4 .....  | 38 |
| 11.1.5  | Conducted Power of LTE Band 5 .....  | 40 |
| 11.1.6  | Conducted Power of LTE Band 7 .....  | 42 |
| 11.1.7  | Conducted Power of LTE Band 12 ..... | 44 |
| 11.1.8  | Conducted Power of LTE Band 17 ..... | 46 |
| 11.1.9  | Conducted Power of LTE Band 38 ..... | 47 |
| 11.1.10 | Conducted Power of LTE Band 41 ..... | 49 |
| 11.1.12 | Conducted Power of LTE Band 66 ..... | 51 |
| 11.1.25 | Conducted Power of Wi-Fi 2.4G.....   | 53 |
| 11.1.26 | Conducted Power of Wi-Fi 5G.....     | 54 |
| 11.1.27 | Conducted Power of BT .....          | 55 |
| 11.1.28 | Tune-up power tolerance .....        | 56 |
| 11.2    | SAR test results .....               | 58 |
| 11.3    | Test Result.....                     | 61 |

|        |                                                          |    |
|--------|----------------------------------------------------------|----|
| 11.3.1 | Results overview of GSM .....                            | 61 |
| 11.3.2 | Results overview of WCDMA .....                          | 62 |
| 11.3.3 | Results overview of LTE .....                            | 63 |
| 11.3.4 | Results overview of WIFI&BT .....                        | 72 |
| 12     | Multiple Transmitter Information.....                    | 76 |
| 12.1   | Simultaneous Transmission Possibilities.....             | 77 |
| 12.1.1 | SAR Summation Scenario .....                             | 78 |
| 13     | Measurement uncertainty evaluation .....                 | 83 |
| 13.1   | Measurement uncertainty evaluation for SAR test .....    | 83 |
| 13.2   | Measurement uncertainty evaluation for system check..... | 85 |
| 14     | Test equipment and ancillaries used for tests .....      | 86 |

## Modified History

| REV.    | Modification Description    | Issued Date | Remark    |
|---------|-----------------------------|-------------|-----------|
| REV.1.0 | Initial Test Report Release | 26 May 2025 | Li Huaibi |
|         |                             |             |           |

## 1 General information

### 1.1 Notes

The test results of this test report relate exclusively to the test item specified in this test report. Shenzhen Timeway Testing Laboratories does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report is not to be reproduced or published in full without the prior written permission.

### 1.2 Application details

Date of receipt of test item: 2025-04-08  
Start of test: 2025-04-09  
End of test: 2025-05-26

### 1.3 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for KM7 is as below:

| Band         | Position Test Points | MAX Reported SAR <sub>1g</sub> (W/kg) |
|--------------|----------------------|---------------------------------------|
| GSM850       | Head                 | 0.163                                 |
| GSM1900      | Head                 | 0.049                                 |
| UMTS Band 2  | Head                 | 0.069                                 |
| UMTS Band 4  | Head                 | 0.027                                 |
| UMTS Band 5  | Head                 | 0.125                                 |
| LTE Band 2   | Head                 | 0.072                                 |
| LTE Band 4   | Head                 | 0.023                                 |
| LTE Band 5   | Head                 | 0.142                                 |
| LTE Band 7   | Head                 | 0.119                                 |
| LTE Band 12  | Head                 | 0.058                                 |
| LTE Band 17  | Head                 | 0.069                                 |
| LTE Band 38  | Head                 | 0.060                                 |
| LTE Band 41  | Head                 | 0.096                                 |
| LTE Band 66  | Head                 | 0.031                                 |
| BT           | Head                 | 0.098                                 |
| Wi-Fi 2.4G   | Head                 | 0.194                                 |
| WIFI5G Band1 | Head                 | 0.166                                 |
| WIFI5G Band2 | Head                 | 0.195                                 |
| WIFI5G Band3 | Head                 | 0.260                                 |
| WIFI5G Band4 | Head                 | 0.243                                 |

| Band                                                     | Position Test Points | MAX Reported SAR <sub>1g</sub> (W/kg) |
|----------------------------------------------------------|----------------------|---------------------------------------|
| GSM850                                                   | Body & Hotspot 10mm  | 0.625                                 |
| GSM1900                                                  | Body & Hotspot 10mm  | 0.857                                 |
| UMTS Band 2                                              | Body & Hotspot 10mm  | 0.505                                 |
| UMTS Band 4                                              | Body & Hotspot 10mm  | 0.187                                 |
| UMTS Band 5                                              | Body & Hotspot 10mm  | 0.224                                 |
| LTE Band 2                                               | Body & Hotspot 10mm  | 0.631                                 |
| LTE Band 4                                               | Body & Hotspot 10mm  | 0.283                                 |
| LTE Band 5                                               | Body & Hotspot 10mm  | 0.221                                 |
| LTE Band 7                                               | Body & Hotspot 10mm  | 0.605                                 |
| LTE Band 12                                              | Body & Hotspot 10mm  | 0.129                                 |
| LTE Band 17                                              | Body & Hotspot 10mm  | 0.144                                 |
| LTE Band 38                                              | Body & Hotspot 10mm  | 0.247                                 |
| LTE Band 41                                              | Body & Hotspot 10mm  | 0.311                                 |
| LTE Band 66                                              | Body & Hotspot 10mm  | 0.283                                 |
| BT                                                       | Body & Hotspot 10mm  | 0.064                                 |
| Wi-Fi 2.4G                                               | Body & Hotspot 10mm  | 0.047                                 |
| WIFI5G Band1                                             | Body & Hotspot 10mm  | 0.078                                 |
| WIFI5G Band2                                             | Body & Hotspot 10mm  | 0.121                                 |
| WIFI5G Band3                                             | Body & Hotspot 10mm  | 0.145                                 |
| WIFI5G Band4                                             | Body & Hotspot 10mm  | 0.129                                 |
| Maximum Max. SAR Level(s)<br>Measured: (Limit: 1.6W/Kg): | GSM850               | 0.163 W/kg1gHeadTissue                |
|                                                          | WIFI5G Band3         | 0.260 W/kg1gHeadTissue                |
|                                                          | GSM1900              | 0.857 W/kg1gBodyTissue                |
|                                                          | WIFI5G Band3         | 0.145 W/kg1gBodyTissue                |
| The Head highest simultaneous SAR :                      |                      | 0.423 W/kg1gHeadTissue                |
| The Body highest simultaneous SAR :                      |                      | 1.002 W/kg1gBodyTissue                |

The device is in compliance with Specific Absorption Rate ( SAR ) for general population/uncontraolled exposure limits of 1.6 W/Kg as averaged over any 1g tissue according to the FCC rule the ANSI/IEEE C95.1:2005, the NCRP Report Number 86 for uncontrolled environment, according to the Industry Canada Radio Standards Specification RSS-102 for General Population/Uncontrolled exposure, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013.

## 1.4 EUT Information

| Device Information:                     |                                                                                                                                                                       |           |           |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|
| Product Type:                           | Mobile Phone                                                                                                                                                          |           |           |
| Model:                                  | KM7                                                                                                                                                                   |           |           |
| Trade Name:                             | TECNO                                                                                                                                                                 |           |           |
| Software number:                        | KM7-15.1.1                                                                                                                                                            |           |           |
| Hardware number:                        | V1.2                                                                                                                                                                  |           |           |
| Device Type:                            | Portable device                                                                                                                                                       |           |           |
| Exposure Category:                      | uncontrolled environment / general population                                                                                                                         |           |           |
| Production Unit or Identical Prototype: | Production Unit                                                                                                                                                       |           |           |
| Antenna Type :                          | Integral Antenna                                                                                                                                                      |           |           |
| Device Operating Configurations:        |                                                                                                                                                                       |           |           |
| Supporting Mode(s) :                    | GSM850, PCS 1900<br>WCDMA B2/ WCDMA B4/ WCDMA B5<br>LTE Band 2/ LTE Band 4/ LTE Band 5<br>LTE Band 7/LTE Band 12/ LTE Band 17<br>LTE Band 38/LTE Band 41/ LTE Band 66 |           |           |
| Modulation:                             | GSM/GPRS: GMSK, /EGPRS: 8PSK, /WCDMA: QPSK<br>HSDPA/HSUPA: QPSK /16QAM, /LTE: QPSK/16QAM                                                                              |           |           |
| Device Class :                          | Class B, No DTM Mode                                                                                                                                                  |           |           |
| Operating Frequency Range(s)            | Band                                                                                                                                                                  | TX(MHz)   | RX(MHz)   |
|                                         | GSM850                                                                                                                                                                | 824~849   | 869~894   |
|                                         | GSM1900                                                                                                                                                               | 1850~1910 | 1930~1990 |
|                                         | UMTS Band 2                                                                                                                                                           | 1850~1910 | 1930~1990 |
|                                         | UMTS Band 4                                                                                                                                                           | 1710~1755 | 2110~2155 |
|                                         | UMTS Band 5                                                                                                                                                           | 824~849   | 869~894   |
|                                         | LTE Band 2                                                                                                                                                            | 1850~1910 | 1930~1990 |
|                                         | LTE Band 4                                                                                                                                                            | 1710~1755 | 2110~2155 |
|                                         | LTE Band 5                                                                                                                                                            | 824~849   | 869~894   |
|                                         | LTE Band 7                                                                                                                                                            | 2500~2570 | 2620~2690 |
|                                         | LTE Band 12                                                                                                                                                           | 699~716   | 729~746   |
|                                         | LTE Band 17                                                                                                                                                           | 704~716   | 734~746   |
|                                         | LTE Band 38                                                                                                                                                           | 2570~2620 | 2570~2620 |
|                                         | LTE Band 41                                                                                                                                                           | 2496~2690 | 2496~2690 |
|                                         | LTE Band 42                                                                                                                                                           | 3450~3550 | 3450~3550 |
|                                         | LTE Band 66                                                                                                                                                           | 1710~1780 | 2110~2200 |
|                                         | Wi-Fi (2.4G)                                                                                                                                                          | 2412~2462 |           |
|                                         | Wi-Fi (5G)                                                                                                                                                            | 5180~5240 | 5180~5240 |
|                                         |                                                                                                                                                                       | 5260~5320 | 5260~5320 |
|                                         |                                                                                                                                                                       | 5500~5700 | 5500~5700 |
| 5745~5825                               |                                                                                                                                                                       | 5745~5825 |           |
| BT                                      | 2402~2480                                                                                                                                                             |           |           |
| NFC                                     | 13.553~13.567                                                                                                                                                         |           |           |

|                                        |                                                                                                                                                                                                              |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Antenna gain:</b>                   | GSM 850/WCDMA B5/LTE B5: -5.21dbi<br>PCS 1900/WCDMA B2/LTE B2: -1.78dbi<br>WCDMA B4/LTE B4/ LTE B66: -7.93dbi<br>LTE B7/ LTE B38/ LTE B41:-0.44dbi<br>LTE B12/LTE B17: -5.41dbi                              |
| <b>Radiated Power (EIRP/ERP) Limit</b> | GSM 850/WCDMA B5/LTE B5: 7.00W(38.45dBm)<br>PCS 1900/WCDMA B2/LTE B2:2.00W(33.01dBm)<br>WCDMA B4/LTE B4/ LTE B66: 1.00W(30.00dBm)<br>LTE B7/LTE B38/LTE B41: 2.00W(33.01dBm)<br>LTE B12/B17: 3.00W(34.77dBm) |
| <b>Power Source:</b>                   | Rechargeable Li-ion Polymer Battery Model: BL-50FT<br>Rated Voltage: 3.92V<br>Rated Capacity: 5060mAh<br>Nominal Energy:19.84Wh<br>Typical Capacity: 5160mAh<br>Limited Charge Voltage: 4.53V                |

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2: For NFC evaluation, it is not necessary to test NFC because its power is very low

## 2 Testing laboratory

|               |                                                                                                                                                                      |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Site     | World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.                                                                                             |
| Laboratory A: | Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China                       |
| Laboratory B: | Building J-7F and Building D, Dongjiang Science & Technology Park, Tangjia Community, Fenghuang Street, Guangming District, Shenzhen City, Guangdong Province, China |

## 3 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

|              |                                                                                              |                                                  |
|--------------|----------------------------------------------------------------------------------------------|--------------------------------------------------|
| <b>CBTL</b>  | IECEE (international Electrotechnical Commiss, The certificate registration number is TL672) | Laboratory A <input type="checkbox"/>            |
|              |                                                                                              | Laboratory B <input type="checkbox"/>            |
| <b>China</b> | CNAS (The certificated registration number: L3732)                                           | Laboratory A <input type="checkbox"/>            |
|              |                                                                                              | Laboratory B <input type="checkbox"/>            |
| <b>USA</b>   | A2LA (The certificated registration number: 5768.01)                                         | Laboratory A <input type="checkbox"/>            |
|              |                                                                                              | Laboratory B <input type="checkbox"/>            |
| <b>USA</b>   | ANAB (The certificated registration number: AT-3951)                                         | Laboratory A <input checked="" type="checkbox"/> |
|              |                                                                                              | Laboratory B <input type="checkbox"/>            |

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.wsct-cert.com>

## 4 Test Environment

|                            | Required   | Actual    |
|----------------------------|------------|-----------|
| Ambient temperature:       | 18 – 25 °C | 22 ± 2 °C |
| Tissue Simulating liquid:  | 22 ± 2 °C  | 22 ± 2 °C |
| Relative humidity content: | 30 – 70 %  | 30 – 70 % |

## 5 Applicant and Manufacturer

|                        |                                                                                         |
|------------------------|-----------------------------------------------------------------------------------------|
| Applicant/Client Name: | TECNO MOBILE LIMITED                                                                    |
| Applicant Address:     | FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG |
| Manufacturer Name:     | TECNO MOBILE LIMITED                                                                    |
| Manufacturer Address:  | FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG |

## 6 Test standards:

| No. | Identity            | Document Title                                                                                                                                                        |
|-----|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 47 CFR Part 2.1093  | Radiofrequency radiation exposure evaluation: portable devices                                                                                                        |
| 2   | IEC/IEEE 62209-1528 | Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate in the Human Head from Wireless Communications Devices: Measurement Techniques |
| 3   | KDB447498 D04       | Interim General RF Exposure Guidance v01                                                                                                                              |
| 4   | KDB865664 D01       | SAR measurement 100MHz to 6GHz v01r04                                                                                                                                 |
| 5   | KDB865664 D02       | RF Exposure Reporting v01r02                                                                                                                                          |
| 6   | KDB941225 D01       | 3G SAR Procedures v03r01                                                                                                                                              |
| 7   | KDB941225 D05       | SAR for LTE Devices v02r05                                                                                                                                            |
| 8   | KDB248227 D01       | 802.11 Wi-Fi SAR v02r02                                                                                                                                               |
| 9   | KDB941225 D06       | Hotspot Mode v02r01                                                                                                                                                   |
| 10  | KDB648474 D04       | Handset SAR v01r03                                                                                                                                                    |
| 11  | KDB690783 D01       | SAR Listings on Grant v01r03                                                                                                                                          |

## 6.1 RF exposure limits

| Human Exposure                                  | Uncontrolled Environment<br>General Population | Controlled Environment<br>Occupational |
|-------------------------------------------------|------------------------------------------------|----------------------------------------|
| Spatial Peak SAR*<br>(Brain/Body/Arms/Legs)     | 1.60 mW/g                                      | 8.00 mW/g                              |
| Spatial Average SAR**<br>(Whole Body)           | 0.08 mW/g                                      | 0.40 mW/g                              |
| Spatial Peak SAR***<br>(Heads/Feet/Ankle/Wrist) | 4.00 mW/g                                      | 20.00 mW/g                             |

The limit applied in this test report is shown in bold letters

### Notes:

\* The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

\*\* The Spatial Average value of the SAR averaged over the whole body.

\*\*\* The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation.

## 6.2 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dW) absorbed by(dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ).

$$SAR = \frac{d}{dt} \left( \frac{dW}{dm} \right) = \frac{d}{dt} \left( \frac{dW}{\rho dV} \right)$$

SAR is expressed in units of watts per kilogram (W/kg). SAR can be related to the electric field at a point by

$$SAR = \frac{\sigma |E|^2}{\rho}$$

where:

σ = conductivity of the tissue (S/m)

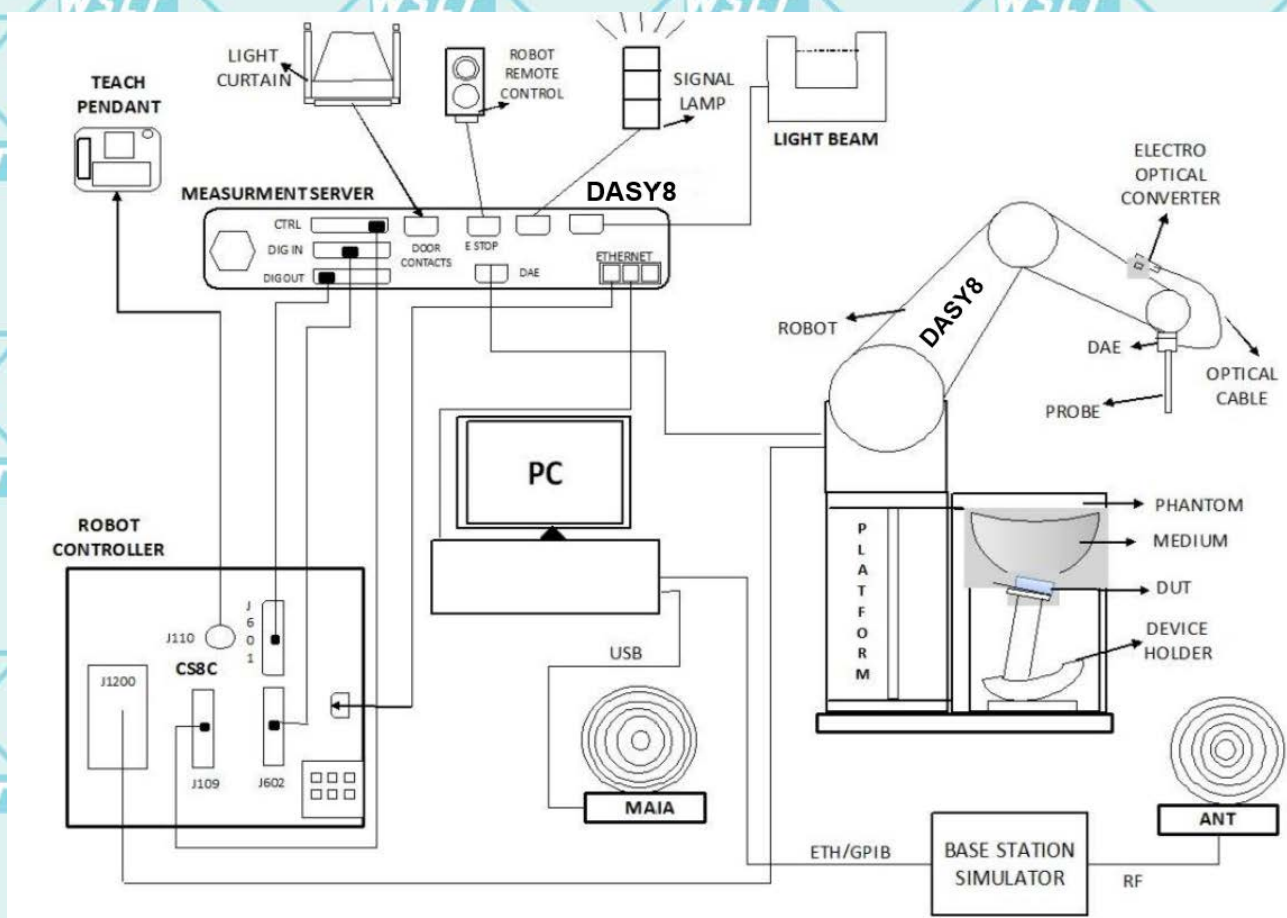
ρ = mass density of the tissue (kg/m<sup>3</sup>)

E = rms electric field strength (V/m)

## 7 SAR Measurement System

### 7.1 The Measurement System

DASY8 is a flexible, high-precision near-field scanner optimized for automated measurements in free-space and tissue simulating liquids (TSL), using the most advanced probes covering the frequency range from 3 kHz to 110 GHz. The software enables point, area, and volume measurements and conformal scanning of complex geometries.



The DASY8 SAR module consists of an isotropic dosimetric probe (SAR) mounted on the TX2 precision robot, which allows field scanning inside anthropomorphic phantoms filled with tissue-simulating liquids. The probes are miniaturized, sensitive, isotropic, linear, stable and calibrated with precise boundary compensation. The spatial accuracy of probe positioning within the phantom is better than 0.2 mm. Scanning is optimized and adaptive to the induced field. The spatial SAR peak is determined without reconstruction.

## 7.2 Robot

The DASY8 system uses the high-precision industrial robots TX2-60L and TX2-90XL from Stäubli SA (France). The TX2 family of robots provides the ideal combination of speed, rigidity, size, and precision:

- High precision (repeatability 0.03 mm)
- High reliability and low maintenance costs (industrial design)
- ELF interference (motor control fields are shielded by the closed metallic construction)
- Hygienic encapsulated 6-axis arm enabled by a hollow shaft gearbox, no external cables.



### 7.3 Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG). The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

For the measurements the Specific Dosimetric E-Field Probe EX3DV4-SN:7895&7391 with following specifications is used



Frequency: 4MHz – 10GHz ;

Linearity:  $\pm 0.2$ dB (30MHz – 10GHz)

Dynamic Range:  $10\mu\text{W/g}$  –  $100\text{ mW/g}$

Linearity:  $\pm 0.2$ dB (noise: typically  $<1\mu\text{W/g}$ )

Directivity (typical):  $\pm 0.1$  dB in TSL (rotation around probe axis)  
 $\pm 0.3$  dB in TSL (rotation normal to probe axis)

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle                               | 46.9°      |
| Probe Overall Length                          | 337mm      |
| Probe Body Diameter                           | 10mm       |
| Tip Length                                    | 9mm        |
| Tip Diameter                                  | 2.5mm      |
| Probe Tip to Sensor X Calibration Point       | 1mm        |
| Probe Tip to Sensor Y Calibration Point       | 1mm        |
| Probe Tip to Sensor Z Calibration Point       | 1mm        |
| Recommended Measurement Distance from Surface | 1.4mm      |

## 7.4 DAE

### DAE4ip– Data Acquisition Electronics 4 with Integrated Power

Data Acquisition Electronics 4 with an integrated power supply for time unlimited measurements.

Performance:

- Measurement range: -100—+300 mV (16-bit resolution and two range settings: 4 mV, 400 mV)
- Input offset voltage: <5 $\mu$ V (with auto zero)
- Input resistance: 200M $\Omega$
- Input bias current: <50 fA
- Power supply: integrated (from the DASY8 measurement server)
- Dimensions (L  $\times$  W  $\times$  H): 60 $\times$ 60 $\times$ 68 mm
- Calibration: ISO/IEC 17025 calibration service available.



## 7.5 Phantom

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEC/IEEE 62209-1528. It enables the dosimetric evaluation of left—and right-hand phone usage as well as body-mounted usage at the flat phantom region. A cover prevents the liquid from evaporating. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.



|                                          |                                                                                                                                                                                                      |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Material</b>                          | Vinyl ester, fiberglass reinforced (VE-GF)                                                                                                                                                           |
| <b>Liquid Compatibility</b>              | The phantom shell is compatible with SPEAG's tissue-simulating liquids (sugar and oil-based). However, using other liquids may render the phantom warranty void (see note or consult SPEAG support). |
| <b>Shell Thickness</b>                   | $2 \pm 0.2\text{mm}$ ( $6 \pm 0.2\text{mm}$ at ear point)                                                                                                                                            |
| <b>Dimensions (incl. Wooden Support)</b> | Length: 1000 mm<br>Width: 500 mm<br>Height: adjustable feet                                                                                                                                          |
| <b>Filling Volume</b>                    | approx. 25 liters                                                                                                                                                                                    |
| <b>Support</b>                           | DASY6/8: standard-size platform slot<br>DASY52 stand-alone: SPEAG standard phantom table                                                                                                             |
| <b>Accessories</b>                       | Mounting Device and Adaptors                                                                                                                                                                         |

## 7.6 Device Holder

The DASY instrument holder is designed to accommodate the various positions specified in the standard. It has two scales for instrument rotation (with respect to the body axis) and instrument tilt (with respect to the line between the ear reference points). The center of rotation for both scales is the Ear Reference Point (ERP). This eliminates the need to reposition the instrument when changing angles.

The DASY instrument holder is made of low-loss POM material with the following dielectric parameters: relative permittivity  $\epsilon=3$  and loss tangent  $\delta=0.02$ . The amount of dielectric material in the immediate vicinity of the device was reduced because measurements indicated that the influence of the clamp on the test results could be reduced.



Device holder

The positioning system allows obtaining cheek and tilting position with a very good accuracy. In compliance with CENELEC, the tilt angle uncertainty is lower than 1°.

## 7.7 SAR Scan General Requirement

According to kdb865664 D01 v01r04:

Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2013. The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements and fully documented in SAR reports, unless further guidance has been provided by the FCC.

|                                                                                                        |                                                                                                                | $\leq 3$ GHz                                        | $>3$ GHz                                                                   |
|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------|
| Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface |                                                                                                                | 5 mm $\pm$ 1 mm                                     | $\frac{1}{2}\delta\ln(2)$ mm $\pm$ 0.5 mm                                  |
| Maximum probe angle from probe axis to phantom surface normal at the measurement location              |                                                                                                                | $30^\circ \pm 1^\circ$                              | $20^\circ \pm 1^\circ$                                                     |
| Maximum area scan spatial resolution: $\Delta x$ Area, $\Delta y$ Area                                 |                                                                                                                | $\leq 2$ GHz: $\leq 15$ mm<br>2-3 GHz: $\leq 12$ mm | 3- 4 GHz: $\leq 12$ mm<br>4- 6 GHz: $\leq 10$ mm                           |
| Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}$ , $\Delta y_{\text{Zoom}}$              |                                                                                                                | $\leq 2$ GHz: $\leq 8$ mm<br>2-3 GHz: $\leq 5$ mm*  | 3- 4 GHz: $\leq 5$ mm*<br>4- 6 GHz: $\leq 4$ mm*                           |
| Maximum zoom scan spatial resolution, normal to phantom surface                                        | uniform grid: $\Delta z$ Zoom (n)                                                                              | $\leq 5$ mm                                         | 3- 4 GHz: $\leq 4$ mm<br>4- 5 GHz: $\leq 3$ mm<br>5- 6 GHz: $\leq 2$ mm    |
|                                                                                                        | graded grid<br>$\Delta z_{\text{Zoom}}(1)$ :<br>between<br>1 st two points<br>closest<br>to phantom<br>surface | $\leq 4$ mm                                         | 3-4 GHz: $\leq 3$ mm<br>4-5 GHz: $\leq 2.5$ mm<br>5-6 GHz: $\leq 2$ mm     |
|                                                                                                        | $\Delta z_{\text{Zoom}}(n>1)$ :<br>between<br>subsequent<br>points                                             | $\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$ mm     |                                                                            |
| Minimum zoom scan volume                                                                               | x, y, z                                                                                                        | $\geq 30$ mm                                        | 3- 4 GHz: $\geq 28$ mm<br>4- 5 GHz: $\geq 25$ mm<br>5- 6 GHz: $\geq 22$ mm |

Note:  $\delta$  is the penetration depth of a plane-wave at normal incidence to the tissue medium; see IEEE Std 1528-2013 for details.

\* When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB Publication 447498 is  $\leq 1.4$  W/kg,  $\leq 8$  mm,  $\leq 7$  mm and  $\leq 5$  mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

## 7.8 Measurement procedure

### Power Drift :

All SAR tests were performed with a fully charged battery under the DUT and transmitting at maximum output power. The DASY measurement software uses the power reference measurement and power drift measurement procedures to monitor the power drift of the DUT during SAR testing. Both methods measure the field value at a specified reference position before and after the SAR test. The software calculates the field difference in dB. If the power drift exceeds 5%, the SAR is retested.

### Area scan:

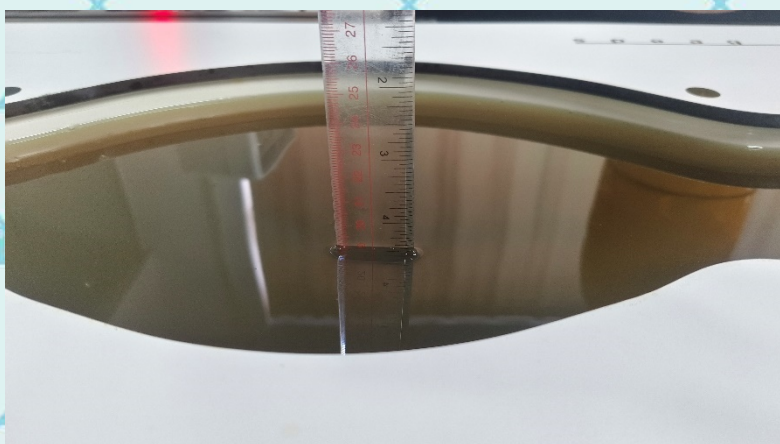
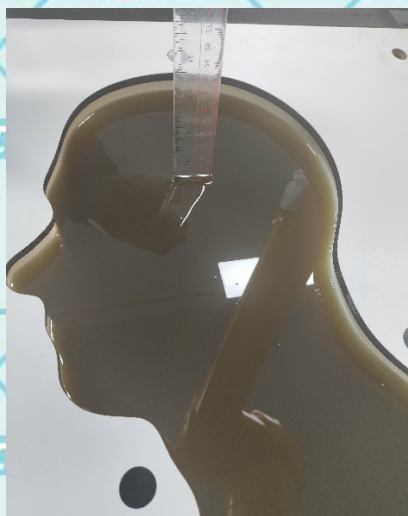
All antennas and radiating structures that may contribute to the measured SAR or influence the SAR distribution must be included in the area scan. The areas of the transmitter(s), antenna(s) and host device, when projected onto the phantom, must be within the area scan measurement region. The area scan measurement resolution must enable the extrapolation algorithms of the SAR system to correctly identify the peak SAR location(s) for subsequent zoom scan measurements to correctly determine the 1-g SAR. Area scans are performed at a constant distance from the phantom surface, determined by the measurement frequencies.

### Zoom Scan:

Except when area scan based 1-g SAR estimation applies, a zoom scan measurement is required at the highest peak SAR location determined in the area scan to determine the 1-g SAR. When the 1-g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR. The zoom scan volume must be larger than the required minimum dimensions described 7.7. There must be at least one measurement point within the first 5 mm from the phantom surface for measurements  $\leq 3$  GHz, two measurement points for measurements  $\leq 5$  GHz and three measurement points for measurements above 5 GHz. When graded grids are used, which only applies in the direction normal to the phantom surface, the initial grid separation closest to the phantom surface and subsequent graded grid increment ratios must satisfy the required protocols in 7.7. The 1-g SAR averaging volume must be fully contained within the zoom scan measurement volume boundaries; otherwise, the measurement must be repeated by shifting or expanding the zoom scan volume. The similar requirements also apply to 10-g SAR measurements.

## 7.9 Tissue simulating liquids: dielectric properties

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The simulating liquids should be checked at the beginning of a series of SAR measurements to determine if the dielectric parameters are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within  $\pm 5\%$  of the target values.



Simulating Head Liquid for 5G(HBBL600-10000MHz V6), Manufactured by SPEAG:

| Ingredients | (% by weight) |
|-------------|---------------|
| Water       | 50-65%        |
| Mineral oil | 10-30%        |
| Emulsifiers | 8-25%         |
| Sodium salt | 0-1.5%        |

## 7.10 Tissue simulating liquids: parameters

| Used Target Frequency | Target Tissue            |                        | Measured Tissue |                | Liquid Temp. | Test Date  |
|-----------------------|--------------------------|------------------------|-----------------|----------------|--------------|------------|
|                       | $\epsilon_r$ (+/-5%)     | $\sigma$ (S/m) (+/-5%) | $\epsilon_r$    | $\sigma$ (S/m) |              |            |
| 750MHz Head           | 41.90<br>(39.805~43.995) | 0.89<br>(0.85~0.93)    | 43.90           | 0.885          | 21.6°C       | 2025-04-23 |
| 835MHz Head           | 41.50<br>(39.425~43.575) | 0.90<br>(0.86~0.95)    | 41.60           | 0.914          | 21.6°C       | 2025-04-26 |
| 1750MHz Head          | 40.10<br>(38.10~42.10)   | 1.37<br>(1.31~1.43)    | 41.90           | 1.34           | 21.6°C       | 2025-04-30 |
| 1900MHz Head          | 40.00<br>(38.00~42.00)   | 1.40<br>(1.33~1.47)    | 41.70           | 1.44           | 21.6°C       | 2025-05-06 |
| 2450MHz Head          | 39.20<br>(37.24~41.16)   | 1.80<br>(1.71~1.89)    | 40.27           | 1.82           | 21.6°C       | 2025-05-09 |
| 2550MHz Head          | 39.10<br>(37.15~41.05)   | 1.91<br>(1.82~2.01)    | 40.80           | 1.90           | 21.6°C       | 2025-05-13 |
| 2600MHz Head          | 39.00<br>(37.05~40.95)   | 1.96<br>(1.86~2.05)    | 39.87           | 1.94           | 21.6°C       | 2025-05-16 |
| 5200MHz Head          | 36.00<br>(34.20~37.80)   | 4.66<br>(4.43~4.89)    | 36.30           | 4.54           | 21.6°C       | 2025-05-19 |
| 5500MHz Head          | 35.60<br>(33.82~37.38)   | 4.96<br>(4.71~5.20)    | 35.80           | 4.88           | 21.6°C       | 2025-05-22 |
| 5800MHz Head          | 35.30<br>(33.54~37.06)   | 5.27<br>(5.01~5.53)    | 35.30           | 5.23           | 21.6°C       | 2025-05-25 |

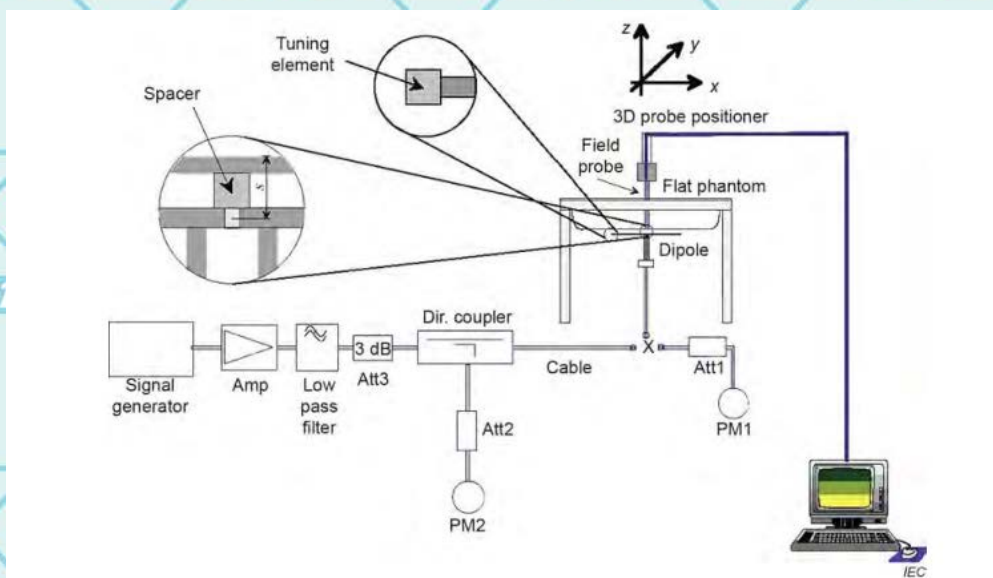
$\epsilon_r$ = Relative permittivity,  $\sigma$ = Conductivity

## 8 System Check

### 8.1 System check procedure

The System check is performed by using a System check dipole which is positioned parallel to the planar part of the SAM phantom at the reference point. The distance of the dipole to the SAM phantom is determined by a spacer. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. It is fed with a power of 100 mW. To adjust this power a power meter is used. The power sensor is connected to the cable before the System check to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the validation to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test (result on plot).

System check results have to be equal or near the values determined during dipole calibration (target SAR in table above) with the relevant liquids and test system.



## 8.2 System check results

The system Check is performed for verifying the accuracy of the complete measurement system and performance of the software. The following table shows System check results for all frequency bands and tissue liquids used during the tests (plot(s) see annex A).

| System Check | Target SAR (1W) (+/-10%) |                        | Measured SAR (Normalized to 1W) |             | Liquid Temp. | Test Date  |
|--------------|--------------------------|------------------------|---------------------------------|-------------|--------------|------------|
|              | 1-g (W/kg)               | 10-g (W/kg)            | 1-g (W/kg)                      | 10-g (W/kg) |              |            |
| D750V3 Body  | 8.46<br>(7.62~9.30)      | 5.70<br>(5.13~6.27)    | 8.58                            | 5.70        | 21.6°C       | 2025-04-23 |
| D835V2 Body  | 9.68<br>(8.72~10.64)     | 6.44<br>(5.80~7.08)    | 9.94                            | 6.55        | 21.6°C       | 2025-04-26 |
| D1750V2 Body | 36.40<br>(32.76~40.04)   | 19.60<br>(17.64~21.56) | 36.20                           | 19.50       | 21.6°C       | 2025-04-30 |
| D1900V2 Body | 39.70<br>(35.73~43.67)   | 21.00<br>(18.90~23.10) | 40.40                           | 21.10       | 21.6°C       | 2025-05-06 |
| D2550V2 Body | 54.10<br>(48.69~59.51)   | 24.70<br>(22.23~27.17) | 55.80                           | 25.60       | 21.6°C       | 2025-05-13 |
| D5200V2 Body | 76.00<br>(68.40~83.60)   | 22.00<br>(19.80~24.20) | 71.70                           | 20.70       | 21.6°C       | 2025-05-19 |
| D5300V2 Body | 80.60<br>(72.54~88.66)   | 23.30<br>(20.97~25.63) | 80.80                           | 23.10       | 21.6°C       | 2025-05-20 |
| D5500V2 Body | 85.60<br>(77.04~94.16)   | 24.50<br>(22.05~26.95) | 79.00                           | 22.50       | 21.6°C       | 2025-05-22 |
| D5600V2 Body | 83.30<br>(74.97~91.63)   | 24.10<br>(21.69~26.51) | 78.70                           | 22.40       | 21.6°C       | 2025-05-24 |
| D5800V2 Body | 79.00<br>(71.10~86.90)   | 22.70<br>(20.43~24.97) | 77.60                           | 22.00       | 21.6°C       | 2025-05-25 |

Note: 1. All SAR values are normalized to 1W forward power.

2. The actual forward power output to the dipole antenna is 20dbm(100mw), so the measured value differs ten times from the table

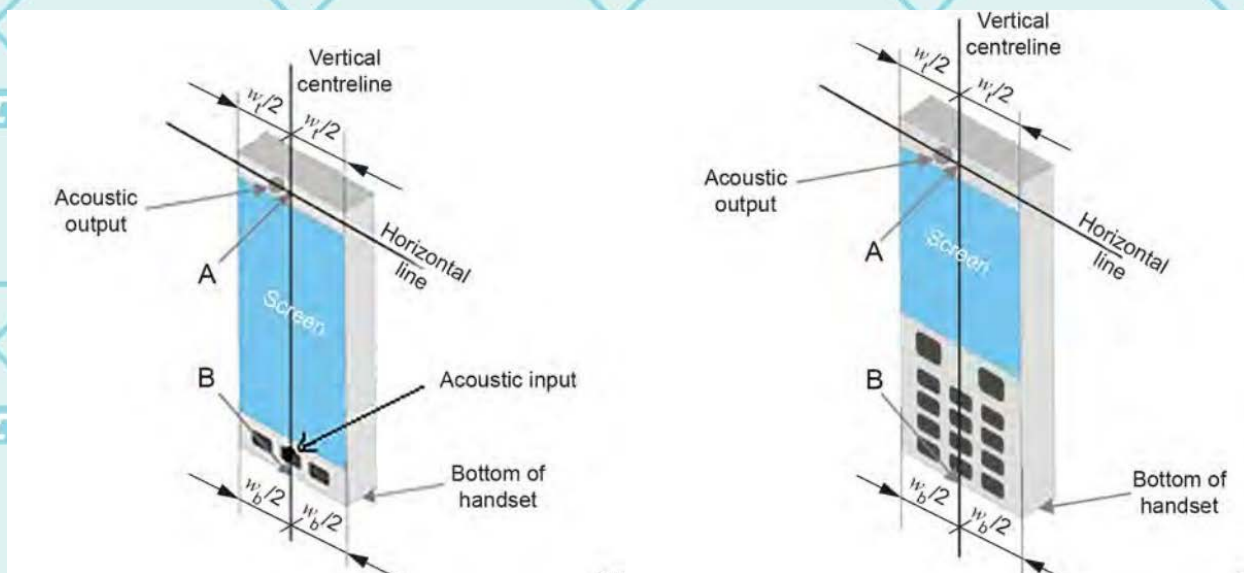
## 9 Test Position Configurations

### 9.1 Head Exposure Conditions

According to the IEEE-1528, the head phantom needs to test both "Cheek" and "Tilt" positions. Configure the DUT for voice operation, if necessary. For example, for a DUT with a flip, swivel, or slide cover piece, open the cover if this is consistent with voice operation. If the DUT can also be used with the cover closed, both configurations shall be tested.

Define two imaginary lines on the DUT, the vertical centreline and the horizontal line, relative to the DUT in vertical orientation as shown in Figure

The vertical centreline passes through two points on the front side of the DUT: the midpoint of the width  $w_t$  of the DUT at the level of the acoustic output (Point A in Figure), and the midpoint of the width  $w_b$  at the bottom of the DUT (Point B). The horizontal line is perpendicular to the vertical centerline, and passes through the centre of the acoustic output (Figure). The two lines intersect at Point A. Note that for many DUTs, Point A coincides with the centre of the acoustic output. However, the acoustic output could be located elsewhere on the horizontal line. Also note that the vertical centreline is not necessarily parallel to the front face of the DUT, especially for clamshell DUTs, DUTs with flip cover pieces, and other irregularly shaped DUTs.



Vertical and horizontal reference lines and reference points A and B on two example device types: a full touch-screen smart phone (left) and a DUT with a keypad (right)

$w_t$  Width of the DUT at the level of the acoustic output

$w_b$  Width of the bottom of the DUT

A Midpoint of the width  $w_t$  of the DUT at the level of the acoustic output

B Midpoint of the width  $w_b$  of the bottom of the DUT

### Cheek position:

Position the DUT close to the surface of the phantom such that Point A is on the (virtual) extension of the line passing through points RE (right-ear ear reference point) and LE (left-ear ear reference point) on the phantom. The plane determined by the vertical centreline and the horizontal line of the DUT shall be parallel to the sagittal plane of the phantom.



### Tilt position:

Place the DUT in the cheek position. While maintaining the orientation of the DUT, move the DUT away from the pinna along the line passing through RE and LE far enough to allow a rotation of the DUT away from the cheek by  $15^\circ$ . Rotate the DUT around the horizontal line by  $15^\circ$ .

While maintaining the orientation of the DUT, move the DUT towards the phantom on a line passing through RE and LE until any part of the DUT touches the ear. The tilt position is obtained when the contact is on the pinna. If the contact is at any location other than the pinna, e.g. an extended antenna in contact with the back of the head phantom, the angle of the DUT shall be reduced. In this case, the tilt position is obtained if any part of the DUT is in contact with the pinna and a second point on the DUT is in contact with the phantom, e.g. the antenna in contact with the back of the head.

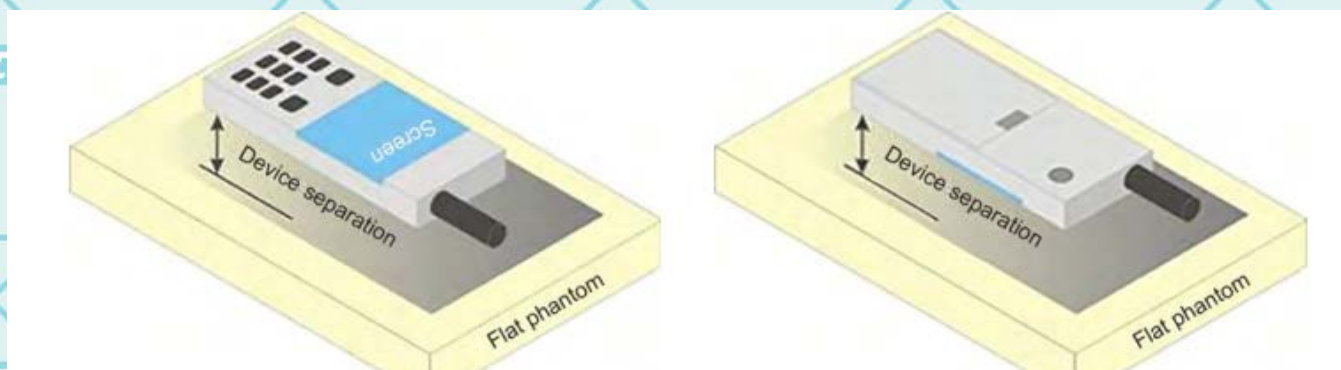


## 9.2 Body Exposure Condition

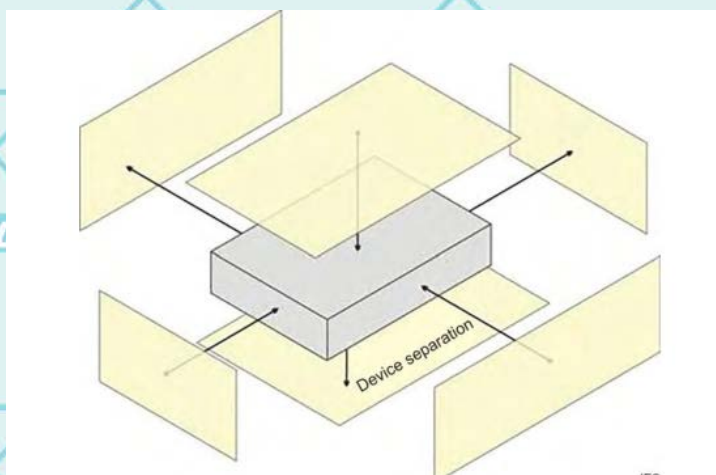
According to 447498 D04

Devices that support transmission while used with body-worn accessories must be tested for SAR compliance related to each body-worn condition of use. SAR evaluation is required for body-worn accessories supplied with the device they are attached to.

The general informing principle is that the selected test configurations must conservatively capture the various body-worn accessory use conditions expected by users. For instance, devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, must be tested for SAR compliance using a conservative minimum test separation distance not to exceed 5 mm for all use conditions required by the device.



Test positions for body-worn devices



Possible test positions for a generic device

Testing of all six faces of the DUT (see Figure) might not be required; justification shall be provided when omitting testing of some faces.

## 10 SAR Test Configuration

### 10.1 GSM Test Configurations

SAR tests for GSM850 and GSM1900, a communication link is set up with a base station by air link. Using CMU200 the power level is set to “5” and “0” in SAR of GSM850 and GSM1900. The tests in the band of GSM 850 and GSM 1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5.

When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8-PSK.

### 10.2 UMTS Test Configuration

#### 1) Output Power Verification

Maximum output power is verified on the high, middle and low channels according to procedures described in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC (transmit power control) set to all “1”s for WCDMA/HSDPA or by applying the required inner loop power control procedures to maintain maximum output power while HSUPA is active. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) are required in the SAR report. All configurations that are not supported by the Headset or cannot be measured due to technical or equipment limitations must be clearly identified.

#### 2) WCDMA

##### a. Head SAR Measurements

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1”s. The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest reported SAR configuration in 12.2 kbps RMC for head exposure.

##### b. Body SAR Measurements

SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1”s. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the Headset with 12.2 kbps RMC as the primary mode

#### 3) HSDPA

SAR for body exposure configurations is measured according to the “Body SAR Measurements” procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq 1/4$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode. This is referred to as the 3G SAR test reduction procedure in the following SAR test guidance, where the primary mode is identified in

the applicable wireless mode test procedures and the secondary mode is wireless mode being considered for SAR test reduction by that procedure. When the 3G SAR test reduction procedure is not satisfied, it is identified as "otherwise" in the applicable procedures; SAR measurement is required for the secondary mode.

Per KDB941225 D01, the 3G SAR test reduction procedure is applied to HSDPA body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures for the highest reported SAR body exposure configuration in 12.2 kbps RMC. HSDPA should be configured according to UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission condition, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. The  $\beta_c$  and  $\beta_d$  gain factors for DPCCH and DPDCH were set according to the values in the below table,  $\beta_{hs}$  for HS-DPCCH is set automatically to the correct value when  $\Delta ACK, \Delta NACK, \Delta CQI = 8$ . The variation of the  $\beta_c / \beta_d$  ratio causes a power reduction at sub-tests 2 - 4.

| Sub-test <sup>a</sup> | $\beta_c$ <sup>a</sup> | $\beta_d$ <sup>a</sup> | $\beta_d$ (SF) <sup>a</sup> | $\beta_c / \beta_d$ <sup>a</sup> | $\beta_{hs}$ (1) <sup>a</sup> | CM(dB)(2) <sup>a</sup> | MPR (dB) <sup>a</sup> |
|-----------------------|------------------------|------------------------|-----------------------------|----------------------------------|-------------------------------|------------------------|-----------------------|
| 1 <sup>a</sup>        | 2/15 <sup>a</sup>      | 15/15 <sup>a</sup>     | 64 <sup>a</sup>             | 2/15 <sup>a</sup>                | 4/15 <sup>a</sup>             | 0.0 <sup>a</sup>       | 0 <sup>a</sup>        |
| 2 <sup>a</sup>        | 12/15(3) <sup>a</sup>  | 15/15(3) <sup>a</sup>  | 64 <sup>a</sup>             | 12/15(3) <sup>a</sup>            | 24/15 <sup>a</sup>            | 1.0 <sup>a</sup>       | 0 <sup>a</sup>        |
| 3 <sup>a</sup>        | 15/15 <sup>a</sup>     | 8/15 <sup>a</sup>      | 64 <sup>a</sup>             | 15/8 <sup>a</sup>                | 30/15 <sup>a</sup>            | 1.5 <sup>a</sup>       | 0.5 <sup>a</sup>      |
| 4 <sup>a</sup>        | 15/15 <sup>a</sup>     | 4/15 <sup>a</sup>      | 64 <sup>a</sup>             | 15/4 <sup>a</sup>                | 30/15 <sup>a</sup>            | 1.5 <sup>a</sup>       | 0.5 <sup>a</sup>      |

Note 1:  $\Delta ACK, \Delta NACK$  and  $\Delta CQI = 8$      $A_{hs} = \beta_{hs} / \beta_c = 30/15$      $\beta_{hs} = 30/15 * \beta_c$   
Note 2: CM=1 for  $\beta_c / \beta_d = 12/15$ ,  $\beta_{hs} / \beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.  
Note 3: For subtest 2 the  $\beta_c / \beta_d$  ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 11/15$  and  $\beta_d = 15/15$

The measurements were performed with a Fixed Reference Channel (FRC) and H-Set 1 QPSK.:

| Parameter                        | Value       |
|----------------------------------|-------------|
| Nominal average inf. bit rate    | 534 kbit/s  |
| Inter-TTI Distance               | 3 TTI's     |
| Number of HARQ Processes         | 2 Processes |
| Information Bit Payload          | 3202 Bits   |
| MAC-d PDU size                   | 336 Bits    |
| Number Code Blocks               | 1 Block     |
| Binary Channel Bits Per TTI      | 4800 Bits   |
| Total Available SMLs in UE       | 19200 SMLs  |
| Number of SMLs per HARQ Process  | 9600 SMLs   |
| Coding Rate                      | 0.67        |
| Number of Physical Channel Codes | 5           |

#### 4)HSUPA

SAR for body exposure configurations is measured according to the “Body SAR Measurements” procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode.

Per KDB941225 D01v03, the 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures for the highest reported body exposure SAR configuration in 12.2 kbps RMC.

### 10.3 LTE Test Configuration

SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices. The CMW500 WideBand Radio Communication Tester was used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR test were performed with the same number of RB and RB offsets transmitting on all TTI frames(Maximum TTI)

#### 1) Spectrum Plots for RB configurations

A properly configured base station simulator was used for LTE output power measurements and SAR testing. Therefore, spectrum plots for RB configurations were not required to be included in this report.

#### 2) MPR

When MPR is implemented permanently within the UE, regardless of network requirements, only those RB configurations allowed by 3GPP for the channel bandwidth and modulation combinations may be tested with MPR active. Configurations with RB allocations less than the RB thresholds required by 3GPP must be tested without MPR.

The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

| Modulation | Channel bandwidth / Transmission bandwidth (RB) |          |          |           |           |           | MPR (dB) |
|------------|-------------------------------------------------|----------|----------|-----------|-----------|-----------|----------|
|            | 1.4 MHz                                         | 3.0 MHz  | 5 MHz    | 10 MHz    | 15 MHz    | 20 MHz    |          |
| QPSK       | > 5                                             | > 4      | > 8      | > 12      | > 16      | > 18      | $\leq 1$ |
| 16 QAM     | $\leq 5$                                        | $\leq 4$ | $\leq 8$ | $\leq 12$ | $\leq 16$ | $\leq 18$ | $\leq 1$ |
| 16 QAM     | > 5                                             | > 4      | > 8      | > 12      | > 16      | > 18      | $\leq 2$ |

#### 3) A-MPR

A-MPR(Additional MPR) has been disabled for all SAR tests by using Network Signalling Value of “NS\_01” on the base station simulator.

## 4) LTE procedures for SAR testing

## A) Largest channel bandwidth standalone SAR test requirements

## i) QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is  $\leq 0.8$  W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is  $> 1.45$  W/kg, SAR is required for all three RB offset configurations for that required test channel.

## ii) QPSK with 50% RB allocation

The procedures required for 1 RB allocation in i) are applied to measure the SAR for QPSK with 50% RB allocation.

## iii) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in i) and ii) are  $\leq 0.8$  W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is  $> 1.45$  W/kg, the remaining required test channels must also be tested.

## iv) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is  $> \frac{1}{2}$  dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is  $> 1.45$  W/kg.

## B) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is  $> \frac{1}{2}$  dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is  $> 1.45$  W/kg.

## 5) TDD LTE test configuration

According to KDB 941225 D05 SAR for LTE Devices v02r04, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

## 10.4 Wi-Fi Test Configuration

For the 802.11b/g SAR tests, a communication link is set up with the test mode software for Wi-Fi mode test. The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 1, 6 and 11 respectively in the case of 2450 MHz. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. Each channel should be tested at the lowest data rate. 802.11b/g operating modes are tested independently according to the service requirements in each frequency band. 802.11b/g modes are tested on channel 1, 6, 11; however, if output power reduction is necessary for channels 1 and/or 11 to meet restricted band requirements the highest output channel closest to each of these channels must be tested instead.

SAR is not required for 802.11g/n channels when the maximum average output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels.

| Mode      | Band    | GHz  | Channel | "Default Test Channels" |         |
|-----------|---------|------|---------|-------------------------|---------|
|           |         |      |         | 802.11b                 | 802.11g |
| 802.11b/g | 2.4 GHz | 2412 | 1#      | √                       | △       |
|           |         | 2437 | 6       | √                       | △       |
|           |         | 2462 | 11#     | √                       | △       |

Notes:

√ = "default test channels"

△ = possible 802.11g channels with maximum average output 1/4 dB the "default test channels"

# = when output power is reduced for channel 1 and /or 11 to meet restricted band requirements the highest output channels closest to each of these channels should be tested.

802.11 Test Channels per FCC Requirements

## 10.5 WiFi 2.4G SAR Test Procedures

Separate SAR procedures are applied to DSSS and OFDM configurations in the 2.4 GHz band to simplify DSSS test requirements. For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions.

### A) 802.11b DSSS SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

- 1) When the reported SAR of the highest measured maximum output power channel (section 3.1 of of KDB 248227D01v02) for the exposure configuration is  $\leq 0.8$  W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
- 2) When the reported SAR is  $> 0.8$  W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is  $> 1.2$  W/kg, SAR is required for the third channel; i.e., all channels require testing.

**B) 2.4GHz 802.11g/n OFDM SAR Test Exclusion Requirements**

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied (section 5.3 of of KDB 248227D01v02r01). SAR is not required for the following 2.4 GHz OFDM conditions.

- 1) When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
- 2) When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is  $\leq 1.2$  W/kg.

**C) SAR Test Requirements for OFDM configurations**

When SAR measurement is required for 802.11 g/n OFDM configurations, each standalone and frequency aggregated band is considered separately for SAR test reduction. In applying the initial test configuration and subsequent test configuration procedures, the 802.11 transmission configuration with the highest specified maximum output power and the channel within a test configuration with the highest measured maximum output power should be clearly distinguished to apply the procedures.

## 11 Detailed Test Results

### 11.1 Conducted Power measurements

The maximum conducted average power (Unit: dBm) including tune-up tolerance is shown as below.

#### 11.1.1 Conducted Power of GSM

| Mode: GSM850  |           | Maximum Tune-up(dBm) | Burst Average Power (dBm) |           |           | Division Factors | Frame-Average Power (dBm) |           |           |
|---------------|-----------|----------------------|---------------------------|-----------|-----------|------------------|---------------------------|-----------|-----------|
|               |           |                      | CH128                     | CH190     | CH251     |                  | CH128                     | CH190     | CH251     |
|               |           |                      | 824.2MHz                  | 836.6MHz  | 848.8MHz  |                  | 824.2MHz                  | 836.6MHz  | 848.8MHz  |
| GSM(CS)       |           | 33.50                | 33.13                     | 33.39     | 33.21     | -9.03            | 25.77                     | 26.03     | 25.85     |
| GPRS (GMSK)   | 1Tx slot  | 33.50                | 33.13                     | 33.38     | 33.19     | -9.03            | 25.77                     | 26.02     | 25.83     |
|               | 2Tx slots | 33.00                | 32.39                     | 32.70     | 32.51     | -9.03            | 25.03                     | 25.34     | 25.15     |
|               | 3Tx slots | 31.00                | 30.54                     | 30.94     | 30.77     | -6.02            | 23.18                     | 23.58     | 23.41     |
|               | 4Tx slots | 30.00                | 29.37                     | 29.70     | 29.42     | -4.26            | 22.01                     | 22.34     | 22.06     |
| EGPRS (8PSK)  | 1Tx slot  | 33.50                | 33.10                     | 33.36     | 33.19     | -3.01            | 25.74                     | 26.00     | 25.83     |
|               | 2Tx slots | 33.00                | 32.40                     | 32.68     | 32.48     | -9.03            | 25.04                     | 25.32     | 25.12     |
|               | 3Tx slots | 31.00                | 30.53                     | 30.93     | 30.69     | -6.02            | 23.17                     | 23.57     | 23.33     |
|               | 4Tx slots | 30.00                | 29.37                     | 29.66     | 29.42     | -4.26            | 22.01                     | 22.30     | 22.06     |
| Mode: GSM1900 |           | Maximum Tune-up(dBm) | Burst Average Power (dBm) |           |           | Division Factors | Frame-Average Power (dBm) |           |           |
|               |           |                      | CH512                     | CH661     | CH810     |                  | CH512                     | CH661     | CH810     |
|               |           |                      | 1850.2MHz                 | 1880.0MHz | 1909.8MHz |                  | 1850.2MHz                 | 1880.0MHz | 1909.8MHz |
| GSM(CS)       |           | 29.50                | 29.01                     | 28.92     | 28.89     | -9.03            | 27.23                     | 27.14     | 27.11     |
| GPRS (GMSK)   | 1Tx slot  | 29.50                | 29.06                     | 28.95     | 28.95     | -9.03            | 27.28                     | 27.17     | 27.17     |
|               | 2Tx slots | 28.50                | 28.38                     | 28.23     | 28.19     | -9.03            | 26.60                     | 26.45     | 26.41     |
|               | 3Tx slots | 27.00                | 26.69                     | 26.54     | 26.47     | -6.02            | 24.91                     | 24.76     | 24.69     |
|               | 4Tx slots | 25.50                | 25.49                     | 25.37     | 25.23     | -4.26            | 23.71                     | 23.59     | 23.45     |
| EGPRS (8PSK)  | 1Tx slot  | 29.50                | 29.05                     | 28.96     | 28.94     | -3.01            | 27.27                     | 27.18     | 27.16     |
|               | 2Tx slots | 28.50                | 28.41                     | 28.27     | 28.20     | -9.03            | 26.63                     | 26.49     | 26.42     |
|               | 3Tx slots | 27.00                | 26.72                     | 26.54     | 26.47     | -6.02            | 24.94                     | 24.76     | 24.69     |
|               | 4Tx slots | 25.50                | 25.50                     | 25.33     | 25.24     | -4.26            | 23.72                     | 23.55     | 23.46     |

Note:

Division Factors

To average the power, the division factor is as follows:

1Tx-slots = 1 transmit time slots out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2Tx-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3Tx-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4Tx-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

### 11.1.2 Conducted Power of WCDMA

| Mode      |           | Maximum Tune-up(dBm) | WCDMA Band 2          |        |        |
|-----------|-----------|----------------------|-----------------------|--------|--------|
|           |           |                      | Conducted Power (dBm) |        |        |
|           |           |                      | CH9262                | CH9400 | CH9538 |
| RMC 12.2K |           | 23.50                | 1852.4                | 1880.0 | 1907.6 |
| HSDPA     | Subtest-1 | 23.50                | 23.19                 | 23.28  | 23.33  |
|           | Subtest-2 | 23.50                | 23.06                 | 23.08  | 23.14  |
|           | Subtest-3 | 23.50                | 23.04                 | 23.10  | 23.25  |
|           | Subtest-4 | 23.50                | 23.05                 | 23.08  | 23.13  |
| HSUPA     | Subtest-1 | 21.50                | 23.03                 | 23.12  | 23.13  |
|           | Subtest-2 | 21.50                | 21.21                 | 21.33  | 21.41  |
|           | Subtest-3 | 21.50                | 20.69                 | 21.33  | 21.36  |
|           | Subtest-4 | 22.50                | 22.17                 | 22.27  | 22.33  |
|           | Subtest-5 | 21.00                | 20.73                 | 20.86  | 20.94  |
|           |           | 22.50                | 22.18                 | 22.27  | 22.34  |
| Mode      |           | Maximum Tune-up(dBm) | WCDMA Band 4          |        |        |
|           |           |                      | Conducted Power (dBm) |        |        |
|           |           |                      | CH1312                | CH1413 | CH1513 |
| RMC 12.2K |           | 23.00                | 1712.4                | 1732.6 | 1752.6 |
| HSDPA     | Subtest-1 | 23.00                | 22.99                 | 22.88  | 22.76  |
|           | Subtest-2 | 23.00                | 23.00                 | 22.91  | 22.76  |
|           | Subtest-3 | 23.00                | 23.00                 | 22.88  | 22.78  |
|           | Subtest-4 | 23.50                | 23.04                 | 22.83  | 22.80  |
| HSUPA     | Subtest-1 | 23.50                | 23.02                 | 22.88  | 22.79  |
|           | Subtest-2 | 21.50                | 21.07                 | 20.96  | 20.84  |
|           | Subtest-3 | 21.50                | 21.04                 | 20.93  | 20.82  |
|           | Subtest-4 | 22.00                | 20.55                 | 21.95  | 21.81  |
|           | Subtest-5 | 22.50                | 22.07                 | 20.40  | 20.30  |
|           |           | 22.50                | 22.07                 | 21.96  | 21.82  |
| Mode      |           | Maximum Tune-up(dBm) | WCDMA Band 5          |        |        |
|           |           |                      | Conducted Power (dBm) |        |        |
|           |           |                      | CH4132                | CH4183 | CH4233 |
| RMC 12.2K |           | 23.00                | 826.4                 | 836.6  | 846.6  |
| HSDPA     | Subtest-1 | 22.51                | 22.51                 | 22.46  | 22.55  |
|           | Subtest-2 | 22.50                | 21.85                 | 21.99  | 22.01  |
|           | Subtest-3 | 22.50                | 21.86                 | 22.00  | 22.05  |
|           | Subtest-4 | 22.50                | 21.97                 | 21.92  | 22.01  |
| HSUPA     | Subtest-1 | 22.50                | 21.88                 | 21.87  | 22.08  |
|           | Subtest-2 | 22.00                | 21.51                 | 21.57  | 21.65  |
|           | Subtest-3 | 22.00                | 21.53                 | 21.55  | 21.66  |
|           | Subtest-4 | 23.00                | 22.50                 | 22.53  | 22.59  |
|           | Subtest-5 | 21.50                | 21.01                 | 21.08  | 21.14  |
|           |           | 23.00                | 22.53                 | 22.51  | 22.58  |

Per KDB 941225 D01, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq 1/2$ dB higher than the primary mode (RMC12.2kbps) or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode.

### 11.1.3 Conducted Power of LTE Band 2

| LTE-FDD Band 2 |            |               |           |                      | Conducted Power(dBm) |       |       |
|----------------|------------|---------------|-----------|----------------------|----------------------|-------|-------|
| Bandwidth      | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 18607                | 18900 | 19193 |
| 1.4MHz         | QPSK       | 1             | 0         | 24.50                | 24.15                | 23.68 | 24.00 |
|                |            |               | 2         | 24.50                | 24.29                | 23.81 | 24.12 |
|                |            |               | 5         | 24.50                | 24.19                | 23.68 | 24.00 |
|                |            | 3             | 0         | 24.50                | 24.16                | 23.84 | 24.03 |
|                |            |               | 2         | 24.50                | 24.23                | 23.84 | 24.04 |
|                |            |               | 3         | 24.50                | 24.19                | 23.82 | 24.02 |
|                | 16QAM      | 1             | 0         | 23.50                | 23.26                | 22.87 | 23.18 |
|                |            |               | 0         | 24.50                | 24.15                | 23.69 | 24.03 |
|                |            |               | 2         | 24.50                | 24.28                | 23.80 | 24.11 |
|                |            | 3             | 5         | 24.50                | 24.18                | 23.67 | 24.00 |
|                |            |               | 0         | 24.50                | 24.15                | 23.85 | 24.04 |
|                |            |               | 2         | 24.50                | 24.19                | 23.86 | 24.08 |
| 3MHz           | QPSK       | 1             | 3         | 24.50                | 24.18                | 23.80 | 24.00 |
|                |            |               | 0         | 23.50                | 23.25                | 22.89 | 23.18 |
|                |            |               | 0         | 24.50                | 24.15                | 23.69 | 24.03 |
|                |            | 8             | 0         | 24.50                | 24.28                | 23.80 | 24.11 |
|                |            |               | 5         | 24.50                | 24.18                | 23.67 | 24.00 |
|                |            |               | 0         | 24.50                | 24.15                | 23.85 | 24.04 |
|                | 16QAM      | 1             | 2         | 24.50                | 24.19                | 23.82 | 24.02 |
|                |            |               | 0         | 23.50                | 23.26                | 22.87 | 23.18 |
|                |            |               | 0         | 24.50                | 24.15                | 23.69 | 24.03 |
|                |            | 8             | 2         | 24.50                | 24.28                | 23.80 | 24.11 |
|                |            |               | 5         | 24.50                | 24.18                | 23.67 | 24.00 |
|                |            |               | 0         | 24.50                | 24.15                | 23.85 | 24.04 |
| 5MHz           | QPSK       | 1             | 3         | 24.50                | 24.18                | 23.80 | 24.00 |
|                |            |               | 0         | 23.50                | 23.25                | 22.89 | 23.18 |
|                |            |               | 0         | 24.50                | 24.15                | 23.69 | 24.03 |
|                |            | 12            | 0         | 24.50                | 24.28                | 23.80 | 24.11 |
|                |            |               | 5         | 24.50                | 24.18                | 23.67 | 24.00 |
|                |            |               | 0         | 24.50                | 24.15                | 23.85 | 24.04 |
|                | 16QAM      | 1             | 2         | 24.50                | 24.19                | 23.82 | 24.02 |
|                |            |               | 0         | 23.50                | 23.26                | 22.87 | 23.18 |
|                |            |               | 0         | 24.50                | 24.15                | 23.69 | 24.03 |
|                |            | 12            | 2         | 24.50                | 24.28                | 23.80 | 24.11 |
|                |            |               | 5         | 24.50                | 24.18                | 23.67 | 24.00 |
|                |            |               | 0         | 24.50                | 24.15                | 23.85 | 24.04 |

| LTE-FDD Band 2 |            |                    |              | Maximum<br>Tune-<br>up(dBm) | Conducted Power(dBm) |                    |                    |
|----------------|------------|--------------------|--------------|-----------------------------|----------------------|--------------------|--------------------|
| Bandwidth      | Modulation | RB<br>allocation   | RB<br>offset |                             | 18650<br>1855.0MHz   | 18900<br>1880.0MHz | 19150<br>1905.0MHz |
| 10MHz          | QPSK       | 1                  | 0            | 24.50                       | 24.29                | 23.95              | 24.31              |
|                |            |                    | 25           | 24.50                       | 24.33                | 23.97              | 24.32              |
|                |            |                    | 49           | 24.50                       | 24.31                | 23.96              | 24.23              |
|                |            | 25                 | 0            | 23.50                       | 23.20                | 22.87              | 23.13              |
|                |            |                    | 13           | 23.50                       | 23.30                | 22.92              | 23.15              |
|                |            |                    | 25           | 23.50                       | 23.28                | 22.90              | 23.06              |
|                | 16QAM      | 50                 | 0            | 23.50                       | 23.25                | 22.90              | 23.11              |
|                |            |                    | 0            | 24.50                       | 24.27                | 23.90              | 24.26              |
|                |            |                    | 25           | 24.50                       | 24.32                | 23.93              | 24.28              |
|                |            | 1                  | 49           | 24.50                       | 24.26                | 23.92              | 24.17              |
|                |            |                    | 0            | 23.50                       | 23.22                | 22.83              | 23.17              |
|                |            |                    | 13           | 23.50                       | 23.29                | 22.93              | 23.17              |
| 15MHz          | QPSK       | 25                 | 25           | 23.50                       | 23.29                | 22.90              | 23.03              |
|                |            |                    | 0            | 23.50                       | 23.24                | 22.92              | 23.15              |
|                |            |                    | 0            | 23.50                       | 23.24                | 22.92              | 23.15              |
|                | 16QAM      | 36                 | 0            | 24.50                       | 24.27                | 23.95              | 24.26              |
|                |            |                    | 38           | 24.50                       | 24.33                | 23.97              | 24.36              |
|                |            |                    | 74           | 24.50                       | 24.18                | 23.97              | 24.24              |
|                | 16QAM      | 75                 | 0            | 23.50                       | 23.30                | 22.90              | 23.23              |
|                |            |                    | 18           | 23.50                       | 23.34                | 22.93              | 23.26              |
|                |            |                    | 39           | 23.50                       | 23.29                | 22.94              | 23.17              |
| 20MHz          | QPSK       | 75                 | 0            | 23.50                       | 23.34                | 22.93              | 23.24              |
|                |            |                    | 0            | 24.50                       | 24.19                | 23.88              | 24.23              |
|                |            |                    | 38           | 24.50                       | 24.26                | 23.89              | 24.29              |
|                | 16QAM      | 74                 | 0            | 24.50                       | 24.09                | 23.90              | 24.15              |
|                |            |                    | 0            | 23.50                       | 23.28                | 22.92              | 23.20              |
|                |            |                    | 18           | 23.50                       | 23.33                | 22.96              | 23.24              |
| 20MHz          | QPSK       | 39                 | 23.50        | 23.29                       | 22.95                | 23.18              | 23.18              |
|                |            |                    | 0            | 23.50                       | 23.35                | 22.93              | 23.24              |
|                |            |                    | 0            | 23.50                       | 23.35                | 22.93              | 23.24              |
|                | 16QAM      | 18700<br>1860.0MHz | 0            | 24.50                       | 24.23                | 23.98              | 24.09              |
|                |            |                    | 50           | 24.50                       | 24.43                | 24.09              | 24.37              |
|                |            |                    | 99           | 24.50                       | 23.99                | 24.07              | 24.12              |
| 20MHz          | QPSK       | 50                 | 0            | 23.50                       | 23.21                | 22.88              | 23.12              |
|                |            |                    | 25           | 23.50                       | 23.31                | 22.94              | 23.20              |
|                |            |                    | 50           | 23.50                       | 23.21                | 22.96              | 23.06              |
|                | 16QAM      | 100                | 0            | 23.50                       | 23.23                | 22.88              | 23.09              |
|                |            |                    | 0            | 24.50                       | 24.17                | 23.95              | 23.99              |
|                |            |                    | 50           | 24.50                       | 24.33                | 24.03              | 24.28              |
| 20MHz          | QPSK       | 99                 | 24.50        | 23.93                       | 24.02                | 24.02              | 24.02              |
|                |            |                    | 0            | 23.50                       | 23.22                | 22.86              | 23.12              |
|                |            |                    | 25           | 23.50                       | 23.35                | 22.96              | 23.22              |
|                | 16QAM      | 50                 | 50           | 23.50                       | 23.22                | 22.99              | 23.09              |
|                |            |                    | 0            | 23.50                       | 23.23                | 22.89              | 23.10              |
|                |            |                    | 0            | 23.50                       | 23.23                | 22.89              | 23.10              |

### 11.1.4 Conducted Power of LTE Band 4

| LTE-FDD Band 4 |            |                  |                  | Maximum<br>Tune-<br>up(dBm) | Conducted Power(dBm)        |           |           |       |
|----------------|------------|------------------|------------------|-----------------------------|-----------------------------|-----------|-----------|-------|
| Bandwidth      | Modulation | RB<br>allocation | RB<br>offset     |                             | 19957                       | 20175     | 20393     |       |
|                |            |                  |                  |                             | 1710.7MHz                   | 1732.5MHz | 1754.3MHz |       |
| 1.4MHz         | QPSK       | 1                | 0                | 24.50                       | 23.37                       | 24.11     | 23.94     |       |
|                |            |                  | 2                | 24.50                       | 23.49                       | 24.23     | 24.01     |       |
|                |            |                  | 5                | 24.50                       | 23.44                       | 24.13     | 23.90     |       |
|                |            | 3                | 0                | 24.50                       | 23.45                       | 24.20     | 23.94     |       |
|                |            |                  | 2                | 24.50                       | 23.48                       | 24.23     | 23.95     |       |
|                |            |                  | 3                | 24.50                       | 23.42                       | 24.16     | 23.96     |       |
|                | 16QAM      | 6                | 0                | 23.50                       | 22.50                       | 23.25     | 23.01     |       |
|                |            | 1                | 0                | 24.50                       | 23.41                       | 24.13     | 23.93     |       |
|                |            |                  | 2                | 24.50                       | 23.47                       | 24.25     | 24.03     |       |
|                |            |                  | 3                | 5                           | 24.50                       | 23.40     | 24.15     | 23.94 |
|                |            | 0                |                  | 24.50                       | 23.44                       | 24.22     | 23.92     |       |
|                |            | 2                |                  | 24.50                       | 23.49                       | 24.22     | 23.94     |       |
| 3              | 3          | 24.50            | 23.42            | 24.17                       | 23.94                       |           |           |       |
| 6              | 0          | 23.50            | 22.49            | 23.25                       | 23.02                       |           |           |       |
| Bandwidth      | Modulation | RB<br>allocation | RB<br>offset     | Maximum<br>Tune-<br>up(dBm) | 19965                       | 20175     | 20385     |       |
| 3MHz           | QPSK       | 1                | 0                | 24.00                       | 23.19                       | 23.96     | 23.79     |       |
|                |            |                  | 7                | 24.50                       | 23.29                       | 24.07     | 23.88     |       |
|                |            |                  | 14               | 24.00                       | 23.23                       | 23.94     | 23.80     |       |
|                |            | 8                | 0                | 23.50                       | 22.41                       | 23.18     | 22.93     |       |
|                |            |                  | 4                | 23.50                       | 22.46                       | 23.23     | 22.99     |       |
|                |            |                  | 7                | 23.50                       | 22.50                       | 23.15     | 22.92     |       |
|                |            | 15               | 0                | 23.50                       | 22.48                       | 23.18     | 22.94     |       |
|                |            | 16QAM            | 1                | 0                           | 24.00                       | 23.22     | 23.96     | 23.75 |
|                |            |                  |                  | 7                           | 24.50                       | 23.29     | 24.05     | 23.89 |
|                | 14         |                  |                  | 24.00                       | 23.23                       | 23.93     | 23.79     |       |
|                | 8          |                  | 0                | 23.50                       | 22.41                       | 23.15     | 22.92     |       |
|                |            |                  | 4                | 23.50                       | 22.49                       | 23.26     | 22.99     |       |
|                |            |                  | 7                | 23.50                       | 22.47                       | 23.18     | 22.92     |       |
|                | 15         | 0                | 23.50            | 22.45                       | 23.19                       | 22.96     |           |       |
|                | Bandwidth  | Modulation       | RB<br>allocation | RB<br>offset                | Maximum<br>Tune-<br>up(dBm) | 19975     | 20175     | 20375 |
|                | 5MHz       | QPSK             | 1                | 0                           | 24.50                       | 23.46     | 24.19     | 23.99 |
|                |            |                  |                  | 13                          | 24.50                       | 23.60     | 24.33     | 24.05 |
|                |            |                  |                  | 24                          | 24.50                       | 23.61     | 24.13     | 23.90 |
| 12             |            |                  | 0                | 23.50                       | 22.51                       | 23.23     | 23.02     |       |
|                |            |                  | 6                | 23.50                       | 22.56                       | 23.33     | 23.07     |       |
|                |            |                  | 13               | 23.50                       | 22.61                       | 23.17     | 23.01     |       |
| 25             |            |                  | 0                | 23.50                       | 22.58                       | 23.26     | 23.01     |       |
| 16QAM          |            |                  | 1                | 0                           | 24.50                       | 23.50     | 24.20     | 23.96 |
|                |            |                  |                  | 13                          | 24.50                       | 23.59     | 24.34     | 24.03 |
|                |            | 24               |                  | 24.50                       | 23.61                       | 24.13     | 23.88     |       |
|                |            | 12               | 0                | 23.50                       | 22.51                       | 23.22     | 23.01     |       |
|                |            |                  | 6                | 23.50                       | 22.59                       | 23.34     | 23.05     |       |
|                |            |                  | 13               | 23.50                       | 22.58                       | 23.23     | 23.02     |       |
| 25             |            | 0                | 23.50            | 22.58                       | 23.25                       | 23.03     |           |       |

| LTE-FDD Band 4 |            |                  |              | Maximum<br>Tune-<br>up(dBm) | Conducted Power(dBm) |                    |                    |
|----------------|------------|------------------|--------------|-----------------------------|----------------------|--------------------|--------------------|
| Bandwidth      | Modulation | RB<br>allocation | RB<br>offset |                             | 20000<br>1715.0MHz   | 20175<br>1732.5MHz | 20350<br>1750.0MHz |
| 10MHz          | QPSK       | 1                | 0            | 24.50                       | 23.56                | 24.17              | 24.18              |
|                |            |                  | 25           | 24.50                       | 23.76                | 24.33              | 24.24              |
|                |            |                  | 49           | 24.50                       | 23.88                | 24.13              | 24.12              |
|                |            | 25               | 0            | 23.50                       | 22.58                | 23.21              | 23.04              |
|                |            |                  | 13           | 23.50                       | 22.71                | 23.32              | 23.05              |
|                |            |                  | 25           | 23.50                       | 22.77                | 23.17              | 22.98              |
|                | 16QAM      | 50               | 0            | 23.50                       | 22.69                | 23.23              | 23.01              |
|                |            |                  | 0            | 24.50                       | 23.55                | 24.21              | 24.16              |
|                |            |                  | 25           | 24.50                       | 23.71                | 24.37              | 24.24              |
|                |            | 1                | 49           | 24.50                       | 23.84                | 24.12              | 24.14              |
|                |            |                  | 0            | 23.50                       | 22.58                | 23.21              | 23.05              |
|                |            |                  | 13           | 23.50                       | 22.72                | 23.32              | 23.04              |
| 15MHz          | QPSK       | 25               | 25           | 23.50                       | 22.80                | 23.18              | 22.96              |
|                |            |                  | 0            | 23.50                       | 22.70                | 23.23              | 22.99              |
|                |            |                  | 0            | 23.50                       | 22.70                | 23.23              | 22.99              |
|                | 16QAM      | 50               | 0            | 23.50                       | 22.70                | 23.23              | 22.99              |
|                |            |                  | 0            | 23.50                       | 22.70                | 23.23              | 22.99              |
|                |            |                  | 0            | 23.50                       | 22.70                | 23.23              | 22.99              |
| 20MHz          | QPSK       | 1                | 0            | 24.50                       | 23.53                | 24.09              | 24.20              |
|                |            |                  | 38           | 24.50                       | 23.89                | 24.34              | 24.25              |
|                |            |                  | 74           | 24.50                       | 23.99                | 23.96              | 24.14              |
|                |            | 36               | 0            | 23.50                       | 22.64                | 23.21              | 23.13              |
|                |            |                  | 18           | 23.50                       | 22.82                | 23.32              | 23.16              |
|                |            |                  | 39           | 23.50                       | 22.90                | 23.16              | 23.08              |
|                | 16QAM      | 75               | 0            | 23.50                       | 22.80                | 23.23              | 23.11              |
|                |            |                  | 0            | 24.50                       | 23.47                | 24.05              | 24.14              |
|                |            |                  | 38           | 24.50                       | 23.80                | 24.36              | 24.21              |
|                |            | 36               | 74           | 24.50                       | 23.94                | 23.99              | 24.04              |
|                |            |                  | 0            | 23.50                       | 22.60                | 23.23              | 23.11              |
|                |            |                  | 18           | 23.50                       | 22.86                | 23.29              | 23.10              |
| 20MHz          | QPSK       | 36               | 39           | 23.50                       | 22.91                | 23.16              | 23.04              |
|                |            |                  | 0            | 23.50                       | 22.81                | 23.24              | 23.13              |
|                |            |                  | 0            | 23.50                       | 22.81                | 23.24              | 23.13              |
|                | 16QAM      | 75               | 0            | 23.50                       | 22.81                | 23.24              | 23.13              |
|                |            |                  | 0            | 23.50                       | 22.81                | 23.24              | 23.13              |
|                |            |                  | 0            | 23.50                       | 22.81                | 23.24              | 23.13              |
| 20MHz          | QPSK       | 1                | 0            | 24.50                       | 23.52                | 24.02              | 24.19              |
|                |            |                  | 50           | 24.50                       | 23.98                | 24.47              | 24.30              |
|                |            |                  | 99           | 24.50                       | 24.14                | 24.05              | 24.02              |
|                |            | 50               | 0            | 23.50                       | 22.67                | 23.20              | 23.11              |
|                |            |                  | 25           | 23.50                       | 22.95                | 23.29              | 23.15              |
|                |            |                  | 50           | 23.50                       | 23.04                | 23.14              | 23.00              |
|                | 16QAM      | 100              | 0            | 23.50                       | 22.86                | 23.16              | 23.05              |
|                |            |                  | 0            | 24.50                       | 23.45                | 24.01              | 24.12              |
|                |            |                  | 50           | 24.50                       | 23.93                | 24.48              | 24.22              |
|                |            | 50               | 99           | 24.50                       | 24.09                | 24.03              | 23.93              |
|                |            |                  | 0            | 23.50                       | 22.68                | 23.22              | 23.12              |
|                |            |                  | 25           | 23.50                       | 22.96                | 23.29              | 23.15              |
| 20MHz          | QPSK       | 100              | 50           | 23.50                       | 23.05                | 23.12              | 23.00              |
|                |            |                  | 0            | 23.50                       | 22.82                | 23.15              | 23.05              |
|                |            |                  | 0            | 23.50                       | 22.82                | 23.15              | 23.05              |
|                | 16QAM      | 100              | 0            | 23.50                       | 22.82                | 23.15              | 23.05              |
|                |            |                  | 0            | 23.50                       | 22.82                | 23.15              | 23.05              |
|                |            |                  | 0            | 23.50                       | 22.82                | 23.15              | 23.05              |

### 11.1.5 Conducted Power of LTE Band 5

| LTE-FDD Band 5 |            |                  |                  | Maximum<br>Tune-<br>up(dBm) | Conducted Power(dBm)        |          |          |       |
|----------------|------------|------------------|------------------|-----------------------------|-----------------------------|----------|----------|-------|
| Bandwidth      | Modulation | RB<br>allocation | RB<br>offset     |                             | 20407                       | 20525    | 20643    |       |
|                |            |                  |                  |                             | 824.7MHz                    | 836.5MHz | 848.3MHz |       |
| 1.4MHz         | QPSK       | 1                | 0                | 25.00                       | 24.59                       | 24.33    | 24.30    |       |
|                |            |                  | 2                | 25.00                       | 24.66                       | 24.43    | 24.31    |       |
|                |            |                  | 5                | 25.00                       | 24.62                       | 24.33    | 24.20    |       |
|                |            | 3                | 0                | 25.00                       | 24.58                       | 24.52    | 24.27    |       |
|                |            |                  | 2                | 25.00                       | 24.61                       | 24.47    | 24.29    |       |
|                |            |                  | 3                | 25.00                       | 24.57                       | 24.46    | 24.30    |       |
|                | 16QAM      | 6                | 0                | 24.00                       | 23.64                       | 23.50    | 23.30    |       |
|                |            |                  | 1                | 0                           | 24.00                       | 23.62    | 23.52    | 23.08 |
|                |            |                  |                  | 2                           | 24.00                       | 23.70    | 23.58    | 23.10 |
|                |            | 3                |                  | 5                           | 24.00                       | 23.64    | 23.53    | 23.06 |
|                |            |                  | 0                | 24.00                       | 23.75                       | 23.67    | 23.45    |       |
|                |            |                  | 2                | 24.00                       | 23.78                       | 23.73    | 23.45    |       |
| 6              | 3          | 24.00            | 23.70            | 23.64                       | 23.46                       |          |          |       |
|                | 0          | 23.00            | 22.85            | 22.66                       | 22.51                       |          |          |       |
|                | Bandwidth  | Modulation       | RB<br>allocation | RB<br>offset                | Maximum<br>Tune-<br>up(dBm) | 20415    | 20525    | 20635 |
| 825.5MHz       |            |                  |                  |                             |                             | 836.5MHz | 847.5MHz |       |
| 3MHz           | QPSK       | 1                | 0                | 24.50                       | 24.32                       | 24.31    | 24.15    |       |
|                |            |                  | 7                | 24.50                       | 24.41                       | 24.31    | 24.23    |       |
|                |            |                  | 14               | 24.50                       | 24.30                       | 24.26    | 24.19    |       |
|                |            | 8                | 0                | 23.50                       | 23.50                       | 23.43    | 23.26    |       |
|                |            |                  | 4                | 24.00                       | 23.56                       | 23.52    | 23.35    |       |
|                |            |                  | 7                | 24.00                       | 23.57                       | 23.48    | 23.28    |       |
|                |            | 15               | 0                | 24.00                       | 23.52                       | 23.47    | 23.31    |       |
|                |            |                  | 0                | 24.00                       | 23.77                       | 23.47    | 23.07    |       |
|                |            |                  | 16QAM            | 1                           | 7                           | 24.00    | 23.83    | 23.48 |
|                | 14         | 24.00            |                  |                             | 23.73                       | 23.45    | 22.98    |       |
|                | 0          | 23.00            |                  |                             | 22.61                       | 22.49    | 22.33    |       |
|                | 8          | 4                |                  | 23.00                       | 22.61                       | 22.51    | 22.32    |       |
|                |            | 7                |                  | 23.00                       | 22.59                       | 22.43    | 22.32    |       |
|                |            | 15               |                  | 0                           | 23.00                       | 22.58    | 22.44    | 22.39 |

| LTE-FDD Band 5 |            |                  |              | Maximum<br>Tune-<br>up(dBm) | Conducted Power(dBm) |          |          |
|----------------|------------|------------------|--------------|-----------------------------|----------------------|----------|----------|
| Bandwidth      | Modulation | RB<br>allocation | RB<br>offset |                             | 20425                | 20525    | 20625    |
|                |            |                  |              |                             | 826.5MHz             | 836.5MHz | 846.5MHz |
| 5MHz           | QPSK       | 1                | 0            | 25.00                       | 24.60                | 24.51    | 24.37    |
|                |            |                  | 13           | 25.00                       | 24.64                | 24.61    | 24.37    |
|                |            |                  | 24           | 25.00                       | 24.62                | 24.56    | 24.27    |
|                |            | 12               | 0            | 24.00                       | 23.54                | 23.49    | 23.53    |
|                |            |                  | 6            | 24.00                       | 23.67                | 23.58    | 23.47    |
|                |            |                  | 13           | 24.00                       | 23.62                | 23.52    | 23.37    |
|                | 16QAM      | 25               | 0            | 24.00                       | 23.60                | 23.55    | 23.44    |
|                |            | 1                | 0            | 24.50                       | 24.11                | 23.82    | 23.69    |
|                |            |                  | 13           | 24.50                       | 24.21                | 23.86    | 23.73    |
|                |            |                  | 24           | 24.50                       | 24.14                | 23.82    | 23.55    |
|                |            | 12               | 0            | 23.00                       | 22.57                | 22.42    | 22.48    |
|                |            |                  | 6            | 23.00                       | 22.67                | 22.53    | 22.50    |
| 13             | 23.00      |                  | 22.66        | 22.49                       | 22.38                |          |          |
| 25             | 0          | 23.00            | 22.58        | 22.55                       | 22.44                |          |          |
| Bandwidth      | Modulation | RB<br>allocation | RB<br>offset | Maximum<br>Tune-<br>up(dBm) | 20450                | 20525    | 20600    |
|                |            |                  |              |                             | 829.0MHz             | 836.5MHz | 844.0MHz |
| 10MHz          | QPSK       | 1                | 0            | 25.00                       | 24.67                | 24.62    | 24.63    |
|                |            |                  | 25           | 25.00                       | 24.64                | 24.59    | 24.61    |
|                |            |                  | 49           | 25.00                       | 24.59                | 24.52    | 24.50    |
|                |            | 25               | 0            | 24.00                       | 23.57                | 23.46    | 23.49    |
|                |            |                  | 13           | 24.00                       | 23.73                | 23.59    | 23.47    |
|                |            |                  | 25           | 24.00                       | 23.59                | 23.46    | 23.31    |
|                | 16QAM      | 50               | 0            | 24.00                       | 23.61                | 23.56    | 23.44    |
|                |            | 1                | 0            | 24.50                       | 24.08                | 23.78    | 23.39    |
|                |            |                  | 25           | 24.50                       | 24.07                | 23.76    | 23.41    |
|                |            |                  | 49           | 24.50                       | 24.02                | 23.71    | 23.28    |
|                |            | 25               | 0            | 23.00                       | 22.61                | 22.52    | 22.46    |
|                |            |                  | 13           | 23.00                       | 22.69                | 22.59    | 22.54    |
|                |            |                  | 25           | 23.00                       | 22.65                | 22.52    | 22.37    |
|                |            | 50               | 0            | 23.00                       | 22.64                | 22.54    | 22.43    |

### 11.1.6 Conducted Power of LTE Band 7

| LTE-FDD Band 7 |            |                  |              | Maximum<br>Tune-<br>up(dBm) | Conducted Power(dBm) |                    |                    |
|----------------|------------|------------------|--------------|-----------------------------|----------------------|--------------------|--------------------|
| Bandwidth      | Modulation | RB<br>allocation | RB<br>offset |                             | 20775<br>2502.5MHz   | 21100<br>2535.0MHz | 21425<br>2567.5MHz |
| 5MHz           | QPSK       | 1                | 0            | 23.50                       | 23.08                | 23.17              | 23.28              |
|                |            |                  | 13           | 23.50                       | 23.18                | 23.22              | 23.39              |
|                |            |                  | 24           | 23.50                       | 23.17                | 23.14              | 23.38              |
|                |            | 12               | 0            | 22.50                       | 22.06                | 22.23              | 22.31              |
|                |            |                  | 6            | 22.50                       | 22.14                | 22.29              | 22.40              |
|                |            |                  | 13           | 22.50                       | 22.19                | 22.25              | 22.38              |
|                | 16QAM      | 25               | 0            | 22.50                       | 22.14                | 22.28              | 22.36              |
|                |            |                  | 0            | 23.50                       | 23.09                | 23.15              | 23.30              |
|                |            |                  | 13           | 23.50                       | 23.17                | 23.19              | 23.39              |
|                |            | 12               | 24           | 23.50                       | 23.15                | 23.15              | 23.35              |
|                |            |                  | 0            | 22.50                       | 22.07                | 22.24              | 22.30              |
|                |            |                  | 6            | 22.50                       | 22.13                | 22.28              | 22.38              |
| 10MHz          | QPSK       | 1                | 13           | 22.50                       | 22.17                | 22.26              | 22.40              |
|                |            |                  | 25           | 22.50                       | 22.13                | 22.27              | 22.39              |
|                |            |                  | 0            | 22.50                       | 22.13                | 22.27              | 22.39              |
|                |            | 25               | 0            | 23.50                       | 23.13                | 23.30              | 23.37              |
|                |            |                  | 25           | 23.50                       | 23.21                | 23.31              | 23.49              |
|                |            |                  | 49           | 23.50                       | 23.20                | 23.25              | 23.50              |
|                |            | 50               | 0            | 22.50                       | 22.17                | 22.29              | 22.27              |
|                |            |                  | 13           | 22.50                       | 22.28                | 22.32              | 22.36              |
|                |            |                  | 25           | 22.50                       | 22.22                | 22.32              | 22.41              |
|                | 16QAM      | 1                | 0            | 22.50                       | 22.22                | 22.30              | 22.37              |
|                |            |                  | 0            | 23.50                       | 23.14                | 23.28              | 23.39              |
|                |            |                  | 25           | 23.50                       | 23.24                | 23.31              | 23.48              |
|                |            | 25               | 49           | 24.00                       | 23.25                | 23.31              | 23.55              |
|                |            |                  | 0            | 22.50                       | 22.13                | 22.22              | 22.30              |
|                |            |                  | 13           | 22.50                       | 22.25                | 22.34              | 22.36              |
|                |            | 50               | 25           | 22.50                       | 22.25                | 22.37              | 22.35              |
|                |            |                  | 0            | 22.50                       | 22.26                | 22.33              | 22.34              |
|                |            |                  | 0            | 22.50                       | 22.26                | 22.33              | 22.34              |

| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 20825     | 21100     | 21375     |
|-----------|------------|---------------|-----------|----------------------|-----------|-----------|-----------|
|           |            |               |           |                      | 2057.5MHz | 2535.0MHz | 2562.5MHz |
| 15MHz     | QPSK       | 1             | 0         | 23.50                | 23.09     | 23.23     | 23.28     |
|           |            |               | 38        | 23.50                | 23.23     | 23.31     | 23.41     |
|           |            |               | 74        | 23.50                | 23.15     | 23.20     | 23.48     |
|           |            | 36            | 0         | 22.50                | 22.20     | 22.27     | 22.27     |
|           |            |               | 18        | 22.50                | 22.28     | 22.38     | 22.36     |
|           |            |               | 39        | 22.50                | 22.32     | 22.33     | 22.38     |
|           | 75         | 0             | 22.50     | 22.27                | 22.39     | 22.39     |           |
|           | 16QAM      | 1             | 0         | 23.50                | 23.10     | 23.24     | 23.29     |
|           |            |               | 38        | 23.50                | 23.22     | 23.31     | 23.41     |
|           |            |               | 74        | 23.50                | 23.16     | 23.18     | 23.44     |
|           |            | 36            | 0         | 22.50                | 22.19     | 22.33     | 22.29     |
|           |            |               | 18        | 22.50                | 22.31     | 22.37     | 22.33     |
| 39        |            |               | 22.50     | 22.34                | 22.34     | 22.37     |           |
| 75        | 0          | 22.50         | 22.32     | 22.35                | 22.40     |           |           |
| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 21350     | 21100     | 21350     |
|           |            |               |           |                      | 2560.0MHz | 2535.0MHz | 2560.0MHz |
| 20MHz     | QPSK       | 1             | 0         | 23.50                | 23.04     | 23.24     | 23.18     |
|           |            |               | 50        | 23.50                | 23.33     | 23.45     | 23.38     |
|           |            |               | 99        | 23.50                | 23.18     | 23.25     | 23.32     |
|           |            | 50            | 0         | 22.50                | 22.20     | 22.23     | 22.29     |
|           |            |               | 25        | 22.50                | 22.27     | 22.33     | 22.35     |
|           |            |               | 50        | 22.50                | 22.25     | 22.27     | 22.30     |
|           | 100        | 0             | 22.50     | 22.20                | 22.25     | 22.29     |           |
|           | 16QAM      | 1             | 0         | 23.50                | 23.04     | 23.25     | 23.16     |
|           |            |               | 50        | 23.50                | 23.33     | 23.46     | 23.38     |
|           |            |               | 99        | 23.50                | 23.17     | 23.25     | 23.34     |
|           |            | 50            | 0         | 22.50                | 22.17     | 22.22     | 22.27     |
|           |            |               | 25        | 22.50                | 22.31     | 22.34     | 22.34     |
|           |            |               | 50        | 22.50                | 22.26     | 22.26     | 22.29     |
|           |            | 100           | 0         | 22.50                | 22.17     | 22.25     | 22.27     |

### 11.1.7 Conducted Power of LTE Band 12

| LTE-FDD Band 12 |            |                  |              | Maximum<br>Tune-<br>up(dBm) | Conducted Power(dBm) |                             |          |          |
|-----------------|------------|------------------|--------------|-----------------------------|----------------------|-----------------------------|----------|----------|
| Bandwidth       | Modulation | RB<br>allocation | RB<br>offset |                             | 23017                | 23095                       | 23173    |          |
|                 |            |                  |              |                             | 699.7MHz             | 707.5MHz                    | 715.5MHz |          |
| 1.4MHz          | QPSK       | 1                | 0            | 25.00                       | 24.59                | 24.45                       | 24.67    |          |
|                 |            |                  | 2            | 25.00                       | 24.67                | 24.57                       | 24.74    |          |
|                 |            |                  | 5            | 25.00                       | 24.60                | 24.48                       | 24.69    |          |
|                 |            | 3                | 0            | 25.00                       | 24.60                | 24.59                       | 24.69    |          |
|                 |            |                  | 2            | 25.00                       | 24.58                | 24.64                       | 24.72    |          |
|                 |            |                  | 3            | 25.00                       | 24.63                | 24.63                       | 24.69    |          |
|                 | 6          | 0                | 24.00        | 23.64                       | 23.66                | 23.77                       |          |          |
|                 | 16QAM      | 1                | 0            | 24.00                       | 23.64                | 23.65                       | 23.40    |          |
|                 |            |                  | 2            | 24.00                       | 23.65                | 23.71                       | 23.46    |          |
|                 |            |                  | 5            | 24.00                       | 23.67                | 23.65                       | 23.43    |          |
|                 |            | 3                | 0            | 24.00                       | 23.74                | 23.78                       | 23.81    |          |
|                 |            |                  | 2            | 24.00                       | 23.77                | 23.85                       | 23.83    |          |
|                 |            |                  | 3            | 24.00                       | 23.71                | 23.80                       | 23.84    |          |
|                 |            | 6                | 0            | 23.00                       | 22.83                | 22.82                       | 22.95    |          |
|                 |            | Bandwidth        | Modulation   | RB<br>allocation            | RB<br>offset         | Maximum<br>Tune-<br>up(dBm) | 23025    | 23095    |
| 700.5MHz        |            |                  |              |                             |                      |                             | 707.5MHz | 714.5MHz |
| 3MHz            | QPSK       | 1                | 0            | 25.00                       | 24.36                | 24.35                       | 24.57    |          |
|                 |            |                  | 7            | 25.00                       | 24.44                | 24.43                       | 24.63    |          |
|                 |            |                  | 14           | 25.00                       | 24.38                | 24.41                       | 24.59    |          |
|                 |            | 8                | 0            | 24.00                       | 23.57                | 23.59                       | 23.69    |          |
|                 |            |                  | 4            | 24.00                       | 23.64                | 23.69                       | 23.74    |          |
|                 |            |                  | 7            | 24.00                       | 23.61                | 23.66                       | 23.67    |          |
|                 | 15         | 0                | 24.00        | 23.62                       | 23.59                | 23.69                       |          |          |
|                 | 16QAM      | 1                | 0            | 24.00                       | 23.74                | 23.55                       | 23.30    |          |
|                 |            |                  | 7            | 24.00                       | 23.83                | 23.64                       | 23.42    |          |
|                 |            |                  | 14           | 24.00                       | 23.77                | 23.60                       | 23.29    |          |
|                 |            | 8                | 0            | 23.00                       | 22.61                | 22.59                       | 22.63    |          |
|                 |            |                  | 4            | 23.00                       | 22.66                | 22.68                       | 22.73    |          |
|                 |            |                  | 7            | 23.00                       | 22.66                | 22.63                       | 22.68    |          |
|                 | 15         | 0                | 23.00        | 22.62                       | 22.58                | 22.75                       |          |          |

| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 23035    | 23095    | 23155    |
|-----------|------------|---------------|-----------|----------------------|----------|----------|----------|
|           |            |               |           |                      | 701.5MHz | 707.5MHz | 713.5MHz |
| 5MHz      | QPSK       | 1             | 0         | 25.00                | 24.65    | 24.62    | 24.67    |
|           |            |               | 13        | 25.00                | 24.68    | 24.72    | 24.76    |
|           |            |               | 24        | 25.00                | 24.66    | 24.77    | 24.68    |
|           |            | 12            | 0         | 24.00                | 23.66    | 23.66    | 23.79    |
|           |            |               | 6         | 24.00                | 23.65    | 23.74    | 23.84    |
|           |            |               | 13        | 24.00                | 23.65    | 23.65    | 23.74    |
|           | 16QAM      | 25            | 0         | 24.00                | 23.63    | 23.65    | 23.77    |
|           |            |               | 0         | 24.50                | 24.11    | 23.98    | 23.98    |
|           |            |               | 13        | 24.50                | 24.23    | 23.99    | 24.05    |
|           |            | 1             | 24        | 24.50                | 24.14    | 23.98    | 23.97    |
|           |            |               | 0         | 23.00                | 22.63    | 22.60    | 22.75    |
|           |            |               | 6         | 23.00                | 22.64    | 22.68    | 22.87    |
| 10MHz     | QPSK       | 12            | 13        | 23.00                | 22.66    | 22.68    | 22.80    |
|           |            |               | 0         | 23.00                | 22.64    | 22.72    | 22.76    |
|           |            |               | 25        | 23.00                | 22.64    | 22.72    | 22.76    |
|           | 16QAM      | 25            | 0         | 23.00                | 22.50    | 23095    | 23130    |
|           |            |               | 704.0MHz  | 707.5MHz             | 711.0MHz |          |          |
|           |            |               | 0         | 25.00                | 24.67    | 24.72    | 24.83    |
|           | QPSK       | 25            | 25        | 25.00                | 24.69    | 24.74    | 24.90    |
|           |            |               | 49        | 25.00                | 24.73    | 24.81    | 24.89    |
|           |            |               | 0         | 24.00                | 23.66    | 23.68    | 23.73    |
|           | 16QAM      | 25            | 13        | 24.00                | 23.81    | 23.80    | 23.85    |
|           |            |               | 25        | 24.00                | 23.76    | 23.71    | 23.72    |
|           |            |               | 0         | 24.00                | 23.67    | 23.70    | 23.70    |
|           | 16QAM      | 50            | 0         | 24.50                | 24.06    | 23.90    | 23.60    |
|           |            |               | 25        | 24.50                | 24.12    | 23.89    | 23.63    |
|           |            |               | 49        | 24.50                | 24.07    | 23.93    | 23.66    |
|           | 16QAM      | 25            | 0         | 23.00                | 22.72    | 22.67    | 22.71    |
|           |            |               | 13        | 23.00                | 22.82    | 22.82    | 22.86    |
|           |            |               | 25        | 23.00                | 22.78    | 22.71    | 22.72    |
|           | 16QAM      | 50            | 0         | 23.00                | 22.70    | 22.74    | 22.70    |

### 11.1.8 Conducted Power of LTE Band 17

| LTE-FDD Band 17 |            |                  |              | Maximum<br>Tune-<br>up(dBm) | Conducted Power(dBm) |                   |                   |
|-----------------|------------|------------------|--------------|-----------------------------|----------------------|-------------------|-------------------|
| Bandwidth       | Modulation | RB<br>allocation | RB<br>offset |                             | 23755<br>706.5MHz    | 23790<br>710.0MHz | 23825<br>713.5MHz |
| 5MHz            | QPSK       | 1                | 0            | 25.00                       | 24.55                | 24.55             | 24.57             |
|                 |            |                  | 13           | 25.00                       | 24.60                | 24.68             | 24.65             |
|                 |            |                  | 24           | 25.00                       | 24.60                | 24.64             | 24.55             |
|                 |            | 12               | 0            | 24.00                       | 23.62                | 23.59             | 23.67             |
|                 |            |                  | 6            | 24.00                       | 23.63                | 23.63             | 23.72             |
|                 |            |                  | 13           | 24.00                       | 23.57                | 23.60             | 23.64             |
|                 | 16QAM      | 25               | 0            | 24.00                       | 23.57                | 23.60             | 23.63             |
|                 |            |                  | 0            | 24.50                       | 24.04                | 23.81             | 23.85             |
|                 |            |                  | 13           | 24.50                       | 24.11                | 23.93             | 23.94             |
|                 |            | 1                | 24           | 24.50                       | 24.03                | 23.83             | 23.90             |
|                 |            |                  | 0            | 23.00                       | 22.58                | 22.51             | 22.67             |
|                 |            |                  | 6            | 23.00                       | 22.65                | 22.62             | 22.74             |
| 10MHz           | QPSK       | 12               | 13           | 23.00                       | 22.56                | 22.55             | 22.63             |
|                 |            |                  | 0            | 23.00                       | 22.60                | 22.62             | 22.59             |
|                 |            |                  | 25           | 23.00                       | 22.60                | 22.62             | 22.59             |
|                 | 16QAM      | 25               | 0            | 23.00                       | 22.60                | 22.62             | 22.59             |
|                 |            |                  | 0            | 23.00                       | 22.60                | 22.62             | 22.59             |
|                 |            |                  | 25           | 23.00                       | 22.60                | 22.62             | 22.59             |
| 10MHz           | QPSK       | 1                | 0            | 25.00                       | 24.56                | 24.65             | 24.66             |
|                 |            |                  | 25           | 25.00                       | 24.67                | 24.72             | 24.83             |
|                 |            |                  | 49           | 25.00                       | 24.70                | 24.65             | 24.80             |
|                 | 16QAM      | 25               | 0            | 24.00                       | 23.57                | 23.56             | 23.57             |
|                 |            |                  | 13           | 24.00                       | 23.68                | 23.67             | 23.70             |
|                 |            |                  | 25           | 24.00                       | 23.64                | 23.61             | 23.59             |
| 10MHz           | QPSK       | 50               | 0            | 24.00                       | 23.63                | 23.61             | 23.67             |
|                 |            |                  | 0            | 24.00                       | 23.99                | 23.85             | 23.47             |
|                 |            |                  | 0            | 24.00                       | 23.99                | 23.85             | 23.47             |
|                 | 16QAM      | 1                | 25           | 24.50                       | 24.01                | 23.82             | 23.54             |
|                 |            |                  | 49           | 24.50                       | 24.06                | 23.78             | 23.57             |
|                 |            |                  | 0            | 23.00                       | 22.56                | 22.55             | 22.58             |
| 10MHz           | QPSK       | 25               | 13           | 23.00                       | 22.72                | 22.64             | 22.69             |
|                 |            |                  | 25           | 23.00                       | 22.65                | 22.59             | 22.63             |
|                 |            |                  | 0            | 23.00                       | 22.61                | 22.65             | 22.61             |
|                 | 16QAM      | 50               | 0            | 23.00                       | 22.61                | 22.65             | 22.61             |
|                 |            |                  | 0            | 23.00                       | 22.61                | 22.65             | 22.61             |
|                 |            |                  | 0            | 23.00                       | 22.61                | 22.65             | 22.61             |

### 11.1.9 Conducted Power of LTE Band 38

| LTE-TDD Band 38 |            |                  |              | Maximum<br>Tune-<br>up(dBm) | Conducted Power(dBm) |           |           |       |       |
|-----------------|------------|------------------|--------------|-----------------------------|----------------------|-----------|-----------|-------|-------|
| Bandwidth       | Modulation | RB<br>allocation | RB<br>offset |                             | 37775                | 38000     | 38225     |       |       |
|                 |            |                  |              |                             | 2572.5MHz            | 2595.0MHz | 2617.5MHz |       |       |
| 5MHz            | QPSK       | 1                | 0            | 24.00                       | 23.89                | 23.95     | 23.84     |       |       |
|                 |            |                  | 13           | 24.50                       | 24.04                | 24.06     | 23.94     |       |       |
|                 |            |                  | 24           | 24.00                       | 23.92                | 23.96     | 23.78     |       |       |
|                 |            | 12               | 0            | 23.00                       | 22.93                | 22.93     | 22.83     |       |       |
|                 |            |                  | 6            | 23.00                       | 22.96                | 22.97     | 22.91     |       |       |
|                 |            |                  | 13           | 23.00                       | 22.94                | 22.94     | 22.87     |       |       |
|                 | 16QAM      | 25               | 0            | 23.00                       | 22.92                | 22.97     | 22.87     |       |       |
|                 |            |                  | 1            | 0                           | 24.00                | 23.90     | 23.97     | 23.83 |       |
|                 |            |                  |              | 13                          | 24.50                | 24.04     | 24.07     | 23.92 |       |
|                 |            | 12               |              | 24                          | 24.00                | 23.92     | 23.96     | 23.75 |       |
|                 |            |                  | 25           | 0                           | 23.00                | 22.89     | 22.94     | 22.87 |       |
|                 |            |                  |              | 6                           | 23.00                | 22.95     | 22.97     | 22.90 |       |
| 13              | 23.00      | 22.93            |              | 22.95                       | 22.89                |           |           |       |       |
| 0               | 23.00      | 22.90            | 22.98        | 22.87                       |                      |           |           |       |       |
| Bandwidth       | Modulation | RB<br>allocation | RB<br>offset | Maximum<br>Tune-<br>up(dBm) | 37800                | 38000     | 38200     |       |       |
|                 |            |                  |              |                             | 2575.0MHz            | 2595.0MHz | 2615.0MHz |       |       |
| 10MHz           | QPSK       | 1                | 0            | 24.50                       | 23.95                | 24.04     | 24.04     |       |       |
|                 |            |                  | 25           | 24.50                       | 24.01                | 24.04     | 24.05     |       |       |
|                 |            |                  | 49           | 24.50                       | 24.02                | 24.04     | 23.94     |       |       |
|                 |            | 25               | 0            | 23.00                       | 22.93                | 22.96     | 22.91     |       |       |
|                 |            |                  | 13           | 23.00                       | 22.98                | 23.00     | 22.94     |       |       |
|                 |            |                  | 25           | 23.00                       | 22.96                | 22.97     | 22.88     |       |       |
|                 |            | 50               | 0            | 23.00                       | 22.93                | 23.00     | 22.96     |       |       |
|                 |            |                  | 16QAM        | 1                           | 0                    | 24.50     | 23.94     | 24.03 | 24.02 |
|                 |            |                  |              |                             | 25                   | 24.50     | 23.99     | 24.06 | 24.04 |
|                 | 49         | 24.50            |              |                             | 24.01                | 24.05     | 23.95     |       |       |
|                 | 16QAM      | 25               | 0            | 23.50                       | 22.93                | 23.01     | 22.93     |       |       |
|                 |            |                  | 13           | 23.00                       | 22.97                | 22.99     | 22.94     |       |       |
|                 |            |                  | 25           | 23.00                       | 22.95                | 22.96     | 22.89     |       |       |
|                 |            | 50               | 0            | 23.00                       | 22.96                | 22.97     | 22.93     |       |       |

| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 37825     | 38000     | 38175     |
|-----------|------------|---------------|-----------|----------------------|-----------|-----------|-----------|
|           |            |               |           |                      | 2577.5MHz | 2595.0MHz | 2612.5MHz |
| 15MHz     | QPSK       | 1             | 0         | 24.50                | 23.91     | 24.00     | 24.03     |
|           |            |               | 38        | 24.50                | 24.00     | 24.06     | 24.11     |
|           |            |               | 74        | 24.00                | 23.91     | 23.95     | 23.92     |
|           |            | 36            | 0         | 23.00                | 22.93     | 22.99     | 22.92     |
|           |            |               | 18        | 23.50                | 23.02     | 23.01     | 22.96     |
|           |            |               | 39        | 23.00                | 22.97     | 22.96     | 22.89     |
|           | 16QAM      | 75            | 0         | 23.00                | 22.99     | 22.99     | 22.94     |
|           |            |               | 0         | 24.50                | 23.88     | 23.98     | 24.01     |
|           |            |               | 38        | 24.50                | 24.03     | 24.07     | 24.07     |
|           |            | 36            | 74        | 24.00                | 23.90     | 23.98     | 23.92     |
|           |            |               | 0         | 23.00                | 22.94     | 22.95     | 22.92     |
|           |            |               | 18        | 23.50                | 22.99     | 23.01     | 22.98     |
| 20MHz     | QPSK       | 39            | 23.00     | 22.97                | 22.94     | 22.94     | 22.90     |
|           |            |               | 0         | 23.00                | 22.99     | 22.99     | 22.93     |
|           |            | 75            | 0         | 23.00                | 22.99     | 22.99     | 22.93     |
|           |            |               | 0         | 24.00                | 23.83     | 23.95     | 23.89     |
|           |            |               | 50        | 24.50                | 24.11     | 24.13     | 24.09     |
|           |            |               | 99        | 24.00                | 23.90     | 23.95     | 23.83     |
|           | 16QAM      | 50            | 0         | 23.00                | 22.95     | 22.97     | 22.90     |
|           |            |               | 25        | 23.50                | 23.02     | 23.00     | 23.00     |
|           |            |               | 50        | 23.00                | 22.92     | 22.95     | 22.86     |
|           |            | 100           | 0         | 23.00                | 22.91     | 22.94     | 22.89     |
|           |            |               | 0         | 24.00                | 23.85     | 23.94     | 23.91     |
|           |            |               | 50        | 24.50                | 24.09     | 24.12     | 24.09     |
| 25MHz     | QPSK       | 99            | 24.00     | 23.90                | 23.95     | 23.95     | 23.84     |
|           |            |               | 0         | 23.00                | 22.92     | 22.94     | 22.92     |
|           |            |               | 25        | 23.50                | 23.00     | 23.05     | 22.98     |
|           |            | 50            | 50        | 23.00                | 22.94     | 22.93     | 22.88     |
|           |            |               | 0         | 23.00                | 22.89     | 22.92     | 22.88     |
|           |            |               | 0         | 23.00                | 22.89     | 22.92     | 22.88     |

### 11.1.10 Conducted Power of LTE Band 41

| LTE-TDD Band 41 |            |               |           |                      | Conducted Power(dBm) |           |           |            |           |
|-----------------|------------|---------------|-----------|----------------------|----------------------|-----------|-----------|------------|-----------|
| Bandwidth       | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 40065                | 40265     | 40640     | 41015      | 41215     |
|                 |            |               |           |                      | 2537.5MHz            | 2557.5MHz | 2595.0MHz | 2632.5 MHz | 2652.5MHz |
| 5MHz            | QPSK       | 1             | 0         | 24.00                | 23.93                | 23.41     | 23.88     | 23.21      | 23.54     |
|                 |            |               | 13        | 24.50                | 24.01                | 23.52     | 24.02     | 23.32      | 23.61     |
|                 |            |               | 24        | 24.00                | 23.89                | 23.40     | 23.91     | 23.17      | 23.43     |
|                 |            | 12            | 0         | 23.00                | 22.87                | 22.41     | 22.94     | 22.22      | 22.50     |
|                 |            |               | 6         | 23.00                | 22.94                | 22.47     | 22.99     | 22.26      | 22.53     |
|                 |            |               | 13        | 23.00                | 22.91                | 22.45     | 22.99     | 22.23      | 22.46     |
|                 | 16QAM      | 25            | 0         | 23.00                | 22.93                | 22.45     | 22.97     | 22.23      | 22.49     |
|                 |            |               | 0         | 24.00                | 23.92                | 23.41     | 23.90     | 23.22      | 23.53     |
|                 |            |               | 13        | 24.50                | 24.02                | 23.51     | 24.00     | 23.30      | 23.60     |
|                 |            | 1             | 0         | 24.00                | 23.88                | 23.38     | 23.88     | 23.17      | 23.45     |
|                 |            |               | 24        | 24.00                | 23.88                | 23.38     | 23.88     | 23.17      | 23.45     |
|                 |            |               | 0         | 23.00                | 22.87                | 22.42     | 22.96     | 22.23      | 22.49     |
|                 |            | 12            | 6         | 23.50                | 22.94                | 22.48     | 23.01     | 22.26      | 22.50     |
|                 |            |               | 13        | 23.00                | 22.94                | 22.46     | 22.97     | 22.20      | 22.43     |
|                 |            |               | 0         | 23.00                | 22.92                | 22.45     | 22.98     | 22.23      | 22.48     |
|                 |            | 25            | 0         | 23.00                | 22.92                | 22.45     | 22.98     | 22.23      | 22.48     |
| 10MHz           | QPSK       | 1             | 0         | 24.50                | 23.93                | 22.42     | 22.96     | 22.35      | 22.74     |
|                 |            |               | 25        | 24.50                | 23.97                | 22.48     | 23.01     | 22.36      | 22.71     |
|                 |            |               | 49        | 24.50                | 23.92                | 22.49     | 23.02     | 22.30      | 22.57     |
|                 |            | 25            | 0         | 23.00                | 22.86                | 22.46     | 22.99     | 22.35      | 22.71     |
|                 |            |               | 13        | 23.00                | 22.93                | 23.42     | 23.96     | 23.40      | 23.84     |
|                 |            |               | 25        | 23.00                | 22.94                | 23.51     | 24.06     | 23.44      | 23.82     |
|                 |            | 50            | 0         | 23.00                | 22.93                | 23.41     | 24.04     | 23.30      | 23.55     |
|                 |            |               | 0         | 24.50                | 23.95                | 22.41     | 22.97     | 22.36      | 22.75     |
|                 |            |               | 25        | 24.50                | 23.97                | 22.46     | 22.99     | 22.36      | 22.72     |
|                 |            | 1             | 49        | 24.50                | 23.91                | 22.46     | 23.01     | 22.31      | 22.60     |
|                 |            |               | 0         | 23.00                | 22.86                | 22.47     | 23.02     | 22.36      | 22.70     |
|                 |            |               | 13        | 23.50                | 22.93                | 23.42     | 23.88     | 23.37      | 23.86     |
|                 | 16QAM      | 25            | 25        | 23.00                | 22.96                | 23.46     | 23.84     | 23.43      | 24.02     |
|                 |            |               | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            | 50            | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            |               | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            | 1             | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            |               | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            |               | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            | 25            | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            |               | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            |               | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            | 50            | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            |               | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |
|                 |            |               | 0         | 23.50                | 22.91                | 23.28     | 23.53     | 23.13      | 23.72     |

| Bandwidth | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 40115     | 40315     | 40640     | 40965     | 41165     |
|-----------|------------|---------------|-----------|----------------------|-----------|-----------|-----------|-----------|-----------|
|           |            |               |           |                      | 2542.5MHz | 2562.5MHz | 2595.0MHz | 2627.5MHz | 2647.5MHz |
| 15MHz     | QPSK       | 1             | 0         | 24.00                | 23.90     | 23.43     | 23.95     | 23.42     | 23.88     |
|           |            |               | 38        | 24.50                | 23.98     | 23.53     | 24.08     | 23.46     | 23.84     |
|           |            |               | 74        | 24.50                | 23.76     | 23.39     | 24.02     | 23.28     | 23.53     |
|           |            | 36            | 0         | 23.00                | 22.87     | 22.42     | 22.96     | 22.35     | 22.74     |
|           |            |               | 18        | 23.50                | 22.95     | 22.48     | 23.01     | 22.36     | 22.71     |
|           |            |               | 39        | 23.50                | 22.95     | 22.49     | 23.02     | 22.30     | 22.57     |
|           |            | 75            | 0         | 23.00                | 22.92     | 22.46     | 22.99     | 22.35     | 22.71     |
|           |            |               | 38        | 24.00                | 23.87     | 23.42     | 23.96     | 23.40     | 23.84     |
|           |            |               | 74        | 24.50                | 23.95     | 23.51     | 24.06     | 23.44     | 23.82     |
|           | 16QAM      | 1             | 0         | 23.00                | 22.84     | 22.41     | 22.97     | 22.36     | 22.75     |
|           |            |               | 18        | 23.00                | 22.93     | 22.46     | 22.99     | 22.36     | 22.72     |
|           |            |               | 39        | 23.50                | 22.91     | 22.46     | 23.01     | 22.31     | 22.60     |
|           |            | 36            | 0         | 23.00                | 22.92     | 22.47     | 23.02     | 22.36     | 22.70     |
|           |            |               | 18        | 23.00                | 22.93     | 22.46     | 22.99     | 22.36     | 22.72     |
|           |            |               | 39        | 23.50                | 22.91     | 22.46     | 23.01     | 22.31     | 22.60     |
| 20MHz     | QPSK       | 1             | 0         | 24.00                | 23.86     | 23.40     | 23.93     | 23.33     | 23.73     |
|           |            |               | 50        | 24.50                | 24.02     | 23.59     | 24.16     | 23.49     | 23.82     |
|           |            |               | 99        | 24.50                | 23.72     | 23.37     | 24.02     | 23.22     | 23.42     |
|           |            | 50            | 0         | 23.00                | 22.79     | 22.39     | 22.99     | 22.34     | 22.69     |
|           |            |               | 25        | 23.50                | 22.91     | 22.48     | 23.05     | 22.40     | 22.75     |
|           |            |               | 50        | 23.50                | 22.91     | 22.46     | 23.01     | 22.28     | 22.55     |
|           |            | 100           | 0         | 23.00                | 22.84     | 22.41     | 22.98     | 22.30     | 22.61     |
|           |            |               | 0         | 24.00                | 23.84     | 23.39     | 23.93     | 23.33     | 23.72     |
|           |            |               | 50        | 24.50                | 24.04     | 23.60     | 24.15     | 23.50     | 23.84     |
|           |            | 16QAM         | 0         | 23.00                | 22.81     | 22.40     | 22.99     | 22.36     | 22.73     |
|           |            |               | 25        | 23.50                | 22.93     | 22.49     | 23.05     | 22.38     | 22.71     |
|           |            |               | 50        | 23.50                | 22.92     | 22.47     | 23.01     | 22.28     | 22.54     |
|           | 16QAM      | 1             | 0         | 23.00                | 22.85     | 22.41     | 22.96     | 22.29     | 22.62     |
|           |            |               | 50        | 24.50                | 24.04     | 23.60     | 24.15     | 23.50     | 23.84     |
|           |            |               | 99        | 24.50                | 23.74     | 23.38     | 24.01     | 23.22     | 23.42     |
|           |            | 50            | 0         | 23.00                | 22.81     | 22.40     | 22.99     | 22.36     | 22.73     |
|           |            |               | 25        | 23.50                | 22.93     | 22.49     | 23.05     | 22.38     | 22.71     |
|           |            |               | 50        | 23.50                | 22.92     | 22.47     | 23.01     | 22.28     | 22.54     |
|           |            | 100           | 0         | 23.00                | 22.85     | 22.41     | 22.96     | 22.29     | 22.62     |
|           |            |               | 50        | 24.50                | 24.04     | 23.60     | 24.15     | 23.50     | 23.84     |
|           |            |               | 99        | 24.50                | 23.74     | 23.38     | 24.01     | 23.22     | 23.42     |
|           |            | 16QAM         | 0         | 23.00                | 22.81     | 22.40     | 22.99     | 22.36     | 22.73     |
|           |            |               | 25        | 23.50                | 22.93     | 22.49     | 23.05     | 22.38     | 22.71     |
|           |            |               | 50        | 23.50                | 22.92     | 22.47     | 23.01     | 22.28     | 22.54     |

### 11.1.12 Conducted Power of LTE Band 66

| LTE-FDD Band 66 |            |               |           |                      | Conducted Power(dBm) |                     |                     |
|-----------------|------------|---------------|-----------|----------------------|----------------------|---------------------|---------------------|
| Bandwidth       | Modulation | RB allocation | RB offset | Maximum Tune-up(dBm) | 131979<br>1710.7MHz  | 132322<br>1755.0MHz | 132665<br>1779.3MHz |
| 1.4MHz          | QPSK       | 1             | 0         | 23.50                | 23.49                | 23.44               | 23.02               |
|                 |            |               | 2         | 24.00                | 23.58                | 23.51               | 23.08               |
|                 |            |               | 5         | 24.00                | 23.51                | 23.41               | 22.99               |
|                 |            | 3             | 0         | 24.00                | 23.53                | 23.62               | 23.13               |
|                 |            |               | 2         | 24.00                | 23.52                | 23.64               | 23.14               |
|                 |            |               | 3         | 24.00                | 23.57                | 23.57               | 23.09               |
|                 | 16QAM      | 6             | 0         | 23.00                | 22.63                | 22.65               | 22.23               |
|                 |            |               | 0         | 23.00                | 22.56                | 22.66               | 21.89               |
|                 |            |               | 2         | 23.00                | 22.62                | 22.69               | 21.97               |
|                 |            | 3             | 5         | 23.00                | 22.58                | 22.62               | 21.92               |
|                 |            |               | 0         | 23.00                | 22.72                | 22.87               | 22.28               |
|                 |            |               | 2         | 23.00                | 22.73                | 22.88               | 22.28               |
| 3MHz            | QPSK       | 1             | 3         | 23.00                | 22.75                | 22.84               | 22.30               |
|                 |            |               | 0         | 22.00                | 21.84                | 21.82               | 21.46               |
|                 |            |               | 0         | 23.50                | 23.21                | 23.37               | 22.86               |
|                 |            | 8             | 7         | 23.50                | 23.35                | 23.40               | 23.03               |
|                 |            |               | 14        | 23.50                | 23.27                | 23.28               | 22.92               |
|                 |            |               | 0         | 23.00                | 22.50                | 22.56               | 22.10               |
|                 |            | 15            | 4         | 23.00                | 22.57                | 22.59               | 22.15               |
|                 |            |               | 7         | 23.00                | 22.54                | 22.54               | 22.12               |
|                 |            |               | 0         | 23.00                | 22.46                | 22.53               | 22.10               |
|                 | 16QAM      | 1             | 0         | 23.00                | 22.67                | 22.54               | 21.81               |
|                 |            |               | 7         | 23.00                | 22.87                | 22.60               | 21.94               |
|                 |            |               | 14        | 23.00                | 22.75                | 22.46               | 21.76               |
|                 |            | 8             | 0         | 22.00                | 21.52                | 21.57               | 21.10               |
|                 |            |               | 4         | 22.00                | 21.60                | 21.62               | 21.13               |
|                 |            |               | 7         | 22.00                | 21.57                | 21.55               | 21.14               |
|                 |            | 15            | 0         | 22.00                | 21.56                | 21.48               | 21.18               |
|                 |            |               | 0         | 24.00                | 23.52                | 23.67               | 23.15               |
|                 | QPSK       | 1             | 13        | 24.00                | 23.73                | 23.72               | 23.20               |
|                 |            |               | 24        | 24.00                | 23.72                | 23.64               | 23.10               |
|                 |            |               | 0         | 23.00                | 22.60                | 22.64               | 22.24               |
|                 |            | 12            | 6         | 23.00                | 22.69                | 22.66               | 22.26               |
|                 |            |               | 13        | 23.00                | 22.78                | 22.65               | 22.23               |
|                 |            |               | 0         | 23.00                | 22.68                | 22.67               | 22.23               |
|                 |            | 25            | 0         | 23.50                | 23.05                | 22.95               | 22.58               |
|                 |            |               | 13        | 23.50                | 23.26                | 23.02               | 22.66               |
|                 |            |               | 24        | 23.50                | 23.34                | 22.89               | 22.57               |
| 5MHz            | QPSK       | 1             | 0         | 22.00                | 21.60                | 21.59               | 21.22               |
|                 |            |               | 6         | 22.00                | 21.72                | 21.60               | 21.25               |
|                 |            |               | 13        | 22.00                | 21.79                | 21.57               | 21.24               |
|                 |            | 12            | 0         | 22.00                | 21.66                | 21.65               | 21.19               |
|                 |            |               | 0         | 24.00                | 23.52                | 23.67               | 23.15               |
|                 |            |               | 13        | 24.00                | 23.73                | 23.72               | 23.20               |
|                 |            |               | 24        | 24.00                | 23.72                | 23.64               | 23.10               |
|                 |            | 12            | 0         | 23.00                | 22.60                | 22.64               | 22.24               |
|                 |            |               | 6         | 23.00                | 22.69                | 22.66               | 22.26               |
|                 |            |               | 13        | 23.00                | 22.78                | 22.65               | 22.23               |
|                 | 16QAM      | 25            | 0         | 23.00                | 22.68                | 22.67               | 22.23               |
|                 |            |               | 0         | 23.50                | 23.05                | 22.95               | 22.58               |
|                 |            |               | 13        | 23.50                | 23.26                | 23.02               | 22.66               |
|                 |            | 1             | 24        | 23.50                | 23.34                | 22.89               | 22.57               |
|                 |            |               | 0         | 22.00                | 21.60                | 21.59               | 21.22               |
|                 |            |               | 6         | 22.00                | 21.72                | 21.60               | 21.25               |
|                 |            | 12            | 13        | 22.00                | 21.79                | 21.57               | 21.24               |
|                 |            |               | 0         | 22.00                | 21.66                | 21.65               | 21.19               |
|                 |            |               | 0         | 22.00                | 21.66                | 21.65               | 21.19               |

| LTE-FDD Band 66 |            |                  |              | Maximum<br>Tune-<br>up(dBm) | Conducted Power(dBm) |           |           |       |
|-----------------|------------|------------------|--------------|-----------------------------|----------------------|-----------|-----------|-------|
| Bandwidth       | Modulation | RB<br>allocation | RB<br>offset |                             | 132022               | 132322    | 132622    |       |
|                 |            |                  |              |                             | 1715.0MHz            | 1755.0MHz | 1775.0MHz |       |
| 10MHz           | QPSK       | 1                | 0            | 24.00                       | 23.52                | 23.70     | 23.28     |       |
|                 |            |                  | 25           | 24.00                       | 23.81                | 23.69     | 23.34     |       |
|                 |            |                  | 49           | 24.00                       | 23.83                | 23.53     | 23.17     |       |
|                 |            | 25               | 0            | 23.00                       | 22.62                | 22.68     | 22.25     |       |
|                 |            |                  | 13           | 23.00                       | 22.83                | 22.75     | 22.29     |       |
|                 |            |                  | 25           | 23.00                       | 22.89                | 22.63     | 22.17     |       |
|                 | 16QAM      | 50               | 0            | 23.00                       | 22.75                | 22.71     | 22.26     |       |
|                 |            |                  | 0            | 23.00                       | 22.96                | 22.88     | 22.15     |       |
|                 |            |                  | 25           | 23.50                       | 23.26                | 22.84     | 22.19     |       |
|                 |            | 1                | 49           | 23.50                       | 23.25                | 22.73     | 22.07     |       |
|                 |            |                  | 25           | 0                           | 22.00                | 21.63     | 21.64     | 21.21 |
|                 |            |                  |              | 13                          | 22.00                | 21.91     | 21.71     | 21.29 |
| 15MHz           | 25         | 25               |              | 22.00                       | 21.91                | 21.57     | 21.18     |       |
|                 |            | 0                | 22.00        | 21.75                       | 21.68                | 21.21     |           |       |
|                 |            | 0                | 22.00        | 21.75                       | 21.68                | 21.21     |           |       |
|                 | 16QAM      | 50               | 0            | 22.00                       | 21.75                | 21.68     | 21.21     |       |
|                 |            |                  | 0            | 22.00                       | 21.75                | 21.68     | 21.21     |       |
|                 |            |                  | 0            | 22.00                       | 21.75                | 21.68     | 21.21     |       |
| Bandwidth       | Modulation | RB<br>allocation | RB<br>offset | Maximum<br>Tune-<br>up(dBm) | 132047               | 132322    | 132597    |       |
|                 |            |                  |              |                             | 1717.5MHz            | 1755.0MHz | 1772.5MHz |       |
| 15MHz           | QPSK       | 1                | 0            | 24.00                       | 23.49                | 23.72     | 23.37     |       |
|                 |            |                  | 38           | 24.00                       | 23.85                | 23.67     | 23.37     |       |
|                 |            |                  | 74           | 24.00                       | 23.84                | 23.48     | 23.19     |       |
|                 |            | 36               | 0            | 23.00                       | 22.67                | 22.69     | 22.30     |       |
|                 |            |                  | 18           | 23.00                       | 22.91                | 22.68     | 22.28     |       |
|                 |            |                  | 39           | 23.00                       | 22.91                | 22.57     | 22.19     |       |
|                 | 16QAM      | 75               | 0            | 23.00                       | 22.82                | 22.68     | 22.29     |       |
|                 |            |                  | 0            | 23.00                       | 22.96                | 22.91     | 22.42     |       |
|                 |            |                  | 38           | 23.50                       | 23.33                | 22.86     | 22.45     |       |
|                 |            | 36               | 74           | 23.50                       | 23.31                | 22.66     | 22.27     |       |
|                 |            |                  | 0            | 22.00                       | 21.69                | 21.76     | 21.29     |       |
|                 |            |                  | 18           | 22.00                       | 21.94                | 21.76     | 21.28     |       |
| 20MHz           | QPSK       | 36               | 39           | 22.00                       | 21.96                | 21.64     | 21.24     |       |
|                 |            |                  | 0            | 22.00                       | 21.80                | 21.66     | 21.31     |       |
|                 |            |                  | 0            | 22.00                       | 21.80                | 21.66     | 21.31     |       |
|                 | 16QAM      | 75               | 0            | 22.00                       | 21.80                | 21.66     | 21.31     |       |
|                 |            |                  | 0            | 22.00                       | 21.80                | 21.66     | 21.31     |       |
|                 |            |                  | 0            | 22.00                       | 21.80                | 21.66     | 21.31     |       |
| Bandwidth       | Modulation | RB<br>allocation | RB<br>offset | Maximum<br>Tune-<br>up(dBm) | 132072               | 132322    | 132572    |       |
|                 |            |                  |              |                             | 1720.0MHz            | 1755.0MHz | 1770.0MHz |       |
| 20MHz           | QPSK       | 1                | 0            | 24.00                       | 23.51                | 23.76     | 23.32     |       |
|                 |            |                  | 50           | 24.00                       | 23.97                | 23.83     | 23.30     |       |
|                 |            |                  | 99           | 24.00                       | 23.89                | 23.52     | 23.09     |       |
|                 |            | 50               | 0            | 23.00                       | 22.75                | 22.77     | 22.38     |       |
|                 |            |                  | 25           | 23.00                       | 22.99                | 22.77     | 22.33     |       |
|                 |            |                  | 50           | 23.00                       | 22.95                | 22.59     | 22.24     |       |
|                 | 16QAM      | 100              | 0            | 23.00                       | 22.87                | 22.65     | 22.33     |       |
|                 |            |                  | 0            | 23.00                       | 22.88                | 22.95     | 22.63     |       |
|                 |            |                  | 50           | 23.50                       | 23.31                | 22.93     | 22.66     |       |
|                 |            | 50               | 99           | 23.50                       | 23.21                | 22.72     | 22.43     |       |
|                 |            |                  | 0            | 22.00                       | 21.79                | 21.75     | 21.42     |       |
|                 |            |                  | 25           | 22.50                       | 22.07                | 21.76     | 21.42     |       |
| 35MHz           | QPSK       | 50               | 50           | 22.00                       | 21.99                | 21.55     | 21.27     |       |
|                 |            |                  | 0            | 22.00                       | 21.87                | 21.64     | 21.38     |       |
|                 |            |                  | 0            | 22.00                       | 21.87                | 21.64     | 21.38     |       |
|                 | 16QAM      | 100              | 0            | 22.00                       | 21.87                | 21.64     | 21.38     |       |
|                 |            |                  | 0            | 22.00                       | 21.87                | 21.64     | 21.38     |       |
|                 |            |                  | 0            | 22.00                       | 21.87                | 21.64     | 21.38     |       |

### 11.1.25 Conducted Power of Wi-Fi 2.4G

#### ANT1

|                        |               |         |          |
|------------------------|---------------|---------|----------|
| Mode                   | 802.11b       |         |          |
| Channel/Frequency(MHz) | 1(2412)       | 6(2437) | 11(2462) |
| Average Power(dBm)     | 13.28         | 13.19   | 13.64    |
| Mode                   | 802.11g       |         |          |
| Channel/Frequency(MHz) | 1(2412)       | 6(2437) | 11(2462) |
| Average Power(dBm)     | 15.85         | 16.85   | 16.58    |
| Mode                   | 802.11n(HT20) |         |          |
| Channel/Frequency(MHz) | 1(2412)       | 6(2437) | 11(2462) |
| Average Power(dBm)     | 17.02         | 17.32   | 17.20    |
| Mode                   | 802.11n(HT40) |         |          |
| Channel/Frequency(MHz) | 1(2422)       | 6(2437) | 11(2452) |
| Average Power(dBm)     | 17.28         | 16.90   | 17.16    |

#### ANT2

|                        |               |         |          |
|------------------------|---------------|---------|----------|
| Mode                   | 802.11b       |         |          |
| Channel/Frequency(MHz) | 1(2412)       | 6(2437) | 11(2462) |
| Average Power(dBm)     | 9.18          | 10.79   | 11.09    |
| Mode                   | 802.11g       |         |          |
| Channel/Frequency(MHz) | 1(2412)       | 6(2437) | 11(2462) |
| Average Power(dBm)     | 12.35         | 13.51   | 13.53    |
| Mode                   | 802.11n(HT20) |         |          |
| Channel/Frequency(MHz) | 1(2412)       | 6(2437) | 11(2462) |
| Average Power(dBm)     | 13.22         | 14.42   | 14.17    |
| Mode                   | 802.11n(HT40) |         |          |
| Channel/Frequency(MHz) | 1(2422)       | 6(2437) | 11(2452) |
| Average Power(dBm)     | 14.47         | 14.52   | 14.68    |

#### MIMO

|                        |               |         |          |
|------------------------|---------------|---------|----------|
| Mode                   | 802.11n(HT20) |         |          |
| Channel/Frequency(MHz) | 1(2412)       | 6(2437) | 11(2462) |
| Average Power(dBm)     | 18.53         | 19.12   | 18.95    |
| Mode                   | 802.11n(HT40) |         |          |
| Channel/Frequency(MHz) | 1(2412)       | 6(2437) | 11(2462) |
| Average Power(dBm)     | 19.11         | 20.66   | 19.10    |

### 11.1.26 Conducted Power of Wi-Fi 5G

| Band                    | Mode           | Channel | Frequency (MHz) | Tune-up    | Average Power (dBm) | SAR Test (Yes/No) |
|-------------------------|----------------|---------|-----------------|------------|---------------------|-------------------|
| U-NII-1<br>(5150-5250)  | 802.11a        | 36      | 5180            | 9.00±1.0   | 8.93                | No                |
|                         |                | 48      | 5240            | 10.00±1.0  | 9.59                | No                |
|                         | 802.11n-HT20   | 36      | 5180            | 10.50±1.0  | 10.08               | No                |
|                         |                | 48      | 5240            | 10.00±1.0  | 9.90                | No                |
|                         | 802.11n-HT40   | 38      | 5190            | 10.00±1.0  | 9.93                | No                |
|                         |                | 46      | 5230            | 10.50±1.0  | 10.29               | Yes               |
|                         | 802.11ac-VHT20 | 36      | 5180            | 10.50±1.0  | 10.22               | No                |
|                         |                | 48      | 5240            | 9.50 ±1.0  | 9.42                | No                |
|                         | 802.11ac-VHT40 | 38      | 5190            | 10.50±1.0  | 10.26               | No                |
|                         |                | 46      | 5230            | 9.50±1.0   | 9.26                | No                |
|                         | 802.11ac-VHT80 | 42      | 5210            | 9.00±1.0   | 8.97                | No                |
| Band                    | Mode           | Channel | Frequency (MHz) | Tune-up    | Average Power (dBm) | SAR Test (Yes/No) |
| U-NII-2a<br>(5250-5350) | 802.11a        | 52      | 5260            | 9.50 ±1.0  | 9.04                | No                |
|                         |                | 64      | 5320            | 9.50 ±1.0  | 9.45                | No                |
|                         | 802.11n-HT20   | 52      | 5260            | 9.50 ±1.0  | 9.04                | No                |
|                         |                | 64      | 5320            | 10.00 ±1.0 | 9.73                | Yes               |
|                         | 802.11n-HT40   | 54      | 5270            | 8.50 ±1.0  | 8.40                | No                |
|                         |                | 62      | 5310            | 8.50 ±1.0  | 8.28                | No                |
|                         | 802.11ac-VHT20 | 52      | 5260            | 9.50 ±1.0  | 9.27                | No                |
|                         |                | 64      | 5320            | 9.50 ±1.0  | 9.44                | No                |
|                         | 802.11ac-VHT40 | 54      | 5270            | 8.50 ±1.0  | 8.43                | No                |
|                         |                | 62      | 5310            | 8.50 ±1.0  | 8.29                | No                |
|                         | 802.11ac-VHT80 | 58      | 5290            | 8.00 ±1.0  | 7.80                | No                |
| Band                    | Mode           | Channel | Frequency (MHz) | Tune-up    | Average Power (dBm) | SAR Test (Yes/No) |
| U-NII-2c<br>(5470-5725) | 802.11a        | 100     | 5500            | 8.50 ±1.0  | 8.21                | Yes               |
|                         |                | 140     | 5700            | 7.50 ±1.0  | 7.39                | No                |
|                         | 802.11n-HT20   | 100     | 5500            | 8.50 ±1.0  | 8.09                | No                |
|                         |                | 140     | 5700            | 7.50 ±1.0  | 7.40                | No                |
|                         | 802.11n-HT40   | 102     | 5510            | 6.00 ±1.0  | 5.61                | No                |
|                         |                | 134     | 5670            | 5.50 ±1.0  | 5.09                | No                |
|                         | 802.11ac-VHT20 | 100     | 5500            | 7.50 ±1.0  | 7.30                | No                |
|                         |                | 140     | 5700            | 7.00 ±1.0  | 6.63                | No                |
|                         | 802.11ac-VHT40 | 102     | 5510            | 6.00 ±1.0  | 5.58                | No                |
|                         |                | 134     | 5670            | 5.50 ±1.0  | 5.01                | No                |
|                         | 802.11ac-VHT80 | 106     | 5530            | 6.00 ±1.0  | 5.58                | No                |
|                         |                | 122     | 5610            | 5.50 ±1.0  | 5.34                | No                |
| Band                    | Mode           | Channel | Frequency (MHz) | Tune-up    | Average Power (dBm) | SAR Test (Yes/No) |
| U-NII-3<br>(5725-5825)  | 802.11a        | 149     | 5745            | 8.00 ±1.0  | 7.78                | No                |
|                         |                | 165     | 5825            | 7.50 ±1.0  | 7.49                | No                |
|                         | 802.11n-HT20   | 149     | 5745            | 8.00 ±1.0  | 7.81                | Yes               |
|                         |                | 165     | 5825            | 8.00 ±1.0  | 7.62                | No                |
|                         | 802.11n-HT40   | 151     | 5755            | 5.50 ±1.0  | 5.41                | No                |
|                         |                | 159     | 5795            | 4.50 ±1.0  | 4.25                | No                |
|                         | 802.11ac-VHT20 | 149     | 5745            | 7.50 ±1.0  | 7.19                | No                |
|                         |                | 165     | 5825            | 7.50 ±1.0  | 7.09                | No                |
|                         | 802.11ac-VHT40 | 151     | 5755            | 5.50 ±1.0  | 5.38                | No                |
|                         |                | 159     | 5795            | 4.50 ±1.0  | 4.23                | No                |
|                         | 802.11ac-VHT80 | 155     | 5775            | 5.50 ±1.0  | 5.25                | No                |

### 11.1.27 Conducted Power of BT

| EDR     | Mode            | Maximum Tune-up(dBm)     | Average Conducted Output Power (dBm) |                                       |                         |
|---------|-----------------|--------------------------|--------------------------------------|---------------------------------------|-------------------------|
|         |                 |                          | 0                                    | 39                                    | 78                      |
|         |                 |                          | 2402MHz                              | 2441MHz                               | 2480MHz                 |
|         |                 |                          |                                      |                                       |                         |
|         | GFSK            | 8.00                     | 6.59                                 | 6.51                                  | 7.88                    |
|         | π/4QPSK         | 7.00                     | 5.86                                 | 5.46                                  | 6.84                    |
|         | 8DPSK           | 7.00                     | 5.86                                 | 5.48                                  | 6.85                    |
| BLE     | Mode            | Maximum Tune-up(dBm)     | Average Conducted Output Power (dBm) |                                       |                         |
|         |                 |                          | 0                                    | 19                                    | 39                      |
|         |                 |                          | 2402MHz                              | 2440MHz                               | 2480MHz                 |
|         |                 |                          |                                      |                                       |                         |
|         | 1Mbps           | 9.50                     | 5.78                                 | 6.10                                  | 9.20                    |
|         | 2Mbps           | 9.50                     | 5.26                                 | 6.08                                  | 8.24                    |
| Channel | Frequency (GHz) | Max. Tune-up Power (dBm) | Max. Power (dBm)                     | Exclusion thresholds for 1-g SAR(dBm) | SAR evaluation required |
| 39      | 2.441           | 8.00                     | 7.88                                 | 4.77                                  | Yes                     |
| 19      | 2.402           | 9.50                     | 9.20                                 | 4.77                                  | Yes                     |

Note

- Per KDB 447498 D04 Interim General RF Exposure Guidance v01, the 1-g SAR test exclusion thresholds for 300 MHz to 6 GHz at test separation distances  $\leq 40$  cm are determined by:

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B.2})$$

where

$$x = -\log_{10} \left( \frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and  $f$  is in GHz,  $d$  is the separation distance (cm), and  $ERP_{20 \text{ cm}}$  is per Formula (B.1).

\*When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine estimated SAR.

- Per KDB 248227 D01 v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
- The output power of all data rate were prescan, just the worst case (the lowest data rate) of all mode were shown in report.

### 11.1.28 Tune-up power tolerance

| Band    | Tune-up power tolerance(dBm) |                                          |
|---------|------------------------------|------------------------------------------|
| GSM850  | GSM/GPRS (GMSK)              | GSM Max output power =33.50 ±1.0dBm      |
|         |                              | 1TXslots Max output power =33.50 ±1.0dBm |
|         |                              | 2TXslots Max output power =33.00±1.0dBm  |
|         |                              | 3TXslots Max output power =31.00 ±1.0dBm |
|         | EGPRS (8-PSK)                | 4TXslots Max output power =30.00 ±1.0dBm |
|         |                              | 1TXslots Max output power =33.50 ±1.0dBm |
|         |                              | 2TXslots Max output power =33.00 ±1.0dBm |
|         |                              | 3TXslots Max output power =31.00 ±1.0dBm |
| GSM1900 | GSM/GPRS (GMSK)              | 4TXslots Max output power =30.00 ±1.0dBm |
|         |                              | GSM Max output power =29.50 ±1.0dBm      |
|         |                              | 1TXslots Max output power =29.50 ±1.0dBm |
|         |                              | 2TXslots Max output power =28.50 ±1.0dBm |
|         | EGPRS (8-PSK)                | 3TXslots Max output power =27.00 ±1.0dBm |
|         |                              | 4TXslots Max output power =25.50 ±1.0dBm |
|         |                              | 1TXslots Max output power =29.50 ±1.0dBm |
|         |                              | 2TXslots Max output power =28.50 ±1.0dBm |
| WCDMA 2 |                              | 3TXslots Max output power =27.00 ±1.0dBm |
| WCDMA 4 |                              | 4TXslots Max output power =25.50 ±1.0dBm |
| WCDMA 5 |                              | 1TXslots Max output power =29.50 ±1.0dBm |
| LTE B2  |                              | 2TXslots Max output power =28.50 ±1.0dBm |
| LTE B4  |                              | 3TXslots Max output power =27.00 ±1.0dBm |
| LTE B5  |                              | 4TXslots Max output power =25.50 ±1.0dBm |
| LTE B7  |                              | 1TXslots Max output power =29.50 ±1.0dBm |
| LTE B12 |                              | 2TXslots Max output power =28.50 ±1.0dBm |
| LTE B17 |                              | 3TXslots Max output power =27.00 ±1.0dBm |
| LTE B38 |                              | 4TXslots Max output power =25.50 ±1.0dBm |
| LTE B41 |                              | 1TXslots Max output power =29.50 ±1.0dBm |
| LTE B66 |                              | 2TXslots Max output power =28.50 ±1.0dBm |

| Band | Tune-up power tolerance(dBm) |                |                                |
|------|------------------------------|----------------|--------------------------------|
| WIFI | 2.4G<br>(MAIN ANT1)          | 802.11b        | Max output power =14.00±1.0dBm |
|      |                              | 802.11g        | Max output power =17.00±1.0dBm |
|      |                              | 802.11n (HT20) | Max output power =17.50±1.0dBm |
|      |                              | 802.11n (HT40) | Max output power =17.50±1.0dBm |
|      | 2.4G<br>(MAIN ANT2)          | 802.11b        | Max output power =11.50±1.0dBm |
|      |                              | 802.11g        | Max output power =14.00±1.0dBm |
|      |                              | 802.11n (HT20) | Max output power =14.50±1.0dBm |
|      |                              | 802.11n (HT40) | Max output power =15.00±1.0dBm |
|      | 2.4G<br>(MAIN MIMO)          | 802.11n (HT20) | Max output power =19.50±1.0dBm |
|      |                              | 802.11n (HT40) | Max output power =21.00±1.0dBm |
|      | U-NII-1(5150-5250)           | 802.11n-HT40   | Max output power =10.5±1.0dBm  |
|      | U-NII-2a(5250-5350)          | 802.11n-HT20   | Max output power =10.00±1.0dBm |
| BT   | U-NII-2c(5470-5725)          | 802.11a        | Max output power =8.50±1.0dBm  |
|      | U-NII-3(5725-5825)           | 802.11n-HT20   | Max output power =8.00±1.0dBm  |
|      | GFSK mode                    |                | Max output power =8.00±1.0dBm  |
| BLE  | π/4DQPSK mode                |                | Max output power =7.00±1.0dBm  |
|      | 8DPSK mode                   |                | Max output power =7.00±1.0dBm  |
|      | 1Mbps Power                  |                | Max output power =9.50±1.0dBm  |
|      | 2Mbps Power                  |                | Max output power =9.50±1.0dBm  |

## 11.2 SAR test results

### Notes:

- 1) Per KDB447498 ,the SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the scaled SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit ( $< 0.8 \text{ W/kg}$ ), testing at the high and low channels is optional.
- 2) Per KDB447498 , testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:  $\leq 0.8 \text{ W/kg}$  or  $2.0 \text{ W/kg}$ , for 1-g or 10-g respectively, when the transmission band is  $\leq 100 \text{ MHz}$ . When the maximum output power variation across the required test channels is  $> \frac{1}{2} \text{ dB}$ , instead of the middle channel, the highest output power channel must be used.
- 3) Per KDB447498 , All measurement SAR result is scaled-up to account for tune-up tolerance is compliant.
- 4) Per KDB648474 D04v01r02, body-worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn with headset SAR.
- 5) Per KDB248227 D01v01r02, the procedures required to establish specific device operating configurations for testing the SAR of 802.11 a/b/g transmitters.
  - (1) For Headsets operating next to ear, hotspot mode or mini-tablet configurations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When the reported SAR of initial test position is  $\leq 0.4 \text{ W/kg}$ , SAR testing for remaining test positions is not required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is  $\leq 0.8 \text{ W/kg}$  or all test positions are measured.
  - (2) For WLAN 2.4 GHz, the highest measured maximum output power channel for DSSS was selected for SAR measurement. When the reported SAR is  $\leq 0.8 \text{ W/kg}$ , no further SAR testing is required. Otherwise, SAR is evaluated at the next highest measured output power channel. When any reported SAR is  $> 1.2 \text{ W/kg}$ , SAR is required for the third channel. For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is  $\leq 1.2 \text{ W/kg}$ .

(3) For WLAN 5 GHz, the initial test configuration was selected according to the transmission mode with the highest maximum output power. When the reported SAR of initial test configuration is  $> 0.8$  W/kg, SAR is required for the subsequent highest measured output power channel until the reported SAR result is  $\leq 1.2$  W/kg or all required channels are measured. For other transmission modes, SAR is not required when the highest reported SAR for initial test configuration is adjusted by the ratio of subsequent test configuration to initial test configuration specified maximum output power and it is  $\leq 1.2$  W/kg.

6) Per KDB865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is  $\geq 0.8$  W/Kg; if the deviation among the repeated measurement is  $\leq 20\%$ , and the measured SAR  $< 1.45$  W/Kg, only one repeated measurement is required.

7) Per KDB865664 D02v01r01, SAR plot is only required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination; Plots are also required when the measured SAR is  $> 1.5$  W/kg, or  $> 7.0$  W/kg for occupational exposure. The published RF exposure KDB procedures may require additional plots; for example, to support SAR to peak location separation ratio test exclusion and/or volume scan post-processing (Refer to appendix B for details).

8) Per KDB941225 D06v01r01, the DUT Dimension is bigger than 9 cm x 5 cm, so 10mm is chosen as the test separation distance for Hotspot mode. When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested.

9) Per KDB 941225 D01, 3G SAR Measurement Procedures, The mode tested for SAR is referred to as the primary mode. The equivalent modes considered for SAR test reduction are denoted as secondary modes. Both primary and secondary modes must be in the same frequency band. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq 1/4$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode.

10) Per KDB 941225 D05, SAR Evaluation Considerations for LTE Devices

(1) QPSK with 1 RB and 50% RB allocation

Start with the largest channel bandwidth and measure SAR, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is  $\leq 0.8$  W/kg, testing of the remaining RB offset configurations and required test channels is not required; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is  $> 1.45$  W/kg, SAR is required for all three RB offset configurations for that required test channel.

### (2) QPSK with 100% RB allocation

SAR is not required when the highest maximum output power for 100% RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are  $\leq 0.8$  W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is  $> 1.45$  W/kg, the remaining required test channels must also be

tested.

### (3) Higher order modulations

SAR is required only when the highest maximum output power for the configuration in the higher order modulation is  $> 1/2$  dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is  $> 1.45$  W/kg.

### (4) Other channel bandwidth

SAR is required when the highest maximum output power of the smaller channel bandwidth is  $> 1/2$  dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is  $> 1.45$  W/kg.

## 11.3 Test Result

### 11.3.1 Results overview of GSM

| Mode            | Position    | Ch. | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|-----------------|-------------|-----|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| GSM 850 (voice) | Left Cheek  | 190 | 836.6       | 0.010            | 0.158               | 100            | 1.00              | 33.39             | 33.50                    | 1.026          | 0.162                |
|                 | Left Tilt   | 190 | 836.6       | -0.050           | 0.079               | 100            | 1.00              | 33.39             | 33.50                    | 1.026          | 0.081                |
|                 | Right Cheek | 190 | 836.6       | 0.000            | 0.159               | 100            | 1.00              | 33.39             | 33.50                    | 1.026          | 0.163                |
|                 | Right Tilt  | 190 | 836.6       | 0.050            | 0.076               | 100            | 1.00              | 33.39             | 33.50                    | 1.026          | 0.078                |
| Mode            | Position    | Ch. | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| GPRS 850+4slots | Front       | 190 | 836.6       | 0.020            | 0.369               | 100            | 1.00              | 33.39             | 33.50                    | 1.026          | 0.378                |
|                 | Back        | 190 | 836.6       | -0.020           | 0.609               | 100            | 1.00              | 33.39             | 33.50                    | 1.026          | 0.625                |
|                 | Left        | 190 | 836.6       | 0.030            | 0.194               | 100            | 1.00              | 33.39             | 33.50                    | 1.026          | 0.199                |
|                 | right       | 190 | 836.6       | -0.130           | 0.281               | 100            | 1.00              | 33.39             | 33.50                    | 1.026          | 0.288                |
|                 | Top         | 190 | 836.6       | 0.150            | 0.015               | 100            | 1.00              | 33.39             | 33.50                    | 1.026          | 0.015                |
|                 | Bottom      | 190 | 836.6       | 0.110            | 0.247               | 100            | 1.00              | 33.39             | 33.50                    | 1.026          | 0.253                |

| Mode             | Position    | Ch. | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|------------------|-------------|-----|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| GSM 1900 (voice) | Left Cheek  | 512 | 1850.2      | 0.15             | 0.039               | 100            | 1.00              | 29.06             | 29.50                    | 1.107          | 0.043                |
|                  | Left Tilt   | 512 | 1850.2      | 0.07             | 0.019               | 100            | 1.00              | 29.06             | 29.50                    | 1.107          | 0.021                |
|                  | Right Cheek | 512 | 1850.2      | 0.05             | 0.044               | 100            | 1.00              | 29.06             | 29.50                    | 1.107          | 0.049                |
|                  | Right Tilt  | 512 | 1850.2      | -0.17            | 0.032               | 100            | 1.00              | 29.06             | 29.50                    | 1.107          | 0.035                |
| Mode             | Position    | Ch. | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| GPRS 1900+4slots | Front       | 512 | 1850.2      | 0.03             | 0.596               | 100            | 1.00              | 29.06             | 29.50                    | 1.107          | 0.660                |
|                  | Back        | 512 | 1850.2      | -0.01            | 0.774               | 100            | 1.00              | 29.06             | 29.50                    | 1.107          | 0.857                |
|                  | Left        | 512 | 1850.2      | -0.05            | 0.137               | 100            | 1.00              | 29.06             | 29.50                    | 1.107          | 0.152                |
|                  | right       | 512 | 1850.2      | 0.02             | 0.281               | 100            | 1.00              | 29.06             | 29.50                    | 1.107          | 0.311                |
|                  | Top         | 512 | 1850.2      | -0.09            | 0.026               | 100            | 1.00              | 29.06             | 29.50                    | 1.107          | 0.029                |
|                  | Bottom      | 512 | 1850.2      | 0.03             | 0.645               | 100            | 1.00              | 29.06             | 29.50                    | 1.107          | 0.714                |

### 11.3.2 Results overview of WCDMA

| Mode                | Position    | Ch.  | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---------------------|-------------|------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| WCDMA Band 2 (RMC*) | Left Cheek  | 9538 | 1907.6      | -0.02            | 0.066               | 100            | 1.00              | 23.33             | 23.50                    | 1.040          | 0.069                |
|                     | Left Tilt   | 9538 | 1907.6      | 0.07             | 0.061               | 100            | 1.00              | 23.33             | 23.50                    | 1.040          | 0.063                |
|                     | Right Cheek | 9538 | 1907.6      | 0.00             | 0.062               | 100            | 1.00              | 23.33             | 23.50                    | 1.040          | 0.064                |
|                     | Right Tilt  | 9538 | 1907.6      | -0.03            | 0.050               | 100            | 1.00              | 23.33             | 23.50                    | 1.040          | 0.052                |
| Mode                | Position    | Ch.  | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| WCDMA Band 2 (RMC*) | Front       | 9538 | 1907.6      | -0.01            | 0.451               | 100            | 1.00              | 23.33             | 23.50                    | 1.040          | 0.469                |
|                     | Back        | 9538 | 1907.6      | -0.01            | 0.486               | 100            | 1.00              | 23.33             | 23.50                    | 1.040          | 0.505                |
|                     | Left        | 9538 | 1907.6      | -0.05            | 0.337               | 100            | 1.00              | 23.33             | 23.50                    | 1.040          | 0.350                |
|                     | right       | 9538 | 1907.6      | 0.03             | 0.184               | 100            | 1.00              | 23.33             | 23.50                    | 1.040          | 0.191                |
|                     | Top         | 9538 | 1907.6      | -0.16            | 0.016               | 100            | 1.00              | 23.33             | 23.50                    | 1.040          | 0.017                |
|                     | Bottom      | 9538 | 1907.6      | 0.07             | 0.356               | 100            | 1.00              | 23.33             | 23.50                    | 1.040          | 0.370                |

| Mode                | Position    | Ch.  | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---------------------|-------------|------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| WCDMA Band 4 (RMC*) | Left Cheek  | 1312 | 1712.4      | 0.10             | 0.021               | 100            | 1.00              | 23.04             | 23.50                    | 1.112          | 0.023                |
|                     | Left Tilt   | 1312 | 1712.4      | 0.11             | 0.019               | 100            | 1.00              | 23.04             | 23.50                    | 1.112          | 0.021                |
|                     | Right Cheek | 1312 | 1712.4      | 0.00             | 0.023               | 100            | 1.00              | 23.04             | 23.50                    | 1.112          | 0.026                |
|                     | Right Tilt  | 1312 | 1712.4      | 0.18             | 0.024               | 100            | 1.00              | 23.04             | 23.50                    | 1.112          | 0.027                |
| Mode                | Position    | Ch.  | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| WCDMA Band 4 (RMC*) | Front       | 1312 | 1712.4      | -0.07            | 0.156               | 100            | 1.00              | 23.04             | 23.50                    | 1.112          | 0.173                |
|                     | Back        | 1312 | 1712.4      | -0.04            | 0.168               | 100            | 1.00              | 23.04             | 23.50                    | 1.112          | 0.187                |
|                     | Left        | 1312 | 1712.4      | 0.04             | 0.098               | 100            | 1.00              | 23.04             | 23.50                    | 1.112          | 0.109                |
|                     | right       | 1312 | 1712.4      | 0.03             | 0.026               | 100            | 1.00              | 23.04             | 23.50                    | 1.112          | 0.029                |
|                     | Top         | 1312 | 1712.4      | -0.09            | 0.003               | 100            | 1.00              | 23.04             | 23.50                    | 1.112          | 0.003                |
|                     | Bottom      | 1312 | 1712.4      | -0.02            | 0.133               | 100            | 1.00              | 23.04             | 23.50                    | 1.112          | 0.148                |

| Mode                | Position    | Ch.  | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---------------------|-------------|------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| WCDMA Band 5 (RMC*) | Left Cheek  | 4233 | 846.6       | -0.050           | 0.104               | 100            | 1.00              | 22.59             | 23.00                    | 1.099          | 0.114                |
|                     | Left Tilt   | 4233 | 846.6       | -0.140           | 0.051               | 100            | 1.00              | 22.59             | 23.00                    | 1.099          | 0.056                |
|                     | Right Cheek | 4233 | 846.6       | 0.040            | 0.114               | 100            | 1.00              | 22.59             | 23.00                    | 1.099          | 0.125                |
|                     | Right Tilt  | 4233 | 846.6       | 0.190            | 0.061               | 100            | 1.00              | 22.59             | 23.00                    | 1.099          | 0.067                |
| Mode                | Position    | Ch.  | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| WCDMA Band 5 (RMC*) | Front       | 4233 | 846.6       | 0.020            | 0.178               | 100            | 1.00              | 22.59             | 23.00                    | 1.099          | 0.196                |
|                     | Back        | 4233 | 846.6       | -0.030           | 0.204               | 100            | 1.00              | 22.59             | 23.00                    | 1.099          | 0.224                |
|                     | Left        | 4233 | 846.6       | 0.020            | 0.112               | 100            | 1.00              | 22.59             | 23.00                    | 1.099          | 0.123                |
|                     | right       | 4233 | 846.6       | -0.160           | 0.042               | 100            | 1.00              | 22.59             | 23.00                    | 1.099          | 0.046                |
|                     | Top         | 4233 | 846.6       | -0.030           | 0.006               | 100            | 1.00              | 22.59             | 23.00                    | 1.099          | 0.007                |
|                     | Bottom      | 4233 | 846.6       | 0.050            | 0.035               | 100            | 1.00              | 22.59             | 23.00                    | 1.099          | 0.038                |

### 11.3.3 Results overview of LTE

| Mode               | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|--------------------|--------------|-------------|-------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Band 2 (BW: 20MHz) | 1RB          | Left Cheek  | 18700 | 1860.0      | 0.020            | 0.058               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.059                |
|                    |              | Left Tilt   | 18700 | 1860.0      | -0.090           | 0.022               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.022                |
|                    |              | Right Cheek | 18700 | 1860.0      | 0.010            | 0.071               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.072                |
|                    |              | Right Tilt  | 18700 | 1860.0      | 0.020            | 0.023               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.023                |
|                    | 50%RB        | Left Cheek  | 18700 | 1860.0      | 0.010            | 0.056               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.057                |
|                    |              | Left Tilt   | 18700 | 1860.0      | -0.050           | 0.020               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.020                |
|                    |              | Right Cheek | 18700 | 1860.0      | 0.030            | 0.068               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.069                |
|                    |              | Right Tilt  | 18700 | 1860.0      | -0.160           | 0.022               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.022                |
| Mode               | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Band 2 (BW: 20MHz) | 1RB          | Front       | 18700 | 1860.0      | 0.030            | 0.518               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.526                |
|                    |              | Back        | 18700 | 1860.0      | 0.000            | 0.621               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.631                |
|                    |              | Left        | 18700 | 1860.0      | 0.150            | 0.434               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.441                |
|                    |              | right       | 18700 | 1860.0      | 0.030            | 0.305               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.310                |
|                    |              | Top         | 18700 | 1860.0      | -0.050           | 0.006               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.006                |
|                    |              | Bottom      | 18700 | 1860.0      | 0.010            | 0.241               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.245                |
|                    | 50%RB        | Front       | 18700 | 1860.0      | 0.020            | 0.504               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.512                |
|                    |              | Back        | 18700 | 1860.0      | -0.070           | 0.611               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.621                |
|                    |              | Left        | 18700 | 1860.0      | 0.040            | 0.425               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.432                |
|                    |              | right       | 18700 | 1860.0      | 0.060            | 0.297               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.302                |
|                    |              | Top         | 18700 | 1860.0      | -0.030           | 0.008               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.008                |
|                    |              | Bottom      | 18700 | 1860.0      | 0.080            | 0.233               | 100            | 1.00              | 24.43             | 24.50                    | 1.016          | 0.237                |

| Mode               | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|--------------------|--------------|-------------|-------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Band 4 (BW: 20MHz) | 1RB          | Left Cheek  | 20175 | 1732.5      | 0.012            | 0.023               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.023                |
|                    |              | Left Tilt   | 20175 | 1732.5      | -0.080           | 0.016               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.016                |
|                    |              | Right Cheek | 20175 | 1732.5      | -0.160           | 0.020               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.020                |
|                    |              | Right Tilt  | 20175 | 1732.5      | -0.040           | 0.016               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.016                |
|                    | 50%RB        | Left Cheek  | 20175 | 1732.5      | 0.020            | 0.023               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.023                |
|                    |              | Left Tilt   | 20175 | 1732.5      | -0.050           | 0.014               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.014                |
|                    |              | Right Cheek | 20175 | 1732.5      | 0.030            | 0.018               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.018                |
|                    |              | Right Tilt  | 20175 | 1732.5      | -0.150           | 0.009               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.009                |
| Mode               | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Band 4 (BW: 20MHz) | 1RB          | Front       | 20175 | 1732.5      | 0.140            | 0.199               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.200                |
|                    |              | Back        | 20175 | 1732.5      | 0.020            | 0.282               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.283                |
|                    |              | Left        | 20175 | 1732.5      | 0.060            | 0.153               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.154                |
|                    |              | right       | 20175 | 1732.5      | -0.180           | 0.092               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.092                |
|                    |              | Top         | 20175 | 1732.5      | -0.050           | 0.004               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.004                |
|                    |              | Bottom      | 20175 | 1732.5      | -0.030           | 0.118               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.119                |
|                    | 50%RB        | Front       | 20175 | 1732.5      | 0.070            | 0.195               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.196                |
|                    |              | Back        | 20175 | 1732.5      | -0.010           | 0.273               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.274                |
|                    |              | Left        | 20175 | 1732.5      | -0.130           | 0.149               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.150                |
|                    |              | right       | 20175 | 1732.5      | 0.050            | 0.091               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.091                |
|                    |              | Top         | 20175 | 1732.5      | -0.110           | 0.003               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.003                |
|                    |              | Bottom      | 20175 | 1732.5      | 0.080            | 0.115               | 100            | 1.00              | 24.48             | 24.50                    | 1.005          | 0.116                |

| Mode               | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|--------------------|--------------|-------------|-------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Band 5 (BW: 10MHz) | 1RB          | Left Cheek  | 20450 | 829.0       | -0.16            | 0.105               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.113                |
|                    |              | Left Tilt   | 20450 | 829.0       | -0.05            | 0.026               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.028                |
|                    |              | Right Cheek | 20450 | 829.0       | 0.030            | 0.132               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.142                |
|                    |              | Right Tilt  | 20450 | 829.0       | 0.030            | 0.048               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.052                |
|                    | 50%RB        | Left Cheek  | 20450 | 829.0       | 0.05             | 0.088               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.095                |
|                    |              | Left Tilt   | 20450 | 829.0       | 0.01             | 0.015               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.016                |
|                    |              | Right Cheek | 20450 | 829.0       | -0.030           | 0.112               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.121                |
|                    |              | Right Tilt  | 20450 | 829.0       | 0.090            | 0.040               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.043                |
| Mode               | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Band 5 (BW: 10MHz) | 1RB          | Front       | 20450 | 829.0       | 0.040            | 0.176               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.190                |
|                    |              | Back        | 20450 | 829.0       | 0.100            | 0.205               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.221                |
|                    |              | Left        | 20450 | 829.0       | -0.190           | 0.142               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.153                |
|                    |              | Right       | 20450 | 829.0       | -0.060           | 0.091               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.098                |
|                    |              | Top         | 20450 | 829.0       | -0.040           | 0.006               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.006                |
|                    |              | Bottom      | 20450 | 829.0       | 0.010            | 0.130               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.140                |
|                    | 50%RB        | Front       | 20450 | 829.0       | 0.050            | 0.173               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.187                |
|                    |              | Back        | 20450 | 829.0       | -0.180           | 0.201               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.217                |
|                    |              | Left        | 20450 | 829.0       | -0.070           | 0.136               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.147                |
|                    |              | Right       | 20450 | 829.0       | -0.030           | 0.088               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.095                |
|                    |              | Top         | 20450 | 829.0       | -0.110           | 0.003               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.003                |
|                    |              | Bottom      | 20450 | 829.0       | 0.040            | 0.124               | 100            | 1.00              | 24.67             | 25.00                    | 1.079          | 0.134                |

| Mode               | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|--------------------|--------------|-------------|-------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Band 7 (BW: 20MHz) | 1RB          | Left Cheek  | 21400 | 2565.0      | -0.040           | 0.107               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.119                |
|                    |              | Left Tilt   | 21400 | 2565.0      | 0.140            | 0.069               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.077                |
|                    |              | Right Cheek | 21400 | 2565.0      | -0.150           | 0.086               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.095                |
|                    |              | Right Tilt  | 21400 | 2565.0      | -0.090           | 0.066               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.073                |
|                    | 50%RB        | Left Cheek  | 21400 | 2565.0      | 0.010            | 0.101               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.112                |
|                    |              | Left Tilt   | 21400 | 2565.0      | 0.000            | 0.061               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.068                |
|                    |              | Right Cheek | 21400 | 2565.0      | -0.020           | 0.085               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.094                |
|                    |              | Right Tilt  | 21400 | 2565.0      | -0.080           | 0.052               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.058                |
| Mode               | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Band 7 (BW: 20MHz) | 1RB          | Front       | 21400 | 2565.0      | 0.130            | 0.429               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.476                |
|                    |              | Back        | 21400 | 2565.0      | -0.010           | 0.545               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.605                |
|                    |              | Left        | 21400 | 2565.0      | -0.050           | 0.369               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.409                |
|                    |              | Right       | 21400 | 2565.0      | 0.020            | 0.252               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.280                |
|                    |              | Top         | 21400 | 2565.0      | 0.180            | 0.009               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.010                |
|                    |              | Bottom      | 21400 | 2565.0      | 0.110            | 0.219               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.243                |
|                    | 50%RB        | Front       | 21400 | 2565.0      | 0.180            | 0.421               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.467                |
|                    |              | Back        | 21400 | 2565.0      | -0.050           | 0.539               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.598                |
|                    |              | Left        | 21400 | 2565.0      | 0.030            | 0.358               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.397                |
|                    |              | Right       | 21400 | 2565.0      | -0.160           | 0.244               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.271                |
|                    |              | Top         | 21400 | 2565.0      | 0.050            | 0.008               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.009                |
|                    |              | Bottom      | 21400 | 2565.0      | 0.120            | 0.207               | 100            | 1.00              | 23.55             | 24.00                    | 1.109          | 0.230                |

| Mode                | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---------------------|--------------|-------------|-------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Band 12 (BW: 10MHz) | 1RB          | Left Cheek  | 23130 | 711.0       | 0.13             | 0.057               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.058                |
|                     |              | Left Tilt   | 23130 | 711.0       | 0.03             | 0.027               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.028                |
|                     |              | Right Cheek | 23130 | 711.0       | 0.00             | 0.056               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.057                |
|                     |              | Right Tilt  | 23130 | 711.0       | -0.02            | 0.030               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.031                |
|                     | 50%RB        | Left Cheek  | 23130 | 711.0       | 0.06             | 0.044               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.045                |
|                     |              | Left Tilt   | 23130 | 711.0       | -0.02            | 0.021               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.021                |
|                     |              | Right Cheek | 23130 | 711.0       | -0.03            | 0.041               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.042                |
|                     |              | Right Tilt  | 23130 | 711.0       | 0.04             | 0.019               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.019                |
| Mode                | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Band 12 (BW: 10MHz) | 1RB          | Front       | 23130 | 711.0       | -0.03            | 0.097               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.099                |
|                     |              | Back        | 23130 | 711.0       | -0.05            | 0.126               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.129                |
|                     |              | Left        | 23130 | 711.0       | 0.02             | 0.036               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.037                |
|                     |              | Right       | 23130 | 711.0       | -0.01            | 0.090               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.092                |
|                     |              | Top         | 23130 | 711.0       | -0.10            | 0.003               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.003                |
|                     |              | Bottom      | 23130 | 711.0       | 0.03             | 0.084               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.086                |
|                     | 50%RB        | Front       | 23130 | 711.0       | -0.01            | 0.088               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.090                |
|                     |              | Back        | 23130 | 711.0       | 0.05             | 0.114               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.117                |
|                     |              | Left        | 23130 | 711.0       | 0.03             | 0.026               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.027                |
|                     |              | Right       | 23130 | 711.0       | -0.04            | 0.081               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.083                |
|                     |              | Top         | 23130 | 711.0       | -0.09            | 0.002               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.002                |
|                     |              | Bottom      | 23130 | 711.0       | -0.05            | 0.075               | 100            | 1.00              | 24.90             | 25.00                    | 1.023          | 0.077                |

| Mode                | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---------------------|--------------|-------------|-------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Band 17 (BW: 10MHz) | 1RB          | Left Cheek  | 23800 | 711.0       | -0.10            | 0.063               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.066                |
|                     |              | Left Tilt   | 23800 | 711.0       | 0.01             | 0.035               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.036                |
|                     |              | Right Cheek | 23800 | 711.0       | 0.03             | 0.066               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.069                |
|                     |              | Right Tilt  | 23800 | 711.0       | 0.04             | 0.037               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.038                |
|                     | 50%RB        | Left Cheek  | 23800 | 711.0       | -0.02            | 0.050               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.052                |
|                     |              | Left Tilt   | 23800 | 711.0       | 0.05             | 0.023               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.024                |
|                     |              | Right Cheek | 23800 | 711.0       | 0.03             | 0.059               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.061                |
|                     |              | Right Tilt  | 23800 | 711.0       | 0.01             | 0.027               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.028                |
| Mode                | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Band 17 (BW: 10MHz) | 1RB          | Front       | 23800 | 711.0       | -0.02            | 0.112               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.116                |
|                     |              | Back        | 23800 | 711.0       | -0.06            | 0.138               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.144                |
|                     |              | Left        | 23800 | 711.0       | 0.03             | 0.036               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.037                |
|                     |              | Right       | 23800 | 711.0       | -0.03            | 0.105               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.109                |
|                     |              | Top         | 23800 | 711.0       | -0.09            | 0.004               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.004                |
|                     |              | Bottom      | 23800 | 711.0       | 0.01             | 0.098               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.102                |
|                     | 50%RB        | Front       | 23800 | 711.0       | 0.03             | 0.097               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.101                |
|                     |              | Back        | 23800 | 711.0       | -0.02            | 0.116               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.121                |
|                     |              | Left        | 23800 | 711.0       | -0.07            | 0.025               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.026                |
|                     |              | Right       | 23800 | 711.0       | 0.05             | 0.084               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.087                |
|                     |              | Top         | 23800 | 711.0       | -0.12            | 0.002               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.002                |
|                     |              | Bottom      | 23800 | 711.0       | -0.04            | 0.077               | 100            | 1.00              | 24.83             | 25.00                    | 1.040          | 0.080                |

| Mode                | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---------------------|--------------|-------------|-------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Band 38 (BW: 20MHz) | 1RB          | Left Cheek  | 38000 | 2595.0      | -0.12            | 0.055               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.060                |
|                     |              | Left Tilt   | 38000 | 2595.0      | 0.15             | 0.014               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.015                |
|                     |              | Right Cheek | 38000 | 2595.0      | 0.17             | 0.038               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.041                |
|                     |              | Right Tilt  | 38000 | 2595.0      | -0.03            | 0.005               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.005                |
|                     | 50%RB        | Left Cheek  | 38000 | 2595.0      | -0.07            | 0.038               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.041                |
|                     |              | Left Tilt   | 38000 | 2595.0      | 0.05             | 0.006               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.007                |
|                     |              | Right Cheek | 38000 | 2595.0      | -0.01            | 0.028               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.030                |
|                     |              | Right Tilt  | 38000 | 2595.0      | 0.03             | 0.002               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.002                |
| Mode                | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Band 38 (BW: 20MHz) | 1RB          | Front       | 38000 | 2595.0      | -0.06            | 0.161               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.175                |
|                     |              | Back        | 38000 | 2595.0      | -0.04            | 0.227               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.247                |
|                     |              | Left        | 38000 | 2595.0      | 0.02             | 0.153               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.167                |
|                     |              | Right       | 38000 | 2595.0      | 0.05             | 0.036               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.039                |
|                     |              | Top         | 38000 | 2595.0      | -0.11            | 0.008               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.009                |
|                     |              | Bottom      | 38000 | 2595.0      | -0.03            | 0.188               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.205                |
|                     | 50%RB        | Front       | 38000 | 2595.0      | -0.09            | 0.140               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.152                |
|                     |              | Back        | 38000 | 2595.0      | 0.05             | 0.197               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.215                |
|                     |              | Left        | 38000 | 2595.0      | -0.03            | 0.124               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.135                |
|                     |              | Right       | 38000 | 2595.0      | -0.03            | 0.021               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.023                |
|                     |              | Top         | 38000 | 2595.0      | -0.08            | 0.002               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.002                |
|                     |              | Bottom      | 38000 | 2595.0      | 0.04             | 0.159               | 100            | 1.00              | 24.13             | 24.50                    | 1.089          | 0.173                |

| Mode                | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---------------------|--------------|-------------|-------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Band 41 (BW: 20MHz) | 1RB          | Left Cheek  | 40620 | 2593.0      | 0.050            | 0.062               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.067                |
|                     |              | Left Tilt   | 40620 | 2593.0      | -0.140           | 0.026               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.028                |
|                     |              | Right Cheek | 40620 | 2593.0      | 0.010            | 0.038               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.041                |
|                     |              | Right Tilt  | 40620 | 2593.0      | 0.080            | 0.023               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.025                |
|                     |              | Left Cheek  | 39750 | 2506.0      | -0.110           | 0.043               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.047                |
|                     |              | Left Cheek  | 40185 | 2549.5      | 0.050            | 0.044               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.048                |
|                     |              | Left Cheek  | 41055 | 2636.5      | -0.110           | 0.084               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.091                |
| 20MHz               |              | Left Cheek  | 41490 | 2680.0      | -0.100           | 0.089               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.096                |
| Mode                | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Band 41 (BW: 20MHz) | 1RB          | Front       | 40620 | 2593.0      | 0.030            | 0.201               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.217                |
|                     |              | Back        | 40620 | 2593.0      | -0.020           | 0.288               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.311                |
|                     |              | Left        | 40620 | 2593.0      | 0.120            | 0.120               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.130                |
|                     |              | Right       | 40620 | 2593.0      | -0.130           | 0.057               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.062                |
|                     |              | Top         | 40620 | 2593.0      | 0.050            | 0.003               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.003                |
|                     |              | Bottom      | 40620 | 2593.0      | 0.080            | 0.095               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.103                |
|                     |              | Back        | 39750 | 2506.0      | -0.090           | 0.208               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.225                |
| 5MHz                |              | Back        | 40185 | 2549.5      | -0.120           | 0.209               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.226                |
| 10MHz               |              | Back        | 41055 | 2636.5      | -0.040           | 0.385               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.416                |
| 15MHz               |              | Back        | 41490 | 2680.0      | -0.040           | 0.393               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.425                |
| 20MHz               |              | Back        | 41490 | 2680.0      | -0.040           | 0.393               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.425                |

| Mode                | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---------------------|--------------|-------------|-------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Band 41 (BW: 20MHz) | 50%RB        | Left Cheek  | 40620 | 2593.0      | 0.050            | 0.059               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.064                |
|                     |              | Left Tilt   | 40620 | 2593.0      | 0.110            | 0.024               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.026                |
|                     |              | Right Cheek | 40620 | 2593.0      | -0.040           | 0.036               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.039                |
|                     |              | Right Tilt  | 40620 | 2593.0      | -0.130           | 0.021               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.023                |
|                     |              | Left Cheek  | 39750 | 2506.0      | -0.020           | 0.041               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.044                |
|                     |              | Left Cheek  | 40185 | 2549.5      | 0.080            | 0.041               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.044                |
|                     |              | Left Cheek  | 41055 | 2636.5      | -0.170           | 0.082               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.089                |
| 20MHz               |              | Left Cheek  | 41490 | 2680.0      | 0.130            | 0.087               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.094                |
| Mode                | Channel Type | Position    | Ch.   | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Band 41 (BW: 20MHz) | 50%RB        | Front       | 40620 | 2593.0      | -0.010           | 0.197               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.213                |
|                     |              | Back        | 40620 | 2593.0      | 0.040            | 0.282               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.305                |
|                     |              | Left        | 40620 | 2593.0      | 0.060            | 0.112               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.121                |
|                     |              | Right       | 40620 | 2593.0      | -0.020           | 0.053               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.057                |
|                     |              | Top         | 40620 | 2593.0      | -0.110           | 0.002               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.002                |
|                     |              | Bottom      | 40620 | 2593.0      | -0.060           | 0.091               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.098                |
|                     |              | Back        | 39750 | 2506.0      | -0.050           | 0.203               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.220                |
| 5MHz                |              | Back        | 40185 | 2549.5      | -0.160           | 0.207               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.224                |
| 10MHz               |              | Back        | 41055 | 2636.5      | 0.020            | 0.376               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.407                |
| 15MHz               |              | Back        | 41490 | 2680.0      | 0.170            | 0.389               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.421                |
| 20MHz               |              | Back        | 41490 | 2680.0      | 0.170            | 0.389               | 100            | 1.00              | 24.16             | 24.50                    | 1.081          | 0.421                |

| Mode                | Channel Type | Position    | Ch.    | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|---------------------|--------------|-------------|--------|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Band 66 (BW: 20MHz) | 1RB          | Left Cheek  | 132072 | 1720.0      | 0.100            | 0.031               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.031                |
|                     |              | Left Tilt   | 132072 | 1720.0      | -0.190           | 0.008               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.008                |
|                     |              | Right Cheek | 132072 | 1720.0      | 0.070            | 0.022               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.022                |
|                     |              | Right Tilt  | 132072 | 1720.0      | 0.120            | 0.007               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.007                |
|                     | 50%RB        | Left Cheek  | 132072 | 1720.0      | 0.140            | 0.030               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.030                |
|                     |              | Left Tilt   | 132072 | 1720.0      | 0.020            | 0.008               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.008                |
|                     |              | Right Cheek | 132072 | 1720.0      | 0.060            | 0.021               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.021                |
|                     |              | Right Tilt  | 132072 | 1720.0      | -0.180           | 0.006               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.006                |
| Mode                | Channel Type | Position    | Ch.    | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Band 66 (BW: 20MHz) | 1RB          | Front       | 132072 | 1720.0      | 0.160            | 0.216               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.217                |
|                     |              | Back        | 132072 | 1720.0      | -0.020           | 0.281               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.283                |
|                     |              | Left        | 132072 | 1720.0      | -0.150           | 0.104               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.105                |
|                     |              | Right       | 132072 | 1720.0      | 0.110            | 0.043               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.043                |
|                     |              | Top         | 132072 | 1720.0      | 0.100            | 0.008               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.008                |
|                     |              | Bottom      | 132072 | 1720.0      | -0.150           | 0.126               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.127                |
|                     | 50%RB        | Front       | 132072 | 1720.0      | 0.060            | 0.210               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.211                |
|                     |              | Back        | 132072 | 1720.0      | -0.150           | 0.276               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.278                |
|                     |              | Left        | 132072 | 1720.0      | -0.020           | 0.099               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.100                |
|                     |              | Right       | 132072 | 1720.0      | 0.170            | 0.041               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.041                |
|                     |              | Top         | 132072 | 1720.0      | 0.130            | 0.005               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.005                |
|                     |              | Bottom      | 132072 | 1720.0      | 0.020            | 0.121               | 100            | 1.00              | 23.97             | 24.00                    | 1.007          | 0.122                |

### 11.3.4 Results overview of WIFI&BT

| Mode                               | Position    | Ch. | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|------------------------------------|-------------|-----|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| 2.4g<br>(2.4~2.4835)<br>802.11ax20 | Left Cheek  | 6   | 2437        | 0.04             | 0.118               | 100            | 1.00              | 20.66             | 21.00                    | 1.081          | 0.128                |
|                                    | Left Tilt   | 6   | 2437        | -0.05            | 0.179               | 100            | 1.00              | 20.66             | 21.00                    | 1.081          | 0.194                |
|                                    | Right Cheek | 6   | 2437        | 0.03             | 0.049               | 100            | 1.00              | 20.66             | 21.00                    | 1.081          | 0.053                |
|                                    | Right Tilt  | 6   | 2437        | 0.01             | 0.080               | 100            | 1.00              | 20.66             | 21.00                    | 1.081          | 0.087                |
| Mode                               | Position    | Ch. | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| 2.4g<br>(2.4~2.4835)<br>802.11ax20 | Front       | 6   | 2437        | 0.02             | 0.028               | 100            | 1.00              | 20.66             | 21.00                    | 1.081          | 0.030                |
|                                    | Back        | 6   | 2437        | 0.00             | 0.043               | 100            | 1.00              | 20.66             | 21.00                    | 1.081          | 0.047                |
|                                    | Left        | 6   | 2437        | -0.01            | 0.002               | 100            | 1.00              | 20.66             | 21.00                    | 1.081          | 0.002                |
|                                    | Right       | 6   | 2437        | -0.03            | 0.031               | 100            | 1.00              | 20.66             | 21.00                    | 1.081          | 0.034                |
|                                    | Top         | 6   | 2437        | 5.00             | 0.035               | 100            | 1.00              | 20.66             | 21.00                    | 1.081          | 0.038                |
|                                    | Bottom      | 6   | 2437        | -0.02            | 0.002               | 100            | 1.00              | 20.66             | 21.00                    | 1.081          | 0.002                |

| Mode                  | Position    | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|-----------------------|-------------|-----|-------------|-----------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| 5g Band1<br>5180-5240 | Left Cheek  | 46  | 5230        | 0.05            | 0.059               | 100            | 1.00              | 10.29             | 10.50                    | 1.050          | 0.062                |
|                       | Left Tilt   | 46  | 5230        | -0.13           | 0.158               | 100            | 1.00              | 10.29             | 10.50                    | 1.050          | 0.166                |
|                       | Right Cheek | 46  | 5230        | -0.04           | 0.040               | 100            | 1.00              | 10.29             | 10.50                    | 1.050          | 0.042                |
|                       | Right Tilt  | 46  | 5230        | 0.06            | 0.105               | 100            | 1.00              | 10.29             | 10.50                    | 1.050          | 0.110                |
| Mode                  | Position    | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| 5g Band1<br>5180-5240 | Front       | 46  | 5230        | -0.05           | 0.027               | 100            | 1.00              | 10.29             | 10.50                    | 1.050          | 0.028                |
|                       | Back        | 46  | 5230        | 0.10            | 0.074               | 100            | 1.00              | 10.29             | 10.50                    | 1.050          | 0.078                |
|                       | Left        | 46  | 5230        | -0.01           | 0.003               | 100            | 1.00              | 10.29             | 10.50                    | 1.050          | 0.003                |
|                       | Right       | 46  | 5230        | 0.02            | 0.025               | 100            | 1.00              | 10.29             | 10.50                    | 1.050          | 0.026                |
|                       | Top         | 46  | 5230        | -0.06           | 0.046               | 100            | 1.00              | 10.29             | 10.50                    | 1.050          | 0.048                |
|                       | Bottom      | 46  | 5230        | -0.02           | 0.002               | 100            | 1.00              | 10.29             | 10.50                    | 1.050          | 0.002                |

| Mode                  | Position    | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|-----------------------|-------------|-----|-------------|-----------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| 5g Band2<br>5260-5320 | Left Cheek  | 64  | 5320        | 0.03            | 0.095               | 100            | 1.00              | 9.73              | 10.00                    | 1.064          | 0.101                |
|                       | Left Tilt   | 64  | 5320        | 0.00            | 0.183               | 100            | 1.00              | 9.73              | 10.00                    | 1.064          | 0.195                |
|                       | Right Cheek | 64  | 5320        | -0.04           | 0.044               | 100            | 1.00              | 9.73              | 10.00                    | 1.064          | 0.047                |
|                       | Right Tilt  | 64  | 5320        | -0.02           | 0.131               | 100            | 1.00              | 9.73              | 10.00                    | 1.064          | 0.139                |
| Mode                  | Position    | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| 5g Band2<br>5260-5320 | Front       | 64  | 5320        | 0.03            | 0.069               | 100            | 1.00              | 9.73              | 10.00                    | 1.064          | 0.073                |
|                       | Back        | 64  | 5320        | -0.17           | 0.114               | 100            | 1.00              | 9.73              | 10.00                    | 1.064          | 0.121                |
|                       | Left        | 64  | 5320        | 0.05            | 0.007               | 100            | 1.00              | 9.73              | 10.00                    | 1.064          | 0.007                |
|                       | Right       | 64  | 5320        | -0.06           | 0.053               | 100            | 1.00              | 9.73              | 10.00                    | 1.064          | 0.056                |
|                       | Top         | 64  | 5320        | 0.02            | 0.081               | 100            | 1.00              | 9.73              | 10.00                    | 1.064          | 0.086                |
|                       | Bottom      | 64  | 5320        | -0.09           | 0.002               | 100            | 1.00              | 9.73              | 10.00                    | 1.064          | 0.002                |

| Mode                  | Position    | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|-----------------------|-------------|-----|-------------|-----------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| 5g Band3<br>5500-5700 | Left Cheek  | 100 | 5500        | -0.03           | 0.146               | 100            | 1.00              | 8.21              | 8.50                     | 1.069          | 0.156                |
|                       | Left Tilt   | 100 | 5500        | -0.11           | 0.243               | 100            | 1.00              | 8.21              | 8.50                     | 1.069          | 0.260                |
|                       | Right Cheek | 100 | 5500        | 0.02            | 0.070               | 100            | 1.00              | 8.21              | 8.50                     | 1.069          | 0.075                |
|                       | Right Tilt  | 100 | 5500        | -0.05           | 0.179               | 100            | 1.00              | 8.21              | 8.50                     | 1.069          | 0.191                |
| Mode                  | Position    | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| 5g Band3<br>5500-5700 | Front       | 100 | 5500        | 0.02            | 0.092               | 100            | 1.00              | 8.21              | 8.50                     | 1.069          | 0.098                |
|                       | Back        | 100 | 5500        | -0.03           | 0.136               | 100            | 1.00              | 8.21              | 8.50                     | 1.069          | 0.145                |
|                       | Left        | 100 | 5500        | 0.04            | 0.009               | 100            | 1.00              | 8.21              | 8.50                     | 1.069          | 0.010                |
|                       | Right       | 100 | 5500        | -0.06           | 0.076               | 100            | 1.00              | 8.21              | 8.50                     | 1.069          | 0.081                |
|                       | Top         | 100 | 5500        | -0.05           | 0.118               | 100            | 1.00              | 8.21              | 8.50                     | 1.069          | 0.126                |
|                       | Bottom      | 100 | 5500        | -0.02           | 0.003               | 100            | 1.00              | 8.21              | 8.50                     | 1.069          | 0.003                |

| Mode                  | Position    | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|-----------------------|-------------|-----|-------------|-----------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| 5g Band4<br>5745-5825 | Left Cheek  | 149 | 5745        | 0.01            | 0.125               | 100            | 1.00              | 7.81              | 8.00                     | 1.045          | 0.131                |
|                       | Left Tilt   | 149 | 5745        | -0.13           | 0.233               | 100            | 1.00              | 7.81              | 8.00                     | 1.045          | 0.243                |
|                       | Right Cheek | 149 | 5745        | 0.03            | 0.061               | 100            | 1.00              | 7.81              | 8.00                     | 1.045          | 0.064                |
|                       | Right Tilt  | 149 | 5745        | -0.04           | 0.146               | 100            | 1.00              | 7.81              | 8.00                     | 1.045          | 0.153                |
| Mode                  | Position    | Ch. | Freq. (MHz) | Power Drift (%) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| 5g Band4<br>5745-5825 | Front       | 149 | 5745        | -0.02           | 0.078               | 100            | 1.00              | 7.81              | 8.00                     | 1.045          | 0.081                |
|                       | Back        | 149 | 5745        | -0.06           | 0.123               | 100            | 1.00              | 7.81              | 8.00                     | 1.045          | 0.129                |
|                       | Left        | 149 | 5745        | -0.06           | 0.007               | 100            | 1.00              | 7.81              | 8.00                     | 1.045          | 0.007                |
|                       | Right       | 149 | 5745        | 0.03            | 0.062               | 100            | 1.00              | 7.81              | 8.00                     | 1.045          | 0.065                |
|                       | Top         | 149 | 5745        | 0.04            | 0.103               | 100            | 1.00              | 7.81              | 8.00                     | 1.045          | 0.108                |
|                       | Bottom      | 149 | 5745        | -0.02           | 0.002               | 100            | 1.00              | 7.81              | 8.00                     | 1.045          | 0.002                |

| Mode      | Position    | Ch. | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
|-----------|-------------|-----|-------------|------------------|---------------------|----------------|-------------------|-------------------|--------------------------|----------------|----------------------|
| Bluetooth | Left Cheek  | 39  | 2480        | 0.050            | 0.087               | 100            | 1.00              | 9.20              | 9.50                     | 1.072          | 0.093                |
|           | Left Tilt   | 39  | 2480        | 0.500            | 0.091               | 100            | 1.00              | 9.20              | 9.50                     | 1.072          | 0.098                |
|           | Right Cheek | 39  | 2480        | -1.000           | 0.072               | 100            | 1.00              | 9.20              | 9.50                     | 1.072          | 0.077                |
|           | Right Tilt  | 39  | 2480        | 1.500            | 0.078               | 100            | 1.00              | 9.20              | 9.50                     | 1.072          | 0.084                |
| Mode      | Position    | Ch. | Freq. (MHz) | Power Drift (db) | 1g Meas. SAR (W/kg) | Duty cycle (%) | Duty cycle Factor | Meas. Power (dBm) | Max. tune-up power (dBm) | Scaling Factor | 1g Scaled SAR (W/kg) |
| Bluetooth | Front       | 39  | 2480        | 0.350            | 0.038               | 100            | 1.00              | 9.20              | 9.50                     | 1.072          | 0.041                |
|           | Back        | 39  | 2480        | 0.500            | 0.060               | 100            | 1.00              | 9.20              | 9.50                     | 1.072          | 0.064                |
|           | Left        | 39  | 2480        | 2.000            | 0.025               | 100            | 1.00              | 9.20              | 9.50                     | 1.072          | 0.027                |
|           | Right       | 39  | 2480        | -0.500           | 0.034               | 100            | 1.00              | 9.20              | 9.50                     | 1.072          | 0.036                |
|           | Top         | 39  | 2480        | 1.500            | 0.022               | 100            | 1.00              | 9.20              | 9.50                     | 1.072          | 0.024                |
|           | Bottom      | 39  | 2480        | -2.000           | 0.015               | 100            | 1.00              | 9.20              | 9.50                     | 1.072          | 0.016                |

Note:

- 1.The maximum SAR Value of each test band is marked bold.
- 2.SAR plot is provided only for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
- 3.Per KDB 447498 D01 v06, for each exposure position, if the highest output power channel Reported SAR  $\leq 0.8$ W/kg, other channels SAR testing is not necessary.
- 4.Per KDB 447498 D01 v06, head/body-worn use is evaluated with the device positioned at 0mm/10 mm from a head/flat phantom respectively filled with head tissue-equivalent medium.
- 5.Per KDB Publication 941225 D06 where SAR test considerations for handsets (L x W  $\geq 9$  cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device with antennas 2.5 cm or closer to the edge of the device, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.
- 6.Per KDB 447498 D01 v06, the report SAR is measured SAR value adjusted for maximum tune-up tolerance. Scaling Factor= $10^{[(\text{tune-up limit power(dBm)} - \text{Ave.power power (dBm)})/10]}$ , where tune-up limit is the maximum rated power among all production units.
- 7.Reported SAR(W/kg)=Measured SAR (W/kg)\*Scaling Factor.

## 12 Multiple Transmitter Information

The SAR measurement positions of each side are as below:



< Rear Side >

| Mode                 | Front side | Rear side | Left side | Right side | Top side | Bottom side |
|----------------------|------------|-----------|-----------|------------|----------|-------------|
| 2G/3G/4G /5G Antenna | Yes        | Yes       | Yes       | Yes        | Yes      | Yes         |
| Wi-Fi/BT Antenna     | Yes        | Yes       | Yes       | Yes        | Yes      | Yes         |

- 1) Per KDB941225 D06v01r01, the DUT Dimension is bigger than 9 cm x 5 cm, so 10mm is chosen as the test separation distance for Hotspot mode. When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested.

## 12.1 Simultaneous Transmission Possibilities

The Simultaneous Transmission Possibilities are as below:

| Simultaneous Transmission Possibilities |                             |      |      |         |
|-----------------------------------------|-----------------------------|------|------|---------|
| Simultaneous Tx Combination             | Configuration               | Head | Body | Hotspot |
| 1                                       | GSM/GPRS/UMTS/LTE/NR +Wi-Fi | YES  | YES  | YES     |
| 2                                       | GSM/GPRS/UMTS/LTE/NR +BT    | YES  | YES  | YES     |

Note: The device does not support simultaneous BT and Wi-Fi ,because the BT and Wi-Fi share the same antenna and can't transmit simultaneously.

### 12.1.1 SAR Summation Scenario

Head

| Band               | Test Position | Scaled SAR              |                             |                                       | BT SAR<br>1g(W/kg) | $\Sigma$ SAR<br>(W/kg) | Llimit<br>(W/kg) |
|--------------------|---------------|-------------------------|-----------------------------|---------------------------------------|--------------------|------------------------|------------------|
|                    |               | WWAN<br>SAR<br>1g(W/kg) | WIFI2.4G<br>SAR<br>1g(W/kg) | Wi-Fi<br>5G(Band 3<br>SAR<br>1g(W/kg) |                    |                        |                  |
| GSM850<br>(voice)  | Left Cheek    | 0.162                   | 0.128                       | 0.156                                 | 0.093              | 0.290                  | 1.6              |
|                    | Left Tilt     | 0.081                   | 0.194                       | 0.260                                 | 0.098              | 0.275                  |                  |
|                    | Right Cheek   | 0.163                   | 0.053                       | 0.075                                 | 0.077              | 0.216                  |                  |
|                    | Right Tilt    | 0.078                   | 0.087                       | 0.191                                 | 0.084              | 0.165                  |                  |
| GSM1900<br>(voice) | Left Cheek    | 0.043                   | 0.128                       | 0.156                                 | 0.093              | 0.171                  |                  |
|                    | Left Tilt     | 0.021                   | 0.194                       | 0.260                                 | 0.098              | 0.215                  |                  |
|                    | Right Cheek   | 0.049                   | 0.053                       | 0.075                                 | 0.077              | 0.102                  |                  |
|                    | Right Tilt    | 0.035                   | 0.087                       | 0.191                                 | 0.084              | 0.122                  |                  |
| WCDMA<br>Band 2    | Left Cheek    | 0.069                   | 0.128                       | 0.156                                 | 0.093              | 0.197                  |                  |
|                    | Left Tilt     | 0.063                   | 0.194                       | 0.260                                 | 0.098              | 0.257                  |                  |
|                    | Right Cheek   | 0.064                   | 0.053                       | 0.075                                 | 0.077              | 0.117                  |                  |
|                    | Right Tilt    | 0.052                   | 0.087                       | 0.191                                 | 0.084              | 0.139                  |                  |
| WCDMA<br>Band 4    | Left Cheek    | 0.023                   | 0.128                       | 0.156                                 | 0.093              | 0.151                  |                  |
|                    | Left Tilt     | 0.021                   | 0.194                       | 0.260                                 | 0.098              | 0.215                  |                  |
|                    | Right Cheek   | 0.026                   | 0.053                       | 0.075                                 | 0.077              | 0.079                  |                  |
|                    | Right Tilt    | 0.027                   | 0.087                       | 0.191                                 | 0.084              | 0.114                  |                  |
| WCDMA<br>Band 5    | Left Cheek    | 0.114                   | 0.128                       | 0.156                                 | 0.093              | 0.242                  |                  |
|                    | Left Tilt     | 0.056                   | 0.194                       | 0.260                                 | 0.098              | 0.250                  |                  |
|                    | Right Cheek   | 0.125                   | 0.053                       | 0.075                                 | 0.077              | 0.178                  |                  |
|                    | Right Tilt    | 0.067                   | 0.087                       | 0.191                                 | 0.084              | 0.154                  |                  |

| Band                           | Test Position | Scaled SAR    |                      |                          |                              | BT SAR<br>1g(W/kg) | Σ SAR<br>(W/kg) | Llimit<br>(W/kg) |
|--------------------------------|---------------|---------------|----------------------|--------------------------|------------------------------|--------------------|-----------------|------------------|
|                                |               | RB allocation | WWAN SAR<br>1g(W/kg) | WiFi2.4G SAR<br>1g(W/kg) | Wi-Fi 5G(Band 3)<br>1g(W/kg) |                    |                 |                  |
| LTE Band 2<br>QPSK<br>(20MHz)  | Left Cheek    | 1RB           | 0.059                | 0.128                    | 0.156                        | 0.093              | 0.187           | 1.6              |
|                                | Left Tilt     |               | 0.022                | 0.194                    | 0.260                        | 0.098              | 0.216           |                  |
|                                | Right Cheek   |               | 0.072                | 0.053                    | 0.075                        | 0.077              | 0.125           |                  |
|                                | Right Tilt    |               | 0.023                | 0.087                    | 0.191                        | 0.084              | 0.110           |                  |
|                                | Left Cheek    | 50%RB         | 0.057                | 0.128                    | 0.156                        | 0.093              | 0.185           |                  |
|                                | Left Tilt     |               | 0.020                | 0.194                    | 0.260                        | 0.098              | 0.214           |                  |
|                                | Right Cheek   |               | 0.069                | 0.053                    | 0.075                        | 0.077              | 0.122           |                  |
|                                | Right Tilt    |               | 0.022                | 0.087                    | 0.191                        | 0.084              | 0.109           |                  |
| LTE Band 4<br>QPSK<br>(20MHz)  | Left Cheek    | 1RB           | 0.023                | 0.128                    | 0.156                        | 0.093              | 0.151           |                  |
|                                | Left Tilt     |               | 0.016                | 0.194                    | 0.260                        | 0.098              | 0.210           |                  |
|                                | Right Cheek   |               | 0.020                | 0.053                    | 0.075                        | 0.077              | 0.073           |                  |
|                                | Right Tilt    |               | 0.016                | 0.087                    | 0.191                        | 0.084              | 0.103           |                  |
|                                | Left Cheek    | 50%RB         | 0.023                | 0.128                    | 0.156                        | 0.093              | 0.151           |                  |
|                                | Left Tilt     |               | 0.014                | 0.194                    | 0.260                        | 0.098              | 0.208           |                  |
|                                | Right Cheek   |               | 0.018                | 0.053                    | 0.075                        | 0.077              | 0.071           |                  |
|                                | Right Tilt    |               | 0.009                | 0.087                    | 0.191                        | 0.084              | 0.096           |                  |
| LTE Band 5<br>QPSK<br>(10MHz)  | Left Cheek    | 1RB           | 0.113                | 0.128                    | 0.156                        | 0.093              | 0.241           |                  |
|                                | Left Tilt     |               | 0.028                | 0.194                    | 0.260                        | 0.098              | 0.222           |                  |
|                                | Right Cheek   |               | 0.142                | 0.053                    | 0.075                        | 0.077              | 0.195           |                  |
|                                | Right Tilt    |               | 0.052                | 0.087                    | 0.191                        | 0.084              | 0.139           |                  |
|                                | Left Cheek    | 50%RB         | 0.095                | 0.128                    | 0.156                        | 0.093              | 0.223           |                  |
|                                | Left Tilt     |               | 0.016                | 0.194                    | 0.260                        | 0.098              | 0.210           |                  |
|                                | Right Cheek   |               | 0.121                | 0.053                    | 0.075                        | 0.077              | 0.174           |                  |
|                                | Right Tilt    |               | 0.043                | 0.087                    | 0.191                        | 0.084              | 0.130           |                  |
| LTE Band 7<br>QPSK<br>(10MHz)  | Left Cheek    | 1RB           | 0.119                | 0.128                    | 0.156                        | 0.093              | 0.247           |                  |
|                                | Left Tilt     |               | 0.077                | 0.194                    | 0.260                        | 0.098              | 0.271           |                  |
|                                | Right Cheek   |               | 0.095                | 0.053                    | 0.075                        | 0.077              | 0.148           |                  |
|                                | Right Tilt    |               | 0.073                | 0.087                    | 0.191                        | 0.084              | 0.160           |                  |
|                                | Left Cheek    | 50%RB         | 0.112                | 0.128                    | 0.156                        | 0.093              | 0.240           |                  |
|                                | Left Tilt     |               | 0.068                | 0.194                    | 0.260                        | 0.098              | 0.262           |                  |
|                                | Right Cheek   |               | 0.094                | 0.053                    | 0.075                        | 0.077              | 0.147           |                  |
|                                | Right Tilt    |               | 0.058                | 0.087                    | 0.191                        | 0.084              | 0.145           |                  |
| LTE Band 12<br>QPSK<br>(10MHz) | Left Cheek    | 1RB           | 0.058                | 0.128                    | 0.156                        | 0.093              | 0.186           |                  |
|                                | Left Tilt     |               | 0.028                | 0.194                    | 0.260                        | 0.098              | 0.222           |                  |
|                                | Right Cheek   |               | 0.057                | 0.053                    | 0.075                        | 0.077              | 0.110           |                  |
|                                | Right Tilt    |               | 0.031                | 0.087                    | 0.191                        | 0.084              | 0.118           |                  |
|                                | Left Cheek    | 50%RB         | 0.045                | 0.128                    | 0.156                        | 0.093              | 0.173           |                  |
|                                | Left Tilt     |               | 0.021                | 0.194                    | 0.260                        | 0.098              | 0.215           |                  |
|                                | Right Cheek   |               | 0.042                | 0.053                    | 0.075                        | 0.077              | 0.095           |                  |
|                                | Right Tilt    |               | 0.019                | 0.087                    | 0.191                        | 0.084              | 0.106           |                  |
| LTE Band 17<br>QPSK<br>(10MHz) | Left Cheek    | 1RB           | 0.066                | 0.128                    | 0.156                        | 0.093              | 0.194           |                  |
|                                | Left Tilt     |               | 0.036                | 0.194                    | 0.260                        | 0.098              | 0.230           |                  |
|                                | Right Cheek   |               | 0.069                | 0.053                    | 0.075                        | 0.077              | 0.122           |                  |
|                                | Right Tilt    |               | 0.038                | 0.087                    | 0.191                        | 0.084              | 0.125           |                  |
|                                | Left Cheek    | 50%RB         | 0.052                | 0.128                    | 0.156                        | 0.093              | 0.180           |                  |
|                                | Left Tilt     |               | 0.024                | 0.194                    | 0.260                        | 0.098              | 0.218           |                  |
|                                | Right Cheek   |               | 0.061                | 0.053                    | 0.075                        | 0.077              | 0.114           |                  |
|                                | Right Tilt    |               | 0.028                | 0.087                    | 0.191                        | 0.084              | 0.115           |                  |
| LTE Band 38<br>QPSK<br>(20MHz) | Left Cheek    | 1RB           | 0.060                | 0.128                    | 0.156                        | 0.093              | 0.188           |                  |
|                                | Left Tilt     |               | 0.015                | 0.194                    | 0.260                        | 0.098              | 0.209           |                  |
|                                | Right Cheek   |               | 0.041                | 0.053                    | 0.075                        | 0.077              | 0.094           |                  |
|                                | Right Tilt    |               | 0.005                | 0.087                    | 0.191                        | 0.084              | 0.092           |                  |
|                                | Left Cheek    | 50%RB         | 0.041                | 0.128                    | 0.156                        | 0.093              | 0.169           |                  |
|                                | Left Tilt     |               | 0.007                | 0.194                    | 0.260                        | 0.098              | 0.201           |                  |
|                                | Right Cheek   |               | 0.030                | 0.053                    | 0.075                        | 0.077              | 0.083           |                  |
|                                | Right Tilt    |               | 0.002                | 0.087                    | 0.191                        | 0.084              | 0.089           |                  |

| Band                           | Test Position | Scaled SAR    |                      |                          | BT SAR<br>1g(W/kg)           | Σ SAR<br>(W/kg) | Llimit<br>(W/kg) |
|--------------------------------|---------------|---------------|----------------------|--------------------------|------------------------------|-----------------|------------------|
|                                |               | RB allocation | WWAN SAR<br>1g(W/kg) | WIFI2.4G SAR<br>1g(W/kg) | Wi-Fi 5G(Band 3)<br>1g(W/kg) |                 |                  |
| LTE Band 41<br>QPSK<br>(20MHz) | Left Cheek    | 1RB           | 0.067                | 0.128                    | 0.156                        | 0.093           | 0.195            |
|                                | Left Tilt     |               | 0.028                | 0.194                    | 0.260                        | 0.098           | 0.222            |
|                                | Right Cheek   |               | 0.041                | 0.053                    | 0.075                        | 0.077           | 0.094            |
|                                | Right Tilt    |               | 0.025                | 0.087                    | 0.191                        | 0.084           | 0.112            |
|                                | Left Cheek    | 50%RB         | 0.064                | 0.128                    | 0.156                        | 0.093           | 0.192            |
|                                | Left Tilt     |               | 0.026                | 0.194                    | 0.260                        | 0.098           | 0.220            |
|                                | Right Cheek   |               | 0.039                | 0.053                    | 0.075                        | 0.077           | 0.092            |
|                                | Right Tilt    |               | 0.023                | 0.087                    | 0.191                        | 0.084           | 0.110            |
| LTE Band 66<br>QPSK<br>(20MHz) | Left Cheek    | 1RB           | 0.031                | 0.128                    | 0.156                        | 0.093           | 0.159            |
|                                | Left Tilt     |               | 0.008                | 0.194                    | 0.260                        | 0.098           | 0.202            |
|                                | Right Cheek   |               | 0.022                | 0.053                    | 0.075                        | 0.077           | 0.075            |
|                                | Right Tilt    |               | 0.007                | 0.087                    | 0.191                        | 0.084           | 0.094            |
|                                | Left Cheek    | 50%RB         | 0.030                | 0.128                    | 0.156                        | 0.093           | 0.158            |
|                                | Left Tilt     |               | 0.008                | 0.194                    | 0.260                        | 0.098           | 0.202            |
|                                | Right Cheek   |               | 0.021                | 0.053                    | 0.075                        | 0.077           | 0.074            |
|                                | Right Tilt    |               | 0.006                | 0.087                    | 0.191                        | 0.084           | 0.093            |

## Hotspot(body-worn10mm)

| Band                        | Test Position | Scaled SAR           |                          |                              | BT SAR<br>1g(W/kg) | Σ SAR<br>(W/kg) | Llimit<br>(W/kg) |
|-----------------------------|---------------|----------------------|--------------------------|------------------------------|--------------------|-----------------|------------------|
|                             |               | WWAN SAR<br>1g(W/kg) | WIFI2.4G SAR<br>1g(W/kg) | Wi-Fi 5G(Band 3)<br>1g(W/kg) |                    |                 |                  |
| GSM850<br>(GPRS<br>4slots)  | Front         | 0.378                | 0.030                    | 0.098                        | 0.041              | 0.408           | 1.6              |
|                             | Back          | 0.625                | 0.047                    | 0.145                        | 0.064              | 0.672           |                  |
|                             | Left          | 0.199                | 0.002                    | 0.010                        | 0.027              | 0.201           |                  |
|                             | right         | 0.288                | 0.034                    | 0.081                        | 0.036              | 0.322           |                  |
|                             | Top           | 0.015                | 0.038                    | 0.126                        | 0.024              | 0.053           |                  |
|                             | Bottom        | 0.253                | 0.002                    | 0.003                        | 0.016              | 0.255           |                  |
| GSM1900<br>(GPRS<br>4slots) | Front         | 0.660                | 0.030                    | 0.098                        | 0.041              | 0.690           |                  |
|                             | Back          | 0.857                | 0.047                    | 0.145                        | 0.064              | 0.904           |                  |
|                             | Left          | 0.152                | 0.002                    | 0.010                        | 0.027              | 0.154           |                  |
|                             | right         | 0.311                | 0.034                    | 0.081                        | 0.036              | 0.345           |                  |
|                             | Top           | 0.029                | 0.038                    | 0.126                        | 0.024              | 0.067           |                  |
|                             | Bottom        | 0.714                | 0.002                    | 0.003                        | 0.016              | 0.716           |                  |
| WCDMA<br>Band 2             | Front         | 0.469                | 0.030                    | 0.098                        | 0.041              | 0.499           |                  |
|                             | Back          | 0.505                | 0.047                    | 0.145                        | 0.064              | 0.552           |                  |
|                             | Left          | 0.350                | 0.002                    | 0.010                        | 0.027              | 0.352           |                  |
|                             | right         | 0.191                | 0.034                    | 0.081                        | 0.036              | 0.225           |                  |
|                             | Top           | 0.017                | 0.038                    | 0.126                        | 0.024              | 0.055           |                  |
|                             | Bottom        | 0.370                | 0.002                    | 0.003                        | 0.016              | 0.372           |                  |
| WCDMA<br>Band 4             | Front         | 0.173                | 0.030                    | 0.098                        | 0.041              | 0.203           |                  |
|                             | Back          | 0.187                | 0.047                    | 0.145                        | 0.064              | 0.234           |                  |
|                             | Left          | 0.109                | 0.002                    | 0.010                        | 0.027              | 0.111           |                  |
|                             | right         | 0.029                | 0.034                    | 0.081                        | 0.036              | 0.063           |                  |
|                             | Top           | 0.003                | 0.038                    | 0.126                        | 0.024              | 0.041           |                  |
|                             | Bottom        | 0.148                | 0.002                    | 0.003                        | 0.016              | 0.150           |                  |
| WCDMA<br>Band 5             | Front         | 0.196                | 0.030                    | 0.098                        | 0.041              | 0.226           |                  |
|                             | Back          | 0.224                | 0.047                    | 0.145                        | 0.064              | 0.271           |                  |
|                             | Left          | 0.123                | 0.002                    | 0.010                        | 0.027              | 0.125           |                  |
|                             | right         | 0.046                | 0.034                    | 0.081                        | 0.036              | 0.080           |                  |
|                             | Top           | 0.007                | 0.038                    | 0.126                        | 0.024              | 0.045           |                  |
|                             | Bottom        | 0.038                | 0.002                    | 0.003                        | 0.016              | 0.040           |                  |

| Band       | Test Position | RB allocation | Scaled SAR              |                             |                                 | BT SAR<br>1g(W/kg) | Σ SAR<br>(W/kg) | Llimit<br>(W/kg) |
|------------|---------------|---------------|-------------------------|-----------------------------|---------------------------------|--------------------|-----------------|------------------|
|            |               |               | WWAN<br>SAR<br>1g(W/kg) | WIFI2.4G<br>SAR<br>1g(W/kg) | Wi-Fi<br>5G(Band 3)<br>1g(W/kg) |                    |                 |                  |
| LTE Band 2 | Front         | 1RB           | 0.526                   | 0.030                       | 0.098                           | 0.041              | 0.556           | 1.6              |
|            | Back          |               | 0.631                   | 0.047                       | 0.145                           | 0.064              | 0.678           |                  |
|            | Left          |               | 0.441                   | 0.002                       | 0.010                           | 0.027              | 0.443           |                  |
|            | right         |               | 0.310                   | 0.034                       | 0.081                           | 0.036              | 0.344           |                  |
|            | Top           |               | 0.006                   | 0.038                       | 0.126                           | 0.024              | 0.044           |                  |
|            | Bottom        |               | 0.245                   | 0.002                       | 0.003                           | 0.016              | 0.247           |                  |
|            | Front         | 50%RB         | 0.512                   | 0.030                       | 0.098                           | 0.041              | 0.542           |                  |
|            | Back          |               | 0.621                   | 0.047                       | 0.145                           | 0.064              | 0.668           |                  |
|            | Left          |               | 0.432                   | 0.002                       | 0.010                           | 0.027              | 0.434           |                  |
|            | right         |               | 0.302                   | 0.034                       | 0.081                           | 0.036              | 0.336           |                  |
|            | Top           |               | 0.008                   | 0.038                       | 0.126                           | 0.024              | 0.046           |                  |
|            | Bottom        |               | 0.237                   | 0.002                       | 0.003                           | 0.016              | 0.239           |                  |
| LTE Band 4 | Front         | 1RB           | 0.200                   | 0.030                       | 0.098                           | 0.041              | 0.230           |                  |
|            | Back          |               | 0.283                   | 0.047                       | 0.145                           | 0.064              | 0.330           |                  |
|            | Left          |               | 0.154                   | 0.002                       | 0.010                           | 0.027              | 0.156           |                  |
|            | right         |               | 0.092                   | 0.034                       | 0.081                           | 0.036              | 0.126           |                  |
|            | Top           |               | 0.004                   | 0.038                       | 0.126                           | 0.024              | 0.042           |                  |
|            | Bottom        |               | 0.119                   | 0.002                       | 0.003                           | 0.016              | 0.121           |                  |
|            | Front         | 50%RB         | 0.196                   | 0.030                       | 0.098                           | 0.041              | 0.226           |                  |
|            | Back          |               | 0.274                   | 0.047                       | 0.145                           | 0.064              | 0.321           |                  |
|            | Left          |               | 0.150                   | 0.002                       | 0.010                           | 0.027              | 0.152           |                  |
|            | right         |               | 0.091                   | 0.034                       | 0.081                           | 0.036              | 0.125           |                  |
|            | Top           |               | 0.003                   | 0.038                       | 0.126                           | 0.024              | 0.041           |                  |
|            | Bottom        |               | 0.116                   | 0.002                       | 0.003                           | 0.016              | 0.118           |                  |
| LTE Band 5 | Front         | 1RB           | 0.190                   | 0.030                       | 0.098                           | 0.041              | 0.220           |                  |
|            | Back          |               | 0.221                   | 0.047                       | 0.145                           | 0.064              | 0.268           |                  |
|            | Left          |               | 0.153                   | 0.002                       | 0.010                           | 0.027              | 0.155           |                  |
|            | right         |               | 0.098                   | 0.034                       | 0.081                           | 0.036              | 0.132           |                  |
|            | Top           |               | 0.006                   | 0.038                       | 0.126                           | 0.024              | 0.044           |                  |
|            | Bottom        |               | 0.140                   | 0.002                       | 0.003                           | 0.016              | 0.142           |                  |
|            | Front         | 50%RB         | 0.187                   | 0.030                       | 0.098                           | 0.041              | 0.217           |                  |
|            | Back          |               | 0.217                   | 0.047                       | 0.145                           | 0.064              | 0.264           |                  |
|            | Left          |               | 0.147                   | 0.002                       | 0.010                           | 0.027              | 0.149           |                  |
|            | right         |               | 0.095                   | 0.034                       | 0.081                           | 0.036              | 0.129           |                  |
|            | Top           |               | 0.003                   | 0.038                       | 0.126                           | 0.024              | 0.041           |                  |
|            | Bottom        |               | 0.134                   | 0.002                       | 0.003                           | 0.016              | 0.136           |                  |
| LTE Band 7 | Front         | 1RB           | 0.476                   | 0.030                       | 0.098                           | 0.041              | 0.506           |                  |
|            | Back          |               | 0.605                   | 0.047                       | 0.145                           | 0.064              | 0.652           |                  |
|            | Left          |               | 0.409                   | 0.002                       | 0.010                           | 0.027              | 0.411           |                  |
|            | right         |               | 0.280                   | 0.034                       | 0.081                           | 0.036              | 0.314           |                  |
|            | Top           |               | 0.010                   | 0.038                       | 0.126                           | 0.024              | 0.048           |                  |
|            | Bottom        |               | 0.243                   | 0.002                       | 0.003                           | 0.016              | 0.245           |                  |
|            | Front         | 50%RB         | 0.467                   | 0.030                       | 0.098                           | 0.041              | 0.497           |                  |
|            | Back          |               | 0.598                   | 0.047                       | 0.145                           | 0.064              | 0.645           |                  |
|            | Left          |               | 0.397                   | 0.002                       | 0.010                           | 0.027              | 0.399           |                  |
|            | right         |               | 0.271                   | 0.034                       | 0.081                           | 0.036              | 0.305           |                  |
|            | Top           |               | 0.009                   | 0.038                       | 0.126                           | 0.024              | 0.047           |                  |
|            | Bottom        |               | 0.230                   | 0.002                       | 0.003                           | 0.016              | 0.232           |                  |

| Band        | Test Position | RB allocation | Scaled SAR           |                          |                                 | BT SAR<br>1g(W/kg) | $\Sigma$ SAR<br>(W/kg) | Llimit<br>(W/kg) |
|-------------|---------------|---------------|----------------------|--------------------------|---------------------------------|--------------------|------------------------|------------------|
|             |               |               | WWAN SAR<br>1g(W/kg) | WIFI2.4G SAR<br>1g(W/kg) | Wi-Fi<br>5G(Band 3<br>1g(W/kg)) |                    |                        |                  |
| LTE Band 12 | Front         | 1RB           | 0.099                | 0.030                    | 0.098                           | 0.041              | 0.129                  | 1.6              |
|             | Back          |               | 0.129                | 0.047                    | 0.145                           | 0.064              | 0.176                  |                  |
|             | Left          |               | 0.037                | 0.002                    | 0.010                           | 0.027              | 0.039                  |                  |
|             | right         |               | 0.092                | 0.034                    | 0.081                           | 0.036              | 0.126                  |                  |
|             | Top           |               | 0.003                | 0.038                    | 0.126                           | 0.024              | 0.041                  |                  |
|             | Bottom        |               | 0.086                | 0.002                    | 0.003                           | 0.016              | 0.088                  |                  |
|             | Front         | 50%RB         | 0.090                | 0.030                    | 0.098                           | 0.041              | 0.120                  |                  |
|             | Back          |               | 0.117                | 0.047                    | 0.145                           | 0.064              | 0.164                  |                  |
|             | Left          |               | 0.027                | 0.002                    | 0.010                           | 0.027              | 0.029                  |                  |
|             | right         |               | 0.083                | 0.034                    | 0.081                           | 0.036              | 0.117                  |                  |
|             | Top           |               | 0.002                | 0.038                    | 0.126                           | 0.024              | 0.040                  |                  |
|             | Bottom        |               | 0.077                | 0.002                    | 0.003                           | 0.016              | 0.079                  |                  |
| LTE Band 17 | Front         | 1RB           | 0.116                | 0.030                    | 0.098                           | 0.041              | 0.146                  |                  |
|             | Back          |               | 0.144                | 0.047                    | 0.145                           | 0.064              | 0.191                  |                  |
|             | Left          |               | 0.037                | 0.002                    | 0.010                           | 0.027              | 0.039                  |                  |
|             | right         |               | 0.109                | 0.034                    | 0.081                           | 0.036              | 0.143                  |                  |
|             | Top           |               | 0.004                | 0.038                    | 0.126                           | 0.024              | 0.042                  |                  |
|             | Bottom        |               | 0.102                | 0.002                    | 0.003                           | 0.016              | 0.104                  |                  |
|             | Front         | 50%RB         | 0.101                | 0.030                    | 0.098                           | 0.041              | 0.131                  |                  |
|             | Back          |               | 0.121                | 0.047                    | 0.145                           | 0.064              | 0.168                  |                  |
|             | Left          |               | 0.026                | 0.002                    | 0.010                           | 0.027              | 0.028                  |                  |
|             | right         |               | 0.087                | 0.034                    | 0.081                           | 0.036              | 0.121                  |                  |
|             | Top           |               | 0.002                | 0.038                    | 0.126                           | 0.024              | 0.040                  |                  |
|             | Bottom        |               | 0.080                | 0.002                    | 0.003                           | 0.016              | 0.082                  |                  |
| LTE Band 38 | Front         | 1RB           | 0.175                | 0.030                    | 0.098                           | 0.041              | 0.205                  |                  |
|             | Back          |               | 0.247                | 0.047                    | 0.145                           | 0.064              | 0.294                  |                  |
|             | Left          |               | 0.167                | 0.002                    | 0.010                           | 0.027              | 0.169                  |                  |
|             | right         |               | 0.039                | 0.034                    | 0.081                           | 0.036              | 0.073                  |                  |
|             | Top           |               | 0.009                | 0.038                    | 0.126                           | 0.024              | 0.047                  |                  |
|             | Bottom        |               | 0.205                | 0.002                    | 0.003                           | 0.016              | 0.207                  |                  |
|             | Front         | 50%RB         | 0.152                | 0.030                    | 0.098                           | 0.041              | 0.182                  |                  |
|             | Back          |               | 0.215                | 0.047                    | 0.145                           | 0.064              | 0.262                  |                  |
|             | Left          |               | 0.135                | 0.002                    | 0.010                           | 0.027              | 0.137                  |                  |
|             | right         |               | 0.023                | 0.034                    | 0.081                           | 0.036              | 0.057                  |                  |
|             | Top           |               | 0.002                | 0.038                    | 0.126                           | 0.024              | 0.040                  |                  |
|             | Bottom        |               | 0.173                | 0.002                    | 0.003                           | 0.016              | 0.175                  |                  |
| LTE Band 41 | Front         | 1RB           | 0.217                | 0.030                    | 0.098                           | 0.041              | 0.247                  |                  |
|             | Back          |               | 0.311                | 0.047                    | 0.145                           | 0.064              | 0.358                  |                  |
|             | Left          |               | 0.130                | 0.002                    | 0.010                           | 0.027              | 0.132                  |                  |
|             | right         |               | 0.062                | 0.034                    | 0.081                           | 0.036              | 0.096                  |                  |
|             | Top           |               | 0.003                | 0.038                    | 0.126                           | 0.024              | 0.041                  |                  |
|             | Bottom        |               | 0.103                | 0.002                    | 0.003                           | 0.016              | 0.105                  |                  |
|             | Front         | 50%RB         | 0.213                | 0.030                    | 0.098                           | 0.041              | 0.243                  |                  |
|             | Back          |               | 0.305                | 0.047                    | 0.145                           | 0.064              | 0.352                  |                  |
|             | Left          |               | 0.121                | 0.002                    | 0.010                           | 0.027              | 0.123                  |                  |
|             | right         |               | 0.057                | 0.034                    | 0.081                           | 0.036              | 0.091                  |                  |
|             | Top           |               | 0.002                | 0.038                    | 0.126                           | 0.024              | 0.040                  |                  |
|             | Bottom        |               | 0.098                | 0.002                    | 0.003                           | 0.016              | 0.100                  |                  |
| LTE Band 66 | Front         | 1RB           | 0.217                | 0.030                    | 0.098                           | 0.041              | 0.247                  |                  |
|             | Back          |               | 0.283                | 0.047                    | 0.145                           | 0.064              | 0.330                  |                  |
|             | Left          |               | 0.105                | 0.002                    | 0.010                           | 0.027              | 0.107                  |                  |
|             | right         |               | 0.043                | 0.034                    | 0.081                           | 0.036              | 0.077                  |                  |
|             | Top           |               | 0.008                | 0.038                    | 0.126                           | 0.024              | 0.046                  |                  |
|             | Bottom        |               | 0.127                | 0.002                    | 0.003                           | 0.016              | 0.129                  |                  |
|             | Front         | 50%RB         | 0.211                | 0.030                    | 0.098                           | 0.041              | 0.241                  |                  |
|             | Back          |               | 0.278                | 0.047                    | 0.145                           | 0.064              | 0.325                  |                  |
|             | Left          |               | 0.100                | 0.002                    | 0.010                           | 0.027              | 0.102                  |                  |
|             | right         |               | 0.041                | 0.034                    | 0.081                           | 0.036              | 0.075                  |                  |
|             | Top           |               | 0.005                | 0.038                    | 0.126                           | 0.024              | 0.043                  |                  |
|             | Bottom        |               | 0.122                | 0.002                    | 0.003                           | 0.016              | 0.124                  |                  |

## 13 Measurement uncertainty evaluation

### 13.1 Measurement uncertainty evaluation for SAR test

The following table includes the uncertainty table of the IEEE 1528. The values are determined by SPEAG. The breakdown of the individual uncertainties is as follows:

| DASY8 Uncertainty Budget                                                |                                 |               |             |            |           |            |               |                |
|-------------------------------------------------------------------------|---------------------------------|---------------|-------------|------------|-----------|------------|---------------|----------------|
| According to IEC/IEEE 62209-1528<br>(Frequency band: 300MHz-3GHz range) |                                 |               |             |            |           |            |               |                |
| Symbol                                                                  | Error Description               | Uncert. value | Prob. Dist. | Div.       | (ci) (1g) | (ci) (10g) | Std. Unc (1g) | Std. Unc (10g) |
| <b>Measurement System Errors</b>                                        |                                 |               |             |            |           |            |               |                |
| CF                                                                      | Probe Calibration               | ±13.3%        | N           | 2          | 1         | 1          | ±6.7%         | ±6.7%          |
| CF <sub>drift</sub>                                                     | Probe Calibration Drift         | ±1.7%         | R           | $\sqrt{3}$ | 1         | 1          | ±1.0%         | ±1.0%          |
| LIN                                                                     | Probe Linearity                 | ±4.7%         | R           | $\sqrt{3}$ | 1         | 1          | ±2.7%         | ±2.7%          |
| BBS                                                                     | Broadband Signal                | ±2.8%         | R           | $\sqrt{3}$ | 1         | 1          | ±1.6%         | ±1.6%          |
| ISO                                                                     | Probe Isotropy                  | ±7.6%         | R           | $\sqrt{3}$ | 1         | 1          | ±4.4%         | ±4.4%          |
| DAE                                                                     | Other Probe+Electronic          | ±0.8%         | N           | 1          | 1         | 1          | ±0.8%         | ±0.8%          |
| AMB                                                                     | RF Ambient                      | ±1.8%         | N           | 1          | 1         | 1          | ±1.8%         | ±1.8%          |
| Δ <sub>sys</sub>                                                        | Probe Positioning               | ±0.006 mm     | N           | 1          | 0.14      | 0.14       | ±0.10%        | ±0.10%         |
| DAT                                                                     | Data Processing                 | ±1.2%         | N           | 1          | 1         | 1          | ±1.2%         | ±1.2%          |
| <b>Phantom and Device Errors</b>                                        |                                 |               |             |            |           |            |               |                |
| LIQ(σ)                                                                  | Conductivity (meas.) DAK        | ±2.5%         | N           | 1          | 0.78      | 0.71       | ±2.0%         | ±1.8%          |
| LIQ(T <sub>σ</sub> )                                                    | Conductivity (temp.) BB         | ±3.3%         | R           | $\sqrt{3}$ | 0.78      | 0.71       | ±1.5%         | ±1.4%          |
| EPS                                                                     | Phantom Permittivity            | ±14.0%        | R           | $\sqrt{3}$ | 0         | 0          | ±0%           | ±0%            |
| DIS                                                                     | Distance DUT – TSL              | ±2.0%         | N           | 1          | 2         | 2          | ±4.0%         | ±4.0%          |
| D <sub>xyz</sub>                                                        | Device Positioning              | ±1.0%         | N           | 1          | 1         | 1          | ±1.0%         | ±1.0%          |
| H                                                                       | Device Holder                   | ±3.6%         | N           | 1          | 1         | 1          | ±3.6%         | ±3.6%          |
| MOD                                                                     | DUT Modulation <sup>m</sup>     | ±2.4%         | R           | $\sqrt{3}$ | 1         | 1          | ±1.4%         | ±1.4%          |
| TAS                                                                     | Time-average SAR                | ±1.7%         | R           | $\sqrt{3}$ | 1         | 1          | ±1.0%         | ±1.0%          |
| RF <sub>drift</sub>                                                     | DUT drift                       | ±2.5%         | N           | 1          | 1         | 1          | ±2.5%         | ±2.5%          |
| VAL                                                                     | Val Antenna Unc. <sup>val</sup> | ±0.0%         | N           | 1          | 1         | 1          | ±0.0%         | ±0.0%          |
| RF <sub>in</sub>                                                        | Unc. Input Power <sup>val</sup> | ±0.0%         | N           | 1          | 1         | 1          | ±0.0%         | ±0.0%          |
| <b>Correction to the SAR results</b>                                    |                                 |               |             |            |           |            |               |                |
| C(ε, σ)                                                                 | Deviation to Target             | ±1.9%         | N           | 1          | 1         | 0.84       | ±1.9%         | ±1.6%          |
| C(R)                                                                    | SAR scaling <sup>p</sup>        | ±0.0%         | R           | $\sqrt{3}$ | 1         | 1          | ±0.0%         | ±0.0%          |
| u(ΔSAR)                                                                 | Combined Uncertainty            |               |             |            |           |            | ±11.3%        | ±11.2%         |
| U                                                                       | Expanded Uncertainty            |               |             |            |           |            | ±22.6%        | ±22.5%         |

## DASY8 Uncertainty Budget

According to IEC/IEEE 62209-1528  
(Frequency band: 3GHz–6GHz range)

| Symbol                               | Error Description               | Uncert. value | Prob. Dist. | Div.       | (ci) (1g) | (ci) (10g) | Std.Unc (1g) | Std.Unc (10g) |
|--------------------------------------|---------------------------------|---------------|-------------|------------|-----------|------------|--------------|---------------|
| <b>Measurement System Errors</b>     |                                 |               |             |            |           |            |              |               |
| CF                                   | Probe Calibration               | ±13.1%        | N           | 2          | 1         | 1          | ±6.55%       | ±6.55%        |
| CF <sub>drift</sub>                  | Probe Calibration Drift         | ±1.7%         | R           | $\sqrt{3}$ | 1         | 1          | ±1.0%        | ±1.0%         |
| LIN                                  | Probe Linearity                 | ±4.7%         | R           | $\sqrt{3}$ | 1         | 1          | ±2.7%        | ±2.7%         |
| BBS                                  | Broadband Signal                | ±2.6%         | R           | $\sqrt{3}$ | 1         | 1          | ±1.5%        | ±1.5%         |
| ISO                                  | Probe Isotropy                  | ±7.6%         | R           | $\sqrt{3}$ | 1         | 1          | ±4.4%        | ±4.4%         |
| DAE                                  | Other Probe+Electronic          | ±1.2%         | N           | 1          | 1         | 1          | ±1.2%        | ±1.2%         |
| AMB                                  | RF Ambient                      | ±1.8%         | N           | 1          | 1         | 1          | ±1.8%        | ±1.8%         |
| Δ <sub>sys</sub>                     | Probe Positioning               | ±0.005 mm     | N           | 1          | 0.29      | 0.29       | ±0.2%        | ±0.20%        |
| DAT                                  | Data Processing                 | ±2.3%         | N           | 1          | 1         | 1          | ±2.3%        | ±2.3%         |
| <b>Phantom and Device Errors</b>     |                                 |               |             |            |           |            |              |               |
| LIQ(σ)                               | Conductivity (meas.)DAK         | ±2.5%         | N           | 1          | 0.78      | 0.71       | ±2.0%        | ±1.8%         |
| LIQ(T <sub>σ</sub> )                 | Conductivity (temp.)BB          | ±3.4%         | R           | $\sqrt{3}$ | 0.78      | 0.71       | ±1.5%        | ±1.4%         |
| EPS                                  | Phantom Permittivity            | ±14.0%        | R           | $\sqrt{3}$ | 0.25      | 0.25       | ±2.0%        | ±2.0%         |
| DIS                                  | Distance DUT – TSL              | ±2.0%         | N           | 1          | 2         | 2          | ±4.0%        | ±4.0%         |
| D <sub>xyz</sub>                     | Device Positioning              | ±1.0%         | N           | 1          | 1         | 1          | ±1.0%        | ±1.0%         |
| H                                    | Device Holder                   | ±3.6%         | N           | 1          | 1         | 1          | ±3.6%        | ±3.6%         |
| MOD                                  | DUT Modulation <sup>m</sup>     | ±2.4%         | R           | $\sqrt{3}$ | 1         | 1          | ±1.4%        | ±1.4%         |
| TAS                                  | Time-average SAR                | ±1.7%         | R           | $\sqrt{3}$ | 1         | 1          | ±1.0%        | ±1.0%         |
| RF <sub>drift</sub>                  | DUT drift                       | ±2.5%         | N           | 1          | 1         | 1          | ±2.5%        | ±2.5%         |
| VAL                                  | Val Antenna Unc. <sup>val</sup> | ±0.0%         | N           | 1          | 1         | 1          | ±0.0%        | ±0.0%         |
| RF <sub>in</sub>                     | Unc.Input Power <sup>val</sup>  | ±0.0%         | N           | 1          | 1         | 1          | ±0.0%        | ±0.0%         |
| <b>Correction to the SAR results</b> |                                 |               |             |            |           |            |              |               |
| C(ε, σ)                              | Deviation to Target             | ±1.9%         | N           | 1          | 1         | 0.84       | ±1.9%        | ±1.6%         |
| C(R)                                 | SAR scaling <sup>p</sup>        | ±0.0%         | R           | $\sqrt{3}$ | 1         | 1          | ±0.0%        | ±0.0%         |
| u(ΔSAR)                              | Combined Uncertainty            |               |             |            |           |            | ±11.6%       | ±11.6%        |
| U                                    | <b>Expanded Uncertainty</b>     |               |             |            |           |            | ±23.3%       | ±23.1%        |

### 13.2 Measurement uncertainty evaluation for system check

The following table includes the uncertainty table of the IEEE 1528. The values are determined by SPEAG. The breakdown of the individual uncertainties is as follows:

| Uncertainty For System Performance Check                                        |              |                |            |                      |                       |                           |                            |                |
|---------------------------------------------------------------------------------|--------------|----------------|------------|----------------------|-----------------------|---------------------------|----------------------------|----------------|
| Uncertainty Component                                                           | Tol.<br>(±%) | Prob.<br>Dist. | Div.       | C <sub>i</sub><br>1g | C <sub>i</sub><br>10g | 1g<br>U <sub>i</sub> (±%) | 10g<br>U <sub>i</sub> (±%) | V <sub>i</sub> |
| measurement system                                                              |              |                |            |                      |                       |                           |                            |                |
| Probe Calibration                                                               | 6.7          | N              | 1          | 1                    | 1                     | 6.70                      | 6.70                       | ∞              |
| Axial Isotropy                                                                  | 4.7          | R              | $\sqrt{3}$ | 0.7                  | 0.7                   | 1.90                      | 1.90                       | ∞              |
| Hemispherical Isotropy                                                          | 9.6          | R              | $\sqrt{3}$ | 0.7                  | 0.7                   | 3.88                      | 3.88                       | ∞              |
| Boundary Effect                                                                 | 1            | R              | $\sqrt{3}$ | 1                    | 1                     | 0.58                      | 0.58                       | ∞              |
| Linearity                                                                       | 4.7          | R              | $\sqrt{3}$ | 1                    | 1                     | 2.71                      | 2.71                       | ∞              |
| system detection Limits                                                         | 1            | R              | $\sqrt{3}$ | 1                    | 1                     | 0.58                      | 0.58                       | ∞              |
| Modulation response                                                             | 0            | N              | 1          | 1                    | 1                     | 0.00                      | 0.00                       | ∞              |
| Readout Electronics                                                             | 0.3          | N              | 1          | 1                    | 1                     | 0.30                      | 0.30                       | ∞              |
| Response Time                                                                   | 0            | R              | $\sqrt{3}$ | 1                    | 1                     | 0.00                      | 0.00                       | ∞              |
| Integration Time                                                                | 0            | R              | $\sqrt{3}$ | 1                    | 1                     | 0.00                      | 0.00                       | ∞              |
| RF ambient Conditions - Noise                                                   | 1            | R              | $\sqrt{3}$ | 1                    | 1                     | 0.58                      | 0.58                       | ∞              |
| RF ambient Conditions – Reflections                                             | 1            | R              | $\sqrt{3}$ | 1                    | 1                     | 0.58                      | 0.58                       | ∞              |
| Probe positioned Mechanical Tolerance                                           | 0.8          | R              | $\sqrt{3}$ | 1                    | 1                     | 0.46                      | 0.46                       | ∞              |
| Probe positioning with respect to Phantom Shell                                 | 6.7          | R              | $\sqrt{3}$ | 1                    | 1                     | 3.87                      | 3.87                       | ∞              |
| Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation | 2.0          | R              | $\sqrt{3}$ | 1                    | 1                     | 1.15                      | 1.15                       | ∞              |
| Dipole                                                                          |              |                |            |                      |                       |                           |                            |                |
| Deviation of experimental source from numerical source                          | 5.5          | N              | 1          | 1                    | 1                     | 3.18                      | 3.18                       | ∞              |
| Input power and SAR drift measurement                                           | 2.0          | R              | $\sqrt{3}$ | 1                    | 1                     | 1.15                      | 1.15                       | ∞              |
| Dipole axis to liquid Distance                                                  | 3.4          | R              | $\sqrt{3}$ | 1                    | 1                     | 1.96                      | 1.96                       | ∞              |
| Phantom and Tissue Parameters                                                   |              |                |            |                      |                       |                           |                            |                |
| Phantom Uncertainty (shape and thickness tolerances)                            | 4.0          | R              | $\sqrt{3}$ | 1                    | 1                     | 2.31                      | 2.31                       | ∞              |
| Uncertainty in SAR correction for deviation (in permittivity and conductivity)  | 2            | N              | 1          | 1                    | 0.84                  | 2.0                       | 1.68                       | ∞              |
| Liquid conductivity (meas.)                                                     | 2.5          | N              | 1          | 0.78                 | 0.71                  | 1.13                      | 1.03                       | 5              |
| Liquid conductivity (target.)                                                   | 5            | R              | $\sqrt{3}$ | 0.78                 | 0.71                  | 3.90                      | 3.55                       | 5              |
| Liquid Permittivity (meas.)                                                     | 2.5          | N              | 1          | 0.23                 | 0.26                  | 0.33                      | 0.38                       | ∞              |
| Liquid Permittivity (target.)                                                   | 5            | R              | $\sqrt{3}$ | 0.23                 | 0.26                  | 1.15                      | 1.30                       | ∞              |
| Combined Standard Uncertainty                                                   |              | Rss            |            |                      |                       | 11.29                     | 11.18                      |                |
| Expanded Uncertainty (95% Confidence interval)                                  |              | k              |            |                      |                       | 20.57                     | 19.95                      |                |

#### 14 Test equipment and ancillaries used for tests

To simplify the identification of the test equipment and/or ancillaries which were used, the reporting of the relevant test cases only refer to the test item number as specified in the table below.

|                                     | Manufacturer | Device Type                          | Type(Model)     | Serial number   | calibration |            |
|-------------------------------------|--------------|--------------------------------------|-----------------|-----------------|-------------|------------|
|                                     |              |                                      |                 |                 | Last Cal.   | Due Date   |
| <input checked="" type="checkbox"/> | SPEAG        | E-Field PROBE                        | EX3DV4          | 7895            | 2024-11-28  | 2025-11-27 |
| <input checked="" type="checkbox"/> | SPEAG        | E-Field PROBE                        | EX3DV4          | 7391            | 2024-11-16  | 2025-11-15 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Kits                      | D750V3          | 1151            | 2024-08-19  | 2027-08-18 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Kits                      | D835V2          | 4d203           | 2024-08-20  | 2027-08-19 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Kits                      | D1750V2         | 1143            | 2024-08-20  | 2027-08-19 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Kits                      | D1900V2         | 5d211           | 2024-08-19  | 2027-08-18 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Sources                   | D2550V2         | 1015            | 2024-08-16  | 2027-08-15 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Sources                   | D3500V2         | 1164            | 2024-10-17  | 2027-10-16 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Sources                   | D3700V2         | 1139            | 2024-10-17  | 2027-10-16 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Sources                   | D3900V2         | 1106            | 2024-10-17  | 2027-10-16 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Sources                   | D4600V2         | 1097            | 2024-10-17  | 2027-10-16 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Sources                   | D4900V2         | 1093            | 2024-10-08  | 2027-10-07 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Sources                   | D5GHzV2         | 1412            | 2024-10-17  | 2027-10-16 |
| <input checked="" type="checkbox"/> | SPEAG        | Validation Sources                   | D6.5GHzV2       | 1116            | 2024-10-14  | 2027-10-13 |
| <input checked="" type="checkbox"/> | SPEAG        | DAE                                  | DAE4            | 1495            | 2024-07-24  | 2025-07-23 |
| <input checked="" type="checkbox"/> | SPEAG        | DAE                                  | DAE4ip          | 1872            | 2024-10-18  | 2025-10-17 |
| <input checked="" type="checkbox"/> | SPEAG        | Dielectric parameter probes          | DAK-3.5         | 1363            | 2024-11-05  | 2025-11-04 |
| <input checked="" type="checkbox"/> | R & S        | Universal Radio Communication Tester | CMU 200         | 119733          | 2024-10-21  | 2025-10-20 |
| <input checked="" type="checkbox"/> | R & S        | Universal Radio Communication Tester | CMW500          | 144459          | 2024-10-21  | 2025-10-20 |
| <input checked="" type="checkbox"/> | R & S        | UXM5G Wireless Test Platform         | E7515B          | MY60192341      | 2024-10-21  | 2025-10-20 |
| <input checked="" type="checkbox"/> | HP           | Network Analyser                     | 8753D           | 3410A08889      | 2024-10-21  | 2025-10-20 |
| <input checked="" type="checkbox"/> | HP           | Signal Generator                     | E4421B          | GB39340770      | 2024-10-28  | 2025-10-27 |
| <input checked="" type="checkbox"/> | Keithley     | Multimeter                           | Keithley 2000   | 4014539         | 2024-10-28  | 2025-10-27 |
| <input checked="" type="checkbox"/> | SATIMO       | Amplifier                            | Power Amplifier | MODU-023-A-0004 | 2024-10-21  | 2025-10-20 |
| <input checked="" type="checkbox"/> | Agilent      | Power Meter                          | E4418B          | GB43312909      | 2024-10-21  | 2025-10-20 |
| <input checked="" type="checkbox"/> | Agilent      | Power Meter Sensor                   | E4412A          | MY41500046      | 2024-10-21  | 2025-10-20 |