



# TEST REPORT

Test item description: 4G LTE Pocket WiFi  
 FCC ID: 2BHDC-MF67  
 Trademark(s): N/A  
 Model/Type reference: MF67  
 Applicant's name: Shenzhen Zijin Technology Co., Ltd.  
 Address: Rm 2895, Pengrunda COMM Plaza, No.3368 Hubin Rd., YuehaiSt., Nanshan Dist., Shenzhen, Guangdong, China  
 Manufacturer: Shenzhen Zijin Technology Co., Ltd.  
 Address: Rm 2895, Pengrunda COMM Plaza, No.3368 Hubin Rd., YuehaiSt., Nanshan Dist., Shenzhen, Guangdong, China  
 Prepared By: Shenzhen CTB Testing Technology Co., Ltd.  
 Address: 1&2/F., Building A, No.26, Xinhe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China  
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 FCC 47 CFR Part1(1.1307), ANSI/IEEE C95.1-2019  
 IEEE 1528-2013 & Published RF Exposure KDB Procedures  
 Test Results: PASS  
 Remark: This is SAR test report.

Compiled by:

Reviewed by:

Approved by:

*Zhang Mao cheng*

*Martin Feng*



Zhang Mao cheng

Martin Feng

Rita Xiao / Director

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1. VERSION

| Report No.         | Issue Date    | Description | Approved |
|--------------------|---------------|-------------|----------|
| CTB26010810102RH04 | Mar. 03, 2026 | Original    | Valid    |

## 2. PRODUCT INFORMATION AND TEST SETUP

### 2.1 Product Information

Model/Type reference: MF67

Model Description: N/A

Wi-Fi Specification: IEEE 802.11b/g/n

Hardware Version: V1.0

Software Version: V1.0

WiFi: IEEE 802.11b/g/n 20: 2412-2462MHz/ 11 channel

IEEE 802.11n 40: 2422-2452MHz/ 7 channel

WCDMA Band 2: 1850~1910MHz

WCDMA Band 5: 824~849MHz

Operation Frequency:

FDD-LTE BAND 2: 1850-1910MHz

FDD-LTE BAND 4: 1710-1755MHz

FDD-LTE BAND 5: 824-849MHz

FDD-LTE BAND 12: 699-716MHz

FDD-LTE BAND 66: 1710-1780MHz

WiFi (2.4G): 14.023dBm

WCDMA Band 2: 20.75dBm

WCDMA Band 5: 22.14dBm

Max. RF output power:

FDD-LTE BAND 2: 20.48 dBm

FDD-LTE BAND 4: 20.98 dBm

FDD-LTE BAND 5: 24.42 dBm

FDD-LTE BAND 12: 24.33 dBm

FDD-LTE BAND 66: 20.87 dBm

Max.SAR:

0.48 W/Kg 1g Body Tissue

Max Simultaneous SAR

1.0 W/Kg 1g Body Tissue

WiFi (2.4G): DSSS, OFDM

Type of Modulation:

GMSK, BPSK

QPSK, 16QAM

Antenna installation:

FPC antenna

WiFi (2.4G): 2.84dBi

Antenna Gain:

WCDMA Band 2: 2.56dBi

WCDMA Band 5: -1.27dBi

FDD--LTE BAND 2: 2.56dBi

FDD--LTE BAND 4: 1.62dBi  
FDD-LTE BAND 5: -1.27dBi  
FDD--LTE BAND 12: -1.56dBi  
FDD-LTE BAND 66: 1.62 dBi  
DC 5V 1A

Ratings:

### 3. EQUIPMENT USED DURING TEST

#### 3.1 Equipment List

| Name of Equipment            | Manufacturer | Type/Model            | Serial Number | Calibration Date | Calibration Due |
|------------------------------|--------------|-----------------------|---------------|------------------|-----------------|
| Data acquisition electronics | SPEAG        | DAE4                  | 881           | 2025/10/15       | 2026/10/14      |
| Dosimetric E-field Probes    | SPEAG        | ES3DV3                | 3089          | 2025/8/15        | 2026/8/14       |
| SAR test software            | SPEAG        | DASY 52               | 52.10.3.1513  | /                | /               |
| Dipole                       | SPEAG        | D750V3                | 1088          | 2025/9/11        | 2028/9/10       |
| Dipole                       | SPEAG        | D835V2                | 4d125         | 2025/8/1         | 2028/7/31       |
| Dipole                       | SPEAG        | D1750V2               | 1057          | 2025/8/1         | 2028/7/31       |
| Dipole                       | SPEAG        | D1900V2               | 5d145         | 2025/8/4         | 2028/8/3        |
| Dipole                       | SPEAG        | D2450V2               | 801           | 2025/8/1         | 2028/7/31       |
| Communication test set       | R&S          | CMW500                | 102698        | 2025/5/22        | 2026/5/21       |
| Network analyzer             | R&S          | ZVB 8                 | 100348        | 2025/5/22        | 2026/5/21       |
| Dielectric Assessment Kit    | SPEAG        | DAK-3.5               | 3.0.6.14      | /                | /               |
| power meter                  | Agilent      | E4419B                | GB42421440    | 2025/5/22        | 2026/5/21       |
| MXA signal analyzer          | Agilent      | N5181A                | MY49060920    | 2025/5/22        | 2026/5/21       |
| RF Power Meter               | Agilent      | E9301A                | MY41495675    | 2025/5/23        | 2026/5/22       |
| Amplifier 300-4200MHz        | SHW          | SHWPA-00300420P3040-S | 22110401      | 2025/5/23        | 2026/5/22       |
| Thermometer and Hygrometer   | SMART SENSOR | AR867                 | /             | 2025/6/3         | 2026/6/2        |
| Phantom(S)                   | SPEAG        | SAM 1                 | TP-1119       | /                | /               |
| Phantom(S)                   | SPEAG        | SAM 2                 | TP-1410       | /                | /               |

### 3.2 Test Equipment Calibration

All the test equipments used are valid and calibrated by Schmid & PartnerEngineering and CCTL.

FCC Test Firm Registration Number: CN1276

IC Registered No.:25587

#### 4. SAR INTRODUCTION

##### 4.1 Introduction

This measurement report shows compliance of the EUT with ANSI/IEEE C95.1-2006 and FCC 47 CFR Part2 (2.1093). The test procedures, as described in IEEE 1528-2013 Standard for IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques(300MHz~6GHz) and Published RF Exposure KDB Procedures

##### 4.2 SAR Definition

- SAR : Specific Absorption Rate
- The SAR characterize the absorption of energy by a quantity of tissue
- This is related to a increase of the temperature of these tissues during a time period.

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

$$DAS = \frac{\sigma E^2}{\rho}$$

$$DAS = c_h \left. \frac{dT}{dt} \right|_{t=0}$$

##### SAR definition

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

##### ➤ SAR : Specific Absorption Rate

- $\sigma$  : Liquid conductivity

○  $\epsilon_r = \epsilon' - j\epsilon''$  (complex permittivity of liquid)

$$\sigma = \frac{\epsilon'' \omega}{\epsilon_0}$$

- $\rho$ : Liquid density

○  $\rho = 1000 \text{ g/L} = 1000 \text{ Kg/m}^3$

where:

$\sigma$  = conductivity of the tissue (S/m)  
 $\rho$  = mass density of the tissue (kg/m<sup>3</sup>)  
 $E$  = rms electric field strength (V/m)



## 5.2 DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe ES3DV3 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

## 5.3 Probe Specification

Construction Symmetrical design with triangular core  
Interleaved sensors

Built-in shielding against static charges

PEEK enclosure material (resistant to organic solvents, e.g., DGBE)

Calibration ISO/IEC 17025 calibration service available.

Frequency 4 MHz – 10 GHz

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

Directivity  $\pm 0.1$  dB in TSL (rotation around probe axis)

$\pm 0.3$  dB in TSL (rotation normal to probe axis)

Dynamic Range 10  $\mu$ W/g – >100 W/kg

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

Dimensions Overall length: 337 mm (tip: 20 mm)  
Tip diameter: 2.5 mm (body: 12 mm)  
Typical distance from probe tip to dipole centers: 1 mm

Application General dosimetry up to 10 GHz  
Dosimetry in strong gradient fields  
Compliance tests of Mobile Phones

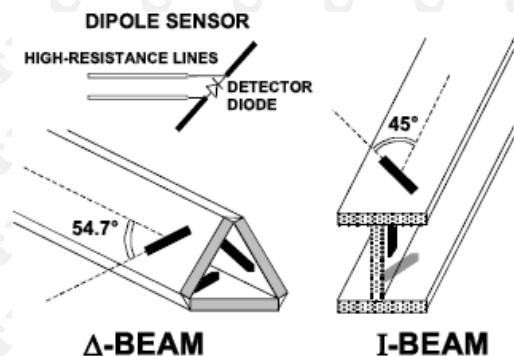
Compatibility DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI



## 5.4 Isotropic E-Field Probe

The isotropic E-Field probe has been fully calibrated and assessed for isotropicity, and boundary effect within a controlled environment. Depending on the frequency for which the probe is calibrated the method utilized for calibration will change.

The E-Field probe utilizes a triangular sensor arrangement as detailed in the diagram below:



## 5.5 Phantoms

The phantom used for all tests i.e. for both system checks and device testing, was the twin-headed "SAM Phantom", manufactured by SPEAG. The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region, where shell thickness increases to 6mm).

System checking was performed using the flat section, whilst Head SAR tests used the left and right head profile sections. Body SAR testing also used the flat section between the head profiles.



SAM Twin Phantom

## 5.6 Device Holder

The device was placed in the device holder (illustrated below) that is supplied by SPEAG as an integral part of the DASY system.

The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.



Device holder supplied by SPEAG

## 6. SAR TEST PROCEDURE

### 6.1 Scanning Procedure

The DASY5 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT's output power and should vary max.  $\pm 5\%$ .

The “surface check” measurement tests the optical surface detection system of the DASY5 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above  $\pm 0.1\text{mm}$ ). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe (It does not depend on the surface reflectivity or the probe angle to the surface within  $\pm 30^\circ$ .)

#### Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values before running a detailed measurement around the hot spot. Before starting the area scan a grid spacing of 15 mm x 15 mm is set. During the scan the distance of the probe to the phantom remains unchanged. After finishing area scan, the field maxima within a range of 2 dB will be ascertained.

#### Zoom Scan

Zoom Scans are used to estimate the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The default Zoom Scan is done by 7x7x5 points within a cube whose base is centered around the maxima found in the preceding area scan.

#### Spatial Peak Detection

The procedure for spatial peak SAR evaluation has been implemented and can determine values of masses of 1g and 10g, as well as for user-specific masses. The DASY5 system allows evaluations that combine measured data and robot positions, such as: • maximum search • extrapolation • boundary correction • peak search for averaged SAR. During a maximum search, global and local maxima searches are automatically performed in 2-D after each Area Scan measurement with at least 6 measurement points. It is based on the evaluation of the local SAR gradient calculated by the Quadratic Shepard's method. The algorithm will find the global maximum and all local maxima within -2 dB of the global maxima for all SAR distributions.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. Several measurements at different distances are necessary for the extrapolation.

Extrapolation routines require at least 10 measurement points in 3-D space. They are used in the Zoom Scan to obtain SAR values between the lowest measurement points and the inner phantom surface. The routine uses the modified Quadratic Shepard's method for extrapolation. For a grid using 7x7x5 measurement points with 5mm resolution amounting to 343 measurement points, the uncertainty of the extrapolation routines is less than 1% for 1g and 10g cubes.

A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube 7x7x5 scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 5mm steps.

## Data Storage and Evaluation

### Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DA4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [W/kg], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

### Data Evaluation

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

|                    |                          |                      |
|--------------------|--------------------------|----------------------|
| Probe parameters:  | Sensitivity:             | Normi, ai0, ai1, ai2 |
|                    | Conversion factor:       | ConvFi               |
|                    | Diode compression point: | Dcpi                 |
| Device parameters: | Frequency:               | f                    |
|                    | Crest factor:            | cf                   |
| Media parameters:  | Conductivity:            | σ                    |
|                    | Density:                 | ρ                    |

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

Vi: compensated signal of channel (i = x, y, z) Ui: input signal of channel (i = x, y, z)

cf: crest factor of exciting field (DASY parameter) dcp\_i: diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

$$E - \text{fieldprobes : } E_i = \sqrt{\frac{V_i}{Norm_i \cdot ConvF}}$$

$$H - \text{fieldprobes : } H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1}f + a_{i2}f^2}{f}$$

Vi: compensated signal of channel (i = x, y, z) Normi: sensor sensitivity of channel (i = x, y, z), [mV/(V/m)²] for E-field Probes ConvF: sensitivity enhancement in solution

aij: sensor sensitivity factors for H-field probes f: carrier frequency [GHz]

$E_i$ : electric field strength of channel  $i$  in V/m  $H_i$ : magnetic field strength of channel  $i$  in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$SAR = E_{tot}^2 \cdot \frac{\sigma}{\rho \cdot 1'000}$$

SAR: local specific absorption rate in W/kg  $E_{tot}$ :

$\sigma$ : conductivity in [mho/m] or [Siemens/m]  $\rho$ :

total field strength in V/m

equivalent tissue density in g/cm<sup>3</sup>

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid.

## 6.2 Extrapolation

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. Several measurements at different distances are necessary for the extrapolation.

They are used in the Cube Scan to obtain SAR values between the lowest measurement points and the inner phantom surface. The routine uses the fourth order least square polynomial method for extrapolation. For a grid using 5x5x7 measurement points with 5mm resolution amounting to 343 measurement points, the uncertainty of the extrapolation routines is less than 1% for 1 g and 10 g cubes.

## 6.3 Test Position – Body Configurations

### Body Worn Position

- (a) To position the device parallel to the phantom surface with either keypad up or down.
- (b) To adjust the device parallel to the flat phantom.
- (c) To adjust the distance between the device surface and the flat phantom to 0 cm or holster surface and the flat phantom to 0 cm.

## 7. EXPOSURE LIMIT

In order for users to be aware of the body-worn operating requirements for meeting RF exposure compliance, operating instructions and cautions statements are included in the user's manual.

### 7.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

### 7.2 Controlled Environment

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). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

**Table 8.1 Human Exposure Limits**

|                                                              | UNCONTROLLED ENVIRONMENT<br>General Population<br>(W/kg) or (mW/g) | CONTROLLED ENVIRONMENT<br>Professional Population<br>(W/kg) or (mW/g) |
|--------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------|
| SPATIAL PEAK SAR <sup>1</sup><br>Brain                       | 1.60                                                               | 8.00                                                                  |
| SPATIAL AVERAGE SAR <sup>2</sup><br>Whole Body               | 0.08                                                               | 0.40                                                                  |
| SPATIAL PEAK SAR <sup>3</sup><br>Hands, Feet, Ankles, Wrists | 4.00                                                               | 20.00                                                                 |

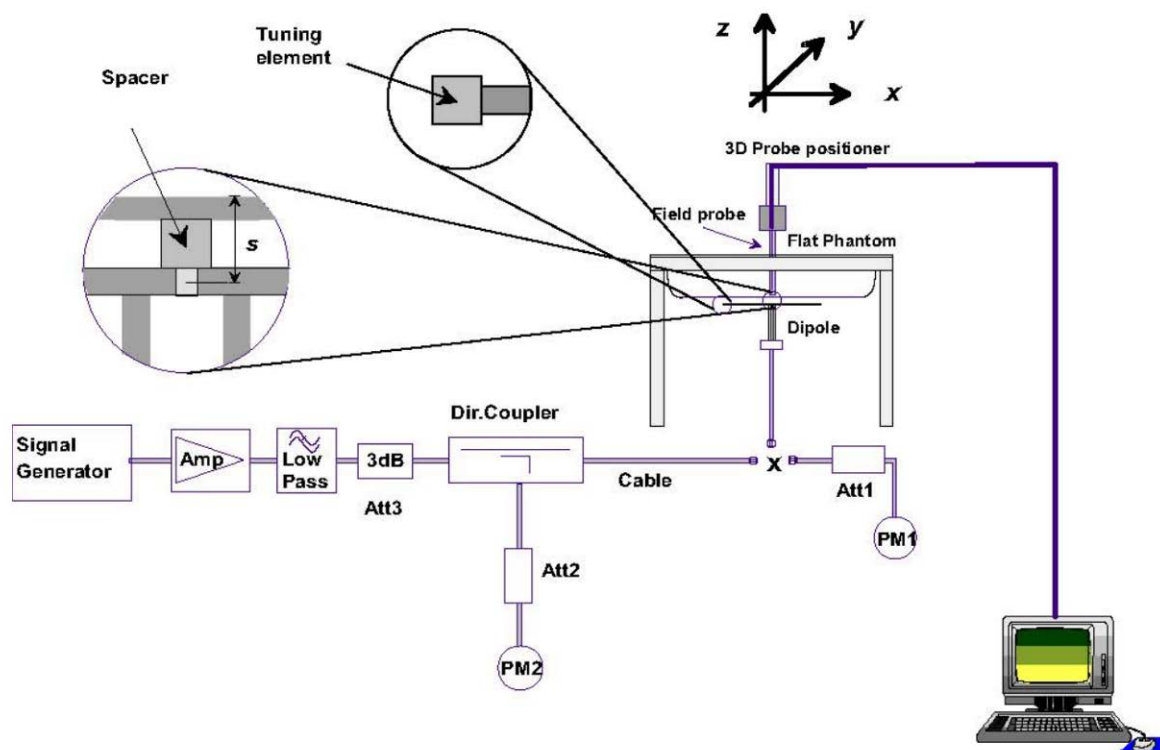
<sup>1</sup> The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

<sup>2</sup> The Spatial Average value of the SAR averaged over the whole body.

<sup>3</sup> 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.

## 8. SYSTEM AND LIQUID VALIDATION

### 8.1 System validation



The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:

1. Signal Generator
2. Amplifier
3. Directional Coupler
4. Power Meter
5. Calibrated Dipole

The output power on dipole port must be calibrated to 30 dBm (1000 mW) before dipole is connected.

## Numerical reference SAR values (W/kg) for reference dipole and flat phantom

| Frequency (MHz) | 1g SAR | 10g SAR | Local SAR at surface(above feed-point) | Local SAR at surface(y = 2 cm offset from feedpoint) |
|-----------------|--------|---------|----------------------------------------|------------------------------------------------------|
| 300             | 3.02   | 2.04    | 4.40                                   | 2.10                                                 |
| 450             | 4.92   | 3.28    | 7.20                                   | 3.20                                                 |
| 750             | 8.49   | 5.55    | 12.6                                   | 4.59                                                 |
| 835             | 9.56   | 6.22    | 14.1                                   | 4.90                                                 |
| 900             | 10.9   | 6.99    | 16.4                                   | 5.40                                                 |
| 1450            | 29.0   | 16.0    | 50.2                                   | 6.50                                                 |
| 1800            | 38.4   | 20.1    | 69.5                                   | 6.80                                                 |
| 1900            | 39.7   | 20.5    | 72.1                                   | 6.60                                                 |
| 2000            | 41.1   | 21.1    | 74.6                                   | 6.50                                                 |
| 2450            | 52.4   | 24.0    | 104                                    | 7.70                                                 |
| 2600            | 55.3   | 24.6    | 113                                    | 8.29                                                 |
| 3000            | 63.8   | 25.7    | 140                                    | 9.50                                                 |

Table 1: system validation (1g)

| Measurement Date | Frequency (MHz) | Liquid Type (head/body) | Target SAR1g (W/kg) | Measured SAR1g (W/kg) | Normalized SAR1g (W/kg) | Deviation (±10%) |
|------------------|-----------------|-------------------------|---------------------|-----------------------|-------------------------|------------------|
| 2026/1/16        | 750             | head                    | 8.48                | 2.14                  | 8.56                    | 0.94             |
| 2026/2/27        | 835             | head                    | 9.57                | 2.34                  | 9.36                    | -2.19            |
| 2026/1/23        | 835             | head                    | 9.57                | 2.55                  | 10.2                    | 6.58             |
| 2026/1/18        | 1750            | head                    | 36.5                | 9.54                  | 38.16                   | 4.55             |
| 2026/1/27        | 1750            | head                    | 36.5                | 8.51                  | 34.04                   | -6.74            |
| 2026/1/19        | 1900            | head                    | 39.8                | 10.02                 | 40.08                   | 0.70             |
| 2026/2/28        | 2450            | head                    | 53.2                | 12.56                 | 50.24                   | -5.56            |

Note: system check input power: 250mW, above 5GHz the input power is 100mW ..

## 8.2 liquid validation

The dielectric parameters were checked prior to assessment using the HP85070C dielectric probe kit. The dielectric parameters measured are reported in each correspondent section.

### KDB 865664 recommended Tissue Dielectric Parameters

The head and body tissue parameters given in this below table should be used to measure the SAR of transmitters operating in 100 MHz to 6 GHz frequency range. The tissue dielectric parameters of the tissue medium at the test frequency should be within the tolerance required in this document. The dielectric parameters should be linearly interpolated between the closest pair of target frequencies to determine the applicable dielectric parameters corresponding to the device test frequency.

The head tissue dielectric parameters recommended by IEEE Std 1528-2013 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in 1528 are derived from tissue dielectric parameters computed from the 4-Cole-Cole equations described above and extrapolated according to the head parameters specified in 1528.

| Target Frequency | Head/Body Tissue |                |
|------------------|------------------|----------------|
| MHz              | $\epsilon_r$     | $\sigma$ (S/m) |
| 150              | 52.3             | 0.76           |
| 300              | 45.3             | 0.87           |
| 450              | 43.5             | 0.87           |
| 835              | 41.5             | 0.90           |
| 900              | 41.5             | 0.97           |
| 915              | 41.5             | 0.98           |
| 1450             | 40.5             | 1.20           |
| 1610             | 40.3             | 1.29           |
| 1800-2000        | 40.0             | 1.40           |
| 2450             | 39.2             | 1.80           |
| 2600             | 39.0             | 1.96           |
| 3000             | 38.5             | 2.40           |
| 5800             | 35.3             | 5.27           |

### 8.3 Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness Power drifts in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

**Table 2: Recommended Dielectric Performance of Tissue**

| Recommended Dielectric Performance of Tissue |                 |       |       |      |      |      |       |      |      |      |      |      |
|----------------------------------------------|-----------------|-------|-------|------|------|------|-------|------|------|------|------|------|
| Ingredients<br>(% by weight )                | Frequency (MHz) |       |       |      |      |      |       |      |      |      |      |      |
|                                              | 750             |       | 835   |      | 1800 |      | 1900  |      | 2450 |      | 2600 |      |
| Tissue                                       | Head            | Body  | Head  | Body | Head | Body | Head  | Body | Head | Body | Head | Body |
| Water                                        | 40.52           | 51.83 | 41.45 | 52.4 | 55.2 | 70.2 | 54.9  | 40.4 | 62.7 | 73.2 | 54.8 | 68.1 |
| Salt (NaCl)                                  | 1.61            | 1.52  | 1.45  | 1.4  | 0.3  | 0.4  | 0.18  | 0.5  | 0.5  | 0.04 | 0.1  | 0.01 |
| Sugar                                        | 57.67           | 46.45 | 56.0  | 45.0 | 0.0  | 0.0  | 0.0   | 58.0 | 0.0  | 0.0  | 0.0  | 0.0  |
| HEC                                          | 0.1             | 0.1   | 1.0   | 1.0  | 0.0  | 0.0  | 0.0   | 1.0  | 0.0  | 0.0  | 0.0  | 0.0  |
| Bactericide                                  | 0.1             | 0.1   | 0.1   | 0.1  | 0.0  | 0.0  | 0.0   | 0.1  | 0.0  | 0.0  | 0.0  | 0.0  |
| Triton x-100                                 | 0.0             | 0.0   | 0.0   | 0.0  | 0.0  | 0.0  | 0.0   | 0.0  | 36.8 | 0.0  | 0.0  | 0.0  |
| DGBE                                         | 0.0             | 0.0   | 0.0   | 0.0  | 44.5 | 29.4 | 44.92 | 0.0  | 0.0  | 26.7 | 45.1 | 31.8 |
| Dielectric                                   | 40.93           | 54.32 | 42.54 | 56.1 | 40.0 | 53.3 | 39.9  | 54.0 | 39.8 | 52.5 | 39.0 | 52.5 |
| Conductivity                                 | 0.87            | 0.95  | 0.91  | 0.95 | 1.40 | 1.52 | 1.42  | 1.45 | 1.88 | 1.78 | 1.96 | 2.15 |

Table 3: Dielectric Performance of Head Tissue Simulating Liquid

| Temperature: 21°C , Relative humidity: 57% |               |                                  |                         |                       |
|--------------------------------------------|---------------|----------------------------------|-------------------------|-----------------------|
| Frequency(MHz)                             | Measured Date | Description                      | Dielectric Parameters   |                       |
|                                            |               |                                  | $\epsilon_r$            | $\sigma(s/m)$         |
| 750                                        | 2026/1/16     | Target Value<br>$\pm 5\%$ window | 41.9<br>39.805 — 43.995 | 0.89<br>0.846 — 0.935 |
|                                            |               | Measurement Value                | 40.256                  | 0.872                 |
| 835                                        | 2026/2/27     | Target Value<br>$\pm 5\%$ window | 41.5<br>39.425 — 43.575 | 0.90<br>0.855 — 0.945 |
|                                            |               | Measurement Value                | 41.514;                 | 0.934                 |
|                                            | 2026/1/23     | Target Value<br>$\pm 5\%$ window | 41.5<br>39.425 — 43.575 | 0.90<br>0.855 — 0.945 |
|                                            |               | Measurement Value                | 41.287                  | 0.862                 |
| 1750                                       | 2026/1/18     | Target Value<br>$\pm 5\%$ window | 40.1<br>38.095 — 42.105 | 1.37<br>1.302 — 1.439 |
|                                            |               | Measurement Value                | 39.726                  | 1.366                 |
|                                            | 2026/1/27     | Target Value<br>$\pm 5\%$ window | 40.1<br>38.095 — 42.105 | 1.37<br>1.302 — 1.439 |
|                                            |               | Measurement Value                | 39.237                  | 1.376                 |
| 1900                                       | 2026/1/19     | Target Value<br>$\pm 5\%$ window | 40.0<br>38.00 — 42.00   | 1.40<br>1.33 — 1.47   |
|                                            |               | Measurement Value                | 40.614                  | 1.402                 |
| 2450                                       | 2026/2/28     | Target Value<br>$\pm 5\%$ window | 39.2<br>37.24 — 41.16   | 1.80<br>1.71 — 1.89   |
|                                            |               | Measurement Value                | 38.619                  | 1.813                 |

## 9. SYSTEM VERIFICATION PLOTS

Date/Time: 2026/1/16 0:28:12

System Check-750

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN: 1088

Communication System: UID 0, CW (0); Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.872$  S/m;  $\epsilon_r = 40.256$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(6.35, 6.35, 6.35) @ 750 MHz; Calibrated: 2025/8/15

Modulation Compensation:

Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$

Electronics: DAE4 Sn881; Calibrated: 2025/10/15

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1410

DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

System Performance Check at 750MHz/d=10mm, Pin=250mW, dist=4.0mm (ES-Probe)/Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 2.26 W/kg

System Performance Check at 750MHz/d=10mm, Pin=250mW, dist=4.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

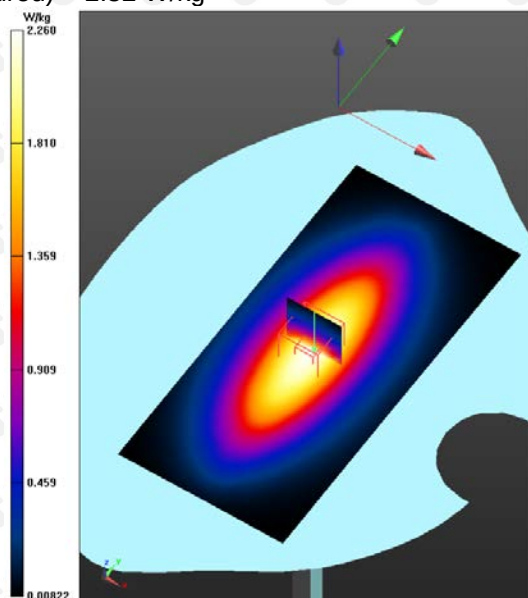
Reference Value = 50.74 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 3.24 W/kg

SAR(1 g) = 2.14 W/kg; SAR(10 g) = 1.41 W/kg

Ratio of SAR at M2 to SAR at M1 = 67.1%

Maximum value of SAR (measured) = 2.32 W/kg



Date/Time: 2026/2/27 0:11:18

# System Check-835

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN:4d125

Communication System: UID 0, CW (0); Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used (interpolated):  $f = 835$  MHz;  $\sigma = 0.934$  S/m;  $\epsilon_r = 41.514$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(6.09, 6.09, 6.09) @ 835 MHz; Calibrated: 2025/8/15

Modulation Compensation:

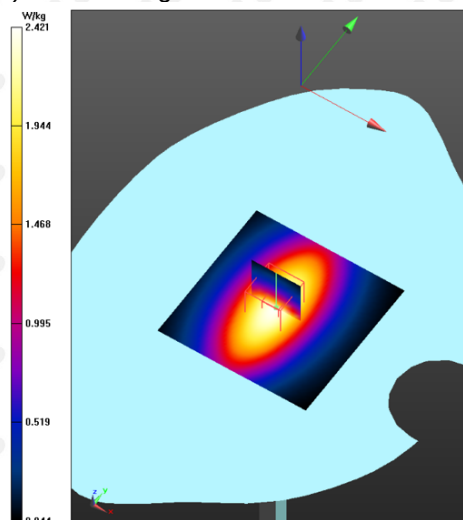
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0$ , 32.0

Electronics: DAE4 Sn881; Calibrated: 2025/10/15

Phantom: SAM 1; Type: QD000P40CD; Serial: TP:1119

DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

System Performance Check at 835MHz/d=10mm, Pin=250mW, dist=4.0mm (ES-Probe)/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 2.421 W/kg

System Performance Check at 835MHz/d=10mm, Pin=250mW, dist=4.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 51.53 V/m; Power Drift = -0.16 dB  
Peak SAR (extrapolated) = 3.25 W/kg  
SAR(1 g) = 2.34 W/kg; SAR(10 g) = 1.56 W/kg  
Ratio of SAR at M2 to SAR at M1 = 69.3%  
Maximum value of SAR (measured) = 2.45 W/kg


Date/Time: 2026/1/23 0:15:51

# System Check-835

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN: 4d125

Communication System: UID 0, CW (0); Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used (interpolated):  $f = 835$  MHz;  $\sigma = 0.862$  S/m;  $\epsilon_r = 41.287$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(6.09, 6.09, 6.09) @ 835 MHz; Calibrated: 2025/8/15

Modulation Compensation:

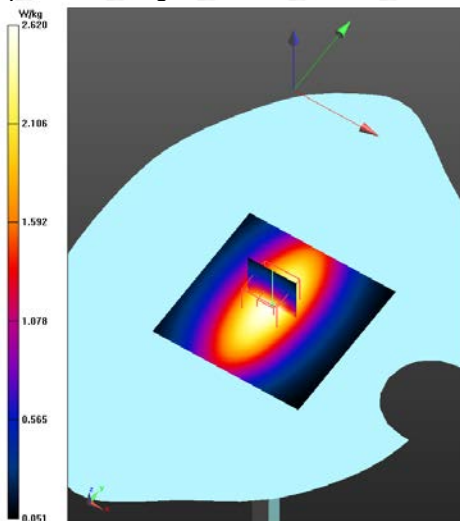
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0$ , 32.0

Electronics: DAE4 Sn881; Calibrated: 2025/10/15

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1410

DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

System Performance Check at 835MHz/d=10mm, Pin=250mW, dist=4.0mm (ES-Probe)/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 2.62 W/kg

System Performance Check at 835MHz/d=10mm, Pin=250mW, dist=4.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 56.61 V/m; Power Drift = -0.14 dB  
Peak SAR (extrapolated) = 3.79 W/kg  
SAR(1 g) = 2.55 W/kg; SAR(10 g) = 1.51 W/kg  
Smallest distance from peaks to all points 3 dB below = 13.5 mm  
Ratio of SAR at M2 to SAR at M1 = 71.9%  
Maximum value of SAR (measured) = 2.96 W/kg


Date/Time: 2026/1/18 0:15:03

## System Check-1750

DUT: Dipole 1750 MHz D1750V2; Type: D1750V2; Serial: D1750V2 - SN: 1057

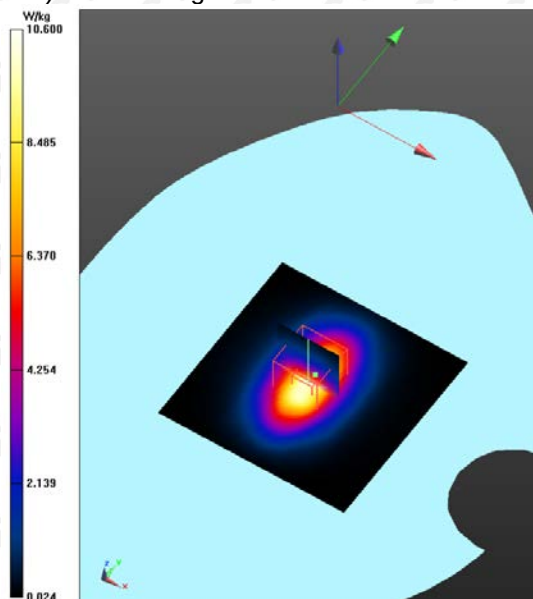
Communication System: UID 0, CW (0); Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.366$  S/m;  $\epsilon_r = 39.726$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(5.29, 5.29, 5.29) @ 1750 MHz; Calibrated: 2025/8/15  
Modulation Compensation:  
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$   
Electronics: DAE4 Sn881; Calibrated: 2025/10/15  
Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1410  
DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

System Performance Check at 1750MHz/d=5mm, Pin=250mW, dist=4.0mm (ES-Probe)/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 10.6 W/kg

System Performance Check at 1750MHz/d=5mm, Pin=250mW, dist=4.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 86.27 V/m; Power Drift = -0.04 dB  
Peak SAR (extrapolated) = 16.3 W/kg  
SAR(1 g) = 9.54 W/kg; SAR(10 g) = 4.91 W/kg  
Smallest distance from peaks to all points 3 dB below = 11.4 mm  
Ratio of SAR at M2 to SAR at M1 = 57.5%  
Maximum value of SAR (measured) = 10.2 W/kg



Date/Time: 2026/1/27 0:13:45

## System Check-1750

DUT: Dipole 1750 MHz D1750V2; Type: D1750V2; Serial: D1750V2 - SN: 1057

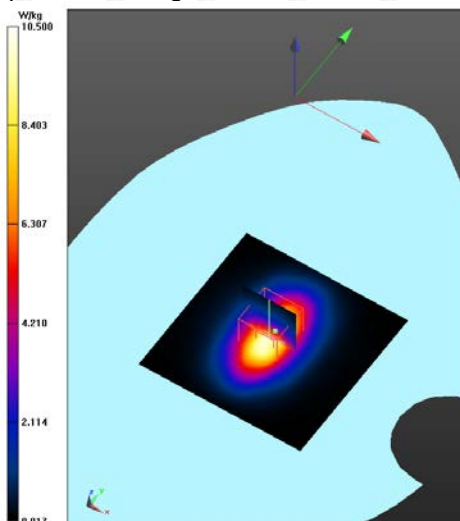
Communication System: UID 0, CW (0); Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.376$  S/m;  $\epsilon_r = 39.237$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(5.29, 5.29, 5.29) @ 1750 MHz; Calibrated: 2025/8/15  
Modulation Compensation:  
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$   
Electronics: DAE4 Sn881; Calibrated: 2025/10/15  
Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1410  
DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

System Performance Check at 1750MHz/d=5mm, Pin=250mW, dist=4.0mm (ES-Probe)/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 10.5 W/kg

System Performance Check at 1750MHz/d=5mm, Pin=250mW, dist=4.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 85.42 V/m; Power Drift = -0.11 dB  
Peak SAR (extrapolated) = 16.49 W/kg  
SAR(1 g) = 8.51 W/kg; SAR(10 g) = 4.84 W/kg  
Smallest distance from peaks to all points 3 dB below = 11.4 mm  
Ratio of SAR at M2 to SAR at M1 = 57.1%  
Maximum value of SAR (measured) = 11.24 W/kg



Date/Time: 2026/1/19 0:02:13

## System Check-1900

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN: 5d145

Communication System: UID 0, CW (0); Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.402$  S/m;  $\epsilon_r = 40.614$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(5, 5, 5) @ 1900 MHz; Calibrated: 2025/8/15

Modulation Compensation:

Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$ 

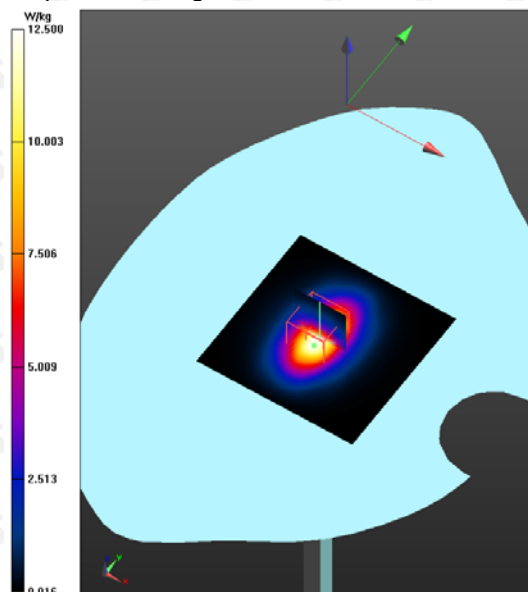
Electronics: DAE4 Sn881; Calibrated: 2025/10/15

Phantom: SAM 1; Type: QD000P40CD; Serial: TP:1119

DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

System Performance Check at 1900MHz/d=5mm, Pin=250mW, dist=4.0mm (ES-Probe)/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 12.5 W/kg

System Performance Check at 1900MHz/d=5mm, Pin=250mW, dist=4.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 93.00 V/m; Power Drift = -0.02 dB  
Peak SAR (extrapolated) = 19.9 W/kg  
SAR(1 g) = 10.02 W/kg; SAR(10 g) = 4.99 W/kg  
Smallest distance from peaks to all points 3 dB below = 10 mm  
Ratio of SAR at M2 to SAR at M1 = 55.5%  
Maximum value of SAR (measured) = 12.1 W/kg



Date/Time: 2026/2/28 0:05:18

## System Check-2450

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:801

Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.813$  S/m;  $\epsilon_r = 38.619$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(4.58, 4.58, 4.58) @ 2450 MHz; Calibrated: 2025/8/15

Modulation Compensation:

Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$ 

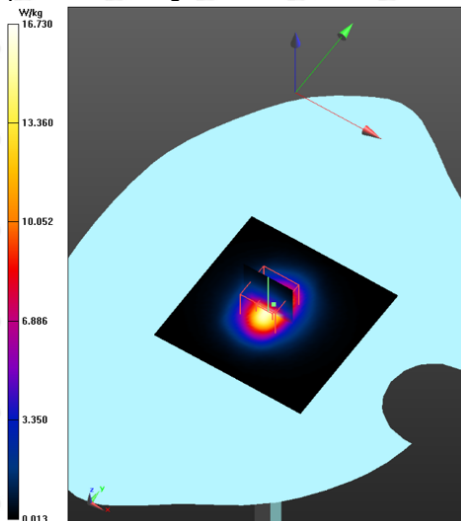
Electronics: DAE4 Sn881; Calibrated: 2025/10/15

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1410

DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

System Performance Check at 2450MHz/d=5mm, Pin=250mW, dist=4.0mm (ES-Probe)/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 16.73 W/kg

System Performance Check at 2450MHz/d=5mm, Pin=250mW, dist=4.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 92.45 V/m; Power Drift = -0.19 dB  
Peak SAR (extrapolated) = 29.4 W/kg  
SAR(1 g) = 12.56 W/kg; SAR(10 g) = 6.18 W/kg  
Smallest distance from peaks to all points 3 dB below = 13.61 mm  
Ratio of SAR at M2 to SAR at M1 = 48.4%  
Maximum value of SAR (measured) = 14.45 W/kg



## 10. TYPE A MEASUREMENT UNCERTAINTY

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience and specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in Table below :

| Uncertainty Distribution | Normal   | Rectangle      | Triangular     | U Shape        |
|--------------------------|----------|----------------|----------------|----------------|
| Multi-plying Factor(a)   | $1/k(b)$ | $1 / \sqrt{3}$ | $1 / \sqrt{6}$ | $1 / \sqrt{2}$ |

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b)  $k$  is the coverage factor

### Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type -sum- by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %.

The COMOSAR Uncertainty Budget is show in below table:

| <b>DASY5 Uncertainty</b><br>Measurement uncertainty for 300MHz to 3GHz averaged over 1 gram/ 10 gram |               |             |      |         |          |                |                 |            |
|------------------------------------------------------------------------------------------------------|---------------|-------------|------|---------|----------|----------------|-----------------|------------|
| Error Description                                                                                    | Uncert. value | Prob. Dist. | Div. | (ci) 1g | (ci) 10g | Std. Unc. (1g) | Std. Unc. (10g) | (vi) vef f |
| Measurement System                                                                                   |               |             |      |         |          |                |                 |            |
| Probe Calibration                                                                                    | ±6.0 %        | N           | 1    | 1       | 1        | ±6.0 %         | ±6.0 %          | ∞          |
| Axial Isotropy                                                                                       | ±4.7 %        | R           | √3   | 0.7     | 0.7      | ±1.9 %         | ±1.9 %          | ∞          |
| Hemispherical Isotropy                                                                               | ±9.6 %        | R           | √3   | 0.7     | 0.7      | ±3.9 %         | ±3.9 %          | ∞          |
| Boundary Effects                                                                                     | ±1.0 %        | R           | √3   | 1       | 1        | ±0.6 %         | ±0.6 %          | ∞          |
| Linearity                                                                                            | ±4.7 %        | R           | √3   | 1       | 1        | ±2.7 %         | ±2.7 %          | ∞          |
| System Detection Limits                                                                              | ±1.0 %        | R           | √3   | 1       | 1        | ±0.6 %         | ±0.6 %          | ∞          |
| Modulation Responsem                                                                                 | ±2.4 %        | R           | √3   | 1       | 1        | ±1.4 %         | ±1.4 %          | ∞          |
| Readout Electronics                                                                                  | ±0.3 %        | N           | 1    | 1       | 1        | ±0.3 %         | ±0.3 %          | ∞          |
| Response Time                                                                                        | ±0.8 %        | R           | √3   | 1       | 1        | ±0.5 %         | ±0.5 %          | ∞          |
| Integration Time                                                                                     | ±2.6 %        | R           | √3   | 1       | 1        | ±1.5 %         | ±1.5 %          | ∞          |
| RF Ambient Noise                                                                                     | ±3.0 %        | R           | √3   | 1       | 1        | ±1.7 %         | ±1.7 %          | ∞          |
| RF Ambient Reflections                                                                               | ±3.0 %        | R           | √3   | 1       | 1        | ±1.7 %         | ±1.7 %          | ∞          |
| Probe Positioner                                                                                     | ±0.4 %        | R           | √3   | 1       | 1        | ±0.2 %         | ±0.2 %          | ∞          |
| Probe Positioning                                                                                    | ±2.9 %        | R           | √3   | 1       | 1        | ±1.7 %         | ±1.7 %          | ∞          |
| Max. SAR Eval.                                                                                       | ±2.0 %        | R           | √3   | 1       | 1        | ±1.2 %         | ±1.2 %          | ∞          |
| Test Sample Related                                                                                  |               |             |      |         |          |                |                 |            |
| Device Positioning                                                                                   | ±2.9 %        | N           | 1    | 1       | 1        | ±2.9 %         | ±2.9 %          | 145        |
| Device Holder                                                                                        | ±3.6 %        | N           | 1    | 1       | 1        | ±3.6 %         | ±3.6 %          | 5          |
| Power Drift                                                                                          | ±5.0 %        | R           | √3   | 1       | 1        | ±2.9 %         | ±2.9 %          | ∞          |
| Power Scalingp                                                                                       | ±0 %          | R           | √3   | 1       | 1        | ±0.0 %         | ±0.0 %          | ∞          |
| Phantom and Setup                                                                                    |               |             |      |         |          |                |                 |            |
| Phantom Uncertainty                                                                                  | ±6.1 %        | R           | √3   | 1       | 1        | ±3.5 %         | ±3.5 %          | ∞          |
| SAR correction                                                                                       | ±1.9 %        | R           | √3   | 1       | 0.84     | ±1.1 %         | ±0.9 %          | ∞          |
| Liquid Conductivity (mea.)DAK                                                                        | ±2.5 %        | R           | √3   | 0.78    | 0.71     | ±1.1 %         | ±1.0 %          | ∞          |
| Liquid Permittivity (mea.) DAK                                                                       | ±2.5 %        | R           | √3   | 0.26    | 0.26     | ±0.3 %         | ±0.4 %          | ∞          |
| Temp. unc. - Conductivity BB                                                                         | ±3.4 %        | R           | √3   | 0.78    | 0.71     | ±1.5 %         | ±1.4 %          | ∞          |
| Temp. unc. - Permittivity BB                                                                         | ±0.4 %        | R           | √3   | 0.23    | 0.26     | ±0.1 %         | ±0.1 %          | ∞          |
| Combined Std. Uncertainty                                                                            |               |             |      |         |          | ±11.2 %        | ±11.1 %         | 361        |
| Expanded STD Uncertainty                                                                             |               |             |      |         |          | ±22.3 %        | ±22.2 %         |            |

## 11. OUTPUT POWER VERIFICATION

### 11.1 Test

Condition:

1. Conducted Measurement  
EUT was set for low, mid, high channel with modulated mode and highest RF output power. The base station simulator was connected to the antenna terminal.
2. Conducted Emissions Measurement Uncertainty  
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is  $\pm 1.5\text{dB}$ .
3. Environmental Conditions
 

|                      |          |
|----------------------|----------|
| Temperature          | 23°C     |
| Relative Humidity    | 53%      |
| Atmospheric Pressure | 1019mbar |
4. Tested By : Martin Feng

### 11.2 Test Procedures:

#### Mobile Phone radio output power measurement

1. The transmitter output port was connected to base station emulator.
2. Establish communication link between emulator and EUT and set EUT to operate at maximum output power all the time.
3. Select lowest, middle, and highest channels for each band and different possible test mode.
4. Measure the conducted peak burst power and conducted average burst power from EUT antenna port.

#### Other radio output power measurement:

The output power was measured using power meter at low, mid, and high channels.

#### Source-based Time Averaged Burst Power Calculation:

For TDMA, the following duty cycle factor was used to calculate the source-based time average power

| Number of Time slot | 1        | 2        | 3        | 4        |
|---------------------|----------|----------|----------|----------|
| Duty Cycle          | 1:8      | 1:4      | 1:2.66   | 1:2      |
| Duty cycle factor   | -9.03 dB | -6.02 dB | -4.26 dB | -3.01 dB |
| Crest Factor        | 8        | 4        | 2.66     | 2        |

**Remark:** *Time slot duty cycle factor =  $10 * \log(\text{Time Slot Duty Cycle})$*

*Source based time averaged power = Maximum burst averaged power (1 Uplink) – 9.03 dB*

*Source based time averaged power = Maximum burst averaged power (2 Uplink) – 6.02 dB*

*Source based time averaged power = Maximum burst averaged power (3 Uplink) – 4.26 dB*

*Source based time averaged power = Maximum burst averaged power (4 Uplink) – 3.01 dB*

### Test Result:

| Band            | WCDMA Band II |       |        |                        | WCDMA Band V |       |       |                        |
|-----------------|---------------|-------|--------|------------------------|--------------|-------|-------|------------------------|
| Channel         | 9262          | 9400  | 9538   | Tune up Power tolerant | 4132         | 4182  | 4233  | Tune up Power tolerant |
| Frequency (MHz) | 1852.4        | 1880  | 1907.6 | /                      | 826.4        | 836.4 | 846.6 | /                      |
| RMC 12.2k       | 20.15         | 20.50 | 20.14  | 20±1                   | 21.66        | 21.93 | 21.90 | 21±1                   |
| HSDPA Subtest-1 | 20.66         | 20.70 | 20.25  | 20±1                   | 21.73        | 22.02 | 21.93 | 22±1                   |
| HSDPA Subtest-2 | 20.65         | 20.70 | 20.33  | 20±1                   | 21.83        | 22.04 | 22.04 | 22±1                   |
| HSDPA Subtest-3 | 20.75         | 20.69 | 20.34  | 20±1                   | 21.82        | 22.14 | 22.03 | 22±1                   |
| HSDPA Subtest-4 | 20.74         | 20.69 | 20.34  | 20±1                   | 21.82        | 22.14 | 22.03 | 22±1                   |
| HSUPA Subtest-1 | 20.55         | 20.65 | 20.17  | 20±1                   | 21.72        | 22.01 | 21.91 | 22±1                   |
| HSUPA Subtest-2 | 20.65         | 20.64 | 20.28  | 20±1                   | 21.82        | 22.01 | 21.91 | 22±1                   |
| HSUPA Subtest-3 | 20.64         | 20.64 | 20.27  | 20±1                   | 21.81        | 22.00 | 21.91 | 21±1                   |
| HSUPA Subtest-4 | 20.64         | 20.73 | 20.28  | 20±1                   | 21.80        | 22.00 | 21.91 | 21±1                   |
| HSUPA Subtest-5 | 20.64         | 20.73 | 20.29  | 20±1                   | 21.80        | 22.00 | 21.91 | 21±1                   |

### LTE Power Reduction

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS36.101 specification.

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   | ≤ 1      |
| 16 QAM     | ≤ 5                                             | ≤ 4     | ≤ 8   | ≤ 12   | ≤ 16   | ≤ 18   | ≤ 1      |
| 16 QAM     | > 5                                             | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 2      |

The allowed A-MPR values specified below in Table 6.2.4-1 of 3GPP TS36.101 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signalling Value of "NS\_01".

**Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)**

| Network Signalling value | Requirements (sub-clause) | E-UTRA Band              | Channel bandwidth (MHz) | Resources Blocks ( $N_{RB}$ ) | A-MPR (dB)    |
|--------------------------|---------------------------|--------------------------|-------------------------|-------------------------------|---------------|
| NS_01                    | 6.6.2.1.1                 | Table 5.5-1              | 1.4, 3, 5, 10, 15, 20   | Table 5.6-1                   | NA            |
| NS_03                    | 6.6.2.2.1                 | 2, 4, 10, 23, 25, 35, 36 | 3                       | >5                            | ≤ 1           |
|                          |                           |                          | 5                       | >6                            | ≤ 1           |
|                          |                           |                          | 10                      | >6                            | ≤ 1           |
|                          |                           |                          | 15                      | >8                            | ≤ 1           |
|                          |                           |                          | 20                      | >10                           | ≤ 1           |
| NS_04                    | 6.6.2.2.2                 | 41                       | 5                       | >6                            | ≤ 1           |
|                          |                           |                          | 10, 15, 20              | See Table 6.2.4-4             |               |
| NS_05                    | 6.6.3.3.1                 | 1                        | 10, 15, 20              | ≥ 50                          | ≤ 1           |
| NS_06                    | 6.6.2.2.3                 | 12, 13, 14, 17           | 1.4, 3, 5, 10           | Table 5.6-1                   | n/a           |
| NS_07                    | 6.6.2.2.3<br>6.6.3.3.2    | 13                       | 10                      | Table 6.2.4-2                 | Table 6.2.4-2 |
| NS_08                    | 6.6.3.3.3                 | 19                       | 10, 15                  | > 44                          | ≤ 3           |
| NS_09                    | 6.6.3.3.4                 | 21                       | 10, 15                  | > 40                          | ≤ 1           |
|                          |                           |                          |                         | > 55                          | ≤ 2           |
| NS_10                    |                           | 20                       | 15, 20                  | Table 6.2.4-3                 | Table 6.2.4-3 |
| NS_11                    | 6.6.2.2.1                 | 23 <sup>1</sup>          | 1.4, 3, 5, 10           | Table 6.2.4-5                 | Table 6.2.4-5 |
| ..                       |                           |                          |                         |                               |               |
| NS_32                    | -                         | -                        | -                       | -                             | -             |

Note 1: Applies to the lower block of Band 23, i.e. a carrier placed in the 2000-2010 MHz region.

**LTE Band 2:**

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 1.4MHz  | 18607 | 1850.7    | QPSK  | 1                | 0            | 19.57               | 19.0±1               | /        |
|         |       |           |       | 1                | 2            | 19.81               | 19.0±1               | /        |
|         |       |           |       | 1                | 5            | 19.54               | 19.0±1               | /        |
|         |       |           |       | 3                | 0            | 19.64               | 19.0±1               | /        |
|         |       |           |       | 3                | 2            | 19.61               | 19.0±1               | /        |
|         |       |           |       | 6                | 0            | 18.61               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.78               | 18.5±1               | /        |
|         |       |           |       | 1                | 2            | 19.02               | 18.5±1               | /        |
|         |       |           |       | 1                | 5            | 18.76               | 18.5±1               | /        |
|         |       |           |       | 3                | 0            | 18.67               | 18.5±1               | /        |
|         |       |           |       | 3                | 2            | 18.72               | 18.5±1               | /        |
|         |       |           |       | 6                | 0            | 17.57               | 17.5±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 19.72               | 19.0±1               | /        |
|         |       |           |       | 1                | 2            | 19.97               | 19.0±1               | /        |
|         |       |           |       | 1                | 5            | 19.79               | 19.0±1               | /        |
|         |       |           |       | 3                | 0            | 19.82               | 19.0±1               | /        |
|         |       |           |       | 3                | 1            | 19.83               | 19.0±1               | /        |
|         |       |           |       | 6                | 0            | 18.73               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.68               | 18.0±1               | /        |
|         |       |           |       | 1                | 2            | 18.84               | 18.0±1               | /        |
|         |       |           |       | 1                | 5            | 18.71               | 18.0±1               | /        |
|         |       |           |       | 3                | 0            | 18.80               | 18.0±1               | /        |
|         |       |           |       | 3                | 2            | 18.83               | 18.0±1               | /        |
|         |       |           |       | 6                | 0            | 17.74               | 17.0±1               | 1.0      |
|         | 19193 | 1909.3    | QPSK  | 1                | 0            | 20.21               | 20.0±1               | /        |
|         |       |           |       | 1                | 2            | 20.31               | 20.0±1               | /        |
|         |       |           |       | 1                | 5            | 20.23               | 20.0±1               | /        |
|         |       |           |       | 3                | 0            | 20.27               | 20.0±1               | /        |
|         |       |           |       | 3                | 2            | 20.25               | 20.0±1               | /        |
|         |       |           |       | 6                | 0            | 19.20               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.19               | 19.0±1               | /        |
|         |       |           |       | 1                | 2            | 19.41               | 19.0±1               | /        |
|         |       |           |       | 1                | 5            | 19.25               | 19.0±1               | /        |
|         |       |           |       | 3                | 0            | 19.42               | 19.0±1               | /        |
|         |       |           |       | 3                | 2            | 19.44               | 19.0±1               | /        |
|         |       |           |       | 6                | 0            | 18.23               | 18.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 3MHz    | 18615 | 1851.5    | QPSK  | 1                | 0            | 19.64               | 19.0±1               | /        |
|         |       |           |       | 1                | 8            | 19.56               | 19.0±1               | /        |
|         |       |           |       | 1                | 14           | 19.58               | 19.0±1               | /        |
|         |       |           |       | 6                | 0            | 18.62               | 18.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 18.61               | 18.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 18.59               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.96               | 18.0±1               | /        |
|         |       |           |       | 1                | 8            | 18.90               | 18.0±1               | /        |
|         |       |           |       | 1                | 14           | 18.88               | 18.0±1               | /        |
|         |       |           |       | 6                | 0            | 17.62               | 17.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 17.64               | 17.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 17.57               | 17.0±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 19.72               | 19.0±1               | /        |
|         |       |           |       | 1                | 8            | 19.78               | 19.0±1               | /        |
|         |       |           |       | 1                | 14           | 19.87               | 19.0±1               | /        |
|         |       |           |       | 6                | 4            | 18.76               | 18.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 18.82               | 18.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 18.75               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.97               | 18.5±1               | /        |
|         |       |           |       | 1                | 8            | 18.98               | 18.5±1               | /        |
|         |       |           |       | 1                | 14           | 19.05               | 18.5±1               | /        |
|         |       |           |       | 6                | 0            | 17.79               | 17.5±1               | 1.0      |
|         |       |           |       | 6                | 9            | 17.81               | 17.5±1               | 1.0      |
|         |       |           |       | 15               | 0            | 17.68               | 17.5±1               | 1.0      |
|         | 19185 | 1908.5    | QPSK  | 1                | 0            | 20.22               | 20.0±1               | /        |
|         |       |           |       | 1                | 8            | 20.26               | 20.0±1               | /        |
|         |       |           |       | 1                | 14           | 20.28               | 20.0±1               | /        |
|         |       |           |       | 6                | 0            | 19.20               | 19.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 19.24               | 19.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 19.18               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.10               | 19.0±1               | /        |
|         |       |           |       | 1                | 8            | 19.13               | 19.0±1               | /        |
|         |       |           |       | 1                | 14           | 19.11               | 19.0±1               | /        |
|         |       |           |       | 6                | 0            | 18.21               | 18.0±1               | 1.0      |
|         |       |           |       | 6                | 9            | 18.24               | 18.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 18.19               | 18.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 18625 | 1852.5    | QPSK  | 1                | 0            | 19.52               | 19.0±1               | /        |
|         |       |           |       | 1                | 12           | 19.58               | 19.0±1               | /        |
|         |       |           |       | 1                | 24           | 19.47               | 19.0±1               | /        |
|         |       |           |       | 12               | 0            | 18.58               | 18.0±1               | 1.0      |
|         |       |           |       | 12               | 11           | 18.59               | 18.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 18.61               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.85               | 18.0±1               | /        |
|         |       |           |       | 1                | 12           | 18.92               | 18.0±1               | /        |
|         |       |           |       | 1                | 24           | 18.79               | 18.0±1               | /        |
|         |       |           |       | 12               | 0            | 17.54               | 17.0±1               | 1.0      |
|         |       |           |       | 12               | 11           | 17.54               | 17.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 17.63               | 17.0±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 19.61               | 19.0±1               | /        |
|         |       |           |       | 1                | 12           | 19.80               | 19.0±1               | /        |
|         |       |           |       | 1                | 24           | 19.78               | 19.0±1               | /        |
|         |       |           |       | 12               | 0            | 18.82               | 18.0±1               | 1.0      |
|         |       |           |       | 12               | 11           | 18.79               | 18.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 18.81               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.87               | 18.5±1               | /        |
|         |       |           |       | 1                | 12           | 19.05               | 18.5±1               | /        |
|         |       |           |       | 1                | 24           | 19.00               | 18.5±1               | /        |
|         |       |           |       | 12               | 0            | 17.75               | 17.5±1               | 1.0      |
|         |       |           |       | 12               | 11           | 17.77               | 17.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 17.80               | 17.5±1               | 1.0      |
|         | 19175 | 1907.5    | QPSK  | 1                | 0            | 20.03               | 20.0±1               | /        |
|         |       |           |       | 1                | 12           | 20.19               | 20.0±1               | /        |
|         |       |           |       | 1                | 24           | 20.10               | 20.0±1               | /        |
|         |       |           |       | 12               | 0            | 19.21               | 19.0±1               | 1.0      |
|         |       |           |       | 12               | 11           | 19.22               | 19.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 19.23               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.34               | 19.0±1               | /        |
|         |       |           |       | 1                | 12           | 19.47               | 19.0±1               | /        |
|         |       |           |       | 1                | 24           | 19.40               | 19.0±1               | /        |
|         |       |           |       | 12               | 0            | 18.24               | 18.0±1               | 1.0      |
|         |       |           |       | 12               | 11           | 18.24               | 18.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 18.25               | 18.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 18650 | 1855      | QPSK  | 1                | 0            | 19.59               | 19.0±1               | /        |
|         |       |           |       | 1                | 24           | 19.68               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 19.37               | 19.0±1               | /        |
|         |       |           |       | 25               | 0            | 18.61               | 18.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 18.57               | 18.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 18.55               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.93               | 18.0±1               | /        |
|         |       |           |       | 1                | 24           | 18.98               | 18.0±1               | /        |
|         |       |           |       | 1                | 49           | 18.69               | 18.0±1               | /        |
|         |       |           |       | 25               | 0            | 17.70               | 17.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 17.65               | 17.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 17.56               | 17.0±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 19.62               | 19.0±1               | /        |
|         |       |           |       | 1                | 24           | 19.99               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 19.97               | 19.0±1               | /        |
|         |       |           |       | 25               | 0            | 18.86               | 18.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 18.86               | 18.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 18.86               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.84               | 18.5±1               | /        |
|         |       |           |       | 1                | 24           | 19.12               | 18.5±1               | /        |
|         |       |           |       | 1                | 49           | 19.14               | 18.5±1               | /        |
|         |       |           |       | 25               | 0            | 17.90               | 17.5±1               | 1.0      |
|         |       |           |       | 25               | 24           | 17.93               | 17.5±1               | 1.0      |
|         |       |           |       | 50               | 0            | 17.89               | 17.5±1               | 1.0      |
|         | 19150 | 1905      | QPSK  | 1                | 0            | 20.18               | 20.0±1               | /        |
|         |       |           |       | 1                | 24           | 20.32               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.19               | 20.0±1               | /        |
|         |       |           |       | 25               | 0            | 19.24               | 19.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 19.24               | 19.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 19.22               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.49               | 19.0±1               | /        |
|         |       |           |       | 1                | 24           | 19.53               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 19.42               | 19.0±1               | /        |
|         |       |           |       | 25               | 0            | 18.25               | 18.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 18.25               | 18.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 18.24               | 18.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 15MHz   | 18675 | 1857.5    | QPSK  | 1                | 0            | 19.60               | 19.0±1               | /        |
|         |       |           |       | 1                | 37           | 19.52               | 19.0±1               | /        |
|         |       |           |       | 1                | 74           | 19.28               | 19.0±1               | /        |
|         |       |           |       | 36               | 0            | 18.66               | 18.0±1               | 1.0      |
|         |       |           |       | 36               | 35           | 18.55               | 18.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 18.56               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.89               | 18.0±1               | /        |
|         |       |           |       | 1                | 37           | 18.81               | 18.0±1               | /        |
|         |       |           |       | 1                | 74           | 18.60               | 18.0±1               | /        |
|         |       |           |       | 36               | 0            | 17.61               | 17.0±1               | 1.0      |
|         |       |           |       | 36               | 35           | 17.54               | 17.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 17.57               | 17.0±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 19.50               | 19.0±1               | /        |
|         |       |           |       | 1                | 37           | 19.85               | 19.0±1               | /        |
|         |       |           |       | 1                | 74           | 19.95               | 19.0±1               | /        |
|         |       |           |       | 36               | 0            | 18.80               | 18.0±1               | 1.0      |
|         |       |           |       | 36               | 35           | 18.97               | 18.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 18.87               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.72               | 18.5±1               | /        |
|         |       |           |       | 1                | 37           | 19.05               | 18.5±1               | /        |
|         |       |           |       | 1                | 74           | 19.15               | 18.5±1               | /        |
|         |       |           |       | 36               | 0            | 17.79               | 17.5±1               | 1.0      |
|         |       |           |       | 36               | 35           | 17.97               | 17.5±1               | 1.0      |
|         |       |           |       | 75               | 0            | 17.85               | 17.5±1               | 1.0      |
|         | 19125 | 1902.5    | QPSK  | 1                | 0            | 20.21               | 20.0±1               | /        |
|         |       |           |       | 1                | 37           | 20.28               | 20.0±1               | /        |
|         |       |           |       | 1                | 74           | 20.21               | 20.0±1               | /        |
|         |       |           |       | 36               | 0            | 19.24               | 19.0±1               | 1.0      |
|         |       |           |       | 36               | 35           | 19.25               | 19.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 19.23               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.25               | 19.0±1               | /        |
|         |       |           |       | 1                | 37           | 19.27               | 19.0±1               | /        |
|         |       |           |       | 1                | 74           | 19.24               | 19.0±1               | /        |
|         |       |           |       | 36               | 0            | 18.19               | 18.0±1               | 1.0      |
|         |       |           |       | 36               | 35           | 18.20               | 18.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 18.25               | 18.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 20MHz   | 18700 | 1860      | QPSK  | 1                | 0            | 19.50               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 19.59               | 19.0±1               | /        |
|         |       |           |       | 1                | 99           | 19.27               | 19.0±1               | /        |
|         |       |           |       | 50               | 0            | 18.45               | 18.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 18.48               | 18.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 18.50               | 18.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.71               | 18.0±1               | /        |
|         |       |           |       | 1                | 49           | 18.80               | 18.0±1               | /        |
|         |       |           |       | 1                | 99           | 18.53               | 18.0±1               | /        |
|         |       |           |       | 50               | 0            | 17.49               | 17.0±1               | 1.0      |
|         |       |           |       | 50               | 49           | 17.51               | 17.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 17.47               | 17.0±1               | 1.0      |
|         | 18900 | 1880      | QPSK  | 1                | 0            | 19.45               | 19.5±1               | /        |
|         |       |           |       | 1                | 49           | 20.05               | 19.5±1               | /        |
|         |       |           |       | 1                | 99           | 20.04               | 19.5±1               | /        |
|         |       |           |       | 50               | 0            | 18.83               | 18.5±1               | 1.0      |
|         |       |           |       | 50               | 24           | 18.88               | 18.5±1               | 1.0      |
|         |       |           |       | 100              | 0            | 18.88               | 18.5±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.32               | 18.0±1               | /        |
|         |       |           |       | 1                | 49           | 18.93               | 18.0±1               | /        |
|         |       |           |       | 1                | 99           | 18.89               | 18.0±1               | /        |
|         |       |           |       | 50               | 0            | 17.84               | 17.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 17.86               | 17.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 17.88               | 17.0±1               | 1.0      |
|         | 19100 | 1900      | QPSK  | 1                | 0            | 20.04               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.48               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.07               | 20.0±1               | /        |
|         |       |           |       | 50               | 0            | 19.16               | 19.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 19.18               | 19.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 19.19               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.86               | 18.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 19.16               | 19.0±1               | /        |
|         |       |           |       | 1                | 99           | 18.90               | 18.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 18.19               | 18.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 18.24               | 18.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 18.18               | 18.0±1               | 1.0      |

**LTE Band 4:**

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 1.4MHz  | 19957 | 1710.7    | QPSK  | 1                | 0            | 20.74               | 20.0±1               | /        |
|         |       |           |       | 1                | 2            | 20.85               | 20.0±1               | /        |
|         |       |           |       | 1                | 5            | 20.76               | 20.0±1               | /        |
|         |       |           |       | 3                | 0            | 20.83               | 20.0±1               | /        |
|         |       |           |       | 3                | 1            | 20.83               | 20.0±1               | /        |
|         |       |           |       | 6                | 0            | 19.76               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.65               | 19.0±1               | /        |
|         |       |           |       | 1                | 2            | 19.84               | 19.0±1               | /        |
|         |       |           |       | 1                | 5            | 19.70               | 19.0±1               | /        |
|         |       |           |       | 3                | 0            | 19.79               | 19.0±1               | /        |
|         |       |           |       | 3                | 2            | 19.82               | 19.0±1               | /        |
|         |       |           |       | 6                | 0            | 18.77               | 18.0±1               | 1.0      |
|         | 20175 | 1732.5    | QPSK  | 1                | 0            | 20.44               | 20.0±1               | /        |
|         |       |           |       | 1                | 2            | 20.63               | 20.0±1               | /        |
|         |       |           |       | 1                | 5            | 20.42               | 20.0±1               | /        |
|         |       |           |       | 3                | 0            | 20.41               | 20.0±1               | /        |
|         |       |           |       | 3                | 2            | 20.41               | 20.0±1               | /        |
|         |       |           |       | 6                | 0            | 19.42               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.37               | 19.0±1               | /        |
|         |       |           |       | 1                | 2            | 19.57               | 19.0±1               | /        |
|         |       |           |       | 1                | 5            | 19.33               | 19.0±1               | /        |
|         |       |           |       | 3                | 0            | 19.51               | 19.0±1               | /        |
|         |       |           |       | 3                | 2            | 19.53               | 19.0±1               | /        |
|         |       |           |       | 6                | 0            | 18.36               | 18.0±1               | 1.0      |
|         | 20393 | 1754.3    | QPSK  | 1                | 0            | 20.58               | 20.0±1               | /        |
|         |       |           |       | 1                | 2            | 20.84               | 20.0±1               | /        |
|         |       |           |       | 1                | 5            | 20.57               | 20.0±1               | /        |
|         |       |           |       | 3                | 0            | 20.66               | 20.0±1               | /        |
|         |       |           |       | 3                | 2            | 20.65               | 20.0±1               | /        |
|         |       |           |       | 6                | 0            | 19.63               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.77               | 19.0±1               | /        |
|         |       |           |       | 1                | 2            | 19.98               | 19.0±1               | /        |
|         |       |           |       | 1                | 5            | 19.80               | 19.0±1               | /        |
|         |       |           |       | 3                | 0            | 19.66               | 19.0±1               | /        |
|         |       |           |       | 3                | 2            | 19.72               | 19.0±1               | /        |
|         |       |           |       | 6                | 0            | 18.57               | 18.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 3MHz    | 19965 | 1711.5    | QPSK  | 1                | 0            | 20.73               | 20.0±1               | /        |
|         |       |           |       | 1                | 8            | 20.68               | 20.0±1               | /        |
|         |       |           |       | 1                | 14           | 20.74               | 20.0±1               | /        |
|         |       |           |       | 8                | 0            | 19.75               | 19.0±1               | 1.0      |
|         |       |           |       | 8                | 4            | 19.79               | 19.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 19.76               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.06               | 19.5±1               | /        |
|         |       |           |       | 1                | 8            | 19.99               | 19.5±1               | /        |
|         |       |           |       | 1                | 14           | 20.03               | 19.5±1               | /        |
|         |       |           |       | 8                | 0            | 18.78               | 18.5±1               | 1.0      |
|         |       |           |       | 8                | 9            | 18.83               | 18.5±1               | 1.0      |
|         |       |           |       | 15               | 0            | 18.76               | 18.5±1               | 1.0      |
|         | 20175 | 1732.5    | QPSK  | 1                | 0            | 20.41               | 20.0±1               | /        |
|         |       |           |       | 1                | 8            | 20.37               | 20.0±1               | /        |
|         |       |           |       | 1                | 14           | 20.35               | 20.0±1               | /        |
|         |       |           |       | 8                | 0            | 19.38               | 19.0±1               | 1.0      |
|         |       |           |       | 8                | 4            | 19.40               | 19.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 19.33               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.53               | 19.0±1               | /        |
|         |       |           |       | 1                | 8            | 19.50               | 19.0±1               | /        |
|         |       |           |       | 1                | 14           | 19.49               | 19.0±1               | /        |
|         |       |           |       | 8                | 0            | 18.34               | 18.0±1               | 1.0      |
|         |       |           |       | 8                | 4            | 18.35               | 18.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 18.19               | 18.0±1               | 1.0      |
|         | 20385 | 1753.5    | QPSK  | 1                | 0            | 20.61               | 20.0±1               | /        |
|         |       |           |       | 1                | 8            | 20.70               | 20.0±1               | /        |
|         |       |           |       | 1                | 14           | 20.66               | 20.0±1               | /        |
|         |       |           |       | 8                | 0            | 19.59               | 19.0±1               | 1.0      |
|         |       |           |       | 8                | 9            | 19.61               | 19.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 19.57               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.46               | 19.0±1               | /        |
|         |       |           |       | 1                | 8            | 19.56               | 19.0±1               | /        |
|         |       |           |       | 1                | 14           | 19.52               | 19.0±1               | /        |
|         |       |           |       | 8                | 0            | 18.62               | 18.0±1               | 1.0      |
|         |       |           |       | 8                | 9            | 18.62               | 18.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 18.60               | 18.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 19975 | 1712.5    | QPSK  | 1                | 0            | 20.57               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.75               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.69               | 20.0±1               | /        |
|         |       |           |       | 12               | 0            | 19.80               | 19.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 19.80               | 19.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 19.81               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.90               | 19.5±1               | /        |
|         |       |           |       | 1                | 49           | 20.07               | 19.5±1               | /        |
|         |       |           |       | 1                | 99           | 19.99               | 19.5±1               | /        |
|         |       |           |       | 12               | 0            | 18.84               | 18.5±1               | 1.0      |
|         |       |           |       | 12               | 24           | 18.84               | 18.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 18.86               | 18.5±1               | 1.0      |
|         | 20175 | 1732.5    | QPSK  | 1                | 0            | 20.35               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.37               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.22               | 20.0±1               | /        |
|         |       |           |       | 12               | 0            | 19.33               | 19.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 19.34               | 19.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 19.34               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.58               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 19.64               | 19.0±1               | /        |
|         |       |           |       | 1                | 99           | 19.51               | 19.0±1               | /        |
|         |       |           |       | 12               | 0            | 18.27               | 18.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 18.31               | 18.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 18.32               | 18.0±1               | 1.0      |
|         | 20375 | 1752.5    | QPSK  | 1                | 0            | 20.44               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.60               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.54               | 20.0±1               | /        |
|         |       |           |       | 12               | 0            | 19.58               | 19.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 19.60               | 19.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 19.61               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.67               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 19.80               | 19.0±1               | /        |
|         |       |           |       | 1                | 99           | 19.73               | 19.0±1               | /        |
|         |       |           |       | 12               | 0            | 18.50               | 18.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 18.56               | 18.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 18.58               | 18.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 20000 | 1715      | QPSK  | 1                | 0            | 20.68               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.88               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.69               | 20.0±1               | /        |
|         |       |           |       | 25               | 0            | 19.90               | 19.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 19.82               | 19.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 19.87               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 20.03               | 19.5±1               | /        |
|         |       |           |       | 1                | 49           | 20.26               | 19.5±1               | /        |
|         |       |           |       | 1                | 99           | 20.00               | 19.5±1               | /        |
|         |       |           |       | 25               | 0            | 18.99               | 18.5±1               | 1.0      |
|         |       |           |       | 25               | 49           | 18.91               | 18.5±1               | 1.0      |
|         |       |           |       | 50               | 0            | 18.88               | 18.5±1               | 1.0      |
|         | 20175 | 1732.5    | QPSK  | 1                | 0            | 20.56               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.57               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.37               | 20.0±1               | /        |
|         |       |           |       | 25               | 0            | 19.42               | 19.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 19.42               | 19.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 19.40               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.37               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 19.36               | 19.0±1               | /        |
|         |       |           |       | 1                | 99           | 19.20               | 19.0±1               | /        |
|         |       |           |       | 25               | 0            | 18.41               | 18.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 18.39               | 18.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 18.37               | 18.0±1               | 1.0      |
|         | 20350 | 1750      | QPSK  | 1                | 0            | 20.33               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.67               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.59               | 20.0±1               | /        |
|         |       |           |       | 25               | 0            | 19.58               | 19.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 19.61               | 19.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 19.61               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.69               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.07               | 19.0±1               | /        |
|         |       |           |       | 1                | 99           | 19.90               | 19.0±1               | /        |
|         |       |           |       | 25               | 0            | 18.71               | 18.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 18.69               | 18.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 18.64               | 18.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 15MHz   | 20025 | 1717.5    | QPSK  | 1                | 0            | 20.64               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.76               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.54               | 20.0±1               | /        |
|         |       |           |       | 36               | 0            | 19.82               | 19.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 19.77               | 19.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 19.79               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.98               | 19.5±1               | /        |
|         |       |           |       | 1                | 49           | 20.09               | 19.5±1               | /        |
|         |       |           |       | 1                | 99           | 19.76               | 19.5±1               | /        |
|         |       |           |       | 36               | 0            | 18.83               | 18.5±1               | 1.0      |
|         |       |           |       | 36               | 49           | 18.74               | 18.5±1               | 1.0      |
|         |       |           |       | 75               | 0            | 18.80               | 18.5±1               | 1.0      |
|         | 20175 | 1732.5    | QPSK  | 1                | 0            | 20.49               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.35               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.18               | 20.0±1               | /        |
|         |       |           |       | 36               | 0            | 19.47               | 19.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 19.32               | 19.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 19.39               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.64               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 19.51               | 19.0±1               | /        |
|         |       |           |       | 1                | 99           | 19.39               | 19.0±1               | /        |
|         |       |           |       | 36               | 0            | 18.38               | 18.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 18.30               | 18.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 18.32               | 18.0±1               | 1.0      |
|         | 20325 | 1747.5    | QPSK  | 1                | 0            | 20.29               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.46               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.58               | 20.0±1               | /        |
|         |       |           |       | 36               | 0            | 19.46               | 19.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 19.51               | 19.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 19.55               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.31               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 19.54               | 19.0±1               | /        |
|         |       |           |       | 1                | 99           | 19.61               | 19.0±1               | /        |
|         |       |           |       | 36               | 0            | 18.50               | 18.0±1               | 1.0      |
|         |       |           |       | 36               | 49           | 18.50               | 18.0±1               | 1.0      |
|         |       |           |       | 75               | 0            | 18.54               | 18.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 20MHz   | 20050 | 1720      | QPSK  | 1                | 0            | 20.58               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.98               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.37               | 20.0±1               | /        |
|         |       |           |       | 50               | 0            | 19.82               | 19.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 19.73               | 19.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 19.77               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.85               | 19.5±1               | /        |
|         |       |           |       | 1                | 49           | 20.04               | 19.5±1               | /        |
|         |       |           |       | 1                | 99           | 19.51               | 19.5±1               | /        |
|         |       |           |       | 50               | 0            | 18.82               | 18.5±1               | 1.0      |
|         |       |           |       | 50               | 24           | 18.76               | 18.5±1               | 1.0      |
|         |       |           |       | 100              | 0            | 18.78               | 18.5±1               | 1.0      |
|         | 20175 | 1732.5    | QPSK  | 1                | 0            | 20.60               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.57               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.22               | 20.0±1               | /        |
|         |       |           |       | 50               | 0            | 19.30               | 19.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 19.19               | 19.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 19.28               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 19.44               | 19.0±1               | /        |
|         |       |           |       | 1                | 49           | 19.39               | 19.0±1               | /        |
|         |       |           |       | 1                | 99           | 19.09               | 19.0±1               | /        |
|         |       |           |       | 50               | 0            | 18.25               | 18.0±1               | 1.0      |
|         |       |           |       | 50               | 49           | 18.18               | 18.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 18.26               | 18.0±1               | 1.0      |
|         | 20300 | 1745      | QPSK  | 1                | 0            | 20.20               | 20.0±1               | /        |
|         |       |           |       | 1                | 49           | 20.52               | 20.0±1               | /        |
|         |       |           |       | 1                | 99           | 20.53               | 20.0±1               | /        |
|         |       |           |       | 50               | 0            | 19.46               | 19.0±1               | 1.0      |
|         |       |           |       | 50               | 24           | 19.36               | 19.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 19.46               | 19.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 18.98               | 18.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 19.33               | 19.0±1               | /        |
|         |       |           |       | 1                | 99           | 19.36               | 19.0±1               | /        |
|         |       |           |       | 50               | 0            | 18.56               | 18.0±1               | 1.0      |
|         |       |           |       | 50               | 49           | 18.45               | 18.0±1               | 1.0      |
|         |       |           |       | 100              | 0            | 18.48               | 18.0±1               | 1.0      |

**LTE Band 5:**

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 1.4MHz  | 20407 | 824.7     | QPSK  | 1                | 0            | 24.15               | 24.0±1               | /        |
|         |       |           |       | 1                | 2            | 24.42               | 24.0±1               | /        |
|         |       |           |       | 1                | 5            | 24.16               | 24.0±1               | /        |
|         |       |           |       | 3                | 0            | 24.18               | 24.0±1               | /        |
|         |       |           |       | 3                | 2            | 24.15               | 24.0±1               | /        |
|         |       |           |       | 6                | 0            | 23.16               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.06               | 23.0±1               | /        |
|         |       |           |       | 1                | 2            | 23.21               | 23.0±1               | /        |
|         |       |           |       | 1                | 5            | 23.00               | 23.0±1               | /        |
|         |       |           |       | 3                | 0            | 23.13               | 23.0±1               | /        |
|         |       |           |       | 3                | 2            | 23.10               | 23.0±1               | /        |
|         |       |           |       | 6                | 0            | 22.11               | 22.0±1               | 1.0      |
|         | 20525 | 836.5     | QPSK  | 1                | 0            | 24.22               | 24.0±1               | /        |
|         |       |           |       | 1                | 2            | 24.40               | 24.0±1               | /        |
|         |       |           |       | 1                | 5            | 24.20               | 24.0±1               | /        |
|         |       |           |       | 3                | 0            | 24.06               | 24.0±1               | /        |
|         |       |           |       | 3                | 2            | 24.08               | 24.0±1               | /        |
|         |       |           |       | 6                | 0            | 23.23               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.00               | 23.0±1               | /        |
|         |       |           |       | 1                | 2            | 23.22               | 23.0±1               | /        |
|         |       |           |       | 1                | 5            | 23.00               | 23.0±1               | /        |
|         |       |           |       | 3                | 0            | 23.09               | 23.0±1               | /        |
|         |       |           |       | 3                | 2            | 23.16               | 23.0±1               | /        |
|         |       |           |       | 6                | 0            | 22.11               | 22.0±1               | 1.0      |
|         | 20643 | 848.3     | QPSK  | 1                | 0            | 23.96               | 23.0±1               | 1.0      |
|         |       |           |       | 1                | 2            | 24.17               | 24.0±1               | /        |
|         |       |           |       | 1                | 5            | 24.01               | 23.0±1               | 1.0      |
|         |       |           |       | 3                | 0            | 23.88               | 23.0±1               | 1.0      |
|         |       |           |       | 3                | 2            | 23.86               | 23.0±1               | 1.0      |
|         |       |           |       | 6                | 0            | 23.15               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.99               | 22.5±1               | /        |
|         |       |           |       | 1                | 2            | 23.18               | 22.5±1               | /        |
|         |       |           |       | 1                | 5            | 23.00               | 22.5±1               | /        |
|         |       |           |       | 3                | 0            | 22.77               | 22.5±1               | /        |
|         |       |           |       | 3                | 2            | 22.76               | 22.5±1               | /        |
|         |       |           |       | 6                | 0            | 21.96               | 21.5±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 3MHz    | 20415 | 825.5     | QPSK  | 1                | 0            | 24.13               | 24.0±1               | /        |
|         |       |           |       | 1                | 8            | 24.06               | 24.0±1               | /        |
|         |       |           |       | 1                | 14           | 24.07               | 24.0±1               | /        |
|         |       |           |       | 8                | 0            | 23.16               | 23.0±1               | 1.0      |
|         |       |           |       | 8                | 9            | 23.15               | 23.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 23.14               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.43               | 23.0±1               | /        |
|         |       |           |       | 1                | 8            | 23.34               | 23.0±1               | /        |
|         |       |           |       | 1                | 14           | 23.29               | 23.0±1               | /        |
|         |       |           |       | 8                | 0            | 22.19               | 22.0±1               | 1.0      |
|         |       |           |       | 8                | 9            | 22.14               | 22.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 22.11               | 22.0±1               | 1.0      |
|         | 20525 | 836.5     | QPSK  | 1                | 0            | 24.20               | 24.0±1               | /        |
|         |       |           |       | 1                | 8            | 24.15               | 24.0±1               | /        |
|         |       |           |       | 1                | 14           | 24.12               | 24.0±1               | /        |
|         |       |           |       | 8                | 0            | 23.20               | 23.0±1               | 1.0      |
|         |       |           |       | 8                | 9            | 23.18               | 23.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 23.08               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.24               | 22.5±1               | /        |
|         |       |           |       | 1                | 8            | 23.24               | 22.5±1               | /        |
|         |       |           |       | 1                | 14           | 23.20               | 22.5±1               | /        |
|         |       |           |       | 8                | 0            | 22.06               | 21.5±1               | 1.0      |
|         |       |           |       | 8                | 9            | 22.07               | 21.5±1               | 1.0      |
|         |       |           |       | 15               | 0            | 21.93               | 21.5±1               | 1.0      |
|         | 20635 | 847.5     | QPSK  | 1                | 0            | 24.08               | 23.5±1               | /        |
|         |       |           |       | 1                | 8            | 24.19               | 23.5±1               | /        |
|         |       |           |       | 1                | 14           | 24.23               | 23.5±1               | /        |
|         |       |           |       | 8                | 0            | 23.03               | 22.5±1               | 1.0      |
|         |       |           |       | 8                | 9            | 23.06               | 22.5±1               | 1.0      |
|         |       |           |       | 15               | 0            | 22.96               | 22.5±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.87               | 22.0±1               | /        |
|         |       |           |       | 1                | 8            | 22.82               | 22.0±1               | /        |
|         |       |           |       | 1                | 14           | 22.85               | 22.0±1               | /        |
|         |       |           |       | 8                | 0            | 21.98               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 9            | 21.96               | 21.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 21.93               | 21.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 20425 | 826.5     | QPSK  | 1                | 0            | 24.02               | 24.0±1               | /        |
|         |       |           |       | 1                | 49           | 24.15               | 24.0±1               | /        |
|         |       |           |       | 1                | 99           | 24.05               | 24.0±1               | /        |
|         |       |           |       | 12               | 0            | 23.19               | 23.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 23.10               | 23.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 23.15               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.34               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.39               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.23               | 23.0±1               | /        |
|         |       |           |       | 12               | 0            | 22.12               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 22.07               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 22.14               | 22.0±1               | 1.0      |
|         | 20525 | 836.5     | QPSK  | 1                | 0            | 24.15               | 24.0±1               | /        |
|         |       |           |       | 1                | 49           | 24.18               | 24.0±1               | /        |
|         |       |           |       | 1                | 99           | 24.05               | 24.0±1               | /        |
|         |       |           |       | 12               | 0            | 23.11               | 23.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 23.07               | 23.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 23.06               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.11               | 22.5±1               | /        |
|         |       |           |       | 1                | 49           | 23.24               | 22.5±1               | /        |
|         |       |           |       | 1                | 99           | 23.15               | 22.5±1               | /        |
|         |       |           |       | 12               | 0            | 21.97               | 21.5±1               | 1.0      |
|         |       |           |       | 12               | 49           | 21.95               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 21.98               | 21.5±1               | 1.0      |
|         | 20625 | 846.5     | QPSK  | 1                | 0            | 23.86               | 23.5±1               | /        |
|         |       |           |       | 1                | 49           | 24.00               | 23.5±1               | /        |
|         |       |           |       | 1                | 99           | 23.96               | 23.5±1               | /        |
|         |       |           |       | 12               | 0            | 23.05               | 22.5±1               | 1.0      |
|         |       |           |       | 12               | 49           | 22.94               | 22.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 22.99               | 22.5±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.23               | 22.5±1               | /        |
|         |       |           |       | 1                | 49           | 23.16               | 22.5±1               | /        |
|         |       |           |       | 1                | 99           | 23.02               | 22.5±1               | /        |
|         |       |           |       | 12               | 0            | 22.07               | 21.5±1               | 1.0      |
|         |       |           |       | 12               | 49           | 21.93               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 0            | 22.01               | 21.5±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 20450 | 829       | QPSK  | 1                | 0            | 24.19               | 24.0±1               | /        |
|         |       |           |       | 1                | 49           | 24.34               | 24.0±1               | /        |
|         |       |           |       | 1                | 99           | 24.27               | 24.0±1               | /        |
|         |       |           |       | 25               | 0            | 23.20               | 23.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 23.14               | 23.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 23.14               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.04               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.09               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.97               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 22.16               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 22.06               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 22.12               | 22.0±1               | 1.0      |
|         | 20525 | 836.5     | QPSK  | 1                | 0            | 24.16               | 24.0±1               | /        |
|         |       |           |       | 1                | 49           | 24.25               | 24.0±1               | /        |
|         |       |           |       | 1                | 99           | 24.06               | 24.0±1               | /        |
|         |       |           |       | 25               | 0            | 23.13               | 23.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 23.08               | 23.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 23.05               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.20               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.36               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.32               | 23.0±1               | /        |
|         |       |           |       | 25               | 0            | 22.09               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 22.15               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 22.01               | 22.0±1               | 1.0      |
|         | 20600 | 844       | QPSK  | 1                | 0            | 24.14               | 24.0±1               | /        |
|         |       |           |       | 1                | 49           | 24.14               | 24.0±1               | /        |
|         |       |           |       | 1                | 99           | 24.06               | 24.0±1               | /        |
|         |       |           |       | 25               | 0            | 23.23               | 23.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 23.03               | 23.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 23.14               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.29               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.33               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.04               | 23.0±1               | /        |
|         |       |           |       | 25               | 0            | 22.28               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 49           | 22.06               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 22.12               | 22.0±1               | 1.0      |

**LTE Band 12:**

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 1.4MHz  | 23017 | 699.7     | QPSK  | 1                | 0            | 23.60               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.87               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.68               | 23.0±1               | /        |
|         |       |           |       | 3                | 0            | 23.69               | 23.0±1               | /        |
|         |       |           |       | 3                | 24           | 23.73               | 23.0±1               | /        |
|         |       |           |       | 6                | 0            | 22.62               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.65               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.95               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.73               | 22.0±1               | /        |
|         |       |           |       | 3                | 0            | 22.84               | 22.0±1               | /        |
|         |       |           |       | 3                | 49           | 22.93               | 22.0±1               | /        |
|         |       |           |       | 6                | 0            | 21.70               | 21.0±1               | 1.0      |
|         | 23095 | 707.5     | QPSK  | 1                | 0            | 23.82               | 23.5±1               | /        |
|         |       |           |       | 1                | 49           | 24.04               | 23.5±1               | /        |
|         |       |           |       | 1                | 99           | 23.79               | 23.5±1               | /        |
|         |       |           |       | 3                | 0            | 23.97               | 23.5±1               | /        |
|         |       |           |       | 3                | 49           | 23.97               | 23.5±1               | /        |
|         |       |           |       | 6                | 0            | 22.84               | 22.5±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.05               | 22.5±1               | /        |
|         |       |           |       | 1                | 49           | 23.37               | 22.5±1               | /        |
|         |       |           |       | 1                | 99           | 23.15               | 22.5±1               | /        |
|         |       |           |       | 3                | 0            | 22.98               | 22.5±1               | /        |
|         |       |           |       | 3                | 49           | 23.08               | 22.5±1               | /        |
|         |       |           |       | 6                | 0            | 21.93               | 21.5±1               | 1.0      |
|         | 23173 | 715.3     | QPSK  | 1                | 0            | 24.16               | 23.5±1               | /        |
|         |       |           |       | 1                | 49           | 24.13               | 23.5±1               | /        |
|         |       |           |       | 1                | 99           | 23.93               | 23.5±1               | /        |
|         |       |           |       | 3                | 0            | 24.09               | 23.5±1               | /        |
|         |       |           |       | 3                | 49           | 24.10               | 23.5±1               | /        |
|         |       |           |       | 6                | 0            | 23.19               | 22.5±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.92               | 22.5±1               | /        |
|         |       |           |       | 1                | 49           | 23.10               | 22.5±1               | /        |
|         |       |           |       | 1                | 99           | 22.96               | 22.5±1               | /        |
|         |       |           |       | 3                | 0            | 22.97               | 22.5±1               | /        |
|         |       |           |       | 3                | 49           | 23.00               | 22.5±1               | /        |
|         |       |           |       | 6                | 0            | 22.11               | 21.5±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 3MHz    | 23025 | 700.5     | QPSK  | 1                | 0            | 23.61               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.63               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.69               | 23.0±1               | /        |
|         |       |           |       | 8                | 0            | 22.63               | 22.0±1               | 1.0      |
|         |       |           |       | 8                | 24           | 22.74               | 22.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 22.71               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.99               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.96               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.94               | 22.0±1               | /        |
|         |       |           |       | 8                | 0            | 21.67               | 21.0±1               | 1.0      |
|         |       |           |       | 8                | 49           | 21.74               | 21.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 21.71               | 21.0±1               | 1.0      |
|         | 23095 | 707.5     | QPSK  | 1                | 0            | 23.87               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.87               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.82               | 23.0±1               | /        |
|         |       |           |       | 8                | 0            | 22.90               | 22.0±1               | 1.0      |
|         |       |           |       | 8                | 49           | 22.90               | 22.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 22.94               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.12               | 22.5±1               | /        |
|         |       |           |       | 1                | 49           | 23.13               | 22.5±1               | /        |
|         |       |           |       | 1                | 99           | 23.19               | 22.5±1               | /        |
|         |       |           |       | 8                | 0            | 21.94               | 21.5±1               | 1.0      |
|         |       |           |       | 8                | 49           | 22.05               | 21.5±1               | 1.0      |
|         |       |           |       | 15               | 0            | 21.90               | 21.5±1               | 1.0      |
|         | 23165 | 714.5     | QPSK  | 1                | 0            | 24.04               | 24.0±1               | /        |
|         |       |           |       | 1                | 49           | 24.23               | 24.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.91               | 23.0±1               | 1.0      |
|         |       |           |       | 8                | 0            | 23.13               | 23.0±1               | 1.0      |
|         |       |           |       | 8                | 49           | 23.11               | 23.0±1               | 1.0      |
|         |       |           |       | 15               | 0            | 23.02               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.90               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.95               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.99               | 22.0±1               | /        |
|         |       |           |       | 8                | 0            | 22.08               | 22.0±1               | /        |
|         |       |           |       | 8                | 49           | 22.04               | 22.0±1               | /        |
|         |       |           |       | 15               | 0            | 21.99               | 21.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 23035 | 701.5     | QPSK  | 1                | 0            | 23.58               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.71               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.70               | 23.0±1               | /        |
|         |       |           |       | 12               | 0            | 22.63               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 24           | 22.76               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 22.70               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.96               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 22.99               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.94               | 22.0±1               | /        |
|         |       |           |       | 12               | 0            | 21.58               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 21.75               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 21.75               | 21.0±1               | 1.0      |
|         | 23095 | 707.5     | QPSK  | 1                | 0            | 23.77               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.83               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.74               | 23.0±1               | /        |
|         |       |           |       | 12               | 0            | 23.04               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 23.06               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 23.08               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.95               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.19               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.24               | 22.0±1               | /        |
|         |       |           |       | 12               | 0            | 22.03               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 22.10               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 22.12               | 21.0±1               | 1.0      |
|         | 23155 | 713.5     | QPSK  | 1                | 0            | 23.67               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 24.02               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.75               | 23.0±1               | /        |
|         |       |           |       | 12               | 0            | 22.90               | 22.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 22.89               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 22.98               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 23.28               | 22.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.26               | 22.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.20               | 22.0±1               | /        |
|         |       |           |       | 12               | 0            | 22.00               | 21.0±1               | 1.0      |
|         |       |           |       | 12               | 49           | 21.94               | 21.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 22.02               | 21.0±1               | 1.0      |

| BW(MHz) | Ch    | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|-------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 23060 | 704.0     | QPSK  | 1                | 0            | 23.58               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.86               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.78               | 23.0±1               | /        |
|         |       |           |       | 25               | 0            | 22.63               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 22.68               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 22.65               | 22.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.96               | 22.5±1               | /        |
|         |       |           |       | 1                | 49           | 23.08               | 22.5±1               | /        |
|         |       |           |       | 1                | 99           | 23.34               | 22.5±1               | /        |
|         |       |           |       | 25               | 0            | 21.68               | 21.5±1               | 1.0      |
|         |       |           |       | 25               | 24           | 21.76               | 21.5±1               | 1.0      |
|         |       |           |       | 50               | 0            | 21.67               | 21.5±1               | 1.0      |
|         | 23095 | 707.5     | QPSK  | 1                | 0            | 23.71               | 23.0±1               | /        |
|         |       |           |       | 1                | 49           | 23.97               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.84               | 23.0±1               | /        |
|         |       |           |       | 25               | 0            | 23.14               | 23.0±1               | /        |
|         |       |           |       | 25               | 24           | 23.19               | 23.0±1               | /        |
|         |       |           |       | 50               | 0            | 23.19               | 23.0±1               | /        |
|         |       |           | 16QAM | 1                | 0            | 22.83               | 22.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 23.30               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 23.21               | 23.0±1               | /        |
|         |       |           |       | 25               | 0            | 22.16               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 22.35               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 22.20               | 22.0±1               | 1.0      |
|         | 23130 | 711.0     | QPSK  | 1                | 0            | 23.85               | 23.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 24.01               | 24.0±1               | /        |
|         |       |           |       | 1                | 99           | 24.33               | 24.0±1               | /        |
|         |       |           |       | 25               | 0            | 23.05               | 23.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 23.19               | 23.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 23.20               | 23.0±1               | 1.0      |
|         |       |           | 16QAM | 1                | 0            | 22.78               | 22.0±1               | 1.0      |
|         |       |           |       | 1                | 49           | 23.14               | 23.0±1               | /        |
|         |       |           |       | 1                | 99           | 22.96               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 0            | 22.20               | 22.0±1               | 1.0      |
|         |       |           |       | 25               | 24           | 22.28               | 22.0±1               | 1.0      |
|         |       |           |       | 50               | 0            | 22.27               | 22.0±1               | 1.0      |

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| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 1.4MHz  | 131979 | 1710.7    | QPSK  | 1                | 0            | 20.63               | 20.0±1               | /        |
|         |        |           |       | 1                | 2            | 20.87               | 20.0±1               | /        |
|         |        |           |       | 1                | 5            | 20.68               | 20.0±1               | /        |
|         |        |           |       | 3                | 0            | 20.75               | 20.0±1               | /        |
|         |        |           |       | 3                | 2            | 20.74               | 20.0±1               | /        |
|         |        |           |       | 6                | 0            | 19.62               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.56               | 19.0±1               | /        |
|         |        |           |       | 1                | 2            | 19.72               | 19.0±1               | /        |
|         |        |           |       | 1                | 5            | 19.53               | 19.0±1               | /        |
|         |        |           |       | 3                | 0            | 19.69               | 19.0±1               | /        |
|         |        |           |       | 3                | 2            | 19.69               | 19.0±1               | /        |
|         |        |           |       | 6                | 0            | 18.63               | 18.0±1               | 1.0      |
|         | 132322 | 1745      | QPSK  | 1                | 0            | 20.27               | 20.0±1               | /        |
|         |        |           |       | 1                | 2            | 20.53               | 20.0±1               | /        |
|         |        |           |       | 1                | 5            | 20.30               | 20.0±1               | /        |
|         |        |           |       | 3                | 0            | 20.28               | 20.0±1               | /        |
|         |        |           |       | 3                | 1            | 20.35               | 20.0±1               | /        |
|         |        |           |       | 6                | 0            | 19.25               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.28               | 19.0±1               | /        |
|         |        |           |       | 1                | 2            | 19.54               | 19.0±1               | /        |
|         |        |           |       | 1                | 5            | 19.29               | 19.0±1               | /        |
|         |        |           |       | 3                | 0            | 19.43               | 19.0±1               | /        |
|         |        |           |       | 3                | 2            | 19.54               | 19.0±1               | /        |
|         |        |           |       | 6                | 0            | 18.27               | 18.0±1               | 1.0      |
|         | 132665 | 1779.3    | QPSK  | 1                | 0            | 19.94               | 19.5±1               | /        |
|         |        |           |       | 1                | 2            | 20.12               | 19.5±1               | /        |
|         |        |           |       | 1                | 5            | 19.91               | 19.5±1               | /        |
|         |        |           |       | 3                | 0            | 19.99               | 19.5±1               | /        |
|         |        |           |       | 3                | 2            | 19.95               | 19.5±1               | /        |
|         |        |           |       | 6                | 0            | 18.98               | 18.5±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.12               | 18.5±1               | /        |
|         |        |           |       | 1                | 2            | 19.30               | 18.5±1               | /        |
|         |        |           |       | 1                | 5            | 19.13               | 18.5±1               | /        |
|         |        |           |       | 3                | 0            | 19.02               | 18.5±1               | /        |
|         |        |           |       | 3                | 2            | 19.03               | 18.5±1               | /        |
|         |        |           |       | 6                | 0            | 17.92               | 17.5±1               | 1.0      |

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 3MHz    | 131987 | 1711.5    | QPSK  | 1                | 0            | 20.64               | 20.0±1               | /        |
|         |        |           |       | 1                | 8            | 20.63               | 20.0±1               | /        |
|         |        |           |       | 1                | 14           | 20.64               | 20.0±1               | /        |
|         |        |           |       | 8                | 0            | 19.64               | 19.0±1               | 1.0      |
|         |        |           |       | 8                | 9            | 19.69               | 19.0±1               | 1.0      |
|         |        |           |       | 15               | 0            | 19.66               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.96               | 19.0±1               | /        |
|         |        |           |       | 1                | 8            | 19.90               | 19.0±1               | /        |
|         |        |           |       | 1                | 14           | 19.97               | 19.0±1               | /        |
|         |        |           |       | 8                | 0            | 18.72               | 18.0±1               | 1.0      |
|         |        |           |       | 8                | 9            | 18.71               | 18.0±1               | 1.0      |
|         |        |           |       | 15               | 0            | 18.68               | 18.0±1               | 1.0      |
|         | 132322 | 1745      | QPSK  | 1                | 0            | 20.25               | 20.0±1               | /        |
|         |        |           |       | 1                | 8            | 20.27               | 20.0±1               | /        |
|         |        |           |       | 1                | 14           | 20.31               | 20.0±1               | /        |
|         |        |           |       | 8                | 4            | 19.28               | 19.0±1               | 1.0      |
|         |        |           |       | 8                | 9            | 19.32               | 19.0±1               | 1.0      |
|         |        |           |       | 15               | 0            | 19.29               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.46               | 19.0±1               | /        |
|         |        |           |       | 1                | 8            | 19.46               | 19.0±1               | /        |
|         |        |           |       | 1                | 14           | 19.48               | 19.0±1               | /        |
|         |        |           |       | 8                | 0            | 18.29               | 18.0±1               | 1.0      |
|         |        |           |       | 8                | 9            | 18.31               | 18.0±1               | 1.0      |
|         |        |           |       | 15               | 0            | 18.17               | 18.0±1               | 1.0      |
|         | 132657 | 1778.5    | QPSK  | 1                | 0            | 20.05               | 19.5±1               | /        |
|         |        |           |       | 1                | 8            | 20.07               | 19.5±1               | /        |
|         |        |           |       | 1                | 14           | 20.04               | 19.5±1               | /        |
|         |        |           |       | 8                | 0            | 19.06               | 18.5±1               | 1.0      |
|         |        |           |       | 8                | 9            | 19.00               | 18.5±1               | 1.0      |
|         |        |           |       | 15               | 0            | 18.96               | 18.5±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 18.94               | 18.0±1               | /        |
|         |        |           |       | 1                | 8            | 18.93               | 18.0±1               | /        |
|         |        |           |       | 1                | 14           | 18.90               | 18.0±1               | /        |
|         |        |           |       | 8                | 0            | 18.05               | 18.0±1               | /        |
|         |        |           |       | 8                | 9            | 18.00               | 18.0±1               | /        |
|         |        |           |       | 15               | 0            | 17.98               | 17.0±1               | 1.0      |

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 5MHz    | 131997 | 1712.5    | QPSK  | 1                | 0            | 20.58               | 20.0±1               | /        |
|         |        |           |       | 1                | 12           | 20.70               | 20.0±1               | /        |
|         |        |           |       | 1                | 24           | 20.56               | 20.0±1               | /        |
|         |        |           |       | 12               | 0            | 19.69               | 19.0±1               | 1.0      |
|         |        |           |       | 12               | 11           | 19.69               | 19.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 19.68               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.88               | 19.5±1               | /        |
|         |        |           |       | 1                | 12           | 20.05               | 19.5±1               | /        |
|         |        |           |       | 1                | 24           | 19.90               | 19.5±1               | /        |
|         |        |           |       | 12               | 0            | 18.68               | 18.5±1               | 1.0      |
|         |        |           |       | 12               | 11           | 18.66               | 18.5±1               | 1.0      |
|         |        |           |       | 25               | 0            | 18.74               | 18.5±1               | 1.0      |
|         | 132322 | 1745      | QPSK  | 1                | 0            | 20.13               | 20.0±1               | /        |
|         |        |           |       | 1                | 12           | 20.28               | 20.0±1               | /        |
|         |        |           |       | 1                | 24           | 20.19               | 20.0±1               | /        |
|         |        |           |       | 12               | 0            | 19.36               | 19.0±1               | 1.0      |
|         |        |           |       | 12               | 11           | 19.26               | 19.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 19.30               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.37               | 19.0±1               | /        |
|         |        |           |       | 1                | 12           | 19.53               | 19.0±1               | /        |
|         |        |           |       | 1                | 24           | 19.48               | 19.0±1               | /        |
|         |        |           |       | 12               | 0            | 18.28               | 18.0±1               | 1.0      |
|         |        |           |       | 12               | 11           | 18.21               | 18.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 18.29               | 18.0±1               | 1.0      |
|         | 132647 | 1777.5    | QPSK  | 1                | 0            | 19.94               | 19.0±1               | /        |
|         |        |           |       | 1                | 12           | 19.99               | 19.0±1               | /        |
|         |        |           |       | 1                | 24           | 19.85               | 19.0±1               | /        |
|         |        |           |       | 12               | 0            | 19.06               | 19.0±1               | /        |
|         |        |           |       | 12               | 11           | 18.94               | 18.0±1               | 1.0      |
|         |        |           |       | 25               | 0            | 18.99               | 18.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.23               | 18.5±1               | /        |
|         |        |           |       | 1                | 12           | 19.30               | 18.5±1               | /        |
|         |        |           |       | 1                | 24           | 19.16               | 18.5±1               | /        |
|         |        |           |       | 12               | 0            | 18.11               | 17.5±1               | 1.0      |
|         |        |           |       | 12               | 11           | 17.93               | 17.5±1               | 1.0      |
|         |        |           |       | 25               | 0            | 17.97               | 17.5±1               | 1.0      |

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 10MHz   | 132022 | 1715      | QPSK  | 1                | 0            | 20.61               | 20.0±1               | /        |
|         |        |           |       | 1                | 24           | 20.79               | 20.0±1               | /        |
|         |        |           |       | 1                | 49           | 20.64               | 20.0±1               | /        |
|         |        |           |       | 25               | 0            | 19.73               | 19.0±1               | 1.0      |
|         |        |           |       | 25               | 24           | 19.71               | 19.0±1               | 1.0      |
|         |        |           |       | 50               | 0            | 19.71               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.94               | 19.5±1               | /        |
|         |        |           |       | 1                | 24           | 20.11               | 19.5±1               | /        |
|         |        |           |       | 1                | 49           | 19.90               | 19.5±1               | /        |
|         |        |           |       | 25               | 0            | 18.86               | 18.5±1               | 1.0      |
|         |        |           |       | 25               | 24           | 18.80               | 18.5±1               | 1.0      |
|         |        |           |       | 50               | 0            | 18.74               | 18.5±1               | 1.0      |
|         | 132322 | 1745      | QPSK  | 1                | 0            | 20.20               | 20.0±1               | /        |
|         |        |           |       | 1                | 24           | 20.43               | 20.0±1               | /        |
|         |        |           |       | 1                | 49           | 20.35               | 20.0±1               | /        |
|         |        |           |       | 25               | 0            | 19.37               | 19.0±1               | 1.0      |
|         |        |           |       | 25               | 24           | 19.28               | 19.0±1               | 1.0      |
|         |        |           |       | 50               | 0            | 19.34               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.37               | 19.0±1               | /        |
|         |        |           |       | 1                | 24           | 19.63               | 19.0±1               | /        |
|         |        |           |       | 1                | 49           | 19.56               | 19.0±1               | /        |
|         |        |           |       | 25               | 0            | 18.43               | 18.0±1               | 1.0      |
|         |        |           |       | 25               | 24           | 18.34               | 18.0±1               | 1.0      |
|         |        |           |       | 50               | 0            | 18.37               | 18.0±1               | 1.0      |
|         | 132622 | 1775      | QPSK  | 1                | 0            | 20.24               | 19.5±1               | /        |
|         |        |           |       | 1                | 24           | 20.22               | 19.5±1               | /        |
|         |        |           |       | 1                | 49           | 20.04               | 19.5±1               | /        |
|         |        |           |       | 25               | 0            | 19.17               | 18.5±1               | /        |
|         |        |           |       | 25               | 24           | 18.93               | 18.5±1               | 1.0      |
|         |        |           |       | 50               | 0            | 19.04               | 18.5±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.08               | 18.5±1               | /        |
|         |        |           |       | 1                | 24           | 19.12               | 18.5±1               | /        |
|         |        |           |       | 1                | 49           | 18.89               | 18.5±1               | /        |
|         |        |           |       | 25               | 0            | 18.13               | 17.5±1               | 1.0      |
|         |        |           |       | 25               | 24           | 17.96               | 17.5±1               | 1.0      |
|         |        |           |       | 50               | 0            | 18.03               | 17.5±1               | 1.0      |

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 15MHz   | 132047 | 1717.5    | QPSK  | 1                | 0            | 20.61               | 20.0±1               | /        |
|         |        |           |       | 1                | 37           | 20.74               | 20.0±1               | /        |
|         |        |           |       | 1                | 74           | 20.50               | 20.0±1               | /        |
|         |        |           |       | 36               | 0            | 19.76               | 19.0±1               | 1.0      |
|         |        |           |       | 36               | 35           | 19.75               | 19.0±1               | 1.0      |
|         |        |           |       | 75               | 0            | 19.72               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.93               | 19.5±1               | /        |
|         |        |           |       | 1                | 37           | 20.04               | 19.5±1               | /        |
|         |        |           |       | 1                | 74           | 19.72               | 19.5±1               | /        |
|         |        |           |       | 36               | 0            | 18.76               | 18.5±1               | 1.0      |
|         |        |           |       | 36               | 35           | 18.72               | 18.5±1               | 1.0      |
|         |        |           |       | 75               | 0            | 18.75               | 18.5±1               | 1.0      |
|         | 132322 | 1745      | QPSK  | 1                | 0            | 20.16               | 20.0±1               | /        |
|         |        |           |       | 1                | 37           | 20.27               | 20.0±1               | /        |
|         |        |           |       | 1                | 74           | 20.38               | 20.0±1               | /        |
|         |        |           |       | 36               | 0            | 19.38               | 19.0±1               | 1.0      |
|         |        |           |       | 36               | 35           | 19.36               | 19.0±1               | 1.0      |
|         |        |           |       | 75               | 0            | 19.37               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.34               | 19.0±1               | /        |
|         |        |           |       | 1                | 37           | 19.50               | 19.0±1               | /        |
|         |        |           |       | 1                | 74           | 19.61               | 19.0±1               | /        |
|         |        |           |       | 36               | 0            | 18.36               | 18.0±1               | 1.0      |
|         |        |           |       | 36               | 35           | 18.32               | 18.0±1               | 1.0      |
|         |        |           |       | 75               | 0            | 18.37               | 18.0±1               | 1.0      |
|         | 132597 | 1772.5    | QPSK  | 1                | 0            | 20.42               | 20.0±1               | /        |
|         |        |           |       | 1                | 37           | 20.24               | 20.0±1               | /        |
|         |        |           |       | 1                | 74           | 19.96               | 19.0±1               | 1.0      |
|         |        |           |       | 36               | 0            | 19.29               | 19.0±1               | 1.0      |
|         |        |           |       | 36               | 35           | 19.12               | 19.0±1               | 1.0      |
|         |        |           |       | 75               | 0            | 19.14               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.38               | 19.0±1               | /        |
|         |        |           |       | 1                | 37           | 19.22               | 19.0±1               | /        |
|         |        |           |       | 1                | 74           | 18.99               | 18.0±1               | 1.0      |
|         |        |           |       | 36               | 0            | 18.18               | 18.0±1               | 1.0      |
|         |        |           |       | 36               | 35           | 18.06               | 18.0±1               | 1.0      |
|         |        |           |       | 75               | 0            | 18.09               | 18.0±1               | 1.0      |

| BW(MHz) | Ch     | Freq(MHz) | Mode  | UL RB Allocation | UL RB Offset | Average Power (dbm) | Tune up limited(dBm) | MPR (dB) |
|---------|--------|-----------|-------|------------------|--------------|---------------------|----------------------|----------|
| 20MHz   | 132072 | 1720      | QPSK  | 1                | 0            | 20.54               | 20.0±1               | /        |
|         |        |           |       | 1                | 49           | 20.74               | 20.0±1               | /        |
|         |        |           |       | 1                | 99           | 20.27               | 20.0±1               | /        |
|         |        |           |       | 50               | 0            | 19.71               | 19.0±1               | 1.0      |
|         |        |           |       | 50               | 24           | 19.65               | 19.0±1               | 1.0      |
|         |        |           |       | 100              | 0            | 19.70               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.78               | 19.0±1               | /        |
|         |        |           |       | 1                | 49           | 19.94               | 19.0±1               | /        |
|         |        |           |       | 1                | 99           | 19.42               | 19.0±1               | /        |
|         |        |           |       | 50               | 0            | 18.75               | 18.0±1               | 1.0      |
|         |        |           |       | 50               | 49           | 18.67               | 18.0±1               | 1.0      |
|         |        |           |       | 100              | 0            | 18.69               | 18.0±1               | 1.0      |
|         | 132322 | 1745      | QPSK  | 1                | 0            | 20.14               | 20.0±1               | /        |
|         |        |           |       | 1                | 49           | 20.44               | 20.0±1               | /        |
|         |        |           |       | 1                | 99           | 20.46               | 20.0±1               | /        |
|         |        |           |       | 50               | 0            | 19.40               | 19.0±1               | 1.0      |
|         |        |           |       | 50               | 24           | 19.24               | 19.0±1               | 1.0      |
|         |        |           |       | 100              | 0            | 19.35               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.00               | 19.0±1               | /        |
|         |        |           |       | 1                | 49           | 19.34               | 19.0±1               | /        |
|         |        |           |       | 1                | 99           | 19.36               | 19.0±1               | /        |
|         |        |           |       | 50               | 0            | 18.43               | 18.0±1               | 1.0      |
|         |        |           |       | 50               | 24           | 18.24               | 18.0±1               | 1.0      |
|         |        |           |       | 100              | 0            | 18.39               | 18.0±1               | 1.0      |
|         | 132572 | 1770      | QPSK  | 1                | 0            | 20.48               | 20.0±1               | /        |
|         |        |           |       | 1                | 49           | 20.35               | 20.0±1               | /        |
|         |        |           |       | 1                | 99           | 19.86               | 19.0±1               | 1.0      |
|         |        |           |       | 50               | 0            | 19.20               | 19.0±1               | 1.0      |
|         |        |           |       | 50               | 24           | 19.04               | 19.0±1               | 1.0      |
|         |        |           |       | 100              | 0            | 19.10               | 19.0±1               | 1.0      |
|         |        |           | 16QAM | 1                | 0            | 19.25               | 19.0±1               | /        |
|         |        |           |       | 1                | 49           | 19.14               | 19.0±1               | /        |
|         |        |           |       | 1                | 99           | 18.69               | 18.0±1               | 1.0      |
|         |        |           |       | 50               | 0            | 18.19               | 18.0±1               | 1.0      |
|         |        |           |       | 50               | 24           | 18.09               | 18.0±1               | 1.0      |
|         |        |           |       | 100              | 0            | 18.10               | 18.0±1               | 1.0      |

**WIFI Mode (2.4G) ANT1**

| Mode          | Channel number | Frequency (MHz) | Data rate(Mbps) | Average Output Power(dBm) | Average Tune up limited(dBm) |
|---------------|----------------|-----------------|-----------------|---------------------------|------------------------------|
| 802.11b       | 1              | 2412            | 1               | 13.787                    | 13.0±1                       |
|               | 6              | 2437            | 1               | 13.124                    | 13.0±1                       |
|               | 11             | 2462            | 1               | 12.348                    | 12.0±1                       |
| 802.11g       | 1              | 2412            | 6               | 12.905                    | 12.0±1                       |
|               | 6              | 2437            | 6               | 12.586                    | 12.0±1                       |
|               | 11             | 2462            | 6               | 11.994                    | 11.0±1                       |
| 802.11n(HT20) | 1              | 2412            | MCS0            | 12.598                    | 12.0±1                       |
|               | 6              | 2437            | MCS0            | 12.033                    | 12.0±1                       |
|               | 11             | 2462            | MCS0            | 11.301                    | 11.0±1                       |
| 802.11n(HT40) | 3              | 2422            | MCS0            | 12.496                    | 12.0±1                       |
|               | 6              | 2437            | MCS0            | 12.777                    | 12.0±1                       |
|               | 9              | 2452            | MCS0            | 12.361                    | 12.0±1                       |

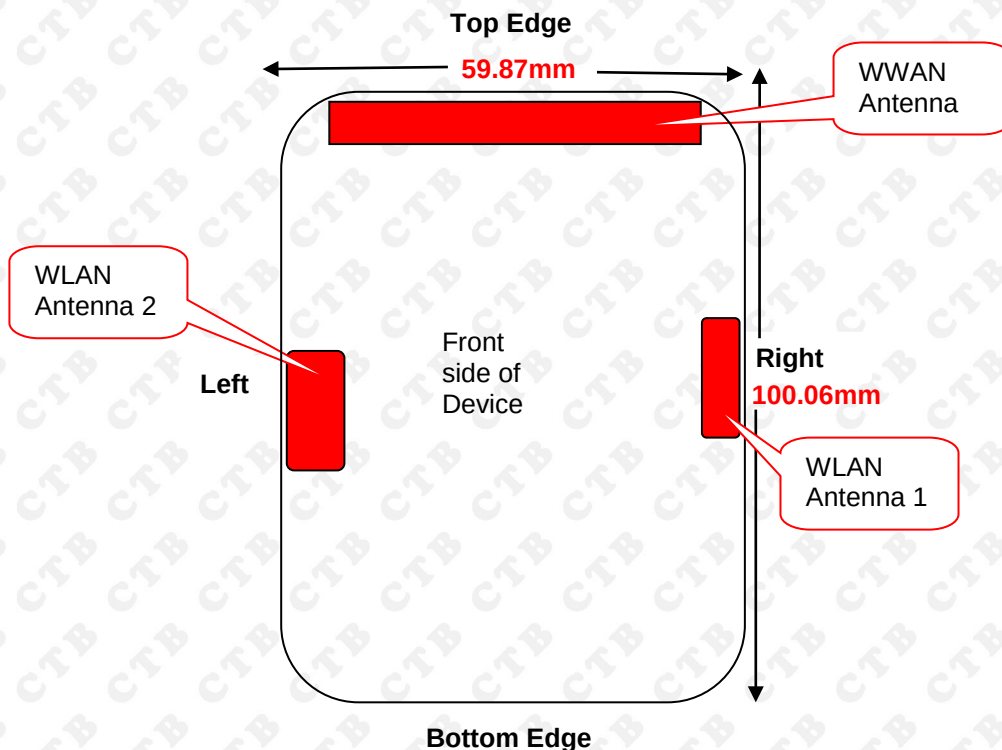
**WIFI Mode (2.4G) ANT2**

| Mode          | Channel number | Frequency (MHz) | Data rate(Mbps) | Average Output Power(dBm) | Average Tune up limited(dBm) |
|---------------|----------------|-----------------|-----------------|---------------------------|------------------------------|
| 802.11b       | 1              | 2412            | 1               | 12.903                    | 12.0±1                       |
|               | 6              | 2437            | 1               | 12.137                    | 12.0±1                       |
|               | 11             | 2462            | 1               | 11.634                    | 11.0±1                       |
| 802.11g       | 1              | 2412            | 6               | 13.759                    | 13.0±1                       |
|               | 6              | 2437            | 6               | 13.209                    | 13.0±1                       |
|               | 11             | 2462            | 6               | 12.452                    | 12.0±1                       |
| 802.11n(HT20) | 1              | 2412            | MCS0            | 13.739                    | 13.0±1                       |
|               | 6              | 2437            | MCS0            | 13.096                    | 13.0±1                       |
|               | 11             | 2462            | MCS0            | 12.441                    | 12.0±1                       |
| 802.11n(HT40) | 3              | 2422            | MCS0            | 13.824                    | 13.0±1                       |
|               | 6              | 2437            | MCS0            | 14.023                    | 14.0±1                       |
|               | 9              | 2452            | MCS0            | 13.565                    | 13.0±1                       |

## 12. EXPOSURE CONDITIONS CONSIDERATION

EUT antenna location:

EUT antenna location:



Test position consideration:

| Distance of EUT antenna-to-edge/surface(mm),<br>Test distance:0mm |           |            |           |            |          |             |
|-------------------------------------------------------------------|-----------|------------|-----------|------------|----------|-------------|
| Antennas                                                          | Back side | Front side | Left Edge | Right Edge | Top Edge | Bottom Edge |
| WWAN                                                              | <25       | <25        | <25       | <25        | <25      | 90          |
| WLAN ANT1                                                         | <25       | <25        | 51        | <25        | 47       | 37          |
| WLAN ANT2                                                         | <25       | <25        | <25       | 49         | 39       | 40          |

| Test distance:0mm |           |            |           |            |          |             |
|-------------------|-----------|------------|-----------|------------|----------|-------------|
| Antennas          | Back side | Front side | Left Edge | Right Edge | Top Edge | Bottom Edge |
| WWAN              | YES       | YES        | YES       | YES        | YES      | NO          |
| WLAN ANT1         | YES       | YES        | NO        | YES        | NO       | NO          |
| WLAN ANT2         | YES       | YES        | YES       | NO         | NO       | NO          |

Note:

- Body SAR mode assessments is required.
- Per KDB 447498 D01v06, for EUT the test separation distance is determined by the smallest distance between the outer surface of the device and the user, which is 0 mm for body SAR. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.

### 13. RF EXPOSURE

#### Standard Requirement:

According to §15.247 (i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances*  $\leq 50$  mm are determined by:

$$\left[ \frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot [\sqrt{f_{\text{GHz}}}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR,}^{16} \text{ where}$$

- $f_{\text{GHz}}$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum *test separation distance* is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

**Exclusion Thresholds =**  $P\sqrt{F} / D$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm

#### Test Distance (0mm)

| Mode                | MAX Power (dBm) | Tune Up Power (dBm) | Max Tune Up Power (dBm) | Max Tune Up Power (mW) | Exclusion Thresholds | Limit |
|---------------------|-----------------|---------------------|-------------------------|------------------------|----------------------|-------|
| 2.4G WIFI ANT1 2412 | 13.787          | 13.0±1              | 14                      | 25.12                  | 7.80                 | 3     |
| 2.4G WIFI ANT1 2412 | 12.903          | 12.0±1              | 13                      | 19.95                  | 6.20                 | 3     |

**Result:** 2.4G WIFI ANT1 and 2.4G WIFI ANT2 SAR measurement are required.

## 14. SAR TEST RESULTS

### 14.1 Test Condition:

1. SAR Measurement  
The distance between the EUT and the antenna of the emulator is more than 50 cm and the output power radiated from the emulator antenna is at least 30 dB less than the output power of EUT.
2. Environmental Conditions

|                      |          |
|----------------------|----------|
| Temperature          | 23°C     |
| Relative Humidity    | 57%      |
| Atmospheric Pressure | 1019mbar |
3. Tested By : Martin Feng

### 14.2 Generally Test Procedures:

1. Establish communication link between EUT and base station emulation by air link.
2. Place the EUT in the selected test position. (Cheek, tilt or flat)
3. Perform SAR testing at middle or highest output power channel under the selected test mode. If the measured 1-g SAR is  $\leq 0.8$  W/kg, then testing for the other channel will not be performed.
4. When SAR is  $< 0.8$  W/kg, no repeated SAR measurement is required

#### For WCDMA test:

1. KDB941225 D01-Body SAR is not required for HSDPA when the average output of each RF channel with HSDPA active is less than 0.25dB higher than measured without HSDPA using 12.2kbps RMC or the maximum SAR for 12.2kbps RMC  $< 75\%$  of the SAR limit.
2. KDB941225 D01-Body SAR is not required for handset with HSPA capabilities when the maximum average output of each RF channel with HSUPA/HSDPA active is less than 0.25dB higher than that measure without HSUPA/HSDPA using 12.2kbps RMC AND THE maximum SAR for 12.2kbps RMC is  $< 75\%$  of the SAR limit

#### For LTE test:

1. According to FCC KDB 941225 D05v02r05:
  - a. Per Section 5.2.1, SAR is required for QPSK 1 RB Allocation for the largest bandwidth
    - i. The required channel and offset combination with the highest maximum output power is required for SAR.
    - ii. 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 using the RB offset configuration with highest output power for that channel.
    - iii. When the reported SAR for a required test channel is  $> 1.45$  W/kg, SAR is required for all RB offset configurations for that channel.
  - b. Per Section 5.2.2, SAR is required for 50% RB allocation using the largest bandwidth following the same procedures outlined in Section 5.2.1.
  - c. Per Section 5.2.3, QPSK SAR is not required for the 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1 RB and 50% RB allocations and the reported SAR for the 1 RB and 50% RB allocations is  $< 0.8$  W/kg.
  - d. Per Section 5.2.4 and 5.3, SAR tests for higher order modulations and lower bandwidths configurations are not required when the conducted power of the required test configurations determined by Sections 5.2.1 through 5.2.3 is less than or equal to  $\frac{1}{2}$  dB higher than the equivalent configuration using QPSK modulation and when the QPSK SAR for those configurations is  $< 1.45$  W/kg.
  - e. A-MPR was disabled for all SAR tests by setting NS=01 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames (maximum TTI).

## 14.3 SAR Summary Test Result:

Table 1: SAR Values of WCDMA Band II

| Test Positions        |            | Channel |      | Test Mode    | Power(dBm)                 |                            | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------------------|------------|---------|------|--------------|----------------------------|----------------------------|------------------------------|---------------------|----------|
|                       |            | CH.     | MHz  |              | Maximum Turn-up Power(dBm) | Measured output power(dBm) | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| Body (0mm Separation) | Front side | 9400    | 1880 | RMC 12.2kbps | 21                         | 20.50                      | 0.111                        | 0.12                | --       |
|                       | Back side  | 9400    | 1880 | RMC 12.2kbps | 21                         | 20.50                      | 0.321                        | 0.36                | <b>1</b> |
|                       | Right Edge | 9400    | 1880 | RMC 12.2kbps | 21                         | 20.50                      | 0.245                        | 0.27                | --       |
|                       | Left Edge  | 9400    | 1880 | RMC 12.2kbps | 21                         | 20.50                      | 0.231                        | 0.26                | --       |
|                       | Top Edge   | 9400    | 1880 | RMC 12.2kbps | 21                         | 20.50                      | 0.302                        | 0.34                | --       |

Table 2: SAR Values of WCDMA Band V

| Test Positions        |            | Channel |       | Test Mode    | Power(dBm)                 |                            | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------------------|------------|---------|-------|--------------|----------------------------|----------------------------|------------------------------|---------------------|----------|
|                       |            | CH.     | MHz   |              | Maximum Turn-up Power(dBm) | Measured output power(dBm) | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| Body (0mm Separation) | Front side | 4182    | 836.4 | RMC 12.2kbps | 22                         | 21.93                      | 0.0922                       | 0.09                | --       |
|                       | Back side  | 4182    | 836.4 | RMC 12.2kbps | 22                         | 21.93                      | 0.313                        | 0.32                | <b>2</b> |
|                       | Right Edge | 4182    | 836.4 | RMC 12.2kbps | 22                         | 21.93                      | 0.228                        | 0.23                | --       |
|                       | Left Edge  | 4182    | 836.4 | RMC 12.2kbps | 22                         | 21.93                      | 0.194                        | 0.20                | --       |
|                       | Top Edge   | 4182    | 836.4 | RMC 12.2kbps | 22                         | 21.93                      | 0.286                        | 0.29                | --       |

Table 3: SAR Values of LTE BAND 2 , 20MHz ,QPSK

| Test Mode | Test Positions        |            | Channel |      | Power(dBm)                 |                            | MPR (dB) | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------|-----------------------|------------|---------|------|----------------------------|----------------------------|----------|------------------------------|---------------------|----------|
|           |                       |            | CH.     | MHz  | Maximum Turn-up Power(dBm) | Measured output power(dBm) |          | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| 1RB #49   | Body (0mm Separation) | Front side | 19100   | 1900 | 21                         | 20.48                      | 0        | 0.205                        | 0.23                | --       |
|           |                       | Back side  | 19100   | 1900 | 21                         | 20.48                      | 0        | 0.430                        | 0.48                | 3        |
|           |                       | Right Edge | 19100   | 1900 | 21                         | 20.48                      | 0        | 0.343                        | 0.39                | --       |
|           |                       | Left Edge  | 19100   | 1900 | 21                         | 20.48                      | 0        | 0.347                        | 0.39                | --       |
|           |                       | Top Edge   | 19100   | 1900 | 21                         | 20.48                      | 0        | 0.381                        | 0.43                | --       |
| 50%RB #24 | Body (0mm Separation) | Front side | 19100   | 1900 | 20                         | 19.18                      | 1        | 0.184                        | 0.22                | --       |
|           |                       | Back side  | 19100   | 1900 | 20                         | 19.18                      | 1        | 0.387                        | 0.47                | --       |
|           |                       | Right Edge | 19100   | 1900 | 20                         | 19.18                      | 1        | 0.309                        | 0.37                | --       |
|           |                       | Left Edge  | 19100   | 1900 | 20                         | 19.18                      | 1        | 0.312                        | 0.38                | --       |
|           |                       | Top Edge   | 19100   | 1900 | 20                         | 19.18                      | 1        | 0.343                        | 0.41                | --       |

Table 4: SAR Values of LTE BAND 4, 20MHz ,QPSK

| Test Mode | Test Positions        |            | Channel |      | Power(dBm)                 |                            | MPR (dB) | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------|-----------------------|------------|---------|------|----------------------------|----------------------------|----------|------------------------------|---------------------|----------|
|           |                       |            | CH.     | MHz  | Maximum Turn-up Power(dBm) | Measured output power(dBm) |          | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| 1RB #49   | Body (0mm Separation) | Front side | 20050   | 1720 | 21                         | 20.98                      | 0        | 0.0924                       | 0.09                | --       |
|           |                       | Back side  | 20050   | 1720 | 21                         | 20.98                      | 0        | 0.264                        | 0.27                | 4        |
|           |                       | Right Edge | 20050   | 1720 | 21                         | 20.98                      | 0        | 0.174                        | 0.17                | --       |
|           |                       | Left Edge  | 20050   | 1720 | 21                         | 20.98                      | 0        | 0.171                        | 0.17                | --       |
|           |                       | Top Edge   | 20050   | 1720 | 21                         | 20.98                      | 0        | 0.226                        | 0.23                | --       |
| 50%RB #0  | Body (0mm Separation) | Front side | 20050   | 1720 | 20                         | 19.82                      | 1        | 0.0833                       | 0.09                | --       |
|           |                       | Back side  | 20050   | 1720 | 20                         | 19.82                      | 1        | 0.238                        | 0.25                | --       |
|           |                       | Right Edge | 20050   | 1720 | 20                         | 19.82                      | 1        | 0.156                        | 0.16                | --       |
|           |                       | Left Edge  | 20050   | 1720 | 20                         | 19.82                      | 1        | 0.154                        | 0.16                | --       |
|           |                       | Top Edge   | 20050   | 1720 | 20                         | 19.82                      | 1        | 0.203                        | 0.21                | --       |

Table 5:SAR Values of LTE BAND 5 , 1.4MHz ,QPSK

| Test Mode | Test Positions        |            | Channel |       | Power(dBm)                 |                            | MPR (dB) | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------|-----------------------|------------|---------|-------|----------------------------|----------------------------|----------|------------------------------|---------------------|----------|
|           |                       |            | CH.     | MHz   | Maximum Turn-up Power(dBm) | Measured output power(dBm) |          | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| 1RB #2    | Body (0mm Separation) | Front side | 20407   | 824.7 | 25                         | 24.42                      | 0        | 0.0727                       | 0.08                | --       |
|           |                       | Back side  | 20407   | 824.7 | 25                         | 24.42                      | 0        | 0.211                        | 0.24                | --       |
|           |                       | Right Edge | 20407   | 824.7 | 25                         | 24.42                      | 0        | 0.144                        | 0.16                | --       |
|           |                       | Left Edge  | 20407   | 824.7 | 25                         | 24.42                      | 0        | 0.134                        | 0.15                | --       |
|           |                       | Top Edge   | 20407   | 824.7 | 25                         | 24.42                      | 0        | 0.189                        | 0.22                | --       |
| 50%RB #0  | Body (0mm Separation) | Front side | 20407   | 824.7 | 25                         | 24.18                      | 0        | 0.0654                       | 0.08                | --       |
|           |                       | Back side  | 20407   | 824.7 | 25                         | 24.18                      | 0        | 0.192                        | 0.23                | --       |
|           |                       | Right Edge | 20407   | 824.7 | 25                         | 24.18                      | 0        | 0.129                        | 0.16                | --       |
|           |                       | Left Edge  | 20407   | 824.7 | 25                         | 24.18                      | 0        | 0.12                         | 0.14                | --       |
|           |                       | Top Edge   | 20407   | 824.7 | 25                         | 24.18                      | 0        | 0.17                         | 0.21                | --       |

Table 6: SAR Values of LTE BAND 5, 10MHz ,QPSK

| Test Mode | Test Positions        |            | Channel |     | Power(dBm)                 |                            | MPR (dB) | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------|-----------------------|------------|---------|-----|----------------------------|----------------------------|----------|------------------------------|---------------------|----------|
|           |                       |            | CH.     | MHz | Maximum Turn-up Power(dBm) | Measured output power(dBm) |          | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| 1RB #49   | Body (0mm Separation) | Front side | 20450   | 829 | 25                         | 24.34                      | 0        | 0.0834                       | 0.10                | --       |
|           |                       | Back side  | 20450   | 829 | 25                         | 24.34                      | 0        | 0.242                        | 0.28                | 5        |
|           |                       | Right Edge | 20450   | 829 | 25                         | 24.34                      | 0        | 0.166                        | 0.19                | --       |
|           |                       | Left Edge  | 20450   | 829 | 25                         | 24.34                      | 0        | 0.154                        | 0.18                | --       |
|           |                       | Top Edge   | 20450   | 829 | 25                         | 24.34                      | 0        | 0.217                        | 0.25                | --       |
| 50%RB #0  | Body (0mm Separation) | Front side | 20450   | 829 | 24                         | 23.20                      | 1        | 0.0751                       | 0.09                | --       |
|           |                       | Back side  | 20450   | 829 | 24                         | 23.20                      | 1        | 0.218                        | 0.26                | --       |
|           |                       | Right Edge | 20450   | 829 | 24                         | 23.20                      | 1        | 0.149                        | 0.18                | --       |
|           |                       | Left Edge  | 20450   | 829 | 24                         | 23.20                      | 1        | 0.138                        | 0.17                | --       |
|           |                       | Top Edge   | 20450   | 829 | 24                         | 23.20                      | 1        | 0.195                        | 0.23                | --       |

Table 7: SAR Values of LTE BAND 12 , 10MHz ,QPSK

| Test Mode | Test Positions        |            | Channel |       | Power(dBm)                 |                            | MPR (dB) | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------|-----------------------|------------|---------|-------|----------------------------|----------------------------|----------|------------------------------|---------------------|----------|
|           |                       |            | CH.     | MHz   | Maximum Turn-up Power(dBm) | Measured output power(dBm) |          | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| 1RB #99   | Body (0mm Separation) | Front side | 23130   | 711.0 | 25                         | 24.33                      | 0        | 0.0235                       | 0.03                | --       |
|           |                       | Back side  | 23130   | 711.0 | 25                         | 24.33                      | 0        | 0.109                        | 0.13                | 6        |
|           |                       | Right Edge | 23130   | 711.0 | 25                         | 24.33                      | 0        | 0.0633                       | 0.07                | --       |
|           |                       | Left Edge  | 23130   | 711.0 | 25                         | 24.33                      | 0        | 0.0628                       | 0.07                | --       |
|           |                       | Top Edge   | 23130   | 711.0 | 25                         | 24.33                      | 0        | 0.088                        | 0.10                | --       |
| 50%RB #24 | Body (0mm Separation) | Front side | 23130   | 711.0 | 24                         | 23.19                      | 1        | 0.0211                       | 0.03                | --       |
|           |                       | Back side  | 23130   | 711.0 | 24                         | 23.19                      | 1        | 0.0982                       | 0.12                | --       |
|           |                       | Right Edge | 23130   | 711.0 | 24                         | 23.19                      | 1        | 0.057                        | 0.07                | --       |
|           |                       | Left Edge  | 23130   | 711.0 | 24                         | 23.19                      | 1        | 0.056                        | 0.07                | --       |
|           |                       | Top Edge   | 23130   | 711.0 | 24                         | 23.19                      | 1        | 0.0793                       | 0.10                | --       |

Table 8:SAR Values of LTE BAND 66 ,1.4MHz ,QPSK

| Test Mode | Test Positions        |            | Channel |        | Power(dBm)                 |                            | MPR (dB) | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------|-----------------------|------------|---------|--------|----------------------------|----------------------------|----------|------------------------------|---------------------|----------|
|           |                       |            | CH.     | MHz    | Maximum Turn-up Power(dBm) | Measured output power(dBm) |          | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| 1RB #2    | Body (0mm Separation) | Front side | 131979  | 1710.7 | 21                         | 20.87                      | 0        | 0.164                        | 0.17                | --       |
|           |                       | Back side  | 131979  | 1710.7 | 21                         | 20.87                      | 0        | 0.333                        | 0.34                | --       |
|           |                       | Right Edge | 131979  | 1710.7 | 21                         | 20.87                      | 0        | 0.259                        | 0.27                | --       |
|           |                       | Left Edge  | 131979  | 1710.7 | 21                         | 20.87                      | 0        | 0.237                        | 0.24                | --       |
|           |                       | Top Edge   | 131979  | 1710.7 | 21                         | 20.87                      | 0        | 0.286                        | 0.29                | --       |
| 50%RB #0  | Body (0mm Separation) | Front side | 131979  | 1710.7 | 21                         | 20.75                      | 0        | 0.149                        | 0.16                | --       |
|           |                       | Back side  | 131979  | 1710.7 | 21                         | 20.75                      | 0        | 0.301                        | 0.32                | --       |
|           |                       | Right Edge | 131979  | 1710.7 | 21                         | 20.75                      | 0        | 0.232                        | 0.25                | --       |
|           |                       | Left Edge  | 131979  | 1710.7 | 21                         | 20.75                      | 0        | 0.213                        | 0.23                | --       |
|           |                       | Top Edge   | 131979  | 1710.7 | 21                         | 20.75                      | 0        | 0.258                        | 0.27                | --       |

Table 9: SAR Values of LTE BAND 66 ,20MHz ,QPSK

| Test Mode | Test Positions        |            | Channel |      | Power(dBm)                 |                            | MPR (dB) | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------|-----------------------|------------|---------|------|----------------------------|----------------------------|----------|------------------------------|---------------------|----------|
|           |                       |            | CH.     | MHz  | Maximum Turn-up Power(dBm) | Measured output power(dBm) |          | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| 1RB #49   | Body (0mm Separation) | Front side | 132072  | 1720 | 21                         | 20.74                      | 0        | 0.189                        | 0.20                | --       |
|           |                       | Back side  | 132072  | 1720 | 21                         | 20.74                      | 0        | 0.382                        | 0.41                | 7        |
|           |                       | Right Edge | 132072  | 1720 | 21                         | 20.74                      | 0        | 0.297                        | 0.32                | --       |
|           |                       | Left Edge  | 132072  | 1720 | 21                         | 20.74                      | 0        | 0.272                        | 0.29                | --       |
|           |                       | Top Edge   | 132072  | 1720 | 21                         | 20.74                      | 0        | 0.329                        | 0.35                | --       |
| 50%RB #0  | Body (0mm Separation) | Front side | 132072  | 1720 | 20                         | 19.71                      | 1        | 0.171                        | 0.18                | --       |
|           |                       | Back side  | 132072  | 1720 | 20                         | 19.71                      | 1        | 0.344                        | 0.37                | --       |
|           |                       | Right Edge | 132072  | 1720 | 20                         | 19.71                      | 1        | 0.267                        | 0.29                | --       |
|           |                       | Left Edge  | 132072  | 1720 | 20                         | 19.71                      | 1        | 0.245                        | 0.26                | --       |
|           |                       | Top Edge   | 132072  | 1720 | 20                         | 19.71                      | 1        | 0.296                        | 0.32                | --       |

Table 10: SAR Values of 2.4G WIFI ANT1

| Test Positions        |            | Channel |      | Test Mode | Power(dBm)                 |                            | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------------------|------------|---------|------|-----------|----------------------------|----------------------------|------------------------------|---------------------|----------|
|                       |            | CH.     | MHz  |           | Maximum Turn-up Power(dBm) | Measured output power(dBm) | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| Body (0mm Separation) | Front side | 1       | 2412 | DSSS      | 14                         | 13.787                     | 0.162                        | 0.17                | --       |
|                       | Back side  | 1       | 2412 | DSSS      | 14                         | 13.787                     | 0.297                        | 0.31                | 8        |
|                       | Right Edge | 1       | 2412 | DSSS      | 14                         | 13.787                     | 0.225                        | 0.24                | --       |

Table 11: SAR Values of 2.4G WIFI ANT2

| Test Positions        |            | Channel |      | Test Mode | Power(dBm)                 |                            | SAR 1g(W/Kg), Limit(1.6W/kg) |                     | Plot No. |
|-----------------------|------------|---------|------|-----------|----------------------------|----------------------------|------------------------------|---------------------|----------|
|                       |            | CH.     | MHz  |           | Maximum Turn-up Power(dBm) | Measured output power(dBm) | Measured SAR 1g(W/kg)        | Scaled SAR 1g(W/kg) |          |
| Body (0mm Separation) | Front side | 1       | 2412 | DSSS      | 13                         | 12.903                     | 0.132                        | 0.13                | --       |
|                       | Back side  | 1       | 2412 | DSSS      | 13                         | 12.903                     | 0.209                        | 0.21                | --       |
|                       | Left Edge  | 1       | 2412 | DSSS      | 13                         | 12.903                     | 0.173                        | 0.18                | --       |

**Note:**

1. KDB941225 D01-Body SAR is not required for HSDPA when the average output of each RF channel with HSDPA active is less than 0.25dB higher than measured without HSDPA using 12.2kbps RMC or the maximum SAR for 12.2kbps RMC<75% of the SAR limit.
2. KDB941225 D01-Body SAR is not required for handset with HSPA capabilities when the maximum average output of each RF channel with HSUPA/HSDPA active is less than 0.25dB higher than that measure without HSUPA/HSDPA using 12.2kbps RMC AND THE maximum SAR for 12.2kbps RMC is<75% of the SAR limit

#### 14.4 Measurement variability consideration

**Refer to FCC KDB 248227 section 5.2.1~5.2.2:**

##### **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) 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.

##### **2.4 GHz 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).

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.

##### **For ANT1**

**Note:** 802.11b DSSS SAR test is required. The highest reported SAR for DSSS\* the ratio of OFDM to DSSS(Max output power) is  $0.816 \times 0.31 = 0.253$  W/Kg  $< 1.2$  W/Kg. so the OFDM SAR test is not required.

##### **For ANT2**

**Note:** 802.11b DSSS SAR test is required. The highest reported SAR for DSSS\* the ratio of OFDM to DSSS(Max output power) is  $1.294 \times 0.21 = 0.272$  W/Kg  $< 1.2$  W/Kg. so the OFDM SAR test is not required.

**According to KDB 865664 D01v01r04 section 2.8.1, repeated measurements are required following the procedures as below:**

Repeated measurement is not required when the original highest measured SAR is  $< 0.80 \text{ W/kg}$ ; steps 2) through 4) do not apply.

When the original highest measured SAR is  $\geq 0.80 \text{ W/kg}$ , repeat that measurement once.

Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is  $> 1.20$  or when the original or repeated measurement is  $\geq 1.45 \text{ W/kg}$  (~ 10% from the 1-g SAR limit).

Perform a third repeated measurement only if the original, first or second repeated measurement is  $\geq 1.5 \text{ W/kg}$  and the ratio of largest to smallest SAR for the original, first and second repeated measurements is  $> 1.20$ .

**Repeated SAR**

**NO Repeated SAR**

## 14.5 Simultaneous Transmission SAR Analysis.

## List of Mode for Simultaneous Multi-band Transmission:

| No. | Configurations                             | Head SAR | Body-worn SAR | Hotspot SAR |
|-----|--------------------------------------------|----------|---------------|-------------|
| 1   | WCDMA (Data) + WLAN ANT1+ WLAN ANT2 (Data) | -        | Yes           | Yes         |
| 2   | LTE (Data) + WLAN ANT1+ WLAN ANT2 (Data)   | -        | Yes           | Yes         |

## Remark:

1. WCDMA/LTE share the same antenna, and cannot transmit simultaneously.

### Body SAR Simultaneous

#### WWAN and 2.4G WIFI ANT1 and 2.4G WIFI ANT2

| Position | WWAN (maximum)   |                   | 2.4G WIFI ANT1    | 2.4G WIFI ANT2    | Summed SAR (W/kg) |
|----------|------------------|-------------------|-------------------|-------------------|-------------------|
|          | Band             | Scaled SAR (W/kg) | Scaled SAR (W/kg) | Scaled SAR (W/kg) |                   |
| Front    | WCDMA Band II    | 0.12              | 0.17              | 0.13              | 0.42              |
| Back     |                  | 0.36              | 0.31              | 0.21              | 0.88              |
| Right    |                  | 0.27              | 0.24              | --                | 0.51              |
| Left     |                  | 0.26              | --                | 0.18              | 0.44              |
| Top      |                  | 0.34              | --                | --                | 0.34              |
| Bottom   |                  | --                | --                | --                | --                |
| Front    | WCDMA Band V     | 0.09              | 0.17              | 0.13              | 0.39              |
| Back     |                  | 0.32              | 0.31              | 0.21              | 0.84              |
| Right    |                  | 0.23              | 0.24              | --                | 0.47              |
| Left     |                  | 0.20              | --                | 0.18              | 0.38              |
| Top      |                  | 0.29              | --                | --                | 0.29              |
| Bottom   |                  | --                | --                | --                | --                |
| Front    | LTE BAND 2(1RB)  | 0.23              | 0.17              | 0.13              | 0.53              |
| Back     |                  | 0.48              | 0.31              | 0.21              | 1                 |
| Right    |                  | 0.39              | 0.24              | --                | 0.63              |
| Left     |                  | 0.39              | --                | 0.18              | 0.57              |
| Top      |                  | 0.43              | --                | --                | 0.43              |
| Bottom   |                  | --                | --                | --                | --                |
| Front    | LTE BAND 4(1RB)  | 0.09              | 0.17              | 0.13              | 0.39              |
| Back     |                  | 0.27              | 0.31              | 0.21              | 0.79              |
| Right    |                  | 0.17              | 0.24              | --                | 0.41              |
| Left     |                  | 0.17              | --                | 0.18              | 0.35              |
| Top      |                  | 0.23              | --                | --                | 0.23              |
| Bottom   |                  | --                | --                | --                | --                |
| Front    | LTE BAND 5(1RB)  | 0.10              | 0.17              | 0.13              | 0.4               |
| Back     |                  | 0.28              | 0.31              | 0.21              | 0.8               |
| Right    |                  | 0.19              | 0.24              | --                | 0.43              |
| Left     |                  | 0.18              | --                | 0.18              | 0.36              |
| Top      |                  | 0.25              | --                | --                | 0.25              |
| Bottom   |                  | --                | --                | --                | --                |
| Front    | LTE BAND 12(1RB) | 0.03              | 0.17              | 0.13              | 0.33              |
| Back     |                  | 0.13              | 0.31              | 0.21              | 0.65              |
| Right    |                  | 0.07              | 0.24              | --                | 0.31              |
| Left     |                  | 0.07              | --                | 0.18              | 0.25              |
| Top      |                  | 0.10              | --                | --                | 0.1               |
| Bottom   |                  | --                | --                | --                | --                |
| Front    | LTE BAND 66(1RB) | 0.20              | 0.17              | 0.13              | 0.5               |
| Back     |                  | 0.41              | 0.31              | 0.21              | 0.93              |
| Right    |                  | 0.32              | 0.24              | --                | 0.56              |
| Left     |                  | 0.29              | --                | 0.18              | 0.47              |
| Top      |                  | 0.35              | --                | --                | 0.35              |
| Bottom   |                  | --                | --                | --                | --                |

## 15. SAR MEASUREMENT REFERENCE

### References

1. FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”
2. IEEE Std. C95.1-2005, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300GHz”, 2005
3. IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, June 2013
4. IEC 62209-2, “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices—Human models, instrumentation, and procedures – Part 2: Procedure to determine the specific absorption rate(SAR) for wireless communication devices used in close proximity to the human body(frequency range of 30MHz to 6GHz)”, April 2010
5. FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 23<sup>th</sup>, 2015
6. FCC KDB 941225 D01 v03r01, “3G SAR Measurement Procedures”, Oct 23<sup>th</sup>, 2015
7. FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 16<sup>th</sup>, 2015
8. FCC KDB 941225 D06 v02r01, “SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities”, Oct 23<sup>th</sup>, 2015
9. FCC KDB865664 D01 v01r04, “SAR Measurement Requirements 100MHz to 6GHz”, Aug 7<sup>th</sup>, 2015
10. FCC KDB865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations ”, Oct 23<sup>th</sup>, 2015
11. FCC KDB648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 23<sup>th</sup>, 2015
12. FCC KDB 248227 D01 v02r02, SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters, Oct 23<sup>th</sup>, 2015.

## 16. MAXIMUM SAR MEASUREMENT PLOTS

### Plot 1

Date/Time: 2026/1/19 16:25:33

Communication System: UID 0, WCDMA (0); Communication System Band: WCDMA BAND2 RMC;  
Frequency: 1880 MHz; Communication System PAR: 0 dB; PMF: 1.12202e-005  
Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.356$  S/m;  $\epsilon_r = 40.48$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

#### DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(5, 5, 5) @ 1880 MHz; Calibrated: 2025/8/15  
Modulation Compensation:  
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$   
Electronics: DAE4 Sn881; Calibrated: 2025/10/15  
Phantom: SAM 1; Type: QD000P40CD; Serial: TP:1119  
DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

KA26010810102 FCC ID Wireless router/Back/Area Scan (10x14x1): Measurement grid:  $dx=10$ mm,  $dy=10$ mm

Maximum value of SAR (measured) = 0.349 W/kg

KA26010810102 FCC ID Wireless router/Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 14.78 V/m; Power Drift = 0.21 dB

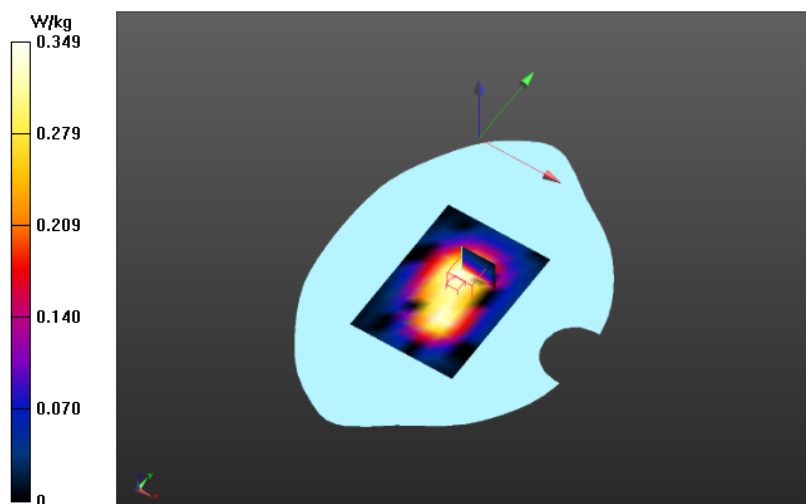
Peak SAR (extrapolated) = 0.560 W/kg

SAR(1 g) = 0.321 W/kg; SAR(10 g) = 0.168 W/kg

Smallest distance from peaks to all points 3 dB below = 4 mm

Ratio of SAR at M2 to SAR at M1 = 61.6%

Maximum value of SAR (measured) = 0.362 W/kg



## Plot 2

Date/Time: 2026/2/27 19:37:03

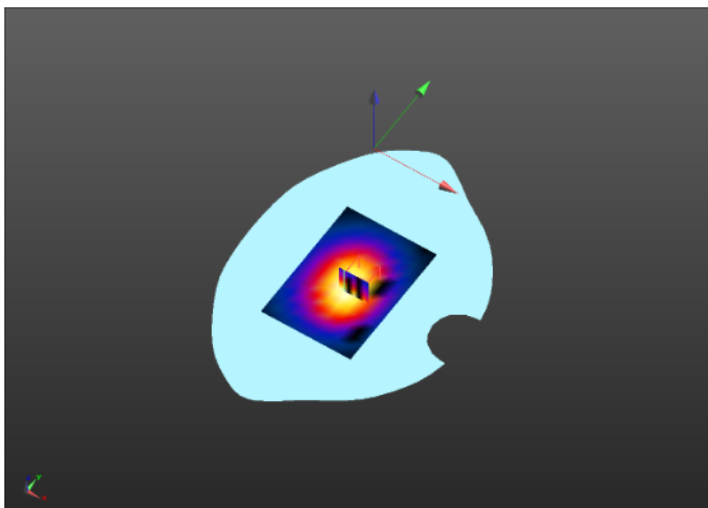
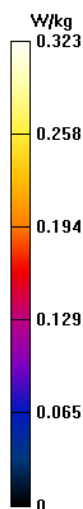
Communication System: UID 0, WCDMA (0); Communication System Band: WCDMA BAND5 RMC;  
Frequency: 836.4 MHz; Communication System PAR: 0 dB; PMF: 1.12202e-005  
Medium parameters used:  $f = 836.4$  MHz;  $\sigma = 0.939$  S/m;  $\epsilon_r = 42.158$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(6.09, 6.09, 6.09) @ 836.4 MHz; Calibrated: 2025/8/15  
Modulation Compensation:  
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$   
Electronics: DAE4 Sn881; Calibrated: 2025/10/15  
Phantom: SAM 1; Type: QD000P40CD; Serial: TP:1119  
DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

KA26010810102 FCC ID Wireless router/Back/Area Scan (10x14x1): Measurement grid:  $dx=10$ mm,  
 $dy=10$ mm  
Maximum value of SAR (measured) = 0.323 W/kg

KA26010810102 FCC ID Wireless router/Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid:  $dx=5$ mm,  
 $dy=5$ mm,  $dz=5$ mm  
Reference Value = 18.76 V/m; Power Drift = 0.02 dB  
Peak SAR (extrapolated) = 0.845 W/kg  
SAR(1 g) = 0.313 W/kg; SAR(10 g) = 0.196 W/kg  
Smallest distance from peaks to all points 3 dB below = 13.2 mm  
Ratio of SAR at M2 to SAR at M1 = 77.4%  
Maximum value of SAR (measured) = 0.319 W/kg



## Plot 3

Date/Time: 2026/1/19 10:17:48

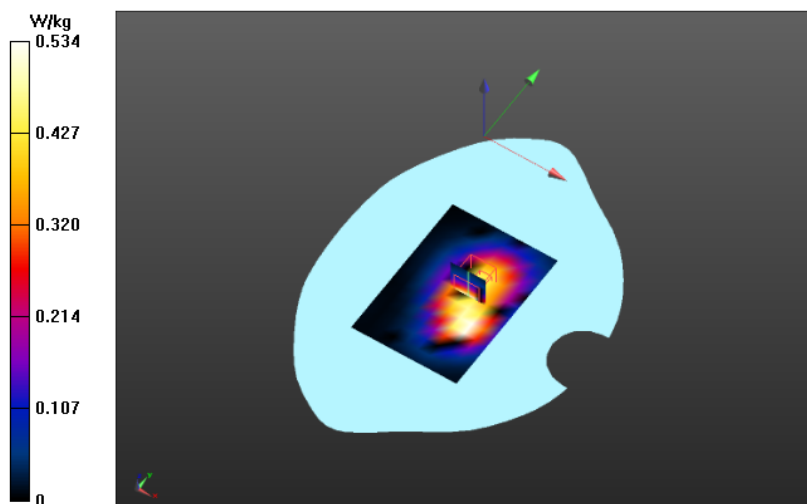
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz); Frequency: 1900 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.402$  S/m;  $\epsilon_r = 40.614$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(5, 5, 5) @ 1900 MHz; Calibrated: 2025/8/15  
Modulation Compensation:  
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0$ , 32.0  
Electronics: DAE4 Sn881; Calibrated: 2025/10/15  
Phantom: SAM 1; Type: QD000P40CD; Serial: TP:1119  
DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

KA26010810102 FCC ID Wireless router/Back/Area Scan (10x14x1): Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 0.534 W/kg

KA26010810102 FCC ID Wireless router/Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 0.8490 V/m; Power Drift = 0.17 dB  
Peak SAR (extrapolated) = 1.07 W/kg  
SAR(1 g) = 0.430 W/kg; SAR(10 g) = 0.250 W/kg  
Smallest distance from peaks to all points 3 dB below = 14.1 mm  
Ratio of SAR at M2 to SAR at M1 = 61.3%  
Maximum value of SAR (measured) = 0.460 W/kg



## Plot 4

Date/Time: 2026/1/18 11:08:43

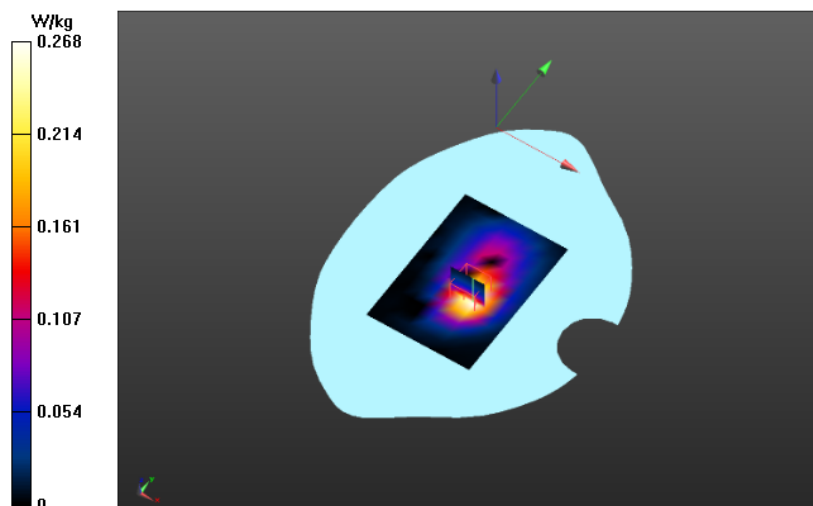
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1720 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 1720$  MHz;  $\sigma = 1.313$  S/m;  $\epsilon_r = 38.368$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(5.29, 5.29, 5.29) @ 1720 MHz; Calibrated: 2025/8/15  
Modulation Compensation:  
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$   
Electronics: DAE4 Sn881; Calibrated: 2025/10/15  
Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1410  
DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

KA26010810102 FCC ID Wireless router/Back/Area Scan (10x14x1): Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 0.268 W/kg

KA26010810102 FCC ID Wireless router/Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 12.30 V/m; Power Drift = 0.09 dB  
Peak SAR (extrapolated) = 0.729 W/kg  
SAR(1 g) = 0.264 W/kg; SAR(10 g) = 0.121 W/kg  
Smallest distance from peaks to all points 3 dB below = 14.8 mm  
Ratio of SAR at M2 to SAR at M1 = 56.2%  
Maximum value of SAR (measured) = 0.278 W/kg



## Plot 5

Date/Time: 2026/1/23 18:49:07

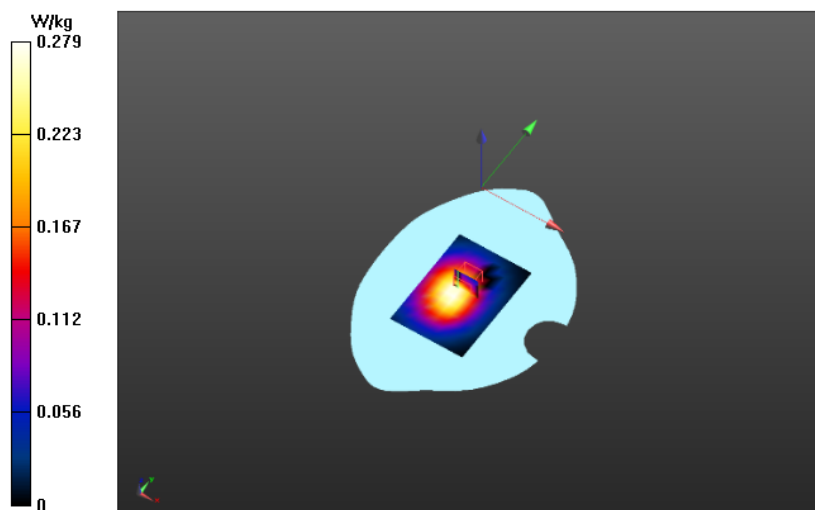
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 5, E-UTRA/FDD (824.0 - 849.0 MHz); Frequency: 829 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used (interpolated):  $f = 829$  MHz;  $\sigma = 0.845$  S/m;  $\epsilon_r = 40.571$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

### DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(6.09, 6.09, 6.09) @ 829 MHz; Calibrated: 2025/8/15  
Modulation Compensation:  
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$   
Electronics: DAE4 Sn881; Calibrated: 2025/10/15  
Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1410  
DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

KA26010810102 FCC ID Wireless router/Back/Area Scan (10x14x1): Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 0.279 W/kg

KA26010810102 FCC ID Wireless router/Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 15.63 V/m; Power Drift = -0.00 dB  
Peak SAR (extrapolated) = 0.466 W/kg  
SAR(1 g) = 0.242 W/kg; SAR(10 g) = 0.127 W/kg  
Smallest distance from peaks to all points 3 dB below = 12.5 mm  
Ratio of SAR at M2 to SAR at M1 = 79.2%  
Maximum value of SAR (measured) = 0.257 W/kg



## Plot 6

Date/Time: 2026/1/16 15:58:47

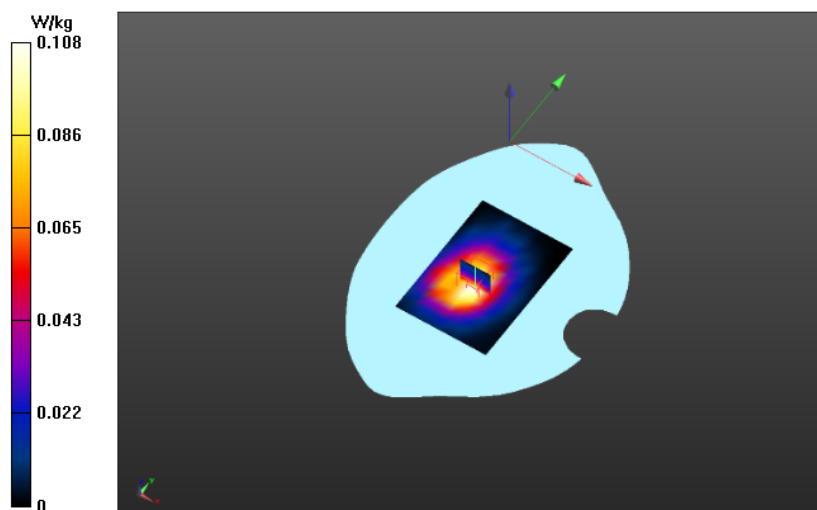
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 12, E-UTRA/FDD (698.0 - 716.0 MHz); Frequency: 711 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used (interpolated):  $f = 711$  MHz;  $\sigma = 0.851$  S/m;  $\epsilon_r = 39.983$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(6.35, 6.35, 6.35) @ 711 MHz; Calibrated: 2025/8/15  
Modulation Compensation:  
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$   
Electronics: DAE4 Sn881; Calibrated: 2025/10/15  
Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1410  
DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

KA26010810102 FCC ID Wireless router/Back/Area Scan (10x14x1): Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 0.108 W/kg

KA26010810102 FCC ID Wireless router/Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 8.998 V/m; Power Drift = 0.19 dB  
Peak SAR (extrapolated) = 0.178 W/kg  
SAR(1 g) = 0.109 W/kg; SAR(10 g) = 0.072 W/kg  
Smallest distance from peaks to all points 3 dB below = 16.1 mm  
Ratio of SAR at M2 to SAR at M1 = 65.5%  
Maximum value of SAR (measured) = 0.119 W/kg



## Plot 7

Date/Time: 2026/1/27 14:56:43

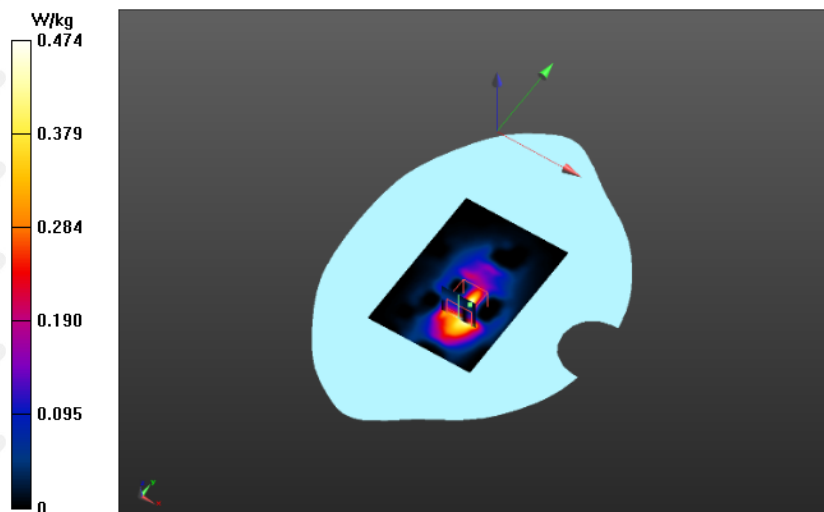
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 66, E-UTRA/FDD (1710-1780MHz); Frequency: 1720 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 1720$  MHz;  $\sigma = 1.313$  S/m;  $\epsilon_r = 40.368$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(5.29, 5.29, 5.29) @ 1720 MHz; Calibrated: 2025/8/15  
Modulation Compensation:  
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$   
Electronics: DAE4 Sn881; Calibrated: 2025/10/15  
Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1410  
DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

KA26010810102 FCC ID Wireless router/Back/Area Scan (91x131x1): Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm  
Maximum value of SAR (interpolated) = 0.474 W/kg

KA26010810102 FCC ID Wireless router/Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 11.17 V/m; Power Drift = 0.18 dB  
Peak SAR (extrapolated) = 1.05 W/kg  
SAR(1 g) = 0.382 W/kg; SAR(10 g) = 0.172 W/kg  
Smallest distance from peaks to all points 3 dB below = 13.9 mm  
Ratio of SAR at M2 to SAR at M1 = 55.6%  
Maximum value of SAR (measured) = 0.403 W/kg



## Plot 8

Date/Time: 2026/2/28 17:52:32

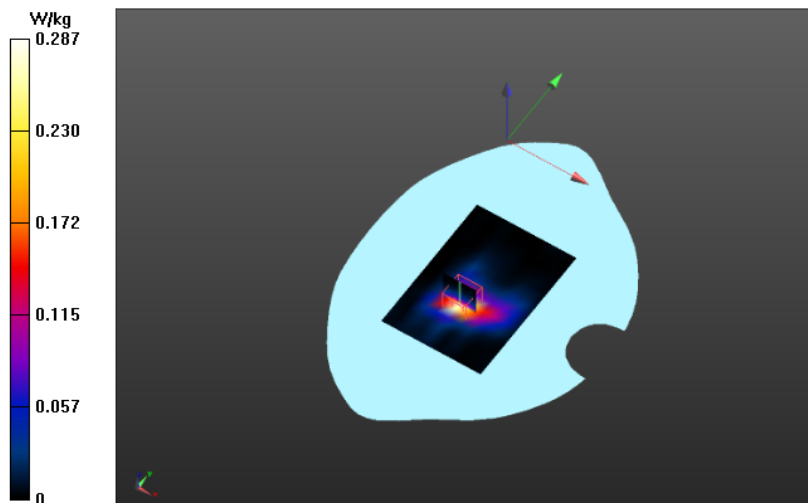
Communication System: UID 0, 2.4G WIFI (0); Communication System Band: 2.4G WIFI 11B; Frequency: 2412 MHz; Communication System PAR: 0 dB; PMF: 1.12202e-005  
Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.759$  S/m;  $\epsilon_r = 37.912$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

## DASY Configuration:

Probe: ES3DV3 - SN3089; ConvF(4.58, 4.58, 4.58) @ 2412 MHz; Calibrated: 2025/8/15  
Modulation Compensation:  
Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.0, 32.0$   
Electronics: DAE4 Sn881; Calibrated: 2025/10/15  
Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1410  
DASY52 52.10.3(1513); SEMCAD X 14.6.13(7474)

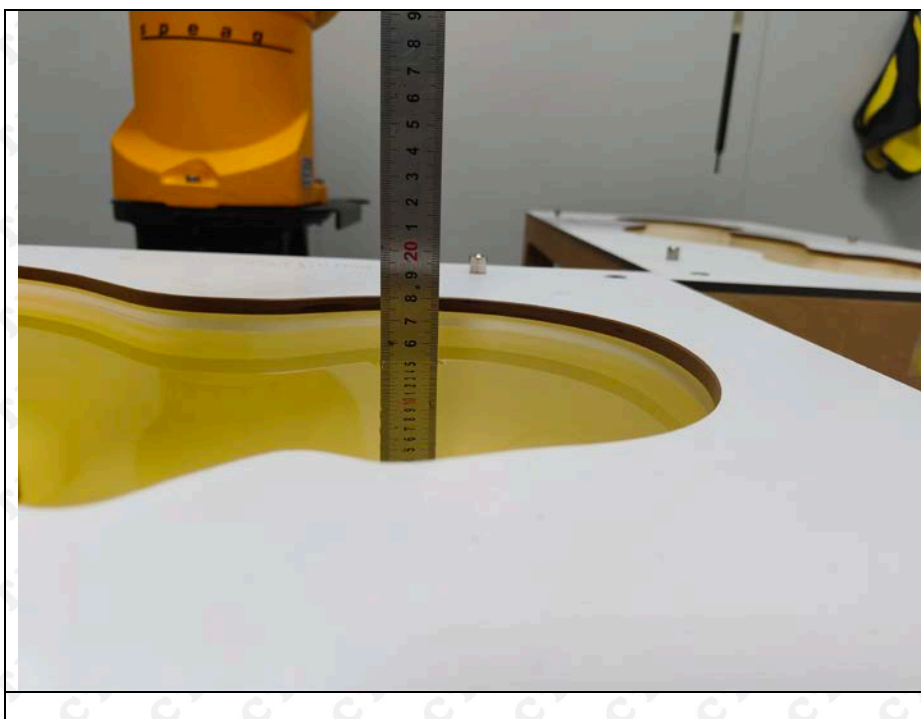
KA26010810102 FCC ID Wireless router/Back/Area Scan (10x14x1): Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 0.287 W/kg

KA26010810102 FCC ID Wireless router/Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 3.756 V/m; Power Drift = 0.15 dB  
Peak SAR (extrapolated) = 0.815 W/kg  
SAR(1 g) = 0.297 W/kg; SAR(10 g) = 0.122 W/kg  
Smallest distance from peaks to all points 3 dB below = 10.2 mm  
Ratio of SAR at M2 to SAR at M1 = 40.5%  
Maximum value of SAR (measured) = 0.343 W/kg

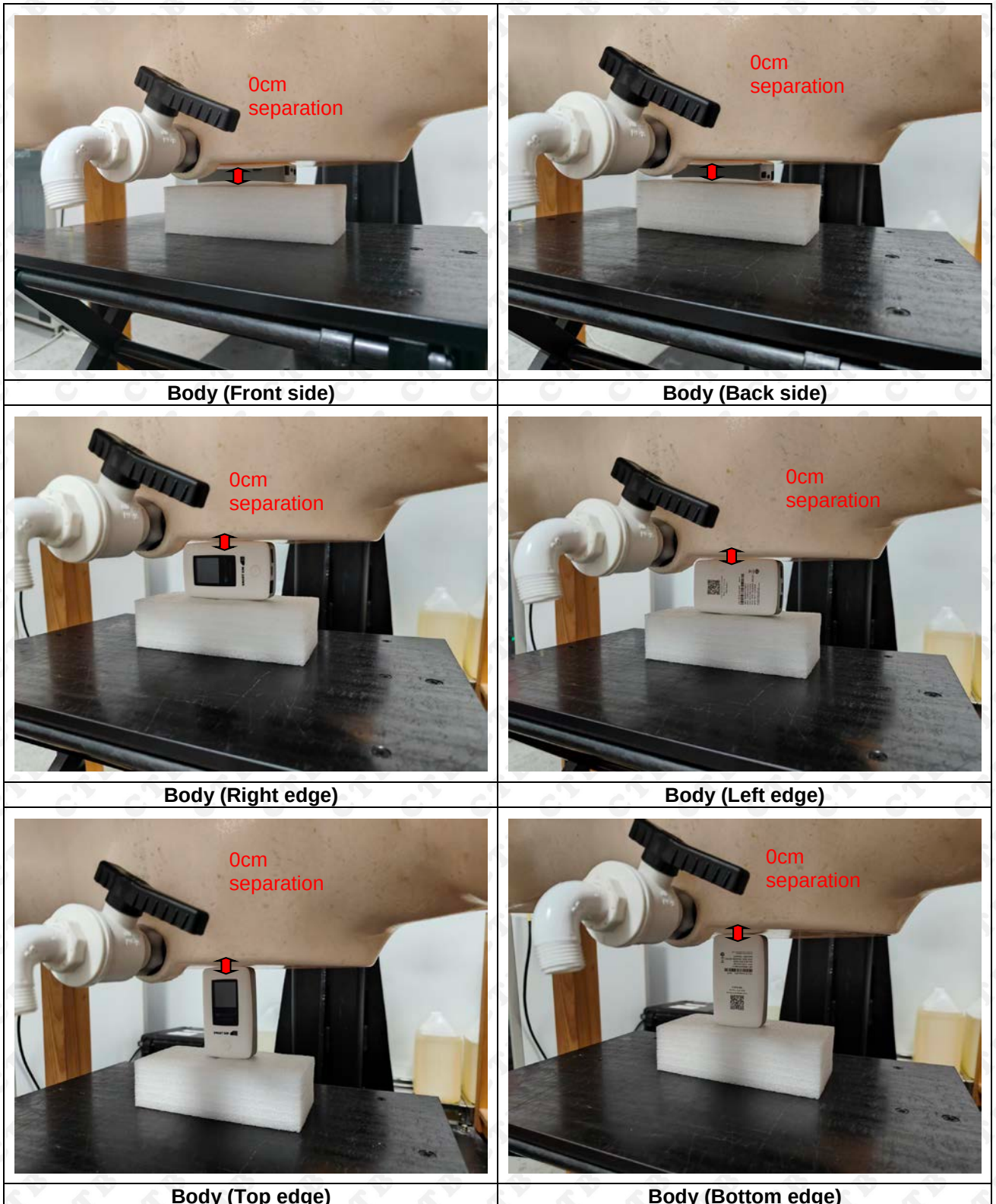


## 17. CALIBRATION REPORTS-PROBE AND DIPOLE

The Probe, Dipole and DAE calibration please refer to the Attachment.

**18. SAR SYSTEM PHOTOS**

## 19. SETUP PHOTO



## 20. EUT PHOTOS

Front Side



Back Side



=====End of report=====