

FCC SAR Compliance Test Report

For

ORAIMO TECHNOLOGY LIMITED

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

FOTAN NT HONGKONG

Model: OKW-800

Test Engineer: Liu Yuhao *Liu Yuhao*

Report Number: WSCT-ANAB-R&E260500046A-SAR

Report Date: 17 June 2026

FCC ID: 2AXYP-OKW-800

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Modified History

REV.	Modification Description	Issued Date	Remark
REV.1.0	Initial Test Report Release	17 June 2026	Li Huaibi

1 General information

1.1 Notes

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

1.2 Application details

Date of receipt of test item: 2026-04-29
Start of test: 2026-05-20
End of test: 2026-06-15

1.3 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for OKW-800 is as below:

Band	MAX Reported SAR(W/kg)	
	10g Extremity SAR(Separation 0mm)	1g Head SAR (Separation 10mm)
GSM850	1.000	0.191
GSM1900	1.138	0.294
LTE Band 2	2.119	0.352
LTE Band 4	0.894	0.557
LTE Band 5	0.967	0.147
LTE Band 7	0.168	0.053
LTE Band 12	0.482	0.022
LTE Band 17	0.317	0.028
LTE Band 38	0.479	0.138
LTE Band 41	0.534	0.137
LTE Band 66	0.515	0.213
Max Head SAR Level(s) Measured: (Limit: 1.6W/Kg):	0.557 W/kg 1g Head SAR	
Max 10g Extremity SAR Level(s) Measured: (Limit: 4W/Kg):	2.119 W/kg 10g Extremity SAR	

NOTE:

- The device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits of 1.6 W/Kg as averaged over any 1g tissue(10g Extremity SAR limits of 4 W/Kg) according to the FCC rule the ANSI/IEEE C95.1:2005, the INCRP Report Number 86 for uncontrolled environment, according to the Industry Canada Radio Standards Specification RSS-102 for General Population /Uncontrolled exposure, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013.
- EUT does not support multiple transmitters operating simultaneously, so there is no need to consider the increase in TER due to synchronous transmission.

1.4 EUT Information

Device Information:	
Product Type:	Smart Watch
Model:	OKW-800
Trade Name:	oraimo
Software version:	20260424_1543
Hardware version:	USD13
IMEL Number:	866030071084735
Device Type:	Portable device
Exposure Category:	uncontrolled environment / general population
Production Unit or Identical Prototype:	Production Unit
Antenna Type :	Integral Antenna
Device Operating Configurations:	
Supporting Mode(s) :	GSM850, PCS 1900 LTE Band 2/ LTE Band 4/ LTE Band 5 LTE Band 7/LTE Band 12/ LTE Band 17 LTE Band 38/LTE Band 41/ LTE Band 66
Modulation:	GSM/GPRS: GMSK LTE: QPSK/16QAM
Operating Frequency Range(s) :	GSM850: 824-849MHz (TX), 869-894MHz (RX); PCS1900: 1850-1910MHz (TX), 1930-1990MHz (RX); LTE Band2: 1850-1910MHz (TX), 1930-1990MHz (RX); LTE Band4: 1710-1755MHz (TX), 2110-2155MHz (RX); LTE Band5: 824-849MHz (TX), 869-894MHz (RX); LTE Band7: 2500-2570MHz (TX), 2620-2690MHz (RX); LTE Band12: 699-716MHz (TX), 729-746MHz (RX); LTE Band17: 704-716MHz (TX), 734-746MHz (RX); LTE Band38: 2570-2620MHz(TX), 2570-2620MHz(RX); LTE Band41: 2535-2655 MHz(TX), 2535-2655 MHz(RX); LTE Band66:1710-1780 MHz(TX), 2110-2200 MHz(RX);

Antenna gain:	GSM 850/LTE B5/: -5.35dbi PCS 1900/LTE B2: -4.97dbi LTE B4:-7.31dbi LTE B66: -6.06dbi LTE B7/B41/B38: -1.78dBi LTE B12/B17: -11.34dbi
Radiated Power (EIRP/ERP) Limit	GSM 850/WCDMA B5/LTE B5: 7.00W(38.45dBm) PCS 1900/WCDMA B2/LTE B2: 2.00W(33.01dBm) WCDMA B4/LTE B4/ LTE B66: 1.00W(30.00dBm) LTE B7/LTE B38/LTE B41: 2.00W(33.01dBm) LTE B12/B17: 3.00W(34.77dBm)
Power Source:	Rechargeable Li-ion Polymer Battery: JL 652830 3.8V 800mAh 3.04Wh Limited Charge Voltage:4.4V

- Note:
1. The EUT is a smartwatch featuring a single SIM card slot, which supports both GSM and LTE and shares the same transceiver; therefore, this report focuses on testing the SIM.
 2. The antenna gain provided by the applicant, and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.
 3. N/A stands for no applicable.
 4. Antenna gain provided by the customer.

2 Testing laboratory

Test Site	World Standardization Certification & Testing Group (Shenzhen) Co., Ltd.
Laboratory	Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China
Tel:	+86-755-26996192
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3 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025:2017

USA	ANAB (Certificate Number: AT-3951)
China	CNAS (Registration Number: L3732)
Canada	ISED (CAB identifier: CN0178)

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

4 Test Environment

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

5 Applicant and Manufacturer

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

6 Test standards:

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

6.1 RF exposure limits

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR* (Head)	1.60W/Kg	8.00 W/Kg
Whole Body SAR	0.08W/Kg	0.4W/Kg
Spatial Peak SAR*** (Hands/Feet/Ankle/Wrist)	4.00 W/Kg	20.00 W/Kg

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

Notes:

- * The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
- ** The Spatial Average value of the SAR averaged over the whole body.
- *** The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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

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

6.2 SAR Definition

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

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

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

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

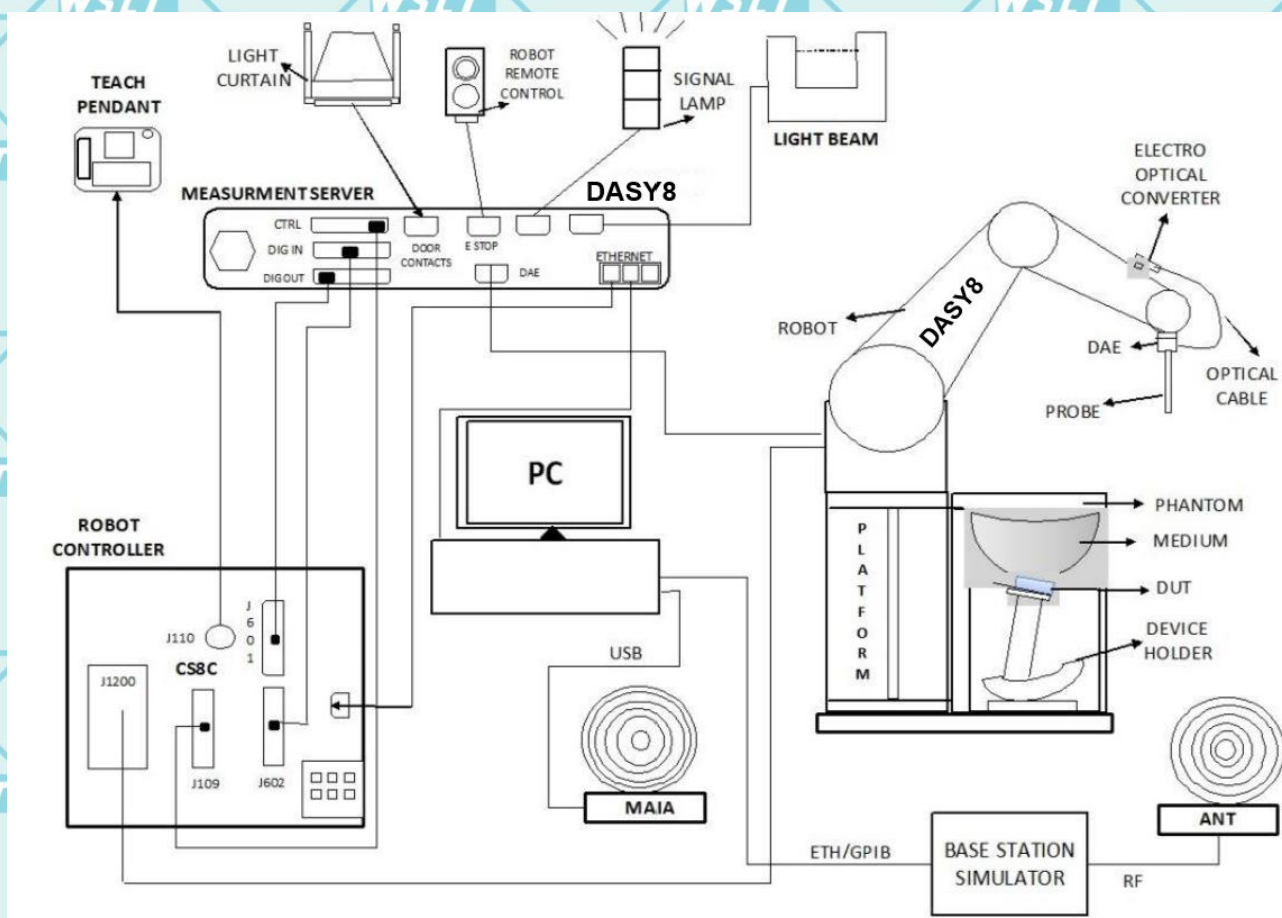
where:

- σ = conductivity of the tissue (S/m)
- ρ = mass density of the tissue (kg/m³)
- E = rms electric field strength (V/m)

7 SAR Measurement System

7.1 The Measurement System

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



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

7.2 Robot

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

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



7.3 Probe

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

For the measurements the Specific Dosimetric E-Field Probe EX3DV4 with following specifications is used



Frequency: 4MHz – 10GHz ;

Linearity: ± 0.2 dB (30MHz – 10GHz)

Dynamic Range: 10 μ W/g $\rightarrow$ 100 mW/g

Linearity: ± 0.2 dB (noise: typically <1 μ W/g)

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

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

7.4 DAE

DAE4ip– Data Acquisition Electronics 4 with Integrated Power

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

Performance:

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



7.5 Phantom

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



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

7.6 Device Holder

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

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



Device holder

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

7.7 SAR Scan General Requirement

According to kdb865664 D01 v01r04:

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

		≤ 3 GHz	>3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		5 mm ± 1 mm	$\frac{1}{2}\delta\ln(2)$ mm ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location		30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx Area, Δy Area		≤ 2 GHz: ≤ 15 mm 2-3 GHz: ≤ 12 mm	3- 4 GHz: ≤ 12 mm 4- 6 GHz: ≤ 10 mm
Maximum zoom scan spatial resolution: Δx Zoom, Δy Zoom		≤ 2 GHz: ≤ 8 mm 2-3 GHz: ≤ 5 mm*	3- 4 GHz: ≤ 5 mm* 4- 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: Δz Zoom (n)	≤ 5 mm	3- 4 GHz: ≤ 4 mm 4- 5 GHz: ≤ 3 mm 5- 6 GHz: ≤ 2 mm
	graded grid Δz Zoom (1): between 1 st two points closest to phantom surface	≤ 4 mm	3-4 GHz: ≤ 3 mm 4-5 GHz: ≤ 2.5 mm 5-6 GHz: ≤ 2 mm
	Δz Zoom (n>1): between subsequent points	≤ 1.5 · Δz Zoom (n-1) mm	
Minimum zoom scan volume	x, y, z	≥ 30 mm	3 -4 GHz: ≥ 28 mm 4- 5 GHz: ≥ 25 mm 5- 6 GHz: ≥ 22 mm

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

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

7.8 Measurement procedure

Power Drift :

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

Area scan:

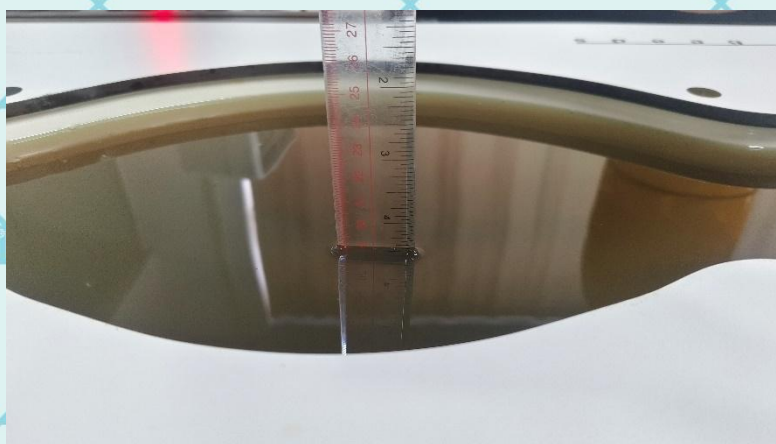
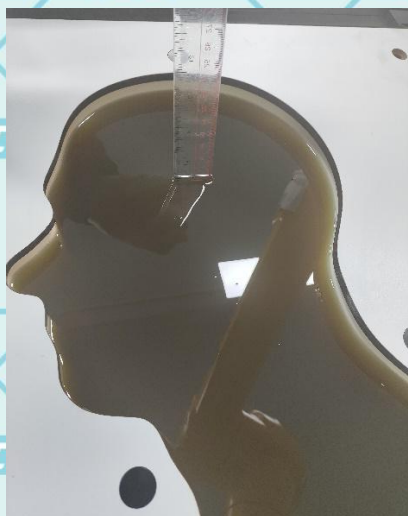
All antennas and radiating structures that may contribute to the measured SAR or influence the SAR distribution must be included in the area scan. The areas of the transmitter(s), antenna(s) and host device, when projected onto the phantom, must be within the area scan measurement region. The area scan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

Zoom Scan:

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

7.9 Tissue simulating liquids: dielectric properties

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The simulating liquids should be checked at the beginning of a series of SAR measurements to determine if the dielectric parameters are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within $\pm 10\%$ of the target values.



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

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

7.10 Tissue simulating liquids: parameters

Used Target Frequency	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
	ϵ_r (+/-10%)	σ (S/m) (+/-10%)	ϵ_r	σ (S/m)		
750MHz Head	41.90 (37.71~46.09)	0.89 (0.81~0.97)	43.90	0.885	21.6°C	2026-06-05
835MHz Head	41.50 (37.35~45.65)	0.91 (0.82~1.00)	43.60	0.914	21.6°C	2026-06-08
1750MHz Head	40.10 (36.09~44.11)	1.37 (1.24~1.50)	41.90	1.34	21.6°C	2026-06-10
1900MHz Head	40.00 (36.00~44.00)	1.40 (1.26~1.54)	41.70	1.44	21.6°C	2026-06-12
2450MHz Head	39.20 (35.28~43.12)	1.80 (1.62~1.98)	41.00	1.82	21.6°C	2026-06-15
2550MHz Head	39.10 (35.19~43.01)	1.91 (1.72~2.1)	40.80	1.90	21.6°C	2026-06-15
2600MHz Head	39.00 (35.10~42.90)	1.96 (1.77~2.15)	40.70	1.94	21.6°C	2026-06-15

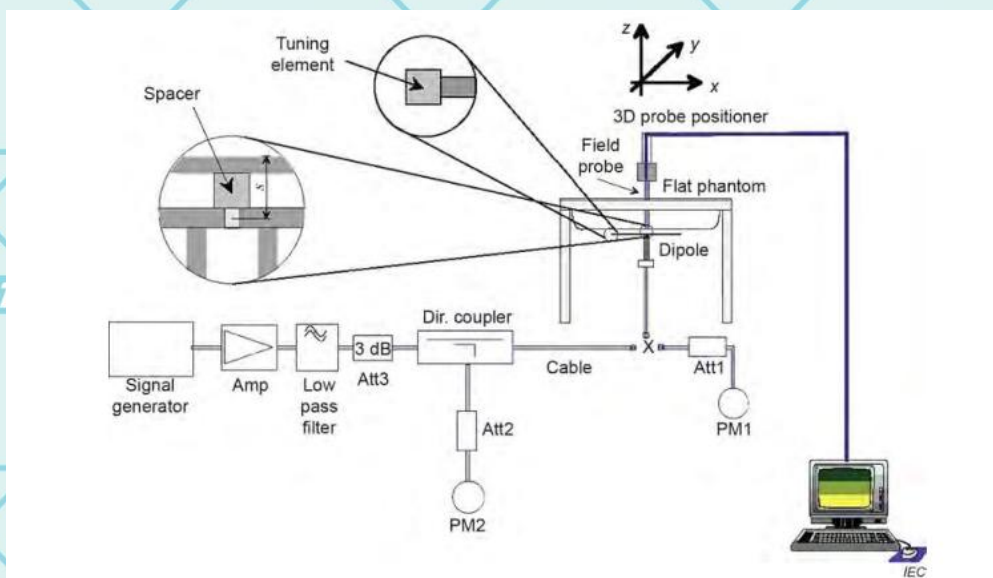
ϵ_r = Relative permittivity, σ = Conductivity

8 System Check

8.1 System check procedure

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

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



8.2 System check results

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

System Check	Target SAR (1W) (+/-10%)		Measured SAR (Normalized to 1W)		Liquid Temp.	Test Date
	1-g (W/kg)	10-g (W/kg)	1-g (W/kg)	10-g (W/kg)		
D750V3 Body	8.46 (7.62~9.30)	5.70 (5.13~6.27)	8.68	5.74	21.6°C	2026-06-05
D835V2 Body	9.68 (8.72~10.64)	6.44 (5.80~7.08)	9.89	6.49	21.6°C	2026-06-08
D1750V2 Body	36.40 (32.76~40.04)	19.60 (17.64~21.56)	35.60	19.50	21.6°C	2026-06-10
D1900V2 Body	39.70 (35.73~43.67)	21.00 (18.90~23.10)	40.00	21.20	21.6°C	2026-06-12
D2450V2 Body	52.70 (47.16~57.64)	24.00 (21.60~26.40)	53.60	25.20	21.6°C	2026-06-15
D2550V2 Body	54.10 (48.69~59.51)	24.70 (22.23~27.17)	54.70	25.50	21.6°C	2026-06-15
D2600V2 Body	55.90 (49.77~60.83)	24.60 (22.14~27.06)	55.90	25.60	21.6°C	2026-06-15

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

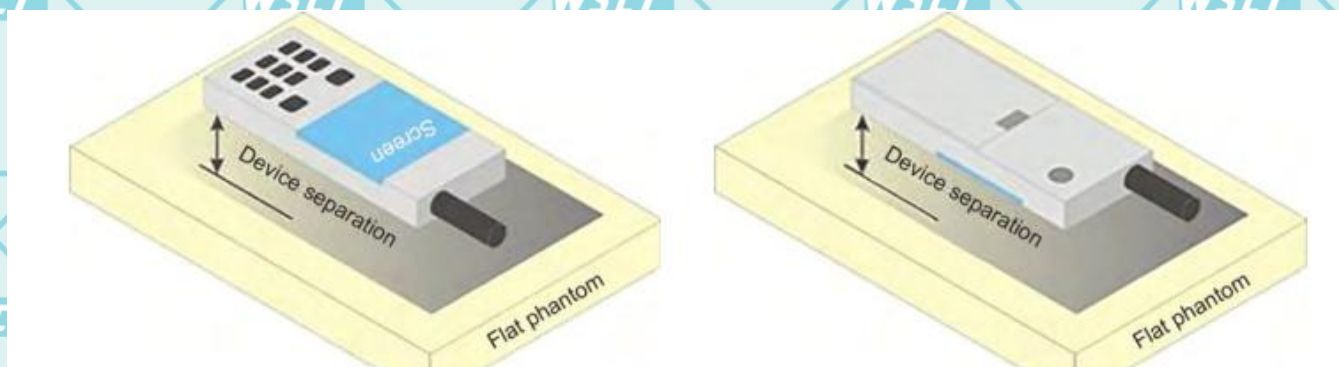
2. The actual forward power output to the dipole antenna is 20dbm(100mw), so the measured value differs ten times from the table

9 Test Position Configurations

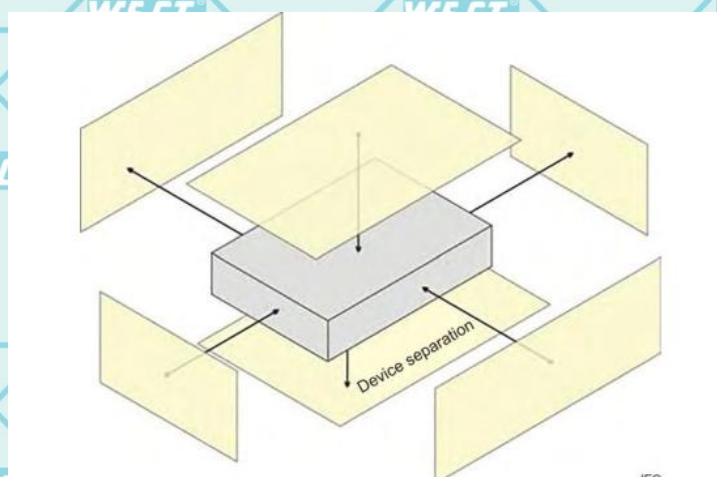
9.1 Body Exposure Condition

According to 447498 D04: Devices that support transmission while used with body-worn accessories must be tested for SAR compliance related to each body-worn condition of use. SAR evaluation is required for body-worn accessories supplied with the device they are attached to.

The general informing principle is that the selected test configurations must conservatively capture the various body-worn accessory use conditions expected by users. For instance, devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, must be tested for SAR compliance using a conservative minimum test separation distance for all use conditions required by the device.



Test positions for body-worn devices



Possible test positions for a generic device

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

10 SAR Test Configuration

10.1 GSM Test Configurations

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

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

10.2 UMTS Test Configuration

1) Output Power Verification

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

2) WCDMA

a. Head SAR Measurements

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

b. Body SAR Measurements

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

3) HSDPA

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

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

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

Sub-test ^o	β_c ^o	β_d ^o	β_d (SF) ^o	β_c / β_d ^o	β_{hs} (1) ^o	CM(dB)(2) ^o	MPR (dB) ^o
1 ^o	2/15 ^o	15/15 ^o	64 ^o	2/15 ^o	4/15 ^o	0.0 ^o	0 ^o
2 ^o	12/15(3) ^o	15/15(3) ^o	64 ^o	12/15(3) ^o	24/15 ^o	1.0 ^o	0 ^o
3 ^o	15/15 ^o	8/15 ^o	64 ^o	15/8 ^o	30/15 ^o	1.5 ^o	0.5 ^o
4 ^o	15/15 ^o	4/15 ^o	64 ^o	15/4 ^o	30/15 ^o	1.5 ^o	0.5 ^o

Note 1: ΔACK , $\Delta NACK$ and $\Delta CQI = 8$ $A_{hs} = \beta_{hs} / \beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$

Note 2: CM=1 for $\beta_c / \beta_d = 12/15$, $\beta_{hs} / \beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 3: For subtest 2 the β_c / β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$

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

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

4)HSUPA

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

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

10.3 LTE Test Configuration

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

1) Spectrum Plots for RB configurations

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

2) MPR

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

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

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

Modulation	Channel bandwidth / Transmission bandwidth (RB)						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

3) A-MPR

A-MPR(Additional MPR) has been disabled for all SAR tests by using Network Signalling Value of “NS_01” on the base station simulator.

4) LTE procedures for SAR testing

A) Largest channel bandwidth standalone SAR test requirements

i) QPSK with 1 RB allocation

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

ii) QPSK with 50% RB allocation

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

iii) QPSK with 100% RB allocation

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

iv) Higher order modulations

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

B) Other channel bandwidth standalone SAR test requirements

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

5) TDD LTE test configuration

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

10.4 Wi-Fi Test Configuration

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

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

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

Notes:

√ = "default test channels"

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

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

802.11 Test Channels per FCC Requirements

10.5 WiFi 2.4G SAR Test Procedures

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

A) 802.11b DSSS SAR Test Requirements

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

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

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

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

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

C) SAR Test Requirements for OFDM configurations

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

11 Detailed Test Results

11.1 Conducted Power measurements

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

11.1.1 Conducted Power of GSM

Mode: GSM850		Maximum Tune-up(dBm)	Burst Average Power (dBm)			Division Factors	Frame-Average Power (dBm)		
			CH128	CH190	CH251		CH128	CH190	CH251
			824.2MHz	836.6MHz	848.8MHz		824.2MHz	836.6MHz	848.8MHz
GSM(CS)		33.50	32.92	33.11	33.15	-9.03	23.89	24.08	24.12
GPRS (GMSK)	1Tx slot	33.50	32.93	33.12	33.14	-9.03	23.90	24.09	24.11
	2Tx slots	32.50	32.45	32.44	32.49	-6.02	26.43	26.42	26.47
	3Tx slots	30.50	30.15	30.22	30.31	-4.26	25.89	25.96	26.05
	4Tx slots	29.00	28.38	28.56	28.36	-3.01	25.37	25.55	25.35
Mode: GSM1900		Maximum Tune-up(dBm)	Burst Average Power (dBm)			Division Factors	Frame-Average Power (dBm)		
			CH512	CH661	CH810		CH512	CH661	CH810
			1850.2MHz	1880.0MHz	1909.8MHz		1850.2MHz	1880.0MHz	1909.8MHz
GSM(CS)		30.00	29.17	29.47	29.69	-9.03	20.14	20.44	20.66
GPRS (GMSK)	1Tx slot	30.00	29.28	29.56	29.79	-9.03	20.25	20.53	20.76
	2Tx slots	29.50	28.97	29.27	29.42	-6.02	22.95	23.25	23.40
	3Tx slots	28.00	27.09	27.35	27.56	-4.26	22.83	23.09	23.30
	4Tx slots	26.00	25.34	25.60	25.80	-3.01	22.33	22.59	22.79

Note:

Division Factors

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

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

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

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

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

11.1.2 Conducted Power of LTE Band 2

LTE-FDD Band 2				Maximum Tune- up(dBm)	Conducted Power(dBm)				
Bandwidth	Modulation	RB allocation	RB offset		18607	18900	19193		
					1850.7MHz	1880.0MHz	1909.3MHz		
1.4MHz	QPSK	1	0	21.50	20.21	20.65	21.17		
			2	22.00	21.12	21.49	21.79		
			5	21.50	20.50	20.75	21.07		
		3	0	22.00	20.91	21.10	21.70		
			2	22.00	21.10	21.34	21.83		
			3	22.00	20.98	21.24	21.55		
	16QAM	6	0	21.00	20.01	20.34	20.74		
			0	21.00	19.37	19.97	20.57		
			2	21.50	20.24	20.69	21.19		
		3	5	20.50	19.45	19.98	20.44		
			0	21.50	20.26	20.55	21.03		
			2	21.50	20.47	20.78	21.20		
3MHz	QPSK	1	3	21.00	20.39	20.55	20.93		
			6	20.50	19.39	19.57	20.03		
			0	21.00	20.65	20.63	20.93		
		8	7	22.50	22.13	22.03	22.28		
			14	21.00	20.50	20.43	20.80		
			0	21.50	20.78	20.69	21.03		
	16QAM	15	4	21.50	21.00	20.92	21.22		
			7	21.00	20.71	20.66	20.88		
			0	21.00	20.70	20.65	20.92		
		1	0	20.50	20.10	19.81	19.85		
			7	22.00	21.55	21.30	21.19		
			14	20.00	19.91	19.71	19.59		
5MHz	QPSK	8	0	20.50	19.80	19.78	20.04		
			4	20.50	20.03	19.99	20.26		
			7	20.00	19.71	19.69	19.95		
		15	0	20.50	19.73	19.68	20.05		
			16QAM	1	0	22.00	21.81	21.37	21.83
					13	22.00	21.65	21.37	21.85
	24	22.00			21.43	21.85	21.80		
	12	0		21.50	20.88	20.58	21.04		
		6		21.50	20.82	20.57	21.06		
		13		21.50	20.64	20.72	21.18		
	1.4MHz	QPSK	25	0	21.00	20.64	20.63	20.88	
				0	21.50	21.40	20.80	21.50	
13				21.50	21.22	20.88	21.28		
1			24	21.50	20.99	21.28	21.25		
			0	20.50	19.90	19.60	20.11		
			6	20.50	19.87	19.61	20.18		
16QAM		12	13	20.50	19.68	19.74	20.28		
			0	20.00	19.64	19.76	19.95		
			0	21.00	19.37	19.97	20.57		
		3	2	21.50	20.24	20.69	21.19		
			5	20.50	19.45	19.98	20.44		
			0	21.50	20.26	20.55	21.03		

LTE-FDD Band 2				Maximum Tune- up(dBm)	Conducted Power(dBm)			
Bandwidth	Modulation	RB allocation	RB offset		18650	18900	19150	
					1855.0MHz	1880.0MHz	1905.0MHz	
10MHz	QPSK	1	0	22.50	22.31	21.19	21.39	
			25	22.00	21.82	21.49	22.00	
			49	22.50	21.41	21.72	22.15	
		25	0	21.50	21.03	20.45	20.82	
			13	21.50	20.85	20.42	21.06	
			25	21.50	20.53	20.8	21.25	
	16QAM	50	0	21.00	20.67	20.63	20.82	
			0	22.00	21.67	20.37	20.47	
			25	21.50	21.22	20.71	20.89	
		1	49	21.50	20.76	21.01	21.00	
			0	20.50	20.07	19.51	19.90	
			13	20.50	19.90	19.51	20.14	
25	25	20.50	19.59	19.88	20.34			
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune- up(dBm)	18675	18900	19125
						1857.5MHz	1880.0MHz	1902.5MHz
15MHz	QPSK	1	0	22.50	22.26	21.02	21.63	
			38	22.00	21.48	21.55	21.69	
			74	22.50	21.16	21.61	22.04	
		36	0	21.00	20.96	20.51	20.58	
			18	21.00	20.77	20.53	20.78	
			39	21.50	20.36	21.02	21.14	
	16QAM	75	0	21.00	20.66	20.67	20.74	
			0	22.00	21.65	20.19	20.68	
			38	21.00	20.87	20.76	20.78	
		1	74	21.50	20.59	20.84	21.11	
			0	20.50	20.03	19.43	19.52	
			18	20.00	19.86	19.49	19.86	
36	39	20.50	19.46	20.00	20.20			
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune- up(dBm)	18700	18900	19100
						1860.0MHz	1880.0MHz	1900.0MHz
20MHz	QPSK	1	0	23.00	22.52	20.87	21.99	
			50	22.00	21.76	21.69	21.45	
			99	22.50	21.69	21.93	22.01	
		50	0	21.50	21.04	20.36	20.54	
			25	21.00	21.00	20.45	20.59	
			50	21.50	20.84	21.27	21.02	
	16QAM	100	0	21.00	20.54	20.45	20.39	
			0	22.00	21.72	20.11	21.28	
			50	21.00	20.95	20.93	20.68	
		1	99	21.50	20.92	21.23	21.29	
			50	0	20.50	20.09	19.44	19.64
				25	20.50	19.97	19.57	20.30
50	20.50	19.93		20.41	20.09			

11.1.3 Conducted Power of LTE Band 4

LTE-FDD Band 4					Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	19957 1710.7MHz	20175 1732.5MHz	20393 1754.3MHz
1.4MHz	QPSK	1	0	23.00	22.52	20.87	21.99
			2	22.00	21.76	21.69	21.45
			5	22.50	21.69	21.93	22.01
		3	0	21.50	21.04	20.36	20.54
			2	21.50	21.00	20.45	20.59
			3	21.50	20.84	21.27	21.02
	16QAM	6	0	21.00	20.54	20.45	20.39
			0	22.00	21.72	20.11	21.28
			1	21.00	20.95	20.93	20.68
		3	5	21.50	20.92	21.23	21.29
			0	20.50	20.09	19.44	19.64
			2	20.50	19.97	19.57	20.30
3MHz	QPSK	1	3	20.50	19.93	20.41	20.09
			0	20.50	19.79	20.36	20.16
			6	20.50	19.79	20.36	20.16
		8	0	21.50	20.28	20.67	21.46
			7	23.00	22.17	21.77	22.76
			14	21.50	21.11	20.29	21.29
		15	0	22.00	20.70	20.65	21.56
			4	22.00	21.02	20.80	21.78
			7	22.00	20.91	20.49	21.52
	16QAM	1	0	22.00	20.76	20.51	21.54
			0	21.00	19.44	20.12	20.67
			7	22.50	21.13	21.26	22.05
		8	14	21.00	19.95	19.77	20.55
			0	21.00	19.75	19.87	20.64
			4	21.00	20.12	20.01	20.83
		15	7	21.00	20.02	19.68	20.53
			0	21.00	19.95	19.75	20.52
			0	21.00	19.95	19.75	20.52
5MHz	QPSK	1	0	21.50	20.44	20.69	21.20
			13	22.50	21.74	21.12	22.16
			24	21.50	21.30	20.12	21.29
		12	0	21.50	20.69	20.53	21.43
			6	22.00	20.95	20.39	21.51
			13	21.50	21.18	20.22	21.48
		25	0	21.50	20.93	20.36	21.46
			0	21.00	20.01	20.01	20.88
			13	22.00	21.30	20.52	21.59
	16QAM	1	24	21.00	20.78	19.63	20.69
			0	21.00	19.76	19.73	20.52
			6	21.00	20.04	19.61	20.60
		12	13	21.00	20.25	19.45	20.54
			0	20.50	19.99	19.63	20.46
			0	20.50	19.99	19.63	20.46

LTE-FDD Band 4				Maximum Tune- up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20000 1715.0MHz	20175 1732.5MHz	20350 1750.0MHz
10MHz	QPSK	1	0	21.50	20.15	21.05	20.46
			25	22.50	22.09	21.21	22.29
			49	21.50	20.99	19.9	21.49
		25	0	21.50	20.87	20.74	21.09
			13	21.50	21.38	20.47	21.48
			25	22.00	21.42	20.17	21.58
	16QAM	50	0	21.50	21.2	20.45	21.36
			0	20.50	19.78	20.18	19.5.0
			25	22.00	21.65	20.46	21.22
		1	49	21.00	20.54	19.13	20.32
			0	20.50	20.06	19.86	20.19
			13	21.00	20.46	19.62	20.57
15MHz	QPSK	25	25	21.00	20.49	19.32	20.66
			0	20.50	20.06	19.86	20.19
			13	21.00	20.46	19.62	20.57
		36	0	21.50	20.85	21.17	20.84
			18	22.00	21.19	20.83	21.52
			39	22.00	20.63	20.34	21.79
	16QAM	75	0	21.50	20.77	20.74	21.34
			0	21.50	20.06	21.38	19.99
			38	21.50	21.40	20.54	21.36
		1	74	21.50	19.68	19.77	21.40
			0	20.50	19.94	20.18	19.83
			18	21.00	20.28	19.79	20.51
20MHz	QPSK	36	39	21.00	19.68	19.31	20.78
			0	20.50	19.94	20.18	19.83
			18	21.00	20.28	19.79	20.51
		50	0	21.50	20.77	20.74	21.34
			25	21.50	21.09	20.79	21.34
			50	22.00	19.97	20.22	21.68
	16QAM	100	0	21.50	20.59	20.74	21.15
			0	22.00	19.76	21.58	19.72
			50	22.00	21.51	20.73	21.33
		1	99	21.50	18.30	19.62	21.28
			0	20.50	20.11	20.31	19.63
			25	20.50	20.15	19.82	20.35
25MHz	QPSK	50	50	21.00	19.02	19.25	20.69
			0	20.50	20.15	19.82	20.35
			25	20.50	20.15	19.82	20.35
		1	0	20.50	19.78	20.18	19.5.0
			25	22.00	21.65	20.46	21.22
			49	21.00	20.54	19.13	20.32
	16QAM	25	0	20.50	20.06	19.86	20.19
			13	21.00	20.46	19.62	20.57
			25	21.00	20.49	19.32	20.66
		36	0	21.50	20.85	21.17	20.84
			18	22.00	21.19	20.83	21.52
			39	22.00	20.63	20.34	21.79

11.1.4 Conducted Power of LTE Band 5

LTE-FDD Band 5				Maximum Tune- up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20407	20525	20643
					824.7MHz	836.5MHz	848.3MHz
1.4MHz	QPSK	1	0	22.50	20.49	22.44	20.56
			2	22.50	22.3	21.67	22.11
			5	22.50	19.06	20.37	22.02
		3	0	21.50	21.07	21.26	20.55
			2	21.50	21.09	20.79	21.34
			3	22.00	19.97	20.22	21.68
	16QAM	6	0	21.50	20.59	20.74	21.15
		1	0	22.00	19.76	21.58	19.72
			2	22.00	21.51	20.73	21.33
			5	21.50	18.3	19.62	21.28
		3	0	20.50	20.11	20.31	19.63
			2	20.50	20.15	19.82	20.35
3	21.00		19.02	19.25	20.69		
6	0	20.50	19.46	19.29	20.48		
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune- up(dBm)	20415	20525	20635
					825.5MHz	836.5MHz	847.5MHz
3MHz	QPSK	1	0	20.50	20.28	20.06	20.00
			7	22.00	21.50	21.59	20.52
			14	20.00	19.85	19.75	19.79
		8	0	20.50	20.04	19.97	19.93
			4	20.50	20.29	20.23	20.14
			7	20.00	19.99	19.95	19.81
	16QAM	15	0	20.50	20.44	20.43	20.19
		1	0	20.50	19.81	20.28	19.03
			7	21.50	21.07	20.83	20.59
			14	20.50	20.36	20.08	18.70
		8	0	19.50	19.10	19.05	19.06
			4	19.50	19.35	19.30	19.32
7	19.50		19.04	18.97	19.03		
		15	0	20.00	19.51	19.46	19.47

LTE-FDD Band 5				Maximum Tune- up(dBm)	Conducted Power(dBm)			
Bandwidth	Modulation	RB allocation	RB offset		20425	20525	20625	
					826.5MHz	836.5MHz	846.5MHz	
5MHz	QPSK	1	0	20.50	20.34	20.01	20.12	
			13	21.50	20.25	21.28	20.01	
			24	21.00	20.45	20.64	20.30	
		12	0	20.50	20.33	20.28	20.12	
			6	20.50	20.35	20.31	20.12	
			13	20.50	20.49	20.48	20.50	
	16QAM	25	0	20.50	20.40	20.37	20.19	
			1	0	20.50	19.81	20.38	19.61
				13	21.00	20.87	20.53	20.47
		12		24	20.00	19.98	19.98	19.80
			0	19.50	19.37	19.29	19.36	
			6	19.50	19.41	19.38	19.35	
25	13	20.00	19.58	19.50	19.74			
	0	19.50	19.46	19.48	19.39			
	Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune- up(dBm)	20450	20525	20600
829.0MHz						836.5MHz	844.0MHz	
10MHz	QPSK	1	0	20.50	19.88	19.80	20.38	
			25	21.50	20.98	21.36	20.09	
			49	21.00	20.79	20.42	20.11	
		25	0	20.50	19.83	20.16	20.26	
			13	20.50	19.89	20.20	20.20	
			25	21.00	20.68	20.61	20.39	
	16QAM	50	0	20.50	20.42	20.45	20.26	
			1	0	20.50	19.39	20.02	19.31
				25	21.00	20.56	20.56	20.15
		25		49	20.50	20.38	19.67	18.99
			0	19.50	19.02	19.02	19.32	
			13	19.50	19.09	19.26	19.28	
25	20.00	19.88	19.68	19.48				

11.1.5 Conducted Power of LTE Band 7

LTE-FDD Band 7				Maximum Tune- up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		20775 2502.5MHz	21100 2535.0MHz	21425 2567.5MHz
5MHz	QPSK	1	0	22.00	21.55	21.68	20.79
			13	22.00	21.70	21.78	20.89
			24	22.00	21.81	21.87	19.83
		12	0	21.00	20.92	20.90	20.47
			6	21.00	20.91	20.85	20.26
			13	21.50	21.04	21.04	20.61
	16QAM	25	0	21.00	20.89	20.97	20.22
			10	21.50	21.19	21.00	20.59
			13	21.50	21.29	21.07	20.37
		12	24	21.50	21.43	21.28	20.05
			0	20.00	19.95	19.89	19.55
			6	20.00	19.96	19.87	19.41
10MHz	QPSK	1	13	20.50	20.12	20.10	19.78
			25	20.50	19.96	20.03	19.36
		25	0	20.50	19.96	20.03	19.36
			10	21.50	21.31	21.37	20.74
			25	22.00	21.61	21.64	20.87
		50	49	21.50	21.19	21.27	19.54
			0	21.00	20.71	20.68	20.29
			13	21.00	20.75	20.62	20.04
	16QAM	25	25	21.50	21.07	21.15	20.77
			0	21.00	20.83	20.92	20.38
		1	0	21.00	20.82	20.65	19.75
			25	21.50	21.05	21.00	19.80
			49	21.50	21.01	21.13	19.29
		25	0	20.00	19.79	19.86	19.39
			13	20.00	19.84	19.81	19.16
			25	20.50	20.18	20.32	19.97

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	20825	21100	21375
					2057.5MHz	2535.0MHz	2562.5MHz
15MHz	QPSK	1	0	22.00	21.22	21.71	21.38
			38	22.00	21.50	21.97	21.41
			74	22.50	21.21	22.13	20.65
		36	0	21.00	20.91	20.84	20.8
			18	21.50	21.00	20.84	20.68
			39	21.50	20.86	21.46	20.78
	16QAM	75	0	21.50	20.83	21.00	20.75
			0	21.00	20.59	20.70	20.46
			38	21.00	20.91	20.97	20.39
		36	74	21.50	20.64	21.26	20.37
			0	20.50	20.04	19.93	19.87
			18	20.50	20.14	19.84	19.68
20MHz	QPSK	1	39	21.00	20.00	20.51	19.82
			21350	21350	21350	21350	21350
			2560.0MHz	2560.0MHz	2560.0MHz	2560.0MHz	2560.0MHz
		50	0	22.00	21.79	21.63	21.92
			50	22.50	21.77	22.01	21.48
			99	22.00	21.24	21.58	20.38
	16QAM	100	0	21.50	21.46	20.91	21.35
			25	22.00	21.59	20.88	21.22
			50	22.00	20.99	21.72	21.60
		50	0	21.50	21.07	20.91	20.89
			0	21.50	20.99	20.82	21.02
			50	21.50	21.00	21.13	20.63
	16QAM	1	99	21.50	20.43	21.02	20.14
			0	20.50	20.46	20.03	20.3
			25	21.00	20.72	19.97	20.3
		50	50	21.00	20.06	20.8.0	20.73

11.1.6 Conducted Power of LTE Band 12

LTE-FDD Band 12				Maximum Tune- up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23017 699.7MHz	23095 707.5MHz	23173 715.5MHz
1.4MHz	QPSK	1	0	21.50	21.24	20.45	20.36
			2	22.00	21.56	20.79	20.76
			5	21.50	21.27	20.32	20.53
		3	0	21.50	21.29	20.62	20.60
			2	21.50	21.48	20.83	20.80
			3	21.00	20.96	20.18	20.36
	16QAM	6	0	20.50	20.16	20.29	19.89
		1	0	20.50	20.13	19.51	19.64
			2	21.00	20.41	20.78	20.09
			5	20.00	19.99	19.42	19.84
		3	0	21.00	20.52	19.88	19.86
			2	21.00	20.74	20.08	20.11
3MHz	QPSK	1	3	20.50	20.27	20.33	19.65
			6	20.00	19.39	19.50	19.13
		8	0	21.00	20.70	19.65	19.87
			7	21.00	20.57	20.40	20.37
			14	20.50	19.27	20.09	19.96
		15	0	20.50	20.03	19.90	19.75
			4	20.50	20.25	20.18	19.96
			7	20.50	19.85	20.04	19.68
	16QAM	1	0	20.50	19.12	20.38	19.92
			0	20.50	20.16	18.81	18.82
			7	21.00	20.04	20.61	20.25
		8	14	19.50	18.76	19.34	18.82
			0	19.50	19.12	19.01	18.80
			4	19.50	19.35	19.28	19.04
		15	7	19.50	18.93	19.09	18.80
			0	19.50	19.23	19.45	19.09

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	23035	23095	23155
					701.5MHz	707.5MHz	713.5MHz
5MHz	QPSK	1	0	21.00	20.84	19.71	19.59
			13	20.50	19.71	20.19	20.02
			24	21.00	18.94	20.60	20.24
		12	0	20.50	19.42	20.10	19.79
			6	20.50	19.28	20.28	19.71
			13	20.00	19.38	19.63	19.18
	16QAM	25	0	20.50	18.85	20.37	19.02
			0	20.50	20.50	18.99	19.00
		1	13	21.00	19.39	20.53	19.42
			24	20.00	18.64	20.00	19.82
10MHz	QPSK	1	0	21.50	21.36	18.78	18.92
			25	20.50	19.52	20.28	19.41
			49	21.50	21.16	20.04	20.02
		25	0	20.00	19.71	19.53	19.18
			13	20.50	19.70	20.06	19.07
			25	20.00	19.62	19.44	19.48
16QAM	50	0	20.50	18.93	20.13	20.05	
		0	21.00	20.78	17.91	18.96	
	1	25	20.50	19.00	20.46	19.38	
		49	21.00	20.61	19.34	18.89	
	25	0	19.00	18.79	18.63	18.23	
		13	19.50	18.80	19.15	18.15	
20MHz	QPSK	25	25	20.00	19.72	19.55	19.59

11.1.7 Conducted Power of LTE Band 17

LTE-FDD Band 17				Maximum Tune- up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		23755 706.5MHz	23790 710.0MHz	23825 713.5MHz
5MHz	QPSK	1	0	21.00	19.77	20.63	19.91
			13	20.50	20.22	20.23	19.76
			24	21.00	20.79	19.84	20.02
		12	0	21.00	19.93	20.59	19.98
			6	21.00	20.29	20.50	19.88
			13	20.50	20.44	19.98	18.99
	16QAM	25	0	20.50	20.17	20.26	19.98
			0	20.00	19.39	19.90	19.56
			13	21.00	20.80	20.44	20.13
		1	24	20.50	20.32	19.23	19.40
			0	20.00	19.06	19.60	19.07
			6	20.00	19.41	19.53	19.00
10MHz	QPSK	12	13	20.00	19.58	19.01	19.12
			0	19.50	19.28	19.36	19.01
			25	19.50	19.28	19.36	19.01
		25	0	21.00	20.25	20.58	20.82
			25	20.50	20.49	20.24	20.06
			49	20.00	19.86	19.72	19.87
		50	0	20.00	19.43	19.51	19.50
			13	20.00	19.68	19.55	19.39
			25	20.50	20.16	19.92	19.76
	16QAM	50	0	20.50	20.17	20.10	20.02
			0	20.00	19.71	19.80	19.84
			0	20.00	19.71	19.80	19.84
		1	25	21.00	20.88	20.46	19.95
			49	19.50	19.34	19.01	18.79
			0	20.00	19.54	19.59	19.59
		25	13	20.00	19.76	19.62	19.49
			0	19.50	19.22	18.99	18.84
			25	19.50	19.22	18.99	18.84

11.1.8 Conducted Power of LTE Band 38

LTE-TDD Band 38				Maximum Tune-up(dBm)	Conducted Power(dBm)			
Bandwidth	Modulation	RB allocation	RB offset		37775	38000	38225	
					2572.5MHz	2595.0MHz	2617.5MHz	
5MHz	QPSK	1	0	21.00	21.00	20.83	20.77	
			13	21.00	20.69	20.65	20.64	
			24	21.00	20.81	20.83	20.91	
		12	0	20.00	19.74	19.71	19.76	
			6	20.00	19.69	19.81	19.73	
			13	20.00	19.81	19.68	19.87	
	16QAM	25	0	20.00	19.84	19.74	19.79	
			1	0	21.00	20.70	20.20	20.16
				13	20.50	20.37	20.04	20.00
		12		24	20.50	20.47	20.22	20.27
			0	19.00	18.82	18.80	18.80	
			6	19.00	18.79	18.78	18.79	
13	19.00	18.93	18.65	18.90				
25	0	19.00	18.77	18.75	18.76			
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	37800	38000	38200	
					2575.0MHz	2595.0MHz	2615.0MHz	
10MHz	QPSK	1	0	21.00	20.95	20.99	20.71	
			25	21.00	20.80	20.85	20.72	
			49	21.00	20.65	20.80	20.83	
		25	0	20.00	19.69	19.83	19.71	
			13	20.00	19.64	19.79	19.67	
			25	20.00	19.66	19.69	19.69	
	16QAM	50	0	20.00	19.79	19.82	19.81	
			1	0	21.00	20.55	20.06	19.71
				25	20.50	20.42	19.98	19.72
		25		49	20.50	20.29	20.03	19.77
			0	19.00	18.85	18.84	18.72	
			13	19.00	18.80	18.82	18.69	
25	19.00	18.83	18.71	18.71				

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	37825	38000	38175
					2577.5MHz	2595.0MHz	2612.5MHz
15MHz	QPSK	1	0	21.00	20.83	20.85	20.67
			38	21.00	20.53	20.68	20.67
			74	21.00	20.50	20.73	20.84
		36	0	20.00	19.66	19.79	19.64
			18	20.00	19.63	19.75	19.73
			39	20.50	19.49	19.61	20.07
	16QAM	75	0	20.00	19.78	19.78	19.86
			0	20.50	20.33	20.14	20.00
			38	20.50	20.04	19.97	19.89
		36	74	20.50	20.03	19.95	20.13
			0	19.00	18.69	18.72	18.68
			18	19.00	18.65	18.74	18.67
20MHz	QPSK	1	39	19.50	18.52	18.69	19.02
			0	21.50	21.09	21.00	20.57
			50	21.00	20.57	20.52	20.42
		50	99	21.00	20.63	20.94	20.87
			0	20.00	19.77	19.79	19.47
			25	20.00	19.79	19.77	19.49
		100	50	20.50	19.99	20.10	20.06
			0	20.00	19.59	19.58	19.53
			0	20.50	20.10	20.23	19.85
	16QAM	1	50	20.00	19.57	19.81	19.66
			99	20.50	19.73	20.14	20.08
			0	19.00	18.82	18.85	18.55
		50	25	19.00	18.84	18.85	18.57
			50	19.50	19.05	19.20	19.16

11.1.10 Conducted Power of LTE Band 41

LTE-TDD Band 41				Maximum Tune- up(dBm)	Conducted Power(dBm)							
Bandwidth	Modulation	RB allocation	RB offset		40265	40640	40740	41015	41215			
					2557.5MHz	2595.0MHz	2605.0MHz	2632.5MHz	2652.5MHz			
5MHz	QPSK	1	0	21.50	21.21	20.49	20.76	20.31	20.86			
			13	21.00	20.92	20.27	20.61	20.16	20.71			
			24	21.50	21.03	20.47	20.91	20.38	20.85			
		12	0	20.50	20.11	19.14	19.16	18.70	19.24			
			6	20.50	20.16	19.15	19.14	18.68	19.21			
			13	20.50	20.03	19.10	19.16	18.69	19.21			
		25	0	20.50	20.07	19.38	19.68	19.21	19.73			
			16QAM	1	0	21.00	20.93	19.98	20.02	19.63	20.24	
					13	21.00	20.61	19.75	19.88	19.48	20.07	
	24	21.00			20.70	19.95	20.20	19.71	20.21			
	12	0		19.50	19.17	18.15	18.12	17.70	18.27			
		6		19.50	19.14	18.13	18.12	17.69	18.26			
		13		19.50	19.04	18.08	18.12	17.68	18.24			
	25	0		19.50	19.02	18.36	18.70	18.21	18.71			
		Bandwidth		Modulation	RB allocation	RB offset	Maximum Tune- up(dBm)	40290	40640	40740	40990	41190
								2560.0MHz	2595.0MHz	2605.0MHz	2630.0MHz	2650.0MHz
	10MHz	QPSK	1	0	21.50	21.31	20.67	21.03	20.42	20.80		
				25	21.50	21.15	20.53	20.90	20.33	20.76		
49				21.00	20.98	20.44	20.89	20.26	20.63			
25			0	20.50	20.04	19.39	19.74	19.26	19.78			
			13	20.50	20.00	19.36	19.71	19.22	19.72			
			25	20.00	19.88	19.07	19.25	18.68	19.11			
50			0	20.50	20.00	19.37	19.73	19.23	19.72			
			16QAM	1	0	21.00	20.78	19.96	20.13	19.54	19.94	
					25	21.00	20.64	19.85	20.05	19.46	19.86	
49		21.00			20.51	19.81	20.10	19.39	19.67			
25		0		19.50	19.07	18.42	18.76	18.28	18.80			
		13		19.50	19.02	18.38	18.74	18.25	18.75			
		25		19.00	18.90	18.09	18.28	17.70	18.11			

Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	40315	40640	40740	40965	41165
					2562.5MHz	2595.0MHz	2605.0MHz	2627.5MHz	2647.5MHz
15MHz	QPSK	1	0	21.50	21.07	20.46	20.85	20.34	20.82
			38	21.00	20.85	20.34	20.83	20.28	20.72
			74	21.50	20.80	20.41	21.02	20.37	20.71
		36	0	20.50	20.11	19.52	19.92	19.13	19.33
			18	20.50	20.08	19.49	19.89	19.10	19.30
			39	19.50	18.79	18.54	19.28	18.71	19.13
	16QAM	75	0	20.00	19.99	19.40	19.80	19.31	19.81
			0	21.00	20.66	19.90	20.14	19.59	20.04
			38	20.50	20.37	19.74	20.11	19.55	19.98
		36	74	20.50	20.30	19.80	20.29	19.63	19.97
			0	19.50	19.15	18.50	18.85	18.07	18.28
			18	19.50	19.11	18.48	18.85	18.04	18.23
			39	18.50	17.76	17.50	18.23	17.64	18.05
			0	21.00	20.66	19.90	20.14	19.59	20.04
			38	20.50	20.37	19.74	20.11	19.55	19.98
			74	20.50	20.30	19.80	20.29	19.63	19.97
			0	19.50	19.15	18.50	18.85	18.07	18.28
			18	19.50	19.11	18.48	18.85	18.04	18.23
			39	18.50	17.76	17.50	18.23	17.64	18.05
20MHz	QPSK	1	0	21.50	21.36	20.73	21.09	20.52	20.95
			50	21.00	20.97	20.35	20.73	20.18	20.63
			99	21.50	20.96	20.58	21.19	20.51	20.82
		50	0	20.00	19.98	19.36	19.74	19.29	19.84
			25	20.00	19.95	19.38	19.80	19.34	19.88
			50	20.00	19.63	18.81	18.99	18.72	19.44
		100	0	20.00	19.74	19.21	19.68	19.19	19.69
			0	21.00	20.51	19.88	20.24	19.67	20.10
			50	20.50	20.04	19.48	19.91	19.36	19.80
			99	20.50	20.04	19.71	20.37	19.69	20.01
	16QAM	1	0	19.50	19.02	18.41	18.80	18.34	18.88
			25	19.50	19.00	18.41	18.82	18.33	18.84
			50	19.00	18.68	17.81	17.94	17.67	18.40
		50	0	21.00	20.51	19.88	20.24	19.67	20.10
			50	20.50	20.04	19.48	19.91	19.36	19.80
			99	20.50	20.04	19.71	20.37	19.69	20.01
			0	19.50	19.02	18.41	18.80	18.34	18.88
			25	19.50	19.00	18.41	18.82	18.33	18.84
			50	19.00	18.68	17.81	17.94	17.67	18.40
			0	21.00	20.51	19.88	20.24	19.67	20.10
			50	20.50	20.04	19.48	19.91	19.36	19.80
			99	20.50	20.04	19.71	20.37	19.69	20.01
			0	19.50	19.02	18.41	18.80	18.34	18.88

11.1.12 Conducted Power of LTE Band 66

LTE-FDD Band 66					Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset	Maximum Tune-up(dBm)	131979	132322	132665
					1710.7MHz	1755.0MHz	1779.3MHz
1.4MHz	QPSK	1	0	22.00	20.10	21.00	21.52
			2	22.50	20.96	21.69	22.13
			5	21.50	20.47	21.09	21.47
		3	0	22.50	20.68	21.38	22.00
			2	22.50	20.91	21.64	22.16
			3	22.50	20.74	21.49	22.07
	16QAM	6	0	21.50	19.82	20.58	21.18
			0	21.00	19.09	20.19	20.84
			1	21.50	19.87	20.90	21.49
		3	5	21.00	19.35	20.42	20.86
			0	21.50	19.96	20.78	21.34
			2	22.00	20.20	21.00	21.53
3MHz	QPSK	1	3	21.50	20.08	20.82	21.33
			6	20.50	19.07	19.86	20.36
		8	0	21.50	20.03	20.61	21.11
			7	23.00	21.67	22.05	22.60
			14	21.50	20.56	20.92	21.39
		15	0	21.50	20.30	20.77	21.30
			4	22.00	20.65	21.15	21.59
			7	21.50	20.57	21.04	21.37
	16QAM	1	0	21.50	20.39	20.94	21.34
			0	20.50	19.62	19.92	20.05
			7	21.50	21.27	21.43	21.49
		8	14	20.50	20.14	20.31	20.20
			0	20.50	19.49	20.01	20.35
			4	21.00	19.86	20.29	20.66
		15	7	20.50	19.73	20.11	20.45
			0	21.00	19.60	20.01	20.53
5MHz	QPSK	1	0	21.00	20.28	20.63	20.61
			13	22.00	21.58	21.68	21.87
			24	21.50	21.15	21.32	21.25
		12	0	21.00	20.55	20.79	20.98
			6	21.50	20.81	20.96	21.22
			13	21.50	21.03	21.14	21.33
		25	0	21.50	20.90	20.95	21.17
			0	20.50	19.86	19.94	20.29
			13	21.50	21.22	21.06	21.28
	16QAM	1	24	21.00	20.77	20.72	20.70
			0	20.50	19.72	19.85	20.10
			6	20.50	19.99	20.02	20.33
		12	13	20.50	20.22	20.19	20.41
			0	20.50	19.90	20.05	20.27
			0	20.50	19.90	20.05	20.27

LTE-FDD Band 66				Maximum Tune- up(dBm)	Conducted Power(dBm)		
Bandwidth	Modulation	RB allocation	RB offset		132022 1715.0MHz	132322 1755.0MHz	132622 1775.0MHz
10MHz	QPSK	1	0	20.50	20.06	20.29	20.47
			25	22.50	21.97	21.79	22.09
			49	22.00	20.89	21.62	21.78
		25	0	21.00	20.74	20.74	20.84
			13	21.50	21.16	21.10	21.27
			25	22.00	21.21	21.45	21.61
	16QAM	50	0	21.50	20.98	21.11	21.27
			0	20.00	19.53	19.52	19.48
			25	21.50	21.45	21.07	21.01
		1	49	21.00	20.35	20.88	20.60
			0	20.00	19.82	19.84	19.93
			13	20.50	20.22	20.20	20.35
15MHz	QPSK	25	25	21.00	20.27	20.53	20.69
			132047	132047	132322	132597	
			1717.5MHz	1717.5MHz	1755.0MHz	1772.5MHz	
		36	0	22.00	20.45	20.61	21.68
			38	22.00	21.84	21.68	21.81
			74	22.50	20.12	22.35	22.40
	16QAM	75	0	21.50	20.72	20.53	21.10
			18	21.50	21.09	21.16	21.31
			39	22.00	20.53	21.54	21.76
		1	0	21.50	20.65	21.18	21.46
			0	21.50	19.92	19.95	21.21
			38	21.50	21.28	20.97	21.28
20MHz	QPSK	36	74	22.00	19.61	21.56	21.84
			0	20.50	19.82	19.70	20.28
			18	21.00	20.17	20.24	20.50
	16 QAM	39	21.00	19.60	20.64	20.64	20.86
			132072	132072	132322	132572	
			1720.0MHz	1720.0MHz	1755.0MHz	1770.0MHz	
	QPSK	1	0	22.50	19.82	20.16	22.17
			50	22.00	21.76	21.77	21.85
			99	22.00	18.62	21.80	21.92
	16 QAM	50	0	21.50	20.67	20.31	21.31
			25	21.50	20.77	21.11	21.21
			50	21.50	19.75	21.45	21.31
20MHz	QPSK	100	0	21.50	20.28	21.03	21.41
			0	22.00	19.51	19.64	21.72
			50	21.50	21.37	21.25	21.37
	16 QAM	1	99	21.50	18.16	21.29	21.45
			0	21.00	19.88	19.56	20.62
			25	20.50	20.02	20.33	20.44
20MHz	QPSK	50	50	21.00	18.92	20.68	20.54
			132047	132047	132322	132597	
			1717.5MHz	1717.5MHz	1755.0MHz	1772.5MHz	
	16 QAM	1	0	22.00	19.51	19.64	21.72
			50	21.50	21.37	21.25	21.37
			99	21.50	18.16	21.29	21.45
20MHz	QPSK	50	0	21.00	19.88	19.56	20.62
			25	20.50	20.02	20.33	20.44
			50	21.00	18.92	20.68	20.54
	16 QAM	1	0	22.00	19.51	19.64	21.72
			50	21.50	21.37	21.25	21.37
			99	21.50	18.16	21.29	21.45

11.1.28 Tune-up power tolerance

Band	Tune-up power tolerance(dBm)		
GSM850	GSM/GPRS (GMSK)	GSM	Max output power =33.50
		1TXslots	Max output power =33.50
		2TXslots	Max output power =32.50
		3TXslots	Max output power =30.50
		4TXslots	Max output power =29.00
GSM1900	GSM/GPRS (GMSK)	GSM	Max output power =30.00
		1TXslots	Max output power =30.00
		2TXslots	Max output power =29.50
		3TXslots	Max output power =28.00
		4TXslots	Max output power =26.00
LTE B2			Max output power =18.00
LTE B4			Max output power =23.00
LTE B5			Max output power =22.00
LTE B7			Max output power =22.50
LTE B12			Max output power =22.00
LTE B17			Max output power =21.00
LTE B38			Max output power =21.50
LTE B41			Max output power =21.50
LTE B66			Max output power =23.00

11.2 SAR test results

Notes:

1) Per KDB447498, the SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the scaled SAR measured at mid-band channel for each test configuration is at least 3.0 dB lower than the SAR limit ($< 0.8 \text{ W/kg}$), testing at the high and low channels is optional.

2) Per KDB447498, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is: $\leq 0.8 \text{ W/kg}$ or 2.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\leq 100 \text{ MHz}$. When the maximum output power variation across the required test channels is $> \frac{1}{2} \text{ dB}$, instead of the middle channel, the highest output power channel must be used.

3) Per KDB447498, All measurement SAR result is scaled-up to account for tune-up tolerance is compliant.

4) Per KDB648474 D04v01r02, body-worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn with headset SAR.

5) Per KDB248227 D01v01r02, the procedures required to establish specific device operating configurations for testing the SAR of 802.11 a/b/g transmitters.

(1) For Headsets operating next to ear, hotspot mode or mini-tablet configurations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When the reported SAR of initial test position is $\leq 0.4 \text{ W/kg}$, SAR testing for remaining test positions is not required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is $\leq 0.8 \text{ W/kg}$ or all test positions are measured.

(2) For WLAN 2.4 GHz, the highest measured maximum output power channel for DSSS was selected for SAR measurement. When the reported SAR is $\leq 0.8 \text{ W/kg}$, no further SAR testing is required. Otherwise, SAR is evaluated at the next highest measured output power channel. When any reported SAR is $> 1.2 \text{ W/kg}$, SAR is required for the third channel. For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is $\leq 1.2 \text{ W/kg}$.

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

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

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

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

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

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

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

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

(2) QPSK with 100% RB allocation

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

tested.

(3) Higher order modulations

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

(4) Other channel bandwidth

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

11.3 Test Result

11.3.1 Results overview of GSM

Mode	Position	Ch.	Freq. (MHz)	Power Drift (db)	10g Meas. Extremity SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	10g Scaled SAR (W/kg)
GSM 850 (voice)	Front	251	848.8	-0.080	0.923	100	1.00	33.15	33.50	1.084	1.000
	Back	251	848.8	-0.180	0.245	100	1.00	33.15	33.50	1.084	0.266
	Left	251	848.8	-0.070	0.122	100	1.00	33.15	33.50	1.084	0.132
	Right	251	848.8	-0.100	0.221	100	1.00	33.15	33.50	1.084	0.240
Mode	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
GSM 850 (voice)	Front 10mm	251	848.8	-0.080	0.176	100	1.00	33.15	33.50	1.084	0.191

Mode	Position	Ch.	Freq. (MHz)	Power Drift (db)	10g Meas. Extremity SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	10g Scaled SAR (W/kg)
GSM 1900 (voice)	Front	810	1909.8	-0.110	1.060	100	1.00	29.69	30.00	1.074	1.138
	Back	810	1909.8	-0.090	0.535	100	1.00	29.69	30.00	1.074	0.575
	Left	810	1909.8	0.010	0.365	100	1.00	29.69	30.00	1.074	0.392
	Right	810	1909.8	-0.110	0.298	100	1.00	29.69	30.00	1.074	0.320
Mode	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
GSM 1900 (voice)	Front 10mm	810	1909.8	-0.040	0.274	100	1.00	29.69	30.00	1.074	0.294

11.3.2 Results overview of LTE

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	10g Meas. Extremity SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	10g Scaled SAR (W/kg)
Band 2 (BW: 20MHz)	1RB	Front	18700	1860.0	-0.080	1.910	100	1.00	17.55	18.00	1.109	2.119
		Back	18700	1860.0	0.170	1.130	100	1.00	17.55	18.00	1.109	1.253
		Left	18700	1860.0	-0.060	0.209	100	1.00	17.55	18.00	1.109	0.232
		right	18700	1860.0	0.020	0.101	100	1.00	17.55	18.00	1.109	0.112
	50%RB	Front	18700	1860.0	0.040	1.880	100	1.00	17.55	18.00	1.109	2.085
		Back	18700	1860.0	-0.020	1.100	100	1.00	17.55	18.00	1.109	1.220
		Left	18700	1860.0	0.150	0.203	100	1.00	17.55	18.00	1.109	0.225
		right	18700	1860.0	0.120	0.102	100	1.00	17.55	18.00	1.109	0.113
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 2 (BW: 20MHz)	1RB	Front 10mm	18700	1860.0	-0.120	0.317	100	1.00	17.55	18.00	1.109	0.352

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	10g Meas. Extremity SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	10g Scaled SAR (W/kg)
Band 4 (BW: 20MHz)	1RB	Front	20385	1753.5	-0.180	0.846	100	1.00	22.76	23.00	1.057	0.894
		Back	20385	1753.5	0.010	0.548	100	1.00	22.76	23.00	1.057	0.579
		Left	20385	1753.5	-0.020	0.323	100	1.00	22.76	23.00	1.057	0.341
		right	20385	1753.5	0.110	0.030	100	1.00	22.76	23.00	1.057	0.032
	50%RB	Front	20385	1753.5	0.070	0.841	100	1.00	22.76	23.00	1.057	0.889
		Back	20385	1753.5	-0.020	0.549	100	1.00	22.76	23.00	1.057	0.580
		Left	20385	1753.5	0.180	0.321	100	1.00	22.76	23.00	1.057	0.339
		right	20385	1753.5	0.020	0.031	100	1.00	22.76	23.00	1.057	0.033
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 4 (BW: 20MHz)	1RB	Front 10mm	20385	1753.5	-0.03	0.527	100	1.00	22.76	23.00	1.057	0.557

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	10g Meas. Extremity SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	10g Scaled SAR (W/kg)
Band 5 (BW: 10MHz)	1RB	Front	20525	836.5	-0.100	0.886	100	1.00	21.62	22.00	1.091	0.967
		Back	20525	836.5	0.010	0.203	100	1.00	21.62	22.00	1.091	0.222
		Left	20525	836.5	-0.120	0.086	100	1.00	21.62	22.00	1.091	0.094
		Right	20525	836.5	-0.130	0.190	100	1.00	21.62	22.00	1.091	0.207
	50%RB	Front	20525	836.5	0.120	0.873	100	1.00	21.62	22.00	1.091	0.953
		Back	20525	836.5	0.070	0.207	100	1.00	21.62	22.00	1.091	0.226
		Left	20525	836.5	-0.080	0.081	100	1.00	21.62	22.00	1.091	0.088
		Right	20525	836.5	0.130	0.191	100	1.00	21.62	22.00	1.091	0.208
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 5 (BW: 10MHz)	1RB	Front 10mm	20525	836.5	0.10	0.135	100	1.00	21.62	22.00	1.091	0.147

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	10g Meas. Extremity SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	10g Scaled SAR (W/kg)
Band 7 (BW: 20MHz)	1RB	Front	21100	2535.0	0.000	0.110	100	1.00	22.13	22.50	1.089	0.120
		Back	21100	2535.0	0.170	0.154	100	1.00	22.13	22.50	1.089	0.168
		Left	21100	2535.0	0.180	0.078	100	1.00	22.13	22.50	1.089	0.085
		Right	21100	2535.0	-0.090	0.017	100	1.00	22.13	22.50	1.089	-0.019
	50%RB	Front	21100	2535.0	0.110	0.107	100	1.00	22.13	22.50	1.089	0.117
		Back	21100	2535.0	0.080	0.151	100	1.00	22.13	22.50	1.089	0.164
		Left	21100	2535.0	-0.010	0.075	100	1.00	22.13	22.50	1.089	0.082
		Right	21100	2535.0	0.060	0.018	100	1.00	22.13	22.50	1.089	0.020
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 7 (BW: 20MHz)	1RB	Front 10mm	21100	2535.0	-0.06	0.049	100	1.00	22.13	22.50	1.089	0.053

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	10g Meas. Extremity SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	10g Scaled SAR (W/kg)
Band 12 (BW: 10MHz)	1RB	Front	23017	699.7	-0.160	0.436	100	1.00	21.56	22.00	1.107	0.482
		Back	23017	699.7	0.090	0.075	100	1.00	21.56	22.00	1.107	0.083
		Left	23017	699.7	0.180	0.038	100	1.00	21.56	22.00	1.107	0.042
		Right	23017	699.7	0.140	0.035	100	1.00	21.56	22.00	1.107	0.039
	50%RB	Front	23017	699.7	0.180	0.421	100	1.00	21.56	22.00	1.107	0.466
		Back	23017	699.7	-0.010	0.071	100	1.00	21.56	22.00	1.107	0.079
		Left	23017	699.7	0.060	0.041	100	1.00	21.56	22.00	1.107	0.045
		Right	23017	699.7	0.000	0.032	100	1.00	21.56	22.00	1.107	0.035
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 12 (BW: 10MHz)	1RB	Front 10mm	23017	699.7	0.03	0.020	100	1.00	21.56	22.00	1.107	0.022

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	10g Meas. Extremity SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	10g Scaled SAR (W/kg)
Band 17 (BW: 10MHz)	1RB	Front	23800	711.0	0.030	0.304	100	1.00	20.82	21.00	1.042	0.317
		Back	23800	711.0	-0.140	0.077	100	1.00	20.82	21.00	1.042	0.080
		Left	23800	711.0	-0.180	0.027	100	1.00	20.82	21.00	1.042	0.028
		Right	23800	711.0	-0.100	0.027	100	1.00	20.82	21.00	1.042	0.028
	50%RB	Front	23800	711.0	0.090	0.300	100	1.00	20.82	21.00	1.042	0.313
		Back	23800	711.0	0.110	0.078	100	1.00	20.82	21.00	1.042	0.081
		Left	23800	711.0	0.090	0.026	100	1.00	20.82	21.00	1.042	0.027
		Right	23800	711.0	-0.070	0.027	100	1.00	20.82	21.00	1.042	0.028
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 17 (BW: 10MHz)	1RB	Front 10mm	23800	711.0	0.03	0.027	100	1.00	20.82	21.00	1.042	0.028

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	10g Meas. Extremity SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	10g Scaled SAR (W/kg)
Band 38 (BW: 20MHz)	1RB	Front	37850	2580.0	-0.140	0.147	100	1.00	21.09	21.50	1.099	0.162
		Back	37850	2580.0	-0.060	0.436	100	1.00	21.09	21.50	1.099	0.479
		Left	37850	2580.0	-0.170	0.154	100	1.00	21.09	21.50	1.099	0.169
		Right	37850	2580.0	-0.190	0.063	100	1.00	21.09	21.50	1.099	0.069
	50%RB	Front	37850	2580.0	0.150	0.143	100	1.00	21.09	21.50	1.099	0.157
		Back	37850	2580.0	-0.010	0.431	100	1.00	21.09	21.50	1.099	0.474
		Left	37850	2580.0	0.190	0.155	100	1.00	21.09	21.50	1.099	0.170
		Right	37850	2580.0	0.020	0.061	100	1.00	21.09	21.50	1.099	0.067
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 38 (BW: 20MHz)	1RB	Front 10mm	37850	2580.0	-0.01	0.126	100	1.00	21.09	21.50	1.099	0.138

Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	10g Meas. Extremity SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	10g Scaled SAR (W/kg)
Band 41 (BW: 20MHz)	1RB	Front	40340	2565.0	-0.120	0.161	100	1.00	21.36	21.50	1.033	0.166
		Back	40340	2565.0	-0.120	0.517	100	1.00	21.36	21.50	1.033	0.534
		Left	40340	2565.0	-0.120	0.254	100	1.00	21.36	21.50	1.033	0.262
		Right	40340	2565.0	-0.100	0.063	100	1.00	21.36	21.50	1.033	0.065
		Back	40640	2595.0	0.080	0.489	100	1.00	21.36	21.50	1.033	0.505
		Back	40740	2605.0	0.070	0.468	100	1.00	21.36	21.50	1.033	0.483
		Back	40940	2625.0	0.010	0.419	100	1.00	21.36	21.50	1.033	0.433
		Back	41140	2645.0	0.010	0.365	100	1.00	21.36	21.50	1.033	0.377
	50%RB	Front	40340	2565.0	0.020	0.163	100	1.00	21.36	21.50	1.033	0.168
		Back	40340	2565.0	-0.090	0.511	100	1.00	21.36	21.50	1.033	0.528
		Left	40340	2565.0	0.170	0.253	100	1.00	21.36	21.50	1.033	0.261
		Right	40340	2565.0	0.060	0.061	100	1.00	21.36	21.50	1.033	0.063
		Back	40640	2595.0	0.140	0.488	100	1.00	21.36	21.50	1.033	0.504
		Back	40740	2605.0	0.000	0.464	100	1.00	21.36	21.50	1.033	0.479
		Back	40940	2625.0	-0.080	0.417	100	1.00	21.36	21.50	1.033	0.431
		Back	41140	2645.0	0.130	0.366	100	1.00	21.36	21.50	1.033	0.378
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 41 (BW: 20MHz)	1RB	Front 10mm	40340	2565.0	-0.16	0.133	100	1.00	21.36	21.50	1.033	0.137

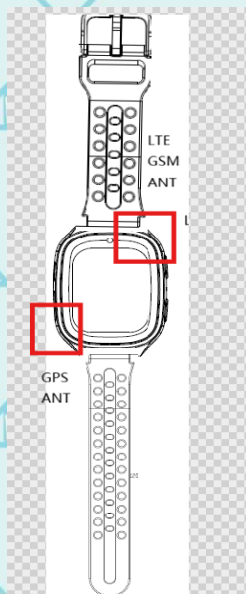
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 66 (BW: 20MHz)	1RB	Front	132657	1778.5	-0.120	0.470	100	1.00	22.60	23.00	1.096	0.515
		Back	132657	1778.5	0.170	0.401	100	1.00	22.60	23.00	1.096	0.440
		Left	132657	1778.5	0.020	0.203	100	1.00	22.60	23.00	1.096	0.223
		Right	132657	1778.5	0.070	0.019	100	1.00	22.60	23.00	1.096	0.021
	50%RB	Front	132657	1778.5	0.020	0.467	100	1.00	22.60	23.00	1.096	0.512
		Back	132657	1778.5	-0.080	0.403	100	1.00	22.60	23.00	1.096	0.442
		Left	132657	1778.5	0.110	0.201	100	1.00	22.60	23.00	1.096	0.220
		Right	132657	1778.5	0.090	0.018	100	1.00	22.60	23.00	1.096	0.020
Mode	Channel Type	Position	Ch.	Freq. (MHz)	Power Drift (db)	1g Meas. Head SAR (W/kg)	Duty cycle (%)	Duty cycle Factor	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)
Band 66 (BW: 20MHz)	1RB	Front 10mm	132657	1778.5	0.040	0.194	100	1.00	22.60	23.00	1.096	0.213

Note:

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

12 Multiple Transmitter Information

The SAR measurement positions of each side are as below:



< Rear Side >

Mode	Front side	Rear side	Left side	Right side	Top side	Bottom side
2G/4G Antenna	Yes	Yes	Yes	Yes	N/A	N/A

Per KDB941225 D06V01r01, the DUT Dimension is bigger than 9 cm x 5 cm, so 10mm is chosen as the test separation distance for Hotspot mode. When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested.

12.1 Simultaneous Transmission Possibilities

EUT does not support multiple transmitters operating simultaneously, so there is no need to consider the increase in TER due to synchronous transmission.

Note: The relevant synchronous transmission technical specification materials are provided by the applicant.

13 Measurement uncertainty evaluation

13.1 Measurement uncertainty evaluation for SAR test

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

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

DASY8 Uncertainty Budget

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

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

13.2 Measurement uncertainty evaluation for system check

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

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

14 Test equipment and ancillaries used for tests

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

	Manufact urer	Device Type	Type(Model)	Serial number	calibration	
					Last Cal.	Due Date
☒	SPEAG	E-Field PROBE	EX3DV4	7955	2025-09-30	2026-09-29
☒	SPEAG	Validation Kits	D750V3	1151	2024-08-19	2027-08-18
☒	SPEAG	Validation Kits	D835V2	4d203	2024-08-20	2027-08-19
☒	SPEAG	Validation Kits	D1750V2	1143	2024-08-20	2027-08-19
☒	SPEAG	Validation Kits	D1900V2	5d211	2024-08-19	2027-08-18
☒	SPEAG	Validation Kits	D2450V2	1099	2026-03-05	2029-03-04
☒	SPEAG	Validation Sources	D2550V2	1015	2024-08-16	2027-08-15
☒	SPEAG	Validation Kits	D2600V2	1094	2026-03-04	2029-03-03
☐	SPEAG	Validation Sources	D3500V2	1164	2024-10-17	2027-10-16
☐	SPEAG	Validation Sources	D3700V2	1139	2024-10-17	2027-10-16
☐	SPEAG	Validation Sources	D3900V2	1106	2024-10-17	2027-10-16
☐	SPEAG	Validation Sources	D4600V2	1097	2024-10-17	2027-10-16
☐	SPEAG	Validation Sources	D4900V2	1093	2024-10-08	2027-10-07
☐	SPEAG	Validation Sources	D5GHzV2	1412	2024-10-17	2027-10-16
☐	SPEAG	Validation Sources	D6.5GHzV2	1116	2024-10-14	2027-10-13
☒	SPEAG	DAE	DAE4ip	1921	2025-09-04	2026-09-03
☒	R & S	Universal Radio Communication Tester	CMU 200	119733	2025-11-27	2026-11-26
☒	R & S	Universal Radio Communication Tester	CMW500	144459	2025-11-27	2026-11-26
☐	R & S	UXM5G Wireless Test Platform	E7515B	MY60192341	2025-11-27	2026-11-26
☒	HP	Network Analyser	8753D	3410A08889	2025-11-27	2026-11-26
☒	HP	Signal Generator	E4421B	GB39340770	2025-11-27	2026-11-26
☒	Keithley	Multimeter	Keithley 2000	4014539	2025-11-27	2026-11-26
☒	SATIMO	Amplifier	Power Amplifier	MODU-023-A-0004	2025-11-27	2026-11-26
☒	Agilent	Power Meter	E4418B	GB43312909	2025-11-27	2026-11-26
☒	Agilent	Power Meter Sensor	E4412A	MY41500046	2025-11-27	2026-11-26

Annex A: System Check

(Please See the SAR Measurement Plots of annex A.)

Annex B: Measurement Results

(Please See the SAR Measurement Plots of annex B.)

Annex C: Calibration Reports

(Please See the Calibration reports of annex C.)

Annex D: Test Photographs

(Please see SAR test setup photos.)