

TEST REPORT

FCC SAR Part 0 Test for SM-F761B
Class II Permissive Change

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-SR-2506-FC009-R1

DATE OF ISSUE
June 17, 2025

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PART 0 SAR Test
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FCC ID

A3LSMF761B

Applicant

SAMSUNG Electronics Co., Ltd
129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677, Korea

Product Name

Mobile Phone

Model Name

SM-F761B

Application Type

Class II Permissive Change

Date of Test

May 13, 2025~ May 27, 2025

Location of Test

☒ Permanent Testing Lab ☐ On Site Testing Lab
(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si,
Gyeonggi-do, 17383 KOREA)

FCC Rule Part(s)

CFR § 2.1093

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	Jun. 13, 2025	Initial Release
1	Jun. 17, 2025	Revised Page 6.

Notice

Content

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

The laboratory is not accredited for the test results marked *.

Information provided by the applicant is marked **.

Test results provided by external providers are marked ***.

When confirmation of authenticity of this test report is required, please contact www.hct.co.kr

The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

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1. Test Location

1.1 Test Laboratory

Company Name	HCT Co., Ltd.
Address	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA
Telephone	031-645-6300
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1.2 Test Facilities

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

Korea	National Radio Research Agency (Designation No. KR0032)
	KOLAS (Testing No. KT197)

1.3 General Information of the EUT

Model Name	SM-F761B
Equipment Type	Mobile Phone
FCC ID	A3LSMF761B
Application Type	Class II Permissive Change
Applicant	SAMSUNG Electronics Co., Ltd.
Test Note	The spot check is performed on the band with the change of the sub5 antenna, and the full test is performed on the band where the result is higher than the basic model [Report no: HCT-SR-2505-FC003-R1]. The C2PC changes in this model do not affect the Main TAS algorithm and can be represented by the original model's TAS test report. [Report no: HCT-SR-2505-FC004] Please refer to the technical documentation for detailed C2PC changes.

2. DEVICE UNDER TEST DESCRIPTION

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
GSM850	Voice / Data	824.2 MHz ~ 848.8 MHz
GSM1900	Voice / Data	1 850.2 MHz ~ 1 909.8 MHz
UMTS Band 2	Voice / Data	1 852.4 MHz ~ 1 907.6 MHz
UMTS Band 4	Voice / Data	1 712.4 MHz ~ 1 752.6 MHz
UMTS Band 5	Voice / Data	826.4 MHz ~ 846.6 MHz
LTE FDD Band 2 (PCS)	Voice / Data	1 850.7 MHz ~ 1 909.3 MHz
LTE FDD Band 4 (AWS)	Voice / Data	1 710.7 MHz ~ 1 754.3 MHz
LTE FDD Band 5 (Cell)	Voice / Data	824.7 MHz ~ 848.3 MHz
LTE FDD Band 12	Voice / Data	699.7 MHz ~ 715.3 MHz
LTE FDD Band 13	Voice / Data	779.5 MHz ~ 784.5 MHz
LTE FDD Band 17	Voice / Data	706.5 MHz ~ 713.5 MHz
LTE FDD Band 25	Voice / Data	1 850.7 MHz ~ 1 914.3 MHz
LTE FDD Band 26	Voice / Data	814.7 MHz ~ 848.3 MHz
LTE TDD Band 41	Voice / Data	2 498.5 MHz ~ 2 687.5 MHz
LTE FDD Band 66 (AWS)	Voice / Data	1 710.7 MHz ~ 1 779.3 MHz
NR FDD Band n2 (PCS)	Voice / Data	1 852.5 MHz ~ 1 907.5 MHz
NR FDD Band n5	Voice / Data	826.5 MHz ~ 846.5 MHz
NR FDD Band n25 (PCS)	Voice / Data	1 852.5 MHz ~ 1 912.5 MHz
NR TDD Band n41	Voice / Data	2 501.01 MHz ~ 2 685 MHz
NR FDD Band n66	Voice / Data	1 712.5 MHz ~ 1 777.5 MHz
NR FDD Band n71	Voice / Data	665.5 MHz ~ 695.5 MHz
NR TDD Band n77	Voice / Data	3 705 MHz ~ 3 975 MHz
NR TDD Band n77 DoD	Voice / Data	3 445.01 MHz ~ 3 544.98 MHz
U-NII-1	Voice / Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Voice / Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Voice / Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Voice / Data	5 745 MHz ~ 5 825 MHz
U-NII-4	Voice / Data	5 845 MHz ~ 5 885 MHz
U-NII-5	Voice / Data	5 935 MHz ~ 6 425 MHz
U-NII-6	Voice / Data	6 425 MHz ~ 6 525 MHz
U-NII-7	Voice / Data	6 525 MHz ~ 6 865 MHz
U-NII-8	Voice / Data	6 865 MHz ~ 7 115 MHz
2.4 GHz WLAN	Voice / Data	2 412 MHz ~ 2 472 MHz
Bluetooth / LE 5.4	Data	2 402 MHz ~ 2 480 MHz
NFC	Data	13.56 MHz
WPC	Data	110 kHz ~ 148 kHz

2.1 Time-Averaging for SAR

This WWAN Mode of DUT is equipped with an S.LSI chipset to which the Samsung S.LSI proprietary TAS (Time Average SAR) algorithm is applied. and also This equipment contains the Qualcomm modem supporting WLAN Fast connect TAS operations.

This DUT is enabled with the Samsung S.LSI proprietary TAS (Time Average SAR) algorithm for WWAN Mode and also Qualcomm Fast connect TAS feature for WLAN Mode to control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is in compliance with the FCC requirement

FCC RF exposure limit is based on time averaged RF exposure. The SAR regulatory specification is defined over certain measurement duration allowing for time-averaging. The Samsung S.LSI proprietary TAS (Time Average SAR) algorithm has been designed to meet the compliance limits over the required duration, while still allowing dynamic control of transmit power to satisfy the performance of the system.

This feature performs time averaging SAR algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time.

The WLAN mode are not controlled by The Samsung S.LSI proprietary TAS (Time Average SAR) algorithm.

This equipment contains the Qualcomm modem supporting WLAN Fast connect TAS algorithm for TAS operations This feature performs time averaging algorithm in real time to control and manage transmitting power and ensure the time-averaged RF exposure is in compliance with FCC requirements all the time. DUT contains BDF File configured for the WLAN Fast connect TAS algorithm. Only the BT, NFC mode of the device did not apply the time averaged SAR algorithm.

The Samsung S.LSI TAS algorithm and Qualcomm Fast connect TAS algorithm allow the device to transmit at higher power instantaneously, as high as P_{max}, when needed, but enforces power limiting to maintain time-averaged transmit power to P_{limit}. Below table shows P_{limit} NV settings and maximum tune up output power P_{max} configured for this DUT for various transmit conditions (Radio SAR indicator RSI for Head / Body SAR of WWAN Mode, Device State Index DSI for WLAN mode).

The purpose of this report is to demonstrate that the DUT meets FCC SAR limits when transmitting in static transmission configurations at P_{limit} specified by manufacturer.

SAR Characterization confirms that P_{limit} in the 4G/5G/WLAN communication mode declared by the manufacturer satisfies SAR_{target}.

The compliance test under the static transmission scenario and simultaneous transmission analysis are reported in SAR report for WWAN. The validation of The Samsung S.LSI proprietary TAS (Time Average SAR) algorithm and compliance under the time-varying transmission scenario for WWAN technologies are reported in TAS Validation report. The validation of The Qualcomm Fast connect TAS algorithm and compliance under the time-varying transmission scenario for WLAN technologies are reported in A3LSMF761B_SAR Part 2 Report_WLAN report.

2.2 Nomenclature for Part 0 Report

Technology	Term	Description
2G/3G/4G/5G/ Sub6 NR/ WLAN	Plimit	Power level that corresponds to the exposure design target (SAR_design_target) after accounting for all device design related uncertainties
	Pmax	Maximum tune up output power
	SAR_design_target	Target SAR level < FCC SAR limit after accounting for all device design related uncertainties.
	SAR Char	Table containing Plimit for all technologies and bands

3. SAR MEASUREMENTS

3.1 SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative of the incremental electromagnetic energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (r). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body

$$SAR = \frac{d}{dt} \left(\frac{dU}{dm} \right)$$

SAR Mathematical Equation

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \sigma E^2 / \rho$$

Where:

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

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

3.2 SAR Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013:

1. The SAR distribution at the exposed side of the head or body was measured at a distance no more than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the DUT's head and body area and the horizontal grid resolution was depending on the FCC KDB 865664 D01v01r04 (see table 3-1) & IEEE 1528-2013.
2. Based on step, the area of the maximum absorption was determined by sophisticated interpolations routines implemented in DASY software. When an Area Scan has measured all reachable point. DASY system computes the field maximal found in the scanned are, within a range of the maximum. SAR at this fixed point was measured and used as a reference value.
3. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB 865664 D01v01r04 table 4-1 and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (reference from the DASY manual.)
 - a. The data at the surface were extrapolated, since the center of the dipoles is no more than 2.7 mm away from the tip of the probe (it is different from the probe type) and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.
 - b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.
 - c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan. If the value changed by more than 5 %, the SAR evaluation and drift measurements were repeated.

Frequency	Maximum Area Scan Resolution(mm) (Δxarea, Δyarea)	Maximum Zoom Scan Resolution (mm) (Δxzoom, Δyzoom)	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid	Graded Grid		
			Δzzoom(n)	Δzzoom(1)*	Δzzoom(n>1)*	
≤2 GHz	≤15	≤8	≤5	≤4	≤1.5* Δzzoom(n-1)	≥30
2-3 GHz	≤12	≤5	≤5	≤4	≤1.5* Δzzoom(n-1)	≥30
3-4 GHz	≤12	≤5	≤4	≤3	≤1.5* Δzzoom(n-1)	≥28
4-5 GHz	≤10	≤4	≤3	≤2.5	≤1.5* Δzzoom(n-1)	≥25
5-6 GHz	≤10	≤4	≤2	≤2	≤1.5* Δzzoom(n-1)	≥22

Table 3-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

4. SAR CHARACTERIZATION

4.1 Exposure Index and SAR Determination

This device uses different Radio State index (RSI) to configure different time averaged power levels based on certain exposure scenarios. Depending on the detection scheme implemented in the smartphone, the worst-case SAR was determined by measurements for the relevant exposure conditions for that RSI. Detailed descriptions of the detection mechanisms are included in the operational description.

When 1g SAR and 10g SAR exposure comparison is needed, the worst-case was determined from SAR normalized to 1g or 10g SAR limit.

The Radio State indicator (RSI) conditions used in Table 4-1 represent different exposure scenarios.

Table 4-1 RSI and Corresponding Exposure Scenarios for WWAN Mode

Scenario	Description	SAR Test Cases
Head (RSI = 1)	Device positioned next to head	SAR per KDB Publication 648474 D04 and KDB Publication 447498 D01
Flip Open Body (RSI = 0)	Device Flip open DUT's transmitter output power in free or body worn condition	SAR per KDB Publication 648474 D04 and KDB Publication 447498 D01
Flip Open Body (RSI = 2)	Device Flip open Device transmits in hotspot mode Device is held with hand	SAR per KDB Publication 648474 D04 and KDB Publication 447498 D01
Flip Close Body (RSI = 3)	Device Flip close DUT's transmitter output power in free or body worn condition	SAR per KDB Publication 648474 D04 and KDB Publication 447498 D01
Flip Close Body (RSI = 4)	Device Flip close Device transmits in hotspot mode	SAR per KDB Publication 648474 D04 and KDB Publication 447498 D01

4.2 SAR Design Target

SAR_design_target is determined by ensuring that it is less than FCC SAR limit after accounting for total device designed related uncertainties specified by the manufacturer (see Table 4-2).

<i>SAR_design_target</i>			
$SAR_design_target < SAR_regulatory_limit \times 10^{Total\ Uncertainty/10}$			
Body 1g SAR (W/kg)		10g SAR (W/kg)	
<i>Total Uncertainty</i>	1.0 dB	<i>Total Uncertainty</i>	1.0 dB
<i>SAR_regulatory_limit</i>	1.6 W/kg	<i>SAR_regulatory_limit</i>	4.0 W/kg
<i>SAR_design_target</i>	1.0 W/kg	<i>SAR_design_target</i>	2.5 W/kg

Table 4-2 Main SAR_design_target Calculations

4.3 SAR Characterization

SAR test results corresponding to Pmax for each antenna/technology/band/DSI/RSI can be found in Appendix A. Plimit is calculated by linearly scaling with the measured SAR at the Pmax to correspond to the SAR_design_target. Plimit determination for each exposure scenario corresponding to SAR_design_target are shown in Table 4-5.

Plim values in green indicate Plimit < Pmax Plim values in grey indicate Plimit > Pmax						
Plimit corresponding to 1 W/kg (1g) 2.5W/kg(10g) SAR_Design_target						Pmax
SAR Exposure Position			Free (Open, Close)	Head (RCV ON)	Hotspot (Open, Close)	Maximum Tune-up Output Power (Frame Averaged Power) [dBm]
Averaging volume			1g	1g	1g	
separation Distance			5 mm	0 mm	5 mm	
Mode	Band	Antenna	RSI=0,3	RSI=1	RSI=2,4	
LTE FDD	13	A	21.4	N/A	21.4	24.0
NR TDD SRS 1 PC2	n77/n77DoD	F	14.0	N/A	14.0	25.5
NR TDD SRS 2 PC2	n77/n77DoD	I	14.0	N/A	14.0	25.5
NR TDD SRS 3 PC2	n77/n77DoD	E	14.0	N/A	14.0	25.5
NR TDD SRS 4 PC2	n77/n77DoD	C	14.0	N/A	14.0	23.5

Table 4-5 SAR Characterization

Note

1. all Plimit and maximum tune up output power Pmax levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of TDD modulation schemes (for e.g., GSM, LTE TDD).
2. The maximum time-averaged output power (dBm) for any 2G/3G/4G/5G WWAN and WLAN technology, band, and SAR Exposure condition=minimum of “Plimit” and “Maximum tune up output power: “Pmax” + 1dB device uncertainty.
3. The maximum time averaged output power means Plimit for each modes SAR values in this report were scaled to the maximum allowed output power to determine compliance per KDB Publication 447498 D01v06.

5. Equipment List

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
SPEAG	cDASY6 5G Module Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli 1-L	CS8Cspeag-TX90	F11/ 5K3RA1/ C/ 01	N/A	N/A	N/A
Staubli 1-R	CS8Cspeag-TX90	F12/ 5K9GA1/ C/ 01	N/A	N/A	N/A
Staubli 5	CS8Cspeag-TX90	F17/ 59RAA1/ C/ 01	N/A	N/A	N/A
Staubli 7	CS8Cspeag-TX90	F08/5AJ0A1/C/01	N/A	N/A	N/A
Staubli 1-L	TX90 Lspeag	F11/ 5K3RA1/ A/ 01	N/A	N/A	N/A
Staubli 1-R	TX90 XLSpeag	F12/ 5K9GA1/ A/ 01	N/A	N/A	N/A
Staubli 5	TX90 XLSpeag	F17/ 59RAA1/ A/ 01	N/A	N/A	N/A
Staubli 7	TX90 XLSpeag	F08/5AJ0A1/A/01	N/A	N/A	N/A
Staubli 1-L	Teach Pendant (Joystick)	S-1203 0309	N/A	N/A	N/A
Staubli 1-R	Teach Pendant (Joystick)	S-1206 0513	N/A	N/A	N/A
Staubli 5	Teach Pendant (Joystick)	011578	N/A	N/A	N/A
Staubli 7	Teach Pendant (Joystick)	S-0008	N/A	N/A	N/A
TESTO 1-L	175-H1/Thermometer	40331936309	12/26/2024	Annual	12/26/2025
TESTO 1-R	175-H1/Thermometer	40331936309	12/26/2024	Annual	12/26/2025
TESTO 5	175-H1/Thermometer	40331922309	12/26/2024	Annual	12/26/2025
TESTO 7	175-H1/Thermometer	40331949309	12/26/2024	Annual	12/26/2025
SPEAG	DAE4	868	09/19/2024	Annual	09/19/2025
SPEAG	DAE4	1417	02/18/2025	Annual	02/18/2026
SPEAG	DAE4	1720	04/23/2025	Annual	04/23/2026
SPEAG	DAE4	869	03/19/2025	Annual	03/19/2026
SPEAG	E-Field Probe EX3DV4	7732	06/19/2024	Annual	06/19/2025
SPEAG	E-Field Probe EX3DV4	7309	06/19/2024	Annual	06/19/2025
SPEAG	E-Field Probe EX3DV4	7370	08/22/2024	Annual	08/22/2025
SPEAG	E-Field Probe EX3DV4	7622	11/22/2024	Annual	11/22/2025
SPEAG	Dipole D750V3	1122	02/28/2025	Annual	02/28/2026
SPEAG	Dipole D1800V2	2d007	04/15/2024	Biennial	04/15/2026
SPEAG	Dipole D1900V2	5d061	01/20/2025	Annual	01/20/2026
SPEAG	Dipole D2600V2	1015	04/22/2024	Biennial	04/22/2026
SPEAG	Dipole D3500V2	1040	01/16/2025	Annual	01/16/2026
SPEAG	Dipole D3700V2	1105	09/18/2024	Annual	09/18/2025
SPEAG	Dipole D3900V2	1086	05/21/2024	Annual	05/21/2025
Agilent	Power Meter E4419B	MY41291386	09/11/2024	Annual	09/11/2025
Agilent	Power Meter N1911A	MY45101406	05/21/2024	Annual	05/21/2025
Agilent	Power Meter N1911A	MY45101406	05/19/2025	Annual	05/19/2026
Agilent	Power Sensor 8481A	SG1091286	09/12/2024	Annual	09/12/2025
H.P	Power Sensor 8481A	MY41090675	09/12/2024	Annual	09/12/2025

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
Agilent	Power Meter E4419B	MY41291386	09/11/2024	Annual	09/11/2025
Agilent	Wideband Power Sensor N1921A	MY55220026	07/30/2024	Annual	07/30/2025
Agilent	11636B/Power Divider	58698	01/13/2025	Annual	01/13/2026
SPEAG	DAKS 3.5	1038	01/20/2025	Annual	01/20/2026
SPEAG	Vector Reflectometer	0141013	01/13/2025	Annual	01/13/2026
SPEAG	MXA Signal Analyzer	MY49100108	01/07/2025	Annual	01/07/2026
H.P	Network Analyzer /8753E	JP38451384	08/20/2024	Annual	08/20/2025
Protek	NETWORK ANALYZER	X11-15305	02/10/2025	Annual	02/10/2026
Agilent	WIRELESS COMMUNICATION E5515C	MY48361100	09/11/2024	Annual	09/11/2025
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/29/2024	Annual	07/29/2025
R&S	Wireless Communication Test Set CMW500	115733	03/20/2025	Annual	03/20/2026
R&S	Wireless Communication Test Set CMW500	139333	12/09/2024	Annual	12/09/2025
Agilent	SIGNAL GENERATOR N5182A	MY47070230	03/18/2025	Annual	03/18/2026
Keysight	PSG Vector Signal Generator	MY50350097	03/05/2025	Annual	03/05/2026
EMPOWER	RF Power Amplifier	1084	05/21/2024	Annual	05/21/2025
EMPOWER	RF Power Amplifier	1084	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1041D/C0508	05/21/2024	Annual	05/21/2025
EMPOWER	RF Power Amplifier	1041D/C0508	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier	1011	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-15N	10453	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-30N	-	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-60N	32011	09/11/2024	Annual	09/11/2025
Agilent	Attenuator (3dB) 8693B	MY39260298	08/20/2024	Annual	08/20/2025
HP	Attenuator (20dB) 8493C	09271	08/21/2024	Annual	08/21/2025
Agilent	Directional Bridge 86205A	3140A04581	04/18/2025	Annual	04/18/2026
Agilent	MXA Signal Analyzer N9020A	MY50510407	06/04/2024	Annual	06/04/2025
HP	Dual Directional Coupler	16072	09/11/2024	Annual	09/11/2025
Anritsu	Radio Communication Test Station MT8000A	6262036812	11/27/2024	Annual	11/27/2025
Anritsu	Radio Communication Test Station MT8000A	6262148305	12/23/2024	Annual	12/23/2025
Anritsu	Radio Communication Tester MT8820C	6201074225	01/13/2025	Annual	01/13/2026
Anritsu	Radio Communication Tester MT8820C	6200695605	03/21/2025	Annual	03/21/2026
Anritsu	Radio Communication Tester MT8821C	6262044720	11/27/2024	Annual	11/27/2025
Anritsu	Radio Communication Tester MT8821C	6201664725	01/13/2025	Annual	01/13/2026
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/22/2024	Annual	05/22/2025
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/20/2025	Annual	05/20/2026

Note: All measurements were performed within the valid calibration period of the specific equipment.

* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

6. Measurement Uncertainty

The measured SAR was <1.5 W/Kg for 1g SAR and <3.75 W/Kg For 10g SAR for all frequency bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

Appendix A: SAR Test Results For P limit CALCULATIONS

Table A-1 RSI = 1 *PLimit* Calculations – 3G Head SAR

MEASUREMENT RESULTS										
Frequency		Mode/ Band		Ant.	Frame Averaged	Test Position	Duty Cycle	Meas.	Plimit	Minimum
MHz	Ch.				Conducted Power			(W/kg)	(dBm)	Plimit
					(dBm)				(dBm)	(dBm)
1 732.4	1412	UMTS Band 4	RMC	I	15.90	Left Cheek	1:1	0.495	19.0	19.0
1 732.4	1412				15.90	Left Tilt	1:1	0.125	24.9	
1 732.4	1412				15.90	Right Cheek	1:1	0.279	21.4	
1 732.4	1412				15.90	Right Tilt	1:1	0.064	27.8	
1 880	9400	UMTS Band 2	RMC	I	15.98	Left Cheek	1:1	0.581	18.3	18.3
1 880	9400				15.98	Left Tilt	1:1	0.126	25.0	
1 880	9400				15.98	Right Cheek	1:1	0.230	22.4	
1 880	9400				15.98	Right Tilt	1:1	0.057	28.4	

Table A-2 RSI = 1 *PLimit* Calculations – 4G Head SAR

MEASUREMENT RESULTS													
Frequency		Mode	Ant.	Band	Frame	Test	MPR	RB	RB	Duty	Meas.	Plimit	Minimum
MHz	Ch.			width	Averaged						SAR(1g)	(dBm)	
				(dBm)	Conducte		(dB)	Size	offset	Cycle	(W/kg)	(dBm)	(dBm)
1 860.0	26140	LTE Band 25	I	20	15.64	Left Cheek	0	1	0	1:1	0.729	17.0	17.0
1 860.0	26140	LTE Band 25	I	20	15.64	Left Tilt	0	1	0	1:1	0.150	23.9	
1 860.0	26140	LTE Band 25	I	20	15.64	Right Cheek	0	1	0	1:1	0.271	21.3	
1 860.0	26140	LTE Band 25	I	20	15.64	Right Tilt	0	1	0	1:1	0.051	28.6	
2 549.5	40185	LTE Band41(PC3)	I	20	14.37	Left Cheek	0	1	0	1:1.58	0.650	16.2	16.2
2 549.5	40185	LTE Band41(PC3)	I	20	14.37	Left Tilt	0	1	0	1:1.58	0.122	23.5	
2 549.5	40185	LTE Band41(PC3)	I	20	14.37	Right Cheek	0	1	0	1:1.58	0.207	21.2	
2 549.5	40185	LTE Band41(PC3)	I	20	14.37	Right Tilt	0	1	0	1:1.58	0.044	27.9	
2 549.5	40185	LTE Band41(PC2)	I	20	14.60	Left Cheek	0	1	0	1:2.31	0.683	16.3	16.3
1 770.0	132572	LTE Band 66	I	20	15.72	Left Cheek	0	1	99	1:1	0.587	18.0	18.0
1 770.0	132572	LTE Band 66	I	20	15.72	Left Tilt	0	1	99	1:1	0.128	24.6	
1 770.0	132572	LTE Band 66	I	20	15.72	Right Cheek	0	1	99	1:1	0.267	21.5	
1 770.0	132572	LTE Band 66	I	20	15.72	Right Tilt	0	1	99	1:1	0.045	29.2	

Table A-3 RSI = 1 *PLimit* Calculations – NR Head SAR

For some bands/modes, a lower *PLimit* was selected as a more conservative evaluation.

NR TDD Bands : In the case of the NR TDD bands, the *PLimit* were calculated as the Frame average power to which the duty factor was applied to the burst power.

SAR measurements of all NR bands were measured in FTM Mode.

MEASUREMENT RESULTS														
Frequency		Mode	Ant.	Band width	Frame Averaged Conducted Power	Test Configurations		MPR	RB Size	RB offset	Duty Cycle	Meas. SAR (1g)	Plimit	Minimum Plimit
				(dBm)	(dBm)			(dB)				W/kg	(dBm)	(dBm)
MHz	Ch.													
1 882.5	376500	NR Band n25	I	40	15.57	Left Cheek	DFT-s-OFDM QPSK	0	1	104	1:1	0.648	17.5	17.5
1 882.5	376500	NR Band n25	I	40	15.57	Left Tilt	DFT-s-OFDM QPSK	0	1	104	1:1	0.139	24.1	
1 882.5	376500	NR Band n25	I	40	15.57	Right Cheek	DFT-s-OFDM QPSK	0	1	104	1:1	0.204	22.5	
1 882.5	376500	NR Band n25	I	40	15.57	Right Tilt	DFT-s-OFDM QPSK	0	1	104	1:1	0.066	27.4	
2 592.99	518598	NR Band n41	I	100	15.03	Left Cheek	DFT-s-OFDM QPSK	0	1	271	1:1	0.585	17.4	17.4
2 592.99	518598	NR Band n41	I	100	15.03	Left Tilt	DFT-s-OFDM QPSK	0	1	271	1:1	0.088	25.6	
2 592.99	518598	NR Band n41	I	100	15.03	Right Cheek	DFT-s-OFDM QPSK	0	1	271	1:1	0.135	23.7	
2 592.99	518598	NR Band n41	I	100	15.03	Right Tilt	DFT-s-OFDM QPSK	0	1	271	1:1	0.018	32.5	
2 592.99	518598	NR Band n41 SRS2	I	100	11.96	Left Cheek	DFT-s-OFDM QPSK	0	1	137	1:1	0	N/A	N/A
2 592.99	518598	NR Band n41 SRS2	I	100	11.96	Left Tilt	DFT-s-OFDM QPSK	0	1	137	1:1	0	N/A	
2 592.99	518598	NR Band n41 SRS2	I	100	11.96	Right Cheek	DFT-s-OFDM QPSK	0	1	137	1:1	0	N/A	
2 592.99	518598	NR Band n41 SRS2	I	100	11.96	Right Tilt	DFT-s-OFDM QPSK	0	1	137	1:1	0	N/A	
2 592.99	518598	NR Band n41 SRS3	I	100	13.20	Left Cheek	DFT-s-OFDM QPSK	0	1	137	1:1	0.011	32.8	25.0
2 592.99	518598	NR Band n41 SRS3	I	100	13.20	Left Tilt	DFT-s-OFDM QPSK	0	1	137	1:1	0.011	32.8	
2 592.99	518598	NR Band n41 SRS3	I	100	13.20	Right Cheek	DFT-s-OFDM QPSK	0	1	137	1:1	0.066	25.0	
2 592.99	518598	NR Band n41 SRS3	I	100	13.20	Right Tilt	DFT-s-OFDM QPSK	0	1	137	1:1	0.041	27.1	
2 592.99	518598	NR Band n41 SRS4	I	100	12.04	Left Cheek	DFT-s-OFDM QPSK	0	1	137	1:1	0	N/A	N/A
2 592.99	518598	NR Band n41 SRS4	I	100	12.04	Left Tilt	DFT-s-OFDM QPSK	0	1	137	1:1	0	N/A	
2 592.99	518598	NR Band n41 SRS4	I	100	12.04	Right Cheek	DFT-s-OFDM QPSK	0	1	137	1:1	0	N/A	
2 592.99	518598	NR Band n41 SRS4	I	100	12.04	Right Tilt	DFT-s-OFDM QPSK	0	1	137	1:1	0	N/A	
1 745	349000	NR Band 66	I	40	14.28	Left Cheek	DFT-s-OFDM QPSK	0	1	108	1:1	0.409	18.2	18.2
1 745	349000	NR Band 66	I	40	14.28	Left Tilt	DFT-s-OFDM QPSK	0	1	108	1:1	0.098	24.4	
1 745	349000	NR Band 66	I	40	14.28	Right Cheek	DFT-s-OFDM QPSK	0	1	108	1:1	0.324	19.2	
1 745	349000	NR Band 66	I	40	14.28	Right Tilt	DFT-s-OFDM QPSK	0	1	108	1:1	0.041	28.2	

Table A-4 RSI = 0,3 P_{Limit} Calculations – 3G Body-Worn SAR

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.

MEASUREMENT RESULTS												
Frequency		Mode/ Band		Form Factor	Ant. No.	Frame Averaged Conducted Power (dBm)	Test Position	Spacing (mm)	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.									(W/kg)	(dBm)	(dBm)
1 732.4	1412	UMTS Band 4	RMC	Open	I	16.11	Rear	5	1:1	0.529	18.9	18.9
1 732.4	1412	UMTS Band 4	RMC	Open	I	16.11	Front	5	1:1	0.275	21.7	
1 732.4	1412	UMTS Band 4	RMC	Close	I	16.54	Rear	5	1:1	0.029	31.5	20.3
1 732.4	1412	UMTS Band 4	RMC	Close	I	16.54	Front	5	1:1	0.385	20.3	
1 880.0	9400	UMTS Band 2	RMC	Open	I	15.99	Rear	5	1:1	0.596	18.2	18.2
1 880.0	9400	UMTS Band 2	RMC	Open	I	15.99	Front	5	1:1	0.256	21.9	
1 880.0	9400	UMTS Band 2	RMC	Close	I	15.99	Rear	5	1:1	0.023	32.4	20.2
1 880.0	9400	UMTS Band 2	RMC	Close	I	15.99	Front	5	1:1	0.383	20.2	

Table A-5 RSI = 0,3 P_{Limit} Calculations – 4G Body-Worn SAR

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.

MEASUREMENT RESULTS															
Frequency		Mode	Form Factor	Ant. No.	Band width h	Frame Averaged Conducted Power	Test Position	Spacing (mm)	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR (1g)	Plimit	Minimum Plimit
MHz	Ch.					(dBm)							(W/kg)	(dBm)	(dBm)
7 82.0	23230	LTE Band 13	Open	A	10	21.24	Rear	5	0	1	24	1:1	0.293	26.6	26.6
7 82.0	23230	LTE Band 13	Open	A	10	21.24	Front	5	0	1	24	1:1	0.249	27.3	
7 82.0	23230	LTE Band 13	Close	A	10	21.24	Rear	5	0	1	24	1:1	0.207	28.1	
7 82.0	23230	LTE Band 13	Close	A	10	21.24	Front	5	0	1	24	1:1	0.031	36.3	
1 882.5	26365	LTE Band 25	Open	I	20	16.66	Rear	5	0	1	0	1:1	0.516	19.5	19.5
1 882.5	26365	LTE Band 25	Open	I	20	16.66	Front	5	0	1	0	1:1	0.461	20.0	
1 882.5	26365	LTE Band 25	Close	I	20	16.66	Rear	5	0	1	0	1:1	0.039	30.7	
1 882.5	26365	LTE Band 25	Close	I	20	16.66	Front	5	0	1	0	1:1	0.479	19.9	
2 593	40620	LTE Band 41(PC3)	Open	I	20	17.20	Rear	5	0	1	49	1:1.58	0.631	19.2	19.2
2 593	40620	LTE Band 41(PC3)	Open	I	20	17.20	Front	5	0	1	49	1:1.58	0.469	20.5	
2 593	40620	LTE Band 41(PC3)	Close	I	20	17.20	Rear	5	0	1	49	1:1.58	0.113	26.7	
2 593	40620	LTE Band 41(PC3)	Close	I	20	17.20	Front	5	0	1	49	1:1.58	0.555	19.8	
1 770	132572	LTE Band 66	Open	I	20	16.59	Rear	5	0	1	99	1:1	0.525	19.4	19.3
1 770	132572	LTE Band 66	Open	I	20	16.59	Front	5	0	1	99	1:1	0.457	20.0	
1 770	132572	LTE Band 66	Close	I	20	16.59	Rear	5	0	1	99	1:1	0.027	32.3	
1 770	132572	LTE Band 66	Close	I	20	16.59	Front	5	0	1	99	1:1	0.534	19.3	

Table A-6 RSI = 0,3 *PLimit* Calculations – NR Body-Worn SAR

For some bands/modes, a lower *PLimit* was selected as a more conservative evaluation.

NR TDD Bands : In the case of the NR TDD bands, the *PLimit* were calculated as the Frame average power to which the duty factor was applied to the burst power.0

SAR measurements of all NR bands were measured in FTM Mode.

MEASUREMENT RESULTS																
Frequency		Mode	Form Factor	Ant. No.	Band width	Frame Averaged Conducted Power	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimu Plimit
					MHz	Ch.			MHz					(dBm)	(dB)	(W/kg)
1 882.5	376500	NR Band n25	Open	I	40	16.48	Rear	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.582	18.8	18.8
1 882.5	376500	NR Band n25	Open	I	40	16.48	Front	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.409	20.4	
1 882.5	376500	NR Band n25	Close	I	40	16.48	Rear	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.037	30.8	
1 882.5	376500	NR Band n25	Close	I	40	16.48	Front	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.508	19.4	
1 745	349000	NR Band n66	Open	I	40	15.42	Rear	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.411	19.3	19.0
1 745	349000	NR Band n66	Open	I	40	15.42	Rear	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.118	24.7	
1 745	349000	NR Band n66	Close	I	40	15.42	Rear	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.024	31.6	
1 745	349000	NR Band n66	Close	I	40	15.42	Rear	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.439	19.0	
2 592.99	518598	NR Band n41	Open	I	100	17.63	Rear	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.352	22.2	20.6
2 592.99	518598	NR Band n41	Open	I	100	17.63	Front	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.407	21.5	
2 592.99	518598	NR Band n41	Close	I	100	17.63	Rear	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.172	25.3	
2 592.99	518598	NR Band n41	Close	I	100	17.63	Front	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.509	20.6	
2 592.99	518598	NR n41 SRS2	Open	B	100	15.88	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.089	26.4	26.4
2 592.99	518598	NR n41 SRS2	Open	B	100	15.88	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.018	33.3	
2 592.99	518598	NR n41 SRS2	Close	B	100	15.88	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.082	26.7	
2 592.99	518598	NR n41 SRS2	Close	B	100	15.88	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.000	-	
2 592.99	518598	NR n41 SRS3	Open	F	100	17.97	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.049	31.1	30.6
2 592.99	518598	NR n41 SRS3	Open	F	100	17.97	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.054	30.6	
2 592.99	518598	NR n41 SRS3	Close	F	100	17.97	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.003	42.2	
2 592.99	518598	NR n41 SRS3	Close	F	100	17.97	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.052	30.8	
2 592.99	518598	NR n41 SRS4	Open	C	100	15.62	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.039	29.7	29.7
2 592.99	518598	NR n41 SRS4	Open	C	100	15.62	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.008	36.1	
2 592.99	518598	NR n41 SRS4	Close	C	100	15.62	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.019	32.8	
2 592.99	518598	NR n41 SRS4	Close	C	100	15.62	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.000	-	

Table A-7 RSI = 2,4 P_{Limit} Calculations – 3G Hotspot SAR

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.

MEASUREMENT RESULTS												
Frequency		Mode/ Band		Form Factor	Ant . No.	Frame Averaged Conducted Power (dBm)	Test Position	Spacing (mm)	Duty Cycle	Meas. SAR(1g) (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
MHz	Ch.											
1 732.4	1412	UMTS Band 4	RMC	Open	I	16.11	Rear	5	1:1	0.529	18.9	17.7
1 732.4	1412	UMTS Band 4	RMC	Open	I	16.11	Front	5	1:1	0.275	21.7	
1 732.4	1412	UMTS Band 4	RMC	Open	I	16.11	Right	5	1:1	0.694	17.7	
1 732.4	1412	UMTS Band 4	RMC	Open	I	16.11	Top	5	1:1	0.016	34.1	
1 732.4	1412	UMTS Band 4	RMC	Close	I	16.11	Rear	5	1:1	0.029	31.5	
1 732.4	1412	UMTS Band 4	RMC	Close	I	16.11	Front	5	1:1	0.385	20.3	
1 732.4	1412	UMTS Band 4	RMC	Close	I	16.11	Right	5	1:1	0.582	18.5	
1 732.4	1412	UMTS Band 4	RMC	Close	I	16.11	Top	5	1:1	0.001	46.1	
1 732.4	1412	UMTS Band 4	RMC	Close	I	16.11	Bottom	5	1:1	0.015	34.3	
1 880	9400	UMTS Band 2	RMC	Open	I	15.99	Rear	5	1:1	0.596	18.2	17.4
1 880	9400	UMTS Band 2	RMC	Open	I	15.99	Front	5	1:1	0.256	21.9	
1 880	9400	UMTS Band 2	RMC	Open	I	15.99	Right	5	1:1	0.729	17.4	
1 880	9400	UMTS Band 2	RMC	Open	I	15.99	Top	5	1:1	0.024	32.2	
1 880	9400	UMTS Band 2	RMC	Close	I	15.99	Rear	5	1:1	0.023	32.4	
1 880	9400	UMTS Band 2	RMC	Close	I	15.99	Front	5	1:1	0.383	20.2	
1 880	9400	UMTS Band 2	RMC	Close	I	15.99	Right	5	1:1	0.699	17.5	
1 880	9400	UMTS Band 2	RMC	Close	I	15.99	Top	5	1:1	0.011	35.6	
1 880	9400	UMTS Band 2	RMC	Close	I	15.99	Bottom	5	1:1	0.020	33.0	

Table A-8 RSI = 2,4 P_{Limit} Calculations – 4G Hotspot SAR

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.

MEASUREMENT RESULTS															
Frequency		Mode	Form Factor	Ant. No.	Band width	Frame Averaged Conducted Power	Test Position	Spacing (mm)	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR (1g)	Plimit	Minimum Plimit
MHz	Ch.				MHz	(dBm)			(dB)				(W/kg)	(dBm)	(dBm)
782	23230	LTE Band 13	Open	A	10	21.24	Rear	5	0	1	24	1:1	0.293	26.6	26.6
782	23230	LTE Band 13	Open	A	10	21.24	Front	5	0	1	24	1:1	0.249	27.3	
782	23230	LTE Band 13	Open	A	10	21.24	Left	5	0	1	24	1:1	0.089	31.7	
782	23230	LTE Band 13	Open	A	10	21.24	Right	5	0	1	24	1:1	0.180	28.7	
782	23230	LTE Band 13	Open	A	10	21.24	Bottom	5	0	1	24	1:1	0.127	30.2	
782	23230	LTE Band 13	Close	A	10	21.24	Rear	5	0	1	24	1:1	0.207	28.1	
782	23230	LTE Band 13	Close	A	10	21.24	Front	5	0	1	24	1:1	0.031	36.3	
782	23230	LTE Band 13	Close	A	10	21.24	Left	5	0	1	24	1:1	0.022	37.8	
782	23230	LTE Band 13	Close	A	10	21.24	Right	5	0	1	24	1:1	0.007	42.8	
782	23230	LTE Band 13	Close	A	10	21.24	Bottom	5	0	1	24	1:1	0.122	30.4	
1860	26140	LTE Band 25	Open	I	20	16.35	Rear	5	0	1	0	1:1	0.516	19.2	16.8
1860	26140	LTE Band 25	Open	I	20	16.35	Front	5	0	1	0	1:1	0.461	19.7	
1860	26140	LTE Band 25	Open	I	20	16.35	Right	5	0	1	0	1:1	0.895	16.8	
1860	26140	LTE Band 25	Open	I	20	16.35	Top	5	0	1	0	1:1	0.07	27.9	
1860	26140	LTE Band 25	Close	I	20	16.35	Rear	5	0	1	0	1:1	0.039	30.4	
1860	26140	LTE Band 25	Close	I	20	16.35	Front	5	0	1	0	1:1	0.479	19.5	
1860	26140	LTE Band 25	Close	I	20	16.35	Right	5	0	1	0	1:1	0.678	18.0	
1860	26140	LTE Band 25	Close	I	20	16.35	Top	5	0	1	0	1:1	0.011	35.9	
1860	26140	LTE Band 25	Close	I	20	16.35	Bottom	5	0	1	0	1:1	0.044	29.9	
2549.5	40185	LTE Band 41(PC3)	Open	I	20	17.20	Rear	5	0	1	49	1:1.58	0.631	19.2	17.6
2549.5	40185	LTE Band 41(PC3)	Open	I	20	17.20	Front	5	0	1	49	1:1.58	0.469	20.5	
2549.5	40185	LTE Band 41(PC3)	Open	I	20	17.20	Right	5	0	1	49	1:1.58	0.917	17.6	
2549.5	40185	LTE Band 41(PC3)	Open	I	20	17.20	Top	5	0	1	49	1:1.58	0.085	27.9	
2549.5	40185	LTE Band 41(PC3)	Close	I	20	17.20	Rear	5	0	1	49	1:1.58	0.113	26.7	
2549.5	40185	LTE Band 41(PC3)	Close	I	20	17.20	Front	5	0	1	49	1:1.58	0.555	19.8	
2549.5	40185	LTE Band 41(PC3)	Close	I	20	17.20	Right	5	0	1	49	1:1.58	0.817	18.1	
2549.5	40185	LTE Band 41(PC3)	Close	I	20	17.20	Top	5	0	1	49	1:1.58	0.039	31.3	
2549.5	40185	LTE Band 41(PC3)	Close	I	20	17.20	Bottom	5	0	1	49	1:1.58	0.112	26.7	
2549.5	40185	LTE Band 41(PC2)	Open	I	20	17.15	Right	5	0	1	49	1:2.31	0.962	17.3	17.3
2549.5	40185	LTE Band 41(PC2)	Close	I	20	16.81	Right	5	0	1	49	1:2.31	0.768	18.0	
1770	132572	LTE Band 66	Open	I	20	16.59	Rear	5	0	1	99	1:1	0.525	19.4	17.5
1770	132572	LTE Band 66	Open	I	20	16.59	Front	5	0	1	99	1:1	0.457	20.0	
1770	132572	LTE Band 66	Open	I	20	16.59	Right	5	0	1	99	1:1	0.807	17.5	
1770	132572	LTE Band 66	Open	I	20	16.59	Top	5	0	1	99	1:1	0.043	30.3	
1770	132572	LTE Band 66	Close	I	20	16.59	Rear	5	0	1	99	1:1	0.027	32.3	
1770	132572	LTE Band 66	Close	I	20	16.59	Front	5	0	1	99	1:1	0.534	19.3	
1770	132572	LTE Band 66	Close	I	20	16.59	Right	5	0	1	99	1:1	0.638	18.5	
1770	132572	LTE Band 66	Close	I	20	16.59	Top	5	0	1	99	1:1	0.010	36.6	
1770	132572	LTE Band 66	Close	I	20	16.59	Bottom	5	0	1	99	1:1	0.039	30.7	

Table A-9 RSI = 2,4 *PLimit* Calculations – NR Hotspot SAR

For some bands/modes, a lower *PLimit* was selected as a more conservative evaluation.

NR TDD Bands : In the case of the NR TDD bands, the *PLimit* were calculated as the Frame average power to which the duty factor was applied to the burst power.0

SAR measurements of all NR bands were measured in FTM Mode.

MEASUREMENT RESULTS																	
Frequency		Mode	Form Factor	Ant. No.	Band width	Frame Averaged Conducted Power	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimu Plimit	
Mhz	Ch.				MHz	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)	
1 882.5	376500	NR Band n25	Open	I	40	16.48	Rear	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.582	18.8	17.4	
1 882.5	376500	NR Band n25	Open	I	40	16.48	Front	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.409	20.4		
1 882.5	376500	NR Band n25	Open	I	40	16.48	Right	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.765	17.6		
1 882.5	376500	NR Band n25	Open	I	40	16.48	Top	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.020	33.5		
1 882.5	376500	NR Band n25	Close	I	40	16.48	Rear	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.037	30.8		
1 882.5	376500	NR Band n25	Close	I	40	16.48	Front	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.508	19.4		
1 882.5	376500	NR Band n25	Close	I	40	16.48	Right	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.802	17.4		
1 882.5	376500	NR Band n25	Close	I	40	16.48	Top	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.00645	38.7		
1 882.5	376500	NR Band n25	Close	I	40	16.48	Bottom	DFT-s-OFDM QPSK	0	5	1	108	1:1	0.028	32.0		
2 593	518598	NR Band n41	Open	I	100	17.63	Rear	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.352	22.2	18.5	
2 593	518598	NR Band n41	Open	I	100	17.63	Front	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.407	21.5		
2 593	518598	NR Band n41	Open	I	100	17.63	Right	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.823	18.5		
2 593	518598	NR Band n41	Open	I	100	17.63	Top	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.05	30.6		
2 593	518598	NR Band n41	Close	I	100	17.63	Rear	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.172	25.3		
2 593	518598	NR Band n41	Close	I	100	17.63	Front	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.509	20.6		
2 593	518598	NR Band n41	Close	I	100	17.63	Left	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.751	18.9		
2 593	518598	NR Band n41	Close	I	100	17.63	Bottom	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.034	32.3		
2 593	518598	NR Band n41	Close	I	100	17.63	Rear	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.095	27.9		
2 593	518598	NR n41 SRS2	Open	B	100	15.88	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.089	26.4	21.8	
2 593	518598	NR n41 SRS2	Open	B	100	15.88	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.018	33.3		
2 593	518598	NR n41 SRS2	Open	B	100	15.88	Left	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.062	28.0		
2 593	518598	NR n41 SRS2	Open	B	100	15.88	Bottom	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.253	21.8		
2 593	518598	NR n41 SRS2	Close	B	100	15.88	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.082	26.7		
2 593	518598	NR n41 SRS2	Close	B	100	15.88	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.000	N/A		
2 593	518598	NR n41 SRS2	Close	B	100	15.88	Left	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.054	28.6		
2 593	518598	NR n41 SRS2	Close	B	100	15.88	Bottom	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.199	22.9		

MEASUREMENT RESULTS																
Frequency		Mode	Form Factor	Ant. No.	Band width	Frame Averaged Conducted Power	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimu Plimit
MHz	Ch.				MHz	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)
2 593	518598	NR n41 SRS3	Open	F	100	17.97	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.049	31.1	26.0
2 593	518598	NR n41 SRS3	Open	F	100	17.97	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.054	30.6	
2 593	518598	NR n41 SRS3	Open	F	100	17.97	Left	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.156	26.0	
2 593	518598	NR n41 SRS3	Open	F	100	17.97	Top	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.050	31.0	
2 593	518598	NR n41 SRS3	Close	F	100	17.97	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.003	43.2	
2 593	518598	NR n41 SRS3	Close	F	100	17.97	Front	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.052	30.8	
2 593	518598	NR n41 SRS3	Close	F	100	17.97	Left	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.098	28.1	
2 593	518598	NR n41 SRS3	Close	F	100	17.97	Bottom	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.000	N/A	
2 593	518598	NR n41 SRS3	Close	F	100	17.97	Top	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.046	31.3	
2 593	518598	NR n41 SRS4	Open	C	100	15.62	Rear	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.039	29.7	29.7
2 593	518598	NR n41 SRS4	Open	C	100	15.62	Front	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.008	36.1	
2 593	518598	NR n41 SRS4	Open	C	100	15.62	Left	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.017	33.3	
2 593	518598	NR n41 SRS4	Open	C	100	15.62	Bottom	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.000	N/A	
2 593	518598	NR n41 SRS4	Close	C	100	15.62	Rear	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.019	32.8	
2 593	518598	NR n41 SRS4	Close	C	100	15.62	Front	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.000	N/A	
2 593	518598	NR n41 SRS4	Close	C	100	15.62	Left	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.035	30.2	
2 593	518598	NR n41 SRS4	Close	C	100	15.62	Top	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.000	N/A	
2 593	518598	NR n41 SRS4	Close	C	100	15.62	Bottom	DFT-s-OFDM QPSK	5	5	1	137	1:1	0.000	N/A	
1 745	349000	NR Band n66	Open	I	40	15.42	Rear	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.411	19.3	16.8
1 745	349000	NR Band n66	Open	I	40	15.42	Front	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.118	24.7	
1 745	349000	NR Band n66	Open	I	40	15.42	Right	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.736	16.8	
1 745	349000	NR Band n66	Open	I	40	15.42	Top	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.019	32.6	
1 745	349000	NR Band n66	Close	I	40	15.42	Rear	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.024	31.6	
1 745	349000	NR Band n66	Close	I	40	15.42	Front	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.439	19.0	
1 745	349000	NR Band n66	Close	I	40	15.42	Right	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.726	16.8	
1 745	349000	NR Band n66	Close	I	40	15.42	Top	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.000	n/a	
1 745	349000	NR Band n66	Close	I	40	15.42	Bottom	DFT-s-OFDM QPSK	0	5	108	108	1:1	0.022	32.0	

MEASUREMENT RESULTS																
Frequency		Mode	Form Factor	Ant. No.	Band width	Frame Averaged Conducted Power	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.															
					MHz	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)
3 750	650000	NR Band n77	Open	F	100	14.99	Rear	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.467	18.3	17.2
3 750	650000	NR Band n77	Open	F	100	14.99	Front	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.251	21.0	
3 750	650000	NR Band n77	Open	F	100	14.99	Left	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.598	17.2	
3 750	650000	NR Band n77	Open	F	100	14.99	Top	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.205	21.9	
3 750	650000	NR Band n77	Close	F	100	14.99	Rear	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.036	29.4	
3 750	650000	NR Band n77	Close	F	100	14.99	Front	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.483	18.2	
3 750	650000	NR Band n77	Close	F	100	14.99	Left	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.502	18.0	
3 750	650000	NR Band n77	Close	F	100	14.99	Bottom	DFT-s-OFDM QPSK	0	5	1	271	1:1	0.117	24.3	
3 750	650000	NR Band n77 SRS1	Open	I	100	14.92	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.146	23.3	18.7
3 750	650000	NR Band n77 SRS1	Open	I	100	14.92	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.057	27.4	
3 750	650000	NR Band n77 SRS1	Open	I	100	14.92	Right	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.189	22.2	
3 750	650000	NR Band n77 SRS1	Open	I	100	14.92	Top	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.004	38.9	
3 750	650000	NR Band n77 SRS1	Close	I	100	14.92	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.019	32.1	
3 750	650000	NR Band n77 SRS1	Close	I	100	14.92	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.418	18.7	
3 750	650000	NR Band n77 SRS1	Close	I	100	14.92	Right	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.415	18.7	
3 750	650000	NR Band n77 SRS1	Close	I	100	14.92	Top	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.008	35.9	
3 750	650000	NR Band n77 SRS1	Close	I	100	14.92	Bottom	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.008	35.9	
3 750	650000	NR Band n77 SRS2	Open	E	100	14.95	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.079	26.0	22.9
3 750	650000	NR Band n77 SRS2	Open	E	100	14.95	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.075	26.2	
3 750	650000	NR Band n77 SRS2	Open	E	100	14.95	Left	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.130	23.8	
3 750	650000	NR Band n77 SRS2	Open	E	100	14.95	Top	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.00242	41.9	
3 750	650000	NR Band n77 SRS2	Close	E	100	14.95	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.063	27.0	
3 750	650000	NR Band n77 SRS2	Close	E	100	14.95	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.091	25.4	
3 750	650000	NR Band n77 SRS2	Close	E	100	14.95	Left	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.162	22.9	
3 750	650000	NR Band n77 SRS2	Close	E	100	14.95	Top	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.000	N/A	
3 750	650000	NR Band n77 SRS2	Close	E	100	14.95	Bottom	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.007	36.5	
3 750	650000	NR Band n77 SRS3	Open	C	100	13.68	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.039	28.8	24.1
3 750	650000	NR Band n77 SRS3	Open	C	100	14.68	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.031	29.8	
3 750	650000	NR Band n77 SRS3	Open	C	100	14.68	Left	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.113	24.1	
3 750	650000	NR Band n77 SRS3	Open	C	100	14.68	Bottom	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.00359	38.7	
3 750	650000	NR Band n77 SRS3	Close	C	100	14.68	Rear	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.038	28.9	
3 750	650000	NR Band n77 SRS3	Close	C	100	14.68	Front	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.000	N/A	
3 750	650000	NR Band n77 SRS3	Close	C	100	14.68	Left	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.105	24.5	
3 750	650000	NR Band n77 SRS3	Close	C	100	14.68	Top	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.000	N/A	
3 750	650000	NR Band n77 SRS3	Close	C	100	14.68	Bottom	DFT-s-OFDM QPSK	0	5	1	137	1:1	0.002	41.7	