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PART 0 SAR CHAR REPORT

Applicant Name: **SAMSUNG Electronics Co., Ltd.** 129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677 Rep. of Korea	**Date of Issue: Nov. 26, 2021** **Test Report No.: HCT-SR-2111-FC005** **Test Site: HCT CO., LTD.**

FCC ID: **A3LSMX808U**

Report Type:	**Part 0 SAR Characterization**
Equipment Type:	**Tablet**
Model Name:	**SM-X808U**
Date of Test:	**Sep. 20. 2021 ~ Nov. 23. 2021**

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.
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Tested By

Jin-nyeong, Choi
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REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	Nov. 26, 2021	Initial Release

This test results were applied only to the test methods required by the standard.

The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

Table of Contents

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)

2. DEVICE UNDER TEST

2.1 General Information of the EUT

Device Wireless specification overview		
Band & Mode	**Operating Mode**	**Tx Frequency**
UMTS Band 5	Data	826.4 ㎒ ~ 846.6 ㎒
UMTS Band 4	Data	1 712.4 ㎒ ~ 1 752.6 ㎒
UMTS Band 2	Data	1 852.4 ㎒ ~ 1 907.6 ㎒
LTE Band 2	Data	1 850.7 ㎒ ~ 1 909.3 ㎒
LTE Band 4	Data	1 710.7 ㎒ ~ 1 754.3 ㎒
LTE Band 5 (Cell)	Data	824.7 ㎒ ~ 848.3 ㎒
LTE Band 7	Data	2 502.5 ㎒ ~ 2 567.5 ㎒
LTE Band 12	Data	699.7 ㎒ ~ 715.3 ㎒
LTE Band 13	Data	779.5 ㎒ ~ 784.5 ㎒
LTE Band 25	Data	1 850.7 ㎒ ~ 1 914.3 ㎒
LTE Band 26	Data	814.7 ㎒ ~ 848.3 ㎒
LTE TDD Band 41	Data	2 498.5 ㎒ ~ 2 687.5 ㎒
LTE Band 66 (AWS)	Data	1 710.7 ㎒ ~ 1 779.3 ㎒
LTE Band 71	Data	665.5 ㎒ ~ 695.5 ㎒
NR Band 2	Data	1 852.5 ㎒ ~ 1 907.5 ㎒
NR Band 5	Data	826.5 ㎒ ~ 846.5 ㎒
NR Band 25	Data	1 852.5 ㎒ ~ 1912.5 ㎒
NR Band 41	Data	2 506.02 ㎒ ~ 2 679.99 ㎒
NR Band 66	Data	1 712.5 ㎒ ~ 1 777.5 ㎒
NR Band 71	Data	665.5 ㎒ - 695.5 ㎒
NR Band 77	Data	3 710 ㎒ ~ 3 969.99 ㎒
NR Band 77(DoD)	Data	3 450 ㎒ ~ 3 550 ㎒
NR Band n260	Data	37000 ㎒ ~ 40000 ㎒
NR Band n261	Data	27500 ㎒ ~ 28350 ㎒
2.4GHz WLAN	Data	2 412 ㎒ ~ 2 462 ㎒
U-NII-1	Data	5 180 ㎒ ~ 5 240 ㎒
U-NII-2A	Data	5 260 ㎒ ~ 5 320 ㎒
U-NII-2C	Data	5 500 ㎒ ~ 5 720 ㎒
U-NII-3	Data	5 745 ㎒ ~ 5 825 ㎒
U-NII-4	Data	5 845 ㎒ ~ 5 885 ㎒
U-NII-5	Data	5 935 ㎒ ~ 6 415 ㎒
U-NII-6	Data	6 435 ㎒ ~ 6 525 ㎒
U-NII-7	Data	6 535 ㎒ ~ 6 875 ㎒
U-NII-8	Data	6 895 ㎒ ~ 7 115 ㎒
Bluetooth	Data	2 402 ㎒ ~ 2 480 ㎒
S-PEN	Data	530 ㎑

This device uses the Qualcomm® Smart Transmit feature to control and manage transmitting power in real time and to ensure the time-averaged RF exposure is in compliance with the FCC requirement at all times for 3G/4G/5G WWAN operations. Additionally, this device supports WLAN/BT technologies, but the output power of these modems is not controlled by the Smart Transmit algorithm

2.2 Time-Averaging for SAR

This device is enabled with Qualcomm® Smart Transmit algorithm to control and manage transmitting power in real time and to ensure that the time-averaged RF exposure from 3G/4G/5G NR WWAN is in compliance with FCC requirements.
This Part 0 report shows SAR and Power Density characterization of WWAN radios for 3G/4G and 5G Sub-6 NR respectively. Characterization is achieved by determining PLimit for 3G/4G and 5G Sub-6 NR correspond to the exposure design targets after accounting for all device design related uncertainties ,i.e., SAR_design_target (< FCC SAR limit) for sub-6 radio.
The SAR characterization is denoted as SAR Char in this report. Section 2.3 includes a nomenclature of the specific terms used in this report.

The compliance test under the static transmission scenario and simultaneous transmission analysis are reported in Part 1 report. The validation of the time-averaging algorithm and compliance under the dynamic (time- varying) transmission scenario for WWAN technologies are reported in Part 2 report

2.3 Nomenclature for Part 0 Report

Technology	Term	Description
3G/4G/5G Sub 6 NR	*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 (d*W*) absorbed by (dissipated in) an incremental mass (d*m*) contained in a volume element (d*V*) 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

$$SAR = \frac{d}{d\ t}\left(\frac{d\ U}{d\ m}\right)$$

Figure 1. 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/㎥)

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 measuredat a distance no greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device head and body interface andthe horizontal grid resolution was determined per FCC KDB Publication865664 D01v01r04 and IEEE 1528-2013.

2. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.

3. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (SeeTable 3-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with: the following procedure (see references or the DASY manual online for more details)

a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in
b. Table 3-1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).
c. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 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 then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.
d. 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-easured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test 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 CHARAC TERIZATION

4.1 DSI and SAR Determination

This device uses different Device State Index (DSI) 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 DSI. 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 device state index (DSI) conditions used in Table 4-1 represent different exposure scenarios.

Scenario	Description	SAR Test Cases
Max Power (DSI = 0)	▪ Device is held with hand and grip sensor is not triggered ▪ Distance grip sensor not triggered Max Power Condition	*KDB Publication 616217 D04*
Grip on (DSI=1)	▪ Device is held with hand and grip sensor is triggered Reduced Power condition	*KDB Publication 616217 D04*

Table 4-1 DSI and Corresponding Exposure Scenarios

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).

SAR_design_target	
$SAR\_design\_target < SAR\_regulatory\_limit \times 10^{-Total\ Uncertainty/10}$	
1g SAR (W/kg)	
Total Uncertainty	1.0 dB
SAR_regulatory_limit	1.6 W/kg
SAR_design_target	1.0 W/kg

Table 4-2 *SAR_design_target* Calculations

4.3 SAR Characterization

SAR test results corresponding to *Pmax* for each antenna/technology/band/DSI 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 4-3.

Device State Index (DSI)	*PLimit* Determination Scenarios
0	The worst-case SAR exposure is determined as maximum SAR normalized to the limit among: 1. Body SAR measured at 21, 7, 20mm and 8mm spacing for Rear, Right, Top and Right Corner respectively Main 1 Ant 2. Body SAR measured at 0 mm for Left surfaces for Main 1 Ant /Main 3 Ant 3. Body SAR measured at 9.5, 7, 12mm and 8 mm spacing for Rear, Right, Top and Right Corner respectively Main 3 Ant
1	1. P_{limit} is calculated based on 1g Body SAR at 0 mm for Rear, Right and Top surfaces (Main Ant 1) 2. P_{limit} is calculated based on 1g Body SAR at 0 mm for Rear, Left, Right and Top surfaces (Main Ant 3)

Table 4-3 *PLimit* Determination

Note:

Main 1 Ant) For DSI=0,*Plimit* is calculated by :

Plimit = min{ *Plimit* cooresponding to 1g Body SAR evaluation at 21 (Rear), 7(Right), 20(Top) and 8mm(Right Corner) spacing *Plimit* cooresponding to 1g Body SAR evaluation at 0mm for Left surfaces}

Main Ant 3) For DSI=0,*Plimit* is calculated by :

Plimit = min{ *Plimit* cooresponding to 1g Body SAR evaluation at 9.5(Rear), 7(Right), 12(Top) and 8mm(Right Corner) spacing,*Plimit* cooresponding to 1g Body SAR evaluation at 0mm for Left surfaces}

Table 4-4 SAR Characterization

SAR Exposure Configurations			Plimt (all values are time averaged)		Pmax		
			Body SAR Grip Off	Body SAR Grip ON	Burst Average Power [dBm]	Frame Averaged Power [dBm]	UL:DL Ratio
Test Configuration			Max Power	Reduced Power			
Averaging volume			1g	1g			
DSI			0	1			
Mode	Band	Antenna	Plimt		Pmax		
UMTS	5	Main 1	23.5	16.0	23.5	FDD	100%
UMTS	4	Main 1	23.5	13.0	23.5	FDD	100%
UMTS	2	Main 1	23.5	13.0	23.5	FDD	100%
LTE FDD	2	Main 1	24.0	13.0	24.0	FDD	100%
LTE FDD	4	Main 1	24.0	13.0	24.0	FDD	100%
LTE FDD	5	Main 1	24.0	16.0	24.0	FDD	100%
LTE FDD	7	Main 1	21.5	10.5	21.5	FDD	100%
LTE FDD	12	Main 1	24.0	14.0	24.0	FDD	100%
LTE FDD	13	Main 1	24.0	14.0	24.0	FDD	100%
LTE FDD	25	Main 1	24.0	13.0	24.0	FDD	100%
LTE FDD	26	Main 1	24.0	14.0	24.0	FDD	100%
LTE FDD	66	Main 1	24.0	13.0	24.0	FDD	100%
LTE FDD	71	Main 1	24.0	14.0	24.0	FDD	100%
LTE TDD PC3	41	Main 1	22.0	11.0	24.0	22.0	63.3%
LTE TDD PC2	41	Main 1	22.9	11.0	26.5	22.9	43.3%
LTE FDD With FR1 ENDC	2	Sub 1	24.0	13.5	24.0	FDD	100%
LTE FDD With FR1 ENDC	66	Sub 1	24.0	13.5	24.0	FDD	100%
LTE FDD With FR1 ENDC	7	Sub 1	21.5	13.0	21.5	FDD	100%
NR FDD	2	Main 1	24.0	13.5	24.0	FDD	100%
NR FDD	5	Main 1	24.0	16.0	24.0	FDD	100%
NR FDD	25	Main 1	24.0	13.5	24.0	FDD	100%
NR FDD	66	Main 1	24.0	13.5	24.0	FDD	100%
NR FDD	71	Main 1	24.0	14.0	24.0	FDD	100%
NR TDD (PC3)	77	Main 3	18.5	8.0	24.5	18.5	25%
NR TDD (PC2)	77	Main 3	20.5	8.0	26.5	20.5	25%
NR TDD (PC3)	41	Main 1	18.0	8.0	24.0	18.0	25%
NR TDD (PC2)	41	Main 1	20.5	8.0	26.5	20.5	25%

Note:

1. when the Proximity sensor is triggered ,the *Plimit* for DSI=1 is set
2. When *Pmax* < *Plimit*, the DUT will operate at a power level up to *Pmax*.
3. When DSI=1, *Plimit((Tune-up)< Plimit(cal),* the DUT will operate at a power level up to *Plimit as tune-up document*
4. Maximum Tune up Power,P*max*. Is configured in NV settings in EUT to limit maximum transmitting power

5In the case of TDD Signal Bands, Plimit was evaluated by applying the maximum transmission duty. The LTE TDD B41 (PC3) was applied 63.3%, the LTE TDD B41 (PC2) was 43.3%, and the NR TDD Band was applied 25%..

5. Equipment List

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F11/ 5K3RA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F12/ 5K9GA1/ C/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F11/ 5K3RA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F12/ 5K9GA1/ A/ 01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1203 0309	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1206 0513	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331936309	01/26/2021	Annual	01/26/2022
TESTO	175-H1/Thermometer	44606559906	01/26/2021	Annual	01/26/2022
SPEAG	DAE4	1686	06/21/2021	Annual	06/21/2022
SPEAG	DAE4	504	02/19/2021	Annual	02/19/2022
SPEAG	E-Field Probe ES3DV3	3076	07/28/2021	Annual	07/28/2022
SPEAG	E-Field Probe EX3DV4	7370	08/26/2021	Annual	08/26/2022
SPEAG	Dipole D750V3	1014	06/01/2021	Annual	06/01/2022
SPEAG	Dipole D835V2	4d165	08/03/2021	Annual	08/03/2022
SPEAG	Dipole D1800V2	2d015	07/30/2021	Annual	07/30/2022
SPEAG	Dipole D1900V2	5d032	01/28/2021	Annual	01/28/2022
SPEAG	Dipole D2600V2	1106	07/30/2021	Annual	07/30/2022
SPEAG	Dipole D3500V2	1040	02/17/2021	Annual	02/17/2022
SPEAG	Dipole D3700V2	1066	11/19/2020	Annual	11/19/2021
SPEAG	Dipole D3900V2	1019	06/09/2021	Annual	06/09/2022
Agilent	Power Meter E4419B	MY41291386	10/23/2020	Annual	10/23/2021
Agilent	Power Meter E4419B	MY41291386	10/22/2021	Annual	10/22/2022
Agilent	Power Meter N1911A	MY45101406	07/08/2021	Annual	07/08/2022
Agilent	Power Sensor 8481A	SG1091286	10/05/2020	Annual	10/05/2021
Agilent	Power Sensor 8481A	SG1091286	10/04/2021	Annual	10/04/2022
Agilent	Power Sensor 8481A	MY41090675	10/06/2021	Annual	10/06/2022
Agilent	Power Sensor N1921A	MY55220026	08/05/2021	Annual	08/05/2022
SPEAG	DAKS 3.5	1038	03/17/2021	Annual	03/17/2022
ROHDE&SCHWARZ	Signal Generator SMB100A	177633	07/05/2021	Annual	07/05/2022

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/23/2021	Annual	07/23/2022
R&S	Wireless Communication Test Set CMW500	115733	04/15/2021	Annual	04/15/2022
Agilent	11636B/Power Divider	58698	02/26/2021	Annual	02/26/2022
EMPOWER	RF Power Amplifier	1084	06/25/2021	Annual	06/25/2022
EMPOWER	RF Power Amplifier	1041D/C0508	06/24/2021	Annual	06/24/2022
EMPOWER	RF Power Amplifier	BBS5K8CAJ	10/05/2021	Annual	10/05/2022
MICRO LAB	LP Filter / LA-15N	10453	10/05/2020	Annual	10/05/2021
MICRO LAB	LP Filter / LA-15N	10453	10/06/2021	Annual	10/06/2022
MICRO LAB	LP Filter / LA-30N	-	10/05/2020	Annual	10/05/2021
MICRO LAB	LP Filter / LA-30N	-	10/06/2021	Annual	10/06/2022
MICRO LAB	LP Filter / LA-60N	32011	10/05/2020	Annual	10/05/2021
MICRO LAB	LP Filter / LA-60N	32011	10/06/2021	Annual	10/06/2022
HP	Attenuator (3dB) 333340A	02427	09/06/2021	Annual	09/06/2022
HP	Attenuator (20dB) 8493C	09271	09/06/2021	Annual	09/17/2022
Agilent	Directional Bridge 86205A	3140A03878	05/28/2021	Annual	05/28/2022
Agilent	MXA Signal Analyzer N9020A	MY50510407	10/23/2020	Annual	10/23/2021
Agilent	MXA Signal Analyzer N9020A	MY50510407	10/20/2021	Annual	10/20/2022
Anritsu	Radio Communication Tester MT8820C	6200695605	04/15/2021	Annual	04/15/2022
Anritsu	Radio Communication Tester MT8821C	6262287678	05/25/2021	Annual	05/25/2022
Anritsu	Radio Communication Test Station MT8000A	6262036812	12/22/2020	Annual	12/22/2021
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	02/26/2021	Annual	02/26/2022

* 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 Plimit CALCULATIONS

Table A-10 DSI = 0 *PLimit* Calculations - – 3G Body SAR

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

MEASUREMENT RESULTS										
Frequency		Mode		Conducted Power	Test Position	Distance	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(dBm)		(mm)		(W/kg)	(dBm)	(dBm)
846.6	4233	UMTS 850	RMC	24.04	Rear	21	1:1	0.397	28.1	26.5
846.6	4233	UMTS 850	RMC	24.04	Top	20	1:1	0.568	26.5	
846.6	4233	UMTS 850	RMC	24.04	Right	7	1:1	0.178	31.5	
846.6	4233	UMTS 850	RMC	24.04	Left	0	1:1	0.074	35.3	
846.6	4233	UMTS 850	RMC	24.04	Right Corner	8	1:1	0.100	34.0	
1732.4	1412	UMTS 1700	RMC	23.32	Rear	21	1:1	0.266	29.1	25.6
1732.4	1412	UMTS 1700	RMC	23.32	Top	20	1:1	0.588	25.6	
1732.4	1412	UMTS 1700	RMC	23.32	Right	7	1:1	0.182	30.7	
1732.4	1412	UMTS 1700	RMC	23.32	Left	0	1:1	0.131	32.1	
1732.4	1412	UMTS 1700	RMC	23.32	Right Corner	8	1:1	0.242	29.5	
1880.0	9400	UMTS 1900	RMC	24.01	Rear	21	1:1	0.418	27.8	25.6
1880.0	9400	UMTS 1900	RMC	24.01	Top	20	1:1	0.694	25.6	
1880.0	9400	UMTS 1900	RMC	24.01	Right	7	1:1	0.147	32.3	
1880.0	9400	UMTS 1900	RMC	24.01	Left	0	1:1	0.425	27.7	
1880.0	9400	UMTS 1900	RMC	24.01	Right Corner	8	1:1	0.343	28.7	

Table A-11 DSI = 0 *PLimit* Calculations - – 4G Body SAR

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

MEASUREMENT RESULTS														
Frequency		Mode		Band width	Conducted Power	Test Position	Distance	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(MHz)	(dBm)		(mm)	(dBm)				(W/kg)	(dBm)	(dBm)
2 560	21350	LTE Band 7	High	20	22.02	Rear	21	0	1	0	1:1	0.170	29.7	27.2
2 560	21350	LTE Band 7	High	20	22.02	Top	20	0	1	0	1:1	0.219	28.6	
2 560	21350	LTE Band 7	High	20	22.02	Right	7	0	1	0	1:1	0.134	30.7	
2 560	21350	LTE Band 7	High	20	22.02	Left	0	0	1	0	1:1	0.065	33.9	
2 560	21350	LTE Band 7	High	20	22.02	Right Corner	8	0	1	0	1:1	0.301	27.2	
707.5	23095	LTE Band 12	Mid	10	24.71	Rear	21	0	1	49	1:1	0.269	30.4	29.0
707.5	23095	LTE Band 12	Mid	10	24.71	Top	20	0	1	49	1:1	0.372	29.0	
707.5	23095	LTE Band 12	Mid	10	24.71	Right	7	0	1	49	1:1	0.138	33.3	
707.5	23095	LTE Band 12	Mid	10	24.71	Left	0	0	1	49	1:1	0.073	36.1	
707.5	23095	LTE Band 12	Mid	10	24.71	Right Corner	8	0	1	49	1:1	0.070	36.3	
782	23230	LTE Band 13	Mid	10	24.44	Rear	21	0	1	24	1:1	0.304	29.6	27.3
782	23230	LTE Band 13	Mid	10	24.44	Top	20	0	1	24	1:1	0.517	27.3	
782	23230	LTE Band 13	Mid	10	24.44	Right	7	0	1	24	1:1	0.110	34.0	
782	23230	LTE Band 13	Mid	10	24.44	Left	0	0	1	24	1:1	0.045	37.9	
782	23230	LTE Band 13	Mid	10	24.44	Right Corner	8	0	1	24	1:1	0.076	35.6	
1 882.5	26365	LTE Band 25	Mid	20	24.57	Rear	21	0	1	0	1:1	0.346	29.2	27.1
1 882.5	26365	LTE Band 25	Mid	20	24.57	Top	20	0	1	0	1:1	0.553	27.1	
1 882.5	26365	LTE Band 25	Mid	20	24.57	Right	7	0	1	0	1:1	0.166	32.4	
1 882.5	26365	LTE Band 25	Mid	20	24.57	Left	0	0	1	0	1:1	0.311	29.6	
1 882.5	26365	LTE Band 25	Mid	20	24.57	Right Corner	8	0	1	0	1:1	0.290	29.9	
831.5	26865	LTE Band 26	Mid	15	24.00	Rear	21	0	1	74	1:1	0.364	28.4	27.3
831.5	26865	LTE Band 26	Mid	15	24.00	Top	20	0	1	74	1:1	0.471	27.3	
831.5	26865	LTE Band 26	Mid	15	24.00	Right	7	0	1	74	1:1	0.106	33.7	
831.5	26865	LTE Band 26	Mid	15	24.00	Left	0	0	1	74	1:1	0.044	37.6	
831.5	26865	LTE Band 26	Mid	15	24.00	Right Corner	8	0	1	74	1:1	0.087	34.6	
2 593	40620	LTE Band 41(PC3)	Mid	20	22.30	Rear	21	0	1	49	1:1.58	0.131	27.4	27.4
2 593	40620	LTE Band 41(PC3)	Mid	20	22.30	Top	20	0	1	49	1:1.58	0.192	29.5	
2 593	40620	LTE Band 41(PC3)	Mid	20	22.30	Right	7	0	1	49	1:1.58	0.120	31.5	
2 593	40620	LTE Band 41(PC3)	Mid	20	22.30	Left	0	0	1	49	1:1.58	0.034	37.0	
2 593	40620	LTE Band 41(PC3)	Mid	20	22.30	Right Corner	8	0	1	49	1:1.58	0.230	28.7	
2 593	40620	LTE Band 41(PC2)	Mid	20	22.67	Right Corner	8	0	1	49	1:2.31	0.258	28.6	

In the case of TDD Signal mode, Plimit was evaluated by applying the maximum transmission duty. The LTE TDD B41 (PC3) was applied 63.3%, the LTE TDD B41 (PC2) was 43.3%, and the NR TDD Band was applied 25%.

MEASUREMENT RESULTS														
Frequency		Mode		Band width	Conducted Power	Test Position	Distance	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
㎒	Ch.			(MHz)	(dBm)		(mm)	(dBm)				(W/kg)	(dBm)	(dBm)
1 770	132572	LTE Band 66	High	20	24.16	Rear	21	0	1	99	1:1	0.345	28.8	26.6
1 770	132572	LTE Band 66	High	20	24.16	Top	20	0	1	99	1:1	0.575	26.6	
1 770	132572	LTE Band 66	High	20	24.16	Right	7	0	1	99	1:1	0.153	32.3	
1 770	132572	LTE Band 66	High	20	24.16	Left	0	0	1	99	1:1	0.313	29.2	
1 770	132572	LTE Band 66	High	20	24.16	Right Corner	8	0	1	99	1:1	0.199	31.2	
680.5	133297	LTE Band 71	Mid	20	24.57	Rear	21	0	1	99	1:1	0.227	31.0	29.9
680.5	133297	LTE Band 71	Mid	20	24.57	Top	20	0	1	99	1:1	0.291	29.9	
680.5	133297	LTE Band 71	Mid	20	24.57	Right	7	0	1	99	1:1	0.088	35.1	
680.5	133297	LTE Band 71	Mid	20	24.57	Left	0	0	1	99	1:1	0.058	36.9	
680.5	133297	LTE Band 71	Mid	20	24.57	Right Corner	8	0	1	99	1:1	0.047	37.8	
1 880	18900	LTE Band 2 (Sub 1)	Mid	20	24.13	Rear	17	0	1	99	1:1	0.367	28.5	27.7
1 880	18900	LTE Band 2 (Sub 1)	Mid	20	24.13	Bottom	23	0	1	99	1:1	0.209	30.9	
1 880	18900	LTE Band 2 (Sub 1)	Mid	20	24.13	Right	7	0	1	99	1:1	0.075	35.3	
1 880	18900	LTE Band 2 (Sub 1)	Mid	20	24.13	Left	0	0	1	99	1:1	0.438	27.7	
2 560	21350	LTE Band 7 (Sub 1)	High	20	21.86	Rear	17	0	1	99	1:1	0.099	31.9	28.0
2 560	21350	LTE Band 7 (Sub 1)	High	20	21.86	Bottom	23	0	1	99	1:1	0.043	35.5	
2 560	21350	LTE Band 7 (Sub 1)	High	20	21.86	Right	7	0	1	99	1:1	0.025	37.9	
2 560	21350	LTE Band 7 (Sub 1)	High	20	21.86	Left	0	0	1	99	1:1	0.241	28.0	
1 720	132072	LTE Band 66 (Sub 1)	Low	20	24.12	Rear	17	0	1	0	1:1	0.323	29.0	29.0
1 770	132572	LTE Band 66 (Sub 1)	High	20	24.12	Bottom	23	0	1	0	1:1	0.215	30.8	
1 720	132072	LTE Band 66 (Sub 1)	Low	20	24.12	Right	7	0	1	0	1:1	0.094	34.4	
1 770	132572	LTE Band 66 (Sub 1)	High	20	24.12	Left	0	0	1	0	1:1	0.314	29.2	

Table A-11 DSI = 0 *PLimit* Calculations - – NR Body SAR

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

MEASUREMENT RESULTS															
Frequency		Mode		Band width	Conducted Power	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(MHz)	(dBm)			(dBm)					(W/kg)	(dBm)	(dBm)
836.5	167300	NR Band n5	Mid	20	24.23	Rear	DFT-s-OFDM QPSK	0	21	1	104	1:1	0.416	28.0	27.3
836.5	167300	NR Band n5	Mid	20	24.23	Top	DFT-s-OFDM QPSK	0	20	1	104	1:1	0.488	27.3	
836.5	167300	NR Band n5	Mid	20	24.23	Right	DFT-s-OFDM QPSK	0	7	1	104	1:1	0.220	30.8	
836.5	167300	NR Band n5	Mid	20	24.23	Left	DFT-s-OFDM QPSK	0	0	1	104	1:1	0.071	35.7	
836.5	167300	NR Band n5	Mid	20	24.23	Right Corner	DFT-s-OFDM QPSK	0	8	1	104	1:1	0.100	34.2	
1882.5	376500	NR Band n25	Mid	40	23.33	Rear	DFT-s-OFDM QPSK	0	21	1	1	1:1	0.316	28.3	26.3
1882.5	376500	NR Band n25	Mid	40	23.33	Top	DFT-s-OFDM QPSK	0	20	1	1	1:1	0.505	26.3	
1882.5	376500	NR Band n25	Mid	40	23.33	Right	DFT-s-OFDM QPSK	0	7	1	1	1:1	0.181	30.8	
1882.5	376500	NR Band n25	Mid	40	23.33	Left	DFT-s-OFDM QPSK	0	0	108	54	1:1	0.064	35.3	
1882.5	376500	NR Band n25	Mid	40	23.33	Right Corner	DFT-s-OFDM QPSK	0	8	1	1	1:1	0.339	28.0	
2592.99	518598	NR Band n41(PC3)	Mid	100	18.17	Rear	DFT-s-OFDM QPSK	0	21	1	1	1:1	0.073	29.5	26.6
2592.99	518598	NR Band n41(PC3)	Mid	100	18.17	Top	DFT-s-OFDM QPSK	0	20	1	1	1:1	0.096	28.3	
2592.99	518598	NR Band n41(PC3)	Mid	100	18.17	Right	DFT-s-OFDM QPSK	0	7	1	1	1:1	0.095	28.4	
2592.99	518598	NR Band n41(PC3)	Mid	100	18.17	Left	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.077	29.3	
2592.99	518598	NR Band n41(PC3)	Mid	100	18.17	Right Corner	DFT-s-OFDM QPSK	0	8	1	1	1:1	0.143	26.6	
2592.99	518598	NR Band n41 (PC2)	Mid	100	20.49	Rear	DFT-s-OFDM QPSK	0	21	1	271	1:1	0.171	28.1	27.7
2592.99	518598	NR Band n41 (PC2)	Mid	100	20.49	Top	DFT-s-OFDM QPSK	0	20	135	69	1:1	0.183	27.8	
2592.99	518598	NR Band n41 (PC2)	Mid	100	20.49	Right	DFT-s-OFDM QPSK	0	7	135	69	1:1	0.132	29.3	
2592.99	518598	NR Band n41 (PC2)	Mid	100	20.49	Left	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.087	31.1	
2592.99	518598	NR Band n41 (PC2)	Mid	100	20.49	Right Corner	CP-OFDM QPSK	0	8	1	1	1:1	0.19	27.7	
1745	349000	NR Band n66	Mid	40	24.53	Rear	DFT-s-OFDM QPSK	0	21	1	1	1:1	0.377	28.8	26.8
1745	349000	NR Band n66	Mid	40	24.53	Top	DFT-s-OFDM QPSK	0	20	1	1	1:1	0.598	26.8	
1745	349000	NR Band n66	Mid	40	24.53	Right	DFT-s-OFDM QPSK	0	7	108	54	1:1	0.197	31.6	
1745	349000	NR Band n66	Mid	40	24.53	Left	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.186	31.8	
1745	349000	NR Band n66	Mid	40	24.53	Right Corner	DFT-s-OFDM QPSK	0	8	108	54	1:1	0.278	30.1	
680.5	136100	NR Band n71	Mid	20	23.78	Rear	DFT-s-OFDM QPSK	0	21	1	53	1:1	0.235	30.1	28.6
680.5	136100	NR Band n71	Mid	20	23.78	Top	DFT-s-OFDM QPSK	0	20	1	53	1:1	0.328	28.6	
680.5	136100	NR Band n71	Mid	20	23.78	Right	DFT-s-OFDM QPSK	0	7	1	53	1:1	0.075	35.0	
680.5	136100	NR Band n71	Mid	20	23.78	Left	DFT-s-OFDM QPSK	0	0	1	53	1:1	0.061	35.9	
680.5	136100	NR Band n71	Mid	20	23.78	Right Corner	DFT-s-OFDM QPSK	0	8	1	53	1:1	0.039	37.9	

In the case of TDD Signal mode, Plimit was evaluated by applying the maximum transmission duty. The LTE TDD B41 (PC3) was applied 63.3%, the LTE TDD B41 (PC2) was 43.3%, and the NR TDD Band was applied 25%.

MEASUREMENT RESULTS																
Frequency		Mode		Band width	Conducted Power	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(MHz)	(dBm)			(dBm)					(W/kg)	(dBm)	(dBm)
3500.01	633334	NR n77 PC2 (DoD)	Mid	100	20.44	Rear	DFT-s-OFDM QPSK	0	8	1	1	1:1	0.782	21.3	
3500.01	633334	NR n77 PC2 (DoD)	Mid	100	20.44	Top	DFT-s-OFDM QPSK	0	11	1	1	1:1	0.746	21.5	
3500.01	633334	NR n77 PC2 (DoD)	Mid	100	20.44	Right	DFT-s-OFDM QPSK	0	7	1	1	1:1	0.092	30.6	21.3
3500.01	633334	NR n77 PC2 (DoD)	Mid	100	20.44	Left	DFT-s-OFDM QPSK	0	0	135	69	1:1	0.612	22.4	
3500.01	633334	NR n77 PC2 (DoD)	Mid	100	20.44	Right Corner	DFT-s-OFDM QPSK	0	8	1	1	1:1	0.164	28.1	
3500.01	633334	NR n77 PC3 (DoD)	Mid	100	18.26	Rear	DFT-s-OFDM QPSK	0	8	1	1	1:1	0.488	21.2	
3500.01	633334	NR n77 PC3 (DoD)	Mid	100	18.26	Top	DFT-s-OFDM QPSK	0	11	1	1	1:1	0.472	21.3	
3500.01	633334	NR n77 PC3 (DoD)	Mid	100	18.26	Right	DFT-s-OFDM QPSK	0	7	1	1	1:1	0.056	30.6	21.2
3500.01	633334	NR n77 PC3 (DoD)	Mid	100	18.26	Left	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.312	23.1	
3500.01	633334	NR n77 PC3 (DoD)	Mid	100	18.26	Right Corner	DFT-s-OFDM QPSK	0	8	1	1	1:1	0.101	28.0	
3840	656000	NR n77 PC2	Mid	100	20.20	Rear	DFT-s-OFDM QPSK	0	8	135	69	1:1	0.827	21.0	
3840	656000	NR n77 PC2	Mid	100	20.20	Top	DFT-s-OFDM QPSK	0	11	135	69	1:1	0.757	21.4	
3840	656000	NR n77 PC2	Mid	100	21.08	Right	DFT-s-OFDM QPSK	0	7	1	137	1:1	0.081	32.0	21.0
3840	656000	NR n77 PC2	Mid	100	21.08	Left	DFT-s-OFDM QPSK	0	0	1	137	1:1	0.188	28.3	
3840	656000	NR n77 PC2	Mid	100	21.08	Right Corner	DFT-s-OFDM QPSK	0	8	1	137	1:1	0.124	30.1	
3840	656000	NR n77 PC3	Mid	100	17.68	Rear	DFT-s-OFDM QPSK	0	8	135	69	1:1	0.525	20.5	
3840	656000	NR n77 PC3	Mid	100	17.68	Top	DFT-s-OFDM QPSK	0	11	135	69	1:1	0.476	20.9	
3840	656000	NR n77 PC3	Mid	100	18.68	Right	DFT-s-OFDM QPSK	0	7	1	137	1:1	0.047	32.0	20.5
3840	656000	NR n77 PC3	Mid	100	18.68	Left	DFT-s-OFDM QPSK	0	0	1	137	1:1	0.144	27.1	
3840	656000	NR n77 PC3	Mid	100	18.68	Right Corner	DFT-s-OFDM QPSK	0	8	1	137	1:1	0.075	29.9	

In the case of TDD Signal mode, Plimit was evaluated by applying the maximum transmission duty. The LTE TDD B41 (PC3) was applied 63.3%, the LTE TDD B41 (PC2) was 43.3%, and the NR TDD Band was applied 25%.

Table A-11 DSI = 1 P_{Limit} Calculations - – 3G Body SAR

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

MEASUREMENT RESULTS										
Frequency		Mode		Conducted Power	Test Position	Distance	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(dBm)		(mm)		(W/kg)	(dBm)	(dBm)
846.6	4233	UMTS 850	RMC	16.42	Rear	0	1:1	0.671	18.2	18.1
846.6	4233	UMTS 850	RMC	16.42	Top	0	1:1	0.673	18.1	
846.6	4233	UMTS 850	RMC	16.42	Right	0	1:1	0.087	27.0	
846.6	4233	UMTS 850	RMC	16.42	Right Corner	0	1:1	0.135	25.1	
1712.4	1312	UMTS 1700	RMC	13.74	Rear	0	1:1	0.622	15.8	15.0
1712.4	1312	UMTS 1700	RMC	13.74	Top	0	1:1	0.743	15.0	
1712.4	1312	UMTS 1700	RMC	13.74	Right	0	1:1	0.054	26.4	
1712.4	1312	UMTS 1700	RMC	13.74	Right Corner	0	1:1	0.084	24.5	
1 907.6	9538	UMTS 1900	RMC	13.68	Rear	0	1:1	0.799	14.7	14.7
1 880.0	9400	UMTS 1900	RMC	13.93	Top	0	1:1	0.670	15.7	
1 880.0	9400	UMTS 1900	RMC	13.93	Right	0	1:1	0.077	25.1	
1 880.0	9400	UMTS 1900	RMC	13.93	Right Corner	0	1:1	0.141	22.4	

Table A-13 DSI = 1 *PLimit* Calculations - – 4G Body SAR

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

MEASUREMENT RESULTS														
Frequency		Mode		Band width	Conducted Power	Test Position	Distance	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(MHz)	(dBm)		(mm)	(dBm)				(W/kg)	(dBm)	(dBm)
836.5	20525	LTE Band 5	Mid	10	15.79	Rear	0	0	1	49	1:1	0.584	18.1	16.9
836.5	20525	LTE Band 5	Mid	10	15.83	Top	0	0	25	24	1:1	0.786	16.9	
836.5	20525	LTE Band 5	Mid	10	15.79	Right	0	0	1	49	1:1	0.052	28.6	
836.5	20525	LTE Band 5	Mid	10	15.79	Right Corner	0	0	1	49	1:1	0.110	25.4	
2 510	20850	LTE Band 7	Mid	20	10.45	Rear	0	0	50	0	1:1	0.763	11.6	11.6
2 560	21350	LTE Band 7	Mid	20	10.61	Top	0	0	50	25	1:1	0.430	14.3	
2 560	21350	LTE Band 7	Mid	20	10.80	Right	0	0	1	0	1:1	0.061	22.9	
2 560	21350	LTE Band 7	Mid	20	10.80	Right Corner	0	0	1	0	1:1	0.125	19.8	
707.5	23095	LTE Band 12	Mid	10	14.27	Rear	0	0	1	24	1:1	0.268	20.0	17.6
707.5	23095	LTE Band 12	Mid	10	14.30	Top	0	0	25	24	1:1	0.468	17.6	
707.5	23095	LTE Band 12	Mid	10	14.27	Right	0	0	1	24	1:1	0.030	29.5	
707.5	23095	LTE Band 12	Mid	10	14.30	Right Corner	0	0	25	24	1:1	0.044	27.9	
782	23230	LTE Band 13	Mid	10	13.73	Rear	0	0	25	12	1:1	0.295	19.0	16.7
782	23230	LTE Band 13	Mid	10	13.73	Top	0	0	25	12	1:1	0.506	16.7	
782	23230	LTE Band 13	Mid	10	13.71	Right	0	0	1	24	1:1	0.029	29.3	
782	23230	LTE Band 13	Mid	10	13.71	Right Corner	0	0	1	24	1:1	0.044	27.5	
1 905	26140	LTE Band 25	Mid	20	13.13	Rear	0	0	1	49	1:1	0.837	13.9	14.0
1 905	26140	LTE Band 25	Mid	20	13.13	Top	0	0	1	49	1:1	0.796	14.1	
1 882.5	26365	LTE Band 25	Mid	20	13.24	Right	0	0	1	49	1:1	0.074	24.5	
1 882.5	26365	LTE Band 25	Mid	20	13.24	Right Corner	0	0	1	49	1:1	0.122	22.4	
831.5	26865	LTE Band 26	Mid	15	13.52	Rear	0	0	36	39	1:1	0.348	18.1	17.5
831.5	26865	LTE Band 26	Mid	15	13.52	Top	0	0	36	39	1:1	0.403	17.5	
831.5	26865	LTE Band 26	Mid	15	13.52	Right	0	0	36	39	1:1	0.048	26.7	
831.5	26865	LTE Band 26	Mid	15	13.52	Right Corner	0	0	36	39	1:1	0.069	25.1	
2 593	40620	LTE Band 41	Mid	20	11.18	Rear	0	0	50	25	1:1.58	0.634	13.2	13.2
2 593	40620	LTE Band 41	Mid	20	11.18	Top	0	0	50	25	1:1.58	0.415	15.0	
2 593	40620	LTE Band 41	Mid	20	11.18	Right	0	0	50	25	1:1.58	0.041	25.1	
2 593	40620	LTE Band 41	Mid	20	11.18	Right Corner	0	0	50	25	1:1.58	0.115	20.6	

In the case of TDD Signal mode, Plimit was evaluated by applying the maximum transmission duty. The LTE TDD B41 (PC3) was applied 63.3%, the LTE TDD B41 (PC2) was 43.3%, and the NR TDD Band was applied 25%.

MEASUREMENT RESULTS														
Frequency		Mode		Band width	Conducted Power	Test Position	Distance	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
㎒	Ch.			(MHz)	(dBm)		(mm)	(dBm)				(W/kg)	(dBm)	(dBm)
1 720	132072	LTE Band 66	Low	20	12.88	Rear	0	0	50	25	1:1	0.617	15.0	13.7
1 770	132572	LTE Band 66	High	20	12.54	Top	0	0	50	25	1:1	0.765	13.7	
1 720	132072	LTE Band 66	Low	20	12.84	Right	0	0	50	25	1:1	0.030	28.1	
1 720	132072	LTE Band 66	Low	20	12.84	Right Corner	0	0	50	25	1:1	0.066	24.6	
680.5	133297	LTE Band 71	Mid	20	13.78	Rear	0	0	50	49	1:1	0.458	17.2	16.4
680.5	133297	LTE Band 71	Mid	20	13.77	Top	0	0	1	99	1:1	0.551	16.4	
680.5	133297	LTE Band 71	Mid	20	13.77	Right	0	0	1	99	1:1	0.018	31.2	
680.5	133297	LTE Band 71	Mid	20	13.77	Right Corner	0	0	1	99	1:1	0.090	24.2	
1 880	18900	LTE Band 2 (Sub 1)	Mid	20	14.11	Rear	0	0	1	0	1:1	0.940	14.4	14.4
1 880	18900	LTE Band 2 (Sub 1)	Mid	20	14.11	Bottom	0	0	50	49	1:1	0.829	14.9	
1 880	18900	LTE Band 2 (Sub 1)	Mid	20	14.11	Right	0	0	50	49	1:1	0.045	27.6	
2 560	21350	LTE Band 7 (Sub 1)	High	20	13.04	Rear	0	0	1	99	1:1	0.826	13.9	13.9
2 560	21350	LTE Band 7 (Sub 1)	High	20	13.04	Bottom	0	0	1	99	1:1	0.381	17.2	
2 560	21350	LTE Band 7 (Sub 1)	High	20	13.04	Right	0	0	1	99	1:1	0.042	26.8	
1 720	132072	LTE Band 66 (Sub 1)	Low	20	14.11	Rear	0	0	50	0	1:1	0.622	16.2	16.2
1 720	132072	LTE Band 66 (Sub 1)	Low	20	14.11	Bottom	0	0	50	0	1:1	0.406	18.1	
1 720	132072	LTE Band 66 (Sub 1)	Low	20	14.11	Right	0	0	50	0	1:1	0.002	41.1	

Table A-15 DSI = 1 *PLimit* Calculations - – NR Body SAR

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

MEASUREMENT RESULTS															
Frequency		Mode		Band width	Conducted Power	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(MHz)	(dBm)			(dBm)					(W/kg)	(dBm)	(dBm)
836.5	167300	NR Band n5	Mid	20	16.30	Rear	DFT-s-OFDM QPSK	0	0	50	56	1:1	0.537	19.0	19.0
836.5	167300	NR Band n5	Mid	20	16.30	Top	DFT-s-OFDM QPSK	0	0	50	56	1:1	0.500	19.3	
836.5	167300	NR Band n5	Mid	20	16.17	Right	DFT-s-OFDM QPSK	0	0	1	104	1:1	0.086	26.8	
836.5	167300	NR Band n5	Mid	20	16.17	Right Corner	DFT-s-OFDM QPSK	0	0	1	104	1:1	0.119	25.4	
1882.5	376500	NR Band n25	Mid	40	14.07	Rear	DFT-s-OFDM QPSK	0	0	108	54	1:1	0.920	14.4	14.4
1882.5	376500	NR Band n25	Mid	40	14.07	Top	DFT-s-OFDM QPSK	0	0	108	54	1:1	0.630	16.1	
1882.5	376500	NR Band n25	Mid	40	13.93	Right	DFT-s-OFDM QPSK	0	0	1	108	1:1	0.106	23.7	
1882.5	376500	NR Band n25	Mid	40	13.93	Right Corner	DFT-s-OFDM QPSK	0	0	1	108	1:1	0.130	22.8	
2592.99	518598	NR Band n41(PC3)	Mid	100	7.76	Rear	DFT-s-OFDM QPSK	0	0	135	0	1:1	0.388	11.9	11.9
2592.99	518598	NR Band n41(PC3)	Mid	100	7.76	Top	DFT-s-OFDM QPSK	0	0	135	0	1:1	0.245	13.8	
2592.99	518598	NR Band n41(PC3)	Mid	100	7.74	Right	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.019	25.0	
2592.99	518598	NR Band n41(PC3)	Mid	100	7.74	Right Corner	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.068	19.4	
1745	349000	NR Band n66	Mid	40	13.50	Rear	DFT-s-OFDM QPSK	0	0	108	0	1:1	0.825	14.3	14.3
1745	349000	NR Band n66	Mid	40	13.50	Top	DFT-s-OFDM QPSK	0	0	108	0	1:1	0.556	16.0	
1745	349000	NR Band n66	Mid	40	13.40	Right	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.064	25.3	
1745	349000	NR Band n66	Mid	40	13.50	Right Corner	DFT-s-OFDM QPSK	0	0	108	1	1:1	0.083	24.3	
680.5	136100	NR Band n71	Mid	20	14.22	Rear	DFT-s-OFDM QPSK	0	0	50	28	1:1	0.433	17.8	17.8
680.5	136100	NR Band n71	Mid	20	14.22	Top	DFT-s-OFDM QPSK	0	0	50	28	1:1	0.367	18.5	
680.5	136100	NR Band n71	Mid	20	14.15	Right	DFT-s-OFDM QPSK	0	0	1	53	1:1	0.017	31.8	
680.5	136100	NR Band n71	Mid	20	14.15	Right Corner	DFT-s-OFDM QPSK	0	0	1	53	1:1	0.024	30.3	

In the case of TDD Signal mode, Plimit was evaluated by applying the maximum transmission duty. The LTE TDD B41 (PC3) was applied 63.3%, the LTE TDD B41 (PC2) was 43.3%, and the NR TDD Band was applied 25%.

MEASUREMENT RESULTS															
Frequency		Mode		Band width	Conducted Power	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(MHz)	(dBm)			(dBm)					(W/kg)	(dBm)	(dBm)
3500.01	633334	NR n77 PC3 (DoD)	Mid	100	8.04	Rear	DFT-s-OFDM QPSK	0	0	135	0	1:1	0.495	11.1	11.1
3500.01	633334	NR n77 PC3 (DoD)	Mid	100	8.04	Top	DFT-s-OFDM QPSK	0	0	135	0	1:1	0.295	13.3	
3500.01	633334	NR n77 PC3 (DoD)	Mid	100	8.04	Right	DFT-s-OFDM QPSK	0	0	135	0	1:1	0.005	31.1	
3500.01	633334	NR n77 PC3 (DoD)	Mid	100	8.04	Right Corner	DFT-s-OFDM QPSK	0	0	135	0	1:1	0.014	26.6	
3500.01	633334	NR n77 PC3	Mid	100	7.54	Rear	DFT-s-OFDM QPSK	0	0	1	137	1:1	0.513	10.4	10.4
3500.01	633334	NR n77 PC3	Mid	100	8.12	Top	DFT-s-OFDM QPSK	0	0	135	138	1:1	0.286	13.6	
3500.01	633334	NR n77 PC3	Mid	100	8.12	Right	DFT-s-OFDM QPSK	0	0	135	138	1:1	0.003	33.3	
3500.01	633334	NR n77 PC3	Mid	100	8.12	Right Corner	DFT-s-OFDM QPSK	0	0	135	138	1:1	0.005	31.1	

In the case of TDD Signal mode, Plimit was evaluated by applying the maximum transmission duty. The LTE TDD B41 (PC3) was applied 63.3%, the LTE TDD B41 (PC2) was 43.3%, and the NR TDD Band was applied 25%.