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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:** Oct. 31, 2022 **Test Report No.:** HCT-SR-2210-FC003 **Test Site: HCT CO., LTD.**

FCC ID:	**A3LSMS911B**

Report Type:	**Part 0 SAR Characterization**
Equipment Type:	**Mobile Phone**
Model Name:	**SM-S911B/DS**
Additional Model Name:	**SM-S911B**

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.

Tested By	Reviewed By
Jung Hun, Park Test Engineer SAR Team Certification Division	Yun-jeang, Heo Technical Manager SAR Team Certification Division

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	Oct. 31, 2022	Initial Release

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

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
Fax.	031-645-6401

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**
GSM850	Voice / Data	824.2 ㎒ ~ 848.8 ㎒
GSM1900	Voice / Data	1 850.2 ㎒ ~ 1 909.8 ㎒
UMTS Band 5	Voice / Data	826.4 ㎒ ~ 846.6 ㎒
UMTS Band 4	Voice / Data	1 712.4 ㎒ ~ 1 752.6 ㎒
UMTS Band 2	Voice / Data	1 852.4 ㎒ ~ 1 907.6 ㎒
LTE Band 2 (PCS)	Voice / Data	1 850.7 ㎒ ~ 1 909.3 ㎒
LTE Band 4 (AWS)	Voice / Data	1 710.7 ㎒ ~ 1 754.3 ㎒
LTE Band 5 (Cell)	Voice / Data	824.7 ㎒ ~ 848.3 ㎒
LTE Band 12	Voice / Data	699.7 ㎒ ~ 715.3 ㎒
LTE Band 13	Voice / Data	779.5 ㎒ ~ 784.5 ㎒
LTE Band 17	Voice / Data	706.5 ㎒ ~ 713.5 ㎒
LTE Band 25	Voice / Data	1 850.7 ㎒ ~ 1 914.3 ㎒
LTE Band 26	Voice / Data	814.7 ㎒ ~ 848.3 ㎒
LTE Band 41	Voice / Data	2 498.5 ㎒ ~ 2 687.5 ㎒
LTE Band 66 (AWS)	Voice / Data	1 710.7 ㎒ ~ 1 779.3 ㎒
NR Band n2 (PCS)	Voice / Data	1 852.5 ㎒ ~ 1 907.5 ㎒
NR Band n5	Voice / Data	826.5 ㎒ ~ 846.5 ㎒
NR Band n25 (PCS)	Voice / Data	1 852.5 ㎒ ~ 1 912.5 ㎒
NR Band n41	Voice / Data	2 506.02 ㎒ ~ 2 679.99 ㎒
NR Band n66	Voice / Data	1 712.5 ㎒ ~ 1 777.5 ㎒
NR Band n77	Voice / Data	3 705 ㎒ ~ 3 975 ㎒
NR Band n77 DoD	Voice / Data	3 455.04 ㎒ ~ 3 544.98 ㎒
U-NII-1	Voice / Data	5 180 ㎒ ~ 5 240 ㎒
U-NII-2A	Voice / Data	5 260 ㎒ ~ 5 320 ㎒
U-NII-2C	Voice / Data	5 500 ㎒ ~ 5 720 ㎒
U-NII-3	Voice / Data	5 745 ㎒ ~ 5 825 ㎒
U-NII-4	Voice / Data	5 845 ㎒ ~ 5 885 ㎒
U-NII-5	Voice / Data	5 955 ㎒ – 6 425 ㎒
U-NII-6	Voice / Data	6 425 ㎒ – 6 525 ㎒
U-NII-7	Voice / Data	6 525 ㎒ – 6 875 ㎒
U-NII-8	Voice / Data	6 875 ㎒ – 7 115 ㎒
2.4 ㎓ WLAN	Voice / Data	2 412 ㎒ ~ 2 472 ㎒
Bluetooth / LE 5.3	Data	2 402 ㎒ ~ 2 480 ㎒
NFC	Data	13.56 ㎒
WPC	Data	110 ㎑ ~ 148 ㎑

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 2G/3G/4G/5G WWAN operations. Additionally, this device supports WLAN/BT/NFC technologies, but the output power of these technologies is not controlled by the Smart Transmit algorithm.

2.2Time-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 2G/3G/4G/5G NR WWAN is incompliance with FCC requirements.

This Part 0 report shows SAR and Power Density characterization of WWAN radios for 2G/3G/4G and 5G Sub-6 NR respectively. Characterization is achieved by determining Plimit for 2G/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 reporte d 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
2G/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

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

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/㎥)

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.

Table 3-1

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

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.

Table 4-1 DSI and Corresponding Exposure Scenarios

Scenario	Description	SAR Test Cases
Head (DSI = 2)	Device positioned next to head Receiver Active	Head SAR per KDB Publication 648474 D04
Hotspot mode (DSI = 3)	Device transmits in hotspot mode near body Hotspot Mode Active	Hotspot SAR per KDB Publication 941225 D06
Phablet Grip (DSI=1 or 4)	Device is held with hand and grip sensor is triggered Grip sensor triggered or earjack is active	Phablet SAR per KDB Publication 648474 D04 & KDB Publication 616217 D04
Phablet (DSI = 0)	Device is held with hand and grip sensor is not triggered Distance grip sensor not triggered	Phablet SAR per KDB Publication 648474 D04 & KDB Publication 616217 D04
Body-worn (DSI = 0)	Device being used with a body-worn accessory	Body-worn SAR per KDB Publication 648474 D04

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 x 10$^{-Total\ Uncertainty/10}$			
1g SAR (W/kg)		**10g SAR (W/kg)**	
Total Uncertainty	1.0 dB	*Total Uncertainty*	1.0 dB
SAR_regulatory_limit	1.6 W/kg	*SAR_regulatory_limit*	4.0 W/kg
SAR_design_target	1.0 W/kg	*SAR_design_target*	2.5 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 Worn SAR 2. Extremity SAR measured at 8, 6 and 11 mm spacing for back, front, bottom respectively 3. Extremity SAR measured at 0 mm for left and right surfaces
2	Plimit is calculated based on 1g Head SAR
3	Plimit is calculated based on 1g Hotspot SAR at 10 mm
1&4	Plimit is calculated based on 10g Extremity SAR at 0 mm for back, front, and bottom surfaces. Ear jack inseted mode.

Table 4-3 *PLimit* Determination

Note:
For DSI=0,*Plimit* is calculated by :
Plimit = min{ *Plimit* cooresponding to 1g Body Worn SAR evaluation at 15mm spacing,
Plimit cooresponding to 10g Extremity SAR evaluation at 6(Front), 8(Rear) and 11mm(bottom) spacing,
Plimit cooresponding to 10g Extremity SAR evaluation at 0mm for Left and right surface }

Table 4-4 SAR Characterization

Plim values in green indicate Plimt < Pmax				Plim values in grey indicate Plim > Pmax				
Plimt corresponding to 1 W/kg (1g) 2.5W/kg(10g) SAR_Design_target								Pmax
SAR Exposure Position			Body worn/ Phablet	Phablet (Grip On)	Head (RCV ON)	Hotspot	EarJack	Maximum Tune-up Output Power [dBm]
Averaging volume			1g/10g	10g	1g	1g	10g	
seperation Distance			15/0,8,6,11 mm	0 mm	0 mm	10 mm	0 mm	
Mode	Band	Antenna	DSI = 0	DSI = 1	DSI = 2	DSI = 3	DSI = 4	
GSM/GPRS/EDGE	850	MAIN 1	29.1	25.7	30.3	26.7	25.7	25.0
GSM/GPRS/EDGE	1900	MAIN 1	26.5	19.0	29.8	19.0	19.0	22.0
UMTS	5	MAIN 1	29.8	26.3	30.8	26.8	26.3	24.5
UMTS	4	MAIN 1	25.8	20.0	30.0	20.0	20.0	23.0
UMTS	2	MAIN 1	26.5	19.5	29.8	17.5	19.5	23.0
LTE FDD	4	SUB 2	20.0	20.0	15.5	20.0	20.0	23.0
LTE FDD	5	MAIN 1	28.2	26.5	29.3	26.2	26.5	24.5
LTE FDD	12	MAIN 1	31.3	26.5	32.7	29.2	26.5	24.0
LTE FDD	13	MAIN 1	28.1	26.2	30.6	26.7	26.2	24.0
LTE FDD	25	MAIN 1	26.2	19.0	29.5	18.5	19.0	23.0
LTE FDD	26	MAIN 1	28.7	26.6	29.4	25.3	26.6	24.0
LTE TDD PC3	41 P3	MAIN 2	25.1	20.0	31.2	20.0	20.0	22.0
LTE TDD PC2	41 P2	MAIN 2	25.1	19.9	31.4	19.9	19.9	21.9
LTE FDD	66	MAIN 1	25.9	19.5	30.9	19.5	19.5	23.0
NR FDD	5	MAIN 1	28.7	24.9	29.5	27.1	24.9	24.0
NR FDD	25	MAIN 1	26.5	19.0	29.1	18.5	19.0	23.0
NR TDD PC3	41	SUB 2	18.5	18.5	16.5	16.5	18.5	24.0
NR TDD SRS1(PC3)	41	MAIN 2	14.5	14.5	14.5	14.5	14.5	24.0
NR TDD SRS2(PC3)	41	SUB 1	13.0	13.0	13.0	13.0	13.0	24.0
NR TDD SRS3(PC3)	41	MAIN 4	11.5	11.5	11.5	11.5	11.5	24.0
NR FDD	66	MAIN 1	25.5	19.5	29.0	19.5	19.5	23.0
NR FDD	66	SUB 2	20.0	20.0	16.0	20.0	20.0	23.0
NR TDD PC3	77	SUB 2	18.0	18.0	15.0	15.0	18.0	24.5
NR TDD SRS1(PC3)	77	MAIN 3	13.0	13.0	13.0	13.0	13.0	24.5
NR TDD SRS2(PC3)	77	SUB 5	13.5	13.5	13.5	13.5	13.5	24.5
NR TDD SRS3(PC3)	77	MAIN 4	12.5	12.5	12.5	12.5	12.5	24.5
NR TDD PC3	77 DOD	SUB 2	18.0	18.0	15.0	15.0	18.0	24.5
NR TDD SRS1(PC3)	77 DOD	MAIN 3	13.0	13.0	13.0	13.0	13.0	24.5
NR TDD SRS2(PC3)	77 DOD	SUB 5	13.5	13.5	13.5	13.5	13.5	24.5
NR TDD SRS3(PC3)	77 DOD	MAIN 4	12.5	12.5	12.5	12.5	12.5	24.5

Note:

1. Compared with the Plimt (Tune up Powers) declared in each DSI by the manufacturer and the plimt (calculation) calculated by the SAR measurement of each DSI, the lower power were applied to the EFS as the plimit at each DSI configurations.
2. When *Pmax* < *Plimit*, the DUT will operate at a power level up to *Pmax*.
3. when Hotspot Mode (DSI=3) Grip sensor (DSI=1) and Ear-jack mode(DSI=4) are triggered at the same time,DSI=3(Hotspot) takes more higher priority.the Priority for power reduction was given in the order of hotspot(DSI=3), earjack.(DSI=4), and grip (DSI=1),.
4. Maximum Tune up Power,P*max*. Is configured in NV settings in EUT to limit maximum transmitting power. This power is converted into peak power in NV setting for TDD schemes.(GPRS, LTE TDD)

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	F17/ 59RAA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5R4XF1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F08/5AJ0A1/C/01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5SD0A1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F10/5FN3A1/C/01	N/A	N/A	N/A
Staubli	CS9spe-TX2-60	F/21/0029002/C/001	N/A	N/A	N/A
Staubli	TX90 XLspeag	F17/ 59CHA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F13/ 5R4XF1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F08/5AJ0A1/A/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F13/ 5SD0A1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F10/5FN3A1/A/01	N/A	N/A	N/A
Staubli	TX2-60 Lspe	F/21/0029002/A/001	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	010963	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1338 1332	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-0008	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	001729	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	D21142602	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	D21144507C	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331915309	01/04/2022	Annual	01/04/2023
TESTO	175-H1/Thermometer	40332651310	01/04/2022	Annual	01/04/2023
TESTO	175-H1/Thermometer	40331949309	01/04/2022	Annual	01/04/2023
TESTO	608-H1/Thermometer	83348029	04/29/2022	Annual	04/29/2023
TESTO	608-H1/Thermometer	2183499992	12/09/2021	Annual	12/09/2022
TESTO	608-H1/Thermometer	83239085	11/15/2021	Annual	11/15/2022
SPEAG	DAE4	1225	12/01/2021	Annual	12/01/2022
SPEAG	DAE4	466	05/02/2022	Annual	05/02/2023
SPEAG	DAE4	504	03/01/2022	Annual	03/01/2023
SPEAG	DAE4	780	06/14/2022	Annual	06/14/2023
SPEAG	DAE4	1687	07/18/2022	Annual	07/18/2023
SPEAG	DAE4	1464	06/15/2022	Annual	06/15/2023
SPEAG	E-Field Probe EX3DV4	3903	03/29/2022	Annual	03/29/2023
SPEAG	E-Field Probe EX3DV4	7622	11/24/2021	Annual	11/24/2022
SPEAG	E-Field Probe EX3DV4	7370	08/19/2022	Annual	08/19/2023
SPEAG	E-Field Probe EX3DV4	7655	06/20/2022	Annual	06/20/2023
SPEAG	E-Field Probe EX3DV4	7679	08/19/2022	Annual	08/19/2023
SPEAG	E-Field Probe EX3DV4	7702	01/20/2022	Annual	01/20/2023
SPEAG	Dipole D750V3	1014	05/25/2022	Annual	05/25/2023
SPEAG	Dipole D835V2	441	07/15/2022	Annual	07/15/2023
SPEAG	Dipole D1800V2	2d007	07/18/2022	Annual	07/18/2023
SPEAG	Dipole D1900V2	5d032	01/28/2022	Annual	01/28/2023
SPEAG	Dipole D2450V2	743	05/31/2022	Annual	05/31/2023
SPEAG	Dipole D2600V2	1015	07/15/2022	Annual	07/15/2023
SPEAG	Dipole D3500V2	1132	01/24/2022	Annual	01/24/2023
SPEAG	Dipole D3700V2	1105	11/22/2021	Annual	11/22/2022
SPEAG	Dipole D3900V2	1086	05/25/2022	Annual	05/25/2023
SPEAG	Dipole D5GHzV2	1253	05/31/2022	Annual	05/31/2023
SPEAG	Dipole D5GHzV2	1107	07/19/2022	Annual	07/19/2023
Agilent	Power Meter E4419B	MY41291386	09/27/2022	Annual	09/27/2023
Agilent	Power Meter N1911A	MY45101406	06/27/2022	Annual	06/27/2023
Agilent	Power Sensor 8481A	SG1091286	09/272022	Annual	09/27/2023
H.P	Power Sensor 8481A	MY41090873	02/07/2022	Annual	02/07/2023
Agilent	Power Sensor 8481A	MY41090675	09/27/2022	Annual	09/27/2023
Agilent	Wideband Power Sensor N1921A	MY55220026	08/02/2022	Annual	08/02/2023
Agilent	11636B/Power Divider	58698	02/24/2022	Annual	02/24/2023
SPEAG	DAKS 3.5	1038	03/28/2022	Annual	03/28/2023

H.P	Network Analyzer /8753ES	JP39240221	01/05/2022	Annual	01/05/2023
Agilent	WIRELESS COMMUNICATION E5515C	MY48361100	09/27/2022	Annual	09/27/2023
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	08/08/2022	Annual	08/08/2023
R&S	Wireless Communication Test Set CMW500	115733	04/14/2022	Annual	04/14/2023
Agilent	SIGNAL GENERATOR N5182A	MY47070230	04/28/2022	Annual	04/28/2023
EMPOWER	RF Power Amplifier	1084	06/20/2022	Annual	06/20/2023
EMPOWER	RF Power Amplifier	1041D/C0508	06/20/2022	Annual	06/20/2023
MICRO LAB	LP Filter / LA-15N	10453	09/27/2022	Annual	09/27/2023
MICRO LAB	LP Filter / LA-30N	-	09/27/2022	Annual	09/27/2023
MICRO LAB	LP Filter / LA-60N	32011	09/27/2022	Annual	09/27/2023
Agilent	Attenuator (3dB) 8693B	MY39260298	08/25/2022	Annual	08/25/2023
HP	Attenuator (3dB) 33340A	02427	08/25/2022	Annual	08/25/2023
HP	Attenuator (20dB) 8493C	09271	08/25/2022	Annual	08/25/2023
Agilent	Directional Bridge 86205A	3140A04581	05/262022	Annual	05/262023
OSI	Power Divider	#3	06/17/2022	Annual	06/17/2023
Agilent	MXA Signal Analyzer N9020A	MY50510407	06/07/2022	Annual	06/07/2023
HP	Dual Directional Coupler	16072	09/27/2022	Annual	09/27/2023
Anritsu	Radio Communication Test Station MT8000A	6262036812	12/20/2021	Annual	12/20/2022
Anritsu	Radio Communication Tester MT8820C	6201074225	02/24/2022	Annual	02/24/2023
Anritsu	Radio Communication Tester MT8820C	6200695605	04/15/2022	Annual	04/15/2023
Anritsu	Radio Communication Tester MT8821C	6201502997	06/27/2022	Annual	06/27/2023
Anritsu	Radio Communication Tester MT8821C	6262044720	12/20/2021	Annual	12/20/2022
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	06/27/2022	Annual	06/27/2023
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	02/28/2022	Annual	02/28/2023

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 DSI = 2 *PLimit* Calculations – 3G Head SAR

MEASUREMENT RESULTS									
Frequency		Mode/ Band		Frame Averaged Conducted Power	Test Position	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plim
㎒	Ch.			(dBm)			(W/kg)	(dBm)	(dBm)
836.6	190	GSM 850	GPRS 2Tx	25.24	Right Cheek	1:4.15	0.309	30.3	30.3
836.6	190	GSM 850		25.24	Right Tilt	1:4.15	0.169	33.0	
836.6	190	GSM 850		25.24	Left Cheek	1:4.15	0.300	30.5	
836.6	190	GSM 850		25.24	Left Tilt	1:4.15	0.176	32.8	
1 880	661	GSM 1900	GPRS 2Tx	21.40	Right Cheek	1:4.15	0.060	33.6	29.8
1 880	661	GSM 1900		21.40	Right Tilt	1:4.15	0.045	34.9	
1 880	661	GSM 1900		21.40	Left Cheek	1:4.15	0.145	29.8	
1 880	661	GSM 1900		21.40	Left Tilt	1:4.15	0.051	34.3	
836.6	4183	UMTS Band 5	RMC	24.19	Right Cheek	1:1	0.220	30.8	30.8
836.6	4183	UMTS Band 5	RMC	24.19	Right Tilt	1:1	0.110	33.8	
836.6	4183	UMTS Band 5	RMC	24.19	Left Cheek	1:1	0.200	31.2	
836.6	4183	UMTS Band 5	RMC	24.19	Left Tilt	1:1	0.113	33.7	
1 732.4	1412	UMTS Band 4	RMC	23.50	Right Cheek	1:1	0.129	32.4	30.0
1 732.4	1412	UMTS Band 4	RMC	23.50	Right Tilt	1:1	0.110	33.1	
1 732.4	1412	UMTS Band 4	RMC	23.50	Left Cheek	1:1	0.226	30.0	
1 732.4	1412	UMTS Band 4	RMC	23.50	Left Tilt	1:1	0.066	35.3	
1 880	9400	UMTS Band 2	RMC	23.29	Right Cheek	1:1	0.112	32.8	29.8
1 880	9400	UMTS Band 2	RMC	23.29	Right Tilt	1:1	0.073	34.7	
1 880	9400	UMTS Band 2	RMC	23.29	Left Cheek	1:1	0.224	29.8	
1 880	9400	UMTS Band 2	RMC	23.29	Left Tilt	1:1	0.071	34.8	

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

MEASUREMENT RESULTS													
Frequency		Mode		Band width	Frame Averaged Conducted Power	Test Position	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(dBm)	(dBm)		(dB)				(W/kg)	(dBm)	(dBm)
836.5	20525	LTE Band 5	Mid	10	24.14	Right Cheek	0	1	24	1:1	0.302	29.3	29.3
836.5	20525	LTE Band 5	Mid	10	24.14	Right Tilt	0	1	24	1:1	0.169	31.9	
836.5	20525	LTE Band 5	Mid	10	24.14	Left Cheek	0	1	24	1:1	0.277	29.7	
836.5	20525	LTE Band 5	Mid	10	24.14	Left Tilt	0	1	24	1:1	0.160	32.1	
707.5	23095	LTE Band 12	Mid	10	23.97	Right Cheek	0	1	24	1:1	0.116	33.3	32.7
707.5	23095	LTE Band 12	Mid	10	23.97	Right Tilt	0	1	24	1:1	0.080	34.9	
707.5	23095	LTE Band 12	Mid	10	23.97	Left Cheek	0	1	24	1:1	0.135	32.7	
707.5	23095	LTE Band 12	Mid	10	23.97	Left Tilt	0	1	24	1:1	0.079	35.0	
782	23230	LTE Band 13	Mid	10	23.50	Right Cheek	0	1	49	1:1	0.197	30.6	30.6
782	23230	LTE Band 13	Mid	10	23.50	Right Tilt	0	1	49	1:1	0.110	33.1	
782	23230	LTE Band 13	Mid	10	23.50	Left Cheek	0	1	49	1:1	0.165	31.3	
782	23230	LTE Band 13	Mid	10	23.50	Left Tilt	0	1	49	1:1	0.104	33.3	
1 882.5	26365	LTE Band 25	Mid	20	22.80	Right Cheek	0	1	0	1:1	0.116	32.2	29.5
1 882.5	26365	LTE Band 25	Mid	20	22.80	Right Tilt	0	1	0	1:1	0.084	33.6	
1 882.5	26365	LTE Band 25	Mid	20	22.80	Left Cheek	0	1	0	1:1	0.216	29.5	
1 882.5	26365	LTE Band 25	Mid	20	22.80	Left Tilt	0	1	0	1:1	0.075	34.0	
831.5	26865	LTE Band 26	Mid	15	23.50	Right Cheek	0	1	74	1:1	0.257	29.4	29.4
831.5	26865	LTE Band 26	Mid	15	23.50	Right Tilt	0	1	74	1:1	0.146	31.9	
831.5	26865	LTE Band 26	Mid	15	23.50	Left Cheek	0	1	74	1:1	0.213	30.2	
831.5	26865	LTE Band 26	Mid	15	23.50	Left Tilt	0	1	74	1:1	0.143	31.9	
2 636.5	41055	LTE Band41(PC3)	Mid-High	20	22.62	Right Cheek	0	1	99	1:1.58	0.088	33.2	31.2
2 636.5	41055	LTE Band41(PC3)	Mid-High	20	22.62	Right Tilt	0	1	99	1:1.58	0.043	36.3	
2 636.5	41055	LTE Band41(PC3)	Mid-High	20	22.62	Left Cheek	0	1	99	1:1.58	0.138	31.2	
2 636.5	41055	LTE Band41(PC3)	Mid-High	20	22.62	Left Tilt	0	1	99	1:1.58	0.050	35.6	
2 636.5	41055	LTE Band41(PC2)	Mid-High	20	22.49	Left Cheek	0	1	99	1:2.31	0.130	31.4	31.1
1 720	132072	LTE Band 66	Low	20	23.07	Right Cheek	0	1	0	1:1	0.079	34.1	30.9
1 720	132072	LTE Band 66	Low	20	23.07	Right Tilt	0	1	0	1:1	0.060	35.3	
1 720	132072	LTE Band 66	Low	20	23.07	Left Cheek	0	1	0	1:1	0.166	30.9	
1 720	132072	LTE Band 66	Low	20	23.07	Left Tilt	0	1	0	1:1	0.053	35.8	
1 732.5	20175	LTE Band 4 ULCA	Mid	20	15.93	Right Cheek	0	1	0	1:1	0.530	18.7	18.3
1 732.5	20175	LTE Band 4 ULCA	Mid	20	15.98	Right Tilt	0	18	0	1:1	0.590	18.3	
1 732.5	20175	LTE Band 4 ULCA	Mid	20	15.93	Left Cheek	0	1	0	1:1	0.269	21.6	
1 732.5	20175	LTE Band 4 ULCA	Mid	20	15.98	Left Tilt	0	18	0	1:1	0.411	19.8	

Table A-3 DSI = 2 *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		Band width	Frame Averaged Conducted Power	Test Configurations		MPR	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimu Plimit
MHz	Ch.			(dBm)	(dBm)			(dB)				(W/kg)	(dBm)	(dBm)
836.5	167300	NR Band n5	Mid	20	23.84	Right Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.272	29.5	29.5
836.5	167300	NR Band n5	Mid	20	23.84	Right Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.151	32.1	
836.5	167300	NR Band n5	Mid	20	23.84	Left Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.240	30.0	
836.5	167300	NR Band n5	Mid	20	23.84	Left Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.163	31.7	
1 882.5	376500	NR Band n25	Mid	40	22.79	Right Cheek	DFT-s-OFDM QPSK	0	50	28	1:1	0.111	32.3	29.1
1 882.5	376500	NR Band n25	Mid	40	22.79	Right Tilt	DFT-s-OFDM QPSK	0	50	28	1:1	0.081	33.7	
1 882.5	376500	NR Band n25	Mid	40	22.79	Left Cheek	DFT-s-OFDM QPSK	0	50	28	1:1	0.234	29.1	
1 882.5	376500	NR Band n25	Mid	40	22.79	Left Tilt	DFT-s-OFDM QPSK	0	50	28	1:1	0.066	34.6	
2 592.99	518598	NR Band n41(PC3)	Mid	100	16.81	Right Cheek	DFT-s-OFDM QPSK	0	135	138	1:1	0.434	20.4	19.5
2 592.99	518598	NR Band n41(PC3)	Mid	100	16.76	Right Tilt	DFT-s-OFDM QPSK	0	1	137	1:1	0.529	19.5	
2 592.99	518598	NR Band n41(PC3)	Mid	100	16.76	Left Cheek	DFT-s-OFDM QPSK	0	1	137	1:1	0.248	22.8	
2 592.99	518598	NR Band n41(PC3)	Mid	100	16.81	Left Tilt	DFT-s-OFDM QPSK	0	135	138	1:1	0.376	21.1	
2 592.99	518598	NR Band n41 SRS2	Mid	100	14.39	Right Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0	-	30.2
2 592.99	518598	NR Band n41 SRS2	Mid	100	14.39	Right Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.0053	37.4	
2 592.99	518598	NR Band n41 SRS2	Mid	100	14.39	Left Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.026	30.2	
2 592.99	518598	NR Band n41 SRS2	Mid	100	14.39	Left Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.00606	36.6	
2 592.99	518598	NR Band n41 SRS3	Mid	100	13.04	Right Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.156	21.1	18.6
2 592.99	518598	NR Band n41 SRS3	Mid	100	13.04	Right Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.150	21.3	
2 592.99	518598	NR Band n41 SRS3	Mid	100	13.04	Left Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.235	19.3	
2 592.99	518598	NR Band n41 SRS3	Mid	100	13.04	Left Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.276	18.6	
2 592.99	518598	NR Band n41 SRS4	Mid	100	11.21	Right Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0	-	30.4
2 592.99	518598	NR Band n41 SRS4	Mid	100	11.21	Right Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.012	30.4	
2 592.99	518598	NR Band n41 SRS4	Mid	100	11.21	Left Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0	-	
2 592.99	518598	NR Band n41 SRS4	Mid	100	11.21	Left Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.00148	41.2	
1 745	349000	NR Band n66	Mid	40	22.77	Right Cheek	DFT-s-OFDM QPSK	0	108	54	1:1	0.125	31.8	29.0
1 745	349000	NR Band n66	Mid	40	22.77	Right Tilt	DFT-s-OFDM QPSK	0	108	54	1:1	0.084	33.5	
1 745	349000	NR Band n66	Mid	40	22.92	Left Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.248	29.0	
1 745	349000	NR Band n66	Mid	40	22.92	Left Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.062	35.0	
1 745	349000	NR Band 66 Upper, ENDC	Mid	40	16.40	Right Cheek	DFT-s-OFDM QPSK	0	108	54	1:1	0.580	18.8	18.6
1 745	349000	NR Band 66 Upper, ENDC	Mid	40	16.35	Right Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.592	18.6	
1 745	349000	NR Band 66 Upper, ENDC	Mid	40	16.40	Left Cheek	DFT-s-OFDM QPSK	0	108	54	1:1	0.303	21.6	
1 745	349000	NR Band 66 Upper, ENDC	Mid	40	16.35	Left Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.462	19.7	
3 750	650000	NR Band 77(PC3)	Low	100	14.79	Right Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.456	18.2	17.7
3 750	650000	NR Band 77(PC3)	Low	100	15.14	Right Tilt	DFT-s-OFDM QPSK	0	270	0	1:1	0.551	17.7	
3 750	650000	NR Band 77(PC3)	Low	100	14.98	Left Cheek	DFT-s-OFDM QPSK	0	1	137	1:1	0.287	20.4	
3 750	650000	NR Bandn77(PC3)	Low	100	14.98	Left Tilt	DFT-s-OFDM QPSK	0	1	137	1:1	0.377	19.2	
3 500.01	633334	NR Band 77 DoD(PC3)	Mid	100	15.43	Right Cheek	DFT-s-OFDM QPSK	0	135	138	1:1	0.658	17.2	17.2
3 500.01	633334	NR Band 77 DoD(PC3)	Mid	100	15.60	Right Tilt	DFT-s-OFDM QPSK	0	1	271	1:1	0.647	17.5	
3 500.01	633334	NR Band 77 DoD(PC3)	Mid	100	15.60	Left Cheek	DFT-s-OFDM QPSK	0	1	271	1:1	0.298	20.9	
3 500.01	633334	NR Band 77 DoD(PC3)	Mid	100	15.60	Left Tilt	DFT-s-OFDM QPSK	0	1	271	1:1	0.406	19.5	
MEASUREMENT RESULTS														

Frequency		Mode		Band width	Frame Averaged Conducted Power	Test Configurations		MPR	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimu Plimit
MHz	Ch.			(dBm)	(dBm)			(dB)				(W/kg)	(dBm)	(dBm)
3 930.0	662000	NR Band 77 SRS2	High	100	13.06	Right Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	-
3 930.0	662000	NR Band 77 SRS2	High	100	13.06	Right Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 930.0	662000	NR Band 77 SRS2	High	100	13.06	Left Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 930.0	662000	NR Band 77 SRS2	High	100	13.06	Left Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 930.0	662000	NR Band 77 SRS3	High	100	14.13	Right Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.623	16.2	16.2
3 930.0	662000	NR Band 77 SRS3	High	100	14.13	Right Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.016	32.1	
3 930.0	662000	NR Band 77 SRS3	High	100	14.13	Left Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.299	19.4	
3 930.0	662000	NR Band 77 SRS3	High	100	14.13	Left Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.00762	35.1	
3 930.0	662000	NR Band 77 SRS4	High	100	12.47	Right Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	-
3 930.0	662000	NR Band 77 SRS4	High	100	12.47	Right Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 930.0	662000	NR Band 77 SRS4	High	100	12.47	Left Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 930.0	662000	NR Band 77 SRS4	High	100	12.47	Left Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 500.01	633334	NR Band 77 DoD SRS2	Mid	100	13.24	Right Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	-
3 500.01	633334	NR Band 77 DoD SRS2	Mid	100	13.24	Right Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 500.01	633334	NR Band 77 DoD SRS2	Mid	100	13.24	Left Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 500.01	633334	NR Band 77 DoD SRS2	Mid	100	13.24	Left Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 500.01	633334	NR Band 77 DoD SRS3	Mid	100	14.47	Right Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.683	16.1	16.1
3 500.01	633334	NR Band 77 DoD SRS3	Mid	100	14.47	Right Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.039	28.6	
3 500.01	633334	NR Band 77 DoD SRS3	Mid	100	14.47	Left Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.228	20.9	
3 500.01	633334	NR Band 77 DoD SRS3	Mid	100	14.47	Left Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.026	30.3	
3 500.01	633334	NR Band 77 DoD SRS4	Mid	100	13.04	Right Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	-
3 500.01	633334	NR Band 77 DoD SRS4	Mid	100	13.04	Right Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 500.01	633334	NR Band 77 DoD SRS4	Mid	100	13.04	Left Cheek	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	
3 500.01	633334	NR Band 77 DoD SRS4	Mid	100	13.04	Left Tilt	DFT-s-OFDM QPSK	0	-	-	1:1	0.000	-	

Table A-4 DSI = 0 *PLimit* 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		Frame Averaged Conducted Power	Test Position	Spacing (mm)	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(dBm)				(W/kg)	(dBm)	(dBm)
836.6	190	GSM 850	GPRS 2Tx	25.24	Back	15	1:4.15	0.409	29.1	29.1
836.6	190	GSM 850	GPRS 2Tx	25.24	Front	15	1:4.15	0.385	29.4	
1 880	661	GSM 1900	GPRS 2Tx	21.40	Back	15	1:4.15	0.262	27.2	27.2
1 880	661	GSM 1900	GPRS 2Tx	21.40	Front	15	1:4.15	0.217	28.0	
836.6	4183	UMTS Band 5	RMC	24.19	Back	15	1:1	0.273	29.8	29.8
836.6	4183	UMTS Band 5	RMC	24.19	Front	15	1:1	0.222	30.7	
1 732.4	1412	UMTS Band 4	RMC	23.50	Back	15	1:1	0.585	25.8	25.8
1 732.4	1412	UMTS Band 4	RMC	23.50	Front	15	1:1	0.240	29.7	
1 880.0	9400	UMTS Band 2	RMC	23.29	Back	15	1:1	0.477	26.5	26.5
1 880.0	9400	UMTS Band 2	RMC	23.29	Front	15	1:1	0.196	30.4	

Table A-5 DSI = 0 *PLimit* Calculations - 4G Body-Worn SAR

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

MEASUREMENT RESULTS														
Frequency		Mode		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)
836.5	20525	LTE Band 5	Mid	10	24.14	Back	15	0	1	24	1:1	0.391	28.2	28.2
836.5	20525	LTE Band 5	Mid	10	24.14	Front	15	0	1	24	1:1	0.381	28.3	
707.5	23095	LTE Band 12	Mid	10	23.97	Back	15	0	1	0	1:1	0.178	31.5	31.3
707.5	23095	LTE Band 12	Mid	10	23.97	Front	15	0	1	0	1:1	0.187	31.3	
782	23230	LTE Band 13	Mid	10	23.50	Back	15	0	1	49	1:1	0.316	28.5	28.1
782	23230	LTE Band 13	Mid	10	23.50	Front	15	0	1	49	1:1	0.348	28.1	
1 882.5	26365	LTE Band 25	Mid	20	22.80	Back	15	0	1	49	1:1	0.461	26.2	26.2
1 882.5	26365	LTE Band 25	Mid	20	22.80	Front	15	0	1	49	1:1	0.359	27.2	
831.5	26865	LTE Band 26	Mid	15	23.50	Back	15	0	1	0	1:1	0.281	29.0	28.7
831.5	26865	LTE Band 26	Mid	15	23.50	Front	15	0	1	0	1:1	0.303	28.7	
1 720	132072	LTE Band 66	Low	20	23.07	Back	15	0	1	0	1:1	0.527	25.9	25.9
1 720	132072	LTE Band 66	Low	20	23.07	Front	15	0	1	0	1:1	0.409	27.0	
2 636.5	41055	LTE Band 41(PC3)	Mid-High	20	22.62	Back	15	0	1	99	1:1.58	0.276	28.2	28.2
2 636.5	41055	LTE Band 41(PC3)	Mid-High	20	22.62	Front	15	0	1	99	1:1.58	0.263	28.4	
2 636.5	41055	LTE Band 41(PC2)	Mid-High	20	22.49	Back	15	0	1	99	1:2.31	0.265	28.3	28.3
1 732.5	20175	LTE Band 4 Upper, ULCA	Mid	20	19.90	Back	15	0	1	0	1:1	0.205	26.8	26.8
1 732.5	20175	LTE Band 4 Upper, ULCA	Mid	20	19.90	Front	15	0	1	0	1:1	0.146	28.3	

Table A-6 DSI = 0 *PLimit* Calculations - NR Body-Worn SAR

For some bands/modes, a lower P_{Limit} 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		Band width	Frame Averaged Conducted Power	Test Configurations		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			MHz	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)
836.5	167300	NR Band n5	Mid	20	23.84	Back	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.313	28.9	28.7
836.5	167300	NR Band n5	Mid	20	23.84	Front	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.324	28.7	
1 882.5	376500	NR Band n25	Mid	40	22.57	Back	DFT-s-OFDM QPSK	0	15	1	53	1:1	0.402	26.5	26.5
1 882.5	376500	NR Band n25	Mid	40	22.57	Front	DFT-s-OFDM QPSK	0	15	1	53	1:1	0.311	27.6	
2 592.99	518598	NR Bandn41(PC3)	Mid	100	18.82	Back	DFT-s-OFDM QPSK	0	15	135	138	1:1	0.156	26.9	26.9
2 592.99	518598	NR Bandn41(PC3)	Mid	100	18.74	Front	DFT-s-OFDM QPSK	0	15	1	137	1:1	0.066	30.5	
2 592.99	518598	NR Bandn41 SRS #2	Mid	100	14.39	Back	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.046	27.8	27.8
2 592.99	518598	NR Bandn41 SRS #2	Mid	100	14.39	Front	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.026	30.2	
2 592.99	518598	NR Bandn41 SRS #3	Mid	100	13.04	Back	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.044	26.6	26.6
2 592.99	518598	NR Bandn41 SRS #3	Mid	100	13.04	Front	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.00449	37.0	
2 592.99	518598	NR Bandn41 SRS #4	Mid	100	11.21	Back	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.019	28.4	28.4
2 592.99	518598	NR Bandn41 SRS #4	Mid	100	11.21	Front	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.00	-	
1 745	349000	NR Band n66	Mid	40	22.77	Back	DFT-s-OFDM QPSK	0	15	108	54	1:1	0.530	25.5	25.5
1 745	349000	NR Band n66	Mid	40	22.77	Front	DFT-s-OFDM QPSK	0	15	108	54	1:1	0.419	26.5	
1 745	349000	NR Bandn66(Upper, ENDC)	Mid	40	20.22	Back	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.155	28.3	28.3
1 745	349000	NR Bandn66(Upper, ENDC)	Mid	40	20.22	Front	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.137	28.9	
3 750	650000	NR Band n77	Mid	100	17.83	Back	DFT-s-OFDM QPSK	0	15	135	0	1:1	0.090	28.3	28.3
3 750	650000	NR Band n77	Mid	100	17.83	Front	DFT-s-OFDM QPSK	0	15	135	0	1:1	0.032	32.8	
2 592.99	518598	NR Bandn77 SRS #2	Mid	100	13.06	Back	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.00542	36.1	36.1
2 592.99	518598	NR Bandn77 SRS #2	Mid	100	13.06	Front	DFT-s-OFDM QPSK	0	15	-	-	1:1	0	-	
2 592.99	518598	NR Bandn77 SRS #3	Mid	100	14.13	Back	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.011	33.7	33.7
2 592.99	518598	NR Bandn77 SRS #3	Mid	100	14.13	Front	DFT-s-OFDM QPSK	0	15	-	-	1:1	0	-	
2 592.99	518598	NR Bandn77 SRS #4	Mid	100	12.47	Back	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.012	31.7	31.7
2 592.99	518598	NR Bandn77 SRS #4	Mid	100	12.47	Front	DFT-s-OFDM QPSK	0	15	-	-	1:1	0	-	
3 500.01	633334	NR Band n77 DoD	Mid	100	18.63	Back	DFT-s-OFDM QPSK	0	15	1	271	1:1	0.125	27.7	27.7
3 500.01	633334	NR Band n77 DoD	Mid	100	18.63	Front	DFT-s-OFDM QPSK	0	15	1	271	1:1	0.071	30.1	
3 930.0	662000	NR Bandn77 SRS(DoD)#2	High	100	13.24	Back	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.036	27.7	27.7
3 930.0	662000	NR Bandn77 SRS(DoD)#2	High	100	13.24	Front	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.015	31.5	
3 930.0	662000	NR Bandn77 SRS(DoD)#3	High	100	14.47	Back	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.046	27.8	27.8
3 930.0	662000	NR Bandn77 SRS(DoD)#3	High	100	14.47	Front	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.029	29.8	
3 930.0	662000	NR Bandn77 SRS(DoD)#4	High	100	13.04	Back	DFT-s-OFDM QPSK	0	15	-	-	1:1	0.114	22.5	22.5
3 930.0	662000	NR Bandn77 SRS(DoD)#4	High	100	13.04	Front	DFT-s-OFDM QPSK	0	15	-	-	1:1	0	-	

Table A-7 DSI = 3 *PLimit* Calculations – 3G Hotspot SAR

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

MEASUREMENT RESULTS										
Frequency		Mode/ Band		Frame Averaged Conducted Power	Test Position	Spacing (mm)	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
MHz	Ch.			(dBm)				(W/kg)	(dBm)	(dBm)
836.6	190	GSM 850	GPRS2Tx	25.24	Back	10	1:4.15	0.531	28.0	26.7
836.6	190	GSM 850	GPRS2Tx	25.24	Front	10	1:4.15	0.424	29.0	
836.6	190	GSM 850	GPRS2Tx	25.24	Bottom	10	1:4.15	0.214	31.9	
836.6	190	GSM 850	GPRS2Tx	25.24	Right	10	1:4.15	0.719	26.7	
836.6	190	GSM 850	GPRS2Tx	25.24	Left	10	1:4.15	0.446	28.7	
1 880.0	661	GSM 1900	GPRS2Tx	18.98	Back	10	1:4.15	0.345	23.6	20.4
1 880.0	661	GSM 1900	GPRS2Tx	18.98	Front	10	1:4.15	0.250	25.0	
1 880.0	661	GSM 1900	GPRS2Tx	18.98	Bottom	10	1:4.15	0.726	20.4	
1 880.0	661	GSM 1900	GPRS2Tx	18.98	Right	10	1:4.15	0.017	36.7	
1 880.0	661	GSM 1900	GPRS2Tx	18.98	Left	10	1:4.15	0.149	27.2	
836.6	4183	UMTS 850	RMC	24.19	Back	10	1:1	0.552	26.8	26.8
836.6	4183	UMTS 850	RMC	24.19	Front	10	1:1	0.479	27.4	
836.6	4183	UMTS 850	RMC	24.19	Bottom	10	1:1	0.121	33.4	
836.6	4183	UMTS 850	RMC	24.19	Right	10	1:1	0.496	27.2	
836.6	4183	UMTS 850	RMC	24.19	Left	10	1:1	0.273	29.8	
1 732.4	1412	UMTS 1700	RMC	20.51	Back	10	1:1	0.610	22.7	20.8
1 732.4	1412	UMTS 1700	RMC	20.51	Front	10	1:1	0.490	23.6	
1 732.4	1412	UMTS 1700	RMC	20.51	Bottom	10	1:1	0.934	20.8	
1 732.4	1412	UMTS 1700	RMC	20.51	Right	10	1:1	0.074	31.8	
1 732.4	1412	UMTS 1700	RMC	20.51	Left	10	1:1	0.149	28.8	
1 880	9400	UMTS 1900	RMC	18.27	Back	10	1:1	0.300	24.4	19.5
1 880	9400	UMTS 1900	RMC	18.27	Front	10	1:1	0.282	24.6	
1 880	9400	UMTS 1900	RMC	18.28	Bottom	10	1:1	0.923	19.5	
1 880	9400	UMTS 1900	RMC	18.27	Right	10	1:1	0.016	37.1	
1 880	9400	UMTS 1900	RMC	18.27	Left	10	1:1	0.174	26.7	

Table A-8 DSI = 3 *PLimit* Calculations - – 4G Hotspot SAR

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

MEASUREMENT RESULTS														
Frequency		Mode		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)
836.5	20525	LTE Band 5	Mid	10	24.14	Back	10	0	1	24	1:1	0.617	26.2	
836.5	20525	LTE Band 5	Mid	10	24.14	Front	10	0	1	24	1:1	0.184	31.5	
836.5	20525	LTE Band 5	Mid	10	24.14	Bottom	10	0	1	24	1:1	0.225	30.6	26.2
836.5	20525	LTE Band 5	Mid	10	24.14	Right	10	0	1	24	1:1	0.410	28.0	
836.5	20525	LTE Band 5	Mid	10	24.14	Left	10	0	1	24	1:1	0.284	29.6	
707.5	23095	LTE Band 12	Mid	10	23.97	Back	10	0	1	24	1:1	0.302	29.2	
707.5	23095	LTE Band 12	Mid	10	23.97	Front	10	0	1	24	1:1	0.176	31.5	
707.5	23095	LTE Band 12	Mid	10	23.97	Bottom	10	0	1	24	1:1	0.043	37.6	29.2
707.5	23095	LTE Band 12	Mid	10	23.97	Right	10	0	1	24	1:1	0.085	34.7	
707.5	23095	LTE Band 12	Mid	10	23.97	Left	10	0	1	24	1:1	0.210	30.7	
782	23230	LTE Band 13	Mid	10	23.50	Back	10	0	1	49	1:1	0.475	26.7	
782	23230	LTE Band 13	Mid	10	23.50	Front	10	0	1	49	1:1	0.336	28.2	
782	23230	LTE Band 13	Mid	10	23.50	Bottom	10	0	1	49	1:1	0.096	33.7	26.7
782	23230	LTE Band 13	Mid	10	23.50	Right	10	0	1	49	1:1	0.348	28.1	
782	23230	LTE Band 13	Mid	10	23.50	Left	10	0	1	49	1:1	0.329	28.3	
1 860	26140	LTE Band 25	Low	20	18.4	Back	10	0	50	25	1:1	0.526	22.2	
1 860	26140	LTE Band 25	Low	20	18.4	Front	10	0	50	25	1:1	0.409	23.3	
1 860	26140	LTE Band 25	Low	20	18.4	Bottom	10	0	1	49	1:1	0.808	20.4	20.4
1 860	26140	LTE Band 25	Low	20	18.4	Right	10	0	50	25	1:1	0.025	35.5	
1 860	26140	LTE Band 25	Low	20	18.4	Left	10	0	50	25	1:1	0.212	26.2	
831.5	26865	LTE Band 26	Low	15	23.50	Back	10	0	1	74	1:1	0.666	25.3	
831.5	26865	LTE Band 26	Low	15	23.50	Front	10	0	1	74	1:1	0.162	31.4	
831.5	26865	LTE Band 26	Low	15	23.50	Bottom	10	0	1	74	1:1	0.191	30.7	25.3
831.5	26865	LTE Band 26	Low	15	23.50	Right	10	0	1	74	1:1	0.331	28.3	
831.5	26865	LTE Band 26	Low	15	23.50	Left	10	0	1	74	1:1	0.243	29.6	
2 636.5	41055	LTE Band 41(PC3)	Mid-High	20	22.95	Back	10	0	50	0	1:1.58	0.392	25.0	
2 636.5	41055	LTE Band 41(PC3)	Mid-High	20	22.96	Front	10	0	1	0	1:1.58	0.302	26.2	
2 636.5	41055	LTE Band 41(PC3)	Mid-High	20	22.63	Bottom	10	0	50	25	1:1.58	0.682	22.3	22.3
2 636.5	41055	LTE Band 41(PC3)	Mid-High	20	22.96	Right	10	0	1	0	1:1.58	0.179	28.4	
2 636.5	41055	LTE Band 41(PC3)	Mid-High	20	22.96	Left	10	0	1	0	1:1.58	0.544	23.6	
2 680.0	41490	LTE Band 41(PC2)	High	20	24.16	Bottom	10	0	50	25	1:2.31	0.69	22.1	22.1
1 720	132072	LTE Band 66	Low	20	19.98	Back	10	0	1	0	1:1	0.501	23.0	
1 720	132072	LTE Band 66	Low	20	19.98	Front	10	0	1	0	1:1	0.374	24.3	
1 720	132072	LTE Band 66	Low	20	19.94	Bottom	10	0	50	25	1:1	0.699	21.5	21.5
1 720	132072	LTE Band 66	Low	20	19.94	Right	10	0	50	25	1:1	0.067	31.7	
1 720	132072	LTE Band 66	Low	20	19.98	Left	10	0	1	0	1:1	0.121	29.2	
1 732.5	20175	LTE Band 4(Upper, ULCA)	Mid	20	19.92	Back	10	0	18	0	1:1	0.328	24.8	
1 732.5	20175	LTE Band 4(Upper, ULCA)	Mid	20	19.92	Front	10	0	18	0	1:1	0.257	25.8	
1 732.5	20175	LTE Band 4(Upper, ULCA)	Mid	20	19.90	Top	10	0	1	0	1:1	0.489	23.0	23.0
1 732.5	20175	LTE Band 4(Upper, ULCA)	Mid	20	19.90	Right	10	0	1	0	1:1	0.058	32.3	
1 732.5	20175	LTE Band 4(Upper, ULCA)	Mid	20	19.90	Left	10	0	1	0	1:1	0.132	28.7	

Table A-9 DSI = 3 *PLimit* Calculations - – NR Hotspot SAR

For some bands/modes, a lower P_{Limit} 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		Band width	Frame Averaged Conducted Power	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimur Plimit
MHz	Ch.			MHz	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)
836.5	167300	NR Band n5	Mid	20	23.84	Back	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.472	27.1	27.1
836.5	167300	NR Band n5	Mid	20	23.84	Front	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.335	28.3	
836.5	167300	NR Band n5	Mid	20	23.84	Bottom	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.149	32.1	
836.5	167300	NR Band n5	Mid	20	23.84	Right	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.374	28.1	
836.5	167300	NR Band n5	Mid	20	23.84	Left	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.253	29.8	
1 882.5	376500	NR Band n25	Mid	20	20.14	Back	DFT-s-OFDM QPSK	0	10	50	0	1:1	0.417	23.9	20.2
1 882.5	376500	NR Band n25	Mid	20	20.14	Front	DFT-s-OFDM QPSK	0	10	50	0	1:1	0.318	25.1	
1 882.5	376500	NR Band n25	Mid	20	19.97	Bottom	DFT-s-OFDM QPSK	0	10	50	56	1:1	0.949	20.2	
1 882.5	376500	NR Band n25	Mid	20	19.81	Right	DFT-s-OFDM QPSK	0	10	1	53	1:1	0.027	35.5	
1 882.5	376500	NR Band n25	Mid	20	19.81	Left	DFT-s-OFDM QPSK	0	10	1	53	1:1	0.205	26.7	
2 592.99	518598	NR Bandn41(PC3)	Mid	100	16.76	Back	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.164	24.6	22.9
2 592.99	518598	NR Bandn41(PC3)	Mid	100	16.76	Front	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.075	28.0	
2 592.99	518598	NR Bandn41(PC3)	Mid	100	16.76	Top	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.242	22.9	
2 592.99	518598	NR Bandn41(PC3)	Mid	100	16.76	Left	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.034	31.4	
2 592.99	518598	NR Bandn41 SRS2	Mid	100	14.39	Back	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.097	24.5	23.3
2 592.99	518598	NR Bandn41 SRS2	Mid	100	14.39	Front	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.062	26.5	
2 592.99	518598	NR Bandn41 SRS2	Mid	100	14.39	Bottom	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.130	23.3	
2 592.99	518598	NR Bandn41 SRS2	Mid	100	14.39	Left	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.092	24.8	
2 592.99	518598	NR Bandn41 SRS3	Mid	100	13.04	Back	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.163	20.9	20.9
2 592.99	518598	NR Bandn41 SRS3	Mid	100	13.04	Front	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.045	26.5	
2 592.99	518598	NR Bandn41 SRS3	Mid	100	13.04	Top	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.042	26.8	
2 592.99	518598	NR Bandn41 SRS3	Mid	100	13.04	Right	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.022	29.6	
2 592.99	518598	NR Bandn41 SRS4	Mid	100	11.21	Back	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.058	23.6	23.6
2 592.99	518598	NR Bandn41 SRS4	Mid	100	11.21	Front	DFT-s-OFDM QPSK	0	10	-	-	1:1	0	-	
2 592.99	518598	NR Bandn41 SRS4	Mid	100	11.21	Bottom	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.00157	38.2	
2 592.99	518598	NR Bandn41 SRS4	Mid	100	11.21	Right	DFT-s-OFDM QPSK	0	10	-	-	1:1	0	-	
2 592.99	518598	NR Bandn41 SRS4	Mid	100	11.21	Left	DFT-s-OFDM QPSK	0	10	-	-	1:1	0	-	
1 745	349000	NR Band n66	Mid	40	19.85	Back	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.609	22.0	20.3
1 745	349000	NR Band n66	Mid	40	19.85	Front	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.475	23.1	
1 745	349000	NR Band n66	Mid	40	19.92	Bottom	DFT-s-OFDM QPSK	0	10	108	0	1:1	0.921	20.3	
1 745	349000	NR Band n66	Mid	40	19.85	Right	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.078	30.9	
1 745	349000	NR Band n66	Mid	40	19.92	Left	DFT-s-OFDM QPSK	0	10	108	0	1:1	0.144	28.3	
1 745	349000	NR Band n66 Upper	Mid	40	20.31	Back	DFT-s-OFDM QPSK	0	10	108	54	1:1	0.400	24.3	23.2
1 745	349000	NR Band n66 Upper	Mid	40	20.31	Front	DFT-s-OFDM QPSK	0	10	108	54	1:1	0.333	25.1	
1 745	349000	NR Band n66 Upper	Mid	40	20.31	Top	DFT-s-OFDM QPSK	0	10	108	54	1:1	0.517	23.2	
1 745	349000	NR Band n66 Upper	Mid	40	20.22	Left	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.150	28.5	

MEASUREMENT RESULTS

Frequency		Mode		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(PC3)	Low	100	14.98	Back	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.083	25.8	25.5
3 750	650000	NR Band n77(PC3)	Low	100	15.14	Front	DFT-s-OFDM QPSK	0	10	135	0	1:1	0.059	27.4	
3 750	650000	NR Band n77(PC3)	Low	100	14.98	Top	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.089	25.5	
3 750	650000	NR Band n77(PC3)	Low	100	14.98	Left	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.008	35.9	
3 930.0	662000	NR Bandn77 SRS #2	High	100	13.06	Back	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.021	29.8	26.2
3 930.0	662000	NR Bandn77 SRS #2	High	100	13.06	Front	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.00843	34.0	
3 930.0	662000	NR Bandn77 SRS #2	High	100	13.06	Bottom	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.011	32.6	
3 930.0	662000	NR Bandn77 SRS #2	High	100	13.06	Left	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.049	26.2	
3 930.0	662000	NR Bandn77 SRS #3	High	100	14.13	Back	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.042	27.9	27.9
3 930.0	662000	NR Bandn77 SRS #3	High	100	14.13	Front	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.023	30.5	
3 930.0	662000	NR Bandn77 SRS #3	High	100	14.13	Left	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.00204	41.1	
3 930.0	662000	NR Bandn77 SRS #4	High	100	12.47	Back	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.067	24.2	24.2
3 930.0	662000	NR Bandn77 SRS #4	High	100	12.47	Front	DFT-s-OFDM QPSK	0	10	-	-	1:1	0	-	
3 930.0	662000	NR Bandn77 SRS #4	High	100	12.47	Bottom	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.012	31.7	
3 930.0	662000	NR Bandn77 SRS #4	High	100	12.47	Right	DFT-s-OFDM QPSK	0	10	-	-	1:1	0	-	
3 930.0	662000	NR Bandn77 SRS #4	High	100	12.47	Left	DFT-s-OFDM QPSK	0	10	-	-	1:1	0	-	
3 500.01	633334	NR Band n77(DoD)	Mid	100	15.60	Back	DFT-s-OFDM QPSK	0	10	1	271	1:1	0.114	25.0	24.7
3 500.01	633334	NR Band n77(DoD)	Mid	100	15.43	Front	DFT-s-OFDM QPSK	0	10	135	138	1:1	0.094	25.7	
3 500.01	633334	NR Band n77(DoD)	Mid	100	15.60	Top	DFT-s-OFDM QPSK	0	10	1	271	1:1	0.124	24.7	
3 500.01	633334	NR Band n77(DoD)	Mid	100	15.60	Left	DFT-s-OFDM QPSK	0	10	1	271	1:1	0.047	28.9	
3 500.01	633334	NR Bandn77 SRS(DoD)#2	Mid	100	13.24	Back	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.076	24.4	21.7
3 500.01	633334	NR Bandn77 SRS(DoD)#2	Mid	100	13.24	Front	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.031	28.3	
3 500.01	633334	NR Bandn77 SRS(DoD)#2	Mid	100	13.24	Bottom	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.065	25.1	
3 500.01	633334	NR Bandn77 SRS(DoD)#2	Mid	100	13.24	Left	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.143	21.7	
3 500.01	633334	NR Bandn77 SRS(DoD)#3	Mid	100	14.47	Back	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.109	24.1	24.1
3 500.01	633334	NR Bandn77 SRS(DoD)#3	Mid	100	14.47	Front	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.074	25.8	
3 500.01	633334	NR Bandn77 SRS(DoD)#3	Mid	100	14.47	Left	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.012	33.7	
3 500.01	633334	NR Bandn77 SRS(DoD)#4	Mid	100	13.04	Back	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.245	19.1	19.1
3 500.01	633334	NR Bandn77 SRS(DoD)#4	Mid	100	13.04	Front	DFT-s-OFDM QPSK	0	10	-	-	1:1	0	-	
3 500.01	633334	NR Bandn77 SRS(DoD)#4	Mid	100	13.04	Bottom	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.039	27.1	
3 500.01	633334	NR Bandn77 SRS(DoD)#4	Mid	100	13.04	Right	DFT-s-OFDM QPSK	0	10	-	-	1:1	0.00401	37.0	
3 500.01	633334	NR Bandn77 SRS(DoD)#4	Mid	100	13.04	Left	DFT-s-OFDM QPSK	0	10	-	-	1:1	0	-	

Table A-10 DSI = 0 *PLimit* Calculations - – 3G Phablet SAR (Grip Sensor is off)
For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.

MEASUREMENT RESULTS										
Frequency		Mode/ Band		Frame Averaged Conducted Power	Test Position	Spacing (mm)	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
㎒	Ch.			(dBm)				(W/kg)	(dBm)	(dBm)
1 880.0	661	GSM 1900	GPRS 2TX	21.40	Back	8	1:4.15	0.636	27.3	26.5
1 880.0	661	GSM 1900	GPRS 2TX	21.40	Front	6	1:4.15	0.554	27.9	
1 880.0	661	GSM 1900	GPRS 2TX	21.40	Bottom	11	1:4.15	0.550	28.0	
1 880.0	661	GSM 1900	GPRS 2TX	21.40	Right	0	1:4.15	0.076	36.6	
1 880.0	661	GSM 1900	GPRS 2TX	21.40	Left	0	1:4.15	0.770	26.5	
1 732.4	1412	UMTS Band 4	RMC	23.50	Back	8	1:1	1.16	26.8	26.8
1 732.4	1412	UMTS Band 4	RMC	23.50	Front	6	1:1	0.982	27.6	
1 732.4	1412	UMTS Band 4	RMC	23.50	Bottom	11	1:1	0.811	28.4	
1 732.4	1412	UMTS Band 4	RMC	23.50	Right	0	1:1	0.356	32.0	
1 732.4	1412	UMTS Band 4	RMC	23.50	Left	0	1:1	0.664	29.3	
1 880.0	9400	UMTS Band 2	RMC	23.29	Back	8	1:1	0.931	27.6	27.6
1 880.0	9400	UMTS Band 2	RMC	23.29	Front	6	1:1	0.794	28.3	
1 880.0	9400	UMTS Band 2	RMC	23.29	Bottom	11	1:1	0.851	28.0	
1 880.0	9400	UMTS Band 2	RMC	23.29	Right	0	1:1	0.112	36.8	
1 880.0	9400	UMTS Band 2	RMC	23.29	Left	0	1:1	0.780	28.3	

Table A-11 DSI = 0 *PLimit* Calculations - – 4G Phablet SAR(Grip Sensor is off)
For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.

MEASUREMENT RESULTS														
Frequency		Mode		Band width	Frame Averaged Conducted Power	Test Position	Spacing (mm)	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR (10g)	Plimit	Minimum Plimit
MHz	Ch.			MHz	(dBm)			(dB)				(W/kg)	(dBm)	(dBm)
1 882.5	26365	LTE Band 25	Mid	20	22.80	Back	8	0	1	0	1:1	0.749	28.0	
1 882.5	26365	LTE Band 25	Mid	20	22.80	Front	6	0	1	0	1:1	0.897	27.3	
1 882.5	26365	LTE Band 25	Mid	20	22.80	Bottom	11	0	1	0	1:1	0.787	27.8	26.4
1 882.5	26365	LTE Band 25	Mid	20	21.61	Right	0	0	1	0	1:1	0.106	35.3	
1 882.5	26365	LTE Band 25	Mid	20	22.80	Left	0	0	1	0	1:1	1.100	26.4	
2 636.5	41055	LTE Band 41 (PC3)	Mid-High	20	22.62	Back	8	0	1	99	1:1.58	0.499	29.6	
2 636.5	41055	LTE Band 41 (PC3)	Mid-High	20	22.62	Front	6	0	1	99	1:1.58	0.431	30.3	
2 636.5	41055	LTE Band 41 (PC3)	Mid-High	20	22.62	Bottom	11	0	1	99	1:1.58	0.342	31.3	25.1
2 636.5	41055	LTE Band 41 (PC3)	Mid-High	20	22.62	Right	0	0	1	99	1:1.58	0.407	30.5	
2 636.5	41055	LTE Band 41 (PC3)	Mid-High	20	22.62	Left	0	0	1	99	1:1.58	1.400	25.1	
2 636.5	41055	LTE Band 41 (PC2)	Mid-High	20	22.49	Back	8	0	1	0	1:2.31	0.424	30.2	
2 636.5	41055	LTE Band 41 (PC2)	Mid-High	20	22.49	Front	6	0	1	0	1:2.31	-	-	
2 636.5	41055	LTE Band 41 (PC2)	Mid-High	20	22.49	Bottom	11	0	1	0	1:2.31	0.295	31.8	30.2
2 636.5	41055	LTE Band 41 (PC2)	Mid-High	20	22.49	Right	0	0	1	0	1:2.31	-	-	
2 636.5	41055	LTE Band 41 (PC2)	Mid-High	20	22.49	Left	0	0	1	0	1:2.31	-	-	
1 720	132072	LTE Band 66	Low	20	23.07	Back	8	0	1	0	1:1	0.682	28.7	
1 720	132072	LTE Band 66	Low	20	23.07	Front	6	0	1	0	1:1	0.908	27.5	
1 720	132072	LTE Band 66	Low	20	23.07	Bottom	11	0	1	0	1:1	0.691	28.7	27.5
1 720	132072	LTE Band 66	Low	20	23.07	Right	0	0	1	0	1:1	0.253	33.0	
1 720	132072	LTE Band 66	Low	20	23.07	Left	0	0	1	0	1:1	0.427	30.7	

Table A-11 DSI = 0 *PLimit* Calculations - – NR Phablet SAR (Grip Sensor is off, Maximum Power)

For some bands/modes, a lower P_{Limit} 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		Band width	Frame Averaged Conducted Power	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR (10g)	Plimit	Minimum Plimit
㎒	Ch.			㎒	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)
1 882.5	376500	NR Band n25	Mid	20	22.57	Back	DFT-s-OFDM QPSK	0	8	1	53	1:1	0.680	28.2	27.4
1 882.5	376500	NR Band n25	Mid	20	22.57	Front	DFT-s-OFDM QPSK	0	6	1	53	1:1	0.825	27.4	
1 882.5	376500	NR Band n25	Mid	20	22.79	Bottom	DFT-s-OFDM QPSK	0	11	50	28	1:1	0.843	27.5	
1 882.5	376500	NR Band n25	Mid	20	22.57	Right	DFT-s-OFDM QPSK	0	0	1	53	1:1	0.115	35.9	
1 882.5	376500	NR Band n25	Mid	20	22.79	Left	DFT-s-OFDM QPSK	0	0	50	28	1:1	0.860	27.4	
1 745	349000	NR Band n66	Mid	40	22.92	Back	DFT-s-OFDM QPSK	0	8	1	1	1:1	0.885	27.4	26.9
1 745	349000	NR Band n66	Mid	40	22.77	Front	DFT-s-OFDM QPSK	0	6	108	54	1:1	0.959	26.9	
1 745	349000	NR Band n66	Mid	40	22.92	Bottom	DFT-s-OFDM QPSK	0	11	1	1	1:1	0.890	27.4	
1 745	349000	NR Band n66	Mid	40	22.92	Right	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.302	32.1	
1 745	349000	NR Band n66	Mid	40	22.77	Left	DFT-s-OFDM QPSK	0	0	108	54	1:1	0.654	28.6	

Table A-11 DSI = 1 (Grip Sensor is not activated) ***PLimit* Calculations - 3G Phablet SAR**
For some bands/modes, a lower *PLimit* was selected as a more conservative evaluation.

MEASUREMENT RESULTS										
Frequency		Mode		Frame Averaged Conducted Power	Test Position	Distance	Duty Cycle	Meas. SAR(10g)	Plimit	Minimum Plimit
MHz	Ch.			(dBm)		(mm)		(W/kg)	(dBm)	(dBm)
836.6	4183	UMTS Band 5	RMC	24.19	Back	0	1:1	1.540	26.3	26.3
836.6	4183	UMTS Band 5	RMC	24.19	Front	0	1:1	1.470	26.5	
836.6	4183	UMTS Band 5	RMC	24.19	Bottom	0	1:1	0.795	29.2	
1 732.4	1412	UMTS Band 4	RMC	20.53	Back	0	1:1	1.56	22.6	22.6
1 732.4	1412	UMTS Band 4	RMC	20.53	Front	0	1:1	1.56	22.6	
1 732.4	1412	UMTS Band 4	RMC	20.53	Bottom	0	1:1	1.54	22.6	
1 880.0	9400	UMTS Band 2	RMC	20.31	Back	0	1:1	1.31	23.1	23.1
1 880.0	9400	UMTS Band 2	RMC	20.31	Front	0	1:1	1.14	23.7	
1 880.0	9400	UMTS Band 2	RMC	20.31	Bottom	0	1:1	0.936	24.6	

Table A-11 DSI = 0 GSM Mode *PLimit* Calculations - 3G Phablet SAR (Grip on)

MEASUREMENT RESULTS										
Frequency		Mode		Frame Averaged Conducted	Test Position	Distance	Duty Cycle	Meas. SAR(10g)	Plimit	Minimum Plimit
MHz	Ch.			(dBm)		(mm)		(W/kg)	(dBm)	(dBm)
836.6	190	GSM 850	GPRS 2TX	25.24	Back	0	1:4.15	1.510	27.4	25.7
836.6	190	GSM 850	GPRS 2TX	25.24	Front	0	1:4.15	2.240	25.7	
836.6	190	GSM 850	GPRS 2TX	25.24	Bottom	0	1:4.15	0.146	37.6	
836.6	190	GSM 850	GPRS 2TX	25.24	Right	0	1:4.15	0.216	35.9	
836.6	190	GSM 850	GPRS 2TX	25.24	Left	0	1:4.15	0.856	29.9	
1 880.0	661	GSM 1900	GPRS 2TX	19.07	Back	0	1:4.15	0.744	24.3	24.3
1 880.0	661	GSM 1900	GPRS 2TX	19.07	Front	0	1:4.15	0.683	24.7	
1 880.0	661	GSM 1900	GPRS 2TX	19.07	Bottom	0	1:4.15	0.471	26.3	

Table A-13 DSI =1,4 *PLimit* Calculations - 4G Phablet SAR (Grip Sensor is on, Earjack inserted)

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

MEASUREMENT RESULTS														
Frequency		Mode		Band width	Frame Averaged Conducted	Test Position	Spacing (mm)	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR(10g)	Plimit	Minimum Plimit
MHz	Ch.			MHz	(dBm)			(dB)				(W/kg)	(dBm)	(dBm)
836.5	20525	LTE Band 5	Mid	10	24.14	Back	0	0	1	24	1:1	1.450	26.5	26.5
836.5	20525	LTE Band 5	Mid	10	24.14	Front	0	0	1	24	1:1	1.080	27.8	
836.5	20525	LTE Band 5	Mid	10	24.14	Bottom	0	0	1	24	1:1	0.751	29.4	
836.5	20525	LTE Band 5	Mid	10	24.14	Right	0	0	1	24	1:1	0.322	33.0	
836.5	20525	LTE Band 5	Mid	10	24.14	Left	0	0	1	24	1:1	1.270	27.1	
707.5	23095	LTE Band 12	Mid	10	23.97	Back	0	0	1	24	1:1	1.390	26.5	26.5
707.5	23095	LTE Band 12	Mid	10	23.97	Front	0	0	1	24	1:1	0.954	28.2	
707.5	23095	LTE Band 12	Mid	10	23.97	Bottom	0	0	1	24	1:1	0.436	31.6	
707.5	23095	LTE Band 12	Mid	10	23.97	Right	0	0	1	24	1:1	0.138	36.6	
707.5	23095	LTE Band 12	Mid	10	23.97	Left	0	0	1	24	1:1	1.010	27.9	
782	23230	LTE Band 13	Mid	10	23.50	Back	0	0	1	49	1:1	1.330	26.2	26.2
782	23230	LTE Band 13	Mid	10	23.50	Front	0	0	1	49	1:1	1.180	26.8	
782	23230	LTE Band 13	Mid	10	23.50	Bottom	0	0	1	49	1:1	0.618	29.6	
782	23230	LTE Band 13	Mid	10	23.50	Right	0	0	1	49	1:1	0.266	33.2	
782	23230	LTE Band 13	Mid	10	23.50	Left	0	0	1	49	1:1	0.830	28.3	
1 882.5	26365	LTE Band 25	Mid	20	19.43	Back	0	0	50	49	1:1	1.030	23.3	23.6
1 882.5	26365	LTE Band 25	Mid	20	19.43	Front	0	0	50	49	1:1	0.961	23.6	
1 882.5	26365	LTE Band 25	Mid	20	19.45	Bottom	0	0	1	49	1:1	0.810	24.3	
831.5	26865	LTE Band 26	Mid	15	23.50	Back	0	0	1	74	1:1	1.220	26.6	26.6
831.5	26865	LTE Band 26	Mid	15	23.50	Front	0	0	1	74	1:1	1.040	27.3	
831.5	26865	LTE Band 26	Mid	15	23.50	Bottom	0	0	1	74	1:1	0.625	29.5	
831.5	26865	LTE Band 26	Mid	15	23.50	Right	0	0	1	74	1:1	0.266	33.2	
831.5	26865	LTE Band 26	Mid	15	23.50	Left	0	0	1	74	1:1	0.975	27.6	
2 636.5	41055	LTE Band 41(PC3)	High	20	20.95	Rear	0	0	1	99	1:1.58	1.430	23.4	23.4
2 636.5	41055	LTE Band 41(PC3)	High	20	20.95	Front	0	0	1	99	1:1.58	1.040	24.8	
2 636.5	41055	LTE Band 41(PC3)	High	20	20.95	Bottom	0	0	1	99	1:1.58	1.290	23.8	
2 636.5	41055	LTE Band 41(PC2)	High	20	20.84	Rear	0	0	1	99	1:2.31	1.690	22.5	22.5
2 636.5	41055	LTE Band 41(PC2)	High	20	20.84	Front	0	0	1	99	1:2.31	1.050	24.6	
2 636.5	41055	LTE Band 41(PC2)	High	20	20.84	Bottom	0	0	1	99	1:2.31	1.370	23.5	
1 720	132072	LTE Band 66	Low	20	19.92	Back	0	0	50	25	1:1	1.180	23.2	22.5
1 720	132072	LTE Band 66	Low	20	19.92	Front	0	0	50	25	1:1	1.320	22.7	
1 720	132072	LTE Band 66	Low	20	20.01	Bottom	0	0	1	0	1:1	1.400	22.5	
1 732.5	20175	LTE Band 4(Upper, ULCA)	Mid	20	19.90	Back	0	0	1	0	1:1	2.430	20.0	20.0
1 732.5	20175	LTE Band 4(Upper, ULCA)	Mid	20	19.90	Front	0	0	1	0	1:1	1.540	22.0	
1 732.5	20175	LTE Band 4(Upper, ULCA)	Mid	20	19.90	Bottom	0	0	1	0	1:1	0.091	34.3	
1 732.5	20175	LTE Band 4(Upper, ULCA)	Mid	20	19.90	Right	0	0	1	0	1:1	0.215	30.6	
1 732.5	20175	LTE Band 4(Upper, ULCA)	Mid	20	19.90	Left	0	0	1	0	1:1	1.690	21.6	

Table A-15 DSI = 1,4 *PLimit* Calculations - – NR Phablet SAR(grip on , Ear jack inserted)

For some bands/modes, a lower P_{Limit} 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		Band width	Frame Averaged Conducted	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR (10g)	Plimit	Minimum Plimit
MHz	Ch.			MHz	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)
836.5	167300	NR Band n5	Mid	20	23.84	Back	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.250	26.9	24.9
836.5	167300	NR Band n5	Mid	20	23.84	Front	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.440	26.2	
836.5	167300	NR Band n5	Mid	20	23.84	Bottom	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.960	24.9	
836.5	167300	NR Band n5	Mid	20	23.84	Right	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.158	35.8	
836.5	167300	NR Band n5	Mid	20	23.84	Left	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.535	30.5	
1 882.5	376500	NR Band n25	Mid	20	20.14	Back	DFT-s-OFDM QPSK	0	0	50	0	1:1	1.190	23.4	23.4
1 882.5	376500	NR Band n25	Mid	20	20.14	Front	DFT-s-OFDM QPSK	0	0	50	0	1:1	1.050	23.9	
1 882.5	376500	NR Band n25	Mid	20	19.81	Bottom	DFT-s-OFDM QPSK	0	0	1	53	1:1	0.875	24.4	
2 592.99	518598	NR Band n41(PC3)	Mid	100	18.74	Back	DFT-s-OFDM QPSK	0	0	1	137	1:1	0.864	23.4	21.1
2 592.99	518598	NR Band n41(PC3)	Mid	100	18.74	Front	DFT-s-OFDM QPSK	0	0	1	137	1:1	0.587	25.0	
2 592.99	518598	NR Band n41(PC3)	Mid	100	18.71	Top	DFT-s-OFDM QPSK	0	0	270	0	1:1	1.430	21.1	
2 592.99	518598	NR Band n41(PC3)	Mid	100	18.74	Left	DFT-s-OFDM QPSK	0	0	1	137	1:1	0.108	32.4	
2 592.99	518598	NR Band n41 SRS2	Mid	100	14.39	Back	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.432	22.0	22.0
2 592.99	518598	NR Band n41 SRS2	Mid	100	14.39	Front	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.301	23.6	
2 592.99	518598	NR Band n41 SRS2	Mid	100	14.39	Bottom	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.358	22.8	
2 592.99	518598	NR Band n41 SRS2	Mid	100	14.39	Left	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.274	24.0	
2 592.99	518598	NR Band n41 SRS3	Mid	100	13.04	Back	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.241	23.2	21.2
2 592.99	518598	NR Band n41 SRS3	Mid	100	13.04	Front	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.383	21.2	
2 592.99	518598	NR Band n41 SRS3	Mid	100	13.04	Top	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.168	24.8	
2 592.99	518598	NR Band n41 SRS3	Mid	100	13.04	Right	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.232	23.4	
2 592.99	518598	NR Band n41 SRS4	Mid	100	11.21	Back	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.178	22.7	22.7
2 592.99	518598	NR Band n41 SRS4	Mid	100	11.21	Front	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.021	32.0	
2 592.99	518598	NR Band n41 SRS4	Mid	100	11.21	Bottom	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.035	29.7	
2 592.99	518598	NR Band n41 SRS4	Mid	100	11.21	Right	DFT-s-OFDM QPSK	0	0	-	-	1:1	-	-	
2 592.99	518598	NR Band n41 SRS4	Mid	100	11.21	Left	DFT-s-OFDM QPSK	0	0	-	-	1:1	-	-	
1 745	349000	NR Band n66	Mid	40	19.85	Back	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.410	22.3	21.6
1 745	349000	NR Band n66	Mid	40	19.85	Front	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.320	22.6	
1 745	349000	NR Band n66	Mid	40	19.32	Bottom	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.490	21.6	
1 745	349000	NR Band n66 (Upper)	Mid	40	20.22	Back	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.070	23.9	20.7
1 745	349000	NR Band n66 (Upper)	Mid	40	20.22	Front	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.510	22.4	
1 745	349000	NR Band n66 (Upper)	Mid	40	20.22	Bottom	DFT-s-OFDM QPSK	0	0	1	1	1:1	2.240	20.7	
1 745	349000	NR Band n66 (Upper)	Mid	40	20.22	Right	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.146	32.6	
1 745	349000	NR Band n66 (Upper)	Mid	40	20.22	Left	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.258	30.1	

MEASUREMENT RESULTS															
Frequency		Mode		Band width	Frame Averaged Conducted	Test Position		MPR	Spacing (mm)	RB Size	RB offset	Duty Cycle	Meas. SAR (10g)	Plimit	Minimum Plimit
MHz	Ch.			MHz	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)
3 750	650000	NR Band n77(PC3)	High	100	17.81	Back	DFT-s-OFDM QPSK	0	0	1	137	1:1	0.776	22.9	20.7
3 750	650000	NR Band n77(PC3)	High	100	17.81	Front	DFT-s-OFDM QPSK	0	0	1	137	1:1	0.703	23.3	
3 750	650000	NR Band n77(PC3)	High	100	17.81	Top	DFT-s-OFDM QPSK	0	0	1	137	1:1	1.300	20.7	
3 750	650000	NR Band n77(PC3)	High	100	17.81	Left	DFT-s-OFDM QPSK	0	0	1	137	1:1	0.107	31.5	
3 930.0	662000	NR Band n77 SRS2	High	100	13.06	Back	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.292	22.4	20.9
3 930.0	662000	NR Band n77 SRS2	High	100	13.06	Front	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.215	23.7	
3 930.0	662000	NR Band n77 SRS2	High	100	13.06	Bottom	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.089	27.6	
3 930.0	662000	NR Band n77 SRS2	High	100	13.06	Left	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.408	20.9	
3 930.0	662000	NR Band n77 SRS3	High	100	14.13	Back	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.702	19.7	18.7
3 930.0	662000	NR Band n77 SRS3	High	100	14.13	Front	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.876	18.7	
3 930.0	662000	NR Band n77 SRS3	High	100	14.13	Left	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.213	24.8	
3 930.0	662000	NR Band n77 SRS4	High	100	12.47	Back	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.445	20.0	20.0
3 930.0	662000	NR Band n77 SRS4	High	100	12.47	Front	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.038	30.7	
3 930.0	662000	NR Band n77 SRS4	High	100	12.47	Bottom	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.062	28.5	
3 930.0	662000	NR Band n77 SRS4	High	100	12.47	Right	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.031	31.5	
3 930.0	662000	NR Band n77 SRS4	High	100	12.47	Left	DFT-s-OFDM QPSK	0	0	-	-	1:1	-	-	
3 500.01	633334	NR Band n77DoD(PC3)	High	100	18.63	Back	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.810	23.5	21.2
3 500.01	633334	NR Band n77DoD(PC3)	High	100	18.63	Front	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.689	24.2	
3 500.01	633334	NR Band n77DoD(PC3)	High	100	18.63	Top	DFT-s-OFDM QPSK	0	0	1	271	1:1	1.400	21.2	
3 500.01	633334	NR Band n77DoD(PC3)	High	100	18.63	Left	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.096	32.8	
3 500.01	633334	NR Band n77DoD SRS2	High	100	13.24	Back	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.619	19.3	19.3
3 500.01	633334	NR Band n77DoD SRS2	High	100	13.24	Front	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.380	21.4	
3 500.01	633334	NR Band n77DoD SRS2	High	100	13.24	Bottom	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.087	27.8	
3 500.01	633334	NR Band n77DoD SRS2	High	100	13.24	Left	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.512	20.1	
3 500.01	633334	NR Band n77DoD SRS3	High	100	14.47	Back	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.867	19.1	18.5
3 500.01	633334	NR Band n77DoD SRS3	High	100	14.47	Front	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.994	18.5	
3 500.01	633334	NR Band n77DoD SRS3	High	100	14.47	Left	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.212	25.2	
3 500.01	633334	NR Band n77DoD SRS4	High	100	13.04	Back	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.610	19.2	19.2
3 500.01	633334	NR Band n77DoD SRS4	High	100	13.04	Front	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.110	26.6	
3 500.01	633334	NR Band n77DoD SRS4	High	100	13.04	Bottom	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.119	26.3	
3 500.01	633334	NR Band n77DoD SRS4	High	100	13.04	Right	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.070	28.6	
3 500.01	633334	NR Band n77DoD SRS4	High	100	13.04	Left	DFT-s-OFDM QPSK	0	0	-	-	1:1	0.000	-	