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## PART 0 SAR CHAR REPORT

<b>Applicant Name:</b> <b>SAMSUNG Electronics Co., Ltd.</b> 129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677 Rep. of Korea	<b>Date of Issue:</b> May. 26, 2022 <b>Test Report No.:</b> HCT-SR-2205-FC002-R2 <b>Test Site:</b> HCT CO., LTD.
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**FCC ID:**

**A3LSMG736U**

**Report Type:** Part 0 SAR Characterization  
**Equipment Type:** Mobile Phone  
**Model Name:** SM-G736U  
**Additional Model Name:** SM-G736U1

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

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**REVISION HISTORY**

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

<b>Revision No.</b>	<b>Date of Issue</b>	<b>Description</b>
0	May.16, 2022	Initial Release
1	May.20, 2022	Revised Page 5
2	May.26, 2022	Revised Page 19

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

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## 1. Test Location

### 1.1 Test Laboratory

<b>Company Name</b>	HCT Co., Ltd.
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### 1.2 Test Facilities

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

<b>Korea</b>	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 MHz ~ 848.8 MHz
GSM1900	Voice / Data	1 850.2 MHz ~ 1 909.8 MHz
UMTS Band 5	Voice / Data	826.4 MHz ~ 846.6 MHz
UMTS Band 4	Voice / Data	1 712.4 MHz ~ 1 752.6 MHz
UMTS Band 2	Voice / Data	1 852.4 MHz ~ 1 907.6 MHz
LTE Band 2 (PCS)	Voice / Data	1 850.7 MHz ~ 1 909.3 MHz
LTE Band 4 (AWS)	Voice / Data	1 710.7 MHz ~ 1 754.3 MHz
LTE Band 5 (Cell)	Voice / Data	824.7 MHz ~ 848.3 MHz
LTE Band 7	Voice / Data	2 502.5 MHz ~ 2 567.5 MHz
LTE Band 12	Voice / Data	699.7 MHz ~ 715.3 MHz
LTE Band 13	Voice / Data	779.5 MHz ~ 784.5 MHz
LTE Band 14	Voice / Data	790.5 MHz ~ 795.5 MHz
LTE Band 25	Voice / Data	1 850.7 MHz ~ 1 914.3 MHz
LTE Band 26	Voice / Data	814.7 MHz ~ 848.3 MHz
LTE Band 30	Voice / Data	2 307.5 MHz ~ 2 312.5 MHz
LTE TDD Band 38	Voice / Data	2 572.5 MHz ~ 2 617.5 MHz
LTE TDD Band 40	Voice / Data	2 302.5 MHz ~ 2 397.5 MHz
LTE TDD Band 41	Voice / Data	2 498.5 MHz ~ 2 687.5 MHz
LTE TDD Band 48	Voice / Data	3 552.5 MHz ~ 3 697.5 MHz
LTE Band 66 (AWS)	Voice / Data	1 710.7 MHz ~ 1 779.3 MHz
LTE Band 71	Voice / Data	665.5 MHz ~ 695.5 MHz
NR Band n2	Voice / Data	1 852.5 MHz ~ 1 907.5 MHz
NR Band n5	Voice / Data	826.5 MHz ~ 846.5 MHz
NR Band n12	Voice / Data	701.5 MHz ~ 713.5 MHz
NR Band n25	Voice / Data	1 852.5 MHz ~ 1 912.5 MHz
NR Band n30	Voice / Data	2 307.5 MHz ~ 2 312.5 MHz
NR Band n41	Voice / Data	2 506.02 MHz ~ 2 679.99 MHz
NR Band n66	Voice / Data	1 712.5 MHz ~ 1 777.5 MHz
NR Band n71	Voice / Data	665.5 MHz ~ 695.5 MHz
NR Band n77	Voice / Data	3 705 MHz ~ 3 975 MHz
NR Band n77 (DoD)	Voice / Data	3 455.04 MHz ~ 3 544.98 MHz
U-NII-1	Voice / Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Voice / Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Voice / Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Voice / Data	5 745 MHz ~ 5 825 MHz
U-NII-5	Data	5 955 MHz ~ 6 415 MHz
U-NII-6	Data	6 435 MHz ~ 6 525 MHz
U-NII-7	Data	6 535 MHz ~ 6 875 MHz
U-NII-8	Data	6 895 MHz ~ 7 115 MHz
2.4 GHz WLAN	Voice / Data	2 412 MHz ~ 2 462 MHz
Bluetooth / LE 5.2	Data	2 402 MHz ~ 2 480 MHz
NFC	Data	13.56 MHz

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.

## 2.2 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 2G/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 2G/3G/4G and 5G Sub-6 NR respectively. Characterization is achieved by determining  $P_{limit}$  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 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
2G/3G/4G/5G Sub 6 NR	$P_{limit}$	Power level that corresponds to the exposure design target ( $SAR_{design\_target}$ ) after accounting for all device design related uncertainties
	$P_{max}$	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 $P_{limit}$ for all technologies and bands

### 3. SAR MEASUREMENTS

#### 3.1 SAR Definition

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

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

SAR Mathematical Equation

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

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

Where:

$\sigma$  = conductivity of the tissue-simulant material (S/m)  
 $\rho$  = mass density of the tissue-simulant material ( $\text{kg/m}^3$ )  
 $E$  = 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) ( $\Delta x_{area}, \Delta y_{area}$ )	Maximum Zoom Scan Resolution (mm) ( $\Delta x_{zoom}, \Delta y_{zoom}$ )	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid	Graded Grid		
			$\Delta z_{zoom}(n)$	$\Delta z_{zoom}(1)^*$	$\Delta z_{zoom}(n>1)^*$	
≤2 GHz	≤15	≤8	≤5	≤4	$\leq 1.5 * \Delta z_{zoom}(n-1)$	≥30
2-3 GHz	≤12	≤5	≤5	≤4	$\leq 1.5 * \Delta z_{zoom}(n-1)$	≥30
3-4 GHz	≤12	≤5	≤4	≤3	$\leq 1.5 * \Delta z_{zoom}(n-1)$	≥28
4-5 GHz	≤10	≤4	≤3	≤2.5	$\leq 1.5 * \Delta z_{zoom}(n-1)$	≥25
5-6 GHz	≤10	≤4	≤2	≤2	$\leq 1.5 * \Delta z_{zoom}(n-1)$	≥22

**Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04\***



## 4. SAR CHARACTERIZATION

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

### 4.2 SAR Design Target

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

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

Table 4-2 *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)	<i>PLimit</i> 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 19 and 13 mm spacing for back, bottom respectively 3. Extremity SAR measured at 0 mm for left and right surfaces
1	<i>PLimit</i> is calculated based on 1g Head SAR
2	<i>PLimit</i> is calculated based on 1g Hotspot SAR at 10 mm
3,4	<i>PLimit</i> 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 :

$$P_{limit} = \min\{ P_{limit} \text{ cooresponding to } 1g \text{ Body Worn SAR evaluation at } 15mm \text{ spacing,} \\
 P_{limit} \text{ cooresponding to } 10g \text{ Extremity SAR evaluation at } 19(\text{Rear}) \text{ and } 13mm(\text{bottom}) \text{ spacing,} \\
 P_{limit} \text{ cooresponding to } 10g \text{ Extremity SAR evaluation at } 0mm \text{ for Left and right surface} \\
 P_{limit} \text{ cooresponding to } 10g \text{ Extremity SAR evaluation at } 0mm \text{ for bands without grip sensor back-off } \}$$

Plimit corresponding to 1 W/kg (1g) 2.5W/kg(10g) SAR_Design_target								Pmax	Pmax
SAR Exposure Position			Body worn/ Phablet	Phablet (Grip On)	Head (RCV ON)	Hotspot	EarJack	Maximum Tune-up Output Power (Burst Average Power) [dBm]	Maximum Tune-up Output Power (Frame Averaged Power) [dBm]
Averaging volume seperation Distance			1g/10g 15/0,19,13 mm	10g 0 mm	1g 0 mm	1g 10 mm	10g 0 mm		
Mode	Band	Antenna	DSI = 0	DSI = 4	DSI = 1	DSI = 2	DSI = 3		
GSM/GPRS/EDGE	850	Main 1	29.2	22.5	28.9	22.5	22.5	30.5	24.3
GSM/GPRS/EDGE	1900	Main 2	28.3	19.5	28.3	19.5	19.5	29.0	22.8
UMTS	5	Main 1	24.3	24.3	28.9	26.5	24.3	22.5	22.5
UMTS	4	Main 2	25.5	21.5	30.7	21.5	21.5	23.5	23.5
UMTS	2	Main 2	25.1	21.5	28.8	21.5	21.5	23.5	23.5
LTE FDD	12	Main 1	27.4	27.4	29.6	28.2	27.4	24.5	24.5
LTE FDD	13	Main 1	29.3	29.3	31.4	27.9	29.3	24.0	24.0
LTE FDD	14	Main 1	30.5	30.5	33.0	29.1	30.5	24.5	24.5
LTE FDD	26	Main 1	27.6	27.6	28.8	26.9	27.6	24.5	24.5
LTE FDD	5	Main 1	27.6	27.6	28.8	26.9	27.6	24.5	24.5
LTE FDD	66	Main 2	25.1	21.0	29.3	21.0	21.0	24.0	24.0
LTE FDD	66	Sub 1	26.5	24.9	19.0	26.2	24.9	22.0	22.0
LTE FDD	4	Main 2	25.1	21.0	29.3	21.0	21.0	24.0	24.0
LTE FDD	4	Sub 1	26.5	24.9	19.0	26.2	24.9	22.0	22.0
LTE FDD	2	Main 2	25.2	21.0	26.7	21.0	21.0	24.0	24.0
LTE FDD	2	Sub 1	26.4	25.0	19.0	26.4	25.0	22.0	22.0
LTE FDD	25	Main 2	25.2	21.0	26.7	21.0	21.0	24.0	24.0
LTE FDD	25	Sub 1	26.4	25.0	19.0	26.4	25.0	22.0	22.0
LTE FDD	71	Main 1	29.5	29.5	30.4	28.3	29.5	24.5	24.5
LTE FDD	7	Main 2	24.3	21.0	27.8	21.0	21.0	24.0	24.0
LTE FDD	30	Main 2	24.4	21.0	28.4	21.0	21.0	23.0	23.0
LTE TDD	40	Main 2	22.1	25.8	32.5	25.4	25.8	13.0	11.0
LTE TDD	48	Sub 3	22.1	24.2	18.0	21.4	24.2	22.5	20.5
LTE TDD PC3	41	Main 2	26.0	25.2	31.6	25.2	25.2	24.0	22.0
LTE TDD PC2	41	Main 2	28.3	27.1	31.7	24.9	27.1	26.5	22.9
LTE TDD	38	Main 2	26.0	25.2	31.6	25.2	25.2	24.0	22.0
NR FDD	5	Main1	27.9	27.9	28.5	26.1	27.9	24.0	24.0
NR FDD	12	Main 1	29.5	28.2	30.7	28.8	28.2	24.0	24.0
NR FDD	71	Main 1	30.4	29.6	30.3	28.6	29.6	24.0	24.0
NR FDD	30	Main 2	24.2	21.0	28.4	21.0	21.0	23.5	23.5
NR FDD	66	Main 2	25.3	21.0	29.0	21.0	21.0	24.0	24.0
NR FDD	2	Main 2	24.8	21.0	27.9	21.0	21.0	23.5	23.5
NR FDD	25	Main 2	24.8	21.0	27.9	21.0	21.0	23.5	23.5
NR TDD PC3	41	Main 2	21.0	21.0	21.0	21.0	21.0	24.5	24.5
NR TDD PC2	41	Main 2	21.0	21.0	21.0	21.0	21.0	26.0	26.0
NR TDD SRS0(PC2)	n77 DoD	Sub 3	17.5	17.5	17.5	17.5	17.5	27.0	27.0
NR TDD SRS0(PC3)	n77 DoD	Sub 3	17.5	17.5	17.5	17.5	17.5	24.5	24.5
NR TDD SRS1(PC2)	n77 DoD	Sub 5	15.0	15.0	15.0	15.0	15.0	22.6	22.6
NR TDD SRS1(PC3)	n77 DoD	Sub 5	15.0	15.0	15.0	15.0	15.0	22.6	22.6
NR TDD SRS2(PC2)	n77 DoD	Main 2	16.0	16.0	16.0	16.0	16.0	25.0	25.0
NR TDD SRS2(PC3)	n77 DoD	Main 2	16.0	16.0	16.0	16.0	16.0	23.5	23.5
NR TDD SRS3(PC2)	n77 DoD	Main 3	17.5	17.5	17.5	17.5	17.5	23.0	23.0
NR TDD SRS3(PC3)	n77 DoD	Main 3	17.5	17.5	17.5	17.5	17.5	23.0	23.0
NR TDD SRS0(PC2)	n77	Sub 3	17.5	17.5	17.5	17.5	17.5	27.0	27.0
NR TDD SRS0(PC3)	n77	Sub 3	17.5	17.5	17.5	17.5	17.5	24.5	24.5
NR TDD SRS1(PC2)	n77	Sub 5	15.0	15.0	15.0	15.0	15.0	22.6	22.6
NR TDD SRS1(PC3)	n77	Sub 5	15.0	15.0	15.0	15.0	15.0	22.6	22.6
NR TDD SRS2(PC2)	n77	Main 2	16.0	16.0	16.0	16.0	16.0	25.0	25.0
NR TDD SRS2(PC3)	n77	Main 2	16.0	16.0	16.0	16.0	16.0	23.5	23.5
NR TDD SRS3(PC2)	n77	Main 3	17.5	17.5	17.5	17.5	17.5	23.0	23.0
NR TDD SRS3(PC3)	n77	Main 3	17.5	17.5	17.5	17.5	17.5	23.0	23.0

Table 4-4 SAR Characterization

Note:

1. Compared with the Plimit (Tune up Powers) declared in each DSI by the manufacturer and the plimit (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=2) Grip sensor (DSI=4) and Ear-jack mode(DSI=3) are triggered at the same time,DSI=2(Hotspot) takes more higher priority.the Priority for power reduction was given in the order of hotspot(DSI=2), earjack.(DSI=3), and grip (DSI=4),.
4. Maximum Tune up Power,Pmax. 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 ,NR 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	F12/ 5K9GA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F17/ 59CHA1/ C/ 01	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-TX60	F08/5AJ0A1/C/01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F/20/0018446/C/001	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5SD0A1/ 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	F12/ 5K9GA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F17/ 59CHA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F17/ 59RAA1/ A/ 01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F13/ 5R4XF1/ A/ 01	N/A	N/A	N/A
Staubli	TX60 Lspeag	F08/5AJ0A1/A/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F/20/0018446/A/001	N/A	N/A	N/A
Staubli	TX90 XLspeag	F13/ 5SD0A1/ 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)	S-1206 0513	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	010963	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	011578	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)	020885	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	001729	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	D21144507C	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331939309	01/04/2022	Annual	01/04/2023
TESTO	175-H1/Thermometer	40331915309	01/04/2022	Annual	01/04/2023
TESTO	175-H1/Thermometer	40331922309	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	175-H1/Thermometer	44606559906	01/04/2022	Annual	01/04/2023
TESTO	608-H1/Thermometer	83348029	05/06/2021	Annual	05/06/2022
TESTO	608-H1/Thermometer	83348029	04/29/2022	Annual	04/29/2023
TESTO	608-H1/Thermometer	83239085	11/15/2021	Annual	11/15/2022
SPEAG	DAE4	1686	06/21/2021	Annual	06/21/2022
SPEAG	DAE4	648	06/02/2021	Annual	06/02/2022
SPEAG	DAE4	446	09/30/2021	Annual	09/30/2022
SPEAG	DAE4	1422	05/19/2021	Annual	05/19/2022
SPEAG	DAE4	466	04/23/2021	Annual	04/23/2022
SPEAG	DAE4	868	09/27/2021	Annual	09/27/2022
SPEAG	DAE4	1629	07/26/2021	Annual	07/26/2022
SPEAG	DAE4	1687	06/21/2021	Annual	06/21/2022
SPEAG	E-Field Probe EX3DV4	7681	12/14/2021	Annual	12/14/2022
SPEAG	E-Field Probe EX3DV4	3972	05/21/2021	Annual	05/21/2022
SPEAG	E-Field Probe EX3DV4	7309	04/20/2021	Annual	04/20/2022
SPEAG	E-Field Probe EX3DV4	7655	05/21/2021	Annual	05/21/2022
SPEAG	E-Field Probe EX3DV4	7702	01/20/2022	Annual	01/20/2023
SPEAG	E-Field Probe EX3DV4	7654	05/21/2021	Annual	05/21/2022
SPEAG	E-Field Probe EX3DV4	7679	09/10/2021	Annual	09/10/2022
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	01/28/2022	Annual	01/28/2023
SPEAG	Dipole D2300V2	1010	08/17/2021	Annual	08/17/2022
SPEAG	Dipole D2450V2	965	06/15/2021	Annual	06/15/2022

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	Dipole D2600V2	1106	07/30/2021	Annual	07/30/2022
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	1019	06/09/2021	Annual	06/09/2022
SPEAG	Dipole D5GHzV2	1107	07/22/2021	Annual	07/22/2022
Agilent	Power Meter E4419B	MY41291386	10/06/2021	Annual	10/06/2022
Agilent	Power Meter N1911A	MY45101406	07/08/2021	Annual	07/08/2022
Agilent	Power Sensor 8481A	SG1091286	10/06/2021	Annual	10/06/2022
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	1031	04/21/2021	Annual	04/21/2022
SPEAG	DAKS 3.5	1038	03/28/2022	Annual	03/28/2023
SPEAG	DAKS_VNA R140	0141013	04/07/2021	Annual	04/07/2022
SPEAG	DAKS_VNA R140	0141013	03/25/2022	Annual	03/25/2023
R&S	Wireless Communication Test Set CMW500	115733	04/15/2021	Annual	04/15/2022
R&S	Wireless Communication Test Set CMW500	115733	04/14/2022	Annual	04/14/2023
Agilent	11636B/Power Divider	58698	02/24/2022	Annual	02/24/2023
OSI	Power Divider	#1	06/24/2021	Annual	06/24/2022
OSI	Power Divider	#2	06/24/2021	Annual	06/24/2022
OSI	Power Divider	#3	06/24/2021	Annual	06/24/2022
OSI	Power Divider	#4	06/24/2021	Annual	06/24/2022
OSI	Power Divider	#5	06/24/2021	Annual	06/24/2022
Agilent	SIGNAL GENERATOR E4438C	MY49071736	01/03/2022	Annual	01/03/2023
Agilent	SIGNAL GENERATOR N5182A	MY47070230	05/10/2021	Annual	05/10/2022
Agilent	SIGNAL GENERATOR N5182A	MY47070230	04/28/2022	Annual	04/28/2023
EMPOWER	RF Power Amplifier	1084	06/25/2021	Annual	06/25/2022
EMPOWER	RF Power Amplifier	1011	10/06/2021	Annual	10/06/2022
MICRO LAB	LP Filter / LA-15N	10453	10/06/2021	Annual	10/06/2022
MICRO LAB	LP Filter / LA-30N	-	10/06/2021	Annual	10/06/2022
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
Aeroflex/Weinschel	Fixed Coaxial Attenuator (30 dB)	CE6106	11/11/2021	Annual	11/11/2022
Agilent	Directional Bridge 86205A	3140A03878	05/28/2021	Annual	05/28/2022
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 MT8820C	6200695605	04/15/2022	Annual	04/15/2023
Anritsu	Radio Communication Tester MT8821C	6201502997	07/08/2021	Annual	07/08/2022
Anritsu	Radio Communication Tester MT8821C	6262044720	12/20/2021	Annual	12/20/2022
Anritsu	Radio Communication Tester MT8821C	6262287674	05/25/2021	Annual	05/25/2022
Anritsu	Radio Communication Tester MT8821C	6262287678	05/25/2021	Annual	05/25/2022
Anritsu	Radio Communication Test Station MT8000A	6262036812	12/20/2021	Annual	12/20/2022
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/23/2021	Annual	07/23/2022
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	02/28/2022	Annual	02/28/2023

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

## 6. Measurement Uncertainty

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

## Appendix A: SAR Test Results For P limit CALCULATIONS

**Table A-1 DSI = 1 PLimit Calculations – 2G/3G Head SAR**

MEASUREMENT RESULTS									
Frequency		Mode/ Band		Frame Averaged Conducted Power	Test Position	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
Mhz	Ch.			(dBm)			(W/kg)	(dBm)	(dBm)
836.6	190	GSM 850	GPRS 2Tx	24.38	Right Cheek	1:4.15	0.356	28.9	28.9
836.6	190	GSM 850		24.38	Right Tilt	1:4.15	0.195	31.5	
836.6	190	GSM 850		24.38	Left Cheek	1:4.15	0.329	29.2	
836.6	190	GSM 850		24.38	Left Tilt	1:4.15	0.199	31.4	
1 880	661	GSM 1900	GPRS 2Tx	22.66	Right Cheek	1:4.15	0.180	30.1	28.3
1 880	661	GSM 1900		22.66	Right Tilt	1:4.15	0.128	31.6	
1 880	661	GSM 1900		22.66	Left Cheek	1:4.15	0.272	<b>28.3</b>	
1 880	661	GSM 1900		22.66	Left Tilt	1:4.15	0.099	32.7	
836.6	4183	UMTS 850	RMC	22.71	Right Cheek	1:1	0.242	<b>28.9</b>	28.9
836.6	4183	UMTS 850	RMC	22.71	Right Tilt	1:1	0.133	31.5	
836.6	4183	UMTS 850	RMC	22.71	Left Cheek	1:1	0.218	29.3	
836.6	4183	UMTS 850	RMC	22.71	Left Tilt	1:1	0.116	32.1	
1 732.4	1412	UMTS 1700	RMC	23.54	Right Cheek	1:1	0.194	<b>30.7</b>	30.7
1 732.4	1412	UMTS 1700	RMC	23.54	Right Tilt	1:1	0.128	32.5	
1 732.4	1412	UMTS 1700	RMC	23.54	Left Cheek	1:1	0.125	32.6	
1 732.4	1412	UMTS 1700	RMC	23.54	Left Tilt	1:1	0.070	35.1	
1 880	9400	UMTS 1900	RMC	23.38	Right Cheek	1:1	0.289	<b>28.8</b>	28.8
1 880	9400	UMTS 1900	RMC	23.38	Right Tilt	1:1	0.203	30.3	
1 880	9400	UMTS 1900	RMC	23.38	Left Cheek	1:1	0.248	29.4	
1 880	9400	UMTS 1900	RMC	23.38	Left Tilt	1:1	0.076	34.6	



**Table A-2 DSI = 1 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)
2510	20850	LTE Band 7	Low	20	23.42	Right Cheek	0	1	0	1:1	0.231	29.8	27.8
2510	20850	LTE Band 7	Low	20	23.42	Right Tilt	0	1	0	1:1	0.221	30.0	
2510	20850	LTE Band 7	Low	20	23.42	Left Cheek	0	1	0	1:1	0.362	<b>27.8</b>	
2510	20850	LTE Band 7	Low	20	23.42	Left Tilt	0	1	0	1:1	0.124	32.5	
707.5	23095	LTE Band 12	Mid	10	24.15	Right Cheek	0	1	24	1:1	0.282	<b>29.6</b>	29.6
707.5	23095	LTE Band 12	Mid	10	24.15	Right Tilt	0	1	24	1:1	0.135	32.8	
707.5	23095	LTE Band 12	Mid	10	24.15	Left Cheek	0	1	24	1:1	0.260	30.0	
707.5	23095	LTE Band 12	Mid	10	24.15	Left Tilt	0	1	24	1:1	0.107	33.9	
782	23230	LTE Band 13	Mid	10	24	Right Cheek	0	1	24	1:1	0.183	<b>31.4</b>	31.4
782	23230	LTE Band 13	Mid	10	24	Right Tilt	0	1	24	1:1	0.098	34.1	
782	23230	LTE Band 13	Mid	10	24	Left Cheek	0	1	24	1:1	0.163	31.9	
782	23230	LTE Band 13	Mid	10	24	Left Tilt	0	1	24	1:1	0.010	44.0	
793	23330	LTE Band 14	Mid	10	24.55	Right Cheek	0	1	24	1:1	0.143	<b>33.0</b>	33.0
793	23330	LTE Band 14	Mid	10	24.55	Right Tilt	0	1	24	1:1	0.079	35.6	
793	23330	LTE Band 14	Mid	10	24.55	Left Cheek	0	1	24	1:1	0.128	33.5	
793	23330	LTE Band 14	Mid	10	24.55	Left Tilt	0	1	24	1:1	0.077	35.7	
1 882.5	26365	LTE Band 25	Mid	20	23.03	Right Cheek	0	1	49	1:1	0.321	28.0	26.7
1 882.5	26365	LTE Band 25	Mid	20	23.03	Right Tilt	0	1	49	1:1	0.193	30.2	
1 882.5	26365	LTE Band 25	Mid	20	23.03	Left Cheek	0	1	49	1:1	0.433	<b>26.7</b>	
1 882.5	26365	LTE Band 25	Mid	20	23.03	Left Tilt	0	1	49	1:1	0.163	30.9	
1 882.5	26365	LTE Band 25	Mid	20	19.03	Right Cheek	0	50	0	1:1	0.340	23.7	20.9
1 882.5	26365	LTE Band 25	Mid	20	19.03	Right Tilt	0	50	0	1:1	0.349	23.6	
1 882.5	26365	LTE Band 25	Mid	20	19.03	Left Cheek	0	50	0	1:1	0.653	<b>20.9</b>	
1 882.5	26365	LTE Band 25	Mid	20	19.03	Left Tilt	0	50	0	1:1	0.337	23.8	
831.5	26865	LTE Band 26	Mid	15	23.83	Right Cheek	0	1	0	1:1	0.319	<b>28.8</b>	28.8
831.5	26865	LTE Band 26	Mid	15	23.83	Right Tilt	0	1	0	1:1	0.159	31.8	
831.5	26865	LTE Band 26	Mid	15	23.83	Left Cheek	0	1	0	1:1	0.267	29.6	
831.5	26865	LTE Band 26	Mid	15	23.83	Left Tilt	0	1	0	1:1	0.129	32.7	
2 310	27710	LTE Band 30	Mid	10	22.86	Right Cheek	0	1	49	1:1	0.158	30.9	28.4
2 310	27710	LTE Band 30	Mid	10	22.86	Right Tilt	0	1	49	1:1	0.117	32.2	
2 310	27710	LTE Band 30	Mid	10	22.86	Left Cheek	0	1	49	1:1	0.278	<b>28.4</b>	
2 310	27710	LTE Band 30	Mid	10	22.86	Left Tilt	0	1	49	1:1	0.062	34.9	
2 310	38750	LTE Band 40	Mid	10	11.16	Right Cheek	0	25	12	1:1.58	0.000	0	34.2
2 310	38750	LTE Band 40	Mid	10	11.16	Right Tilt	0	25	12	1:1.58	0.000	0	
2 310	38750	LTE Band 40	Mid	10	11.16	Left Cheek	0	25	12	1:1.58	0.00495	<b>34.2</b>	
2 310	38750	LTE Band 40	Mid	10	11.16	Left Tilt	0	25	12	1:1.58	0.000139	0	
2 355	39200	LTE Band 40	Mid	10	10.98	Right Cheek	0	25	12	1:1.58	0.000	0	32.5
2 355	39200	LTE Band 40	Mid	10	10.98	Right Tilt	0	25	12	1:1.58	0.000	0	
2 355	39200	LTE Band 40	Mid	10	10.98	Left Cheek	0	25	12	1:1.58	0.0063	33.2	
2 355	39200	LTE Band 40	Mid	10	10.98	Left Tilt	0	25	12	1:1.58	0.00693	<b>32.5</b>	

**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)
2 680	41490	LTE Band41(PC3)	High	20	21.89	Right Cheek	0	1	0	1:1.58	0.096	32.1	31.6
2 680	41490	LTE Band41(PC3)	High	20	21.89	Right Tilt	0	1	0	1:1.58	0.061	34	
2 680	41490	LTE Band41(PC3)	High	20	21.89	Left Cheek	0	1	0	1:1.58	0.108	<b>31.6</b>	
2 680	41490	LTE Band41(PC3)	High	20	21.89	Left Tilt	0	1	0	1:1.58	0.031	37	
2 680	41490	LTE Band41(PC2)	High	20	23.39	Left Cheek	0	1	0	0.433	0.149	<b>31.7</b>	31.7
3560	55340	LTE Band 48	Low	20	18.08	Right Cheek	0	1	0	1:1.58	0.786	<b>19.1</b>	19.1
3560	55340	LTE Band 48	Low	20	18.08	Right Tilt	0	1	0	1:1.58	0.364	22.5	
3560	55340	LTE Band 48	Low	20	18.08	Left Cheek	0	1	0	1:1.58	0.202	25.0	
3560	55340	LTE Band 48	Low	20	18.08	Left Tilt	0	1	0	1:1.58	0.160	26.0	
1720	132072	LTE Band 66	Low	20	23.39	Right Cheek	0	1	49	1:1	0.200	30.4	29.3
1720	132072	LTE Band 66	Low	20	23.39	Right Tilt	0	1	49	1:1	0.128	32.3	
1720	132072	LTE Band 66	Low	20	23.39	Left Cheek	0	1	49	1:1	0.258	<b>29.3</b>	
1720	132072	LTE Band 66	Low	20	23.39	Left Tilt	0	1	49	1:1	0.162	31.3	
1770	132572	LTE Band 66	High	20	19.10	Right Cheek	0	1	0	1:1	0.278	24.7	21.9
1770	132572	LTE Band 66	High	20	19.10	Right Tilt	0	1	0	1:1	0.240	25.3	
1770	132572	LTE Band 66	High	20	19.10	Left Cheek	0	1	0	1:1	0.527	<b>21.9</b>	
1770	132572	LTE Band 66	High	20	19.10	Left Tilt	0	1	0	1:1	0.272	24.8	
680.5	133297	LTE Band 71	Mid	20	23.96	Right Cheek	0	1	0	1:1	0.225	<b>30.4</b>	30.4
680.5	133297	LTE Band 71	Mid	20	23.96	Right Tilt	0	1	0	1:1	0.098	34.0	
680.5	133297	LTE Band 71	Mid	20	23.96	Left Cheek	0	1	0	1:1	0.202	30.9	
680.5	133297	LTE Band 71	Mid	20	23.96	Left Tilt	0	1	0	1:1	0.076	35.2	

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

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

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

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

MEASUREMENT RESULTS														
Frequency		Mode	Band width	Frame Averaged Conducted Power	Test Configurations	MPR	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	PLimit	Minimum PLimit		
Mhz	Ch.												(dBm)	(dBm)
836.5	167300	NR Band n5	Mid	20	23.88	Right Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.342	<b>28.5</b>	28.5
836.5	167300	NR Band n5	Mid	20	23.88	Right Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.178	31.4	
836.5	167300	NR Band n5	Mid	20	23.88	Left Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.279	29.4	
836.5	167300	NR Band n5	Mid	20	23.88	Left Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.138	32.5	
707.5	141500	NR Band n12	Mid	15	23.73	Right Cheek	DFT-s-OFDM QPSK	0	1	77	1:1	0.203	<b>30.7</b>	30.7
707.5	141500	NR Band n12	Mid	15	23.73	Right Tilt	DFT-s-OFDM QPSK	0	1	77	1:1	0.093	34.0	
707.5	141500	NR Band n12	Mid	15	23.73	Left Cheek	DFT-s-OFDM QPSK	0	1	77	1:1	0.191	30.9	
707.5	141500	NR Band n12	Mid	15	23.73	Left Tilt	DFT-s-OFDM QPSK	0	1	77	1:1	0.089	34.2	
1 882.5	376500	NR Band n25	Mid	40	23.96	Right Cheek	DFT-s-OFDM QPSK	0	1	108	1:1	0.310	29.0	27.9
1 882.5	376500	NR Band n25	Mid	40	23.96	Right Tilt	DFT-s-OFDM QPSK	0	1	108	1:1	0.165	31.8	
1 882.5	376500	NR Band n25	Mid	40	23.96	Left Cheek	DFT-s-OFDM QPSK	0	1	108	1:1	0.405	<b>27.9</b>	
1 882.5	376500	NR Band n25	Mid	40	23.96	Left Tilt	DFT-s-OFDM QPSK	0	1	108	1:1	0.164	31.8	
2 310	462000	NR Band n30	Mid	10	23.25	Right Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.170	30.9	28.4
2 310	462000	NR Band n30	Mid	10	23.25	Right Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.112	32.8	
2 310	462000	NR Band n30	Mid	10	23.25	Left Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.307	<b>28.4</b>	
2 310	462000	NR Band n30	Mid	10	23.25	Left Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.069	34.9	
2 592.99	518598	NR Band n41(PC3)	Mid	100	21.39	Right Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.254	27.3	26.1
2 592.99	518598	NR Band n41(PC3)	Mid	100	21.39	Right Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.182	28.8	
2 592.99	518598	NR Band n41(PC3)	Mid	100	21.39	Left Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.335	<b>26.1</b>	
2 592.99	518598	NR Band n41(PC3)	Mid	100	21.39	Left Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.099	31.4	
1 745	349000	NR Band n66	High	40	24.5	Right Cheek	DFT-s-OFDM QPSK	0	108	54	1:1	0.351	<b>29.0</b>	29
1 745	349000	NR Band n66	High	40	24.5	Right Tilt	DFT-s-OFDM QPSK	0	108	54	1:1	0.178	32.0	
1 745	349000	NR Band n66	High	40	24.5	Left Cheek	DFT-s-OFDM QPSK	0	108	54	1:1	0.329	29.3	
1 745	349000	NR Band n66	High	40	24.5	Left Tilt	DFT-s-OFDM QPSK	0	108	54	1:1	0.233	30.8	
680.5	136100	NR Band n71	Mid	20	23.85	Right Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.224	<b>30.3</b>	30.3
680.5	136100	NR Band n71	Mid	20	23.85	Right Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.096	34.0	
680.5	136100	NR Band n71	Mid	20	23.85	Left Cheek	DFT-s-OFDM QPSK	0	1	1	1:1	0.193	31.0	
680.5	136100	NR Band n71	Mid	20	23.85	Left Tilt	DFT-s-OFDM QPSK	0	1	1	1:1	0.083	34.7	
3750	650000	NR Band 77(PC3)	Low	100	17.95	Right Cheek	DFT-s-OFDM QPSK	0	135	69	1:1	0.742	<b>19.2</b>	19.2
3750	650000	NR Band 77(PC3)	Low	100	17.95	Right Tilt	DFT-s-OFDM QPSK	0	135	69	1:1	0.253	23.9	
3750	650000	NR Bandn77(PC3)	Low	100	17.95	Left Cheek	DFT-s-OFDM QPSK	0	135	69	1:1	0.126	26.9	
3750	650000	NR Bandn77(PC3)	Low	100	17.95	Left Tilt	DFT-s-OFDM QPSK	0	135	69	1:1	0.080	28.9	
3750	650000	NR Bandn77SRS1	Low	100	14.33	Right Cheek	DFT-s-OFDM QPSK	0			1:1	0.092	24.7	18.1
3750	650000	NR Bandn77SRS1	Low	100	14.33	Right Tilt	DFT-s-OFDM QPSK	0			1:1	0.113	23.8	
3750	650000	NR Bandn77SRS1	Low	100	14.33	Left Cheek	DFT-s-OFDM QPSK	0			1:1	0.420	<b>18.1</b>	
3750	650000	NR Bandn77SRS1	Low	100	14.33	Left Tilt	DFT-s-OFDM QPSK	0			1:1	0.212	21.1	

MEASUREMENT RESULTS														
Frequency		Mode		Band width	Frame Averaged Conducted Power	Test Configurations		MPR	RB Size	RB offset	Duty Cycle	Meas. SAR(1g)	Plimit	Minimum Plimit
Mhz	Ch.			(dBm)	(dBm)			(dB)				(W/kg)	(dBm)	(dBm)
3930	662000	NR Bandn77SRS2	High	100	16.81	Right Cheek	DFT-s-OFDM QPSK	0			1:1	0.012	36.0	33.6
3930	662000	NR Bandn77SRS2	High	100	16.81	Right Tilt	DFT-s-OFDM QPSK	0			1:1	0.00504	39.8	
3930	662000	NR Bandn77SRS2	High	100	16.81	Left Cheek	DFT-s-OFDM QPSK	0			1:1	0.021	<b>33.6</b>	
3930	662000	NR Bandn77SRS2	High	100	16.81	Left Tilt	DFT-s-OFDM QPSK	0			1:1	0.00736	38.4	
3750	650000	NR Bandn77SRS3	Low	100	16.21	Right Cheek	DFT-s-OFDM QPSK	0			1:1	0.000	0	0
3750	650000	NR Bandn77SRS3	Low	100	16.21	Right Tilt	DFT-s-OFDM QPSK	0			1:1	0.000	0	
3750	650000	NR Bandn77SRS3	Low	100	16.21	Left Cheek	DFT-s-OFDM QPSK	0			1:1	0.000	0	
3750	650000	NR Bandn77SRS3	Low	100	16.21	Left Tilt	DFT-s-OFDM QPSK	0			1:1	0.000	0	
836.5	167300	NR Bandn77DoD	Mid	20	17.56	Right Cheek	DFT-s-OFDM QPSK	0	135	138	1:1	0.638	<b>19.5</b>	19.5
836.5	167300	NR Bandn77DoD	Mid	20	17.56	Right Tilt	DFT-s-OFDM QPSK	0	135	138	1:1	0.353	22.1	
836.5	167300	NR Bandn77DoD	Mid	20	17.56	Left Cheek	DFT-s-OFDM QPSK	0	135	138	1:1	0.128	26.5	
836.5	167300	NR Bandn77DoD	Mid	20	17.56	Left Tilt	DFT-s-OFDM QPSK	0	135	138	1:1	0.076	28.3	
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Right Cheek	DFT-s-OFDM QPSK	0			1:1	0.085	25.6	17.7
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Right Tilt	DFT-s-OFDM QPSK	0			1:1	0.041	28.8	
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Left Cheek	DFT-s-OFDM QPSK	0			1:1	0.525	<b>17.7</b>	
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Left Tilt	DFT-s-OFDM QPSK	0			1:1	0.121	24.1	
3500.01	633334	NR Bandn77S DoD SRS2	High	100	16.50	Right Cheek	DFT-s-OFDM QPSK	0			1:1	0.014	35.0	33.9
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Right Tilt	DFT-s-OFDM QPSK	0			1:1	0.00958	36.5	
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Left Cheek	DFT-s-OFDM QPSK	0			1:1	0.018	<b>33.9</b>	
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Left Tilt	DFT-s-OFDM QPSK	0			1:1	0.00379	40.5	
3500.01	633334	NR Bandn77 DoD SRS3	High	100	17.70	Right Cheek	DFT-s-OFDM QPSK	0			1:1	0.000	0	0
3500.01	633334	NR Bandn77 DoD SRS3	High	100	17.70	Right Tilt	DFT-s-OFDM QPSK	0			1:1	0.000	0	
3500.01	633334	NR Bandn77 DoD SRS3	High	100	17.70	Left Cheek	DFT-s-OFDM QPSK	0			1:1	0.000	0	
3500.01	633334	NR Bandn77 DoD SRS3	High	100	17.70	Left Tilt	DFT-s-OFDM QPSK	0			1:1	0.000	0	

**Table A-4 DSI = 0 P<sub>Limit</sub> Calculations - 2G/3G Body-Worn SAR**

For some bands/modes, a lower P<sub>Limit</sub> 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	24.38	Back	15	1:4.15	0.330	<b>29.2</b>	29.2
836.6	190	GSM 850	GPRS2Tx	24.38	Front	15	1:4.15	0.308	29.5	
1 880	661	GSM 1900	GPRS2Tx	22.66	Back	15	1:4.15	0.174	30.3	29.5
1 880	661	GSM 1900	GPRS2Tx	22.66	Front	15	1:4.15	0.205	<b>29.5</b>	
826.4	4132	UMTS 850	RMC	22.71	Back	15	1:1	0.217	29.3	28.9
826.4	4132	UMTS 850	RMC	22.71	Front	15	1:1	0.240	<b>28.9</b>	
1 732.4	1412	UMTS 1700	RMC	23.54	Back	15	1:1	0.277	29.1	28.8
1 732.4	1412	UMTS 1700	RMC	23.54	Front	15	1:1	0.296	<b>28.8</b>	
1 880	9400	UMTS 1900	RMC	23.38	Back	15	1:1	0.364	27.8	27.4
1 880	9400	UMTS 1900	RMC	23.38	Front	15	1:1	0.400	<b>27.4</b>	

**Table A-5 DSI = 0 P<sub>Limit</sub> Calculations - 4G Body-Worn SAR**

For some bands/modes, a lower P<sub>Limit</sub> 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)	P <sub>limit</sub>	Minimum P <sub>limit</sub>
Mhz	Ch.			Mhz	(dBm)			(dB)				(W/kg)	(dBm)	(dBm)
2510	20850	LTE Band 7	Low	20	23.42	Back	15	0	1	0	1:1	0.325	28.3	27.0
2510	20850	LTE Band 7	Low	20	23.42	Front	15	0	1	0	1:1	0.436	<b>27.0</b>	
707.5	23095	LTE Band 12	Mid	10	24.15	Back	15	0	1	24	1:1	0.239	<b>30.4</b>	30.4
707.5	23095	LTE Band 12	Mid	10	24.15	Front	15	0	1	24	1:1	0.232	30.5	
782	23230	LTE Band 13	Mid	10	24.00	Back	15	0	1	24	1:1	0.258	<b>29.9</b>	29.9
782	23230	LTE Band 13	Mid	10	24.00	Front	15	0	1	24	1:1	0.240	30.2	
793	23330	LTE Band 14	Mid	10	24.55	Back	15	0	1	24	1:1	0.187	31.8	31.7
793	23330	LTE Band 14	Mid	10	24.55	Front	15	0	1	24	1:1	0.192	<b>31.7</b>	
1 882.5	26365	LTE Band 25	Mid	20	24.07	Back	15	0	1	49	1:1	0.306	29.2	27.8
1 882.5	26365	LTE Band 25	Mid	20	24.07	Front	15	0	1	49	1:1	0.423	<b>27.8</b>	
1 882.5	26365	LTE Band 25	Mid	20	21.21	Back	15	0	1	0	1:1	0.153	29.4	28.7
1 882.5	26365	LTE Band 25	Mid	20	21.21	Front	15	0	1	0	1:1	0.177	<b>28.7</b>	
831.5	26865	LTE Band 26	Mid	15	23.83	Back	15	0	1	0	1:1	0.280	29.4	29.3
831.5	26865	LTE Band 26	Mid	15	23.83	Front	15	0	1	0	1:1	0.281	<b>29.3</b>	
2 310	27710	LTE Band 30	Mid	10	22.86	Back	15	0	1	49	1:1	0.157	30.9	28.3
2 310	27710	LTE Band 30	Mid	10	22.86	Front	15	0	1	49	1:1	0.286	<b>28.3</b>	
2 310	38750	LTE Band 40	Mid	10	11.16	Back	15	0	25	12	1:1.58	0.00679	32.7	32.1
2 310	38750	LTE Band 40	Mid	10	11.16	Front	15	0	25	12	1:1.58	0.00776	<b>32.1</b>	
2 535	39200	LTE Band 40	Mid	10	10.98	Back	15	0	25	12	1:1.58	0.01100	<b>30.6</b>	30.6
2 535	39200	LTE Band 40	Mid	10	10.98	Front	15	0	25	12	1:1.58	0.00822	32.0	
1720	132072	LTE Band 66	Low	20	24.17	Back	15	0	1	49	1:1	0.241	30.3	29.0
1720	132072	LTE Band 66	Low	20	24.17	Front	15	0	1	49	1:1	0.326	<b>29.0</b>	
1745	132322	LTE Band 66	Mid	20	21.69	Back	15	0	1	0	1:1	0.134	30.4	29.3
1745	132322	LTE Band 66	Mid	20	21.69	Front	15	0	1	0	1:1	0.174	<b>29.3</b>	
2 593	40620	LTE Band 41(PC3)	High	20	21.89	Back	15	0	1	49	1:1.58	0.171	29.6	27.9
2 593	40620	LTE Band 41(PC3)	High	20	21.89	Front	15	0	1	49	1:1.58	0.253	<b>27.9</b>	
2 680	41490	LTE Band 41(PC2)	High	20	23.39	Front	15	0	1	0	1:1.58	0.326	<b>28.3</b>	28.3
3603.3	55773	LTE Band 48	Low	20	20.47	Back	15	0	1	99	1:1.58	0.283	<b>26.0</b>	26.0
3603.3	55773	LTE Band 48	Low	20	20.47	Front	15	0	1	99	1:1.58	0.105	30.3	
680.5	133297	LTE Band 71	Mid	20	23.96	Back	15	0	1	0	1:1	0.252	<b>29.9</b>	29.9
680.5	133297	LTE Band 71	Mid	20	23.96	Front	15	0	1	0	1:1	0.221	30.5	

**Table A-6 DSI = 0 P<sub>Limit</sub> Calculations - NR Body-Worn SAR**

For some bands/modes, a lower P<sub>Limit</sub> was selected as a more conservative evaluation.

NR TDD Bands : In the case of the NR TDD bands, the P<sub>limit</sub> 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)	P <sub>limit</sub>	Minimum P <sub>limit</sub>
Mhz	Ch.			Mhz	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)
836.5	167300	NR Band n5	Mid	20	23.88	Back	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.320	28.8	28.7
836.5	167300	NR Band n5	Mid	20	23.88	Front	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.332	<b>28.7</b>	
707.5	141500	NR Band n12	Mid	15	23.73	Back	DFT-s-OFDM QPSK	0	15	1	77	1:1	0.251	<b>29.7</b>	29.7
707.5	141500	NR Band n12	Mid	15	23.73	Front	DFT-s-OFDM QPSK	0	15	1	77	1:1	0.247	29.8	
1 882.5	376500	NR Band n25	Mid	40	23.69	Back	DFT-s-OFDM QPSK	0	15	1	108	1:1	0.288	29.4	27.9
1 882.5	376500	NR Band n25	Mid	40	23.69	Front	DFT-s-OFDM QPSK	0	15	1	108	1:1	0.402	<b>27.9</b>	
2 310	462000	NR Band n30	Mid	10	23.25	Back	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.221	29.8	27.7
2 310	462000	NR Band n30	Mid	10	23.25	Front	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.358	<b>27.7</b>	
2 592.99	518598	NR Bandn41(PC3)	Mid	100	21.39	Back	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.308	26.5	25.4
2 592.99	518598	NR Bandn41(PC3)	Mid	100	21.39	Front	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.401	<b>25.4</b>	
1 745	349000	NR Band n66	Mid	40	24.50	Back	DFT-s-OFDM QPSK	0	15	108	54	1:1	0.302	29.7	29.4
1 745	349000	NR Band n66	Mid	40	24.50	Front	DFT-s-OFDM QPSK	0	15	108	54	1:1	0.327	<b>29.4</b>	
680.5	136100	NR Band n71	Mid	20	23.85	Back	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.188	<b>31.1</b>	31.1
680.5	136100	NR Band n71	Mid	20	23.85	Front	DFT-s-OFDM QPSK	0	15	1	1	1:1	0.187	31.1	
3750	650000	NR Bandn77(PC3)	Low	100	17.95	Back	DFT-s-OFDM QPSK	0	15	1	271	1:1	0.178	<b>25.4</b>	25.4
3750	650000	NR Bandn77(PC3)	Low	100	17.95	Front	DFT-s-OFDM QPSK	0	15	1	271	1:1	0.057	30.4	
3750	650000	NR Bandn77SRS1	Low	100	14.33	Back	DFT-s-OFDM QPSK	0	15			1:1	0.099	<b>24.4</b>	24.4
3750	650000	NR Bandn77SRS1	Low	100	14.33	Front	DFT-s-OFDM QPSK	0	15			1:1	0.050	27.3	
3930	662000	NR Bandn77SRS2	High	100	16.81	Back	DFT-s-OFDM QPSK	0	15			1:1	0.081	<b>27.7</b>	27.7
3930	662000	NR Bandn77SRS2	High	100	16.81	Front	DFT-s-OFDM QPSK	0	15			1:1	0.072	28.2	
3750	650000	NR Bandn77SRS3	Low	100	16.21	Back	DFT-s-OFDM QPSK	0	15			1:1	0.006	<b>38.4</b>	38.4
3750	650000	NR Bandn77SRS3	Low	100	16.21	Front	DFT-s-OFDM QPSK	0	15			1:1	0.000	0	
3500.01	633334	NR Bandn77DoD	Mid	100	17.56	Back	DFT-s-OFDM QPSK	0	15	1	137	1:1	0.205	<b>24.44</b>	24.44
3500.01	633334	NR Bandn77DoD	Mid	100	17.56	Front	DFT-s-OFDM QPSK	0	15	1	137	1:1	0.077	28.70	
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Back	DFT-s-OFDM QPSK	0	15			1:1	0.243	<b>21.1</b>	21.1
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Front	DFT-s-OFDM QPSK	0	15			1:1	0.047	28.2	
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Back	DFT-s-OFDM QPSK	0	15			1:1	0.095	<b>26.7</b>	26.7
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Front	DFT-s-OFDM QPSK	0	15			1:1	0.073	27.9	
3500.01	633334	NR Bandn77 DoD SRS3	High	100	17.70	Back	DFT-s-OFDM QPSK	0	15			1:1	0.024	<b>33.9</b>	33.9
3500.01	633334	NR Bandn77 DoD SRS3	High	100	17.70	Front	DFT-s-OFDM QPSK	0	15			1:1	0.000	0	

**Table A-8 DSI = 2 P<sub>Limit</sub> Calculations - - 2G/3G Hotspot SAR**

For some bands/modes, a lower P<sub>Limit</sub> 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	22.00	Back	10	1:4.15	0.269	<b>27.7</b>	27.7
836.6	190	GSM 850	GPRS2Tx	22.00	Front	10	1:4.15	0.120	31.2	
836.6	190	GSM 850	GPRS2Tx	22.00	Bottom	10	1:4.15	0.183	29.4	
836.6	190	GSM 850	GPRS2Tx	22.00	Right	10	1:4.15	0.134	30.7	
836.6	190	GSM 850	GPRS2Tx	22.00	Left	10	1:4.15	0.086	32.7	
1 880.0	661	GSM 1900	GPRS2Tx	19.42	Back	10	1:4.15	0.616	<b>24.5</b>	24.5
1 880.0	661	GSM 1900	GPRS2Tx	19.42	Front	10	1:4.15	0.599	24.7	
1 880.0	661	GSM 1900	GPRS2Tx	19.42	Bottom	10	1:4.15	0.455	25.8	
1 880.0	661	GSM 1900	GPRS2Tx	19.42	Left	10	1:4.15	0.353	27.0	
836.6	4183	UMTS 850	RMC	22.71	Back	10	1:1	0.420	<b>26.5</b>	26.5
836.6	4183	UMTS 850	RMC	22.71	Front	10	1:1	0.252	28.7	
836.6	4183	UMTS 850	RMC	22.71	Bottom	10	1:1	0.286	28.1	
836.6	4183	UMTS 850	RMC	22.71	Right	10	1:1	0.282	28.2	
836.6	4183	UMTS 850	RMC	22.71	Left	10	1:1	0.148	31.0	
1 732.4	1412	UMTS 1700	RMC	21.55	Back	10	1:1	0.438	25.1	24.9
1 732.4	1412	UMTS 1700	RMC	21.55	Front	10	1:1	0.444	25.1	
1 732.4	1412	UMTS 1700	RMC	21.55	Bottom	10	1:1	0.463	<b>24.9</b>	
1 732.4	1412	UMTS 1700	RMC	21.55	Left	10	1:1	0.292	26.9	
1 880	9400	UMTS 1900	RMC	21.40	Back	10	1:1	0.584	23.7	22.6
1 880	9400	UMTS 1900	RMC	21.40	Front	10	1:1	0.582	23.8	
1 880	9400	UMTS 1900	RMC	21.40	Bottom	10	1:1	0.762	<b>22.6</b>	
1 880	9400	UMTS 1900	RMC	21.40	Left	10	1:1	0.397	25.4	



**Table A-8 DSI = 2 P<sub>Limit</sub> Calculations - - 4G Hotspot SAR**

For some bands/modes, a lower P<sub>Limit</sub> 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)	P <sub>limit</sub>	Minimum P <sub>limit</sub>
MHz	Ch.			MHz	(dBm)			(dB)				(W/kg)	(dBm)	(dBm)
2510	20850	LTE Band 7	Low	20	20.74	Back	10	0	1	0	1:1	0.328	25.7	24.6
2510	20850	LTE Band 7	Low	20	20.74	Front	10	0	1	0	1:1	0.430	<b>24.6</b>	
2510	20850	LTE Band 7	Low	20	20.74	Bottom	10	0	1	0	1:1	0.418	24.7	
2510	20850	LTE Band 7	Low	20	20.74	Right	10	0	1	0	1:1	0.063	32.9	
2510	20850	LTE Band 7	Low	20	20.74	Left	10	0	1	0	1:1	0.151	29.1	
707.5	23095	LTE Band 12	Mid	10	24.15	Back	10	1	1	24	1:1	0.395	<b>28.2</b>	28.2
707.5	23095	LTE Band 12	Mid	10	24.15	Front	10	0	1	24	1:1	0.274	29.8	
707.5	23095	LTE Band 12	Mid	10	24.15	Bottom	10	0	1	24	1:1	0.236	30.4	
707.5	23095	LTE Band 12	Mid	10	24.15	Right	10	0	1	24	1:1	0.207	31.0	
707.5	23095	LTE Band 12	Mid	10	24.15	Left	10	0	1	24	1:1	0.137	32.8	
782	23230	LTE Band 13	Mid	10	24.00	Back	10	0	1	24	1:1	0.410	<b>27.9</b>	27.9
782	23230	LTE Band 13	Mid	10	24.00	Front	10	0	1	24	1:1	0.216	30.7	
782	23230	LTE Band 13	Mid	10	24.00	Bottom	10	0	1	24	1:1	0.328	28.8	
782	23230	LTE Band 13	Mid	10	24.00	Right	10	0	1	24	1:1	0.306	29.1	
782	23230	LTE Band 13	Mid	10	24.00	Left	10	0	1	24	1:1	0.167	31.8	
793	23330	LTE Band 14	Mid	10	24.55	Back	10	0	1	24	1:1	0.347	<b>29.1</b>	29.1
793	23330	LTE Band 14	Mid	10	24.55	Front	10	0	1	24	1:1	0.170	32.2	
793	23330	LTE Band 14	Mid	10	24.55	Bottom	10	0	1	24	1:1	0.262	30.4	
793	23330	LTE Band 14	Mid	10	24.55	Right	10	0	1	24	1:1	0.246	30.6	
793	23330	LTE Band 14	Mid	10	24.55	Left	10	0	1	24	1:1	0.111	34.1	
1 882.5	26365	LTE Band 25	Mid	20	21.26	Back	10	0	50	49	1:1	0.343	25.9	25.9
1 882.5	26365	LTE Band 25	Mid	20	21.26	Front	10	0	50	49	1:1	0.344	<b>25.9</b>	
1 882.5	26365	LTE Band 25	Mid	20	21.26	Bottom	10	0	50	49	1:1	0.253	27.2	
1 882.5	26365	LTE Band 25	Mid	20	21.26	Right	10	0	50	49	1:1	0.061	33.4	
1 882.5	26365	LTE Band 25	Mid	20	21.26	Left	10	0	50	49	1:1	0.203	28.2	
1 882.5	26365	LTE Band 25	Mid	20	21.21	Back	10	0	1	0	1:1	0.280	26.7	26.4
1 882.5	26365	LTE Band 25	Mid	20	21.21	Front	10	0	1	0	1:1	0.303	<b>26.4</b>	
1 882.5	26365	LTE Band 25	Mid	20	21.21	Right	10	0	1	0	1:1	0.153	29.4	
1 882.5	26365	LTE Band 25	Mid	20	21.21	Top	10	0	1	0	1:1	0.293	26.5	
831.5	26865	LTE Band 26	Mid	15	23.83	Back	10	0	1	0	1:1	0.497	<b>26.9</b>	
831.5	26865	LTE Band 26	Mid	15	23.83	Front	10	0	1	0	1:1	0.294	29.1	
831.5	26865	LTE Band 26	Mid	15	23.83	Bottom	10	0	1	0	1:1	0.313	28.9	
831.5	26865	LTE Band 26	Mid	15	23.83	Right	10	0	1	0	1:1	0.210	30.7	
831.5	26865	LTE Band 26	Mid	15	23.83	Left	10	0	1	0	1:1	0.189	31.1	
2 310	27710	LTE Band 30	Mid	10	21.28	Back	10	0	1	49	1:1	0.330	26.1	24.4
2 310	27710	LTE Band 30	Mid	10	21.28	Front	10	0	1	49	1:1	0.492	<b>24.4</b>	
2 310	27710	LTE Band 30	Mid	10	21.28	Bottom	10	0	1	49	1:1	0.404	25.2	
2 310	27710	LTE Band 30	Mid	10	21.28	Left	10	0	1	49	1:1	0.223	27.8	
2 310	38750	LTE Band 40 (Low)	Mid	10	11.16	Back	10	0	25	12	1:1.58	0.014	27.7	25.4
2 310	38750	LTE Band 40 (Low)	Mid	10	11.16	Front	10	0	25	12	1:1.58	0.017	26.9	
2 310	38750	LTE Band 40 (Low)	Mid	10	11.16	Bottom	10	0	25	12	1:1.58	0.024	<b>25.4</b>	
2 310	38750	LTE Band 40 (Low)	Mid	10	11.16	Left	10	0	25	12	1:1.58	0.010	29.2	
2 355	39200	LTE Band 40 (Upper)	Mid	10	10.98	Back	10	0	25	12	1:1.58	0.014	29.5	27.0
2 355	39200	LTE Band 40 (Upper)	Mid	10	10.98	Front	10	0	25	12	1:1.58	0.019	28.2	
2 355	39200	LTE Band 40 (Upper)	Mid	10	10.98	Bottom	10	0	25	12	1:1.58	0.025	<b>27.0</b>	
2 355	39200	LTE Band 40 (Upper)	Mid	10	10.98	Left	10	0	25	12	1:1.58	0.010	29.0	

**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)
2 593	40620	LTE Band 41(PC3)	High	20	21.89	Back	10	0	1	0	1:1.58	0.371	26.2	25.2
2 593	40620	LTE Band 41(PC3)	High	20	21.89	Front	10	0	1	0	1:1.58	0.387	26.0	
2 593	40620	LTE Band 41(PC3)	High	20	21.89	Bottom	10	0	1	0	1:1.58	0.462	<b>25.2</b>	
2 593	40620	LTE Band 41(PC3)	High	20	21.89	Left	10	0	1	0	1:1.58	0.129	28.8	
2 680	41490	LTE Band41(PC2)	High	20	23.39	Bottom	10	0	1	0	1:1.58	0.710	<b>24.9</b>	24.9
3603.3	55773	LTE Band 48	Low	20	20.47	Back	10	0	1	99	1:1.58	0.465	23.8	21.4
3603.3	55773	LTE Band 48	Low	20	20.47	Front	10	0	1	99	1:1.58	0.171	28.1	
3603.3	55773	LTE Band 48	Low	20	20.47	Top	10	0	1	99	1:1.58	0.089	31.0	
3603.3	55773	LTE Band 48	Low	20	20.47	Left	10	0	1	99	1:1.58	0.806	<b>21.4</b>	
1 720	132072	LTE Band 66	Low	20	21.45	Back	10	0	50	25	1:1	0.409	<b>25.3</b>	25.3
1 720	132072	LTE Band 66	Low	20	21.45	Front	10	0	50	25	1:1	0.350	26.0	
1 720	132072	LTE Band 66	Low	20	21.45	Bottom	10	0	50	25	1:1	0.208	28.3	
1 720	132072	LTE Band 66	Low	20	21.45	Right	10	0	50	25	1:1	0.078	32.5	
1 720	132072	LTE Band 66	Low	20	21.45	Left	10	0	50	25	1:1	0.225	27.9	
1745	132322	LTE Band 66	Low	20	21.69	Back	10	0	1	0	1:1	0.331	26.5	26.2
1745	132322	LTE Band 66	Low	20	21.69	Front	10	0	1	0	1:1	0.355	<b>26.2</b>	
1745	132322	LTE Band 66	Low	20	21.69	Top	10	0	1	0	1:1	0.225	28.2	
1745	132322	LTE Band 66	Low	20	21.69	Right	10	0	1	0	1:1	0.265	27.5	
680.5	133297	LTE Band 71	Mid	20	23.96	Back	10	0	1	0	1:1	0.365	<b>28.3</b>	28.3
680.5	133297	LTE Band 71	Mid	20	23.96	Front	10	0	1	0	1:1	0.227	30.4	
680.5	133297	LTE Band 71	Mid	20	23.96	Bottom	10	0	1	0	1:1	0.265	29.7	
680.5	133297	LTE Band 71	Mid	20	23.96	Right	10	0	1	0	1:1	0.168	31.7	
680.5	133297	LTE Band 71	Mid	20	23.96	Left	10	0	1	0	1:1	0.230	30.3	

**Table A-9 DSI = 2  $P_{Limit}$  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  $P_{limit}$  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)	$P_{limit}$	Minimum $P_{limit}$
Mhz	Ch.			Mhz	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)
836.5	167300	NR Band n5	Mid	20	23.88	Back	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.595	<b>26.1</b>	26.1
836.5	167300	NR Band n5	Mid	20	23.88	Front	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.335	28.6	
836.5	167300	NR Band n5	Mid	20	23.88	Bottom	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.352	28.4	
836.5	167300	NR Band n5	Mid	20	23.88	Right	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.333	28.7	
836.5	167300	NR Band n5	Mid	20	23.88	Left	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.217	30.5	
707.5	141500	NR Band n12	Mid	15	23.73	Back	DFT-s-OFDM QPSK	0	10	1	77	1:1	0.311	<b>28.8</b>	28.8
707.5	141500	NR Band n12	Mid	15	23.73	Front	DFT-s-OFDM QPSK	0	10	1	77	1:1	0.282	29.2	
707.5	141500	NR Band n12	Mid	15	23.73	Bottom	DFT-s-OFDM QPSK	0	10	1	77	1:1	0.175	31.3	
707.5	141500	NR Band n12	Mid	15	23.73	Right	DFT-s-OFDM QPSK	0	10	1	77	1:1	0.148	32.0	
707.5	141500	NR Band n12	Mid	15	23.73	Left	DFT-s-OFDM QPSK	0	10	1	77	1:1	0.077	34.9	
1 882.5	376500	NR Band n25	Mid	40	21.40	Back	DFT-s-OFDM QPSK	0	10	1	108	1:1	0.347	26.0	24.9
1 882.5	376500	NR Band n25	Mid	40	21.40	Front	DFT-s-OFDM QPSK	0	10	1	108	1:1	0.352	25.9	
1 882.5	376500	NR Band n25	Mid	40	21.40	Bottom	DFT-s-OFDM QPSK	0	10	1	108	1:1	0.443	<b>24.9</b>	
1 882.5	376500	NR Band n25	Mid	40	21.40	Left	DFT-s-OFDM QPSK	0	10	1	108	1:1	0.186	28.7	
2 310	462000	NR Band n30	Mid	10	21.21	Back	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.174	28.8	26.4
2 310	462000	NR Band n30	Mid	10	21.21	Front	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.304	<b>26.4</b>	
2 310	462000	NR Band n30	Mid	10	21.21	Bottom	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.291	26.6	
2 310	462000	NR Band n30	Mid	10	21.21	Left	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.101	31.2	
2 592.99	518598	NR Bandn41(PC3)	Mid	100	21.39	Back	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.508	24.3	22.9
2 592.99	518598	NR Bandn41(PC3)	Mid	100	21.39	Front	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.704	<b>22.9</b>	
2 592.99	518598	NR Bandn41(PC3)	Mid	100	21.39	Bottom	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.545	24.0	
2 592.99	518598	NR Bandn41(PC3)	Mid	100	21.39	Left	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.259	27.3	
1 745	349000	NR Band n66	Mid	40	21.59	Back	DFT-s-OFDM QPSK	0	10	108	0	1:1	0.369	25.9	25.7
1 745	349000	NR Band n66	Mid	40	21.59	Front	DFT-s-OFDM QPSK	0	10	108	0	1:1	0.376	25.8	
1 745	349000	NR Band n66	Mid	40	21.59	Bottom	DFT-s-OFDM QPSK	0	10	108	0	1:1	0.390	<b>25.7</b>	
1 745	349000	NR Band n66	Mid	40	21.59	Left	DFT-s-OFDM QPSK	0	10	108	0	1:1	0.200	28.6	

**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
680.5	136100	NR Band n71	Mid	20	23.85	Back	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.332	<b>28.6</b>	28.6
680.5	136100	NR Band n71	Mid	20	23.85	Front	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.210	30.6	
680.5	136100	NR Band n71	Mid	20	23.85	Bottom	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.223	30.4	
680.5	136100	NR Band n71	Mid	20	23.85	Right	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.230	30.2	
680.5	136100	NR Band n71	Mid	20	23.85	Left	DFT-s-OFDM QPSK	0	10	1	1	1:1	0.104	33.7	
3750	650000	NR Band n77(PC3)	Low	100	17.95	Back	DFT-s-OFDM QPSK	0	10	1	271	1:1	0.390	26.0	24.6
3750	650000	NR Band n77(PC3)	Low	100	17.95	Front	DFT-s-OFDM QPSK	0	10	1	271	1:1	0.103	31.8	
3750	650000	NR Band n77(PC3)	Low	100	17.95	Top	DFT-s-OFDM QPSK	0	10	1	271	1:1	0.075	33.2	
3750	650000	NR Band n77(PC3)	Low	100	17.95	Left	DFT-s-OFDM QPSK	0	10	1	271	1:1	0.540	<b>24.6</b>	
3750	650000	NR Bandn77SRS1	Low	100	14.33	Back	DFT-s-OFDM QPSK	0	10			1:1	0.205	25.2	22.7
3750	650000	NR Bandn77SRS1	Low	100	14.33	Front	DFT-s-OFDM QPSK	0	10			1:1	0.122	27.4	
3750	650000	NR Bandn77SRS1	Low	100	14.33	Top	DFT-s-OFDM QPSK	0	10			1:1	0.026	34.2	
3750	650000	NR Bandn77SRS1	Low	100	14.33	Right	DFT-s-OFDM QPSK	0	10			1:1	0.366	<b>22.7</b>	
3930	6620000	NR Bandn77SRS2	High	100	16.81	Back	DFT-s-OFDM QPSK	0	10			1:1	0.148	<b>29.1</b>	29.1
3930	662000	NR Bandn77SRS2	High	100	16.81	Front	DFT-s-OFDM QPSK	0	10			1:1	0.114	30.2	
3930	662000	NR Bandn77SRS2	High	100	16.81	Bottom	DFT-s-OFDM QPSK	0	10			1:1	0.098	30.9	
3930	662000	NR Bandn77SRS2	High	100	16.81	Left	DFT-s-OFDM QPSK	0	10			1:1	0.079	31.8	
3750	650000	NR Bandn77SRS3	Low	100	16.21	Back	DFT-s-OFDM QPSK	0	10			1:1	0.023	<b>36.6</b>	36.6
3750	650000	NR Bandn77SRS3	Low	100	16.21	Front	DFT-s-OFDM QPSK	0	10			1:1	0	0	
3750	650000	NR Bandn77SRS3	Low	100	16.21	Left	DFT-s-OFDM QPSK	0	10			1:1	0	0	
3750	650000	NR Bandn77SRS3	Low	100	16.21	Bottom	DFT-s-OFDM QPSK	0	10			1:1	0.000187	0	
3930	6620000	NR Band n77(DoD)	High	100	17.56	Back	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.432	21.2	20.94
3930	6620000	NR Band n77(DoD)	High	100	17.56	Front	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.099	27.60	
3930	6620000	NR Band n77(DoD)	High	100	17.56	Top	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.048	30.75	
3930	6620000	NR Band n77(DoD)	High	100	17.56	Left	DFT-s-OFDM QPSK	0	10	1	137	1:1	0.459	<b>20.94</b>	
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Rear	DFT-s-OFDM QPSK	0	10			1:1	0.519	17.8	17.1
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Front	DFT-s-OFDM QPSK	0	10			1:1	0.097	25.1	
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Top	DFT-s-OFDM QPSK	0	10			1:1	0.052	27.8	
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Right	DFT-s-OFDM QPSK	0	10			1:1	0.601	<b>17.1</b>	
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Rear	DFT-s-OFDM QPSK	0	10			1:1	0.176	<b>28.0</b>	28.0
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Front	DFT-s-OFDM QPSK	0	10			1:1	0.136	29.1	
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Bottom	DFT-s-OFDM QPSK	0	10			1:1	0.167	28.3	
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Right	DFT-s-OFDM QPSK	0	10			1:1	0.161	28.4	

**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
3500.01	633334	NR Bandn77 DoD SRS3	High	100	17.70	Rear	DFT-s-OFDM QPSK	0	10			1:1	0.078	<b>28.8</b>	28.8
3500.01	633334	NR Bandn77 DoD SRS3	High	100	17.70	Front	DFT-s-OFDM QPSK	0	10			1:1	0.000	0	
3500.01	633334	NR Bandn77 DoD SRS3	High	100	17.70	Left	DFT-s-OFDM QPSK	0	10			1:1	0.000	0	
3500.01	633334	NR Bandn77 DoD SRS3	High	100	17.70	Bottom	DFT-s-OFDM QPSK	0	10			1:1	0.00724	39.2	

**Table A-10 DSI = 3,4 P<sub>Limit</sub> Calculations - - 2G/3G Phablet SAR (Grip Sensor is on )**  
 For some bands/modes, a lower P<sub>Limit</sub> 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)
1880.0	661	GSM 1900	GPRS 2Tx	19.42	Back	19	1:4.15	0.629	<b>25.4</b>	25.4
1880.0	661	GSM 1900	GPRS 2Tx	19.42	Bottom	13	1:4.15	0.623	25.5	
1 880.0	9400	UMTS 1900	RMC	21.40	Back	19	1:1	1.020	<b>25.3</b>	25.3
1 880.0	9400	UMTS 1900	RMC	21.40	Bottom	13	1:1	0.888	25.9	

**Table A-11 DSI = 0 (Grip Sensor is not activated)  $P_{Limit}$  Calculations - - 2G/3G Phablet SAR**  
 For some bands/modes, a lower  $P_{Limit}$  was selected as a more conservative evaluation.

MEASUREMENT RESULTS										
Frequency		Mode		Frame Averaged	Test Position	Distance	Duty Cycle	Meas.	Plimit	Minimum
Mhz	Ch.			Conducted Power		(mm)		SAR(10g)		
				(dBm)			(W/kg)	(dBm)	(dBm)	
826.4	4132	UMTS 850	RMC	22.71	Back	0	1:1	1.010	26.6	24.3
826.4	4132	UMTS 850	RMC	22.71	Front	0	1:1	0.672	28.4	
826.4	4132	UMTS 850	RMC	22.71	Bottom	0	1:1	1.750	<b>24.3</b>	
826.4	4132	UMTS 850	RMC	22.71	Right	0	1:1	0.450	30.2	
826.4	4132	UMTS 850	RMC	22.71	Left	0	1:1	0.102	36.6	
1 732.4	1412	UMTS 1700	RMC	23.54	Back	0	1:1	0.102	37.4	25.5
1 732.4	1412	UMTS 1700	RMC	23.54	Front	0	1:1	1.610	<b>25.5</b>	
1 732.4	1412	UMTS 1700	RMC	23.54	Bottom	0	1:1	0.211	34.3	
1 732.4	1412	UMTS 1700	RMC	23.54	Right	0	1:1	0.191	34.7	
1 732.4	1412	UMTS 1700	RMC	23.54	Left	0	1:1	0.338	32.2	
1880.0	9400	UMTS 1900	RMC	23.38	Back	0	1:1	0.139	35.9	25.1
1880.0	9400	UMTS 1900	RMC	23.38	Front	0	1:1	1.680	<b>25.1</b>	
1880.0	9400	UMTS 1900	RMC	23.38	Bottom	0	1:1	0.337	32.1	
1880.0	9400	UMTS 1900	RMC	23.38	Right	0	1:1	0.191	34.5	
1880.0	9400	UMTS 1900	RMC	23.38	Left	0	1:1	0.338	32.1	

**Table A-11 DSI = 0 GSM Mode  $P_{Limit}$  Calculations - - 2G/3G Phablet SAR (Grip off )**

MEASUREMENT RESULTS										
Frequency		Mode		Frame Averaged	Test Position	Distance	Duty Cycle	Meas.	Plimit	Minimum
Mhz	Ch.			Conducted Power		(mm)		SAR(10g)		
				(dBm)			(W/kg)	(dBm)	(dBm)	
836.6	190	GPRS 2TX	GSM	24.38	Back	0	1:4.15	0.570	30.8	29.6
836.6	190	GPRS 2TX	GSM	24.38	Front	0	1:4.15	0.536	31.1	
836.6	190	GPRS 2TX	GSM	24.38	Bottom	0	1:4.15	0.754	<b>29.6</b>	
836.6	190	GPRS 2TX	GSM	24.38	Right	0	1:4.15	0.333	33.1	
836.6	190	GPRS 2TX	GSM	24.38	Left	0	1:4.15	0.113	37.8	
1 880	661	GPRS 2TX	GSM	22.66	Back	0	1:4.15	0.095	36.9	28.3
1 880	661	GPRS 2TX	GSM	22.66	Front	0	1:4.15	0.675	<b>28.3</b>	
1 880	661	GPRS 2TX	GSM	22.66	Bottom	0	1:4.15	0.125	35.7	
1 880	661	GPRS 2TX	GSM	22.66	Right	0	1:4.15	0.077	37.8	
1 880	661	GPRS 2TX	GSM	22.66	Left	0	1:4.15	0.396	30.7	

**Table A-13 DSI =3,4 P<sub>Limit</sub> Calculations – 4G Phablet SAR(Grip Sensor is on, Earjack inserted )**  
 For some bands/modes, a lower P<sub>Limit</sub> 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)	P <sub>limit</sub>	Minimum P <sub>limit</sub>
Mhz	Ch.			Mhz	(dBm)			(dB)				(W/kg)	(dBm)	(dBm)
2 510	20850	LTE Band 7	Low	20	23.42	Back	0	0	1	0	1:1	0.082	38.3	24.3
2 510	20850	LTE Band 7	Low	20	23.42	Front	0	0	1	0	1:1	2.060	<b>24.3</b>	
2 510	20850	LTE Band 7	Low	20	23.42	Bottom	0	0	1	0	1:1	0.107	37.1	
2 510	20850	LTE Band 7	Low	20	23.42	Right	0	0	1	0	1:1	0.246	33.5	
2 510	20850	LTE Band 7	Low	20	23.42	Left	0	0	1	0	1:1	0.870	28.0	
707.5	23095	LTE Band 12	Mid	10	24.15	Back	0	0	1	24	1:1	1.190	<b>27.4</b>	27.4
707.5	23095	LTE Band 12	Mid	10	24.15	Front	0	0	1	24	1:1	0.856	28.8	
707.5	23095	LTE Band 12	Mid	10	24.15	Bottom	0	0	1	24	1:1	0.714	29.6	
707.5	23095	LTE Band 12	Mid	10	24.15	Right	0	0	1	24	1:1	0.849	28.8	
707.5	23095	LTE Band 12	Mid	10	24.15	Left	0	0	1	24	1:1	0.135	36.8	
782	23230	LTE Band 13	Mid	10	24.00	Back	0	0	1	24	1:1	0.729	29.4	29.3
782	23230	LTE Band 13	Mid	10	24.00	Front	0	0	1	24	1:1	0.487	31.1	
782	23230	LTE Band 13	Mid	10	24.00	Bottom	0	0	1	24	1:1	0.745	<b>29.3</b>	
782	23230	LTE Band 13	Mid	10	24.00	Right	0	0	1	24	1:1	0.437	31.6	
782	23230	LTE Band 13	Mid	10	24.00	Left	0	0	1	24	1:1	0.116	37.3	
793	23330	LTE Band 14	Mid	10	24.55	Back	0	0	1	24	1:1	0.641	30.5	30.5
793	23330	LTE Band 14	Mid	10	24.55	Front	0	0	1	24	1:1	0.357	33.0	
793	23330	LTE Band 14	Mid	10	24.55	Bottom	0	0	1	24	1:1	0.638	<b>30.5</b>	
793	23330	LTE Band 14	Mid	10	24.55	Right	0	0	1	24	1:1	0.363	32.9	
793	23330	LTE Band 14	Mid	10	24.55	Left	0	0	1	24	1:1	0.088	39.1	
1 882.5	26365	LTE Band 25	Mid	20	24.07	Back	0	0	1	24	1:1	0.090	38.5	25.2
1 882.5	26365	LTE Band 25	Mid	20	24.07	Front	0	0	1	24	1:1	1.930	<b>25.2</b>	
1 882.5	26365	LTE Band 25	Mid	20	24.07	Bottom	0	0	1	24	1:1	0.198	35.1	
1 882.5	26365	LTE Band 25	Mid	20	24.07	Right	0	0	1	24	1:1	0.238	34.3	
1 882.5	26365	LTE Band 25	Mid	20	24.07	Left	0	0	1	24	1:1	1.220	27.2	
1 882.5	26365	LTE Band 25	Mid	20	21.21	Back	0	0	1	0	1:1	0.160	33.1	26.4
1 882.5	26365	LTE Band 25	Mid	20	21.21	Front	0	0	1	0	1:1	0.761	<b>26.4</b>	
1 882.5	26365	LTE Band 25	Mid	20	21.21	Right	0	0	1	0	1:1	0.233	31.5	
1 882.5	26365	LTE Band 25	Mid	20	21.21	Left	0	0	1	0	1:1	0.042	39.0	
831.5	26865	LTE Band 26	Mid	15	23.83	Back	0	0	1	0	1:1	1.030	27.7	
831.5	26865	LTE Band 26	Mid	15	23.83	Front	0	0	1	0	1:1	0.854	28.5	
831.5	26865	LTE Band 26	Mid	15	23.83	Bottom	0	0	1	0	1:1	1.060	<b>27.6</b>	
831.5	26865	LTE Band 26	Mid	15	23.83	Right	0	0	1	0	1:1	0.588	30.1	
831.5	26865	LTE Band 26	Mid	15	23.83	Left	0	0	1	0	1:1	0.133	36.6	
2 310	27710	LTE Band 30	Mid	10	22.86	Back	0	0	1	0	1:1	0.069	38.5	24.4
2 310	27710	LTE Band 30	Mid	10	22.86	Front	0	0	1	0	1:1	1.770	<b>24.4</b>	
2 310	27710	LTE Band 30	Mid	10	22.86	Bottom	0	0	1	0	1:1	0.152	35.0	
2 310	27710	LTE Band 30	Mid	10	22.86	Right	0	0	1	0	1:1	0.211	33.6	
2 310	27710	LTE Band 30	Mid	10	22.86	Left	0	0	1	0	1:1	0.732	28.2	
2 310	38750	LTE Band 40 (Low)	Mid	10	11.16	Back	0	0	25	12	1:1	0.078	26.2	22.1
2 310	38750	LTE Band 40 (Low)	Mid	10	11.16	Front	0	0	25	12	1:1	0.081	26.1	
2 310	38750	LTE Band 40 (Low)	Mid	10	11.16	Bottom	0	0	25	12	1:1	0.203	<b>22.1</b>	
2 310	38750	LTE Band 40 (Low)	Mid	10	11.16	Left	0	0	25	12	1:1	0.029	30.5	
2 355	39200	LTE Band 40 (Upper)	Mid	10	10.98	Back	0	0	25	12	1:1	0.079	26.0	
2 355	39200	LTE Band 40 (Upper)	Mid	10	10.98	Front	0	0	25	12	1:1	0.079	26.0	
2 355	39200	LTE Band 40 (Upper)	Mid	10	10.98	Bottom	0	0	25	12	1:1	0.172	<b>22.6</b>	
2 355	39200	LTE Band 40 (Upper)	Mid	10	10.98	Left	0	0	25	12	1:1	0.028	30.5	





**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)
2 680	41490	LTE Band 41(PC3)	High	20	21.89	Back	0	0	1	0	1:1.58	0.099	35.9	26.0
2 680	41490	LTE Band 41(PC3)	High	20	21.89	Front	0	0	1	0	1:1.58	0.982	<b>26.0</b>	
2 680	41490	LTE Band 41(PC3)	High	20	21.89	Bottom	0	0	1	0	1:1.58	0.193	33.0	
2 680	41490	LTE Band 41(PC3)	High	20	21.89	Right	0	0	1	0	1:1.58	0.174	33.5	
2 680	41490	LTE Band 41(PC3)	High	20	21.89	Left	0	0	1	0	1:1.58	0.454	29.3	
2 680	41490	LTE Band 41(PC2)	High	20	23.39	Back	0	0	1	0	1:1.58	1.070	<b>27.1</b>	27.1
2 680	41490	LTE Band 41(PC2)	High	20	23.39	Bottom	0	0	1	0	1:1.58	0.996	27.4	
3 603.3	55773	LTE Band 48	Low	20	22.46	Back	0	0	1	99	1:1.58	1.060	<b>26.2</b>	26.2
3 603.3	55773	LTE Band 48	Low	20	22.46	Front	0	0	1	99	1:1.58	0.635	28.4	
3 603.3	55773	LTE Band 48	Low	20	22.46	Bottom	0	0	1	99	1:1.58	0.115	35.8	
3 603.3	55773	LTE Band 48	Low	20	22.46	Right	0	0	1	99	1:1.58	0.086	37.1	
3 603.3	55773	LTE Band 48	Low	20	22.46	Left	0	0	1	99	1:1.58	0.355	30.9	
1 720	132072	LTE Band 66	Low	20	24.17	Back	0	0	1	49	1:1	0.082	39.0	25.1
1 720	132072	LTE Band 66	Low	20	24.17	Front	0	0	1	49	1:1	2.000	<b>25.1</b>	
1 720	132072	LTE Band 66	Low	20	24.17	Bottom	0	0	1	49	1:1	0.150	36.4	
1 720	132072	LTE Band 66	Low	20	24.17	Right	0	0	1	49	1:1	0.156	36.2	
1 720	132072	LTE Band 66	Low	20	24.17	Left	0	0	1	49	1:1	0.963	28.3	
1 770	132572	LTE Band 66	High	20	21.69	Back	0	0	1	0	1:1	0.034	40.4	26.5
1 770	132572	LTE Band 66	High	20	21.69	Front	0	0	1	0	1:1	0.819	<b>26.5</b>	
1 770	132572	LTE Band 66	High	20	21.69	Bottom	0	0	1	0	1:1	0.085	36.4	
1 770	132572	LTE Band 66	High	20	21.69	Right	0	0	1	0	1:1	0.333	30.4	
1 770	132572	LTE Band 66	High	20	21.69	Left	0	0	1	0	1:1	0.045	39.1	
683	133322	LTE Band 71	Mid	20	23.96	Back	0	0	1	0	1:1	0.693	<b>29.5</b>	29.5
683	133322	LTE Band 71	Mid	20	23.96	Front	0	0	1	0	1:1	0.436	31.5	
683	133322	LTE Band 71	Mid	20	23.96	Bottom	0	0	1	0	1:1	0.639	29.9	
683	133322	LTE Band 71	Mid	20	23.96	Right	0	0	1	0	1:1	0.372	32.2	
683	133322	LTE Band 71	Mid	20	23.96	Left	0	0	1	0	1:1	0.100	37.9	

**Table A-15 DSI = 0,4 P<sub>Limit</sub> Calculations - – NR Phablet SAR(grip on , Ear jack inserted)**

For some bands/modes, a lower P<sub>Limit</sub> was selected as a more conservative evaluation.

NR TDD Bands : In the case of the NR TDD bands, the P<sub>limit</sub> 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(1g)	P <sub>limit</sub>	Minimum P <sub>limit</sub>
Mhz	Ch.			Mhz	(dBm)			(dB)					(W/kg)	(dBm)	(dBm)
836.5	167300	NR Band n5	Mid	20	23.88	Back	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.000	<b>27.9</b>	27.9
836.5	167300	NR Band n5	Mid	20	23.88	Front	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.873	28.4	
836.5	167300	NR Band n5	Mid	20	23.88	Bottom	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.914	28.2	
836.5	167300	NR Band n5	Mid	20	23.88	Right	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.800	28.8	
836.5	167300	NR Band n5	Mid	20	23.88	Left	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.078	38.9	
707.5	141500	NR Band n12	Mid	15	23.73	Back	DFT-s-OFDM QPSK	0	0	1	77	1:1	0.175	35.3	29.5
707.5	141500	NR Band n12	Mid	15	23.73	Front	DFT-s-OFDM QPSK	0	0	1	77	1:1	0.621	29.8	
707.5	141500	NR Band n12	Mid	15	23.73	Bottom	DFT-s-OFDM QPSK	0	0	1	77	1:1	0.060	39.9	
707.5	141500	NR Band n12	Mid	15	23.73	Right	DFT-s-OFDM QPSK	0	0	1	77	1:1	0.656	<b>29.5</b>	
707.5	141500	NR Band n12	Mid	15	23.73	Left	DFT-s-OFDM QPSK	0	0	1	77	1:1	0.127	36.7	
1 882.5	376500	NR Band n25	Mid	40	23.96	Back	DFT-s-OFDM QPSK	0	0	1	108	1:1	0.163	35.8	24.8
1 882.5	376500	NR Band n25	Mid	40	23.96	Front	DFT-s-OFDM QPSK	0	0	1	108	1:1	2.040	<b>24.8</b>	
1 882.5	376500	NR Band n25	Mid	40	23.96	Bottom	DFT-s-OFDM QPSK	0	0	1	108	1:1	0.362	32.4	
1 882.5	376500	NR Band n25	Mid	40	23.96	Right	DFT-s-OFDM QPSK	0	0	1	108	1:1	0.250	34.0	
1 882.5	376500	NR Band n25	Mid	40	23.96	Left	DFT-s-OFDM QPSK	0	0	1	108	1:1	1.280	26.9	
2 310	462000	NR Band n30	Mid	10	23.25	Back	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.077	38.4	24.2
2 310	462000	NR Band n30	Mid	10	23.25	Front	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.990	<b>24.2</b>	
2 310	462000	NR Band n30	Mid	10	23.25	Bottom	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.195	34.3	
2 310	462000	NR Band n30	Mid	10	23.25	Right	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.241	33.4	
2 310	462000	NR Band n30	Mid	10	23.25	Left	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.782	28.3	
2 592.99	518598	NR Band n41(PC3)	Mid	100	21.39	Back	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.093	35.7	22.7
2 592.99	518598	NR Band n41(PC3)	Mid	100	21.39	Front	DFT-s-OFDM QPSK	0	0	1	1	1:1	1.840	<b>22.7</b>	
2 592.99	518598	NR Band n41(PC3)	Mid	100	21.39	Bottom	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.224	31.9	
2 592.99	518598	NR Band n41(PC3)	Mid	100	21.39	Right	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.221	31.9	
2 592.99	518598	NR Band n41(PC3)	Mid	100	21.39	Left	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.628	27.4	
1 745	349000	NR Band n66	Mid	40	24.50	Back	DFT-s-OFDM QPSK	0	0	1	108	1:1	0.332	33.3	25.3
1 745	349000	NR Band n66	Mid	40	24.50	Front	DFT-s-OFDM QPSK	0	0	1	108	1:1	2.070	<b>25.3</b>	
1 745	349000	NR Band n66	Mid	40	24.50	Bottom	DFT-s-OFDM QPSK	0	0	1	108	1:1	0.311	33.6	
1 745	349000	NR Band n66	Mid	40	24.50	Right	DFT-s-OFDM QPSK	0	0	1	108	1:1	0.163	36.4	
1 745	349000	NR Band n66	Mid	40	24.50	Left	DFT-s-OFDM QPSK	0	0	1	108	1:1	0.988	28.5	
680.5	136100	NR Band n71	Mid	20	23.85	Back	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.170	35.5	30.4
680.5	136100	NR Band n71	Mid	20	23.85	Front	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.559	<b>30.4</b>	
680.5	136100	NR Band n71	Mid	20	23.85	Bottom	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.114	37.3	
680.5	136100	NR Band n71	Mid	20	23.85	Right	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.402	31.8	
680.5	136100	NR Band n71	Mid	20	23.85	Left	DFT-s-OFDM QPSK	0	0	1	1	1:1	0.072	39.3	

**MEASUREMENT RESULTS**

Frequency		Mode		Band width	Frame Averaged Conducted	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	17.95	Back	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.058	34.3	22.3
3 750	650000	NR Band n77(PC3)	Low	100	17.95	Front	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.373	26.2	
3 750	650000	NR Band n77(PC3)	Low	100	17.95	Top	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.050	34.9	
3 750	650000	NR Band n77(PC3)	Low	100	17.95	Left	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.910	<b>22.3</b>	
3 750	650000	NR Bandn77SRS1	Low	100	14.33	Back	DFT-s-OFDM QPSK	0	0			1:1	0.081	29.2	19.2
3 750	650000	NR Bandn77SRS1	Low	100	14.33	Front	DFT-s-OFDM QPSK	0	0			1:1	0.250	24.3	
3 750	650000	NR Bandn77SRS1	Low	100	14.33	Bottom	DFT-s-OFDM QPSK	0	0			1:1	0.813	<b>19.2</b>	
3 930	662000	NR Bandn77SRS2	High	100	16.81	Back	DFT-s-OFDM QPSK	0	0			1:1	0.038	35.0	24.1
3 930	662000	NR Bandn77SRS2	High	100	16.81	Front	DFT-s-OFDM QPSK	0	0			1:1	0.420	24.6	
3 930	662000	NR Bandn77SRS2	High	100	16.81	Right	DFT-s-OFDM QPSK	0	0			1:1	0.022	37.4	
3 930	662000	NR Bandn77SRS2	High	100	16.81	Left	DFT-s-OFDM QPSK	0	0			1:1	0.463	<b>24.1</b>	
3 500.01	633334	NR Band n77(DoD)	High	100	17.54	Back	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.143	30.0	21.8
3 500.01	633334	NR Band n77(DoD)	High	100	17.54	Front	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.430	25.2	
3 500.01	633334	NR Band n77(DoD)	High	100	17.54	Top	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.033	36.4	
3 500.01	633334	NR Band n77(DoD)	High	100	17.54	Left	DFT-s-OFDM QPSK	0	0	1	271	1:1	0.934	<b>21.8</b>	
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Back	DFT-s-OFDM QPSK	0	0			1:1	0.146	27.3	19.7
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Front	DFT-s-OFDM QPSK	0	0			1:1	0.144	27.3	
3500.01	633334	NR Bandn77 DoD SRS1	High	100	14.92	Right	DFT-s-OFDM QPSK	0	0			1:1	0.827	<b>19.7</b>	
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Back	DFT-s-OFDM QPSK	0	0			1:1	0.067	32.2	24.8
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Front	DFT-s-OFDM QPSK	0	0			1:1	0.358	24.9	
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Bottom	DFT-s-OFDM QPSK	0	0			1:1	0.037	34.8	
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Right	DFT-s-OFDM QPSK	0	0			1:1	0.373	<b>24.8</b>	
3500.01	633334	NR Bandn77 DoD SRS2	High	100	16.50	Left	DFT-s-OFDM QPSK	0	0			1:1	0.068	32.2	