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PART 0 SAR CHAR REPORT

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Date of Testing:
 04/27/20 – 06/11/20
Test Site/Location:
 PCTEST Lab, Columbia, MD, USA
Document Serial No.:
 1M2004170066-20.A3L

FCC ID: A3LSMN986W

APPLICANT: SAMSUNG ELECTRONICS CO., LTD

Report Type: Part 0 SAR Characterization
DUT Type: Portable Handset
Model(s): SM-N986W

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.

Test results reported herein relate only to the item(s) tested.


 Randy Ortanez
 President








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1 DEVICE UNDER TEST




1.1 Device Overview

Band & Mode	Operating Modes	Tx Frequency
Cell. CDMA/EVDO	Voice/Data	824.70 - 848.31 MHz
GSM/GPRS/EDGE 850	Voice/Data	824.20 - 848.80 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.20 - 1909.80 MHz
UMTS 850	Voice/Data	826.40 - 846.60 MHz
UMTS 1750	Voice/Data	1712.4 - 1752.6 MHz
UMTS 1900	Voice/Data	1852.4 - 1907.6 MHz
LTE Band 71	Voice/Data	665.5 - 695.5 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 25 (PCS)	Voice/Data	1850.7 - 1914.3 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 30	Voice/Data	2307.5 - 2312.5 MHz
LTE Band 7	Voice/Data	2502.5 - 2567.5 MHz
LTE Band 41	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 38	Voice/Data	2572.5 - 2617.5 MHz
NR Band n71	Data	665.5 - 695.5 MHz
NR Band n66	Data	1712.5 - 1777.5 MHz
NR Band n41	Data	2506.02 - 2679.99 MHz
2.4 GHz WLAN	Voice/Data	2412 - 2462 MHz
U-NII-1	Voice/Data	5180 - 5240 MHz
U-NII-2A	Voice/Data	5260 - 5320 MHz
U-NII-2C	Voice/Data	5500 - 5720 MHz
U-NII-3	Voice/Data	5745 - 5825 MHz
Bluetooth	Data	2402 - 2480 MHz
NFC	Data	13.56 MHz
MST	Data	555 Hz - 8.33 kHz
WPT	N/A	110 kHz - 148 kHz

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/MST technologies, but the output power of these modems is not controlled by the Smart Transmit algorithm.

1.2 Time-Averaging for SAR and Power Density

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 Sub-6 NR WWAN is in compliance with FCC requirements. This Part 0 report shows SAR characterization of WWAN radios for 2G/3G/4G/5G Sub-6 NR. Characterization is achieved by determining P_{Limit} for 2G/3G/4G/5G Sub-6 NR that corresponds to the exposure design targets after accounting for all device design related uncertainties, i.e.,

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SAR_design_target (< FCC SAR limit) for sub-6 radio. The SAR characterization is denoted as SAR Char in this report. Section 1.3 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 (report SN could be found in Section 1.4 – Bibliography).

1.3 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 (<i>SAR_design_target</i>) after accounting for all device design related uncertainties
	P_{max}	Maximum tune up output power
	<i>SAR_design_target</i>	Target SAR level < FCC SAR limit after accounting for all device design related uncertainties
	<i>SAR Char</i>	Table containing <i>Plimit</i> for all technologies and bands

1.4 Bibliography

Report Type	Report Serial Number
FCC SAR Evaluation Report (Part 1)	1M2004170066-01.A3L
RF Exposure Part 2 Test Report	1M2004170066-22.A3L
RF Exposure Compliance Summary	1M2004170066-21.A3L

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2.1 SAR Definition

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dU) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body (see Equation 2-1).

Equation 2-1
SAR Mathematical Equation

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

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

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

where:

σ	=	conductivity of the tissue-simulating material (S/m)
ρ	=	mass density of the tissue-simulating material (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 relation 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.[6]

2.2 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 greater than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the device-head and body interface and the horizontal grid resolution was determined per FCC KDB Publication 865664 D01v01r04 (See Table 2-1) and IEEE 1528-2013.
2. Table 2-1) and IEEE 1528-2013.
3. The point SAR measurement was taken at the maximum SAR region determined from Step 1 to enable the monitoring of SAR fluctuations/drifts during the 1g/10g cube evaluation. SAR at this fixed point was measured and used as a reference value.

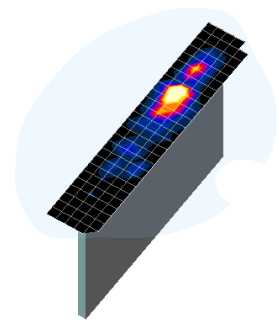





Figure 2-1
Sample SAR Area Scan



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4. Based on the area scan data, the peak of the region with maximum SAR was determined by spline interpolation. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB Publication 865664 D01v01r04 (See
5. Table 2-1) and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (see references or the DASY manual online for more details):
 - a. SAR values at the inner surface of the phantom are extrapolated from the measured values along the line away from the surface with spacing no greater than that in
 - b. Table 2-1. The extrapolation was based on a least-squares algorithm. A polynomial of the fourth order was calculated through the points in the z-axis (normal to the phantom shell).
 - c. After the maximum interpolated values were calculated between the points in the cube, the SAR was averaged over the spatial volume (1g or 10g) using a 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the “Not a knot” condition (in x, y, and z directions). The volume was then integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were obtained through interpolation, in order to calculate the averaged SAR.
 - d. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
6. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan was complete to calculate the SAR drift. If the drift deviated by more than 5%, the SAR test and drift measurements were repeated.

Table 2-1
Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

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		
				$\Delta z_{zoom}(n)$	$\Delta z_{zoom}(1)^*$	
≤ 2 GHz	≤ 15	≤ 8	≤ 5	≤ 4	≤ 1.5* $\Delta z_{zoom}(n-1)$	≥ 30
2-3 GHz	≤ 12	≤ 5	≤ 5	≤ 4	≤ 1.5* $\Delta z_{zoom}(n-1)$	≥ 30
3-4 GHz	≤ 12	≤ 5	≤ 4	≤ 3	≤ 1.5* $\Delta z_{zoom}(n-1)$	≥ 28
4-5 GHz	≤ 10	≤ 4	≤ 3	≤ 2.5	≤ 1.5* $\Delta z_{zoom}(n-1)$	≥ 25
5-6 GHz	≤ 10	≤ 4	≤ 2	≤ 2	≤ 1.5* $\Delta z_{zoom}(n-1)$	≥ 22

*Also compliant to IEEE 1528-2013 Table 6

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3 SAR CHARACTERIZATION

3.1 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 3-1 represent different exposure scenarios.

**Table 3-1
DSI and Corresponding Exposure Scenarios**




Scenario	Description	SAR Test Cases
Head (DSI = 2)	<ul style="list-style-type: none"> Device positioned next to head Receiver Active 	Head SAR per KDB Publication 648474 D04
Hotspot mode (DSI = 3)	<ul style="list-style-type: none"> Device transmits in hotspot mode near body Hotspot Mode Active 	Hotspot SAR per KDB Publication 941225 D06
Phablet Grip (DSI=1 or 4)	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> Device being used with a body-worn accessory 	Body-worn SAR per KDB Publication 648474 D04

3.2 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 3-2).

**Table 3-2
SAR_design_target Calculations**

<i>SAR_design_target</i>			
$SAR_design_target < SAR_regulatory_limit \times 10^{\frac{-Total\ Uncertainty}{10}}$			
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

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3.3 SAR Char

SAR test results corresponding to P_{max} for each antenna/technology/band/DSI can be found in Appendix A.

P_{limit} is calculated by linearly scaling with the measured SAR at the P_{max} to correspond to the SAR_{design_target} . P_{limit} determination for each exposure scenario corresponding to SAR_{design_target} are shown in Table 3-3.




**Table 3-3
 P_{Limit} Determination**

Device State Index (DSI)	P_{Limit} 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 12 mm spacing for back, front, bottom respectively 3. Extremity SAR measured at 0 mm for left and right surfaces
1 or 4	P_{limit} is calculated based on 10g Extremity SAR at 0 mm for back, front, and bottom surfaces
2	P_{limit} is calculated based on 1g Head SAR
3	P_{limit} is calculated based on 1g Hotspot SAR at 10 mm

Note:

For DSI = 0, P_{limit} is calculated by:

$$P_{limit} = \min\{ P_{limit} \text{ corresponding to 1g Body Worn SAR evaluation at 15 mm spacing, } \\ P_{limit} \text{ corresponding to 10g Extremity SAR evaluation at 6~12 mm spacing, } \\ P_{limit} \text{ corresponding to 10g Extremity SAR evaluation at 0 mm for left and right surfaces} \}$$




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**Table 3-4
SAR Characterizations**

Exposure Scenario:	Body-Worn	Phablet	Phablet	Head	Hotspot	Earjack	Maximum Tune-up Output Power*
Averaging Volume:	1g	10g	10g	1g	1g	10g	
Spacing:	15 mm	8, 6, 12	0 mm	0 mm	10 mm	0 mm	
DSI:	0	0	1	2	3	4	
Technology/Band	P _{limit} corresponding to 1mW/g (SAR _{design_target})						P _{max}
CDMA/EVDO BCO	29.8		27.2	32.6	25.9	27.2	24.8
GSM/GPRS/EDGE 850 MHz	31.8		28.7	26.3	28.7	28.7	25.3
GSM/GPRS/EDGE 1900 MHz	25.7		20.1	23.3	18.6	20.1	22.3
UMTS B5	30.4		27.1	33.2	27.0	27.1	24.8
UMTS B4	24.7		20.0	32.6	19.0	20.0	23.5
UMTS B2	26.9		20.0	32.4	18.0	20.0	23.0
LTE FDD B71	31.4		26.7	33.6	26.7	26.7	24.8
LTE FDD B12	31.1		27.4	32.9	27.4	27.4	24.8
LTE FDD B13	29.4		28.0	32.2	27.1	28.0	24.8
LTE FDD B5	31.0		27.1	33.3	27.1	27.1	24.8
LTE FDD B66/4	24.8		19.5	32.8	19.0	19.5	23.5
LTE FDD B25/2	25.2		21.0	33.6	18.5	21.0	23.5
LTE FDD B30	26.2		23.1	36.9	19.0	23.1	23.0
LTE FDD B7	27.3		19.0	33.6	19.0	19.0	23.0
LTE TDD B41/38	27.7		20.0	34.8	19.0	20.0	22.0
NR FDD n71	31.1		28.5	33.4	28.5	28.5	24.5
NR FDD n66	24.1		19.5	31.7	19.0	19.5	23.5
NR TDD n41	27.0		27.0	16.5	21.1	27.0	18.5

Notes:

1. For all modes/bands, when Hotspot Mode (DSI=3) and Extremity sensor (DSI=1) are triggered at the same time, DSI=3 takes priority, thus the P_{limit} for DSI=3 is set to be less or equal to P_{limit} for DSI=1.
2. When $P_{max} < P_{limit}$, the DUT will operate at a power level up to P_{max} .
3. P_{limit} for DSI=1 and DSI =4 are the same.
4. For NR TDD n41, when RCV is active, DSI=2 takes priority over all levels.

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4



EQUIPMENT LIST

For SAR measurements

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8594A	[9kHz-2.9GHz] Spectrum Analyzer	N/A	N/A	N/A	3051A00187
Agilent	E5515C	8960 Series 10-Wireless Communications Test Set	2/10/2020	Annual	2/10/2021	GB42230325
Agilent	E4438C	ESG Vector Signal Generator	3/8/2019	Biennial	3/8/2021	MY42082385
Agilent	E4438C	ESG Vector Signal Generator	5/23/2019	Annual	5/23/2020	MY47270002
Agilent	E4432B	ESG-D Series Signal Generator	7/14/2019	Annual	7/14/2020	US40053896
Agilent	N5182A	MXG Vector Signal Generator	5/13/2020	Annual	5/13/2021	MY47420603
Agilent	N5182A	MXG Vector Signal Generator	7/10/2019	Annual	7/10/2020	MY47420800
Agilent	87535E	S-Parameter Network Analyzer	8/26/2019	Annual	8/26/2020	MY40006070
Agilent	87535E	S-Parameter Network Analyzer	12/31/2019	Annual	12/31/2020	US39170122
Agilent	E5515C	Wireless Communications Test Set	9/25/2019	Annual	9/25/2020	GB43304278
Agilent	E5515C	Wireless Communications Test Set	1/14/2020	Triennial	1/14/2023	GB43304447
Agilent	N4010A	Wireless Connectivity Test Set	CBT	N/A	CBT	GB44450273
Agilent	N4010A	Wireless Connectivity Test Set	CBT	N/A	CBT	GB46170664
Amplifier Research	1551G6	Amplifier	CBT	N/A	CBT	433976
Amplifier Research	1551G6	Amplifier	CBT	N/A	CBT	433976
Anritsu	MN8110B	I/O Adaptor	CBT	N/A	CBT	6261747881
Anritsu	ML2495A	Power Meter	12/17/2019	Annual	12/17/2020	941001
Anritsu	ML2496A	Power Meter	2/13/2020	Annual	2/13/2021	1306009
Anritsu	ML2496A	Power Meter	3/23/2020	Annual	3/23/2021	1351001
Anritsu	MA2411B	Pulse Power Sensor	12/4/2019	Annual	12/4/2020	1126066
Anritsu	MA2411B	Pulse Power Sensor	6/11/2019	Annual	6/11/2020	1207364
Anritsu	MT8821C	Radio Communication Analyzer	2/22/2020	Annual	2/22/2021	6261895213
Anritsu	MT8821C	Radio Communication Analyzer	11/22/2019	Annual	11/22/2020	6263034715
Anritsu	MA24106A	USB Power Sensor	5/22/2019	Annual	5/22/2020	1231535
Anritsu	MA24106A	USB Power Sensor	5/6/2019	Annual	5/6/2020	1231538
Anritsu	MA24106A	USB Power Sensor	2/27/2020	Annual	2/27/2021	1244524
Anritsu	MT8862A	Wireless Connectivity Test Set	8/8/2019	Annual	8/8/2020	6261782395
COMTECH	AR85729-5	Solid State Amplifier	CBT	N/A	CBT	M155A00-009
COMTECH	AR85729-5/5759B	Solid State Amplifier	CBT	N/A	CBT	M3W1A00-1002
Control Company	4352	Long Stem Thermometer	6/26/2019	Biennial	6/26/2021	192282739
Control Company	4352	Long Stem Thermometer	6/26/2019	Biennial	6/26/2021	192282744
Control Company	4040	Therm./Clock/Humidity Monitor	10/9/2018	Biennial	10/9/2020	181647812
Control Company	4040	Therm./Clock/Humidity Monitor	2/17/2020	Biennial	2/17/2022	200113269
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	M6705B	DC Power Analyzer	4/27/2019	Biennial	4/27/2021	MY53004059
Keysight Technologies	8503E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	7/2/2019	Annual	7/2/2020	MY53401181
MCL	BW-N6W5+	6dB Attenuator	CBT	N/A	CBT	1139
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
MiniCircuits	SLP-2400+	Low Pass Filter	CBT	N/A	CBT	R8979500903
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-1200+	Low Pass Filter DC to 1000 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5	Power Attenuator	CBT	N/A	CBT	1226
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	CBT	N/A
Narda	BW-33W2	Attenuator (3dB)	CBT	N/A	CBT	120
Narda	4737-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	7/18/2019	Biennial	7/18/2020	N/A
Rohde & Schwarz	CMW500	Radio Communication Tester	10/4/2019	Annual	10/4/2020	166462
Rohde & Schwarz	CMW500	Radio Communication Tester	4/23/2020	Annual	4/23/2021	167283
Rohde & Schwarz	ZNL6E	Vector Network Analyzer	10/11/2019	Annual	10/11/2020	101307
Seekonk	NC-100	Torque Wrench (8" lb)	5/10/2018	Biennial	5/10/2020	21053
Seekonk	NC-100	Torque Wrench (8" lb)	5/23/2018	Biennial	5/23/2020	N/A
SPEAG	D1750V2	1750 MHz SAR Dipole	10/22/2018	Biennial	10/22/2020	1150
SPEAG	D1765V2	1765 MHz SAR Dipole	5/23/2018	Triennial	5/23/2021	1008
SPEAG	D1900V2	1900 MHz SAR Dipole	10/23/2018	Biennial	10/23/2020	50880
SPEAG	D1900V2	1900 MHz SAR Dipole	2/21/2019	Biennial	2/21/2021	50148
SPEAG	D2300V2	2300 MHz SAR Dipole	10/23/2018	Biennial	10/23/2020	50149
SPEAG	D2300V2	2300 MHz SAR Dipole	8/13/2018	Biennial	8/13/2020	1073
SPEAG	D2450V2	2450 MHz SAR Dipole	8/14/2019	Annual	8/14/2020	719
SPEAG	D2450V2	2450 MHz SAR Dipole	9/11/2017	Triennial	9/11/2020	797
SPEAG	D2600V2	2600 MHz SAR Dipole	6/14/2019	Annual	6/14/2020	1064
SPEAG	D5GHzV2	5 GHz SAR Dipole	9/17/2019	Annual	9/17/2020	1191
SPEAG	D750V3	750 MHz Dipole	3/11/2020	Annual	3/11/2021	1054
SPEAG	D750V3	750 MHz SAR Dipole	10/19/2018	Biennial	10/19/2020	1161
SPEAG	D835V2	835 MHz SAR Dipole	3/13/2019	Biennial	3/13/2021	40407
SPEAG	D835V2	835 MHz SAR Dipole	1/13/2020	Annual	1/13/2021	4d132
SPEAG	D835V2	835 MHz SAR Dipole	10/19/2018	Biennial	10/19/2020	4d133
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/20/2020	Annual	5/20/2021	728
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/18/2019	Annual	12/18/2020	859
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2019	Annual	7/11/2020	1322
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2019	Annual	7/11/2020	1323
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/17/2019	Annual	9/17/2020	1333
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/12/2020	Annual	3/12/2021	1368
SPEAG	DAE4	Dasy Data Acquisition Electronics	4/15/2020	Annual	4/15/2021	1407
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/12/2019	Annual	9/12/2020	1449
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2020	Annual	1/13/2021	1530
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/13/2020	Annual	1/13/2021	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	12/5/2019	Annual	12/5/2020	1533
SPEAG	DAE-3.5	Dielectric Assessment Kit	10/22/2019	Annual	10/22/2020	1091
SPEAG	EX3D4	SAR Probe	1/21/2020	Annual	1/21/2021	3589
SPEAG	EX3D4	SAR Probe	4/21/2020	Annual	4/21/2021	7357
SPEAG	EX3D4	SAR Probe	7/16/2019	Annual	7/16/2020	7410
SPEAG	EX3D4	SAR Probe	1/21/2020	Annual	1/21/2021	7488
SPEAG	EX3D4	SAR Probe	3/17/2020	Annual	3/17/2021	7527
SPEAG	EX3D4	SAR Probe	5/18/2020	Annual	5/18/2021	7538
SPEAG	EX3D4	SAR Probe	7/15/2019	Annual	7/15/2020	7547
SPEAG	EX3D4	SAR Probe	9/19/2019	Annual	9/19/2020	7551
SPEAG	EX3D4	SAR Probe	9/19/2019	Annual	9/19/2020	7552
SPEAG	EX3D4	SAR Probe	12/11/2019	Annual	12/11/2020	7570
SPEAG	EX3D4	SAR Probe	12/11/2019	Annual	12/11/2020	7571

Note:

- CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path. The power meter offset was then adjusted to compensate for the measurement system losses. This level offset is stored within the power meter before measurements are made. This calibration verification procedure applies to the system verification and output power measurements. The calibrated reading is then taken directly from the power meter after compensation of the losses for all final power measurements.
- Each equipment item was used solely within its respective calibration period.




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MEASUREMENT UNCERTAINTIES

For SAR Measurements

a	c	d	e=	f	g	h =	i =	k
			f(d,k)			c x f/e	c x g/e	
Uncertainty Component	Tol. (± %)	Prob. Dist.	Div.	c _i 1gm	c _i 10 gms	1gm u _i (± %)	10gms u _i (± %)	v _i
Measurement System								
Probe Calibration	6.55	N	1	1.0	1.0	6.6	6.6	∞
Axial Isotropy	0.25	N	1	0.7	0.7	0.2	0.2	∞
Hemishperical Isotropy	1.3	N	1	0.7	0.7	0.9	0.9	∞
Boundary Effect	2.0	R	1.73	1.0	1.0	1.2	1.2	∞
Linearity	0.3	N	1	1.0	1.0	0.3	0.3	∞
System Detection Limits	0.25	R	1.73	1.0	1.0	0.1	0.1	∞
Readout Electronics	0.3	N	1	1.0	1.0	0.3	0.3	∞
Response Time	0.8	R	1.73	1.0	1.0	0.5	0.5	∞
Integration Time	2.6	R	1.73	1.0	1.0	1.5	1.5	∞
RF Ambient Conditions - Noise	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
RF Ambient Conditions - Reflections	3.0	R	1.73	1.0	1.0	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	0.4	R	1.73	1.0	1.0	0.2	0.2	∞
Probe Positioning w/ respect to Phantom	6.7	R	1.73	1.0	1.0	3.9	3.9	∞
Extrapolation, Interpolation & Integration algorithms for Max. SAR Evaluation	4.0	R	1.73	1.0	1.0	2.3	2.3	∞
Test Sample Related								
Test Sample Positioning	2.7	N	1	1.0	1.0	2.7	2.7	35
Device Holder Uncertainty	1.67	N	1	1.0	1.0	1.7	1.7	5
Output Power Variation - SAR drift measurement	5.0	R	1.73	1.0	1.0	2.9	2.9	∞
SAR Scaling	0.0	R	1.73	1.0	1.0	0.0	0.0	∞
Phantom & Tissue Parameters								
Phantom Uncertainty (Shape & Thickness tolerances)	7.6	R	1.73	1.0	1.0	4.4	4.4	∞
Liquid Conductivity - measurement uncertainty	4.2	N	1	0.78	0.71	3.3	3.0	10
Liquid Permittivity - measurement uncertainty	4.1	N	1	0.23	0.26	1.0	1.1	10
Liquid Conductivity - Temperature Uncertainty	3.4	R	1.73	0.78	0.71	1.5	1.4	∞
Liquid Permittivity - Temperature Uncertainty	0.6	R	1.73	0.23	0.26	0.1	0.1	∞
Liquid Conductivity - deviation from target values	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Permittivity - deviation from target values	5.0	R	1.73	0.60	0.49	1.7	1.4	∞
Combined Standard Uncertainty (k=1)	RSS					11.5	11.3	60
Expanded Uncertainty (95% CONFIDENCE LEVEL)	k=2					23.0	22.6	

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APPENDIX A: SAR TEST RESULTS FOR P_{LIMIT} CALCULATIONS

Table A-1
DSI = 2 P_{Limit} Calculations – 2G/3G Head SAR

MEASUREMENT RESULTS										
FREQUENCY		Mode/Band	Service	Conducted Power [dBm]	Side	Test Position	Duty Cycle	SAR (1g)	Plimit	Minimum Plimit
MHz	Ch.							(W/kg)	[dBm]	[dBm]
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	24.73	Right	Cheek	1:1	0.114	34.16	32.57
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	24.73	Right	Tilt	1:1	0.088	35.29	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	24.73	Left	Cheek	1:1	0.157	32.77	
836.52	384	CDMA BC0 (§22H)	RC3 / SO55	24.73	Left	Tilt	1:1	0.096	34.91	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	24.56	Right	Cheek	1:1	0.119	33.80	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	24.56	Right	Tilt	1:1	0.083	35.37	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	24.56	Left	Cheek	1:1	0.158	32.57	
836.52	384	CDMA BC0 (§22H)	EVDO Rev. A	24.56	Left	Tilt	1:1	0.099	34.60	
836.60	190	GSM 850	GSM	33.14	Right	Cheek	1:8.3	0.059	36.23	34.44
836.60	190	GSM 850	GSM	33.14	Right	Tilt	1:8.3	0.042	37.71	
836.60	190	GSM 850	GSM	33.14	Left	Cheek	1:8.3	0.089	34.44	
836.60	190	GSM 850	GSM	33.14	Left	Tilt	1:8.3	0.046	37.31	
1880.00	661	GSM 1900	GSM	29.56	Right	Cheek	1:8.3	0.051	33.28	33.28
1880.00	661	GSM 1900	GSM	29.56	Right	Tilt	1:8.3	0.026	36.21	
1880.00	661	GSM 1900	GSM	29.56	Left	Cheek	1:8.3	0.038	34.56	
1880.00	661	GSM 1900	GSM	29.56	Left	Tilt	1:8.3	0.034	35.04	
836.60	4183	UMTS 850	RMC	25.17	Right	Cheek	1:1	0.110	34.76	33.18
836.60	4183	UMTS 850	RMC	25.17	Right	Tilt	1:1	0.079	36.19	
836.60	4183	UMTS 850	RMC	25.17	Left	Cheek	1:1	0.158	33.18	
836.60	4183	UMTS 850	RMC	25.17	Left	Tilt	1:1	0.067	36.91	
1732.40	1412	UMTS 1750	RMC	23.98	Right	Cheek	1:1	0.138	32.58	32.58
1732.40	1412	UMTS 1750	RMC	23.98	Right	Tilt	1:1	0.108	33.65	
1732.40	1412	UMTS 1750	RMC	23.98	Left	Cheek	1:1	0.108	33.65	
1732.40	1412	UMTS 1750	RMC	23.98	Left	Tilt	1:1	0.128	32.91	
1880.00	9400	UMTS 1900	RMC	23.42	Right	Cheek	1:1	0.128	32.35	32.35
1880.00	9400	UMTS 1900	RMC	23.42	Right	Tilt	1:1	0.046	36.79	
1880.00	9400	UMTS 1900	RMC	23.42	Left	Cheek	1:1	0.074	34.73	
1880.00	9400	UMTS 1900	RMC	23.42	Left	Tilt	1:1	0.065	35.29	

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




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Table A-2
DSI = 2 P_{Limit} Calculations – 4G Head SAR

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Duty Cycle	SAR (1g)	PLimit	Minimum PLimit
MHz	Ch.	(W/kg)											[dBm]	[dBm]	
680.5	133297	Mid	LTE Band 71	20	25.18	0	Right	Cheek	QPSK	1	0	1:1	0.135	33.88	33.58
680.5	133297	Mid	LTE Band 71	20	24.19	1	Right	Cheek	QPSK	50	0	1:1	0.102	34.10	
680.5	133297	Mid	LTE Band 71	20	25.18	0	Right	Tilt	QPSK	1	0	1:1	0.068	36.85	
680.5	133297	Mid	LTE Band 71	20	24.19	1	Right	Tilt	QPSK	50	0	1:1	0.055	36.79	
680.5	133297	Mid	LTE Band 71	20	25.18	0	Left	Cheek	QPSK	1	0	1:1	0.133	33.94	
680.5	133297	Mid	LTE Band 71	20	24.19	1	Left	Cheek	QPSK	50	0	1:1	0.115	33.58	
680.5	133297	Mid	LTE Band 71	20	25.18	0	Left	Tilt	QPSK	1	0	1:1	0.027	40.87	
680.5	133297	Mid	LTE Band 71	20	24.19	1	Left	Tilt	QPSK	50	0	1:1	0.008	45.16	
707.5	23095	Mid	LTE Band 12	10	25.41	0	Right	Cheek	QPSK	1	0	1:1	0.158	33.42	32.92
707.5	23095	Mid	LTE Band 12	10	24.19	1	Right	Cheek	QPSK	25	0	1:1	0.114	33.62	
707.5	23095	Mid	LTE Band 12	10	25.41	0	Right	Tilt	QPSK	1	0	1:1	0.096	35.59	
707.5	23095	Mid	LTE Band 12	10	24.19	1	Right	Tilt	QPSK	25	0	1:1	0.070	35.74	
707.5	23095	Mid	LTE Band 12	10	25.41	0	Left	Cheek	QPSK	1	0	1:1	0.166	33.21	
707.5	23095	Mid	LTE Band 12	10	24.19	1	Left	Cheek	QPSK	25	0	1:1	0.134	32.92	
707.5	23095	Mid	LTE Band 12	10	25.41	0	Left	Tilt	QPSK	1	0	1:1	0.079	36.43	
707.5	23095	Mid	LTE Band 12	10	24.19	1	Left	Tilt	QPSK	25	0	1:1	0.063	36.20	
782.0	23230	Mid	LTE Band 13	10	25.25	0	Right	Cheek	QPSK	1	0	1:1	0.150	33.49	32.24
782.0	23230	Mid	LTE Band 13	10	24.23	1	Right	Cheek	QPSK	25	12	1:1	0.115	33.62	
782.0	23230	Mid	LTE Band 13	10	25.25	0	Right	Tilt	QPSK	1	0	1:1	0.097	35.38	
782.0	23230	Mid	LTE Band 13	10	24.23	1	Right	Tilt	QPSK	25	12	1:1	0.077	35.37	
782.0	23230	Mid	LTE Band 13	10	25.25	0	Left	Cheek	QPSK	1	0	1:1	0.179	32.72	
782.0	23230	Mid	LTE Band 13	10	24.23	1	Left	Cheek	QPSK	25	12	1:1	0.158	32.24	
782.0	23230	Mid	LTE Band 13	10	25.25	0	Left	Tilt	QPSK	1	0	1:1	0.092	35.61	
782.0	23230	Mid	LTE Band 13	10	24.23	1	Left	Tilt	QPSK	25	12	1:1	0.079	35.25	
836.5	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	Right	Cheek	QPSK	1	0	1:1	0.104	35.07	33.34
836.5	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	Right	Cheek	QPSK	25	0	1:1	0.076	35.41	
836.5	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	Right	Tilt	QPSK	1	0	1:1	0.078	36.32	
836.5	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	Right	Tilt	QPSK	25	0	1:1	0.062	36.30	
836.5	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	Left	Cheek	QPSK	1	0	1:1	0.155	33.34	
836.5	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	Left	Cheek	QPSK	25	0	1:1	0.122	33.36	
836.5	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	Left	Tilt	QPSK	1	0	1:1	0.084	36.00	
836.5	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	Left	Tilt	QPSK	25	0	1:1	0.068	35.89	

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




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Table A-3
DSI = 2 P_{Limit} Calculations – 4G Head SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Duty Cycle	SAR (1g)	PLimit	Minimum PLimit	
MHz	Ch.											[W/kg]	[dBm]	[dBm]	
1720.0	132072	Low	LTE Band 66 (AWS)	20	23.73	0	Right	Cheek	QPSK	1	50	1:1	0.116	33.09	32.81
1720.0	132072	Low	LTE Band 66 (AWS)	20	22.85	1	Right	Cheek	QPSK	50	50	1:1	0.101	32.81	
1720.0	132072	Low	LTE Band 66 (AWS)	20	23.73	0	Right	Tilt	QPSK	1	50	1:1	0.085	34.44	
1720.0	132072	Low	LTE Band 66 (AWS)	20	22.85	1	Right	Tilt	QPSK	50	50	1:1	0.072	34.28	
1720.0	132072	Low	LTE Band 66 (AWS)	20	23.73	0	Left	Cheek	QPSK	1	50	1:1	0.099	33.77	
1720.0	132072	Low	LTE Band 66 (AWS)	20	22.85	1	Left	Cheek	QPSK	50	50	1:1	0.080	33.82	
1720.0	132072	Low	LTE Band 66 (AWS)	20	23.73	0	Left	Tilt	QPSK	1	50	1:1	0.088	34.29	
1720.0	132072	Low	LTE Band 66 (AWS)	20	22.85	1	Left	Tilt	QPSK	50	50	1:1	0.073	34.22	
1905.0	26590	High	LTE Band 25 (PCS)	20	23.60	0	Right	Cheek	QPSK	1	50	1:1	0.088	34.16	33.58
1905.0	26590	High	LTE Band 25 (PCS)	20	22.66	1	Right	Cheek	QPSK	50	25	1:1	0.075	33.91	
1905.0	26590	High	LTE Band 25 (PCS)	20	23.60	0	Right	Tilt	QPSK	1	50	1:1	0.042	37.37	
1905.0	26590	High	LTE Band 25 (PCS)	20	22.66	1	Right	Tilt	QPSK	50	25	1:1	0.038	36.86	
1905.0	26590	High	LTE Band 25 (PCS)	20	23.60	0	Left	Cheek	QPSK	1	50	1:1	0.099	33.64	
1905.0	26590	High	LTE Band 25 (PCS)	20	22.66	1	Left	Cheek	QPSK	50	25	1:1	0.081	33.58	
1905.0	26590	High	LTE Band 25 (PCS)	20	23.60	0	Left	Tilt	QPSK	1	50	1:1	0.095	33.82	
1905.0	26590	High	LTE Band 25 (PCS)	20	22.66	1	Left	Tilt	QPSK	50	25	1:1	0.078	33.74	
2310.0	27710	Mid	LTE Band 30	10	23.84	0	Right	Cheek	QPSK	1	0	1:1	0.038	38.04	36.86
2310.0	27710	Mid	LTE Band 30	10	22.88	1	Right	Cheek	QPSK	25	12	1:1	0.037	37.20	
2310.0	27710	Mid	LTE Band 30	10	23.84	0	Right	Tilt	QPSK	1	0	1:1	0.027	39.53	
2310.0	27710	Mid	LTE Band 30	10	22.88	1	Right	Tilt	QPSK	25	12	1:1	0.016	40.84	
2310.0	27710	Mid	LTE Band 30	10	23.84	0	Left	Cheek	QPSK	1	0	1:1	0.046	37.21	
2310.0	27710	Mid	LTE Band 30	10	22.88	1	Left	Cheek	QPSK	25	12	1:1	0.040	36.86	
2310.0	27710	Mid	LTE Band 30	10	23.84	0	Left	Tilt	QPSK	1	0	1:1	0.038	38.04	
2310.0	27710	Mid	LTE Band 30	10	22.88	1	Left	Tilt	QPSK	25	12	1:1	0.024	39.08	
2510.0	20850	Low	LTE Band 7	20	23.24	0	Right	Cheek	QPSK	1	50	1:1	0.087	33.84	33.64
2510.0	20850	Low	LTE Band 7	20	22.33	1	Right	Cheek	QPSK	50	25	1:1	0.074	33.64	
2510.0	20850	Low	LTE Band 7	20	23.24	0	Right	Tilt	QPSK	1	50	1:1	0.052	36.08	
2510.0	20850	Low	LTE Band 7	20	22.33	1	Right	Tilt	QPSK	50	25	1:1	0.042	36.10	
2510.0	20850	Low	LTE Band 7	20	23.24	0	Left	Cheek	QPSK	1	50	1:1	0.062	35.32	
2510.0	20850	Low	LTE Band 7	20	22.33	1	Left	Cheek	QPSK	50	25	1:1	0.050	35.34	
2510.0	20850	Low	LTE Band 7	20	23.24	0	Left	Tilt	QPSK	1	50	1:1	0.089	33.75	
2510.0	20850	Low	LTE Band 7	20	22.33	1	Left	Tilt	QPSK	50	25	1:1	0.061	34.48	
2680.0	41490	High	LTE Band 41	20	24.38	0	Right	Cheek	QPSK	1	50	1:1.58	0.054	35.07	34.76
2680.0	41490	High	LTE Band 41	20	23.37	1	Right	Cheek	QPSK	50	25	1:1.58	0.046	34.76	
2680.0	41490	High	LTE Band 41	20	24.38	0	Right	Tilt	QPSK	1	50	1:1.58	0.033	37.21	
2680.0	41490	High	LTE Band 41	20	23.37	1	Right	Tilt	QPSK	50	25	1:1.58	0.024	37.58	
2680.0	41490	High	LTE Band 41	20	24.38	0	Left	Cheek	QPSK	1	50	1:1.58	0.051	35.32	
2680.0	41490	High	LTE Band 41	20	23.37	1	Left	Cheek	QPSK	50	25	1:1.58	0.040	35.36	
2680.0	41490	High	LTE Band 41	20	24.38	0	Left	Tilt	QPSK	1	50	1:1.58	0.051	35.32	
2680.0	41490	High	LTE Band 41	20	23.37	1	Left	Tilt	QPSK	50	25	1:1.58	0.039	35.47	

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




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Table A-4
DSI = 2 P_{Limit} Calculations – 5G Head SAR

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Side	Test Position	Modulation	RB Size	RB Offset	Duty Cycle	SAR (1g)	PLimit	Minimum PLimit
MHz	Ch.												(W/kg)	[dBm]	[dBm]
680.50	136100	Mid	NR Band n71	20	25.10	0	Right	Cheek	DFT-s-OFDM QPSK	1	53	1:1	0.121	34.27	33.40
680.50	136100	Mid	NR Band n71	20	24.95	0	Right	Cheek	DFT-s-OFDM QPSK	50	28	1:1	0.123	34.05	
680.50	136100	Mid	NR Band n71	20	25.10	0	Right	Tilt	DFT-s-OFDM QPSK	1	53	1:1	0.075	36.35	
680.50	136100	Mid	NR Band n71	20	24.95	0	Right	Tilt	DFT-s-OFDM QPSK	50	28	1:1	0.072	36.38	
680.50	136100	Mid	NR Band n71	20	25.10	0	Left	Cheek	DFT-s-OFDM QPSK	1	53	1:1	0.148	33.40	
680.50	136100	Mid	NR Band n71	20	24.95	0	Left	Cheek	DFT-s-OFDM QPSK	50	28	1:1	0.132	33.74	
680.50	136100	Mid	NR Band n71	20	25.10	0	Left	Tilt	DFT-s-OFDM QPSK	1	53	1:1	0.065	36.97	
680.50	136100	Mid	NR Band n71	20	24.95	0	Left	Tilt	DFT-s-OFDM QPSK	50	28	1:1	0.065	36.82	
680.50	136100	Mid	NR Band n71	20	23.43	1.5	Left	Cheek	CP-OFDM QPSK	1	1	1:1	0.095	33.65	
1720.00	344000	Low	NR Band n66	20	23.97	0	Right	Cheek	DFT-s-OFDM QPSK	1	1	1:1	0.167	31.74	31.74
1720.00	344000	Low	NR Band n66	20	23.81	0	Right	Cheek	DFT-s-OFDM QPSK	50	28	1:1	0.128	32.74	
1720.00	344000	Low	NR Band n66	20	23.97	0	Right	Tilt	DFT-s-OFDM QPSK	1	1	1:1	0.090	34.43	
1720.00	344000	Low	NR Band n66	20	23.81	0	Right	Tilt	DFT-s-OFDM QPSK	50	28	1:1	0.092	34.17	
1720.00	344000	Low	NR Band n66	20	23.97	0	Left	Cheek	DFT-s-OFDM QPSK	1	1	1:1	0.108	33.64	
1720.00	344000	Low	NR Band n66	20	23.81	0	Left	Cheek	DFT-s-OFDM QPSK	50	28	1:1	0.100	33.81	
1720.00	344000	Low	NR Band n66	20	23.97	0	Left	Tilt	DFT-s-OFDM QPSK	1	1	1:1	0.106	33.72	
1720.00	344000	Low	NR Band n66	20	23.81	0	Left	Tilt	DFT-s-OFDM QPSK	50	28	1:1	0.093	34.13	
1720.00	344000	Low	NR Band n66	20	22.52	1.5	Right	Cheek	CP-OFDM QPSK	1	1	1:1	0.112	32.03	
2592.99	518598	Mid	NR Band n41	100	23.49	0	Right	Cheek	DFT-s-OFDM QPSK	1	1	1:4	0.541	20.14	18.93
2592.99	518598	Mid	NR Band n41	100	23.41	0	Right	Cheek	DFT-s-OFDM QPSK	135	0	1:4	0.528	20.16	
2592.99	518598	Mid	NR Band n41	100	23.49	0	Right	Tilt	DFT-s-OFDM QPSK	1	1	1:4	0.616	19.57	
2592.99	518598	Mid	NR Band n41	100	23.41	0	Right	Tilt	DFT-s-OFDM QPSK	135	0	1:4	0.592	19.67	
2592.99	518598	Mid	NR Band n41	100	23.40	0	Right	Tilt	DFT-s-OFDM QPSK	270	0	1:4	0.601	19.59	
2592.99	518598	Mid	NR Band n41	100	23.49	0	Left	Cheek	DFT-s-OFDM QPSK	1	1	1:4	0.599	19.70	
2592.99	518598	Mid	NR Band n41	100	23.41	0	Left	Cheek	DFT-s-OFDM QPSK	135	0	1:4	0.537	20.09	
2592.99	518598	Mid	NR Band n41	100	23.40	0	Left	Cheek	DFT-s-OFDM QPSK	270	0	1:4	0.492	20.46	
2592.99	518598	Mid	NR Band n41	100	23.49	0	Left	Tilt	DFT-s-OFDM QPSK	1	1	1:4	0.715	18.93	
2592.99	518598	Mid	NR Band n41	100	23.41	0	Left	Tilt	DFT-s-OFDM QPSK	135	0	1:4	0.593	19.66	
2592.99	518598	Mid	NR Band n41	100	23.40	0	Left	Tilt	DFT-s-OFDM QPSK	270	0	1:4	0.522	20.20	
2592.99	518598	Mid	NR Band n41	100	23.35	0	Left	Tilt	CP-OFDM QPSK	1	1	1:4	0.595	19.58	

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




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Table A-5
DSI = 0 P_{Limit} Calculations – 2G/3G Body-Worn SAR

MEASUREMENT RESULTS										
FREQUENCY		Mode/Band	Service	Conducted Power [dBm]	Spacing (mm)	Side	Duty Cycle	SAR (1g)	PLimit	Minimum PLimit
MHz	Ch.							(W/kg)	[dBm]	[dBm]
836.52	384	CDMA BC0 (\$22H)	TDSO / SO32	24.73	15	Back	1:1	0.312	29.79	29.79
836.52	384	CDMA BC0 (\$22H)	TDSO / SO32	24.73	15	Front	1:1	0.225	31.21	
836.60	190	GSM 850	GSM	33.14	15	Back	1:8.3	0.149	32.21	32.21
836.60	190	GSM 850	GSM	33.14	15	Front	1:8.3	0.136	32.60	
1880.00	661	GSM 1900	GSM	29.56	15	Back	1:8.3	0.294	25.68	25.68
1880.00	661	GSM 1900	GSM	29.56	15	Front	1:8.3	0.232	26.70	
836.60	4183	UMTS 850	RMC	25.17	15	Back	1:1	0.303	30.36	30.36
836.60	4183	UMTS 850	RMC	25.17	15	Front	1:1	0.223	31.69	
1712.40	1312	UMTS 1750	RMC	24.18	15	Back	1:1	0.880	24.74	24.74
1732.40	1412	UMTS 1750	RMC	23.98	15	Back	1:1	0.569	26.43	
1752.60	1513	UMTS 1750	RMC	23.88	15	Back	1:1	0.640	25.82	
1732.40	1412	UMTS 1750	RMC	23.98	15	Front	1:1	0.477	27.19	
1880.00	9400	UMTS 1900	RMC	23.42	15	Back	1:1	0.449	26.90	26.90
1880.00	9400	UMTS 1900	RMC	23.42	15	Front	1:1	0.318	28.40	

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




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
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Table A-6
DSI = 0 P_{Limit} Calculations – 4G Body-Worn SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing (mm)	Side	Duty Cycle	SAR (1g)	PLimit	Minimum PLimit	
MHz	Ch.											(W/kg)	[dBm]	[dBm]	
680.50	133297	Mid	LTE Band 71	20	25.18	0	QPSK	1	0	15	Back	1:1	0.226	31.64	31.40
680.50	133297	Mid	LTE Band 71	20	24.19	1	QPSK	50	0	15	Back	1:1	0.190	31.40	
680.50	133297	Mid	LTE Band 71	20	25.18	0	QPSK	1	0	15	Front	1:1	0.186	32.48	
680.50	133297	Mid	LTE Band 71	20	24.19	1	QPSK	50	0	15	Front	1:1	0.158	32.20	
707.50	23095	Mid	LTE Band 12	10	25.41	0	QPSK	1	0	15	Back	1:1	0.247	31.48	31.14
707.50	23095	Mid	LTE Band 12	10	24.19	1	QPSK	25	0	15	Back	1:1	0.202	31.14	
707.50	23095	Mid	LTE Band 12	10	25.41	0	QPSK	1	0	15	Front	1:1	0.227	31.85	
707.50	23095	Mid	LTE Band 12	10	24.19	1	QPSK	25	0	15	Front	1:1	0.182	31.59	
782.00	23230	Mid	LTE Band 13	10	25.25	0	QPSK	1	0	15	Back	1:1	0.354	29.76	29.44
782.00	23230	Mid	LTE Band 13	10	24.23	1	QPSK	25	12	15	Back	1:1	0.301	29.44	
782.00	23230	Mid	LTE Band 13	10	25.25	0	QPSK	1	0	15	Front	1:1	0.282	30.75	
782.00	23230	Mid	LTE Band 13	10	24.23	1	QPSK	25	12	15	Front	1:1	0.251	30.23	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	QPSK	1	0	15	Back	1:1	0.248	31.30	31.02
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	QPSK	25	0	15	Back	1:1	0.209	31.02	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	QPSK	1	0	15	Front	1:1	0.197	32.30	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	QPSK	25	0	15	Front	1:1	0.163	32.10	
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.73	0	QPSK	1	50	15	Back	1:1	0.691	25.34	24.75
1745.00	132322	Mid	LTE Band 66 (AWS)	20	23.66	0	QPSK	1	50	15	Back	1:1	0.739	24.97	
1770.00	132572	High	LTE Band 66 (AWS)	20	23.70	0	QPSK	1	50	15	Back	1:1	0.785	24.75	
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.85	1	QPSK	50	50	15	Back	1:1	0.575	25.25	
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.80	1	QPSK	100	0	15	Back	1:1	0.584	25.14	
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.73	0	QPSK	1	50	15	Front	1:1	0.523	26.54	
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.85	1	QPSK	50	50	15	Front	1:1	0.435	26.47	
1860.00	26140	Low	LTE Band 25 (PCS)	20	23.52	0	QPSK	1	0	15	Back	1:1	0.683	25.18	25.16
1882.50	26365	Mid	LTE Band 25 (PCS)	20	23.46	0	QPSK	1	0	15	Back	1:1	0.667	25.22	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.60	0	QPSK	1	50	15	Back	1:1	0.691	25.21	
1905.00	26590	High	LTE Band 25 (PCS)	20	22.66	1	QPSK	50	25	15	Back	1:1	0.556	25.21	
1905.00	26590	High	LTE Band 25 (PCS)	20	22.55	1	QPSK	100	0	15	Back	1:1	0.548	25.16	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.60	0	QPSK	1	50	15	Front	1:1	0.532	26.34	
1905.00	26590	High	LTE Band 25 (PCS)	20	22.66	1	QPSK	50	25	15	Front	1:1	0.429	26.34	
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	15	Back	1:1	0.588	26.15	26.15
2310.00	27710	Mid	LTE Band 30	10	22.88	1	QPSK	25	12	15	Back	1:1	0.458	26.27	
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	15	Front	1:1	0.423	27.58	
2310.00	27710	Mid	LTE Band 30	10	22.88	1	QPSK	25	12	15	Front	1:1	0.325	27.76	
2510.00	20850	Low	LTE Band 7	20	23.24	0	QPSK	1	50	15	Back	1:1	0.371	27.55	27.31
2510.00	20850	Low	LTE Band 7	20	22.33	1	QPSK	50	25	15	Back	1:1	0.318	27.31	
2510.00	20850	Low	LTE Band 7	20	23.24	0	QPSK	1	50	15	Front	1:1	0.262	29.06	
2510.00	20850	Low	LTE Band 7	20	22.33	1	QPSK	50	25	15	Front	1:1	0.207	29.17	
2680.00	41490	High	LTE Band 41	20	24.38	0	QPSK	1	50	15	Back	1:1.58	0.249	28.43	28.42
2680.00	41490	High	LTE Band 41	20	23.37	1	QPSK	50	25	15	Back	1:1.58	0.198	28.42	
2680.00	41490	High	LTE Band 41	20	24.38	0	QPSK	1	50	15	Front	1:1.58	0.194	29.52	
2680.00	41490	High	LTE Band 41	20	23.37	1	QPSK	50	25	15	Front	1:1.58	0.160	29.34	

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




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Table A-7
DSI = 0 P_{Limit} Calculations – 5G Body-Worn SAR

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing (mm)	Side	Duty Cycle	SAR (1g)	PLimit	Minimum PLimit
MHz	Ch.												(W/kg)	[dBm]	[dBm]
680.50	136100	Mid	NR Band n71	20	25.10	0	DFT-s-OFDM QPSK	1	53	15	Back	1:1	0.249	31.14	31.14
680.50	136100	Mid	NR Band n71	20	24.95	0	DFT-s-OFDM QPSK	50	28	15	Back	1:1	0.224	31.45	
680.50	136100	Mid	NR Band n71	20	25.10	0	DFT-s-OFDM QPSK	1	53	15	Front	1:1	0.207	31.94	
680.50	136100	Mid	NR Band n71	20	24.95	0	DFT-s-OFDM QPSK	50	28	15	Front	1:1	0.188	32.21	
680.50	136100	Mid	NR Band n71	20	23.43	1.5	CP-OFDM QPSK	1	1	15	Back	1:1	0.167	31.20	
1720.00	344000	Low	NR Band n66	20	23.97	0	DFT-s-OFDM QPSK	1	1	15	Back	1:1	0.811	24.88	24.09
1745.00	349000	Mid	NR Band n66	20	23.85	0	DFT-s-OFDM QPSK	1	53	15	Back	1:1	0.891	24.35	
1770.00	354000	High	NR Band n66	20	23.72	0	DFT-s-OFDM QPSK	1	1	15	Back	1:1	0.853	24.41	
1720.00	344000	Low	NR Band n66	20	23.81	0	DFT-s-OFDM QPSK	50	28	15	Back	1:1	0.815	24.70	
1745.00	349000	Mid	NR Band n66	20	23.56	0	DFT-s-OFDM QPSK	50	28	15	Back	1:1	0.885	24.09	
1770.00	354000	High	NR Band n66	20	23.64	0	DFT-s-OFDM QPSK	50	28	15	Back	1:1	0.753	24.87	
1720.00	344000	Low	NR Band n66	20	22.79	0	DFT-s-OFDM QPSK	100	0	15	Back	1:1	0.644	24.70	
1720.00	344000	Low	NR Band n66	20	23.97	0	DFT-s-OFDM QPSK	1	1	15	Front	1:1	0.634	25.95	
1720.00	344000	Low	NR Band n66	20	23.81	0	DFT-s-OFDM QPSK	50	28	15	Front	1:1	0.649	25.69	
1720.00	344000	Low	NR Band n66	20	22.52	1.5	CP-OFDM QPSK	1	1	15	Back	1:1	0.548	25.13	
2592.99	518598	Mid	NR Band n41	100	24.98	0	DFT-s-OFDM QPSK	1	1	15	Back	1:4	0.079	29.98	29.61
2592.99	518598	Mid	NR Band n41	100	24.63	0	DFT-s-OFDM QPSK	135	69	15	Back	1:4	0.059	30.90	
2592.99	518598	Mid	NR Band n41	100	24.98	0	DFT-s-OFDM QPSK	1	1	15	Front	1:4	0.086	29.61	
2592.99	518598	Mid	NR Band n41	100	24.63	0	DFT-s-OFDM QPSK	135	69	15	Front	1:4	0.061	30.76	
2592.99	518598	Mid	NR Band n41	100	23.75	1.5	CP-OFDM QPSK	1	1	15	Back	1:4	0.057	30.17	
2592.99	518598	Mid	NR Band n41	100	23.75	1.5	CP-OFDM QPSK	1	1	15	Front	1:4	0.062	29.81	

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




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Table A-8
DSI = 3 P_{Limit} Calculations – 2G/3G Hotspot SAR

MEASUREMENT RESULTS											
FREQUENCY		Mode/Band	Service	Conducted Power [dBm]	Spacing (mm)	Side	# of GPRS Slots	Duty Cycle	SAR (1g)	P _{Limit}	Minimum P _{Limit}
MHz	Ch.								(W/kg)	(dBm)	(dBm)
824.70	1013	CDMA BC0 (\$22H)	EVDO Rev. 0	24.88	10	Back	N/A	1:1	0.663	26.66	25.86
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.89	10	Back	N/A	1:1	0.683	26.55	
848.31	777	CDMA BC0 (\$22H)	EVDO Rev. 0	24.45	10	Back	N/A	1:1	0.722	25.86	
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.89	10	Front	N/A	1:1	0.402	28.85	
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.89	10	Bottom	N/A	1:1	0.351	29.44	
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.89	10	Right	N/A	1:1	0.066	36.69	
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.89	10	Left	N/A	1:1	0.191	32.08	
836.60	190	GSM 850	GPRS	30.01	10	Back	3	1:2.76	0.396	29.60	29.60
836.60	190	GSM 850	GPRS	30.01	10	Front	3	1:2.76	0.285	31.03	
836.60	190	GSM 850	GPRS	30.01	10	Bottom	3	1:2.76	0.246	31.67	
836.60	190	GSM 850	GPRS	30.01	10	Right	3	1:2.76	0.048	38.77	
836.60	190	GSM 850	GPRS	30.01	10	Left	3	1:2.76	0.128	34.51	
1880.00	661	GSM 1900	GPRS	22.18	10	Back	4	1:2.076	0.283	24.48	20.57
1880.00	661	GSM 1900	GPRS	22.18	10	Front	4	1:2.076	0.237	25.25	
1850.20	512	GSM 1900	GPRS	22.25	10	Bottom	4	1:2.076	0.621	21.14	
1880.00	661	GSM 1900	GPRS	22.18	10	Bottom	4	1:2.076	0.563	21.49	
1909.80	810	GSM 1900	GPRS	22.45	10	Bottom	4	1:2.076	0.742	20.57	
1880.00	661	GSM 1900	GPRS	22.18	10	Right	4	1:2.076	0.038	33.20	
1880.00	661	GSM 1900	GPRS	22.18	10	Left	4	1:2.076	0.035	33.56	
826.40	4132	UMTS 850	RMC	25.26	10	Back	N/A	1:1	0.571	27.69	27.01
836.60	4183	UMTS 850	RMC	25.17	10	Back	N/A	1:1	0.575	27.57	
846.60	4233	UMTS 850	RMC	24.94	10	Back	N/A	1:1	0.621	27.01	
836.60	4183	UMTS 850	RMC	25.17	10	Front	N/A	1:1	0.382	29.35	
836.60	4183	UMTS 850	RMC	25.17	10	Bottom	N/A	1:1	0.354	29.68	
836.60	4183	UMTS 850	RMC	25.17	10	Right	N/A	1:1	0.072	36.60	
836.60	4183	UMTS 850	RMC	25.17	10	Left	N/A	1:1	0.208	31.99	
1712.40	1312	UMTS 1750	RMC	19.86	10	Back	N/A	1:1	0.599	22.09	20.10
1712.40	1312	UMTS 1750	RMC	19.86	10	Front	N/A	1:1	0.520	22.70	
1712.40	1312	UMTS 1750	RMC	19.86	10	Bottom	N/A	1:1	0.946	20.10	
1732.40	1412	UMTS 1750	RMC	19.67	10	Bottom	N/A	1:1	0.597	21.91	
1752.60	1513	UMTS 1750	RMC	19.00	10	Bottom	N/A	1:1	0.658	20.82	
1712.40	1312	UMTS 1750	RMC	19.86	10	Right	N/A	1:1	0.110	29.45	
1712.40	1312	UMTS 1750	RMC	19.86	10	Left	N/A	1:1	0.072	31.29	
1880.00	9400	UMTS 1900	RMC	18.51	10	Back	N/A	1:1	0.502	21.50	18.68
1880.00	9400	UMTS 1900	RMC	18.51	10	Front	N/A	1:1	0.357	22.98	
1852.40	9262	UMTS 1900	RMC	18.70	10	Bottom	N/A	1:1	0.907	19.12	
1880.00	9400	UMTS 1900	RMC	18.51	10	Bottom	N/A	1:1	0.871	19.11	
1907.60	9538	UMTS 1900	RMC	18.85	10	Bottom	N/A	1:1	1.040	18.68	
1880.00	9400	UMTS 1900	RMC	18.51	10	Right	N/A	1:1	0.051	31.43	
1880.00	9400	UMTS 1900	RMC	18.51	10	Left	N/A	1:1	0.052	31.35	

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




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
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Table A-9
DSI = 3 P_{Limit} Calculations – 4G Hotspot SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing (mm)	Side	Duty Cycle	SAR (1g)	PLimit	Minimum PLimit	
MHz	Ch.											(W/kg)	[dBm]	[dBm]	
680.50	133297	Mid	LTE Band 71	20	25.18	0	QPSK	1	0	10	Back	1:1	0.331	29.98	29.77
680.50	133297	Mid	LTE Band 71	20	24.19	1	QPSK	50	0	10	Back	1:1	0.277	29.77	
680.50	133297	Mid	LTE Band 71	20	25.18	0	QPSK	1	0	10	Front	1:1	0.209	31.98	
680.50	133297	Mid	LTE Band 71	20	24.19	1	QPSK	50	0	10	Front	1:1	0.173	31.81	
680.50	133297	Mid	LTE Band 71	20	25.18	0	QPSK	1	0	10	Bottom	1:1	0.162	33.08	
680.50	133297	Mid	LTE Band 71	20	24.19	1	QPSK	50	0	10	Bottom	1:1	0.141	32.70	
680.50	133297	Mid	LTE Band 71	20	25.18	0	QPSK	1	0	10	Right	1:1	0.180	32.63	
680.50	133297	Mid	LTE Band 71	20	24.19	1	QPSK	50	0	10	Right	1:1	0.147	32.52	
680.50	133297	Mid	LTE Band 71	20	25.18	0	QPSK	1	0	10	Left	1:1	0.280	30.71	
680.50	133297	Mid	LTE Band 71	20	24.19	1	QPSK	50	0	10	Left	1:1	0.227	30.63	
707.50	23095	Mid	LTE Band 12	10	25.41	0	QPSK	1	0	10	Back	1:1	0.398	29.41	29.28
707.50	23095	Mid	LTE Band 12	10	24.19	1	QPSK	25	0	10	Back	1:1	0.310	29.28	
707.50	23095	Mid	LTE Band 12	10	25.41	0	QPSK	1	0	10	Front	1:1	0.251	31.41	
707.50	23095	Mid	LTE Band 12	10	24.19	1	QPSK	25	0	10	Front	1:1	0.197	31.25	
707.50	23095	Mid	LTE Band 12	10	25.41	0	QPSK	1	0	10	Bottom	1:1	0.219	32.01	
707.50	23095	Mid	LTE Band 12	10	24.19	1	QPSK	25	0	10	Bottom	1:1	0.172	31.83	
707.50	23095	Mid	LTE Band 12	10	25.41	0	QPSK	1	0	10	Right	1:1	0.169	33.13	
707.50	23095	Mid	LTE Band 12	10	24.19	1	QPSK	25	0	10	Right	1:1	0.128	33.12	
707.50	23095	Mid	LTE Band 12	10	25.41	0	QPSK	1	0	10	Left	1:1	0.258	31.29	
707.50	23095	Mid	LTE Band 12	10	24.19	1	QPSK	25	0	10	Left	1:1	0.231	30.55	
782.00	23230	Mid	LTE Band 13	10	25.25	0	QPSK	1	0	10	Back	1:1	0.580	27.62	27.21
782.00	23230	Mid	LTE Band 13	10	24.23	1	QPSK	25	12	10	Back	1:1	0.504	27.21	
782.00	23230	Mid	LTE Band 13	10	25.25	0	QPSK	1	0	10	Front	1:1	0.417	29.05	
782.00	23230	Mid	LTE Band 13	10	24.23	1	QPSK	25	12	10	Front	1:1	0.367	28.58	
782.00	23230	Mid	LTE Band 13	10	25.25	0	QPSK	1	0	10	Bottom	1:1	0.368	29.59	
782.00	23230	Mid	LTE Band 13	10	24.23	1	QPSK	25	12	10	Bottom	1:1	0.344	28.86	
782.00	23230	Mid	LTE Band 13	10	25.25	0	QPSK	1	0	10	Right	1:1	0.099	35.29	
782.00	23230	Mid	LTE Band 13	10	24.23	1	QPSK	25	12	10	Right	1:1	0.080	35.20	
782.00	23230	Mid	LTE Band 13	10	25.25	0	QPSK	1	0	10	Left	1:1	0.316	30.25	
782.00	23230	Mid	LTE Band 13	10	24.23	1	QPSK	25	12	10	Left	1:1	0.255	30.16	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	QPSK	1	0	10	Back	1:1	0.503	28.22	27.96
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	QPSK	25	0	10	Back	1:1	0.423	27.96	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	QPSK	1	0	10	Front	1:1	0.349	29.81	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	QPSK	25	0	10	Front	1:1	0.292	29.57	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	QPSK	1	0	10	Bottom	1:1	0.304	30.41	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	QPSK	25	0	10	Bottom	1:1	0.256	30.14	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	QPSK	1	0	10	Right	1:1	0.059	37.53	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	QPSK	25	0	10	Right	1:1	0.051	37.14	
836.50	20525	Mid	LTE Band 5 (Cell)	10	25.24	0	QPSK	1	0	10	Left	1:1	0.171	32.91	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.22	1	QPSK	25	0	10	Left	1:1	0.145	32.61	

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




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
Test Dates: 04/27/20 – 06/11/20	DUT Type: Portable Handset			APPENDIX A: Page 9 of 20

Table A-10
DSI = 3 P_{Limit} Calculations – 4G Hotspot SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing (mm)	Side	Duty Cycle	SAR (1g)	PLimit	Minimum PLimit [dBm]	
MHz	Ch.											[W/kg]	[dBm]		
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.96	0	QPSK	1	50	10	Back	1:1	0.459	23.34	19.98
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.97	0	QPSK	50	50	10	Back	1:1	0.479	23.17	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.96	0	QPSK	1	50	10	Front	1:1	0.384	24.12	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.97	0	QPSK	50	50	10	Front	1:1	0.398	23.97	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.96	0	QPSK	1	50	10	Bottom	1:1	0.766	21.12	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.97	0	QPSK	50	50	10	Bottom	1:1	0.769	21.11	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	19.38	0	QPSK	50	25	10	Bottom	1:1	0.791	20.40	
1770.00	132572	High	LTE Band 66 (AWS)	20	19.34	0	QPSK	50	25	10	Bottom	1:1	0.862	19.98	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.91	0	QPSK	100	0	10	Bottom	1:1	0.771	21.04	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.96	0	QPSK	1	50	10	Right	1:1	0.087	30.56	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.97	0	QPSK	50	50	10	Right	1:1	0.091	30.38	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.96	0	QPSK	1	50	10	Left	1:1	0.063	31.97	
1720.00	132072	Low	LTE Band 66 (AWS)	20	19.97	0	QPSK	50	50	10	Left	1:1	0.064	31.91	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.25	0	QPSK	1	50	10	Back	1:1	0.578	21.63	18.67
1905.00	26590	High	LTE Band 25 (PCS)	20	19.31	0	QPSK	50	25	10	Back	1:1	0.600	21.53	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.25	0	QPSK	1	50	10	Front	1:1	0.462	22.60	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.31	0	QPSK	50	25	10	Front	1:1	0.476	22.53	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.20	0	QPSK	1	0	10	Bottom	1:1	1.010	19.16	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19.09	0	QPSK	1	99	10	Bottom	1:1	1.050	18.88	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.25	0	QPSK	1	50	10	Bottom	1:1	1.110	18.80	
1860.00	26140	Low	LTE Band 25 (PCS)	20	19.27	0	QPSK	50	25	10	Bottom	1:1	1.020	19.18	
1882.50	26365	Mid	LTE Band 25 (PCS)	20	19.12	0	QPSK	50	50	10	Bottom	1:1	1.050	18.91	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.31	0	QPSK	50	25	10	Bottom	1:1	1.160	18.67	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.20	0	QPSK	100	0	10	Bottom	1:1	1.100	18.79	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.25	0	QPSK	1	50	10	Right	1:1	0.054	31.93	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.31	0	QPSK	50	25	10	Right	1:1	0.052	32.15	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.25	0	QPSK	1	50	10	Left	1:1	0.047	32.53	
1905.00	26590	High	LTE Band 25 (PCS)	20	19.31	0	QPSK	50	25	10	Left	1:1	0.048	32.50	
2310.00	27710	Mid	LTE Band 30	10	19.26	0	QPSK	1	0	10	Back	1:1	0.439	22.84	19.02
2310.00	27710	Mid	LTE Band 30	10	19.31	0	QPSK	25	12	10	Back	1:1	0.437	22.91	
2310.00	27710	Mid	LTE Band 30	10	19.26	0	QPSK	1	0	10	Front	1:1	0.327	24.11	
2310.00	27710	Mid	LTE Band 30	10	19.31	0	QPSK	25	12	10	Front	1:1	0.320	24.26	
2310.00	27710	Mid	LTE Band 30	10	19.26	0	QPSK	1	0	10	Bottom	1:1	1.050	19.05	
2310.00	27710	Mid	LTE Band 30	10	19.31	0	QPSK	25	12	10	Bottom	1:1	1.070	19.02	
2310.00	27710	Mid	LTE Band 30	10	19.24	0	QPSK	50	0	10	Bottom	1:1	1.040	19.07	
2310.00	27710	Mid	LTE Band 30	10	19.26	0	QPSK	1	0	10	Right	1:1	0.067	31.00	
2310.00	27710	Mid	LTE Band 30	10	19.31	0	QPSK	25	12	10	Right	1:1	0.066	31.11	
2310.00	27710	Mid	LTE Band 30	10	19.26	0	QPSK	1	0	10	Left	1:1	0.027	34.95	
2310.00	27710	Mid	LTE Band 30	10	19.31	0	QPSK	25	12	10	Left	1:1	0.024	35.51	
2510.00	20850	Low	LTE Band 7	20	19.42	0	QPSK	1	0	10	Back	1:1	0.235	25.71	
2510.00	20850	Low	LTE Band 7	20	19.41	0	QPSK	50	25	10	Back	1:1	0.247	25.48	
2510.00	20850	Low	LTE Band 7	20	19.42	0	QPSK	1	0	10	Front	1:1	0.161	27.35	
2510.00	20850	Low	LTE Band 7	20	19.41	0	QPSK	50	25	10	Front	1:1	0.167	27.18	
2510.00	20850	Low	LTE Band 7	20	19.42	0	QPSK	1	0	10	Bottom	1:1	0.482	22.59	
2510.00	20850	Low	LTE Band 7	20	19.41	0	QPSK	50	25	10	Bottom	1:1	0.514	22.30	
2510.00	20850	Low	LTE Band 7	20	19.42	0	QPSK	1	0	10	Right	1:1	0.102	29.33	
2510.00	20850	Low	LTE Band 7	20	19.41	0	QPSK	50	25	10	Right	1:1	0.106	29.16	
2680.00	41490	High	LTE Band 41	20	21.44	0	QPSK	1	50	10	Back	1:1.58	0.226	25.91	25.91
2680.00	41490	High	LTE Band 41	20	21.59	1	QPSK	50	25	10	Back	1:1.58	0.217	26.24	
2680.00	41490	High	LTE Band 41	20	21.44	0	QPSK	1	50	10	Front	1:1.58	0.182	26.85	
2680.00	41490	High	LTE Band 41	20	21.59	1	QPSK	50	25	10	Front	1:1.58	0.176	27.15	
2680.00	41490	High	LTE Band 41	20	21.44	0	QPSK	1	50	10	Bottom	1:1.58	0.414	23.28	
2680.00	41490	High	LTE Band 41	20	21.59	1	QPSK	50	25	10	Bottom	1:1.58	0.396	23.63	
2680.00	41490	High	LTE Band 41	20	21.44	0	QPSK	1	50	10	Right	1:1.58	0.092	29.82	
2680.00	41490	High	LTE Band 41	20	21.59	1	QPSK	50	25	10	Right	1:1.58	0.088	30.16	

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




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
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Table A-11
DSI = 3 P_{Limit} Calculations – 5G Hotspot SAR

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing (mm)	Side	Duty Cycle	SAR (1g)	PLimit	Minimum PLimit
MHz	Ch.												(W/kg)	[dBm]	[dBm]
680.50	136100	Mid	NR Band n71	20	25.10	0	DFT-s-OFDM QPSK	1	53	10	Back	1:1	0.341	29.77	29.57
680.50	136100	Mid	NR Band n71	20	24.95	0	DFT-s-OFDM QPSK	50	28	10	Back	1:1	0.345	29.57	
680.50	136100	Mid	NR Band n71	20	25.10	0	DFT-s-OFDM QPSK	1	53	10	Front	1:1	0.205	31.98	
680.50	136100	Mid	NR Band n71	20	24.95	0	DFT-s-OFDM QPSK	50	28	10	Front	1:1	0.208	31.77	
680.50	136100	Mid	NR Band n71	20	25.10	0	DFT-s-OFDM QPSK	1	53	10	Bottom	1:1	0.199	32.11	
680.50	136100	Mid	NR Band n71	20	24.95	0	DFT-s-OFDM QPSK	50	28	10	Bottom	1:1	0.189	32.19	
680.50	136100	Mid	NR Band n71	20	25.10	0	DFT-s-OFDM QPSK	1	53	10	Right	1:1	0.171	32.77	
680.50	136100	Mid	NR Band n71	20	24.95	0	DFT-s-OFDM QPSK	50	28	10	Right	1:1	0.163	32.83	
680.50	136100	Mid	NR Band n71	20	25.10	0	DFT-s-OFDM QPSK	1	53	10	Left	1:1	0.266	30.85	
680.50	136100	Mid	NR Band n71	20	24.95	0	DFT-s-OFDM QPSK	50	28	10	Left	1:1	0.262	30.77	
680.50	136100	Mid	NR Band n71	20	23.43	1.5	CP-OFDM QPSK	1	1	10	Back	1:1	0.241	29.61	
1720.00	344000	Low	NR Band n66	20	20.00	0	DFT-s-OFDM QPSK	1	53	10	Back	1:1	0.584	22.34	19.35
1720.00	344000	Low	NR Band n66	20	19.64	0	DFT-s-OFDM QPSK	50	0	10	Back	1:1	0.590	21.93	
1720.00	344000	Low	NR Band n66	20	20.00	0	DFT-s-OFDM QPSK	1	53	10	Front	1:1	0.518	22.86	
1720.00	344000	Low	NR Band n66	20	19.64	0	DFT-s-OFDM QPSK	50	0	10	Front	1:1	0.494	22.70	
1720.00	344000	Low	NR Band n66	20	20.00	0	DFT-s-OFDM QPSK	1	53	10	Bottom	1:1	0.867	20.62	
1745.00	349000	Mid	NR Band n66	20	19.85	0	DFT-s-OFDM QPSK	1	53	10	Bottom	1:1	0.990	19.89	
1770.00	354000	High	NR Band n66	20	19.99	0	DFT-s-OFDM QPSK	1	53	10	Bottom	1:1	0.841	20.74	
1720.00	344000	Low	NR Band n66	20	19.64	0	DFT-s-OFDM QPSK	50	0	10	Bottom	1:1	0.931	19.95	
1745.00	349000	Mid	NR Band n66	20	19.44	0	DFT-s-OFDM QPSK	50	0	10	Bottom	1:1	0.945	19.69	
1770.00	354000	High	NR Band n66	20	19.63	0	DFT-s-OFDM QPSK	50	0	10	Bottom	1:1	1.030	19.50	
1720.00	344000	Low	NR Band n66	20	19.59	0	DFT-s-OFDM QPSK	100	0	10	Bottom	1:1	0.923	19.94	
1720.00	344000	Low	NR Band n66	20	20.00	0	DFT-s-OFDM QPSK	1	53	10	Right	1:1	0.124	29.07	
1720.00	344000	Low	NR Band n66	20	19.64	0	DFT-s-OFDM QPSK	50	0	10	Right	1:1	0.119	28.88	
1720.00	344000	Low	NR Band n66	20	20.00	0	DFT-s-OFDM QPSK	1	53	10	Left	1:1	0.080	30.97	
1720.00	344000	Low	NR Band n66	20	19.64	0	DFT-s-OFDM QPSK	50	0	10	Left	1:1	0.078	30.72	
1770.00	354000	High	NR Band n66	20	19.48	0	CP-OFDM QPSK	1	1	10	Bottom	1:1	1.030	19.35	
2592.99	518598	Mid	NR Band n41	100	24.98	0	DFT-s-OFDM QPSK	1	1	10	Back	1:4	0.140	27.50	
2592.99	518598	Mid	NR Band n41	100	24.63	0	DFT-s-OFDM QPSK	135	69	10	Back	1:4	0.101	28.57	
2592.99	518598	Mid	NR Band n41	100	24.98	0	DFT-s-OFDM QPSK	1	1	10	Front	1:4	0.146	27.32	
2592.99	518598	Mid	NR Band n41	100	24.63	0	DFT-s-OFDM QPSK	135	69	10	Front	1:4	0.101	28.57	
2592.99	518598	Mid	NR Band n41	100	24.98	0	DFT-s-OFDM QPSK	1	1	10	Top	1:4	0.534	21.68	
2592.99	518598	Mid	NR Band n41	100	24.63	0	DFT-s-OFDM QPSK	135	69	10	Top	1:4	0.358	23.07	
2592.99	518598	Mid	NR Band n41	100	23.92	0	DFT-s-OFDM QPSK	270	0	10	Top	1:4	0.289	23.29	
2592.99	518598	Mid	NR Band n41	100	24.98	0	DFT-s-OFDM QPSK	1	1	10	Left	1:4	0.021	35.74	
2592.99	518598	Mid	NR Band n41	100	24.63	0	DFT-s-OFDM QPSK	135	69	10	Left	1:4	0.016	36.57	
2592.99	518598	Mid	NR Band n41	100	23.75	1.5	CP-OFDM QPSK	1	1	10	Top	1:4	0.372	22.02	

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




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
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Table A-12
DSI = 0 P_{Limit} Calculations – 2G/3G Phablet SAR

MEASUREMENT RESULTS											
FREQUENCY		Mode/Band	Service	Conducted Power [dBm]	Spacing	Side	# of GPRS Slots	Duty Cycle	SAR (10g)	PLimit	Minimum PLimit
MHz	Ch.								(W/kg)	[dBm]	[dBm]
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.66	8	Back	N/A	1:1	0.512	31.55	31.55
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.66	6	Front	N/A	1:1	0.502	31.63	
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.66	12	Bottom	N/A	1:1	0.122	37.78	
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.66	0	Right	N/A	1:1	0.216	35.29	
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.66	0	Left	N/A	1:1	0.214	35.34	
836.60	190	GSM 850	GPRS	29.58	8	Back	3	1:2.76	0.543	31.78	31.78
836.60	190	GSM 850	GPRS	29.58	6	Front	3	1:2.76	0.496	32.17	
836.60	190	GSM 850	GPRS	29.58	12	Bottom	3	1:2.76	0.165	36.95	
836.60	190	GSM 850	GPRS	29.58	0	Right	3	1:2.76	0.272	34.78	
836.60	190	GSM 850	GPRS	29.58	0	Left	3	1:2.76	0.252	35.12	
1880.00	661	GSM 1900	GPRS	26.87	8	Back	3	1:2.76	0.539	29.10	28.00
1880.00	661	GSM 1900	GPRS	26.87	6	Front	3	1:2.76	0.625	28.46	
1880.00	661	GSM 1900	GPRS	26.87	12	Bottom	3	1:2.76	0.695	28.00	
1880.00	661	GSM 1900	GPRS	26.87	0	Right	3	1:2.76	0.260	32.27	
1880.00	661	GSM 1900	GPRS	26.87	0	Left	3	1:2.76	0.172	34.06	
826.40	4132	UMTS 850	RMC	24.74	8	Back	N/A	1:1	0.562	31.22	31.22
826.40	4132	UMTS 850	RMC	24.74	6	Front	N/A	1:1	0.543	31.37	
826.40	4132	UMTS 850	RMC	24.74	12	Bottom	N/A	1:1	0.150	36.96	
826.40	4132	UMTS 850	RMC	24.74	0	Right	N/A	1:1	0.224	35.22	
826.40	4132	UMTS 850	RMC	24.74	0	Left	N/A	1:1	0.241	34.90	
1732.40	1412	UMTS 1750	RMC	23.98	8	Back	N/A	1:1	0.808	28.89	28.48
1732.40	1412	UMTS 1750	RMC	23.98	6	Front	N/A	1:1	0.888	28.48	
1732.40	1412	UMTS 1750	RMC	23.98	12	Bottom	N/A	1:1	0.687	29.59	
1732.40	1412	UMTS 1750	RMC	23.98	0	Right	N/A	1:1	0.459	31.34	
1732.40	1412	UMTS 1750	RMC	23.98	0	Left	N/A	1:1	0.276	33.55	
1880.00	9400	UMTS 1900	RMC	23.42	8	Back	N/A	1:1	0.969	27.54	27.11
1880.00	9400	UMTS 1900	RMC	23.42	6	Front	N/A	1:1	1.040	27.23	
1880.00	9400	UMTS 1900	RMC	23.42	12	Bottom	N/A	1:1	1.070	27.11	
1880.00	9400	UMTS 1900	RMC	23.42	0	Right	N/A	1:1	0.398	31.40	
1880.00	9400	UMTS 1900	RMC	23.42	0	Left	N/A	1:1	0.256	33.32	

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.
Data highlighted in blue was tested and provided by the manufacturer.



FCC ID: A3LSMN986W	 PCTEST <small>Proud to be part of element</small>	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
Test Dates: 04/27/20 – 06/11/20	DUT Type: Portable Handset	APPENDIX A: Page 12 of 20		

Table A-13
DSI = 1 P_{Limit} Calculations – 2G/3G Phablet SAR

MEASUREMENT RESULTS												
FREQUENCY		Mode/Band	Service	Conducted Power [dBm]	Spacing (mm)	Side	# of GPRS Slots	Duty Cycle	SAR (10g)	PLimit	Minimum PLimit	
MHz	Ch.								(W/kg)	[dBm]	[dBm]	
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.66	0	Back	N/A	1:1	1.392	27.20	27.20	
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.66	0	Front	N/A	1:1	1.388	27.22		
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.66	0	Bottom	N/A	1:1	0.798	29.62		
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.66	0	Right	N/A	1:1	0.216	35.29		
836.52	384	CDMA BC0 (\$22H)	EVDO Rev. 0	24.66	0	Left	N/A	1:1	0.225	35.12		
836.60	190	GSM 850	GPRS	29.58	0	Back	3	1:2.76	0.875	29.71	28.68	
836.60	190	GSM 850	GPRS	29.58	0	Front	3	1:2.76	1.108	28.68		
836.60	190	GSM 850	GPRS	29.58	0	Bottom	3	1:2.76	0.511	32.05		
836.60	190	GSM 850	GPRS	29.58	0	Right	3	1:2.76	0.265	34.90		
836.60	190	GSM 850	GPRS	29.58	0	Left	3	1:2.76	0.257	35.03		
1880.00	661	GSM 1900	GPRS	22.77	0	Back	4	1:2.076	1.270	22.53	21.83	
1880.00	661	GSM 1900	GPRS	22.77	0	Front	4	1:2.076	1.000	23.57		
1850.20	512	GSM 1900	GPRS	22.85	0	Bottom	4	1:2.076	1.520	21.83		
1880.00	661	GSM 1900	GPRS	22.77	0	Bottom	4	1:2.076	1.270	22.53		
1909.80	810	GSM 1900	GPRS	22.92	0	Bottom	4	1:2.076	1.280	22.65		
1880.00	661	GSM 1900	GPRS	26.87	0	Right	3	1:2.76	0.260	32.27		
1880.00	661	GSM 1900	GPRS	26.87	0	Left	3	1:2.76	0.172	34.06		
826.40	4132	UMTS 850	RMC	24.74	0	Back	N/A	1:1	1.428	27.17	27.06	
826.40	4132	UMTS 850	RMC	24.74	0	Front	N/A	1:1	1.467	27.06		
826.40	4132	UMTS 850	RMC	24.74	0	Bottom	N/A	1:1	0.964	28.88		
826.40	4132	UMTS 850	RMC	24.74	0	Right	N/A	1:1	0.235	35.01		
826.40	4132	UMTS 850	RMC	24.74	0	Left	N/A	1:1	0.252	34.71		
1712.40	1312	UMTS 1750	RMC	20.78	0	Back	N/A	1:1	2.600	20.61	20.32	
1732.40	1412	UMTS 1750	RMC	20.61	0	Back	N/A	1:1	2.670	20.32		
1752.60	1513	UMTS 1750	RMC	20.28	0	Back	N/A	1:1	2.470	20.33		
1712.40	1312	UMTS 1750	RMC	20.78	0	Front	N/A	1:1	2.170	21.39		
1732.40	1412	UMTS 1750	RMC	20.61	0	Front	N/A	1:1	2.200	21.17		
1752.60	1513	UMTS 1750	RMC	20.28	0	Front	N/A	1:1	2.130	20.98		
1712.40	1312	UMTS 1750	RMC	20.78	0	Bottom	N/A	1:1	2.340	21.07		
1732.40	1412	UMTS 1750	RMC	20.61	0	Bottom	N/A	1:1	2.280	21.01		
1752.60	1513	UMTS 1750	RMC	20.28	0	Bottom	N/A	1:1	2.150	20.94		
1732.40	1412	UMTS 1750	RMC	23.98	0	Right	N/A	1:1	0.459	31.34		
1732.40	1412	UMTS 1750	RMC	23.98	0	Left	N/A	1:1	0.276	33.55		
1852.40	9262	UMTS 1900	RMC	20.45	0	Back	N/A	1:1	2.770	20.00		20.00
1880.00	9400	UMTS 1900	RMC	20.35	0	Back	N/A	1:1	2.670	20.06		
1907.60	9538	UMTS 1900	RMC	20.60	0	Back	N/A	1:1	2.760	20.17		
1852.40	9262	UMTS 1900	RMC	20.45	0	Front	N/A	1:1	2.350	20.72		
1880.00	9400	UMTS 1900	RMC	20.35	0	Front	N/A	1:1	2.180	20.94		
1907.60	9538	UMTS 1900	RMC	20.60	0	Front	N/A	1:1	2.280	21.00		
1852.40	9262	UMTS 1900	RMC	20.45	0	Bottom	N/A	1:1	2.710	20.10		
1880.00	9400	UMTS 1900	RMC	20.35	0	Bottom	N/A	1:1	2.510	20.33		
1907.60	9538	UMTS 1900	RMC	20.60	0	Bottom	N/A	1:1	2.870	20.00		
1880.00	9400	UMTS 1900	RMC	23.42	0	Right	N/A	1:1	0.398	31.40		
1880.00	9400	UMTS 1900	RMC	23.42	0	Left	N/A	1:1	0.256	33.32		

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.
Data highlighted in blue was tested and provided by the manufacturer.




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
Test Dates: 04/27/20 – 06/11/20	DUT Type: Portable Handset			APPENDIX A: Page 13 of 20

Table A-14
DSI = 0 P_{Limit} Calculations – 4G Phablet SAR

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing (mm)	Side	Duty Cycle	SAR (10g)	PLimit	Minimum PLimit
MHz	Ch.												(W/kg)	[dBm]	[dBm]
680.50	133297	Mid	LTE Band 71	20	24.58	0	QPSK	1	0	8	Back	1:1	0.322	33.48	33.48
680.50	133297	Mid	LTE Band 71	20	24.58	0	QPSK	1	0	6	Front	1:1	0.282	34.06	
680.50	133297	Mid	LTE Band 71	20	24.58	0	QPSK	1	0	12	Bottom	1:1	0.045	42.03	
680.50	133297	Mid	LTE Band 71	20	24.58	0	QPSK	1	0	0	Right	1:1	0.087	39.16	
680.50	133297	Mid	LTE Band 71	20	24.58	0	QPSK	1	0	0	Left	1:1	0.153	36.71	
707.50	23095	Mid	LTE Band 12	10	24.56	0	QPSK	1	0	8	Back	1:1	0.342	33.20	33.20
707.50	23095	Mid	LTE Band 12	10	24.56	0	QPSK	1	0	6	Front	1:1	0.342	33.20	
707.50	23095	Mid	LTE Band 12	10	24.56	0	QPSK	1	0	12	Bottom	1:1	0.064	40.48	
707.50	23095	Mid	LTE Band 12	10	24.56	0	QPSK	1	0	0	Right	1:1	0.078	39.62	
707.50	23095	Mid	LTE Band 12	10	24.56	0	QPSK	1	0	0	Left	1:1	0.156	36.61	
782.00	23230	Mid	LTE Band 13	10	24.73	0	QPSK	1	0	8	Back	1:1	0.487	31.83	31.54
782.00	23230	Mid	LTE Band 13	10	24.73	0	QPSK	1	0	6	Front	1:1	0.521	31.54	
782.00	23230	Mid	LTE Band 13	10	24.73	0	QPSK	1	0	12	Bottom	1:1	0.132	37.50	
782.00	23230	Mid	LTE Band 13	10	24.73	0	QPSK	1	0	0	Right	1:1	0.235	35.00	
782.00	23230	Mid	LTE Band 13	10	24.73	0	QPSK	1	0	0	Left	1:1	0.225	35.19	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.81	0	QPSK	1	0	8	Back	1:1	0.523	31.60	31.60
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.81	0	QPSK	1	0	6	Front	1:1	0.513	31.69	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.81	0	QPSK	1	0	12	Bottom	1:1	0.122	37.93	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.81	0	QPSK	1	0	0	Right	1:1	0.231	35.15	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.81	0	QPSK	1	0	0	Left	1:1	0.223	35.31	
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.73	0	QPSK	1	50	8	Back	1:1	0.933	28.01	27.36
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.85	1	QPSK	50	50	8	Back	1:1	0.768	27.98	
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.73	0	QPSK	1	50	6	Front	1:1	1.050	27.50	
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.85	1	QPSK	50	50	6	Front	1:1	0.886	27.36	
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.73	0	QPSK	1	50	12	Bottom	1:1	0.881	28.26	
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.85	1	QPSK	50	50	12	Bottom	1:1	0.729	28.20	
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.73	0	QPSK	1	50	0	Right	1:1	0.445	31.23	
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.85	1	QPSK	50	50	0	Right	1:1	0.372	31.12	
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.73	0	QPSK	1	50	0	Left	1:1	0.299	32.95	
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.85	1	QPSK	50	50	0	Left	1:1	0.243	32.97	

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.
Data highlighted in blue was tested and provided by the manufacturer.




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
Test Dates: 04/27/20 – 06/11/20	DUT Type: Portable Handset	APPENDIX A: Page 14 of 20		

Table A-15
DSI = 0 P_{Limit} Calculations – 4G Phablet SAR

MEASUREMENT RESULTS														
FREQUENCY			Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	PLimit
MHz	Ch.	(W/kg)											[dBm]	
1905.00	26590	High	LTE Band 25 (PCS)	20	23.60	0	QPSK	1	50	8	Back	1:1	1.010	27.54
1905.00	26590	High	LTE Band 25 (PCS)	20	22.66	1	QPSK	50	25	8	Back	1:1	0.830	27.45
1905.00	26590	High	LTE Band 25 (PCS)	20	23.60	0	QPSK	1	50	6	Front	1:1	1.210	26.75
1905.00	26590	High	LTE Band 25 (PCS)	20	22.66	1	QPSK	50	25	6	Front	1:1	0.996	26.66
1905.00	26590	High	LTE Band 25 (PCS)	20	23.60	0	QPSK	1	50	12	Bottom	1:1	1.080	27.25
1905.00	26590	High	LTE Band 25 (PCS)	20	22.66	1	QPSK	50	25	12	Bottom	1:1	0.887	27.16
1905.00	26590	High	LTE Band 25 (PCS)	20	23.60	0	QPSK	1	50	0	Right	1:1	0.364	31.97
1905.00	26590	High	LTE Band 25 (PCS)	20	22.66	1	QPSK	50	25	0	Right	1:1	0.293	31.97
1905.00	26590	High	LTE Band 25 (PCS)	20	23.60	0	QPSK	1	50	0	Left	1:1	0.251	33.58
1905.00	26590	High	LTE Band 25 (PCS)	20	22.66	1	QPSK	50	25	0	Left	1:1	0.201	33.61
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	8	Back	1:1	0.804	28.77
2310.00	27710	Mid	LTE Band 30	10	22.88	1	QPSK	25	12	8	Back	1:1	0.643	28.78
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	6	Front	1:1	0.776	28.92
2310.00	27710	Mid	LTE Band 30	10	22.88	1	QPSK	25	12	6	Front	1:1	0.610	29.01
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	12	Bottom	1:1	0.947	28.06
2310.00	27710	Mid	LTE Band 30	10	22.88	1	QPSK	25	12	12	Bottom	1:1	0.764	28.03
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	0	Right	1:1	0.502	30.81
2310.00	27710	Mid	LTE Band 30	10	22.88	1	QPSK	25	12	0	Right	1:1	0.407	30.76
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	0	Left	1:1	0.197	34.87
2310.00	27710	Mid	LTE Band 30	10	22.88	1	QPSK	25	12	0	Left	1:1	0.153	35.01
2510.00	20850	Low	LTE Band 7	20	23.24	0	QPSK	1	50	8	Back	1:1	0.398	31.22
2510.00	20850	Low	LTE Band 7	20	22.33	1	QPSK	50	25	8	Back	1:1	0.332	31.10
2510.00	20850	Low	LTE Band 7	20	23.24	0	QPSK	1	50	6	Front	1:1	0.301	32.43
2510.00	20850	Low	LTE Band 7	20	22.33	1	QPSK	50	25	6	Front	1:1	0.245	32.42
2510.00	20850	Low	LTE Band 7	20	23.24	0	QPSK	1	50	12	Bottom	1:1	0.436	30.82
2510.00	20850	Low	LTE Band 7	20	22.33	1	QPSK	50	25	12	Bottom	1:1	0.353	30.83
2510.00	20850	Low	LTE Band 7	20	23.24	0	QPSK	1	50	0	Right	1:1	0.838	27.99
2510.00	20850	Low	LTE Band 7	20	22.33	1	QPSK	50	25	0	Right	1:1	0.681	27.98
2680.00	41490	High	LTE Band 41	20	24.38	0	QPSK	1	50	8	Back	1:1.58	0.336	31.11
2680.00	41490	High	LTE Band 41	20	23.37	1	QPSK	50	25	8	Back	1:1.58	0.267	31.10
2680.00	41490	High	LTE Band 41	20	24.38	0	QPSK	1	50	6	Front	1:1.58	0.313	31.42
2680.00	41490	High	LTE Band 41	20	23.37	1	QPSK	50	25	6	Front	1:1.58	0.256	31.28
2680.00	41490	High	LTE Band 41	20	24.38	0	QPSK	1	50	12	Bottom	1:1.58	0.270	32.06
2680.00	41490	High	LTE Band 41	20	23.37	1	QPSK	50	25	12	Bottom	1:1.58	0.216	32.02
2680.00	41490	High	LTE Band 41	20	24.38	0	QPSK	1	50	0	Right	1:1.58	0.708	27.87
2680.00	41490	High	LTE Band 41	20	23.37	1	QPSK	50	25	0	Right	1:1.58	0.578	27.74

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.
Data highlighted in blue was tested and provided by the manufacturer.




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
Test Dates: 04/27/20 – 06/11/20	DUT Type: Portable Handset			APPENDIX A: Page 15 of 20

Table A-16
DSI = 1 P_{Limit} Calculations – 4G Phablet SAR

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing (mm)	Side	Duty Cycle	SAR (10g)	PLimit	Minimum PLimit
MHz	Ch.												(W/kg)	[dBm]	[dBm]
680.50	133297	Mid	LTE Band 71	20	24.58	0	QPSK	1	0	0	Back	1:1	1.488	26.83	26.74
680.50	133297	Mid	LTE Band 71	20	24.58	0	QPSK	1	0	0	Front	1:1	1.520	26.74	
680.50	133297	Mid	LTE Band 71	20	24.58	0	QPSK	1	0	0	Bottom	1:1	1.010	28.52	
680.50	133297	Mid	LTE Band 71	20	24.58	0	QPSK	1	0	0	Right	1:1	0.088	39.11	
680.50	133297	Mid	LTE Band 71	20	24.58	0	QPSK	1	0	0	Left	1:1	0.143	37.01	
707.50	23095	Mid	LTE Band 12	10	24.56	0	QPSK	1	0	0	Back	1:1	1.120	28.05	27.54
707.50	23095	Mid	LTE Band 12	10	24.56	0	QPSK	1	0	0	Front	1:1	1.258	27.54	
707.50	23095	Mid	LTE Band 12	10	24.56	0	QPSK	1	0	0	Bottom	1:1	0.764	29.71	
707.50	23095	Mid	LTE Band 12	10	24.56	0	QPSK	1	0	0	Right	1:1	0.096	38.72	
707.50	23095	Mid	LTE Band 12	10	24.56	0	QPSK	1	0	0	Left	1:1	0.170	36.23	
782.00	23230	Mid	LTE Band 13	10	24.73	0	QPSK	1	0	0	Back	1:1	1.188	27.96	27.96
782.00	23230	Mid	LTE Band 13	10	24.73	0	QPSK	1	0	0	Front	1:1	1.175	28.01	
782.00	23230	Mid	LTE Band 13	10	24.73	0	QPSK	1	0	0	Bottom	1:1	0.583	31.05	
782.00	23230	Mid	LTE Band 13	10	24.73	0	QPSK	1	0	0	Right	1:1	0.245	34.82	
782.00	23230	Mid	LTE Band 13	10	24.73	0	QPSK	1	0	0	Left	1:1	0.223	35.23	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.81	0	QPSK	1	0	0	Back	1:1	1.396	27.34	27.34
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.81	0	QPSK	1	0	0	Front	1:1	1.342	27.51	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.81	0	QPSK	1	0	0	Bottom	1:1	1.023	28.69	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.81	0	QPSK	1	0	0	Right	1:1	0.224	35.29	
836.50	20525	Mid	LTE Band 5 (Cell)	10	24.81	0	QPSK	1	0	0	Left	1:1	0.233	35.12	

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.
Data highlighted in blue was tested and provided by the manufacturer.




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
Test Dates: 04/27/20 – 06/11/20	DUT Type: Portable Handset	APPENDIX A: Page 16 of 20		

Table A-17
DSI = 1 P_{Limit} Calculations – 4G Phablet SAR

MEASUREMENT RESULTS																
FREQUENCY			Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	P _{Limit}	Minimum P _{Limit}	
MHz	Ch.	Low											Mid	High	Low	Mid
1720.00	132072	Low	LTE Band 66 (AWS)	20	20.35	0	QPSK	1	50	0	Back	1:1	2.430	20.47	19.68	
1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.05	0	QPSK	1	50	0	Back	1:1	2.470	20.10		
1770.00	132572	High	LTE Band 66 (AWS)	20	20.15	0	QPSK	1	0	0	Back	1:1	2.450	20.24		
1720.00	132072	Low	LTE Band 66 (AWS)	20	20.25	0	QPSK	50	25	0	Back	1:1	2.610	20.06		
1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.24	0	QPSK	50	25	0	Back	1:1	2.580	20.10		
1770.00	132572	High	LTE Band 66 (AWS)	20	20.21	0	QPSK	50	25	0	Back	1:1	2.560	20.11		
1720.00	132072	Low	LTE Band 66 (AWS)	20	20.24	0	QPSK	100	0	0	Back	1:1	2.570	20.12		
1720.00	132072	Low	LTE Band 66 (AWS)	20	20.35	0	QPSK	1	50	0	Front	1:1	1.840	21.68		
1720.00	132072	Low	LTE Band 66 (AWS)	20	20.25	0	QPSK	50	25	0	Front	1:1	1.960	21.31		
1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.24	0	QPSK	50	25	0	Front	1:1	2.040	21.12		
1770.00	132572	High	LTE Band 66 (AWS)	20	20.21	0	QPSK	50	25	0	Front	1:1	2.110	20.95		
1720.00	132072	Low	LTE Band 66 (AWS)	20	20.24	0	QPSK	100	0	0	Front	1:1	1.910	21.41		
1720.00	132072	Low	LTE Band 66 (AWS)	20	20.35	0	QPSK	1	50	0	Bottom	1:1	2.640	20.11		
1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.05	0	QPSK	1	50	0	Bottom	1:1	2.590	19.90		
1770.00	132572	High	LTE Band 66 (AWS)	20	20.15	0	QPSK	1	0	0	Bottom	1:1	2.700	19.82		
1720.00	132072	Low	LTE Band 66 (AWS)	20	20.25	0	QPSK	50	25	0	Bottom	1:1	2.850	19.68		
1745.00	132322	Mid	LTE Band 66 (AWS)	20	20.24	0	QPSK	50	25	0	Bottom	1:1	2.680	19.94		
1770.00	132572	High	LTE Band 66 (AWS)	20	20.21	0	QPSK	50	25	0	Bottom	1:1	2.750	19.80		
1720.00	132072	Low	LTE Band 66 (AWS)	20	20.24	0	QPSK	100	0	0	Bottom	1:1	2.760	19.81		
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.73	0	QPSK	1	50	0	Right	1:1	0.445	31.23		
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.85	1	QPSK	50	50	0	Right	1:1	0.372	31.12		
1720.00	132072	Low	LTE Band 66 (AWS)	20	23.73	0	QPSK	1	50	0	Left	1:1	0.299	32.95		
1720.00	132072	Low	LTE Band 66 (AWS)	20	22.85	1	QPSK	50	50	0	Left	1:1	0.243	32.97		
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.63	0	QPSK	1	0	0	Back	1:1	2.850	21.06		
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.42	0	QPSK	1	99	0	Back	1:1	2.700	21.09		
1905.00	26590	High	LTE Band 25 (PCS)	20	21.57	0	QPSK	1	99	0	Back	1:1	2.790	21.09		
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.72	0	QPSK	50	0	0	Back	1:1	2.740	21.32		
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.63	0	QPSK	50	50	0	Back	1:1	2.870	21.03		
1905.00	26590	High	LTE Band 25 (PCS)	20	21.70	0	QPSK	50	50	0	Back	1:1	2.890	21.07		
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.62	0	QPSK	100	0	0	Back	1:1	2.880	21.01		
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.63	0	QPSK	1	0	0	Front	1:1	2.370	21.86		
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.42	0	QPSK	1	99	0	Front	1:1	2.130	22.12		
1905.00	26590	High	LTE Band 25 (PCS)	20	21.57	0	QPSK	1	99	0	Front	1:1	2.160	22.20		
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.72	0	QPSK	50	0	0	Front	1:1	2.450	21.81		
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.63	0	QPSK	50	50	0	Front	1:1	2.260	22.07		
1905.00	26590	High	LTE Band 25 (PCS)	20	21.70	0	QPSK	50	50	0	Front	1:1	2.300	22.06		
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.62	0	QPSK	100	0	0	Front	1:1	2.380	21.83		
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.63	0	QPSK	1	0	0	Bottom	1:1	2.750	21.22		
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.42	0	QPSK	1	99	0	Bottom	1:1	2.710	21.07		
1905.00	26590	High	LTE Band 25 (PCS)	20	21.57	0	QPSK	1	99	0	Bottom	1:1	2.500	21.57		
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.72	0	QPSK	50	0	0	Bottom	1:1	2.720	21.35		
1882.50	26365	Mid	LTE Band 25 (PCS)	20	21.63	0	QPSK	50	50	0	Bottom	1:1	2.890	21.00		
1905.00	26590	High	LTE Band 25 (PCS)	20	21.70	0	QPSK	50	50	0	Bottom	1:1	2.610	21.51		
1860.00	26140	Low	LTE Band 25 (PCS)	20	21.62	0	QPSK	100	0	0	Bottom	1:1	2.810	21.11		
1905.00	26590	High	LTE Band 25 (PCS)	20	23.60	0	QPSK	1	50	0	Right	1:1	0.364	31.97		
1905.00	26590	High	LTE Band 25 (PCS)	20	22.66	1	QPSK	50	25	0	Right	1:1	0.293	31.97		
1905.00	26590	High	LTE Band 25 (PCS)	20	23.60	0	QPSK	1	50	0	Left	1:1	0.251	33.58		
1905.00	26590	High	LTE Band 25 (PCS)	20	22.66	1	QPSK	50	25	0	Left	1:1	0.201	33.61		

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.
Data highlighted in blue was tested and provided by the manufacturer.




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
Test Dates: 04/27/20 – 06/11/20	DUT Type: Portable Handset	APPENDIX A: Page 17 of 20		

Table A-18
DSI = 1 P_{Limit} Calculations – 4G Phablet SAR

MEASUREMENT RESULTS															
FREQUENCY		Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing	Side	Duty Cycle	SAR (10g)	PLimit	Minimum PLimit [dBm]	
MHz	Ch.											[W/kg]	[dBm]		
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	0	Back	1:1	2.900	23.20	23.18
2310.00	27710	Mid	LTE Band 30	10	22.88	0	QPSK	25	12	0	Back	1:1	2.280	23.28	
2310.00	27710	Mid	LTE Band 30	10	22.70	0	QPSK	50	0	0	Back	1:1	2.240	23.18	
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	0	Front	1:1	2.170	24.45	
2310.00	27710	Mid	LTE Band 30	10	22.88	0	QPSK	25	12	0	Front	1:1	1.800	24.31	
2310.00	27710	Mid	LTE Band 30	10	22.70	0	QPSK	50	0	0	Front	1:1	1.770	24.20	
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	0	Bottom	1:1	2.490	23.86	
2310.00	27710	Mid	LTE Band 30	10	22.88	0	QPSK	25	12	0	Bottom	1:1	2.040	23.76	
2310.00	27710	Mid	LTE Band 30	10	22.70	0	QPSK	50	0	0	Bottom	1:1	2.010	23.65	
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	0	Right	1:1	0.502	30.81	
2310.00	27710	Mid	LTE Band 30	10	22.88	1	QPSK	25	12	0	Right	1:1	0.407	30.76	
2310.00	27710	Mid	LTE Band 30	10	23.84	0	QPSK	1	0	0	Left	1:1	0.197	34.87	
2310.00	27710	Mid	LTE Band 30	10	22.88	1	QPSK	25	12	0	Left	1:1	0.153	35.01	
2510.00	20850	Low	LTE Band 7	20	19.42	0	QPSK	1	0	0	Back	1:1	1.280	22.40	21.23
2510.00	20850	Low	LTE Band 7	20	19.41	0	QPSK	50	25	0	Back	1:1	1.300	22.25	
2510.00	20850	Low	LTE Band 7	20	19.42	0	QPSK	1	0	0	Front	1:1	0.943	23.65	
2510.00	20850	Low	LTE Band 7	20	19.41	0	QPSK	50	25	0	Front	1:1	0.991	23.43	
2510.00	20850	Low	LTE Band 7	20	19.42	0	QPSK	1	0	0	Bottom	1:1	1.550	21.50	
2510.00	20850	Low	LTE Band 7	20	19.41	0	QPSK	50	25	0	Bottom	1:1	1.630	21.27	
2535.00	21100	Mid	LTE Band 7	20	19.18	0	QPSK	50	0	0	Bottom	1:1	1.390	21.73	
21350.00	21350	High	LTE Band 7	20	18.95	0	QPSK	50	25	0	Bottom	1:1	1.480	21.23	
2510.00	20850	Low	LTE Band 7	20	23.24	0	QPSK	1	50	0	Right	1:1	0.838	27.99	
2510.00	20850	Low	LTE Band 7	20	22.33	1	QPSK	50	25	0	Right	1:1	0.681	27.98	
2506.00	39750	Low	LTE Band 41	20	22.17	0	QPSK	1	50	0	Back	1:1.58	1.220	23.30	20.02
2549.50	40185	Low-Mid	LTE Band 41	20	22.15	0	QPSK	1	99	0	Back	1:1.58	1.410	22.65	
2593.00	40620	Mid	LTE Band 41	20	22.32	0	QPSK	1	50	0	Back	1:1.58	1.490	22.58	
2636.50	41055	Mid-High	LTE Band 41	20	22.34	0	QPSK	1	50	0	Back	1:1.58	1.800	21.78	
2680.00	41490	High	LTE Band 41	20	22.59	0	QPSK	1	50	0	Back	1:1.58	1.490	22.85	
2680.00	41490	High	LTE Band 41	20	22.54	0	QPSK	50	25	0	Back	1:1.58	1.240	23.60	
2680.00	41490	High	LTE Band 41	20	22.50	0	QPSK	100	0	0	Back	1:1.58	1.220	23.63	
2680.00	41490	High	LTE Band 41	20	22.59	0	QPSK	1	50	0	Front	1:1.58	1.270	23.55	
2506.00	39750	Low	LTE Band 41	20	22.25	0	QPSK	50	50	0	Front	1:1.58	0.992	24.28	
2549.50	40185	Low-Mid	LTE Band 41	20	22.34	0	QPSK	50	25	0	Front	1:1.58	1.020	24.25	
2593.00	40620	Mid	LTE Band 41	20	22.50	0	QPSK	50	25	0	Front	1:1.58	1.000	24.49	
2636.50	41055	Mid-High	LTE Band 41	20	22.44	0	QPSK	50	25	0	Front	1:1.58	1.100	24.02	
2680.00	41490	High	LTE Band 41	20	22.54	0	QPSK	50	25	0	Front	1:1.58	1.460	22.89	
2680.00	41490	High	LTE Band 41	20	22.50	0	QPSK	100	0	0	Front	1:1.58	1.250	23.52	
2506.00	39750	Low	LTE Band 41	20	22.17	0	QPSK	1	50	0	Bottom	1:1.58	1.790	21.63	
2549.50	40185	Low-Mid	LTE Band 41	20	22.15	0	QPSK	1	99	0	Bottom	1:1.58	1.960	21.22	
2593.00	40620	Mid	LTE Band 41	20	22.32	0	QPSK	1	50	0	Bottom	1:1.58	2.050	21.20	
2636.50	41055	Mid-High	LTE Band 41	20	22.34	0	QPSK	1	50	0	Bottom	1:1.58	2.470	20.41	
2680.00	41490	High	LTE Band 41	20	22.59	0	QPSK	1	50	0	Bottom	1:1.58	2.430	20.73	
2506.00	39750	Low	LTE Band 41	20	22.25	0	QPSK	50	50	0	Bottom	1:1.58	1.890	21.48	
2549.50	40185	Low-Mid	LTE Band 41	20	22.34	0	QPSK	50	25	0	Bottom	1:1.58	2.020	21.28	
2593.00	40620	Mid	LTE Band 41	20	22.50	0	QPSK	50	25	0	Bottom	1:1.58	2.160	21.15	
2636.50	41055	Mid-High	LTE Band 41	20	22.44	0	QPSK	50	25	0	Bottom	1:1.58	2.570	20.33	
2680.00	41490	High	LTE Band 41	20	22.54	0	QPSK	50	25	0	Bottom	1:1.58	2.830	20.02	
2680.00	41490	High	LTE Band 41	20	22.50	0	QPSK	100	0	0	Bottom	1:1.58	2.800	20.02	
2680.00	41490	High	LTE Band 41	20	24.38	0	QPSK	1	50	0	Right	1:1.58	0.708	27.87	
2680.00	41490	High	LTE Band 41	20	23.37	1	QPSK	50	25	0	Right	1:1.58	0.578	27.74	

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.
Data highlighted in blue was tested and provided by the manufacturer.




FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
Test Dates: 04/27/20 – 06/11/20	DUT Type: Portable Handset			APPENDIX A: Page 18 of 20

Table A-19
DSI = 0 P_{Limit} Calculations – 5G Phablet SAR

MEASUREMENT RESULTS												
Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing (mm)	Side	Duty Cycle	SAR (10g)	PLimit	Minimum PLimit
										(W/kg)	[dBm]	[dBm]
NR Band n71	20	24.32	0	DFT-s-OFDM QPSK	1	53	8	Back	1:1	0.216	34.95	34.95
NR Band n71	20	24.32	0	DFT-s-OFDM QPSK	1	53	6	Front	1:1	0.215	34.98	
NR Band n71	20	24.32	0	DFT-s-OFDM QPSK	1	53	12	Bottom	1:1	0.038	42.50	
NR Band n71	20	24.32	0	DFT-s-OFDM QPSK	1	53	0	Right	1:1	0.064	40.24	
NR Band n71	20	24.32	0	DFT-s-OFDM QPSK	1	53	0	Left	1:1	0.098	38.39	
NR Band n66	20	23.97	0	DFT-s-OFDM QPSK	1	1	8	Back	1:1	0.930	28.26	27.62
NR Band n66	20	23.81	0	DFT-s-OFDM QPSK	50	28	8	Back	1:1	0.971	27.92	
NR Band n66	20	23.97	0	DFT-s-OFDM QPSK	1	1	6	Front	1:1	0.938	28.23	
NR Band n66	20	23.81	0	DFT-s-OFDM QPSK	50	28	6	Front	1:1	0.952	28.00	
NR Band n66	20	23.97	0	DFT-s-OFDM QPSK	1	1	12	Bottom	1:1	1.000	27.95	
NR Band n66	20	23.81	0	DFT-s-OFDM QPSK	50	28	12	Bottom	1:1	1.040	27.62	
NR Band n66	20	23.97	0	DFT-s-OFDM QPSK	1	1	0	Right	1:1	0.514	30.84	
NR Band n66	20	23.81	0	DFT-s-OFDM QPSK	50	28	0	Right	1:1	0.521	30.62	
NR Band n66	20	23.97	0	DFT-s-OFDM QPSK	1	1	0	Left	1:1	0.302	33.15	
NR Band n66	20	23.81	0	DFT-s-OFDM QPSK	50	28	0	Left	1:1	0.303	32.97	
NR Band n41	100	24.53	0	DFT-s-OFDM QPSK	1	0	0	Back	1:4	0.082	33.35	27.00
NR Band n41	100	24.53	0	DFT-s-OFDM QPSK	1	0	0	Front	1:4	0.123	31.59	
NR Band n41	100	24.53	0	DFT-s-OFDM QPSK	1	0	0	Top	1:4	0.354	27.00	
NR Band n41	100	24.53	0	DFT-s-OFDM QPSK	1	0	0	Left	1:4	0.012	41.70	

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.
Data highlighted in blue was tested and provided by the manufacturer.






FCC ID: A3LSMN986W	 <small>Proud to be part of element</small>	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
Test Dates: 04/27/20 – 06/11/20	DUT Type: Portable Handset	APPENDIX A: Page 19 of 20		

Table A-20
DSI = 1 P_{Limit} Calculations – 5G Phablet SAR

MEASUREMENT RESULTS															
FREQUENCY			Mode	Bandwidth [MHz]	Conducted Power [dBm]	MPR [dB]	Modulation	RB Size	RB Offset	Spacing (mm)	Side	Duty Cycle	SAR (10g)	PLimit	Minimum PLimit
MHz	Ch.												(W/kg)	[dBm]	[dBm]
680.50	136100	Mid	NR Band n71	20	24.32	0	DFT-s-OFDM QPSK	1	53	0	Back	1:1	0.954	28.50	28.50
680.50	136100	Mid	NR Band n71	20	24.32	0	DFT-s-OFDM QPSK	1	53	0	Front	1:1	0.778	29.39	
680.50	136100	Mid	NR Band n71	20	24.32	0	DFT-s-OFDM QPSK	1	53	0	Bottom	1:1	0.524	31.11	
680.50	136100	Mid	NR Band n71	20	24.32	0	DFT-s-OFDM QPSK	1	53	0	Right	1:1	0.054	40.98	
680.50	136100	Mid	NR Band n71	20	24.32	0	DFT-s-OFDM QPSK	1	53	0	Left	1:1	0.097	38.43	
1720.00	344000	Low	NR Band n66	20	20.09	0	DFT-s-OFDM QPSK	1	53	0	Back	1:1	2.130	20.79	20.46
1745.00	349000	Mid	NR Band n66	20	20.02	0	DFT-s-OFDM QPSK	1	1	0	Back	1:1	2.020	20.95	
1770.00	354000	High	NR Band n66	20	20.07	0	DFT-s-OFDM QPSK	1	1	0	Back	1:1	2.180	20.66	
1720.00	344000	Low	NR Band n66	20	20.01	0	DFT-s-OFDM QPSK	50	0	0	Back	1:1	2.120	20.73	
1745.00	349000	Mid	NR Band n66	20	19.85	0	DFT-s-OFDM QPSK	50	0	0	Back	1:1	2.170	20.46	
1770.00	354000	High	NR Band n66	20	19.91	0	DFT-s-OFDM QPSK	50	0	0	Back	1:1	2.120	20.63	
1720.00	344000	Low	NR Band n66	20	20.02	0	DFT-s-OFDM QPSK	100	0	0	Back	1:1	2.130	20.72	
1720.00	344000	Low	NR Band n66	20	20.09	0	DFT-s-OFDM QPSK	1	53	0	Front	1:1	2.020	21.02	
1745.00	349000	Mid	NR Band n66	20	20.02	0	DFT-s-OFDM QPSK	1	1	0	Front	1:1	1.990	21.01	
1770.00	354000	High	NR Band n66	20	20.07	0	DFT-s-OFDM QPSK	1	1	0	Front	1:1	2.020	21.00	
1720.00	344000	Low	NR Band n66	20	20.01	0	DFT-s-OFDM QPSK	50	0	0	Front	1:1	1.920	21.16	
1745.00	349000	Mid	NR Band n66	20	19.85	0	DFT-s-OFDM QPSK	50	0	0	Front	1:1	1.980	20.86	
1770.00	354000	High	NR Band n66	20	19.91	0	DFT-s-OFDM QPSK	50	0	0	Front	1:1	1.890	21.12	
1720.00	344000	Low	NR Band n66	20	20.02	0	DFT-s-OFDM QPSK	100	0	0	Front	1:1	1.960	21.08	
1720.00	344000	Low	NR Band n66	20	20.09	0	DFT-s-OFDM QPSK	1	53	0	Bottom	1:1	2.110	20.83	
1745.00	349000	Mid	NR Band n66	20	20.02	0	DFT-s-OFDM QPSK	1	1	0	Bottom	1:1	1.910	21.19	
1770.00	354000	High	NR Band n66	20	20.07	0	DFT-s-OFDM QPSK	1	1	0	Bottom	1:1	2.100	20.83	
1720.00	344000	Low	NR Band n66	20	20.01	0	DFT-s-OFDM QPSK	50	0	0	Bottom	1:1	2.150	20.67	
1745.00	349000	Mid	NR Band n66	20	19.85	0	DFT-s-OFDM QPSK	50	0	0	Bottom	1:1	1.860	21.13	
1770.00	354000	High	NR Band n66	20	19.91	0	DFT-s-OFDM QPSK	50	0	0	Bottom	1:1	2.060	20.75	
1720.00	344000	Low	NR Band n66	20	20.02	0	DFT-s-OFDM QPSK	100	0	0	Bottom	1:1	2.110	20.76	
1720.00	344000	Low	NR Band n66	20	23.97	0	DFT-s-OFDM QPSK	1	1	0	Right	1:1	0.514	30.84	
1720.00	344000	Low	NR Band n66	20	23.81	0	DFT-s-OFDM QPSK	50	28	0	Right	1:1	0.521	30.62	
1720.00	344000	Low	NR Band n66	20	23.97	0	DFT-s-OFDM QPSK	1	1	0	Left	1:1	0.302	33.15	
1720.00	344000	Low	NR Band n66	20	23.81	0	DFT-s-OFDM QPSK	50	28	0	Left	1:1	0.303	32.97	
1770.00	354000	High	NR Band n66	20	20.17	0	CP-OFDM QPSK	1	1	0	Back	1:1	2.120	20.89	
2592.99	518598	Mid	NR Band n41	100	24.53	0	DFT-s-OFDM QPSK	1	0	0	Back	1:4	0.082	33.35	27.00
2592.99	518598	Mid	NR Band n41	100	24.53	0	DFT-s-OFDM QPSK	1	0	0	Front	1:4	0.123	31.59	
2592.99	518598	Mid	NR Band n41	100	24.53	0	DFT-s-OFDM QPSK	1	0	0	Top	1:4	0.354	27.00	
2592.99	518598	Mid	NR Band n41	100	24.53	0	DFT-s-OFDM QPSK	1	0	0	Left	1:4	0.012	41.70	

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.
Data highlighted in blue was tested and provided by the manufacturer.

FCC ID: A3LSMN986W	 Proud to be part of 	PART 0 SAR CHAR REPORT		Approved by: Quality Manager
Test Dates: 04/27/20 – 06/11/20	DUT Type: Portable Handset	APPENDIX A: Page 20 of 20		