LG Electronics Model : LM-F100VM

PART 0 SAR CHAR REPORT

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1. INTRODUCTION

Qualcomm Smart Transmit cannot operate without SAR at the device level, beforehand. The parameters obtained from SAR (referred to as SAR char) will be used as input for Smart Transmit. SAR char will be entered via the Embedded File System (EFS) to enable the Smart Transmit feature.

2. DEVICE UNDER TEST

2.1. Device Overview

Band & Mode	Operating Modes	Tx Frequency
Cell. BC0 CDMA/EVDO	Voice/Data	824 - 849 MHz
PCS CDMA/EVDO	Voice/Data	1850 - 1910 MHz
GSM/GPRS/EDGE 850	Voice/Data	824.2 - 848.8 MHz
GSM/GPRS/EDGE 1900	Voice/Data	1850.2 - 1909.8 MHz
UMTS 850	Voice/Data	827 - 846.6 MHz
UMTS 1900	Voice/Data	1854.2 - 1906.6 MHz
UMTS 1700	Voice/Data	1712 - 1753 MHz
LTE Band 2 (PCS)	Voice/Data	1850.7 - 1909.3 MHz
LTE Band 4 (AWS)	Voice/Data	1710.7 - 1754.3 MHz
LTE Band 5 (Cell)	Voice/Data	824.7 - 848.3 MHz
LTE Band 4_ENDC	Data	1710.7 - 1754.3 MHz
LTE Band 12	Voice/Data	699.7 - 715.3 MHz
LTE Band 13	Voice/Data	779.5 - 784.5 MHz
LTE Band 14	Voice/Data	788 - 798 MHz
LTE Band 30	Voice/Data	2305 - 2315 MHz
LTE Band 48	Voice/Data	3550 – 3697.5 MHz
LTE Band 30_ENDC	Data	2305 - 2315 MHz
LTE Band 41 (PC3)	Voice/Data	2498.5 - 2687.5 MHz
LTE Band 66 (AWS)	Voice/Data	1710.7 - 1779.3 MHz
LTE Band 2 (PCS)_ULCA/ENDC	Data	1850.7 - 1909.3 MHz
LTE Band 66 (AWS)_ULCA/ENDC	Data	1710.7 - 1779.3 MHz
LTE Band 5 (Cell)_ULCA	Data	824.7 - 848.3 MHz
LTE Band 12_ULCA	Data	699.7 - 715.3 MHz
NR n2	Data	1852.5 – 1907.5 MHz
NR n66	Data	1712.5 – 1777.5 MHz
NR n5	Data	824.7 - 848.3 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

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 modems is not controlled by the Smart Transmit algorithm.

2.2 Time-Averaging for SAR

This device is enabled with Qualcomm® Smart Transmit algorithm to control and manage transmitting power in

real time and to ensure that the time-averaged RF exposure from 2G/3G/4G/5G NR Sub6 WWAN is in compliance with FCC requirements. This Part 0 report shows SAR characterization of WWAN radios for 2G/3G/4G/5G NR Sub6. Characterization is achieved by determining PLimit for 2G/3G/4G/5G NR Sub6 that 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 3.3 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 NR Sub6	Plimit	Power level that corresponds to the exposure design target (SAR_design_target) after accounting for all device design related uncertainties
	Pmax	Maximum tune up output power
	SAR_design_target	Target SAR level < FCC SAR limit after accounting for all device design related uncertainties
	SAR Char	Table containing Plimit for all technologies and bands
	Reserve_power_margin	The margin, in dB, below the Plimit to reserve for future transmission with a minimum transmit power

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
Hotspot mode (DSI = 5)	■ Device transmits in hotspot mode near body ■ Hotspot Mode Active	Hotspot SAR per KDB Publication 941225 D06

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). The reserve_power_margin is 3dB.

Table 3-2 *SAR_design_target* Calculations

SAR_design_target			
$SAR_design_target < SAR_regulatory_limit \times 10^{-Total\ Uncertainty/10}$			
1g SAR (W/kg)		**10g SAR (W/kg)**	
Total Uncertainty	1 dB	Total Uncertainty	1 dB
SAR_regulatory_limit	1.6 W/kg	SAR_regulatory_limit	4.0 W/kg
SAR_design_target	1.01 W/kg	SAR_design_target	2.52 W/kg

3.3 SAR Char

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 3-3.

Table 3-3 *PLimit* Determination

Device State Index (DSI)	***PLimit* Determination Scenarios**
1	The worst-case SAR exposure is determined as maximum SAR normalized to the limit among: 1. 1g Head SAR and 2. Body Worn SAR and 3. Extremity SAR measured at 0mm for back, front, bottom, left and right surfaces
5	Plimit is calculated based on 1g Hotspot SAR at 10 mm
7	Swivel mode(Main screen attaches at 90 degree)

Note:

For DSI = 1, P_{limit} is calculated by:

P_{limit} = min{P_{limit} corresponding to 1g Head SAR at 0 mm spacing,
P_{limit} corresponding to 1g Body Worn SAR evaluation at 10 mm spacing,
P_{limit} corresponding to 10g Extremity SAR evaluation at 0 mm for back, front, bottom, left and right surfaces}

Table 3-4 SAR Characterizations

	Exposure scenario	head / body-worn /extremity Normal	head / body-worn / extremity Swivel	Hotspot	Pmax*
	Avg, vol	1g / 1g / 10g	1g / 1g / 10g	1g	
	Spacing	0mm / 10mm /0mm	0mm / 10mm /0mm	10mm	
	DSI	DSI=1	DSI=7	DSI=5	
Antenna configuration	Mode/Band	PLimit	PLimit	PLimit	
		(dBm)	(dBm)	(dBm)	(dBm)
ANT1	CDMA BC0	27.9	27.9	27.9	24.5
ANT2	PCS CDMA	22.5	22.5	22.5	24.5
ANT1	GSM 850**	27.5	27.5	27.5	24.8
ANT2	GSM 1900**	24.3	24.3	24.3	21.8
ANT1	UMTS B5	28.0	28.0	28.0	24.5
ANT2	UMTS B2	22.5	22.5	22.5	24.5
ANT2	UMTS B4	22.5	22.5	22.5	24.5
ANT1	LTE Band12	29.9	29.9	28.9	24.5
ANT1	LTE Band12_ULCA	28.9	28.9	28.9	22.5
ANT1	LTE Band13	27.9	27.9	27.9	24.5
ANT1	LTE Band14	28.5	28.5	28.5	24.5
ANT1	LTE Band5	27.2	27.2	27.2	24.5
ANT1	LTE Band5_ULCA	28.4	28.4	27.2	22.5
ANT2	LTE Band2	22.5	22.5	22.5	24.5
ANT3	LTE Band2_ULCA	23.8	23.8	23.8	22.5
ANT3	LTE Band2_ENDC	22.5	22.5	22.5	24.5
ANT2	LTE Band66(4)	22.5	22.5	22.5	24.5
ANT3	LTE Band66_ULCA	24.4	24.4	24.4	22.5
ANT3	LTE Band66(4)_ENDC	22.5	22.5	22.5	24.5
ANT2	LTE Band30	24.0	24.0	24.0	24.5
ANT1	LTE Band30_ENDC	24.0	24.0	24.0	24.5
ANT2	LTE Band41 (PC3)**	22.0	22.0	22.0	22.5
ANT9	LTE Band48**	19.5	19.5	19.5	21.0
ANT1	NR Band n5	26.9	26.9	26.9	24.5
ANT3	NR Band n2	22.5	22.5	22.5	24.5
ANT3	NR Band n66	22.5	22.5	22.5	24.5

Notes:

1. DSI=1, 5, and 7 are applied with worst SAR.

2. DSI=1, 5, and 7 have the same PLimit.

3. When Pmax < PLimit, the DUT will operate at a power level up to Pmax.

4 LTE B12/LTE B5/LTE B2/LTE B66 is defined by Standalone.
When the device outputs tx power as Interband ULCA, the PCC Tx power is 22.5dBm(Max power 23.5dBm) and SCC Tx power is 17dBm(Max power :17.7dBm).

5. NR SCSs is defined by FDD and TDD, FDD(n5,n2,n66) : 15khz
*Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + device uncertainty.
**All PLimit power levels entered in Table 3-4 correspond to average power levels after accounting

for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & NR TDD).

6. The Pmax for GSM850/GSM1900 is set to Max value of the Duty cycle Nominal power.

Mode/ Band		Voice		Burst Averaged GMSK			
		1Tx slot		1Tx slot		2Tx slot	
	Duty cycle	8.3		8.3		4.15	
Tx power		Maximum	Nominal	Maximum	Nominal	Maximum	Nominal
GSM 850	wo/duty	34.0	33.0	34.0	33.0	32.0	31.0
GSM1900	cycle	31.0	30.0	31.0	30.0	29.0	28.0
GSM 850	w/duty	24.8	23.8	24.8	23.8	25.8	24.8
GSM1900	cycle	21.8	20.8	21.8	20.8	22.8	21.8

7. Hall IC Scenario

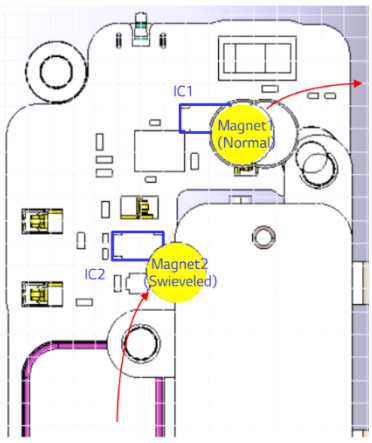
	Normal Mode	Swivel Mode
Hall IC #1	Low	High
Hall IC #2	High	Low

There are two Hall IC's interrupt pins. (HALL1_INT : detecting Normal mode / HALL2_INT : detecting Swivel mode)

Hall IC operates active when accepted lower than 2.2mT (min 1.1, max 3.7mT)

Hall IC operates high when accepted higher than 3.0mT (min 1.4, max 4.0mT)

◆ Hall IC Simulation



→ Operates in Normal mode until about 4~5 degrees turn.

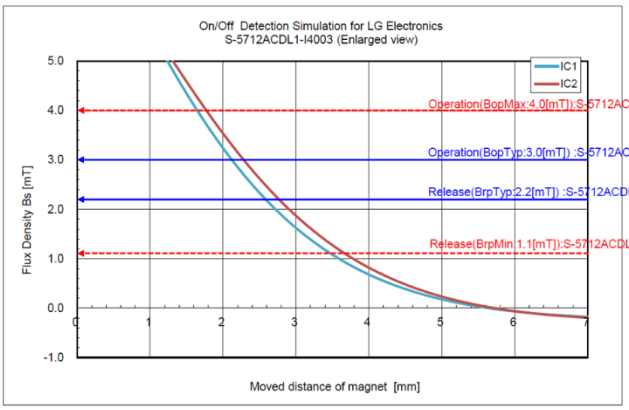
→ Operates in Swivel mode when turns around 85~86 degrees.

6. Magnetic Characteristics

Table 4

(Ta = +25°C, V_{DD} = 1.85 V, V_{SS} = 0 V unless otherwise specified)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit	Test Circuit
Operating point*1	South pole	B_{OPS}	–	1.4	3.0	4.0	mT	4
	North pole	B_{OPN}	–	−4.0	−3.0	−1.4	mT	4
Release point*2	South pole	B_{RPS}	–	1.1	2.2	3.7	mT	4
	North pole	B_{RPN}	–	−3.7	−2.2	−1.1	mT	4
Hysteresis width*3	South pole	B_{HYSS}	$B_{HYSS} = B_{OPS} - B_{RPS}$	–	0.8	–	mT	4
	North pole	B_{HYSN}	$B_{HYSN} = \lvert B_{OPN} - B_{RPN} \rvert$	–	0.8	–	mT	4



8. Antenna configuration

B12(ANT1), B12 ULCA(ANT1)
B5(ANT1), B5 ULCA(ANT1)
B2(ANT2), B2 ULCA(ANT3), B2 ENDC(ANT3)
B66(4)(ANT2), B66 ULCA(ANT3), B4 ENDC(ANT3)

9. NR(NR bands n5) power value is set by LTE(LTE Band 2/66/30) anchor power.
The sum power is always limited as the highest power +0.1dB(W) between LTE or NR.

10. LTE Inter-band Uplink CA

Case	Bands	Normal Power				
		Ant_1	Ant_2	Ant_3	SUM : 23.6	
1	B12A_B66A	B12A_SCC	X	B66A_PCC		
		17	X	22.5	23.58	Normal
2	B12A_B66A	B12A_PCC	X	B66A_SCC		
		22.5	X	17	23.58	Normal
3	B2A_B12A	B12A_SCC	X	B2A_PCC		
		17	X	22.5	23.58	Normal
4	B2A_B12A	B12A_PCC	X	B2A_SCC		
		22.5	X	17	23.58	Normal
5	B2A_B5A	B5A_SCC	X	B2A_PCC		
		17	X	22.5	23.58	Normal
6	B2A_B5A	B5A_PCC	X	B2A_SCC		
		22.5	X	17	23.58	Normal
7	B5A_B66A	B5_SCC	X	B66A_PCC		
		17	X	22.5	23.58	Normal
8	B5A_B66A	B5_PCC	X	B66A_SCC		
		22.5	X	17	23.58	Normal
9	B2A_B66A	X	B66_PCC	B2A_SCC		
		X	22.5	17	23.58	Normal
10	B2A_B66A	X	B66_SCC	B2A_PCC		
		X	17	22.5	23.58	Normal

Case	Bands	Max Power				
		Ant_1	Ant_2	Ant_3	SUM : 24.6	
1	B12A_B66A	B12A_SCC	X	B66A_PCC		
		17.7	X	23.5	24.51	All up
2	B12A_B66A	B12A_PCC	X	B66A_SCC		
		23.5	X	17.7	24.51	All up
3	B2A_B12A	B12A_SCC	X	B2A_PCC		
		17.7	X	23.5	24.51	All up
4	B2A_B12A	B12A_PCC	X	B2A_SCC		
		23.5	X	17.7	24.51	All up
5	B2A_B5A	B5A_SCC	X	B2A_PCC		
		17.7	X	23.5	24.51	All up
6	B2A_B5A	B5A_PCC	X	B2A_SCC		
		23.5	X	17.7	24.51	All up
7	B5A_B66A	B5_SCC	X	B66A_PCC		
		17.7	X	23.5	24.51	All up
8	B5A_B66A	B5_PCC	X	B66A_SCC		
		23.5	X	17.7	24.51	All up
9	B2A_B66A	X	B66_PCC	B2A_SCC		
		X	23.5	17.7	24.51	All up
10	B2A_B66A	X	B66_SCC	B2A_PCC		
		X	17.7	23.5	24.51	All up

APPENDIX A: SAR TEST RESULTS FOR *PLIMIT* CALCULATIONS

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

Frequency		Mode	Service	Conducted Power	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.			[dBm]				[W/kg]	[W/kg]	[dBm]	[dBm]
836.52	384	CDMA BC0	RC3	24.5	Right	Cheek	1:1	0.1184	1.01	33.8	33.8
836.52	384	CDMA_BC0	RC3	24.5	Right	Tilt	1:1	0.0788	1.01	35.6	
836.52	384	CDMA_BC0	RC3	24.5	Left	Cheek	1:1	0.1108	1.01	34.1	
836.52	384	CDMA_BC0	RC3	24.5	Left	Tilt	1:1	0.0674	1.01	36.3	
836.52	384	CDMA_BC0	EVDO Rev.A	24.5	Right	Cheek	1:1	0.0600	1.01	36.8	
836.52	384	CDMA_BC0	EVDO Rev.A	24.5	Right	Tilt	1:1	0.0488	1.01	37.7	
836.52	384	CDMA_BC0	EVDO Rev.A	24.5	Left	Cheek	1:1	0.0742	1.01	35.8	
836.52	384	CDMA_BC0	EVDO Rev.A	24.5	Left	Tilt	1:1	0.0466	1.01	37.9	
1880	600	PCS CDMA	RC3	24.5	Right	Cheek	1:1	0.0512	1.01	37.4	35.9
1880	600	PCS CDMA	RC3	24.5	Right	Tilt	1:1	0.0507	1.01	37.5	
1880	600	PCS CDMA	RC3	24.5	Left	Cheek	1:1	0.0654	1.01	36.4	
1880	600	PCS CDMA	RC3	24.5	Left	Tilt	1:1	0.0485	1.01	37.7	
1880	600	PCS CDMA	EVDO Rev.A	24.5	Right	Cheek	1:1	0.0458	1.01	37.9	
1880	600	PCS CDMA	EVDO Rev.A	24.5	Right	Tilt	1:1	0.0403	1.01	38.5	
1880	600	PCS CDMA	EVDO Rev.A	24.5	Left	Cheek	1:1	0.0731	1.01	35.9	
1880	600	PCS CDMA	EVDO Rev.A	24.5	Left	Tilt	1:1	0.0371	1.01	38.8	
836.6	190	GSM 850	GSM	33	Right	Cheek	1:8.3	0.0717	1.01	35.3	35.0
836.6	190	GSM 850	GSM	33	Right	Tilt	1:8.3	0.0441	1.01	37.4	
836.6	190	GSM 850	GSM	33	Left	Cheek	1:8.3	0.0771	1.01	35.0	
836.6	190	GSM 850	GSM	33	Left	Tilt	1:8.3	0.0501	1.01	36.8	
836.6	190	GSM 850	GPRS	31	Right	Cheek	1:4.15	0.0963	1.01	35.0	
836.6	190	GSM 850	GPRS	31	Right	Tilt	1:4.15	0.0656	1.01	36.7	
836.6	190	GSM 850	GPRS	31	Left	Cheek	1:4.15	0.0902	1.01	35.3	
836.6	190	GSM 850	GPRS	31	Left	Tilt	1:4.15	0.0561	1.01	37.4	
1880	661	GSM 1900	GSM	30	Right	Cheek	1:8.3	0.0285	1.01	36.3	35.2
1880	661	GSM 1900	GSM	30	Right	Tilt	1:8.3	0.0229	1.01	37.2	
1880	661	GSM 1900	GSM	30	Left	Cheek	1:8.3	0.0364	1.01	35.2	
1880	661	GSM 1900	GSM	30	Left	Tilt	1:8.3	0.0277	1.01	36.4	
1880	661	GSM 1900	GPRS	28	Right	Cheek	1:4.15	0.0272	1.01	37.5	
1880	661	GSM 1900	GPRS	28	Right	Tilt	1:4.15	0.0274	1.01	37.5	
1880	661	GSM 1900	GPRS	28	Left	Cheek	1:4.15	0.0222	1.01	38.4	
1880	661	GSM 1900	GPRS	28	Left	Tilt	1:4.15	0.0397	1.01	35.9	
836.6	4183	UMTS850	WCDMA	24.5	Right	Cheek	1:1	0.1026	1.01	34.4	34.1
836.6	4183	UMTS 850	WCDMA	24.5	Right	Tilt	1:1	0.0718	1.01	36.0	
836.6	4183	UMTS 850	WCDMA	24.5	Left	Cheek	1:1	0.1105	1.01	34.1	
836.6	4183	UMTS 850	WCDMA	24.5	Left	Tilt	1:1	0.0671	1.01	36.3	
1880	9400	UMTS 1900	WCDMA	24.5	Right	Cheek	1:1	0.0572	1.01	37.0	35.1
1880	9400	UMTS 1900	WCDMA	24.5	Right	Tilt	1:1	0.0561	1.01	37.0	
1880	9400	UMTS 1900	WCDMA	24.5	Left	Cheek	1:1	0.0884	1.01	35.1	
1880	9400	UMTS 1900	WCDMA	24.5	Left	Tilt	1:1	0.0734	1.01	35.9	
1732.4	1412	UMTS 1750	WCDMA	24.5	Right	Cheek	1:1	0.0534	1.01	37.3	36.8
1732.4	1412	UMTS 1750	WCDMA	24.5	Right	Tilt	1:1	0.0466	1.01	37.9	
1732.4	1412	UMTS 1750	WCDMA	24.5	Left	Cheek	1:1	0.0600	1.01	36.8	
1732.4	1412	UMTS 1750	WCDMA	24.5	Left	Tilt	1:1	0.0337	1.01	39.3	

Table A-2 DSI = 1 P_{Limit} Calculations – 4G Head SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	Right	Cheek	1:1	0.065	1.01	36.4	35.2
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	Right	Cheek	1:1	0.053	1.01	36.3	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	Right	Tilt	1:1	0.043	1.01	38.2	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	Right	Tilt	1:1	0.036	1.01	38.0	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	Left	Cheek	1:1	0.081	1.01	35.5	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	Left	Cheek	1:1	0.069	1.01	35.2	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	Left	Tilt	1:1	0.051	1.01	37.5	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	Left	Tilt	1:1	0.031	1.01	38.7	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	Right	Cheek	1:1	0.051	1.01	35.4	34.2
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	Right	Cheek	1:1	0.042	1.01	35.3	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	Right	Tilt	1:1	0.034	1.01	37.2	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	Right	Tilt	1:1	0.029	1.01	37.0	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	Left	Cheek	1:1	0.064	1.01	34.5	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	Left	Cheek	1:1	0.055	1.01	34.2	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	Left	Tilt	1:1	0.040	1.01	36.5	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	Left	Tilt	1:1	0.024	1.01	37.7	
782	23230	LTE Band13	10	24.5	QPSK	1	0	Right	Cheek	1:1	0.065	1.01	36.4	35.7
782	23230	LTE Band13	10	23.5	QPSK	25	25	Right	Cheek	1:1	0.061	1.01	35.7	
782	23230	LTE Band13	10	24.5	QPSK	1	0	Right	Tilt	1:1	0.046	1.01	37.9	
782	23230	LTE Band13	10	23.5	QPSK	25	25	Right	Tilt	1:1	0.037	1.01	37.8	
782	23230	LTE Band13	10	24.5	QPSK	1	0	Left	Cheek	1:1	0.071	1.01	36.0	
782	23230	LTE Band13	10	23.5	QPSK	25	25	Left	Cheek	1:1	0.060	1.01	35.8	
782	23230	LTE Band13	10	24.5	QPSK	1	0	Left	Tilt	1:1	0.041	1.01	38.4	
782	23230	LTE Band13	10	23.5	QPSK	25	25	Left	Tilt	1:1	0.035	1.01	38.1	
763	23330	LTE Band14	10	24.5	QPSK	1	0	Right	Cheek	1:1	0.065	1.01	36.4	35.7
763	23330	LTE Band14	10	23.5	QPSK	25	25	Right	Cheek	1:1	0.061	1.01	35.7	
763	23330	LTE Band14	10	24.5	QPSK	1	0	Right	Tilt	1:1	0.046	1.01	37.9	
763	23330	LTE Band14	10	23.5	QPSK	25	25	Right	Tilt	1:1	0.037	1.01	37.8	
763	23330	LTE Band14	10	24.5	QPSK	1	0	Left	Cheek	1:1	0.071	1.01	36.0	
763	23330	LTE Band14	10	23.5	QPSK	25	25	Left	Cheek	1:1	0.060	1.01	35.8	
763	23330	LTE Band14	10	24.5	QPSK	1	0	Left	Tilt	1:1	0.041	1.01	38.4	
782	23330	LTE Band14	10	23.5	QPSK	25	25	Left	Tilt	1:1	0.035	1.01	38.1	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	Right	Cheek	1:1	0.079	1.01	35.6	35.6
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	Right	Cheek	1:1	0.057	1.01	36.0	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	Right	Tilt	1:1	0.058	1.01	36.9	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	Right	Tilt	1:1	0.046	1.01	36.9	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	Left	Cheek	1:1	0.065	1.01	36.4	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	Left	Cheek	1:1	0.050	1.01	36.6	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	Left	Tilt	1:1	0.040	1.01	38.5	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	Left	Tilt	1:1	0.037	1.01	37.9	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	Right	Cheek	1:1	0.063	1.01	34.6	34.6
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	Right	Cheek	1:1	0.045	1.01	35.0	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	Right	Tilt	1:1	0.046	1.01	35.9	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	Right	Tilt	1:1	0.037	1.01	35.9	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	Left	Cheek	1:1	0.052	1.01	35.4	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	Left	Cheek	1:1	0.040	1.01	35.6	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	Left	Tilt	1:1	0.032	1.01	37.5	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	Left	Tilt	1:1	0.029	1.01	36.9	

Table A-3 DSI = 1 P_{Limit} Calculations – 4G Head SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
1882.5	26365	LTE Band2	20	24.5	QPSK	1	0	Right	Cheek	1:1	0.070	1.01	36.1	35.4
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	Right	Cheek	1:1	0.042	1.01	37.4	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	0	Right	Tilt	1:1	0.043	1.01	38.2	
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	Right	Tilt	1:1	0.036	1.01	38.0	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	0	Left	Cheek	1:1	0.082	1.01	35.4	
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	Left	Cheek	1:1	0.065	1.01	35.4	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	0	Left	Tilt	1:1	0.058	1.01	36.9	
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	Left	Tilt	1:1	0.043	1.01	37.2	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	Right	Cheek	1:1	0.018	1.01	40.0	39.4
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	Right	Cheek	1:1	0.016	1.01	39.4	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	Right	Tilt	1:1	0.007	1.01	44.4	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	Right	Tilt	1:1	0.006	1.01	43.7	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	Left	Cheek	1:1	0.009	1.01	42.8	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	Left	Cheek	1:1	0.008	1.01	42.3	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	Left	Tilt	1:1	0.006	1.01	44.7	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	Left	Tilt	1:1	0.005	1.01	44.4	
1882.5	26365	LTE Band2_ENDC	20	24.5	QPSK	1	0	Right	Cheek	1:1	0.217	1.01	31.2	29.7
1882.5	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	Right	Cheek	1:1	0.242	1.01	29.7	
1882.5	26365	LTE Band2_ENDC	20	24.5	QPSK	1	0	Right	Tilt	1:1	0.079	1.01	35.6	
1882.5	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	Right	Tilt	1:1	0.091	1.01	34.0	
1882.5	26365	LTE Band2_ENDC	20	24.5	QPSK	1	0	Left	Cheek	1:1	0.108	1.01	34.2	
1882.5	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	Left	Cheek	1:1	0.124	1.01	32.6	
1882.5	26365	LTE Band2_ENDC	20	24.5	QPSK	1	0	Left	Tilt	1:1	0.066	1.01	36.3	
1882.5	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	Left	Tilt	1:1	0.075	1.01	34.8	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	Right	Cheek	1:1	0.059	1.01	36.8	35.8
1745	132322	LTE Band66	20	23.5	QPSK	50	50	Right	Cheek	1:1	0.051	1.01	36.5	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	Right	Tilt	1:1	0.049	1.01	37.6	
1745	132322	LTE Band66	20	23.5	QPSK	50	50	Right	Tilt	1:1	0.036	1.01	38.0	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	Left	Cheek	1:1	0.071	1.01	36.0	
1745	132322	LTE Band66	20	23.5	QPSK	50	50	Left	Cheek	1:1	0.060	1.01	35.8	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	Left	Tilt	1:1	0.030	1.01	39.8	
1745	132322	LTE Band66	20	23.5	QPSK	50	50	Left	Tilt	1:1	0.026	1.01	39.4	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	50	Right	Cheek	1:1	0.161	1.01	30.5	30.5
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	50	Right	Cheek	1:1	0.113	1.01	31.0	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	50	Right	Tilt	1:1	0.054	1.01	35.2	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	50	Right	Tilt	1:1	0.038	1.01	35.7	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	50	Left	Cheek	1:1	0.071	1.01	34.0	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	50	Left	Cheek	1:1	0.049	1.01	34.6	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	50	Left	Tilt	1:1	0.056	1.01	35.0	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	50	Left	Tilt	1:1	0.038	1.01	35.7	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	99	Right	Cheek	1:1	0.180	1.01	32.0	31.5
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	Right	Cheek	1:1	0.160	1.01	31.5	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	99	Right	Tilt	1:1	0.060	1.01	36.7	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	Right	Tilt	1:1	0.054	1.01	36.2	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	99	Left	Cheek	1:1	0.080	1.01	35.5	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	Left	Cheek	1:1	0.069	1.01	35.1	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	99	Left	Tilt	1:1	0.063	1.01	36.5	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	Left	Tilt	1:1	0.054	1.01	36.2	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	Right	Cheek	1:1	0.012	1.01	43.8	41.1
2310	27710	LTE Band30	10	23.5	QPSK	25	12	Right	Cheek	1:1	0.012	1.01	42.7	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	Right	Tilt	1:1	0.011	1.01	44.2	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	Right	Tilt	1:1	0.010	1.01	43.4	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	Left	Cheek	1:1	0.019	1.01	41.7	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	Left	Cheek	1:1	0.017	1.01	41.1	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	Left	Tilt	1:1	0.009	1.01	45.0	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	Left	Tilt	1:1	0.008	1.01	44.4	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	Right	Cheek	1:1	0.012	1.01	41.8	39.2
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	Right	Cheek	1:1	0.012	1.01	40.8	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	Right	Tilt	1:1	0.011	1.01	42.3	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	Right	Tilt	1:1	0.010	1.01	41.4	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	Left	Cheek	1:1	0.019	1.01	39.8	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	Left	Cheek	1:1	0.017	1.01	39.2	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	Left	Tilt	1:1	0.009	1.01	43.0	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	Left	Tilt	1:1	0.008	1.01	42.5	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	Right	Cheek	1:1.58	0.052	1.01	35.4	35.0
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	Right	Cheek	1:1.58	0.039	1.01	35.6	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	Right	Tilt	1:1.58	0.033	1.01	37.3	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	Right	Tilt	1:1.58	0.028	1.01	37.1	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	Left	Cheek	1:1.58	0.053	1.01	35.3	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	Left	Cheek	1:1.58	0.045	1.01	35.0	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	Left	Tilt	1:1.58	0.032	1.01	37.5	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	Left	Tilt	1:1.58	0.029	1.01	36.9	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	Right	Cheek	1:1.58	0.151	1.01	29.3	24.0
3646.7	56207	LTE Band48	20	22	QPSK	50	25	Right	Cheek	1:1.58	0.125	1.01	29.1	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	Right	Tilt	1:1.58	0.126	1.01	30.1	
3646.7	56207	LTE Band48	20	22	QPSK	50	25	Right	Tilt	1:1.58	0.110	1.01	29.6	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	Left	Cheek	1:1.58	0.493	1.01	24.1	
3646.7	56207	LTE Band48	20	22	QPSK	50	25	Left	Cheek	1:1.58	0.406	1.01	24.0	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	Left	Tilt	1:1.58	0.177	1.01	28.6	
3646.7	56207	LTE Band48	20	22	QPSK	50	25	Left	Tilt	1:1.58	0.148	1.01	28.3	

Table A-4 DSI = 1 P_{Limit} Calculations – 5G NR Head SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	Right	Cheek	1:1	0.062	1.01	36.6	36.6
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	Right	Cheek	1:1	0.048	1.01	37.7	
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	Right	Tilt	1:1	0.049	1.01	37.6	
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	Right	Tilt	1:1	0.036	1.01	38.9	
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	Left	Cheek	1:1	0.056	1.01	37.1	
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	Left	Cheek	1:1	0.040	1.01	38.5	
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	Left	Tilt	1:1	0.031	1.01	39.6	
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	Left	Tilt	1:1	0.030	1.01	39.8	
1905	381000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	Right	Cheek	1:1	0.217	1.01	31.2	30.7
1905	381000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	Right	Cheek	1:1	0.242	1.01	30.7	
1905	381000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	Right	Tilt	1:1	0.079	1.01	35.6	
1905	381000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	Right	Tilt	1:1	0.091	1.01	35.0	
1905	381000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	Left	Cheek	1:1	0.108	1.01	34.2	
1905	381000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	Left	Cheek	1:1	0.124	1.01	33.6	
1905	381000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	Left	Tilt	1:1	0.066	1.01	36.3	
1905	381000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	Left	Tilt	1:1	0.075	1.01	35.8	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	Right	Cheek	1:1	0.180	1.01	32.0	32.0
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	Right	Cheek	1:1	0.160	1.01	32.5	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	Right	Tilt	1:1	0.060	1.01	36.7	
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	Right	Tilt	1:1	0.054	1.01	37.2	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	Left	Cheek	1:1	0.080	1.01	35.5	
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	Left	Cheek	1:1	0.069	1.01	36.1	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	Left	Tilt	1:1	0.063	1.01	36.5	
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	Left	Tilt	1:1	0.054	1.01	37.2	

Table A-5 DSI = 1 P_{Limit} Calculations – 2G/3G Body-Worn SAR

Frequency		Mode	Service	Conducted Power	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.			[dBm]				[W/kg]	[W/kg]	[dBm]	[dBm]
824.7	1013	CDMA BC0	TDSO	24.5	back	10mm	1:1	0.416	1.01	28.4	28.4
836.52	384	CDMA BC0	TDSO	24.5	back	10mm	1:1	0.409	1.01	28.4	
848.31	777	CDMA BC0	TDSO	24.5	back	10mm	1:1	0.401	1.01	28.5	
1851.25	25	CDMA BC1	TDSO	24.5	back	10mm	1:1	1.177	1.01	23.8	23.8
1880	600	CDMA BC1	TDSO	24.5	back	10mm	1:1	1.185	1.01	23.8	
1908.75	1175	CDMA BC1	TDSO	24.5	back	10mm	1:1	1.147	1.01	23.9	
836.6	190	GSM 850	GSM	33	back	10mm	1:8.3	0.399	1.01	27.8	27.8
836.6	190	GSM 850	GPRS	31	back	10mm	1:4.15	0.414	1.01	28.7	
1880	661	GSM 1900	GSM	30	back	10mm	1:8.3	0.407	1.01	24.8	24.8
1880	661	GSM 1900	GPRS	28	back	10mm	1:4.15	0.462	1.01	25.2	
826.4	4132	UMTS 850	RMC	24.5	back	10mm	1:1	0.394	1.01	28.6	28.6
836	4183	UMTS 850	RMC	24.5	back	10mm	1:1	0.396	1.01	28.6	
846.6	4233	UMTS 850	RMC	24.5	back	10mm	1:1	0.376	1.01	28.8	
1880	9400	UMTS 1900	RMC	24.5	back	10mm	1:1	1.243	1.01	23.6	23.6
1732.4	1412	UMTS 1750	RMC	24.5	back	10mm	1:1	0.733	1.01	25.9	25.9

Table A-6 DSI = 1 P_{Limit} Calculations – 4G Body-Worn SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	back	10mm	1:1	0.265	1.01	30.3	30.3
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	back	10mm	1:1	0.181	1.01	31.0	
707.5	23095	LTE Band12_UCLA	10	22.5	QPSK	1	49	back	10mm	1:1	0.106	1.01	32.3	32.3
707.5	23095	LTE Band12_UCLA	10	21.5	QPSK	25	12	back	10mm	1:1	0.081	1.01	32.5	
782	23230	LTE Band13	10	24.5	QPSK	1	0	back	10mm	1:1	0.428	1.01	28.2	28.2
782	23230	LTE Band13	10	23.5	QPSK	25	25	back	10mm	1:1	0.269	1.01	29.2	
763	23330	LTE Band14	10	24.5	QPSK	1	0	back	10mm	1:1	0.373	1.01	28.8	28.8
763	23230	LTE Band14	10	23.5	QPSK	25	25	back	10mm	1:1	0.269	1.01	29.2	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	back	10mm	1:1	0.500	1.01	27.6	27.6
836.5	20525	LTE Band5	10	23.5	QPSK	25	25	back	10mm	1:1	0.312	1.01	28.6	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	back	10mm	1:1	0.199	1.01	29.6	29.6
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	25	back	10mm	1:1	0.153	1.01	29.7	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	0	back	10mm	1:1	0.613	1.01	26.7	26.7
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	back	10mm	1:1	0.487	1.01	26.7	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	back	10mm	1:1	0.063	1.01	34.5	34.5
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	back	10mm	1:1	0.050	1.01	34.5	
1882.5	26365	LTE Band2_ENDC	20	24.5	QPSK	1	0	back	10mm	1:1	0.356	1.01	29.0	29.0
1882.5	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	back	10mm	1:1	0.283	1.01	29.0	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	back	10mm	1:1	0.629	1.01	26.6	26.6
1745	132322	LTE Band66	20	23.5	QPSK	50	50	back	10mm	1:1	0.500	1.01	26.6	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	50	back	10mm	1:1	0.354	1.01	27.0	27.0
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	50	back	10mm	1:1	0.281	1.01	27.0	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	99	back	10mm	1:1	0.345	1.01	29.2	29.2
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	back	10mm	1:1	0.274	1.01	29.2	
2310	27710	LTE Band30	10	24.5	QPSK	1	0	back	10mm	1:1	0.268	1.01	30.3	30.3
2310	27710	LTE Band30	10	23.5	QPSK	25	12	back	10mm	1:1	0.213	1.01	30.3	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	0	back	10mm	1:1	0.019	1.01	41.8	40.8
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	back	10mm	1:1	0.019	1.01	40.8	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	back	10mm	1:1.58	0.185	1.01	29.9	29.4
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	back	10mm	1:1.58	0.165	1.01	29.4	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	back	10mm	1:1.58	0.148	1.01	29.4	28.0
3646.7	56207	LTE Band48	20	22	QPSK	50	25	back	10mm	1:1.58	0.160	1.01	28.0	

Table A-7 DSI = 1 P_{Limit} Calculations – 5G NR Sub6 Body-Worn SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	back	10mm	1:1	0.424	1.01	28.3	28.3
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	back	10mm	1:1	0.398	1.01	28.5	
1905	381000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	back	10mm	1:1	0.258	1.01	30.4	30.4
1905	381000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	back	10mm	1:1	0.249	1.01	30.6	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	back	10mm	1:1	0.371	1.01	28.8	28.8
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	back	10mm	1:1	0.326	1.01	29.4	

Table A-8 DSI = 5 P_{Limit} Calculations – 2G/3G Hotspot SAR

Frequency		Mode	Service	Conducted Power	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.			[dBm]				[W/kg]	[W/kg]	[dBm]	[dBm]
836.52	384	CDMA BC0	EVDO Rev.0	24.5	back	10mm	1:1	0.430	1.01	28.2	28.2
836.52	384	CDMA BC0	EVDO Rev.0	24.5	front	10mm	1:1	0.211	1.01	31.3	
836.52	384	CDMA BC0	EVDO Rev.0	24.5	bottom	10mm	1:1	0.172	1.01	32.2	
836.52	384	CDMA BC0	EVDO Rev.0	24.5	right	10mm	1:1	0.191	1.01	31.7	
1880	600	PCS CDMA	EVDO Rev.0	24.5	back	10mm	1:1	1.032	1.01	24.4	23.2
1880	600	PCS CDMA	EVDO Rev.0	24.5	front	10mm	1:1	0.420	1.01	28.3	
1851.25	25	PCS CDMA	EVDO Rev.0	24.5	bottom	10mm	1:1	1.366	1.01	23.2	
1880	600	PCS CDMA	EVDO Rev.0	24.5	bottom	10mm	1:1	1.287	1.01	23.4	
1908.75	1175	PCS CDMA	EVDO Rev.0	24.5	bottom	10mm	1:1	1.058	1.01	24.3	
1880	600	PCS CDMA	EVDO Rev.0	24.5	left	10mm	1:1	0.328	1.01	29.4	
836.6	190	GSM 850	GPRS	31	back	10mm	1:4.15	0.411	1.01	28.7	28.7
836.6	190	GSM 850	GPRS	31	front	10mm	1:4.15	0.181	1.01	32.3	
836.6	190	GSM 850	GPRS	31	bottom	10mm	1:4.15	0.166	1.01	32.7	
836.6	190	GSM 850	GPRS	31	right	10mm	1:4.15	0.156	1.01	32.9	
1880	661	GSM 1900	GPRS	28	back	10mm	1:4.15	0.460	1.01	25.2	24.3
1880	661	GSM 1900	GPRS	28	front	10mm	1:4.15	0.201	1.01	28.8	
1880	661	GSM 1900	GPRS	28	bottom	10mm	1:4.15	0.567	1.01	24.3	
1880	661	GSM 1900	GPRS	28	left	10mm	1:4.15	0.134	1.01	30.6	
836.6	4183	UMTS 850	RMC	24.5	back	10mm	1:1	0.403	1.01	28.5	28.5
836.6	4183	UMTS 850	RMC	24.5	front	10mm	1:1	0.192	1.01	31.7	
836.6	4183	UMTS 850	RMC	24.5	bottom	10mm	1:1	0.141	1.01	33.1	
836.6	4183	UMTS 850	RMC	24.5	right	10mm	1:1	0.174	1.01	32.1	
1880	9400	UMTS 1900	RMC	24.5	back	10mm	1:1	1.108	1.01	24.1	23.0
1880	9400	UMTS 1900	RMC	24.5	front	10mm	1:1	0.422	1.01	28.3	
1852.4	9262	UMTS 1900	RMC	24.5	bottom	10mm	1:1	1.427	1.01	23.0	
1880	9400	UMTS 1900	RMC	24.5	bottom	10mm	1:1	1.335	1.01	23.3	
1907.6	9538	UMTS 1900	RMC	24.5	bottom	10mm	1:1	1.325	1.01	23.3	
1880	9400	UMTS 1900	RMC	24.5	left	10mm	1:1	0.310	1.01	29.6	
1732.4	1412	UMTS 1750	RMC	24.5	back	10mm	1:1	0.582	1.01	26.9	24.2
1732.4	1412	UMTS 1750	RMC	24.5	front	10mm	1:1	0.284	1.01	30.0	
1712.4	1312	UMTS 1750	RMC	24.5	bottom	10mm	1:1	1.080	1.01	24.2	
1732.4	1412	UMTS 1750	RMC	24.5	bottom	10mm	1:1	1.033	1.01	24.4	
1752.6	1513	UMTS 1750	RMC	24.5	bottom	10mm	1:1	0.929	1.01	24.9	
1740	1450	UMTS 1750	RMC	24.5	left	10mm	1:1	0.253	1.01	30.5	

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

Table A-9 DSI = 5 P_{Limit} Calculations – 4G Hotspot SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	back	10mm	1:1	0.265	1.01	30.3	30.30
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	back	10mm	1:1	0.167	1.01	31.3	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	front	10mm	1:1	0.084	1.01	35.3	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	front	10mm	1:1	0.052	1.01	36.4	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	bottom	10mm	1:1	0.088	1.01	35.1	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	bottom	10mm	1:1	0.051	1.01	36.4	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	right	10mm	1:1	0.078	1.01	35.6	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	right	10mm	1:1	0.051	1.01	36.4	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	back	10mm	1:1	0.106	1.01	32.3	30.14
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	back	10mm	1:1	0.084	1.01	32.3	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	front	10mm	1:1	0.106	1.01	32.3	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	front	10mm	1:1	0.082	1.01	32.4	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	bottom	10mm	1:1	0.070	1.01	34.1	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	bottom	10mm	1:1	0.058	1.01	33.9	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	right	10mm	1:1	0.174	1.01	30.1	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	right	10mm	1:1	0.129	1.01	30.4	
763	23330	LTE Band13	10	24.5	QPSK	1	0	back	10mm	1:1	0.421	1.01	28.3	28.29
782	23230	LTE Band13	10	23.5	QPSK	25	25	back	10mm	1:1	0.272	1.01	29.2	
782	23230	LTE Band13	10	24.5	QPSK	1	0	front	10mm	1:1	0.168	1.01	32.3	
782	23230	LTE Band13	10	23.5	QPSK	25	25	front	10mm	1:1	0.119	1.01	32.8	
782	23230	LTE Band13	10	24.5	QPSK	1	0	bottom	10mm	1:1	0.141	1.01	33.1	
782	23230	LTE Band13	10	23.5	QPSK	25	25	bottom	10mm	1:1	0.091	1.01	34.0	
782	23230	LTE Band13	10	24.5	QPSK	1	0	right	10mm	1:1	0.168	1.01	32.3	
782	23230	LTE Band13	10	23.5	QPSK	25	25	right	10mm	1:1	0.096	1.01	33.7	
763	23330	LTE Band14	10	24.5	QPSK	1	0	back	10mm	1:1	0.367	1.01	28.9	28.89
763	23330	LTE Band14	10	23.5	QPSK	25	25	back	10mm	1:1	0.272	1.01	29.2	
763	23330	LTE Band14	10	24.5	QPSK	1	0	front	10mm	1:1	0.165	1.01	32.4	
763	23330	LTE Band14	10	23.5	QPSK	25	25	front	10mm	1:1	0.092	1.01	33.9	
763	23330	LTE Band14	10	24.5	QPSK	1	0	bottom	10mm	1:1	0.120	1.01	33.8	
763	23330	LTE Band14	10	23.5	QPSK	25	25	bottom	10mm	1:1	0.091	1.01	34.0	
763	23330	LTE Band14	10	24.5	QPSK	1	0	right	10mm	1:1	0.133	1.01	33.3	
763	23330	LTE Band14	10	23.5	QPSK	25	25	right	10mm	1:1	0.096	1.01	33.7	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	back	10mm	1:1	0.500	1.01	27.5	27.5
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	back	10mm	1:1	0.310	1.01	28.6	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	front	10mm	1:1	0.282	1.01	30.0	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	front	10mm	1:1	0.175	1.01	31.1	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	bottom	10mm	1:1	0.222	1.01	31.1	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	bottom	10mm	1:1	0.128	1.01	32.5	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	right	10mm	1:1	0.229	1.01	30.9	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	right	10mm	1:1	0.138	1.01	32.1	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	back	10mm	1:1	0.224	1.01	29.0	29.0
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	back	10mm	1:1	0.174	1.01	29.1	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	front	10mm	1:1	0.199	1.01	29.5	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	front	10mm	1:1	0.179	1.01	29.0	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	bottom	10mm	1:1	0.125	1.01	31.6	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	bottom	10mm	1:1	0.095	1.01	31.8	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	right	10mm	1:1	0.123	1.01	31.6	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	right	10mm	1:1	0.115	1.01	30.9	

Table A-10 DSI = 5 P_{Limit} Calculations – 4G Hotspot SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
1905	26590	LTE Band2	20	24.5	QPSK	1	0	back	10mm	1:1	0.613	1.01	26.7	24.6
1905	26590	LTE Band2	20	23.5	QPSK	50	25	back	10mm	1:1	0.487	1.01	26.7	
1905	26590	LTE Band2	20	24.5	QPSK	1	0	front	10mm	1:1	0.269	1.01	30.2	
1905	26590	LTE Band2	20	23.5	QPSK	50	25	front	10mm	1:1	0.214	1.01	30.2	
1860	26140	LTE Band2	20	24.5	QPSK	1	99	bottom	10mm	1:1	0.986	1.01	24.6	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	99	bottom	10mm	1:1	0.885	1.01	25.1	
1905	26590	LTE Band2	20	23.5	QPSK	50	25	bottom	10mm	1:1	0.694	1.01	25.1	
1905	26590	LTE Band2	20	24.5	QPSK	1	0	left	10mm	1:1	0.249	1.01	30.6	
1905	26590	LTE Band2	20	23.5	QPSK	50	25	left	10mm	1:1	0.198	1.01	30.6	
1860	26590	LTE Band2_ULCA	20	22.5	QPSK	1	0	back	10mm	1:1	0.061	1.01	34.7	30.9
1860	26590	LTE Band2_ULCA	20	21.5	QPSK	50	25	back	10mm	1:1	0.049	1.01	34.7	
1860	26590	LTE Band2_ULCA	20	22.5	QPSK	1	0	front	10mm	1:1	0.024	1.01	38.8	
1860	26590	LTE Band2_ULCA	20	21.5	QPSK	50	25	front	10mm	1:1	0.019	1.01	38.8	
1860	26140	LTE Band2_ULCA	20	22.5	QPSK	1	0	bottom	10mm	1:1	0.038	1.01	36.8	
1860	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	bottom	10mm	1:1	0.030	1.01	36.8	
1860	26590	LTE Band2_ULCA	20	22.5	QPSK	1	0	right	10mm	1:1	0.145	1.01	30.9	
1860	26590	LTE Band2_ULCA	20	21.5	QPSK	50	25	right	10mm	1:1	0.115	1.01	30.9	
1860	26590	LTE Band2_ENDC	20	24.5	QPSK	1	0	back	10mm	1:1	0.448	1.01	28.0	25.5
1860	26590	LTE Band2_ENDC	20	23.5	QPSK	50	25	back	10mm	1:1	0.356	1.01	28.0	
1860	26590	LTE Band2_ENDC	20	24.5	QPSK	1	0	front	10mm	1:1	0.183	1.01	31.9	
1860	26590	LTE Band2_ENDC	20	23.5	QPSK	50	25	front	10mm	1:1	0.145	1.01	31.9	
1860	26140	LTE Band2_ENDC	20	24.5	QPSK	1	0	bottom	10mm	1:1	0.017	1.01	42.3	
1860	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	bottom	10mm	1:1	0.013	1.01	42.3	
1860	26590	LTE Band2_ENDC	20	24.5	QPSK	1	0	right	10mm	1:1	0.801	1.01	25.5	
1860	26590	LTE Band2_ENDC	20	23.5	QPSK	50	25	right	10mm	1:1	0.636	1.01	25.5	
1745	132322	LTE Band66	20	24.5	QPSK	1	0	back	10mm	1:1	0.629	1.01	26.6	23.1
1745	132322	LTE Band66	20	23.5	QPSK	50	25	back	10mm	1:1	0.500	1.01	26.6	
1745	132322	LTE Band66	20	24.5	QPSK	1	0	front	10mm	1:1	0.289	1.01	29.9	
1745	132322	LTE Band66	20	23.5	QPSK	50	25	front	10mm	1:1	0.230	1.01	29.9	
1720	132072	LTE Band66	20	24.5	QPSK	1	0	bottom	10mm	1:1	1.280	1.01	23.5	
1745	132322	LTE Band66	20	24.5	QPSK	1	0	bottom	10mm	1:1	1.370	1.01	23.2	
1770	132572	LTE Band66	20	24.5	QPSK	1	0	bottom	10mm	1:1	1.380	1.01	23.1	
1770	132572	LTE Band66	20	23.5	QPSK	50	25	bottom	10mm	1:1	1.096	1.01	23.1	
1745	132322	LTE Band66	20	24.5	QPSK	1	0	left	10mm	1:1	0.271	1.01	30.2	
1745	132322	LTE Band66	20	23.5	QPSK	50	25	left	10mm	1:1	0.215	1.01	30.2	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	back	10mm	1:1	0.345	1.01	27.2	24.4
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	back	10mm	1:1	0.307	1.01	26.7	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	front	10mm	1:1	0.134	1.01	31.3	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	front	10mm	1:1	0.106	1.01	31.3	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	bottom	10mm	1:1	0.038	1.01	36.8	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	bottom	10mm	1:1	0.030	1.01	36.8	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	right	10mm	1:1	0.526	1.01	25.3	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	right	10mm	1:1	0.514	1.01	24.4	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	0	back	10mm	1:1	0.345	1.01	29.2	25.43
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	back	10mm	1:1	0.274	1.01	29.2	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	0	front	10mm	1:1	0.134	1.01	33.3	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	front	10mm	1:1	0.106	1.01	33.3	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	0	bottom	10mm	1:1	0.213	1.01	31.3	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	bottom	10mm	1:1	0.169	1.01	31.3	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	0	left	10mm	1:1	0.815	1.01	25.4	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	left	10mm	1:1	0.647	1.01	25.4	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	back	10mm	1:1	0.268	1.01	30.3	26.47
2310	27710	LTE Band30	10	23.5	QPSK	25	12	back	10mm	1:1	0.213	1.01	30.3	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	front	10mm	1:1	0.119	1.01	33.8	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	front	10mm	1:1	0.095	1.01	33.8	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	bottom	10mm	1:1	0.641	1.01	26.5	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	bottom	10mm	1:1	0.509	1.01	26.5	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	left	10mm	1:1	0.069	1.01	36.1	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	left	10mm	1:1	0.055	1.01	36.1	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	back	10mm	1:1	0.019	1.01	41.8	40.81
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	back	10mm	1:1	0.019	1.01	40.8	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	front	10mm	1:1	0.005	1.01	47.6	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	front	10mm	1:1	0.003	1.01	48.6	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	bottom	10mm	1:1	0.016	1.01	42.5	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	bottom	10mm	1:1	0.018	1.01	41.0	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	left	10mm	1:1	0.010	1.01	44.5	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	left	10mm	1:1	0.007	1.01	45.0	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	back	10mm	1:1.58	0.185	1.01	29.9	25.90
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	back	10mm	1:1.58	0.165	1.01	29.4	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	front	10mm	1:1.58	0.067	1.01	34.3	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	front	10mm	1:1.58	0.060	1.01	33.8	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	bottom	10mm	1:1.58	0.432	1.01	26.2	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	0	bottom	10mm	1:1.58	0.368	1.01	25.9	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	left	10mm	1:1.58	0.047	1.01	35.8	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	0	left	10mm	1:1.58	0.047	1.01	34.8	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	back	10mm	1:1.58	0.148	1.01	29.3	25.03
3646.7	56207	LTE Band48	20	22	QPSK	50	25	back	10mm	1:1.58	0.158	1.01	28.1	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	front	10mm	1:1.58	0.059	1.01	33.4	
3646.7	56207	LTE Band48	20	22	QPSK	50	25	front	10mm	1:1.58	0.060	1.01	32.3	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	bottom	10mm	1:1.58	0.108	1.01	30.7	
3646.7	56207	LTE Band48	20	22	QPSK	50	0	bottom	10mm	1:1.58	0.107	1.01	29.7	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	right	10mm	1:1.58	0.321	1.01	26.0	
3646.7	56207	LTE Band48	20	22	QPSK	50	0	right	10mm	1:1.58	0.318	1.01	25.0	

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

Table A-11 DSI = 5 P_{Limit} Calculations – 5G NR Hotspot SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	back	10mm	1:1	0.461	1.01	27.9	27.90
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	back	10mm	1:1	0.401	1.01	28.5	
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	front	10mm	1:1	0.236	1.01	30.8	
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	front	10mm	1:1	0.247	1.01	30.6	
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	bottom	10mm	1:1	0.176	1.01	32.1	
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	bottom	10mm	1:1	0.186	1.01	31.9	
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	right	10mm	1:1	0.174	1.01	32.1	
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	right	10mm	1:1	0.182	1.01	31.9	
1860	372000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	back	10mm	1:1	0.253	1.01	30.5	26.4
1860	372000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	back	10mm	1:1	0.249	1.01	30.6	
1860	372000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	front	10mm	1:1	0.160	1.01	32.5	
1860	372000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	front	10mm	1:1	0.150	1.01	32.8	
1860	372000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	bottom	10mm	1:1	0.213	1.01	31.3	
1860	372000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	bottom	10mm	1:1	0.206	1.01	31.4	
1860	372000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	right	10mm	1:1	0.646	1.01	26.4	
1860	372000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	right	10mm	1:1	0.533	1.01	27.3	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	back	10mm	1:1	0.371	1.01	28.8	24.7
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	back	10mm	1:1	0.326	1.01	29.4	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	front	10mm	1:1	0.112	1.01	34.0	
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	front	10mm	1:1	0.068	1.01	36.2	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	bottom	10mm	1:1	0.198	1.01	31.6	
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	bottom	10mm	1:1	0.138	1.01	33.1	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	right	10mm	1:1	0.967	1.01	24.7	
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	right	10mm	1:1	0.926	1.01	24.9	

Table A-12 DSI = 1 P_{Limit} Calculations – 2G/3G Phablet SAR

Frequency		Mode	Service	Conducted Power	Test Position	Spacing	Duty Cycle	SAR (10g)	SAR design target	Plimit	Min Plimit
MHz	Ch.			[dBm]				[W/kg]	[W/kg]	[dBm]	[dBm]
836.52	384	CDMA BC0	EVDO Rev.0	24.5	back	0mm	1:1	0.757	2.52	29.7	29.7
836.52	384	CDMA BC0	EVDO Rev.0	24.5	front	0mm	1:1	0.681	2.52	30.2	
836.52	384	CDMA BC0	EVDO Rev.0	24.5	bottom	0mm	1:1	0.320	2.52	33.5	
836.52	384	CDMA BC0	EVDO Rev.0	24.5	right	0mm	1:1	0.307	2.52	33.6	
836.6	190	GSM 850	GPRS	31	back	0mm	1:4.15	0.301	2.52	34.1	34.1
836.6	190	GSM 850	GPRS	31	front	0mm	1:4.15	0.299	2.52	34.1	
836.6	190	GSM 850	GPRS	31	bottom	0mm	1:4.15	0.284	2.52	34.3	
836.6	190	GSM 850	GPRS	31	right	0mm	1:4.15	0.023	2.52	45.2	
1880	661	GSM 1900	GPRS	28	back	0mm	1:4.15	0.515	2.52	28.7	28.5
1880	661	GSM 1900	GPRS	28	front	0mm	1:4.15	0.534	2.52	28.6	
1880	661	GSM 1900	GPRS	28	bottom	0mm	1:4.15	0.539	2.52	28.5	
1880	661	GSM 1900	GPRS	28	left	0mm	1:4.15	0.265	2.52	31.6	
836.6	4183	UMTS 850	RMC	24.5	back	0mm	1:1	1.079	2.52	28.2	28.2
836.6	4183	UMTS 850	RMC	24.5	front	0mm	1:1	1.048	2.52	28.3	
836.6	4183	UMTS 850	RMC	24.5	bottom	0mm	1:1	0.339	2.52	33.2	
836.6	4183	UMTS 850	RMC	24.5	right	0mm	1:1	0.426	2.52	32.2	
1880	600	PCS CDMA	EVDO Rev.0	24.5	back	0mm	1:1	3.170	2.52	23.5	23.1
1880	600	PCS CDMA	EVDO Rev.0	24.5	front	0mm	1:1	1.000	2.52	28.5	
1880	600	PCS CDMA	EVDO Rev.0	24.5	bottom	0mm	1:1	3.450	2.52	23.1	
1880	9400	UMTS 1900	RMC	24.5	back	0mm	1:1	3.240	2.52	23.4	22.8
1852.4	9262	UMTS 1900	RMC	24.5	back	0mm	1:1	3.175	2.52	23.5	
1880	9400	UMTS 1900	RMC	24.5	back	0mm	1:1	3.103	2.52	23.6	
1907.6	9538	UMTS 1900	RMC	24.5	front	0mm	1:1	0.937	2.52	28.8	
1852.4	9262	UMTS 1900	RMC	24.5	bottom	0mm	1:1	3.740	2.52	22.8	
1880	9400	UMTS 1900	RMC	24.5	bottom	0mm	1:1	3.675	2.52	22.9	
1907.6	9538	UMTS 1900	RMC	24.5	bottom	0mm	1:1	3.603	2.52	23.0	
1732.4	1412	UMTS 1750	RMC	24.5	back	0mm	1:1	2.840	2.52	24.0	23.4
1732.4	1412	UMTS 1750	RMC	24.5	front	0mm	1:1	0.904	2.52	29.0	
1712.4	1312	UMTS 1750	RMC	24.5	bottom	0mm	1:1	3.230	2.52	23.4	
1732.4	1412	UMTS 1750	RMC	24.5	bottom	0mm	1:1	3.170	2.52	23.5	
1752.6	1513	UMTS 1750	RMC	24.5	bottom	0mm	1:1	2.980	2.52	23.8	

Table A-13 DSI = 1 P_{Limit} Calculations – 4G Phablet SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (10g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	back	0mm	1:1	0.538	2.52	31.2	29.9
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	back	0mm	1:1	0.456	2.52	30.9	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	front	0mm	1:1	0.538	2.52	31.2	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	front	0mm	1:1	0.445	2.52	31.0	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	bottom	0mm	1:1	0.229	2.52	34.9	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	bottom	0mm	1:1	0.188	2.52	34.8	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	right	0mm	1:1	0.672	2.52	30.2	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	right	0mm	1:1	0.578	2.52	29.9	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	back	0mm	1:1	0.427	2.52	30.2	28.9
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	back	0mm	1:1	0.362	2.52	29.9	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	front	0mm	1:1	0.427	2.52	30.2	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	front	0mm	1:1	0.353	2.52	30.0	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	bottom	0mm	1:1	0.182	2.52	33.9	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	bottom	0mm	1:1	0.150	2.52	33.8	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	right	0mm	1:1	0.534	2.52	29.2	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	right	0mm	1:1	0.459	2.52	28.9	
782	23230	LTE Band13	10	24.5	QPSK	1	0	back	0mm	1:1	0.682	2.52	30.2	30.0
782	23230	LTE Band13	10	23.5	QPSK	25	25	back	0mm	1:1	0.536	2.52	30.2	
782	23230	LTE Band13	10	24.5	QPSK	1	0	front	0mm	1:1	0.624	2.52	30.6	
782	23230	LTE Band13	10	23.5	QPSK	25	25	front	0mm	1:1	0.563	2.52	30.0	
782	23230	LTE Band13	10	24.5	QPSK	1	0	bottom	0mm	1:1	0.294	2.52	33.8	
782	23230	LTE Band13	10	23.5	QPSK	25	25	bottom	0mm	1:1	0.234	2.52	33.8	
782	23230	LTE Band13	10	24.5	QPSK	1	0	right	0mm	1:1	0.515	2.52	31.4	
782	23230	LTE Band13	10	23.5	QPSK	25	25	right	0mm	1:1	0.420	2.52	31.3	
763	23330	LTE Band14	10	24.5	QPSK	1	0	back	0mm	1:1	0.682	2.52	30.2	30.0
763	23330	LTE Band14	10	23.5	QPSK	25	25	back	0mm	1:1	0.536	2.52	30.2	
763	23330	LTE Band14	10	24.5	QPSK	1	0	front	0mm	1:1	0.624	2.52	30.6	
763	23330	LTE Band14	10	23.5	QPSK	25	25	front	0mm	1:1	0.563	2.52	30.0	
763	23330	LTE Band14	10	24.5	QPSK	1	0	bottom	0mm	1:1	0.294	2.52	33.8	
763	23330	LTE Band14	10	23.5	QPSK	25	25	bottom	0mm	1:1	0.234	2.52	33.8	
763	23330	LTE Band14	10	24.5	QPSK	1	0	right	0mm	1:1	0.515	2.52	31.4	
763	23330	LTE Band14	10	23.5	QPSK	25	25	right	0mm	1:1	0.420	2.52	31.3	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	back	0mm	1:1	0.772	2.52	29.6	29.6
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	back	0mm	1:1	0.592	2.52	29.8	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	front	0mm	1:1	0.648	2.52	30.4	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	front	0mm	1:1	0.534	2.52	30.2	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	bottom	0mm	1:1	0.239	2.52	34.7	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	bottom	0mm	1:1	0.192	2.52	34.7	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	right	0mm	1:1	0.253	2.52	34.5	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	right	0mm	1:1	0.229	2.52	33.9	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	back	0mm	1:1	0.613	2.52	28.6	28.6
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	back	0mm	1:1	0.470	2.52	28.8	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	front	0mm	1:1	0.515	2.52	29.4	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	front	0mm	1:1	0.424	2.52	29.2	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	bottom	0mm	1:1	0.190	2.52	33.7	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	bottom	0mm	1:1	0.153	2.52	33.7	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	right	0mm	1:1	0.201	2.52	33.5	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	right	0mm	1:1	0.182	2.52	32.9	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	back	0mm	1:1	1.030	2.52	28.4	28.4
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	back	0mm	1:1	0.818	2.52	28.4	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	front	0mm	1:1	0.089	2.52	39.0	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	front	0mm	1:1	0.071	2.52	39.0	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	bottom	0mm	1:1	0.195	2.52	35.6	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	bottom	0mm	1:1	0.155	2.52	35.6	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	left	0mm	1:1	0.775	2.52	29.6	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	left	0mm	1:1	0.616	2.52	29.6	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	0	back	0mm	1:1	1.830	2.52	25.9	22.9
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	back	0mm	1:1	1.454	2.52	25.9	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	0	front	0mm	1:1	0.597	2.52	30.8	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	front	0mm	1:1	0.474	2.52	30.8	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	0	right	0mm	1:1	3.630	2.52	22.9	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	25	right	0mm	1:1	2.883	2.52	22.9	
1745	132322	LTE Band2_ENDC	20	24.5	QPSK	1	0	back	0mm	1:1	1.790	2.52	26.0	23.6
1745	132322	LTE Band2_ENDC	20	23.5	QPSK	50	50	back	0mm	1:1	1.422	2.52	26.0	
1745	132322	LTE Band2_ENDC	20	24.5	QPSK	1	0	front	0mm	1:1	0.612	2.52	30.6	
1745	132322	LTE Band2_ENDC	20	23.5	QPSK	50	50	front	0mm	1:1	0.486	2.52	30.6	
1745	132322	LTE Band2_ENDC	20	24.5	QPSK	1	0	right	0mm	1:1	3.130	2.52	23.6	
1745	132322	LTE Band2_ENDC	20	23.5	QPSK	50	25	right	0mm	1:1	2.486	2.52	23.6	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	back	0mm	1:1.58	2.508	2.52	21.0	21.0
3646.7	56207	LTE Band48	20	22	QPSK	50	25	back	0mm	1:1.58	1.844	2.52	21.4	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	front	0mm	1:1.58	1.441	2.52	23.4	
3646.7	56207	LTE Band48	20	22	QPSK	50	25	front	0mm	1:1.58	0.879	2.52	24.6	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	right	0mm	1:1.58	1.025	2.52	24.9	
3646.7	56207	LTE Band48	20	22	QPSK	50	0	right	0mm	1:1.58	0.496	2.52	27.1	

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (10g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
1905	26590	LTE Band2	20	24.5	QPSK	1	0	back	0mm	1:1	3.640	2.52	22.9	22.6
1905	26590	LTE Band2	20	23.5	QPSK	50	25	back	0mm	1:1	2.891	2.52	22.9	
1905	26590	LTE Band2	20	24.5	QPSK	1	0	front	0mm	1:1	1.030	2.52	28.4	
1905	26590	LTE Band2	20	23.5	QPSK	50	25	front	0mm	1:1	0.818	2.52	28.4	
1860	26140	LTE Band2	20	24.5	QPSK	1	99	bottom	0mm	1:1	3.920	2.52	22.6	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	99	bottom	0mm	1:1	3.819	2.52	22.7	
1905	26590	LTE Band2	20	24.5	QPSK	1	0	bottom	0mm	1:1	3.808	2.52	22.7	
1860	26140	LTE Band2	20	23.5	QPSK	50	25	bottom	0mm	1:1	3.114	2.52	22.6	
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	bottom	0mm	1:1	3.034	2.52	22.7	
1905	26590	LTE Band2	20	23.5	QPSK	50	25	bottom	0mm	1:1	3.025	2.52	22.7	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	right	0mm	1:1	1.079	2.52	26.2	23.8
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	right	0mm	1:1	0.857	2.52	26.2	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	back	0mm	1:1	0.369	2.52	30.8	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	back	0mm	1:1	0.293	2.52	30.8	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	front	0mm	1:1	1.886	2.52	23.8	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	front	0mm	1:1	1.498	2.52	23.8	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	bottom	0mm	1:1	0.028	2.52	42.1	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	bottom	0mm	1:1	0.026	2.52	41.3	
1770	132572	LTE Band66	20	24.5	QPSK	1	0	back	0mm	1:1	2.770	2.52	24.1	23.4
1770	132572	LTE Band66	20	23.5	QPSK	50	25	back	0mm	1:1	2.200	2.52	24.1	
1770	132572	LTE Band66	20	24.5	QPSK	1	0	front	0mm	1:1	0.836	2.52	29.3	
1770	132572	LTE Band66	20	23.5	QPSK	50	25	front	0mm	1:1	0.664	2.52	29.3	
1720	132072	LTE Band66	20	24.5	QPSK	1	50	bottom	0mm	1:1	3.180	2.52	23.5	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	bottom	0mm	1:1	3.270	2.52	23.4	
1770	132572	LTE Band66	20	24.5	QPSK	1	0	bottom	0mm	1:1	3.280	2.52	23.4	
1720	132072	LTE Band66	20	23.5	QPSK	50	25	bottom	0mm	1:1	2.526	2.52	23.5	
1745	132322	LTE Band66	20	23.5	QPSK	50	25	bottom	0mm	1:1	2.597	2.52	23.4	
1770	132572	LTE Band66	20	23.5	QPSK	50	25	bottom	0mm	1:1	2.605	2.52	23.4	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	right	0mm	1:1	0.665	2.52	28.3	24.8
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	right	0mm	1:1	0.410	2.52	29.4	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	back	0mm	1:1	0.252	2.52	32.5	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	back	0mm	1:1	0.229	2.52	31.9	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	front	0mm	1:1	1.376	2.52	25.1	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	front	0mm	1:1	1.166	2.52	24.8	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	bottom	0mm	1:1	0.046	2.52	39.9	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	bottom	0mm	1:1	0.056	2.52	38.0	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	back	0mm	1:1.58	2.120	2.52	23.3	23.2
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	back	0mm	1:1.58	1.684	2.52	23.3	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	front	0mm	1:1.58	0.500	2.52	29.5	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	front	0mm	1:1.58	0.397	2.52	29.5	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	bottom	0mm	1:1.58	2.130	2.52	23.2	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	0	bottom	0mm	1:1.58	1.692	2.52	23.2	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	back	0mm	1:1	2.300	2.52	24.9	24.6
2310	27710	LTE Band30	10	23.5	QPSK	25	12	back	0mm	1:1	1.827	2.52	24.9	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	front	0mm	1:1	0.603	2.52	30.7	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	front	0mm	1:1	0.479	2.52	30.7	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	bottom	0mm	1:1	2.460	2.52	24.6	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	bottom	0mm	1:1	1.954	2.52	24.6	

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

Table A-14 DSI = 1 P_{Limit} Calculations – 5G Phablet SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (10g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
836.5	176300	NR Band n5	20	23.8	DFT-s-OFDM-QPSK	1	1	back	0mm	1:1	0.657	2.52	29.6	29.6
836.5	176300	NR Band n5	20	23.8	CP-OFDM-QPSK	1	1	back	0mm	1:1	0.503	2.52	30.8	
836.5	176300	NR Band n5	20	23.8	DFT-s-OFDM-QPSK	1	1	front	0mm	1:1	0.552	2.52	30.4	
836.5	176300	NR Band n5	20	23.8	CP-OFDM-QPSK	1	1	front	0mm	1:1	0.454	2.52	31.2	
836.5	176300	NR Band n5	20	23.8	DFT-s-OFDM-QPSK	1	1	bottom	0mm	1:1	0.204	2.52	34.7	
836.5	176300	NR Band n5	20	23.8	CP-OFDM-QPSK	1	1	bottom	0mm	1:1	0.163	2.52	35.7	
836.5	176300	NR Band n5	20	23.8	DFT-s-OFDM-QPSK	1	1	right	0mm	1:1	0.216	2.52	34.5	
836.5	176300	NR Band n5	20	23.8	CP-OFDM-QPSK	1	1	right	0mm	1:1	0.195	2.52	34.9	
1880	376000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	53	right	0mm	1:1	3.948	2.52	22.6	22.6
1880	376000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	0	right	0mm	1:1	3.856	2.52	22.7	
1880	376000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	53	back	0mm	1:1	1.283	2.52	27.4	
1880	376000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	0	back	0mm	1:1	1.183	2.52	27.8	
1880	376000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	53	front	0mm	1:1	0.657	2.52	30.3	
1880	376000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	0	front	0mm	1:1	0.556	2.52	31.1	
1880	376000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	53	bottom	0mm	1:1	0.320	2.52	33.5	
1880	376000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	0	bottom	0mm	1:1	0.220	2.52	35.1	
1745	349000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	53	right	0mm	1:1	3.956	2.52	22.5	22.5
1745	349000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	0	right	0mm	1:1	3.855	2.52	22.7	
1745	349000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	53	back	0mm	1:1	1.740	2.52	26.1	
1745	349000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	0	back	0mm	1:1	1.652	2.52	26.3	
1745	349000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	53	front	0mm	1:1	1.080	2.52	28.2	
1745	349000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	0	front	0mm	1:1	0.993	2.52	28.5	
1745	349000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	53	bottom	0mm	1:1	0.310	2.52	33.6	
1745	349000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	0	bottom	0mm	1:1	0.224	2.52	35.0	

Table A-15 DSI = 7 P_{Limit} Calculations – Swivel 2G/3G Head SAR

Frequency		Mode	Service	Conducted Power	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.			[dBm]				[W/kg]	[W/kg]	[dBm]	[dBm]
836.52	384	CDMA BC0	RC3	24.5	Right	Cheek	1:1	0.127	1.01	33.5	33.5
836.52	384	CDMA_BC0	RC3	24.5	Right	Tilt	1:1	0.084	1.01	35.3	
836.52	384	CDMA_BC0	RC3	24.5	Left	Cheek	1:1	0.119	1.01	33.8	
836.52	384	CDMA_BC0	RC3	24.5	Left	Tilt	1:1	0.072	1.01	36.0	
836.52	384	CDMA_BC0	EVDO Rev.A	24.5	Right	Cheek	1:1	0.064	1.01	36.5	
836.52	384	CDMA_BC0	EVDO Rev.A	24.5	Right	Tilt	1:1	0.052	1.01	37.4	
836.52	384	CDMA_BC0	EVDO Rev.A	24.5	Left	Cheek	1:1	0.080	1.01	35.5	
836.52	384	CDMA_BC0	EVDO Rev.A	24.5	Left	Tilt	1:1	0.050	1.01	37.6	
1880	600	PCS CDMA	RC3	24.5	Right	Cheek	1:1	0.055	1.01	37.1	35.6
1880	600	PCS CDMA	RC3	24.5	Right	Tilt	1:1	0.054	1.01	37.2	
1880	600	PCS CDMA	RC3	24.5	Left	Cheek	1:1	0.070	1.01	36.1	
1880	600	PCS CDMA	RC3	24.5	Left	Tilt	1:1	0.052	1.01	37.4	
1880	600	PCS CDMA	EVDO Rev.A	24.5	Right	Cheek	1:1	0.049	1.01	37.6	
1880	600	PCS CDMA	EVDO Rev.A	24.5	Right	Tilt	1:1	0.043	1.01	38.2	
1880	600	PCS CDMA	EVDO Rev.A	24.5	Left	Cheek	1:1	0.078	1.01	35.6	
1880	600	PCS CDMA	EVDO Rev.A	24.5	Left	Tilt	1:1	0.040	1.01	38.5	
836.6	190	GSM 850	GSM	33	Right	Cheek	1:8.3	0.077	1.01	35.0	34.7
836.6	190	GSM 850	GSM	33	Right	Tilt	1:8.3	0.047	1.01	37.1	
836.6	190	GSM 850	GSM	33	Left	Cheek	1:8.3	0.083	1.01	34.7	
836.6	190	GSM 850	GSM	33	Left	Tilt	1:8.3	0.054	1.01	36.5	
836.6	190	GSM 850	GPRS	31	Right	Cheek	1:4.15	0.103	1.01	34.7	
836.6	190	GSM 850	GPRS	31	Right	Tilt	1:4.15	0.070	1.01	36.4	
836.6	190	GSM 850	GPRS	31	Left	Cheek	1:4.15	0.092	1.01	35.2	
836.6	190	GSM 850	GPRS	31	Left	Tilt	1:4.15	0.060	1.01	37.1	
1880	661	GSM 1900	GSM	30	Right	Cheek	1:8.3	0.030	1.01	36.0	34.9
1880	661	GSM 1900	GSM	30	Right	Tilt	1:8.3	0.025	1.01	36.9	
1880	661	GSM 1900	GSM	30	Left	Cheek	1:8.3	0.039	1.01	34.9	
1880	661	GSM 1900	GSM	30	Left	Tilt	1:8.3	0.030	1.01	36.1	
1880	661	GSM 1900	GPRS	28	Right	Cheek	1:4.15	0.029	1.01	37.2	
1880	661	GSM 1900	GPRS	28	Right	Tilt	1:4.15	0.029	1.01	37.2	
1880	661	GSM 1900	GPRS	28	Left	Cheek	1:4.15	0.046	1.01	35.2	
1880	661	GSM 1900	GPRS	28	Left	Tilt	1:4.15	0.043	1.01	35.6	
836.6	4183	UMTS850	WCDMA	24.5	Right	Cheek	1:1	0.110	1.01	34.1	33.8
836.6	4183	UMTS 850	WCDMA	24.5	Right	Tilt	1:1	0.077	1.01	35.7	
836.6	4183	UMTS 850	WCDMA	24.5	Left	Cheek	1:1	0.118	1.01	33.8	
836.6	4183	UMTS 850	WCDMA	24.5	Left	Tilt	1:1	0.072	1.01	36.0	
1880	9400	UMTS 1900	WCDMA	24.5	Right	Cheek	1:1	0.061	1.01	36.7	34.8
1880	9400	UMTS 1900	WCDMA	24.5	Right	Tilt	1:1	0.060	1.01	36.7	
1880	9400	UMTS 1900	WCDMA	24.5	Left	Cheek	1:1	0.095	1.01	34.8	
1880	9400	UMTS 1900	WCDMA	24.5	Left	Tilt	1:1	0.079	1.01	35.6	
1732.4	1412	UMTS 1750	WCDMA	24.5	Right	Cheek	1:1	0.070	1.01	36.1	35.6
1732.4	1412	UMTS 1750	WCDMA	24.5	Right	Tilt	1:1	0.061	1.01	36.7	
1732.4	1412	UMTS 1750	WCDMA	24.5	Left	Cheek	1:1	0.079	1.01	35.6	
1732.4	1412	UMTS 1750	WCDMA	24.5	Left	Tilt	1:1	0.044	1.01	38.1	

Table A-16 DSI = 7 P_{Limit} Calculations – Swivel 4G Head SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	Right	Cheek	1:1	0.069	1.01	36.1	34.9
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	Right	Cheek	1:1	0.057	1.01	36.0	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	Right	Tilt	1:1	0.046	1.01	37.9	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	Right	Tilt	1:1	0.039	1.01	37.7	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	Left	Cheek	1:1	0.086	1.01	35.2	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	Left	Cheek	1:1	0.074	1.01	34.9	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	Left	Tilt	1:1	0.054	1.01	37.2	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	Left	Tilt	1:1	0.033	1.01	38.4	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	Right	Cheek	1:1	0.054	1.01	35.2	34.0
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	Right	Cheek	1:1	0.044	1.01	35.1	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	Right	Tilt	1:1	0.036	1.01	37.0	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	Right	Tilt	1:1	0.030	1.01	36.8	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	Left	Cheek	1:1	0.067	1.01	34.3	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	Left	Cheek	1:1	0.057	1.01	34.0	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	Left	Tilt	1:1	0.042	1.01	36.3	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	Left	Tilt	1:1	0.025	1.01	37.5	
782	23230	LTE Band13	10	24.5	QPSK	1	0	Right	Cheek	1:1	0.069	1.01	36.1	35.4
782	23230	LTE Band13	10	23.5	QPSK	25	25	Right	Cheek	1:1	0.066	1.01	35.4	
782	23230	LTE Band13	10	24.5	QPSK	1	0	Right	Tilt	1:1	0.049	1.01	37.6	
782	23230	LTE Band13	10	23.5	QPSK	25	25	Right	Tilt	1:1	0.040	1.01	37.5	
782	23230	LTE Band13	10	24.5	QPSK	1	0	Left	Cheek	1:1	0.076	1.01	35.7	
782	23230	LTE Band13	10	23.5	QPSK	25	25	Left	Cheek	1:1	0.064	1.01	35.5	
782	23230	LTE Band13	10	24.5	QPSK	1	0	Left	Tilt	1:1	0.044	1.01	38.1	
782	23230	LTE Band13	10	23.5	QPSK	25	25	Left	Tilt	1:1	0.038	1.01	37.8	
763	23330	LTE Band14	10	24.5	QPSK	1	0	Right	Cheek	1:1	0.069	1.01	36.1	35.4
763	23330	LTE Band14	10	23.5	QPSK	25	25	Right	Cheek	1:1	0.066	1.01	35.4	
763	23330	LTE Band14	10	24.5	QPSK	1	0	Right	Tilt	1:1	0.049	1.01	37.6	
763	23330	LTE Band14	10	23.5	QPSK	25	25	Right	Tilt	1:1	0.040	1.01	37.5	
763	23330	LTE Band14	10	24.5	QPSK	1	0	Left	Cheek	1:1	0.076	1.01	35.7	
763	23330	LTE Band14	10	23.5	QPSK	25	25	Left	Cheek	1:1	0.064	1.01	35.5	
763	23330	LTE Band14	10	24.5	QPSK	1	0	Left	Tilt	1:1	0.044	1.01	38.1	
782	23330	LTE Band14	10	23.5	QPSK	25	25	Left	Tilt	1:1	0.038	1.01	37.8	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	Right	Cheek	1:1	0.085	1.01	35.3	35.3
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	Right	Cheek	1:1	0.061	1.01	35.7	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	Right	Tilt	1:1	0.063	1.01	36.6	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	Right	Tilt	1:1	0.049	1.01	36.6	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	Left	Cheek	1:1	0.070	1.01	36.1	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	Left	Cheek	1:1	0.053	1.01	36.3	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	Left	Tilt	1:1	0.043	1.01	38.2	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	Left	Tilt	1:1	0.040	1.01	37.6	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	Right	Cheek	1:1	0.066	1.01	34.4	34.4
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	Right	Cheek	1:1	0.047	1.01	34.8	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	Right	Tilt	1:1	0.049	1.01	35.7	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	Right	Tilt	1:1	0.038	1.01	35.7	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	Left	Cheek	1:1	0.054	1.01	35.2	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	Left	Cheek	1:1	0.041	1.01	35.4	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	Left	Tilt	1:1	0.034	1.01	37.3	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	Left	Tilt	1:1	0.031	1.01	36.7	

Table A-17 DSI = 7 P_{Limit} Calculations – Swivel 4G Head SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
1882.5	26365	LTE Band2	20	24.5	QPSK	1	0	Right	Cheek	1:1	0.075	1.01	35.8	35.1
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	Right	Cheek	1:1	0.045	1.01	37.1	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	0	Right	Tilt	1:1	0.046	1.01	37.9	
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	Right	Tilt	1:1	0.039	1.01	37.7	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	0	Left	Cheek	1:1	0.088	1.01	35.1	
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	Left	Cheek	1:1	0.070	1.01	35.1	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	0	Left	Tilt	1:1	0.062	1.01	36.6	
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	Left	Tilt	1:1	0.046	1.01	36.9	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	Right	Cheek	1:1	0.014	1.01	41.2	40.1
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	Right	Cheek	1:1	0.014	1.01	40.1	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	Right	Tilt	1:1	0.005	1.01	45.5	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	Right	Tilt	1:1	0.005	1.01	44.3	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	Left	Cheek	1:1	0.007	1.01	44.0	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	Left	Cheek	1:1	0.007	1.01	42.9	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	Left	Tilt	1:1	0.005	1.01	45.9	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	Left	Tilt	1:1	0.004	1.01	45.1	
1882.5	26365	LTE Band2_ENDC	20	24.5	QPSK	1	0	Right	Cheek	1:1	0.233	1.01	30.9	29.4
1882.5	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	Right	Cheek	1:1	0.260	1.01	29.4	
1882.5	26365	LTE Band2_ENDC	20	24.5	QPSK	1	0	Right	Tilt	1:1	0.084	1.01	35.3	
1882.5	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	Right	Tilt	1:1	0.097	1.01	33.7	
1882.5	26365	LTE Band2_ENDC	20	24.5	QPSK	1	0	Left	Cheek	1:1	0.116	1.01	33.9	
1882.5	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	Left	Cheek	1:1	0.133	1.01	32.3	
1882.5	26365	LTE Band2_ENDC	20	24.5	QPSK	1	0	Left	Tilt	1:1	0.071	1.01	36.0	
1882.5	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	Left	Tilt	1:1	0.080	1.01	34.5	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	Right	Cheek	1:1	0.063	1.01	36.5	35.5
1745	132322	LTE Band66	20	23.5	QPSK	50	50	Right	Cheek	1:1	0.055	1.01	36.2	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	Right	Tilt	1:1	0.052	1.01	37.3	
1745	132322	LTE Band66	20	23.5	QPSK	50	50	Right	Tilt	1:1	0.038	1.01	37.7	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	Left	Cheek	1:1	0.076	1.01	35.7	
1745	132322	LTE Band66	20	23.5	QPSK	50	50	Left	Cheek	1:1	0.064	1.01	35.5	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	Left	Tilt	1:1	0.032	1.01	39.5	
1745	132322	LTE Band66	20	23.5	QPSK	50	50	Left	Tilt	1:1	0.028	1.01	39.1	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	50	Right	Cheek	1:1	0.161	1.01	30.5	30.5
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	50	Right	Cheek	1:1	0.113	1.01	31.0	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	50	Right	Tilt	1:1	0.054	1.01	35.2	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	50	Right	Tilt	1:1	0.038	1.01	35.7	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	50	Left	Cheek	1:1	0.071	1.01	34.0	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	50	Left	Cheek	1:1	0.049	1.01	34.6	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	50	Left	Tilt	1:1	0.056	1.01	35.0	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	50	Left	Tilt	1:1	0.038	1.01	35.7	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	99	Right	Cheek	1:1	0.193	1.01	31.7	31.2
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	Right	Cheek	1:1	0.172	1.01	31.2	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	99	Right	Tilt	1:1	0.065	1.01	36.4	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	Right	Tilt	1:1	0.058	1.01	35.9	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	99	Left	Cheek	1:1	0.086	1.01	35.2	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	Left	Cheek	1:1	0.074	1.01	34.8	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	99	Left	Tilt	1:1	0.067	1.01	36.2	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	Left	Tilt	1:1	0.058	1.01	35.9	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	Right	Cheek	1:1	0.013	1.01	43.5	40.8
2310	27710	LTE Band30	10	23.5	QPSK	25	12	Right	Cheek	1:1	0.013	1.01	42.4	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	Right	Tilt	1:1	0.011	1.01	43.9	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	Right	Tilt	1:1	0.011	1.01	43.1	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	Left	Cheek	1:1	0.020	1.01	41.4	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	Left	Cheek	1:1	0.019	1.01	40.8	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	Left	Tilt	1:1	0.010	1.01	44.7	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	Left	Tilt	1:1	0.009	1.01	44.1	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	Right	Cheek	1:1	0.012	1.01	43.8	41.1
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	Right	Cheek	1:1	0.012	1.01	42.7	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	Right	Tilt	1:1	0.011	1.01	44.2	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	Right	Tilt	1:1	0.010	1.01	43.4	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	Left	Cheek	1:1	0.019	1.01	41.7	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	Left	Cheek	1:1	0.017	1.01	41.1	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	Left	Tilt	1:1	0.009	1.01	45.0	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	Left	Tilt	1:1	0.008	1.01	44.4	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	Right	Cheek	1:1.58	0.056	1.01	35.1	34.7
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	Right	Cheek	1:1.58	0.042	1.01	35.3	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	Right	Tilt	1:1.58	0.036	1.01	37.0	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	Right	Tilt	1:1.58	0.030	1.01	36.8	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	Left	Cheek	1:1.58	0.057	1.01	35.0	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	Left	Cheek	1:1.58	0.048	1.01	34.7	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	Left	Tilt	1:1.58	0.034	1.01	37.2	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	Left	Tilt	1:1.58	0.031	1.01	36.6	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	Right	Cheek	1:1.58	0.302	1.01	26.3	21.0
3646.7	56207	LTE Band48	20	22	QPSK	50	25	Right	Cheek	1:1.58	0.248	1.01	26.1	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	Right	Tilt	1:1.58	0.251	1.01	27.1	
3646.7	56207	LTE Band48	20	22	QPSK	50	25	Right	Tilt	1:1.58	0.219	1.01	26.6	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	Left	Cheek	1:1.58	0.984	1.01	21.1	
3646.7	56207	LTE Band48	20	22	QPSK	50	25	Left	Cheek	1:1.58	0.810	1.01	21.0	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	Left	Tilt	1:1.58	0.352	1.01	25.6	
3646.7	56207	LTE Band48	20	22	QPSK	50	25	Left	Tilt	1:1.58	0.296	1.01	25.3	

Table A-18 DSI = 7 P_{Limit} Calculations – Swivel 5G Head SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	Right	Cheek	1:1	0.066	1.01	36.3	36.3
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	Right	Cheek	1:1	0.051	1.01	37.4	
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	Right	Tilt	1:1	0.052	1.01	37.3	
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	Right	Tilt	1:1	0.039	1.01	38.6	
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	Left	Cheek	1:1	0.060	1.01	36.8	
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	Left	Cheek	1:1	0.043	1.01	38.2	
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	Left	Tilt	1:1	0.033	1.01	39.3	
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	Left	Tilt	1:1	0.032	1.01	39.5	
1905	381000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	Right	Cheek	1:1	0.233	1.01	30.9	30.4
1905	381000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	Right	Cheek	1:1	0.260	1.01	30.4	
1905	381000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	Right	Tilt	1:1	0.084	1.01	35.3	
1905	381000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	Right	Tilt	1:1	0.097	1.01	34.7	
1905	381000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	Left	Cheek	1:1	0.116	1.01	33.9	
1905	381000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	Left	Cheek	1:1	0.133	1.01	33.3	
1905	381000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	Left	Tilt	1:1	0.071	1.01	36.0	
1905	381000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	Left	Tilt	1:1	0.080	1.01	35.5	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	Right	Cheek	1:1	0.193	1.01	31.7	31.7
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	Right	Cheek	1:1	0.172	1.01	32.2	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	Right	Tilt	1:1	0.065	1.01	36.4	
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	Right	Tilt	1:1	0.058	1.01	36.9	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	Left	Cheek	1:1	0.086	1.01	35.2	
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	Left	Cheek	1:1	0.074	1.01	35.8	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	Left	Tilt	1:1	0.067	1.01	36.2	
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	Left	Tilt	1:1	0.058	1.01	36.9	

Table A-19 DSI = 7 P_{Limit} Calculations – Swivel 2G/3G Body worn SAR

Frequency		Mode	Service	Conducted Power	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.			[dBm]				[W/kg]	[W/kg]	[dBm]	[dBm]
824.7	1013	CDMA BC0	TDSO	24.5	back	10mm	1:1	0.445	1.01	28.1	28.1
836.52	384	CDMA BC0	TDSO	24.5	back	10mm	1:1	0.439	1.01	28.1	
848.31	777	CDMA BC0	TDSO	24.5	back	10mm	1:1	0.429	1.01	28.2	
1851.25	25	CDMA BC1	TDSO	24.5	back	10mm	1:1	1.233	1.01	23.6	23.6
1880	600	CDMA BC1	TDSO	24.5	back	10mm	1:1	1.240	1.01	23.6	
1908.75	1175	CDMA BC1	TDSO	24.5	back	10mm	1:1	1.201	1.01	23.7	
836.6	190	GSM 850	GSM	33	back	10mm	1:8.3	0.428	1.01	27.5	27.5
836.6	190	GSM 850	GPRS	31	back	10mm	1:4.15	0.444	1.01	28.4	
1880	661	GSM 1900	GSM	30	back	10mm	1:8.3	0.436	1.01	24.5	24.5
1880	661	GSM 1900	GPRS	28	back	10mm	1:4.15	0.495	1.01	24.9	
826.4	4132	UMTS 850	RMC	24.5	back	10mm	1:1	0.422	1.01	28.3	28.3
836	4183	UMTS 850	RMC	24.5	back	10mm	1:1	0.424	1.01	28.3	
846.6	4233	UMTS 850	RMC	24.5	back	10mm	1:1	0.403	1.01	28.5	
1880	9400	UMTS 1900	RMC	24.5	back	10mm	1:1	0.667	1.01	26.3	26.3
1732.4	1412	UMTS 1750	RMC	24.5	back	10mm	1:1	0.785	1.01	25.6	25.6

Table A-20 DSI = 7 P_{Limit} Calculations – Swivel 4G Body worn SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	back	10mm	1:1	0.284	1.01	30.0	30.0
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	back	10mm	1:1	0.194	1.01	30.7	
707.5	23095	LTE Band12_UCLA	10	22.5	QPSK	1	49	back	10mm	1:1	0.113	1.01	32.0	32.0
707.5	23095	LTE Band12_UCLA	10	21.5	QPSK	25	12	back	10mm	1:1	0.087	1.01	32.2	
782	23230	LTE Band13	10	24.5	QPSK	1	0	back	10mm	1:1	0.458	1.01	27.9	27.9
782	23230	LTE Band13	10	23.5	QPSK	25	25	back	10mm	1:1	0.288	1.01	28.9	
763	23330	LTE Band14	10	24.5	QPSK	1	0	back	10mm	1:1	0.399	1.01	28.5	28.5
763	23230	LTE Band14	10	23.5	QPSK	25	25	back	10mm	1:1	0.288	1.01	28.9	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	back	10mm	1:1	0.535	1.01	27.3	27.3
836.5	20525	LTE Band5	10	23.5	QPSK	25	25	back	10mm	1:1	0.334	1.01	28.3	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	back	10mm	1:1	0.213	1.01	29.3	29.3
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	25	back	10mm	1:1	0.164	1.01	29.4	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	0	back	10mm	1:1	0.657	1.01	26.4	26.4
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	back	10mm	1:1	0.522	1.01	26.4	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	back	10mm	1:1	0.067	1.01	34.2	34.2
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	back	10mm	1:1	0.054	1.01	34.2	
1882.5	26365	LTE Band2_ENDC	20	24.5	QPSK	1	0	back	10mm	1:1	0.381	1.01	28.7	28.7
1882.5	26365	LTE Band2_ENDC	20	23.5	QPSK	50	25	back	10mm	1:1	0.303	1.01	28.7	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	back	10mm	1:1	0.674	1.01	26.3	26.3
1745	132322	LTE Band66	20	23.5	QPSK	50	50	back	10mm	1:1	0.535	1.01	26.3	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	50	back	10mm	1:1	0.067	1.01	34.2	34.2
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	50	back	10mm	1:1	0.054	1.01	34.2	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	99	back	10mm	1:1	0.370	1.01	28.9	28.9
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	back	10mm	1:1	0.294	1.01	28.9	
2310	27710	LTE Band30	10	24.5	QPSK	1	0	back	10mm	1:1	0.287	1.01	30.0	30.0
2310	27710	LTE Band30	10	23.5	QPSK	25	12	back	10mm	1:1	0.228	1.01	30.0	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	0	back	10mm	1:1	0.020	1.01	41.5	40.5
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	back	10mm	1:1	0.020	1.01	40.5	
`	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	back	10mm	1:1.58	0.198	1.01	29.6	29.1
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	back	10mm	1:1.58	0.177	1.01	29.1	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	back	10mm	1:1.58	0.158	1.01	29.1	27.7
3646.7	56207	LTE Band48	20	22	QPSK	50	25	back	10mm	1:1.58	0.172	1.01	27.7	

Table A-21 DSI = 7 P_{Limit} Calculations – Swivel 5G Body worn SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (1g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
836.5	176300	NR Band n5	20	24.5	DFT-s-OFDM-QPSK	1	1	back	10mm	1:1	0.454	1.01	28.0	28.0
836.5	176300	NR Band n5	20	24.5	CP-OFDM-QPSK	1	1	back	10mm	1:1	0.427	1.01	28.2	
1905	381000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	104	back	10mm	1:1	0.276	1.01	30.1	30.1
1905	381000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	1	back	10mm	1:1	0.267	1.01	30.3	
1770	354000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	104	back	10mm	1:1	0.398	1.01	28.5	28.5
1770	354000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	1	back	10mm	1:1	0.349	1.01	29.1	

Table A-22 DSI = 7 P_{Limit} Calculations – Swivel 2G/3G Phablet SAR

Frequency		Mode	Service	Conducted Power	Test Position	Spacing	Duty Cycle	SAR (10g)	SAR design target	Plimit	Min Plimit
MHz	Ch.			[dBm]				[W/kg]	[W/kg]	[dBm]	[dBm]
836.52	384	CDMA BC0	EVDO Rev.0	24.5	back	0mm	1:1	0.793	2.52	29.5	29.5
836.52	384	CDMA BC0	EVDO Rev.0	24.5	front	0mm	1:1	0.713	2.52	30.0	
836.52	384	CDMA BC0	EVDO Rev.0	24.5	bottom	0mm	1:1	0.335	2.52	33.3	
836.6	190	GSM 850	GPRS	31	back	0mm	1:4.15	0.315	2.52	33.9	33.9
836.6	190	GSM 850	GPRS	31	front	0mm	1:4.15	0.313	2.52	33.9	
836.6	190	GSM 850	GPRS	31	bottom	0mm	1:4.15	0.297	2.52	34.1	
1880	661	GSM 1900	GPRS	28	back	0mm	1:4.15	0.539	2.52	28.5	28.3
1880	661	GSM 1900	GPRS	28	front	0mm	1:4.15	0.559	2.52	28.4	
1880	661	GSM 1900	GPRS	28	bottom	0mm	1:4.15	0.565	2.52	28.3	
836.6	4183	UMTS 850	RMC	24.5	back	0mm	1:1	1.130	2.52	28.0	28.0
836.6	4183	UMTS 850	RMC	24.5	front	0mm	1:1	1.097	2.52	28.1	
836.6	4183	UMTS 850	RMC	24.5	bottom	0mm	1:1	0.355	2.52	33.0	
1880	600	PCS CDMA	EVDO Rev.0	24.5	back	0mm	1:1	3.050	2.52	23.7	23.5
1880	600	PCS CDMA	EVDO Rev.0	24.5	front	0mm	1:1	3.146	2.52	23.5	
1880	600	PCS CDMA	EVDO Rev.0	24.5	bottom	0mm	1:1	3.066	2.52	23.7	
1880	9400	UMTS 1900	RMC	24.5	back	0mm	1:1	3.948	2.52	22.6	22.6
1852.4	9262	UMTS 1900	RMC	24.5	front	0mm	1:1	3.560	2.52	23.0	
1880	9400	UMTS 1900	RMC	24.5	front	0mm	1:1	3.550	2.52	23.0	
1907.6	9538	UMTS 1900	RMC	24.5	front	0mm	1:1	3.592	2.52	23.0	
1852.4	9262	UMTS 1900	RMC	24.5	bottom	0mm	1:1	3.686	2.52	22.9	
1880	9400	UMTS 1900	RMC	24.5	bottom	0mm	1:1	3.675	2.52	22.9	
1907.6	9538	UMTS 1900	RMC	24.5	bottom	0mm	1:1	3.717	2.52	22.8	
1732.4	1412	UMTS 1750	RMC	24.5	back	0mm	1:1	3.456	2.52	23.1	23.1
1732.4	1412	UMTS 1750	RMC	24.5	front	0mm	1:1	3.340	2.52	23.3	
1712.4	1312	UMTS 1750	RMC	24.5	bottom	0mm	1:1	3.194	2.52	23.5	
1732.4	1412	UMTS 1750	RMC	24.5	bottom	0mm	1:1	3.068	2.52	23.6	
1752.6	1513	UMTS 1750	RMC	24.5	bottom	0mm	1:1	2.890	2.52	23.9	

Table A-23 DSI = 7 P_{Limit} Calculations – Swivel 4G Phablet SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (10g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	back	0mm	1:1	0.564	2.52	31.0	30.7
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	back	0mm	1:1	0.477	2.52	30.7	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	front	0mm	1:1	0.564	2.52	31.0	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	front	0mm	1:1	0.465	2.52	30.8	
707.5	23095	LTE Band12	10	24.5	QPSK	1	49	bottom	0mm	1:1	0.239	2.52	34.7	
707.5	23095	LTE Band12	10	23.5	QPSK	25	12	bottom	0mm	1:1	0.197	2.52	34.6	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	back	0mm	1:1	0.448	2.52	30.0	29.7
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	back	0mm	1:1	0.379	2.52	29.7	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	front	0mm	1:1	0.448	2.52	30.0	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	front	0mm	1:1	0.370	2.52	29.8	
707.5	23095	LTE Band12_ULCA	10	22.5	QPSK	1	49	bottom	0mm	1:1	0.190	2.52	33.7	
707.5	23095	LTE Band12_ULCA	10	21.5	QPSK	25	12	bottom	0mm	1:1	0.157	2.52	33.6	
782	23230	LTE Band13	10	24.5	QPSK	1	0	back	0mm	1:1	0.714	2.52	30.0	29.8
782	23230	LTE Band13	10	23.5	QPSK	25	25	back	0mm	1:1	0.562	2.52	30.0	
782	23230	LTE Band13	10	24.5	QPSK	1	0	front	0mm	1:1	0.653	2.52	30.4	
782	23230	LTE Band13	10	23.5	QPSK	25	25	front	0mm	1:1	0.590	2.52	29.8	
782	23230	LTE Band13	10	24.5	QPSK	1	0	bottom	0mm	1:1	0.307	2.52	33.6	
782	23230	LTE Band13	10	23.5	QPSK	25	25	bottom	0mm	1:1	0.245	2.52	33.6	
763	23330	LTE Band14	10	24.5	QPSK	1	0	back	0mm	1:1	0.714	2.52	30.0	29.8
763	23330	LTE Band14	10	23.5	QPSK	25	25	back	0mm	1:1	0.562	2.52	30.0	
763	23330	LTE Band14	10	24.5	QPSK	1	0	front	0mm	1:1	0.653	2.52	30.4	
763	23330	LTE Band14	10	23.5	QPSK	25	25	front	0mm	1:1	0.590	2.52	29.8	
763	23330	LTE Band14	10	24.5	QPSK	1	0	bottom	0mm	1:1	0.307	2.52	33.6	
763	23330	LTE Band14	10	23.5	QPSK	25	25	bottom	0mm	1:1	0.245	2.52	33.6	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	back	0mm	1:1	0.808	2.52	29.4	29.4
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	back	0mm	1:1	0.619	2.52	29.6	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	front	0mm	1:1	0.679	2.52	30.2	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	front	0mm	1:1	0.559	2.52	30.0	
836.5	20525	LTE Band5	10	24.5	QPSK	1	0	bottom	0mm	1:1	0.251	2.52	34.5	
836.5	20525	LTE Band5	10	23.5	QPSK	25	0	bottom	0mm	1:1	0.201	2.52	34.5	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	back	0mm	1:1	0.642	2.52	28.4	28.4
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	back	0mm	1:1	0.492	2.52	28.6	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	front	0mm	1:1	0.539	2.52	29.2	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	front	0mm	1:1	0.444	2.52	29.0	
836.5	20525	LTE Band5_ULCA	10	22.5	QPSK	1	0	bottom	0mm	1:1	0.199	2.52	33.5	
836.5	20525	LTE Band5_ULCA	10	21.5	QPSK	25	0	bottom	0mm	1:1	0.160	2.52	33.5	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	back	0mm	1:1	1.047	2.52	28.3	28.3
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	back	0mm	1:1	0.832	2.52	28.3	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	front	0mm	1:1	0.443	2.52	32.1	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	front	0mm	1:1	0.352	2.52	32.1	
2310	27710	LTE Band30_ENDC	10	24.5	QPSK	1	25	bottom	0mm	1:1	0.365	2.52	32.9	
2310	27710	LTE Band30_ENDC	10	23.5	QPSK	25	12	bottom	0mm	1:1	0.290	2.52	32.9	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	0	back	0mm	1:1	2.461	2.52	24.6	24.6
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	back	0mm	1:1	1.955	2.52	24.6	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	0	front	0mm	1:1	2.346	2.52	24.8	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	50	front	0mm	1:1	1.863	2.52	24.8	
1745	132322	LTE Band4_ENDC	20	24.5	QPSK	1	0	bottom	0mm	1:1	0.254	2.52	34.5	
1745	132322	LTE Band4_ENDC	20	23.5	QPSK	50	25	bottom	0mm	1:1	0.202	2.52	34.5	
1745	132322	LTE Band2_ENDC	20	24.5	QPSK	1	0	back	0mm	1:1	2.209	2.52	25.1	24.3
1745	132322	LTE Band2_ENDC	20	23.5	QPSK	50	50	back	0mm	1:1	1.755	2.52	25.1	
1745	132322	LTE Band2_ENDC	20	24.5	QPSK	1	0	front	0mm	1:1	2.649	2.52	24.3	
1745	132322	LTE Band2_ENDC	20	23.5	QPSK	50	50	front	0mm	1:1	2.104	2.52	24.3	
1745	132322	LTE Band2_ENDC	20	24.5	QPSK	1	0	bottom	0mm	1:1	0.132	2.52	37.3	
1745	132322	LTE Band2_ENDC	20	23.5	QPSK	50	25	bottom	0mm	1:1	0.105	2.52	37.3	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	back	0mm	1:1.58	2.395	2.52	21.2	21.2
3646.7	56207	LTE Band48	20	22	QPSK	50	25	back	0mm	1:1.58	1.761	2.52	21.6	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	front	0mm	1:1.58	1.376	2.52	23.6	
3646.7	56207	LTE Band48	20	22	QPSK	50	25	front	0mm	1:1.58	0.840	2.52	24.8	
3646.7	56207	LTE Band48	20	23	QPSK	1	0	bottom	0mm	1:1.58	0.979	2.52	25.1	
3646.7	56207	LTE Band48	20	22	QPSK	50	0	bottom	0mm	1:1.58	0.474	2.52	27.3	

1905	26590	LTE Band2	20	24.5	QPSK	1	0	back	0mm	1:1	3.696	2.52	22.8	22.8
1905	26590	LTE Band2	20	23.5	QPSK	50	25	back	0mm	1:1	2.936	2.52	22.8	
1905	26590	LTE Band2	20	24.5	QPSK	1	0	front	0mm	1:1	3.276	2.52	23.4	
1905	26590	LTE Band2	20	23.5	QPSK	50	25	front	0mm	1:1	2.602	2.52	23.4	
1860	26140	LTE Band2	20	24.5	QPSK	1	99	bottom	0mm	1:1	3.600	2.52	23.0	
1882.5	26365	LTE Band2	20	24.5	QPSK	1	99	bottom	0mm	1:1	3.553	2.52	23.0	
1905	26590	LTE Band2	20	24.5	QPSK	1	0	bottom	0mm	1:1	3.696	2.52	22.8	
1860	26140	LTE Band2	20	23.5	QPSK	50	25	bottom	0mm	1:1	2.860	2.52	23.0	
1882.5	26365	LTE Band2	20	23.5	QPSK	50	25	bottom	0mm	1:1	2.822	2.52	23.0	
1905	26590	LTE Band2	20	23.5	QPSK	50	25	bottom	0mm	1:1	2.936	2.52	22.8	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	back	0mm	1:1	1.449	2.52	24.9	24.9
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	back	0mm	1:1	1.151	2.52	24.9	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	front	0mm	1:1	1.381	2.52	25.1	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	front	0mm	1:1	1.097	2.52	25.1	
1882.5	26365	LTE Band2_ULCA	20	22.5	QPSK	1	0	bottom	0mm	1:1	0.150	2.52	34.8	
1882.5	26365	LTE Band2_ULCA	20	21.5	QPSK	50	25	bottom	0mm	1:1	0.119	2.52	34.8	
1770	132572	LTE Band66	20	24.5	QPSK	1	0	back	0mm	1:1	3.100	2.52	23.6	23.2
1770	132572	LTE Band66	20	23.5	QPSK	50	25	back	0mm	1:1	2.462	2.52	23.6	
1770	132572	LTE Band66	20	24.5	QPSK	1	0	front	0mm	1:1	2.963	2.52	23.8	
1770	132572	LTE Band66	20	23.5	QPSK	50	25	front	0mm	1:1	2.354	2.52	23.8	
1720	132072	LTE Band66	20	24.5	QPSK	1	50	bottom	0mm	1:1	3.424	2.52	23.2	
1745	132322	LTE Band66	20	24.5	QPSK	1	50	bottom	0mm	1:1	3.435	2.52	23.2	
1770	132572	LTE Band66	20	24.5	QPSK	1	0	bottom	0mm	1:1	3.403	2.52	23.2	
1720	132072	LTE Band66	20	23.5	QPSK	50	25	bottom	0mm	1:1	2.720	2.52	23.2	
1745	132322	LTE Band66	20	23.5	QPSK	50	25	bottom	0mm	1:1	2.728	2.52	23.2	
1770	132572	LTE Band66	20	23.5	QPSK	50	25	bottom	0mm	1:1	2.703	2.52	23.2	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	back	0mm	1:1	1.553	2.52	24.6	24.6
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	back	0mm	1:1	1.233	2.52	24.6	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	front	0mm	1:1	1.480	2.52	24.8	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	front	0mm	1:1	1.176	2.52	24.8	
1745	132322	LTE Band66_ULCA	20	22.5	QPSK	1	0	bottom	0mm	1:1	0.161	2.52	34.5	
1745	132322	LTE Band66_ULCA	20	21.5	QPSK	50	25	bottom	0mm	1:1	0.128	2.52	34.5	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	back	0mm	1:1.58	2.335	2.52	22.8	22.8
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	back	0mm	1:1.58	1.855	2.52	22.8	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	front	0mm	1:1.58	2.157	2.52	23.2	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	25	front	0mm	1:1.58	1.713	2.52	23.2	
2506	39750	LTE Band41(PC3)	20	24.5	QPSK	1	0	bottom	0mm	1:1.58	2.377	2.52	22.8	
2506	39750	LTE Band41(PC3)	20	23.5	QPSK	50	0	bottom	0mm	1:1.58	1.888	2.52	22.8	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	back	0mm	1:1	2.346	2.52	24.8	24.0
2310	27710	LTE Band30	10	23.5	QPSK	25	12	back	0mm	1:1	1.863	2.52	24.8	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	front	0mm	1:1	2.283	2.52	24.9	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	front	0mm	1:1	1.813	2.52	24.9	
2310	27710	LTE Band30	10	24.5	QPSK	1	25	bottom	0mm	1:1	2.827	2.52	24.0	
2310	27710	LTE Band30	10	23.5	QPSK	25	12	bottom	0mm	1:1	2.246	2.52	24.0	

Table A-24 DSI = 7 P_{Limit} Calculations – Swivel 5G Phablet SAR

Frequency		Mode	Bandwidth	Conducted Power	Modulation	RB Size	RB offset	Test Position	Spacing	Duty Cycle	SAR (10g)	SAR design target	Plimit	Min Plimit
MHz	Ch.		[MHz]	[dBm]							[W/kg]	[W/kg]	[dBm]	[dBm]
836.5	176300	NR Band n5	20	23.8	DFT-s-OFDM-QPSK	1	1	back	0mm	1:1	0.672	2.52	29.5	29.5
836.5	176300	NR Band n5	20	23.8	CP-OFDM-QPSK	1	1	back	0mm	1:1	0.515	2.52	30.7	
836.5	176300	NR Band n5	20	23.8	DFT-s-OFDM-QPSK	1	1	front	0mm	1:1	0.565	2.52	30.3	
836.5	176300	NR Band n5	20	23.8	CP-OFDM-QPSK	1	1	front	0mm	1:1	0.465	2.52	31.1	
836.5	176300	NR Band n5	20	23.8	DFT-s-OFDM-QPSK	1	1	bottom	0mm	1:1	0.208	2.52	34.6	
836.5	176300	NR Band n5	20	23.8	CP-OFDM-QPSK	1	1	bottom	0mm	1:1	0.167	2.52	35.6	
1880	376000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	53	right	0mm	1:1	3.685	2.52	22.9	22.9
1880	376000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	0	right	0mm	1:1	3.599	2.52	23.0	
1880	376000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	53	back	0mm	1:1	1.198	2.52	27.7	
1880	376000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	0	back	0mm	1:1	1.104	2.52	28.1	
1880	376000	NR Band n2	20	24.5	DFT-s-OFDM-QPSK	1	53	front	0mm	1:1	0.613	2.52	30.6	
1880	376000	NR Band n2	20	24.5	CP-OFDM-QPSK	1	0	front	0mm	1:1	0.519	2.52	31.4	
1745	349000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	53	back	0mm	1:1	2.570	2.52	24.4	23.5
1745	349000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	0	back	0mm	1:1	2.457	2.52	24.6	
1745	349000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	53	front	0mm	1:1	3.190	2.52	23.5	
1745	349000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	0	front	0mm	1:1	3.077	2.52	23.6	
1745	349000	NR Band n66	20	24.5	DFT-s-OFDM-QPSK	1	53	bottom	0mm	1:1	0.280	2.52	34.0	
1745	349000	NR Band n66	20	24.5	CP-OFDM-QPSK	1	0	bottom	0mm	1:1	0.167	2.52	36.3	