



RF Exposure Report

(Part 0: SAR Characterization Evaluation)

FCC ID : A4RG9BQD
Equipment : Phone
Model Name : G9BQD
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, California, 94043 USA
Standard : FCC 47 CFR Part 2 (2.1093)

We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA2D0208-07C	01	Initial issue of report	Jul. 06, 2023
FA2D0208-07C	02	Update Section 3.1 and 3.2	Jul. 18, 2023

1. Introduction

The FCC RF exposure limit is based on time-averaged RF exposure. SAR regulatory specifications are defined over certain measurement duration allowing for time-averaging. The Samsung S.LSI proprietary TAS (Time Average SAR) algorithm has been designed to meet the compliance limits over the required duration, while still allowing dynamic control of transmit power for meeting system performance.

This report shows SAR characterization of sub6GHz. The characterization is achieved by determination of Plimit. In the case of sub6GHz, power is measured by antenna connection port power. Plimit is the power level that corresponds to the exposure design target. Design target is defined as SAR_design target for sub6GHz.

The compliance test under static transmission and simultaneous transmission are performed and summarized in Part 1 report. The validation of TAS algorithm under the dynamic transmission scenarios are conducted are reported in Part 2. Terminologies for this report are listed up in the table below.

Pmax	Maximum Tx power that can be transmitted physically from RFIC for a given RAT
SAR_FCC_limit	SAR limit specified by FCC 1.6 W/kg averaged over 1-gram, for head and body exposure, and 4 W/kg averaged over 10-gram, for extremity exposure
SAR_target	Target SAR level used in TAS algorithm. This SAR value should be less than FCC limit and should be determined after accounting for all uncertainties and other design considerations.
Plimit	The time-averaged RF power that corresponds to SAR_target.
SAR characterization	Characterization of SAR value for all sub6GHz technologies



2. Product Description

Product Feature & Specification	
Equipment Name	Phone
Model Name	G9BQD
FCC ID	A4RG9BQD
S / N	33301FDJH00023
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n26 : 814 MHz ~ 849 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n70 : 1695 MHz ~ 1710 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 5G NR n78: 3450 MHz ~ 3550 MHz, 3700 MHz ~ 3800 MHz WLAN 2.4GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2G Band: 5150 MHz ~ 5250 MHz WLAN 5.3G Band: 5250 MHz ~ 5350 MHz WLAN 5.5G Band: 5470 MHz ~ 5725 MHz WLAN 5.8G Band: 5725 MHz ~ 5850 MHz WLAN 5.9G Band: 5850 MHz ~ 5895 MHz WLAN 6E: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC: 13.56 MHz WPT: 110.1 KHz ~ 148.5 KHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN: 802.11a/b/g/n/ac/ax/be HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160/EHT20/EHT40/EHT80/EHT160 Bluetooth BR/EDR/LE NFC: ASK WPT: ASK

3. SAR Characterization

SAR characterization must be performed to cover all radio configurations and usage scenarios that the wireless device supports for operating at 6 GHz or below. It will then be used as input for S.LSI TAS feature to control and manage RF exposure for $f < 6$ GHz.

3.1 SAR design target and uncertainty

The power table index 5 and 6 will be designed to meet both 1g and 10 SAR design target

Accounting for total uncertainty, SAR_design_target should meet the following condition:

$$SAR_{design_target} < SAR_{regulatory_limit} \times 10^{\frac{-total\ uncertainty}{10}}$$

Wireless technology/band	Antenna	Duty cycle	Head		Hotspot	Body-worn		Body-worn/Extremity		power tolerance (dB)
			Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	Standalone	Simultaneous	
			Index 2	Index 3	Index 4	Index 5	Index 6	Index 5	Index 6	
1g SAR design target (W/Kg)								10g SAR design target (W/Kg)		
GSM850 GSM/GPRS 1TX	0	12.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM850 GPRS 2TX	0	25.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM850 GPRS 3TX	0	37.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM850 GPRS 4TX	0	50.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM850 EDGE 1TX	0	12.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM850 EDGE 2TX	0	25.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM850 EDGE 3TX	0	37.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM850 EDGE 4TX	0	50.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM850 GSM/GPRS 1TX	1	12.50%	0.79	0.67	0.67	0.79	0.67	2.62	2.22	1.00
GSM850 GPRS 2TX	1	25.00%	0.79	0.67	0.67	0.79	0.67	2.62	2.22	1.00
GSM850 GPRS 3TX	1	37.50%	0.79	0.67	0.67	0.79	0.67	2.62	2.22	1.00
GSM850 GPRS 4TX	1	50.00%	0.79	0.67	0.67	0.79	0.67	2.62	2.22	1.00
GSM850 EDGE 1TX	1	12.50%	0.79	0.67	0.67	0.79	0.67	2.62	2.22	1.00
GSM850 EDGE 2TX	1	25.00%	0.79	0.67	0.67	0.79	0.67	2.62	2.22	1.00
GSM850 EDGE 3TX	1	37.50%	0.79	0.67	0.67	0.79	0.67	2.62	2.22	1.00
GSM850 EDGE 4TX	1	50.00%	0.79	0.67	0.67	0.79	0.67	2.62	2.22	1.00
GSM1900 GSM/GPRS 1TX	2	12.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 GPRS 2TX	2	25.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 GPRS 3TX	2	37.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 GPRS 4TX	2	50.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 EDGE 1TX	2	12.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 EDGE 2TX	2	25.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 EDGE 3TX	2	37.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 EDGE 4TX	2	50.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 GSM/GPRS 1TX	0	12.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 GPRS 2TX	0	25.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 GPRS 3TX	0	37.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 GPRS 4TX	0	50.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 EDGE 1TX	0	12.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 EDGE 2TX	0	25.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 EDGE 3TX	0	37.50%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
GSM1900 EDGE 4TX	0	50.00%	0.79	0.67	0.67	0.79	0.67	1.98	1.68	1.00
WCDMA B2	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
WCDMA B2	0	100.00%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
WCDMA B4	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
WCDMA B4	0	100.00%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
WCDMA B5	0	100.00%	0.83	0.7	0.7	0.83	0.7	2.74	2.32	0.80
WCDMA B5	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90

Wireless technology/ band	Antenna	Duty cycle	Head		Hotspot	Body-worn		Body-worn/Extremity		power tolerance (dB)
			Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	Standalone	Simultaneous	
			Index 2	Index 3	Index 4	Index 5	Index 6	Index 5	Index 6	
			1g SAR design target (W/Kg)					10g SAR design target (W/Kg)		
LTE B25/2	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
LTE B25/2	0	100.00%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
LTE B2	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
LTE B2	5	100.00%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
LTE B7	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
LTE B7	0	100.00%	0.69	0.58	0.58	0.69	0.58	1.72	1.46	1.60
LTE B12/17	0	100.00%	0.83	0.7	0.7	0.83	0.7	2.74	2.32	0.80
LTE B12/17	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
LTE B13	0	100.00%	0.83	0.7	0.7	0.83	0.7	2.74	2.32	0.80
LTE B13	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
LTE B14	0	100.00%	0.83	0.7	0.7	0.83	0.7	2.74	2.32	0.80
LTE B14	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
LTE B26/B5	0	100.00%	0.83	0.7	0.7	0.83	0.7	2.74	2.32	0.80
LTE B26/B5	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
LTE B30	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
LTE B30	0	100.00%	0.69	0.58	0.58	0.69	0.58	1.72	1.46	1.60
LTE B38 PC3	2	63.30%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
LTE B38 PC3	0	63.30%	0.69	0.58	0.58	0.69	0.58	1.72	1.46	1.60
LTE B38 PC2	2	43.30%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
LTE B38 PC2	0	43.30%	0.69	0.58	0.58	0.69	0.58	1.72	1.46	1.60
LTE B41 PC3	2	63.30%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
LTE B41 PC3	0	63.30%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
LTE B41 PC2	2	43.30%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
LTE B41 PC2	0	43.30%	0.69	0.58	0.58	0.69	0.58	1.72	1.46	1.60
LTE B48 PC3	6	63.30%	0.77	0.66	0.66	0.77	0.66	1.94	1.64	1.10
LTE B48 PC3	7	63.30%	0.66	0.56	0.56	0.66	0.56	2.18	1.84	1.80
LTE B66/B4	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
LTE B66/B4	0	100.00%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
LTE B66/B4	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
LTE B66/B4	5	100.00%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
LTE B71	0	100.00%	0.83	0.7	0.7	0.83	0.7	2.74	2.32	0.80
LTE B71	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90

Wireless technology/ band	Antenna	Duty cycle	Head		Hotspot	Body-worn		Body-worn/Extremity		power tolerance (dB)
			Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	Standalone	Simultaneous	
			Index 2	Index 3	Index 4	Index 5	Index 6	Index 5	Index 6	
			1g SAR design target (W/Kg)					10g SAR design target (W/Kg)		
FR1 n25/n2	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
FR1 n25/n2	0	100.00%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
FR1 n2	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
FR1 n2	5	100.00%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
FR1 n5/n26	0	100.00%	0.83	0.7	0.7	0.83	0.7	2.74	2.32	0.80
FR1 n5/n26	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
FR1 n7	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
FR1 n7	0	100.00%	0.69	0.58	0.58	0.69	0.58	1.72	1.46	1.60
FR1 n12	0	100.00%	0.83	0.7	0.7	0.83	0.7	2.74	2.32	0.80
FR1 n12	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
FR1 n30	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
FR1 n30	0	100.00%	0.69	0.58	0.58	0.69	0.58	1.72	1.46	1.60
FR1 n38 PC3	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
FR1 n38 PC3	0	100.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n38 PC3	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
FR1 n38 PC3	5	100.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n41 PC3	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
FR1 n41 PC3	0	100.00%	0.7	0.6	0.6	0.7	0.6	2.33	1.98	1.50
FR1 n41 PC3	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
FR1 n41 PC3	5	100.00%	0.7	0.6	0.6	0.7	0.6	2.33	1.98	1.50
FR1 n41 PC2	2	50.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
FR1 n41 PC2	0	50.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n41 PC2	1	50.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
FR1 n41 PC2	5	50.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n41 PC1.5	2	25.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
FR1 n41 PC1.5	0	25.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n41 PC1.5	1	25.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
FR1 n41 PC1.5	5	25.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n48 PC3	6	100.00%	0.77	0.66	0.66	0.77	0.66	2.56	2.17	1.10
FR1 n48 PC3	7	100.00%	0.66	0.56	0.56	0.66	0.56	2.18	1.84	1.80
FR1 n48 PC3	1	100.00%	0.77	0.66	0.66	0.77	0.66	2.56	2.17	1.10
FR1 n48 PC3	5	100.00%	0.66	0.56	0.56	0.66	0.56	2.18	1.84	1.80
FR1 n66	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
FR1 n66	0	100.00%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
FR1 n66	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
FR1 n66	5	100.00%	0.7	0.6	0.6	0.7	0.6	2.33	1.98	1.50
FR1 n70	2	100.00%	0.81	0.69	0.69	0.81	0.69	2.03	1.72	0.90
FR1 n70	0	100.00%	0.7	0.6	0.6	0.7	0.6	1.76	1.5	1.50
FR1 n71	0	100.00%	0.83	0.7	0.7	0.83	0.7	2.74	2.32	0.80
FR1 n71	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
FR1 n77 PC3	6	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
FR1 n77 PC3	7	100.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n77 PC3	1	100.00%	0.81	0.69	0.69	0.81	0.69	2.68	2.27	0.90
FR1 n77 PC3	5	100.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n77 PC2	6	50.00%	0.77	0.66	0.66	0.77	0.66	2.56	2.17	1.10
FR1 n77 PC2	7	50.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n77 PC2	1	50.00%	0.77	0.66	0.66	0.77	0.66	2.56	2.17	1.10
FR1 n77 PC2	5	50.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n77 PC1.5	6	25.00%	0.77	0.66	0.66	0.77	0.66	2.56	2.17	1.10
FR1 n77 PC1.5	7	25.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n77 PC1.5	1	25.00%	0.77	0.66	0.66	0.77	0.66	2.56	2.17	1.10
FR1 n77 PC1.5	5	25.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n78 PC3	6	100.00%	0.77	0.66	0.66	0.77	0.66	2.56	2.17	1.10
FR1 n78 PC3	7	100.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n78 PC3	1	100.00%	0.77	0.66	0.66	0.77	0.66	2.56	2.17	1.10
FR1 n78 PC3	5	100.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60
FR1 n78 PC2	6	50.00%	0.77	0.66	0.66	0.77	0.66	2.56	2.17	1.10
FR1 n78 PC2	7	50.00%	0.69	0.58	0.58	0.69	0.58	2.28	1.93	1.60

3.2 SAR Characterization – Power Table

1. The Plimit values correspond to SAR_design_target.
2. GSM and WCDMA don't support time average feature of dynamic power varying, the power will be fixed at the static reduce power level at different exposure conditions for RF exposure compliance. For the GSM (TDD) Plimit power levels in the table correspond to the burst average power levels which don't account for TX duty cycle.
3. The device additionally support UL MIMO mode on n41/48/77/78
4. LTE and 5GNR TDD: Plimit power levels in the table correspond to the time-averaged power levels which accounts for TX duty cycle.
5. Maximum target power, Pmax, is configured in NV settings in EUT to limit maximum transmitting power. This power is converted into peak power in NV settings for TDD scheme

<P_{limit} for supported technologies and bands (P_{limit} corresponding to SAR design target)>

Wireless technology/ band (No Accounting duty cycle)	Antenna	Duty cycle	Max Power condition	Head		Hotspot	Body-worn/Extremity		P Max Burst average power (dBm)
			Index 1	Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	
				Index 2	Index 3	Index 4	Index 5	Index 6	
				P limit					
				Burst average power (dBm)					
GSM850 GSM/GPRS 1TX	0	12.50%	32.50	33.70	33.00	32.70	34.40	33.70	32.50
GSM850 GPRS 2TX	0	25.00%	31.50	30.70	30.00	29.70	31.40	30.70	31.50
GSM850 GPRS 3TX	0	37.50%	30.50	28.90	28.20	27.90	29.60	28.90	30.50
GSM850 GPRS 4TX	0	50.00%	29.50	27.70	27.00	26.70	28.40	27.70	29.50
GSM850 EDGE 1TX	0	12.50%	27.00	33.70	33.00	32.70	34.40	33.70	27.00
GSM850 EDGE 2TX	0	25.00%	26.50	30.70	30.00	29.70	31.40	30.70	26.50
GSM850 EDGE 3TX	0	37.50%	26.50	28.90	28.20	27.90	29.60	28.90	26.50
GSM850 EDGE 4TX	0	50.00%	24.50	27.70	27.00	26.70	28.40	27.70	24.50
GSM850 GSM/GPRS 1TX	1	12.50%	32.00	29.90	29.20	35.90	36.60	35.90	32.00
GSM850 GPRS 2TX	1	25.00%	31.00	26.90	26.20	32.90	33.60	32.90	31.00
GSM850 GPRS 3TX	1	37.50%	30.00	25.10	24.40	31.10	31.80	31.10	30.00
GSM850 GPRS 4TX	1	50.00%	29.00	23.90	23.20	29.90	30.60	29.90	29.00
GSM850 EDGE 1TX	1	12.50%	26.50	29.90	29.20	35.90	36.60	35.90	26.50
GSM850 EDGE 2TX	1	25.00%	26.00	26.90	26.20	32.90	33.60	32.90	26.00
GSM850 EDGE 3TX	1	37.50%	26.00	25.10	24.40	31.10	31.80	31.10	26.00
GSM850 EDGE 4TX	1	50.00%	24.00	23.90	23.20	29.90	30.60	29.90	24.00
GSM1900 GSM/GPRS 1TX	2	12.50%	30.00	35.00	34.30	29.10	29.80	29.10	30.00
GSM1900 GPRS 2TX	2	25.00%	28.50	32.00	31.30	26.10	26.80	26.10	28.50
GSM1900 GPRS 3TX	2	37.50%	28.00	30.20	29.50	24.30	25.00	24.30	28.00
GSM1900 GPRS 4TX	2	50.00%	27.00	29.00	28.30	23.10	23.80	23.10	27.00
GSM1900 EDGE 1TX	2	12.50%	25.00	35.00	34.30	29.10	29.80	29.10	25.00
GSM1900 EDGE 2TX	2	25.00%	24.00	32.00	31.30	26.10	26.80	26.10	24.00
GSM1900 EDGE 3TX	2	37.50%	24.00	30.20	29.50	24.30	25.00	24.30	24.00
GSM1900 EDGE 4TX	2	50.00%	23.00	29.00	28.30	23.10	23.80	23.10	23.00
GSM1900 GSM/GPRS 1TX	0	12.50%	29.20	42.10	41.40	25.50	27.60	26.90	29.20
GSM1900 GPRS 2TX	0	25.00%	27.70	39.10	38.40	22.50	24.60	23.90	27.70
GSM1900 GPRS 3TX	0	37.50%	27.20	37.30	36.60	20.70	22.80	22.10	27.20
GSM1900 GPRS 4TX	0	50.00%	26.20	36.10	35.40	19.50	21.60	20.90	26.20
GSM1900 EDGE 1TX	0	12.50%	24.20	42.10	41.40	25.50	27.60	26.90	24.20
GSM1900 EDGE 2TX	0	25.00%	23.20	39.10	38.40	22.50	24.60	23.90	23.20
GSM1900 EDGE 3TX	0	37.50%	23.20	37.30	36.60	20.70	22.80	22.10	23.20
GSM1900 EDGE 4TX	0	50.00%	22.20	36.10	35.40	19.50	21.60	20.90	22.20
WCDMA B2	2	100.00%	24.60	24.20	23.50	20.40	21.10	20.40	24.60
WCDMA B2	0	100.00%	23.80	31.30	30.60	16.90	18.60	17.90	23.80
WCDMA B4	2	100.00%	24.60	27.20	26.50	20.30	21.00	20.30	24.60
WCDMA B4	0	100.00%	23.80	32.00	31.30	17.80	18.50	17.80	23.80
WCDMA B5	0	100.00%	24.70	26.60	25.90	24.40	25.60	24.90	24.70
WCDMA B5	1	100.00%	24.20	21.50	20.80	27.00	27.70	27.00	24.20

<P_{limit} for supported technologies and bands (P_{limit} corresponding to SAR design target)>

Wireless technology/ band (Accounting duty cycle)	Antenna	Duty cycle	Max Power condition	Head		Hotspot	Body-worn/Extremity		P Max Time-average power (dBm)
				Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	
			Index 1	Index 2	Index 3	Index 4	Index 5	Index 6	
			P limit						
			Time-average power (dBm)						
LTE B25/2	2	100.00%	24.60	23.60	22.90	19.10	19.80	19.10	24.60
LTE B25/2	0	100.00%	23.80	31.50	30.80	17.00	18.60	17.90	23.80
LTE B2	1	100.00%	24.60	16.30	15.60	20.30	21.80	21.10	24.60
LTE B2	5	100.00%	23.80	15.70	15.00	19.70	20.40	19.70	23.80
LTE B7	2	100.00%	24.50	21.30	20.60	18.80	19.50	18.80	24.50
LTE B7	0	100.00%	23.40	28.10	27.40	16.80	19.80	19.10	23.40
LTE B12/17	0	100.00%	24.70	28.90	28.20	25.60	26.30	25.60	24.70
LTE B12/17	1	100.00%	24.20	23.80	23.10	27.10	27.80	27.10	24.20
LTE B13	0	100.00%	24.70	27.30	26.60	23.90	25.90	25.20	24.70
LTE B13	1	100.00%	24.20	22.70	22.00	27.50	28.20	27.50	24.20
LTE B14	0	100.00%	24.70	27.50	26.80	23.50	24.20	23.50	24.70
LTE B14	1	100.00%	24.20	22.40	21.70	28.10	28.80	28.10	24.20
LTE B26/B5	1	100.00%	24.20	21.20	20.50	26.70	27.50	26.80	24.20
LTE B26/B5	0	100.00%	24.70	27.10	26.40	24.80	26.10	25.40	24.70
LTE B30	2	100.00%	21.60	22.70	22.00	19.00	19.70	19.00	21.60
LTE B30	0	100.00%	19.20	29.80	29.10	15.80	18.60	17.90	19.20
LTE B38 PC3	2	63.30%	22.40	21.10	20.40	18.30	19.40	18.70	21.00
LTE B38 PC3	0	63.30%	21.30	27.90	27.20	16.30	19.00	18.30	19.90
LTE B41 PC3	2	63.30%	22.40	21.10	20.40	18.30	19.40	18.70	21.00
LTE B41 PC3	0	63.30%	21.30	28.00	27.30	16.40	19.10	18.40	20.20
LTE B38 PC2	2	43.30%	22.40	21.10	20.40	18.30	19.40	18.70	22.40
LTE B38 PC2	0	43.30%	21.30	27.90	27.20	16.30	19.00	18.30	21.30
LTE B41 PC2	2	43.30%	22.40	21.10	20.40	18.30	19.40	18.70	22.40
LTE B41 PC2	0	43.30%	21.30	28.00	27.30	16.40	19.10	18.40	21.30
LTE B48 PC3	6	63.30%	19.40	21.50	20.80	17.60	18.50	17.80	19.40
LTE B48 PC3	7	63.30%	20.20	29.50	28.80	18.60	19.80	19.10	20.20
LTE B66/B4	2	100.00%	24.60	25.10	24.40	20.40	21.10	20.40	24.60
LTE B66/B4	0	100.00%	23.80	31.10	30.40	17.30	20.00	19.30	23.80
LTE B66/B4	1	100.00%	24.60	18.30	17.60	21.30	22.00	21.30	24.60
LTE B66/B4	5	100.00%	23.80	18.40	17.70	19.00	19.70	19.00	23.80
LTE B71	0	100.00%	24.70	30.10	29.40	26.80	27.80	27.10	24.70
LTE B71	1	100.00%	24.20	23.30	22.60	27.30	28.00	27.30	24.20

<P_{limit} for supported technologies and bands (P_{limit} corresponding to SAR design target)>

Wireless technology/ band (Accounting duty cycle)	Antenna	Duty cycle	Max Power condition Index 1	Head		Hotspot	Body-worn/Extremity		P Max Time-average power (dBm)
				Standalone	Simultaneous	Simultaneous	Standalone	Simultaneous	
			Index 2	Index 3	Index 4	Index 5	Index 6		
			P limit						
Time-average power (dBm)									
FR1 n25/n2	2	100.00%	24.60	23.80	23.10	20.30	21.00	20.30	24.60
FR1 n25/n2	0	100.00%	23.80	31.90	31.20	16.70	18.00	17.30	23.80
FR1 n2	1	100.00%	24.60	16.80	16.10	20.30	21.90	21.20	24.60
FR1 n2	5	100.00%	23.80	15.80	15.10	19.70	20.40	19.70	23.80
FR1 n5/n26	0	100.00%	24.70	26.60	25.90	24.30	25.50	24.80	24.70
FR1 n5/n26	1	100.00%	24.20	20.40	19.70	27.50	28.20	27.50	24.20
FR1 n7	2	100.00%	24.50	21.90	21.20	19.00	19.70	19.00	24.50
FR1 n7	0	100.00%	23.40	28.80	28.10	17.00	19.20	18.50	23.40
FR1 n12	0	100.00%	24.70	29.40	28.70	26.00	26.70	26.00	24.70
FR1 n12	1	100.00%	24.20	22.50	21.80	26.90	27.60	26.90	24.20
FR1 n30	2	100.00%	21.60	23.40	22.70	18.50	19.20	18.50	21.60
FR1 n30	0	100.00%	19.20	27.60	26.90	15.30	17.90	17.20	19.20
FR1 n38 PC3	2	100.00%	24.50	21.50	20.80	17.80	20.60	19.90	24.50
FR1 n38 PC3	0	100.00%	23.40	29.20	28.50	16.80	18.90	18.20	23.40
FR1 n38 PC3	1	100.00%	24.50	13.50	12.80	18.40	19.80	19.10	24.50
FR1 n38 PC3	5	100.00%	23.40	15.80	15.10	17.80	19.80	19.10	23.40
FR1 n41 PC3	2	100.00%	23.00	21.50	20.80	17.80	20.60	19.90	23.00
FR1 n41 PC3	0	100.00%	22.20	26.10	25.40	16.90	19.00	18.30	22.20
FR1 n41 PC3	5	100.00%	22.20	15.90	15.20	17.90	19.90	19.20	22.20
FR1 n41 PC3	1	100.00%	23.00	13.50	12.80	18.40	19.80	19.10	23.00
FR1 n41 PC2	2	50.00%	23.00	21.50	20.80	17.80	20.60	19.90	23.00
FR1 n41 PC2	0	50.00%	22.20	26.10	25.40	16.90	19.00	18.30	21.90
FR1 n41 PC2	1	50.00%	23.00	13.50	12.80	18.40	19.80	19.10	23.00
FR1 n41 PC2	5	50.00%	22.20	15.90	15.20	17.90	19.90	19.20	21.90
FR1 n41 PC1.5	2	25.00%	23.00	21.50	20.80	17.80	20.60	19.90	18.50
FR1 n41 PC1.5	0	25.00%	22.20	26.10	25.40	16.90	19.00	18.30	17.40
FR1 n41 PC1.5	1	25.00%	23.00	13.50	12.80	18.40	19.80	19.10	18.50
FR1 n41 PC1.5	5	25.00%	22.20	15.90	15.20	17.90	19.90	19.20	17.40
FR1 n48 PC3	6	100.00%	21.40	24.30	23.60	17.60	18.60	17.90	21.40
FR1 n48 PC3	7	100.00%	22.20	30.30	29.60	18.30	20.30	19.60	22.20
FR1 n48 PC3	1	100.00%	21.40	20.60	19.90	21.60	22.30	21.60	21.40
FR1 n48 PC3	5	100.00%	22.20	14.10	13.40	18.50	19.20	18.50	22.20
FR1 n66	2	100.00%	24.60	27.00	26.30	20.60	21.30	20.60	24.60
FR1 n66	0	100.00%	23.80	30.40	29.70	16.60	19.50	18.80	23.80
FR1 n66	1	100.00%	24.60	19.20	18.50	21.80	23.70	23.00	24.60
FR1 n66	5	100.00%	23.80	18.30	17.60	19.50	22.30	21.60	23.80
FR1 n70	2	100.00%	24.60	27.60	26.90	20.90	21.60	20.90	24.60
FR1 n70	0	100.00%	23.80	32.60	31.90	17.50	18.40	17.70	23.80
FR1 n71	0	100.00%	24.70	29.20	28.50	26.30	27.00	26.30	24.70
FR1 n71	1	100.00%	24.20	22.60	21.90	27.40	28.10	27.40	24.20
FR1 n77 PC3	6	100.00%	23.50	21.30	20.60	16.60	19.50	18.80	23.50
FR1 n77 PC3	7	100.00%	22.40	26.30	25.60	18.80	19.50	18.80	22.40
FR1 n77 PC3	1	100.00%	23.50	20.90	20.20	22.20	22.90	22.20	23.50
FR1 n77 PC3	5	100.00%	22.40	13.50	12.80	17.50	19.70	19.00	22.40
FR1 n77 PC2	6	50.00%	23.50	21.30	20.60	16.60	19.50	18.80	23.50
FR1 n77 PC2	7	50.00%	22.40	26.30	25.60	18.80	19.50	18.80	22.40
FR1 n77 PC2	1	50.00%	23.50	20.90	20.20	22.20	22.90	22.20	23.50
FR1 n77 PC2	5	50.00%	22.40	13.50	12.80	17.50	19.70	19.00	22.40
FR1 n77 PC1.5	6	25.00%	23.50	21.30	20.60	16.60	19.50	18.80	19.00
FR1 n77 PC1.5	7	25.00%	22.40	26.30	25.60	18.80	19.50	18.80	17.90
FR1 n77 PC1.5	5	25.00%	22.40	13.50	12.80	17.50	19.70	19.00	17.90
FR1 n77 PC1.5	1	25.00%	23.50	20.90	20.20	22.20	22.90	22.20	19.00
FR1 n78 PC3	6	100.00%	23.50	21.10	20.40	16.40	19.30	18.60	23.00
FR1 n78 PC3	7	100.00%	22.40	26.40	25.70	18.80	19.50	18.80	21.90
FR1 n78 PC3	1	100.00%	23.00	18.10	17.40	19.90	22.70	22.00	23.00
FR1 n78 PC3	5	100.00%	21.90	13.50	12.80	17.50	19.70	19.00	21.90
FR1 n78 PC2	6	50.00%	23.50	21.10	20.40	16.40	19.30	18.60	23.50
FR1 n78 PC2	7	50.00%	22.40	26.40	25.70	18.80	19.50	18.80	22.40