

**FCC 47 CFR § 2.1093
IEEE Std 1528-2013**

**SAR EVALUATION REPORT
(SAR CHARACTERIZATION Report)**

FOR

GSM/WCDMA/LTE/5G NR Tablet + BT/BLE, DTS/UNII a/b/g/n/ac/ax, NFC and WPT

MODEL NUMBER: SM-S921B/DS, SM-S921B

FCC ID: A3LSMS921B

REPORT NUMBER: 4790976555-S1V4

ISSUE DATE: 10/31/2023

Prepared for
**SAMSUNG ELECTRONICS CO., LTD.
129 SAMSUNG-RO, YEONGTONG-GU, SUWON-SI,
GYEONGGI-DO, 16677, KOREA**

Prepared by

UL Korea, Ltd.

26th floor, 152, Teheran-ro, Gangnam-gu Seoul, 06236, Korea

**Suwon Test Site: UL Korea, Ltd. Suwon Laboratory
218 Maeyeong-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16675, Korea**

TEL: (031) 337-9902

FAX: (031) 213-5433



Testing Laboratory

TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	10/20/2023	Initial Issue	--
V2	10/23/2023	Revised typo throughout the whole document. Revised table 6.3.1.2 in Sec 6.3.1 Revised Head, Product specific 10-g table in Sec 7.1	Hakchul Lee
V3	10/24/2023	Revised table 6.3.1.2 in Sec 6.3.1	Hakchul Lee
V4	10/31/2023	Revised Sec 5.1 - added Wi-Fi 2.4GHz 802.11 ac	Hakchul Lee

Table of Contents


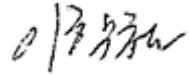
1.	Attestation of SAR Characterization	4
2.	Introduction	5
3.	Facilities and Accreditation	5
4.	SAR Measurement System & Test Equipment	6
4.1.	<i>SAR Measurement System.....</i>	<i>6</i>
4.2.	<i>SAR Scan Procedures.....</i>	<i>8</i>
4.3.	<i>Test Equipment.....</i>	<i>10</i>
5.	Device Under Test (DUT) Information	12
5.1	<i>Wireless Technologies.....</i>	<i>12</i>
5.2	<i>Time-Averaging for SAR.....</i>	<i>13</i>
5.3	<i>Nomenclature for SAR Characterization Report for both WWAN and WLAN</i>	<i>13</i>
6.	SAR Characterizations.....	14
6.1	<i>SAR Design Target.....</i>	<i>14</i>
6.1.1	<i>WWAN SAR Design Target.....</i>	<i>14</i>
6.1.2	<i>WLAN SAR Design Target</i>	<i>14</i>
6.2	<i>SAR Determination.....</i>	<i>15</i>
6.2.1	<i>RSI and SAR Determination in WWAN techs</i>	<i>15</i>
6.2.2	<i>DSI and SAR Determination in WLAN techs.....</i>	<i>16</i>
6.3	<i>P_{limit} determination</i>	<i>17</i>
6.3.1	<i>P_{limit} determination of RSI scenarios</i>	<i>17</i>
6.3.2	<i>P_{limit} determination of DSI scenarios</i>	<i>19</i>
7.	SAR Test results for P_{limit} calculations	20
7.1	<i>SAR Test results for P_{limit} calculations in each RSI scenarios</i>	<i>20</i>
7.2	<i>SAR Test results for P_{limit} calculations in each DSI scenarios</i>	<i>29</i>

1. Attestation of SAR Characterization

Applicant Name	SAMSUNG ELECTRONICS CO.,LTD.
FCC ID	A3LSMS921B
Model Number	SM-S921B/DS, SM-S921B
Applicable Standards	FCC 47 CFR § 2.1093 IEEE Std 1528-2013 Published RF exposure KDB procedures
Report type	SAR Characterization Report
Date Tested	8/25/2023 to 10/20/2023
SAR Characterization Purpose	SAR Char is the procedures for determining P_{Limit} for WWAN (2G/3G/4G/5G-sub6) & WLAN(2.4G/5G/6GHz) to satisfy <i>SAR_design_target</i> in order to FCC limit's requirement.

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government

Approved & Released By:	Prepared By:
	
Justin Park Operations Leader UL Korea, Ltd. Suwon Laboratory	Hakchul Lee Laboratory Engineer UL Korea, Ltd. Suwon Laboratory

2. Introduction

The equipment under test (EUT) is SAMSUNG Smartphone (FCC ID : A3LSMS921B), it contains both S.LSI TAS supporting WWAN technologies (2G/3G/4G/5G-Sub6) and Qualcomm FastConnect TAS supporting WLAN technologies (2.4GHz/5G/6GHz). Both TAS chipset are enabled with each 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.

And The EUT has also supports to BT/NFC technologies, but There are not support to TAS algorithm.

This purpose of the SAR Char report is to determine SAR char is derived from SAR test measurements and conducted power measurements to determine P_{Limit} for each technology/band. The P_{Limit} represents the maximum time-averaged power level for the corresponding radio/antenna configuration.

3. Facilities and Accreditation

The test sites and measurement facilities used to collect data are located at

Suwon	
SAR 1 Room	SAR 6 Room
SAR 2 Room	SAR 7 Room
SAR 3 Room	SAR 8 Room
SAR 4 Room	SAR 9 Room
SAR 5 Room	

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.

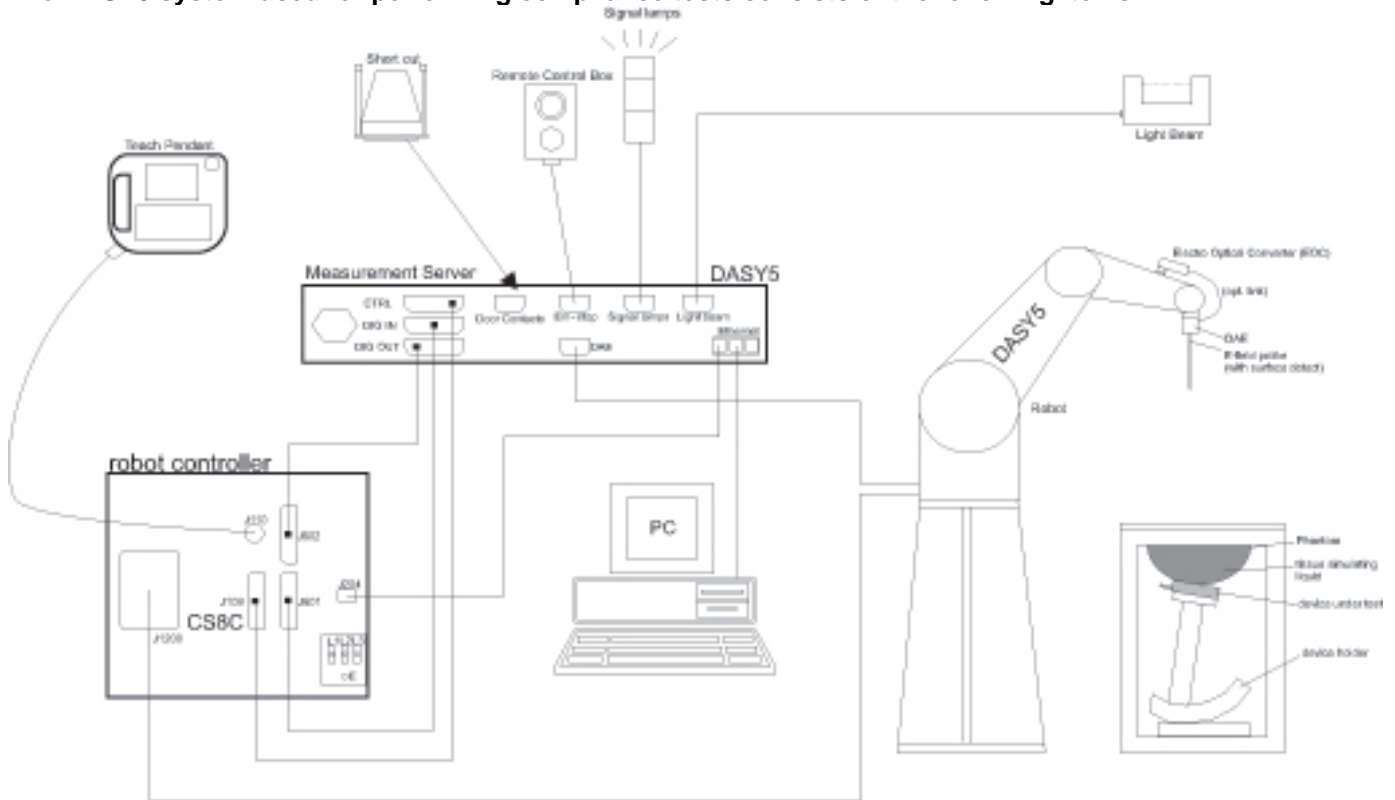
The full scope of accreditation can be viewed at

<https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf>.

4. SAR Measurement System & Test Equipment

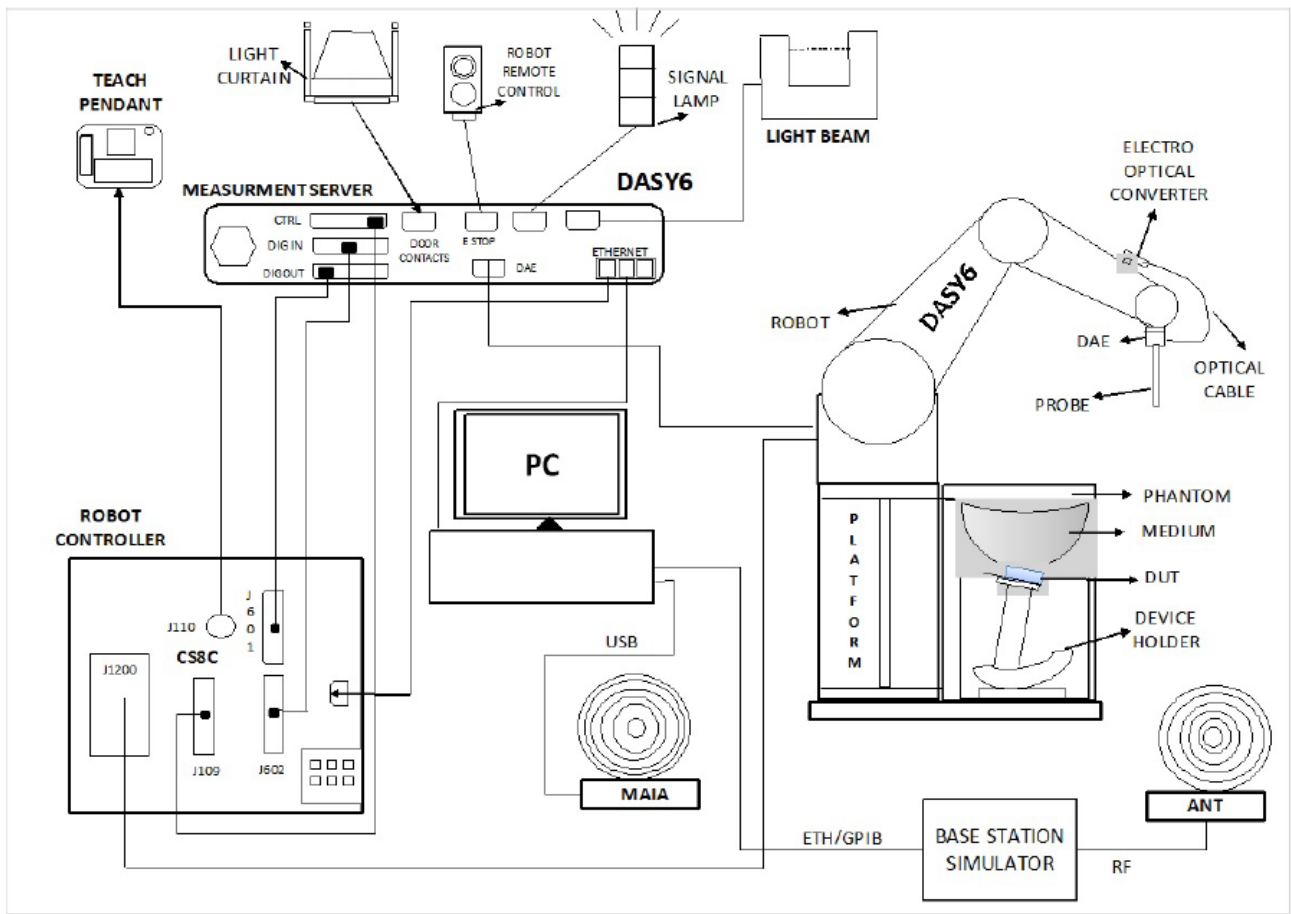
4.1. SAR Measurement System

The DASY5 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

The DASY6 & 8 system used for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win10 and the DASY6 or 8 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

4.2. SAR Scan Procedures

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 2.1 mm. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE Standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan). If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly.

Area Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be \leq the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Step 3: Zoom Scan

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The Zoom Scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1 g and 10 g and displays these values next to the job's label.

Zoom Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

		≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{Zoom}, \Delta y_{Zoom}$		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm 3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5 · $\Delta z_{Zoom}(n-1)$
Minimum zoom scan volume	x, y, z	≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.			

Step 4: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

Step 5: Z-Scan (FCC only)

The Z Scan measures points along a vertical straight line. The line runs along the Z-axis of a one-dimensional grid. In order to get a reasonable extrapolation the extrapolated distance should not be larger than the step size in Z-direction.

4.3. Test Equipment

The measuring equipment used to perform the tests documented in this report has been calibrated in accordance with the manufacturers' recommendations, and is traceable to recognized national standards.

Dielectric Property Measurements

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Network Analyzer	Agilent	E5071C	MY46522054	7-24-2024
Network Analyzer	ROHDE & SCHWARZ	ZNB 20	102256	7-24-2024
Dielectric Assessment Kit	SPEAG	DAK-12	1158	11-17-2023
Dielectric Assessment Kit	SPEAG	DAK-3.5	1196	7-17-2024
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Shorting block	SPEAG	DAK-12 Short	SM DAK 220 AD	N/A
Thermometer	LKM	DTM3000	3851	7-25-2024
Thermometer	LKM	DTM3000	3862	7-25-2024

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
MXG Analog Signal Generator	Agilent	N5181A	MY50145882	7-26-2024
MXG Analog Signal Generator	Keysight	N5181B	MY59100587	7-26-2024
MXG Analog Signal Generator	Keysight	N5173B	MY59101083	7-27-2024
Power Sensor	KEYSIGHT	U2000A	MY60180020	7-27-2024
Power Sensor	KEYSIGHT	U2000A	MY60490008	7-25-2024
Power Sensor	KEYSIGHT	U2000A	MY60160004	7-25-2024
Power Sensor	KEYSIGHT	U2000A	MY61010010	7-25-2024
Power Amplifier	EXODUS	AMP2027	1410025-AMP2027-10003	11-2-2023
Power Amplifier	MINI-CIRCUITS	TVA-R5-13A+	2111006	1-6-2024
Power Amplifier	EXODUS	AMP2027ADB	10002	1-6-2024
Directional Coupler	Agilent	772D	MY52180193	7-25-2024
Directional Coupler	H.P	778D	16133	7-25-2024
Directional Coupler	NARDA	4216-10	2835	7-25-2024
Directional Coupler	MINI-CIRCUITS	ZMDC-30-1+	SF569102123	7-25-2024
Low Pass Filter	FILTRON	L140012FL	1410003S	7-25-2024
Low Pass Filter	MICROLAB	LA-60N	3942	7-25-2024
Low Pass Filter	MINI-CIRCUITS	VLF-6000+	S0142	7-25-2024
Low Pass Filter	MINI-CIRCUITS	VLF-3000+	S0143	7-25-2024
Low Pass Filter	MINI-CIRCUITS	NLP-1200	VUU19301915	1-5-2024
Attenuator	KEYSIGHT	8491B/003	MY39272276	7-25-2024
Attenuator	KEYSIGHT	8491B/010	MY39271981	7-24-2024
Attenuator	KEYSIGHT	8491B/010	MY39272011	7-25-2024
Attenuator	KEYSIGHT	8491B/020	MY39272301	7-25-2024
Attenuator	KEYSIGHT	8491B/020	MY39272302	7-24-2024
Attenuator	KEYSIGHT	8491B/003	MY39272275	7-25-2024
E-Field Probe	SPEAG	EX3DV4	7313	3-24-2024
E-Field Probe	SPEAG	EX3DV4	7330	1-24-2024
E-Field Probe	SPEAG	EX3DV4	7545	8-25-2024
E-Field Probe	SPEAG	EX3DV4	7651	5-30-2024
E-Field Probe	SPEAG	EX3DV4	7646	3-23-2024
Data Acquisition Electronics	SPEAG	DAE4	1447	3-22-2024
Data Acquisition Electronics	SPEAG	DAE4	1468	8-24-2024
Data Acquisition Electronics	SPEAG	DAE4	1494	7-17-2024
Data Acquisition Electronics	SPEAG	DAE4	1591	3-22-2024
Data Acquisition Electronics	SPEAG	DAE4	1668	4-26-2024
System Validation Dipole	SPEAG	D750V3	1122	2-24-2024

Test Equipment (Continued)

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
System Validation Dipole	SPEAG	D835V2	4d194	3-24-2024
System Validation Dipole	SPEAG	D835V2	4d174	9-21-2024
System Validation Dipole	SPEAG	D1750V2	1125	11-30-2023
System Validation Dipole	SPEAG	D1900V2	5d190	11-16-2023
System Validation Dipole	SPEAG	D1900V2	5d199	3-25-2024
System Validation Dipole	SPEAG	D2450V2	960	3-24-2024
System Validation Dipole	SPEAG	D5GHzV2	1209	2-28-2024
System Validation Dipole	SPEAG	D3700V2	1036	5-19-2024
System Validation Dipole	SPEAG	D3500V2	1075	5-19-2024
System Validation Dipole	SPEAG	D1750V2	1180	9-21-2024
System Validation Dipole	SPEAG	D2600V2	1178	4-23-2023
System Validation Dipole	SPEAG	D3900V2	1069	4-21-2024
System Validation Dipole	SPEAG	CLA -13	1015	8-22-2024
Thermometer	Lutron	MHB-382SD	AH.50215	1-9-2024
Thermometer	Lutron	MHB-382SD	AH.50213	1-11-2024
Thermometer	Lutron	MHB-382SD	AH.91463	1-11-2024
Thermometer	Lutron	MHB-382SD	AJ.45903	1-9-2024
Thermometer	Lutron	MHB-382SD	AJ.42446	7-26-2024
Thermometer	Lutron	MHB-382SD	AK.12102	7-31-2024
Thermometer	Lutron	MHB-382SD	AK.12103	7-31-2024
Thermometer	Lutron	MHB-382SD	AK.12123	1-9-2024
Thermometer	Lutron	MHB-382SD	AK.18789	7-27-2024

Others

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Base Station Simulator	R & S	CMW500	150313	7-27-2024
Base Station Simulator	R & S	CMW500	150314	7-26-2024
Base Station Simulator	R & S	CMW500	162790	7-26-2024
Base Station Simulator	R & S	CMW500	169803	1-5-2024
Base Station Simulator	R & S	CMW500	169801	1-5-2024
Base Station Simulator	R & S	CMW500	169799	7-26-2024
Base Station Simulator	R & S	CMW500	169800	7-27-2024
Base Station Simulator	R & S	CMW500	169798	7-27-2024
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY57510596	7-27-2024
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY59150850	1-9-2024
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY58120110	1-10-2024

Note(s):

1. For System Validation Dipole, Calibration interval applied every 2 years according to referencing KDB 865664 guidance.
2. Refer to Appendix F that mentioned about justification for Extended SAR Dipole Calibrations. (for blue box items)
3. All equipments were used until Cal.Due data.

5. Device Under Test (DUT) Information

5.1 Wireless Technologies

Wireless technologies	Frequency bands	Operating mode		Duty Cycle used for SAR testing
GSM	850 1900	Voice (GMSK) GPRS (GMSK) EGPRS (8PSK)	GPRS Multi-Slot Class: <input type="checkbox"/> Class 8 - 1 Up, 4 Down <input type="checkbox"/> Class 10 - 2 Up, 4 Down <input type="checkbox"/> Class 12 - 4 Up, 4 Down <input checked="" type="checkbox"/> Class 33 - 4 Up, 5 Down	GSM Voice: 12.5% (E)GPRS: 1 Slot: 12.5% 2 Slots: 25% 3 Slots: 37.5% 4 Slots: 50%
	Does this device support DTM (Dual Transfer Mode)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Category 14) HSUPA (Category 6) DC-HSDPA (Category 14) HSPA+ (DL only)		100%
LTE	FDD Band 2 FDD Band 4 FDD Band 5 FDD Band 12 FDD Band 13 FDD Band 17 FDD Band 25 FDD Band 26 TDD Band 41 <small>Power Class 3</small> TDD Band 41 <small>Power Class 2</small> FDD Band 66	QPSK 16QAM 64QAM 256QAM Rel. 16 Carrier Aggregation (2 Uplink and 4 Downlinks) Uplink Carrier Aggregation(2CC) CA_2A-4A, CA_4A-5A, CA_4A-12A, CA_5A-66A, CA_12A-66A		100% (FDD) 63.3% (TDD) – PC3 43.3% (TDD) – PC2
	Does this device support SV-LTE (1xRTT-LTE)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
5G NR (Sub 6)	FDD Band n2 FDD Band n5 FDD Band n25 TDD Band n41 FDD Band n66 TDD Band n77	DFT-s-OFDM: ■ $\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-OFDM: ■ QPSK, 16QAM, 64QAM, 256QAM		100%
Wi-Fi	2.4 GHz	802.11b, 802.11g, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20)		98.9% (802.11b-SISO) 98.8% (802.11b-MIMO)
	5 GHz	802.11a / 802.11n (HT20/40) 802.11ac (VHT20/40/80/160) 802.11ax (HE20/40/80/160)		97.1% (802.11ac (VHT80-SISO) 94.5% (802.11ac (VHT80-MIMO)
	Does this device support bands 5.60 ~ 5.65 GHz? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Does this device support Band gap channel(s)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Bluetooth	2.4 GHz	Version 5.3 LE		76.9% _(BT) 85.2% _(LE)
NFC	13.56 MHz	Type A/B/F		100%

Notes

1. This device supports Power Class 2(HPUE) and Power Class 3 for LTE Band 41 & NR Band n41 & NR Band n77
2. NR TDD Band n41 and n77/n78 has support SRS(0,1,2,3) modes.
3. This device supports LTE UL CA intra-band Contiguous.

5.2 Time-Averaging for SAR

This device is enabled with Samsung S.LSI proprietary TAS (Time Average SAR) algorithm and Qualcomm FastConnect TAS to control and manage transmitting power in real time and to ensure that the time-averaged RF exposure from WWAN and WLAN is compliance with FCC requirement. This SAR Char report shows SAR characterization of WWAN and WLAN radios. Characterization is achieved by determining P_{limit} for WWAN and WLAN radios that correspond to the SAR_{design_target} after accounting for all device design related uncertainty. The SAR Characterization is denoted as SAR Char in this report.

5.3 Nomenclature for SAR Characterization Report for both WWAN and WLAN

Term	Description
P_{max}	Maximum Tx power that can be transmitted physically from RFIC for a given RAT.
$SAR_{regulatory_limit}$	SAR value limit specified by FCC.
SAR_{design_target}	Target SAR level using in TAS algorithm. This SAR value should be less than SAR regulatory limit and should be determined after accounting for all uncertainties and other design considerations.
P_{limit}	Power level corresponds to the SAR design target.
SAR Char (SAR Characterization)	Table containing P_{limit} for all technologies and bands.

Table 5.3.1 Definitions for TAS algorithm

6. SAR Characterizations

6.1 SAR Design Target

6.1.1 WWAN 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.

WWAN_SAR_design_target			
$SAR_design_target < SAR_regulatory_limit \times 10^{\frac{-Total\ Uncertainty}{10}}$			
1g SAR (W/kg)		10g SAR (W/kg)	
Total Uncertainty	1.0 dB	Total Uncertainty	1.0 dB
SAR_regulatory_limit	1.6 W/kg	SAR_regulatory_limit	4.0 W/kg
SAR_design_target	0.8 W/kg	SAR_design_target	2.0 W/kg

Table 6.1.1 Definitions of uncertainty and design target for WWAN techs.

6.1.2 WLAN 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.

WLAN_SAR_design_target			
$SAR_design_target < SAR_regulatory_limit \times 10^{\frac{-Total\ Uncertainty}{10}}$			
1g SAR (W/kg)		10g SAR (W/kg)	
Total Uncertainty	1.0 dB	Total Uncertainty	1.0 dB
SAR_regulatory_limit	1.6 W/kg	SAR_regulatory_limit	4.0 W/kg
SAR_design_target	0.4 W/kg	SAR_design_target	1.0 W/kg

Table 6.1.2 Definitions of uncertainty and design target for WLAN techs.

6.2 SAR Determination

6.2.1 RSI and SAR Determination in WWAN techs

This device uses different Radio SAR Index (RSI) via **S.LSI TAS** to configure different time averaged power levels based on certain exposure scenarios. Depending on the detection scheme implemented in the wireless device, the worst-case SAR was determined by measurements for the relevant exposure conditions for that RSI. Detailed descriptions of the detection mechanisms are included in the operational description.

The radio SAR Index (RSI) conditions used in below table represent different exposure scenarios.

RF exposure Scenarios	RSI state	Description	KDB guide For SAR test
Head	RCV	1. Device positioned next to head. 2. Receiver Active.	KDB 648474 D04
Body-worn	Free	1. Device being used with a body-worn accessory.	KDB 648474 D04
Hotspot	Hotspot	1. Device transmits in hotspot mode near body. 2. Hotspot Mode Active.	KDB 941225 D06
Phablet-10g	Free	1. Device is held with hand.	KDB 648474 D04

Table 6.2.1 RSI and Corresponding Exposure Scenarios

6.2.2 DSI and SAR Determination in WLAN techs

This device uses different Device State Index (DSI) via **Qualcomm FastConnect TAS** to configure different time averaged power levels based on certain exposure scenarios. Depending on the detection scheme implemented in the wireless device, 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.

The device State Index (DSI) conditions used in below table represent different exposure scenarios.

RF exposure Scenarios	DSI No.	Description	KDB guide For SAR test
Head	1	1. Device positioned next to head. 2. Receiver Active.	KDB 648474 D04
	9	1. Device positioned next to head. 2. Receiver Active. 3. NR Band Active.	KDB 648474 D04
Body-w orn & Hotspot & Phablet-10g	0	1. Device transmits in hotspot mode near body. 2. Hotspot Mode Active. 3. Device being used w ith a body-w orn accessory. 4. Device is held w ith hand.	KDB 648474 D04 KDB 941225 D06
	8	1. Device transmits in hotspot mode near body. 2. Hotspot Mode Active. 3. Device being used w ith a body-w orn accessory. 4. Device is held w ith hand. 5. NR Band active.	KDB 648474 D04 KDB 941225 D06

Table 6.2.2 DSI and Corresponding Exposure Scenarios

6.3 Plimit determination

6.3.1 Plimit determination of RSI scenarios

SAR results corresponding to P_{max} for each antenna/technology/band/RSI can be found in Section.7.1. P_{limit} is calculated by linearly scaling with the P_{max} to correspond to *the SAR_design_target*. P_{limit} determination for each exposure scenario corresponding to *SAR_design_target* are shown in table. If P_{limit} is lower than P_{max} , then Part.0's SAR data were referred to SAR data in Part.1 report.

Table 6.3.1.1 P_{Limit} Determination of WWAN's RSI scenarios

RSI state	Plimit Determination Scenarios
RCV	Plimit is calculated based on 1g Head exposure SAR results.
Hotspot	Plimit is calculated based on 1g Hotspot exposure SAR results at 10 mm test distance.
Free	The worst-case SAR exposure is determine as maximum SAR normalized to the limit (i.e. low est Plimit) among: 1. 1g Body worn SAR measured at 10 mm test distance. 2. 10g Phablet SAR measured at 0 mm test distance.

Table 6.3.1.2 Plimit result according to technologies and bands in each RSI

Exposure condition			Head (RCV)	Body worn & Hotspot	Product Specific 10-g SAR	Pmax (Maximum tune-up Power) (dBm)
Spatial-average			1g	1g	10g	
Test distance (mm)			0	10	0	
RSI:			RCV	Free / Hotspot	Free	
RF Air Interface	Antenna	Antenna Group	Plimit corresponding to 0.8 W/kg (SAR_design_target) (1g) / 2.0 W/kg (SAR_design_target) (10g)			
GSM 850	Main 1	AG 0	25.00	25.00	25.00	25.00
GSM 1900	Main 1	AG 0	18.70	18.70	18.70	21.50
GSM 850 Upper	Sub 1	AG 1	20.00	25.00	25.00	25.00
WCDMA 2	Main 1	AG 0	22.00	18.50	18.50	22.00
WCDMA 4	Main 1	AG 0	23.00	19.00	19.00	23.00
WCDMA 5	Main 1	AG 0	24.00	24.00	24.00	24.00
WCDMA 5 Upper	Sub 1	AG 1	18.00	18.00	18.00	23.50
LTE B5	Main 1	AG 0	24.00	24.00	24.00	24.00
LTE B12(17)	Main 1	AG 0	23.50	23.50	23.50	23.50
LTE B13	Main 1	AG 0	23.50	23.50	23.50	23.50
LTE B25(2)	Main 1	AG 0	22.50	18.50	18.50	22.50
LTE B26	Main 1	AG 0	23.50	23.50	23.50	23.50
LTE B41	Main 2	AG 0	20.50	18.50	18.50	20.50
LTE B41(PC2)	Main 2	AG 0	21.40	19.00	19.00	21.40
LTE B66(4)	Main 1	AG 0	22.50	18.00	18.00	22.50
LTE B2 Upper	Sub 2	AG 1	15.50	17.50	17.50	22.50
LTE B5 Upper	Sub 1	AG 1	19.50	19.50	19.50	23.50
LTE B26 Upper	Sub 1	AG 1	18.00	18.00	18.00	23.00
LTE B66(4) Upper	Sub 2	AG 1	17.50	17.50	17.50	22.50
NR Band n5	Main 1	AG 0	24.00	24.00	24.00	24.50
NR Band n25(n2)	Main 1	AG 0	23.50	19.00	19.00	23.50
NR Band n66	Main 1	AG 0	23.50	19.50	19.50	23.50
NR Band n5 Upper	Sub 1	AG 1	19.50	19.50	19.50	24.00
NR Band n25(n2) Upper	Sub 2	AG 1	14.50	19.00	19.00	23.00
NR Band n66 Upper	Sub 2	AG 1	18.00	19.00	19.00	23.00
NR Band n41	Sub 2	AG 1	16.00	16.00	16.00	24.00
NR Band n41 - SRS1 -	Main 2	AG 0	14.50	14.50	14.50	22.00
NR Band n41 - SRS2 -	Sub 1	AG 1	14.00	14.00	14.00	23.00
NR Band n41 - SRS3 -	Main 4	AG 0	15.00	15.00	15.00	20.00
NR Band n77	Sub 2	AG 1	15.00	15.00	15.00	24.50
NR Band n77 - SRS1 -	Main 3	AG 0	9.00	9.00	9.00	23.00
NR Band n77 - SRS2 -	Sub 5	AG 1	9.00	9.00	9.00	20.00
NR Band n77 - SRS3 -	Main4	AG 0	6.50	6.50	6.50	23.00

Notes:

1. If P_{limit} is higher than P_{max} for some modes/bands, The modes/bands will operate at a power level up to P_{max} .
2. P_{max} (Maximum tune-up power) is specified in tune-up document. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty.
3. All P_{limit} NV and maximum tune up output P_{max} levels entered in above Table correspond to average power levels after accounting for duty cycle in the case of LTE TDD modulation schemes.
4. For NR FR1 TDD Bands, P_{limit} listed averaged power level, and P_{max} listed burst power level.

6.3.2 Plimit determination of DSI scenarios

SAR results corresponding to P_{max} for each antenna/technology/band/RSI can be found in Section.7.2. P_{limit} is calculated by linearly scaling with the P_{max} to correspond to the SAR_{design_target} . P_{limit} determination for each exposure scenario corresponding to SAR_{design_target} are shown in table. If P_{limit} is lower than P_{max} , then Part.0's SAR data were referred to SAR data in Part.1 report.

Table 6.3.2.1 P_{Limit} Determination of WLAN's DSI scenarios

DSI No.	Plimit Determination Scenarios
0	The worst-case SAR exposure is determine as maximum SAR normalized to the limit (i.e. low est Plimit) among: 1. 1g Body worn SAR measured at 10 mm test distance. 2. 1g Hotspot SAR measured at 10 mm test distance 3. 10g Phablet SAR measured at 0 mm test distance.
1	Plimit is calculated based on 1g Head exposure SAR results.
8	Scenarios are the same as DSI 0 (Only NR band active scenario).
9	Scenarios are the same as DSI 1 (Only NR band active scenario).

Table 6.3.3.2 Plimit result according to technologies and bands in each DSI

Exposure condition			Head (RCV)	Head (NR + RCV)	Body worn & Hotspot	Body worn & Hotspot (NR active)	Product Specific 10-g	Product Specific 10-g (NR active)	Pmax (Maximum tune-up Power) (dBm)
Spatial-average			1g	1g	1g	1g	10g	10g	
Test distance (mm)			0	0	10	10	0	0	
DSI:			1	9	0	8	0	8	
RF Air Interface	Antenna	Antenna Group	Plimit corresponding to 0.4 W/kg (SAR_{design_target}) (1g) / 1 W/kg (SAR_{design_target}) (10g)						
DTS SISO Ant.1	Sub.4	AG 1	11.00			14.50		14.50	18.00
DTS SISO Ant.2	Sub.6	AG 1	11.00			14.50		14.50	18.00
DTS MIMO	Sub.4&Sub.6	AG 1	11.00			14.50		14.50	18.00
UNII-2A SISO Ant.1	Sub.4	AG 1	11.00			12.00		12.00	15.00
UNII-2A SISO Ant.2	Sub.1	AG 1	11.00			12.00		12.00	15.00
UNII-2A MIMO	Sub.4&Sub.1	AG 1	11.00			12.00		12.00	15.00
UNII-2C SISO Ant.1	Sub.4	AG 1	11.00			12.00		12.00	15.00
UNII-2C SISO Ant.2	Sub.1	AG 1	11.00			12.00		12.00	15.00
UNII-2C MIMO	Sub.4&Sub.1	AG 1	11.00			12.00		12.00	15.00
UNII-3 SISO Ant.1	Sub.4	AG 1	11.00			12.00		12.00	15.00
UNII-3 SISO Ant.2	Sub.1	AG 1	11.00			12.00		12.00	15.00
UNII-3 MIMO	Sub.4&Sub.1	AG 1	11.00			12.00		12.00	15.00
UNII-4 SISO Ant.1	Sub.4	AG 1	11.00			12.00		12.00	15.00
UNII-4 SISO Ant.2	Sub.1	AG 1	11.00			12.00		12.00	15.00
UNII-4 MIMO	Sub.4&Sub.1	AG 1	11.00			12.00		12.00	15.00
WiFi 6e SISO Ant.1	Sub.4	AG 1	8.00			8.00		8.00	8.00
WiFi 6e SISO Ant.2	Sub.1	AG 1	8.00			8.00		8.00	8.00
WiFi 6e MIMO	Sub.4&Sub.1	AG 1	8.00			8.00		8.00	8.00

Notes:

1. If P_{limit} is higher than P_{max} for some modes/bands, The modes/bands will operate at a power level up to P_{max} .
2. P_{max} (Maximum tune-up power) is specified in tune-up document. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty.

7. SAR Test results for Plimit calculations

7.1 SAR Test results for P_{limit} calculations in each RSI scenarios

Head exposure (RSI =RCV)

RF Exposure Conditions	RSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Head	Rcv	GSM 850	Main 1	GPRS 2 slots		190	0	Left Touch	24.97	0.131	32.83	31.70
							0	Left Tilt	24.97	0.092	34.38	
							0	Right Touch	24.97	0.170	31.70	
							0	Right Tilt	24.97	0.088	34.57	
Head	Rcv	GSM 1900	Main 1	GPRS 3 slots		661	0	Left Touch	18.65	0.040	31.71	31.71
							0	Left Tilt	18.65	0.015	36.01	
							0	Right Touch	18.65	0.023	34.16	
							0	Right Tilt	18.65	0.015	36.01	
Head	Rcv	GSM 850 Upper	Sub 1	GPRS 1 Slot		128	0	Left Touch	20.05	0.430	22.75	22.75
							0	Left Tilt	20.05	0.404	23.02	
							0	Right Touch	20.05	0.281	24.59	
							0	Right Tilt	20.05	0.239	25.30	
Head	Rcv	WCDMA 2	Main 1	Rel 99		9400	0	Left Touch	22.37	0.059	33.67	33.67
							0	Left Tilt	22.37	0.031	36.56	
							0	Right Touch	22.37	0.039	35.51	
							0	Right Tilt	22.37	0.021	38.12	
Head	Rcv	WCDMA 4	Main 1	Rel 99		1413	0	Left Touch	22.76	0.226	28.25	28.25
							0	Left Tilt	22.76	0.045	35.28	
							0	Right Touch	22.76	0.120	31.00	
							0	Right Tilt	22.76	0.058	34.16	
Head	Rcv	WCDMA 5	Main 1	Rel 99		4183	0	Left Touch	23.91	0.127	31.90	30.64
							0	Left Tilt	23.91	0.080	33.94	
							0	Right Touch	23.91	0.170	30.64	
							0	Right Tilt	23.91	0.093	33.27	
Head	Rcv	WCDMA 5 Upper	Sub 1	Rel 99		4183	0	Left Touch	18.42	0.620	19.53	19.49
							0	Left Tilt	18.42	0.626	19.49	
							0	Right Touch	18.42	0.368	21.79	
							0	Right Tilt	18.42	0.320	22.40	
Head	Rcv	LTE B5	Main 1	QPSK	1/0	20525	0	Left Touch	23.73	0.150	31.00	30.28
							0	Left Tilt	23.73	0.111	32.31	
							0	Right Touch	23.73	0.177	30.28	
							0	Right Tilt	23.73	0.091	33.16	
Head	Rcv	LTE B12(17)	Main 1	QPSK	1/0	23095	0	Left Touch	24.11	0.086	33.80	33.62
							0	Left Tilt	24.11	0.066	34.96	
							0	Right Touch	24.11	0.090	33.62	
							0	Right Tilt	24.11	0.065	35.01	
Head	Rcv	LTE B13	Main 1	QPSK	1/0	23230	0	Left Touch	23.87	0.112	32.41	32.18
							0	Left Tilt	23.87	0.062	35.01	
							0	Right Touch	23.87	0.118	32.18	
							0	Right Tilt	23.87	0.057	35.37	
Head	Rcv	LTE B25(2)	Main 1	QPSK	1/49	26590	0	Left Touch	22.51	0.164	29.39	29.39
							0	Left Tilt	22.51	0.046	34.94	
							0	Right Touch	22.51	0.089	32.06	
							0	Right Tilt	22.51	0.060	33.73	
Head	Rcv	LTE B26	Main 1	QPSK	1/0	26865	0	Left Touch	23.84	0.134	31.60	30.83
							0	Left Tilt	23.84	0.084	33.61	
							0	Right Touch	23.84	0.160	30.83	
							0	Right Tilt	23.84	0.093	33.20	
Head	Rcv	LTE B41	Main 2	QPSK	1/0	40620	0	Left Touch	20.83	0.152	28.04	28.04
							0	Left Tilt	20.83	0.055	32.45	
							0	Right Touch	20.83	0.059	32.19	
							0	Right Tilt	20.83	0.044	33.45	

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Head exposure (RSI =RCV) (Continued)

RF Exposure Conditions	RSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Head	Rcv	LTE B41(PC2)	Main 2	QPSK	1/0	40620	0	Left Touch	21.36	0.162	28.30	28.30
Head	Rcv	LTE B66(4)	Main 1	QPSK	1/0	132072	0	Left Touch	22.63	0.290	27.04	27.04
							0	Left Tilt	22.63	0.086	32.33	
							0	Right Touch	22.63	0.127	30.62	
							0	Right Tilt	22.63	0.100	31.66	
Head	Rcv	LTE B2 Upper	Sub 2	QPSK	50/0	19100	0	Left Touch	14.52	0.238	19.79	17.38
							0	Left Tilt	14.52	0.321	18.49	
							0	Right Touch	14.52	0.409	17.43	
							0	Right Tilt	14.52	0.414	17.38	
Head	Rcv	LTE B5 Upper	Sub 1	QPSK	25/0	20525	0	Left Touch	19.39	0.579	20.79	20.79
							0	Left Tilt	19.39	0.472	21.68	
							0	Right Touch	19.39	0.509	21.35	
							0	Right Tilt	19.39	0.460	21.79	
Head	Rcv	LTE B26 Upper	Sub 1	QPSK	1/0	26865	0	Left Touch	17.96	0.384	21.15	21.15
							0	Left Tilt	17.96	0.301	22.21	
							0	Right Touch	17.96	0.296	22.28	
							0	Right Tilt	17.96	0.231	23.35	
Head	Rcv	LTE B66(4) Upper	Sub 2	QPSK	1/0	132322	0	Left Touch	16.79	0.256	21.74	18.00
							0	Left Tilt	16.79	0.371	20.13	
							0	Right Touch	16.79	0.554	18.39	
							0	Right Tilt	16.79	0.606	18.00	
Head	Rcv	NR Band n5	Main 1	QPSK	1/52	167300	0	Left Touch	23.87	0.109	32.53	30.28
							0	Left Tilt	23.87	0.084	33.66	
							0	Right Touch	23.87	0.183	30.28	
							0	Right Tilt	23.87	0.088	33.45	
Head	Rcv	NR Band n25	Main 1	QPSK	1/52	381000	0	Left Touch	23.04	0.136	30.74	30.74
							0	Left Tilt	23.04	0.041	35.97	
							0	Right Touch	23.04	0.056	34.58	
							0	Right Tilt	23.04	0.040	36.04	
Head	Rcv	NR Band n66	Main 1	QPSK	1/0	344000	0	Left Touch	23.38	0.210	29.19	29.19
							0	Left Tilt	23.38	0.038	36.61	
							0	Right Touch	23.38	0.128	31.34	
							0	Right Tilt	23.38	0.087	33.02	
Head	Rcv	NR Band n5 Upper	Sub 1	QPSK	50/28	167300	0	Left Touch	19.30	0.587	20.64	20.64
							0	Left Tilt	19.30	0.477	21.55	
							0	Right Touch	19.30	0.427	22.03	
							0	Right Tilt	19.30	0.349	22.90	
Head	Rcv	NR Band n25 Upper	Sub 2	QPSK	1/52	381000	0	Left Touch	14.90	0.254	19.88	16.59
							0	Left Tilt	14.90	0.370	18.25	
							0	Right Touch	14.90	0.500	16.94	
							0	Right Tilt	14.90	0.542	16.59	
Head	Rcv	NR Band n66 Upper	Sub 2	QPSK	1/0	344000	0	Left Touch	18.05	0.379	21.29	18.83
							0	Left Tilt	18.05	0.573	19.50	
							0	Right Touch	18.05	0.569	19.53	
							0	Right Tilt	18.05	0.669	18.83	
Head	Rcv	NR Band n41	Sub 2	QPSK	135/138	518598	0	Left Touch	16.38	0.387	19.53	16.48
							0	Left Tilt	16.38	0.584	17.75	
							0	Right Touch	16.38	0.690	17.02	
							0	Right Tilt	16.38	0.782	16.48	
Head	Rcv	NR Band n41 - SRS1 -	Main 2	CW		518598	0	Left Touch	14.56	0.033	28.38	28.38
							0	Left Tilt	14.56	0.003	38.18	
							0	Right Touch	14.56	0.001	43.59	
							0	Right Tilt	14.56	0.006	36.02	
Head	Rcv	NR Band n41 - SRS2 -	Sub 1	CW		518598	0	Left Touch	13.85	0.470	16.16	16.16
							0	Left Tilt	13.85	0.432	16.53	
							0	Right Touch	13.85	0.138	21.48	
							0	Right Tilt	13.85	0.132	21.68	

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Head exposure (RSI =RCV) (Continued)

RF Exposure Conditions	RSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Head	Rcv	NR Band n41 - SRS3 -	Main 4	CW		518598	0	Left Touch	15.21	0.001	44.24	44.24
							0	Left Tilt	15.21	0.001	44.24	
							0	Right Touch	15.21	0.001	44.24	
							0	Right Tilt	15.21	0.001	44.24	
Head	Rcv	NR Band n77	Sub 2	QPSK	1/136	650000	0	Left Touch	14.96	0.187	21.27	15.76
							0	Left Tilt	14.96	0.198	21.02	
						633334	0	Right Touch	15.20	0.590	16.52	
							0	Right Tilt	15.16	0.697	15.76	
Head	Rcv	NR Band n77 - SRS1 -	Main 3	CW		650000	0	Left Touch	9.12	0.024	24.40	24.40
							0	Left Tilt	9.12	0.001	38.15	
							0	Right Touch	9.12	0.001	38.15	
							0	Right Tilt	9.12	0.007	29.95	
Head	Rcv	NR Band n77 - SRS2 -	Sub 5	CW		650000	0	Left Touch	9.37	0.128	17.33	15.85
							0	Left Tilt	9.37	0.001	38.40	
							0	Right Touch	9.37	0.180	15.85	
							0	Right Tilt	9.37	0.003	33.20	
Head	Rcv	NR Band n77 - SRS3 -	Main4	CW		662000	0	Left Touch	6.38	0.001	35.41	35.41
							0	Left Tilt	6.38	0.001	35.41	
							0	Right Touch	6.38	0.001	35.41	
							0	Right Tilt	6.38	0.001	35.41	

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Body-worn & Hotspot exposure (RSI=Free&Hotspot)

RF Exposure Conditions	RSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Body-worn & Hotspot	Free & Hotspot	GSM 850	Main 1	GPRS 2 slots		190	10	Rear	24.97	0.381	28.19	28.19
Hotspot							10	Front	24.97	0.202	30.95	
							10	Left	24.97	0.205	30.88	
							10	Bottom	24.97	0.173	31.62	
							10	Right	24.97	0.138	32.60	
Body-worn & Hotspot	Free & Hotspot	GSM 1900	Main 1	GPRS 3 slots		661	10	Rear	18.65	0.203	24.61	20.58
Hotspot							10	Front	18.65	0.188	24.94	
							10	Left	18.65	0.045	31.19	
							10	Bottom	18.65	0.513	20.58	
							10	Right	18.65	0.048	30.83	
Body-worn & Hotspot	Free & Hotspot	GSM 850 Upper	Sub 1	GPRS 2 slots		190	10	Rear	24.22	0.424	26.98	26.98
Hotspot							10	Front	24.22	0.403	27.20	
							10	Top	24.22	0.356	27.74	
							10	Left	24.22	0.299	28.49	
Body-worn & Hotspot	Free & Hotspot	WCDMA 2	Main 1	Rel 99		9400	10	Rear	18.77	0.313	22.85	19.40
Hotspot							10	Front	18.77	0.310	22.89	
							10	Left	18.77	0.065	29.70	
							10	Bottom	18.77	0.692	19.40	
							10	Right	18.77	0.084	28.57	
Body-worn & Hotspot	Free & Hotspot	WCDMA 4	Main 1	Rel 99		1413	10	Rear	19.17	0.429	21.88	19.38
Hotspot							10	Front	19.17	0.412	22.05	
							10	Left	19.17	0.072	29.66	
							10	Bottom	19.17	0.763	19.38	
							10	Right	19.17	0.126	27.20	
Body-worn & Hotspot	Free & Hotspot	WCDMA 5	Main 1	Rel 99		4183	10	Rear	23.91	0.366	27.31	27.31
Hotspot							10	Front	23.91	0.242	29.10	
							10	Left	23.91	0.238	29.18	
							10	Bottom	23.91	0.139	31.51	
							10	Right	23.91	0.168	30.69	
Body-worn & Hotspot	Free & Hotspot	WCDMA 5 Upper	Sub 1	Rel 99		4183	10	Rear	18.42	0.251	23.45	23.45
Hotspot							10	Front	18.42	0.167	25.22	
							10	Top	18.42	0.180	24.90	
							10	Left	18.42	0.179	24.92	
Body-worn & Hotspot	Free & Hotspot	LTE B5	Main 1	QPSK	1/0	20525	10	Rear	23.73	0.493	25.83	25.83
Hotspot							10	Front	23.73	0.223	29.28	
							10	Left	23.73	0.193	29.91	
							10	Bottom	23.73	0.160	30.72	
							10	Right	23.73	0.154	30.89	
Body-worn & Hotspot	Free & Hotspot	LTE B12(17)	Main 1	QPSK	1/0	23095	10	Rear	24.11	0.230	29.52	29.52
Hotspot							10	Front	24.11	0.150	31.38	
							10	Left	24.11	0.119	32.39	
							10	Bottom	24.11	0.046	36.53	
							10	Right	24.11	0.162	31.05	
Body-worn & Hotspot	Free & Hotspot	LTE B13	Main 1	QPSK	1/0	23230	10	Rear	23.87	0.349	27.47	27.47
Hotspot							10	Front	23.87	0.281	28.41	
							10	Left	23.87	0.107	32.61	
							10	Bottom	23.87	0.111	32.45	
							10	Right	23.87	0.171	30.57	
Body-worn & Hotspot	Free & Hotspot	LTE B25(2)	Main 1	QPSK	50/0	26365	10	Rear	18.83	0.410	21.73	19.31
Hotspot							10	Front	18.83	0.317	22.85	
							10	Left	18.83	0.061	30.04	
							10	Bottom	18.83	0.716	19.31	
							10	Right	18.83	0.074	29.15	
Body-worn & Hotspot	Free & Hotspot	LTE B26	Main 1	QPSK	1/0	26865	10	Rear	23.84	0.499	25.89	25.89
Hotspot							10	Front	23.84	0.464	26.21	
							10	Left	23.84	0.239	29.09	
							10	Bottom	23.84	0.126	31.87	
							10	Right	23.84	0.197	29.93	
Body-worn & Hotspot	Free & Hotspot	LTE B41	Main 2	QPSK	1/0	40620	10	Rear	19.31	0.248	24.40	23.16
Hotspot							10	Front	19.31	0.200	25.33	
							10	Bottom	19.31	0.330	23.16	
							10	Right	19.31	0.298	23.60	
Hotspot	Free & Hotspot	LTE B41(PC2)	Main 2	QPSK	1/0	40620	10	Bottom	19.35	0.320	23.33	23.33

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Body-worn & Hotspot exposure (RSI=Free&Hotspot) (Continued)

RF Exposure Conditions	RSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Body-worn & Hotspot	Free & Hotspot	LTE B66(4)	Main 1	QPSK	1/0	132072	10	Rear	17.49	0.239	22.74	20.25
Hotspot							10	Front	17.49	0.224	23.02	
							10	Left	17.49	0.064	28.46	
							10	Bottom	17.49	0.424	20.25	
							10	Right	17.49	0.130	25.38	
Body-worn & Hotspot	Free & Hotspot	LTE B2 Upper	Sub 2	QPSK	1/49	19100	10	Rear	16.72	0.158	23.76	21.39
Hotspot							10	Front	16.72	0.097	25.88	
							10	Top	16.72	0.273	21.39	
							10	Right	16.72	0.074	27.08	
							10	Rear	19.40	0.150	26.67	
Body-worn & Hotspot	Free & Hotspot	LTE B5 Upper	Sub 1	QPSK	1/0	20525	10	Front	19.40	0.128	27.36	26.67
Hotspot							10	Top	19.40	0.109	28.06	
							10	Left	19.40	0.039	32.51	
							10	Rear	17.96	0.112	26.50	
							10	Front	17.96	0.083	27.78	
Body-worn & Hotspot	Free & Hotspot	LTE B26 Upper	Sub 1	QPSK	1/0	26865	10	Top	17.96	0.070	28.55	26.50
Hotspot							10	Left	17.96	0.086	27.66	
							10	Rear	16.79	0.105	25.61	
							10	Front	16.79	0.086	26.48	
							10	Top	16.79	0.202	22.77	
Body-worn & Hotspot	Free & Hotspot	LTE B66(4) Upper	Sub 2	QPSK	1/0	132322	10	Right	16.79	0.042	29.58	22.77
Hotspot							10	Rear	23.87	0.409	26.78	
							10	Front	23.87	0.220	29.48	
							10	Left	23.87	0.199	29.91	
							10	Bottom	23.87	0.163	30.78	
Body-worn & Hotspot	Free & Hotspot	NR Band n5	Main 1	QPSK	1/52	167300	10	Right	23.87	0.167	30.67	26.78
Hotspot							10	Rear	19.16	0.266	23.94	
							10	Front	19.16	0.277	23.77	
							10	Left	19.16	0.078	29.25	
							10	Bottom	19.16	0.591	20.48	
Body-worn & Hotspot	Free & Hotspot	NR Band n25	Main 1	QPSK	1/52	381000	10	Right	19.16	0.070	29.75	20.48
Hotspot							10	Rear	19.39	0.400	22.40	
							10	Front	19.39	0.334	23.18	
							10	Left	19.39	0.055	31.05	
							10	Bottom	19.39	0.702	19.96	
Body-worn & Hotspot	Free & Hotspot	NR Band n66	Main 1	QPSK	1/1	349000	10	Right	19.39	0.101	28.38	19.96
Hotspot							10	Rear	19.41	0.138	27.04	
							10	Front	19.41	0.146	26.80	
							10	Top	19.41	0.122	27.58	
							10	Left	19.41	0.126	27.44	
Body-worn & Hotspot	Free & Hotspot	NR Band n5 Upper	Sub 1	QPSK	1/52	167300	10	Rear	19.33	0.134	27.09	26.80
Hotspot							10	Front	19.33	0.108	28.03	
							10	Top	19.33	0.258	24.24	
							10	Right	19.33	0.072	29.80	
							10	Rear	19.13	0.217	24.80	
Body-worn & Hotspot	Free & Hotspot	NR Band n66 Upper	Sub 2	QPSK	1/1	344000	10	Front	19.13	0.167	25.93	23.54
Hotspot							10	Top	19.13	0.290	23.54	
							10	Right	19.13	0.074	29.45	
							10	Rear	16.51	0.270	21.23	
							10	Front	16.51	0.121	24.71	
Body-worn & Hotspot	Free & Hotspot	NR Band n41	Sub 2	QPSK	1/1	518598	10	Top	16.51	0.322	20.46	20.46
Hotspot							10	Right	16.51	0.030	30.76	
							10	Rear	14.56	0.099	23.63	
							10	Front	14.56	0.067	25.34	
							10	Bottom	14.56	0.184	20.94	
Body-worn & Hotspot	Free & Hotspot	NR Band n41 - SRS1 -	Main 2	QPSK		518598	10	Right	14.56	0.113	23.06	20.94
Hotspot							10	Rear	13.85	0.052	25.72	
							10	Front	13.85	0.030	28.07	
							10	Top	13.85	0.034	27.58	
							10	Left	13.85	0.034	27.60	
Body-worn & Hotspot	Free & Hotspot	NR Band n41 - SRS2 -	Sub 1	QPSK		518598	10	Rear	15.21	0.044	27.78	25.72
Hotspot							10	Front	15.21	0.005	37.38	
							10	Left	15.21	0.001	44.24	
							10	Bottom	15.21	0.031	29.30	
							10	Right	15.21	0.001	44.24	
Body-worn & Hotspot	Free & Hotspot	NR Band n41 - SRS3 -	Main 4	QPSK		518598	10	Bottom	15.21	0.031	29.30	27.78
Hotspot							10	Right	15.21	0.001	44.24	
							10	Left	15.21	0.001	44.24	
							10	Front	15.21	0.005	37.38	
							10	Rear	15.21	0.044	27.78	

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Body-worn & Hotspot exposure (RSI=Free&Hotspot) (Continued)

RF Exposure Conditions	RSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Body-worn & Hotspot	Free & Hotspot	NR Band n77	Sub 2	QPSK	1/136	650000	10	Rear	14.96	0.110	23.58	23.58
Hotspot							10	Front	14.96	0.052	26.86	
							10	Top	14.96	0.105	23.78	
							10	Right	14.96	0.019	31.23	
Body-worn & Hotspot	Free & Hotspot	NR Band n77 - SRS1 -	Main 3	QPSK		650000	10	Rear	9.12	0.031	23.27	19.56
Hotspot							10	Front	9.12	0.025	24.22	
							10	Bottom	9.12	0.006	30.37	
							10	Right	9.12	0.072	19.56	
Body-worn & Hotspot	Free & Hotspot	NR Band n77 - SRS2 -	Sub 5	QPSK		650000	10	Rear	9.37	0.018	25.87	25.87
Hotspot							10	Front	9.37	0.005	31.76	
							10	Right	9.37	0.003	33.82	
Body-worn & Hotspot	Free & Hotspot	NR Band n77 - SRS3 -	Main4	QPSK		662000	10	Rear	6.38	0.152	13.59	13.59
Hotspot							10	Front	6.38	0.001	35.41	
							10	Left	6.38	0.006	27.32	
Hotspot							10	Bottom	6.38	0.008	26.14	

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Product Specific 10-g exposure (RSI=Free)

RF Exposure Conditions	RSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Product Specific 10-g	Free	GSM 850	Main 1	GPRS 2 slots		190	0	Rear	25.97	0.837	29.75	29.75
							0	Front	25.97	0.795	29.98	
							0	Left	25.97	0.128	37.91	
							0	Bottom	25.97	0.440	32.55	
							0	Right	25.97	0.334	33.74	
Product Specific 10-g	Free	GSM 1900	Main 1	GPRS 3 slots		661	0	Rear	18.65	0.907	22.08	21.62
							0	Front	18.65	0.692	23.26	
							0	Left	18.65	0.093	31.98	
							0	Bottom	18.65	1.010	21.62	
							0	Right	18.65	0.115	31.05	
Product Specific 10-g	Free	GSM 850 Upper	Sub 1	GPRS 2 slots		190	0	Rear	24.22	0.688	28.85	28.85
							0	Front	24.22	0.651	29.09	
							0	Top	24.22	0.623	29.29	
							0	Left	24.22	0.390	31.32	
Product Specific 10-g	Free	WCDMA 2	Main 1	Rel 99		9400	0	Rear	18.77	1.240	20.85	20.78
							0	Front	18.77	0.940	22.05	
							0	Left	18.77	0.163	29.66	
							0	Bottom	18.77	1.260	20.78	
							0	Right	18.77	0.172	29.43	
Product Specific 10-g	Free	WCDMA 4	Main 1	Rel 99		1413	0	Rear	19.17	1.560	20.25	19.75
							0	Front	19.17	1.430	20.63	
							0	Left	19.17	0.160	30.14	
							0	Bottom	19.17	1.750	19.75	
Product Specific 10-g	Free	WCDMA 5	Main 1	Rel 99		4183	0	Rear	23.91	1.260	25.92	25.92
							0	Front	23.91	0.883	27.46	
							0	Left	23.91	0.175	34.49	
							0	Bottom	23.91	0.611	29.06	
							0	Right	23.91	0.814	27.81	
Product Specific 10-g	Free	WCDMA 5 Upper	Sub 1	Rel 99			0	Rear	18.42	0.675	23.14	22.48
							0	Front	18.42	0.785	22.48	
							0	Top	18.42	0.728	22.81	
							0	Left	18.42	0.615	23.54	
Product Specific 10-g	Free	LTE B5	Main 1	QPSK	1/0	20525	0	Rear	23.73	1.200	25.95	25.95
							0	Front	23.73	0.783	27.80	
							0	Left	23.73	0.198	33.77	
							0	Bottom	23.73	0.595	29.00	
							0	Right	23.73	0.680	28.42	
Product Specific 10-g	Free	LTE B12(17)	Main 1	QPSK	1/0	23095	0	Rear	24.10	1.460	25.47	25.47
							0	Front	24.10	1.160	26.47	
							0	Left	24.10	0.088	37.68	
							0	Bottom	24.10	0.692	28.71	
Product Specific 10-g	Free	LTE B13	Main 1	QPSK	1/0	23230	0	Rear	23.90	1.310	25.74	25.74
							0	Front	23.90	0.928	27.23	
							0	Left	23.90	0.164	34.76	
							0	Bottom	23.90	0.585	29.24	
							0	Right	23.90	0.360	31.35	
Product Specific 10-g	Free	LTE B25(2)	Main 1	QPSK	50/0	26590	0	Rear	18.83	1.270	20.80	20.80
							0	Front	18.83	0.906	22.27	
							0	Left	18.83	0.170	29.54	
							0	Bottom	18.83	1.230	20.94	
Product Specific 10-g	Free	LTE B26	Main 1	QPSK	1/0	26865	0	Rear	23.84	1.250	25.88	25.88
							0	Front	23.84	0.900	27.31	
							0	Left	23.84	0.195	33.95	
							0	Bottom	23.84	0.665	28.62	
Product Specific 10-g	Free	LTE B41	Main 2	QPSK	1/0	40620	0	Rear	19.31	1.310	21.15	21.15
							0	Front	19.31	0.907	22.74	
							0	Bottom	19.31	1.070	22.03	
							0	Right	19.31	0.483	25.48	
Product	Free	LTE B41(PC2)	Main 2	QPSK	1/0	40620	0	Rear	19.35	1.400	20.90	20.90

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Product Specific 10-g exposure (RSI=Free) (Continued)

RF Exposure Conditions	RSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Product Specific 10-g	Free	LTE B66(4)	Main 1	QPSK	1/0	132072	0	Rear	17.49	0.749	21.76	20.41
							0	Front	17.49	0.733	21.85	
							0	Left	17.49	0.090	30.97	
							0	Bottom	17.49	1.020	20.41	
							0	Right	17.49	0.146	28.86	
Product Specific 10-g	Free	LTE B2 Upper	Sub 2	QPSK	1/49	19100	0	Rear	16.72	0.667	21.49	18.12
							0	Front	16.72	0.524	22.54	
							0	Top	16.72	1.450	18.12	
							0	Right	16.72	0.274	25.35	
							0	Rear	19.40	0.519	25.26	
Product Specific 10-g	Free	LTE B5 Upper	Sub 1	QPSK	1/0	20525	0	Front	19.40	0.601	24.62	24.62
							0	Top	19.40	0.489	25.52	
							0	Left	19.40	0.438	26.00	
							0	Rear	17.96	0.356	25.46	
							0	Front	17.96	0.561	23.48	
Product Specific 10-g	Free	LTE B26 Upper	Sub 1	QPSK	1/0	26865	0	Top	17.96	0.508	23.91	23.48
							0	Left	17.96	0.392	25.04	
							0	Rear	16.79	0.465	23.13	
							0	Front	16.79	0.431	23.46	
							0	Top	16.79	0.928	20.12	
Product Specific 10-g	Free	LTE B66(4) Upper	Sub 2	QPSK	1/0	132322	0	Right	16.79	0.149	28.07	20.12
							0	Rear	23.87	1.290	25.77	
							0	Front	23.87	0.733	28.23	
							0	Left	23.87	0.158	34.89	
							0	Bottom	23.87	0.549	29.48	
Product Specific 10-g	Free	NR Band n5	Main 1	QPSK	1/52	167300	0	Right	23.87	0.558	29.41	25.77
							0	Rear	19.16	1.010	22.13	
							0	Front	19.16	0.586	24.49	
							0	Left	19.16	0.164	30.02	
							0	Bottom	19.16	1.120	21.68	
Product Specific 10-g	Free	NR Band n25	Main 1	QPSK	1/52	381000	0	Right	19.16	0.165	30.00	21.68
							0	Rear	19.39	1.230	21.50	
							0	Front	19.39	1.170	21.72	
							0	Left	19.39	0.121	31.57	
							0	Bottom	19.39	1.310	21.23	
Product Specific 10-g	Free	NR Band n66	Main 1	QPSK	1/1	354000	0	Right	19.39	0.197	29.46	21.23
							0	Rear	19.41	0.514	25.31	
							0	Front	19.41	0.528	25.19	
							0	Top	19.41	0.466	25.74	
							0	Left	19.41	0.452	25.87	
Product Specific 10-g	Free	NR Band n5 Upper	Sub 1	QPSK	1/52	167300	0	Rear	19.33	0.539	25.02	25.19
							0	Front	19.33	0.590	24.63	
							0	Top	19.33	1.290	21.23	
							0	Right	19.33	0.284	27.81	
							0	Rear	19.13	0.586	24.46	
Product Specific 10-g	Free	NR Band n25 Upper	Sub 2	QPSK	1/52	381000	0	Front	19.13	0.627	24.17	20.44
							0	Top	19.13	1.480	20.44	
							0	Right	19.13	0.206	29.00	
							0	Rear	16.51	0.722	20.93	
							0	Front	16.51	0.709	21.01	
Product Specific 10-g	Free	NR Band n41	Sub 2	QPSK	1/1	518598	0	Top	16.51	1.250	18.55	18.55
							0	Right	16.51	0.113	28.99	
							0	Rear	14.56	0.686	19.21	
							0	Front	14.56	0.454	21.00	
							0	Bottom	14.56	0.520	20.41	
Product Specific 10-g	Free	NR Band n41 - SRS1 -	Main 2	QPSK	1/1	518598	0	Right	14.56	0.254	23.52	19.21
							0	Rear	13.85	0.245	22.97	
							0	Front	13.85	0.202	23.81	
							0	Top	13.85	0.147	25.19	
							0	Left	13.85	0.201	23.83	
Product Specific 10-g	Free	NR Band n41 - SRS2 -	Sub 1	QPSK	1/1	518598	0	Rear	15.21	0.411	22.08	22.97
							0	Front	15.21	0.084	28.98	
							0	Left	15.21	0.001	48.22	
							0	Bottom	15.21	0.052	31.06	
							0	Right	15.21	0.001	48.22	
Product Specific 10-g	Free	NR Band n41 - SRS3 -	Main 4	QPSK	1/1	518598	0	Rear	15.21	0.411	22.08	22.08
							0	Front	15.21	0.084	28.98	
							0	Left	15.21	0.001	48.22	
							0	Bottom	15.21	0.052	31.06	
							0	Right	15.21	0.001	48.22	

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Product Specific 10-g exposure (RSI=Free) (Continued)

RF Exposure Conditions	RSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Product Specific 10-g	Free	NR Band n77	Sub 2	QPSK	1/136	650000	0	Rear	15.20	0.395	22.24	19.17
							0	Front	15.20	0.418	22.00	
							0	Top	15.20	0.801	19.17	
							0	Right	15.20	0.074	29.52	
Product Specific 10-g	Free	NR Band n77 - SRS1 -	Main 3	QPSK	[Hatched]	650000	0	Rear	9.12	0.451	15.59	12.52
							0	Front	9.12	0.477	15.35	
							0	Top	9.12	0.914	12.52	
							0	Right	9.12	0.084	22.87	
Product Specific 10-g	Free	NR Band n77 - SRS2 -	Sub 5	QPSK	[Hatched]	650000	0	Rear	9.37	0.131	21.21	19.83
							0	Front	9.37	0.180	19.83	
							0	Right	9.37	0.032	27.32	
							0	Left	9.37	0.032	27.32	
Product Specific 10-g	Free	NR Band n77 - SRS3 -	Main4	QPSK	[Hatched]	662000	0	Rear	6.38	0.586	11.71	11.71
							0	Front	6.38	0.013	28.18	
							0	Left	6.38	0.015	27.66	
							0	Bottom	6.38	0.036	23.89	

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

7.2 SAR Test results for P_{limit} calculations in each DSI scenarios

Head exposure (DSI = 1, 9)

RF Exposure Conditions	DSI	band	Antenna	mode	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Head	1, 9	DTS SISO Ant.1	Sub.4	b	6	0	Left Touch	11.44	0.045	20.96	15.39
						0	Left Tilt	11.44	0.025	23.52	
						0	Right Touch	11.44	0.161	15.39	
						0	Right Tilt	11.44	0.064	19.40	
Head	1, 9	DTS SISO Ant.2	Sub.6	b	1	0	Left Touch	11.33	0.308	12.47	12.47
						0	Left Tilt	11.33	0.039	21.47	
						0	Right Touch	11.33	0.152	15.53	
						0	Right Tilt	11.33	0.014	25.92	
Head	1, 9	DTS MIMO	Sub4 & Sub.6	b	1	0	Left Touch	11.18	0.217	13.84	13.84
						0	Left Tilt	11.18	0.032	22.20	
						0	Right Touch	11.68	0.214	14.40	
						0	Right Tilt	11.68	0.149	15.97	
Head	1, 9	UNII-2A SISO Ant.1	Sub.4	ac	58	0	Left Touch	10.93	0.076	18.16	12.42
						0	Left Tilt	10.93	0.074	18.25	
						0	Right Touch	10.93	0.284	12.42	
						0	Right Tilt	10.93	0.163	14.83	
Head	1, 9	UNII-2A SISO Ant.2	Sub.1	ac	58	0	Left Touch	11.39	0.095	17.63	17.63
						0	Left Tilt	11.39	0.074	18.72	
						0	Right Touch	11.39	0.078	18.48	
						0	Right Tilt	11.39	0.079	18.42	
Head	1, 9	UNII-2A MIMO	Sub.4 & Sub.1	ac	58	0	Left Touch	11.22	0.067	18.96	14.08
						0	Left Tilt	11.22	0.055	19.82	
						0	Right Touch	11.22	0.207	14.08	
						0	Right Tilt	11.22	0.140	15.78	
Head	1, 9	UNII-2C SISO Ant.1	Sub.4	ac	122	0	Left Touch	11.79	0.111	17.36	12.69
						0	Left Tilt	11.79	0.118	17.09	
						0	Right Touch	11.79	0.325	12.69	
						0	Right Tilt	11.79	0.258	13.69	
Head	1, 9	UNII-2C SISO Ant.2	Sub.1	ac	106	0	Left Touch	10.64	0.065	18.51	17.52
						0	Left Tilt	10.64	0.060	18.89	
						0	Right Touch	10.64	0.082	17.52	
						0	Right Tilt	10.64	0.069	18.28	
Head	1, 9	UNII-2C MIMO	Sub.4 & Sub.1	ac	122	0	Left Touch	10.42	0.103	16.31	13.46
						0	Left Tilt	10.42	0.090	16.90	
						0	Right Touch	11.66	0.264	13.46	
						0	Right Tilt	10.42	0.190	13.65	
Head	1, 9	UNII-3 SISO Ant.1	Sub.4	ac	155	0	Left Touch	11.34	0.001	37.36	12.35
						0	Left Tilt	11.34	0.067	19.11	
						0	Right Touch	11.34	0.317	12.35	
						0	Right Tilt	11.34	0.123	16.46	
Head	1, 9	UNII-3 SISO Ant.2	Sub.1	ac	155	0	Left Touch	10.54	0.001	36.56	19.77
						0	Left Tilt	10.54	0.036	21.00	
						0	Right Touch	10.54	0.001	36.56	
						0	Right Tilt	10.54	0.048	19.77	
Head	1, 9	UNII-3 MIMO	Sub.4 & Sub.1	ac	155	0	Left Touch	10.41	0.070	17.99	12.15
						0	Left Tilt	10.41	0.067	18.14	
						0	Right Touch	11.23	0.324	12.15	
						0	Right Tilt	10.41	0.201	13.40	

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Head exposure (DSI = 1, 9) (Continued)

RF Exposure Conditions	DSI	band	Antenna	mode	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Head	1, 9	UNII-4 SISO Ant.1	Sub.4	ac	171	0	Left Touch	10.95	0.045	20.47	12.11
						0	Left Tilt	10.95	0.052	19.79	
						0	Right Touch	10.95	0.306	12.11	
						0	Right Tilt	10.95	0.132	15.76	
Head	1, 9	UNII-4 SISO Ant.2	Sub.1	ac	173	0	Left Touch	10.58	0.035	21.14	21.14
						0	Left Tilt	10.58	0.034	21.34	
						0	Right Touch	10.58	0.001	36.60	
						0	Right Tilt	10.58	0.034	21.25	
Head	1, 9	UNII-4 MIMO	Sub.4 & Sub.1	ac	171	0	Left Touch	10.53	0.087	17.17	12.27
						0	Left Tilt	10.53	0.079	17.58	
						0	Right Touch	10.81	0.286	12.27	
						0	Right Tilt	10.53	0.205	13.43	
Head	1, 9	WiFi 6e SISO Ant.1	Sub.4	ax	79	0	Right Touch	8.06	0.160	12.04	12.04
Head	1, 9	WiFi 6e SISO Ant.2	Sub.1	ax	15	0	Left Tilt	8.20	0.039	18.31	18.31
Head	1, 9	WiFi 6e MIMO	Sub.4 & Sub.1	ax	79	0	Right Touch	7.77	0.130	12.65	12.65

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Body-worn & Hotspot exposure (DSI=0, 8)

RF Exposure Conditions	DSI	band	Antenna	mode	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Body-worn & Hotspot	0, 8	DTS SISO Ant.1	Sub.4	b	6	10	Rear	15.13	0.105	20.94	19.45
Hotspot						10	Front	15.13	0.069	22.75	
						10	Top	15.13	0.016	29.22	
						10	Right	15.13	0.148	19.45	
Body-worn & Hotspot	0, 8	DTS SISO Ant.2	Sub.6	b	1	10	Rear	14.88	0.079	21.94	21.94
Hotspot						10	Front	14.88	0.078	21.98	
						10	Top	14.88	0.001	40.90	
						10	Left	14.88	0.018	28.37	
Body-worn & Hotspot	0, 8	DTS MIMO	Sub4&Sub.6	b	6	10	Rear	13.65	0.069	21.31	19.86
Hotspot						10	Front	14.91	0.058	23.28	
						10	Top	14.91	0.048	24.11	
						10	Left	13.65	0.026	25.59	
Body-worn & Hotspot	0, 8	UNII-2A SISO Ant.1	Sub.4	ac	58	10	Rear	12.35	0.136	17.04	17.04
Hotspot						10	Front	12.35	0.031	23.44	
Body-worn & Hotspot	0, 8	UNII-2A SISO Ant.2	Sub.1	ac	58	10	Rear	12.33	0.001	38.35	33.13
Hotspot						10	Front	12.33	0.003	33.13	
Body-worn & Hotspot	0, 8	UNII-2A MIMO	Sub.4 & Sub.1	ac	58	10	Rear	11.48	0.104	17.33	17.33
Hotspot						10	Front	11.48	0.017	25.12	
Body-worn & Hotspot	0, 8	UNII-2C SISO Ant.1	Sub.4	ac	122	10	Rear	12.44	0.185	15.79	15.79
Hotspot						10	Front	12.44	0.055	21.05	
Body-worn & Hotspot	0, 8	UNII-2C SISO Ant.2	Sub.1	ac	138	10	Rear	12.95	0.043	22.66	22.66
Hotspot						10	Front	12.95	0.001	38.97	
Body-worn & Hotspot	0, 8	UNII-2C MIMO	Sub.4 & Sub.1	ac	122	10	Rear	12.28	0.134	17.03	17.03
Hotspot						10	Front	12.28	0.042	22.03	
Body-worn & Hotspot	0, 8	UNII-3 SISO Ant.1	Sub.4	ac	155	10	Rear	12.20	0.209	15.02	15.02
Hotspot						10	Front	12.20	0.059	20.53	
						10	Top	12.20	0.039	22.35	
						10	Right	12.20	0.194	15.34	
Body-worn & Hotspot	0, 8	UNII-3 SISO Ant.2	Sub.1	ac	155	10	Rear	12.50	0.039	22.67	22.67
Hotspot						10	Front	12.50	0.001	38.52	
						10	Top	12.50	0.033	23.40	
						10	Left	12.50	0.001	38.52	
Body-worn & Hotspot	0, 8	UNII-3 MIMO	Sub.4 & Sub.1	ac	155	10	Rear	12.23	0.122	17.39	16.02
Hotspot						10	Front	12.23	0.036	22.64	
						10	Top	12.03	0.053	20.80	
						10	Left	12.03	0.001	38.05	
Body-worn & Hotspot	0, 8	UNII-4 SISO Ant.1	Sub.4	ac	171	10	Rear	11.70	0.195	14.82	14.82
Hotspot						10	Front	11.70	0.059	19.99	
Body-worn & Hotspot	0, 8	UNII-4 SISO Ant.2	Sub.1	ac	171	10	Rear	12.90	0.080	19.91	19.91
Hotspot						10	Front	12.90	0.001	38.92	
Body-worn & Hotspot	0, 8	UNII-4 MIMO	Sub.4 & Sub.1	ac	171	10	Rear	12.32	0.202	15.29	15.29
Hotspot						10	Front	12.32	0.057	20.75	
Body-worn & Hotspot	0, 8	WiFi 6e SISO Ant.1	Sub.4	ax	15	10	Rear	8.19	0.077	15.35	15.35
Hotspot						10	Front	8.19	0.077	15.35	
Body-worn & Hotspot	0, 8	WiFi 6e SISO Ant.2	Sub.1	ax	79	10	Rear	7.95	0.116	13.33	13.33
Hotspot						10	Front	7.95	0.116	13.33	
Body-worn & Hotspot	0, 8	WiFi 6e MIMO	Sub.4 & Sub.1	ax	111	10	Rear	8.02	0.216	10.70	10.70
Hotspot						10	Front	8.02	0.216	10.70	

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

Product Specific 10-g exposure (DSI=0, 8)

RF Exposure Conditions	DSI	band	Antenna	mode	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Product Specific-10g	0, 8	DTS SISO Ant.1	Sub.4	b	6	0	Right	15.13	0.987	15.19	15.19
Product Specific-10g	0, 8	DTS SISO Ant.2	Sub.6	b	1	0	Front	14.88	0.463	18.22	18.22
Product Specific-10g	0, 8	DTS MIMO	Sub4 & Sub.6	b	6	0	Right	14.91	0.605	17.09	17.09
Product Specific-10g	0, 8	UNII-2A SISO Ant.1	Sub.4	ac	58	0	Rear	12.35	0.400	16.33	15.76
						0	Front	12.35	0.286	17.79	
						0	Top	12.35	0.153	20.50	
						0	Right	12.35	0.456	15.76	
Product Specific-10g	0, 8	UNII-2A SISO Ant.2	Sub.1	ac	58	0	Rear	12.33	0.132	21.12	21.12
						0	Front	12.33	0.102	22.24	
						0	Top	12.33	0.038	26.56	
						0	Left	12.33	0.005	35.07	
Product Specific-10g	0, 8	UNII-2A MIMO	Sub.4 & Sub.1	ac	58	0	Rear	11.48	0.283	16.96	15.14
						0	Front	11.48	0.198	18.51	
						0	Top	11.48	0.132	20.27	
						0	Left	12.17	0.018	29.52	
Product Specific-10g	0, 8	UNII-2C SISO Ant.1	Sub.4	ac	122	0	Right	11.48	0.431	15.14	14.42
						0	Rear	12.44	0.454	15.87	
						0	Front	12.44	0.271	18.11	
						0	Top	12.44	0.171	20.11	
Product Specific-10g	0, 8	UNII-2C SISO Ant.2	Sub.1	ac	138	0	Right	12.44	0.634	14.42	21.07
						0	Rear	12.95	0.154	21.07	
						0	Front	12.95	0.131	21.78	
						0	Top	12.95	0.077	24.06	
Product Specific-10g	0, 8	UNII-2C MIMO	Sub.4 & Sub.1	ac	122	0	Left	12.95	0.001	42.95	14.74
						0	Rear	12.28	0.363	16.68	
						0	Front	12.28	0.225	18.76	
						0	Top	11.93	0.172	19.57	
Product Specific-10g	0, 8	UNII-2C MIMO	Sub.4 & Sub.1	ac	122	0	Left	11.93	0.012	31.07	14.74
						0	Right	12.28	0.567	14.74	
						0	Right	12.28	0.567	14.74	
						0	Right	12.28	0.567	14.74	
Product Specific-10g	0, 8	UNII-3 SISO Ant.1	Sub.4	ac	155	0	Right	12.20	0.673	13.92	13.92
Product Specific-10g	0, 8	UNII-3 SISO Ant.2	Sub.1	ac	155	0	Rear	12.50	0.184	19.85	19.85
Product Specific-10g	0, 8	UNII-3 MIMO	Sub.4 & Sub.1	ac	155	0	Right	12.23	0.706	13.74	13.74
Product Specific-10g	0, 8	UNII-4 SISO Ant.1	Sub.4	ac	171	0	Rear	11.70	0.518	14.56	12.84
						0	Front	11.70	0.335	16.45	
						0	Top	11.70	0.173	19.32	
						0	Right	11.70	0.770	12.84	
Product Specific-10g	0, 8	UNII-4 SISO Ant.2	Sub.1	ac	171	0	Rear	12.90	0.240	19.10	19.10
						0	Front	12.90	0.111	22.45	
						0	Top	12.90	0.069	24.51	
						0	Left	12.90	0.001	42.90	
Product Specific-10g	0, 8	UNII-4 MIMO	Sub.4 & Sub.1	ac	171	0	Rear	12.32	0.536	15.03	13.75
						0	Front	12.32	0.356	16.81	
						0	Top	12.32	0.172	19.96	
						0	Left	12.38	0.011	32.13	
Product Specific-10g	0, 8	UNII-4 MIMO	Sub.4 & Sub.1	ac	171	0	Right	12.32	0.719	13.75	13.75
						0	Right	12.32	0.719	13.75	
						0	Right	12.32	0.719	13.75	
						0	Right	12.32	0.719	13.75	
Product Specific-10g	0, 8	WiFi 6e SISO Ant.1	Sub.4	ax	15	0	Right	8.06	0.266	13.81	13.81
Product Specific-10g	0, 8	WiFi 6e SISO Ant.2	Sub.1	ax	143	0	Rear	8.20	0.233	14.53	14.53
Product Specific-10g	0, 8	WiFi 6e MIMO	Sub.4 & Sub.1	ax	143	0	Right	7.77	0.396	11.79	11.79

Notes:

1. The maximum allowed power is equal to maximum tune up power + 1 dB device design uncertainty
2. Measured Output power refer to Sec.9 in SAR report.

END OF REPORT