



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

**SAR EVALUATION REPORT
(Part 0 : SAR CHARACTERIZATION)**

FOR

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

MODEL NUMBER: SM-F21B/DSN

FCC ID: A3LSMF721B

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V1	6/15/2022	Initial Issue	--
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1. Attestation of SAR Characterization

Applicant Name	SAMSUNG ELECTRONICS CO.,LTD.
FCC ID	A3LSMF721B
Model Number	SM-F721B/DSN
Applicable Standards	FCC 47 CFR § 2.1093 IEEE Std 1528-2013 Published RF exposure KDB procedures
Report type	Part.0 : SAR Characterization
Date Tested	4/20/2022 to 6/13/2022
Part 0 Purpose	Part 0 is the procedures for determining P_{Limit} for 2G/3G/4G/5G NR sub6 to satisfy <u>SAR_design_target</u> 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:
	
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2. Introduction

The equipment under test (EUT) is SAMSUNG Smartphone (FCC ID : A3LSMF721B), it contains the Qualcomm modems supporting 2G/3G/4G/5G NR technologies. These modems are enable with Qualcomm Smart Transmit feature to control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is in compliance with FCC requirement.

This purpose of the part 0 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 2 Room
SAR 3 Room
SAR 4 Room
SAR 5 Room

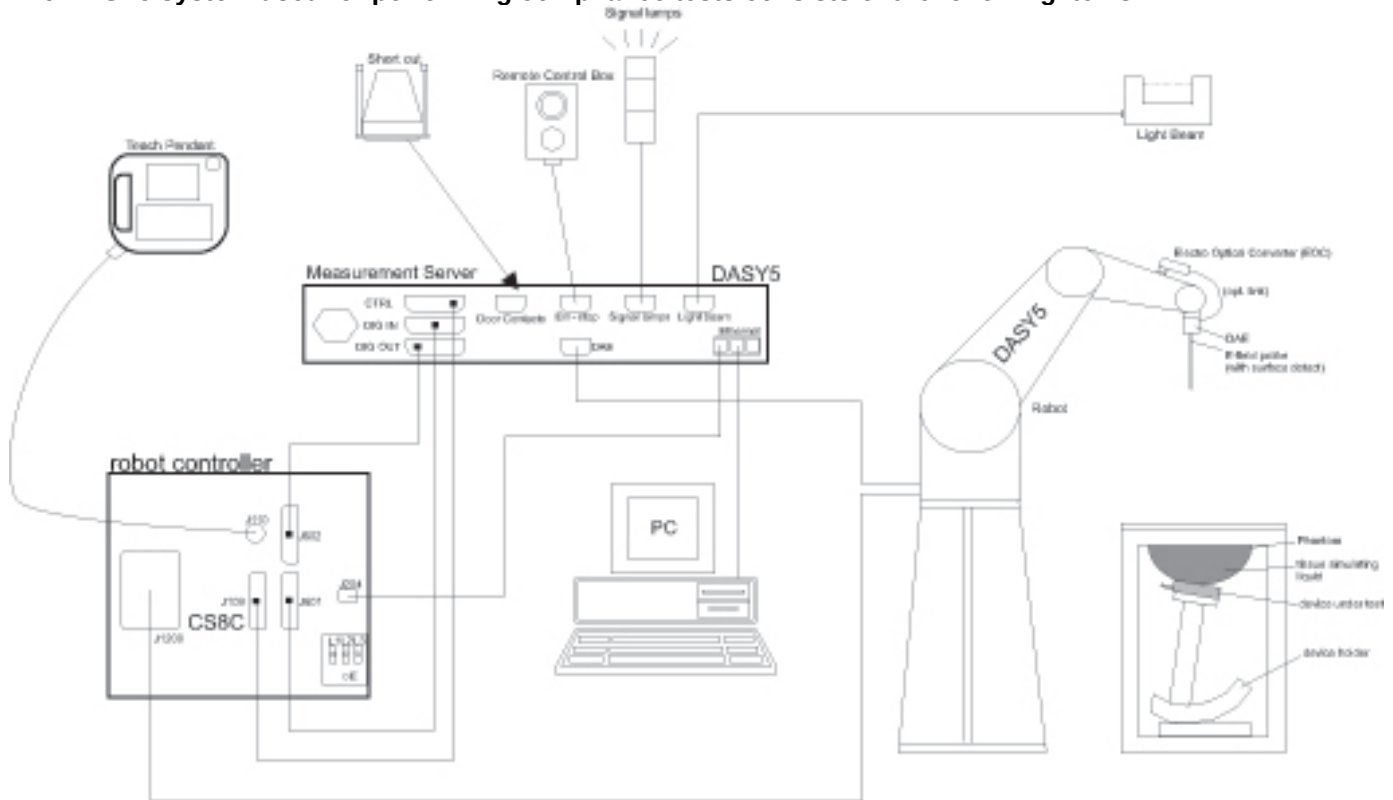
UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.

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.

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: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	≤ 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: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 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: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: 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
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
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 <u>reported</u> 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	8-6-2022
Dielectric Assessment Kit	SPEAG	DAK-3.5	1196	7-21-2022
Dielectric Assessment Kit	SPEAG	DAK-3.5	1158	10-20-2022
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Thermometer	LKM	DTM3000	3851	8-4-2022
Thermometer	LKM	DTM3000	3862	8-4-2022

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
MXG Analog Signal Generator	Agilent	N5181A	MY50145882	8-4-2022
MXG Analog Signal Generator	Keysight	N5181B	MY59100587	8-4-2022
MXG Analog Signal Generator	Keysight	N5173B	MY59101083	8-4-2022
Power Sensor	Keysight	U2000A	MY60180020	8-4-2022
Power Sensor	Agilent	U2000A	MY54260007	8-4-2022
Power Sensor	Agilent	U2000A	MY54260010	8-4-2022
Power Sensor	Keysight	U2000A	MY60490008	8-4-2022
Power Sensor	Keysight	U2000A	MY61060004	8-4-2022
Power Sensor	Keysight	U2000A	MY61010006	8-4-2022
Power Sensor	Keysight	U2000A	MY61010010	8-4-2022
Power Amplifier	EXODUS	1410025-AMP2027-10003	10003	8-4-2022
Power Amplifier	EXODUS	AMP2027ADB	10002	8-4-2022
Directional Coupler	Agilent	772D	MY52180193	8-3-2022
Directional Coupler	H.P	778D	16133	8-3-2022
Directional Coupler	MINI-CIRCUITS	ZUDC20-183+	N/A	8-3-2022
Directional Coupler	MINI-CIRCUITS	ZUDC20-183+	N/A	8-3-2022
Low Pass Filter	MICROLAB	LA-15N	3943	8-3-2022
Low Pass Filter	FILTRON	L14012FL	1410003S	8-3-2022
Low Pass Filter	MICROLAB	LA-60N	3942	8-3-2022
Low Pass Filter	MINI-CIRCUITS	NLP-1200	VUU19301915	8-4-2022
Attenuator	KEYSIGHT	8491B/003	VE2017A0283	8-4-2022
Attenuator	KEYSIGHT	8491B/010	MY39271981	8-4-2022
Attenuator	KEYSIGHT	8491B/010	MY39272011	8-4-2022
Attenuator	KEYSIGHT	8491B/020	MY39271973	8-4-2022
E-Field Probe	SPEAG	EX3DV4	7376	7-30-2022
E-Field Probe	SPEAG	EX3DV4	7330	1-28-2023
E-Field Probe	SPEAG	EX3DV4	7313	3-2-2023
E-Field Probe	SPEAG	EX3DV4	7545	8-26-2022
E-Field Probe	SPEAG	EX3DV4	7645	4-29-2023
E-Field Probe	SPEAG	EX3DV4	7651	5-18-2022
E-Field Probe	SPEAG	EX3DV4	7652	4-28-2023
E-Field Probe	SPEAG	EX3DV4	7646	3-29-2023
E-Field Probe	SPEAG	EX3DV4	3666	4-29-2023
Data Acquisition Electronics	SPEAG	DAE4	1447	3-25-2023

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.

Test Equipments (Continued)

Data Acquisition Electronics	SPEAG	DAE4	1468	9-27-2022
Data Acquisition Electronics	SPEAG	DAE4	1591	3-24-2023
Data Acquisition Electronics	SPEAG	DAE4	1343	8-23-2022
Data Acquisition Electronics	SPEAG	DAE4	1671	5-6-2022
Data Acquisition Electronics	SPEAG	DAE4	1668	4-27-2023
Data Acquisition Electronics	SPEAG	DAE4	912	11-22-2022
Data Acquisition Electronics	SPEAG	DAE4	479	10-12-2022
System Validation Dipole	SPEAG	D750V3	1205	4-27-2023
System Validation Dipole	SPEAG	D835V2	4d174	3-17-2023
System Validation Dipole	SPEAG	D1750V2	1180	4-27-2023
System Validation Dipole	SPEAG	D1900V2	5d190	11-24-2022
System Validation Dipole	SPEAG	D2450V2	939	7-21-2023
System Validation Dipole	SPEAG	D2600V2	1178	4-23-2023
System Validation Dipole	SPEAG	D3500V2	1121	4-21-2023
System Validation Dipole	SPEAG	D3700V2	1036	5-21-2023
System Validation Dipole	SPEAG	D3900V2	1069	4-21-2023
System Validation Dipole	SPEAG	D5GHzV2	1209	11-24-2023
System Validation Dipole	SPEAG	CLA-13	1015	10-12-2022
Thermometer (SAR1)	Lutron	MHB-382SD	AH.91463	8-4-2022
Thermometer (SAR2)	Lutron	MHB-382SD	AH.50215	8-3-2022
Thermometer (SAR3)	Lutron	MHB-382SD	AH.50213	8-4-2022
Thermometer (SAR4, 5)	Lutron	MHB-382SD	AH.45903	8-3-2022
Thermometer (SAR6, 7)	Lutron	MHB-382SD	AK.18789	8-4-2022
Thermometer (SAR8, 9)	Lutron	MHB-382SD	AK.12102	8-3-2022

Others

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Base Station Simulator	R & S	CMW500	150313	8-3-2022
Base Station Simulator	R & S	CMW500	150314	8-4-2022
Base Station Simulator	R & S	CMW500	162790	8-3-2022
Base Station Simulator	R & S	CMW500	169803	5-27-2023
Base Station Simulator	R & S	CMW500	169801	8-3-2022
Base Station Simulator	R & S	CMW500	169799	8-3-2022
Base Station Simulator	R & S	CMW500	169800	8-3-2022
Base Station Simulator	R & S	CMW500	169797	8-3-2022
Base Station Simulator	R & S	CMW500	169798	8-3-2022
UXM 5G Wireless Test Platform	Keysight	E7515B	MY59150850	12-13-2022
UXM 5G Wireless Test Platform	Keysight	E7515B	MY58460570	12-13-2022
UXM 5G Wireless Test Platform	Keysight	E7515B	MY57510596	8-6-2022

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: ☐ Class 8 - 1 Up, 4 Down ☐ Class 10 - 2 Up, 4 Down ☐ Class 12 - 4 Up, 4 Down ☒ 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)? ☐ Yes ☒ No			
W-CDMA (UMTS)	Band II Band IV Band V	UMTS Rel. 99 (Voice & Data) HSDPA (Category 24) HSUPA (Category 6) DC-HSDPA (Category 24) 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 ^{Power Class 3} TDD Band 41 ^{Power Class 2} FDD Band 66	QPSK 16QAM 64QAM 256QAM Rel. 15 Carrier Aggregation (2 Uplink and 5 Downlinks) <u>Uplink inter-band</u> <u>Carrier Aggregation(2CC)</u> CA_2A-4A		100% (FDD) 63.3% (TDD) ^{Power Class 3} 43.3% (TDD) ^{Power Class 2}
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
5G NR (Sub 6)	FDD Band n2 FDD Band n5 FDD Band n12 FDD Band n25 FDD Band n66 TDD Band n41 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) 802.11ax (HE20)		SISO mode 99.2% (802.11b) MIMO mode 96.1% (802.11g)
	5 GHz	802.11a 802.11n (HT20) & (HT40) 802.11ac (VHT20) & (VHT40) & (VHT80) & (VHT160) 802.11ax (HE20) & (HE40) & (HE80) & (HE160)		SISO mode 96.3% (802.11a) 94.2% (802.11ac (VHT80)) MIMO mode 96.3% (802.11a) 94.2% (802.11ac (VHT80))
	Does this device support bands 5.60 ~ 5.65 GHz? ☒ Yes ☐ No			
	Does this device support Band gap channel(s)? ☒ Yes ☐ No			
Bluetooth	2.4 GHz	Version 5.2 LE		76.7% (DH5)
NFC	13.56 MHz	Type A/B/F		100%

Notes:

- The Bluetooth protocol is considered source-based averaging. Bluetooth GFSK (DH5) was verified to have the highest duty cycle of 76.7% and was considered and used for SAR Testing.
- Duty cycle for Wi-Fi is referenced from the DTS and UNII report.
- This device supports Power Class 2(HPUE) and Power Class 3 for LTE Band 41.
- This device supports UL CA inter-band.
- NR TDD Band has support SRS(1,2,3,4) modes.

5.2. 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 compliance with FCC requirement. This part.0 report shows SAR characterization of WWAN radios for 2G/3G/4G/5G NR Sub6. Characterization is achieved by determining P_{limit} for 2G/3G/4G/5G NR Sub6 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 Part 0 Report

Technology	Term	Description
2G/3G/4G/ 5G NR Sub6	P_{limit}	Power level that corresponds to the exposure design target (SAR_{design_target}) after accounting for all device design related uncertainties
	P_{max}	Maximum tune up output power
	SAR_{design_target}	Target SAR level < FCC SAR limit after accounting for all device design related uncertainties
	SAR_{Char}	Table containing P_{limit} for all technologies and bands

6. SAR Characterizations

6.1. 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.

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

6.2. 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 Tablet, 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.

DSI and Corresponding Exposure Scenarios

RF exposure Scenarios	DSI No.	Description	KDB guide For SAR test
Head exposure	2	1. Next to the ear exposure condition. 2. Handset's Receiver(ear piece) is active during voice or VoIP call.	KDB 648474 D04
Body-worn exposure	0	1. Handset are used with body-worn accessories.	KDB 648474 D04
Hotspot exposure	3	1. SAR test requirements for Handset with wireless router or hotspot mode capabilities. 2. Hotspot mode SAR test for Near body use condition.	KDB 941225 D06
Product Specific 10-g	1 or 4	1. Hand use conditions for Handset(Phablet) and Proximity sensor is triggered 2. Connected ear-jack.	KDB 648474 D04 KDB 616217 D04
	0	1. Hand use conditions for Handset(Phablet) and Proximity sensor is not triggered.	KDB 648474 D04 KDB 616217 D04

6.3. SAR Char

SAR results corresponding to P_{max} for each antenna/technology/band/DSI can be found in Section.7. P_{limit} is calculated by linearly scaling with the measured SAR at the P_{max} to correspond to the SAR_design_target . P_{limit} determination for each exposure scenario corresponding to SAR_design_target are shown in table.

P_{limit} Determination

Device State Index (DSI)	P_{limit} Determination Scenarios
DSI = 0	The worst-case SAR exposure is determined as maximum SAR normalized to the limit among; 1. Body-worn exposure SAR (DUT Open & Closed configurations). 2. Product Specific 10-g SAR measured at 8, 6 and 12 mm spacing for Back, Front, Edge.3 (DUT Open configuration). 3. Product Specific 10-g SAR measured at 0 mm for Edge.2, 4 (DUT Open configuration).
DSI = 1 or 4	1. P_{limit} is calculated based on Product Specific 10-g SAR at 0 mm for Back, Front, Edge 3. (DUT Open configuration).
DSI = 2	1. P_{limit} is calculated based on Head exposure SAR (DUT Open configuration).
DSI = 3	1. P_{limit} is calculated based on Hotspot SAR at 5mm in the closed configuration or 10mm in the open configuration.

Notes:

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

Main Ant.1&2)

$$P_{limit} = \min\{ P_{limit} \text{ corresponding to 1g Body worn SAR evaluation at 15mm spacing,} \\ P_{limit} \text{ corresponding to Product specific 10g SAR evaluation at 8(Rear), 6(Front). 12(Edge1) mm spacing,} \\ P_{limit} \text{ corresponding to Product specific 10g SAR evaluation at at 0 mm for Edge2 and Edge4 surfaces} \}$$

Ant. B & Ant. C)

$$P_{limit} = \min\{ P_{limit} \text{ corresponding to 1g Body worn SAR evaluation at 15mm spacing,} \\ P_{limit} \text{ corresponding to Product specific 10g SAR evaluation at at 0 mm for Rear, Front, Edge3 and Edge4 surfaces} \}$$

Ant. E & Ant. F)

$$P_{limit} = \min\{ P_{limit} \text{ corresponding to 1g Body worn SAR evaluation at 15mm spacing,} \\ P_{limit} \text{ corresponding to Product specific 10g SAR evaluation at at 0 mm for Rear, Front, Edge1 and Edge4 surfaces} \}$$

Sub Ant.5)

$$P_{limit} = \min\{ P_{limit} \text{ corresponding to 1g Body worn SAR evaluation at 15mm spacing,} \\ P_{limit} \text{ corresponding to Product specific 10g SAR evaluation at at 0 mm for Rear, Front, Edge1 and Edge2 surfaces} \}$$

SAR Characterizations

Exposure condition		Body-Worn	Product Specific 10-g Without triggering sensor	Product Specific 10-g With triggering sensor	Head (RCV)	Hotspot	Ear-jack	Pmax (Maximum tune-up Power) (dBm)
Spatial-average		1g	10g	10g	1g	1g	10g	
Test distance (mm)		15	8/ 6/ 12/ 0	0	0	10	0	
DSI:		0	0	1	2	3	4	
RF Air Interface	Antenna	Plimit corresponding to 1.0 W/kg (SAR_design_target) (1g) / 2.5 W/kg (SAR_design_target) (10g)						
GSM 850	Main. 1	30.31	32.22	30.07	31.63	23.20	30.07	25.00
GSM 1900	Main. 1	25.69	27.81	19.50	35.14	17.70	19.50	22.00
WCDMA Band II	Main. 1	25.53	27.85	20.00	21.00	16.50	20.00	23.50
WCDMA Band IV	Main. 1	26.66	26.32	20.00	20.50	17.00	20.00	23.50
WCDMA Band V	Main. 1	31.04	32.65	28.36	29.94	22.50	28.36	24.00
LTE Band 4	Sub. 5	19.50	19.50	19.50	17.50	17.50	19.50	23.00
LTE Band 5	Main. 1	28.49	28.94	28.19	30.21	23.50	28.19	24.50
LTE Band 12/17	Main. 1	30.36	28.95	28.12	30.06	25.75	28.12	24.00
LTE Band 13	Main. 1	30.73	30.40	27.83	30.67	25.01	27.83	24.00
LTE Band 25/2	Main. 1	25.81	27.45	19.50	35.25	16.50	19.50	23.50
LTE Band 26	Main. 1	29.40	32.92	28.28	31.19	24.54	28.28	24.00
LTE Band 66/4	Main. 1	24.57	27.15	19.50	34.03	17.00	19.50	23.50
LTE Band 41 PC3	Main. 2	26.70	28.19	20.00	34.27	16.40	20.00	22.00
LTE Band 41 PC2	Main. 2	28.07	27.13	20.00	37.83	16.40	20.00	22.10
NR Band n25/n2	Main. 1	26.20	27.59	20.00	35.74	17.00	20.00	23.50
NR Band n5	Main. 1	29.20	31.60	28.61	30.70	24.72	28.61	24.00
NR Band n12	Main. 1	30.92	30.19	28.91	32.11	26.49	28.91	24.00
NR Band n66	Main. 1	26.34	28.67	20.50	36.12	17.00	20.50	23.70
NR Band n66	Sub. 5	19.50	19.50	19.50	15.50	15.50	19.50	23.00
NR Band n41-SRS 1	Sub. 5	18.00	18.00	18.00	15.00	18.00	18.00	24.50
NR Band n41-SRS 2	Ant.B	16.50	16.50	16.50	16.50	16.50	16.50	19.00
NR Band n41-SRS 3	Ant.F	15.50	15.50	15.50	15.50	15.50	15.50	15.50
NR Band n41-SRS 4	Ant.C	13.50	13.50	13.50	13.50	13.50	13.50	15.50
NR Band n77-SRS 1	Ant.F	18.00	18.00	18.00	13.00	14.00	18.00	24.00
NR Band n77-SRS 2	Sub. 5	18.00	18.00	18.00	16.00	17.50	18.00	21.00
NR Band n77-SRS 3	Ant.E	17.00	17.00	17.00	15.00	17.00	17.00	23.00
NR Band n77-SRS 4	Ant.C	15.50	15.50	15.50	15.50	15.50	15.50	17.00

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} EFS and maximum tune up output Pmax 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 GSM bands, P_{limit} was calculated according to frame-average output power.
5. $P_{limit}(DSI=0)$ was determined to be the lower of "Body-worn" and "Product Specific 10-g at Max power" in each WWAN Bands.

7. SAR Test results for P_{limit} calculations

Head exposure (DSI = 2)

RF Exposure Conditions	DSI	band	Antenna	Form Factor	mode	Ch.	Test position	Test distance (mm)	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Head	2	GSM 850	Main. 1	Open	GPRS	190	Left Touch	0	25.32	0.189	32.56	31.63
							Left Toilt	0	25.32	0.108	34.99	
							Right Touch	0	25.32	0.234	31.63	
							Right Toilt	0	25.32	0.129	34.22	
Head	2	GSM 1900	Main. 1	Open	GPRS	661	Left Touch	0	22.08	0.043	35.73	35.14
							Left Toilt	0	22.08	0.023	38.56	
							Right Touch	0	22.08	0.049	35.14	
							Right Toilt	0	22.08	0.016	39.98	
Head	2	WCDMA Band II	Main. 1	Open	Rel.99	9400	Left Touch	0	24.20	0.053	36.95	35.01
							Left Toilt	0	24.20	0.035	38.75	
							Right Touch	0	24.20	0.083	35.01	
							Right Toilt	0	24.20	0.035	38.71	
Head	2	WCDMA Band IV	Main. 1	Open	Rel.99	1413	Left Touch	0	23.06	0.057	35.54	31.99
							Left Toilt	0	23.06	0.024	39.35	
							Right Touch	0	23.06	0.128	31.99	
							Right Toilt	0	23.06	0.028	38.65	
Head	2	WCDMA Band V	Main. 1	Open	Rel.99	4183	Left Touch	0	24.03	0.178	31.52	29.94
							Left Toilt	0	24.03	0.092	34.39	
							Right Touch	0	24.03	0.256	29.94	
							Right Toilt	0	24.03	0.118	33.31	
Head	2	LTE Band 4	Sub. 5	Open	QPSK BW=20 RB 1/49	20175	Left Touch	0	17.36	0.522	20.18	20.18
							Left Toilt	0	17.36	0.120	26.57	
							Right Touch	0	17.36	0.207	24.20	
							Right Toilt	0	17.36	0.051	30.32	
Head	2	LTE Band 12 / 17	Main. 1	Open	QPSK BW=10 RB 1/0	23095	Left Touch	0	23.82	0.238	30.06	30.06
							Left Toilt	0	23.82	0.106	33.57	
							Right Touch	0	23.82	0.232	30.17	
							Right Toilt	0	23.82	0.092	34.17	
Head	2	LTE Band 13	Main. 1	Open	QPSK BW=10 RB 1/0	23230	Left Touch	0	23.93	0.180	31.38	30.67
							Left Toilt	0	23.93	0.086	34.61	
							Right Touch	0	23.93	0.212	30.67	
							Right Toilt	0	23.93	0.098	34.04	
Head	2	LTE Band 25 / 2	Main. 1	Open	QPSK BW=20 RB 1/49	26365	Left Touch	0	23.92	0.063	35.93	35.25
							Left Toilt	0	23.92	0.019	41.09	
							Right Touch	0	23.92	0.074	35.25	
							Right Toilt	0	23.92	0.048	37.15	
Head	2	LTE Band 5	Main. 1	Open	QPSK BW=10 RB 1/0	26865	Left Touch	0	24.50	0.212	31.24	30.21
							Left Toilt	0	24.50	0.127	33.46	
							Right Touch	0	24.50	0.269	30.21	
							Right Toilt	0	24.50	0.137	33.14	
Head	2	LTE Band 26	Main. 1	Open	QPSK BW=10 RB 1/0	26865	Left Touch	0	23.74	0.166	31.54	31.19
							Left Toilt	0	23.74	0.100	33.75	
							Right Touch	0	23.74	0.180	31.19	
							Right Toilt	0	23.74	0.085	34.44	
Head	2	LTE Band 66 / 4	Main. 1	Open	QPSK BW=20 RB 1/49	132322	Left Touch	0	23.03	0.032	38.05	34.03
							Left Toilt	0	23.03	0.013	41.86	
							Right Touch	0	23.03	0.080	34.03	
							Right Toilt	0	23.03	0.034	37.78	
Head	2	LTE Band 41 -PC3-	Main. 2	Open	QPSK BW=20 RB 1/49	40620	Left Touch	0	21.56	0.054	34.27	34.27
							Left Toilt	0	21.56	0.015	39.92	
							Right Touch	0	21.56	0.019	38.86	
							Right Toilt	0	21.56	0.023	38.02	
Head	2	LTE Band 41 -PC2-	Main. 2	Open	QPSK BW=20 RB 1/49	40620	Left Touch	0	21.74	0.025	37.83	37.83

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 part.1 report.
3. Some bands were determined more conservative P_{limit} instead of calculation P_{limit} .

Head exposure (DSI = 2) (Continued)

RF Exposure Conditions	DSI	band	Antenna	Form Factor	mode	Ch.	Test position	Test distance (mm)	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Head	2	NR Band n25 / n2	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/25	381000	Left Touch	0	23.78	0.054	36.46	35.74
							Left Toilt	0	23.78	0.026	39.56	
							Right Touch	0	23.78	0.064	35.74	
							Right Toilt	0	23.78	0.029	39.16	
Head	2	NR Band n5	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/25	167300	Left Touch	0	24.04	0.171	31.71	30.70
							Left Toilt	0	24.04	0.098	34.11	
							Right Touch	0	24.04	0.216	30.70	
							Right Toilt	0	24.04	0.098	34.12	
Head	2	NR Band n12	Main. 1	Open	DFT-s-OFDM QPSK BW=15 RB 1/1	141500	Left Touch	0	24.41	0.170	32.11	32.11
							Left Toilt	0	24.41	0.062	36.47	
							Right Touch	0	24.41	0.146	32.77	
							Right Toilt	0	24.41	0.053	37.17	
Head	2	NR Band n66	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/25	344000	Left Touch	0	23.78	0.049	36.90	36.12
							Left Toilt	0	23.78	0.027	39.55	
							Right Touch	0	23.78	0.058	36.12	
							Right Toilt	0	23.78	0.026	39.61	
Head	2	NR Band n66	Sub. 5	Open	DFT-s-OFDM QPSK BW=20 RB 50/54	354000	Left Touch	0	15.88	0.806	16.82	16.82
							Left Toilt	0	15.88	0.136	24.54	
							Right Touch	0	15.88	0.222	22.42	
							Right Toilt	0	15.88	0.043	29.53	
Head	2	NR Band n41 -SRS 1-	Sub. 5	Open	DFT-s-OFDM QPSK BW=100 RB 1/271	518598	Left Touch	0	15.59	0.841	16.34	16.34
							Left Toilt	0	15.59	0.236	21.86	
							Right Touch	0	15.59	0.242	21.75	
							Right Toilt	0	15.59	0.049	28.68	
Head	2	NR Band n41 -SRS 2-	Ant.B	Open	SRS CW	518598	Left Touch	0	16.43	0.001	46.43	46.43
							Left Toilt	0	16.43	0.001	46.43	
							Right Touch	0	16.43	0.001	46.43	
							Right Toilt	0	16.43	0.001	46.43	
Head	2	NR Band n41 -SRS 3-	Ant.F	Open	SRS CW	518598	Left Touch	0	15.02	0.054	27.72	23.50
							Left Toilt	0	15.02	0.037	29.37	
							Right Touch	0	15.02	0.142	23.50	
							Right Toilt	0	15.02	0.123	24.12	
Head	2	NR Band n41 -SRS 4-	Ant.C	Open	SRS CW	518598	Left Touch	0	13.64	0.022	30.14	30.14
							Left Toilt	0	13.64	0.001	43.64	
							Right Touch	0	13.64	0.001	43.64	
							Right Toilt	0	13.64	0.001	43.64	
Head	2	NR Band n77 -SRS 1-	Ant.F	Open	DFT-s-OFDM QPSK BW=100 RB 1/271	650000	Left Touch	0	13.35	0.171	21.02	16.26
							Left Toilt	0	13.35	0.106	23.10	
							Right Touch	0	13.35	0.512	16.26	
							Right Toilt	0	13.35	0.418	17.14	
Head	2	NR Band n77 -SRS 2-	Sub. 5	Open	SRS CW	662000	Left Touch	0	15.92	0.529	18.69	18.69
							Left Toilt	0	15.92	0.042	29.71	
							Right Touch	0	15.92	0.396	19.94	
							Right Toilt	0	15.92	0.001	45.92	
Head	2	NR Band n77 -SRS 3-	Ant.E	Open	SRS CW	662000	Left Touch	0	15.89	0.803	16.84	16.84
							Left Toilt	0	15.89	0.049	29.02	
							Right Touch	0	15.89	0.411	19.75	
							Right Toilt	0	15.89	0.023	32.29	
Head	2	NR Band n77 -SRS 4-	Ant.C	Open	SRS CW	650000	Left Touch	0	15.38	0.021	32.26	32.26
							Left Toilt	0	15.38	0.001	45.38	
							Right Touch	0	15.38	0.001	45.38	
							Right Toilt	0	15.38	0.001	45.38	

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 part.1 report.
3. Some bands were determined more conservative P_{limit} instead of calculation P_{limit}.

Body-worn exposure (DSI = 0)

RF Exposure Conditions	DSI	band	Antenna	Form Factor	mode	Ch.	Test position	Test distance (mm)	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Bodyworn	0	GSM 850	Main. 1	Open	GPRS	190	Rear	15	25.32	0.195	32.42	30.31
				Front			25.32		0.182	32.72		
				Closed			Rear	15	25.32	0.317	30.31	
Front	25.32	0.117	34.64									
Bodyworn	0	GSM 1900	Main. 1	Open	GPRS	661	Rear	15	22.08	0.435	25.69	25.69
				Front			22.08		0.342	26.74		
				Closed			Rear	15	22.08	0.182	29.48	
Front	22.08	0.057	34.50									
Bodyworn	0	WCDMA Band II	Main. 1	Open	Rel.99	9400	Rear	15	24.20	0.736	25.53	25.53
				Front			24.20		0.515	27.09		
				Closed			Rear	15	24.20	0.359	28.65	
Front	24.20	0.139	32.77									
Bodyworn	0	WCDMA Band IV	Main. 1	Open	Rel.99	1413	Rear	15	23.06	0.437	26.66	26.66
				Front			23.06		0.393	27.12		
				Closed			Rear	15	23.06	0.254	29.01	
Front	23.06	0.092	33.41									
Bodyworn	0	WCDMA Band V	Main. 1	Open	Rel.99	4183	Rear	15	24.03	0.177	31.55	31.04
				Front			24.03		0.199	31.04		
				Closed			Rear	15	24.03	0.179	31.50	
Front	24.03	0.098	34.14									
Bodyworn	0	LTE Band 4	Sub. 5	Open	QPSK BW=20 RB 1/49	20175	Rear	15	19.90	0.088	30.47	29.49
				Front			19.90		0.083	30.69		
				Closed			Rear	15	19.90	0.012	39.07	
Front	19.90	0.110	29.49									
Bodyworn	0	LTE Band 12 / 17	Main. 1	Open	QPSK BW=10 RB 1/0	23095	Rear	15	23.82	0.213	30.54	30.36
				Front			23.82		0.222	30.36		
				Closed			Rear	15	23.82	0.220	30.40	
Front	23.82	0.053	36.57									
Bodyworn	0	LTE Band 13	Main. 1	Open	QPSK BW=10 RB 1/0	23230	Rear	15	23.93	0.139	32.50	30.73
				Front			23.93		0.161	31.86		
				Closed			Rear	15	23.93	0.209	30.73	
Front	23.93	0.044	37.55									
Bodyworn	0	LTE Band 25 / 2	Main. 1	Open	QPSK BW=20 RB 1/49	26590	Rear	15	23.92	0.648	25.81	25.81
				Front			23.92		0.470	27.20		
				Closed			Rear	15	23.92	0.332	28.71	
Front	23.92	0.318	28.90									
Bodyworn	0	LTE Band 5	Main. 1	Open	QPSK BW=10 RB 1/0	20525	Rear	15	24.50	0.222	31.04	28.49
				Front			24.50		0.251	30.51		
				Closed			Rear	15	24.50	0.399	28.49	
Front	24.50	0.120	33.71									
Bodyworn	0	LTE Band 26	Main. 1	Open	QPSK BW=10 RB 1/0	26865	Rear	15	23.74	0.181	31.17	29.40
				Front			23.74		0.186	31.05		
				Closed			Rear	15	23.74	0.272	29.40	
Front	23.74	0.088	34.30									
Bodyworn	0	LTE Band 66 / 4	Main. 1	Open	QPSK BW=20 RB 1/49	132322	Rear	15	23.03	0.702	24.57	24.57
				Front			23.03		0.558	25.56		
				Closed			Rear	15	23.03	0.247	29.10	
Front	23.03	0.099	33.07									
Bodyworn	0	LTE Band 41 -PC3-	Main. 2	Open	QPSK BW=20 RB 1/49	40620	Rear	15	21.56	0.306	26.70	26.70
				Front			21.56		0.198	28.59		
				Closed			Rear	15	21.56	0.233	27.89	
Front	21.56	0.019	38.80									
Bodyworn	0	LTE Band 41 -PC2-	Main. 2	Open	QPSK BW=20 RB 1/49	40620	Rear	15	21.74	0.174	29.33	28.07
				Closed			Rear	15	21.74	0.233	28.07	

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 part.1 report.
3. Some bands were determined more conservative P_{limit} instead of calculation P_{limit}.

Body-worn exposure (DSI = 0) (Continued)

RF Exposure Conditions	DSI	band	Antenna	Form Factor	mode	Ch.	Test position	Test distance (mm)	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Bodyworn	0	NR Band n25 / n2	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 1/53	381000	Rear	15	23.80	0.576	26.20	26.20
				Closed	DFT-s-OFDM QPSK BW=20 RB 50/25		Front		23.80	0.404	27.74	
				Open	DFT-s-OFDM QPSK BW=20 RB 50/25		Rear		23.78	0.355	28.28	
				Closed	DFT-s-OFDM QPSK BW=20 RB 50/25		Front		23.78	0.144	32.20	
Bodyworn	0	NR Band n5	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/25	167300	Rear	15	24.04	0.138	32.64	29.20
				Closed	DFT-s-OFDM QPSK BW=20 RB 50/25		Front		24.04	0.147	32.37	
				Open	DFT-s-OFDM QPSK BW=20 RB 50/25		Rear		24.04	0.305	29.20	
				Closed	DFT-s-OFDM QPSK BW=20 RB 50/25		Front		24.04	0.119	33.28	
Bodyworn	0	NR Band n12	Main. 1	Open	DFT-s-OFDM QPSK BW=15 RB 36/22	141500	Rear	15	24.56	0.231	30.92	30.92
				Closed	DFT-s-OFDM QPSK BW=15 RB 1/1		Front		24.56	0.213	31.28	
				Open	DFT-s-OFDM QPSK BW=15 RB 1/1		Rear		24.41	0.206	31.27	
				Closed	DFT-s-OFDM QPSK BW=15 RB 1/1		Front		24.41	0.069	36.02	
Bodyworn	0	NR Band n66	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/25	344000	Rear	15	23.78	0.554	26.34	26.34
				Closed	DFT-s-OFDM QPSK BW=20 RB 50/25		Front		23.78	0.442	27.33	
				Open	DFT-s-OFDM QPSK BW=20 RB 50/25		Rear		23.78	0.187	31.06	
				Closed	DFT-s-OFDM QPSK BW=20 RB 50/25		Front		23.78	0.080	34.75	
Bodyworn	0	NR Band n66	Sub. 5	Open	DFT-s-OFDM QPSK BW=20 RB 1/104	354000	Rear	15	20.05	0.231	26.41	24.62
				Closed	DFT-s-OFDM QPSK BW=20 RB 1/104		Front		20.05	0.190	27.26	
				Open	DFT-s-OFDM QPSK BW=20 RB 1/104		Rear		20.05	0.023	36.43	
				Closed	DFT-s-OFDM QPSK BW=20 RB 1/104		Front		20.05	0.349	24.62	
Bodyworn	0	NR Band n41 -SRS 1-	Sub. 5	Open	DFT-s-OFDM QPSK BW=100 RB 1/271	518598	Rear	15	18.92	0.111	28.47	28.24
				Closed	DFT-s-OFDM QPSK BW=100 RB 1/271		Front		18.92	0.117	28.24	
				Open	DFT-s-OFDM QPSK BW=100 RB 1/271		Rear		18.92	0.047	32.24	
				Closed	DFT-s-OFDM QPSK BW=100 RB 1/271		Front		18.92	0.093	29.24	
Bodyworn	0	NR Band n41 -SRS 2-	Ant.B	Open	SRS CW	518598	Rear	15	16.43	0.092	26.78	26.78
				Closed	SRS CW		Front		16.43	0.041	30.33	
				Open	SRS CW		Rear	15	16.43	0.044	30.01	
				Closed	SRS CW		Front		16.43	0.001	46.43	
Bodyworn	0	NR Band n41 -SRS 3-	Ant.F	Open	SRS CW	518598	Rear	15	15.02	0.003	40.16	36.63
				Closed	SRS CW		Front		15.02	0.007	36.63	
				Open	SRS CW		Rear	15	15.02	0.001	45.02	
				Closed	SRS CW		Front		15.02	0.002	42.92	
Bodyworn	0	NR Band n41 -SRS 4-	Ant.C	Open	SRS CW	518598	Rear	15	13.64	0.007	35.20	35.04
				Closed	SRS CW		Front		13.64	0.007	35.04	
				Open	SRS CW		Rear	15	13.64	0.006	35.53	
				Closed	SRS CW		Front		13.64	0.001	43.64	
Bodyworn	0	NR Band n77 -SRS 1-	Ant.F	Open	DFT-s-OFDM QPSK BW=100 RB 1/137	662000	Rear	15	18.99	0.226	25.45	24.01
				Closed	DFT-s-OFDM QPSK BW=100 RB 135/69		Front		18.99	0.167	26.76	
				Open	DFT-s-OFDM QPSK BW=100 RB 135/69		Rear	15	18.97	0.065	30.87	
				Closed	DFT-s-OFDM QPSK BW=100 RB 135/69		Front		18.97	0.313	24.01	
Bodyworn	0	NR Band n77 -SRS 2-	Sub. 5	Open	SRS CW	662000	Rear	15	18.72	0.080	29.71	29.71
				Closed	SRS CW		Front		18.72	0.020	35.80	
				Open	SRS CW		Rear	15	18.72	0.007	40.17	
				Closed	SRS CW		Front		18.72	0.063	30.71	
Bodyworn	0	NR Band n77 -SRS 3-	Ant.E	Open	SRS CW	650000	Rear	15	17.59	0.064	29.53	29.53
				Closed	SRS CW		Front		17.59	0.048	30.74	
				Open	SRS CW		Rear	15	17.59	0.004	41.25	
				Closed	SRS CW		Front		17.59	0.038	31.82	
Bodyworn	0	NR Band n77 -SRS 4-	Ant.C	Open	SRS CW	650000	Rear	15	15.38	0.020	32.48	32.48
				Closed	SRS CW		Front		15.38	0.001	45.38	
				Open	SRS CW		Rear	15	15.38	0.019	32.68	
				Closed	SRS CW		Front		15.38	0.001	45.38	

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 part.1 report.
3. Some bands were determined more conservative P_{limit} instead of calculation P_{limit}.

Hotspot exposure (DSI = 3)

RF Exposure Conditions	DSI	band	Antenna	Form Factor	mode	Ch.	Test position	Test distance (mm)	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Hotspot	3	GSM 850	Main. 1	Open	GPRS	190	Rear	10	25.32	0.209	32.12	27.13
							Front	10	25.32	0.140	33.86	
							Edge 2	10	25.32	0.154	33.45	
							Edge 3	10	25.32	0.070	36.87	
							Edge 4	10	25.32	0.085	36.06	
				Closed	GPRS	190	Rear	5	25.32	0.660	27.13	
							Front	5	25.32	0.105	35.11	
							Edge 2	5	25.32	0.121	34.50	
							Edge 3	5	25.32	0.165	33.15	
							Edge 4	5	25.32	0.171	32.99	
Hotspot	3	GSM 1900	Main. 1	Open	GPRS	661	Rear	10	17.68	0.334	22.44	19.14
							Front	10	17.68	0.306	22.82	
							Edge 2	10	17.68	0.032	32.60	
							Edge 3	10	17.68	0.459	21.06	
							Edge 4	10	17.68	0.047	30.96	
				Closed	GPRS	661	Rear	5	17.68	0.471	20.95	
							Front	5	17.68	0.238	23.91	
							Edge 2	5	17.68	0.035	32.21	
							Edge 3	5	17.68	0.715	19.14	
							Edge 4	5	17.68	0.046	31.09	
Hotspot	3	WCDMA Band II	Main. 1	Open	Rel.99	9400	Rear	10	17.25	0.328	22.09	17.60
							Front	10	17.25	0.175	24.82	
							Edge 2	10	17.25	0.022	33.83	
							Edge 3	10	17.25	0.486	20.38	
							Edge 4	10	17.25	0.035	31.86	
				Closed	Rel.99	9400	Rear	5	17.25	0.462	20.60	
							Front	5	17.25	0.275	22.86	
							Edge 2	5	17.25	0.046	30.61	
							Edge 3	5	17.25	0.922	17.60	
							Edge 4	5	17.25	0.111	26.80	
Hotspot	3	WCDMA Band IV	Main. 1	Open	Rel.99	1413	Rear	10	17.51	0.224	24.01	19.12
							Front	10	17.51	0.193	24.65	
							Edge 2	10	17.51	0.020	34.50	
							Edge 3	10	17.51	0.341	22.18	
							Edge 4	10	17.51	0.025	33.58	
				Closed	Rel.99	1413	Rear	5	17.51	0.563	20.00	
							Front	5	17.51	0.120	26.72	
							Edge 2	5	17.51	0.056	30.04	
							Edge 3	5	17.51	0.690	19.12	
							Edge 4	5	17.51	0.033	32.30	
Hotspot	3	WCDMA Band V	Main. 1	Open	Rel.99	4183	Rear	10	22.91	0.299	28.15	24.44
							Front	10	22.91	0.179	30.38	
							Edge 2	10	22.91	0.198	29.94	
							Edge 3	10	22.91	0.102	32.82	
							Edge 4	10	22.91	0.100	32.92	
				Closed	Rel.99	4183	Rear	5	22.91	0.703	24.44	
							Front	5	22.91	0.134	31.64	
							Edge 2	5	22.91	0.108	32.58	
							Edge 3	5	22.91	0.168	30.66	
							Edge 4	5	22.91	0.160	30.87	
Hotspot	3	LTE Band 4	Sub. 5	Open	QPSK BW=20 RB 1/49	20175	Rear	10	17.35	0.153	25.50	17.62
							Front	10	17.35	0.127	26.31	
							Edge 1	10	17.35	0.009	37.95	
							Edge 2	10	17.35	0.291	22.71	
							Rear	5	17.35	0.029	32.80	
				Closed	QPSK BW=20 RB 1/49	20175	Front	5	17.35	0.429	21.03	
							Edge 1	5	17.35	0.011	36.90	
							Edge 2	5	17.35	0.940	17.62	
							Edge 3	5	17.35	0.032	32.35	
							Rear	10	23.82	0.237	30.08	
Hotspot	3	LTE Band 12 / 17	Main. 1	Open	QPSK BW=10 RB 1/0	23095	Front	10	23.82	0.231	30.19	25.75
							Edge 2	10	23.82	0.229	30.22	
							Edge 3	10	23.82	0.037	38.20	
							Edge 4	10	23.82	0.248	29.88	
							Rear	5	23.82	0.641	25.75	
				Closed	QPSK BW=10 RB 1/0	23095	Front	5	23.82	0.144	32.24	
							Edge 2	5	23.82	0.093	34.13	
							Edge 3	5	23.82	0.132	32.62	
							Edge 4	5	23.82	0.166	31.62	
							Rear	10	23.93	0.342	28.59	
Hotspot	3	LTE Band 13	Main. 1	Open	QPSK BW=10 RB 1/0	23230	Front	10	23.93	0.234	30.24	25.01
							Edge 2	10	23.93	0.252	29.92	
							Edge 3	10	23.93	0.082	34.80	
							Edge 4	10	23.93	0.139	32.50	
							Rear	5	23.93	0.780	25.01	
				Closed	QPSK BW=10 RB 1/0	23230	Front	5	23.93	0.078	35.02	
							Edge 2	5	23.93	0.079	34.96	
							Edge 3	5	23.93	0.135	32.63	
							Edge 4	5	23.93	0.132	32.73	
							Rear	10	16.99	0.242	23.15	
Hotspot	3	LTE Band 25 / 2	Main. 1	Open	QPSK BW=20 RB 1/49	26590	Front	10	16.99	0.200	23.98	17.60
							Edge 2	10	16.99	0.021	33.77	
							Edge 3	10	16.99	0.375	21.25	
							Edge 4	10	16.99	0.050	30.02	
				Closed	QPSK BW=20 RB 1/49	26590	Rear	5	16.99	0.293	22.32	
							Front	5	16.99	0.238	23.22	
							Edge 2	5	16.99	0.018	34.34	
							Edge 3	5	16.99	0.869	17.60	
							Edge 4	5	16.99	0.066	28.77	

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 part.1 report.
3. Some bands were determined more conservative P_{limit} instead of calculation P_{limit}.

Hotspot exposure (DSI = 3) (Continued)

RF Exposure Conditions	DSI	band	Antenna	Form Factor	mode	Ch.	Test position	Test distance (mm)	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Hotspot	3	LTE Band 5	Main. 1	Open	QPSK BW=10 RB 1/0	26865	Rear	10	23.76	0.448	27.25	24.38
							Front	10	23.76	0.241	29.94	
							Edge 2	10	23.76	0.307	28.89	
							Edge 3	10	23.76	0.110	33.35	
							Edge 4	10	23.76	0.154	31.88	
				Closed	QPSK BW=20 RB 25/0	26865	Rear	5	23.70	0.856	24.38	
							Front	5	23.70	0.191	30.89	
							Edge 2	5	23.70	0.136	32.36	
							Edge 3	5	23.70	0.237	29.95	
							Edge 4	5	23.70	0.200	30.69	
Hotspot	3	LTE Band 26	Main. 1	Open	QPSK BW=10 RB 1/0	26865	Rear	10	23.74	0.295	29.05	24.54
							Front	10	23.74	0.191	30.93	
							Edge 2	10	23.74	0.233	30.07	
							Edge 3	10	23.74	0.132	32.54	
							Edge 4	10	23.74	0.089	34.27	
				Closed	QPSK BW=20 RB 1/0	26865	Rear	5	23.74	0.833	24.54	
							Front	5	23.74	0.220	30.32	
							Edge 2	5	23.74	0.127	32.71	
							Edge 3	5	23.74	0.267	29.48	
							Edge 4	5	23.74	0.167	31.52	
Hotspot	3	LTE Band 66 / 4	Main. 1	Open	QPSK BW=20 RB 1/49	132322	Rear	10	17.04	0.216	23.70	17.67
							Front	10	17.04	0.166	24.84	
							Edge 2	10	17.04	0.022	33.56	
							Edge 3	10	17.04	0.402	21.00	
							Edge 4	10	17.04	0.027	32.74	
				Closed	QPSK BW=20 RB 1/49	132572	Rear	5	17.04	0.496	20.09	
							Front	5	17.04	0.109	26.67	
							Edge 2	5	17.04	0.042	30.85	
							Edge 3	5	17.04	0.864	17.67	
							Edge 4	5	17.04	0.056	29.59	
Hotspot	3	LTE Band 41 -PC3-	Main. 2	Open	QPSK BW=20 RB 1/49	40620	Rear	10	19.65	0.172	27.29	21.07
							Front	10	19.65	0.146	28.01	
							Edge 3	10	19.65	0.419	23.43	
							Edge 4	10	19.65	0.052	32.47	
							Rear	5	19.65	0.317	24.64	
				Closed	QPSK BW=20 RB 1/49	40620	Front	5	19.65	0.029	35.00	
							Edge 3	5	19.65	0.721	21.07	
							Edge 4	5	19.65	0.137	28.28	
Hotspot	3	LTE Band 41 -PC2-	Main. 2	Open	QPSK BW=20 RB 1/49	40620	Edge 3	10	18.09	0.391	22.17	19.69
				Closed		40620	Edge 3	5	18.09	0.692	19.69	
Hotspot	3	NR Band n25 / n2	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/25	381000	Rear	10	17.27	0.316	22.27	17.60
							Front	10	17.27	0.234	23.58	
							Edge 2	10	17.27	0.026	33.20	
							Edge 3	10	17.27	0.473	20.52	
							Edge 4	10	17.27	0.048	30.47	
				Closed	DFT-s-OFDM QPSK BW=20 RB 1/49	381000	Rear	5	16.99	0.293	22.32	
							Front	5	16.99	0.238	23.22	
							Edge 2	5	16.99	0.018	34.34	
							Edge 3	5	16.99	0.869	17.60	
							Edge 4	5	16.99	0.066	28.77	
Hotspot	3	NR Band n5	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/25	167300	Rear	10	24.04	0.259	29.91	24.72
							Front	10	24.04	0.164	31.89	
							Edge 2	10	24.04	0.194	31.16	
							Edge 3	10	24.04	0.115	33.43	
							Edge 4	10	24.04	0.086	34.68	
				Closed	DFT-s-OFDM QPSK BW=20 RB 50/25	167300	Rear	5	24.04	0.855	24.72	
							Front	5	24.04	0.226	30.50	
							Edge 2	5	24.04	0.139	32.61	
							Edge 3	5	24.04	0.270	29.73	
							Edge 4	5	24.04	0.178	31.54	
Hotspot	3	NR Band n12	Main. 1	Open	DFT-s-OFDM QPSK BW=15 RB 36/22	141500	Rear	10	24.56	0.209	31.36	26.49
							Front	10	24.56	0.225	31.04	
							Edge 2	10	24.56	0.210	31.34	
							Edge 3	10	24.56	0.032	39.52	
							Edge 4	10	24.56	0.199	31.57	
				Closed	DFT-s-OFDM QPSK BW=15 RB 1/1	141500	Rear	5	24.41	0.619	26.49	
							Front	5	24.41	0.168	32.16	
							Edge 2	5	24.41	0.077	35.53	
							Edge 3	5	24.41	0.186	31.71	
							Edge 4	5	24.41	0.147	32.74	
Hotspot	3	NR Band n66	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/25	344000	Rear	10	17.01	0.322	21.93	17.69
							Front	10	17.01	0.230	23.39	
							Edge 2	10	17.01	0.023	33.32	
							Edge 3	10	17.01	0.469	20.30	
							Edge 4	10	17.01	0.077	28.16	
				Closed	DFT-s-OFDM QPSK BW=20 RB 50/25	344000	Rear	5	17.01	0.458	20.40	
							Front	5	17.01	0.071	28.50	
							Edge 2	5	17.01	0.024	33.17	
							Edge 3	5	17.01	0.855	17.69	
							Edge 4	5	17.01	0.123	26.11	
Hotspot	3	NR Band n66	Sub. 5	Open	DFT-s-OFDM QPSK BW=20 RB 50/54	354000	Rear	10	15.82	0.142	24.30	17.20
							Front	10	15.82	0.109	25.45	
							Edge 1	10	15.82	0.028	31.41	
							Edge 2	10	15.82	0.252	21.81	
							Rear	5	15.82	0.035	30.35	
				Closed	DFT-s-OFDM QPSK BW=20 RB 50/54	354000	Front	5	15.82	0.367	20.17	
							Edge 1	5	15.82	0.010	35.73	
							Edge 2	5	15.82	0.728	17.20	
							Edge 3	5	15.82	0.025	31.88	

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 part.1 report.
3. Some bands were determined more conservative P_{limit} instead of calculation P_{limit}.

Hotspot exposure (DSI = 3) (Continued)

RF Exposure Conditions	DSI	band	Antenna	Form Factor	mode	Ch.	Test position	Test distance (mm)	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Hotspot	3	NR Band n41 -SRS 1-	Sub. 5	Open	DFT-s-OFDM QPSK BW=100 RB 1/271	518598	Rear	10	18.92	0.258	24.80	19.62
							Front	10	18.92	0.241	25.10	
							Edge 1	10	18.92	0.080	29.89	
							Edge 2	10	18.92	0.358	23.38	
							Rear	5	18.91	0.244	25.04	
				Closed	DFT-s-OFDM QPSK BW=100 RB 135/138	518598	Front	5	18.91	0.745	20.19	
							Edge 1	5	18.91	0.050	31.89	
							Edge 2	5	18.91	0.850	19.62	
							Edge 3	5	18.91	0.172	26.55	
							Rear	10	16.43	0.188	23.69	
Hotspot	3	NR Band n41 -SRS 2-	Ant.B	Open	SRS CW	518598	Front	10	16.43	0.078	27.53	18.38
							Edge 3	10	16.43	0.392	20.50	
							Edge 4	10	16.43	0.021	33.13	
							Rear	5	16.43	0.322	21.35	
							Front	5	16.43	0.010	36.63	
				Closed	SRS CW	518598	Edge 3	5	16.43	0.638	18.38	
							Edge 4	5	16.43	0.046	29.78	
							Rear	10	15.02	0.012	34.34	
							Front	10	15.02	0.014	33.44	
							Edge 1	10	15.02	0.005	37.81	
Hotspot	3	NR Band n41 -SRS 3-	Ant.F	Open	SRS CW	518598	Edge 4	10	15.02	0.019	32.30	28.90
							Rear	5	15.02	0.003	40.69	
							Front	5	15.02	0.031	30.06	
							Edge 3	5	15.02	0.008	35.95	
							Edge 4	5	15.02	0.041	28.90	
				Closed	SRS CW	518598	Rear	10	13.64	0.017	31.34	
							Front	10	13.64	0.010	33.83	
							Edge 3	10	13.64	0.002	41.63	
							Edge 4	10	13.64	0.013	32.47	
							Rear	5	13.64	0.068	25.30	
Hotspot	3	NR Band n41 -SRS 4-	Ant.C	Open	SRS CW	518598	Front	5	13.64	0.005	36.65	24.74
							Edge 1	5	13.64	0.002	41.74	
							Edge 3	5	13.64	0.002	41.34	
							Edge 4	5	13.64	0.078	24.74	
							Rear	10	14.60	0.191	21.79	
				Closed	DFT-s-OFDM QPSK BW=100 RB 135/69	662000	Front	10	14.60	0.117	23.92	
							Edge 1	10	14.60	0.100	24.60	
							Edge 4	10	14.60	0.318	19.58	
							Rear	5	14.68	0.048	27.90	
							Front	5	14.68	0.568	17.14	
Hotspot	3	NR Band n77 -SRS 1-	Ant.F	Open	DFT-s-OFDM QPSK BW=100 RB 135/69	662000	Edge 3	5	14.68	0.188	21.94	15.55
							Edge 4	5	14.68	0.818	15.55	
							Rear	10	17.38	0.124	26.45	
							Front	10	17.38	0.102	27.29	
							Edge 1	10	17.38	0.007	38.74	
				Closed	SRS CW	662000	Edge 2	10	17.38	0.165	25.21	
							Rear	5	17.38	0.026	33.28	
							Front	5	17.38	0.862	18.02	
							Edge 1	5	17.38	0.013	36.17	
							Edge 2	5	17.38	0.857	18.05	
Hotspot	3	NR Band n77 -SRS 2-	Sub. 5	Open	SRS CW	662000	Edge 3	5	17.38	0.001	47.38	18.02
							Rear	10	17.59	0.140	26.13	
							Front	10	17.59	0.076	28.76	
							Edge 1	10	17.59	0.015	35.83	
							Edge 4	10	17.59	0.143	26.04	
				Closed	SRS CW	650000	Rear	5	17.59	0.065	29.45	
							Front	5	17.59	0.230	23.97	
							Edge 1	5	17.59	0.031	32.68	
							Edge 3	5	17.59	0.036	32.05	
							Edge 4	5	17.59	0.293	22.92	
Hotspot	3	NR Band n77 -SRS 3-	Ant.E	Open	SRS CW	650000	Rear	10	15.38	0.037	29.66	21.80
							Front	10	15.38	0.035	29.93	
							Edge 3	10	15.38	0.026	31.26	
							Edge 4	10	15.38	0.075	26.61	
							Rear	5	15.38	0.121	24.55	
				Closed	SRS CW	650000	Front	5	15.38	0.001	45.38	
							Edge 1	5	15.38	0.007	36.69	
							Edge 3	5	15.38	0.005	38.17	
							Edge 4	5	15.38	0.228	21.80	

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 part.1 report.
3. Some bands were determined more conservative P_{limit} instead of calculation P_{limit}.

Product Specific 10-g without triggering sensor (DSI = 0)

RF Exposure Conditions	DSI	band	Antenna	Form Factor	mode	Ch.	Test position	Test distance (mm)	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Product Specific-10g (Sensor Off)	0	GSM 850	Main. 1	Open	GPRS	190	Rear	8	25.32	0.280	34.83	32.22
							Front	6	25.32	0.249	35.34	
							Edge 2	0	25.32	0.511	32.22	
							Edge 3	12	25.32	0.289	34.69	
							Edge 4	0	25.32	0.078	40.38	
Product Specific-10g (Sensor Off)	0	GSM 1900	Main. 1	Open	GPRS	661	Rear	8	22.08	0.611	28.20	27.81
							Front	6	22.08	0.668	27.81	
							Edge 2	0	22.08	0.158	34.07	
							Edge 3	12	22.08	0.545	28.69	
							Edge 4	0	22.08	0.252	32.04	
Product Specific-10g (Sensor Off)	0	WCDMA Band II	Main. 1	Open	Rel.99	9400	Rear	8	24.20	0.967	28.33	27.85
							Front	6	24.20	0.954	28.39	
							Edge 2	0	24.20	0.277	33.76	
							Edge 3	12	24.20	1.080	27.85	
							Edge 4	0	24.20	0.390	32.27	
Product Specific-10g (Sensor Off)	0	WCDMA Band IV	Main. 1	Open	Rel.99	1413	Rear	8	23.06	0.791	28.06	26.32
							Front	6	23.06	1.180	26.32	
							Edge 2	0	23.06	0.272	32.69	
							Edge 3	12	23.06	1.080	26.71	
							Edge 4	0	23.06	0.307	32.17	
Product Specific-10g (Sensor Off)	0	WCDMA Band V	Main. 1	Open	Rel.99	4183	Rear	8	24.03	0.311	33.08	32.65
							Front	6	24.03	0.228	34.43	
							Edge 2	0	24.03	0.343	32.65	
							Edge 3	12	24.03	0.067	39.75	
							Edge 4	0	24.03	0.245	34.12	
Product Specific-10g (Sensor Off)	0	LTE Band 4	Sub. 5	Open	QPSK BW=20 RB 1/49	20175	Rear	0	19.90	1.010	23.84	23.84
							Front	0	19.90	0.966	24.03	
							Edge 1	0	19.90	0.065	35.75	
							Edge 2	0	19.90	0.711	25.36	
							Rear	8	23.82	0.241	33.98	
Product Specific-10g (Sensor Off)	0	LTE Band 12 / 17	Main. 1	Open	QPSK BW=10 RB 1/0	23095	Front	6	23.82	0.202	34.75	28.95
							Edge 2	0	23.82	0.296	33.09	
							Edge 3	12	23.82	0.029	43.12	
							Edge 4	0	23.82	0.768	28.95	
							Rear	8	23.93	0.238	34.15	
Product Specific-10g (Sensor Off)	0	LTE Band 13	Main. 1	Open	QPSK BW=10 RB 1/0	23230	Front	6	23.93	0.236	34.18	30.40
							Edge 2	0	23.93	0.564	30.40	
							Edge 3	12	23.93	0.054	40.62	
							Edge 4	0	23.93	0.564	30.40	
							Rear	8	23.92	0.940	28.17	
Product Specific-10g (Sensor Off)	0	LTE Band 25 / 2	Main. 1	Open	QPSK BW=20 RB 1/49	26365 -> 26590	Front	6	23.92	1.090	27.53	27.45
							Edge 2	0	23.92	0.236	34.17	
							Edge 3	12	23.92	1.110	27.45	
							Edge 4	0	23.92	0.443	31.44	
							Rear	8	24.50	0.315	33.50	
Product Specific-10g (Sensor Off)	0	LTE Band 5	Main. 1	Open	QPSK BW=10 RB 1/0	26865	Front	6	24.50	0.295	33.78	28.94
							Edge 2	0	24.50	0.658	30.30	
							Edge 3	12	24.50	0.054	41.17	
							Edge 4	0	24.50	0.900	28.94	
							Rear	8	23.74	0.252	33.71	
Product Specific-10g (Sensor Off)	0	LTE Band 26	Main. 1	Open	QPSK BW=10 RB 1/0	26865	Front	6	23.74	0.194	34.85	32.92
							Edge 2	0	23.74	0.302	32.92	
							Edge 3	12	23.74	0.055	40.32	
							Edge 4	0	23.74	0.285	33.18	
							Rear	8	23.03	0.952	27.22	
Product Specific-10g (Sensor Off)	0	LTE Band 66 / 4	Main. 1	Open	QPSK BW=20 RB 1/49	132322	Front	6	23.03	0.969	27.15	27.15
							Edge 2	0	23.03	0.208	33.83	
							Edge 3	12	23.03	0.961	27.18	
							Edge 4	0	23.03	0.290	32.39	
							Rear	8	21.56	0.400	29.52	
Product Specific-10g (Sensor Off)	0	LTE Band 41 -PC3-	Main. 2	Open	QPSK BW=20 RB 1/49	40620	Front	6	21.56	0.452	28.99	28.19
							Edge 3	12	21.56	0.412	29.39	
							Edge 4	0	21.56	0.543	28.19	
Product Specific-10g (Sensor Off)	0	LTE Band 41 -PC2-	Main. 2	Open	QPSK BW=20 RB 1/49	40620	Edge 4	0	21.74	0.723	27.13	27.13

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 part.1 report.
3. Some bands were determined more conservative P_{limit} instead of calculation P_{limit}.

Product Specific 10-g without triggering sensor (DSI = 0) (Continued)

RF Exposure Conditions	DSI	band	Antenna	Form Factor	mode	Ch.	Test position	Test distance (mm)	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Product Specific-10g (Sensor Off)	0	NR Band n25 / n2	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/28	381000	Rear	8	23.78	0.827	28.58	27.59
							Front	6	23.78	0.961	27.93	
							Edge 2	0	23.78	0.244	33.89	
							Edge 3	12	23.78	1.040	27.59	
							Edge 4	0	23.78	0.457	31.16	
Product Specific-10g (Sensor Off)	0	NR Band n5	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 1/1	167300	Rear	8	24.04	0.256	33.94	31.60
							Front	6	24.04	0.220	34.60	
							Edge 2	0	24.04	0.438	31.60	
							Edge 3	12	24.04	0.054	40.70	
							Edge 4	0	24.04	0.314	33.05	
Product Specific-10g (Sensor Off)	0	NR Band n12	Main. 1	Open	DFT-s-OFDM QPSK BW=15 RB 1/1	141500	Rear	8	24.56	0.186	35.84	30.19
							Front	6	24.56	0.166	36.34	
							Edge 2	0	24.56	0.342	33.20	
							Edge 3	12	24.56	0.024	44.77	
							Edge 4	0	24.56	0.684	30.19	
Product Specific-10g (Sensor Off)	0	NR Band n66	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/28	344000	Rear	8	23.78	0.704	29.28	28.67
							Front	6	23.78	0.811	28.67	
							Edge 2	0	23.78	0.177	35.28	
							Edge 3	12	23.78	0.791	28.78	
							Edge 4	0	23.78	0.189	34.99	
Product Specific-10g (Sensor Off)	0	NR Band n66	Sub. 5	Open	DFT-s-OFDM QPSK BW=20 RB 1/104	349000	Rear	0	20.05	1.140	23.46	22.86
							Front	0	20.05	1.260	23.03	
							Edge 1	0	20.05	0.084	34.79	
							Edge 2	0	20.05	1.310	22.86	
Product Specific-10g (Sensor Off)	0	NR Band n41 -SRS 1-	Sub. 5	Open	DFT-s-OFDM QPSK BW=100 RB 1/271	518598	Rear	0	18.92	0.846	23.63	22.22
							Front	0	18.92	1.040	22.73	
							Edge 1	0	18.92	0.140	31.44	
							Edge 2	0	18.92	1.170	22.22	
Product Specific-10g (Sensor Off)	0	NR Band n41 -SRS 2-	Ant.B	Open	SRS CW	518598	Rear	0	16.43	0.707	21.92	21.92
							Front	0	16.43	0.306	25.55	
							Edge 3	0	16.43	0.666	22.17	
							Edge 4	0	16.43	0.243	26.55	
Product Specific-10g (Sensor Off)	0	NR Band n41 -SRS 3-	Ant.F	Open	SRS CW	518598	Rear	0	15.02	0.184	26.35	25.52
							Front	0	15.02	0.223	25.52	
							Edge 1	0	15.02	0.053	31.77	
							Edge 4	0	15.02	0.216	25.65	
Product Specific-10g (Sensor Off)	0	NR Band n41 -SRS 4-	Ant.C	Open	SRS CW	518598	Rear	0	13.64	0.153	25.77	25.77
							Front	0	13.64	0.114	27.05	
							Edge 3	0	13.64	0.051	30.54	
							Edge 4	0	13.64	0.125	26.65	
Product Specific-10g (Sensor Off)	0	NR Band n77 -SRS 1-	Ant.F	Open	DFT-s-OFDM QPSK BW=100 RB 1/137	650000	Rear	0	18.99	1.170	22.29	18.59
					DFT-s-OFDM QPSK BW=100 RB 135/69		Front	0	18.99	0.890	23.48	
					Edge 1		0	18.97	0.591	25.23		
					Edge 4		0	18.97	2.730	18.59		
Product Specific-10g (Sensor Off)	0	NR Band n77 -SRS 2-	Sub. 5	Open	SRS CW	662000	Rear	0	18.72	0.386	26.83	22.89
							Front	0	18.72	0.361	27.12	
							Edge 1	0	18.72	0.001	52.70	
							Edge 2	0	18.72	0.957	22.89	
Product Specific-10g (Sensor Off)	0	NR Band n77 -SRS 3-	Ant.E	Open	SRS CW	662000	Rear	0	17.52	0.559	24.03	20.71
							Front	0	17.52	0.400	25.48	
							Edge 1	0	17.52	0.027	37.14	
							Edge 4	0	17.52	1.200	20.71	
Product Specific-10g (Sensor Off)	0	NR Band n77 -SRS 4-	Ant.C	Open	SRS CW	650000	Rear	0	15.38	0.203	26.28	22.67
							Front	0	15.38	0.164	27.21	
							Edge 3	0	15.38	0.054	32.03	
							Edge 4	0	15.38	0.467	22.67	

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 part.1 report.
3. Some bands were determined more conservative P_{limit} instead of calculation P_{limit}.

Product Specific 10-g with triggering sensor (DSI = 1&4)

RF Exposure Conditions	DSI	band	Antenna	Form Factor	mode	Ch.	Test position	Test distance (mm)	Output power (dbm)	meas SAR 1g (W/kg)	P _{limit} (dBm)	Minimum P _{limit} (dBm)
Product Specific-10g (Sensor On)	1, 4	GSM 850	Main. 1	Open	GPRS	190	Rear	0	25.32	0.838	30.07	30.07
							Front	0	25.32	0.320	34.25	
							Edge 3	0	25.32	0.261	35.14	
Product Specific-10g (Sensor On)	1, 4	GSM 1900	Main. 1	Open	GPRS	661	Rear	0	19.54	1.090	23.14	23.14
							Front	0	19.54	0.999	23.52	
							Edge 3	0	19.54	0.829	24.33	
Product Specific-10g (Sensor On)	1, 4	WCDMA Band II	Main. 1	Open	Rel.99	9400	Rear	0	20.75	1.740	22.32	22.32
							Front	0	20.75	1.390	23.30	
							Edge 3	0	20.75	1.400	23.27	
Product Specific-10g (Sensor On)	1, 4	WCDMA Band IV	Main. 1	Open	Rel.99	1413	Rear	0	20.52	1.500	22.74	22.46
							Front	0	20.52	1.120	24.01	
							Edge 3	0	20.52	1.600	22.46	
Product Specific-10g (Sensor On)	1, 4	WCDMA Band V	Main. 1	Open	Rel.99	4183	Rear	0	24.03	0.922	28.36	28.36
							Front	0	24.03	0.700	29.56	
							Edge 3	0	24.03	0.626	30.04	
Product Specific-10g (Sensor On)	1, 4	LTE Band 12 / 17	Main. 1	Open	QPSK BW=10 RB 1/0	23095	Rear	0	23.82	0.930	28.12	28.12
							Front	0	23.82	0.741	29.10	
							Edge 3	0	23.82	0.289	33.19	
Product Specific-10g (Sensor On)	1, 4	LTE Band 13	Main. 1	Open	QPSK BW=10 RB 1/0	23230	Rear	0	23.93	1.020	27.83	27.83
							Front	0	23.93	0.797	28.90	
							Edge 3	0	23.93	0.579	30.28	
Product Specific-10g (Sensor On)	1, 4	LTE Band 25 / 2	Main. 1	Open	QPSK BW=20 RB 50/50	26365	Rear	0	19.72	1.490	21.97	21.85
							Front	0	19.72	1.250	22.78	
							Edge 3	0	19.72	1.530	21.85	
Product Specific-10g (Sensor On)	1, 4	LTE Band 5	Main. 1	Open	QPSK BW=10 RB 1/0	20175	Rear	0	24.50	1.070	28.19	28.19
							Front	0	24.50	0.848	29.20	
							Edge 3	0	24.50	0.597	30.72	
Product Specific-10g (Sensor On)	1, 4	LTE Band 26	Main. 1	Open	QPSK BW=10 RB 1/0	26865	Rear	0	23.74	0.880	28.28	28.28
							Front	0	23.74	0.618	29.81	
							Edge 3	0	23.74	0.435	31.34	
Product Specific-10g (Sensor On)	1, 4	LTE Band 66 / 4	Main. 1	Open	QPSK BW=20 RB 1/49	132322	Rear	0	19.33	1.350	22.01	21.62
							Front	0	19.31	1.060	23.04	
							Edge 3	0	19.31	1.470	21.62	
Product Specific-10g (Sensor On)	1, 4	LTE Band 41 -PC3-	Main. 2	Open	QPSK BW=20 RB 50/24	40620	Rear	0	21.50	1.150	24.87	24.87
							Front	0	21.50	0.742	26.78	
							Edge 3	0	21.50	1.020	25.39	
Product Specific-10g (Sensor On)	1, 4	LTE Band 41 -PC2-	Main. 2	Open	QPSK BW=20 RB 1/49	40620	Rear	0	20.07	1.450	22.44	22.44
Product Specific-10g (Sensor On)	1, 4	NR Band n25 / n2	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 50/25	381000	Rear	0	20.69	1.610	22.60	22.60
							Front	0	20.69	0.955	24.87	
							Edge 3	0	20.69	1.570	22.71	
Product Specific-10g (Sensor On)	1, 4	NR Band n5	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 1/1	167300	Rear	0	24.04	0.873	28.61	28.61
							Front	0	24.04	0.664	29.80	
							Edge 3	0	24.04	0.563	30.51	
Product Specific-10g (Sensor On)	1, 4	NR Band n12	Main. 1	Open	DFT-s-OFDM QPSK BW=15 RB 1/1	141500	Rear	0	24.56	0.918	28.91	28.91
							Front	0	24.56	0.669	30.29	
							Edge 3	0	24.56	0.352	33.07	
Product Specific-10g (Sensor On)	1, 4	NR Band n66	Main. 1	Open	DFT-s-OFDM QPSK BW=20 RB 1/1	344000	Rear	0	21.04	1.780	22.52	22.38
							Front	0	21.04	1.400	23.56	
							Edge 3	0	21.00	1.820	22.38	

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 part.1 report.
3. Some bands were determined more conservative P_{limit} instead of calculation P_{limit}.

END OF REPORT