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: SC-51E, SCG25

FCC ID: A3LSMS921JPN

REPORT NUMBER: 4790976580-S1V2

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Testing Laboratory

TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	1/22/2024	Initial Issue	--
V2	2/1/2024	Revised BT Pmax target in Sec.6.3.. Revised operation mode in Sec.5.1 -Changed to non-support for DC-HSDPA mode of WCDMA5	Seungyeon.Kim

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1. Attestation of SAR Characterization

Applicant Name	SAMSUNG ELECTRONICS CO.,LTD.
FCC ID	A3LSMS921JPN
Model Number	SC-51E, SCG25
Applicable Standards	FCC 47 CFR § 2.1093 IEC/IEEE Std 62209-1528 : 2020 Published RF exposure KDB procedures
Report type	Part.0 : SAR Characterization
Date Tested	12/5/2023 to 1/22/2024
Part 0 Purpose	Part 0 is the procedures for determining P_{Limit} for 2G/3G/4G/5G NR sub6 and WLAN/BT to satisfy *SAR_design_target* 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	Seungyeon Kim Laboratory Engineer UL Korea, Ltd. Suwon Laboratory

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2. Introduction

The equipment under test (EUT) is SAMSUNG Smartphone (FCC ID : A3LSMS921JPN), it contains the Qualcomm modems supporting 2G/3G/4G/5G NR and WLAN/BT 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 6 Room
SAR 7 Room
SAR 8 Room
SAR 9 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.

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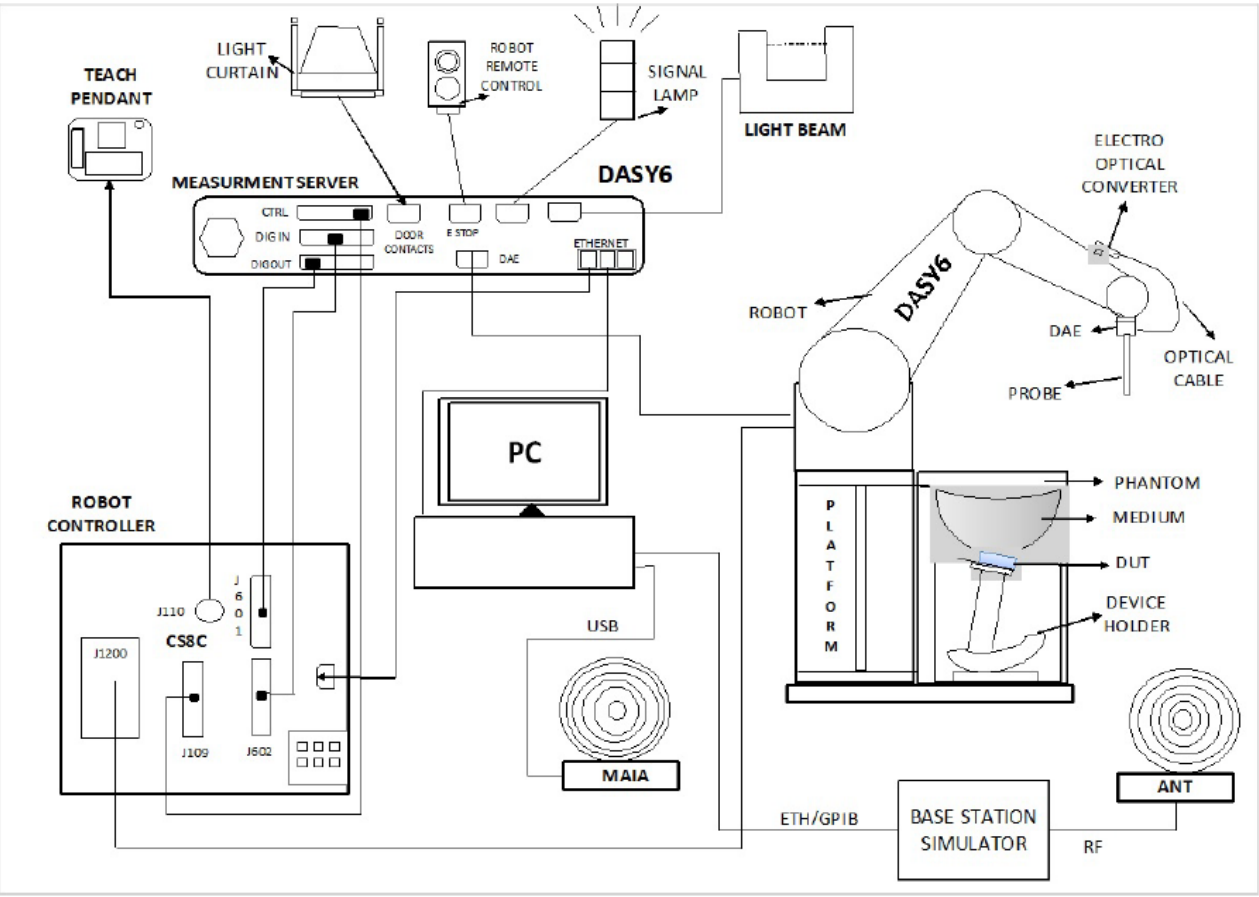
4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

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.

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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	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
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 ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

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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: Δx_{Zoom}, Δy_{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 1st 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 *reported* SAR from the *area scan based 1-g SAR estimation* 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.

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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	9/20/2024
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	Aglient	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	7/26/2024
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	MINI-CIRCUITS	TVA-R5-13A+	2111006	**1/6/2024**
				1/3/2025
Power Amplifier	EXODUS	AMP2027ADB	10002	**1/6/2024**
				1/5/2025
Directional Coupler	Aglient	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
Directional Coupler	KRYTAR	100318010	215541	**1/5/2024**
				1/4/2025
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**
				1/4/2025
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	7545	8/25/2024
E-Field Probe	SPEAG	EX3DV4	7645	9/20/2024
E-Field Probe	SPEAG	EX3DV4	7652	4/24/2024
E-Field Probe	SPEAG	EX3DV4	7646	5/23/2024
E-Field Probe	SPEAG	EX3DV4	7376	7/25/2024
Data Acquisition Electronics	SPEAG	DAE4	1447	3/22/2024
Data Acquisition Electronics	SPEAG	DAE4	1468	8/24/2024
Data Acquisition Electronics	SPEAG	DAE4	1670	5/24/2024
Data Acquisition Electronics	SPEAG	DAE4	1343	6/30/2024

Note(s):

1. For System Validation Dipole, Calibration interval applied every 2 years according to referencing KDB 865664 guidance.
2. All equipments were used until Cal.Due data.

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Test Equipment (Continued)

System Validation Dipole	SPEAG	CLA-13	1015	8/22/2024
System Validation Dipole	SPEAG	D750V3	1122	**2/24/2024**
System Validation Dipole	SPEAG	D835V2	4d174	**9/21/2024**
System Validation Dipole	SPEAG	D835V2	4d194	**3/24/2024**
System Validation Dipole	SPEAG	D1750V2	1125	**11/30/2024**
System Validation Dipole	SPEAG	D1750V2	1180	**9/21/2024**
System Validation Dipole	SPEAG	D1900V2	5d190	**11/16/2024**
System Validation Dipole	SPEAG	D1900V2	5d199	**3/25/2024**
System Validation Dipole	SPEAG	D2450V2	939	7/19/2024
System Validation Dipole	SPEAG	D2450V2	960	**3/24/2024**
System Validation Dipole	SPEAG	D2600V2	1097	9/26/2024
System Validation Dipole	SPEAG	D5GHzV2	1209	2/28/2024
System Validation Dipole	SPEAG	D5GHzV2	1325	4/21/2024
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.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**
				1/3/2025
Base Station Simulator	R & S	CMW500	169801	**1/5/2024**
				1/3/2025
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**
				1/3/2025
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY58120110	**1/10/2024**
				1/3/2025
Radio Communication Test Station	Anritsu	MT8000A	6272466165	10/18/2024
Radio Communication Analyzer	Anritsu	MT8821C	6161094351	11/30/2024

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.

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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 V	UMTS Rel. 99 (Voice & Data) HSDPA (Category 24) HSUPA (Category 6) HSPA+ (DL only)		100%
LTE	FDD Band 12 / FDD Band 13 FDD Band 5 / FDD Band 66 FDD Band 4 / FDD Band 2 TDD Band 41-PC3 **UL CA intraband-contiguous (2CC)** 41C	QPSK 16QAM 64QAM Rel. 16 Carrier Aggregation (2 Uplink and 6 Downlinks)		100% (FDD) 63.3% (TDD) Power Class 3
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
NR (Sub6)	FDD Band n5 / Band n66 TDD Band n41-PC3	DFT-s-ODFM: ■ π/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM CP-ODFM: ■QPSK, 16QAM, 64QAM, 256QAM		100%
Wi-Fi	2.4 GHz	802.11b / 802.11g / 802.11n (HT20) 802.11ac (VHT20) / 802.11ax (HE20)		98.8% (802.11b-SISO) 98.8% (802.11b-MIMO)
	5 GHz	802.11a / 802.11n (HT20) & (HT40) 802.11ac (VHT20) & (VHT40) & (VHT80) & (VHT160) 802.11ax (HE20) & (HE40) & (HE80) & (HE160)		97.1% (802.11ac (VHT80-SISO) 98.2% (802.11n (HT40-SISO) 94.5% (802.11ac (VHT80-MIMO) 98.2% (802.11n (HT40-MIMO)
	6 GHz	802.11a 802.11ax (HE20) & (HE40) & (HE80) & (HE160)		99.6% (802.11ax (HE160-SISO/MIMO)
	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 5.3 LE		76.8% (BDR-DH5)
NFC	13.56 MHz	Type A/B/F		100%

Notes:

1. Wi-Fi & Bluetooth were tested SAR using highest duty cycle. Measured duty cycle plots are in Section.9.
2. This device supports UL CA intra band in LTE Band. Detail of configuration refer to appendix.G.
3. 6GHz RF Exposure report has test results of WiFi 6GHz.

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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/WIFI/BT is compliance with FCC requirement. This part.0 report shows SAR characterization of 2G/3G/4G/5G NR Sub6 and WLAN/BT. Characterization is achieved by determining P_{limit} for 2G/3G/4G/5G NR Sub6 and WLAN/BT 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/ and WLAN/BT	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

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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.

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	**1.0 W/kg**	***SAR_design_target***	**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.	Descroption	KDB guide For SAR test
Head	1	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 & Hotspot	0	1. SAR test requirements for Handset with wireless router or hotspot mode capabilities. 2. Hotspot mode SAR test for Near body use condition.	KDB 648474 D04 KDB 941225 D06
Phablet-10g	0	1. Hand use conditions for Handset(Phablet).	KDB 648474 D04

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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)	Plimit Determination Scenarios
DSI = 0	The worst-case SAR exposure is determined as maximum SAR normalized to the limit among; 1. Bodyworn & Hotspot SAR at 10 mm 2. Product Specific 10g SAR at 0 mm
DSI = 1	1. Plimit is calculated based on Head exposure SAR

Notes:

1. For DSI = 0 or 1, Plimit is calculated by:

All Antennas

P_{limit} = min{ P_{limit} corresponding to Body-worn & Hotspot 1g SAR evaluation at 10 mm spacing,

P_{limit} corresponding to Phablet-10g SAR evaluation at 0 mm on all surfaces and side edges with each antenna location at within 25mm from that surface or edge.}

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SAR Characterizations

Exposure condition			Head (RCV)	Bodyworn & Hotspot	Phablet 10-g SAR	Pmax (Maximum tune-up Power) (dBm)
Spatial-average			1g	1g	10g	
Test distance (mm)			0	10	0	
DSI :			1	0	0	
RF Air Interface	Antenna	Antenna Group	Plimit corresponding to 1.0 W/kg (SAR_design_target) (1g) / 2.5 W/kg (SAR_design_target) (10g)			
GSM 850	A	AG0	28.8	28.3	27.6	25.3
GSM 850	E	AG1	21.8	26.3	26.3	25.3
GSM 1900	A	AG0	28.2	18.8	18.8	22.1
WCDMA 5	A	AG0	27.4	28.0	26.3	24.0
WCDMA 5	E	AG1	22.0	27.2	27.2	24.0
LTE Band 2	A	AG0	29.0	19.0	19.0	23.2
LTE Band 5	A	AG0	27.9	27.9	26.3	24.0
LTE Band 5	E	AG1	22.0	26.1	26.1	24.0
LTE Band 12	A	AG0	28.4	29.0	27.4	23.0
LTE Band 12	E	AG1	21.5	27.1	27.7	23.0
LTE Band 13	A	AG0	26.9	27.2	27.1	23.0
LTE Band 13	E	AG1	23.2	26.3	26.3	23.0
LTE Band 66(4)	A	AG0	25.8	19.0	19.0	23.2
LTE Band 41	B	AG0	26.3	21.0	21.0	22.0
LTE Band 41	F	AG1	17.0	19.5	19.5	22.0
NR Band n5	A	AG0	27.5	26.2	26.4	24.0
NR Band n5	E	AG1	22.0	26.4	27.4	24.0
NR Band n66	A	AG0	26.7	19.0	19.0	23.0
NR Band n66	F	AG1	17.5	21.0	21.0	23.0
NR Band n41	F	AG1	17.0	19.5	19.5	24.0
NR Band n41	B	AG0	21.0	21.0	21.0	24.0
DTS SISO Ant. 1	H	AG1	14.0	23.0	20.1	18.0
DTS SISO Ant. 2	J	AG1	14.0	26.8	21.9	18.0
DTS MIMO	H+J	AG1	14.0	22.0	19.6	18.0
UNII-2A SISO Ant. 1	H	AG1	13.0	16.0	16.0	17.0
UNII-2A SISO Ant. 2	E	AG1	13.0	16.0	16.0	17.0
UNII-2A MIMO	H+E	AG1	13.0	16.0	16.0	17.0
UNII-2C SISO Ant. 1	H	AG1	13.0	16.0	16.0	17.0
UNII-2C SISO Ant. 2	E	AG1	13.0	16.0	16.0	17.0
UNII-2C MIMO	H+E	AG1	13.0	16.0	16.0	17.0
UNII-3 SISO Ant. 1	H	AG1	13.0	16.0	16.0	17.0
UNII-3 SISO Ant. 2	E	AG1	13.0	16.0	16.0	17.0
UNII-3 MIMO	H+E	AG1	13.0	16.0	16.0	17.0
UNI-4 SISO Ant. 1	H	AG1	13.0	16.0	16.0	17.0
UNI-4 SISO Ant. 2	E	AG1	13.0	16.0	16.0	17.0
UNI-4 MIMO	H+E	AG1	13.0	16.0	16.0	17.0
WiFi 6E SISO Ant. 1	H	AG1	9.0	9.0	9.0	15.0
WiFi 6E SISO Ant. 2	E	AG1	9.0	9.0	9.0	15.0
WiFi 6E MIMO	H+E	AG1	9.0	9.0	9.0	15.0
Bluetooth Ant. 1	H	AG1	22.2	24.8	22.4	18.0
Bluetooth Ant. 2	J	AG1	20.9	30.3	24.1	16.0
Bluetooth MIMO	H+J	AG1	17.0	22.4	19.1	14.5

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. Pmax (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 Plimit 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 TDD modulation schemes.
4. Plimit(DSI=0) was determined to be the lower of “Body-worn & Hotspot” and “Product Specific 10-g” in each WWAN Bands.
5. Some band’s DSIs were determined more conservative Plimit instead of calculation Plimit in Section.7.
6. Some band defined lower Plimit than calculated Plimit according to manufacturer requirement. (for blue box)

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7. SAR Test results for P_{limit} calculations

Head exposure (DSI = 1)

RF Exposure Conditions	DSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	P_{limit} (dBm)	Minimum P_{limit} (dBm)
Head	1	GSM 850	A	GPRS 2 slots		190	0	Left Touch	24.46	0.145	32.85	32.39
							0	Left Tilt	24.46	0.080	35.43	
							0	Right Touch	24.46	0.161	32.39	
							0	Right Tilt	24.46	0.092	34.82	
Head	1	GSM 850	E	GPRS 4 slots		190	0	Left Touch	21.73	0.606	23.91	23.91
							0	Left Tilt	21.73	0.534	24.45	
							0	Right Touch	21.73	0.453	25.17	
							0	Right Tilt	21.73	0.424	25.46	
Head	1	GSM 1900	A	GPRS 3 slots		512	0	Left Touch	21.89	0.097	32.02	32.02
							0	Left Tilt	21.89	0.040	35.87	
							0	Right Touch	21.89	0.041	35.76	
							0	Right Tilt	21.89	0.035	36.45	
Head	1	WCDMA 5	A	Rel 99		4183	0	Left Touch	23.64	0.163	31.52	30.97
							0	Left Tilt	23.64	0.104	33.47	
							0	Right Touch	23.64	0.185	30.97	
							0	Right Tilt	23.64	0.104	33.47	
Head	1	WCDMA 5	E	Rel 99		4183	0	Left Touch	22.64	0.802	23.60	23.60
							0	Left Tilt	22.64	0.782	23.71	
							0	Right Touch	22.64	0.653	24.49	
							0	Right Tilt	22.64	0.611	24.78	
Head	1	LTE Band 2	A	QPSK BW = 20	1/49	18700	0	Left Touch	23.47	0.123	32.57	32.57
							0	Left Tilt	23.47	0.067	35.21	
							0	Right Touch	23.47	0.074	34.78	
							0	Right Tilt	23.47	0.048	36.66	
Head	1	LTE Band 5	A	QPSK BW = 10	1/0	20525	0	Left Touch	24.05	0.168	31.80	31.55
							0	Left Tilt	24.05	0.088	34.61	
							0	Right Touch	24.05	0.178	31.55	
							0	Right Tilt	24.05	0.089	34.56	
Head	1	LTE Band 5	E	QPSK BW = 10	1/0	20525	0	Left Touch	22.37	0.838	23.14	23.14
							0	Left Tilt	22.37	0.756	23.58	
							0	Right Touch	22.37	0.644	24.28	
							0	Right Tilt	22.37	0.656	24.20	
Head	1	LTE Band 12	A	QPSK BW = 10	1/49	23095	0	Left Touch	23.01	0.124	32.08	32.04
							0	Left Tilt	23.01	0.083	33.82	
							0	Right Touch	23.01	0.125	32.04	
							0	Right Tilt	23.01	0.085	33.72	
Head	1	LTE Band 12	E	QPSK BW = 10	1/25	23095	0	Left Touch	21.90	0.843	22.64	22.64
							0	Left Tilt	21.90	0.729	23.27	
							0	Right Touch	21.90	0.696	23.47	
							0	Right Tilt	21.90	0.528	24.67	
Head	1	LTE Band 13	A	QPSK BW = 10	1/25	23230	0	Left Touch	23.09	0.141	31.60	30.47
							0	Left Tilt	23.09	0.086	33.75	
							0	Right Touch	23.09	0.183	30.47	
							0	Right Tilt	23.09	0.094	33.36	
Head	1	LTE Band 13	E	QPSK BW = 10	1/25	23230	0	Left Touch	23.80	1.100	23.39	23.39
							0	Left Tilt	23.80	0.989	23.85	
							0	Right Touch	23.80	0.859	24.46	
							0	Right Tilt	23.80	0.748	25.06	
Head	1	LTE Band 66(4)	A	QPSK BW = 20	1/49	132322	0	Left Touch	23.39	0.248	29.45	29.45
							0	Left Tilt	23.39	0.096	33.57	
							0	Right Touch	23.39	0.107	33.10	
							0	Right Tilt	23.39	0.058	35.76	
Head	1	LTE Band 41 PC3	B	QPSK BW = 20	1/0	41055	0	Left Touch	22.33	0.165	30.16	30.16
							0	Left Tilt	22.33	0.053	35.09	
							0	Right Touch	22.33	0.051	35.25	
							0	Right Tilt	22.33	0.039	36.42	
Head	1	LTE Band 41 PC3	F	QPSK BW = 20	1/0	41490	0	Left Touch	17.13	0.368	21.47	18.33
							0	Left Tilt	17.13	0.442	20.68	
							0	Right Touch	17.13	0.738	18.45	
							0	Right Tilt	17.13	0.759	18.33	

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

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Head exposure (DSI = 1) (Continued)

RF Exposure Conditions	DSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Head	1	NR Band n5	A	DFT-s OFDM QPSK BW = 20	50/28	167300	0	Left Touch	23.87	0.104	33.70	31.13
							0	Left Tilt	23.87	0.060	36.09	
							0	Right Touch	23.87	0.188	31.13	
							0	Right Tilt	23.87	0.098	33.96	
Head	1	NR Band n5	E	DFT-s OFDM QPSK BW = 20	1/1	167300	0	Left Touch	22.80	1.050	22.59	22.59
							0	Left Tilt	22.80	0.860	23.46	
							0	Right Touch	22.80	0.641	24.73	
							0	Right Tilt	22.80	0.616	24.90	
Head	1	NR Band n66	A	DFT-s OFDM QPSK BW = 40	108/54	349000	0	Left Touch	23.15	0.191	30.34	30.34
							0	Left Tilt	23.15	0.075	34.40	
							0	Right Touch	23.15	0.104	32.98	
							0	Right Tilt	23.15	0.064	35.09	
Head	1	NR Band n66	F	DFT-s OFDM QPSK BW = 40	1/107	349000	0	Left Touch	17.96	0.250	23.98	20.57
							0	Left Tilt	17.96	0.355	22.46	
							0	Right Touch	17.96	0.437	21.56	
							0	Right Tilt	17.96	0.548	20.57	
Head	1	NR Band n41 PC3	F	DFT-s OFDM QPSK BW = 100	1/1	518598	0	Left Touch	17.42	0.469	20.71	17.73
							0	Left Tilt	17.42	0.483	20.58	
							0	Right Touch	17.42	0.932	17.73	
							0	Right Tilt	17.42	0.923	17.77	
Head	1	NR Band n41 PC3	B	DFT-s OFDM QPSK BW = 100	135/138	518598	0	Left Touch	21.36	0.130	30.22	30.22
							0	Left Tilt	21.36	0.060	33.58	
							0	Right Touch	21.36	0.052	34.20	
							0	Right Tilt	21.36	0.032	36.31	
Head	1	DTS SISO Ant. 1	H	802.11b 1Mbps		6	0	Right Touch	14.44	0.678	16.13	16.13
Head	1	DTS SISO Ant. 2	J	802.11b 1Mbps		1	0	Left Touch	14.47	0.567	16.93	16.93
Head	1	DTS MIMO	H+J	802.11b 1Mbps		1	0	Right Touch	13.83	0.771	14.96	14.96
Head	1	UNII-2A SISO Ant. 1	H	802.11ac VHT 80		58	0	Right Touch	12.92	0.527	15.70	15.70
Head	1	UNII-2A SISO Ant. 2	E	802.11ac VHT 80		58	0	Left Touch	12.97	0.215	19.65	19.65
Head	1	UNII-2A MIMO	H+E	802.11ac VHT 80		58	0	Right Touch	12.42	0.445	15.94	15.94
Head	1	UNII-2C SISO Ant. 1	H	802.11ac VHT 80		106	0	Right Touch	12.92	0.539	15.60	15.60
Head	1	UNII-2C SISO Ant. 2	E	802.11ac VHT 80		106	0	Left Touch	13.88	0.147	22.21	22.21
Head	1	UNII-2C MIMO	H+E	802.11ac VHT 80		106	0	Right Touch	12.18	0.381	16.37	16.37
Head	1	UNII-3 SISO Ant. 1	H	802.11ac VHT 80		155	0	Right Touch	12.41	0.522	15.23	15.23
Head	1	UNII-3 SISO Ant. 2	E	802.11ac VHT 80		155	0	Left Touch	13.20	0.033	28.01	28.01
Head	1	UNII-3 MIMO	H+E	802.11ac VHT 80		155	0	Right Touch	12.05	0.380	16.25	16.25
Head	1	UNII-4 SISO Ant. 1	H	802.11ac VHT 80		171	0	Right Touch	12.08	0.491	15.17	15.17
Head	1	UNII-4 SISO Ant. 2	E	802.11ac VHT 80		171	0	Left Touch	12.00	0.020	28.99	28.99
Head	1	UNII-4 MIMO	H+E	802.11ac VHT 80		171	0	Right Touch	12.80	0.443	16.34	16.34
Head	1	WiFi 6E SISO Ant. 1	H	802.11ax HE160		79	0	Right Touch	8.45	0.194	15.57	15.57
Head	1	WiFi 6E SISO Ant. 2	E	802.11ax HE160		79	0	Left Touch	9.06	0.008	30.03	30.03
Head	1	WiFi 6E MIMO	H+E	802.11ax HE160		79	0	Right Touch	8.88	0.282	14.38	14.38
Head	1	Bluetooth Ant. 1	H	GFSK DH5		39	0	Left Touch	18.01	0.088	28.57	22.26
							0	Left Tilt	18.01	0.037	32.33	
							0	Right Touch	18.01	0.376	22.26	
							0	Right Tilt	18.01	0.102	27.93	
Head	1	Bluetooth Ant. 2	J	GFSK DH5		39	0	Left Touch	15.85	0.306	20.99	20.99
							0	Left Tilt	15.85	0.038	30.05	
							0	Right Touch	15.85	0.153	24.00	
							0	Right Tilt	15.85	0.018	33.29	
Head	1	Bluetooth MIMO	H+J	GFSK DH5		39	0	Left Touch	10.92	0.243	17.06	17.06
							0	Left Tilt	10.92	0.065	22.79	
							0	Right Touch	11.87	0.250	17.89	
							0	Right Tilt	11.87	0.118	21.15	

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}.

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Body-worn & Hotspot exposure (DSI = 0)

RF Exposure Conditions	DSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Bodyworn & Hotspot	0	GSM 850	A	GPRS 2 slots		190	10	Rear	24.46	0.411	28.32	28.32
							10	Front	24.46	0.269	30.16	
							10	Left	24.46	0.171	32.13	
							10	Bottom	24.46	0.197	31.51	
							10	Right	24.46	0.219	31.06	
Bodyworn & Hotspot	0	GSM 850	E	GPRS 2 slots		190	10	Rear	25.06	0.600	27.28	27.28
							10	Front	25.06	0.362	29.47	
							10	Top	25.06	0.389	29.16	
							10	Right	25.06	0.481	28.24	
Bodyworn & Hotspot	0	GSM 1900	A	GPRS 4 slots		661	10	Rear	18.82	0.241	25.00	21.68
							10	Front	18.82	0.211	25.58	
							10	Left	18.82	0.043	32.49	
							10	Bottom	18.82	0.517	21.68	
							10	Right	18.82	0.062	30.90	
Bodyworn & Hotspot	0	WCDMA 5	A	Rel 99		4183	10	Rear	23.64	0.363	28.04	28.04
							10	Front	23.64	0.270	29.33	
							10	Left	23.64	0.186	30.94	
							10	Bottom	23.64	0.202	30.59	
							10	Right	23.64	0.297	28.91	
Bodyworn & Hotspot	0	WCDMA 5	E	Rel 99		4183	10	Rear	24.34	0.509	27.27	27.27
							10	Front	24.34	0.181	31.76	
							10	Top	24.34	0.415	28.16	
							10	Right	24.34	0.330	29.15	
Bodyworn & Hotspot	0	LTE Band 2	A	QPSK BW = 20	1/49	18700	10	Rear	19.15	0.397	23.16	20.46
							10	Front	19.15	0.347	23.75	
							10	Left	19.15	0.059	31.44	
							10	Bottom	19.15	0.739	20.46	
							10	Right	19.15	0.079	30.17	
Bodyworn & Hotspot	0	LTE Band 5	A	QPSK BW = 10	1/0	20525	10	Rear	24.05	0.411	27.91	27.91
							10	Front	24.05	0.308	29.16	
							10	Left	24.05	0.186	31.35	
							10	Bottom	24.05	0.182	31.45	
							10	Right	24.05	0.288	29.46	
Bodyworn & Hotspot	0	LTE Band 5	E	QPSK BW = 10	1/0	20525	10	Rear	24.74	0.570	27.18	27.18
							10	Front	24.74	0.403	28.69	
							10	Top	24.74	0.390	28.83	
							10	Right	24.74	0.485	27.88	
Bodyworn & Hotspot	0	LTE Band 12	A	QPSK BW = 10	1/49	23095	10	Rear	23.01	0.251	29.01	29.01
							10	Front	23.01	0.142	31.49	
							10	Left	23.01	0.166	30.81	
							10	Bottom	23.01	0.043	36.68	
							10	Right	23.01	0.109	32.64	
Bodyworn & Hotspot	0	LTE Band 12	E	QPSK BW = 10	1/25	23095	10	Rear	23.48	0.431	27.14	27.14
							10	Front	23.48	0.353	28.00	
							10	Top	23.48	0.352	28.01	
							10	Right	23.48	0.304	28.65	
Bodyworn & Hotspot	0	LTE Band 13	A	QPSK BW = 10	1/25	23230	10	Rear	23.09	0.384	27.25	27.25
							10	Front	23.09	0.257	28.99	
							10	Left	23.09	0.257	28.99	
							10	Bottom	23.09	0.107	32.80	
							10	Right	23.09	0.269	28.79	
Bodyworn & Hotspot	0	LTE Band 13	E	QPSK BW = 10	1/25	23230	10	Rear	23.80	0.389	27.90	27.45
							10	Front	23.80	0.308	28.91	
							10	Top	23.80	0.305	28.96	
							10	Right	23.80	0.432	27.45	
Bodyworn & Hotspot	0	LTE Band 66(4)	A	QPSK BW = 20	50/50	132322	10	Rear	18.99	0.430	22.66	20.56
							10	Front	18.99	0.384	23.15	
							10	Left	18.99	0.087	29.59	
							10	Bottom	18.99	0.697	20.56	
							10	Right	18.99	0.059	31.28	
Bodyworn & Hotspot	0	LTE Band 41 PC3	B	QPSK BW = 20	1/0	41055	10	Rear	21.55	0.465	24.88	24.66
							10	Front	21.55	0.359	26.00	
							10	Left	21.55	0.386	25.68	
							10	Bottom	21.55	0.489	24.66	
Bodyworn & Hotspot	0	LTE Band 41 PC3	F	QPSK BW = 20	1/0	41490	10	Rear	19.65	0.289	25.04	24.21
							10	Front	19.65	0.213	26.37	
							10	Top	19.65	0.350	24.21	
							10	Left	19.65	0.022	36.23	

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}.

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

RF Exposure Conditions	DSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	P_{limit} (dBm)	Minimum P_{limit} (dBm)
Bodyworn & Hotspot	0	NR Band n5	A	DFT-s OFDM QPSK BW = 20	1/1	167300	10	Rear	23.92	0.584	26.26	26.26
							10	Front	23.92	0.303	29.11	
							10	Left	23.92	0.178	31.42	
							10	Bottom	23.92	0.170	31.62	
							10	Right	23.92	0.230	30.30	
Bodyworn & Hotspot	0	NR Band n5	E	DFT-s OFDM QPSK BW = 20	50/28	167300	10	Rear	24.53	0.641	26.46	26.46
							10	Front	24.53	0.584	26.87	
							10	Top	24.53	0.390	28.62	
							10	Right	24.53	0.492	27.61	
Bodyworn & Hotspot	0	NR Band n66	A	DFT-s OFDM QPSK BW = 40	1/214	349000	10	Rear	19.15	0.456	22.56	20.75
							10	Front	19.15	0.395	23.18	
							10	Left	19.15	0.043	32.82	
							10	Bottom	19.15	0.692	20.75	
							10	Right	19.15	0.065	31.02	
Bodyworn & Hotspot	0	NR Band n66	F	DFT-s OFDM QPSK BW = 40	1/107	349000	10	Rear	21.25	0.378	25.48	23.92
							10	Front	21.25	0.282	26.75	
							10	Top	21.25	0.541	23.92	
							10	Left	21.25	0.103	31.12	
Bodyworn & Hotspot	0	NR Band n41 PC3	F	DFT-s OFDM QPSK BW = 100	135/138	518598	10	Rear	19.98	0.337	24.70	23.29
							10	Front	19.98	0.258	25.86	
							10	Top	19.98	0.467	23.29	
							10	Left	19.98	0.069	31.59	
Bodyworn & Hotspot	0	NR Band n41 PC3	B	DFT-s OFDM QPSK BW = 100	1/271	518598	10	Rear	21.68	0.422	25.43	23.29
							10	Front	21.68	0.326	26.55	
							10	Left	21.68	0.378	25.91	
							10	Bottom	21.68	0.690	23.29	
Bodyworn & Hotspot	0	DTS SISO Ant. 1	H	802.11b 1Mbps		6	10	Left	18.52	0.350	23.08	23.08
Bodyworn & Hotspot	0	DTS SISO Ant. 2	J	802.11b 1Mbps		1	10	Front	18.61	0.149	26.88	26.88
Bodyworn & Hotspot	0	DTS MIMO	H+J	802.11b 1Mbps		1	10	Left	17.86	0.354	22.37	22.37
Bodyworn & Hotspot	0	UNII-2A SISO Ant. 1	H	802.11n HT40		54	10	Rear	15.98	0.330	20.79	20.79
Bodyworn & Hotspot	0	UNII-2A SISO Ant. 2	E	802.11n HT40		54	10	Rear	16.11	0.293	21.44	21.44
Bodyworn & Hotspot	0	UNII-2A MIMO	H+E	802.11n HT40		54	10	Rear	16.32	0.496	19.37	19.37
Bodyworn & Hotspot	0	UNII-2C SISO Ant. 1	H	802.11ac VHT80		106	10	Rear	16.80	0.444	20.33	20.33
Bodyworn & Hotspot	0	UNII-2C SISO Ant. 2	E	802.11ac VHT80		106	10	Rear	16.94	0.464	20.27	20.27
Bodyworn & Hotspot	0	UNII-2C MIMO	H+E	802.11ac VHT80		106	10	Rear	16.14	0.397	20.15	20.15
Bodyworn & Hotspot	0	UNII-3 SISO Ant. 1	H	802.11ac VHT80		155	10	Rear	16.40	0.495	19.45	19.45
Bodyworn & Hotspot	0	UNII-3 SISO Ant. 2	E	802.11ac VHT80		155	10	Rear	16.56	0.332	21.35	21.35
Bodyworn & Hotspot	0	UNII-3 MIMO	H+E	802.11ac VHT80		155	10	Rear	16.22	0.421	19.98	19.98

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}.

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

RF Exposure Conditions	DSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	P_{limit} (dBm)	Minimum P_{limit} (dBm)
Bodyworn & Hotspot	0	UNII-4 SISO Ant. 1	H	802.11ac VHT80		171	10	Rear	15.98	0.433	19.62	19.62
Bodyworn & Hotspot	0	UNII-4 SISO Ant. 2	E	802.11ac VHT80		171	10	Rear	16.45	0.308	21.56	21.56
Bodyworn & Hotspot	0	UNII-4 MIMO	H+E	802.11ac VHT80		171	10	Rear	16.05	0.363	20.45	20.45
Bodyworn & Hotspot	0	WiFi 6E SISO Ant. 1	H	802.11ax HE160		15	10	Rear	8.53	0.085	19.24	19.24
Bodyworn & Hotspot	0	WiFi 6E SISO Ant. 2	E	802.11ax HE160		15	10	Rear	9.43	0.033	24.24	24.24
Bodyworn & Hotspot	0	WiFi 6E MIMO	H+E	802.11ax HE160		15	10	Rear	8.36	0.059	20.65	20.65
Bodyworn & Hotspot	0	Bluetooth Ant. 1	H	GFSK DH5		39	10	Rear	18.01	0.064	29.95	24.85
							10	Front	18.01	0.061	30.16	
							10	Top	18.01	0.050	31.02	
							10	Left	18.01	0.207	24.85	
Bodyworn & Hotspot	0	Bluetooth Ant. 2	J	GFSK DH5		39	10	Rear	15.85	0.019	33.06	30.36
							10	Front	15.85	0.035	30.36	
							10	Top	15.85	0.004	39.82	
							10	Right	15.85	0.025	31.87	
Bodyworn & Hotspot	0	Bluetooth MIMO	H+J	GFSK DH5		39	10	Rear	10.92	0.050	23.93	22.41
							10	Front	10.92	0.071	22.41	
							10	Top	11.87	0.003	37.10	
							10	Left	11.87	0.002	38.86	
							10	Right	10.92	0.024	27.12	

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}.

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

RF Exposure Conditions	DSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	P_{limit} (dBm)	Minimum P_{limit} (dBm)
Phablet 10-g SAR	0	GSM 850	A	GPRS 2 slots		190	0	Rear	24.46	1.190	27.68	27.68
							0	Front	24.46	0.783	29.50	
							0	Left	24.46	0.348	33.02	
							0	Bottom	24.46	0.777	29.53	
							0	Right	24.46	0.263	34.24	
Phablet 10-g SAR	0	GSM 850	E	GPRS 2 slots		190	0	Rear	25.06	0.854	29.72	27.52
							0	Front	25.06	0.876	29.61	
							0	Top	25.06	1.420	27.52	
							0	Right	25.06	0.820	29.90	
Phablet 10-g SAR	0	GSM 1900	A	GPRS 4 slots		661	0	Rear	18.82	0.862	23.44	21.83
							0	Front	18.82	0.912	23.20	
							0	Left	18.82	0.079	33.82	
							0	Bottom	18.82	1.250	21.83	
							0	Right	18.82	0.123	31.90	
Phablet 10-g SAR	0	WCDMA 5	A	Rel 99		4183	0	Rear	23.64	1.350	26.32	26.32
							0	Front	23.64	1.150	27.01	
							0	Left	23.64	0.409	31.50	
							0	Bottom	23.64	0.746	28.89	
							0	Right	23.64	0.192	34.79	
Phablet 10-g SAR	0	WCDMA 5	E	Rel 99		4183	0	Rear	24.34	0.729	29.69	27.25
							0	Front	24.34	0.874	28.90	
							0	Top	24.34	1.280	27.25	
							0	Right	24.34	0.853	29.01	
Phablet 10-g SAR	0	LTE Band 2	A	QPSK BW = 20	1/49	18700	0	Rear	19.15	1.190	22.37	21.86
							0	Front	19.15	1.060	22.88	
							0	Left	19.15	0.099	33.17	
							0	Bottom	19.15	1.340	21.86	
							0	Right	19.15	0.168	30.88	
Phablet 10-g SAR	0	LTE Band 5	A	QPSK BW = 10	1/0	20525	0	Rear	24.05	1.470	26.36	26.36
							0	Front	24.05	1.090	27.66	
							0	Left	24.05	0.357	32.50	
							0	Bottom	24.05	0.931	28.34	
							0	Right	24.05	0.228	34.45	
Phablet 10-g SAR	0	LTE Band 5	E	QPSK BW = 10	1/0	20525	0	Rear	24.74	1.140	28.15	27.29
							0	Front	24.74	1.200	27.93	
							0	Top	24.74	1.390	27.29	
							0	Right	24.74	1.060	28.47	
Phablet 10-g SAR	0	LTE Band 12	A	QPSK BW = 10	1/49	23095	0	Rear	23.01	0.898	27.46	27.46
							0	Front	23.01	0.531	29.74	
							0	Left	23.01	0.543	29.64	
							0	Bottom	23.01	0.249	33.03	
							0	Right	23.01	0.072	38.42	
Phablet 10-g SAR	0	LTE Band 12	E	QPSK BW = 10	1/25	23095	0	Rear	23.48	0.855	28.14	27.73
							0	Front	23.48	0.830	28.27	
							0	Top	23.48	0.940	27.73	
							0	Right	23.48	0.616	29.56	
Phablet 10-g SAR	0	LTE Band 13	A	QPSK BW = 10	1/25	23230	0	Rear	23.09	0.988	27.12	27.12
							0	Front	23.09	0.739	28.38	
							0	Left	23.09	0.392	31.14	
							0	Bottom	23.09	0.350	31.63	
							0	Right	23.09	0.170	34.76	
Phablet 10-g SAR	0	LTE Band 13	E	QPSK BW = 10	1/25	23230	0	Rear	23.80	0.897	28.25	28.01
							0	Front	23.80	0.856	28.45	
							0	Top	23.80	0.948	28.01	
							0	Right	23.80	0.598	30.01	

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}.

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

RF Exposure Conditions	DSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Phablet 10-g SAR	0	LTE Band 66(4)	A	QPSK BW = 20	1/49	132322	0	Rear	18.99	1.210	22.14	22.14
							0	Front	18.99	1.180	22.25	
							0	Left	18.99	0.113	32.44	
							0	Bottom	18.99	1.150	22.36	
							0	Right	18.99	0.137	31.60	
Phablet 10-g SAR	0	LTE Band 41 PC3	B	QPSK BW = 20	1/0	41055	0	Rear	21.55	1.940	22.65	22.65
							0	Front	21.55	1.220	24.67	
							0	Left	21.55	0.770	26.66	
							0	Bottom	21.55	1.630	23.41	
Phablet 10-g SAR	0	LTE Band 41 PC3	F	QPSK BW = 20	1/0	41490	0	Rear	19.65	0.875	24.21	21.59
							0	Front	19.65	1.070	23.34	
							0	Top	19.65	1.600	21.59	
							0	Left	19.65	0.150	31.87	
Phablet 10-g SAR	0	NR Band n5	A	DFT-s OFDM QPSK BW = 20	1/1	167300	0	Rear	23.92	1.400	26.44	26.44
							0	Front	23.92	0.976	28.00	
							0	Left	23.92	0.463	31.24	
							0	Bottom	23.92	0.755	29.12	
							0	Right	23.92	0.215	34.58	
Phablet 10-g SAR	0	NR Band n5	E	DFT-s OFDM QPSK BW = 20	50/28	167300	0	Rear	24.53	1.090	28.14	27.44
							0	Front	24.53	1.180	27.79	
							0	Top	24.53	1.280	27.44	
							0	Right	24.53	0.985	28.58	
Phablet 10-g SAR	0	NR Band n66	A	DFT-s OFDM QPSK BW = 40	1/214	349000	0	Rear	19.15	1.110	22.68	22.02
							0	Front	19.15	1.100	22.72	
							0	Left	19.15	0.143	31.58	
							0	Bottom	19.15	1.290	22.02	
							0	Right	19.15	0.146	31.49	
Phablet 10-g SAR	0	NR Band n66	F	DFT-s OFDM QPSK BW = 40	1/107	349000	0	Rear	21.25	0.762	26.41	23.16
							0	Front	21.25	0.890	25.74	
							0	Top	21.25	1.610	23.16	
							0	Left	21.25	0.335	29.98	
Phablet 10-g SAR	0	NR Band n41 PC3	F	DFT-s OFDM QPSK BW = 100	1/1	518598	0	Rear	19.98	1.050	23.75	21.68
							0	Front	19.98	1.330	22.72	
							0	Top	19.98	1.690	21.68	
							0	Left	19.98	0.230	30.34	
Phablet 10-g SAR	0	NR Band n41 PC3	B	DFT-s OFDM QPSK BW = 100	1/271	518598	0	Rear	21.68	2.320	22.00	22.00
							0	Front	21.68	1.670	23.43	
							0	Left	21.68	0.751	26.90	
							0	Bottom	21.68	1.950	22.76	
Phablet 10-g SAR	0	DTS SISO Ant. 1	H	802.11b 1Mbps		6	0	Left	18.52	1.730	20.12	20.12
Phablet 10-g SAR	0	DTS SISO Ant. 2	J	802.11b 1Mbps		1	0	Front	18.61	1.150	21.98	21.98
Phablet 10-g SAR	0	DTS MIMO	H+J	802.11b 1Mbps		1	0	Left	17.86	1.670	19.61	19.61
Phablet 10-g SAR	0	UNII-2A SISO Ant. 1	H	802.11n HT40		54	0	Left	15.98	1.720	17.60	17.60
Phablet 10-g SAR	0	UNII-2A SISO Ant. 2	E	802.11n HT40		54	0	Rear	16.11	0.797	21.07	21.07
Phablet 10-g SAR	0	UNII-2A MIMO	H+E	802.11n HT40		54	0	Left	16.32	1.660	18.10	18.10
Phablet 10-g SAR	0	UNII-2C SISO Ant. 1	H	802.11ac VHT80		106	0	Left	16.80	2.200	17.36	17.36
Phablet 10-g SAR	0	UNII-2C SISO Ant. 2	E	802.11ac VHT80		106	0	Rear	16.94	1.160	20.27	20.27
Phablet 10-g SAR	0	UNII-2C MIMO	H+E	802.11ac VHT80		122	0	Left	16.51	2.190	17.08	17.08

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

RF Exposure Conditions	DSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 1g (W/kg)	Plimit (dBm)	Minimum Plimit (dBm)
Phablet 10-g SAR	0	UNII-3 SISO Ant. 1	H	802.11ac VHT80		155	0	Left	16.40	2.620	16.20	16.20
Phablet 10-g SAR	0	UNII-3 SISO Ant. 2	E	802.11ac VHT80		155	0	Rear	16.56	0.907	20.96	20.96
Phablet 10-g SAR	0	UNII-3 MIMO	H+E	802.11ac VHT80		155	0	Left	16.22	2.300	16.58	16.58
Phablet 10-g SAR	0	UNII-4 SISO Ant. 1	H	802.11ac VHT80		171	0	Left	15.98	2.380	16.19	16.19
Phablet 10-g SAR	0	UNII-4 SISO Ant. 2	E	802.11ac VHT80		171	0	Rear	16.45	0.828	21.25	21.25
Phablet 10-g SAR	0	UNII-4 MIMO	H+E	802.11ac VHT80		171	0	Left	16.05	2.360	16.30	16.30
Phablet 10-g SAR	0	WiFi 6E SISO Ant. 1	H	802.11ax HE160		15	0	Left	8.53	0.469	15.80	15.80
Phablet 10-g SAR	0	WiFi 6E SISO Ant. 2	E	802.11ax HE160		15	0	Rear	9.43	0.090	23.87	23.87
Phablet 10-g SAR	0	WiFi 6E MIMO	H+E	802.11ax HE160		15	0	Left	8.36	0.346	16.95	16.95
Phablet 10-g SAR	0	Bluetooth Ant. 1	H	GFSK DH5		39	0	Rear	18.01	0.519	24.84	22.49
							0	Front	18.01	0.588	24.30	
							0	Top	18.01	0.163	29.87	
							0	Left	18.01	0.892	22.49	
Phablet 10-g SAR	0	Bluetooth Ant. 2	J	GFSK DH5		39	0	Rear	15.85	0.274	25.45	24.18
							0	Front	15.85	0.367	24.18	
							0	Top	15.85	0.004	43.80	
							0	Right	15.85	0.121	29.00	
Phablet 10-g SAR	0	Bluetooth MIMO	H+J	GFSK DH5		39	0	Rear	10.92	0.272	20.55	19.10
							0	Front	10.92	0.380	19.10	
							0	Top	11.87	0.002	42.84	
							0	Left	11.87	0.003	41.08	
							0	Right	10.92	0.129	23.79	

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 part.1 report.
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