FCC 47 CFR § 2.1093
IEEE Std 1528-2013

SAR EVALUATION REPORT
(SAR CHARACTERIZATION Report)

FOR

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

MODEL NUMBER: SM-A556E/DS, SM-A556E

FCC ID: A3LSMA556E

REPORT NUMBER: 4791082054-S1V2

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IAS ACCREDITED

Testing Laboratory

TL-637

Revision History

Rev.	Date	Revisions	Revised By
V1	1/11/2024	Initial Issue	--
V2	1/17/2024	Revised Test Equipment Cal. Due Date info. In Sec. 4.3. Revised Table 6.3.3 in Sec. 6.3.1	Hakchul Lee

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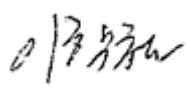
1. Attestation of SAR Characterization

Applicant Name	SAMSUNG ELECTRONICS CO.,LTD.
FCC ID	A3LSMA556E
Model Number	SM-A556E/DS, SM-A556E
Applicable Standards	FCC 47 CFR § 2.1093 IEEE Std 1528-2013 Published RF exposure KDB procedures
Report type	SAR Characterization Report
Date Tested	11/15/2023 to 1/11/2024
SAR Characterization Purpose	SAR Char is the procedures for determining P_{Limit} for WWAN (2G/3G/4G/5G-sub6) 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	Hakchul Lee Laboratory Engineer UL Korea, Ltd. Suwon Laboratory

2. Introduction

The equipment under test (EUT) is SAMSUNG Tablet (FCC ID : A3LSMA556E), it contains both S.LSI TAS supporting WWAN technologies (2G/3G/4G/5G-Sub6). TAS chipset is enabled with TAS (Time Average SAR) algorithm has been designed to meet the compliance limits over the required duration, while still allowing dynamic control of transmit power for meeting system performance.

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

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

3. Facilities and Accreditation

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

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

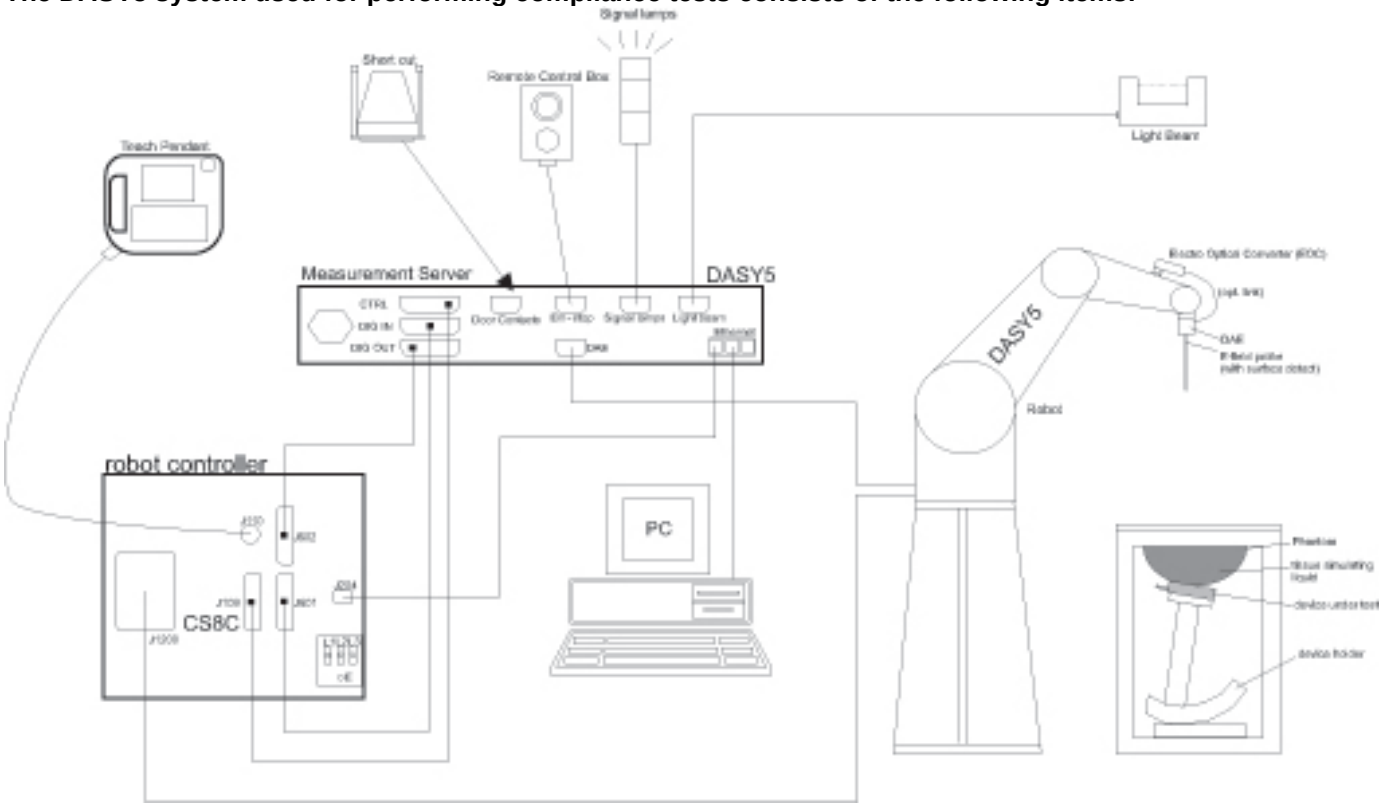
UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.
The full scope of accreditation can be viewed at

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

4. SAR Measurement System & Test Equipment

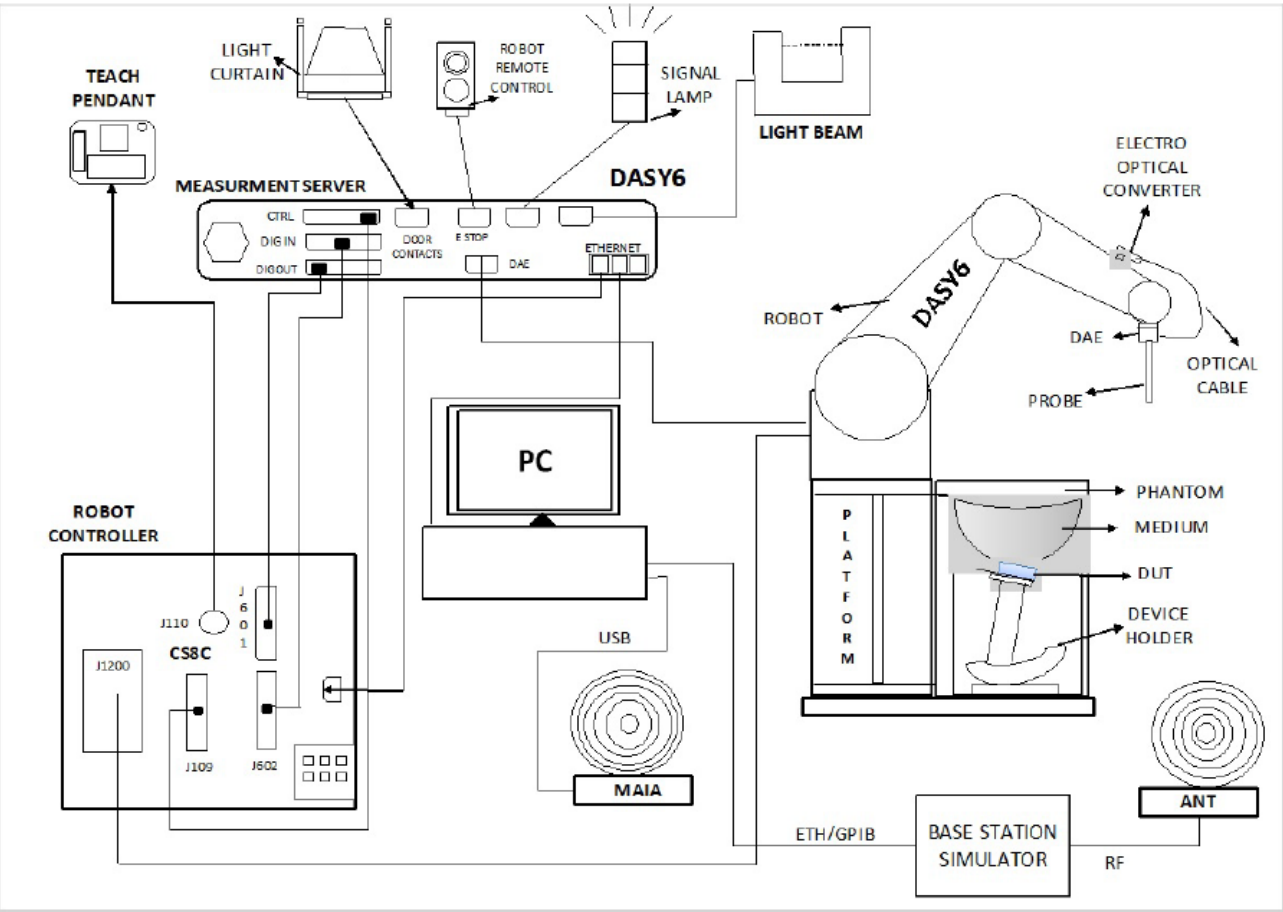
4.1. SAR Measurement System

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



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

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



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

4.2. SAR Scan Procedures

Step 1: Power Reference Measurement

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

Step 2: Area Scan

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

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	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.	

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.

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	RF Test	RF Power Amplifier	1	6-14-2024
Power Amplifier	RF Test	Board Band High Power Amplifier	1030	6-14-2024
Power Amplifier	MINI-CIRCUITS	TVA-R5-13A+	2111006	1-6-2024
Power Amplifier	EXODUS	AMP2027ADB	10002	1-6-2024
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
Low Pass Filter	FILTRON	L140012FL	1410003S	7-25-2024
Low Pass Filter	MICROLAB	LA-60N	3942	7-25-2024
Low Pass Filter	MINI-CIRCUITS	VLF-6000+	S0142	7-25-2024
Low Pass Filter	MINI-CIRCUITS	VLF-3000+	S0143	7-25-2024
Low Pass Filter	MINI-CIRCUITS	NLP-1200	VUU19301915	1-5-2024
Attenuator	KEYSIGHT	8491B/003	MY39272276	7-25-2024
Attenuator	KEYSIGHT	8491B/010	MY39271981	7-24-2024
Attenuator	KEYSIGHT	8491B/010	MY39272011	7-25-2024
Attenuator	KEYSIGHT	8491B/020	MY39272301	7-25-2024
Attenuator	KEYSIGHT	8491B/020	MY39272302	7-24-2024
Attenuator	KEYSIGHT	8491B/003	MY39272275	7-25-2024
E-Field Probe	SPEAG	EX3DV4	7313	3-24-2024
E-Field Probe	SPEAG	EX3DV4	7545	8-25-2024
E-Field Probe	SPEAG	EX3DV4	7651	5-30-2024
E-Field Probe	SPEAG	EX3DV4	7646	5-23-2024
E-Field Probe	SPEAG	EX3DV4	7376	7-25-2024
E-Field Probe	SPEAG	EX3DV4	7314	5-26-2024
E-Field Probe	SPEAG	EX3DV4	3871	8-25-2024
E-Field Probe	SPEAG	EX3DV4	7645	9-20-2024
Data Acquisition Electronics	SPEAG	DAE4	1447	3-22-2024
Data Acquisition Electronics	SPEAG	DAE4	1468	8-24-2024
Data Acquisition Electronics	SPEAG	DAE4	1494	7-17-2024
Data Acquisition Electronics	SPEAG	DAE4	1591	3-22-2024
Data Acquisition Electronics	SPEAG	DAE4	1667	4-24-2024
Data Acquisition Electronics	SPEAG	DAE4	1343	6-30-2024
Data Acquisition Electronics	SPEAG	DAE4	1668	4-26-2024
Data Acquisition Electronics	SPEAG	DAE4	1671	5-25-2024
System Validation Dipole	SPEAG	D750V3	1205	4-18-2024

Test Equipment (Continued)

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
System Validation Dipole	SPEAG	D750V3	1122	**2-24-2024**
System Validation Dipole	SPEAG	D835V2	4d194	**3-24-2024**
System Validation Dipole	SPEAG	D835V2	4d174	**9-21-2024**
System Validation Dipole	SPEAG	D1750V2	1125	**11-30-2024**
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	D3500V2	1121	4-20-2024
System Validation Dipole	SPEAG	D3700V2	1036	5-19-2024
System Validation Dipole	SPEAG	D3500V2	1075	5-19-2024
System Validation Dipole	SPEAG	D1750V2	1180	**9-21-2024**
System Validation Dipole	SPEAG	D2600V2	1178	4-25-2024
System Validation Dipole	SPEAG	D3900V2	1069	4-21-2024
Thermometer	Lutron	MHB-382SD	AH.50215	1-9-2024
				1-8-2025
Thermometer	Lutron	MHB-382SD	AH.50213	1-11-2024
				1-4-2025
Thermometer	Lutron	MHB-382SD	AH.91463	1-11-2024
				1-4-2025
Thermometer	Lutron	MHB-382SD	AJ.45903	1-9-2024
				1-4-2025
Thermometer	Lutron	MHB-382SD	AJ.42446	7-26-2024
Thermometer	Lutron	MHB-382SD	AK.12102	7-31-2024
Thermometer	Lutron	MHB-382SD	AK.12103	7-31-2024
Thermometer	Lutron	MHB-382SD	AK.12123	1-9-2024
				1-8-2025
Thermometer	Lutron	MHB-382SD	AK.18789	7-27-2024

Others

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Base Station Simulator	R & S	CMW500	150313	7-27-2024
Base Station Simulator	R & S	CMW500	150314	7-26-2024
Base Station Simulator	R & S	CMW500	162790	7-26-2024
Base Station Simulator	R & S	CMW500	169803	1-5-2024
Base Station Simulator	R & S	CMW500	169801	1-5-2024
Base Station Simulator	R & S	CMW500	169799	7-26-2024
Base Station Simulator	R & S	CMW500	169800	7-27-2024
Base Station Simulator	R & S	CMW500	169798	7-27-2024

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 14) HSUPA (Category 6) DC-HSDPA (Category 14) HSPA+ (DL only)		100%
LTE	FDD Band 2 FDD Band 4 FDD Band 5 FDD Band 12 FDD Band 13 FDD Band 17 FDD Band 25 FDD Band 26 TDD Band 41 Power Class 3 FDD Band 66	QPSK 16QAM 64QAM 256QAM Rel. 16 Carrier Aggregation (2 Uplink and 4 Downlinks) **<u>Uplink Carrier Aggregation(2CC)</u>** CA_2A-4A, CA_4A-5A, CA_4A-12A, CA_5A-66A, CA_12A-66A		100% (FDD) 63.3% (TDD) – PC3
	Does this device support SV-LTE (1xRTT-LTE)? ☐ Yes ☒ No			
5G NR (Sub 6)	FDD Band n5 TDD Band n41 FDD Band n66 TDD Band n77	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), 802.11ax (HE20)		99.0% (802.11b-SISO) 96.5% (802.11g-SISO)
	5 GHz	802.11a / 802.11n (HT20/40) 802.11ac (VHT20/40/80) 802.11ax (HE20/40/80)		96.2% (802.11a -SISO) 96.8% (802.11n (HT 40 -SISO) 97.1% (802.11ac (VHT80-SISO)
	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		85.1%(LE)
NFC	13.56 MHz	Type A/B/F		100%

Notes

1. The Bluetooth protocol is considered source-based averaging. For duty used in Wi-Fi/BT SAR testing, Please refer to section.9.
2. This device supports Power Class 2(HPUE) and Power Class 3 for NR Band n77.
3. This device supports UL CA inter band
4. NR TDD Band n41 has support SRS (Sounding Reference Signal) 0/1/2/3 operates.

5.2 Time-Averaging for SAR

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

5.3 Nomenclature for SAR Characterization Report for WWAN

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

Table 5.3.1 Definitions for TAS algorithm

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.

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

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

6.2 SAR Determination

6.2.1 RSI and SAR Determination in WWAN techs

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

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

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

Table 6.2.1 RSI and Corresponding Exposure Scenarios

6.3 Plimit determination

6.3.1 Plimit determination of RSI scenarios

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

Table 6.3.1 P_{Limit} Determination of WWAN's RSI scenarios

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

Table 6.3.3 Plimit result according to technologies and bands in each RSI

Exposure condition			Head (RCV)	Bodyworn & Hotspot & Earjack	Phablet 10-g SAR & Earjack	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	Main.1	AG0	24.8	24.8	24.8	24.8
GSM 1900	Main.1	AG0	21.3	17.8	17.8	21.3
WCDMA 2	Main.1	AG0	23.5	19.0	19.0	23.5
WCDMA 4	Main.1	AG0	23.0	19.0	19.0	23.0
WCDMA 5	Main.1	AG0	24.0	24.0	24.0	24.0
LTE Band 5	Main.1	AG0	24.0	24.0	24.0	24.0
LTE Band 12	Main.1	AG0	23.0	23.0	23.0	23.0
LTE Band 13	Main.1	AG0	23.0	23.0	23.0	23.0
LTE Band 25(2)	Main.1	AG0	23.0	18.0	18.0	23.0
LTE Band 25(2)	Sub.2	AG1	17.0	17.0	17.0	23.0
LTE Band 26	Main.1	AG0	24.0	24.0	24.0	24.0
LTE Band 66(4)	Main.1	AG0	23.0	18.0	18.0	23.0
LTE Band 66(4)	Sub.2	AG1	16.0	16.0	16.0	23.0
LTE Band 41	Main.2	AG0	22.0	17.0	17.0	22.0
LTE Band 41	Sub.2	AG1	17.0	17.0	17.0	21.0
NR Band n5	Main.1	AG0	24.0	24.0	24.0	24.0
NR Band n66	Main.1	AG0	23.0	18.0	18.0	23.0
NR Band n66	Sub.2	AG1	17.0	17.0	17.0	23.0
NR Band n41 -Main-	Main.2	AG0	17.0	17.0	17.0	23.0
NR Band n41 -Main & SRS1-	Sub.2	AG1	17.0	17.0	17.0	23.0
NR Band n41 -SRS2-	Sub.1	AG1	16.0	17.0	17.0	20.0
NR Band n41 -SRS3-	Main.4	AG0	16.5	16.5	16.5	21.0
NR Band n77 PC2 -Main-	Sub.2	AG1	14.0	19.0	19.0	25.0

Notes:

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

7. SAR Test results for Plimit calculations

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

Head exposure (RSI =RCV)

RF Exposure Conditions	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	RCV	GSM 850	Main.1	GPRS 2 slots		190	0	Left Touch	24.72	0.122	33.86	31.96
							0	Left Tilt	24.72	0.085	35.43	
							0	Right Touch	24.72	0.189	31.96	
							0	Right Tilt	24.72	0.092	35.08	
Head	RCV	GSM 1900	Main.1	GPRS 4 slots		661	0	Left Touch	24.15	0.052	36.97	36.97
							0	Left Tilt	24.15	0.024	40.42	
							0	Right Touch	24.15	0.040	38.11	
							0	Right Tilt	24.15	0.030	39.41	
Head	RCV	WCDMA 2	Main.1	Rel 99		9400	0	Left Touch	22.82	0.136	31.48	31.48
							0	Left Tilt	22.82	0.024	39.02	
							0	Right Touch	22.82	0.080	33.82	
							0	Right Tilt	22.82	0.063	34.81	
Head	RCV	WCDMA 4	Main.1	Rel 99		1413	0	Left Touch	22.78	0.130	31.64	31.64
							0	Left Tilt	22.78	0.060	35.03	
							0	Right Touch	22.78	0.083	33.62	
							0	Right Tilt	22.78	0.046	36.16	
Head	RCV	WCDMA 5	Main.1	Rel 99		4183	0	Left Touch	24.45	0.129	33.34	31.83
							0	Left Tilt	24.45	0.099	34.49	
							0	Right Touch	24.45	0.183	31.83	
							0	Right Tilt	24.45	0.100	34.45	
Head	RCV	LTE Band 5	Main.1	QPSK BW = 10	RB 1/0	20525	0	Left Touch	23.54	0.061	35.69	32.78
							0	Left Tilt	23.54	0.047	36.82	
							0	Right Touch	23.54	0.119	32.78	
							0	Right Tilt	23.54	0.067	35.28	
Head	RCV	LTE Band 12	Main.1	QPSK BW = 10	RB 1/0	23095	0	Left Touch	22.96	0.069	34.57	33.77
							0	Left Tilt	22.96	0.042	36.73	
							0	Right Touch	22.96	0.083	33.77	
							0	Right Tilt	22.96	0.046	36.33	
Head	RCV	LTE Band 13	Main.1	QPSK BW = 10	RB 1/0	23230	0	Left Touch	23.49	0.089	34.00	32.00
							0	Left Tilt	23.49	0.077	34.63	
							0	Right Touch	23.49	0.141	32.00	
							0	Right Tilt	23.49	0.072	34.92	
Head	RCV	LTE Band 25(2)	Main.1	QPSK BW = 20	RB 50/0	26590	0	Left Touch	23.12	0.072	34.55	34.55
							0	Left Tilt	23.12	0.029	38.50	
							0	Right Touch	23.12	0.039	37.21	
							0	Right Tilt	23.12	0.025	39.14	
Head	RCV	LTE Band 25(2)	Sub.2	QPSK BW = 20	RB 1/0	26365	0	Left Touch	16.92	0.289	22.31	19.67
							0	Left Tilt	16.92	0.362	21.33	
							0	Right Touch	16.92	0.499	19.94	
							0	Right Tilt	16.92	0.531	19.67	
Head	RCV	LTE Band 26	Main.1	QPSK BW = 15	RB 1/0	26865	0	Left Touch	23.77	0.092	34.13	32.77
							0	Left Tilt	23.77	0.055	36.37	
							0	Right Touch	23.77	0.126	32.77	
							0	Right Tilt	23.77	0.073	35.14	
Head	RCV	LTE Band 66(4)	Main.1	QPSK BW = 20	RB 50/0	132322	0	Left Touch	22.27	0.110	31.86	31.86
							0	Left Tilt	22.27	0.038	36.47	
							0	Right Touch	22.27	0.060	34.49	
							0	Right Tilt	22.27	0.042	36.04	
Head	RCV	LTE Band 66(4)	Sub.2	QPSK BW = 20	RB 1/0	132322	0	Left Touch	15.86	0.293	21.19	18.96
							0	Left Tilt	15.86	0.350	20.42	
							0	Right Touch	15.86	0.490	18.96	
							0	Right Tilt	15.86	0.479	19.06	

Notes:

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

Head exposure (RSI =RCV) (Continued)

RF Exposure Conditions	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	RCV	LTE Band 41	Main.2	QPSK BW = 20	RB 1/99	41490	0	Left Touch	22.68	0.088	33.25	33.25
							0	Left Tilt	22.68	0.001	52.68	
							0	Right Touch	22.68	0.006	45.02	
							0	Right Tilt	22.68	0.008	43.80	
Head	RCV	LTE Band 41	Sub.2	QPSK BW = 20	RB 1/99	40185	0	Left Touch	17.82	0.247	23.89	20.24
							0	Left Tilt	17.82	0.241	24.00	
							0	Right Touch	17.82	0.505	20.79	
							0	Right Tilt	17.82	0.573	20.24	
Head	RCV	NR Band n5	Main.1	DFT-s OFDM QPSK BW= 20	RB 50/28	167300	0	Left Touch	24.12	0.110	33.71	32.78
							0	Left Tilt	24.12	0.082	34.98	
							0	Right Touch	24.12	0.136	32.78	
							0	Right Tilt	24.12	0.083	34.93	
Head	RCV	NR Band n66	Main.1	DFT-s OFDM QPSK BW=40	RB 108/54	349000	0	Left Touch	22.70	0.092	33.06	33.06
							0	Left Tilt	22.70	0.042	36.47	
							0	Right Touch	22.70	0.042	36.47	
							0	Right Tilt	22.70	0.012	41.91	
Head	RCV	NR Band n66	Sub.2	DFT-s OFDM QPSK BW=40	RB 108/54	349000	0	Left Touch	16.71	0.415	20.53	18.70
							0	Left Tilt	16.71	0.453	20.15	
							0	Right Touch	16.71	0.602	18.91	
							0	Right Tilt	16.71	0.632	18.70	
Head	RCV	NR Band n41 -Main-	Main.2	DFT-s OFDM QPSK BW=100	RB 135/138	518598	0	Left Touch	16.83	0.055	29.43	29.43
							0	Left Tilt	16.83	0.009	37.34	
							0	Right Touch	16.83	0.010	36.70	
							0	Right Tilt	16.83	0.011	36.54	
Head	RCV	NR Band n41 -Main & SRS1-	Sub.2	DFT-s OFDM QPSK BW=100	RB 1/1	518598	0	Left Touch	17.13	0.392	21.20	18.55
							0	Left Tilt	17.13	0.386	21.26	
							0	Right Touch	17.13	0.676	18.83	
							0	Right Tilt	17.13	0.721	18.55	
Head	RCV	NR Band n41 -SRS2-	Sub.1	CW	N/A	518598	0	Left Touch	15.70	0.624	17.75	17.75
							0	Left Tilt	15.70	0.536	18.41	
							0	Right Touch	15.70	0.315	20.72	
							0	Right Tilt	15.70	0.277	21.28	
Head	RCV	NR Band n41 -SRS3-	Main.4	CW	N/A	518598	0	Left Touch	17.06	0.001	47.06	47.06
							0	Left Tilt	17.06	0.001	47.06	
							0	Right Touch	17.06	0.001	47.06	
							0	Right Tilt	17.06	0.001	47.06	
Head	RCV	NR Band n77 PC2 -Main-	Sub.2	DFT-s OFDM QPSK BW=100	RB 1/271	662000	0	Left Touch	14.31	0.356	18.80	15.84
							0	Left Tilt	14.31	0.324	19.20	
							0	Right Touch	14.31	0.603	16.51	
							0	Right Tilt	14.31	0.703	15.84	

Notes:

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

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

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	Main.1	GPRS 2 slots		190	10	Rear	24.72	0.459	28.10	28.10
							10	Front	24.72	0.325	29.60	
							10	Left	24.72	0.051	37.64	
							10	Bottom	24.72	0.101	34.68	
							10	Right	24.72	0.254	30.67	
Bodyworn & Hotspot	0	GSM 1900	Main.1	GPRS 1 slots		810	10	Rear	17.50	0.321	22.43	20.26
							10	Front	17.50	0.262	23.32	
							10	Left	17.50	0.058	29.84	
							10	Bottom	17.50	0.529	20.26	
							10	Right	17.50	0.065	29.40	
Bodyworn & Hotspot	0	WCDMA 2	Main.1	Rel 99		9400	10	Rear	19.11	0.265	24.88	21.62
							10	Front	19.11	0.244	25.24	
							10	Left	19.11	0.210	25.89	
							10	Bottom	19.11	0.561	21.62	
							10	Right	19.11	0.084	29.88	
Bodyworn & Hotspot	0	WCDMA 4	Main.1	Rel 99		1413	10	Rear	18.70	0.425	22.42	20.26
							10	Front	18.70	0.292	24.05	
							10	Left	18.70	0.226	25.16	
							10	Bottom	18.70	0.698	20.26	
							10	Right	18.70	0.137	27.33	
Bodyworn & Hotspot	0	WCDMA 5	Main.1	Rel 99		4183	10	Rear	24.45	0.537	27.15	27.15
							10	Front	24.45	0.384	28.61	
							10	Left	24.45	0.069	36.06	
							10	Bottom	24.45	0.356	28.94	
							10	Right	24.45	0.169	32.17	
Bodyworn & Hotspot	0	LTE Band 5	Main.1	QPSK BW = 10	RB 1/0	20525	10	Rear	23.54	0.423	27.28	27.28
							10	Front	23.54	0.287	28.96	
							10	Left	23.54	0.052	36.38	
							10	Bottom	23.54	0.246	29.63	
							10	Right	23.54	0.143	31.99	
Bodyworn & Hotspot	0	LTE Band 12	Main.1	QPSK BW = 10	RB 1/0	23095	10	Rear	22.96	0.260	28.81	28.81
							10	Front	22.96	0.139	31.53	
							10	Left	22.96	0.060	35.18	
							10	Bottom	22.96	0.106	32.71	
							10	Right	22.96	0.112	32.47	
Bodyworn & Hotspot	0	LTE Band 13	Main.1	QPSK BW = 10	RB 1/0	23230	10	Rear	23.49	0.367	27.84	27.84
							10	Front	23.49	0.190	30.70	
							10	Left	23.49	0.068	35.16	
							10	Bottom	23.49	0.139	32.06	
							10	Right	23.49	0.213	30.21	
Bodyworn & Hotspot	0	LTE Band 25(2)	Main.1	QPSK BW = 20	RB 1/49	26590	10	Rear	17.95	0.191	25.14	20.86
							10	Front	17.95	0.174	25.54	
							10	Left	17.95	0.114	27.38	
							10	Bottom	17.95	0.512	20.86	
							10	Right	17.95	0.058	30.32	
Bodyworn & Hotspot	0	LTE Band 25(2)	Sub.2	QPSK BW = 20	RB 50/0	26365	10	Rear	16.78	0.068	28.45	23.86
							10	Front	16.78	0.064	28.75	
							10	Top	16.78	0.196	23.86	
							10	Left	16.78	0.070	28.33	
Bodyworn & Hotspot	0	LTE Band 26	Main.1	QPSK BW = 15	RB 1/0	26865	10	Rear	23.77	0.418	27.56	27.56
							10	Front	23.77	0.253	29.74	
							10	Left	23.77	0.047	37.05	
							10	Bottom	23.77	0.274	29.39	
							10	Right	23.77	0.174	31.36	

Notes:

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

Body-worn & Hotspot exposure (RSI=Free&Hotspot&Earjack) (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)
Bodyworn & Hotspot	0	LTE Band 66(4)	Main.1	QPSK BW = 20	RB 50/0	132322	10	Rear	18.67	0.281	24.18	21.37
							10	Front	18.67	0.228	25.09	
							10	Left	18.67	0.203	25.60	
							10	Bottom	18.67	0.537	21.37	
							10	Right	18.67	0.055	31.27	
Bodyworn & Hotspot	0	LTE Band 66(4)	Sub.2	QPSK BW = 20	RB 1/0	132322	10	Rear	15.86	0.109	25.49	22.08
							10	Front	15.86	0.100	25.86	
							10	Top	15.86	0.239	22.08	
							10	Right	15.86	0.170	23.56	
Bodyworn & Hotspot	0	LTE Band 41	Main.2	QPSK BW = 20	RB 1/99	41490	10	Rear	17.49	0.221	24.05	22.88
							10	Front	17.49	0.160	25.45	
							10	Left	17.49	0.090	27.97	
							10	Bottom	17.49	0.289	22.88	
Bodyworn & Hotspot	0	LTE Band 41	Sub.2	QPSK BW = 20	RB 50/50	40185	10	Rear	17.49	0.124	26.56	24.44
							10	Front	17.49	0.097	27.61	
							10	Top	17.49	0.202	24.44	
							10	Left	17.49	0.009	37.94	
Bodyworn & Hotspot	0	NR Band n5	Main.1	DFT-s OFDM QPSK BW=20	RB 50/28	167300	10	Rear	24.12	0.522	26.94	26.94
							10	Front	24.12	0.399	28.11	
							10	Left	24.12	0.074	35.43	
							10	Bottom	24.12	0.338	28.83	
							10	Right	24.12	0.154	32.24	
Bodyworn & Hotspot	0	NR Band n66	Main.1	DFT-s OFDM QPSK BW=40	RB 108/54	349000	10	Rear	18.09	0.195	25.19	20.91
							10	Front	18.09	0.223	24.61	
							10	Left	18.09	0.105	27.88	
							10	Bottom	18.09	0.522	20.91	
							10	Right	18.09	0.029	33.47	
Bodyworn & Hotspot	0	NR Band n66	Sub.2	DFT-s OFDM QPSK BW=40	RB 108/54	349000	10	Rear	16.71	0.151	24.92	21.64
							10	Front	16.71	0.134	25.44	
							10	Top	16.71	0.321	21.64	
							10	Left	16.71	0.035	31.27	
Bodyworn & Hotspot	0	NR Band n41 -Main-	Main.2	DFT-s OFDM QPSK BW=100	RB 1/271	518598	10	Rear	17.32	0.186	24.62	22.52
							10	Front	17.32	0.129	26.21	
							10	Left	17.32	0.120	26.53	
							10	Bottom	17.32	0.302	22.52	
Bodyworn & Hotspot	0	NR Band n41 -Main & SRS1-	Sub.2	DFT-s OFDM QPSK BW=100	RB 1/1	518598	10	Rear	17.13	0.153	25.28	24.10
							10	Front	17.13	0.101	27.09	
							10	Top	17.13	0.201	24.10	
							10	Bottom	17.13	0.011	36.92	
Bodyworn & Hotspot	0	NR Band n41 -SRS2-	Sub.1	CW	N/A	518598	10	Rear	16.80	0.183	24.18	24.18
							10	Front	16.80	0.174	24.39	
							10	Top	16.80	0.153	24.95	
							10	Right	16.80	0.144	25.22	
Bodyworn & Hotspot	0	NR Band n41 -SRS3-	Main.4	CW	N/A	518598	10	Rear	17.06	0.264	22.84	22.84
							10	Front	17.06	0.006	38.99	
							10	Bottom	17.06	0.027	32.71	
							10	Right	17.06	0.013	36.09	
Bodyworn & Hotspot	0	NR Band n77 PC2 -Main-	Sub.2	DFT-s OFDM QPSK BW=100	RB 1/271	662000	10	Rear	19.42	0.374	23.69	23.69
							10	Front	19.42	0.172	27.06	
							10	Top	19.42	0.146	27.78	
							10	Left	19.42	0.029	34.80	

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 report.

Product Specific 10-g exposure (RSI=Free&Earjack)

RF Exposure Conditions	DSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 10g (W/kg)	P_{limit} (dBm)	Minimum P_{limit} (dBm)
Product Specific-10g	0	GSM 850	Main.1	GPRS 2 slots		190	0	Rear	24.72	0.838	29.47	29.40
							0	Front	24.72	0.850	29.40	
							0	Left	24.72	0.251	34.70	
							0	Bottom	24.72	0.428	32.38	
							0	Right	24.72	0.239	34.91	
Product Specific-10g	0	GSM 1900	Main.1	GPRS 4 slots		810	0	Rear	17.50	0.868	22.09	20.99
							0	Front	17.50	0.851	22.18	
							0	Left	17.50	0.110	31.06	
							0	Bottom	17.50	1.120	20.99	
							0	Right	17.50	0.078	32.57	
Product Specific-10g	0	WCDMA 2	Main.1	Rel 99		9400	0	Rear	19.11	0.772	24.21	22.56
							0	Front	19.11	0.639	25.03	
							0	Left	19.11	0.714	24.55	
							0	Bottom	19.11	1.130	22.56	
							0	Right	19.11	0.158	31.10	
Product Specific-10g	0	WCDMA 4	Main.1	Rel 99		1413	0	Rear	18.70	0.967	22.83	22.51
							0	Front	18.70	1.040	22.51	
							0	Left	18.70	0.472	25.94	
							0	Bottom	18.70	1.010	22.64	
							0	Right	18.70	0.252	28.67	
Product Specific-10g	0	WCDMA 5	Main.1	Rel 99		4183	0	Rear	24.45	0.972	28.55	27.43
							0	Front	24.45	1.260	27.43	
							0	Left	24.45	0.428	32.11	
							0	Bottom	24.45	0.563	30.92	
							0	Right	24.45	0.374	32.70	
Product Specific-10g	0	LTE Band 5	Main.1	QPSK BW = 10	RB 1/0	20525	0	Rear	23.54	0.686	29.16	29.16
							0	Front	23.54	0.674	29.23	
							0	Left	23.54	0.298	32.78	
							0	Bottom	23.54	0.473	30.77	
							0	Right	23.54	0.175	35.09	
Product Specific-10g	0	LTE Band 12	Main.1	QPSK BW = 10	RB 1/0	23095	0	Rear	22.96	0.502	29.93	28.70
							0	Front	22.96	0.536	29.65	
							0	Left	22.96	0.250	32.96	
							0	Bottom	22.96	0.667	28.70	
							0	Right	22.96	0.196	34.02	
Product Specific-10g	0	LTE Band 13	Main.1	QPSK BW = 10	RB 1/0	23230	0	Rear	23.49	0.532	30.21	29.12
							0	Front	23.49	0.684	29.12	
							0	Left	23.49	0.252	33.46	
							0	Bottom	23.49	0.476	30.69	
							0	Right	23.49	0.222	34.01	
Product Specific-10g	0	LTE Band 25(2)	Main.1	QPSK BW = 20	RB 1/49	26590	0	Rear	17.95	0.761	23.12	21.64
							0	Front	17.95	0.679	23.61	
							0	Left	17.95	0.109	31.56	
							0	Bottom	17.95	1.070	21.64	
							0	Right	17.95	0.057	34.36	
Product Specific-10g	0	LTE Band 25(2)	Sub.2	QPSK BW = 20	RB 1/0	26365	0	Rear	16.92	0.191	28.09	24.15
							0	Front	16.92	0.255	26.83	
							0	Top	16.92	0.473	24.15	
							0	Left	16.92	0.031	36.01	
Product Specific-10g	0	LTE Band 26	Main.1	QPSK BW = 15	RB 1/0	26865	0	Rear	23.77	0.882	28.29	28.29
							0	Front	23.77	0.761	28.94	
							0	Left	23.77	0.266	33.50	
							0	Bottom	23.77	0.430	31.41	
							0	Right	23.77	0.217	34.38	

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 report.

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

RF Exposure Conditions	DSI	band	Antenna	mode	RB	Ch.	Test distance (mm)	Test position	Output power (dbm)	meas SAR 10g (W/kg)	P_{limit} (dBm)	Minimum P_{limit} (dBm)
Product Specific-10g	0	LTE Band 66(4)	Main.1	QPSK BW = 20	RB 1/49	132322	0	Rear	18.55	0.736	23.86	23.44
							0	Front	18.55	0.732	23.88	
							0	Left	18.55	0.166	30.33	
							0	Bottom	18.55	0.810	23.44	
							0	Right	18.55	0.052	35.37	
Product Specific-10g	0	LTE Band 66(4)	Sub.2	QPSK BW = 20	RB 1/0	132322	0	Rear	15.86	0.262	25.66	22.28
							0	Front	15.86	0.340	24.52	
							0	Top	15.86	0.570	22.28	
							0	Left	15.86	0.115	29.23	
Product Specific-10g	0	LTE Band 41	Main.2	QPSK BW = 20	RB 1/99	41490	0	Rear	17.49	0.923	21.82	21.14
							0	Front	17.49	0.531	24.22	
							0	Left	17.49	0.260	27.32	
							0	Bottom	17.49	1.080	21.14	
Product Specific-10g	0	LTE Band 41	Sub.2	QPSK BW = 20	RB 1/99	40185	0	Rear	17.82	0.419	25.58	21.15
							0	Front	17.82	0.474	25.04	
							0	Top	17.82	1.160	21.15	
							0	Left	17.82	0.063	33.80	
Product Specific-10g	0	NR Band n5	Main.1	DFT-s OFDM QPSK BW=20	RB 1/52	167300	0	Rear	24.18	1.390	26.73	26.73
							0	Front	24.18	1.280	27.09	
							0	Left	24.18	0.401	32.13	
							0	Bottom	24.18	0.686	29.80	
							0	Right	24.18	0.358	32.62	
Product Specific-10g	0	NR Band n66	Main.1	DFT-s OFDM QPSK BW=40	RB 1/107	349000	0	Rear	18.05	0.638	23.98	22.90
							0	Front	18.05	0.451	25.49	
							0	Left	18.05	0.174	29.62	
							0	Bottom	18.05	0.818	22.90	
							0	Right	18.05	0.054	34.71	
Product Specific-10g	0	NR Band n66	Sub.2	DFT-s OFDM QPSK BW=40	RB 1/107	349000	0	Rear	16.85	0.306	25.97	23.14
							0	Front	16.85	0.382	25.01	
							0	Top	16.85	0.588	23.14	
							0	Left	16.85	0.093	31.14	
Bodyworn & Hotspot	0	NR Band n41 -Main-	Main.2	DFT-s OFDM QPSK BW=100	RB 1/271	518598	0	Rear	17.32	0.975	21.41	21.41
							0	Front	17.32	0.680	22.97	
							0	Left	17.32	0.241	27.48	
							0	Bottom	17.32	0.953	21.51	
Bodyworn & Hotspot	0	NR Band n41 -Main & SRS1-	Sub.2	DFT-s OFDM QPSK BW=100	RB 1/1	518598	0	Rear	17.13	0.513	24.01	21.43
							0	Front	17.13	0.517	23.97	
							0	Top	17.13	0.928	21.43	
							0	Left	17.13	0.048	34.30	
Bodyworn & Hotspot	0	NR Band n41 -SRS2-	Sub.1	CW	N/A	518598	10	Rear	16.80	0.487	23.90	20.89
							10	Front	16.80	0.974	20.89	
							10	Top	16.80	0.481	23.96	
							10	Right	16.80	0.673	22.50	
Bodyworn & Hotspot	0	NR Band n41 -SRS3-	Main.4	CW	N/A	518598	10	Rear	17.06	1.620	18.94	18.94
							10	Front	17.06	0.070	32.59	
							10	Bottom	17.06	0.118	30.32	
							10	Right	17.06	0.026	36.92	
Bodyworn & Hotspot	0	NR Band n77 PC2 -Main-	Sub.2	DFT-s OFDM QPSK BW=100	RB 1/271	662000	10	Rear	19.42	0.728	24.78	23.72
							10	Front	19.42	0.929	23.72	
							10	Top	19.42	0.847	24.12	
							10	Left	19.42	0.029	38.78	

Notes:

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

END OF REPORT