

TEST REPORT

FCC SAR Part 0 Test for SM-A276U
Certification

APPLICANT
SAMSUNG Electronics Co., Ltd.

REPORT NO.
HCT-SR-2604-FC001-R1

DATE OF ISSUE
May 18, 2026

Tested by
Dong Seon Kim



Technical Manager
Yun Jeang Heo



HCT CO., LTD.
BongJai Huh
BongJai Huh / CEO



HCT CO., LTD.

2-6, 73, 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea
Tel. +82 31 645 6300 Fax. +82 31 645 6401

TEST REPORT

SAR PART 0 Test
for certification

REPORT NO.

HCT-SR-2604-FC001-R1

DATE OF ISSUE

May. 18, 2026

FCC ID

A3LSMA276U

Applicant

SAMSUNG Electronics Co., Ltd

129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677,
Korea

Product Name

Mobile Phone

Model Name

SM-A276U

Additional Model Name

SM-A276U1, SM-S276V

Date of Test

Mar. 12, 2026 ~ April 10, 2026 , May.06, 2026

Location of Test

☒ Permanent Testing Lab ☐ On Site Testing Lab

(Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si,
Gyeonggi-do, Republic of Korea)

FCC Rule Part(s)

CFR § 2.1093

Test Results

PASS (1g SAR Limit: 1.6 W/kg, 10g SAR Limit: 4.0 W/kg)

Refer to the clause 3.2 Attestation of test result

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	April 23, 2026	Initial Release
1	May 18,2026	Revised Table 4-4 for UMTS B 2/4/5, LTE B 5/26/14 DSI=1

Notice

Content

The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated.

The test results have only been applied with the test methods required by the standard(s).

The laboratory is not accredited for the test results marked *.

Information provided by the applicant is marked **.

Test results provided by external providers are marked ***.

When confirmation of authenticity of this test report is required, please contact www.hct.co.kr

The test results in this test report are not associated with the ((KS Q) ISO/IEC 17025) accreditation by KOLAS (Korea Laboratory Accreditation Scheme) / A2LA (American Association for Laboratory Accreditation) that are under the ILAC (International Laboratory Accreditation Cooperation) Mutual Recognition Agreement (MRA).

CONTENTS

1. Test Location	5
2. Device Under Test Description	6
3. SAR MEASUREMENTS.....	9
4. SAR CHARAC TERIZATION	11
5. Equipment List.....	15
6. Measurement Uncertainty	17
Appendix A: SAR Test Results For P limit CALCULATIONS	

1. Test Location

1.1 Test Laboratory

Company Name	HCT Co., Ltd.
Address	74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea
Telephone	031-645-6300
Fax.	031-645-6401

1.2 Test Facilities

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Korea	National Radio Research Agency (Designation No. KR0032)
	KOLAS (Testing No. KT197)

1.3 General Information of the EUT

Model Name	SM-A276U
Additional Model Name	SM-A276U1, SM-S276V
Equipment Type	Mobile Phone
FCC ID	A3LSMA276U
Application Type	Certification
Applicant	SAMSUNG Electronics Co., Ltd.

2. Device Under Test Description

Device Wireless specification overview		
Band & Mode	Operating Mode	Tx Frequency
GSM850	Voice / Data	824.2 MHz ~ 848.8 MHz
GSM1900	Voice / Data	1 850.2 MHz ~ 1 909.8 MHz
UMTS Band 2	Voice / Data	1 852.4 MHz ~ 1 907.6 MHz
UMTS Band 4	Voice / Data	1 712.4 MHz ~ 1 752.6 MHz
UMTS Band 5	Voice / Data	826.4 MHz ~ 846.6 MHz
LTE FDD Band 2 (PCS)	Voice / Data	1 850.7 MHz ~ 1 909.3 MHz
LTE FDD Band 4 (AWS)	Voice / Data	1 710.7 MHz ~ 1 754.3 MHz
LTE FDD Band 5 (Cell)	Voice / Data	824.7 MHz ~ 848.3 MHz
LTE FDD Band 7	Voice / Data	2 502.5 MHz ~ 2 567.5 MHz
LTE FDD Band 12	Voice / Data	699.7 MHz ~ 715.3 MHz
LTE FDD Band 13	Voice / Data	779.5 MHz ~ 784.5 MHz
LTE FDD Band 14	Voice / Data	790.5 MHz ~ 795.5 MHz
LTE FDD Band 25	Voice / Data	1 850.7 MHz ~ 1 914.3 MHz
LTE FDD Band 26	Voice / Data	814.7 MHz ~ 848.3 MHz
LTE FDD Band 30	Voice / Data	2 307.5 MHz ~ 2 312.5 MHz
LTE TDD Band 38	Voice / Data	2 572.5 MHz ~ 2 617.5 MHz
LTE TDD Band 41	Voice / Data	2 498.5 MHz ~ 2 687.5 MHz
LTE TDD Band 48	Voice / Data	3 552.5 MHz ~ 3 697.5 MHz
LTE FDD Band 66 (AWS)	Voice / Data	1 710.7 MHz ~ 1 779.3 MHz
LTE FDD Band 71	Voice / Data	665.5 MHz ~ 695.5 MHz
NR FDD Band n2 (PCS)	Voice / Data	1 852.5 MHz ~ 1 907.5 MHz
NR FDD Band n5	Voice / Data	826.5 MHz ~ 846.5 MHz
NR FDD Band n25 (PCS)	Voice / Data	1 852.5 MHz ~ 1 912.5 MHz
NR FDD Band n30	Voice / Data	2 307.5 MHz ~ 2 312.5 MHz
NR TDD Band n41	Voice / Data	2 501.01 MHz ~ 2 685 MHz
NR TDD Band n48	Voice / Data	3 555 MHz ~ 3 695.01 MHz
NR FDD Band n66	Voice / Data	1 712.5 MHz ~ 1 777.5 MHz
NR FDD Band n70	Voice / Data	1 697.5 MHz ~ 1 707.5 MHz
NR FDD Band n71	Voice / Data	665.5 MHz ~ 695.5 MHz
NR TDD Band n77	Voice / Data	3 705 MHz ~ 3 975 MHz
NR TDD Band n77 DoD	Voice / Data	3 445.01 MHz ~ 3 544.98 MHz
NR TDD Band n78	Voice / Data	3 705 MHz ~ 3 795 MHz
NR TDD Band n78 DoD	Voice / Data	3 455.01 MHz ~ 3 544.98 MHz
U-NII-1	Voice / Data	5 180 MHz ~ 5 240 MHz
U-NII-2A	Voice / Data	5 260 MHz ~ 5 320 MHz
U-NII-2C	Voice / Data	5 500 MHz ~ 5 720 MHz
U-NII-3	Voice / Data	5 745 MHz ~ 5 825 MHz
2.4 GHz WLAN	Voice / Data	2 412 MHz ~ 2 462 MHz
Bluetooth / LE	Data	2 402 MHz ~ 2 480 MHz
NFC	Data	13.56 MHz
Device Description		
Device Serial Numbers	Mode	Serial Number
	GSM850, GSM1900, UMTS Band 2,4,5, NFC	ZC60312M, ZC60224M ZD30759M, ZD30743M
	LTE Band 2,4,5,7,12,13,14,25,26,30,66,71 NR Band n2,5,25,30,66,70,71	ZC60226M, ZC60447M, ZC60420M, ZD30432M ZD30743M
	LTE Band 41, 48 NR Band n41, n48, n77, n77 SRS 2	ZC60489M, ZC60484M, ZC60410M, ZD30471M
	NR Band n48 SRS2, 3, 4, n77 SRS3, 4	ZD30759M, ZD30743M, ZD30737M
	WLAN 2.4G, 5G, BT	ZC60223M, ZC60336M, ZC60454M
The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.		

2.1 Time-Averaging for SAR

This device uses the Qualcomm® Smart Transmit feature to control and manage transmitting power for 2G/3G/4G/5G WWAN operations in real time and to ensure the time-averaged RF exposure is in compliance with the FCC requirement at all times. Additionally, this device supports WLAN, BT and NFC technologies, but the output power of these modems is not controlled by the TAS algorithm.

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 WWAN is in compliance with FCC requirements.

This Part 0 report shows SAR characterization of WWAN radios. Characterization is achieved by determining P_{limit} for WWAN that corresponds to the exposure design targets after accounting for all device design related uncertainties, i.e., SAR_{design_target} (< FCC SAR limit) for WWAN.

The compliance test under the static transmission scenario and simultaneous transmission analysis are reported in Part 1 SAR report for WWAN/WLAN/BT. The validation of the time-averaging algorithm and compliance under the dynamic (time-varying) transmission scenario for WWAN technologies are reported in A3LSMA276U_SAR Part 2 Report.

2.2 Nomenclature for Part 0 Report

Technology	Term	Description
2G/3G/4G/5G Sub 6 NR	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

3. SAR MEASUREMENTS

3.1 SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative of the incremental electromagnetic energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body

$$SAR = \frac{d}{dt} \left(\frac{dW}{dm} \right)$$

SAR Mathematical Equation

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \sigma E^2 / \rho$$

Where:

σ = conductivity of the tissue-simulant material (S/m)

ρ = mass density of the tissue-simulant material (kg/m³)

E = Total RMS electric field strength (V/m)

NOTE: The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

3.2 SAR Measurement Procedure

The evaluation was performed using the following procedure compliant to FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013:

1. The SAR distribution at the exposed side of the head or body was measured at a distance no more than 5.0 mm from the inner surface of the shell. The area covered the entire dimension of the DUT's head and body area and the horizontal grid resolution was depending on the FCC KDB 865664 D01v01r04 (see table 3-1) & IEEE 1528-2013.
2. Based on step, the area of the maximum absorption was determined by sophisticated interpolations routines implemented in DASY software. When an Area Scan has measured all reachable point. DASY system computes the field maximal found in the scanned are, within a range of the maximum. SAR at this fixed point was measured and used as a reference value.
3. Around this point, a volume was assessed according to the measurement resolution and volume size requirements of FCC KDB 865664 D01v01r04 table 4-1 and IEEE 1528-2013. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure (reference from the DASY manual.)
 - a. The data at the surface were extrapolated, since the center of the dipoles is no more than 2.7 mm away from the tip of the probe (it is different from the probe type) and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.
 - b. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the "Not a knot" condition (in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.
 - c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.
4. The SAR reference value, at the same location as step 2, was re-measured after the zoom scan. If the value changed by more than 5 %, the SAR evaluation and drift measurements were repeated.

Table 3-1

Frequency	Maximum Area Scan Resolution(mm) (ΔXarea, ΔYarea)	Maximum Zoom Scan Resolution (mm) (ΔXzoom, ΔYzoom)	Maximum Zoom Scan Spatial Resolution (mm)			Minimum Zoom Scan Volume (mm) (x,y,z)
			Uniform Grid		Graded Grid	
			ΔZzoom n)	Δz zoom(1)*	ΔZzoom(n>1)*	
≤2 GHz	≤15	≤8	≤5	≤4	≤1.5* ΔZzoom (n-1)	≥30
2-3 GHz	≤12	≤5	≤5	≤4	≤1.5* ΔZzoom (n-1)	≥30
3-4 GHz	≤12	≤5	≤4	≤3	≤1.5* ΔZzoom (n-1)	≥28
4-5 GHz	≤10	≤4	≤3	≤2.5	≤1.5* ΔZzoom (n-1)	≥25
5-6 GHz	≤10	≤4	≤2	≤2	≤1.5* ΔZzoom (n-1)	≥22

Area and Zoom Scan Resolutions per FCC KDB Publication 865664 D01v01r04*

4. SAR CHARACTERIZATION

4.1 DSI and SAR Determination

This device uses different Device SAR Index (DSI) to configure different time averaged power levels based on certain exposure scenarios. Depending on the detection scheme implemented in the smartphone, 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.

When 1g SAR and 10g SAR exposure comparison is needed, the worst-case was determined from SAR normalized to 1g or 10g SAR limit.

The Device SAR Index (DSI) conditions used in Table 4-1 represent different exposure scenarios.

Table 4-1 DSI and Corresponding Exposure Scenarios

Scenario		Description	SAR Test Cases
Head	DSI = 1	Device positioned next to head When RCV is activated for voice call	Head SAR per KDB Publication 648474 D04
Non –Head Body worn Hotspot mode Phablet	DSI = 0	Device is held with hand Device transmits in hotspot mode near body Device being used with a body-worn accessory	Phablet SAR per KDB Publication 648474 D04 Hotspot SAR per KDB Publication 941225 D06 Body-worn SAR per KDB Publication 648474 D04

4.2 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 (see Table 4-2).

<i>SAR_design_target</i>			
$SAR_design_target < SAR_regulatory_limit \times 10^{Total\ Uncertainty/10}$			
1g SAR (W/kg)		10g SAR (W/kg)	
<i>Total Uncertainty</i>	1.0 dB	<i>Total Uncertainty</i>	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

Table 4-2 *SAR_design_target* Calculations for WWAN Bands

4.3 SAR Characterization

P_{limit} is calculated by linearly scaling with the measured SAR at the P_{part0} to correspond to the SAR_{design_target} . When $P_{limit} < P_{max}$, P_{part0} was used as P_{limit} in the Smart Transmit EFS. When $P_{limit} > P_{max}$ and $P_{part0} = P_{max}$, calculated P_{limit} was used in the Smart Transmit EFS. All reported SAR obtained from the Part0 SAR tests was less than $SAR_{Design_target} + 1$ dB Uncertainty. The final P_{limit} determination for each exposure scenario corresponding to SAR_{design_target} are shown in Table 4-3 and Table 4-4

Device State Index (DSI)	P_{Limit} Determination Scenarios
0	The worst-case SAR exposure is determined as maximum SAR normalized to the limit (i.e. lowest P_{limit}) among: 1. Body Worn SAR at 5 mm for Rear and Front positions 2. Hotspot SAR at 10 mm for top, bottom, right, and left positions and at 5mm for back and front positions 3. Extremity SAR measured at 0 mm spacing for back, front, top, bottom, right and left.
1	P_{Limit} is calculated based on 1g Head SAR

Plimit values in green indicate Plimit ≤ Pmax				Plimit values in grey indicate Plimit > Pmax		
Plimit corresponding to 1 W/kg (1g) 2.5W/kg(10g) SAR_Design_target						Pmax
SAR Exposure Position			Non-Head Bodyworn Hotspot	Head (RCV ON)	Phablet	Maximum Tune-up Output Power [dBm]
Averaging volume			1g	1g	10g	
separation Distance			5,10 mm	0 mm	0 mm	
Mode	Antenna	Antenna Group	DSI=0	DSI=1	DSI=0	
GSM/GPRS/EDGE 850	A	AG0	22.8	27.1	22.8	24.8
GSM/GPRS/EDGE1900	A	AG0	19.8	27.1	19.8	22.6
UMTS 2	A	AG0	19.0	22.0	19.0	23.5
UMTS 4	A	AG0	19.0	19.0	19.0	23.5
UMTS 5	A	AG0	22.0	22.0	22.0	24.5
LTE FDD 7	A	AG0	18.0	26.6	18.0	24.0
LTE FDD 12	A	AG0	27.2	26.7	27.2	24.5
LTE FDD 13	A	AG0	26.2	27.4	26.2	24.0
LTE FDD 14	A	AG0	25.9	23.0	25.9	24.0
LTE FDD 2/25	A	AG0	18.0	26.7	18.0	24.0
LTE FDD 2/25	F	AG1	18.0	18.0	18.0	24.0
LTE FDD 5/26	A	AG0	22.0	23.0	22.0	24.5
LTE FDD 30	A	AG0	18.0	25.6	18.0	23.0
LTE TDD 38/41	A	AG0	17.0	25.6	17.0	22.0
LTE TDD 48	G	AG1	14.0	14.0	14.0	20.0
LTE FDD 4/66	A	AG0	18.0	28.0	18.0	24.0
LTE FDD 4/66	F	AG1	18.0	18.0	18.0	24.0
LTE FDD 71	A	AG0	27.9	28.8	27.9	24.0
NR FDD 5	A	AG0	22.0	26.3	22.0	24.5
NR FDD 2/25	A	AG0	18.0	26.2	18.0	24.0
NR FDD 2/25	F	AG1	18.0	18.0	18.0	24.0
NR FDD 30	A	AG0	18.0	26.7	18.0	23.0
NR TDD 41 PC2	A	AG0	17.0	23.0	17.0	23.0
NR TDD 41 PC3	A	AG0	17.0	23.0	17.0	24.0
NR TDD 48 SRS0	G	AG1	14.0	14.0	14.0	22.0
NR TDD 48 SRS1	I	AG1	14.0	14.0	14.0	18.0
NR TDD 48 SRS2	D	AG1	14.0	14.0	14.0	22.0
NR TDD 48 SRS3	H	AG1	14.0	14.0	14.0	17.0
NR FDD 66	A	AG0	18.0	26.3	18.0	24.0
NR FDD 66	F	AG1	18.0	18.0	18.0	24.0
NR FDD 70	A	AG0	20.0	30.0	20.0	24.0
NR FDD 70	F	AG1	19.0	19.0	19.0	24.0
NR FDD 71	A	AG0	27.4	27.5	27.4	24.0
NR TDD 77/78 SRS0 PC2	G	AG1	14.0	13.0	14.0	23.0
NR TDD 77/78 SRS1 PC2	I	AG1	14.0	13.0	14.0	19.0
NR TDD 77/78 SRS2 PC2	D	AG1	14.0	13.0	14.0	23.0
NR TDD 77/78 SRS3 PC2	H	AG1	14.0	13.0	14.0	18.0
NR TDD 77/78 SRS0 PC3	G	AG1	14.0	13.0	14.0	24.0
NR TDD 77/78 SRS1 PC3	I	AG1	14.0	13.0	14.0	20.0
NR TDD 77/78 SRS2 PC3	D	AG1	14.0	13.0	14.0	24.0
NR TDD 77/78 SRS3 PC3	H	AG1	14.0	13.0	14.0	19.0

Table 4-4 SAR Characterization

4. Equipment List

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
SPEAG	ELI Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F11/5K3RA1/C/01	N/A	N/A	N/A
Staubli	TX90 Lspeag	F11/5K3RA1/A/01	N/A	N/A	N/A
Staubli	D21142603	S-1203 0309	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331936309	12/18/2025	Annual	12/18/2026
Staubli	CS8Cspeag-TX90	F12/5K9GA1/C/01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F12/5K9GA1/A/01	N/A	N/A	N/A
Staubli	D2114210603	S-1206 0513	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331936309	12/18/2025	Annual	12/18/2026
Staubli	CS9spe-TX2-90	F/24/0058554/C001	N/A	N/A	N/A
Staubli	TX2-90XL spe	F/24/0058554/A/001	N/A	N/A	N/A
Staubli	SP2	D21144508	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331939309	12/18/2025	Annual	12/18/2026
Staubli	CS8Cspeag-TX90	F17/59RAA1/C/01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F17/59RAA1/A/01	N/A	N/A	N/A
Staubli	D21142606B	11578	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331922309	12/18/2025	Annual	12/18/2026
Staubli	CS8Cspeag-TX90	F08/5AJ0A1/C/01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F08/5AJ0A1/A/01	N/A	N/A	N/A
Staubli	D21143300	S-0008	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331949309	12/18/2025	Annual	12/18/2026
Staubli	CS8Cspeag-TX90	F17/59CHA1/C/01	N/A	N/A	N/A
Staubli	TX90 XLSpeag	F17/59CHA1/A/01	N/A	N/A	N/A
Staubli	D21142606B	010963	N/A	N/A	N/A
TESTO	175-H1/Thermometer	40331915309	12/26/2025	Annual	12/26/2026
SPEAG	DAE4	1225	09/25/2025	Annual	09/25/2026
SPEAG	DAE4	1629	08/13/2025	Annual	08/13/2026
SPEAG	DAE4	1687	07/15/2025	Annual	07/15/2026
SPEAG	DAE4	1254	05/21/2025	Annual	05/21/2026
SPEAG	DAE4	1686	06/05/2025	Annual	06/05/2026
SPEAG	DAE4	780	06/04/2025	Annual	06/04/2026
SPEAG	E-Field Probe ES3DV3	3076	07/22/2025	Annual	07/22/2026
SPEAG	E-Field Probe EX3DV4	7622	12/12/2025	Annual	12/12/2026
SPEAG	E-Field Probe EX3DV4	7679	08/19/2025	Annual	08/19/2026
SPEAG	E-Field Probe EX3DV4	3768	10/20/2025	Annual	10/20/2026
SPEAG	E-Field Probe EX3DV4	7655	06/03/2025	Annual	06/03/2026
SPEAG	E-Field Probe EX3DV4	7907	01/23/2026	Annual	01/23/2027
SPEAG	E-Field Probe EX3DV4	7732	06/25/2025	Annual	06/25/2026
SPEAG	CLA13	1016	11/13/2025	Annual	11/13/2026
SPEAG	Dipole D750V3	1014	05/20/2025	Annual	05/20/2026
SPEAG	Dipole D835V2	4d165	04/14/2025	Annual	04/14/2026
SPEAG	Dipole D835V2	441	03/27/2026	Annual	03/27/2027
SPEAG	Dipole D1640V2	345	07/07/2025	Annual	07/07/2026
SPEAG	Dipole D1800V2	2d015	04/17/2025	Annual	04/17/2026
SPEAG	Dipole D1800V2	2d007	03/12/2026	Annual	03/12/2027
SPEAG	Dipole D1900V2	5d032	01/28/2026	Annual	01/28/2027
SPEAG	Dipole D2300V2	1010	05/19/2025	Annual	05/19/2026
SPEAG	Dipole D2450V2	743	02/19/2026	Annual	02/19/2027
SPEAG	Dipole D2600V2	1043	05/22/2025	Annual	05/22/2026
SPEAG	Dipole D3500V2	1132	01/28/2026	Annual	01/28/2027
SPEAG	Dipole D3700V2	1066	09/15/2025	Annual	09/15/2026
SPEAG	Dipole D3900V2	1019	05/21/2025	Annual	05/21/2026
SPEAG	Dipole D5GHzV2	1253	09/26/2025	Annual	09/26/2026

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
R&S	Wireless Communication Test Set / CMW500	167916	09/13/2025	Annual	09/13/2026
Anritsu	Radio Communication Tester / MT8820C	6201041449	12/17/2025	Annual	12/17/2026
Anritsu	Radio Communication Tester / MT8820C	6201144485	07/14/2025	Annual	07/14/2026
Anritsu	Radio Communication Tester / MT8820C	6201074225	01/07/2026	Annual	01/07/2027
Anritsu	Radio Communication Tester / MT8821C	6201664725	01/06/2026	Annual	01/06/2027
Anritsu	Radio Communication Tester / MT8821C	6201664727	12/02/2025	Annual	12/02/2026
Anritsu	Radio Communication Tester / MT8821C	6262044720	11/24/2025	Annual	11/24/2026
Anritsu	Radio Communication Test Station / MT8000A	6262148305	12/18/2025	Annual	12/18/2026
Anritsu	Radio Communication Test Station / MT8000A	6261987928	01/07/2026	Annual	01/07/2027
Agilent	WIRELESS COMMUNICATION / E5515C	MY50260992	05/20/2025	Annual	05/20/2026
Agilent	WIRELESS COMMUNICATION / E5515C	GB42230619	05/20/2025	Annual	05/20/2026
KEYSIGHT	Signal Analyzer / N9020A	MY54500650	07/15/2025	Annual	07/15/2026
Agilent	Power Divider / 11636B	50659	05/20/2025	Annual	05/20/2026
ROHDE&SCHWARZ	Bluetooth Tester / CBT	100272	01/06/2026	Annual	01/06/2027
Agilent	Power Meter / E4419B	MY41291386	09/13/2025	Annual	09/13/2026
Agilent	Power Meter / E4419B	MY40330223	09/15/2025	Annual	09/15/2026
Agilent	Power Meter / N1911A	MY45101406	05/19/2025	Annual	05/19/2026
Agilent	Power Sensor / 8481A	SG1091286	09/09/2025	Annual	09/09/2026
Agilent	Power Sensor / 8481A	MY41090873	01/06/2026	Annual	01/06/2027
Keysight	Power Sensor / N1921A	MY55220026	08/07/2025	Annual	08/07/2026
SPEAG	DAKS-12	1048	03/10/2026	Annual	03/10/2027
SPEAG	DAK-3.5	1377	09/08/2025	Annual	09/08/2026
R&S	VECTOR NETWORK ANALYZER / ZNB 20	102279	07/07/2025	Annual	07/07/2026
R&S	VECTOR NETWORK ANALYZER / ZNB 8	103719	03/31/2026	Annual	03/31/2027
Agilent	SIGNAL GENERATOR/E4421B	MY41000790	10/21/2025	Annual	10/21/2026
Agilent	SIGNAL GENERATOR / E4433B	US40052109	01/08/2026	Annual	01/08/2027
Agilent	SIGNAL GENERATOR / E8267D	MY50350097	02/26/2026	Annual	02/26/2027
EMPOWER	RF Power Amplifier / 2135DEFAAXLXX	1084	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier / 2001-BBS3Q7EBK	1041D/C0508	05/20/2025	Annual	05/20/2026
EMPOWER	RF Power Amplifier / BBS5K8CAJ	1011	09/15/2025	Annual	09/15/2026
MICRO LAB	LP Filter / LA-15N	10453	09/15/2025	Annual	09/15/2026
MICRO LAB	LP Filter / LA-30N	-	09/15/2025	Annual	09/15/2026
MICRO LAB	LP Filter / LA-60N	32011	09/15/2025	Annual	09/15/2026
Agilent	Attenuator (3dB) / 8693B	MY39260298	08/18/2025	Annual	08/18/2026
RF COREA	Attenuator (30dB)	A-0830	06/24/2025	Annual	06/24/2026
NARDA	Directional Coupler / 4226-10	7083	01/16/2026	Annual	01/16/2027
Agilent	Directional Bridge / 86205A	3140A04581	04/07/2026	Annual	04/07/2027

Note: All measurements were performed within the valid calibration period of the specific equipment.

* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

6. Measurement Uncertainty

The measured SAR was <1.5 W/Kg for 1g SAR and <3.75 W/Kg, for 10g SAR for all frequency Bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

Appendix A: SAR Test Results For Plimit CALCULATIONS

For some bands/modes, a lower P_{Limit} was selected as a more conservative evaluation.

Table A-1 DSI = 0 P_{Limit} Calculations – 2G/3G Phablet SAR

Freq.(MHz)	Ch.	Band	Mode	Ant.	Frame Avg. Meas. Power(dBm)	Test Position	Distance (mm)	Duty Cycle	Meas. 10g SAR(W/kg)	Plimit	Minimum Plimit	EFS Plimit [dBm]
836.6	190	GSM 850	GPRS 4TX	A	22.08	LEFT	0	1:2.08	0.054	38.7	28.4	22.8
836.6	190	GSM 850	GPRS 4TX	A	22.08	RIGHT	0	1:2.08	0.411	29.9		
836.6	190	GSM 850	GPRS 4TX	A	22.08	BOTTOM	0	1:2.08	0.580	28.4		
1 880	661	GSM 1900	GPRS 4TX	A	19.38	LEFT	0	1:2.08	0.221	29.9	24.1	19.8
1 880	661	GSM 1900	GPRS 4TX	A	19.38	RIGHT	0	1:2.08	0.078	34.4		
1 880	661	GSM 1900	GPRS 4TX	A	19.38	BOTTOM	0	1:2.08	0.836	24.1		
1 880	9400	UMTS 2	RMC	A	19.81	LEFT	0	1:1	0.254	29.7	24.7	19.0
1 880	9400	UMTS 2	RMC	A	19.81	RIGHT	0	1:1	0.088	34.3		
1 880	9400	UMTS 2	RMC	A	19.81	BOTTOM	0	1:1	0.813	24.7		
1 732.6	1413	UMTS 4	RMC	A	19.57	LEFT	0	1:1	0.265	29.3	24.2	19.0
1 732.6	1413	UMTS 4	RMC	A	19.57	RIGHT	0	1:1	0.043	37.2		
1 732.6	1413	UMTS 4	RMC	A	19.57	BOTTOM	0	1:1	0.859	24.2		
836.6	4183	UMTS 5	RMC	A	22.81	LEFT	0	1:1	0.093	37.1	28.1	22.0
836.6	4183	UMTS 5	RMC	A	22.81	RIGHT	0	1:1	0.468	30.1		
836.6	4183	UMTS 5	RMC	A	22.81	BOTTOM	0	1:1	0.743	28.1		

Table A-2 DSI = 0 *PLimit* Calculations – 4G Phablet SAR

Freq.(MHz)	Ch.	Band	Mode	Ant.	Frame Avg. Meas. Power(dBm)	Test Position	Distance (mm)	Duty Cycle	Meas. 10g SAR(W/kg)	PLimit [dBm]	Minimum PLimit [dBm]	EFS PLimit [dBm]
2 535	21100	LTE 7	QPSK	A	17.50	LEFT	0	1:1	0.321	26.4	22.3	18.0
2 535	21100	LTE 7	QPSK	A	17.50	RIGHT	0	1:1	0.113	30.9		
2 535	21100	LTE 7	QPSK	A	17.50	BOTTOM	0	1:1	0.826	22.3		
707.5	23095	LTE 12	QPSK	A	24.79	LEFT	0	1:1	0.025	44.8	29.6	27.2
707.5	23095	LTE 12	QPSK	A	24.79	RIGHT	0	1:1	0.418	32.6		
707.5	23095	LTE 12	QPSK	A	24.79	BOTTOM	0	1:1	0.826	29.6		
782	23230	LTE 13	QPSK	A	24.50	LEFT	0	1:1	0.042	42.2	28.9	26.2
782	23230	LTE 13	QPSK	A	24.50	RIGHT	0	1:1	0.649	30.4		
782	23230	LTE 13	QPSK	A	24.50	BOTTOM	0	1:1	0.904	28.9		
793	23330	LTE 14	QPSK	A	24.52	LEFT	0	1:1	0.040	42.5	28.5	25.9
793	23330	LTE 14	QPSK	A	24.52	RIGHT	0	1:1	0.637	30.5		
793	23330	LTE 14	QPSK	A	24.52	BOTTOM	0	1:1	0.992	28.5		
1 882.5	26365	LTE 25	QPSK	A	18.22	LEFT	0	1:1	0.229	28.6	25.5	18.0
1 882.5	26365	LTE 25	QPSK	A	18.22	RIGHT	0	1:1	0.065	34.1		
1 882.5	26365	LTE 25	QPSK	A	18.22	BOTTOM	0	1:1	0.471	25.5		
1 882.5	26365	LTE 25	QPSK	F	18.74	LEFT	0	1:1	0.463	26.1	26.1	18.0
1 882.5	26365	LTE 25	QPSK	F	18.74	TOP	0	1:1	0.277	28.3		
831.5	26865	LTE 26	QPSK	A	22.58	LEFT	0	1:1	0.033	41.4	28.9	22.0
831.5	26865	LTE 26	QPSK	A	22.58	RIGHT	0	1:1	0.504	29.5		
831.5	26865	LTE 26	QPSK	A	22.58	BOTTOM	0	1:1	0.580	28.9		
2 310	27710	LTE 30	QPSK	A	18.34	LEFT	0	1:1	0.347	26.9	22.3	18.0
2 310	27710	LTE 30	QPSK	A	18.34	RIGHT	0	1:1	0.137	31.0		
2 310	27710	LTE 30	QPSK	A	18.27	BOTTOM	0	1:1	1.010	22.3		
2 593	40620	LTE 41	QPSK	A	16.73	LEFT	0	1:1.58	0.301	25.9	22.5	17.0
2 593	40620	LTE 41	QPSK	A	16.73	RIGHT	0	1:1.58	0.088	31.3		
2 593	40620	LTE 41	QPSK	A	16.73	BOTTOM	0	1:1.58	0.657	22.5		
3 690	56640	LTE 48	QPSK	G	13.86	LEFT	0	1:1.58	0.186	25.1	25.1	14.0
3 690	56640	LTE 48	QPSK	G	13.86	TOP	0	1:1.58	0.030	33.1		
1 745	132322	LTE 66	QPSK	A	17.77	LEFT	0	1:1	0.256	27.7	23.4	18.0
1 745	132322	LTE 66	QPSK	A	17.77	RIGHT	0	1:1	0.032	36.7		
1 745	132322	LTE 66	QPSK	A	17.77	BOTTOM	0	1:1	0.681	23.4		
1 745	132322	LTE 66	QPSK	F	18.09	LEFT	0	1:1	0.340	26.8	26.8	18.0
1 745	132322	LTE 66	QPSK	F	18.09	TOP	0	1:1	0.127	31.0		
680.5	133297	LTE 71	QPSK	A	24.60	LEFT	0	1:1	0.071	40.1	30.5	27.9
680.5	133297	LTE 71	QPSK	A	24.60	RIGHT	0	1:1	0.443	32.1		
680.5	133297	LTE 71	QPSK	A	24.60	BOTTOM	0	1:1	0.641	30.5		

Table A-3 DSI = 0 *PLimit* Calculations – NR Phablet SAR

Freq. (MHz)	Ch.	Band	Mode	Ant.	Frame Avg. Meas. Power(dBm)	Test Position	Distance (mm)	Duty Cycle	Meas. 10g SAR(W/kg)	Plimit	Minimum Plimit	EFS Plimit [dBm]
836.5	167300	NR n5	DFT-S QPSK	A	22.25	LEFT	0	1:1	0.084	37.0	27.7	22.0
836.5	167300	NR n5	DFT-S QPSK	A	22.25	RIGHT	0	1:1	0.439	29.8		
836.5	167300	NR n5	DFT-S QPSK	A	22.25	BOTTOM	0	1:1	0.719	27.7		
1882.5	376500	NR n25	DFT-S QPSK	A	17.90	LEFT	0	1:1	0.236	28.2	24.0	18.0
1882.5	376500	NR n25	DFT-S QPSK	A	17.90	RIGHT	0	1:1	0.082	32.7		
1882.5	376500	NR n25	DFT-S QPSK	A	17.90	BOTTOM	0	1:1	0.608	24.0		
1882.5	376500	NR n25	DFT-S QPSK	F	18.31	LEFT	0	1:1	0.490	25.4	25.4	18.0
1882.5	376500	NR n25	DFT-S QPSK	F	18.31	TOP	0	1:1	0.312	27.3		
2310	462000	NR n30	DFT-S QPSK	A	17.77	LEFT	0	1:1	0.272	27.4	21.5	18.0
2310	462000	NR n30	DFT-S QPSK	A	17.77	RIGHT	0	1:1	0.120	31.0		
2310	462000	NR n30	DFT-S QPSK	A	17.77	BOTTOM	0	1:1	1.060	21.5		
2592.99	518598	NR n41	DFT-S QPSK	A	16.58	LEFT	0	1:1	0.299	25.8	21.9	17.0
2592.99	518598	NR n41	DFT-S QPSK	A	16.58	RIGHT	0	1:1	0.093	30.9		
2592.99	518598	NR n41	DFT-S QPSK	A	16.58	BOTTOM	0	1:1	0.738	21.9		
3570	638000	NR n48	DFT-S QPSK	G	14.72	LEFT	0	1:1	0.253	24.7	24.7	14.0
3570	638000	NR n48	DFT-S QPSK	G	14.72	TOP	0	1:1	0.027	34.4		
3624.99	641666	NR n48 SRS1	DFT-S QPSK	I	10.21	Top	0	1:1	0.122	23.3	23.3	14.0
3624.99	641666	NR n48 SRS2	DFT-S QPSK	D	14.04	RIGHT	0	1:1	0.008	39.0	30.0	14.0
3624.99	641666	NR n48 SRS2	DFT-S QPSK	D	14.04	TOP	0	1:1	0.063	30.0		
3624.99	641666	NR n48 SRS3	DFT-S QPSK	H	9.12	LEFT	0	1:1	0.077	24.2	24.2	14.0
3624.99	641666	NR n48 SRS3	DFT-S QPSK	H	9.12	TOP	0	1:1	0.001	43.1		
1745	349000	NR n66	DFT-S QPSK	A	17.76	LEFT	0	1:1	0.287	27.2	23.7	18.0
1745	349000	NR n66	DFT-S QPSK	A	17.76	RIGHT	0	1:1	0.039	35.8		
1745	349000	NR n66	DFT-S QPSK	A	17.76	BOTTOM	0	1:1	0.630	23.7		
1745	349000	NR n66	DFT-S QPSK	F	18.42	LEFT	0	1:1	0.302	27.6	27.6	18.0
1745	349000	NR n66	DFT-S QPSK	F	18.42	TOP	0	1:1	0.141	30.9		
1702.5	340500	NR n70	DFT-S QPSK	A	20.22	LEFT	0	1:1	0.278	29.8	22.7	20.0
1702.5	340500	NR n70	DFT-S QPSK	A	20.22	RIGHT	0	1:1	0.097	34.3		
1702.5	340500	NR n70	DFT-S QPSK	A	20.22	BOTTOM	0	1:1	1.400	22.7		
1702.5	340500	NR n70	DFT-S QPSK	F	19.46	LEFT	0	1:1	0.332	28.2	28.2	19.0
1702.5	340500	NR n70	DFT-S QPSK	F	19.46	TOP	0	1:1	0.139	32.0		
680.5	136100	NR n71	DFT-S QPSK	A	24.03	LEFT	0	1:1	0.086	38.7	30.4	27.4
680.5	136100	NR n71	DFT-S QPSK	A	24.03	RIGHT	0	1:1	0.385	32.2		
680.5	136100	NR n71	DFT-S QPSK	A	24.03	BOTTOM	0	1:1	0.574	30.4		
3930	662000	NR n77	DFT-S QPSK	G	13.76	LEFT	0	1:1	0.383	21.9	21.9	13.0
3930	662000	NR n77	DFT-S QPSK	G	13.76	TOP	0	1:1	0.095	28.0		
3500.01	633334	NR n77 DoD	DFT-S QPSK	G	13.72	LEFT	0	1:1	0.174	25.3	25.3	13.0
3500.01	633334	NR n77 DoD	DFT-S QPSK	G	13.72	TOP	0	1:1	0.022	34.3		
3750	650000	NR n77 SRS1	DFT-S QPSK	I	9.97	TOP	0	1:1	0.141	22.5	22.5	13.0
3500.01	633334	NR n77 DoD SRS1	DFT-S QPSK	I	9.36	TOP	0	1:1	0.352	17.9	17.9	13.0
3930	662000	NR n77 SRS2	DFT-S QPSK	D	13.52	LEFT	0	1:1	0.013	36.4	28.6	13.0
3930	662000	NR n77 SRS2	DFT-S QPSK	D	13.52	TOP	0	1:1	0.078	28.6		
3500.01	633334	NR n77 DoD SRS2	DFT-S QPSK	D	12.81	LEFT	0	1:1	0.003	43.8	29.9	13.0
3500.01	633334	NR n77 DoD SRS2	DFT-S QPSK	D	12.81	TOP	0	1:1	0.071	29.9		
3750	650000	NR n77 SRS3	DFT-S QPSK	H	9.16	RIGHT	0	1:1	0.048	26.3	26.3	13.0
3750	650000	NR n77 SRS3	DFT-S QPSK	H	9.16	TOP	0	1:1	0.001	43.1		
3500.01	633334	NR n77 DoD SRS3	DFT-S QPSK	H	8.33	RIGHT	0	1:1	0.089	22.8	22.8	13.0
3500.01	633334	NR n77 DoD SRS3	DFT-S QPSK	H	8.33	TOP	0	1:1	0.001	42.3		

End.