



FCC 47 CFR § 2.1093
IEC/IEEE Std 62209-1528 : 2020
IEC TR 63170 : 2018

RF EVALUATION REPORT (UNII 6e(above 6GHz))
FOR

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

MODEL NUMBER: SM-S908B/DS

FCC ID: A3LSMS908B

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TL-637

Revision History

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V2	11/18/2021	Revised model number in Report. Revised Appendix A.	Sunghoon Kim

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1. Attestation of Test Results

Applicant Name	SAMSUNG ELECTRONICS CO.,LTD.		
FCC ID	A3LSMS908B		
Model Number	SM-S908B/DS		
Applicable Standards	FCC 47 CFR § 2.1093 IEC/IEEE Std 62209-1528 : 2020 IEC TR 63170 : 2018 Published RF exposure KDB procedures		
Exposure Category	SAR Limits (W/Kg)		Power Density Limits (mW/cm ² over 4cm ²)
	Peak spatial-average (1g of tissue)	Product Specific 10g (10g of tissue)	IPD (Incident Power Density) & APD (Absorbed Power Density)
General population / Uncontrolled exposure	1.6	4.0	1.0
RF Exposure Conditions	Equipment Class - NII		
	The Highest Reported SAR (W/kg)	APD (mW/cm ²)	IPD (mW/cm ²)
Head	0.072	0.052	0.330
Body-worn	0.222	0.118	
Hotspot	N/A	N/A	
Product Specific 10g	0.377	0.653	
Date Tested	10/25/2021 to 11/2/2021		
Test Results	Pass		
<p>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.</p> <p>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.</p>			
Approved & Released By:		Prepared By:	
			
Justin Park Operations Leader UL Korea, Ltd. Suwon Laboratory		Sunghoon Kim Test Engineer UL Korea, Ltd. Suwon Laboratory	

2. Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE Std 1528-2013, IEC TR 63170-2018, IEC 62479:2010 the following FCC Published RF exposure [KDB](#) procedures:

- 248227 D01 802.11 Wi-Fi SAR v02r02
- 447498 D01 General RF Exposure Guidance v06
- 648474 D04 Handset SAR v01r03
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- 941225 D07 UMPC Mini Tablet v01r02

In addition to the above, the following information was used:

- [TCB workshop](#) October, 2020; 5G RFX Policies (U-NII 6-7 GHz RF Exposure)
- SPEAG, 5G Module V1.2 Application Note: 5G Compliance Testing, August 2018
- SPEAG DASY6 Application Note : Interim Procedures for Devices Operating at 6 – 10 GHz)

3. Facilities and Accreditation

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

Suwon
SAR 6 Room
SAR 9 Room

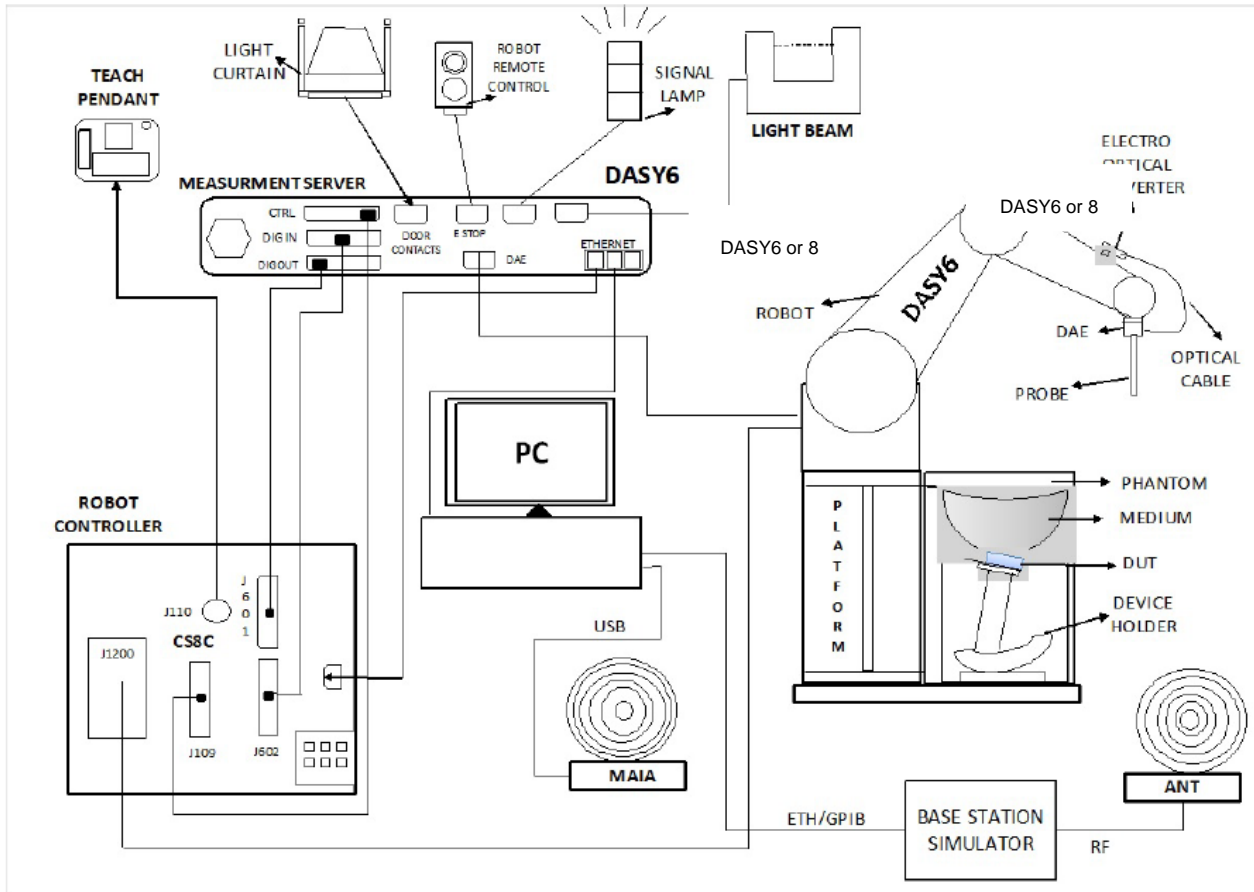
UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.

The full scope of accreditation can be viewed at <https://www.iasonline.org/wp-content/uploads/2017/05/TL-637-cert-New.pdf>.

4. SAR and Power Density 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.

4.1.1. 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 IEC/IEEE Standard 62209-1528, 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 IEC/IEEE Standard 62209-1528.

Parameter	DUT transmit frequency being tested	
	$f \leq 3 \text{ GHz}$	$3 \text{ GHz} < f \leq 10 \text{ GHz}$
Maximum distance between the measured points (geometric centre of the sensors) and the inner phantom surface (z_{M1} in Figure 20 in mm)	5 ± 1	$\delta \ln(2)/2 \pm 0,5^a$
Maximum spacing between adjacent measured points in mm (see O.8.3.1) ^b	20, or half of the corresponding zoom scan length, whichever is smaller	$60/f$, or half of the corresponding zoom scan length, whichever is smaller
Maximum angle between the probe axis and the phantom surface normal (α in Figure 20) ^c	5° (flat phantom only) 30° (other phantoms)	5° (flat phantom only) 20° (other phantoms)
Tolerance in the probe angle	1°	1°

^a δ is the penetration depth for a plane-wave incident normally on a planar half-space.

^b See Clause O.8 on how Δx and Δy may be selected for individual area scan requirements.

^c The probe angle relative to the phantom surface normal is restricted due to the degradation in the measurement accuracy in fields with steep spatial gradients. The measurement accuracy decreases with increasing probe angle and increasing frequency. This is the reason for the tighter probe angle restriction at frequencies above 3 GHz.

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 IEC/IEEE Standard 62209-1528.

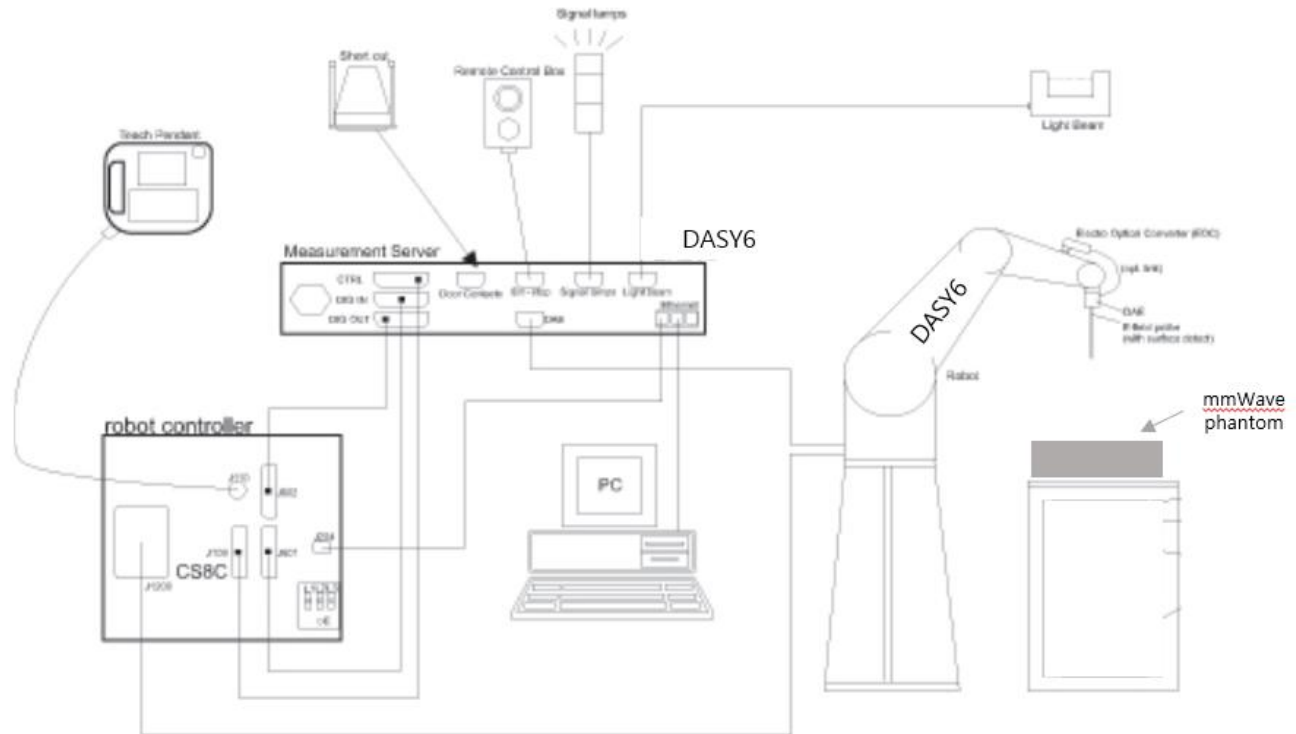
Parameter	DUT transmit frequency being tested	
	$f \leq 3$ GHz	3 GHz $< f \leq 10$ GHz
Maximum distance between the closest measured points and the phantom surface (z_{M1} in Figure 20 and Table 3, in mm)	5	$\delta \ln(2)/2^a$
Maximum angle between the probe axis and the phantom surface normal (α in Figure 20)	5° (flat phantom only) 30° (other phantoms)	5° (flat phantom only) 20° (other phantoms)
Maximum spacing between measured points in the x - and y -directions (Δx and Δy , in mm)	8	$24/f^b$
For uniform grids: Maximum spacing between measured points in the direction normal to the phantom shell (Δz_1 in Figure 20, in mm)	5	$10/(f - 1)$
For graded grids: Maximum spacing between the two closest measured points in the direction normal to the phantom shell (Δz_1 in Figure 20, in mm)	4	$12/f$
For graded grids: Maximum incremental increase in the spacing between measured points in the direction normal to the phantom shell ($R_z = \Delta z_2/\Delta z_1$ in Figure 20)	1,5	1,5
Minimum edge length of the zoom scan volume in the x - and y -directions (L_z in O.8.3.2, in mm)	30	22
Minimum edge length of the zoom scan volume in the direction normal to the phantom shell (L_h in O.8.3.2 in mm)	30	22
Tolerance in the probe angle	1°	1°
^a δ is the penetration depth for a plane-wave incident normally on a planar half-space.		
^b This is the maximum spacing allowed, which might not work for all circumstances.		

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.

4.2. Incident Power Density 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).
- The EUmmWVx probe is based on the pseudo-vector probe design, which not only measures the field magnitude but also derives its polarization ellipse.
- 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 which is specialized for 5G other accessories according to the targeted measurement.

4.2.1. Power Density 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 device under test.

Step 2: 5G Scan

The steps in the X, Y, and Z directions are specified in terms of fractions of the signal wavelength, λ . Area Scan Parameters extracted from SPEAG, 5G Module V1.2 Application Note.

Recommended settings for measurement of verification sources

Frequency [GHz]	Grid step	Grid extent X/Y [mm]	Measurement points
10	$0.25 \left(\frac{\lambda}{4}\right)$	120/120	16 × 16
30	$0.25 \left(\frac{\lambda}{4}\right)$	60/60	24 × 24
60	$0.25 \left(\frac{\lambda}{4}\right)$	31/31	26 × 26
90	$0.25 \left(\frac{\lambda}{4}\right)$	29/29	35 × 35

The minimum distance of probe sensors to verification source surface, horn antenna, is 10 mm.

Per equipment manufacturer guidance for 6 – 10GHz, Power density was measured at $d=2\text{mm}$ and $d=\lambda/5\text{mm}$ using same grid size and grid step size for some frequencies and surfaces. The integrated power Density (iPD) was calculated based on these measurements. Since iPD ratio between the two distances is < 1dB, the grid step was sufficient for determining compliance at $d=2\text{mm}$.

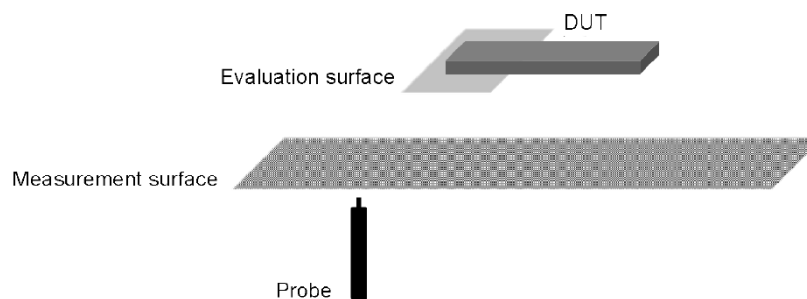
Step 3: Power drift measurement

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. When the drift is larger than $\pm 5\%$, test is repeated from step1.

4.2.2. Total Field and Power Flux Density Reconstruction(measurement distance)

Reconstruction algorithms are used to project or transform the measured fields from the measurement surface to the evaluation surface (below fig) in order to determine power density or to compute spatial-average and/or local power density with known uncertainty.

Manufacture has developed a reconstruction approach based on the Gerchberg-Saxton algorithm, which benefits from the availability of the E-field polarization ellipse information obtained with the EUmWVx probe. This reconstruction algorithm, together with the ability of the probe to measure extremely close to the source without perturbing the field, permits reconstruction of the E- and H-fields, as well as of the power density, on measurement planes.



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.

4.3.1. SAR Test Equipment

Dielectric Property Measurements

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Network Analyzer	Agilent	E5071C	MY46522054	8-6-2022
Network Analyzer	Agilent	ZNB 20	102256	8-6-2022
Dielectric Assessment Kit	SPEAG	DAK-3.5	1196	7-21-2022
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	N/A
Thermometer	LKM	DTM3000	3851	8-4-2022

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
MXG Analog Signal Generator	Agilent	N5173B	MY59101083	8-4-2022
Power Sensor	Agilent	U2000A	MY61010010	8-4-2022
Power Sensor	Agilent	U2000A	MY54260010	8-4-2022
Power Amplifier	EXODUS	AMP2027ADB	10002	8-4-2022
Power Amplifier	MINI-CIRCUITS	ZVE-3W-183+	311602009	8-4-2022
Directional Coupler	MINI-CIRCUITS	ZUDC20-183+	N/A	8-3-2022
Low Pass Filter	MINI-CIRCUITS	WLKX10-11000-13640-21000-60TS	1	8-3-2022
Attenuator	Agilent	8491B/003	MY39272276	8-17-2022
Attenuator	Agilent	8491B/003	VE2017A0283	8-4-2022
Attenuator	Agilent	8491B/010	MY39272011	8-4-2022
Attenuator	Agilent	8491B/020	MY39271973	8-4-2022
E-Field Probe	SPEAG	EX3DV4	7545	8-26-2022
Data Acquisition Electronics	SPEAG	DAE4	1668	4-8-2022
System Validation Dipole	SPEAG	D6.5GHzV2	1010	8-21-2022
Thermometer	LUTRON	MHB-382SD	AK.18789	8-3-2022

Note(s):

1. For System Validation Dipole, Calibration interval applied every 2 years according to referencing KDB 865664 guidance.
2. Refer to Appendix F that mentioned about justification for Extended SAR Dipole Calibrations.

4.3.2 Incident Power Density Test Equipment

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
MXG Analog Signal Generator	Agilent	N5173B	MY59101083	8-4-2022
Power Sensor	Agilent	U2000A	MY61010010	8-4-2022
Power Sensor	Agilent	U2000A	MY54260010	8-4-2022
Power Amplifier	EXODUS	AMP2027ADB	10002	8-4-2022
Power Amplifier	MINI-CIRCUITS	ZVE-3W-183+	311602009	8-4-2022
Directional Coupler	MINI-CIRCUITS	ZUDC20-183+	N/A	8-3-2022
Low Pass Filter	MINI-CIRCUITS	WLKX10-11000-13640-21000-60TS	1	8-3-2022
Attenuator	Agilent	8491B/003	MY39272276	8-17-2022
Attenuator	Agilent	8491B/003	VE2017A0283	8-4-2022
Attenuator	Agilent	8491B/010	MY39272011	8-4-2022
Attenuator	Agilent	8491B/020	MY39271973	8-4-2022
5G probe	SPEAG	EummmWV4	9559	4-1-2022
Data Acquisition Electronics	SPEAG	DAE4	1667	4-8-2022
5G Verification Source (10GHz)	SPEAG	5G verification source_10GHz	1022	1-18-2022
Thermometer	LUTRON	MHB-382SD	AK.12102	8-3-2022

5. Measurement Uncertainty

5.1. SAR Measurement Uncertainty

Measurement uncertainty for 6 GHz to 10 GHz

(According to IEEE 62209-1528)

a	b	c		d	e f(d,k)	f	g	h = cxf/e	l = cxg/e	k
Uncertainty component	Reference	Tol. 1 g (±%)	Tol. 10 g (±%)	Prob. Dist.	Div.	c_i (1 g)	c_i (10 g)	1 g u_i (± %)	10 g u_i (± %)	v_i
Measurement System Errors										
Probe Calibration	8.4.1.1	18.6		Normal	2	1	1	9.3	9.3	∞
Probe Calibration Drift	8.4.1.2	1.7		Rectangular	1.732	1	1	1.0	1.0	∞
Probe Linearity	8.4.1.3	4.7		Rectangular	1.732	1	1	2.7	2.7	∞
Broadband Signal	8.4.1.4	2.8		Rectangular	1.732	1	1	1.6	1.6	∞
Probe Isotropy	8.4.1.5	7.6		Rectangular	1.732	1	1	4.4	4.4	∞
Data Acquisition	8.4.1.6	0.3		Normal	1	1	1	0.3	0.3	∞
RF Ambient	8.4.1.7	1.8		Normal	1	1	1	1.8	1.8	∞
Probe Positioning	8.4.1.8	0.005		Normal	1	0.50	0.50	0.25	0.25	∞
Data Processing	8.4.1.9	3.5		Normal	1	1	1	3.5	3.5	∞
Phantom and Device Errors										
Conductivity (meas.)DAK	8.4.2.1	2.5		Normal	1	0.78	0.71	2.0	1.8	∞
Conductivity (temp.)BB	8.4.2.2	2.4		Rectangular	1.732	0.78	0.71	1.1	1.0	∞
Phantom Permittivity	8.4.2.3	14.0		Rectangular	1.732	0	0	0.0	0.0	∞
Distance DUT - TSL	8.4.2.4	2.0		Normal	1	2	2	4.0	4.0	∞
Device Positioning	8.4.2.5	2.4	1.6	Normal	1	1	1	2.4	1.6	40
Device Holder	8.4.2.6	3.6		Normal	1	1	1	3.6	3.6	∞
DUT Modulation	8.4.2.7	2.4		Rectangular	1.732	1	1	1.4	1.4	∞
Time-average SAR	8.4.2.8	1.7		Rectangular	1.732	1	1	1.0	1.0	∞
DUT drift	8.4.2.9	5.0		Normal	1	1	1	5.0	5.0	∞
Correction to the SAR results										
Deviation to Target	8.4.3.1	1.9		Normal	1	1	0.84	1.9	1.6	∞
Combined Standard Uncertainty $U_c(y) =$								RSS	14.26	14.09
Expanded Uncertainty U , Coverage Factor = 2, > 95 % Confidence =									28.53	28.18

5.1.1. Decision rule

Decision rule for statement(s) of conformity is based on Procedures 1, Clause 4.4.2 in IEC Guide 115:2007.

5.2. Incident Power Density Measurement Uncertainty

Measurement Uncertainty for cDASY6 Module mmWave						
Error Description	Uncertainty value (\pm dB)	Probe Dist.	Divisor	(Ci)	Std. Unc. (\pm dB)	(Vi)
Uncertainty terms dependent on the measurement system						
Calibration	0.49	Normal	1	1	0.49	Infinity
Probe correction	0.00	Rectangular	1.73	1	0.00	Infinity
Frequency response (BW \leq 1 GHz)	0.20	Rectangular	1.73	1	0.12	Infinity
Sensor cross coupling	0.00	Rectangular	1.73	1	0.00	Infinity
Isotropy	0.50	Rectangular	1.73	1	0.29	Infinity
Linearity	0.20	Rectangular	1.73	1	0.12	Infinity
Probe scattering	0.00	Rectangular	1.73	1	0.00	Infinity
Probe positioning offset	0.30	Rectangular	1.73	1	0.17	Infinity
Probe positioning repeatability	0.04	Rectangular	1.73	1	0.02	Infinity
Sensor mechanical offset	0.00	Rectangular	1.73	1	0.00	Infinity
Probe spatial resolution	0.00	Rectangular	1.73	1	0.00	Infinity
Field impedance dependance	0.00	Rectangular	1.73	1	0.00	Infinity
Amplitude and phase drift	0.00	Rectangular	1.73	1	0.00	Infinity
Amplitude and phase noise	0.04	Rectangular	1.73	1	0.02	Infinity
Measurement area truncation	0.10	Rectangular	1.73	1	0.06	Infinity
Data acquisition	0.03	Normal	1.00	1	0.03	Infinity
Sampling	0.00	Rectangular	1.73	1	0.00	Infinity
Field reconstruction	1.97	Rectangular	1.73	1	1.14	Infinity
Forward transformation	0.00	Rectangular	1.73	1	0.00	Infinity
Power density scaling	-	Rectangular	1.73	1	-	Infinity
Spatial averaging	0.10	Rectangular	1.73	1	0.06	Infinity
System detection limit	0.04	Rectangular	1.73	1	0.02	Infinity
Uncertainty terms dependent on the DUT and environmental factors						
Probe coupling with DUT	0.00	Rectangular	1.73	1	0.00	Infinity
Modulation response	0.40	Rectangular	1.73	1	0.23	Infinity
Integration time	0.00	Rectangular	1.73	1	0.00	Infinity
Response time	0.00	Rectangular	1.73	1	0.00	Infinity
Device holder influence	0.10	Rectangular	1.73	1	0.06	Infinity
DUT alignment	0.00	Rectangular	1.73	1	0.00	Infinity
RF ambient conditions	0.04	Rectangular	1.73	1	0.02	Infinity
Ambient reflections	0.04	Rectangular	1.73	1	0.02	Infinity
Immunity / secondary reception	0.00	Rectangular	1.73	1	0.00	Infinity
Drift of the DUT	0.22	Rectangular	1.73	1	0.13	Infinity
Combined Std. Uncertainty					1.33	
Expanded Standard Uncertainty (95%)					2.65	

5.2.1. Decision rule

Decision rule for statement(s) of conformity is based on Procedures 2, Clause 4.4.3 in IEC Guide 115:2007.

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Refer to Appendix A.		
Back Cover	<input checked="" type="checkbox"/> The Back Cover is not removable.		
Battery Options	<input checked="" type="checkbox"/> The rechargeable battery is not user accessible		
Test Sample Information	No.	S/N	Notes
	1	R3CR80AAZJJ	Conducted
	2	575854c0513f7ece	Radiated
	3	572cf07d293f7ece	Radiated
	4	R3CR80ABWRF	Radiated
	5	R3CRA0HCAHN	Radiated

6.2. Wireless Technologies of UNII 6e

Wireless technologies	Frequency bands	Operating mode	Duty Cycle used for SAR & PD testing
Wi-Fi_UNII 6e (Above 6GHz)	UNII Band 5 (5.925-6.425 GHz) UNII Band 6 (6.425-6.525 GHz) UNII Band 7 (6.525-6.885 GHz) UNII Band 8 (6.885-7.125 GHz)	802.11a 802.11ax (HE20) 802.11ax (HE40) 802.11ax (HE80) 802.11ax (HE160)	92.2% <small>(802.11ax (HE160))</small>

Notes:

Duty cycle for Wi-Fi is referenced from the UNII report.

6.3. Nominal and Maximum Output Power

RF Air interface	Mode	Max. RF Output Power (dBm)		
		WLAN Ant.1	WLAN Ant.2	MIMO (WLAN Ant.1 + Ant.2)
WiFi 6 GHz (UNII Band 5 - 8)	802.11a	9.0	9.0	12.0
	802.11ax HE20	9.0	9.0	12.0
	802.11ax HE40	10.0	10.0	13.0
	802.11ax HE80	10.0	10.0	13.0
	802.11ax HE160	10.0	10.0	13.0

Note(s):

Only MIMO mode supports for UNII 6e Bands.

7. RF Exposure Conditions (Test Configurations)

Refer to Appendix A for the specific details of the antenna-to-antenna and antenna-to-edge(s) distances.

Wireless technologies	RF Exposure Conditions	Antenna	DUT-to-User Separation	Test Position	Antenna-to-edge/surface	SAR Required	Note
UNII 6e	Head	WiFi 6G MIMO	0 mm	Left Touch	N/A	Yes	
				Left Tilt (15°)	N/A	Yes	
				Right Touch	N/A	Yes	
				Right Tilt (15°)	N/A	Yes	
	Body		15 mm	Rear	N/A	Yes	
				Front	N/A	Yes	
	Product Specific 10-g		0 mm	Rear	< 25 mm	Yes	
				Front	< 25 mm	Yes	
				Edge 1 (Top)	< 25 mm	Yes	
				Edge 2 (Right)	> 25 mm	No	1
				Edge 3 (Bottom)	> 25 mm	No	1
				Edge 4 (Left)	< 25 mm	Yes	

Notes:

- SAR is not required because the distance from the antenna to the edge is > 25 mm as per KDB 941225 D06 Hot Spot SAR.
- For Phablet devices: When hotspot mode applies, Product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.
- For Phablet devices: When hotspot mode is not supported, Product specific 10-g SAR is required for all surfaces and edges with an antenna located at ≤ 25mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions.

8. SAR System Check with Dielectric Property Measurements

8.1. Dielectric Property Measurements

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized.

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after 1 days of use; for example, when the parameters are marginal at the beginning of the measurement series. Tissue dielectric parameters were measured at the low, middle and high frequency of each operating frequency range of the test device.

Tissue Dielectric Parameters

Refer to Table 2 within the IEC/IEEE Std 62209-1528 : 2020

Target Frequency (MHz)	Tissue parameters	
	ϵ_r	σ (S/m)
5800	35.3	5.27
6000	35.1	5.48
6500	34.5	6.07
7000	33.9	6.65
7500	33.3	7.24

Dielectric Property Measurements Results:

SAR 6 Room

Date	Freq. (MHz)		Liquid Parameters	Measured	Target	Delta (%)	Limit ±(%)		
10-25-2021	Head 5920	e'	35.9400	Relative Permittivity (ϵ_r):	35.94	35.17	2.20	5	
		e"	15.9800	Conductivity (σ):	5.26	5.39	-2.47	5	
	Head 6200	e'	35.4800	Relative Permittivity (ϵ_r):	35.48	34.83	1.87	5	
		e"	16.2200	Conductivity (σ):	5.59	5.71	-2.14	5	
	Head 6500	e'	35.0100	Relative Permittivity (ϵ_r):	35.01	34.46	1.60	5	
		e"	16.4300	Conductivity (σ):	5.94	6.07	-2.20	5	
	Head 6700	e'	34.6800	Relative Permittivity (ϵ_r):	34.68	34.23	1.31	5	
		e"	16.5800	Conductivity (σ):	6.18	6.30	-2.00	5	
	Head 7000	e'	34.2400	Relative Permittivity (ϵ_r):	34.24	33.88	1.06	5	
		e"	16.7600	Conductivity (σ):	6.52	6.65	-1.90	5	
	10-26-2021	Head 5920	e'	35.5300	Relative Permittivity (ϵ_r):	35.53	35.17	1.04	5
			e"	16.8800	Conductivity (σ):	5.56	5.39	3.02	5
Head 6200		e'	35.0200	Relative Permittivity (ϵ_r):	35.02	34.83	0.55	5	
		e"	17.1700	Conductivity (σ):	5.92	5.71	3.59	5	
Head 6500		e'	34.5500	Relative Permittivity (ϵ_r):	34.55	34.46	0.26	5	
		e"	17.2900	Conductivity (σ):	6.25	6.07	2.91	5	
Head 6700		e'	34.1200	Relative Permittivity (ϵ_r):	34.12	34.23	-0.32	5	
		e"	17.3800	Conductivity (σ):	6.47	6.30	2.73	5	
Head 7000		e'	33.5400	Relative Permittivity (ϵ_r):	33.54	33.88	-1.00	5	
		e"	17.5900	Conductivity (σ):	6.85	6.65	2.95	5	
10-27-2021		Head 5920	e'	34.9400	Relative Permittivity (ϵ_r):	34.94	35.17	-0.64	5
			e"	16.6700	Conductivity (σ):	5.49	5.39	1.74	5
	Head 6200	e'	34.4900	Relative Permittivity (ϵ_r):	34.49	34.83	-0.98	5	
		e"	16.8800	Conductivity (σ):	5.82	5.71	1.84	5	
	Head 6500	e'	33.9200	Relative Permittivity (ϵ_r):	33.92	34.46	-1.57	5	
		e"	17.1100	Conductivity (σ):	6.18	6.07	1.84	5	
	Head 6700	e'	33.5200	Relative Permittivity (ϵ_r):	33.52	34.23	-2.07	5	
		e"	17.3600	Conductivity (σ):	6.47	6.30	2.61	5	
	Head 7000	e'	32.9900	Relative Permittivity (ϵ_r):	32.99	33.88	-2.63	5	
		e"	17.4400	Conductivity (σ):	6.79	6.65	2.08	5	

8.2. System Check

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every days.

System Performance Check Measurement Conditions:

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness: 2.0 ±0.2 mm (bottom plate) filled with Simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be ≥ 10.0 cm for measurements > 6 GHz.
- The DASY system with an E-Field Probe was used for the measurements.
- The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 5 mm (above 6GHz) from dipole center to the simulating liquid surface.
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

Reference Target SAR Values

The reference SAR values can be obtained from the calibration certificate of system validation dipoles.

System Dipole	Serial No.	Cal. Date	Freq. (MHz)	Target SAR Values (W/kg)	
				1g/10g	Head
D6.5GHzV2	1010	8-21-2020	6500	1g	291.00
				10g	53.10

System Check Results

The 1-g and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within 10% of the manufacturer calibrated dipole SAR target.

SAR 6 Room

Date Tested	System Dipole		T.S. Liquid	Measured Results		Target (Ref. Value)	Delta ±10 %	Plot No.	
	Type	Serial #		Zoom Scan to 100 mW	Normalize to 1 W				
10-25-2021	D6.5GHzV2	1010	Head	1g	29.50	295.00	291.00	1.37	
				10g	5.49	54.90	53.10	3.39	
10-26-2021	D6.5GHzV2	1010	Head	1g	29.10	291.00	291.00	0.00	
				10g	5.47	54.70	53.10	3.01	
10-27-2021	D6.5GHzV2	1010	Head	1g	30.30	303.00	291.00	4.12	1
				10g	5.70	57.00	53.10	7.34	

9. IPD(Incident Power Density) System with Dielectric Property

9.1. Dielectric Property

Media is air so Relative Permittivity (ϵ_r) and Conductivity (σ) is 1.

9.2. System Check

Per Nov 2017,TCB Workshop

System validation is required before a system is deployed for measurement

System check is also required before each series of continuous measurement and, as applicable, repeated at least weekly

Peak and spatially averaged power density at the peak location(s) must be compared to calibrated results according to the defined test conditions

- the same spatial resolution and measurement region used in the waveguide calibration should be applied to system validation and system check
- 4 cm² spatial averaging have been used according to FCC requirement.
- power density distribution should also be verified, both spatially (shape) and numerically (level) through visual inspection for noticeable differences
- The Horn antenna input power (forward power) was 100 mW.
- The measured results should be within 10% of the calibrated targets

Reference Target PD Values

Per the manufacturer's guide, the target value of the calibration report was converted to a value of 100mW input power.

5G verification Source	Serial No.	Cal. Date	Freq. (MHz)	Averaging area	Prad (mW)	Input power (mW)	Target PD Values (W/m ²)		Note
							1 cm ²	4 cm ²	
10GHz	1022	1-18-2021	100000	Circular	74		45.10	42.20	Cal.report target
10GHz	1022	1-18-2021	100000	Circular		100	60.95	57.03	Convert target from Cal.report

SAR 9 Room

Date	Source SN	Source Cal. Due Data	Input Power (mW)	Measured Results for 1cm ² (W/m ²)	Target (Ref. Value) (W/m ²)	Delta $\pm 10\%$	Measured Total psPD for 4cm ² (W/m ²)	Target (Ref. Value) (W/m ²)	Delta ($\pm 10\%$)	visual inspection	Plot No.
10-26-2021	1022	2-18-2022	100	57.80	60.95	-5.17	54.10	57.03	-5.14	confirmed	2
10-27-2021	1022	2-19-2022	100	61.60	60.95	1.07	56.80	57.03	-0.40	confirmed	
10-28-2021	1022	2-20-2022	100	58.60	60.95	-3.86	54.10	57.03	-5.14	confirmed	
10-29-2021	1022	2-21-2022	100	59.70	60.95	-2.05	55.10	57.03	-3.38	confirmed	
11-2-2021	1022	2-21-2022	100	63.60	60.95	4.35	57.70	57.03	1.17	confirmed	3

Note(s):

psPD value used the pS_{tot} avg value of test result plot.

9.3. Wi-Fi 6 GHz (U-NII Bands)

Band (GHz)	Mode	Data Rate	Ch #	Freq. (MHz)	Max. Average Power			
					WLAN MIMO Ant.1		WLAN MIMO Ant.2	
					Avg Pwr (dBm)	Max. Tune-up Limit (dBm)	Avg Pwr (dBm)	Max. Tune-up Limit (dBm)
UNII 5 (5.925 - 6.425 GHz)	802.11a	6 Mbps	1	5935	7.3	9.0	6.9	9.0
			45	6175	7.7		7.6	
			93	6415	7.2		7.6	
	802.11ax (HE20)	7.3 Mbps	1	5935	7.5	9.0	6.9	9.0
			45	6175	7.9		7.8	
			93	6415	7.8		8.1	
	802.11ax (HE40)	14.6 Mbps	3	5965	8.6	10.0	7.6	10.0
			43	6165	8.7		8.0	
			91	6405	8.7		8.2	
	802.11ax (HE80)	36.0 Mbps	7	5985	8.6	10.0	7.5	10.0
			39	6145	8.3		8.0	
			87	6385	8.7		8.0	
	802.11ax (HE160)	72.0 Mbps	15	6025	8.4	10.0	10.0	10.0
			47	6185	8.5		8.6	
			79	6345	8.6		8.1	
UNII 6 (6.425 - 6.525 GHz)	802.11a	6 Mbps	97	6435	7.1	9.0	8.4	9.0
			105	6475	6.7		8.1	
			113	6515	7.1		8.2	
	802.11ax (HE20)	7.3 Mbps	97	6435	8.0	9.0	9.0	9.0
			105	6475	7.6		8.6	
			113	6515	7.6		8.4	
	802.11ax (HE40)	14.6 Mbps	99	6445	8.2	10.0	7.8	10.0
			115	6525	8.4		7.9	
	802.11ax (HE80)	36.0 Mbps	103	6465	8.5	10.0	9.0	10.0
			111	6505	9.1		8.5	
UNII 7 (6.525 - 6.885 GHz)	802.11a	6 Mbps	117	6535	7.2	9.0	7.8	9.0
			149	6695	7.2		7.5	
			185	6875	7.3		8.0	
	802.11ax (HE20)	7.3 Mbps	117	6535	7.9	9.0	8.5	9.0
			149	6695	7.8		8.0	
			185	6875	8.0		8.3	
	802.11ax (HE40)	14.6 Mbps	123	6565	8.6	10.0	8.0	10.0
			147	6685	8.5		8.1	
			179	6845	8.4		8.2	
	802.11ax (HE80)	36.0 Mbps	119	6545	8.7	10.0	8.5	10.0
			151	6705	8.9		8.7	
			183	6865	8.7		9.0	
	802.11ax (HE160)	72.0 Mbps	143	6665	9.5	10.0	8.9	10.0
			175	6825	8.8		8.8	
	UNII 8 (6.885 - 7.125 GHz)	802.11a	6 Mbps	189	6895	8.1	9.0	8.1
209				6995	8.0	8.0		
233				7115	7.6	7.3		
802.11ax (HE20)		7.3 Mbps	189	6895	8.9	9.0	8.6	9.0
			209	6995	8.6		8.3	
			233	7115	2.8		2.9	
802.11ax (HE40)		14.6 Mbps	187	6885	8.6	10.0	8.1	10.0
			203	6965	9.4		7.8	
			227	7085	8.7		7.7	
802.11ax (HE80)		36.0 Mbps	199	6945	9.5	10.0	8.4	10.0
	215		7025	9.1	8.4			
802.11ax (HE160)	72.0 Mbps	207	6985	9.0	10.0	8.9	10.0	

Note(s):

Per TCB workshop Oct.2020's guide, Channel power verification was performed for UNII 6e (5925MHz-7125MHz), And 5 test channels of 802.11ax (HE160) were determined for SAR & PD test. Refer to blue box in table.

10. SAR and APD(Absorbed Power Density) Results

SAR Test Reduction criteria are as follows:

- Reported SAR(W/kg) for Wi-Fi = Measured SAR * Tune-up scaling factor * Duty Cycle scaling factor
- Duty Cycle scaling factor = 1 / Duty cycle (%)

KDB 447498 D01 General RF Exposure Guidance:

Testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

KDB 648474 D04 Handset SAR:

With headset attached, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

KDB 648474 D04 Handset SAR (Phablet Only):

For smart phones, with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm.

When hotspot mode does not apply, 10-g extremity SAR is required for all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge in direct contact with a flat phantom, to address interactive hand use exposure conditions. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold.

Additional 1-g SAR testing at 5 mm is not required when hotspot mode 10-g extremity SAR is not required for the surfaces and edges; since all 1-g reported SAR < 1.2 W/kg.

10.1. WiFi (UNII Bands-Above 6GHz)

SAR test results

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle (%)	Power (dBm)		1-g SAR (W/kg)		10-g SAR (W/kg)		Plot No.		
									Tune-up limit	Meas.	Meas.	Scaled	Meas.	Scaled			
WLAN MIMO Ant.1	Head	802.11ax HE160 72.0 Mbps	N/A	0	Left Touch	15	6025.0	92.2%	10.0	8.4							
					Left Tilt	15	6025.0	92.2%	10.0	8.4							
					Right Touch	15	6025.0	92.2%	10.0	8.4							
						79	6345.0	92.2%	10.0	8.6							
						111	6505.0	92.2%	10.0	9.1							
						143	6665.0	92.2%	10.0	9.5							
					207	6985.0	92.2%	10.0	9.0								
	Right Tilt		15	6025.0	92.2%	10.0	8.4										
	Body-worn		N/A	15	Rear	15	6025.0	92.2%	10.0	8.4							
						79	6345.0	92.2%	10.0	8.6							
						111	6505.0	92.2%	10.0	9.1							
						143	6665.0	92.2%	10.0	9.5							
						207	6985.0	92.2%	10.0	9.0							
	Front		15	6025.0	92.2%	10.0	8.4										
	Product Specific 10-g		N/A	0	Rear	15	6025.0	92.2%	10.0	8.4							
						79	6345.0	92.2%	10.0	8.6							
						111	6505.0	92.2%	10.0	9.1							
						143	6665.0	92.2%	10.0	9.5							
207		6985.0			92.2%	10.0	9.0										
Front		15			6025.0	92.2%	10.0	8.4									
Edge 4		15			6025.0	92.2%	10.0	8.4					0.137	0.214			
WLAN MIMO Ant.2	Head	802.11ax HE160 72.0 Mbps	N/A	0	Left Touch	15	6025.0	92.2%	10.0	10.0	0.016	0.018					
					Left Tilt	15	6025.0	92.2%	10.0	10.0	0.015	0.016					
					Right Touch	15	6025.0	92.2%	10.0	10.0	0.066	0.072				1	
						79	6345.0	92.2%	10.0	8.1	0.019	0.032					
						111	6505.0	92.2%	10.0	8.5	0.014	0.021					
						143	6665.0	92.2%	10.0	8.9	0.009	0.013					
					207	6985.0	92.2%	10.0	8.9	0.016	0.022						
	Right Tilt		15	6025.0	92.2%	10.0	10.0	0.021	0.023								
	Body-worn		N/A	15	Rear	15	6025.0	92.2%	10.0	10.0	0.052	0.057					
						79	6345.0	92.2%	10.0	8.1	0.050	0.085					
						111	6505.0	92.2%	10.0	8.5	0.145	0.222				2	
						143	6665.0	92.2%	10.0	8.9	0.138	0.193					
						207	6985.0	92.2%	10.0	8.9	0.101	0.141					
	Front		15	6025.0	92.2%	10.0	10.0	0.002	0.002								
	Product Specific 10-g		N/A	0	Rear	15	6025.0	92.2%	10.0	10.0					0.190	0.208	
						79	6345.0	92.2%	10.0	8.1					0.118	0.200	
						111	6505.0	92.2%	10.0	8.5					0.247	0.377	3
						143	6665.0	92.2%	10.0	8.9					0.269	0.376	
					207	6985.0	92.2%	10.0	8.9					0.173	0.242		
					Front	15	6025.0	92.2%	10.0	10.0					0.044	0.048	
					Edge 4	15	6025.0	92.2%	10.0	10.0					0.024	0.026	

APD (Absorbed Power Density) results

Antenna	RF Exposure Conditions	Mode	PWR Back-off	Dist. (mm)	Test Position	Ch #.	Freq. (MHz)	Duty Cycle (%)	Power (dBm)		Measured APD (mW/cm ² over 4cm ²)	Plot No.
									Tune-up limit	Meas.		
WLAN MIMO Ant.1	Head	802.11ax HE160 72.0 Mbps	N/A	0	Left Touch	15	6025.0	92.2%	10.0	8.4		
					Left Tilt	15	6025.0	92.2%	10.0	8.4		
					Right Touch	15	6025.0	92.2%	10.0	8.4		
						79	6345.0	92.2%	10.0	8.6		
						111	6505.0	92.2%	10.0	9.1		
						143	6665.0	92.2%	10.0	9.5		
					207	6985.0	92.2%	10.0	9.0			
	Right Tilt		15	6025.0	92.2%	10.0	8.4					
	Body-w orn		N/A	15	Rear	15	6025.0	92.2%	10.0	8.4		
						79	6345.0	92.2%	10.0	8.6		
						111	6505.0	92.2%	10.0	9.1		
						143	6665.0	92.2%	10.0	9.5		
						207	6985.0	92.2%	10.0	9.0		
	Front		15	6025.0	92.2%	10.0	8.4					
	Product Specific 10-g		N/A	0	Rear	15	6025.0	92.2%	10.0	8.4		
						79	6345.0	92.2%	10.0	8.6		
						111	6505.0	92.2%	10.0	9.1		
						143	6665.0	92.2%	10.0	9.5		
					207	6985.0	92.2%	10.0	9.0			
					Front	15	6025.0	92.2%	10.0	8.4		
					Edge 1	15	6025.0	92.2%	10.0	8.4		
Edge 4	15	6025.0	92.2%	10.0	8.4	0.3200						
WLAN MIMO Ant.2	Head	802.11ax HE160 72.0 Mbps	N/A	0	Left Touch	15	6025.0	92.2%	10.0	10.0	0.0120	
					Left Tilt	15	6025.0	92.2%	10.0	10.0	0.0102	
					Right Touch	15	6025.0	92.2%	10.0	10.0	0.0524	1
						79	6345.0	92.2%	10.0	8.1	0.0155	
						111	6505.0	92.2%	10.0	8.5	0.0081	
						143	6665.0	92.2%	10.0	8.9	0.0052	
					207	6985.0	92.2%	10.0	8.9	0.0094		
	Right Tilt		15	6025.0	92.2%	10.0	10.0	0.0163				
	Body-w orn		N/A	15	Rear	15	6025.0	92.2%	10.0	10.0	0.0435	
						79	6345.0	92.2%	10.0	8.1	0.0418	
						111	6505.0	92.2%	10.0	8.5	0.1180	2
						143	6665.0	92.2%	10.0	8.9	0.1150	
						207	6985.0	92.2%	10.0	8.9	0.0836	
	Front		15	6025.0	92.2%	10.0	10.0	0.0012				
	Product Specific 10-g		N/A	0	Rear	15	6025.0	92.2%	10.0	10.0	0.4500	
						79	6345.0	92.2%	10.0	8.1	0.2830	
						111	6505.0	92.2%	10.0	8.5	0.6000	
						143	6665.0	92.2%	10.0	8.9	0.6530	4
					207	6985.0	92.2%	10.0	8.9	0.4130		
					Front	15	6025.0	92.2%	10.0	10.0	0.1030	
					Edge 1	15	6025.0	92.2%	10.0	10.0	0.0542	
Edge 4	15	6025.0	92.2%	10.0	10.0							

Note(s):

1. APD (Absorbed Power Density) over 4cm² averaging area is reported based on SAR measurements.
2. 10 W/m² = 1.0 mW/cm²

11. IPD(Incident Power density) Results

Antenna	Mode	Test Position	Dist. (mm)	Ch.	Freq. (MHz)	Duty Cycle	Grid Step (Lamda)	iPD ^{Note.1} (mW/cm ²)	Meas. Normal psPD	Meas. Total psPD	Scaling factor for Measurement Uncertainty per IEC 62479 ^{Note.2}	Scaled Normal psPD	Scaled Total psPD	Note.	Plot No.
									mW/cm ²	mW/cm ²		mW/cm ²	mW/cm ²		
WLAN MIMO Ant.1 & Ant.2	802.11ax HE 160 72.0 Mbps	Rear	2.00	15	6025.0	92.2%	0.05	N/A	0.1490	0.1660	1.541	0.2296	0.2558		
				79	6345.0	92.2%	0.05	N/A	0.0883	0.0958	1.541	0.1361	0.1476		
				111	6505.0	92.2%	0.05	0.1190	0.1950	0.2140	1.541	0.3005	0.3298	1	5
				143	6665.0	92.2%	0.05	N/A	0.1440	0.1640	1.541	0.2219	0.2527		
				207	6985.0	92.2%	0.05	N/A	0.1330	0.1480	1.541	0.2050	0.2281		
		Front		111	6505.0	92.2%	0.05	N/A	0.0034	0.0042	1.541	0.0052	0.0065		
		Edge 1		111	6505.0	92.2%	0.05	N/A	0.0193	0.0250	1.541	0.0297	0.0385		
		Edge 4		111	6505.0	92.2%	0.05	N/A	0.0171	0.0217	1.541	0.0264	0.0334		
		Rear		9.22	111	6505.0	92.2%	0.05	0.0957	0.1230	0.1300	1.541	0.1895	0.2003	1

Note(s):

- Per manufacturer guide, Incident power density was measured at d=2mm and d=Lamda/5mm using the same grid size and grid step size for some frequencies and surfaces. iPD(integrated Power Density) was calculated based on these measurements. Since iPD ratio between the two distance is < 1dB, the grid step was sufficient for determining compliance at d=2mm.
- Per TCBC workshop guide, Incident power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 2.65 dB (84.1%) was used to determine the psPD measurement scaling factor.
- 10 W/m² = 1.0 mW/cm²

12. Simultaneous Transmission Analysis

Please refer to section.12 in FCC SAR report S1.

Appendixes

Refer to separated files for the following appendixes.

4790089631-S2 FCC Report WiFi 6GHz_App A_PD Photos & Ant. Locations

4790089631-S2 FCC Report WiFi 6GHz _App B_Highest SAR and PD Test Plots

4790089631-S2 FCC Report WiFi 6GHz _App C_System Check Plots

4790089631-S2 FCC Report WiFi 6GHz _App D_SAR Tissue Ingredients

4790089631-S2 FCC Report WiFi 6GHz _App E_Probe Cal. Certificates

4790089631-S2 FCC Report WiFi 6GHz _App F_Dipole and Horn antenna Cal. Certificates

END OF REPORT