



SAR EVALUATION REPORT

IEEE Std 1528-2013

For
Portable Digital Transceiver

FCC ID: **IPH-05116**
Model Name: **A05116**

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Revision History

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V1	1/9/2026		Alvino Silva
V2	1/12/2026	Updated Section 3	Kiara Davis
V3	1/14/2026	Updated note in Section 9.1	Miguel Llamas

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1. Attestation of Test Results

Applicant Name	Garmin International Inc.			
FCC ID	IPH-05116			
Model Name	A05116			
Applicable Standards	Published RF exposure KDB procedures. IEEE Std 1528-2013			
Exposure Category	SAR Limits (W/Kg)			
	Peak spatial-average (1g of tissue)	Extremities (hands, wrists, ankles, etc.) (10g of tissue)		
General population / Uncontrolled exposure	1.6	4		
RF Exposure Conditions	Equipment Class - Highest Reported SAR (W/kg)			
	DTS	NII	DSS	ANT/ANT+
Standalone	0.352	0.410	N/A	N/A
Extremity	0.423	0.379	0.021	N/A
Date Tested	10/16/2025 to 1/9/2026			
Test Results	Complies			
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested can demonstrate compliance with the requirements as documented in this report. This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to ensure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not considered unless noted otherwise. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. 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 A2LA, NIST, or any agency of the U.S. Government, or any agency of the U.S. government.				
Approved & Released By:		Prepared By:		
				
Devin Chang Senior Laboratory Engineer UL Verification Services Inc.		Alvino Miguel Silva Laboratory Engineer UL Verification Services Inc.		

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, the following FCC Published RF exposure [KDB](#) procedures:

- 248227 D01 802.11 Wi-Fi SAR v02r02
- 447498 D01 General RF Exposure Guidance v06
- 447498 D03 Supplement C Cross-Reference v01
- 447498 D04 Interim General RF Exposure Guidance v01
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- 865664 D02 RF Exposure Reporting v01r02
- 941225 D07 UMPC Mini Tablet v01r02

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

- [TCB Workshop](#) October 2016; RF Exposure Procedures (Bluetooth Duty Factor)
- [TCB Workshop](#) October 2016; RF Exposure Procedures (DUT Holder Perturbations)
- [TCB Workshop](#) May 2017; RF Exposure Procedures (Broadband Liquid Above 3 GHz)
- [TCB Workshop](#) April 2019; RF Exposure Procedures (Tissue Simulating Liquids (TSL))

3. Facilities and Accreditation

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

47173 Benicia Street
SAR Lab C

UL Verification Services Inc. is accredited by A2LA, Certificate Number 0751.05

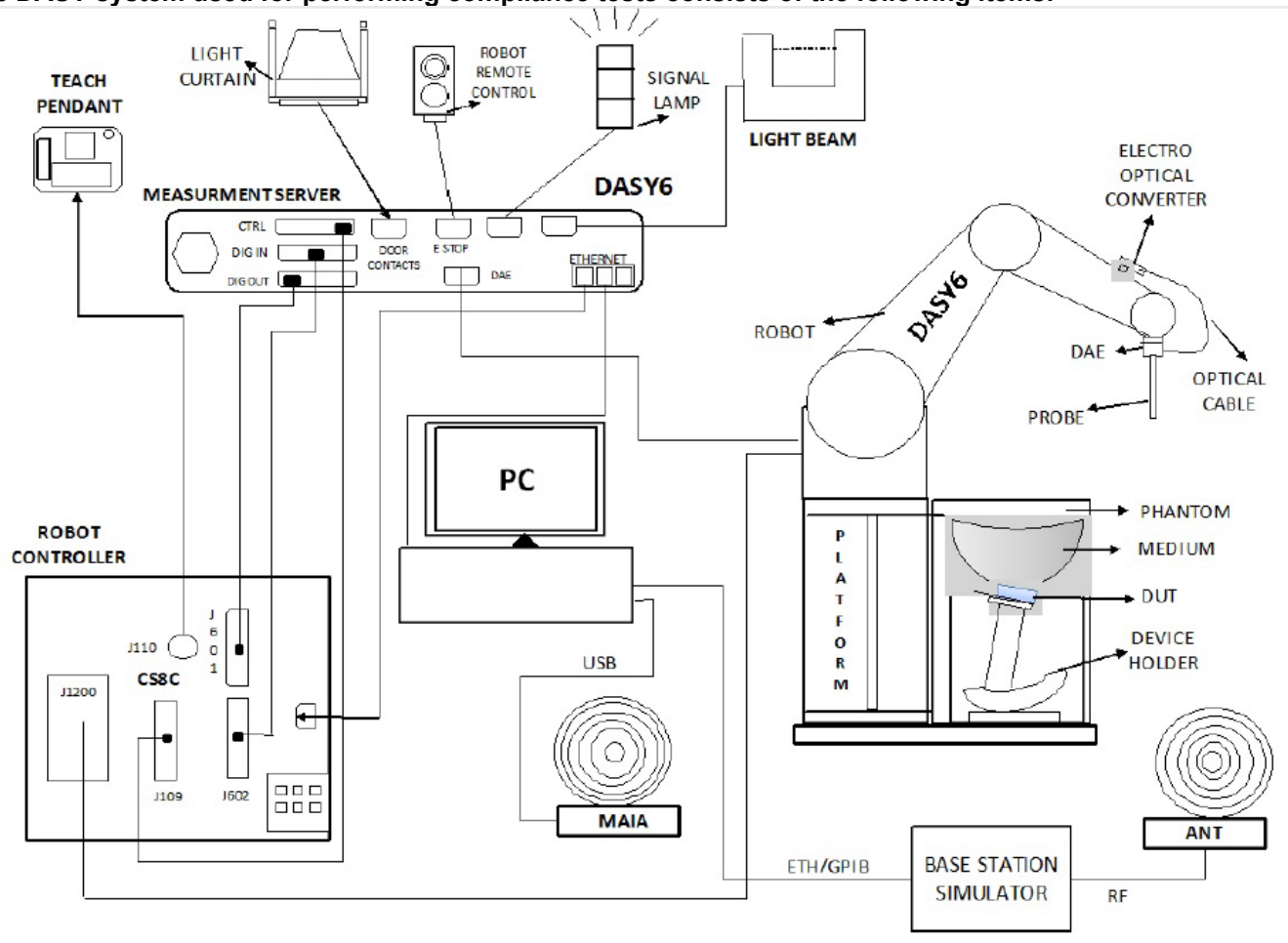
The Test Lab Conformity Assessment Body Identifier (CABID)

Location	CABID	Company Number	FCC Registration
47173 Benicia Street, Fremont, CA, 94538 UNITED STATES	US0104	2324A	550739

4. SAR Measurement System & Test Equipment

4.1. SAR Measurement System

The DASY 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 DASY6/8¹ 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.

¹ DASY6/8 software used: DASY6.16.2 or DASY8.16.2 and older generations

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 IEC/IEEE 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 KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Step 3: Zoom Scan

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The Zoom Scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1 g and 10 g and displays these values next to the job's label.

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

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <u>reported</u> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

Step 4: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

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
Vector Network Analyzer*	Copper Mountain Tech	R140N	21130078	1/1/2026
Vector Network Analyzer	Rohde & Schwarz	ZNLE6	1323.0012K56-101274-mn	2/28/2026
Dielectric Probe kit	SPEAG	DAK-3.5 Probe	1082	4/14/2026
Shorting block	SPEAG	DAK-3.5 Short	SM DAK 200 BA	2/28/2026
Thermometer	Traceable Calibration Control Co.	4242	240054866	1/31/2026

Note(s):

*Equipment not used past calibration due date.

System Check

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
Power Source	SPEAG	Powersource1	4371	4/30/2026
Power Meter	Keysight	N1911A	MY55196009	1/31/2026
Signal Generator	Rohde & Schwarz	SMB 100A	06.600K03-180970-	2/28/2026
Power Sensor	Keysight	N1912A	MY55196004	1/31/2026
Power Sensor	Rohde & Schwarz	NRP18A	24.6815K02-100992	2/28/2026
Directional coupler	Mini-Circuits	ZUDC10-83-S+	2224	N/A

Lab Equipment

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due Date
E-Field Probe (SAR Lab C)	SPEAG	EX3DV4	7501	3/12/2026
Data Acquisition Electronics (SAR Lab C)	SPEAG	DAE4	1547	4/14/2026
System Validation Dipole	SPEAG	D2450V2	748	2/8/2026
System Validation Dipole	SPEAG	D5GHzV2	1168	2/6/2026

OTHER

Name of Equipment	Manufacturer	Type/Model	T Number	Serial No.	Cal. Due Date
Wideband Radio Communication Tester	Rohde & Schwarz	CMW 500	959	137873-WG	2/19/2022

5. Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be $\leq 30\%$, for a confidence interval of $k = 2$. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval.

Therefore, the measurement uncertainty is not required.

6. Device Under Test (DUT) Information

6.1. DUT Description

Device Dimension	Overall (Length x Width): 127.4 mm x 74.3 mm Overall Diagonal: 142.3 mm Display Diagonal: 116.8 mm This is a UMPC mini-tablet device(an overall diagonal dimensions ≤ 20 cm) Refer to Appendix A		
Back Cover	The Back Cover is not removable		
Battery Options	The rechargeable battery is not user accessible.		
Test sample information	S/N	IMEI	Notes
	18058259	N/A	Radiated Sample
	9014964	N/A	Conducted Sample
Hardware Version	N/A		
Software Version	1.24		

6.2. Wireless Technologies

Wireless Technologies	Frequency Bands	Operating Mode
Wi-Fi	2.4 GHz	802.11b/g/n (20 MHz BW)
	5 GHz UNII-1/2A/2C/3	802.11a/n/ac (20/40/80 MHz BW)
		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	BR, EDR, and LE
ANT/ANT+	2.4 GHz	GFSK

Notes:

- Duty cycle for Wi-Fi is referenced from the DTS and U-NII reports. Refer to Section 10 for Duty Cycle values used for testing.

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.

7.1. Standalone SAR Test Exclusion Considerations

Per 447498 D01 v06 General RF Exposure Guidance § 4.3.1 and Appendix A and Appendix B:

These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions, and platform requirements, to any part of the body or extremity of a user or bystander. To qualify for SAR test exclusion, the test separation distances applied must be fully explained and justified, typically in the SAR measurement or SAR analysis report, by the operating configurations and exposure conditions of the transmitter and applicable host platform requirements, according to the required published RF exposure KDB procedures.

- a) For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
 - $f(\text{GHz})$ is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison
 - The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below
- b) For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following (also illustrated in Appendix B):
 - 1) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]\}$ mW, for 100 MHz to 1500 MHz
 - 2) $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$ mW, for > 1500 MHz and ≤ 6 GHz

SAR Test Exclusion Calculations

- When the separation distance from the antenna to an adjacent edge is ≤ 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.
- When the separation distance from the antenna to an adjacent edge is > 5 mm, the actual antenna-to-edge separation distance is applied to determine SAR test exclusion.

Antennas ≤ 50 mm to adjacent edges

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						SAR Exemption Limit (mW) & Exclusion					
			dBm	mW	Back	Front	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Front	Edge Top	Edge Right	Edge Bottom	Edge Left
2.4 GHz ANT	Wi-Fi 2.4 GHz	2462	19.0	79	7.9	9.6	63.2	73.1	6.6	34.8	Limit 7 mW	Limit 9 mW	Limit 342 mW	Limit 451 mW	Limit 5 mW	Limit 110 mW
5 GHz ANT	Wi-Fi 5.2 GHz	5240	17.5	56	7.5	9.6	27.1	107.3	37.3	16.6	-MEASURE-	-MEASURE-	-EXEMPT-	-EXEMPT-	-MEASURE-	-EXEMPT-
5 GHz ANT	Wi-Fi 5.3 GHz	5320	18.5	71	7.5	9.6	27.1	107.3	37.3	16.6	-MEASURE-	-MEASURE-	-MEASURE-	-EXEMPT-	Limit 95 mW	Limit 18 mW
5 GHz ANT	Wi-Fi 5.5 GHz	5700	17.0	50	7.5	9.6	27.1	107.3	37.3	16.6	-MEASURE-	-MEASURE-	-MEASURE-	-EXEMPT-	Limit 95 mW	Limit 18 mW
5 GHz ANT	Wi-Fi 5.8 GHz	5825	17.5	56	7.5	9.6	27.1	107.3	37.3	16.6	-MEASURE-	-MEASURE-	-MEASURE-	-EXEMPT-	Limit 92 mW	Limit 17 mW
2.4 GHz ANT	Bluetooth	2480	8.0	6	7.9	9.6	63.2	73.1	6.6	34.8	Limit 3 mW	Limit 5 mW	Limit 47 mW	Limit 633 mW	Limit 91 mW	Limit 17 mW
2.4 GHz ANT	ANT/ANT+	2480	-2.0	1	7.9	9.6	63.2	73.1	6.6	34.8	-EXEMPT-	-EXEMPT-	-EXEMPT-	-EXEMPT-	-EXEMPT-	-EXEMPT-

Note(s):

According to KDB 447498, if the calculated threshold value is >3 (1g SAR), then SAR testing is required.

Antennas > 50 mm to adjacent edges

Antenna	Tx Interface	Frequency (MHz)	Output Power		Separation Distances (mm)						SAR Exemption Limit (mW) & Exclusion					
			dBm	mW	Back	Front	Edge Top	Edge Right	Edge Bottom	Edge Left	Back	Front	Edge Top	Edge Right	Edge Bottom	Edge Left
2.4 GHz ANT	Wi-Fi 2.4 GHz	2462	19.0	79	7.9	9.6	63.2	73.1	6.6	34.8	< 50 mm	< 50 mm	227.6 mW	326.6 mW	< 50 mm	< 50 mm
5 GHz ANT	Wi-Fi 5.2 GHz	5240	17.5	56	7.5	9.6	27.1	107.3	37.3	16.6	< 50 mm	< 50 mm	< 50 mm	638.5 mW	< 50 mm	< 50 mm
5 GHz ANT	Wi-Fi 5.3 GHz	5320	18.5	71	7.5	9.6	27.1	107.3	37.3	16.6	< 50 mm	< 50 mm	< 50 mm	638 mW	< 50 mm	< 50 mm
5 GHz ANT	Wi-Fi 5.5 GHz	5700	17.0	50	7.5	9.6	27.1	107.3	37.3	16.6	< 50 mm	< 50 mm	< 50 mm	635.8 mW	< 50 mm	< 50 mm
5 GHz ANT	Wi-Fi 5.8 GHz	5825	17.5	56	7.5	9.6	27.1	107.3	37.3	16.6	< 50 mm	< 50 mm	< 50 mm	635.2 mW	< 50 mm	< 50 mm
2.4 GHz ANT	Bluetooth	2480	8.0	6	7.9	9.6	63.2	73.1	6.6	34.8	< 50 mm	< 50 mm	227.3 mW	326.3 mW	< 50 mm	< 50 mm
2.4 GHz ANT	ANT/ANT+	2480	-2.0	1	7.9	9.6	63.2	73.1	6.6	34.8	< 50 mm	< 50 mm	227.3 mW	326.3 mW	< 50 mm	< 50 mm

Note(s):

According to KDB 447498, if the calculated Power threshold is less than the output power, then SAR testing is required.

7.2. Required Test Configurations

The table below identifies the standalone test configurations required for this device according to the findings in Section 7.1:

Antenna	Band	Back	Front	Edge Top	Edge Right	Edge Bottom	Edge Left
2.4 GHz ANT	Wi-Fi 2.4 GHz	Yes	Yes	No	No	Yes	No
5 GHz ANT	Wi-Fi 5 GHz	Yes	Yes	Yes	No	No	Yes
2.4 GHz ANT	Bluetooth 2.4 GHz	No	No	No	No	Yes	No
2.4 GHz ANT	ANT/ANT+	No	No	No	No	No	No

8. Dielectric Property Measurements & System Check

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ 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 each 3 – 4 days of use; or earlier if the dielectric parameters can become out of tolerance; 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.

The methodology used to determine the SAR correction is described in IEEE Std 1528-2013. The methodology was conducted over a frequency range of 30 MHz to 6000 MHz, but it is implemented over the 300 MHz to 6000 MHz frequency range. The methodology was also studied for permittivity (ϵ_r) and conductivity (σ) ranges of $\pm 20\%$, but ranges of $\pm 10\%$ have been chosen. Given that the change in dielectric parameters influences the conversion factor of the probe, this influence will be small if a $\pm 10\%$ range is used.

Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

Target Frequency (MHz)	Head		Body	
	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5000	36.2	4.45	49.3	5.07
5100	36.1	4.55	49.1	5.18
5200	36.0	4.66	49.0	5.30
5300	35.9	4.76	48.9	5.42
5400	35.8	4.86	48.7	5.53
5500	35.6	4.96	48.6	5.65
5600	35.5	5.07	48.5	5.77
5700	35.4	5.17	48.3	5.88
5800	35.3	5.27	48.2	6.00

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 three to four days when the liquid parameters are re-measured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

System Performance Check Measurement Conditions:

- The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness: 2.0 $\pm$ 0.2 mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- The depth of tissue-equivalent liquid in a phantom must be $\geq$ 15.0 cm for SAR measurements $\leq$ 3 GHz and $\geq$ 10.0 cm for measurements $>$ 3 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 10 mm (above 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 15 mm was aligned with the dipole.
For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 (below 3 GHz) and/or 8x8x7 (above 3 GHz) fine cube was chosen for the cube.
- Distance between probe sensors and phantom surface was set to 3 mm.
For 5 GHz band - Distance between probe sensors and phantom surface was set to 2.5 mm
- The dipole input power (forward power) was 100 mW.
- The results are normalized to 1 W input power.

Liquid Check										System Check												
SAR Lab	Date	Band (MHz)	Freq. (MHz)	Relative Permittivity (ϵ_r)			Conductivity (σ)			Date	Dipole Type & Serial Number	Dipole Cal. Due Date	Input Power (dBm)	Measured results for 1-g SAR				Measured results for 10-g SAR				Plot No.
				Measured	Target	Delta	Measured	Target	Delta					Meas. Zoom Scan	Normalize to 1 W	Target (Ref. Value)	Delta $\pm$ 10%	Meas. Zoom Scan	Normalize to 1 W	Target (Ref. Value)	Delta $\pm$ 10%	
SAR C	12/12/2025	2450	2450	38.39	39.20	-2.07%	1.74	1.80	-3.61%	12/12/2025	D2450V2 SN: 748	2/8/2026	17.0	2.56	51.08	51.70	-1.2%	1.21	24.14	24.20	-0.2%	
			2400	38.44	39.30	-2.18%	1.70	1.75	-3.06%													
			2500	38.32	39.14	-2.09%	1.78	1.85	-4.21%													
SAR C	12/15/2025	5250	5250	33.87	35.93	-5.74%	4.36	4.70	-7.30%	12/15/2025	D5GHzV2 SN: 1168 (5.25 GHz)	2/6/2026	17.0	4.19	83.60	81.10	3.1%	1.21	24.14	23.10	4.5%	
			5150	33.92	36.05	-5.90%	4.24	4.60	-7.78%													
			5350	33.44	35.82	-6.64%	4.42	4.80	-7.92%													
SAR C	12/15/2025	5600	5600	33.12	35.53	-6.79%	4.76	5.06	-5.89%	12/15/2025	D5GHzV2 SN: 1168 (5.60 GHz)	2/6/2026	17.0	4.31	86.00	81.50	5.5%	1.22	24.34	23.40	4.0%	
			5500	33.19	35.65	-6.90%	4.66	4.96	-6.01%													
			5725	32.92	35.39	-6.98%	4.87	5.19	-6.15%													
SAR C	12/15/2025	5750	5750	32.94	35.36	-6.85%	4.90	5.21	-6.09%	12/15/2025	D5GHzV2 SN: 1168 (5.75 GHz)	2/6/2026	17.0	4.37	87.19	79.40	9.8%	1.24	24.74	22.50	10.0%	1
			5700	32.98	35.42	-6.89%	4.82	5.16	-6.65%													
			5850	32.79	35.30	-7.11%	5.04	5.32	-5.24%													
SAR C	12/17/2025	2450	2450	39.92	39.20	1.84%	1.75	1.80	-2.83%	12/17/2025	D2450V2 SN: 748	2/8/2026	20.0	5.47	54.70	51.70	5.8%	2.58	25.80	24.20	6.6%	
			2400	39.98	39.30	1.74%	1.72	1.75	-2.09%													
			2500	39.84	39.14	1.80%	1.79	1.85	-3.51%													
SAR C	12/30/2025	5250	5250	33.67	35.93	-6.30%	4.39	4.70	-6.70%	12/30/2025	D5GHzV2 SN: 1168 (5.25 GHz)	2/6/2026	17.0	4.14	82.60	81.10	1.9%	1.19	23.74	23.10	2.8%	
			5150	33.80	36.05	-6.23%	4.27	4.60	-7.13%													
			5350	33.26	35.82	-7.14%	4.45	4.80	-7.38%													
SAR C	12/30/2025	5600	5600	32.97	35.53	-7.22%	4.76	5.06	-5.91%	12/30/2025	D5GHzV2 SN: 1168 (5.60 GHz)	2/6/2026	17.0	4.46	88.99	81.50	9.2%	1.27	25.34	23.40	8.3%	2
			5500	32.99	35.65	-7.46%	4.69	4.96	-5.96%													
			5725	32.69	35.39	-7.63%	4.88	5.19	-5.96%													
SAR C	12/30/2025	5750	5750	32.75	35.36	-7.39%	4.92	5.21	-5.73%	12/30/2025	D5GHzV2 SN: 1168 (5.75 GHz)	2/6/2026	17.0	4.31	86.00	79.40	8.3%	1.23	24.54	22.50	9.1%	
			5700	32.74	35.42	-7.57%	4.83	5.16	-6.46%													
			5850	32.58	35.30	-7.71%	5.05	5.32	-5.04%													
SAR C	1/1/2026	2450	2450	38.04	39.20	-2.96%	1.73	1.80	-3.78%	1/1/2026	D2450V2 SN: 748	2/8/2026	17.0	2.78	55.47	51.70	7.3%	1.32	26.34	24.20	8.8%	3
			2400	38.11	39.30	-3.02%	1.69	1.75	-3.52%													
			2500	37.93	39.14	-3.08%	1.78	1.85	-4.10%													
SAR C	1/6/2026	2450	2450	36.32	39.20	-7.35%	1.67	1.80	-7.06%	1/6/2026	D2450V2 SN: 748	2/8/2026	17.0	2.56	51.08	51.70	-1.2%	1.22	24.34	24.20	0.6%	
			2400	36.38	39.30	-7.42%	1.64	1.75	-6.49%													
			2500	36.23	39.14	-7.43%	1.71	1.85	-7.66%													
SAR C	1/6/2026	5250	5250	35.49	35.93	-1.23%	4.61	4.70	-1.87%	1/6/2026	D5GHzV2 SN: 1168 (5.25 GHz)	2/6/2026	20.0	7.51	75.10	81.10	-7.4%	2.14	21.40	23.10	-7.4%	4
			5150	35.61	36.05	-1.21%	4.49	4.60	-2.34%													
			5350	35.02	35.82	-2.23%	4.69	4.80	-2.32%													
SAR C	1/6/2026	5600	5600	34.66	35.53	-2.46%	5.04	5.06	-0.50%	1/6/2026	D5GHzV2 SN: 1168 (5.60 GHz)	2/6/2026	20.0	7.98	79.80	81.50	-2.1%	2.25	22.50	23.40	-3.8%	
			5500	34.76	35.65	-2.49%	4.94	4.96	-0.30%													
			5725	34.39	35.39	-2.83%	5.17	5.19	-0.29%													
SAR C	1/6/2026	5750	5750	34.44	35.36	-2.61%	5.20	5.21	-0.36%	1/6/2026	D5GHzV2 SN: 1168 (5.75 GHz)	2/6/2026	20.0	7.32	73.20	79.40	-7.8%	2.08	20.80	22.50	-7.6%	
			5700	34.47	35.42	-2.68%	5.12	5.16	-0.92%													
			5850	34.36	35.30	-2.66%	5.36	5.32	0.66%													

9. Conducted Output Power Measurements

The selection between antennas in the application is based on RSSI based antenna selection. The full details of power selections are described in the operational description. Refer to Sec. 7 and Sec. 10 for details of the testing. Test reductions have applied accordingly following the SAR KDB Procedure for the supported wireless technologies of the DUT. This is noted in detail for each technology in their respective Sections.

The Maximum Output Power already includes component uncertainty. KDB 447498 sec.4.1.(d) at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

Maximum Output Power (Tune-up Power Limit) provided by the manufacturer are used to scale measured SAR values.

9.1. Wi-Fi 2.4GHz (DTS Band)

Maximum Output Power (Tune-up Limit) for Wi-Fi 2.4 GHz

The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.

For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11b/g/n mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

SAR testing is not required for OFDM mode(s) when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

Wi-Fi 2.4GHz Measured Results

Band	Mode	Ch #	Freq. (MHz)	2.4 GHz ANT (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)
DSSS 2.4 GHz	802.11b	1	2412	17.4	18.0	Yes
		6	2437	16.3	18.0	
		11	2462	16.7	18.0	
OFDM 2.4 GHz	802.11g	1	2412		15.0	No
		6	2437		19.0	
		11	2462		14.0	
	802.11n (HT20)	1	2412		15.0	No
		6	2437		19.0	
		11	2462		15.0	

Note(s):

Channel 12 and 13 are not supported for this region per the manufacturer.

9.2. Wi-Fi 5GHz (U-NII 1-3 Bands)

Maximum Output Power (Tune-up Limit) for Wi-Fi 5 GHz

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/n/ac modes, the channel in the lower order/sequence 802.11 transmission mode is selected.

The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.

For “Not required”, SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.

Wi-Fi 5 GHz Measured Results

Band	Mode	Ch #	Freq. (MHz)	5 GHz ANT (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-2A 5.3 GHz	802.11a	52	5260	0.9	2.5	Yes
		56	5280	16.9	18.5	
		60	5300	14.6	16.0	
		64	5320	13.5	15.0	
	802.11n (HT20)	52	5260		-5.0	No
		56	5280		18.0	
		60	5300		17.0	
		64	5320		17.0	
	802.11ac (VHT20)	52	5260		-5.0	No
		56	5280		18.0	
		60	5300		17.0	
		64	5320		17.0	
	802.11n (HT40)	54	5270		10.0	No
		62	5310		15.0	
	802.11ac (VHT40)	54	5270		10.0	No
		62	5310		15.0	
	802.11ac (VHT80)	58	5290		9.0	No

Band	Mode	Ch #	Freq. (MHz)	5 GHz ANT (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-2C 5.5 GHz	802.11a	100	5500		14.0	No
		116	5580		15.5	
		124	5620		15.5	
		140	5700		15.5	
	802.11n (HT20)	100	5500		14.0	No
		116	5580		16.0	
		124	5620		16.0	
		140	5700		16.0	
	802.11ac (VHT20)	100	5500		14.0	No
		116	5580		16.0	
		124	5620		16.0	
		140	5700		16.0	
	802.11n (HT40)	102	5510	7.2	9.0	Yes
		118	5590	15.1	17.0	
		126	5630	15.3	17.0	
		134	5670	16.2	17.0	
	802.11ac (VHT40)	102	5510		9.0	No
		118	5590		17.0	
		126	5630		17.0	
		134	5670		17.0	
	802.11ac (VHT80)	106	5530		7.5	No
		122	5610		16.5	
		138	5690		16.5	
Band	Mode	Ch #	Freq. (MHz)	5 GHz ANT (dBm)		
				Meas Pwr	Tune-up	SAR Test (Yes/No)
UNII-3 5.8 GHz	802.11a	149	5745		17.0	No
		157	5785		15.0	
		165	5825		15.0	
	802.11n (HT20)	149	5745		16.0	No
		157	5785		17.0	
		165	5825		16.0	
	802.11ac (VHT20)	149	5745		16.0	No
		157	5785		17.0	
		165	5825		16.0	
	802.11n (HT40)	151	5755		17.5	No
		159	5795		17.5	
	802.11ac (VHT40)	151	5755		17.5	No
		159	5795		17.5	
	802.11ac (VHT80)	155	5775	15.9	17.5	Yes

9.3. Bluetooth

Maximum Output Power (Tune-up Limit) for Bluetooth

From October 2016 TCB workshop, Power and SAR measurements were performed with test software using DH5 modulation and a duty cycle of 76.80%.

SAR measurement is not required for the EDR and LE. When the secondary mode is $\leq 1/4$ dB higher than the primary mode.

Bluetooth Measured Results

Band	Mode	Ch #	Freq. (MHz)	2.4 GHz ANT		
				Meas Pwr	Tune-up	SAR Test (Yes/No)
Bluetooth 2.4 GHz	BR GFSK	0	2402	6.1	8.0	Yes
		39	2441	7.8	8.0	
		78	2480	6.5	8.0	
	EDR $\pi/4$ DQPSK	0	2402		5.5	No
		39	2441		5.5	
		78	2480		5.5	
	EDR 8-DPSK	0	2402		5.5	No
		39	2441		5.5	
		78	2480		5.5	
	LE GFSK	37	2402		5.5	No
		17	2440		5.5	
		39	2480		5.5	

Duty Factor Measured Results

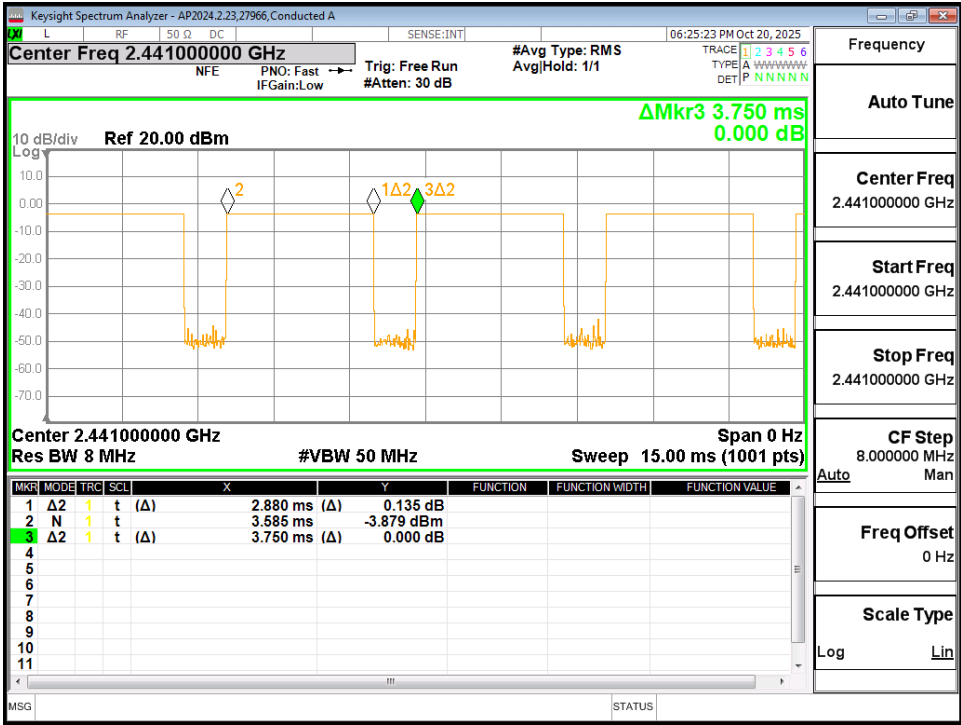
Mode	Type	T on (ms)	Period (ms)	Duty Cycle	Crest Factor (1/duty cycle)
GFSK	DH5	2.88	3.75	76.80%	1.30

Note(s):

Duty Cycle = (T on / period) * 100%

Duty Cycle plots

GFSK



10. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

- Reported SAR(W/kg) for WWAN and Bluetooth = Measured SAR * Tune-up Scaling Factor
- Reported SAR(W/kg) for Wi-Fi and Bluetooth = 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 248227 D01 SAR meas for 802.11:

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; these are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the initial test position(s) by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The initial test position(s) is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the reported SAR for the initial test position is:

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- > 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next closest/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions are tested.
 - For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
 - When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required test channels are considered.
 - The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.
- When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
- When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.
- When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

To determine the initial test position, Area Scans were performed to determine the position with the *Maximum Value of SAR (measured)*. The position that produced the highest *Maximum Value of SAR* is considered the worst case position; thus used as the initial test position.

10.1. Wi-Fi (DTS Band)

When the 802.11b reported SAR of the highest measured maximum output power channel is ≤ 0.8 W/kg, no further SAR testing is required. If SAR is > 0.8 W/kg and ≤ 1.2 W/kg, SAR is required for the next highest measured output power channel. Finally, if SAR is > 1.2 W/kg, SAR is required for the third channel.

SAR testing is not required for OFDM mode(s) when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

Standalone

Band	RF Exposure Condition(s)	Mode(s)	Dist. (mm)	Duty Cycle (%)	Test Position(s)	Channel	Freq. (MHz)	TuP Limit (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Wi-Fi 2.4 GHz	Standalone	802.11b	5	99.7%	Back	1	2412	18.0	17.4	0.308	0.352	1
Wi-Fi 2.4 GHz	Standalone	802.11b	5	99.7%	Front	1	2412	18.0	17.4	0.215	0.246	
Wi-Fi 2.4 GHz	Standalone	802.11b	5	99.7%	Edge Left	1	2412	18.0	17.4	0.052	0.059	
Wi-Fi 2.4 GHz	Standalone	802.11b	5	99.7%	Edge Bottom	1	2412	18.0	17.4	0.327	0.374	

Extremity

Band	RF Exposure Condition(s)	Mode(s)	Dist. (mm)	Duty Cycle (%)	Test Position(s)	Channel	Freq. (MHz)	TuP Limit (dBm)	Meas. (dBm)	10-g Meas. (W/kg)	10-g Scaled (W/kg)	Plot No.
Wi-Fi 2.4 GHz	Extremity	802.11b	0	99.7%	Back	1	2412	18.0	17.4	0.249	0.285	
Wi-Fi 2.4 GHz	Extremity	802.11b	0	99.7%	Front	1	2412	18.0	17.4	0.262	0.300	
Wi-Fi 2.4 GHz	Extremity	802.11b	0	99.7%	Edge Bottom	1	2412	18.0	17.4	0.370	0.423	2
Wi-Fi 2.4 GHz	Extremity	802.11b	0	99.7%	Edge Left	1	2412	18.0	17.4	0.351	0.401	

Adjusted SAR for 802.11g mode

Standalone

802.11b Max. Power		802.11g Max. Power		Worst SAR for 802.11b (W/kg)	Adjusted SAR for 802.11g
dBm	mW	dBm	mW		
18.0	63	19.0	79	0.352	0.443

Extremity

802.11b Max. Power		802.11g Max. Power		Worst SAR for 802.11b (W/kg)	Adjusted SAR for 802.11g
dBm	mW	dBm	mW		
18.0	63	19.0	79	0.423	0.533

10.2. Wi-Fi (U-NII 1-3 Bands)

UNII-1 & 2A

When the specified maximum output power is the same for both UNII band 1 and UNII band 2A, begin SAR measurement in UNII band 2A; and if the highest reported SAR for UNII band 2A is

- ≤ 1.2 W/kg, SAR is not required for UNII band 1
- > 1.2 W/kg, both bands should be tested independently for SAR.

Standalone

Band	RF Exposure Condition(s)	Mode(s)	Dist. (mm)	Duty Cycle (%)	Test Position(s)	Channel	Freq. (MHz)	TuP Limit (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
WiFi 5.3 GHz	Standalone	802.11a	5	97.8%	Back	56	5280	18.5	16.9	0.211	0.313	
WiFi 5.3 GHz	Standalone	802.11a	5	97.8%	Front	56	5280	18.5	16.9	0.048	0.071	
WiFi 5.3 GHz	Standalone	802.11a	5	97.8%	Edge Top	56	5280	18.5	16.9	0.137	0.203	
WiFi 5.3 GHz	Standalone	802.11a	5	97.8%	Edge Left	56	5280	18.5	16.9	0.277	0.410	3

Extremity

Band	RF Exposure Condition(s)	Mode(s)	Dist. (mm)	Duty Cycle (%)	Test Position(s)	Channel	Freq. (MHz)	TuP Limit (dBm)	Meas. (dBm)	10-g Meas. (W/kg)	10-g Scaled (W/kg)	Plot No.
WiFi 5.3 GHz	Extremity	802.11a	0	97.8%	Back	56	5280	18.5	16.9	0.172	0.255	
WiFi 5.3 GHz	Extremity	802.11a	0	97.8%	Front	56	5280	18.5	16.9	0.051	0.076	
WiFi 5.3 GHz	Extremity	802.11a	0	97.8%	Edge Left	56	5280	18.5	16.9	0.256	0.379	4
WiFi 5.3 GHz	Extremity	802.11a	0	97.8%	Edge Top	56	5280	18.5	16.9	0.045	0.067	

UNII-2C

Standalone

Band	RF Exposure Condition(s)	Mode(s)	Dist. (mm)	Duty Cycle (%)	Test Position(s)	Channel	Freq. (MHz)	TuP Limit (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Wi-Fi 5.5 GHz	Standalone	802.11n (HT40)	5	95.5%	Back	134	5670	17.0	16.2	0.093	0.117	
Wi-Fi 5.5 GHz	Standalone	802.11n (HT40)	5	95.5%	Front	134	5670	17.0	16.2	0.066	0.083	
Wi-Fi 5.5 GHz	Standalone	802.11n (HT40)	5	95.5%	Edge Top	134	5670	17.0	16.2	0.079	0.099	
Wi-Fi 5.5 GHz	Standalone	802.11n (HT40)	5	95.5%	Edge Left	134	5670	17.0	16.2	0.314	0.395	5

Extremity

Band	RF Exposure Condition(s)	Mode(s)	Dist. (mm)	Duty Cycle (%)	Test Position(s)	Channel	Freq. (MHz)	TuP Limit (dBm)	Meas. (dBm)	10-g Meas. (W/kg)	10-g Scaled (W/kg)	Plot No.
Wi-Fi 5.5 GHz	Extremity	802.11n (HT40)	0	95.5%	Back	134	5670	17.0	16.2	0.092	0.116	
Wi-Fi 5.5 GHz	Extremity	802.11n (HT40)	0	95.5%	Front	134	5670	17.0	16.2	0.073	0.092	
Wi-Fi 5.5 GHz	Extremity	802.11n (HT40)	0	95.5%	Edge Left	134	5670	17.0	16.2	0.238	0.299	6
Wi-Fi 5.5 GHz	Extremity	802.11n (HT40)	0	95.5%	Edge Top	134	5670	17.0	16.2	0.054	0.068	

UNII-3

Standalone

Band	RF Exposure Condition(s)	Mode(s)	Dist. (mm)	Duty Cycle (%)	Test Position(s)	Channel	Freq. (MHz)	TuP Limit (dBm)	Meas. (dBm)	1-g Meas. (W/kg)	1-g Scaled (W/kg)	Plot No.
Wi-Fi 5.8 GHz	Standalone	802.11ac (VHT80)	5	91.2%	Back	155	5775.0	17.5	15.9	0.074	0.118	
Wi-Fi 5.8 GHz	Standalone	802.11ac (VHT80)	5	91.2%	Front	155	5775.0	17.5	15.9	0.069	0.110	
Wi-Fi 5.8 GHz	Standalone	802.11ac (VHT80)	5	91.2%	Edge Top	155	5775.0	17.5	15.9	0.092	0.147	
Wi-Fi 5.8 GHz	Standalone	802.11ac (VHT80)	5	91.2%	Edge Left	155	5775.0	17.5	15.9	0.219	0.350	7

Extremity

Band	RF Exposure Condition(s)	Mode(s)	Dist. (mm)	Duty Cycle (%)	Test Position(s)	Channel	Freq. (MHz)	TuP Limit (dBm)	Meas. (dBm)	10-g Meas. (W/kg)	10-g Scaled (W/kg)	Plot No.
Wi-Fi 5.8 GHz	Extremity	802.11ac (VHT80)	0	91.2%	Back	155	5775.0	17.5	15.9	0.061	0.098	
Wi-Fi 5.8 GHz	Extremity	802.11ac (VHT80)	0	91.2%	Front	155	5775.0	17.5	15.9	0.016	0.026	
Wi-Fi 5.8 GHz	Extremity	802.11ac (VHT80)	0	91.2%	Edge Left	155	5775.0	17.5	15.9	0.135	0.216	8
Wi-Fi 5.8 GHz	Extremity	802.11ac (VHT80)	0	91.2%	Edge Top	155	5775.0	17.5	15.9	0.030	0.048	

10.3. Bluetooth

Band	RF Exposure Condition(s)	Mode(s)	Dist. (mm)	Duty Cycle (%)	Test Position(s)	Channel	Freq. (MHz)	TuP Limit (dBm)	Meas. (dBm)	10-g Meas. (W/kg)	10-g Scaled (W/kg)	Plot No.
BT 2.4 GHz	Extremity	GFSK (BDR)	0	76.8%	Back	39	2441	8.0	7.8	0.012	0.013	
BT 2.4 GHz	Extremity	GFSK (BDR)	0	76.8%	Front	39	2441	8.0	7.8	0.011	0.012	
BT 2.4 GHz	Extremity	GFSK (BDR)	0	76.8%	Edge Bottom	39	2441	8.0	7.8	0.020	0.021	9
BT 2.4 GHz	Extremity	GFSK (BDR)	0	76.8%	Edge Left	39	2441	8.0	7.8	0.021	0.022	

11. SAR Measurement Variability

In accordance with published RF Exposure KDB 865664 D01 SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

- 1) Repeated measurement is not required when the original highest measured SAR is < 0.8 or 2 W/kg (1-g or 10-g respectively); steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is ≥ 0.8 or 2 W/kg (1-g or 10-g respectively), repeat that measurement once.
- 3) Perform a second repeated measurement only if the **ratio of largest to smallest SAR** for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 or 3.6 W/kg (~ 10% from the 1-g or 10-g respective SAR limit).
- 4) Perform a third repeated measurement only if the original, first, or second repeated measurement is ≥ 1.5 or 3.75 W/kg (1-g or 10-g respectively) and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	First Repeated		Second Repeated		Third Repeated Measured SAR (W/kg)
						Measured SAR (W/kg)	Largest to Smallest SAR Ratio	Measured SAR (W/kg)	Largest to Smallest SAR Ratio	
2400	Wi-Fi 802.11b/g/n	Standalone	Rear	No	0.308	N/A	N/A	N/A	N/A	N/A
5300	Wi-Fi 802.11a/n/ac	Standalone	Edge Left	No	0.277	N/A	N/A	N/A	N/A	N/A
5500	Wi-Fi 802.11a/n/ac	Standalone	Edge Left	No	0.314	N/A	N/A	N/A	N/A	N/A
5800	Wi-Fi 802.11a/n/ac	Standalone	Edge Left	No	0.219	N/A	N/A	N/A	N/A	N/A

Frequency Band (MHz)	Air Interface	RF Exposure Conditions	Test Position	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	First Repeated		Second Repeated		Third Repeated Measured SAR (W/kg)
						Measured SAR (W/kg)	Largest to Smallest SAR Ratio	Measured SAR (W/kg)	Largest to Smallest SAR Ratio	
2400	Wi-Fi 802.11b/g/n	Extremity	Edge Right	No	0.370	N/A	N/A	N/A	N/A	N/A
	BT	Extremity	Edge Bottom	No	0.020	N/A	N/A	N/A	N/A	N/A
5300	Wi-Fi 802.11a/n/ac	Extremity	Edge Left	No	0.256	N/A	N/A	N/A	N/A	N/A
5500	Wi-Fi 802.11a/n/ac	Extremity	Edge Left	No	0.238	N/A	N/A	N/A	N/A	N/A
5800	Wi-Fi 802.11a/n/ac	Extremity	Edge Left	No	0.135	N/A	N/A	N/A	N/A	N/A

Note(s):

Repeated measurement is not required since the original highest measured SAR is $< 0.8 \text{ W/kg}$ (1-g) or 2 W/kg (10-g) .

12. Simultaneous Transmission SAR Analysis

This device does not support simultaneous transmission.

Appendixes

Refer to separated files for the following appendixes.

Appendix A: SAR Setup Photos

Appendix B: SAR System Check Plots

Appendix C: SAR Highest Test Plots

Appendix D: SAR Tissue Ingredients

Appendix E: SAR Probe Certificates

Appendix F: SAR Dipole Certificates

END OF REPORT