FCC SAR TEST REPORT

FCC ID	: 2AYOA-4007
Equipment	: AI GLASSES
Brand Name	: Oakley | Meta
Model Name	: OW8001
Applicant	: Luxottica Group S.p.A. Piazzale Cadorna 3 20123 Milan, Italy
Manufacturer	: Luxottica Group S.p.A. Piazzale Cadorna 3 20123 Milan, Italy
Standard	: FCC 47 CFR Part 2 (2.1093)

The product was received on May 29, 2025 and testing was started from Jun. 01, 2025 and completed on Jun. 08, 2025. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been pass the FCC requirement.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.

Approved by: Cona Huang / Deputy Manager

Sporton International Inc. Wensan Laboratory
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Table of Contents

History of this test report

Report No.	Version	Description	Issued Date
FA551226	01	Initial issue of report	Jul. 16, 2025

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) for Luxottica Group S.p.A., AI GLASSES, OW8001, are as follows.

Equipment Class	Frequency Band	Highest SAR Summary			Highest Simultaneous Transmission 1g SAR (W/kg)	Highest Simultaneous Transmission 10g SAR (W/kg)
		Head (Separation 0mm)	Body-worn (Separation 0mm)	Handheld (Separation 0mm)		
		1g SAR (W/kg)		10g SAR (W/kg)		
DTS	2.4GHz WLAN	0.75	0.52	0.10	0.75	0.10
NII	5GHz WLAN	0.67	0.61	0.33	0.76	0.36
DSS	Bluetooth	0.09	0.08	0.03	0.76	0.36
Date of Testing:		2025/06/01 ~ 2025/06/08				

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test. This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Handheld 10g SAR) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

Reviewed by: Jason Wang
Report Producer: Paula Chen

2. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards, the below KDB standard may not including in the TAF code without accreditation.

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02

3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	AI GLASSES
Brand Name	Oakley | Meta
Model Name	OW8001
FCC ID	2AYOA-4007
Wireless Technology and Frequency Range	WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE
EUT Stage	Identical Prototype
Remark: 1. This device has two samples as G2 and G5, the difference includes in operational description, and RF exposure used G2 as the main testing, G5 spot check worst case found in G2. 2. The device has several output power states when operation in different user scenarios, and these output power states control by sensor detection and detail control logic includes in operational description, and the sensor power verification, supplemental SAR test results refer to appendix D	

4. RF Exposure Limits

4.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

4.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

1. Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

5. Specific Absorption Rate (SAR)

5.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

5.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$\mathbf{SAR} = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\mathbf{dm}}\right) = \frac{\mathbf{d}}{\mathbf{dt}}\left(\frac{\mathbf{dW}}{\boldsymbol{\rho}\mathbf{dv}}\right)$$

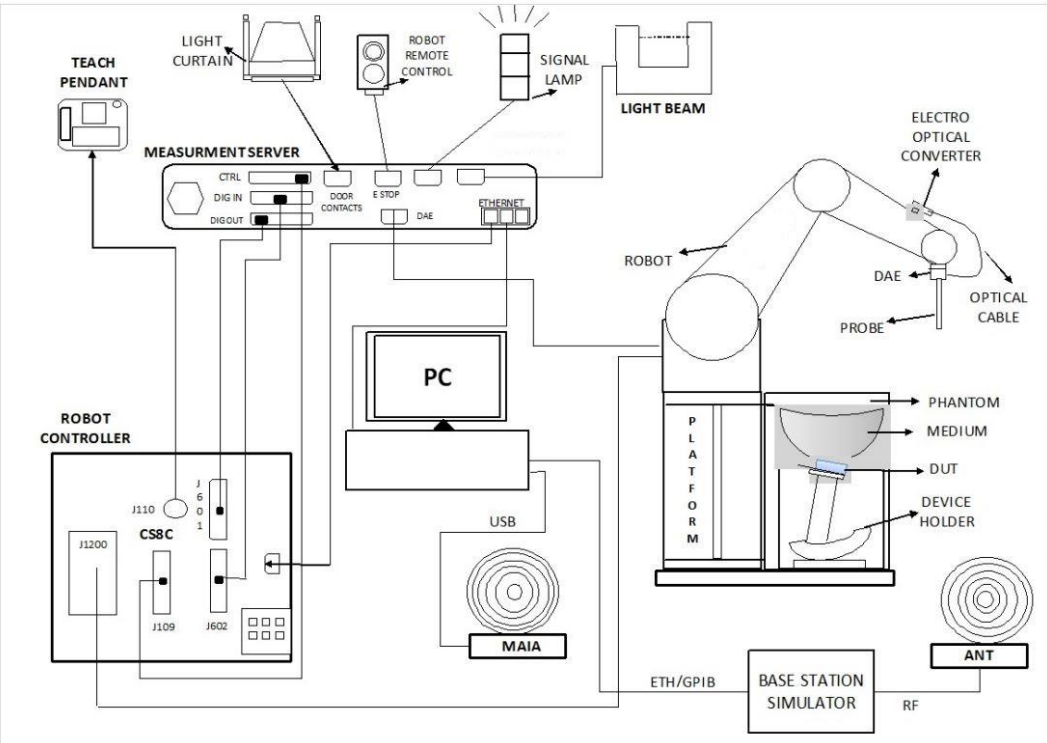
SAR is expressed in units of Watts per kilogram (W/kg)

$$\mathbf{SAR} = \frac{\boldsymbol{\sigma}|\mathbf{E}|^{\mathbf{2}}}{\boldsymbol{\rho}}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

6. System Description and Setup

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



- The DASY system in SAR Configuration is shown above
- 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 windows software and the DASY software v16.4 for RF Exposure testing.
- 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.

6.1 Test Site Location

The SAR measurement facilities used to collect data are within both Sporton Lab list below test site location are accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190 and 3786) and the FCC designation No. TW1190 and TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test.

Laboratory	EMC & Wireless Communications Laboratory		Wensan Laboratory				
Test Site Location	TW1190 No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan		TW3786 No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan				
Test Site No.	SAR01-HY	SAR03-HY	SAR08-HY	SAR09-HY	SAR15-HY	SAR18-HY	SAR21-HY
	SAR04-HY	SAR05-HY	SAR11-HY	SAR12-HY	SAR16-HY	SAR19-HY	SAR22-HY
	SAR06-HY	SAR10-HY	SAR13-HY	SAR14-HY	SAR17-HY	SAR20-HY	

6.2 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG).The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

<ES3DV3 Probe>

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – 4 GHz; Linearity: ±0.2 dB (30 MHz – 4 GHz)	
Directivity	±0.2 dB in TSL (rotation around probe axis) ±0.3 dB in TSL (rotation normal to probe axis)	
Dynamic Range	5 µW/g – >100 mW/g; Linearity: ±0.2 dB	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm	

<EX3DV4 Probe>

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – >6 GHz Linearity: ±0.2 dB (30 MHz – 6 GHz)	
Directivity	±0.3 dB in TSL (rotation around probe axis) ±0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 µW/g – >100 mW/g Linearity: ±0.2 dB (noise: typically <1 µW/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

6.3 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

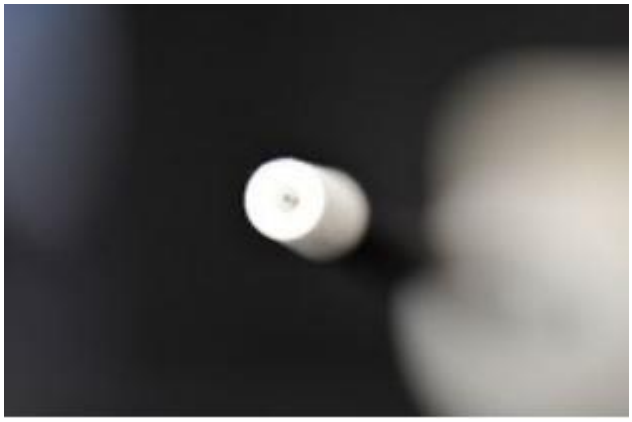
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

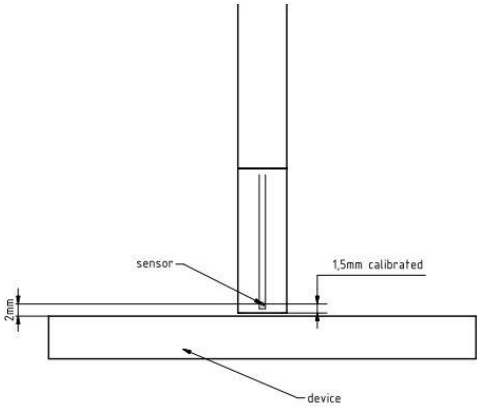
Fig 5.1 Photo of DAE

6.4 EUmmWave Probe / E-Field 5G Probe

The probe design allows measurements at distances as small as 2 mm from the sensors to the surface of the device under test (DUT). The typical sensor to probe tip distance is 1.5 mm.

Frequency	750 MHz – 110 GHz
Probe Overall Length	320 mm
Probe Body Diameter	8.0 mm
Tip Length	23.0 mm
Tip Diameter	8.0 mm
Probe's two dipoles length	0.9 mm – Diode loaded
Dynamic Range	< 20 V/m - 10000 V/m with PRE-10 (min < 50 V/m - 3000 V/m)
Position Precision	< 0.2 mm
Distance between diode sensors and probe's tip	1.5 mm
Minimum Mechanical separation between probe tip and a Surface	0.5 mm
Applications	E-field measurements of 5G devices and other mm-wave transmitters operating above 10GHz in < 2 mm distance from device (free-space) Power density, H-field and far-field analysis using total field reconstruction.
Compatibility	cDASY6 + 5G-Module SW1.0 and higher





6.5 Data Acquisition Electronics (DAE)

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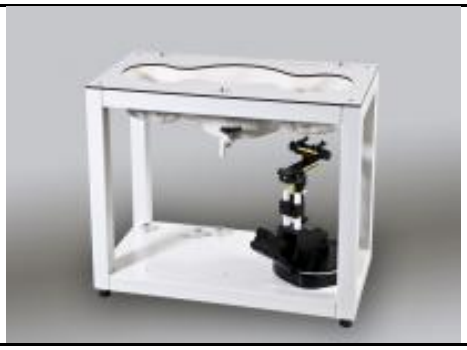
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Fig 5.2 Photo of DAE

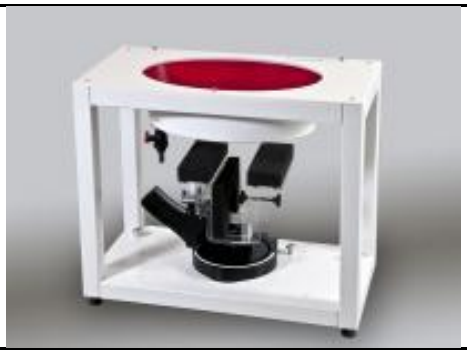
6.6 Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm	
Filling Volume	Approx. 25 liters	
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet	
Measurement Areas	Left Hand, Right Hand, Flat Phantom	

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)	
Filling Volume	Approx. 30 liters	
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm	

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

<SAM Head-Stand Phantom>

Liquid Compatibility	The phantom shell is compatible with SPEAG's tissue simulating liquids both sugar and oil based. Other liquids may be used however liquids that are corrosive, including liquids containing DGBE, must not be used as they will cause damage to the phantom and render the warranty void (see note or consult SPEAG support).	
Shell Thickness	2 ± 0.2 mm (6 mm at ear point)	
Head Shape	Standard compatible SAM head.	

<SAM Face-Down Phantom>

Liquid Compatibility	The phantom shell is compatible with SPEAG's tissue simulating liquids both sugar and oil-based. Other liquids may be used however liquids that are corrosive, including liquids containing DGBE, must not be used as they will cause damage to the phantom and render the warranty void (see note or consult SPEAG support).	
Shell Thickness	2 ± 0.2 mm (6 mm at ear point)	
Head Shape	Standard compatible SAM head.	

6.7 Device Holder

<Mounting Device for Hand-Held Transmitter>

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.

Mounting Device for Hand-Held Transmitters

Mounting Device Adaptor for Wide-Phones

<Mounting Device for Laptops and other Body-Worn Transmitters>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.

Mounting Device for Laptops

7. Measurement Procedures

The measurement procedures are as follows:

(a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
(b) Place the EUT in the positions as Appendix D demonstrates.
(c) Set scan area, grid size and other setting on the DASY software.
(d) Measure SAR results for the highest power channel on each testing position.
(e) Find out the largest SAR result on these testing positions of each band
(f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

7.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

(a) Extraction of the measured data (grid and values) from the Zoom Scan
(b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
(c) Generation of a high-resolution mesh within the measured volume
(d) Interpolation of all measured values form the measurement grid to the high-resolution grid
(e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
(f) Calculation of the averaged SAR within masses of 1g and 10g

7.2 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. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

7.3 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 found in the scanned area, within a range of the global maximum. The range (in dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

7.4 Zoom Scan

Zoom scans are used assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube shoes 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 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

7.5 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

7.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

8. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	2450MHz System Validation Kit(2)	D2450V2	929	Nov. 21, 2022	Nov. 18, 2025
SPEAG	5GHz System Validation Kit	D5GHzV2	1006	Oct. 15, 2024	Oct. 14, 2025
SPEAG	Data Acquisition Electronics	DAE4	1707	Dec. 04, 2024	Dec. 03, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7590	Mar. 19, 2025	Mar. 18, 2026
Testo	Hygro meter	608-H1	45196600	Oct. 28, 2024	Oct. 27, 2025
R&S	BT Base Station	CBT	101136	Oct. 20, 2024	Oct. 19, 2025
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Sep. 24, 2024	Sep. 23, 2025
Keysight	ENA Network Analyzer	E5071C	MY46104758	Oct. 20, 2024	Oct. 19, 2025
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 17, 2024	Sep. 16, 2025
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3690	Aug. 07, 2024	Aug. 06, 2025
Anritsu	Power Meter	ML2495A	1419002	Aug. 13, 2024	Aug. 12, 2025
Anritsu	Power Sensor	MA2411B	1911176	Aug. 13, 2024	Aug. 12, 2025
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jul. 09, 2024	Jul. 08, 2025
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 23, 2024	Oct. 22, 2025
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Warison	Directional Coupler	WCOU-10-50S-10	WR889BMC4B1	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. The dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval. The justification data in appendix C can be found which the return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration for each dipole.

9. System Verification

9.1 Tissue Verification

The tissue dielectric parameters of tissue-equivalent media used for SAR measurements must be characterized within a temperature range of 18℃ to 25℃, measured with calibrated instruments and apparatuses, such as network analyzers and temperature probes. The temperature of the tissue-equivalent medium during SAR measurement must also be within 18℃ to 25℃ and within ± 2℃ of the temperature when the tissue parameters are characterized. The tissue dielectric measurement system must be calibrated before use. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements.
The liquid tissue depth was at least 15cm in the phantom for all SAR testing.

<Tissue Dielectric Parameter Check Results>

Frequency (MHz)	Phantom	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
2450	SAM-twin phantom	22.1	1.830	38.900	1.80	39.20	1.67	-0.77	±5	2025/6/1
2450	SAM-twin phantom	22.4	1.850	39.200	1.80	39.20	2.78	0.00	±5	2025/6/3
2450	SAM-twin phantom	22.5	1.780	39.000	1.80	39.20	-1.11	-0.51	±5	2025/6/5
2450	SAM-twin phantom	22.7	1.850	39.000	1.80	39.20	2.78	-0.51	±5	2025/6/7
5250	SAM-twin phantom	22.4	4.810	36.600	4.71	35.95	2.12	1.81	±5	2025/6/3
5250	SAM-twin phantom	22.4	4.670	35.600	4.71	35.95	-0.85	-0.97	±5	2025/6/6
5250	SAM-twin phantom	22.7	4.700	35.800	4.71	35.95	-0.21	-0.42	±5	2025/6/7
5600	SAM-twin phantom	22.4	5.200	36.100	5.07	35.50	2.56	1.69	±5	2025/6/3
5600	SAM-twin phantom	22.4	5.060	34.900	5.07	35.50	-0.20	-1.69	±5	2025/6/6
5600	SAM-twin phantom	22.7	5.100	35.200	5.07	35.50	0.59	-0.85	±5	2025/6/7
5800	SAM-twin phantom	22.1	5.330	34.700	5.27	35.30	1.14	-1.70	±5	2025/6/2
5800	SAM-twin phantom	22.4	5.420	35.800	5.27	35.30	2.85	1.42	±5	2025/6/3
5800	SAM-twin phantom	22.4	5.310	34.600	5.27	35.30	0.76	-1.98	±5	2025/6/6
5800	SAM-twin phantom	22.7	5.350	34.800	5.27	35.30	1.52	-1.42	±5	2025/6/7
2450	SAM-Head Stand phantom at C 0º	22.1	1.830	38.900	1.80	39.20	1.67	-0.77	±5	2025/6/1
2450	SAM-Head Stand phantom at D 90º	22.1	1.830	38.900	1.80	39.20	1.67	-0.77	±5	2025/6/1
2450	SAM-Head Stand phantom at C 0º	22.5	1.780	39.000	1.80	39.20	-1.11	-0.51	±5	2025/6/5
2450	SAM-Head Stand phantom at D 90º	22.5	1.780	39.000	1.80	39.20	-1.11	-0.51	±5	2025/6/5
5200	SAM-Head Stand phantom at C 0º	22.1	4.630	35.800	4.66	36.00	-0.64	-0.56	±5	2025/6/2
5200	SAM-Head Stand phantom at C 0º	22.5	4.610	35.700	4.66	36.00	-1.07	-0.83	±5	2025/6/6
5600	SAM-Head Stand phantom at D 90º	22.1	5.080	35.100	5.07	35.50	0.20	-1.13	±5	2025/6/2
5600	SAM-Head Stand phantom at D 90º	22.5	5.060	34.900	5.07	35.50	-0.20	-1.69	±5	2025/6/6
5800	SAM-Head Stand phantom at C 0º	22.1	5.330	34.700	5.27	35.30	1.14	-1.70	±5	2025/6/2
5800	SAM-Head Stand phantom at D 90º	22.1	5.330	34.700	5.27	35.30	1.14	-1.70	±5	2025/6/2
5800	SAM-Head Stand phantom at C 0º	22.5	5.310	34.600	5.27	35.30	0.76	-1.98	±5	2025/6/6
5800	SAM-Head Stand phantom at D 90º	22.5	5.310	34.600	5.27	35.30	0.76	-1.98	±5	2025/6/6

9.2 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

<System Check Results at SAM-twin Phantom>

Test Site	Phantom	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (dB)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (dB)
SAR-13	SAM-twin	2025/6/1	2450	50	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn1707	2.590	52.400	51.8	-0.05	1.220	24.700	24.4	-0.05
SAR-13	SAM-twin	2025/6/3	2450	50	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn1707	2.590	52.400	51.8	-0.05	1.230	24.700	24.6	-0.02
SAR-13	SAM-twin	2025/6/5	2450	50	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn1707	2.510	52.400	50.2	-0.19	1.190	24.700	23.8	-0.16
SAR-13	SAM-twin	2025/6/7	2450	50	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn1707	2.620	52.400	52.4	0.00	1.240	24.700	24.8	0.02
SAR-13	SAM-twin	2025/6/3	5250	50	D5GHzV2-1006-5250	EX3DV4 - SN7590	DAE4 Sn1707	4.140	80.600	82.8	0.12	1.110	22.800	22.2	-0.12
SAR-13	SAM-twin	2025/6/6	5250	100	D5GHzV2-1006-5250	EX3DV4 - SN7590	DAE4 Sn1707	8.820	80.600	88.2	0.39	2.490	22.800	24.9	0.38
SAR-13	SAM-twin	2025/6/7	5250	50	D5GHzV2-1006-5250	EX3DV4 - SN7590	DAE4 Sn1707	3.770	80.600	75.4	-0.29	1.030	22.800	20.6	-0.44
SAR-13	SAM-twin	2025/6/3	5600	50	D5GHzV2-1006-5600	EX3DV4 - SN7590	DAE4 Sn1707	3.970	83.400	79.4	-0.21	1.110	23.700	22.2	-0.28
SAR-13	SAM-twin	2025/6/6	5600	100	D5GHzV2-1006-5600	EX3DV4 - SN7590	DAE4 Sn1707	8.600	83.400	86	0.13	2.400	23.700	24	0.05
SAR-13	SAM-twin	2025/6/7	5600	50	D5GHzV2-1006-5600	EX3DV4 - SN7590	DAE4 Sn1707	4.230	83.400	84.6	0.06	1.140	23.700	22.8	-0.17
SAR-13	SAM-twin	2025/6/2	5800	50	D5GHzV2-1006-5800	EX3DV4 - SN7590	DAE4 Sn1707	4.180	80.600	83.6	0.16	1.140	22.700	22.8	0.02
SAR-13	SAM-twin	2025/6/3	5800	50	D5GHzV2-1006-5800	EX3DV4 - SN7590	DAE4 Sn1707	4.380	80.600	87.6	0.36	1.160	22.700	23.2	0.09
SAR-13	SAM-twin	2025/6/6	5800	100	D5GHzV2-1006-5800	EX3DV4 - SN7590	DAE4 Sn1707	7.650	80.600	76.5	-0.23	2.120	22.700	21.2	-0.30
SAR-13	SAM-twin	2025/6/7	5800	50	D5GHzV2-1006-5800	EX3DV4 - SN7590	DAE4 Sn1707	4.090	80.600	81.8	0.06	1.030	22.700	20.6	-0.42

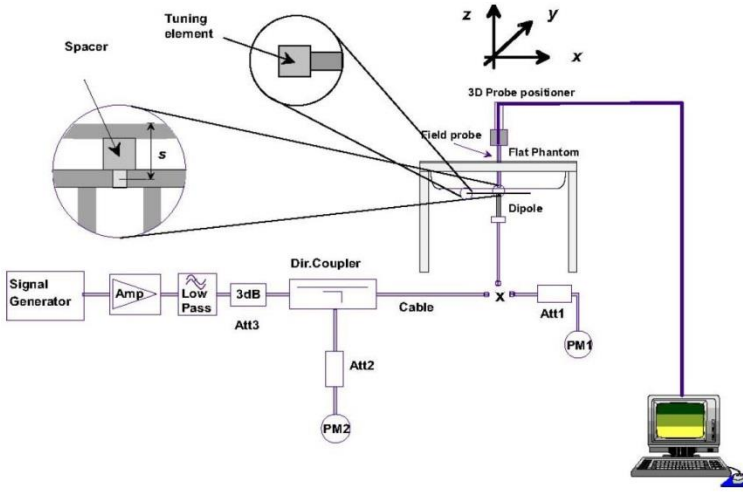


Fig 8.3.1 System Performance Check Setup

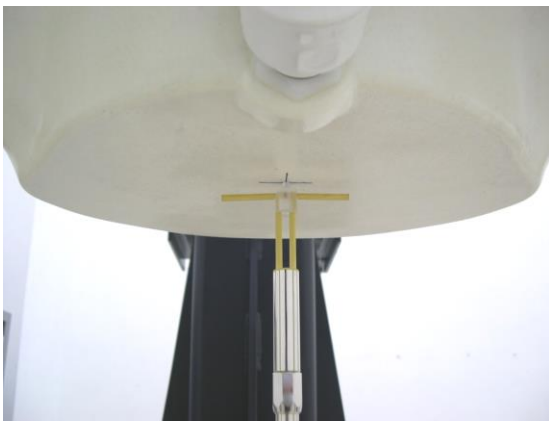


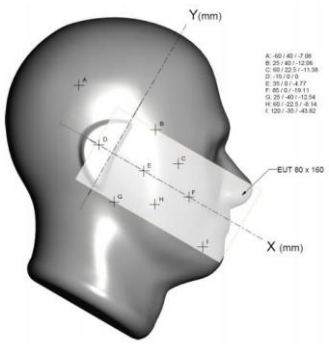
Fig 8.3.2 Setup Photo

<System Check Results under SAM Head-Stand Phantom>

Mount SAM Head-Stand Phantom System Validation Masks provided by SPEAG on the faces and mark Reference Point B

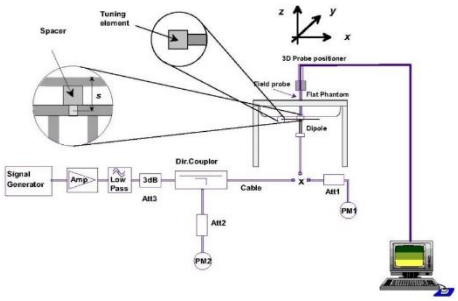
Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 1.2dB under the SAM Head-stand Phantom. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

Test Site	Phantom	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (dB)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (dB)
SAR-13	SAM-Head Stand phantom at C 0°	2025/6/1	2450	50	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn1707	2.980	53.000	59.6	0.51	1.290	24.000	25.8	0.31
SAR-13	SAM-Head Stand phantom at D 90°	2025/6/1	2450	50	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn1707	1.750	32.200	35	0.36	0.862	16.000	17.24	0.32
SAR-13	SAM-Head Stand phantom at C 0°	2025/6/5	2450	50	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn1707	2.920	53.000	58.4	0.42	1.260	24.000	25.2	0.21
SAR-13	SAM-Head Stand phantom at D 90°	2025/6/5	2450	50	D2450V2-929	EX3DV4 - SN7590	DAE4 Sn1707	1.780	32.200	35.6	0.44	0.875	16.000	17.5	0.39
SAR-13	SAM-Head Stand phantom at C 0°	2025/6/2	5200	50	D5GHzV2-1006-5200	EX3DV4 - SN7590	DAE4 Sn1707	4.380	83.900	87.6	0.19	1.160	21.600	23.2	0.31
SAR-13	SAM-Head Stand phantom at C 0°	2025/6/6	5200	50	D5GHzV2-1006-5200	EX3DV4 - SN7590	DAE4 Sn1707	4.450	83.900	89	0.26	1.150	21.600	23	0.27
SAR-13	SAM-Head Stand phantom at D 90°	2025/6/2	5600	50	D5GHzV2-1006-5600	EX3DV4 - SN7590	DAE4 Sn1707	2.280	60.100	45.6	-1.20	0.741	19.500	14.82	-1.19
SAR-13	SAM-Head Stand phantom at D 90°	2025/6/6	5600	50	D5GHzV2-1006-5600	EX3DV4 - SN7590	DAE4 Sn1707	2.360	60.100	47.2	-1.05	0.766	19.500	15.32	-1.05
SAR-13	SAM-Head Stand phantom at C 0°	2025/6/2	5800	50	D5GHzV2-1006-5800	EX3DV4 - SN7590	DAE4 Sn1707	4.000	80.100	80	-0.01	1.040	20.000	20.8	0.17
SAR-13	SAM-Head Stand phantom at D 90°	2025/6/2	5800	50	D5GHzV2-1006-5800	EX3DV4 - SN7590	DAE4 Sn1707	2.310	64.100	46.2	-1.42	0.753	21.100	15.06	-1.46
SAR-13	SAM-Head Stand phantom at C 0°	2025/6/6	5800	50	D5GHzV2-1006-5800	EX3DV4 - SN7590	DAE4 Sn1707	3.980	80.100	79.6	-0.03	1.040	20.000	20.8	0.17
SAR-13	SAM-Head Stand phantom at D 90°	2025/6/6	5800	50	D5GHzV2-1006-5800	EX3DV4 - SN7590	DAE4 Sn1707	2.350	64.100	47	-1.35	0.766	21.100	15.32	-1.39



SAM Face-Down Reference Point

Setup Photo at SAM Face-Down Phantom



System Performance Check Setup

10. WiFi/Bluetooth Output Power (Unit: dBm)

General Note:

1. 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/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, additional output power measurements were not necessary.
2. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
3. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
4. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, 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/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
5. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
    a. When the reported SAR of 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 802.11 transmission mode combinations within the frequency band or aggregated band.
    b. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
    c. For all positions/configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
6. Per 201904 TCBC workshops, General principles of FCC KDB Publication 248227 D01 can be applied to determine the SAR Initial Test Configurations and test reduction for 802.11ax SAR testing. For the table below the 802.11ax maximum power is SU (non-OFDMA), and the SU maximum power also higher than RU (OFDMA)
7. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing
8. For modes with the same maximum output power, the guidance from section 5.3.2 a) of FCC KDB Publication 248227 D01 should be applied, with 802.11ax being considered as the highest 802.11 mode for the appropriate frequency bands
9. When SAR testing for 802.11ax is required
    a. If the maximum output power is highest for OFDMA scenarios, choose the tone size with the maximum number of tones and the highest maximum output power
    b. Otherwise, consider the fully allocated channel for SAR testing
    c. When SAR testing is required on RU sizes less than the fully allocated channel, use the RU number closest to the middle of the channel, choosing the higher RU number when two RUs are equidistant to the middle of the channel

<Power State A>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	14.84	15.75	100.00
		6	2437	15.30	15.75	
		11	2462	15.14	15.75	
		12	2467	15.12	15.75	
		13	2472	15.05	15.75	
	802.11g 6Mbps	1	2412	Not Required	15.75	Not Required
		6	2437		15.75	
		11	2462		15.75	
		12	2467		15.75	
		13	2472		1.00	
	802.11n-HT20 MCS0	1	2412		15.75	
		6	2437		15.75	
		11	2462		15.75	
		12	2467		15.75	
		13	2472		-0.50	
	802.11ac-VHT20 MCS0	1	2412		15.75	
		6	2437		15.75	
		11	2462		15.75	
		12	2467		15.75	
		13	2472		-0.50	
	802.11ax-HE20 MCS0	1	2412		15.75	
		6	2437		15.75	
		11	2462		15.75	
		12	2467		15.50	
		13	2472		-0.50	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	Not Required	14.00	Not Required
		40	5200		14.00	
		44	5220		14.00	
		48	5240		14.00	
	802.11n-HT20 MCS0	36	5180		14.00	
		40	5200		14.00	
		44	5220		14.00	
		48	5240		14.00	
	802.11n-HT40 MCS0	38	5190	13.16	14.00	99.76
		46	5230	13.08	14.00	
	802.11ac-VHT20 MCS0	36	5180	Not Required	14.00	Not Required
		40	5200		14.00	
		44	5220		14.00	
		48	5240		14.00	
	802.11ac-VHT40 MCS0	38	5190		14.00	
		46	5230		14.00	
	802.11ac-VHT80 MCS0	42	5210		14.00	
	802.11ax-HE20 MCS0	36	5180		14.00	
		40	5200		14.00	
		44	5220		14.00	
		48	5240		14.00	
	802.11ax-HE40 MCS0	38	5190		14.00	
		46	5230		14.00	
	802.11ax-HE80 MCS0	42	5210		14.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	Not Required	13.50	Not Required
		56	5280		13.50	
		60	5300		13.50	
		64	5320		13.50	
	802.11n-HT20 MCS0	52	5260		13.50	
		56	5280		13.50	
		60	5300		13.50	
		64	5320		13.50	
	802.11n-HT40 MCS0	54	5270		13.50	
		62	5310		13.50	
	802.11ac-VHT20 MCS0	52	5260		13.50	
		56	5280		13.50	
		60	5300		13.50	
		64	5320		13.50	
	802.11ac-VHT40 MCS0	54	5270		13.50	
		62	5310		13.50	
	802.11ac-VHT80 MCS0	58	5290	12.38	13.50	99.76
	802.11ac-VHT160 MCS0	50	5250	12.71	13.50	99.63
	802.11ax-HE20 MCS0	52	5260	Not Required	13.50	Not Required
		56	5280		13.50	
		60	5300		13.50	
		64	5320		13.50	
	802.11ax-HE40 MCS0	54	5270		13.50	
		62	5310		13.50	
	802.11ax-HE80 MCS0	58	5290		13.50	
	802.11ax-HE160 MCS0	50	5250		13.50	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	Not Required	12.25	Not Required
		116	5580		12.25	
		124	5620		12.25	
		132	5660		12.25	
		144	5720		12.25	
	802.11n-HT20 MCS0	100	5500		12.25	
		116	5580		12.25	
		124	5620		12.25	
		132	5660		12.25	
		144	5720		12.25	
	802.11n-HT40 MCS0	102	5510		12.25	
		110	5550		12.25	
		126	5630		12.25	
		134	5670		12.25	
		142	5710		12.25	
	802.11ac-VHT20 MCS0	100	5500		12.25	
		116	5580		12.25	
		124	5620		12.25	
		132	5660		12.25	
		144	5720		12.25	
	802.11ac-VHT40 MCS0	102	5510		12.25	
		110	5550		12.25	
		126	5630		12.25	
		134	5670		12.25	
		142	5710		12.25	
	802.11ac-VHT80 MCS0	106	5530	11.21	12.25	99.76
		122	5610	11.11	12.25	
		138	5690	10.93	12.25	
	802.11ac-VHT160 MCS0	114	5570	11.23	12.25	99.63
	802.11ax-HE20 MCS0	100	5500	Not Required	12.25	Not Required
		116	5580		12.25	
		124	5620		12.25	
		132	5660		12.25	
		144	5720		12.25	
	802.11ax-HE40 MCS0	102	5510		12.25	
		110	5550		12.25	
		126	5630		12.25	
		134	5670		12.25	
		142	5710		12.25	
	802.11ax-HE80 MCS0	106	5530		12.25	
		122	5610		12.25	
		138	5690		12.25	
	802.11ax-HE160 MCS0	114	5570		12.25	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	Not Required	12.00	Not Required
		157	5785		12.00	
		165	5825		12.00	
	802.11n-HT20 MCS0	149	5745		12.00	
		157	5785		12.00	
		165	5825		12.00	
	802.11n-HT40 MCS0	151	5755	11.32	12.00	99.76
		159	5795	11.41	12.00	
	802.11ac-VHT20 MCS0	149	5745	Not Required	12.00	Not Required
		157	5785		12.00	
		165	5825		12.00	
	802.11ac-VHT40 MCS0	151	5755		12.00	
		159	5795		12.00	
	802.11ac-VHT80 MCS0	155	5775	11.38	12.00	99.76
	802.11ax-HE20 MCS0	149	5745	Not Required	12.00	Not Required
		157	5785		12.00	
		165	5825		12.00	
	802.11ax-HE40 MCS0	151	5755		12.00	
		159	5795		12.00	
	802.11ax-HE80 MCS0	155	5775		12.00	

<Power State B>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	16.90	18.00	100.00
		6	2437	17.40	18.00	
		11	2462	17.25	18.00	
		12	2467	17.22	18.00	
		13	2472	16.65	17.00	
	802.11g 6Mbps	1	2412	Not Required	18.00	Not Required
		6	2437		18.00	
		11	2462		18.00	
		12	2467		17.50	
		13	2472		1.00	
	802.11n-HT20 MCS0	1	2412		18.00	
		6	2437		18.00	
		11	2462		17.50	
		12	2467		17.00	
		13	2472		-0.50	
	802.11ac-VHT20 MCS0	1	2412		18.00	
		6	2437		18.00	
		11	2462		17.50	
		12	2467		17.00	
		13	2472		-0.50	
	802.11ax-HE20 MCS0	1	2412		18.00	
		6	2437		18.00	
		11	2462		17.00	
		12	2467		15.50	
		13	2472		-0.50	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	Not Required	15.00	Not Required
		40	5200		15.00	
		44	5220		15.00	
		48	5240		15.00	
	802.11n-HT20 MCS0	36	5180		15.00	
		40	5200		15.00	
		44	5220		15.00	
		48	5240		15.00	
	802.11n-HT40 MCS0	38	5190	14.64	15.00	99.76
		46	5230	14.56	15.00	
	802.11ac-VHT20 MCS0	36	5180	Not Required	15.00	Not Required
		40	5200		15.00	
		44	5220		15.00	
		48	5240		15.00	
	802.11ac-VHT40 MCS0	38	5190		15.00	
		46	5230		15.00	
	802.11ac-VHT80 MCS0	42	5210		14.00	
	802.11ax-HE20 MCS0	36	5180		15.00	
		40	5200		15.00	
		44	5220		15.00	
		48	5240		15.00	
	802.11ax-HE40 MCS0	38	5190		15.00	
		46	5230		15.00	
	802.11ax-HE80 MCS0	42	5210		14.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	Not Required	14.75	Not Required
		56	5280		14.75	
		60	5300		14.75	
		64	5320		14.75	
	802.11n-HT20 MCS0	52	5260		14.75	
		56	5280		14.75	
		60	5300		14.75	
		64	5320		14.75	
	802.11n-HT40 MCS0	54	5270		14.75	
		62	5310		14.75	
	802.11ac-VHT20 MCS0	52	5260		14.75	
		56	5280		14.75	
		60	5300		14.75	
		64	5320		14.75	
	802.11ac-VHT40 MCS0	54	5270		14.75	
		62	5310		14.75	
	802.11ac-VHT80 MCS0	58	5290	14.43	14.75	99.76
	802.11ac-VHT160 MCS0	50	5250	Not Required	14.00	Not Required
	802.11ax-HE20 MCS0	52	5260		14.75	
		56	5280		14.75	
		60	5300		14.75	
		64	5320		14.75	
	802.11ax-HE40 MCS0	54	5270		14.75	
		62	5310		14.75	
	802.11ax-HE80 MCS0	58	5290		14.75	
	802.11ax-HE160 MCS0	50	5250		14.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	Not Required	14.50	Not Required
		116	5580		14.50	
		124	5620		14.50	
		132	5660		14.50	
		144	5720		14.50	
	802.11n-HT20 MCS0	100	5500		14.50	
		116	5580		14.50	
		124	5620		14.50	
		132	5660		14.50	
		144	5720		14.50	
	802.11n-HT40 MCS0	102	5510		14.50	
		110	5550		14.50	
		126	5630		14.50	
		134	5670		14.50	
		142	5710		14.50	
	802.11ac-VHT20 MCS0	100	5500		14.50	
		116	5580		14.50	
		124	5620		14.50	
		132	5660		14.50	
		144	5720		14.50	
	802.11ac-VHT40 MCS0	102	5510		14.50	
		110	5550		14.50	
		126	5630		14.50	
		134	5670		14.50	
		142	5710		14.50	
	802.11ac-VHT80 MCS0	106	5530	13.22	14.50	99.76
		122	5610	13.18	14.50	
		138	5690	12.89	14.50	
	802.11ac-VHT160 MCS0	114	5570	13.61	14.50	99.63
	802.11ax-HE20 MCS0	100	5500	Not Required	14.50	Not Required
		116	5580		14.50	
		124	5620		14.50	
		132	5660		14.50	
		144	5720		14.50	
	802.11ax-HE40 MCS0	102	5510		14.50	
		110	5550		14.50	
		126	5630		14.50	
		134	5670		14.50	
		142	5710		14.50	
	802.11ax-HE80 MCS0	106	5530		14.50	
		122	5610		14.50	
		138	5690		14.50	
	802.11ax-HE160 MCS0	114	5570		14.50	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	Not Required	14.00	Not Required
		157	5785		14.00	
		165	5825		14.00	
	802.11n-HT20 MCS0	149	5745		14.00	
		157	5785		14.00	
		165	5825		14.00	
	802.11n-HT40 MCS0	151	5755	13.08	14.00	99.76
		159	5795	13.03	14.00	
	802.11ac-VHT20 MCS0	149	5745	Not Required	14.00	Not Required
		157	5785		14.00	
		165	5825		14.00	
	802.11ac-VHT40 MCS0	151	5755		14.00	
		159	5795		14.00	
	802.11ac-VHT80 MCS0	155	5775	13.09	14.00	99.76
	802.11ax-HE20 MCS0	149	5745	Not Required	14.00	Not Required
		157	5785		14.00	
		165	5825		14.00	
	802.11ax-HE40 MCS0	151	5755		14.00	
		159	5795		14.00	
	802.11ax-HE80 MCS0	155	5775		14.00	

<Power State C>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	16.20	18.00	100.00
		6	2437	16.60	18.00	
		11	2462	16.40	18.00	
		12	2467	16.50	18.00	
		13	2472	15.40	17.00	
	802.11g 6Mbps	1	2412	Not Required	18.00	Not Required
		6	2437		18.00	
		11	2462		18.00	
		12	2467		17.50	
		13	2472		1.00	
	802.11n-HT20 MCS0	1	2412		18.00	
		6	2437		18.00	
		11	2462		17.50	
		12	2467		17.00	
		13	2472		-0.50	
	802.11ac-VHT20 MCS0	1	2412		18.00	
		6	2437		18.00	
		11	2462		17.50	
		12	2467		17.00	
		13	2472		-0.50	
	802.11ax-HE20 MCS0	1	2412		18.00	
		6	2437		18.00	
		11	2462		17.50	
		12	2467		15.50	
		13	2472		-0.50	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	Not Required	18.00	99.10
		40	5200		18.00	
		44	5220		18.00	
		48	5240		18.00	
	802.11n-HT20 MCS0	36	5180		18.00	Not Required
		40	5200		18.00	
		44	5220		18.00	
		48	5240		18.00	
	802.11n-HT40 MCS0	38	5190	14.60	16.50	99.76
		46	5230	16.20	18.00	
	802.11ac-VHT20 MCS0	36	5180	Not Required	18.00	Not Required
		40	5200		18.00	
		44	5220		18.00	
		48	5240		18.00	
	802.11ac-VHT40 MCS0	38	5190		16.50	
		46	5230		18.00	
	802.11ac-VHT80 MCS0	42	5210		14.00	
	802.11ax-HE20 MCS0	36	5180		18.00	
		40	5200		18.00	
		44	5220		18.00	
		48	5240		18.00	
	802.11ax-HE40 MCS0	38	5190		17.00	
		46	5230		18.00	
	802.11ax-HE80 MCS0	42	5210		14.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	Not Required	18.00	Not Required
		56	5280		18.00	
		60	5300		18.00	
		64	5320		18.00	
	802.11n-HT20 MCS0	52	5260		18.00	
		56	5280		18.00	
		60	5300		18.00	
		64	5320		18.00	
	802.11n-HT40 MCS0	54	5270	16.30	18.00	99.76
		62	5310	15.40	17.00	
	802.11ac-VHT20 MCS0	52	5260	Not Required	18.00	Not Required
		56	5280		18.00	
		60	5300		18.00	
		64	5320		18.00	
	802.11ac-VHT40 MCS0	54	5270		18.00	
		62	5310		17.00	
	802.11ac-VHT80 MCS0	58	5290		16.50	
	802.11ac-VHT160 MCS0	50	5250		14.00	
	802.11ax-HE20 MCS0	52	5260		18.00	
		56	5280		18.00	
		60	5300		18.00	
		64	5320		18.00	
	802.11ax-HE40 MCS0	54	5270		18.00	
		62	5310		18.00	
	802.11ax-HE80 MCS0	58	5290		16.50	
	802.11ax-HE160 MCS0	50	5250		14.00	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	Not Required	17.50	Not Required
		116	5580		18.00	
		124	5620		18.00	
		132	5660		18.00	
		144	5720		18.00	
	802.11n-HT20 MCS0	100	5500		17.50	
		116	5580		18.00	
		124	5620		18.00	
		132	5660		18.00	
		144	5720		18.00	
	802.11n-HT40 MCS0	102	5510		16.00	
		110	5550		18.00	
		126	5630		18.00	
		134	5670		18.00	
		142	5710		18.00	
	802.11ac-VHT20 MCS0	100	5500		17.50	
		116	5580		18.00	
		124	5620		18.00	
		132	5660		18.00	
		144	5720		18.00	
	802.11ac-VHT40 MCS0	102	5510		16.00	
		110	5550		18.00	
		126	5630		18.00	
		134	5670		18.00	
		142	5710		18.00	
	802.11ac-VHT80 MCS0	106	5530	14.90	16.50	99.76
		122	5610	16.60	18.00	
		138	5690	16.10	18.00	
	802.11ac-VHT160 MCS0	114	5570	Not Required	16.50	Not Required
	802.11ax-HE20 MCS0	100	5500		17.50	
		116	5580		18.00	
		124	5620		18.00	
		132	5660		18.00	
		144	5720		18.00	
	802.11ax-HE40 MCS0	102	5510		16.00	
		110	5550		18.00	
		126	5630		18.00	
		134	5670		18.00	
		142	5710		18.00	
	802.11ax-HE80 MCS0	106	5530		16.50	
		122	5610		18.00	
		138	5690		18.00	
	802.11ax-HE160 MCS0	114	5570		16.50	

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	Not Required	18.00	Not Required
		157	5785		18.00	
		165	5825		18.00	
	802.11n-HT20 MCS0	149	5745		18.00	
		157	5785		18.00	
		165	5825		18.00	
	802.11n-HT40 MCS0	151	5755	16.20	18.00	99.76
		159	5795	16.30	18.00	
	802.11ac-VHT20 MCS0	149	5745	Not Required	18.00	Not Required
		157	5785		18.00	
		165	5825		18.00	
	802.11ac-VHT40 MCS0	151	5755		18.00	
		159	5795		18.00	
	802.11ac-VHT80 MCS0	155	5775	16.20	18.00	99.76
	802.11ax-HE20 MCS0	149	5745	Not Required	18.00	Not Required
		157	5785		18.00	
		165	5825		18.00	
	802.11ax-HE40 MCS0	151	5755		18.00	
		159	5795		18.00	
	802.11ax-HE80 MCS0	155	5775		18.00	

<2.4GHz Bluetooth>

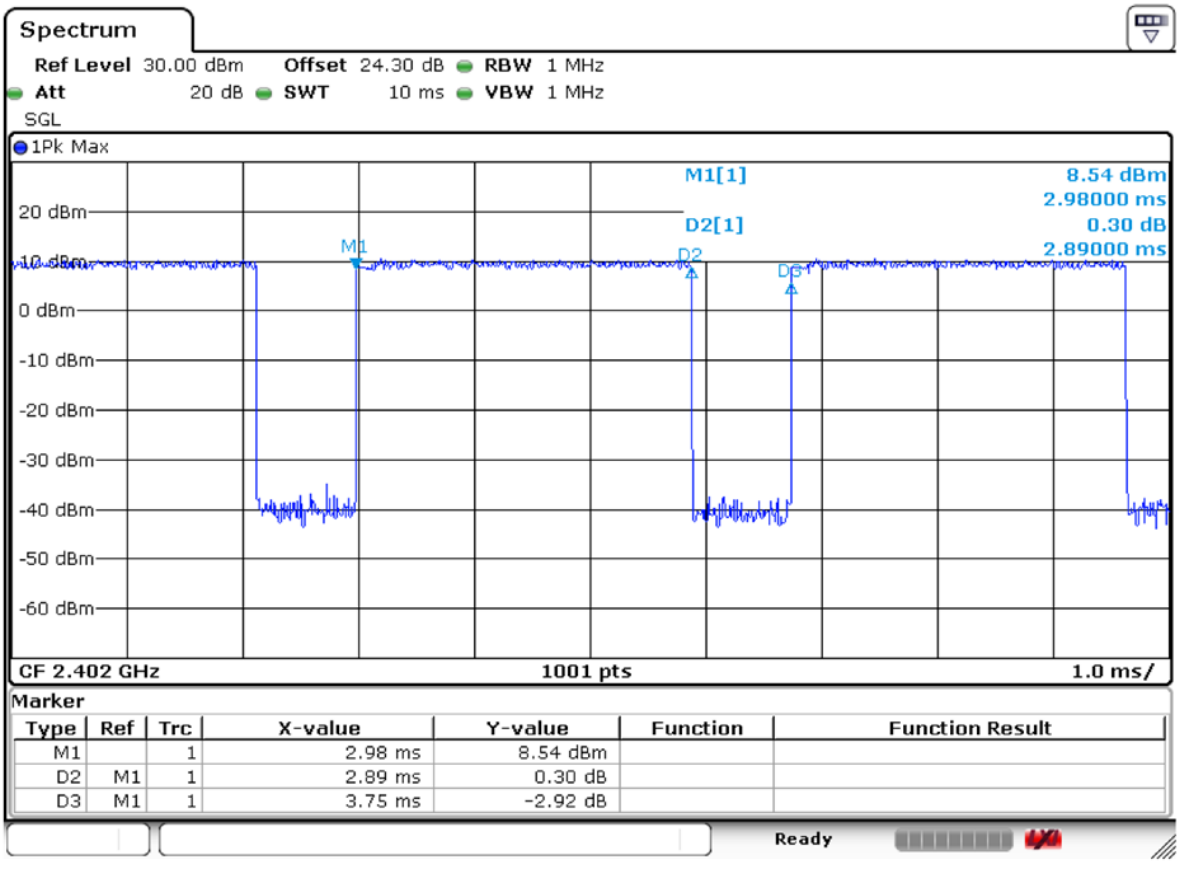
<Power State A/B/C>

	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
Bluetooth	BR / EDR 1Mbps	0	2402	9.51	11.00	77.07
		39	2441	9.74	11.00	
		78	2480	9.75	11.00	
	BR / EDR 2Mbps	0	2402	Not Required	9.00	Not Required
		39	2441		9.00	
		78	2480		9.00	
	BR / EDR 3Mbps	0	2402		9.00	
		39	2441		9.00	
		78	2480		9.00	
	LE 1Mbps	0	2402		10.00	
		19	2440		10.00	
		39	2480		10.00	
	LE 2Mbps	0	2402		10.00	
		19	2440		10.00	
		39	2480		10.00	

General Note:

1. For 2.4GHz Bluetooth SAR testing was selected 1Mbps due to its highest average power and duty cycle is 77.07% considered in SAR testing, and the duty cycle would be scaled to theoretical 83.3% in reported SAR calculation.

BT Duty cycle



11. SAR Test Results

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
   a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
   b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
   c. For WLAN/Bluetooth: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
2. Per KDB 447498 D01v06, for each exposure position, 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
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
4. The RF exposure evaluation for the device was conducted using the Head-stand Phantom and special test conditions, in accordance with the approved KDB procedures by the OET.

WLAN Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required 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.
2. Per KDB 248227 D01v02r02, WLAN5.2GHz SAR testing is not required for hotspot and body-worn condition when the WLAN5.3GHz band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for WLAN5.2GHz band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. During SAR testing, the WLAN transmit signal was continuously monitored using a spectrum analyzer to ensure continuous and stable signal output throughout the measurement.

11.1 Head SAR

<Face-worn Exposure Condition under Head-stand Phantom>

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
01	WLAN2.4GHz	802.11b 1Mbps	Face-Worn	0mm	Narrow	A	6	2437	G2	15.30	15.75	1.109	100	1.000	0.06	0.387	0.429
	WLAN2.4GHz	802.11b 1Mbps	Face-Worn	0mm	Medium	A	6	2437	G2	15.30	15.75	1.109	100	1.000	-0.09	0.356	0.395
	WLAN2.4GHz	802.11b 1Mbps	Face-Worn	0mm	Wide	A	6	2437	G2	15.30	15.75	1.109	100	1.000	-0.08	0.360	0.399
	WLAN2.4GHz	802.11b 1Mbps	Face-Worn	0mm	Narrow	A	6	2437	G5	15.30	15.75	1.109	100	1.000	-0.02	0.371	0.411
	WLAN5GHz	802.11n-HT40 MCS0	Face-Worn	0mm	Wide	A	38	5190	G2	13.16	14.00	1.213	99.76	1.002	0.01	0.370	0.450
02	WLAN5GHz	802.11n-HT40 MCS0	Face-Worn	0mm	Wide	A	46	5230	G2	13.08	14.00	1.236	99.76	1.002	0.06	0.539	0.668
	WLAN5GHz	802.11n-HT40 MCS0	Face-Worn	0mm	Narrow	A	46	5230	G2	13.08	14.00	1.236	99.76	1.002	0.13	0.508	0.629
	WLAN5GHz	802.11n-HT40 MCS0	Face-Worn	0mm	Medium	A	46	5230	G2	13.08	14.00	1.236	99.76	1.002	0.12	0.495	0.613
	WLAN5GHz	802.11n-HT40 MCS0	Face-Worn	0mm	Wide	A	46	5230	G5	13.08	14.00	1.236	99.76	1.002	0.03	0.521	0.645
03	WLAN5GHz	802.11ac-VHT160 MCS0	Face-Worn	0mm	Wide	A	114	5570	G2	11.23	12.25	1.265	99.63	1.004	0.01	0.283	0.359
	WLAN5GHz	802.11ac-VHT160 MCS0	Face-Worn	0mm	Narrow	A	114	5570	G2	11.23	12.25	1.265	99.63	1.004	0.18	0.256	0.325
	WLAN5GHz	802.11ac-VHT160 MCS0	Face-Worn	0mm	Medium	A	114	5570	G2	11.23	12.25	1.265	99.63	1.004	0.16	0.243	0.309
	WLAN5GHz	802.11ac-VHT160 MCS0	Face-Worn	0mm	Wide	A	114	5570	G5	11.23	12.25	1.265	99.63	1.004	-0.1	0.271	0.344
04	WLAN5GHz	802.11ac-VHT80 MCS0	Face-Worn	0mm	Wide	A	155	5775	G2	11.38	12.00	1.153	99.76	1.002	0.02	0.384	0.444
	WLAN5GHz	802.11ac-VHT80 MCS0	Face-Worn	0mm	Narrow	A	155	5775	G2	11.38	12.00	1.153	99.76	1.002	0.05	0.344	0.397
	WLAN5GHz	802.11ac-VHT80 MCS0	Face-Worn	0mm	Medium	A	155	5775	G2	11.38	12.00	1.153	99.76	1.002	0.08	0.335	0.387
	WLAN5GHz	802.11ac-VHT80 MCS0	Face-Worn	0mm	Wide	A	155	5775	G5	11.38	12.00	1.153	99.76	1.002	-0.11	0.368	0.425

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
05	Bluetooth	1Mbps	Face-Worn	0mm	Narrow	A	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.13	0.061	0.088
	Bluetooth	1Mbps	Face-Worn	0mm	Wide	A	78	2480	G2	9.75	11.00	1.332	77.07	1.081	0.01	0.052	0.075
	Bluetooth	1Mbps	Face-Worn	0mm	Medium	A	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.15	0.050	0.072
	Bluetooth	1Mbps	Face-Worn	0mm	Narrow	A	78	2480	G5	9.75	11.00	1.332	77.07	1.081	0.19	0.056	0.081

<Rest-on-Head Exposure Condition under Head-stand Phantom>

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Rest-on-Head	0mm	Narrow	A	6	2437	G2	15.30	15.75	1.109	100	1.000	0	0.522	0.579
	WLAN2.4GHz	802.11b 1Mbps	Rest-on-Head	0mm	Narrow	A	1	2412	G2	14.84	15.75	1.233	100	1.000	0.03	0.523	0.645
	WLAN2.4GHz	802.11b 1Mbps	Rest-on-Head	0mm	Narrow	A	11	2462	G2	15.14	15.75	1.151	100	1.000	-0.1	0.561	0.646
06	WLAN2.4GHz	802.11b 1Mbps	Rest-on-Head	0mm	Narrow	A	12	2467	G2	15.12	15.75	1.156	100	1.000	-0.01	0.645	0.746
	WLAN2.4GHz	802.11b 1Mbps	Rest-on-Head	0mm	Narrow	A	13	2472	G2	15.05	15.75	1.175	100	1.000	0.01	0.526	0.618
	WLAN2.4GHz	802.11b 1Mbps	Rest-on-Head	0mm	Medium	A	12	2467	G2	15.12	15.75	1.156	100	1.000	0.1	0.605	0.699
	WLAN2.4GHz	802.11b 1Mbps	Rest-on-Head	0mm	Wide	A	12	2467	G2	15.12	15.75	1.156	100	1.000	-0.17	0.600	0.694
	WLAN2.4GHz	802.11b 1Mbps	Rest-on-Head	0mm	Narrow	A	12	2467	G5	15.12	15.75	1.156	100	1.000	0.04	0.631	0.729
07	WLAN5GHz	802.11n-HT40 MCS0	Rest-on-Head	0mm	Wide	A	38	5190	G2	13.16	14.00	1.213	99.76	1.002	-0.07	0.271	0.329
	WLAN5GHz	802.11n-HT40 MCS0	Rest-on-Head	0mm	Narrow	A	38	5190	G2	13.16	14.00	1.213	99.76	1.002	0.07	0.251	0.305
	WLAN5GHz	802.11n-HT40 MCS0	Rest-on-Head	0mm	Medium	A	38	5190	G2	13.16	14.00	1.213	99.76	1.002	-0.18	0.248	0.301
	WLAN5GHz	802.11n-HT40 MCS0	Rest-on-Head	0mm	Wide	A	38	5190	G5	13.16	14.00	1.213	99.76	1.002	0.03	0.263	0.320
08	WLAN5GHz	802.11ac-VHT160 MCS0	Rest-on-Head	0mm	Wide	A	114	5570	G2	11.23	12.25	1.265	99.63	1.004	-0.02	0.129	0.164
	WLAN5GHz	802.11ac-VHT160 MCS0	Rest-on-Head	0mm	Narrow	A	114	5570	G2	11.23	12.25	1.265	99.63	1.004	-0.15	0.115	0.146
	WLAN5GHz	802.11ac-VHT160 MCS0	Rest-on-Head	0mm	Medium	A	114	5570	G2	11.23	12.25	1.265	99.63	1.004	-0.15	0.109	0.138
	WLAN5GHz	802.11ac-VHT160 MCS0	Rest-on-Head	0mm	Wide	A	114	5570	G5	11.23	12.25	1.265	99.63	1.004	0.11	0.122	0.155
09	WLAN5GHz	802.11ac-VHT80 MCS0	Rest-on-Head	0mm	Wide	A	155	5775	G2	11.38	12.00	1.153	99.76	1.002	0.01	0.251	0.290
	WLAN5GHz	802.11ac-VHT80 MCS0	Rest-on-Head	0mm	Narrow	A	155	5775	G2	11.38	12.00	1.153	99.76	1.002	-0.07	0.126	0.224
	WLAN5GHz	802.11ac-VHT80 MCS0	Rest-on-Head	0mm	Medium	A	155	5775	G2	11.38	12.00	1.153	99.76	1.002	0.12	0.119	0.219
	WLAN5GHz	802.11ac-VHT80 MCS0	Rest-on-Head	0mm	Wide	A	155	5775	G5	11.38	12.00	1.153	99.76	1.002	-0.09	0.133	0.267

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
10	Bluetooth	1Mbps	Rest-on-Head	0mm	Narrow	A	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.06	0.048	0.069
	Bluetooth	1Mbps	Rest-on-Head	0mm	Wide	A	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.04	0.031	0.045
	Bluetooth	1Mbps	Rest-on-Head	0mm	Medium	A	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.08	0.035	0.050
	Bluetooth	1Mbps	Rest-on-Head	0mm	Narrow	A	78	2480	G5	9.75	11.00	1.332	77.07	1.081	0.17	0.042	0.060

11.2 Body Worn Accessory SAR

<Rest-on-shirt Exposure Condition under SAM-twin Phantom>

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Narrow	B	6	2437	G2	17.40	18.00	1.148	100	1.000	0.08	0.340	0.390
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Narrow	B	1	2412	G2	16.90	18.00	1.288	100	1.000	0.01	0.274	0.353
11	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Narrow	B	11	2462	G2	17.25	18.00	1.189	100	1.000	0.03	0.366	0.435
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Narrow	B	12	2467	G2	17.22	18.00	1.197	100	1.000	0.03	0.312	0.373
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Narrow	B	13	2472	G2	16.65	17.00	1.084	100	1.000	-0.08	0.290	0.314
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Medium	B	11	2462	G2	17.25	18.00	1.189	100	1.000	-0.08	0.362	0.430
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Wide	B	11	2462	G2	17.25	18.00	1.189	100	1.000	0.1	0.358	0.426
	WLAN2.4GHz	802.11b 1Mbps	Back	0mm	Narrow	B	11	2462	G5	17.25	18.00	1.189	100	1.000	-0.18	0.316	0.376
12	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Wide	B	38	5190	G2	14.64	15.00	1.086	99.76	1.002	-0.05	0.167	0.182
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Narrow	B	38	5190	G2	14.64	15.00	1.086	99.76	1.002	-0.08	0.160	0.174
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Medium	B	38	5190	G2	14.64	15.00	1.086	99.76	1.002	-0.08	0.156	0.170
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Wide	B	38	5190	G5	14.64	15.00	1.086	99.76	1.002	0.1	0.160	0.174
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	0mm	Wide	B	114	5570	G2	13.61	14.50	1.227	99.63	1.004	0.12	0.171	0.211
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	0mm	Narrow	B	114	5570	G2	13.61	14.50	1.227	99.63	1.004	0.03	0.168	0.207
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	0mm	Medium	B	114	5570	G2	13.61	14.50	1.227	99.63	1.004	0.18	0.164	0.202
13	WLAN5GHz	802.11ac-VHT160 MCS0	Back	0mm	Wide	B	114	5570	G5	13.61	14.50	1.227	99.63	1.004	-0.01	0.184	0.227
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Wide	B	155	5775	G2	13.09	14.00	1.233	99.76	1.002	0.08	0.227	0.280
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Narrow	B	155	5775	G2	13.09	14.00	1.233	99.76	1.002	0.01	0.224	0.277
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Medium	B	155	5775	G2	13.09	14.00	1.233	99.76	1.002	0.03	0.219	0.271
14	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Wide	B	155	5775	G5	13.09	14.00	1.233	99.76	1.002	-0.11	0.295	0.364

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
15	Bluetooth	1Mbps	Back	0mm	Narrow	B	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.03	0.037	0.053
	Bluetooth	1Mbps	Back	0mm	Wide	B	78	2480	G2	9.75	11.00	1.332	77.07	1.081	0.08	0.031	0.045
	Bluetooth	1Mbps	Back	0mm	Medium	B	78	2480	G2	9.75	11.00	1.332	77.07	1.081	0.01	0.032	0.046
	Bluetooth	1Mbps	Back	0mm	Narrow	B	78	2480	G5	9.75	11.00	1.332	77.07	1.081	0.03	0.034	0.049

<Pocketing Exposure Condition under SAM-twin Phantom>

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
16	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Narrow	B	6	2437	G2	17.40	18.00	1.148	100	1.000	0.02	0.449	0.515
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Medium	B	6	2437	G2	17.40	18.00	1.148	100	1.000	-0.03	0.437	0.502
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Wide	B	6	2437	G2	17.40	18.00	1.148	100	1.000	0.14	0.421	0.483
	WLAN2.4GHz	802.11b 1Mbps	Front	5mm	Narrow	B	6	2437	G5	17.40	18.00	1.148	100	1.000	0.11	0.439	0.504
17	WLAN5GHz	802.11n-HT40 MCS0	Front	5mm	Wide	B	38	5190	G2	14.64	15.00	1.086	99.76	1.002	0.09	0.564	0.614
	WLAN5GHz	802.11n-HT40 MCS0	Front	5mm	Wide	B	46	5230	G2	14.56	15.00	1.107	99.76	1.002	0.05	0.525	0.582
	WLAN5GHz	802.11n-HT40 MCS0	Front	5mm	Narrow	B	38	5190	G2	14.64	15.00	1.086	99.76	1.002	0.08	0.538	0.585
	WLAN5GHz	802.11n-HT40 MCS0	Front	5mm	Medium	B	38	5190	G2	14.64	15.00	1.086	99.76	1.002	0.01	0.549	0.597
	WLAN5GHz	802.11n-HT40 MCS0	Front	5mm	Wide	B	38	5190	G5	14.64	15.00	1.086	99.76	1.002	0.03	0.524	0.570
18	WLAN5GHz	802.11ac-VHT160 MCS0	Front	5mm	Wide	B	114	5570	G2	13.61	14.50	1.227	99.63	1.004	0	0.361	0.445
	WLAN5GHz	802.11ac-VHT160 MCS0	Front	5mm	Narrow	B	114	5570	G2	13.61	14.50	1.227	99.63	1.004	-0.18	0.358	0.441
	WLAN5GHz	802.11ac-VHT160 MCS0	Front	5mm	Medium	B	114	5570	G2	13.61	14.50	1.227	99.63	1.004	0.1	0.357	0.440
	WLAN5GHz	802.11ac-VHT160 MCS0	Front	5mm	Wide	B	114	5570	G5	13.61	14.50	1.227	99.63	1.004	0.12	0.351	0.432
19	WLAN5GHz	802.11ac-VHT80 MCS0	Front	5mm	Wide	B	155	5775	G2	13.09	14.00	1.233	99.76	1.002	0.08	0.356	0.440
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	5mm	Narrow	B	155	5775	G2	13.09	14.00	1.233	99.76	1.002	0.08	0.331	0.409
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	5mm	Medium	B	155	5775	G2	13.09	14.00	1.233	99.76	1.002	-0.17	0.353	0.436
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	5mm	Wide	B	155	5775	G5	13.09	14.00	1.233	99.76	1.002	-0.03	0.355	0.439

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
20	Bluetooth	1Mbps	Front	5mm	Narrow	B	78	2480	G2	9.75	11.00	1.332	77.07	1.081	0.03	0.056	0.081
	Bluetooth	1Mbps	Front	5mm	Wide	B	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.17	0.053	0.076
	Bluetooth	1Mbps	Front	5mm	Medium	B	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.03	0.051	0.073
	Bluetooth	1Mbps	Front	5mm	Narrow	B	78	2480	G5	9.75	11.00	1.332	77.07	1.081	0.14	0.052	0.075

<Pocketing (in case) Exposure Condition under SAM-twin Phantom>

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Top Edge	5mm	Narrow	C	6	2437	G2	16.60	18.00	1.380	100	1.000	0.08	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Bottom Edge	5mm	Narrow	C	6	2437	G2	16.60	18.00	1.380	100	1.000	0.01	0.020	0.028
21	WLAN2.4GHz	802.11b 1Mbps	Front Edge	5mm	Narrow	C	6	2437	G2	16.60	18.00	1.380	100	1.000	0.12	0.063	0.087
	WLAN2.4GHz	802.11b 1Mbps	Back Edge	5mm	Narrow	C	6	2437	G2	16.60	18.00	1.380	100	1.000	0.03	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Front Edge	5mm	Medium	C	6	2437	G2	16.60	18.00	1.380	100	1.000	-0.08	0.061	0.084
	WLAN2.4GHz	802.11b 1Mbps	Front Edge	5mm	Wide	C	6	2437	G2	16.60	18.00	1.380	100	1.000	-0.08	0.060	0.083
	WLAN2.4GHz	802.11b 1Mbps	Front Edge	5mm	Narrow	C	6	2437	G5	16.60	18.00	1.380	100	1.000	0.1	0.041	0.057
	WLAN5GHz	802.11n-HT40 MCS0	Top Edge	5mm	Wide	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	0.18	0.071	0.105
	WLAN5GHz	802.11n-HT40 MCS0	Bottom Edge	5mm	Wide	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	-0.04	0.096	0.142
	WLAN5GHz	802.11n-HT40 MCS0	Front Edge	5mm	Wide	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	-0.08	0.220	0.326
	WLAN5GHz	802.11n-HT40 MCS0	Back Edge	5mm	Wide	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	-0.13	0.001	0.001
	WLAN5GHz	802.11n-HT40 MCS0	Front Edge	5mm	Narrow	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	-0.13	0.215	0.319
	WLAN5GHz	802.11n-HT40 MCS0	Front Edge	5mm	Medium	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	0.06	0.212	0.314
22	WLAN5GHz	802.11n-HT40 MCS0	Front Edge	5mm	Wide	C	54	5270	G5	16.30	18.00	1.479	99.76	1.002	0.02	0.240	0.356
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Edge	5mm	Wide	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	-0.03	0.063	0.087
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Edge	5mm	Wide	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	0.08	0.080	0.111
23	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	5mm	Wide	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	-0.04	0.271	0.375
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	5mm	Wide	C	106	5530	G2	14.90	16.50	1.445	99.76	1.002	0.05	0.184	0.266
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	5mm	Wide	C	138	5690	G2	16.10	18.00	1.549	99.76	1.002	0.03	0.235	0.365
	WLAN5GHz	802.11ac-VHT80 MCS0	Back Edge	5mm	Wide	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	-0.07	0.001	0.001
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	5mm	Narrow	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	0.05	0.264	0.365
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	5mm	Medium	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	-0.11	0.260	0.360
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	5mm	Wide	C	122	5610	G5	16.60	18.00	1.380	99.76	1.002	-0.12	0.255	0.353
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Edge	5mm	Wide	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	-0.16	0.061	0.093
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Edge	5mm	Wide	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	-0.02	0.061	0.093
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	5mm	Wide	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	-0.08	0.284	0.431
	WLAN5GHz	802.11ac-VHT80 MCS0	Back Edge	5mm	Wide	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	-0.05	0.001	0.002
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	5mm	Narrow	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	-0.09	0.282	0.428
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	5mm	Medium	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	0.11	0.281	0.426
24	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	5mm	Wide	C	155	5775	G5	16.20	18.00	1.514	99.76	1.002	-0.02	0.343	0.520

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	Bluetooth	1Mbps	Top Edge	5mm	Narrow	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	0.18	0.009	0.013
	Bluetooth	1Mbps	Bottom Edge	5mm	Narrow	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	0.14	0.009	0.013
25	Bluetooth	1Mbps	Front Edge	5mm	Narrow	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.11	0.022	0.032
	Bluetooth	1Mbps	Back Edge	5mm	Narrow	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.17	0.001	0.001
	Bluetooth	1Mbps	Front Edge	5mm	Wide	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	0.17	0.019	0.027
	Bluetooth	1Mbps	Front Edge	5mm	Medium	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.05	0.018	0.026
	Bluetooth	1Mbps	Front Edge	5mm	Narrow	C	78	2480	G5	9.75	11.00	1.332	77.07	1.081	0.01	0.021	0.030

11.3 Handheld SAR

<Handheld (in case) Exposure Condition under SAM-twin Phantom>

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Top Edge	0mm	Narrow	C	6	2437	G2	16.60	18.00	1.380	100	1.000	0.06	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Bottom Edge	0mm	Narrow	C	6	2437	G2	16.60	18.00	1.380	100	1.000	-0.09	0.024	0.033
26	WLAN2.4GHz	802.11b 1Mbps	Front Edge	0mm	Narrow	C	6	2437	G2	16.60	18.00	1.380	100	1.000	-0.09	0.070	0.097
	WLAN2.4GHz	802.11b 1Mbps	Back Edge	0mm	Narrow	C	6	2437	G2	16.60	18.00	1.380	100	1.000	-0.08	0.001	0.001
	WLAN2.4GHz	802.11b 1Mbps	Front Edge	0mm	Medium	C	6	2437	G2	16.60	18.00	1.380	100	1.000	0.13	0.065	0.090
	WLAN2.4GHz	802.11b 1Mbps	Front Edge	0mm	Wide	C	6	2437	G2	16.60	18.00	1.380	100	1.000	0.12	0.063	0.087
	WLAN2.4GHz	802.11b 1Mbps	Front Edge	0mm	Narrow	C	6	2437	G5	16.60	18.00	1.380	100	1.000	0.03	0.050	0.069
	WLAN5GHz	802.11n-HT40 MCS0	Top Edge	0mm	Wide	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	0.05	0.038	0.056
	WLAN5GHz	802.11n-HT40 MCS0	Bottom Edge	0mm	Wide	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	0.05	0.043	0.064
	WLAN5GHz	802.11n-HT40 MCS0	Front Edge	0mm	Wide	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	-0.03	0.097	0.144
	WLAN5GHz	802.11n-HT40 MCS0	Back Edge	0mm	Wide	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	-0.15	0.001	0.001
	WLAN5GHz	802.11n-HT40 MCS0	Front Edge	0mm	Narrow	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	0.02	0.093	0.138
	WLAN5GHz	802.11n-HT40 MCS0	Front Edge	0mm	Medium	C	54	5270	G2	16.30	18.00	1.479	99.76	1.002	0.07	0.091	0.135
27	WLAN5GHz	802.11n-HT40 MCS0	Front Edge	0mm	Wide	C	54	5270	G5	16.30	18.00	1.479	99.76	1.002	-0.06	0.122	0.181
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Edge	0mm	Wide	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	0.13	0.033	0.046
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Edge	0mm	Wide	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	-0.18	0.039	0.054
28	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	0mm	Wide	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	0.04	0.135	0.187
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	0mm	Wide	C	106	5530	G2	14.90	16.50	1.445	99.76	1.002	0.08	0.091	0.132
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	0mm	Wide	C	138	5690	G2	16.10	18.00	1.549	99.76	1.002	0.01	0.118	0.183
	WLAN5GHz	802.11ac-VHT80 MCS0	Back Edge	0mm	Wide	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	0.02	0.001	0.001
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	0mm	Narrow	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	0.16	0.131	0.181
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	0mm	Medium	C	122	5610	G2	16.60	18.00	1.380	99.76	1.002	-0.03	0.127	0.176
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	0mm	Wide	C	122	5610	G5	16.60	18.00	1.380	99.76	1.002	0.07	0.123	0.170
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Edge	0mm	Wide	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	0.01	0.039	0.059
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom Edge	0mm	Wide	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	-0.01	0.034	0.052
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	0mm	Wide	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	-0.06	0.167	0.253
	WLAN5GHz	802.11ac-VHT80 MCS0	Back Edge	0mm	Wide	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	-0.17	0.001	0.002
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	0mm	Narrow	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	-0.1	0.160	0.243
	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	0mm	Medium	C	155	5775	G2	16.20	18.00	1.514	99.76	1.002	0.18	0.157	0.238
29	WLAN5GHz	802.11ac-VHT80 MCS0	Front Edge	0mm	Wide	C	155	5775	G5	16.20	18.00	1.514	99.76	1.002	-0.11	0.215	0.326

Plot No.	Band	Mode	Test Position	Gap (mm)	Nose Pad	Power State	Ch.	Freq. (MHz)	Sample	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	Bluetooth	1Mbps	Top Edge	0mm	Narrow	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	0.1	0.010	0.014
	Bluetooth	1Mbps	Bottom Edge	0mm	Narrow	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.17	0.011	0.016
30	Bluetooth	1Mbps	Front Edge	0mm	Narrow	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	0.09	0.020	0.029
	Bluetooth	1Mbps	Back Edge	0mm	Narrow	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	0.04	0.001	0.001
	Bluetooth	1Mbps	Front Edge	0mm	Wide	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.01	0.015	0.022
	Bluetooth	1Mbps	Front Edge	0mm	Medium	C	78	2480	G2	9.75	11.00	1.332	77.07	1.081	-0.08	0.014	0.020
	Bluetooth	1Mbps	Front Edge	0mm	Narrow	C	78	2480	G5	9.75	11.00	1.332	77.07	1.081	0.05	0.015	0.022

12. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Head	Body-worn	Handheld
1.	WLAN5GHz + Bluetooth	Yes	Yes	Yes

General Note:

1. The Scaled SAR summation is calculated based on the same configuration and test position.
2. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
   i) Scalar SAR summation < 1.6W/kg.
   ii) SPLSR = (SAR1 + SAR2)^1.5 / (min. separation distance, mm), and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
   iii) If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary.
   iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.

12.1 Head Exposure Conditions

<Face-worn Exposure Condition under Head-stand Phantom>

Exposure Position	0	1	3	1+3 Summed 1g SAR (W/kg)
	WLAN2.4GHz	WLAN5GHz	Bluetooth	
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Face-Worn at 0mm	0.429	0.668	0.088	**0.756**

<Rest-on-Head Exposure Condition under Head-stand Phantom>

Exposure Position	0	1	3	1+3 Summed 1g SAR (W/kg)
	WLAN2.4GHz	WLAN5GHz	Bluetooth	
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	
Rest-on-Head at 0mm	0.746	0.329	0.069	**0.398**

12.2 Body-Worn Accessory Exposure Conditions

<Rest-on-shirt Exposure Condition under SAM-twin Phantom>

Exposure Position	0 WLAN2.4GHz 1g SAR (W/kg)	1 WLAN5GHz 1g SAR (W/kg)	3 Bluetooth 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)
Back at 0mm	0.435	0.364	0.053	**0.417**

<Pocketing Exposure Condition under SAM-twin Phantom>

Exposure Position	0 WLAN2.4GHz 1g SAR (W/kg)	1 WLAN5GHz 1g SAR (W/kg)	3 Bluetooth 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)
Front at 5mm	0.515	0.614	0.081	**0.695**

<Pocketing (in case) Exposure Condition under SAM-twin Phantom>

Exposure Position	0 WLAN2.4GHz 1g SAR (W/kg)	1 WLAN5GHz 1g SAR (W/kg)	3 Bluetooth 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)
Top Edge at 5mm	0.001	0.105	0.013	**0.118**
Bottom Edge at 5mm	0.028	0.142	0.013	**0.155**
Front Edge at 5mm	0.087	0.520	0.032	**0.552**
Back Edge at 5mm	0.001	0.002	0.001	**0.003**

12.3 Handheld Exposure Conditions

<Handheld (in case) Exposure Condition under SAM-twin Phantom>

Exposure Position	0 WLAN2.4GHz 10g SAR (W/kg)	1 WLAN5GHz 10g SAR (W/kg)	3 Bluetooth 10g SAR (W/kg)	1+3 Summed 10g SAR (W/kg)
Top Edge at 0mm	0.001	0.059	0.014	**0.073**
Bottom Edge at 0mm	0.033	0.064	0.016	**0.080**
Front Edge at 0mm	0.097	0.326	0.029	**0.355**
Back Edge at 0mm	0.001	0.002	0.001	**0.003**

Test Engineer： Lev Lo, Kevin Guo and Albert Chen

13. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, 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 ≤ 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. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.
Declaration of Conformity:
The test results with all measurement uncertainty excluded is presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

14. References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3] IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013

[4] SPEAG DASY System Handbook

[5] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

[6] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

[7] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[8] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.