FCC SAR TEST REPORT

FCC ID	:	**A4RGVU6C**
Equipment	:	**Phone**
Applicant	:	**Google LLC** **1600 Amphitheatre Parkway,** **Mountain View, California, 94043 USA**
Standard	:	**FCC 47 CFR Part 2 (2.1093)**

The product was received on Mar. 18, 2022 and testing was started from Apr. 30, 2022 and completed on Jul. 25, 2022. 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. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Cona Huang

Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA1O2843-06D	01	Initial issue of report	Jun. 15, 2022
FA1O2843-06D	02	1. Added WIFI6E 11a output power 2. Update n48 Plimit and n48/n77 SAR test data	Jun. 27, 2022

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for Google LLC, Phone 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 10mm)	Hotspot (Separation 10mm)	Product Specific (Separation 0mm)		
		1g SAR (W/kg)			10g SAR (W/kg)		
Licensed	GSM850	1.04	0.77	0.77		1.54	3.91
	GSM1900	0.60	0.97	0.89			
	WCDMA II	1.02	1.14	0.90	2.94		
	WCDMA IV	0.57	0.84	0.90	2.97		
	WCDMA V	1.08	0.75	0.75			
	LTE B2	1.09	1.12	0.89	2.96		
	LTE B7	0.68	1.17	0.89	2.97		
	LTE B12/17	1.00	0.43	0.43			
	LTE B13	1.05	0.68	0.82			
	LTE B14	1.07	0.74	0.74			
	LTE B25/2	0.84	1.10	0.89	2.84		
	LTE B26/5	1.05	0.61	0.61			
	LTE B30	0.60	1.04	0.88	2.91		
	LTE B41/38	0.39	1.12	0.89	1.45		
	LTE B48	0.25	1.15	0.82			
	LTE B66/4	1.15	1.07	0.89	2.93		
	LTE B71	1.18	0.34	0.44			
	FR1 n2	1.16	1.13	0.87	2.97		
	FR1 n5	1.18	0.54	0.55			
	FR1 n7	0.60	1.07	0.89	2.94		
	FR1 n12	1.19	0.44	0.44			
	FR1 n14	1.03	0.61	0.61			
	FR1 n25/2	1.03	0.92	0.86			
	FR1 n30	0.67	1.04	0.83	2.76		
	FR1 n41/38	1.17	1.14	0.89	1.96		
	FR1 n48	1.15	1.15	0.90			
	FR1 n66	1.17	0.97	0.87	2.94		
	FR1 n71	1.15	0.34	0.41			
	FR1 n77	1.15	0.95	0.84			
DTS	2.4GHz WLAN	1.19	0.70	0.64		1.54	
NII	5GHz WLAN	1.18	0.79	0.70	2.90	1.54	3.91
6XD	6GHz WLAN	0.38	0.12		0.58		
DSS	Bluetooth	0.36	0.36	0.53		1.54	

Equipment Class	Frequency Band	Head	Body-worn	Product Specific	Reported
		APD (W/m^2)	APD (W/m^2)	APD (W/m^2)	PD (W/m^2)
6XD	6GHz WLAN	1.89	0.75	11	6.53
Date of Testing:		2022/4/30 ~ 2022/7/25			

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 Product Specific 10g SAR) specified in FCC 47 CFR part 2 (2.1093), Human Exposure to RF Radiation Limits (1.0 mW/cm^2=10 W/m^2) specified in FCC 47 CFR part 1.1310and 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. Data Reuse Approach

FCC ID: A4RGQML3 (parent model) and FCC ID: A4RGVU6C (variant model)

- **PCB**: The PCB layout is exactly the same with parent model
- **Component Positions**: the position of the components are the same
- **Enclosure, Materials, and From Factor**: the Enclosure, Materials, and From Factor are exactly the same
- **Antenna Structures**: the FR2 antenna modules are depopulated on the Variant Model, Except for Ant4, all of the other antenna are physically the same as the reference model. Ant4 is used for WLAN and BT, the circuit for ant 4 matching (after the RF conducted port) is different between reference model and variant model to optimize performance. Despit the difference in ant 4's matching circuitry, the physical antenna is identical.

Since the same design are identical between parent model and variant model, SAR data reuse is requested and spot check data in this report is used to justify the SAR data reuse.

For variant model 1g SAR and 10g spot check SAR result does not exceed 30% of reference model and 1g SAR and 10g SAR less than 1.2W/kg and 3.0W/kg respectively, the WWAN max SAR summary are identical with parent model.

The applicant should take full responsibility that the test data as referenced in this report represent compliance for this FCC ID: A4RGVU6C

3. Model Difference Information

A4RGQML3 and A4RGVU6C use the identical internal printed circuit board layout, and the major differences which may relate to RF are listed below:

- Depopulated the FR2 radio and FR2 antenna Module
- Disable n48/77 UL MIMO
- The circuit for ant 4 matching is different between reference model and variant model

The details of similarity and difference can be found in the confidential documents.

4. Reference detail Section

Rule Part	Equipment Class	Wireless Technology	Frequency Band (MHz)	Reference FCC ID (Parent)	Type Grant/ Permissive Change	Reference Title	FCC ID Filling (Variant)	Test on the variant
Part 2.1093 SAR	PCE CBE	GSM	850/1900	A4RGQML3	Original Grant	FA1O2843-05E	A4RGVU6C	Spot Check
		WCDMA	B2/4/5	A4RGQML3	Original Grant	FA1O2843-05E	A4RGVU6C	Spot Check
		LTE	B2/4/5/7/12/13/14 /17/25/26/30/38/41 /48/66/71	A4RGQML3	Original Grant	FA1O2843-05E	A4RGVU6C	Spot Check
		5G FR1	n2/5/7/12/14/25/30/ 38/41/48/66/71/77	A4RGQML3	Original Grant	FA1O2843-05E	A4RGVU6C	Spot Check

5. 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 648474 D04 SAR Evaluation Considerations for Wireless Handsets v01r03
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 941225 D01 3G SAR Procedures v03r01
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- FCC KDB 941225 D05A Rel.10 LTE SAR Test Guidance v01r02
- FCC KDB 941225 D06 Hotspot Mode SAR v02r01
- FCC KDB 941225 D07 UMPC Mini Tablet v01r02
- IEC/IEEE 62209-1528:2020
- SPEAG DASY6 System Handbook
- SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)

6. Equipment Under Test (EUT) Information

6.1 General Information

Product Feature & Specification	
Equipment Name	Phone
FCC ID	A4RGVU6C
SN	24171FDH2000J6 24171FDH2000K0 22281FDH20006G 22281FDH20003U
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1850 MHz ~ 1910 MHz WCDMA Band IV: 1710 MHz ~ 1755 MHz WCDMA Band V: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 38: 2570 MHz ~ 2620 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n7 : 2500 MHz ~ 2570 MHz 5G NR n12 : 699 MHz ~ 716 MHz 5G NR n14 : 788 MHz ~ 798 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n30 : 2305 MHz ~ 2315 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3450MHz ~ 3550 MHz, 3700 MHz ~ 3980 MHz 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 WLAN 5.8G UNII4 Band: 5850 MHz ~ 5895 MHz WLAN 6E: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC : 13.56 MHz WPT: 110KHz ~ 148.5KHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC: ASK WPT: ASK
GSM / (E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.

Remark:

1. This device WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
2. This device has NFC operations, the NFC antenna is integrated into the device for this model, therefore, all SAR test were performed with the device which already incorporates the NFC antenna. A diagram showing the location of the antenna can be found in the operational description.
3. According to FCC KDB publication 447498 D01v06, transmitters are consider to be operating simultaneously when there is overlapping transmission, with the exception of transmission during network hand-offs with maximum hand-off duration less than 30 seconds.
4. The WWAN highest SAR result for variant model sport check are from the reference model FCC ID A4RGQML3 (Sporton report no.: FA1O2843-05E).

7. RF Exposure Limits

7.1 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.

7.2 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.

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Peak Spatially Averaged Power Density was evaluated over a circular area of 4cm^2 per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

8. Specific Absorption Rate (SAR)

8.1 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.

8.2 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:

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

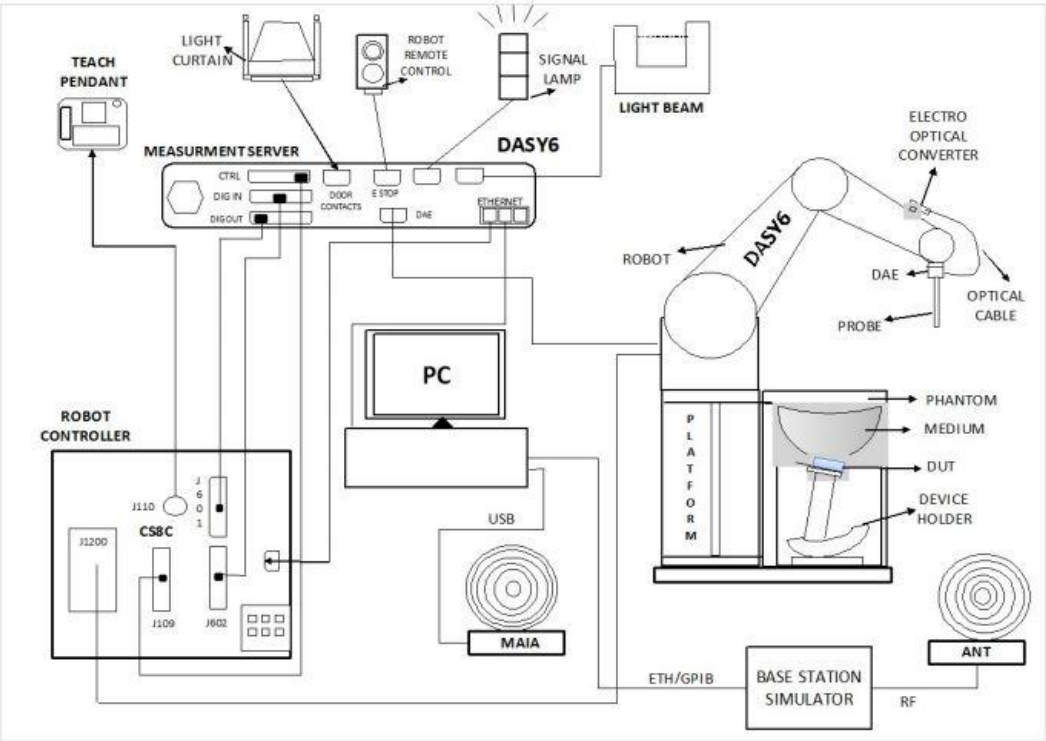
SAR is expressed in units of Watts per kilogram (W/kg)

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

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

9. 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.
- 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.

9.1 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.

Test Site	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
	SAR04-HY	SAR05-HY	SAR11-HY	SAR12-HY	
	SAR06-HY	SAR10-HY	SAR13-HY	SAR14-HY	

9.2 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	10 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	10 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	

9.3 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.

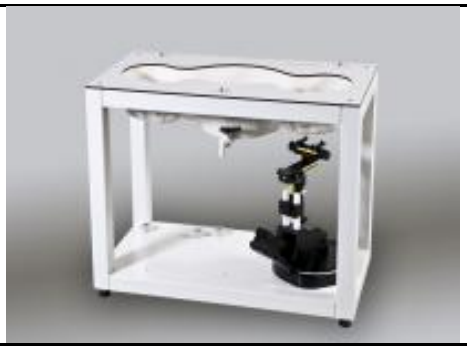
The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Fig 5.1 Photo of DAE

9.4 Phantom

<SAM Twin Phantom>

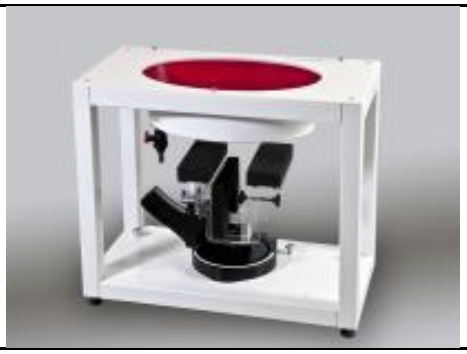
Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



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.

9.5 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

10. 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

10.1 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

10.2 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.

10.3 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.

<table>
<tr><td></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td>Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td>Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td rowspan="2">Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">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.</td></tr>
</table>

10.4 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	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
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.

10.5 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.

10.6 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.

11. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1012	Aug. 18, 2021	Aug. 17, 2022
SPEAG	835MHz System Validation Kit(2)	D835V2	4d167	Nov. 25, 2019	Nov. 22, 2022
SPEAG	1750MHz System Validation Kit	D1750V2	1068	Nov. 25, 2021	Nov. 24, 2022
SPEAG	1900MHz System Validation Kit	D1900V2	5d041	Aug. 19, 2021	Aug. 18, 2022
SPEAG	2450MHz System Validation Kit(2)	D2450V2	929	Nov. 21, 2019	Nov. 18, 2022
SPEAG	2600MHz System Validation Kit	D2600V2	1008	Aug. 17, 2021	Aug. 16, 2022
SPEAG	3500MHz System Validation Kit	D3500V2	1014	Jan. 17, 2022	Jan. 16, 2023
SPEAG	3700MHz System Validation Kit	D3700V2	1022	Jul. 14, 2021	Jul. 13, 2022
SPEAG	3900MHz System Validation Kit	D3900V2	1017	Apr. 22, 2022	Apr. 21, 2023
SPEAG	5GHz System Validation Kit(2)	D5GHzV2	1128	Dec. 16, 2019	Dec. 13, 2022
SPEAG	5GHz System Validation Kit(2)	D5GHzV2	1171	Apr. 20, 2021	Apr. 18, 2023
SPEAG	6500MHz System Validation Kit	D6.5GHzV2	1003	Sep. 24, 2021	Sep. 23, 2022
SPEAG	5G Verification Source	10 GHz	1020	Jan. 18, 2022	Jan. 17, 2023
SPEAG	Data Acquisition Electronics	DAE4	316	Jan. 26, 2022	Jan. 25, 2023
SPEAG	Data Acquisition Electronics	DAE4	699	Feb. 24, 2022	Feb. 23, 2023
SPEAG	Data Acquisition Electronics	DAE4	1424	Jan. 20, 2022	Jan. 19, 2023
SPEAG	Data Acquisition Electronics	DAE4	1696	Nov. 03, 2021	Nov. 02, 2022
SPEAG	Dosimetric E-Field Probe	EX3DV4	3728	Mar. 02, 2022	Mar. 01, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	3976	Jan. 27, 2022	Jan. 26, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	7625	Jan. 27, 2022	Jan. 26, 2023
SPEAG	Dosimetric E-Field Probe	EX3DV4	7694	Jan. 24, 2022	Jan. 23, 2023
SPEAG	EUmmWV Probe Tip Protection	EUmmWV4	9461	Oct. 22, 2021	Oct. 21, 2022
Testo	Hygro meter	608-H1	45196600	Oct. 22, 2021	Oct. 21, 2022
Testo	Hygro meter	608-H1	45207528	Oct. 22, 2021	Oct. 21, 2022
RCPTWN	Thermometer	HTC-1	TM685-1	Oct. 28, 2021	Oct. 27, 2022
RCPTWN	Thermometer	HTC-1	TM560-2	Oct. 28, 2021	Oct. 27, 2022
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Oct. 21, 2021	Oct. 20, 2022
Keysight	Wireless Communication Test Set	E5515C	MY50267236	Mar. 02, 2022	Mar. 01, 2023
R&S	BT Base Station	CBT32	101136	Oct. 17, 2021	Oct. 16, 2022
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Oct. 24, 2021	Oct. 23, 2022
Keysight	ENA Network Analyzer	E5071C	MY46104758	Sep. 19, 2021	Sep. 18, 2022
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 24, 2021	Sep. 23, 2022
LINE SEIKI	Digital Thermometer	DTM3000-spezial	2942	Oct. 26, 2021	Oct. 25, 2022
Anritsu	Power Meter	ML2495A	1419002	Aug. 18, 2021	Aug. 17, 2022
Anritsu	Power Sensor	MA2411B	1911176	Aug. 18, 2021	Aug. 17, 2022
Anritsu	Power Meter	ML2495A	1804003	Oct. 09, 2021	Oct. 08, 2022
Anritsu	Power Sensor	MA2411B	1726150	Oct. 09, 2021	Oct. 08, 2022
Anritsu	Spectrum Analyzer	N9010A	MY53470118	Jan. 12, 2022	Jan. 11, 2023
Agilent	Spectrum Analyzer	E4408B	MY44211028	Aug. 19, 2021	Aug. 18, 2022
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 12, 2021	Oct. 11, 2022
Mini-Circuits	Power Amplifier	ZVE-8G+	479102029	Sep. 06, 2021	Sep. 05, 2022
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	

12. System Verification

12.1 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)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
750	22.2	0.871	42.596	0.89	41.90	-2.13	1.66	±5	2022/5/14
835	22.2	0.880	42.315	0.90	41.50	-2.22	1.96	±5	2022/5/14
1750	22.2	1.384	39.900	1.37	40.10	1.02	-0.50	±5	2022/5/14
1900	22.2	1.441	40.345	1.40	40.00	2.93	0.86	±5	2022/5/14
2600	22.2	1.979	39.072	1.96	39.00	0.97	0.18	±5	2022/5/14
3500	22.2	2.846	37.560	2.91	37.90	-2.20	-0.90	±5	2022/5/14
3500	22.7	3.018	38.338	2.91	37.90	3.71	1.16	±5	2022/6/13
3500	22.6	2.894	37.485	2.91	37.90	-0.55	-1.09	±5	2022/7/23
3500	22.6	2.990	37.632	2.91	37.90	2.75	-0.71	±5	2022/7/25
3700	22.2	3.031	37.298	3.12	37.70	-2.85	-1.07	±5	2022/5/14
3700	22.7	3.178	38.100	3.12	37.70	1.86	1.06	±5	2022/6/13
3900	22.7	3.354	37.856	3.33	37.51	0.72	0.92	±5	2022/6/13

Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (ε_r)	Conductivity Target (σ)	Permittivity Target (ε_r)	Delta (σ) (%)	Delta (ε_r) (%)	Limit (%)	Date
2450	22.5	1.791	38.957	1.80	39.20	-0.50	-0.62	±5	2022/4/30
2450	22.3	1.820	39.264	1.80	39.20	1.11	0.16	±5	2022/5/1
2450	22.4	1.843	39.411	1.80	39.20	2.39	0.54	±5	2022/5/5
2450	22.6	1.841	39.394	1.80	39.20	2.28	0.49	±5	2022/5/8
2450	22.5	1.81	38.794	1.80	39.20	0.56	-1.04	±5	2022/5/31
5250	22.5	4.685	36.384	4.71	35.95	-0.53	1.21	±5	2022/5/3
5250	22.4	4.601	35.696	4.71	35.95	-2.31	-0.71	±5	2022/5/5
5250	22.5	4.630	35.718	4.71	35.95	-1.70	-0.65	±5	2022/5/8
5250	22.6	4.730	36.057	4.71	35.95	0.42	0.30	±5	2022/5/10
5600	22.5	5.019	35.929	5.07	35.50	-1.01	1.21	±5	2022/5/3
5600	22.4	4.901	35.340	5.07	35.50	-3.33	-0.45	±5	2022/5/5
5600	22.5	4.932	35.362	5.07	35.50	-2.72	-0.39	±5	2022/5/8
5600	22.6	5.068	35.623	5.07	35.50	-0.04	0.35	±5	2022/5/10
5750	22.5	5.139	35.651	5.22	35.35	-1.55	0.85	±5	2022/5/3
5750	22.4	5.044	35.211	5.22	35.35	-3.37	-0.39	±5	2022/5/5
5750	22.5	5.075	35.234	5.22	35.35	-2.78	-0.33	±5	2022/5/8
5850	22.4	5.131	35.105	5.32	35.25	-3.55	-0.41	±5	2022/5/5
5850	22.4	5.111	34.971	5.32	35.25	-3.93	-0.79	±5	2022/5/7
6500	23.5	5.870	33.760	6.07	34.50	-3.29	-2.14	±5	2022/5/1
6500	23.3	6.060	34.420	6.07	34.50	-0.16	-0.23	±5	2022/5/2
6500	23.3	6.110	34.550	6.07	34.50	0.66	0.14	±5	2022/5/3

12.2 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.

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Power Drift (dB)	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
SAR08	2022/5/14	750	50	D750V3-1012	EX3DV4 - SN7694	DAE4 Sn1424	0.11	0.404	8.56	8.08	-5.61	0.265	5.56	5.3	-4.68
SAR08	2022/5/14	835	50	D835V2-4d167	EX3DV4 - SN7694	DAE4 Sn1424	0.02	0.469	9.55	9.38	-1.78	0.307	6.21	6.14	-1.13
SAR08	2022/5/14	1750	50	D1750V2-1068	EX3DV4 - SN7694	DAE4 Sn1424	0.04	1.750	36.60	35	-4.37	0.929	19.30	18.58	-3.73
SAR08	2022/5/14	1900	50	D1900V2-5d041	EX3DV4 - SN7694	DAE4 Sn1424	0.02	1.970	40.60	39.4	-2.96	1.020	21.10	20.4	-3.32
SAR08	2022/5/14	2600	250	D2600V2-1008	EX3DV4 - SN7694	DAE4 Sn1424	0.09	13.800	58.00	55.2	-4.83	6.270	25.80	25.08	-2.79
SAR08	2022/5/14	3500	100	D3500V2-1014	EX3DV4 - SN7694	DAE4 Sn1424	0.12	6.070	67.20	60.7	-9.67	2.260	25.10	22.6	-9.96
SAR08	2022/6/13	3500	100	D3500V2-1014	EX3DV4 - SN7694	DAE4 Sn1424	0.15	6.880	67.20	68.8	2.38	2.540	25.10	25.4	1.20
SAR12	2022/7/23	3500	100	D3500V2-1014	EX3DV4 - SN7694	DAE4 Sn1696	0.1	6.310	67.200	63.1	-6.10	2.350	25.100	23.5	-6.37
SAR12	2022/7/25	3500	100	D3500V2-1014	EX3DV4 - SN7694	DAE4 Sn1696	0.12	7.330	67.200	73.3	9.08	2.710	25.100	27.1	7.97
SAR08	2022/5/14	3700	100	D3700V2-1022	EX3DV4 - SN7694	DAE4 Sn1424	0.14	6.480	68.20	64.8	-4.99	2.330	24.70	23.3	-5.67
SAR08	2022/6/13	3700	100	D3700V2-1022	EX3DV4 - SN7694	DAE4 Sn1424	0.11	7.170	68.20	71.7	5.13	2.500	24.70	25	1.21
SAR08	2022/6/13	3900	100	D3900V2-1017	EX3DV4 - SN7694	DAE4 Sn1424	0.12	7.540	68.70	75.4	9.75	2.610	23.90	26.1	9.21

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Power Drift (dB)	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
SAR09	2022/4/30	2450	50	D2450V2-929	EX3DV4 - SN3976	DAE4 Sn316	0.08	2.540	53.10	50.8	-4.33	1.170	24.70	23.4	-5.26
SAR09	2022/5/1	2450	50	D2450V2-929	EX3DV4 - SN3976	DAE4 Sn316	-0.1	2.640	53.10	52.8	-0.56	1.270	24.70	25.4	2.83
SAR09	2022/5/5	2450	50	D2450V2-929	EX3DV4 - SN3976	DAE4 Sn316	-0.03	2.670	53.10	53.4	0.56	1.280	24.70	25.6	3.64
SAR09	2022/5/8	2450	50	D2450V2-929	EX3DV4 - SN3976	DAE4 Sn316	-0.13	2.670	53.10	53.4	0.56	1.280	24.70	25.6	3.64
SAR08	2022/5/31	2450	50	D2450V2-929	EX3DV4 - SN7694	DAE4 Sn1424	-0.09	2.450	53.10	49	-7.72	1.130	24.70	22.6	-8.50
SAR12	2022/5/3	5250	50	D5GHzV2-1128-5250	EX3DV4 - SN7694	DAE4 Sn1424	-0.11	3.740	80.00	74.8	-6.50	1.050	22.90	21	-8.30
SAR12	2022/5/5	5250	100	D5GHzV2-1128-5250	EX3DV4 - SN7694	DAE4 Sn1424	0	8.180	80.00	81.8	2.25	2.330	22.90	23.3	1.75
SAR12	2022/5/8	5250	100	D5GHzV2-1128-5250	EX3DV4 - SN7625	DAE4 Sn1696	0.01	8.240	80.00	82.4	3.00	2.340	22.90	23.4	2.18
SAR12	2022/5/10	5250	50	D5GHzV2-1128-5250	EX3DV4 - SN7625	DAE4 Sn1696	-0.09	3.630	80.00	72.6	-9.25	1.040	22.90	20.8	-9.17
SAR12	2022/5/3	5600	50	D5GHzV2-1128-5600	EX3DV4 - SN7694	DAE4 Sn1424	-0.06	4.220	82.40	84.4	2.43	1.200	23.60	24	1.69
SAR12	2022/5/5	5600	100	D5GHzV2-1128-5600	EX3DV4 - SN7694	DAE4 Sn1424	0.1	8.510	82.40	85.1	3.28	2.410	23.60	24.1	2.12
SAR12	2022/5/8	5600	100	D5GHzV2-1128-5600	EX3DV4 - SN7625	DAE4 Sn1696	0.05	8.340	82.40	83.4	1.21	2.360	23.60	23.6	0.00
SAR12	2022/5/10	5600	50	D5GHzV2-1128-5600	EX3DV4 - SN7625	DAE4 Sn1696	-0.08	3.890	82.40	77.8	-5.58	1.100	23.60	22	-6.78
SAR12	2022/5/3	5750	50	D5GHzV2-1128-5750	EX3DV4 - SN7694	DAE4 Sn1424	-0.03	3.860	79.10	77.2	-2.40	1.100	22.60	22	-2.65
SAR12	2022/5/5	5750	100	D5GHzV2-1128-5750	EX3DV4 - SN7694	DAE4 Sn1424	-0.05	7.730	79.10	77.3	-2.28	2.190	22.60	21.9	-3.10
SAR12	2022/5/8	5750	100	D5GHzV2-1128-5750	EX3DV4 - SN7625	DAE4 Sn1696	-0.03	7.760	79.10	77.6	-1.90	2.200	22.60	22	-2.65
SAR12	2022/5/5	5850	100	D5GHzV2-1171-5850	EX3DV4 - SN7625	DAE4 Sn1696	-0.09	8.450	82.30	84.5	2.67	2.420	23.10	24.2	4.76
SAR12	2022/5/7	5850	100	D5GHzV2-1171-5850	EX3DV4 - SN7625	DAE4 Sn1696	-0.08	8.070	82.30	80.7	-1.94	2.260	23.10	22.6	-2.16
SAR13	2022/5/1	6500	100	D6.5GHzV2-1003	EX3DV4 - SN3728	DAE4 Sn699	0.02	28.900	292.00	289	-1.03	5.260	53.80	52.6	-2.23
SAR13	2022/5/2	6500	100	D6.5GHzV2-1003	EX3DV4 - SN3728	DAE4 Sn699	0.01	30.300	292.00	303	3.77	5.320	53.80	53.2	-1.12
SAR13	2022/5/3	6500	100	D6.5GHzV2-1003	EX3DV4 - SN3728	DAE4 Sn699	-0.11	27.300	292.00	273	-6.51	5.190	53.80	51.9	-3.53

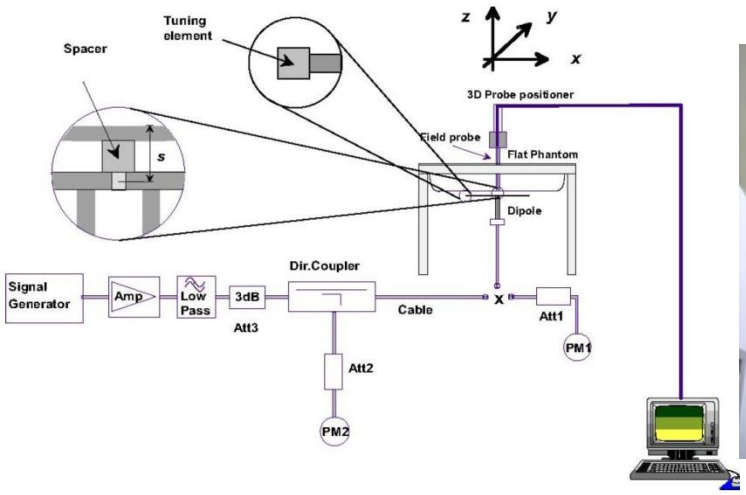


Fig 8.3.1 System Performance Check Setup

Fig 8.3.2 Setup Photo

12.3 PD System Performance Check Results

The system was verified to be within ±0.66 dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66 dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check. The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially (shape) and numerically (level) from the distribution provided by the manufacturer, per November 2017 TCBC Workshop Notes

Test Location	Frequency (GHz)	5G Verification Source	Probe S/N	DAE S/N	Distance (mm)	Measured 4 cm^2 (W/m^2)	Targeted 4 cm^2 (W/m^2)	Deviation (dB)	Date
SAR13-HY	10G	10GHz_1020	EUmmWV4 - SN9461	DAE4 SN699	10	55.5	51.7	0.31	2022/4/11

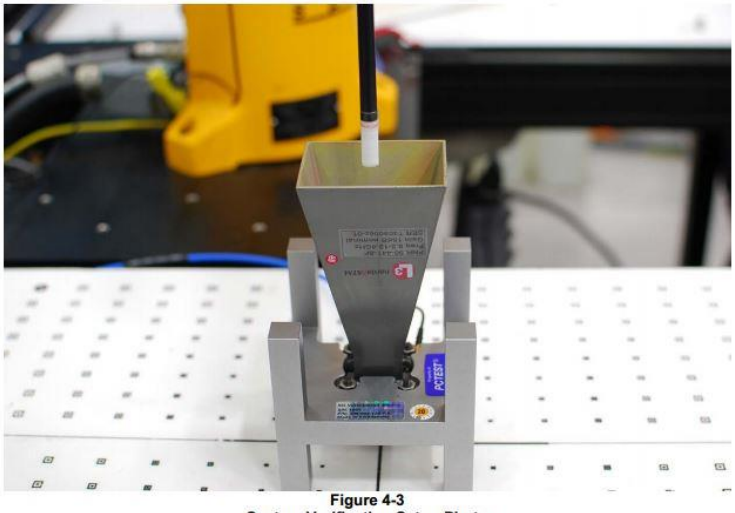


Figure 4-3
System Verification Setup Photo

System Performance Check Setup

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

General Note:

1. The SISO mode support only when the Antenna 3 and 4 is transmitting on 802.11b mode, other support MIMO mode.
2. 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.
3. 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.
4. 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).
5. 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.
6. 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.
7. 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)
8. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing
9. 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
10. 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

WLAN 2.4GHz Power index 1

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 4		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	15.85	16.50	98.90
		6	2437	15.75	16.50	
		11	2462	15.65	16.50	
		12	2467	15.95	16.50	
		13	2472	15.85	16.50	

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 3		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	15.95	16.50	98.90
		6	2437	15.85	16.50	
		11	2462	15.85	16.50	
		12	2467	15.85	16.50	
		13	2472	15.75	16.50	

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
2.4GHz WLAN	802.11g 6Mbps	1	2412	15.85	16.50	15.55	16.50	18.71	19.50	93.40
		6	2437	15.85	16.50	15.15	16.50	18.52	19.50	
		11	2462	15.85	16.50	15.85	16.50	18.86	19.50	
		12	2467	15.85	16.50	15.85	16.50	18.86	19.50	
		13	2472	15.85	16.50	15.65	16.50	18.76	19.50	
	802.11n-HT20 MCS0	1	2412	not required	16.50	not required	16.50	not required	19.50	not required
		6	2437		16.50		16.50		19.50	
		11	2462		16.50		16.50		19.50	
		12	2467		16.50		16.50		19.50	
		13	2472		16.50		16.50		19.50	
	802.11ac-VHT20 MCS0	1	2412		16.50		16.50		19.50	
		6	2437		16.50		16.50		19.50	
		11	2462		16.50		16.50		19.50	
		12	2467		16.50		16.50		19.50	
		13	2472		16.50		16.50		19.50	
	802.11ax-HE20 MCS0	1	2412		16.50		16.50		19.50	
		6	2437		16.50		16.50		19.50	
		11	2462		16.50		16.50		19.50	
		12	2467		16.50		16.50		19.50	
		13	2472		16.50		16.50		19.50	

WLAN 2.4GHz Power index 2

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 4		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	15.85	16.00	98.90
		6	2437	15.75	16.00	
		11	2462	15.65	16.00	
		12	2467	15.95	16.00	
		13	2472	15.85	16.00	

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 3		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	15.95	16.00	98.90
		6	2437	15.85	16.00	
		11	2462	15.85	16.00	
		12	2467	15.85	16.00	
		13	2472	15.75	16.00	

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
2.4GHz WLAN	802.11g 6Mbps	1	2412	15.85	16.00	15.55	16.00	18.71	19.00	93.40
		6	2437	15.85	16.00	15.15	16.00	18.52	19.00	
		11	2462	15.85	16.00	15.85	16.00	18.86	19.00	
		12	2467	15.85	16.00	15.85	16.00	18.86	19.00	
		13	2472	15.85	16.00	15.65	16.00	18.76	19.00	
	802.11n-HT20 MCS0	1	2412	not required	16.00	not required	16.00	not required	19.00	not required
		6	2437		16.00		16.00		19.00	
		11	2462		16.00		16.00		19.00	
		12	2467		16.00		16.00		19.00	
		13	2472		16.00		16.00		19.00	
	802.11ac-VHT20 MCS0	1	2412		16.00		16.00		19.00	
		6	2437		16.00		16.00		19.00	
		11	2462		16.00		16.00		19.00	
		12	2467		16.00		16.00		19.00	
		13	2472		16.00		16.00		19.00	
	802.11ax-HE20 MCS0	1	2412		16.00		16.00		19.00	
		6	2437		16.00		16.00		19.00	
		11	2462		16.00		16.00		19.00	
		12	2467		16.00		16.00		19.00	
		13	2472		16.00		16.00		19.00	

WLAN 2.4GHz Power index 3

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 4		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	14.35	14.50	98.90
		6	2437	14.35	14.50	
		11	2462	14.25	14.50	
		12	2467	14.25	14.50	
		13	2472	14.15	14.50	

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 3		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	14.35	14.50	98.90
		6	2437	14.45	14.50	
		11	2462	14.45	14.50	
		12	2467	14.35	14.50	
		13	2472	14.25	14.50	

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
2.4GHz WLAN	802.11g 6Mbps	1	2412	14.45	14.50	14.05	14.50	17.26	17.50	93.40
		6	2437	14.45	14.50	14.05	14.50	17.26	17.50	
		11	2462	14.35	14.50	14.25	14.50	17.31	17.50	
		12	2467	14.05	14.50	14.05	14.50	17.06	17.50	
		13	2472	14.35	14.50	14.35	14.50	17.36	17.50	
	802.11n-HT20 MCS0	1	2412	not required	14.50	not required	14.50	not required	17.50	not required
		6	2437		14.50		14.50		17.50	
		11	2462		14.50		14.50		17.50	
		12	2467		14.50		14.50		17.50	
		13	2472		14.50		14.50		17.50	
	802.11ac-VHT20 MCS0	1	2412		14.50		14.50		17.50	
		6	2437		14.50		14.50		17.50	
		11	2462		14.50		14.50		17.50	
		12	2467		14.50		14.50		17.50	
		13	2472		14.50		14.50		17.50	
	802.11ax-HE20 MCS0	1	2412		14.50		14.50		17.50	
		6	2437		14.50		14.50		17.50	
		11	2462		14.50		14.50		17.50	
		12	2467		14.50		14.50		17.50	
		13	2472		14.50		14.50		17.50	

WLAN 2.4GHz Power index 4

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 4		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	11.25	11.50	98.90
		6	2437	11.25	11.50	
		11	2462	11.05	11.50	
		12	2467	11.15	11.50	
		13	2472	11.25	11.50	

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 3		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	11.45	11.50	98.90
		6	2437	11.35	11.50	
		11	2462	11.45	11.50	
		12	2467	11.45	11.50	
		13	2472	11.25	11.50	

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
2.4GHz WLAN	802.11g 6Mbps	1	2412	11.45	11.50	11.05	11.50	14.26	14.50	93.40
		6	2437	11.45	11.50	11.05	11.50	14.26	14.50	
		11	2462	11.45	11.50	11.25	11.50	14.36	14.50	
		12	2467	11.45	11.50	11.45	11.50	14.46	14.50	
		13	2472	11.45	11.50	11.35	11.50	14.41	14.50	
	802.11n-HT20 MCS0	1	2412	not required	11.50	not required	11.50	not required	14.50	not required
		6	2437		11.50		11.50		14.50	
		11	2462		11.50		11.50		14.50	
		12	2467		11.50		11.50		14.50	
		13	2472		11.50		11.50		14.50	
	802.11ac-VHT20 MCS0	1	2412		11.50		11.50		14.50	
		6	2437		11.50		11.50		14.50	
		11	2462		11.50		11.50		14.50	
		12	2467		11.50		11.50		14.50	
		13	2472		11.50		11.50		14.50	
	802.11ax-HE20 MCS0	1	2412		11.50		11.50		14.50	
		6	2437		11.50		11.50		14.50	
		11	2462		11.50		11.50		14.50	
		12	2467		11.50		11.50		14.50	
		13	2472		11.50		11.50		14.50	

WLAN 2.4GHz Power index 5/6

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 4		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	21.85	22.50	98.90
		6	2437	21.85	22.50	
		11	2462	21.95	22.50	
		12	2467	21.85	22.50	
		13	2472	21.75	22.50	

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 3		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	21.75	22.50	98.90
		6	2437	21.85	22.50	
		11	2462	21.85	22.50	
		12	2467	21.95	22.50	
		13	2472	21.85	22.50	

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
2.4GHz WLAN	802.11g 6Mbps	1	2412	20.85	21.00	20.35	21.00	23.62	24.00	93.40
		6	2437	21.95	22.50	21.45	22.50	24.72	25.50	
		11	2462	21.55	22.00	21.25	22.00	24.41	25.00	
		12	2467	19.65	20.00	19.15	20.00	22.42	23.00	
		13	2472	18.45	18.50	18.05	18.50	21.26	21.50	
	802.11n-HT20 MCS0	1	2412	not required	20.50	not required	20.50	not required	23.50	not required
		6	2437		22.50		22.50		25.50	
		11	2462		20.50		20.50		23.50	
		12	2467		20.00		20.00		23.00	
		13	2472		18.50		18.50		21.50	
	802.11ac-VHT20 MCS0	1	2412		20.50		20.50		23.50	
		6	2437		22.50		22.50		25.50	
		11	2462		20.50		20.50		23.50	
		12	2467		20.00		20.00		23.00	
		13	2472		18.50		18.50		21.50	
	802.11ax-HE20 MCS0	1	2412		20.50		20.50		23.50	
		6	2437		22.50		22.50		25.50	
		11	2462		20.50		20.50		23.50	
		12	2467		20.00		20.00		23.00	
		13	2472		18.50		18.50		21.50	

WLAN 2.4GHz Power index 7

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 4		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	19.75	20.00	98.90
		6	2437	19.85	20.00	
		11	2462	19.85	20.00	
		12	2467	19.75	20.00	
		13	2472	19.85	20.00	

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 3		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	19.75	20.00	98.90
		6	2437	19.75	20.00	
		11	2462	19.85	20.00	
		12	2467	19.85	20.00	
		13	2472	19.85	20.00	

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
2.4GHz WLAN	802.11g 6Mbps	1	2412	19.85	20.00	19.55	20.00	22.71	23.00	93.40
		6	2437	19.95	20.00	19.75	20.00	22.86	23.00	
		11	2462	19.85	20.00	19.35	20.00	22.62	23.00	
		12	2467	19.65	20.00	19.15	20.00	22.42	23.00	
		13	2472	18.45	18.50	18.05	18.50	21.26	21.50	
	802.11n-HT20 MCS0	1	2412	not required	20.00	not required	20.00	not required	23.00	not required
		6	2437		20.00		20.00		23.00	
		11	2462		20.00		20.00		23.00	
		12	2467		20.00		20.00		23.00	
		13	2472		18.50		18.50		21.50	
	802.11ac-VHT20 MCS0	1	2412		20.00		20.00		23.00	
		6	2437		20.00		20.00		23.00	
		11	2462		20.00		20.00		23.00	
		12	2467		20.00		20.00		23.00	
		13	2472		18.50		18.50		21.50	
	802.11ax-HE20 MCS0	1	2412		20.00		20.00		23.00	
		6	2437		20.00		20.00		23.00	
		11	2462		20.00		20.00		23.00	
		12	2467		20.00		20.00		23.00	
		13	2472		18.50		18.50		21.50	

WLAN 2.4GHz Power index 8

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 4		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	16.85	17.50	98.90
		6	2437	16.75	17.50	
		11	2462	16.85	17.50	
		12	2467	16.85	17.50	
		13	2472	16.85	17.50	

Burst Average Power(dBm)						
Transmit Antenna				SISO Ant 3		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
2.4GHz WLAN	802.11b 1Mbps	1	2412	16.75	17.50	98.90
		6	2437	16.65	17.50	
		11	2462	16.75	17.50	
		12	2467	16.75	17.50	
		13	2472	16.85	17.50	

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
2.4GHz WLAN	802.11g 6Mbps	1	2412	16.95	17.50	16.55	17.50	19.76	20.50	93.40
		6	2437	16.95	17.50	16.55	17.50	19.76	20.50	
		11	2462	16.95	17.50	16.95	17.50	19.86	20.50	
		12	2467	16.95	17.50	16.95	17.50	19.96	20.50	
		13	2472	16.75	17.50	16.55	17.50	19.66	20.50	
	802.11n-HT20 MCS0	1	2412	not required	17.50	not required	17.50	not required	20.50	not required
		6	2437		17.50		17.50		20.50	
		11	2462		17.50		17.50		20.50	
		12	2467		17.50		17.50		20.50	
		13	2472		17.50		17.50		20.50	
	802.11ac-VHT20 MCS0	1	2412		17.50		17.50		20.50	
		6	2437		17.50		17.50		20.50	
		11	2462		17.50		17.50		20.50	
		12	2467		17.50		17.50		20.50	
		13	2472		17.50		17.50		20.50	
	802.11ax-HE20 MCS0	1	2412		17.50		17.50		20.50	
		6	2437		17.50		17.50		20.50	
		11	2462		17.50		17.50		20.50	
		12	2467		17.50		17.50		20.50	
		13	2472		17.50		17.50		20.50	

WLAN 5.2GHz Power index 1/2

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	not required	14.50	not required	14.50	not required	17.50	not required
		40	5200		14.50		14.50		17.50	
		44	5220		14.50		14.50		17.50	
		48	5240		14.50		14.50		17.50	
	802.11n-HT20 MCS0	36	5180		14.50		14.50		17.50	
		40	5200		14.50		14.50		17.50	
		44	5220		14.50		14.50		17.50	
		48	5240		14.50		14.50		17.50	
	802.11n-HT40 MCS0	38	5190		14.50		14.50		17.50	
		46	5230		14.50		14.50		17.50	
	802.11ac-VHT20 MCS0	36	5180		14.50		14.50		17.50	
		40	5200		14.50		14.50		17.50	
		44	5220		14.50		14.50		17.50	
		48	5240		14.50		14.50		17.50	
	802.11ac-VHT40 MCS0	38	5190		14.50		14.50		17.50	
		46	5230		14.50		14.50		17.50	
	802.11ac-VHT80 MCS0	42	5210		14.50		14.50		17.50	
	802.11ax-HE20 MCS0	36	5180		14.50		14.50		17.50	
		40	5200		14.50		14.50		17.50	
		44	5220		14.50		14.50		17.50	
		48	5240		14.50		14.50		17.50	
	802.11ax-HE40 MCS0	38	5190		14.50		14.50		17.50	
		46	5230		14.50		14.50		17.50	
	802.11ax-HE80 MCS0	42	5210		14.50		14.50		17.50	

WLAN 5.2GHz Power index 3/4

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	not required	11.00	not required	11.00	not required	14.00	not required
		40	5200		11.00		11.00		14.00	
		44	5220		11.00		11.00		14.00	
		48	5240		11.00		11.00		14.00	
	802.11n-HT20 MCS0	36	5180		11.00		11.00		14.00	
		40	5200		11.00		11.00		14.00	
		44	5220		11.00		11.00		14.00	
		48	5240		11.00		11.00		14.00	
	802.11n-HT40 MCS0	38	5190		11.00		11.00		14.00	
		46	5230		11.00		11.00		14.00	
	802.11ac-VHT20 MCS0	36	5180		11.00		11.00		14.00	
		40	5200		11.00		11.00		14.00	
		44	5220		11.00		11.00		14.00	
		48	5240		11.00		11.00		14.00	
	802.11ac-VHT40 MCS0	38	5190		11.00		11.00		14.00	
		46	5230		11.00		11.00		14.00	
	802.11ac-VHT80 MCS0	42	5210		11.00		11.00		14.00	
	802.11ax-HE20 MCS0	36	5180		11.00		11.00		14.00	
		40	5200		11.00		11.00		14.00	
		44	5220		11.00		11.00		14.00	
		48	5240		11.00		11.00		14.00	
	802.11ax-HE40 MCS0	38	5190		11.00		11.00		14.00	
		46	5230		11.00		11.00		14.00	
	802.11ax-HE80 MCS0	42	5210		11.00		11.00		14.00	

WLAN 5.2GHz Power index 5/6

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	not required	18.00	not required	18.00	not required	21.00	not required
		40	5200		19.50		19.50		22.50	
		44	5220		19.50		19.50		22.50	
		48	5240		19.50		19.50		22.50	
	802.11n-HT20 MCS0	36	5180		17.00		17.00		20.00	
		40	5200		19.50		19.50		22.50	
		44	5220		19.50		19.50		22.50	
		48	5240		19.50		19.50		22.50	
	802.11n-HT40 MCS0	38	5190		15.00		15.00		18.00	
		46	5230		19.50		19.50		22.50	
	802.11ac-VHT20 MCS0	36	5180		17.00		17.00		20.00	
		40	5200		19.50		19.50		22.50	
		44	5220		19.50		19.50		22.50	
		48	5240		19.50		19.50		22.50	
	802.11ac-VHT40 MCS0	38	5190		15.00		15.00		18.00	
		46	5230		19.50		19.50		22.50	
	802.11ac-VHT80 MCS0	42	5210		15.50		15.50		18.50	
	802.11ax-HE20 MCS0	36	5180		17.00		17.00		20.00	
		40	5200		19.50		19.50		22.50	
		44	5220		19.50		19.50		22.50	
		48	5240		19.50		19.50		22.50	
	802.11ax-HE40 MCS0	38	5190		15.00		15.00		18.00	
		46	5230		19.50		19.50		22.50	
	802.11ax-HE80 MCS0	42	5210		15.50		15.50		18.50	

WLAN 5.2GHz Power index 7

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	not required	16.50	not required	16.50	not required	19.50	not required
		40	5200		16.50		16.50		19.50	
		44	5220		16.50		16.50		19.50	
		48	5240		16.50		16.50		19.50	
	802.11n-HT20 MCS0	36	5180		16.50		16.50		19.50	
		40	5200		16.50		16.50		19.50	
		44	5220		16.50		16.50		19.50	
		48	5240		16.50		16.50		19.50	
	802.11n-HT40 MCS0	38	5190	14.70	15.00	13.60	15.00	17.20	18.00	96.79
		46	5230	16.40	16.50	15.40	16.50	18.85	19.50	
	802.11ac-VHT20 MCS0	36	5180	not required	16.50	not required	16.50	not required	19.50	not required
		40	5200		16.50		16.50		19.50	
		44	5220		16.50		16.50		19.50	
		48	5240		16.50		16.50		19.50	
	802.11ac-VHT40 MCS0	38	5190		15.00		15.00		18.00	
		46	5230		16.50		16.50		19.50	
	802.11ac-VHT80 MCS0	42	5210		15.50		15.50		18.50	
	802.11ax-HE20 MCS0	36	5180		16.50		16.50		19.50	
		40	5200		16.50		16.50		19.50	
		44	5220		16.50		16.50		19.50	
		48	5240		16.50		16.50		19.50	
	802.11ax-HE40 MCS0	38	5190		15.00		15.00		18.00	
		46	5230		16.50		16.50		19.50	
	802.11ax-HE80 MCS0	42	5210		15.50		15.50		18.50	

WLAN 5.2GHz Power index 8/9

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	not required	14.00	not required	14.00	not required	17.00	not required
		40	5200		14.00		14.00		17.00	
		44	5220		14.00		14.00		17.00	
		48	5240		14.00		14.00		17.00	
	802.11n-HT20 MCS0	36	5180		14.00		14.00		17.00	
		40	5200		14.00		14.00		17.00	
		44	5220		14.00		14.00		17.00	
		48	5240		14.00		14.00		17.00	
	802.11n-HT40 MCS0	38	5190		14.00		14.00		17.00	
		46	5230		14.00		14.00		17.00	
	802.11ac-VHT20 MCS0	36	5180		14.00		14.00		17.00	
		40	5200		14.00		14.00		17.00	
		44	5220		14.00		14.00		17.00	
		48	5240		14.00		14.00		17.00	
	802.11ac-VHT40 MCS0	38	5190		14.00		14.00		17.00	
		46	5230		14.00		14.00		17.00	
	802.11ac-VHT80 MCS0	42	5210	13.90	14.00	13.00	14.00	16.48	17.00	88.10
	802.11ax-HE20 MCS0	36	5180	not required	14.00	not required	14.00	not required	17.00	not required
		40	5200		14.00		14.00		17.00	
		44	5220		14.00		14.00		17.00	
		48	5240		14.00		14.00		17.00	
	802.11ax-HE40 MCS0	38	5190		14.00		14.00		17.00	
		46	5230		14.00		14.00		17.00	
	802.11ax-HE80 MCS0	42	5210		14.00		14.00		17.00	

WLAN 5.3GHz Power index 1/2

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	not required	14.50	not required	14.50	not required	17.50	not required
		56	5280		14.50		14.50		17.50	
		60	5300		14.50		14.50		17.50	
		64	5320		14.50		14.50		17.50	
	802.11n-HT20 MCS0	52	5260		14.50		14.50		17.50	
		56	5280		14.50		14.50		17.50	
		60	5300		14.50		14.50		17.50	
		64	5320		14.50		14.50		17.50	
	802.11n-HT40 MCS0	54	5270		14.50		14.50		17.50	
		62	5310		14.50		14.50		17.50	
	802.11ac-VHT20 MCS0	52	5260		14.50		14.50		17.50	
		56	5280		14.50		14.50		17.50	
		60	5300		14.50		14.50		17.50	
		64	5320		14.50		14.50		17.50	
	802.11ac-VHT40 MCS0	54	5270		14.50		14.50		17.50	
		62	5310		14.50		14.50		17.50	
	802.11ac-VHT80 MCS0	58	5290	14.40	14.50	14.00	14.50	17.21	17.50	88.10
	802.11ac-VHT160 MCS0	50	5250	14.30	14.50	13.70	14.50	17.02	17.50	86.84
	802.11ax-HE20 MCS0	52	5260	not required	14.50	not required	14.50	not required	17.50	not required
		56	5280		14.50		14.50		17.50	
		60	5300		14.50		14.50		17.50	
		64	5320		14.50		14.50		17.50	
	802.11ax-HE40 MCS0	54	5270		14.50		14.50		17.50	
		62	5310		14.50		14.50		17.50	
	802.11ax-HE80 MCS0	58	5290		14.50		14.50		17.50	
	802.11ax-HE160 MCS0	50	5250		14.50		14.50		17.50	

WLAN 5.3GHz Power index 3/4

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	not required	11.00	not required	11.00	not required	14.00	not required
		56	5280		11.00		11.00		14.00	
		60	5300		11.00		11.00		14.00	
		64	5320		11.00		11.00		14.00	
	802.11n-HT20 MCS0	52	5260		11.00		11.00		14.00	
		56	5280		11.00		11.00		14.00	
		60	5300		11.00		11.00		14.00	
		64	5320		11.00		11.00		14.00	
	802.11n-HT40 MCS0	54	5270		11.00		11.00		14.00	
		62	5310		11.00		11.00		14.00	
	802.11ac-VHT20 MCS0	52	5260		11.00		11.00		14.00	
		56	5280		11.00		11.00		14.00	
		60	5300		11.00		11.00		14.00	
		64	5320		11.00		11.00		14.00	
	802.11ac-VHT40 MCS0	54	5270		11.00		11.00		14.00	
		62	5310		11.00		11.00		14.00	
	802.11ac-VHT80 MCS0	58	5290		11.00		11.00		14.00	
	802.11ac-VHT160 MCS0	50	5250	10.30	11.00	9.80	11.00	13.07	14.00	86.84
	802.11ax-HE20 MCS0	52	5260	not required	11.00	not required	11.00	not required	14.00	not required
		56	5280		11.00		11.00		14.00	
		60	5300		11.00		11.00		14.00	
		64	5320		11.00		11.00		14.00	
	802.11ax-HE40 MCS0	54	5270		11.00		11.00		14.00	
		62	5310		11.00		11.00		14.00	
	802.11ax-HE80 MCS0	58	5290		11.00		11.00		14.00	
	802.11ax-HE160 MCS0	50	5250		11.00		11.00		14.00	

WLAN 5.3GHz Power index 5/6/7

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	19.40	19.50	19.30	19.50	22.36	22.50	93.42
		56	5280	19.40	19.50	19.30	19.50	22.36	22.50	
		60	5300	19.40	19.50	19.40	19.50	22.41	22.50	
		64	5320	not required	18.50	not required	18.50	not required	21.50	not required
	802.11n-HT20 MCS0	52	5260		19.50		19.50		22.50	
		56	5280		19.50		19.50		22.50	
		60	5300		19.50		19.50		22.50	
		64	5320		17.50		17.50		20.50	
	802.11n-HT40 MCS0	54	5270	19.40	19.50	19.40	19.50	22.41	22.50	96.79
		62	5310	15.90	16.50	15.90	16.50	18.91	19.50	
	802.11ac-VHT20 MCS0	52	5260	not required	19.50	not required	19.50	not required	22.50	not required
		56	5280		19.50		19.50		22.50	
		60	5300		19.50		19.50		22.50	
		64	5320		17.50		17.50		20.50	
	802.11ac-VHT40 MCS0	54	5270		19.50		19.50		22.50	
		62	5310		16.50		16.50		19.50	
	802.11ac-VHT80 MCS0	58	5290		15.50		15.50		18.50	
	802.11ac-VHT160 MCS0	50	5250		14.50		14.50		17.50	
	802.11ax-HE20 MCS0	52	5260		19.50		19.50		22.50	
		56	5280		19.50		19.50		22.50	
		60	5300		19.50		19.50		22.50	
		64	5320		17.50		17.50		20.50	
	802.11ax-HE40 MCS0	54	5270		19.50		19.50		22.50	
		62	5310		16.50		16.50		19.50	
	802.11ax-HE80 MCS0	58	5290		15.50		15.50		18.50	
	802.11ax-HE160 MCS0	50	5250		14.50		14.50		17.50	

WLAN 5.3GHz Power index 8/9

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.3GHz WLAN	802.11a 6Mbps	52	5260	not required	17.50	not required	17.50	not required	20.50	not required
		56	5280		17.50		17.50		20.50	
		60	5300		17.50		17.50		20.50	
		64	5320		17.50		17.50		20.50	
	802.11n-HT20 MCS0	52	5260		17.50		17.50		20.50	
		56	5280		17.50		17.50		20.50	
		60	5300		17.50		17.50		20.50	
		64	5320		17.50		17.50		20.50	
	802.11n-HT40 MCS0	54	5270	16.40	17.50	16.20	17.50	19.31	20.50	96.79
		62	5310	15.90	16.50	15.90	16.50	18.91	19.50	
	802.11ac-VHT20 MCS0	52	5260	not required	17.50	not required	17.50	not required	20.50	not required
		56	5280		17.50		17.50		20.50	
		60	5300		17.50		17.50		20.50	
		64	5320		17.50		17.50		20.50	
	802.11ac-VHT40 MCS0	54	5270		17.50		17.50		20.50	
		62	5310		16.50		16.50		19.50	
	802.11ac-VHT80 MCS0	58	5290		15.50		15.50		18.50	
	802.11ac-VHT160 MCS0	50	5250		14.50		14.50		17.50	
	802.11ax-HE20 MCS0	52	5260		17.50		17.50		20.50	
		56	5280		17.50		17.50		20.50	
		60	5300		17.50		17.50		20.50	
		64	5320		17.50		17.50		20.50	
	802.11ax-HE40 MCS0	54	5270		17.50		17.50		20.50	
		62	5310		16.50		16.50		19.50	
	802.11ax-HE80 MCS0	58	5290		15.50		15.50		18.50	
	802.11ax-HE160 MCS0	50	5250		14.50		14.50		17.50	

WLAN 5.5GHzPower index 1/2

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	not required	15.00	not required	15.00	not required	18.00	not required
		116	5580		15.00		15.00		18.00	
		124	5620		15.00		15.00		18.00	
		132	5660		15.00		15.00		18.00	
		144	5720		15.00		15.00		18.00	
	802.11n-HT20 MCS0	100	5500		15.00		15.00		18.00	
		116	5580		15.00		15.00		18.00	
		124	5620		15.00		15.00		18.00	
		132	5660		15.00		15.00		18.00	
		144	5720		15.00		15.00		18.00	
	802.11n-HT40 MCS0	102	5510		15.00		15.00		18.00	
		110	5550		15.00		15.00		18.00	
		126	5630		15.00		15.00		18.00	
		134	5670		15.00		15.00		18.00	
		142	5710		15.00		15.00		18.00	
	802.11ac-VHT20 MCS0	100	5500		15.00		15.00		18.00	
		116	5580		15.00		15.00		18.00	
		124	5620		15.00		15.00		18.00	
		132	5660		15.00		15.00		18.00	
		144	5720		15.00		15.00		18.00	
	802.11ac-VHT40 MCS0	102	5510		15.00		15.00		18.00	
		110	5550		15.00		15.00		18.00	
		126	5630		15.00		15.00		18.00	
		134	5670		15.00		15.00		18.00	
		142	5710		15.00		15.00		18.00	
	802.11ac-VHT80 MCS0	106	5530	14.40	15.00	14.10	15.00	17.26	18.00	88.10
		122	5610	14.40	15.00	14.00	15.00	17.21	18.00	
		138	5690	14.40	15.00	14.00	15.00	17.21	18.00	
	802.11ac-VHT160 MCS0	114	5570	14.40	15.00	13.80	15.00	17.12	18.00	86.84
	802.11ax-HE20 MCS0	100	5500	not required	15.00	not required	15.00	not required	18.00	not required
		116	5580		15.00		15.00		18.00	
		124	5620		15.00		15.00		18.00	
		132	5660		15.00		15.00		18.00	
		144	5720		15.00		15.00		18.00	
	802.11ax-HE40 MCS0	102	5510		15.00		15.00		18.00	
		110	5550		15.00		15.00		18.00	
		126	5630		15.00		15.00		18.00	
		134	5670		15.00		15.00		18.00	
		142	5710		15.00		15.00		18.00	
	802.11ax-HE80 MCS0	106	5530		15.00		15.00		18.00	
		122	5610		15.00		15.00		18.00	
		138	5690		15.00		15.00		18.00	
	802.11ax-HE160 MCS0	114	5570		15.00		15.00		18.00	

WLAN 5.5GHzPower index 3/4

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	not required	10.50	not required	10.50	not required	13.50	not required
		116	5580		10.50		10.50		13.50	
		124	5620		10.50		10.50		13.50	
		132	5660		10.50		10.50		13.50	
		144	5720		10.50		10.50		13.50	
	802.11n-HT20 MCS0	100	5500		10.50		10.50		13.50	
		116	5580		10.50		10.50		13.50	
		124	5620		10.50		10.50		13.50	
		132	5660		10.50		10.50		13.50	
		144	5720		10.50		10.50		13.50	
	802.11n-HT40 MCS0	102	5510		10.50		10.50		13.50	
		110	5550		10.50		10.50		13.50	
		126	5630		10.50		10.50		13.50	
		134	5670		10.50		10.50		13.50	
		142	5710		10.50		10.50		13.50	
	802.11ac-VHT20 MCS0	100	5500		10.50		10.50		13.50	
		116	5580		10.50		10.50		13.50	
		124	5620		10.50		10.50		13.50	
		132	5660		10.50		10.50		13.50	
		144	5720		10.50		10.50		13.50	
	802.11ac-VHT40 MCS0	102	5510		10.50		10.50		13.50	
		110	5550		10.50		10.50		13.50	
		126	5630		10.50		10.50		13.50	
		134	5670		10.50		10.50		13.50	
		142	5710		10.50		10.50		13.50	
	802.11ac-VHT80 MCS0	106	5530		10.50		10.50		13.50	
		122	5610		10.50		10.50		13.50	
		138	5690		10.50		10.50		13.50	
	802.11ac-VHT160 MCS0	114	5570	10.40	10.50	9.50	10.50	12.98	13.50	86.84
	802.11ax-HE20 MCS0	100	5500	not required	10.50	not required	10.50	not required	13.50	not required
		116	5580		10.50		10.50		13.50	
		124	5620		10.50		10.50		13.50	
		132	5660		10.50		10.50		13.50	
		144	5720		10.50		10.50		13.50	
	802.11ax-HE40 MCS0	102	5510		10.50		10.50		13.50	
		110	5550		10.50		10.50		13.50	
		126	5630		10.50		10.50		13.50	
		134	5670		10.50		10.50		13.50	
		142	5710		10.50		10.50		13.50	
	802.11ax-HE80 MCS0	106	5530		10.50		10.50		13.50	
		122	5610		10.50		10.50		13.50	
		138	5690		10.50		10.50		13.50	
	802.11ax-HE160 MCS0	114	5570		10.50		10.50		13.50	

WLAN 5.5GHz Power index 5/6/7

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	not required	19.50	not required	19.50	not required	22.50	not required
		116	5580		19.50		19.50		22.50	
		124	5620		19.50		19.50		22.50	
		132	5660		19.50		19.50		22.50	
		144	5720		19.50		19.50		22.50	
	802.11n-HT20 MCS0	100	5500		19.50		19.50		22.50	
		116	5580		19.50		19.50		22.50	
		124	5620		19.50		19.50		22.50	
		132	5660		19.50		19.50		22.50	
		144	5720		19.50		19.50		22.50	
	802.11n-HT40 MCS0	102	5510		17.50		17.50		20.50	
		110	5550		19.50		19.50		22.50	
		126	5630		19.50		19.50		22.50	
		134	5670		19.50		19.50		22.50	
		142	5710		19.50		19.50		22.50	
	802.11ac-VHT20 MCS0	100	5500		19.50		19.50		22.50	
		116	5580		19.50		19.50		22.50	
		124	5620		19.50		19.50		22.50	
		132	5660		19.50		19.50		22.50	
		144	5720		19.50		19.50		22.50	
	802.11ac-VHT40 MCS0	102	5510		17.50		17.50		20.50	
		110	5550		19.50		19.50		22.50	
		126	5630		19.50		19.50		22.50	
		134	5670		19.50		19.50		22.50	
		142	5710		19.50		19.50		22.50	
	802.11ac-VHT80 MCS0	106	5530	15.50	15.50	14.80	15.50	18.17	18.50	88.10
		122	5610	19.40	19.50	19.30	19.50	22.36	22.50	
		138	5690	19.30	19.50	19.10	19.50	22.21	22.50	
	802.11ac-VHT160 MCS0	114	5570	not required	16.00	not required	16.00	not required	19.00	not required
	802.11ax-HE20 MCS0	100	5500		19.50		19.50		22.50	
		116	5580		19.50		19.50		22.50	
		124	5620		19.50		19.50		22.50	
		132	5660		19.50		19.50		22.50	
		144	5720		19.50		19.50		22.50	
	802.11ax-HE40 MCS0	102	5510		17.50		17.50		20.50	
		110	5550		19.50		19.50		22.50	
		126	5630		19.50		19.50		22.50	
		134	5670		19.50		19.50		22.50	
		142	5710		19.50		19.50		22.50	
	802.11ax-HE80 MCS0	106	5530		15.50		15.50		18.50	
		122	5610		19.50		19.50		22.50	
		138	5690		19.50		19.50		22.50	
	802.11ax-HE160 MCS0	114	5570		16.00		16.00		19.00	

WLAN 5.5GHz Power index 8/9

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	not required	18.50	not required	18.50	not required	21.50	not required
		116	5580		18.50		18.50		21.50	
		124	5620		18.50		18.50		21.50	
		132	5660		18.50		18.50		21.50	
		144	5720		18.50		18.50		21.50	
	802.11n-HT20 MCS0	100	5500		18.50		18.50		21.50	
		116	5580		18.50		18.50		21.50	
		124	5620		18.50		18.50		21.50	
		132	5660		18.50		18.50		21.50	
		144	5720		18.50		18.50		21.50	
	802.11n-HT40 MCS0	102	5510		17.50		17.50		20.50	
		110	5550		18.50		18.50		21.50	
		126	5630		18.50		18.50		21.50	
		134	5670		18.50		18.50		21.50	
		142	5710		18.50		18.50		21.50	
	802.11ac-VHT20 MCS0	100	5500		18.50		18.50		21.50	
		116	5580		18.50		18.50		21.50	
		124	5620		18.50		18.50		21.50	
		132	5660		18.50		18.50		21.50	
		144	5720		18.50		18.50		21.50	
	802.11ac-VHT40 MCS0	102	5510		17.50		17.50		20.50	
		110	5550		18.50		18.50		21.50	
		126	5630		18.50		18.50		21.50	
		134	5670		18.50		18.50		21.50	
		142	5710		18.50		18.50		21.50	
	802.11ac-VHT80 MCS0	106	5530	15.50	15.50	14.80	15.50	18.17	18.50	88.10
		122	5610	18.40	18.50	18.00	18.50	21.21	21.50	
		138	5690	18.30	18.50	17.70	18.50	21.02	21.50	
	802.11ac-VHT160 MCS0	114	5570	not required	16.00	not required	16.00	not required	19.00	not required
	802.11ax-HE20 MCS0	100	5500		18.50		18.50		21.50	
		116	5580		18.50		18.50		21.50	
		124	5620		18.50		18.50		21.50	
		132	5660		18.50		18.50		21.50	
		144	5720		18.50		18.50		21.50	
	802.11ax-HE40 MCS0	102	5510		17.50		17.50		20.50	
		110	5550		18.50		18.50		21.50	
		126	5630		18.50		18.50		21.50	
		134	5670		18.50		18.50		21.50	
		142	5710		18.50		18.50		21.50	
	802.11ax-HE80 MCS0	106	5530		15.50		15.50		18.50	
		122	5610		18.50		18.50		21.50	
		138	5690		18.50		18.50		21.50	
	802.11ax-HE160 MCS0	114	5570		16.00		16.00		19.00	

WLAN 5.8GHz Power index 1/2

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	not required	15.50	not required	15.50	not required	18.50	not required
		157	5785		15.50		15.50		18.50	
		165	5825		15.50		15.50		18.50	
	802.11n-HT20 MCS0	149	5745		15.50		15.50		18.50	
		157	5785		15.50		15.50		18.50	
		165	5825		15.50		15.50		18.50	
	802.11n-HT40 MCS0	151	5755	14.90	15.50	14.10	15.50	17.53	18.50	96.79
		159	5795	14.90	15.50	14.30	15.50	17.62	18.50	
	802.11ac-VHT20 MCS0	149	5745	not required	15.50	not required	15.50	not required	18.50	not required
		157	5785		15.50		15.50		18.50	
		165	5825		15.50		15.50		18.50	
	802.11ac-VHT40 MCS0	151	5755		15.50		15.50		18.50	
		159	5795		15.50		15.50		18.50	
	802.11ac-VHT80 MCS0	155	5775	14.90	15.50	14.50	15.50	17.71	18.50	88.10
	802.11ax-HE20 MCS0	149	5745	not required	15.50	not required	15.50	not required	18.50	not required
		157	5785		15.50		15.50		18.50	
		165	5825		15.50		15.50		18.50	
	802.11ax-HE40 MCS0	151	5755		15.50		15.50		18.50	
		159	5795		15.50		15.50		18.50	
	802.11ax-HE80 MCS0	155	5775		15.50		15.50		18.50	

WLAN 5.8GHz Power index 3/4

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	not required	11.50	not required	11.50	not required	14.50	not required
		157	5785		11.50		11.50		14.50	
		165	5825		11.50		11.50		14.50	
	802.11n-HT20 MCS0	149	5745		11.50		11.50		14.50	
		157	5785		11.50		11.50		14.50	
		165	5825		11.50		11.50		14.50	
	802.11n-HT40 MCS0	151	5755		11.50		11.50		14.50	
		159	5795		11.50		11.50		14.50	
	802.11ac-VHT20 MCS0	149	5745		11.50		11.50		14.50	
		157	5785		11.50		11.50		14.50	
		165	5825		11.50		11.50		14.50	
	802.11ac-VHT40 MCS0	151	5755		11.50		11.50		14.50	
		159	5795		11.50		11.50		14.50	
	802.11ac-VHT80 MCS0	155	5775	10.80	11.50	10.00	11.50	13.43	14.50	88.10
	802.11ax-HE20 MCS0	149	5745	not required	11.50	not required	11.50	not required	14.50	not required
		157	5785		11.50		11.50		14.50	
		165	5825		11.50		11.50		14.50	
	802.11ax-HE40 MCS0	151	5755		11.50		11.50		14.50	
		159	5795		11.50		11.50		14.50	
	802.11ax-HE80 MCS0	155	5775		11.50		11.50		14.50	

WLAN 5.8GHz Power index 5/6

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	not required	21.50	not required	21.50	not required	24.50	not required
		157	5785		21.50		21.50		24.50	
		165	5825		21.50		21.50		24.50	
	802.11n-HT20 MCS0	149	5745		21.50		21.50		24.50	
		157	5785		21.50		21.50		24.50	
		165	5825		21.50		21.50		24.50	
	802.11n-HT40 MCS0	151	5755		21.50		21.50		24.50	
		159	5795		21.50		21.50		24.50	
	802.11ac-VHT20 MCS0	149	5745		21.50		21.50		24.50	
		157	5785		21.50		21.50		24.50	
		165	5825		21.50		21.50		24.50	
	802.11ac-VHT40 MCS0	151	5755		21.50		21.50		24.50	
		159	5795		21.50		21.50		24.50	
	802.11ac-VHT80 MCS0	155	5775	21.40	21.50	21.00	21.50	24.21	24.50	88.10
	802.11ax-HE20 MCS0	149	5745	not required	21.50	not required	21.50	not required	24.50	not required
		157	5785		21.50		21.50		24.50	
		165	5825		21.50		21.50		24.50	
	802.11ax-HE40 MCS0	151	5755		21.50		21.50		24.50	
		159	5795		21.50		21.50		24.50	
	802.11ax-HE80 MCS0	155	5775		21.50		21.50		24.50	

WLAN 5.8GHz Power index 7

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	not required	18.00	not required	18.00	not required	21.00	not required
		157	5785		18.00		18.00		21.00	
		165	5825		18.00		18.00		21.00	
	802.11n-HT20 MCS0	149	5745		18.00		18.00		21.00	
		157	5785		18.00		18.00		21.00	
		165	5825		18.00		18.00		21.00	
	802.11n-HT40 MCS0	151	5755		18.00		18.00		21.00	
		159	5795		18.00		18.00		21.00	
	802.11ac-VHT20 MCS0	149	5745		18.00		18.00		21.00	
		157	5785		18.00		18.00		21.00	
		165	5825		18.00		18.00		21.00	
	802.11ac-VHT40 MCS0	151	5755		18.00		18.00		21.00	
		159	5795		18.00		18.00		21.00	
	802.11ac-VHT80 MCS0	155	5775	17.40	18.00	16.70	18.00	20.07	21.00	88.10
	802.11ax-HE20 MCS0	149	5745	not required	18.00	not required	18.00	not required	21.00	not required
		157	5785		18.00		18.00		21.00	
		165	5825		18.00		18.00		21.00	
	802.11ax-HE40 MCS0	151	5755		18.00		18.00		21.00	
		159	5795		18.00		18.00		21.00	
	802.11ax-HE80 MCS0	155	5775		18.00		18.00		21.00	

WLAN 5.8GHz Power index 8/9

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	not required	15.00	not required	15.00	not required	18.00	not required
		157	5785		15.00		15.00		18.00	
		165	5825		15.00		15.00		18.00	
	802.11n-HT20 MCS0	149	5745		15.00		15.00		18.00	
		157	5785		15.00		15.00		18.00	
		165	5825		15.00		15.00		18.00	
	802.11n-HT40 MCS0	151	5755		15.00		15.00		18.00	
		159	5795		15.00		15.00		18.00	
	802.11ac-VHT20 MCS0	149	5745		15.00		15.00		18.00	
		157	5785		15.00		15.00		18.00	
		165	5825		15.00		15.00		18.00	
	802.11ac-VHT40 MCS0	151	5755		15.00		15.00		18.00	
		159	5795		15.00		15.00		18.00	
	802.11ac-VHT80 MCS0	155	5775	14.90	15.00	14.20	15.00	17.57	18.00	88.10
	802.11ax-HE20 MCS0	149	5745	not required	15.00	not required	15.00	not required	18.00	not required
		157	5785		15.00		15.00		18.00	
		165	5825		15.00		15.00		18.00	
	802.11ax-HE40 MCS0	151	5755		15.00		15.00		18.00	
		159	5795		15.00		15.00		18.00	
	802.11ax-HE80 MCS0	155	5775		15.00		15.00		18.00	

WLAN 5.8GHz UNII4 Power index 1/2

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.8GHz WLAN UNII4	802.11a 6Mbps	169	5845	not required	16.50	not required	16.50	not required	19.50	not required
		173	5865		16.50		16.50		19.50	
		177	5885		16.50		16.50		19.50	
	802.11n-HT20 MCS0	169	5845		16.50		16.50		19.50	
		173	5865		16.50		16.50		19.50	
		177	5885		16.50		16.50		19.50	
	802.11n-HT40 MCS0	167	5835		16.50		16.50		19.50	
		175	5875		16.50		16.50		19.50	
	802.11ac-VHT20 MCS0	169	5845		16.50		16.50		19.50	
		173	5865		16.50		16.50		19.50	
		177	5885		16.50		16.50		19.50	
	802.11ac-VHT40 MCS0	167	5835		16.50		16.50		19.50	
		175	5875		16.50		16.50		19.50	
	802.11ac-VHT80 MCS0	171	5855	16.50	16.50	16.10	16.50	19.31	19.50	88.10
	802.11ac-VHT160 MCS0	163	5815	16.30	16.50	15.70	16.50	19.02	19.50	87.01
	802.11ax-HE20 MCS0	169	5845	not required	16.50	not required	16.50	not required	19.50	not required
		173	5865		16.50		16.50		19.50	
		177	5885		16.50		16.50		19.50	
	802.11ax-HE40 MCS0	167	5835		16.50		16.50		19.50	
		175	5875		16.50		16.50		19.50	
	802.11ax-HE80 MCS0	171	5855		16.50		16.50		19.50	
	802.11ax-HE160 MCS0	163	5815		16.50		16.50		19.50	

WLAN 5.8GHz UNII4 Power index 3/4

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.8GHz WLAN UNII4	802.11a 6Mbps	169	5845	not required	13.50	not required	13.50	not required	16.50	not required
		173	5865		13.50		13.50		16.50	
		177	5885		13.50		13.50		16.50	
	802.11n-HT20 MCS0	169	5845		13.50		13.50		16.50	
		173	5865		13.50		13.50		16.50	
		177	5885		13.50		13.50		16.50	
	802.11n-HT40 MCS0	167	5835		13.50		13.50		16.50	
		175	5875		13.50		13.50		16.50	
	802.11ac-VHT20 MCS0	169	5845		13.50		13.50		16.50	
		173	5865		13.50		13.50		16.50	
		177	5885		13.50		13.50		16.50	
	802.11ac-VHT40 MCS0	167	5835		13.50		13.50		16.50	
		175	5875		13.50		13.50		16.50	
	802.11ac-VHT80 MCS0	171	5855		13.50		13.50		16.50	
	802.11ac-VHT160 MCS0	163	5815	12.90	13.50	12.40	13.50	15.67	16.50	87.01
	802.11ax-HE20 MCS0	169	5845	not required	13.50	not required	13.50	not required	16.50	not required
		173	5865		13.50		13.50		16.50	
		177	5885		13.50		13.50		16.50	
	802.11ax-HE40 MCS0	167	5835		13.50		13.50		16.50	
		175	5875		13.50		13.50		16.50	
	802.11ax-HE80 MCS0	171	5855		13.50		13.50		16.50	
	802.11ax-HE160 MCS0	163	5815		13.50		13.50		16.50	

WLAN 5.8GHz UNII 4 Power index 5/6/7

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN UNII4	802.11a 6Mbps	169	5845	not required	20.50	not required	20.50	not required	23.50	not required
		173	5865		20.50		20.50		23.50	
		177	5885		20.50		20.50		23.50	
	802.11n-HT20 MCS0	169	5845		20.50		20.50		23.50	
		173	5865		20.50		20.50		23.50	
		177	5885		20.50		20.50		23.50	
	802.11n-HT40 MCS0	167	5835	20.40	20.50	20.00	20.50	23.21	23.50	96.82
		175	5875	20.40	20.50	20.00	20.50	23.21	23.50	
	802.11ac-VHT20 MCS0	169	5845	not required	20.50	not required	20.50	not required	23.50	not required
		173	5865		20.50		20.50		23.50	
		177	5885		20.50		20.50		23.50	
	802.11ac-VHT40 MCS0	167	5835		20.50		20.50		23.50	
		175	5875		20.50		20.50		23.50	
	802.11ac-VHT80 MCS0	171	5855	20.30	20.50	19.90	20.50	23.11	23.50	88.10
	802.11ac-VHT160 MCS0	163	5815	not required	19.50	not required	19.50	not required	22.50	not required
	802.11ax-HE20 MCS0	169	5845		20.50		20.50		23.50	
		173	5865		20.50		20.50		23.50	
		177	5885		20.50		20.50		23.50	
	802.11ax-HE40 MCS0	167	5835		20.50		20.50		23.50	
		175	5875		20.50		20.50		23.50	
	802.11ax-HE80 MCS0	171	5855		20.50		20.50		23.50	
	802.11ax-HE160 MCS0	163	5815		19.50		19.50		22.50	

WLAN 5.8GHz UNII 4 Power index 8/9

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
5.8GHz WLAN UNII4	802.11a 6Mbps	169	5845	not required	19.00	not required	19.00	not required	22.00	not required
		173	5865		19.00		19.00		22.00	
		177	5885		19.00		19.00		22.00	
	802.11n-HT20 MCS0	169	5845		19.00		19.00		22.00	
		173	5865		19.00		19.00		22.00	
		177	5885		19.00		19.00		22.00	
	802.11n-HT40 MCS0	167	5835		19.00		19.00		22.00	
		175	5875		19.00		19.00		22.00	
	802.11ac-VHT20 MCS0	169	5845		19.00		19.00		22.00	
		173	5865		19.00		19.00		22.00	
		177	5885		19.00		19.00		22.00	
	802.11ac-VHT40 MCS0	167	5835		19.00		19.00		22.00	
		175	5875		19.00		19.00		22.00	
	802.11ac-VHT80 MCS0	171	5855	18.80	19.00	18.00	19.00	21.43	22.00	88.10
	802.11ac-VHT160 MCS0	163	5815	18.70	19.00	18.10	19.00	21.42	22.00	87.01
	802.11ax-HE20 MCS0	169	5845	not required	19.00	not required	19.00	not required	22.00	not required
		173	5865		19.00		19.00		22.00	
		177	5885		19.00		19.00		22.00	
	802.11ax-HE40 MCS0	167	5835		19.00		19.00		22.00	
		175	5875		19.00		19.00		22.00	
	802.11ax-HE80 MCS0	171	5855		19.00		19.00		22.00	
	802.11ax-HE160 MCS0	163	5815		19.00		19.00		22.00	

WLAN (6E) Power index 1/2/3/4

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
WiFi 6E	802.11a 6Mbps	1	5955	not required	6.50	not required	6.50	not required	9.50	not required
		57	6235		6.50		6.50		9.50	
		113	6515		6.00		6.00		9.00	
		173	6815		6.00		6.00		9.00	
	802.11ax-HE20 MCS0	1	5955		7.00		7.00		10.00	
		57	6235		6.50		6.50		9.50	
		113	6515		6.50		6.50		9.50	
		173	6815		8.50		8.50		11.50	
	802.11ax-HE40 MCS0	3	5965		10.00		10.00		13.00	
		59	6245		10.00		10.00		13.00	
		107	6485		10.00		10.00		13.00	
		171	6805		10.50		10.50		13.50	
		227	7085		12.00		12.00		15.00	
	802.11ax-HE80 MCS0	7	5985		12.50		12.50		15.50	
		71	6305		12.00		12.00		15.00	
		119	6545		13.00		13.00		16.00	
		167	6785		13.50		13.50		16.50	
		215	7025		12.00		12.00		15.00	
	802.11ax-HE160 MCS0	15	6025	15.00	15.50	15.50	15.50	18.27	18.50	85.07
		47	6185	15.00	15.50	15.10	15.50	18.06	18.50	
		111	6505	14.40	14.50	14.20	14.50	17.31	17.50	
		175	6825	13.50	13.50	13.20	13.50	16.36	16.50	
		207	6985	12.00	12.00	11.60	12.00	14.81	15.00	

WLAN (6E) Power index 5/6/7/8/9

Burst Average Power(dBm)										
Transmit Antenna				MIMO Ant 4+3						
	Mode	Channel	Frequency (MHz)	Average power (dBm) 4+3(4)	Tune-Up Limit 4+3(4)	Average power (dBm) 4+3(3)	Tune-Up Limit 4+3(3)	Average power (dBm) 4+3	Tune-Up Limit 4+3	Duty Cycle %
WiFi 6E	802.11a 6Mbps	1	5955	not required	6.50	not required	6.50	not required	9.50	not required
		57	6235		6.50		6.50		9.50	
		113	6515		6.00		6.00		9.00	
		173	6815		6.00		6.00		9.00	
	802.11ax-HE20 MCS0	1	5955		7.00		7.00		10.00	
		57	6235		6.50		6.50		9.50	
		113	6515		6.50		6.50		9.50	
		173	6815		8.50		8.50		11.50	
	802.11ax-HE40 MCS0	3	5965		10.00		10.00		13.00	
		59	6245		10.00		10.00		13.00	
		107	6485		10.00		10.00		13.00	
		171	6805		10.50		10.50		13.50	
		227	7085		12.00		12.00		15.00	
	802.11ax-HE80 MCS0	7	5985		12.50		12.50		15.50	
		71	6305		12.00		12.00		15.00	
		119	6545		13.00		13.00		16.00	
		167	6785		14.00		14.00		17.00	
		215	7025		13.50		13.50		16.50	
	802.11ax-HE160 MCS0	15	6025	14.00	14.50	14.30	14.50	17.16	17.50	85.07
		47	6185	14.00	14.50	13.90	14.50	16.96	17.50	
		111	6505	15.30	15.50	15.20	15.50	18.26	18.50	
		175	6825	14.10	14.50	13.80	14.50	16.96	17.50	
		207	6985	13.50	13.50	13.00	13.50	16.27	16.50	

Bluetooth Power index 1

Mode	Channel	Frequency (MHz)	Ant 4		
			Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	11.80	not required	not required
	CH 39	2441	11.77		
	CH 78	2480	11.23		
Tune-up Limit			12	12	12

Mode	Channel	Frequency (MHz)	Ant 3		
			Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	10.22	not required	not required
	CH 39	2441	10.18		
	CH 78	2480	10.13		
Tune-up Limit			12	12	12

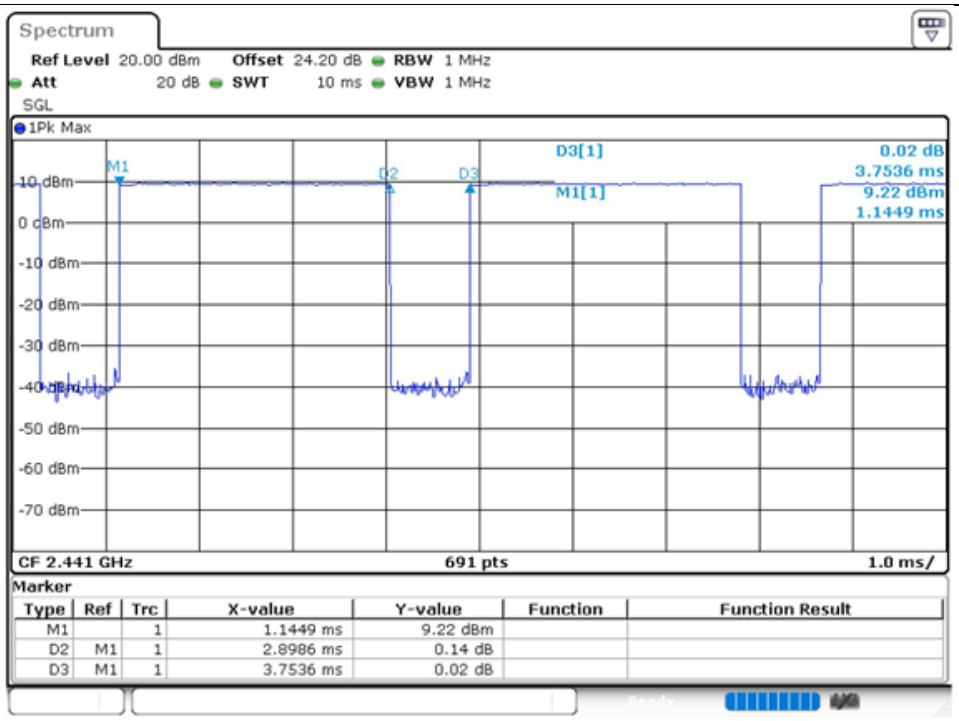
Mode	Channel	Frequency (MHz)	Ant 4	
			Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402	not required	not required
	CH 19	2440		
	CH 39	2480		
Tune-up Limit			12	12

Mode	Channel	Frequency (MHz)	Ant 3	
			Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402	not required	not required
	CH 19	2440		
	CH 39	2480		
Tune-up Limit			12	12

Mode	Channel	Frequency (MHz)	Ant 4			Ant 3			Ant 4+3		
			Average power (dBm)			Average power (dBm)			Average power (dBm)		
			1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	10.75	not required	not required	10.23	not required	not required	13.51	not required	not required
	CH 39	2441	11.57			10.77			14.20		
	CH 78	2480	11.28			10.18			13.78		
Tune-up Limit			12	12	12	12	12	12	15	15	15

Mode	Channel	Frequency (MHz)	Ant 4		Ant 3		Ant 4+3	
			Average power (dBm)		Average power (dBm)		Average power (dBm)	
			1Mbps	2Mbps	1Mbps	2Mbps	1Mbps	2Mbps
LE	CH 00	2402	not required	not required	not required	not required	not required	not required
	CH 19	2440						
	CH 39	2480						
Tune-up Limit			12	12	12	12	15	15

BT Duty Cycle Ant 4/ Ant3 /Ant 4+3



Bluetooth Power index 2/3

Mode	Channel	Frequency (MHz)	Ant 4		
			Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	19.43	not required	not required
	CH 39	2441	19.26		
	CH 78	2480	18.98		
Tune-up Limit			19.5	18.5	18.5

Mode	Channel	Frequency (MHz)	Ant 3		
			Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	19.35	not required	not required
	CH 39	2441	19.20		
	CH 78	2480	18.75		
Tune-up Limit			19.5	18.5	18.5

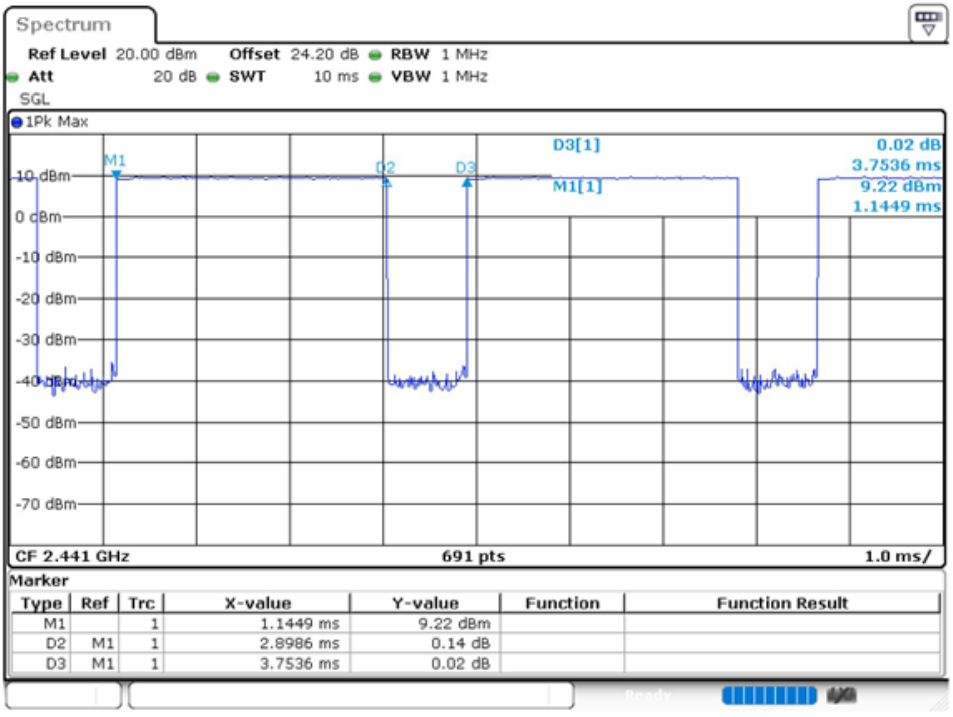
Mode	Channel	Frequency (MHz)	Ant 4	
			Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402	not required	not required
	CH 19	2440		
	CH 39	2480		
Tune-up Limit			19.5	19.5

Mode	Channel	Frequency (MHz)	Ant 3	
			Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402	not required	not required
	CH 19	2440		
	CH 39	2480		
Tune-up Limit			19.5	19.5

Mode	Channel	Frequency (MHz)	Ant 4			Ant 3			Ant 4+3		
			Average power (dBm)			Average power (dBm)			Average power (dBm)		
			1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	17.34	not required	not required	17.25	not required	not required	20.30	not required	not required
	CH 39	2441	16.94			16.83			19.89		
	CH 78	2480	16.62			16.50			19.57		
Tune-up Limit			18	15	15	18	15	15	21	18	18

Mode	Channel	Frequency (MHz)	Ant 4		Ant 3		Ant 4+3	
			Average power (dBm)		Average power (dBm)		Average power (dBm)	
			1Mbps	2Mbps	1Mbps	2Mbps	1Mbps	2Mbps
LE	CH 00	2402	not required	not required	not required	not required	not required	not required
	CH 19	2440						
	CH 39	2480						
Tune-up Limit			18	18	18	18	21	21

BT Duty Cycle Ant 4/ Ant3 /Ant 4+3



Bluetooth Power index 4

Mode	Channel	Frequency (MHz)	Ant 4		
			Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	18.35	not required	not required
	CH 39	2441	17.75		
	CH 78	2480	18.34		
Tune-up Limit			18.5	18.5	18.5

Mode	Channel	Frequency (MHz)	Ant 3		
			Average power (dBm)		
			1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	18.35	not required	not required
	CH 39	2441	18.25		
	CH 78	2480	17.65		
Tune-up Limit			18.5	18.5	18.5

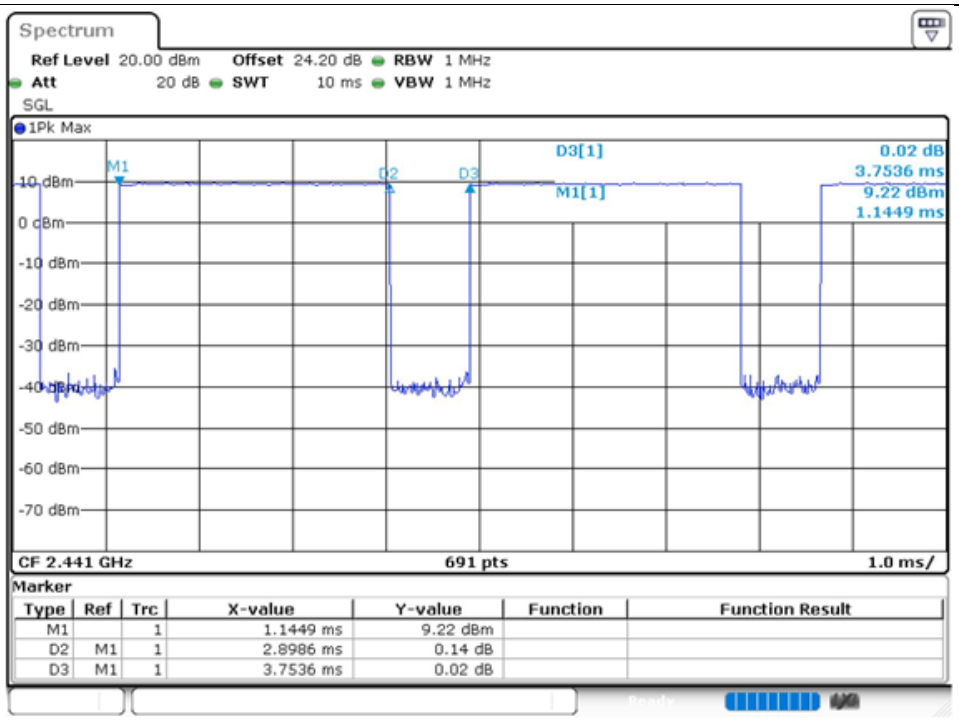
Mode	Channel	Frequency (MHz)	Ant 4	
			Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402	not required	not required
	CH 19	2440		
	CH 39	2480		
Tune-up Limit			18.5	18.5

Mode	Channel	Frequency (MHz)	Ant 3	
			Average power (dBm)	
			1Mbps	2Mbps
LE	CH 00	2402	not required	not required
	CH 19	2440		
	CH 39	2480		
Tune-up Limit			18.5	18.5

Mode	Channel	Frequency (MHz)	Ant 4			Ant 3			Ant 4+3		
			Average power (dBm)			Average power (dBm)			Average power (dBm)		
			1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps	1Mbps	2Mbps	3Mbps
BR / EDR	CH 00	2402	15.61	not required	not required	15.66	not required	not required	18.65	not required	not required
	CH 39	2441	16.94			16.83			19.89		
	CH 78	2480	16.62			16.50			19.57		
Tune-up Limit			17	15	15	17	15	15	20	18	18

Mode	Channel	Frequency (MHz)	Ant 4		Ant 3		Ant 4+3	
			Average power (dBm)		Average power (dBm)		Average power (dBm)	
			1Mbps	2Mbps	1Mbps	2Mbps	1Mbps	2Mbps
LE	CH 00	2402	not required	not required	not required	not required	not required	not required
	CH 19	2440						
	CH 39	2480						
Tune-up Limit			17	17	17	17	20	20

BT Duty Cycle Ant 4/ Ant3 /Ant 4+3



14. Spot Check SAR Results

General Note:

1. SAR spot check verification on the worst cases from the original model was performed to demonstrate the test data from original model remains representative for the variant model.
2. If the 1-g SAR spot check result “does not exceed 30%, but larger than 1.2 W/kg”, more spot check on the next-higher exposure position until the spot check result does not exceed 1.2 W/kg.
3. The spot check results don’t show the SAR increase more than 30%, therefore referring to the guidance in the KDB inquiry, SAR data reuse is justified.

1st as parent model

2nd as variant model

14.1 Spot Check Head SAR Results

Plot No.	No.	Band	Mode	Test Position	Gap (mm)	Power Index	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Deviation (%)
	1st	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2	9538	1907.6	24.52	25.40	1.225	0.09	0.832	1.019	-25.02%
01	2nd	WCDMA II_Ant 2	RMC 12.2Kbps	Right Cheek	0mm	2	9538	1907.6	24.43	25.40	1.250	-0.1	0.611	0.764	
	1st	LTE Band 7_Ant 0	20M_QPSK_1_0	Left Cheek	0mm	2/3	21350	2560	23.58	25.00	1.387	0.04	0.429	0.595	-0.84%
02	2nd	LTE Band 7_Ant 0	20M_QPSK_1_0	Left Cheek	0mm	2/3	21350	2560	23.10	25.00	1.549	0.08	0.381	0.590	
	1st	FR1 n12_Ant 1	15M_BPSK_1_1	Right Cheek	0mm	2	141500	707.5	24.22	24.30	1.019	-0.03	1.170	1.192	-25.00%
03	2nd	FR1 n12_Ant 1	15M_BPSK_1_1	Right Cheek	0mm	2	141500	707.5	24.43	24.30	0.971	-0.08	0.921	0.894	
	1st	FR1 n41_Ant 5	100M_BPSK_1_1	Left Cheek	0mm	2	518598	2592.99	21.38	21.80	1.102	-0.15	1.060	1.168	-1.11%
04	2nd	FR1 n41_Ant 5	100M_BPSK_1_1	Left Cheek	0mm	2	518598	2592.99	19.80	21.80	1.585	-0.01	0.729	1.155	
	1st	FR1 n48_Ant 6	40M_BPSK_1_1	Left Cheek	0mm	2/3	641666	3624.99	24.71	25.40	1.172	-0.16	0.390	0.457	-3.72%
	2nd	FR1 n48_Ant 6	40M_BPSK_1_1	Left Cheek	0mm	2/3	641666	3624.99	24.77	25.40	1.156	0.15	0.381	0.440	
	1st	FR1 n48_Ant 7	10M_BPSK_1_1	Right Cheek	0mm	2/3	641666	3624.99	23.60	24.80	1.318	-0.03	0.093	0.123	-12.20%
	2nd	FR1 n48_Ant 7	10M_BPSK_1_1	Right Cheek	0mm	2/3	641666	3624.99	23.64	24.80	1.306	-0.04	0.083	0.108	
	1st	FR1 n48_Ant 1	10M_QPSK_1_0	Right Cheek	0mm	2	637000	3555	19.69	20.50	1.205	-0.02	0.956	1.152	-10.76%
05	2nd	FR1 n48_Ant 1	10M_QPSK_1_0	Right Cheek	0mm	2	637000	3555	19.17	20.50	1.358	-0.05	0.757	1.028	
	1st	FR1 n48_Ant 5	10M_QPSK_12_6	Left Cheek	0mm	2/3	641666	3624.99	18.87	19.20	1.080	0.07	0.496	0.535	-43.74%
	2nd	FR1 n48_Ant 5	10M_QPSK_12_6	Left Cheek	0mm	2/3	641666	3624.99	18.67	19.20	1.130	0.14	0.266	0.301	
	1st	FR1 n77_Ant 1	100M_BPSK_135_69	Right Cheek	0mm	2	656000	3840	19.01	20.70	1.476	-0.17	0.776	1.145	-29.08%
	2nd	FR1 n77_Ant 1	100M_BPSK_135_69	Right Cheek	0mm	2	656000	3840	19.55	20.70	1.303	-0.07	0.623	0.812	
	1st	FR1 n77_Ant 1	100M_BPSK_135_69	Right Cheek	0mm	2	633332	3499.98	19.47	20.70	1.327	-0.03	0.626	0.831	0.00%
06	2nd	FR1 n77_Ant 1	100M_BPSK_135_69	Right Cheek	0mm	2	633332	3499.98	19.49	20.70	1.321	0.03	0.629	0.831	
	1st	FR1 n77_Ant 5	100M_BPSK_270_0	Left Cheek	0mm	2	656000	3840	21.17	21.70	1.130	-0.02	0.848	0.958	-40.61%
	2nd	FR1 n77_Ant 5	100M_BPSK_270_0	Left Cheek	0mm	2	656000	3840	20.87	21.70	1.211	-0.14	0.470	0.569	
	1st	FR1 n77_Ant 5	100M_BPSK_1_1	Left Cheek	0mm	2	633332	3499.98	21.39	21.70	1.074	0.16	1.030	1.106	-52.08%
	2nd	FR1 n77_Ant 5	100M_BPSK_1_1	Left Cheek	0mm	2	633332	3499.98	21.41	21.70	1.069	-0.07	0.496	0.530	

14.2 Spot Check Hotspot SAR

Plot No.	No.	Band	Mode	Test Position	Gap (mm)	Power Index	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Deviation (%)
	1st	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	4	512	1850.2	22.22	23.00	1.197	0.09	0.747	0.894	-1.34%
07	2nd	GSM1900_Ant 0	GPRS (4 Tx slots)	Bottom Side	10mm	4	512	1850.2	22.55	23.00	1.109	-0.05	0.795	0.882	
	1st	WCDMA II_Ant 2	RMC 12.2Kbps	Right Side	10mm	4	9262	1852.4	21.60	22.60	1.259	0.13	0.711	0.895	-13.74%
08	2nd	WCDMA II_Ant 2	RMC 12.2Kbps	Right Side	0mm	4	9262	1852.4	21.61	22.60	1.256	-0.1	0.615	0.772	
	1st	FR1 n41_Ant 1	100M_BPSK_1_1	Top Side	10mm	4	518598	2592.99	22.51	23.00	1.119	-0.06	0.798	0.893	-12.32%
	2nd	FR1 n41_Ant 1	100M_BPSK_1_1	Top Side	10mm	4	518598	2592.99	22.23	23.00	1.194	-0.13	0.656	0.783	
	1st	FR1 n41_Ant 5	100M_BPSK_1_1	Righ Side	10mm	4	518598	2592.99	21.57	22.30	1.183	-0.13	0.750	0.887	-10.37%
09	2nd	FR1 n41_Ant 5	100M_BPSK_1_1	Right Side	10mm	4	518598	2592.99	21.97	22.30	1.079	-0.12	0.737	0.795	
	2nd	FR1 n48_Ant 6	40M_BPSK_50_28	Front	10mm	4	641666	3624.99	22.30	22.90	1.148	-0.05	0.731	0.839	-5.72%
10	1st	FR1 n48_Ant 6	40M_BPSK_50_28	Front	10mm	4	641666	3624.99	22.67	22.90	1.054	0.01	0.750	0.791	
	1st	FR1 n48_Ant 1	10M_QPSK_1_0	Front	10mm	4	641666	3624.99	20.09	20.50	1.099	0.01	0.166	0.182	-9.34%
	2nd	FR1 n48_Ant 1	10M_QPSK_1_0	Front	10mm	4	641666	3624.99	19.63	20.50	1.222	0.14	0.135	0.165	
	1st	FR1 n48_Ant 5	10M_QPSK_12_6	Right Side	10mm	4	641666	3624.99	18.87	19.20	1.080	0.12	0.250	0.270	-45.56%
	2nd	FR1 n48_Ant 5	10M_QPSK_12_6	Right Side	10mm	4	641666	3624.99	18.67	19.20	1.130	0.04	0.130	0.147	
	1st	FR1 n77_Ant 1	100M_BPSK_135_69	Front	10mm	4	656000	3840	23.65	25.40	1.496	-0.03	0.546	0.817	-33.54%
	2nd	FR1 n77_Ant 1	100M_BPSK_135_69	Front	10mm	4	656000	3840	23.44	25.40	1.570	-0.17	0.346	0.543	
	1st	FR1 n77_Ant 1	100M_BPSK_1_1	Front	10mm	4	633332	3499.98	24.44	25.40	1.247	-0.05	0.347	0.433	-0.23%
	2nd	FR1 n77_Ant 1	100M_BPSK_1_1	Front	10mm	4	633332	3499.98	23.70	25.40	1.479	-0.07	0.292	0.432	
	1st	FR1 n77_Ant 5	100M_BPSK_1_1	Right Side	10mm	4	656000	3840	22.54	23.40	1.219	0.06	0.681	0.830	-40.12%
	2nd	FR1 n77_Ant 5	100M_BPSK_1_1	Right Side	10mm	4	656000	3840	23.00	23.40	1.096	0.15	0.453	0.497	
	1st	FR1 n77_Ant 5	100M_BPSK_1_1	Right Side	10mm	4	633332	3499.98	22.32	23.40	1.282	0.1	0.653	0.837	-66.79%
	2nd	FR1 n77_Ant 5	100M_BPSK_1_1	Right Side	10mm	4	633332	3499.98	22.64	23.40	1.191	0.13	0.233	0.278	
	1st	FR1 n77_Ant 7	100M_BPSK_135_69	Front	10mm	4	633332	3499.98	21.72	23.50	1.507	-0.15	0.520	0.783	-15.58%
11	2nd	FR1 n77_Ant 7	100M_BPSK_135_69	Front	10mm	4	633332	3499.98	21.71	23.50	1.510	-0.11	0.438	0.661	

14.3 Spot Check Body-Worn SAR

Plot No.	No.	Band	Mode	Test Position	Gap (mm)	Power Index	Ch.	Freq. (MHz)	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)	Deviation (%)
	1st	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	5	9262	1852.4	22.95	24.20	1.334			-0.14	0.858	1.144	-25.70%
12	2nd	WCDMA II_Ant 2	RMC 12.2Kbps	Back	10mm	5	9262	1852.4	23.25	24.20	1.245			-0.05	0.683	0.850	
	1st	LTE Band 7_Ant 0	20M_QPSK_1_0	Back	10mm	5	21350	2560	21.34	21.80	1.112			-0.06	1.050	1.167	-10.28%
13	2nd	LTE Band 7_Ant 0	20M_QPSK_1_0	Back	10mm	5	21350	2560	21.13	21.80	1.167			-0.08	0.897	1.047	
	1st	LTE Band 48_Ant 6	20M_QPSK_1_0	Front	10mm	5	55340	3560	24.30	25.40	1.288	62.9	1.006	-0.02	0.887	1.150	-15.65%
14	2nd	LTE Band 48_Ant 6	20M_QPSK_1_0	Front	10mm	5	55340	3560	24.66	25.40	1.186	62.9	1.006	-0.19	0.813	0.970	
	1st	FR1 n2_Ant 1	20M_BPSK_50_28	Front	10mm	5	380000	1900	21.86	23.00	1.300			0.11	0.869	1.130	-0.71%
15	2nd	FR1 n2_Ant 1	20M_BPSK_50_28	Front	10mm	5	380000	1900	21.96	23.00	1.271			0.18	0.883	1.122	
	1st	FR1 n2_Ant 5	20M_BPSK_50_28	Back	10mm	5/6	376000	1880	23.83	25.20	1.371			-0.16	0.498	0.683	-3.37%
	2nd	FR1 n2_Ant 5	20M_BPSK_50_28	Back	10mm	5/6	376000	1880	24.13	25.20	1.279			-0.03	0.516	0.660	
	1st	FR1 n48_Ant 1	10M_QPSK_1_0	Front	10mm	5/6	641666	3624.99	20.09	20.50	1.099			0.01	0.166	0.182	-9.34%
16	2nd	FR1 n48_Ant 1	10M_QPSK_1_0	Front	10mm	5/6	641666	3624.99	19.63	20.50	1.222			0.14	0.135	0.165	
	1st	FR1 n48_Ant 5	10M_QPSK_12_6	Front	10mm	5/6	641666	3624.99	18.87	19.20	1.080			0.05	0.140	0.151	-25.17%
	2nd	FR1 n48_Ant 5	10M_QPSK_12_6	Front	10mm	5/6	641666	3624.99	18.67	19.20	1.130			-0.12	0.100	0.113	
	1st	FR1 n77_Ant 1	100M_BPSK_135_69	Front	10mm	5/6	656000	3840	23.65	25.40	1.496			-0.03	0.546	0.817	-33.54%
	2nd	FR1 n77_Ant 1	100M_BPSK_135_69	Front	10mm	5/6	656000	3840	23.44	25.40	1.570			-0.17	0.346	0.543	
	1st	FR1 n77_Ant 1	100M_BPSK_1_1	Front	10mm	5/6	633332	3499.98	24.44	25.40	1.247			-0.05	0.347	0.433	-0.23%
	2nd	FR1 n77_Ant 1	100M_BPSK_1_1	Front	10mm	5/6	633332	3499.98	23.70	25.40	1.479			-0.07	0.292	0.432	
	1st	FR1 n77_Ant 5	100M_BPSK_1_1	Front	10mm	5/6	656000	3840	24.33	24.80	1.114			-0.03	0.448	0.499	-22.44%
	2nd	FR1 n77_Ant 5	100M_BPSK_1_1	Front	10mm	5/6	656000	3840	23.00	24.80	1.514			0.02	0.256	0.387	
	1st	FR1 n77_Ant 5	100M_BPSK_1_1	Front	10mm	5/6	633332	3499.98	24.22	24.80	1.143			-0.12	0.569	0.650	-58.46%
	2nd	FR1 n77_Ant 5	100M_BPSK_1_1	Front	10mm	5/6	633332	3499.98	23.41	24.80	1.377			-0.12	0.196	0.270	
	1st	FR1 n77_Ant 7	100M_BPSK_135_69	Front	10mm	5/6	633332	3499.98	21.72	23.50	1.507			-0.15	0.520	0.783	-15.58%
17	2nd	FR1 n77_Ant 7	100M_BPSK_135_69	Front	10mm	5/6	633332	3499.98	21.71	23.50	1.510			-0.11	0.438	0.661	

14.4 Spot Check Product Specific SAR

Plot No.	No.	Band	Mode	Test Position	Gap (mm)	Power Index	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)	Deviation (%)
	1st	WCDMA IV_Ant 0	RMC 12.2Kbps	Bottom Side	0mm	5	1513	1752.6	18.55	20.40	1.531	-0.01	1.940	2.970	-24.07%
18	2nd	WCDMA IV_Ant 0	RMC 12.2Kbps	Bottom Side	0mm	5	1513	1752.6	18.91	20.40	1.409	-0.16	1.600	2.255	
	1st	LTE Band 7_Ant 2	20M_QPSK_1_0	Right Side	0mm	5	20850	2510	22.49	23.40	1.233	-0.13	2.410	2.972	-20.93%
19	2nd	LTE Band 7_Ant 2	20M_QPSK_1_0	Right Side	0mm	5	20850	2510	22.43	23.40	1.250	-0.18	1.880	2.350	
	1st	FR1 n2_Ant 1	20M_BPSK_1_53	Top Side	0mm	5	372000	1860	22.05	23.00	1.245	0.09	2.390	2.974	-22.36%
20	2nd	FR1 n2_Ant 1	20M_BPSK_1_53	Top Side	0mm	5	372000	1860	22.13	23.00	1.222	0.09	1.890	2.309	

15. WLAN/BT 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. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
5. For 5.3GHz / 5.5GHz / 6GHz WLAN product specific SAR is necessary too, due to an overall diagonal dimension is > 16cm.

WLAN Note:

1. The SISO mode support only when the Antenna 3 and 4 is transmitting on 802.11b mode, other support MIMO mode.
2. Per KDB 248227 D01v02r02, For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test position when 802.11 DSS mode is active at transmit antenna 3 and 4
3. Per KDB 248227 D01v02r02, for 2.4GHz WLAN MIMO operation for 802.11g/n, when the same highest maximum output power specification applies to multiple transmission modes, the largest channel bandwidth configuration with the lowest order modulation and lowest data rate is measured, so 802.11g mode is selected to be tested.
4. Per KDB 248227 D01v02r02, WLAN5.2GHz SAR testing is not required 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.
5. 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.
6. 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.
7. For determination of the scaling factor for report SAR of MIMO mode, if the hot spots are separated the scaling factors are individually determined from each transmit chain. If the hot spots are not spatially separated, the scaling factor is determined from the worst number of each transmit chain
8. During SAR testing the WLAN transmission was verified using a spectrum analyzer.

WLAN PD Note:

1. The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
2. Absorbed power density (APD) using a 4cm2 averaging area is reported based on SAR measurements.
3. Power density was calculated by repeated E-field measurements on two measurement planes separated by λ/4.
4. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools.
5. Per FCC guidance and equipment manufacturer guidance, power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 2.68 dB (85.4%) was used to determine the psPD measurement scaling factor.
6. The measurement procedure consists of measuring the PDinc at two different distances: 2 mm (compliance distance) and λ/5. The grid extents should be large enough to fully capture the transmitted energy. The grid step should be fine enough to demonstrate that the integrated Power Density iPDn fulfill the criterion described below. Since iPD ratio between the two distances is ≥ -1dB, the grid step (0.0625) was sufficient for determining compliance at d=2mm.

$$10 \cdot log_{10} \frac{iPD_n(2mm)}{iPD_n(\lambda/5)} \geq -1$$

15.1 Head SAR

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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	Right Cheek	0mm	Ant 4	1	12	2467	15.95	16.50	1.135	98.9	1.011	-0.12	0.270	0.310
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4	1	12	2467	15.95	16.50	1.135	98.9	1.011	0.01	0.411	0.472
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	1	12	2467	15.95	16.50	1.135	98.9	1.011	0.05	0.719	0.825
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	1	1	2412	15.85	16.50	1.161	98.9	1.011	-0.07	0.774	0.909
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	1	6	2437	15.75	16.50	1.189	98.9	1.011	-0.06	0.901	1.083
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	1	11	2462	15.65	16.50	1.216	98.9	1.011	0.01	0.823	1.012
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	1	13	2472	15.85	16.50	1.161	98.9	1.011	-0.12	0.807	0.948
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	1	12	2467	15.95	16.50	1.135	98.9	1.011	0.14	0.991	1.137
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	1	1	2412	15.85	16.50	1.161	98.9	1.011	-0.12	0.924	1.085
21	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	1	6	2437	15.75	16.50	1.189	98.9	1.011	-0.06	0.993	1.193
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	1	11	2462	15.65	16.50	1.216	98.9	1.011	-0.13	0.890	1.094
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	1	13	2472	15.85	16.50	1.161	98.9	1.011	-0.14	0.915	1.074
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	1	1	2412	15.95	16.50	1.135	98.9	1.011	-0.17	0.340	0.390
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	1	1	2412	15.95	16.50	1.135	98.9	1.011	0.1	0.050	0.057
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	1	1	2412	15.95	16.50	1.135	98.9	1.011	-0.04	0.355	0.407
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	1	1	2412	15.95	16.50	1.135	98.9	1.011	-0.12	0.029	0.033
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(4)	1	11	2462	15.85	16.50	1.161	93.4	1.071	-0.19	0.293	0.364
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(3)	1	11	2462	15.85	16.50	1.161	93.4	1.071	-0.19	0.222	0.276
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(4)	1	11	2462	15.85	16.50	1.161	93.4	1.071	-0.02	0.386	0.480
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(3)	1	11	2462	15.85	16.50	1.161	93.4	1.071	-0.02	0.077	0.096
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	1	11	2462	15.85	16.50	1.161	93.4	1.071	0.08	0.756	0.940
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	1	11	2462	15.85	16.50	1.161	93.4	1.071	0.08	0.293	0.364
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	1	1	2412	15.85	16.50	1.161	93.4	1.071	-0.06	0.683	0.850
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	1	1	2412	15.55	16.50	1.245	93.4	1.071	-0.06	0.344	0.459
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	1	6	2437	15.85	16.50	1.161	93.4	1.071	-0.11	0.802	0.998
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	1	6	2437	15.15	16.50	1.365	93.4	1.071	-0.11	0.296	0.433
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	1	12	2467	15.85	16.50	1.161	93.4	1.071	0.08	0.805	1.001
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	1	12	2467	15.85	16.50	1.161	93.4	1.071	0.08	0.287	0.357
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	1	13	2472	15.85	16.50	1.161	93.4	1.071	0.04	0.777	0.967
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	1	13	2472	15.65	16.50	1.216	93.4	1.071	0.04	0.220	0.287
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	1	11	2462	15.85	16.50	1.161	93.4	1.071	0.11	0.838	1.042
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	1	11	2462	15.85	16.50	1.161	93.4	1.071	0.11	0.036	0.045
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	1	1	2412	15.85	16.50	1.161	93.4	1.071	0.09	0.892	1.110
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	1	1	2412	15.55	16.50	1.245	93.4	1.071	0.09	0.030	0.040
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	1	6	2437	15.85	16.50	1.161	93.4	1.071	-0.07	0.933	1.161
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	1	6	2437	15.15	16.50	1.365	93.4	1.071	-0.07	0.037	0.054
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	1	12	2467	15.85	16.50	1.161	93.4	1.071	0.08	0.895	1.113
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	1	12	2467	15.85	16.50	1.161	93.4	1.071	0.08	0.034	0.042
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	1	13	2472	15.85	16.50	1.161	93.4	1.071	-0.07	0.873	1.086
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	1	13	2472	15.65	16.50	1.216	93.4	1.071	-0.07	0.029	0.038

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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	Right Cheek	0mm	Ant 4	2	12	2467	15.95	16.00	1.012	98.9	1.011	-0.12	0.270	0.276
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4	2	12	2467	15.95	16.00	1.012	98.9	1.011	0.01	0.411	0.420
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	2	12	2467	15.95	16.00	1.012	98.9	1.011	0.05	0.719	0.735
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	2	12	2467	15.95	16.00	1.012	98.9	1.011	0.14	0.991	1.014
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	2	1	2412	15.85	16.00	1.035	98.9	1.011	-0.12	0.924	0.967
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	2	6	2437	15.75	16.00	1.059	98.9	1.011	-0.06	0.993	1.063
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	2	11	2462	15.65	16.00	1.084	98.9	1.011	-0.13	0.890	0.975
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	2	13	2472	15.85	16.00	1.035	98.9	1.011	-0.14	0.915	0.958
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	2	1	2412	15.95	16.00	1.012	98.9	1.011	-0.17	0.340	0.348
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	2	1	2412	15.95	16.00	1.012	98.9	1.011	0.1	0.050	0.051
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	2	1	2412	15.95	16.00	1.012	98.9	1.011	-0.04	0.355	0.363
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	2	1	2412	15.95	16.00	1.012	98.9	1.011	-0.12	0.029	0.030
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(4)	2	11	2462	15.85	16.00	1.035	93.4	1.071	-0.19	0.293	0.325
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(3)	2	11	2462	15.85	16.00	1.035	93.4	1.071	-0.19	0.222	0.246
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(4)	2	11	2462	15.85	16.00	1.035	93.4	1.071	-0.02	0.386	0.428
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(3)	2	11	2462	15.85	16.00	1.035	93.4	1.071	-0.02	0.077	0.085
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	11	2462	15.85	16.00	1.035	93.4	1.071	0.08	0.756	0.838
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	11	2462	15.85	16.00	1.035	93.4	1.071	0.08	0.293	0.325
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	1	2412	15.85	16.00	1.035	93.4	1.071	-0.06	0.683	0.757
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	1	2412	15.55	16.00	1.109	93.4	1.071	-0.06	0.344	0.409
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	6	2437	15.85	16.00	1.035	93.4	1.071	-0.11	0.802	0.889
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	6	2437	15.15	16.00	1.216	93.4	1.071	-0.11	0.296	0.386
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	12	2467	15.85	16.00	1.035	93.4	1.071	0.08	0.805	0.892
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	12	2467	15.85	16.00	1.035	93.4	1.071	0.08	0.287	0.318
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	2	13	2472	15.85	16.00	1.035	93.4	1.071	0.04	0.777	0.861
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	2	13	2472	15.65	16.00	1.084	93.4	1.071	0.04	0.220	0.255
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	11	2462	15.85	16.00	1.035	93.4	1.071	0.11	0.838	0.929
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	11	2462	15.85	16.00	1.035	93.4	1.071	0.11	0.036	0.040
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	1	2412	15.85	16.00	1.035	93.4	1.071	0.09	0.892	0.989
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	1	2412	15.55	16.00	1.109	93.4	1.071	0.09	0.030	0.036
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	6	2437	15.85	16.00	1.035	93.4	1.071	-0.07	0.933	1.034
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	6	2437	15.15	16.00	1.216	93.4	1.071	-0.07	0.037	0.048
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	12	2467	15.85	16.00	1.035	93.4	1.071	0.08	0.895	0.992
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	12	2467	15.85	16.00	1.035	93.4	1.071	0.08	0.034	0.038
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	2	13	2472	15.85	16.00	1.035	93.4	1.071	-0.07	0.873	0.968
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	2	13	2472	15.65	16.00	1.084	93.4	1.071	-0.07	0.029	0.034

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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	Right Cheek	0mm	Ant 4	3	1	2412	14.35	14.50	1.035	98.9	1.011	-0.16	0.194	0.203
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4	3	1	2412	14.35	14.50	1.035	98.9	1.011	0.14	0.277	0.290
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	3	1	2412	14.35	14.50	1.035	98.9	1.011	0.16	0.511	0.535
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	3	1	2412	14.35	14.50	1.035	98.9	1.011	0.17	0.625	0.654
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	3	11	2462	14.45	14.50	1.012	98.9	1.011	-0.16	0.202	0.207
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	3	11	2462	14.45	14.50	1.012	98.9	1.011	0.08	0.034	0.035
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	3	11	2462	14.45	14.50	1.012	98.9	1.011	-0.18	0.232	0.237
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	3	11	2462	14.45	14.50	1.012	98.9	1.011	-0.02	0.020	0.020
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(4)	3	13	2472	14.35	14.50	1.035	93.4	1.071	-0.18	0.194	0.215
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(3)	3	13	2472	14.35	14.50	1.035	93.4	1.071	-0.18	0.188	0.208
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(4)	3	13	2472	14.35	14.50	1.035	93.4	1.071	-0.14	0.305	0.338
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(3)	3	13	2472	14.35	14.50	1.035	93.4	1.071	-0.14	0.022	0.024
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	3	13	2472	14.35	14.50	1.035	93.4	1.071	-0.17	0.524	0.581
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	3	13	2472	14.35	14.50	1.035	93.4	1.071	-0.17	0.205	0.227
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	3	13	2472	14.35	14.50	1.035	93.4	1.071	-0.14	0.599	0.664
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	3	13	2472	14.35	14.50	1.035	93.4	1.071	-0.14	0.023	0.025
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 4	4	6	2437	11.25	11.50	1.059	98.9	1.011	-0.16	0.110	0.118
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 4	4	6	2437	11.25	11.50	1.059	98.9	1.011	0.06	0.129	0.138
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 4	4	6	2437	11.25	11.50	1.059	98.9	1.011	0.09	0.302	0.323
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	4	6	2437	11.25	11.50	1.059	98.9	1.011	0.14	0.334	0.358
	WLAN2.4GHz	802.11b 1Mbps	Right Cheek	0mm	Ant 3	4	11	2462	11.45	11.50	1.012	98.9	1.011	-0.16	0.106	0.108
	WLAN2.4GHz	802.11b 1Mbps	Right Tilted	0mm	Ant 3	4	11	2462	11.45	11.50	1.012	98.9	1.011	0	0.014	0.014
	WLAN2.4GHz	802.11b 1Mbps	Left Cheek	0mm	Ant 3	4	11	2462	11.45	11.50	1.012	98.9	1.011	-0.1	0.102	0.104
	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 3	4	11	2462	11.45	11.50	1.012	98.9	1.011	-0.16	0.008	0.008
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(4)	4	12	2467	11.45	11.50	1.012	93.4	1.071	-0.06	0.098	0.106
	WLAN2.4GHz	802.11g 6Mbps	Right Cheek	0mm	Ant 4+3(3)	4	12	2467	11.45	11.50	1.012	93.4	1.071	-0.06	0.100	0.108
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(4)	4	12	2467	11.45	11.50	1.012	93.4	1.071	-0.05	0.139	0.151
	WLAN2.4GHz	802.11g 6Mbps	Right Tilted	0mm	Ant 4+3(3)	4	12	2467	11.45	11.50	1.012	93.4	1.071	-0.05	0.010	0.011
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(4)	4	12	2467	11.45	11.50	1.012	93.4	1.071	0.01	0.297	0.322
	WLAN2.4GHz	802.11g 6Mbps	Left Cheek	0mm	Ant 4+3(3)	4	12	2467	11.45	11.50	1.012	93.4	1.071	0.01	0.123	0.133
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(4)	4	12	2467	11.45	11.50	1.012	93.4	1.071	-0.04	0.332	0.360
	WLAN2.4GHz	802.11g 6Mbps	Left Tilted	0mm	Ant 4+3(3)	4	12	2467	11.45	11.50	1.012	93.4	1.071	-0.04	0.012	0.013

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)
22	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	50	5250	14.30	14.50	1.047	86.84	1.152	-0.11	0.069	0.083
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	50	5250	13.70	14.50	1.202	86.84	1.152	-0.11	0.852	1.180
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	58	5290	14.40	14.50	1.023	88.1	1.135	0.13	0.066	0.077
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	58	5290	14.00	14.50	1.122	88.1	1.135	0.13	0.819	1.043
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(4)	1/2	50	5250	14.30	14.50	1.047	86.84	1.152	-0.08	0.057	0.069
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(3)	1/2	50	5250	13.70	14.50	1.202	86.84	1.152	-0.08	0.120	0.166
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(4)	1/2	50	5250	14.30	14.50	1.047	86.84	1.152	0.14	0.185	0.223
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(3)	1/2	50	5250	13.70	14.50	1.202	86.84	1.152	0.14	0.204	0.283
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(4)	1/2	50	5250	14.30	14.50	1.047	86.84	1.152	0.13	0.115	0.139
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(3)	1/2	50	5250	13.70	14.50	1.202	86.84	1.152	0.13	0.058	0.080
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(4)	3/4	50	5250	10.30	11.00	1.175	86.84	1.152	0.18	0.019	0.026
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(3)	3/4	50	5250	9.80	11.00	1.318	86.84	1.152	0.18	0.298	0.453
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(4)	3/4	50	5250	10.30	11.00	1.175	86.84	1.152	0.09	0.015	0.020
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(3)	3/4	50	5250	9.80	11.00	1.318	86.84	1.152	0.09	0.038	0.058
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(4)	3/4	50	5250	10.30	11.00	1.175	86.84	1.152	-0.06	0.099	0.134
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(3)	3/4	50	5250	9.80	11.00	1.318	86.84	1.152	-0.06	0.143	0.217
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(4)	3/4	50	5250	10.30	11.00	1.175	86.84	1.152	-0.13	0.061	0.083
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(3)	3/4	50	5250	9.80	11.00	1.318	86.84	1.152	-0.13	0.002	0.003
23	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	114	5570	14.40	15.00	1.148	86.84	1.152	0.09	0.054	0.071
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	114	5570	13.80	15.00	1.318	86.84	1.152	0.09	0.733	1.113
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	106	5530	14.40	15.00	1.148	88.1	1.135	0.17	0.062	0.081
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	106	5530	14.10	15.00	1.230	88.1	1.135	0.17	0.660	0.922
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(4)	1/2	114	5570	14.40	15.00	1.148	86.84	1.152	-0.18	0.041	0.054
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(3)	1/2	114	5570	13.80	15.00	1.318	86.84	1.152	-0.18	0.103	0.156
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(4)	1/2	114	5570	14.40	15.00	1.148	86.84	1.152	0.04	0.181	0.239
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(3)	1/2	114	5570	13.80	15.00	1.318	86.84	1.152	0.04	0.209	0.317
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(4)	1/2	114	5570	14.40	15.00	1.148	86.84	1.152	0.07	0.113	0.149
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(3)	1/2	114	5570	13.80	15.00	1.318	86.84	1.152	0.07	0.047	0.071
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(4)	3/4	114	5570	10.40	10.50	1.023	86.84	1.152	0.02	0.004	0.005
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(3)	3/4	114	5570	9.50	10.50	1.259	86.84	1.152	0.02	0.333	0.483
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(4)	3/4	114	5570	10.40	10.50	1.023	86.84	1.152	0.04	0.086	0.101
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(3)	3/4	114	5570	9.50	10.50	1.259	86.84	1.152	0.04	0.056	0.081
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(4)	3/4	114	5570	10.40	10.50	1.023	86.84	1.152	0.12	0.127	0.150
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(3)	3/4	114	5570	9.50	10.50	1.259	86.84	1.152	0.12	0.132	0.191
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(4)	3/4	114	5570	10.40	10.50	1.023	86.84	1.152	0.09	0.057	0.067
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(3)	3/4	114	5570	9.50	10.50	1.259	86.84	1.152	0.09	0.028	0.041

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	155	5775	14.90	15.50	1.148	88.1	1.135	-0.16	0.111	0.145
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	155	5775	14.50	15.50	1.259	88.1	1.135	-0.16	0.704	1.006
24	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	159	5795	14.90	15.50	1.148	96.79	1.033	-0.09	0.138	0.164
	WLAN5GHz	802.11n-HT40 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	159	5795	14.30	15.50	1.318	96.79	1.033	-0.09	0.763	1.039
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(4)	1/2	155	5775	14.90	15.50	1.148	88.1	1.135	0.07	0.096	0.125
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(3)	1/2	155	5775	14.50	15.50	1.259	88.1	1.135	0.07	0.157	0.224
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(4)	1/2	155	5775	14.90	15.50	1.148	88.1	1.135	0.12	0.177	0.231
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(3)	1/2	155	5775	14.50	15.50	1.259	88.1	1.135	0.12	0.198	0.283
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(4)	1/2	155	5775	14.90	15.50	1.148	88.1	1.135	0.12	0.275	0.358
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(3)	1/2	155	5775	14.50	15.50	1.259	88.1	1.135	0.12	0.025	0.036
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	3/4	155	5775	10.80	11.50	1.175	88.1	1.135	0	0.091	0.121
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	3/4	155	5775	10.00	11.50	1.413	88.1	1.135	0	0.266	0.426
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(4)	3/4	155	5775	10.80	11.50	1.175	88.1	1.135	-0.01	0.077	0.103
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Tilted	0mm	Ant 4+3(3)	3/4	155	5775	10.00	11.50	1.413	88.1	1.135	-0.01	0.060	0.096
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(4)	3/4	155	5775	10.80	11.50	1.175	88.1	1.135	-0.09	0.152	0.203
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Cheek	0mm	Ant 4+3(3)	3/4	155	5775	10.00	11.50	1.413	88.1	1.135	-0.09	0.133	0.213
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(4)	3/4	155	5775	10.80	11.50	1.175	88.1	1.135	-0.08	0.146	0.195
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Tilted	0mm	Ant 4+3(3)	3/4	155	5775	10.00	11.50	1.413	88.1	1.135	-0.08	0.002	0.003
25	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	163	5815	16.30	16.50	1.047	87.01	1.149	0.18	0.155	0.186
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	163	5815	15.70	16.50	1.202	87.01	1.149	0.18	0.818	1.130
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	171	5855	16.50	16.50	1.000	88.1	1.135	-0.09	0.189	0.215
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	171	5855	16.10	16.50	1.096	88.1	1.135	-0.09	0.754	0.938
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(4)	1/2	163	5815	16.30	16.50	1.047	87.01	1.149	0.01	0.350	0.421
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(3)	1/2	163	5815	15.70	16.50	1.202	87.01	1.149	0.01	0.027	0.037
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(4)	1/2	163	5815	16.30	16.50	1.047	87.01	1.149	0.01	0.441	0.531
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(3)	1/2	163	5815	15.70	16.50	1.202	87.01	1.149	0.01	0.312	0.431
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(4)	1/2	163	5815	16.30	16.50	1.047	87.01	1.149	0.1	0.392	0.472
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(3)	1/2	163	5815	15.70	16.50	1.202	87.01	1.149	0.1	0.036	0.050
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(4)	3/4	163	5815	12.90	13.50	1.148	87.01	1.149	-0.13	0.123	0.162
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(3)	3/4	163	5815	12.40	13.50	1.288	87.01	1.149	-0.13	0.319	0.472
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(4)	3/4	163	5815	12.90	13.50	1.148	87.01	1.149	-0.14	0.177	0.234
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Tilted	0mm	Ant 4+3(3)	3/4	163	5815	12.40	13.50	1.288	87.01	1.149	-0.14	0.001	0.001
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(4)	3/4	163	5815	12.90	13.50	1.148	87.01	1.149	-0.07	0.132	0.174
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Cheek	0mm	Ant 4+3(3)	3/4	163	5815	12.40	13.50	1.288	87.01	1.149	-0.07	0.148	0.219
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(4)	3/4	163	5815	12.90	13.50	1.148	87.01	1.149	-0.14	0.234	0.309
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Tilted	0mm	Ant 4+3(3)	3/4	163	5815	12.40	13.50	1.288	87.01	1.149	-0.14	0.034	0.050

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)	Measured APD (W/m^2)
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2/3/4	15	6025	15.00	15.50	1.122	85.07	1.176	-0.1	0.224	0.296	1.42
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2/3/4	15	6025	15.50	15.50	1.000	85.07	1.176	-0.1	0.287	0.338	1.74
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2/3/4	47	6185	15.00	15.50	1.122	85.07	1.176	0.14	0.162	0.214	1.07
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2/3/4	47	6185	15.10	15.50	1.096	85.07	1.176	0.14	0.259	0.334	1.55
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2/3/4	111	6505	14.40	14.50	1.023	85.07	1.176	0.12	0.234	0.282	1.76
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2/3/4	111	6505	14.20	14.50	1.072	85.07	1.176	0.12	0.246	0.310	1.6
26	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2/3/4	175	6825	13.50	13.50	1.000	85.07	1.176	0.01	0.159	0.187	1.04
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2/3/4	175	6825	13.20	13.50	1.072	85.07	1.176	0.01	0.301	0.379	1.89
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2/3/4	207	6985	12.00	12.00	1.000	85.07	1.176	0.1	0.102	0.120	0.602
	WLAN6GHz	802.11ax-HE160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2/3/4	207	6985	11.60	12.00	1.096	85.07	1.176	0.1	0.206	0.266	1.29
	WLAN6GHz	802.11ax-HE160 MCS0	Right Tilted	0mm	Ant 4+3(4)	1/2/3/4	15	6025	15.00	15.50	1.122	85.07	1.176	0.12	0.011	0.015	0.068
	WLAN6GHz	802.11ax-HE160 MCS0	Right Tilted	0mm	Ant 4+3(3)	1/2/3/4	15	6025	15.50	15.50	1.000	85.07	1.176	0.12	0.223	0.262	1.49
	WLAN6GHz	802.11ax-HE160 MCS0	Left Cheek	0mm	Ant 4+3(4)	1/2/3/4	15	6025	15.00	15.50	1.122	85.07	1.176	0.12	0.226	0.298	1.33
	WLAN6GHz	802.11ax-HE160 MCS0	Left Cheek	0mm	Ant 4+3(3)	1/2/3/4	15	6025	15.50	15.50	1.000	85.07	1.176	0.12	0.154	0.181	1.11
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+3(4)	1/2/3/4	15	6025	15.00	15.50	1.122	85.07	1.176	0.02	0.225	0.297	1.51
	WLAN6GHz	802.11ax-HE160 MCS0	Left Tilted	0mm	Ant 4+3(3)	1/2/3/4	15	6025	15.50	15.50	1.000	85.07	1.176	0.02	0.042	0.049	0.339

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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	Right Cheek	0mm	Ant 4	1	0	2402	11.80	12.00	1.047	77.22	1.079	0.06	0.080	0.090
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 4	1	0	2402	11.80	12.00	1.047	77.22	1.079	0.13	0.106	0.120
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4	1	0	2402	11.80	12.00	1.047	77.22	1.079	0.04	0.190	0.215
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4	1	0	2402	11.80	12.00	1.047	77.22	1.079	-0.14	0.247	0.279
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4	1	39	2441	11.77	12.00	1.054	77.22	1.079	-0.17	0.305	0.347
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4	1	78	2480	11.23	12.00	1.194	77.22	1.079	0	0.260	0.335
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 3	1	0	2402	10.22	12.00	1.507	77.22	1.079	-0.06	0.075	0.122
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 3	1	0	2402	10.22	12.00	1.507	77.22	1.079	0.16	0.014	0.023
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	1	0	2402	10.22	12.00	1.507	77.22	1.079	0.03	0.112	0.182
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	1	39	2441	10.22	12.00	1.507	77.22	1.079	0.09	0.107	0.174
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 3	1	78	2480	10.18	12.00	1.521	77.22	1.079	0.07	0.061	0.100
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 3	1	0	2402	10.13	12.00	1.538	77.22	1.079	-0.05	0.007	0.012
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 4+3(4)	1	39	2441	11.57	12.00	1.104	77.22	1.079	0.06	0.109	0.130
	Bluetooth	1Mbps	Right Cheek	0mm	Ant 4+3(3)	1	39	2441	10.77	12.00	1.327	77.22	1.079	0.06	0.076	0.109
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 4+3(4)	1	39	2441	11.57	12.00	1.104	77.22	1.079	0.01	0.141	0.168
	Bluetooth	1Mbps	Right Tilted	0mm	Ant 4+3(3)	1	39	2441	10.77	12.00	1.327	77.22	1.079	0.01	0.010	0.014
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4+3(4)	1	39	2441	11.57	12.00	1.104	77.22	1.079	-0.09	0.259	0.309
	Bluetooth	1Mbps	Left Cheek	0mm	Ant 4+3(3)	1	39	2441	10.77	12.00	1.327	77.22	1.079	-0.09	0.120	0.172
27	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4+3(4)	1	39	2441	11.57	12.00	1.104	77.22	1.079	0.04	0.298	0.355
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4+3(3)	1	39	2441	10.77	12.00	1.327	77.22	1.079	0.04	0.001	0.001
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4+3(4)	1	0	2402	10.75	12.00	1.334	77.22	1.079	-0.05	0.208	0.299
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4+3(3)	1	0	2402	10.23	12.00	1.503	77.22	1.079	-0.05	0.014	0.023
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4+3(4)	1	78	2480	11.28	12.00	1.180	77.22	1.079	-0.07	0.248	0.316
	Bluetooth	1Mbps	Left Tilted	0mm	Ant 4+3(3)	1	78	2480	10.18	12.00	1.521	77.22	1.079	-0.07	0.012	0.020

15.2 Hotspot SAR

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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	Front	10mm	Ant 4	7	11	2462	19.85	20.00	1.035	98.9	1.011	0.13	0.381	0.399
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	7	11	2462	19.85	20.00	1.035	98.9	1.011	0.09	0.367	0.384
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4	7	11	2462	19.85	20.00	1.035	98.9	1.011	-0.02	0.021	0.022
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 4	7	11	2462	19.85	20.00	1.035	98.9	1.011	-0.07	0.424	0.444
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 4	7	11	2462	19.85	20.00	1.035	98.9	1.011	0.08	0.500	0.523
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 3	7	11	2462	19.85	20.00	1.035	98.9	1.011	-0.06	0.244	0.255
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 3	7	11	2462	19.85	20.00	1.035	98.9	1.011	-0.11	0.254	0.266
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 3	7	11	2462	19.85	20.00	1.035	98.9	1.011	0.01	0.453	0.474
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 3	7	11	2462	19.85	20.00	1.035	98.9	1.011	0.05	0.006	0.006
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 3	7	11	2462	19.85	20.00	1.035	98.9	1.011	0.15	0.018	0.019
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(4)	7	6	2437	19.95	20.00	1.012	93.4	1.071	0.08	0.422	0.457
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(3)	7	6	2437	19.75	20.00	1.059	93.4	1.071	0.08	0.247	0.280
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(4)	7	6	2437	19.95	20.00	1.012	93.4	1.071	-0.12	0.428	0.464
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(3)	7	6	2437	19.75	20.00	1.059	93.4	1.071	-0.12	0.239	0.271
	WLAN2.4GHz	802.11g 6Mbps	Left Side	10mm	Ant 4+3(3)	7	6	2437	19.75	20.00	1.059	93.4	1.071	-0.08	0.396	0.449
	WLAN2.4GHz	802.11g 6Mbps	Right Side	10mm	Ant 4+3(4)	7	6	2437	19.95	20.00	1.012	93.4	1.071	-0.16	0.482	0.522
28	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(4)	7	6	2437	19.95	20.00	1.012	93.4	1.071	0.02	0.588	0.637
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(3)	7	6	2437	19.75	20.00	1.059	93.4	1.071	0.02	0.201	0.228
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(4)	7	1	2412	19.85	20.00	1.035	93.4	1.071	0.13	0.501	0.555
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(3)	7	1	2412	19.55	20.00	1.109	93.4	1.071	0.13	0.192	0.228
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(4)	7	11	2462	19.85	20.00	1.035	93.4	1.071	0.06	0.521	0.578
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(3)	7	11	2462	19.35	20.00	1.161	93.4	1.071	0.06	0.144	0.179
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(4)	7	12	2462	19.65	20.00	1.084	93.4	1.071	0.03	0.494	0.573
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(3)	7	12	2462	19.15	20.00	1.216	93.4	1.071	0.03	0.137	0.178
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 4	8	1	2412	16.85	17.50	1.161	98.9	1.011	-0.04	0.180	0.211
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	8	1	2412	16.85	17.50	1.161	98.9	1.011	0.01	0.170	0.200
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 4	8	1	2412	16.85	17.50	1.161	98.9	1.011	0	0.002	0.002
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 4	8	1	2412	16.85	17.50	1.161	98.9	1.011	-0.04	0.189	0.222
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 4	8	1	2412	16.85	17.50	1.161	98.9	1.011	0.07	0.272	0.319
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 3	8	13	2472	16.85	17.50	1.161	98.9	1.011	0.12	0.115	0.135
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 3	8	13	2472	16.85	17.50	1.161	98.9	1.011	-0.06	0.123	0.144
	WLAN2.4GHz	802.11b 1Mbps	Left Side	10mm	Ant 3	8	13	2472	16.85	17.50	1.161	98.9	1.011	-0.03	0.238	0.279
	WLAN2.4GHz	802.11b 1Mbps	Right Side	10mm	Ant 3	8	13	2472	16.85	17.50	1.161	98.9	1.011	-0.11	0.002	0.002
	WLAN2.4GHz	802.11b 1Mbps	Top Side	10mm	Ant 3	8	13	2472	16.85	17.50	1.161	98.9	1.011	-0.13	0.002	0.002
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(4)	8	12	2467	16.95	17.50	1.135	93.4	1.071	-0.16	0.182	0.221
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(3)	8	12	2467	16.95	17.50	1.135	93.4	1.071	-0.16	0.118	0.143
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(4)	8	12	2467	16.95	17.50	1.135	93.4	1.071	0.03	0.212	0.258
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(3)	8	12	2467	16.95	17.50	1.135	93.4	1.071	0.03	0.116	0.141
	WLAN2.4GHz	802.11g 6Mbps	Left Side	10mm	Ant 4+3(4)	8	12	2467	16.95	17.50	1.135	93.4	1.071	0.07	0.231	0.281
	WLAN2.4GHz	802.11g 6Mbps	Right Side	10mm	Ant 4+3(3)	8	12	2467	16.95	17.50	1.135	93.4	1.071	-0.13	0.234	0.284
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(4)	8	12	2467	16.95	17.50	1.135	93.4	1.071	0.09	0.273	0.332
	WLAN2.4GHz	802.11g 6Mbps	Top Side	10mm	Ant 4+3(3)	8	12	2467	16.95	17.50	1.135	93.4	1.071	0.09	0.072	0.088

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+3(4)	7	46	5230	16.40	16.50	1.023	96.79	1.033	-0.03	0.061	0.064
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+3(3)	7	46	5230	15.40	16.50	1.288	96.79	1.033	-0.03	0.232	0.309
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+3(4)	7	46	5230	16.40	16.50	1.023	96.79	1.033	-0.04	0.037	0.039
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+3(3)	7	46	5230	15.40	16.50	1.288	96.79	1.033	-0.04	0.132	0.176
29	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 4+3(3)	7	46	5230	15.40	16.50	1.288	96.79	1.033	-0.07	0.525	0.699
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	10mm	Ant 4+3(3)	7	38	5190	13.60	15.00	1.380	96.79	1.033	0.01	0.400	0.570
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	10mm	Ant 4+3(4)	7	46	5230	16.40	16.50	1.023	96.79	1.033	-0.12	0.093	0.098
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4+3(4)	7	46	5230	16.40	16.50	1.023	96.79	1.033	-0.08	0.084	0.089
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	10mm	Ant 4+3(3)	7	46	5230	15.40	16.50	1.288	96.79	1.033	-0.08	0.099	0.132
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	8/9	42	5210	13.90	14.00	1.023	88.1	1.135	-0.09	0.023	0.027
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	8/9	42	5210	13.00	14.00	1.259	88.1	1.135	-0.09	0.100	0.143
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(4)	8/9	42	5210	13.90	14.00	1.023	88.1	1.135	0.18	0.008	0.009
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(3)	8/9	42	5210	13.00	14.00	1.259	88.1	1.135	0.18	0.036	0.051
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 4+3(3)	8/9	42	5210	13.00	14.00	1.259	88.1	1.135	-0.02	0.234	0.334
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4+3(4)	8/9	42	5210	13.90	14.00	1.023	88.1	1.135	-0.15	0.026	0.030
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+3(4)	8/9	42	5210	13.90	14.00	1.023	88.1	1.135	0.1	0.017	0.020
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+3(3)	8/9	42	5210	13.00	14.00	1.259	88.1	1.135	0.1	0.021	0.030
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	7	155	5775	17.40	18.00	1.148	88.1	1.135	-0.06	0.075	0.098
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	7	155	5775	16.70	18.00	1.349	88.1	1.135	-0.06	0.219	0.335
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(4)	7	155	5775	17.40	18.00	1.148	88.1	1.135	0	0.074	0.096
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(3)	7	155	5775	16.70	18.00	1.349	88.1	1.135	0	0.092	0.141
30	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 4+3(3)	7	155	5775	16.70	18.00	1.349	88.1	1.135	-0.05	0.325	0.498
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4+3(4)	7	155	5775	17.40	18.00	1.148	88.1	1.135	-0.13	0.161	0.210
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+3(4)	7	155	5775	17.40	18.00	1.148	88.1	1.135	-0.08	0.127	0.166
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	8/9	155	5775	14.90	15.00	1.023	88.1	1.135	-0.09	0.047	0.055
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	8/9	155	5775	14.20	15.00	1.202	88.1	1.135	-0.09	0.106	0.145
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(4)	8/9	155	5775	14.90	15.00	1.023	88.1	1.135	0.14	0.022	0.026
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(3)	8/9	155	5775	14.20	15.00	1.202	88.1	1.135	0.14	0.021	0.029
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	10mm	Ant 4+3(3)	8/9	155	5775	14.20	15.00	1.202	88.1	1.135	-0.04	0.163	0.222
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	10mm	Ant 4+3(4)	8/9	155	5775	14.90	15.00	1.023	88.1	1.135	-0.04	0.048	0.056
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	10mm	Ant 4+3(4)	8/9	155	5775	14.90	15.00	1.023	88.1	1.135	0.05	0.036	0.042

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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	Front	10mm	Ant 4	3	0	2402	19.43	19.50	1.017	77.22	1.079	-0.02	0.332	0.364
	Bluetooth	1Mbps	Back	10mm	Ant 4	3	0	2402	19.43	19.50	1.017	77.22	1.079	-0.02	0.325	0.356
	Bluetooth	1Mbps	Left Side	10mm	Ant 4	3	0	2402	19.43	19.50	1.017	77.22	1.079	0.01	0.036	0.039
	Bluetooth	1Mbps	Right Side	10mm	Ant 4	3	0	2402	19.43	19.50	1.017	77.22	1.079	-0.12	0.369	0.405
31	Bluetooth	1Mbps	Top Side	10mm	Ant 4	3	0	2402	19.43	19.50	1.017	77.22	1.079	0.07	0.482	0.529
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	3	39	2441	19.26	19.50	1.057	77.22	1.079	0.11	0.412	0.470
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	3	78	2480	18.98	19.50	1.128	77.22	1.079	-0.15	0.380	0.462
	Bluetooth	1Mbps	Front	10mm	Ant 3	3	0	2402	19.35	19.50	1.036	77.22	1.079	-0.02	0.206	0.230
	Bluetooth	1Mbps	Back	10mm	Ant 3	3	0	2402	19.35	19.50	1.036	77.22	1.079	-0.06	0.210	0.235
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	3	0	2402	19.35	19.50	1.036	77.22	1.079	-0.12	0.340	0.380
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	3	39	2441	19.20	19.50	1.072	77.22	1.079	-0.11	0.271	0.313
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	3	78	2480	18.75	19.50	1.189	77.22	1.079	-0.15	0.289	0.371
	Bluetooth	1Mbps	Right Side	10mm	Ant 3	3	0	2402	19.35	19.50	1.036	77.22	1.079	-0.09	0.011	0.012
	Bluetooth	1Mbps	Top Side	10mm	Ant 3	3	0	2402	19.35	19.50	1.036	77.22	1.079	-0.01	0.028	0.031
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(4)	3	0	2402	17.34	18.00	1.165	77.22	1.079	-0.05	0.205	0.258
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(3)	3	0	2402	17.25	18.00	1.190	77.22	1.079	-0.05	0.073	0.094
	Bluetooth	1Mbps	Back	10mm	Ant 4+3(4)	3	0	2402	17.34	18.00	1.165	77.22	1.079	-0.04	0.082	0.103
	Bluetooth	1Mbps	Back	10mm	Ant 4+3(3)	3	0	2402	17.25	18.00	1.190	77.22	1.079	-0.04	0.082	0.105
	Bluetooth	1Mbps	Left Side	10mm	Ant 4+3(4)	3	0	2402	17.34	18.00	1.165	77.22	1.079	0.06	0.001	0.001
	Bluetooth	1Mbps	Left Side	10mm	Ant 4+3(3)	3	0	2402	17.25	18.00	1.190	77.22	1.079	0.06	0.244	0.313
	Bluetooth	1Mbps	Right Side	10mm	Ant 4+3(4)	3	0	2402	17.34	18.00	1.165	77.22	1.079	-0.11	0.220	0.277
	Bluetooth	1Mbps	Right Side	10mm	Ant 4+3(3)	3	0	2402	17.25	18.00	1.190	77.22	1.079	-0.11	0.001	0.001
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(4)	3	0	2402	17.34	18.00	1.165	77.22	1.079	0.1	0.420	0.528
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(3)	3	0	2402	17.25	18.00	1.190	77.22	1.079	0.1	0.001	0.001
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(4)	3	39	2441	16.94	18.00	1.278	77.22	1.079	-0.03	0.272	0.375
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(3)	3	39	2441	16.83	18.00	1.310	77.22	1.079	-0.03	0.001	0.001
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(4)	3	78	2480	16.62	18.00	1.375	77.22	1.079	0.03	0.239	0.355
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(3)	3	78	2480	16.50	18.00	1.414	77.22	1.079	0.03	0.001	0.002

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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	Front	10mm	Ant 4	4	0	2402	18.35	18.50	1.035	77.22	1.079	-0.13	0.270	0.302
	Bluetooth	1Mbps	Back	10mm	Ant 4	4	0	2402	18.35	18.50	1.035	77.22	1.079	0.11	0.248	0.277
	Bluetooth	1Mbps	Left Side	10mm	Ant 4	4	0	2402	18.35	18.50	1.035	77.22	1.079	-0.08	0.007	0.008
	Bluetooth	1Mbps	Right Side	10mm	Ant 4	4	0	2402	18.35	18.50	1.035	77.22	1.079	-0.04	0.278	0.311
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	4	0	2402	18.35	18.50	1.035	77.22	1.079	0.19	0.405	0.452
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	4	39	2441	17.75	18.50	1.189	77.22	1.079	-0.07	0.328	0.421
	Bluetooth	1Mbps	Top Side	10mm	Ant 4	4	78	2480	18.34	18.50	1.038	77.22	1.079	-0.05	0.331	0.371
	Bluetooth	1Mbps	Front	10mm	Ant 3	4	0	2402	18.35	18.50	1.035	77.22	1.079	-0.04	0.174	0.194
	Bluetooth	1Mbps	Back	10mm	Ant 3	4	0	2402	18.35	18.50	1.035	77.22	1.079	-0.06	0.175	0.195
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	4	0	2402	18.35	18.50	1.035	77.22	1.079	-0.03	0.289	0.323
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	4	39	2441	18.25	18.50	1.059	77.22	1.079	-0.04	0.234	0.267
	Bluetooth	1Mbps	Left Side	10mm	Ant 3	4	78	2480	17.65	18.50	1.216	77.22	1.079	-0.04	0.230	0.302
	Bluetooth	1Mbps	Right Side	10mm	Ant 3	4	0	2402	18.35	18.50	1.035	77.22	1.079	-0.01	0.007	0.008
	Bluetooth	1Mbps	Top Side	10mm	Ant 3	4	0	2402	18.35	18.50	1.035	77.22	1.079	0.02	0.025	0.028
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(4)	4	39	2441	16.94	17.00	1.015	77.22	1.079	0.16	0.156	0.171
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(3)	4	39	2441	16.83	17.00	1.041	77.22	1.079	0.16	0.113	0.127
	Bluetooth	1Mbps	Back	10mm	Ant 4+3(4)	4	39	2441	16.94	17.00	1.015	77.22	1.079	-0.04	0.171	0.187
	Bluetooth	1Mbps	Back	10mm	Ant 4+3(3)	4	39	2441	16.83	17.00	1.041	77.22	1.079	-0.04	0.101	0.113
	Bluetooth	1Mbps	Left Side	10mm	Ant 4+3(4)	4	39	2441	16.94	17.00	1.015	77.22	1.079	-0.02	0.001	0.001
	Bluetooth	1Mbps	Left Side	10mm	Ant 4+3(3)	4	39	2441	16.83	17.00	1.041	77.22	1.079	-0.02	0.157	0.176
	Bluetooth	1Mbps	Right Side	10mm	Ant 4+3(4)	4	39	2441	16.94	17.00	1.015	77.22	1.079	-0.02	0.162	0.177
	Bluetooth	1Mbps	Right Side	10mm	Ant 4+3(3)	4	39	2441	16.83	17.00	1.041	77.22	1.079	-0.02	0.113	0.127
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(4)	4	39	2441	16.94	17.00	1.015	77.22	1.079	-0.03	0.272	0.298
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(3)	4	39	2441	16.83	17.00	1.041	77.22	1.079	-0.03	0.001	0.001
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(4)	4	0	2402	15.61	17.00	1.377	77.22	1.079	-0.12	0.330	0.490
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(3)	4	0	2402	15.66	17.00	1.361	77.22	1.079	-0.12	0.001	0.001
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(4)	4	78	2480	16.62	17.00	1.092	77.22	1.079	0.03	0.239	0.282
	Bluetooth	1Mbps	Top Side	10mm	Ant 4+3(3)	4	78	2480	16.50	17.00	1.123	77.22	1.079	0.03	0.001	0.001

15.3 Body Worn Accessory SAR

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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	Front	10mm	Ant 4	5/6	11	2462	21.95	22.50	1.135	98.9	1.011	-0.09	0.591	0.678
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	5/6	11	2462	21.95	22.50	1.135	98.9	1.011	0.02	0.602	0.691
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 3	5/6	12	2467	21.95	22.50	1.135	98.9	1.011	-0.1	0.276	0.317
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 3	5/6	12	2467	21.95	22.50	1.135	98.9	1.011	-0.05	0.256	0.294
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(4)	5/6	6	2437	21.95	22.50	1.135	93.4	1.071	-0.1	0.565	0.687
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(3)	5/6	6	2437	21.45	22.50	1.274	93.4	1.071	-0.1	0.342	0.466
32	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(4)	5/6	6	2437	21.95	22.50	1.135	93.4	1.071	-0.12	0.578	0.703
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(3)	5/6	6	2437	21.45	22.50	1.274	93.4	1.071	-0.12	0.318	0.434
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(4)	5/6	1	2412	20.85	21.00	1.035	93.4	1.071	-0.01	0.393	0.436
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(3)	5/6	1	2412	20.35	21.00	1.161	93.4	1.071	-0.01	0.253	0.315
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(4)	5/6	11	2462	21.55	22.00	1.109	93.4	1.071	0.08	0.506	0.601
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(3)	5/6	11	2462	21.25	22.00	1.189	93.4	1.071	0.08	0.293	0.373
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 4	7	11	2462	19.85	20.00	1.035	98.9	1.011	0.13	0.381	0.399
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	7	11	2462	19.85	20.00	1.035	98.9	1.011	0.09	0.367	0.384
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 3	7	11	2462	19.85	20.00	1.035	98.9	1.011	-0.06	0.244	0.255
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 3	7	11	2462	19.85	20.00	1.035	98.9	1.011	-0.11	0.254	0.266
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(4)	7	6	2437	19.95	20.00	1.012	93.4	1.071	0.08	0.422	0.457
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(3)	7	6	2437	19.75	20.00	1.059	93.4	1.071	0.08	0.247	0.280
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(4)	7	6	2437	19.95	20.00	1.012	93.4	1.071	-0.12	0.428	0.464
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(3)	7	6	2437	19.75	20.00	1.059	93.4	1.071	-0.12	0.239	0.271
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 4	8	1	2412	16.85	17.50	1.161	98.9	1.011	-0.04	0.180	0.211
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 4	8	1	2412	16.85	17.50	1.161	98.9	1.011	0.01	0.170	0.200
	WLAN2.4GHz	802.11b 1Mbps	Front	10mm	Ant 3	8	13	2472	16.85	17.50	1.161	98.9	1.011	0.12	0.115	0.135
	WLAN2.4GHz	802.11b 1Mbps	Back	10mm	Ant 3	8	13	2472	16.85	17.50	1.161	98.9	1.011	-0.06	0.123	0.144
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(4)	8	12	2467	16.95	17.50	1.135	93.4	1.071	-0.16	0.182	0.221
	WLAN2.4GHz	802.11g 6Mbps	Front	10mm	Ant 4+3(3)	8	12	2467	16.95	17.50	1.135	93.4	1.071	-0.16	0.118	0.143
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(4)	8	12	2467	16.95	17.50	1.135	93.4	1.071	0.03	0.212	0.258
	WLAN2.4GHz	802.11g 6Mbps	Back	10mm	Ant 4+3(3)	8	12	2467	16.95	17.50	1.135	93.4	1.071	0.03	0.116	0.141

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)
33	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+3(4)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	-0.11	0.164	0.173
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+3(3)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	-0.11	0.546	0.577
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+3(4)	5/6/7	62	5310	15.90	16.50	1.148	96.79	1.033	0.07	0.059	0.070
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+3(3)	5/6/7	62	5310	15.90	16.50	1.148	96.79	1.033	0.07	0.192	0.228
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+3(4)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	-0.16	0.070	0.074
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+3(3)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	-0.16	0.332	0.351
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+3(4)	8/9	54	5270	16.40	17.50	1.288	96.79	1.033	-0.09	0.085	0.113
	WLAN5GHz	802.11n-HT40 MCS0	Front	10mm	Ant 4+3(3)	8/9	54	5270	16.20	17.50	1.349	96.79	1.033	-0.09	0.251	0.350
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+3(4)	8/9	54	5270	16.40	17.50	1.288	96.79	1.033	-0.16	0.086	0.114
	WLAN5GHz	802.11n-HT40 MCS0	Back	10mm	Ant 4+3(3)	8/9	54	5270	16.20	17.50	1.349	96.79	1.033	-0.16	0.192	0.268
34	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	5/6/7	122	5610	19.40	19.50	1.023	88.1	1.135	0.06	0.135	0.157
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	5/6/7	122	5610	19.30	19.50	1.047	88.1	1.135	0.06	0.494	0.587
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	5/6/7	106	5530	15.50	15.50	1.000	88.1	1.135	-0.13	0.045	0.051
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	5/6/7	106	5530	14.80	15.50	1.175	88.1	1.135	-0.13	0.131	0.175
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	5/6/7	138	5690	19.30	19.50	1.047	88.1	1.135	0.01	0.139	0.165
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	5/6/7	138	5690	19.10	19.50	1.096	88.1	1.135	0.01	0.139	0.173
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(4)	5/6/7	122	5610	19.40	19.50	1.023	88.1	1.135	-0.03	0.092	0.107
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(3)	5/6/7	122	5610	19.30	19.50	1.047	88.1	1.135	-0.03	0.223	0.265
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	8/9	122	5610	18.40	18.50	1.023	88.1	1.135	0.12	0.093	0.108
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	8/9	122	5610	18.00	18.50	1.122	88.1	1.135	0.12	0.289	0.368
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(4)	8/9	122	5610	18.40	18.50	1.023	88.1	1.135	-0.13	0.084	0.098
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(3)	8/9	122	5610	18.00	18.50	1.122	88.1	1.135	-0.13	0.176	0.224
35	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	5/6	155	5775	21.40	21.50	1.023	88.1	1.135	-0.01	0.254	0.295
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	5/6	155	5775	21.00	21.50	1.122	88.1	1.135	-0.01	0.618	0.787
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(4)	5/6	155	5775	21.40	21.50	1.023	88.1	1.135	-0.09	0.195	0.226
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(3)	5/6	155	5775	21.00	21.50	1.122	88.1	1.135	-0.09	0.195	0.248
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	7	155	5775	17.40	18.00	1.148	88.1	1.135	-0.06	0.075	0.098
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	7	155	5775	16.70	18.00	1.349	88.1	1.135	-0.06	0.219	0.335
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(4)	7	155	5775	17.40	18.00	1.148	88.1	1.135	0	0.074	0.096
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(3)	7	155	5775	16.70	18.00	1.349	88.1	1.135	0	0.092	0.141
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	8/9	155	5775	14.90	15.00	1.023	88.1	1.135	-0.09	0.047	0.055
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	8/9	155	5775	14.20	15.00	1.202	88.1	1.135	-0.09	0.106	0.145
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(4)	8/9	155	5775	14.90	15.00	1.023	88.1	1.135	0.14	0.022	0.026
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(3)	8/9	155	5775	14.20	15.00	1.202	88.1	1.135	0.14	0.021	0.029
36	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(4)	5/6/7	171	5855	20.30	20.50	1.047	88.1	1.135	-0.12	0.210	0.250
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	10mm	Ant 4+3(3)	5/6/7	171	5855	19.90	20.50	1.148	88.1	1.135	-0.12	0.398	0.519
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(4)	5/6/7	171	5855	20.30	20.50	1.047	88.1	1.135	-0.13	0.107	0.127
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	10mm	Ant 4+3(3)	5/6/7	171	5855	19.90	20.50	1.148	88.1	1.135	-0.13	0.069	0.090
	WLAN5GHz	802.11ac-VHT160 MCS0	Front	10mm	Ant 4+3(4)	8/9	163	5815	18.70	19.00	1.072	87.01	1.149	-0.13	0.124	0.153
	WLAN5GHz	802.11ac-VHT160 MCS0	Front	10mm	Ant 4+3(3)	8/9	163	5815	18.10	19.00	1.230	87.01	1.149	-0.13	0.280	0.396
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	10mm	Ant 4+3(4)	8/9	163	5815	18.70	19.00	1.072	87.01	1.149	-0.11	0.085	0.105
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	10mm	Ant 4+3(3)	8/9	163	5815	18.10	19.00	1.230	87.01	1.149	-0.11	0.075	0.106

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)	Measured APD (W/m^2)
37	WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(4)	5/6/7/8/9	111	6505	15.30	15.50	1.047	85.07	1.176	0.03	0.032	0.039	0.251
	WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(3)	5/6/7/8/9	111	6505	15.20	15.50	1.072	85.07	1.176	0.03	0.097	0.122	0.747
	WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(4)	5/6/7/8/9	15	6025	14.00	14.50	1.122	85.07	1.176	0.09	0.032	0.042	0.222
	WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(3)	5/6/7/8/9	15	6025	14.30	14.50	1.047	85.07	1.176	0.09	0.056	0.069	0.449
	WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(4)	5/6/7/8/9	47	6185	14.00	14.50	1.122	85.07	1.176	0.12	0.024	0.032	0.177
	WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(3)	5/6/7/8/9	47	6185	13.90	14.50	1.148	85.07	1.176	0.12	0.054	0.073	0.377
	WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(4)	5/6/7/8/9	175	6825	14.10	14.50	1.096	85.07	1.176	0.01	0.020	0.026	0.115
	WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(3)	5/6/7/8/9	175	6825	13.80	14.50	1.175	85.07	1.176	0.01	0.079	0.109	0.581
	WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(4)	5/6/7/8/9	207	6985	13.50	13.50	1.000	85.07	1.176	0.06	0.015	0.018	0.089
	WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(3)	5/6/7/8/9	207	6985	13.00	13.50	1.122	85.07	1.176	0.06	0.073	0.096	0.561
	WLAN6GHz	802.11ax-HE160 MCS0	Back	10mm	Ant 4+3(4)	5/6/7/8/9	111	6505	15.30	15.50	1.047	85.07	1.176	0.06	0.058	0.071	0.449
	WLAN6GHz	802.11ax-HE160 MCS0	Back	10mm	Ant 4+3(3)	5/6/7/8/9	111	6505	15.20	15.50	1.072	85.07	1.176	0.06	0.028	0.035	0.218

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)
38	Bluetooth	1Mbps	Front	10mm	Ant 4	2/3	0	2402	19.43	19.50	1.017	77.22	1.079	-0.02	0.332	0.364
	Bluetooth	1Mbps	Back	10mm	Ant 4	2/3	0	2402	19.43	19.50	1.017	77.22	1.079	-0.02	0.325	0.356
	Bluetooth	1Mbps	Front	10mm	Ant 4	2/3	39	2441	19.26	19.50	1.057	77.22	1.079	-0.08	0.279	0.318
	Bluetooth	1Mbps	Front	10mm	Ant 4	2/3	78	2480	18.98	19.50	1.128	77.22	1.079	-0.15	0.240	0.292
	Bluetooth	1Mbps	Front	10mm	Ant 3	2/3	0	2402	19.35	19.50	1.036	77.22	1.079	-0.02	0.206	0.230
	Bluetooth	1Mbps	Back	10mm	Ant 3	2/3	0	2402	19.35	19.50	1.036	77.22	1.079	-0.06	0.210	0.235
	Bluetooth	1Mbps	Back	10mm	Ant 3	2/3	39	2441	19.20	19.50	1.072	77.22	1.079	-0.18	0.164	0.190
	Bluetooth	1Mbps	Back	10mm	Ant 3	2/3	78	2480	18.75	19.50	1.189	77.22	1.079	-0.13	0.160	0.205
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(4)	2/3	0	2402	17.34	18.00	1.165	77.22	1.079	-0.05	0.205	0.258
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(3)	2/3	0	2402	17.25	18.00	1.190	77.22	1.079	-0.05	0.073	0.094
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(4)	2/3	39	2441	16.94	18.00	1.278	77.22	1.079	0.16	0.156	0.215
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(3)	2/3	39	2441	16.83	18.00	1.310	77.22	1.079	0.16	0.113	0.160
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(4)	2/3	78	2480	16.62	18.00	1.375	77.22	1.079	-0.02	0.188	0.279
	Bluetooth	1Mbps	Front	10mm	Ant 4+3(3)	2/3	78	2480	16.50	18.00	1.414	77.22	1.079	-0.02	0.090	0.137
	Bluetooth	1Mbps	Back	10mm	Ant 4+3(4)	2/3	0	2402	17.34	18.00	1.165	77.22	1.079	-0.04	0.082	0.103
	Bluetooth	1Mbps	Back	10mm	Ant 4+3(3)	2/3	0	2402	17.25	18.00	1.190	77.22	1.079	-0.04	0.082	0.105

15.4 Product Specific SAR

<WLAN SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 4+3(4)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	-0.17	0.495	0.523
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 4+3(3)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	-0.17	1.580	1.670
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 4+3(4)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	-0.12	0.149	0.158
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 4+3(3)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	-0.12	0.643	0.680
39	WLAN5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	0.01	2.450	2.590
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	62	5310	15.90	16.50	1.148	96.79	1.033	0.13	0.947	1.123
	WLAN5GHz	802.11a 6Mbps	Left Side	0mm	Ant 4+3(3)	5/6/7	60	5300	19.40	19.50	1.023	93.42	1.070	0.13	2.060	2.256
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 4+3(4)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	0.1	0.731	0.773
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 4+3(4)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	0.16	0.245	0.259
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 4+3(3)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	0.16	0.290	0.307
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 4+3(4)	8/9	54	5270	16.40	17.50	1.288	96.79	1.033	-0.15	0.316	0.421
	WLAN5GHz	802.11n-HT40 MCS0	Front	0mm	Ant 4+3(3)	8/9	54	5270	16.20	17.50	1.349	96.79	1.033	-0.15	0.693	0.966
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 4+3(4)	8/9	54	5270	16.40	17.50	1.288	96.79	1.033	-0.13	0.127	0.169
	WLAN5GHz	802.11n-HT40 MCS0	Back	0mm	Ant 4+3(3)	8/9	54	5270	16.20	17.50	1.349	96.79	1.033	-0.13	0.373	0.520
	WLAN5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 4+3(3)	8/9	54	5270	16.20	17.50	1.349	96.79	1.033	0.11	1.090	1.519
	WLAN5GHz	802.11n-HT40 MCS0	Right Side	0mm	Ant 4+3(4)	8/9	54	5270	16.40	17.50	1.288	96.79	1.033	0	0.286	0.381
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 4+3(4)	8/9	54	5270	16.40	17.50	1.288	96.79	1.033	0.13	0.100	0.133
	WLAN5GHz	802.11n-HT40 MCS0	Top Side	0mm	Ant 4+3(3)	8/9	54	5270	16.20	17.50	1.349	96.79	1.033	0.13	0.112	0.156
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4+3(4)	5/6/7	122	5610	19.40	19.50	1.023	88.1	1.135	-0.06	0.391	0.454
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4+3(3)	5/6/7	122	5610	19.30	19.50	1.047	88.1	1.135	-0.06	1.100	1.307
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4+3(4)	5/6/7	122	5610	19.40	19.50	1.023	88.1	1.135	-0.13	0.213	0.247
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4+3(3)	5/6/7	122	5610	19.30	19.50	1.047	88.1	1.135	-0.13	0.430	0.511
40	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	122	5610	19.30	19.50	1.047	88.1	1.135	0.18	2.440	2.900
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	106	5530	14.80	15.50	1.175	88.1	1.135	0.1	0.920	1.227
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	138	5690	19.10	19.50	1.096	88.1	1.135	0.13	1.870	2.327
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4+3(4)	5/6/7	122	5610	19.40	19.50	1.023	88.1	1.135	0.09	0.501	0.582
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 4+3(4)	5/6/7	122	5610	19.40	19.50	1.023	88.1	1.135	0.09	0.262	0.304
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4+3(4)	8/9	122	5610	18.40	18.50	1.023	88.1	1.135	-0.09	0.477	0.554
	WLAN5GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4+3(3)	8/9	122	5610	18.00	18.50	1.122	88.1	1.135	-0.09	0.819	1.043
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4+3(4)	8/9	122	5610	18.40	18.50	1.023	88.1	1.135	-0.11	0.149	0.173
	WLAN5GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4+3(3)	8/9	122	5610	18.00	18.50	1.122	88.1	1.135	-0.11	0.321	0.409
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4+3(3)	8/9	122	5610	18.00	18.50	1.122	88.1	1.135	0.16	1.760	2.241
	WLAN5GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4+3(4)	8/9	122	5610	18.40	18.50	1.023	88.1	1.135	0.11	0.373	0.433
	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 4+3(4)	8/9	122	5610	18.40	18.50	1.023	88.1	1.135	-0.04	0.192	0.223
	WLAN5/6GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4+3(4)	5/6/7	171	5855	20.30	20.50	1.047	88.1	1.135	-0.17	0.944	1.122
	WLAN5/6GHz	802.11ac-VHT80 MCS0	Front	0mm	Ant 4+3(3)	5/6/7	171	5855	19.90	20.50	1.148	88.1	1.135	-0.17	0.892	1.162
	WLAN5/6GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4+3(4)	5/6/7	171	5855	20.30	20.50	1.047	88.1	1.135	0.11	0.214	0.254
	WLAN5/6GHz	802.11ac-VHT80 MCS0	Back	0mm	Ant 4+3(3)	5/6/7	171	5855	19.90	20.50	1.148	88.1	1.135	0.11	0.141	0.184
	WLAN5/6GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	171	5855	19.90	20.50	1.148	88.1	1.135	-0.18	1.880	2.450
41	WLAN5/6GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	167	5835	20.00	20.50	1.122	96.82	1.033	0.06	2.150	2.492
	WLAN5/6GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	175	5875	20.00	20.50	1.122	96.82	1.033	0.05	2.080	2.411
	WLAN5/6GHz	802.11ac-VHT80 MCS0	Right Side	0mm	Ant 4+3(4)	5/6/7	171	5855	20.30	20.50	1.047	88.1	1.135	-0.1	0.787	0.935
	WLAN5/6GHz	802.11ac-VHT80 MCS0	Top Side	0mm	Ant 4+3(4)	5/6/7	171	5855	20.30	20.50	1.047	88.1	1.135	-0.15	0.404	0.480
	WLAN5GHz	802.11ac-VHT160 MCS0	Front	0mm	Ant 4+3(4)	8/9	163	5815	18.70	19.00	1.072	87.01	1.149	-0.15	0.643	0.792
	WLAN5GHz	802.11ac-VHT160 MCS0	Front	0mm	Ant 4+3(3)	8/9	163	5815	18.10	19.00	1.230	87.01	1.149	-0.15	0.575	0.813
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	0mm	Ant 4+3(4)	8/9	163	5815	18.70	19.00	1.072	87.01	1.149	0.09	0.123	0.151
	WLAN5GHz	802.11ac-VHT160 MCS0	Back	0mm	Ant 4+3(3)	8/9	163	5815	18.10	19.00	1.230	87.01	1.149	0.09	0.067	0.095
	WLAN5GHz	802.11ac-VHT160 MCS0	Left Side	0mm	Ant 4+3(3)	8/9	163	5815	18.10	19.00	1.230	87.01	1.149	0.09	1.730	2.445
	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4+3(3)	8/9	171	5855	18.00	19.00	1.259	88.1	1.135	-0.13	1.730	2.472
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Side	0mm	Ant 4+3(4)	8/9	163	5815	18.70	19.00	1.072	87.01	1.149	0.12	0.560	0.689
	WLAN5GHz	802.11ac-VHT160 MCS0	Top Side	0mm	Ant 4+3(4)	8/9	163	5815	18.70	19.00	1.072	87.01	1.149	0.16	0.305	0.376

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)	Measured APD (W/m^2)
	WLAN6GHz	802.11ax-HE160 MCS0	Front	0mm	Ant 4+3(4)	5/6/7/8/9	111	6505	15.30	15.50	1.047	85.07	1.176	0.01	0.240	0.296	5.65
	WLAN6GHz	802.11ax-HE160 MCS0	Front	0mm	Ant 4+3(3)	5/6/7/8/9	111	6505	15.20	15.50	1.072	85.07	1.176	0.01	0.250	0.315	5.91
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 4+3(4)	5/6/7/8/9	111	6505	15.30	15.50	1.047	85.07	1.176	0.07	0.062	0.076	1.41
	WLAN6GHz	802.11ax-HE160 MCS0	Back	0mm	Ant 4+3(3)	5/6/7/8/9	111	6505	15.20	15.50	1.072	85.07	1.176	0.07	0.050	0.063	1.18
42	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7/8/9	111	6505	15.20	15.50	1.072	85.07	1.176	-0.02	0.463	0.583	11
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7/8/9	15	6025	14.30	14.50	1.047	85.07	1.176	0.09	0.381	0.469	9.05
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7/8/9	47	6185	13.90	14.50	1.148	85.07	1.176	0.03	0.368	0.497	8.77
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7/8/9	175	6825	13.80	14.50	1.175	85.07	1.176	0.06	0.333	0.460	7.92
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7/8/9	207	6985	13.00	13.50	1.122	85.07	1.176	-0.03	0.287	0.379	6.84
	WLAN6GHz	802.11ax-HE160 MCS0	Right Side	0mm	Ant 4+3(4)	5/6/7/8/9	111	6505	15.30	15.50	1.047	85.07	1.176	-0.06	0.223	0.275	5.44
	WLAN6GHz	802.11ax-HE160 MCS0	Top Side	0mm	Ant 4+3(3)	5/6/7/8/9	111	6505	15.20	15.50	1.072	85.07	1.176	-0.04	0.167	0.210	3.98

15.5 6GHz PD Test result

Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Grid Step (λ)	iPDn	iPD ratio (≥ -1)	Normal psPD (W/m^2)	Total psPD (W/m^2)
WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 4+3(3)	15	6025	14.30	0.0625	2.39	-0.88469719	2.13	3.33
WLAN6GHz	802.11ax-HE160 MCS0	Left Side	10mm	Ant 4+3(3)	15	6025	14.30	0.25	2.93		0.875	1.03
WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 4+3(3)	207	6985	13.00	0.0625	2.37	-0.90634505	1.94	2.8
WLAN6GHz	802.11ax-HE160 MCS0	Left Side	8.59mm	Ant 4+3(3)	207	6985	13.00	0.25	2.92		0.594	0.835
WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 4+3(4)	15	6025	15.00	0.0625	3.05	-0.89731428	1.83	2.38
WLAN6GHz	802.11ax-HE160 MCS0	Front	10mm	Ant 4+3(3)	15	6025	15.50	0.25	3.75		0.854	0.939
WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 4+3(3)	207	6985	11.60	0.0625	1.95	-0.32184683	2.41	2.75
WLAN6GHz	802.11ax-HE160 MCS0	Front	8.59mm	Ant 4+3(3)	207	6985	11.60	0.25	2.1		0.866	0.943

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Grid Step (λ)	Scaling Factor for Measurement Uncertainty	Power Drift (dB)	Normal psPD (W/m^2)	Scaled Normal psPD (W/m^2)	Total psPD (W/m^2)	Scaled Total psPD (W/m^2)
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 4+3(3)	15	6025	14.30	14.50	1.047	85.07	1.176	0.0625	1.5535	0.1	2.13	4.07	3.33	6.37
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 4+3(3)	47	6185	13.90	14.00	1.023	85.07	1.176	0.0625	1.5535	-0.02	1.06	1.98	1.79	3.35
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 4+3(3)	111	6505	15.20	15.50	1.072	85.07	1.176	0.0625	1.5535	-0.09	1.76	3.45	2.71	5.31
01	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 4+3(3)	175	6825	13.80	14.50	1.175	85.07	1.176	0.0625	1.5535	0.01	2.44	5.24	3.04	6.53
	WLAN6GHz	802.11ax-HE160 MCS0	Left Side	2mm	Ant 4+3(3)	207	6985	13.00	13.50	1.122	85.07	1.176	0.0625	1.5535	-0.03	1.94	3.98	2.8	5.74
	WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 4+3(4)	15	6025	15.00	15.50	1.122	85.07	1.176	0.0625	1.5535	0.1	1.83	3.75	2.38	4.88
	WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 4+3(3)	47	6185	15.10	15.50	1.096	85.07	1.176	0.0625	1.5535	-0.16	1.81	3.63	2.67	5.35
	WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 4+3(4)	111	6505	14.40	14.50	1.023	85.07	1.176	0.0625	1.5535	0.13	2.32	4.34	3.2	5.98
	WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 4+3(3)	175	6825	13.20	13.50	1.072	85.07	1.176	0.0625	1.5535	-0.16	2.44	4.78	3.31	6.48
	WLAN6GHz	802.11ax-HE160 MCS0	Front	2mm	Ant 4+3(3)	207	6985	11.60	12.00	1.096	85.07	1.176	0.0625	1.5535	0.05	2.41	4.83	2.75	5.51

15.6 Repeated SAR Measurement

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)	Ratio	Reported 1g SAR (W/kg)
1st	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	1	6	2437	15.75	16.50	1.189	98.9	1.011	-0.06	0.993	-	1.193
2nd	WLAN2.4GHz	802.11b 1Mbps	Left Tilted	0mm	Ant 4	1	6	2437	15.75	16.50	1.189	98.9	1.011	0.14	0.965	1.029	1.160
1st	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	50	5250	14.30	14.50	1.047	86.84	1.152	-0.11	0.069	-	0.083
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	50	5250	13.70	14.50	1.202	86.84	1.152	-0.11	0.852		1.180
2nd	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	50	5250	14.30	14.50	1.047	86.84	1.152	0.05	0.066	1.038	0.080
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	50	5250	13.70	14.50	1.202	86.84	1.152	0.05	0.821		1.137
1st	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	163	5815	16.30	16.50	1.047	87.01	1.149	0.18	0.155	-	0.186
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	163	5815	15.70	16.50	1.202	87.01	1.149	0.18	0.818		1.130
2nd	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(4)	1/2	163	5815	16.30	16.50	1.047	87.01	1.149	0.18	0.150	1.024	0.180
	WLAN5GHz	802.11ac-VHT160 MCS0	Right Cheek	0mm	Ant 4+3(3)	1/2	163	5815	15.70	16.50	1.202	87.01	1.149	0.18	0.799		1.104

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Power Index	Ch.	Freq. (MHz)	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)	Ratio	Reported 10g SAR (W/kg)
1st	WLAN5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	0.01	2.450	-	2.590
2nd	WLAN5GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	54	5270	19.40	19.50	1.023	96.79	1.033	0.03	2.380	1.029	2.516
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	122	5610	19.30	19.50	1.047	88.1	1.135	0.18	2.440	-	2.900
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	122	5610	19.30	19.50	1.047	88.1	1.135	0.03	2.360	1.034	2.805
1st	WLAN5/6GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	167	5835	20.00	20.50	1.122	96.82	1.033	0.06	2.150	-	2.492
2nd	WLAN5/6GHz	802.11n-HT40 MCS0	Left Side	0mm	Ant 4+3(3)	5/6/7	167	5835	20.00	20.50	1.122	96.82	1.033	0.01	2.090	1.029	2.422

General Note:

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/kg.
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR <1.45W/kg, only one repeated measurement is required.
3. Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
4. The ratio is the difference in percentage between original and repeated *measured SAR*.
5. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

16. Simultaneous Transmission Analysis

Exposure Condition	Tx mode	Capable TX Configurations	WWAN Power Index	WiFi Power Index	BT Power Index
Head	WWAN standalone	WWAN	Index 2		
	WiFi standalone	WiFi 2.4G SISO (Ant4 or Ant3)		Index 1	
		WiFi 2.4G MIMO/CDD (Ant4+3)			
		WiFi 5G MIMO (Ant4+3)			
		WiFi 6E MIMO (Ant4+3)			
		WiFi 2.4G SISO (Ant4 or Ant3) + WiFi 5G MIMO (Ant4+3)		Index 2 (RSDB)	
		WiFi 2.4G MIMO (Ant4+3) + WiFi 5G MIMO (Ant4+3)			
		WiFi 2.4G SISO (Ant4 or Ant3) + WiFi 6E MIMO (Ant4+3)			
		WiFi 2.4G MIMO (Ant4+3) + WiFi 6E MIMO (Ant4+3)			
	WiFi +BT	WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4)		Index 1	Index 1
		WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant3)			
		WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4+3)			
		WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4)			
		WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant3)			
		WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4+3)			
	WWAN + WiFi	WWAN + WiFi 2.4G SISO (Ant4 or Ant3)	Index 3	Index 3	
		WWAN + WiFi 2.4G MIMO/CDD (Ant4+3)			
		WWAN + WiFi 5G MIMO (Ant4+3)			
		WWAN + WiFi 6E MIMO (Ant4+3)			
		WWAN + WiFi 2.4G SISO (Ant4 or Ant3) + WiFi 5G MIMO (Ant4+3)		Index 4 (RSDB)	
		WWAN + WiFi 2.4G MIMO (Ant4+3) + WiFi 5G MIMO (Ant4+3)			
		WWAN + WiFi 2.4G SISO (Ant4 or Ant3) + WiFi 6E MIMO (Ant4+3)			
		WWAN + WiFi 2.4G MIMO (Ant4+3) + WiFi 6E MIMO (Ant4+3)			
	WWAN + BT	WWAN + Bluetooth (Ant4)			Index 1
		WWAN + Bluetooth (Ant3)			
		WWAN + Bluetooth (Ant4+3)			
	WWAN + WiFi +BT	WWAN + WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4)		Index 3	Index 1
		WWAN + WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant3)			
		WWAN + WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4+3)			
		WWAN + WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4)			
		WWAN + WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant3)			
		WWAN + WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4+3)			

Exposure Condition	Tx mode	Capable TX Configurations	WWAN Power Index	WiFi Power Index	BT Power Index
Body	WWAN standalone	WWAN	Index 5		
	WiFi standalone	WiFi 2.4G SISO (Ant4 or Ant3)		Index 5	
		WiFi 2.4G MIMO/CDD (Ant4+3)			
		WiFi 5G MIMO (Ant4+3)			
		WiFi 6E MIMO (Ant4+3)			
		WiFi 2.4G SISO (Ant4 or Ant3) + WiFi 5G MIMO (Ant4+3)		Index 6 (RSDB)	
		WiFi 2.4G MIMO (Ant4+3) + WiFi 5G MIMO (Ant4+3)			
		WiFi 2.4G SISO (Ant4 or Ant3) + WiFi 6E MIMO (Ant4+3)			
		WiFi 2.4G MIMO (Ant4+3) + WiFi 6E MIMO (Ant4+3)			
	BT standalone	Bluetooth (Ant4)			Index 2
		Bluetooth (Ant3)			
		Bluetooth (Ant4+3)			
	WiFi +BT	WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4)		Index 5	Index 3
		WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant3)			
		WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4+3)			
		WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4)			
		WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant3)			
		WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4+3)			
	WWAN + WiFi	WWAN + WiFi 2.4G SISO (Ant4 or Ant3)	Index 6 / Index 4 (Hotspot)	Index 7	
		WWAN + WiFi 2.4G MIMO/CDD (Ant4+3)			
		WWAN + WiFi 5G MIMO (Ant4+3)			
		WWAN + WiFi 6E MIMO (Ant4+3)			
		WWAN + WiFi 2.4G SISO (Ant4 or Ant3) + WiFi 5G MIMO (Ant4+3)		Index 8 (RSDB)	
		WWAN + WiFi 2.4G MIMO (Ant4+3) + WiFi 5G MIMO (Ant4+3)			
		WWAN + WiFi 2.4G SISO (Ant4 or Ant3) + WiFi 6E MIMO (Ant4+3)			
		WWAN + WiFi 2.4G MIMO (Ant4+3) + WiFi 6E MIMO (Ant4+3)			
	WWAN + BT	WWAN + Bluetooth (Ant4)	Index 6 / Index 4 (Hotspot)		Index 3
		WWAN + Bluetooth (Ant3)			
		WWAN + Bluetooth (Ant4+3)			
	WWAN + WiFi +BT	WWAN + WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4)	Index 6 / Index 4 (Hotspot)	Index 9	Index 4
		WWAN + WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant3)			
		WWAN + WiFi 5G MIMO (Ant4+3) + Bluetooth (Ant4+3)			
		WWAN + WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4)			
		WWAN + WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant3)			
		WWAN + WiFi 6E MIMO (Ant4+3) + Bluetooth (Ant4+3)			

General Note:

1. Simultaneous operation at maximum power levels when the device is neither against the body nor the head (i.e. in a mobile RF exposure condition) is addressed in Sporton's RF Exposure report no.: FA1O2843-06A
2. The WWAN SAR result was data reused from reference model sporton report no.: FA1O2843-05E, these WWAN SAR result from reference model are using for Sim-Tx analysis.
3. For WWAN power, when the device is in head mode and hotspot function is enabled, the device will select power index 7 which is further lower than power index 3, as described in the operational description. In this report, standalone and simultaneous SAR compliance for the mentioned scenario was justified at power index 3 conservatively.
4. The Sim-Tx configuration combination include in operation description will be match the title in the below Sum-Tx evaluation table.
5. This device only WLAN 2.4GHz / 5.2GHz / 5.8GHz supports Hotspot operation and Bluetooth support tethering applications.
6. The worst case reported SAR from each transmit antennas were using for SAR summation. Therefore, the following summations represent the absolute worst cases for simultaneous transmission configuration.
7. The SAR summation is calculated based on the same exposure configuration and test position from each transmit antenna worst case reported SAR results.
8. The SAR summation is calculated based on the same exposure configuration and test position from each transmit antenna worst case reported SAR results.
9. 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.

16.1 5G NR + LTE + WLAN + BT Sim-Tx analysis

The power ratio factors are g_1 and g_2 for LTE and NR respectively. The main purpose of these power ratio factors is to split the available SAR budget among different RATs, so $g_1 + g_2 \leq 1$. The value of g_1 is computed based on the need of the anchor (LTE) and can be changed if the anchor changes its power request. Based on the SAR Budget portion allocated to the anchor, the value of g_2 will be computed. At steady state (where all RATs are being on for a while), the allocated power ratio factors will guarantee that the total exposure ratio never exceeds the highest exposure of either one.

$g_1 * LTE_{exposure} + g_2 * NR_{exposure} \leq 1.0,$
$then,\ g_1 * LTE_{exposure} + g_2 * NR_{exposure} \leq max\ (\ LTE_{exposure}\ ,\ NR_{exposure}\ )$

In simultaneous transmission for this device, 5G NR including FR1 uplink MIMO and LTE transmission are managed and controlled by Samsung S.LSI TAS, while the RF exposure from WLAN, BT radios are managed using legacy approach, therefore, compliance of simultaneous transmission of LTE+5GNR+WiFi+BT can be justified from the compliance of LTE+WiFi +BT and 5GNR+WiFi+BT

16.2 Head Exposure Conditions

<WLAN Index 1, BT Index 1>

Exposure Position	1 WLAN2.4GHz Ant 4 1g SAR (W/kg)	2 WLAN2.4GHz Ant 3 1g SAR (W/kg)	3 WLAN2.4GHz Ant 4+3 1g SAR (W/kg)	4 WLAN5/6GHz Ant 4+3 1g SAR (W/kg)	5 Bluetooth Ant 4 1g SAR (W/kg)	6 Bluetooth Ant 3 1g SAR (W/kg)	7 Bluetooth Ant 4+3 1g SAR (W/kg)	4+5 Summed 1g SAR (W/kg)	4+6 Summed 1g SAR (W/kg)	4+7 Summed 1g SAR (W/kg)
Right Cheek	0.310	0.390	0.364	1.180	0.090	0.122	0.130	**1.270**	**1.302**	**1.310**
Right Tilted	0.472	0.057	0.480	0.421	0.120	0.023	0.168	**0.541**	**0.444**	**0.589**
Left Cheek	1.083	0.407	1.001	0.531	0.215	0.182	0.309	**0.746**	**0.713**	**0.840**
Left Tilted	1.193	0.033	1.161	0.472	0.347	0.012	0.355	**0.819**	**0.484**	**0.827**

<WLAN Index 2>

Exposure Position	1 WLAN2.4GHz Ant 4 1g SAR (W/kg)	2 WLAN2.4GHz Ant 3 1g SAR (W/kg)	3 WLAN2.4GHz Ant 4+3 1g SAR (W/kg)	4 WLAN5/6GHz Ant 4+3 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	2+4 Summed 1g SAR (W/kg)	3+4 Summed 1g SAR (W/kg)
Right Cheek	0.276	0.348	0.325	1.180	**1.456**	**1.528**	**1.505**
Right Tilted	0.420	0.051	0.428	0.421	**0.841**	**0.472**	**0.849**
Left Cheek	0.735	0.363	0.892	0.531	**1.266**	**0.894**	**1.423**
Left Tilted	1.063	0.030	1.034	0.472	**1.535**	**0.502**	**1.506**

<WWAN Index 3, WLAN Index 3, BT Index 1>

WWAN Band	Exposure Position	1	2	3	4	5	6	7	8	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+5+6 Summed 1g SAR (W/kg)	1+5+7 Summed 1g SAR (W/kg)	1+5+8 Summed 1g SAR (W/kg)
		WWAN	WLAN 2.4GHz Ant 4	WLAN 2.4GHz Ant 3	WLAN 2.4GHz Ant 4+3	WLAN 5/GHz Ant 4+3	Bluetooth Ant 4	Bluetooth Ant 3	Bluetooth Ant 4+3						
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)						
Ant 0	Right Cheek	0.252	0.203	0.207	0.215	0.514	0.090	0.122	0.130	**0.455**	**0.459**	**0.467**	**0.856**	**0.888**	**0.896**
	Right Tilted	0.200	0.290	0.035	0.338	0.262	0.120	0.023	0.168	**0.490**	**0.235**	**0.538**	**0.582**	**0.485**	**0.630**
	Left Cheek	0.595	0.535	0.237	0.581	0.298	0.215	0.182	0.309	**1.130**	**0.832**	**1.176**	**1.108**	**1.075**	**1.202**
	Left Tilted	0.235	0.654	0.020	0.664	0.309	0.347	0.012	0.355	**0.889**	**0.255**	**0.899**	**0.891**	**0.556**	**0.899**
Ant 1	Right Cheek	0.898	0.203	0.207	0.215	0.514	0.090	0.122	0.130	**1.101**	**1.105**	**1.113**	**1.502**	**1.534**	**1.542**
	Right Tilted	0.884	0.290	0.035	0.338	0.262	0.120	0.023	0.168	**1.174**	**0.919**	**1.222**	**1.266**	**1.169**	**1.314**
	Left Cheek	0.655	0.535	0.237	0.581	0.298	0.215	0.182	0.309	**1.190**	**0.892**	**1.236**	**1.168**	**1.135**	**1.262**
	Left Tilted	0.672	0.654	0.020	0.664	0.309	0.347	0.012	0.355	**1.326**	**0.692**	**1.336**	**1.328**	**0.993**	**1.336**
Ant 2	Right Cheek	0.898	0.203	0.207	0.215	0.514	0.090	0.122	0.130	**1.101**	**1.105**	**1.113**	**1.502**	**1.534**	**1.542**
	Right Tilted	0.375	0.290	0.035	0.338	0.262	0.120	0.023	0.168	**0.665**	**0.410**	**0.713**	**0.757**	**0.660**	**0.805**
	Left Cheek	0.400	0.535	0.237	0.581	0.298	0.215	0.182	0.309	**0.935**	**0.637**	**0.981**	**0.913**	**0.880**	**1.007**
	Left Tilted	0.382	0.654	0.020	0.664	0.309	0.347	0.012	0.355	**1.036**	**0.402**	**1.046**	**1.038**	**0.703**	**1.046**
Ant 5	Right Cheek	0.771	0.203	0.207	0.215	0.514	0.090	0.122	0.130	**0.974**	**0.978**	**0.986**	**1.375**	**1.407**	**1.415**
	Right Tilted	0.100	0.290	0.035	0.338	0.262	0.120	0.023	0.168	**0.390**	**0.135**	**0.438**	**0.482**	**0.385**	**0.530**
	Left Cheek	0.892	0.535	0.237	0.581	0.298	0.215	0.182	0.309	**1.427**	**1.129**	**1.473**	**1.405**	**1.372**	**1.499**
	Left Tilted	0.196	0.654	0.020	0.664	0.309	0.347	0.012	0.355	**0.850**	**0.216**	**0.860**	**0.852**	**0.517**	**0.860**
Ant 6	Right Cheek	0.212	0.203	0.207	0.215	0.514	0.090	0.122	0.130	**0.415**	**0.419**	**0.427**	**0.816**	**0.848**	**0.856**
	Right Tilted	0.145	0.290	0.035	0.338	0.262	0.120	0.023	0.168	**0.435**	**0.180**	**0.483**	**0.527**	**0.430**	**0.575**
	Left Cheek	0.457	0.535	0.237	0.581	0.298	0.215	0.182	0.309	**0.992**	**0.694**	**1.038**	**0.970**	**0.937**	**1.064**
	Left Tilted	0.147	0.654	0.020	0.664	0.309	0.347	0.012	0.355	**0.801**	**0.167**	**0.811**	**0.803**	**0.468**	**0.811**
Ant 7	Right Cheek	0.136	0.203	0.207	0.215	0.514	0.090	0.122	0.130	**0.339**	**0.343**	**0.351**	**0.740**	**0.772**	**0.780**
	Right Tilted	0.082	0.290	0.035	0.338	0.262	0.120	0.023	0.168	**0.372**	**0.117**	**0.420**	**0.464**	**0.367**	**0.512**
	Left Cheek	0.087	0.535	0.237	0.581	0.298	0.215	0.182	0.309	**0.622**	**0.324**	**0.668**	**0.600**	**0.567**	**0.694**
	Left Tilted	0.095	0.654	0.020	0.664	0.309	0.347	0.012	0.355	**0.749**	**0.115**	**0.759**	**0.751**	**0.416**	**0.759**

<WWAN Index 3, WLAN Index 4>

WWAN Band	Exposure Position	1	2	3	4	5	1+2+5 Summed 1g SAR (W/kg)	1+3+5 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)
		WWAN	WLAN2.4GHz Ant 4	WLAN2.4GHz Ant 3	WLAN2.4GHz Ant 4+3	WLAN5/6GHz Ant 4+3			
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
Ant 0	Right Cheek	0.252	0.118	0.108	0.108	0.514	**0.884**	**0.874**	**0.874**
	Right Tilted	0.200	0.138	0.014	0.151	0.262	**0.600**	**0.476**	**0.613**
	Left Cheek	0.595	0.323	0.104	0.322	0.298	**1.216**	**0.997**	**1.215**
	Left Tilted	0.235	0.358	0.008	0.360	0.309	**0.902**	**0.552**	**0.904**
Ant 1	Right Cheek	0.898	0.118	0.108	0.108	0.514	**1.530**	**1.520**	**1.520**
	Right Tilted	0.884	0.138	0.014	0.151	0.262	**1.284**	**1.160**	**1.297**
	Left Cheek	0.655	0.323	0.104	0.322	0.298	**1.276**	**1.057**	**1.275**
	Left Tilted	0.672	0.358	0.008	0.360	0.309	**1.339**	**0.989**	**1.341**
Ant 2	Right Cheek	0.898	0.118	0.108	0.108	0.514	**1.530**	**1.520**	**1.520**
	Right Tilted	0.375	0.138	0.014	0.151	0.262	**0.775**	**0.651**	**0.788**
	Left Cheek	0.400	0.323	0.104	0.322	0.298	**1.021**	**0.802**	**1.020**
	Left Tilted	0.382	0.358	0.008	0.360	0.309	**1.049**	**0.699**	**1.051**
Ant 5	Right Cheek	0.771	0.118	0.108	0.108	0.514	**1.403**	**1.393**	**1.393**
	Right Tilted	0.100	0.138	0.014	0.151	0.262	**0.500**	**0.376**	**0.513**
	Left Cheek	0.892	0.323	0.104	0.322	0.298	**1.513**	**1.294**	**1.512**
	Left Tilted	0.196	0.358	0.008	0.360	0.309	**0.863**	**0.513**	**0.865**
Ant 6	Right Cheek	0.212	0.118	0.108	0.108	0.514	**0.844**	**0.834**	**0.834**
	Right Tilted	0.145	0.138	0.014	0.151	0.262	**0.545**	**0.421**	**0.558**
	Left Cheek	0.457	0.323	0.104	0.322	0.298	**1.078**	**0.859**	**1.077**
	Left Tilted	0.147	0.358	0.008	0.360	0.309	**0.814**	**0.464**	**0.816**
Ant 7	Right Cheek	0.136	0.118	0.108	0.108	0.514	**0.768**	**0.758**	**0.758**
	Right Tilted	0.082	0.138	0.014	0.151	0.262	**0.482**	**0.358**	**0.495**
	Left Cheek	0.087	0.323	0.104	0.322	0.298	**0.708**	**0.489**	**0.707**
	Left Tilted	0.095	0.358	0.008	0.360	0.309	**0.762**	**0.412**	**0.764**

16.3 Hotspot Exposure Conditions

<WWAN Index 4, WLAN Index 7>

WWAN Band	Exposure Position	1	2	3	4	5	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+5 Summed 1g SAR (W/kg)
		WWAN	WLAN2.4GHz Ant 4	WLAN2.4GHz Ant 3	WLAN2.4GHz Ant 4+3	WLAN5GHz Ant 4+3				
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)				
Ant 0	Front	0.708	0.399	0.255	0.457	0.335	**1.107**	**0.963**	**1.165**	**1.043**
	Back	0.774	0.384	0.266	0.464	0.176	**1.158**	**1.040**	**1.238**	**0.950**
	Left side	0.824	0.022	0.474	0.449	0.699	**0.846**	**1.298**	**1.273**	**1.523**
	Right side	0.369	0.444	0.006	0.522	0.210	**0.813**	**0.375**	**0.891**	**0.579**
	Top side		0.523	0.019	0.637	0.166	**0.523**	**0.019**	**0.637**	**0.166**
	Bottom side	0.894					**0.894**	**0.894**	**0.894**	**0.894**
Ant 1	Front	0.565	0.399	0.255	0.457	0.335	**0.964**	**0.820**	**1.022**	**0.900**
	Back	0.669	0.384	0.266	0.464	0.176	**1.053**	**0.935**	**1.133**	**0.845**
	Left side	0.803	0.022	0.474	0.449	0.699	**0.825**	**1.277**	**1.252**	**1.502**
	Right side	0.281	0.444	0.006	0.522	0.210	**0.725**	**0.287**	**0.803**	**0.491**
	Top side	0.893	0.523	0.019	0.637	0.166	**1.416**	**0.912**	**1.530**	**1.059**
	Bottom side						**0.000**	**0.000**	**0.000**	**0.000**
Ant 2	Front	0.622	0.399	0.255	0.457	0.335	**1.021**	**0.877**	**1.079**	**0.957**
	Back	0.821	0.384	0.266	0.464	0.176	**1.205**	**1.087**	**1.285**	**0.997**
	Left side	0.142	0.022	0.474	0.449	0.699	**0.164**	**0.616**	**0.591**	**0.841**
	Right side	0.895	0.444	0.006	0.522	0.210	**1.339**	**0.901**	**1.417**	**1.105**
	Top side		0.523	0.019	0.637	0.166	**0.523**	**0.019**	**0.637**	**0.166**
	Bottom side	0.317					**0.317**	**0.317**	**0.317**	**0.317**
Ant 5	Front	0.528	0.399	0.255	0.457	0.335	**0.927**	**0.783**	**0.985**	**0.863**
	Back	0.613	0.384	0.266	0.464	0.176	**0.997**	**0.879**	**1.077**	**0.789**
	Left side	0.062	0.022	0.474	0.449	0.699	**0.084**	**0.536**	**0.511**	**0.761**
	Right side	0.833	0.444	0.006	0.522	0.210	**1.277**	**0.839**	**1.355**	**1.043**
	Top side	0.118	0.523	0.019	0.637	0.166	**0.641**	**0.137**	**0.755**	**0.284**
	Bottom side						**0.000**	**0.000**	**0.000**	**0.000**
Ant 6	Front	0.839	0.399	0.255	0.457	0.335	**1.238**	**1.094**	**1.296**	**1.174**
	Back	0.621	0.384	0.266	0.464	0.176	**1.005**	**0.887**	**1.085**	**0.797**
	Left side	0.735	0.022	0.474	0.449	0.699	**0.757**	**1.209**	**1.184**	**1.434**
	Right side	0.001	0.444	0.006	0.522	0.210	**0.445**	**0.007**	**0.523**	**0.211**
	Top side		0.523	0.019	0.637	0.166	**0.523**	**0.019**	**0.637**	**0.166**
	Bottom side	0.234					**0.234**	**0.234**	**0.234**	**0.234**
Ant 7	Front	0.828	0.399	0.255	0.457	0.335	**1.227**	**1.083**	**1.285**	**1.163**
	Back	0.560	0.384	0.266	0.464	0.176	**0.944**	**0.826**	**1.024**	**0.736**
	Left side	0.103	0.022	0.474	0.449	0.699	**0.125**	**0.577**	**0.552**	**0.802**
	Right side	0.344	0.444	0.006	0.522	0.210	**0.788**	**0.350**	**0.866**	**0.554**
	Top side		0.523	0.019	0.637	0.166	**0.523**	**0.019**	**0.637**	**0.166**
	Bottom side	0.465					**0.465**	**0.465**	**0.465**	**0.465**

<WWAN Index 4, WLAN Index 8>

WWAN Band	Exposure Position	1	2	3	4	5	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+3+5 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)
		WWAN	WLAN2.4GHz Ant 4	WLAN2.4GHz Ant 3	WLAN2.4GHz Ant 4+3	WLAN5GHz Ant 4+3							
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)							
Ant 0	Front	0.708	0.211	0.135	0.221	0.145	**0.919**	**0.843**	**0.929**	**0.853**	**1.064**	**0.988**	**1.074**
	Back	0.774	0.200	0.144	0.258	0.051	**0.974**	**0.918**	**1.032**	**0.825**	**1.025**	**0.969**	**1.083**
	Left side	0.824	0.002	0.279	0.281	0.334	**0.826**	**1.103**	**1.105**	**1.158**	**1.160**	**1.437**	**1.439**
	Right side	0.369	0.222	0.002	0.284	0.056	**0.591**	**0.371**	**0.653**	**0.425**	**0.647**	**0.427**	**0.709**
	Top side		0.319	0.002	0.332	0.042	**0.319**	**0.002**	**0.332**	**0.042**	**0.361**	**0.044**	**0.374**
	Bottom side	0.894					**0.894**	**0.894**	**0.894**	**0.894**	**0.894**	**0.894**	**0.894**
Ant 1	Front	0.565	0.211	0.135	0.221	0.145	**0.776**	**0.700**	**0.786**	**0.710**	**0.921**	**0.845**	**0.931**
	Back	0.669	0.200	0.144	0.258	0.051	**0.869**	**0.813**	**0.927**	**0.720**	**0.920**	**0.864**	**0.978**
	Left side	0.803	0.002	0.279	0.281	0.334	**0.805**	**1.082**	**1.084**	**1.137**	**1.139**	**1.416**	**1.418**
	Right side	0.281	0.222	0.002	0.284	0.056	**0.503**	**0.283**	**0.565**	**0.337**	**0.559**	**0.339**	**0.621**
	Top side	0.893	0.319	0.002	0.332	0.042	**1.212**	**0.895**	**1.225**	**0.935**	**1.254**	**0.937**	**1.267**
	Bottom side						**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Ant 2	Front	0.622	0.211	0.135	0.221	0.145	**0.833**	**0.757**	**0.843**	**0.767**	**0.978**	**0.902**	**0.988**
	Back	0.821	0.200	0.144	0.258	0.051	**1.021**	**0.965**	**1.079**	**0.872**	**1.072**	**1.016**	**1.130**
	Left side	0.142	0.002	0.279	0.281	0.334	**0.144**	**0.421**	**0.423**	**0.476**	**0.478**	**0.755**	**0.757**
	Right side	0.895	0.222	0.002	0.284	0.056	**1.117**	**0.897**	**1.179**	**0.951**	**1.173**	**0.953**	**1.235**
	Top side		0.319	0.002	0.332	0.042	**0.319**	**0.002**	**0.332**	**0.042**	**0.361**	**0.044**	**0.374**
	Bottom side	0.317					**0.317**	**0.317**	**0.317**	**0.317**	**0.317**	**0.317**	**0.317**
Ant 5	Front	0.528	0.211	0.135	0.221	0.145	**0.739**	**0.663**	**0.749**	**0.673**	**0.884**	**0.808**	**0.894**
	Back	0.613	0.200	0.144	0.258	0.051	**0.813**	**0.757**	**0.871**	**0.664**	**0.864**	**0.808**	**0.922**
	Left side	0.062	0.002	0.279	0.281	0.334	**0.064**	**0.341**	**0.343**	**0.396**	**0.398**	**0.675**	**0.677**
	Right side	0.833	0.222	0.002	0.284	0.056	**1.055**	**0.835**	**1.117**	**0.889**	**1.111**	**0.891**	**1.173**
	Top side	0.118	0.319	0.002	0.332	0.042	**0.437**	**0.120**	**0.450**	**0.160**	**0.479**	**0.162**	**0.492**
	Bottom side						**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Ant 6	Front	0.839	0.211	0.135	0.221	0.145	**1.050**	**0.974**	**1.060**	**0.984**	**1.195**	**1.119**	**1.205**
	Back	0.621	0.200	0.144	0.258	0.051	**0.821**	**0.765**	**0.879**	**0.672**	**0.872**	**0.816**	**0.930**
	Left side	0.735	0.002	0.279	0.281	0.334	**0.737**	**1.014**	**1.016**	**1.069**	**1.071**	**1.348**	**1.350**
	Right side	0.001	0.222	0.002	0.284	0.056	**0.223**	**0.003**	**0.285**	**0.057**	**0.279**	**0.059**	**0.341**
	Top side		0.319	0.002	0.332	0.042	**0.319**	**0.002**	**0.332**	**0.042**	**0.361**	**0.044**	**0.374**
	Bottom side	0.234					**0.234**	**0.234**	**0.234**	**0.234**	**0.234**	**0.234**	**0.234**
Ant 7	Front	0.828	0.211	0.135	0.221	0.145	**1.039**	**0.963**	**1.049**	**0.973**	**1.184**	**1.108**	**1.194**
	Back	0.560	0.200	0.144	0.258	0.051	**0.760**	**0.704**	**0.818**	**0.611**	**0.811**	**0.755**	**0.869**
	Left side	0.103	0.002	0.279	0.281	0.334	**0.105**	**0.382**	**0.384**	**0.437**	**0.439**	**0.716**	**0.718**
	Right side	0.344	0.222	0.002	0.284	0.056	**0.566**	**0.346**	**0.628**	**0.400**	**0.622**	**0.402**	**0.684**
	Top side		0.319	0.002	0.332	0.042	**0.319**	**0.002**	**0.332**	**0.042**	**0.361**	**0.044**	**0.374**
	Bottom side	0.465					**0.465**	**0.465**	**0.465**	**0.465**	**0.465**	**0.465**	**0.465**

<WWAN Index 4, WLAN Index 9, BT Index 4>

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3 Summed 1g SAR (W/kg)	1+2+4 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)
		WWAN	WLAN5GHz Ant 4+3	Bluetooth Ant 4	Bluetooth Ant 3	Bluetooth Ant 4+3			
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
Ant 0	Front	0.708	0.145	0.302	0.194	0.171	**1.155**	**1.047**	**1.024**
	Back	0.774	0.051	0.277	0.195	0.187	**1.102**	**1.020**	**1.012**
	Left side	0.824	0.334	0.008	0.323	0.176	**1.166**	**1.481**	**1.334**
	Right side	0.369	0.030	0.311	0.008	0.177	**0.710**	**0.407**	**0.576**
	Top side		0.042	0.452	0.028	0.490	**0.494**	**0.070**	**0.532**
	Bottom side	0.894					**0.894**	**0.894**	**0.894**
Ant 1	Front	0.565	0.145	0.302	0.194	0.171	**1.012**	**0.904**	**0.881**
	Back	0.669	0.051	0.277	0.195	0.187	**0.997**	**0.915**	**0.907**
	Left side	0.803	0.334	0.008	0.323	0.176	**1.145**	**1.460**	**1.313**
	Right side	0.281	0.030	0.311	0.008	0.177	**0.622**	**0.319**	**0.488**
	Top side	0.893	0.042	0.452	0.028	0.490	**1.387**	**0.963**	**1.425**
	Bottom side						**0.000**	**0.000**	**0.000**
Ant 2	Front	0.622	0.145	0.302	0.194	0.171	**1.069**	**0.961**	**0.938**
	Back	0.821	0.051	0.277	0.195	0.187	**1.149**	**1.067**	**1.059**
	Left side	0.142	0.334	0.008	0.323	0.176	**0.484**	**0.799**	**0.652**
	Right side	0.895	0.030	0.311	0.008	0.177	**1.236**	**0.933**	**1.102**
	Top side		0.042	0.452	0.028	0.490	**0.494**	**0.070**	**0.532**
	Bottom side	0.317					**0.317**	**0.317**	**0.317**
Ant 5	Front	0.528	0.145	0.302	0.194	0.171	**0.975**	**0.867**	**0.844**
	Back	0.613	0.051	0.277	0.195	0.187	**0.941**	**0.859**	**0.851**
	Left side	0.062	0.334	0.008	0.323	0.176	**0.404**	**0.719**	**0.572**
	Right side	0.833	0.030	0.311	0.008	0.177	**1.174**	**0.871**	**1.040**
	Top side	0.118	0.042	0.452	0.028	0.490	**0.612**	**0.188**	**0.650**
	Bottom side						**0.000**	**0.000**	**0.000**
Ant 6	Front	0.839	0.145	0.302	0.194	0.171	**1.286**	**1.178**	**1.155**
	Back	0.621	0.051	0.277	0.195	0.187	**0.949**	**0.867**	**0.859**
	Left side	0.735	0.334	0.008	0.323	0.176	**1.077**	**1.392**	**1.245**
	Right side	0.001	0.030	0.311	0.008	0.177	**0.342**	**0.039**	**0.208**
	Top side		0.042	0.452	0.028	0.490	**0.494**	**0.070**	**0.532**
	Bottom side	0.234					**0.234**	**0.234**	**0.234**
Ant 7	Front	0.828	0.145	0.302	0.194	0.171	**1.275**	**1.167**	**1.144**
	Back	0.560	0.051	0.277	0.195	0.187	**0.888**	**0.806**	**0.798**
	Left side	0.103	0.334	0.008	0.323	0.176	**0.445**	**0.760**	**0.613**
	Right side	0.344	0.030	0.311	0.008	0.177	**0.685**	**0.382**	**0.551**
	Top side		0.042	0.452	0.028	0.490	**0.494**	**0.070**	**0.532**
	Bottom side	0.465					**0.465**	**0.465**	**0.465**

<WWAN Index 4, BT Index 3>

WWAN Band	Exposure Position	1	3	4	5	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)
		WWAN	Bluetooth Ant 4	Bluetooth Ant 3	Bluetooth Ant 4+3			
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
Ant 0	Front	0.708	0.364	0.230	0.279	**1.072**	**0.938**	**0.987**
	Back	0.774	0.356	0.235	0.105	**1.130**	**1.009**	**0.879**
	Left side	0.824	0.039	0.380	0.313	**0.863**	**1.204**	**1.137**
	Right side	0.369	0.405	0.012	0.277	**0.774**	**0.381**	**0.646**
	Top side		0.529	0.031	0.528	**0.529**	**0.031**	**0.528**
	Bottom side	0.894				**0.894**	**0.894**	**0.894**
Ant 1	Front	0.565	0.364	0.230	0.279	**0.929**	**0.795**	**0.844**
	Back	0.669	0.356	0.235	0.105	**1.025**	**0.904**	**0.774**
	Left side	0.803	0.039	0.380	0.313	**0.842**	**1.183**	**1.116**
	Right side	0.281	0.405	0.012	0.277	**0.686**	**0.293**	**0.558**
	Top side	0.893	0.529	0.031	0.528	**1.422**	**0.924**	**1.421**
	Bottom side					**0.000**	**0.000**	**0.000**
Ant 2	Front	0.622	0.364	0.230	0.279	**0.986**	**0.852**	**0.901**
	Back	0.821	0.356	0.235	0.105	**1.177**	**1.056**	**0.926**
	Left side	0.142	0.039	0.380	0.313	**0.181**	**0.522**	**0.455**
	Right side	0.895	0.405	0.012	0.277	**1.300**	**0.907**	**1.172**
	Top side		0.529	0.031	0.528	**0.529**	**0.031**	**0.528**
	Bottom side	0.317				**0.317**	**0.317**	**0.317**
Ant 5	Front	0.528	0.364	0.230	0.279	**0.892**	**0.758**	**0.807**
	Back	0.613	0.356	0.235	0.105	**0.969**	**0.848**	**0.718**
	Left side	0.062	0.039	0.380	0.313	**0.101**	**0.442**	**0.375**
	Right side	0.833	0.405	0.012	0.277	**1.238**	**0.845**	**1.110**
	Top side	0.118	0.529	0.031	0.528	**0.647**	**0.149**	**0.646**
	Bottom side					**0.000**	**0.000**	**0.000**
Ant 6	Front	0.839	0.364	0.230	0.279	**1.203**	**1.069**	**1.118**
	Back	0.621	0.356	0.235	0.105	**0.977**	**0.856**	**0.726**
	Left side	0.735	0.039	0.380	0.313	**0.774**	**1.115**	**1.048**
	Right side	0.001	0.405	0.012	0.277	**0.406**	**0.013**	**0.278**
	Top side		0.529	0.031	0.528	**0.529**	**0.031**	**0.528**
	Bottom side	0.234				**0.234**	**0.234**	**0.234**
Ant 7	Front	0.828	0.364	0.230	0.279	**1.192**	**1.058**	**1.107**
	Back	0.560	0.356	0.235	0.105	**0.916**	**0.795**	**0.665**
	Left side	0.103	0.039	0.380	0.313	**0.142**	**0.483**	**0.416**
	Right side	0.344	0.405	0.012	0.277	**0.749**	**0.356**	**0.621**
	Top side		0.529	0.031	0.528	**0.529**	**0.031**	**0.528**
	Bottom side	0.465				**0.465**	**0.465**	**0.465**

16.4 Body-Worn Accessory Exposure Conditions

<WLAN Index 5, BT Index 3>

Exposure Position	1	2	3	4	5	6	7	4+5 Summed 1g SAR (W/kg)	4+6 Summed 1g SAR (W/kg)	4+7 Summed 1g SAR (W/kg)
	WLAN2.4GHz Ant 4	WLAN2.4GHz Ant 3	WLAN2.4GHz Ant 4+3	WLAN5/6GHz Ant 4+3	Bluetooth Ant 4	Bluetooth Ant 3	Bluetooth Ant 4+3			
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
Front	0.678	0.317	0.687	0.787	0.364	0.230	0.279	**1.151**	**1.017**	**1.066**
Back	0.691	0.294	0.703	0.351	0.356	0.235	0.105	**0.707**	**0.586**	**0.456**

<WLAN Index 6>

Exposure Position	1	2	3	4	1+4 Summed 1g SAR (W/kg)	2+4 Summed 1g SAR (W/kg)	3+4 Summed 1g SAR (W/kg)
	WLAN2.4GHz Ant 4	WLAN2.4GHz Ant 3	WLAN2.4GHz Ant 4+3	WLAN5/6GHz Ant 4+3			
	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
Front	0.678	0.317	0.687	0.787	**1.465**	**1.104**	**1.474**
Back	0.691	0.294	0.703	0.351	**1.042**	**0.645**	**1.054**

<WWAN Index 6, WLAN Index 7>

WWAN Band	Exposure Position	1	2	3	4	5	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+5 Summed 1g SAR (W/kg)
		WWAN	WLAN2.4GHz Ant 4	WLAN2.4GHz Ant 3	WLAN2.4GHz Ant 4+3	WLAN5/6GHz Ant 4+3				
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)				
Ant 0	Front	0.844	0.399	0.255	0.457	0.587	**1.243**	**1.099**	**1.301**	**1.431**
	Back	0.896	0.384	0.266	0.464	0.351	**1.280**	**1.162**	**1.360**	**1.247**
Ant 1	Front	0.836	0.399	0.255	0.457	0.587	**1.235**	**1.091**	**1.293**	**1.423**
	Back	0.677	0.384	0.266	0.464	0.351	**1.061**	**0.943**	**1.141**	**1.028**
Ant 2	Front	0.651	0.399	0.255	0.457	0.587	**1.050**	**0.906**	**1.108**	**1.238**
	Back	0.885	0.384	0.266	0.464	0.351	**1.269**	**1.151**	**1.349**	**1.236**
Ant 5	Front	0.489	0.399	0.255	0.457	0.587	**0.888**	**0.744**	**0.946**	**1.076**
	Back	0.681	0.384	0.266	0.464	0.351	**1.065**	**0.947**	**1.145**	**1.032**
Ant 6	Front	0.839	0.399	0.255	0.457	0.587	**1.238**	**1.094**	**1.296**	**1.426**
	Back	0.621	0.384	0.266	0.464	0.351	**1.005**	**0.887**	**1.085**	**0.972**
Ant 7	Front	0.828	0.399	0.255	0.457	0.587	**1.227**	**1.083**	**1.285**	**1.415**
	Back	0.560	0.384	0.266	0.464	0.351	**0.944**	**0.826**	**1.024**	**0.911**

<WWAN Index 6, WLAN Index 8>

WWAN Band	Exposure Position	1	2	3	4	5	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)	1+5 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)	1+3+5 Summed 1g SAR (W/kg)	1+4+5 Summed 1g SAR (W/kg)
		WWAN	WLAN 2.4GHz Ant 4	WLAN 2.4GHz Ant 3	WLAN2.4GHz Ant 4+3	WLAN5/6GHz Ant 4+3							
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)							
Ant 0	Front	0.844	0.211	0.135	0.221	0.396	**1.055**	**0.979**	**1.065**	**1.240**	**1.451**	**1.375**	**1.461**
	Back	0.896	0.200	0.144	0.258	0.268	**1.096**	**1.040**	**1.154**	**1.164**	**1.364**	**1.308**	**1.422**
Ant 1	Front	0.836	0.211	0.135	0.221	0.396	**1.047**	**0.971**	**1.057**	**1.232**	**1.443**	**1.367**	**1.453**
	Back	0.677	0.200	0.144	0.258	0.268	**0.877**	**0.821**	**0.935**	**0.945**	**1.145**	**1.089**	**1.203**
Ant 2	Front	0.651	0.211	0.135	0.221	0.396	**0.862**	**0.786**	**0.872**	**1.047**	**1.258**	**1.182**	**1.268**
	Back	0.885	0.200	0.144	0.258	0.268	**1.085**	**1.029**	**1.143**	**1.153**	**1.353**	**1.297**	**1.411**
Ant 5	Front	0.489	0.211	0.135	0.221	0.396	**0.700**	**0.624**	**0.710**	**0.885**	**1.096**	**1.020**	**1.106**
	Back	0.681	0.200	0.144	0.258	0.268	**0.881**	**0.825**	**0.939**	**0.949**	**1.149**	**1.093**	**1.207**
Ant 6	Front	0.839	0.211	0.135	0.221	0.396	**1.050**	**0.974**	**1.060**	**1.235**	**1.446**	**1.370**	**1.456**
	Back	0.621	0.200	0.144	0.258	0.268	**0.821**	**0.765**	**0.879**	**0.889**	**1.089**	**1.033**	**1.147**
Ant 7	Front	0.828	0.211	0.135	0.221	0.396	**1.039**	**0.963**	**1.049**	**1.224**	**1.435**	**1.359**	**1.445**
	Back	0.560	0.200	0.144	0.258	0.268	**0.760**	**0.704**	**0.818**	**0.828**	**1.028**	**0.972**	**1.086**

<WWAN Index 6, WLAN Index 9, BT Index 4>

WWAN Band	Exposure Position	1	2	3	4	5	1+2+3 Summed 1g SAR (W/kg)	1+2+4 Summed 1g SAR (W/kg)	1+2+5 Summed 1g SAR (W/kg)
		WWAN	WLAN 5/6GHz Ant 4+3	Bluetooth Ant 4	Bluetooth Ant 3	Bluetooth Ant 4+3			
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
Ant 0	Front	0.844	0.396	0.302	0.194	0.171	**1.542**	**1.434**	**1.411**
	Back	0.896	0.268	0.277	0.195	0.187	**1.441**	**1.359**	**1.351**
Ant 1	Front	0.836	0.396	0.302	0.194	0.171	**1.534**	**1.426**	**1.403**
	Back	0.677	0.268	0.277	0.195	0.187	**1.222**	**1.140**	**1.132**
Ant 2	Front	0.651	0.396	0.302	0.194	0.171	**1.349**	**1.241**	**1.218**
	Back	0.885	0.268	0.277	0.195	0.187	**1.430**	**1.348**	**1.340**
Ant 5	Front	0.489	0.396	0.302	0.194	0.171	**1.187**	**1.079**	**1.056**
	Back	0.681	0.268	0.277	0.195	0.187	**1.226**	**1.144**	**1.136**
Ant 6	Front	0.839	0.396	0.302	0.194	0.171	**1.537**	**1.429**	**1.406**
	Back	0.621	0.268	0.277	0.195	0.187	**1.166**	**1.084**	**1.076**
Ant 7	Front	0.828	0.396	0.302	0.194	0.171	**1.526**	**1.418**	**1.395**
	Back	0.560	0.268	0.277	0.195	0.187	**1.105**	**1.023**	**1.015**

<WWAN Index 6, BT Index 3>

WWAN Band	Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3 Summed 1g SAR (W/kg)	1+4 Summed 1g SAR (W/kg)
		WWAN	Bluetooth Ant 4	Bluetooth Ant 3	BluetoothAnt 4+3			
		1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)			
Ant 0	Front	0.844	0.364	0.230	0.279	**1.208**	**1.074**	**1.123**
	Back	0.896	0.356	0.235	0.105	**1.252**	**1.131**	**1.001**
Ant 1	Front	0.836	0.364	0.230	0.279	**1.200**	**1.066**	**1.115**
	Back	0.677	0.356	0.235	0.105	**1.033**	**0.912**	**0.782**
Ant 2	Front	0.651	0.364	0.230	0.279	**1.015**	**0.881**	**0.930**
	Back	0.885	0.356	0.235	0.105	**1.241**	**1.120**	**0.990**
Ant 5	Front	0.489	0.364	0.230	0.279	**0.853**	**0.719**	**0.768**
	Back	0.681	0.356	0.235	0.105	**1.037**	**0.916**	**0.786**
Ant 6	Front	0.839	0.364	0.230	0.279	**1.203**	**1.069**	**1.118**
	Back	0.621	0.356	0.235	0.105	**0.977**	**0.856**	**0.726**
Ant 7	Front	0.828	0.364	0.230	0.279	**1.192**	**1.058**	**1.107**
	Back	0.560	0.356	0.235	0.105	**0.916**	**0.795**	**0.665**

16.5 Product Specific Exposure Conditions

<WWAN, WLAN Index 7>

WWAN Band	Exposure Position	1	2	1+2 Summed 10g SAR (W/kg)
		WWAN	WLAN5/6GHz Ant 4+3	
		10g SAR (W/kg)	10g SAR (W/kg)	
Ant 0	Front		1.670	**1.670**
	Back		0.680	**0.680**
	Left side		2.900	**2.900**
	Right side		0.935	**0.935**
	Top side		0.480	**0.480**
	Bottom side	2.970		**2.970**
Ant 1	Front		1.670	**1.670**
	Back		0.680	**0.680**
	Left side		2.900	**2.900**
	Right side		0.935	**0.935**
	Top side	2.974	0.480	**3.454**
	Bottom side			**0.000**
Ant 2	Front		1.670	**1.670**
	Back		0.680	**0.680**
	Left side		2.900	**2.900**
	Right side	2.972	0.935	**3.907**
	Top side		0.480	**0.480**
	Bottom side			**0.000**

<WWAN, WLAN Index 8/9>

WWAN Band	Exposure Position	1	2	1+2 Summed 10g SAR (W/kg)
		WWAN	WLAN5/6GHz Ant 4+3	
		10g SAR (W/kg)	10g SAR (W/kg)	
Ant 0	Front		1.043	**1.043**
	Back		0.520	**0.520**
	Left side		2.472	**2.472**
	Right side		0.689	**0.689**
	Top side		0.376	**0.376**
	Bottom side	2.970		**2.970**
Ant 1	Front		1.043	**1.043**
	Back		0.520	**0.520**
	Left side		2.472	**2.472**
	Right side		0.689	**0.689**
	Top side	2.974	0.376	**3.350**
	Bottom side			**0.000**
Ant 2	Front		1.043	**1.043**
	Back		0.520	**0.520**
	Left side		2.472	**2.472**
	Right side	2.972	0.689	**3.661**
	Top side		0.376	**0.376**
	Bottom side			**0.000**

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17. Uncertainty Assessment

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.

The component of uncertainly may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainly by the statistical analysis of a series of observations is termed a Type An evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor[a]	1/k[b]	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) κ is the coverage factor

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.

Applicable for SAR Measurements:

Uncertainty Budget (4 MHz - 10 GHz range)							
Error Description	**Uncertainty Value (±%)**	**Probability**	**Divisor**	**(Ci) 1g**	**(Ci) 10g**	**Standard Uncertainty (1g) (±%)**	**Standard Uncertainty (10g) (±%)**
Measurement System							
Probe Calibration	18.60	N	2	1	1	9.3	9.3
Axial Isotropy	4.70	R	1.732	0.7	0.7	1.9	1.9
Hemispherical Isotropy	9.60	R	1.732	0.7	0.7	3.9	3.9
Linearity	4.70	R	1.732	1	1	2.7	2.7
Modulation Response	4.68	R	1.732	1	1	2.7	2.7
System Detection Limits	1.00	R	1.732	1	1	0.6	0.6
Boundary Effects	2.00	R	1.732	1	1	1.2	1.2
Readout Electronics	0.30	N	1	1	1	0.3	0.3
Response Time	0.00	R	1.732	1	1	0.0	0.0
Integration Time	2.60	R	1.732	1	1	1.5	1.5
RF Ambient Noise	3.00	R	1.732	1	1	1.7	1.7
RF Ambient Reflections	3.00	R	1.732	1	1	1.7	1.7
Probe Positioner	0.40	R	1.732	1	1	0.2	0.2
Probe Positioning	6.70	R	1.732	1	1	3.9	3.9
Post-processing	4.00	R	1.732	1	1	2.3	2.3
Test Sample Related							
Device Holder	3.60	N	1	1	1	3.6	3.6
Test sample Positioning	3.03	N	1	1	1	3.0	3.0
Power Scaling	0.00	R	1.732	1	1	0.0	0.0
Power Drift	5.00	R	1.732	1	1	2.9	2.9
Phantom and Setup							
Phantom Uncertainty	7.60	R	1.732	1	1	4.4	4.4
SAR correction	0.00	R	1.732	1	0.84	0.0	0.0
Liquid Conductivity Repeatability	0.03	N	1	0.78	0.77	0.0	0.0
Liquid Conductivity (target)	5.00	R	1.732	0.78	0.77	2.3	2.2
Liquid Conductivity (mea.)	2.50	R	1.732	0.78	0.77	1.1	1.1
Temp. unc. - Conductivity	3.68	R	1.732	0.78	0.77	1.7	1.6
Liquid Permittivity Repeatability	0.02	N	1	0.23	0.26	0.0	0.0
Liquid Permittivity (target)	5.00	R	1.732	0.23	0.26	0.7	0.8
Liquid Permittivity (mea.)	2.50	R	1.732	0.23	0.26	0.3	0.4
Temp. unc. - Permittivity	0.84	R	1.732	0.23	0.26	0.1	0.1
Combined Std. Uncertainty						14.5%	14.2%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						29.0%	28.4%

Applicable for Power Density Measurements:

Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (±dB)
Probe Calibration	0.49	N	1	1	0.49
Probe correction	0.00	R	1.732	1	0.00
Frequency response (BW ≤ 1 GHz)	0.20	R	1.732	1	0.12
Sensor cross coupling	0.00	R	1.732	1	0.00
Isotropy	0.50	R	1.732	1	0.29
Linearity	0.20	R	1.732	1	0.12
Probe scattering	0.00	R	1.732	1	0.00
Probe positioning offset	0.30	R	1.732	1	0.17
Probe positioning repeatability	0.04	R	1.732	1	0.02
Sensor mechanical offset	0.00	R	1.732	1	0.00
Probe spatial resolution	0.00	R	1.732	1	0.00
Field impedance dependance	0.00	R	1.732	1	0.00
Amplitude and phase drift	0.00	R	1.732	1	0.00
Amplitude and phase noise	0.04	R	1.732	1	0.02
Measurement area truncation	0.00	R	1.732	1	0.00
Data acquisition	0.03	N	1	1	0.03
Sampling	0.00	R	1.732	1	0.00
Field reconstruction	2.00	R	1.732	1	1.15
Forward transformation	0.00	R	1.732	1	0.00
Power density scaling	0.00	R	1.732	1	0.00
Spatial averaging	0.10	R	1.732	1	0.06
System detection limit	0.04	R	1.732	1	0.02
Uncertainty terms dep endent on the DUT and environmental factors					
Probe coupling with DUT	0.00	R	1.732	1	0.0
Modulation response	0.40	R	1.732	1	0.2
Integration time	0.00	R	1.732	1	0.0
Response time	0.00	R	1.732	1	0.0
Device holder influence	0.10	R	1.732	1	0.1
DUT alignment	0.00	R	1.732	1	0.0
RF ambient conditions	0.04	R	1.732	1	0.0
Ambient reflections	0.04	R	1.732	1	0.0
Immunity / secondary reception	0.00	R	1.732	1	0.0
Drift of the DUT		R	1.732	1	
Combined Std. Uncertainty					1.34
Expanded STD Uncertainty (95%)					**2.68**

18. References

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[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

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[16] SPEAG DASY6 System Handbook

[17] SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)