FCC WiFi 6E RF Exposure

The following samples were submitted and identified on behalf of the client as:

Equipment Under Test	ASUS Phone (Mobile Phone)
Model No.	ASUS_I006D
Brand Name	ASUS
Company Name	ASUSTeK COMPUTER INC.
Company Address	1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan
Standards	IEEE/ANSI C95.1-1992, IEEE 1528-2013,
FCC ID	MSQI006D
Date of Receipt	Jan. 26, 2021
Date of Test(s)	May. 13, 2021 ~ May. 15, 2021
Date of Issue	May. 28, 2021

In the configuration tested, the EUT complied with the standards specified above.

Remarks:

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS Taiwan Ltd. Central RF Lab or testing done by SGS Taiwan Ltd. Central RF Lab in connection with distribution or use of the product described in this report must be approved by SGS Taiwan Ltd. Central RF Lab in writing.

Signed on behalf of SGS

Clerk / Ruby Ou	Supervisor / Afu Chen	Asst. Manager / John Yeh
Ruby Ou	afu Chen	John Yeh

Date: May. 28, 2021

Revision History

Report Number	Revision	Description	Issue Date
EN/2021/20002-01	Rev.00	Initial creation of document	May. 28, 2021

Note:

1. Measurement results in the original test report EN/2021/20002 are partially leveraged in this test report EN/2021/20002-01.

Contents

0. Guidance applied

- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- IEC/IEEE 62209-1528:2020
- SPEAG DASY6 System Handbook
- SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)
- IEC TR 63170:2018
- IEC 62479:2010
- 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

1. General Information

1.1 Testing Laboratory

SGS Taiwan Ltd. Central RF Lab	
1F, No. 8, Alley 15, Lane 120, Sec. 1, NeiHu Road, Neihu District, Taipei City, 11493, Taiwan.	
FCC Designation Number	TW0029
Tel	+886-2-2299-3279
Fax	+886-2-2298-0488
Internet	http://www.tw.sgs.com/

1.2 Details of Applicant

Company Name	ASUSTeK COMPUTER INC.
Company Address	1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

1.3 Description of EUT

EUT Name	ASUS Phone (Mobile Phone)			
FCC ID	MSQI006D			
Brand Name	ASUS			
Model No.	ASUS_I006D			
Mode of Operation	☒WLAN802.11 ax(20M/40M/80M/160M) ☒Bluetooth			
Duty Cycle	WLAN802.11ax (20M/40M/80M/160M)	1		
	Bluetooth	1		
TX Frequency Range (MHz)	WLAN U-NII 5	5925	—	6425
	WLAN U-NII 6	6425	—	6525
	WLAN U-NII 7	6525	—	6875
	WLAN U-NII 8	6875	—	7125
	Bluetooth	2400	—	2483.5

Brand & Mode	Tx Frequency	SAR			APD			PD
	MHz	1g Head (W/kg)	1g Bodyworn (W/kg)	10g Phablet (W/kg)	Head (mW/cm^2)	Bodyworn (mW/cm^2)	Phablet (W/cm^2)	psPD (mW/cm^2)
WiFi 6E	5925-7125	1.19	0.30	0.53	0.61	0.26	0.47	0.99

WiFi 6E power table

Default

ANT 7						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
WiFi 6E	802.11ax20-HE0	1	5955	MCS0	5.00	Not required
		57	6235		5.00	
		113	6515		8.00	
		173	6815		8.00	
		233	7115		9.00	
	802.11ax40-HE0	3	5965	MCS0	7.50	
		59	6245		8.00	
		107	6485		10.00	
		171	6805		11.00	
		227	7085		12.00	
	802.11ax80-HE0	7	5985	MCS0	11.50	
		71	6305		10.50	
		119	6545		12.00	
		167	6785		12.00	
		215	7025		12.00	
	802.11ax160-HE0	15	6025	MCS0	12.00	11.90
		47	6185		12.00	11.98
		79	6345		12.00	11.92
		111	6505		12.00	11.98
		175	6825		12.00	11.99
		207	6985		12.00	11.94

ANT 8						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
WiFi 6E	802.11ax20-HE0	1	5955	MCS0	5.00	Not required
		57	6235		5.00	
		113	6515		8.00	
		173	6815		8.00	
		233	7115		9.00	
	802.11ax40-HE0	3	5965	MCS0	7.50	
		59	6245		8.00	
		107	6485		10.00	
		171	6805		10.50	
		227	7085		10.50	
	802.11ax80-HE0	7	5985	MCS0	10.50	
		71	6305		10.50	
		119	6545		10.50	
		167	6785		10.50	
		215	7025		10.50	
	802.11ax160-HE0	15	6025	MCS0	10.50	10.49
		47	6185		10.50	10.45
		79	6345		10.50	10.40
		111	6505		10.50	10.44
		175	6825		10.50	10.48
		207	6985		10.50	10.47

WiFi only_DBS_receiver

ANT 7						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
WiFi 6E	802.11ax20-HE0	1	5955	MCS0	5.00	Not required
		57	6235		5.00	
		113	6515		8.00	
		173	6815		8.00	
		233	7115		9.00	
	802.11ax40-HE0	3	5965	MCS0	7.50	
		59	6245		8.00	
		107	6485		9.50	
		171	6805		9.50	
		227	7085		9.50	
	802.11ax80-HE0	7	5985	MCS0	9.50	
		71	6305		9.50	
		119	6545		9.50	
		167	6785		9.50	
		215	7025		9.50	
	802.11ax160-HE0	15	6025	MCS0	9.50	9.45
		47	6185		9.50	9.48
		79	6345		9.50	9.43
		111	6505		9.50	9.48
		175	6825		9.50	9.49
		207	6985		9.50	9.44

ANT 8						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
WiFi 6E	802.11ax20-HE0	1	5955	MCS0	5.00	Not required
		57	6235		5.00	
		113	6515		8.00	
		173	6815		8.00	
		233	7115		9.00	
	802.11ax40-HE0	3	5965	MCS0	7.50	
		59	6245		8.00	
		107	6485		9.50	
		171	6805		9.50	
		227	7085		9.50	
	802.11ax80-HE0	7	5985	MCS0	9.50	
		71	6305		9.50	
		119	6545		9.50	
		167	6785		9.50	
		215	7025		9.50	
	802.11ax160-HE0	15	6025	MCS0	9.50	9.49
		47	6185		9.50	9.47
		79	6345		9.50	9.40
		111	6505		9.50	9.44
		175	6825		9.50	9.49
		207	6985		9.50	9.47

WLAN+WWAN_receiver_SISO&MIMO

ANT 7						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
WiFi 6E	802.11ax20-HE0	1	5955	MCS0	5.00	Not required
		57	6235		5.00	
		113	6515		7.50	
		173	6815		7.50	
		233	7115		7.50	
	802.11ax40-HE0	3	5965	MCS0	7.50	
		59	6245		7.50	
		107	6485		7.50	
		171	6805		7.50	
		227	7085		7.50	
	802.11ax80-HE0	7	5985	MCS0	7.50	
		71	6305		7.50	
		119	6545		7.50	
		167	6785		7.50	
		215	7025		7.50	
	802.11ax160-HE0	15	6025	MCS0	7.50	7.41
		47	6185		7.50	7.43
		79	6345		7.50	7.45
		111	6505		7.50	7.48
		175	6825		7.50	7.45
		207	6985		7.50	7.41

ANT 8						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
WiFi 6E	802.11ax20-HE0	1	5955	MCS0	5.00	Not required
		57	6235		5.00	
		113	6515		7.50	
		173	6815		7.50	
		233	7115		7.50	
	802.11ax40-HE0	3	5965	MCS0	7.50	
		59	6245		7.50	
		107	6485		7.50	
		171	6805		7.50	
		227	7085		7.50	
	802.11ax80-HE0	7	5985	MCS0	7.50	
		71	6305		7.50	
		119	6545		7.50	
		167	6785		7.50	
		215	7025		7.50	
	802.11ax160-HE0	15	6025	MCS0	7.50	7.42
		47	6185		7.50	7.47
		79	6345		7.50	7.44
		111	6505		7.50	7.42
		175	6825		7.50	7.49
		207	6985		7.50	7.45

WLAN+WWAN_receiver_DBS

ANT 7						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
WiFi 6E	802.11ax20-HE0	1	5955	MCS0	5.00	Not required
		57	6235		5.00	
		113	6515		5.50	
		173	6815		5.50	
		233	7115		5.50	
	802.11ax40-HE0	3	5965	MCS0	5.50	
		59	6245		5.50	
		107	6485		5.50	
		171	6805		5.50	
		227	7085		5.50	
	802.11ax80-HE0	7	5985	MCS0	5.50	
		71	6305		5.50	
		119	6545		5.50	
		167	6785		5.50	
		215	7025		5.50	
	802.11ax160-HE0	15	6025	MCS0	5.50	5.42
		47	6185		5.50	5.43
		79	6345		5.50	5.45
		111	6505		5.50	5.48
		175	6825		5.50	5.46
		207	6985		5.50	5.44

ANT 8						
Band	Mode	Channel	Frequency (MHz)	Data Rate	Max. Rated Avg. Power + Max. Tolerance (dBm)	Average power (dBm)
WiFi 6E	802.11ax20-HE0	1	5955	MCS0	5.00	Not required
		57	6235		5.00	
		113	6515		5.50	
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		71	6305		5.50	
		119	6545		5.50	
		167	6785		5.50	
		215	7025		5.50	
	802.11ax160-HE0	15	6025	MCS0	5.50	5.44
		47	6185		5.50	5.47
		79	6345		5.50	5.44
		111	6505		5.50	5.44
		175	6825		5.50	5.49
		207	6985		5.50	5.41

1.4 Test Environment

Ambient Temperature: 22±2° C
Tissue Simulating Liquid: 22±2° C

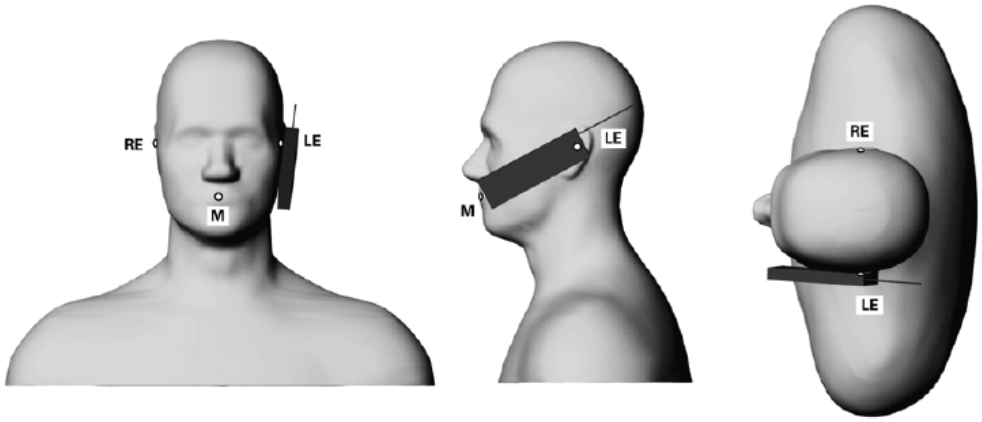
1.5 Operation Description

1. An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band.
2. SAR is measured using the highest measured maximum output power channel. When the reported SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for the subsequent next highest measured output power channel(s) in the initial test configuration until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
3. Since the highest reported SAR for the initial test configuration is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for subsequent test configuration.
4. 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.
5. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing. 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
6. According to KDB865664 D01, SAR measurement variability must be assessed for each frequency band. When the original highest measured SAR is ≥ 0.8 W/kg, repeated that measurement once. Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~10% from the 1-g SAR limit)
7. WIFI 6E of 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.
8. The device doesn't support wireless router capability (hotspot function) in WIFI 6E, so head SAR, body-worn SAR, and product specific 10g-SAR are measured.
9. Per October 2020 & April 2021 TCB Workshop Interim procedures and FCC guidance, start instead with a minimum of 5 test channels across the full band, then adapt and apply conducted power and SAR test reduction procedures of KDB Pub. 248227 v02r02.

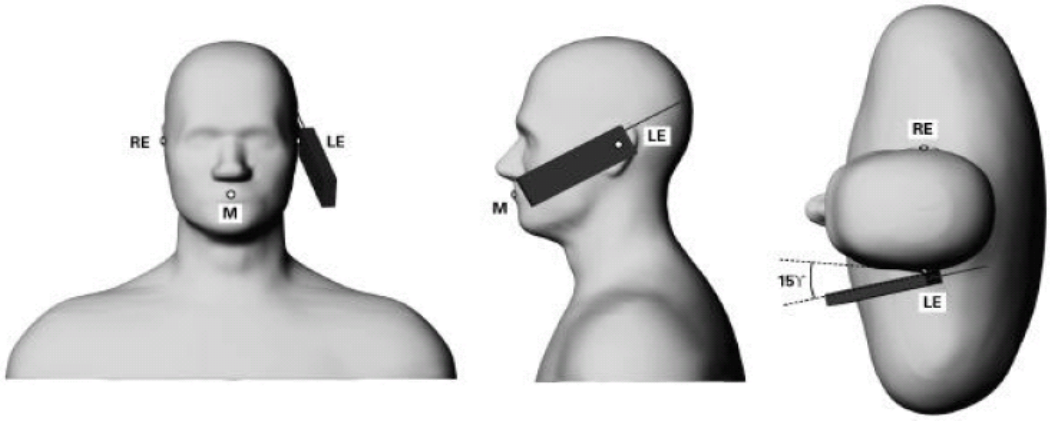
10. WIFI 6E SAR is measured by using 6-7GHz parameters per IEC/IEEE62209-1528:2020 and report also estimated absorbed PD (for reference purposes only, not specifically for compliance).
11. For the highest SAR test configurations also measure incident PD (total) using mmW near-field probe and total-field/power-density reconstruction method.
12. Per FCC guidance, for incident PD test of Wi-Fi 6E, since there is no different PD limit on different exposure conditions, so it is expected phablet exposure will cause the highest PD, therefore the PD test was performed with a 2 mm separation between probe sensor and EUT surface to cover all exposure conditions of phablet. That is, totally five PD test is selected per each antenna. (Select highest phablet SAR configurations to evaluate power density.)
13. Per equipment manufacturer guidance, power density was measured at d=2mm with the grid step (0.0625 λ) for determining compliance at d=2mm.
14. According to October 2020 TCB Workshop Interim procedures, power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 2.67 dB (85%) was used to determine the psPD measurement scaling factor.
15. Per FCC guidance, for simultaneous transmission evaluation, using SAR sum and SPLSR for simultaneous transmit exclusion analyses and evaluations.

1.6 Positioning Procedure

Head SAR measurement statement



Phone position 1, “cheek” or “touch” position. The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning.



Phone position 2, “tilted position.” The reference points for the right ear (RE), left ear (LE) and mouth (M), which define the reference plane for phone positioning.

Cheek/Touch Position:
The handset was brought toward the mouth of the head phantom by pivoting against the ear reference point until any point of the mouthpiece or keypad touched the phantom.
Ear/Tilt Position:
With the phone aligned in the Cheek/Touch position, the handset was tilted away from the mouth with respect to the test device reference point by 15 degrees.

Body SAR / Product Specific 10-g SAR measurement statement

1. Body-worn exposure: 15mm
   Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the same wireless transmission configuration is used for testing body-worn accessory and hotspot mode SAR, respectively, in voice and data mode, SAR results for the most conservative test separation distance configuration may be used to support both SAR conditions. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for the body-worn accessory with a headset attached to the handset.

2. Hotspot exposure: 10mm (The device doesn't support hotspot function in WIFI 6E, so hotspot SAR test is not required)
   A test separation distance of 10 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 25 mm from that surface or edge when the form factor of a handset is larger than 9 cm × 5 cm.

3. Phablet SAR test consideration
   Since the device is a phablet (overall diagonal dimension > 16.0 cm), the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for product specific 10-g SAR. When hotspot mode applies, product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg. However, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold. Based on KDB941225D06v02r01, the hotspot mode and body-worn accessory SAR test configurations may overlap for handsets. When the same wireless mode transmission configurations for voice and data are required for SAR measurements, the more conservative configuration with a smaller separation distance should be tested for the overlapping SAR configurations.

1.7 Evaluation Procedures

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 1 g and 10 g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

1. The extraction of the measured data (grid and values) from the Zoom Scan.
2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters).
3. The generation of a high-resolution mesh within the measured volume.
4. The interpolation of all measured values from the measurement grid to the high-resolution grid.
5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface.
6. The calculation of the averaged SAR within masses of 1g and 10g.

The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extreme of the SAR distribution. The uncertainty on the locations of the extreme is less than 1/20 of the grid size. Only local maximum within –2 dB of the global maximum are searched and passed for the Cube Scan measurement. In the Cube Scan, the interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5mm.

The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1g and 10g peak evaluations are only available for the predefined cube 7x7x7 scans.

The routines are verified and optimized for the grid dimensions used in these cube measurements. The measured volume of 30x30x30mm contains about 30g of tissue. The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D interpolation to get all points within the measured volume. In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is

the moved around until the highest averaged SAR is found.
If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

1.8 Probe Calibration Procedures

For the calibration of E-field probes in lossy liquids, an electric field with an accurately known field strength must be produced within the measured liquid. For standardization purposes it would be desirable if all measurements which are necessary to assess the correct field strength would be traceable to standardized measurement procedures. In the following two different calibration techniques are summarized:

1.8.1 Transfer Calibration with Temperature Probes

In lossy liquids the specific absorption rate (SAR) is related both to the electric field (E) and the temperature gradient ($\delta T / \delta t$) in the liquid.

$$SAR = C\frac{\delta T}{\delta t},$$

Whereby σ is the conductivity, ρ the density and c the heat capacity of the liquid.

Hence, the electric field in lossy liquid can be measured indirectly by measuring the temperature gradient in the liquid. Non-disturbing temperature probes (optical probes or thermistor probes with resistive lines) with high spatial resolution (<1-2 mm) and fast reaction time (<1 s) are available and can be easily calibrated with high precision [1]. The setup and the exciting source have no influence on the calibration; only the relative positioning uncertainties of the standard temperature probe and the E-field probe to be calibrated must be considered. However, several problems limit the available accuracy of probe calibrations with temperature probes:

1. The temperature gradient is not directly measurable but must be evaluated from temperature measurements at different time steps. Special precaution is necessary to avoid measurement errors caused by temperature gradients due to energy equalizing effects or convection currents in the liquid. Such effects cannot be completely avoided, as the measured field itself destroys the thermal equilibrium in the liquid. With a careful setup these errors can be kept

small.

2. The measured volume around the temperature probe is not well defined. It is difficult to calculate the energy transfer from a surrounding gradient temperature field into the probe. These effects must be considered, since temperature probes are calibrated in liquid with homogeneous temperatures. There is no traceable standard for temperature rise measurements.
3. The calibration depends on the assessment of the specific density, the heat capacity and the conductivity of the medium. While the specific density and heat capacity can be measured accurately with standardized procedures (~ 2% for c; much better for ρ), there is no standard for the measurement of the conductivity. Depending on the method and liquid, the error can well exceed ±5%.
4. Temperature rise measurements are not very sensitive and therefore are often performed at a higher power level than the E-field measurements. The nonlinearities in the system (e.g., power measurements, different components, etc.) must be considered.

Considering these problems, the possible accuracy of the calibration of E-field probes with temperature gradient measurements in a carefully designed setup is about ±10% (RSS) [2]. Recently, a setup which is a combination of the waveguide techniques and the thermal measurements was presented in [3]. The estimated uncertainty of the setup is ±5% (RSS) when the same liquid is used for the calibration and for actual measurements and ±7-9% (RSS) when not, which is in good agreement with the estimates given in [2].

1.8.2 Calibration with Analytical Fields

In this method a technical setup is used in which the field can be calculated analytically from measurements of other physical magnitudes (e.g., input power). This corresponds to the standard field method for probe calibration in air; however, there is no standard defined for fields in lossy liquids.

When using calculated fields in lossy liquids for probe calibration, several points must be considered in the assessment of the uncertainty:

1. The setup must enable accurate determination of the incident power.
2. The accuracy of the calculated field strength will depend on the assessment of the dielectric parameters of the liquid.
3. Due to the small wavelength in liquids with high permittivity, even small setups might be above the resonant cutoff frequencies. The field distribution in the setup must be carefully checked for conformity with the theoretical field distribution.

References

(1) N. Kuster, Q. Balzano, and J.C. Lin, Eds., *Mobile Communications Safety*, Chapman & Hall, London, 1997.

(2) K. Meier, M. Burkhardt, T. Schmid, and N. Kuster, \Broadband calibration of E-field probes in lossy media", *IEEE Transactions on Microwave Theory and Techniques*, vol. 44, no. 10, pp. 1954{1962, Oct. 1996.

(3) K. Jokela, P. Hyysalo, and L. Puranen, \Calibration of specific absorption rate (SAR) probes in waveguide at 900 MHz", *IEEE Transactions on Instrumentation and Measurements*, vol. 47, no. 2, pp. 432{438, Apr. 1998.

1.9 SAR System Description and Setup

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

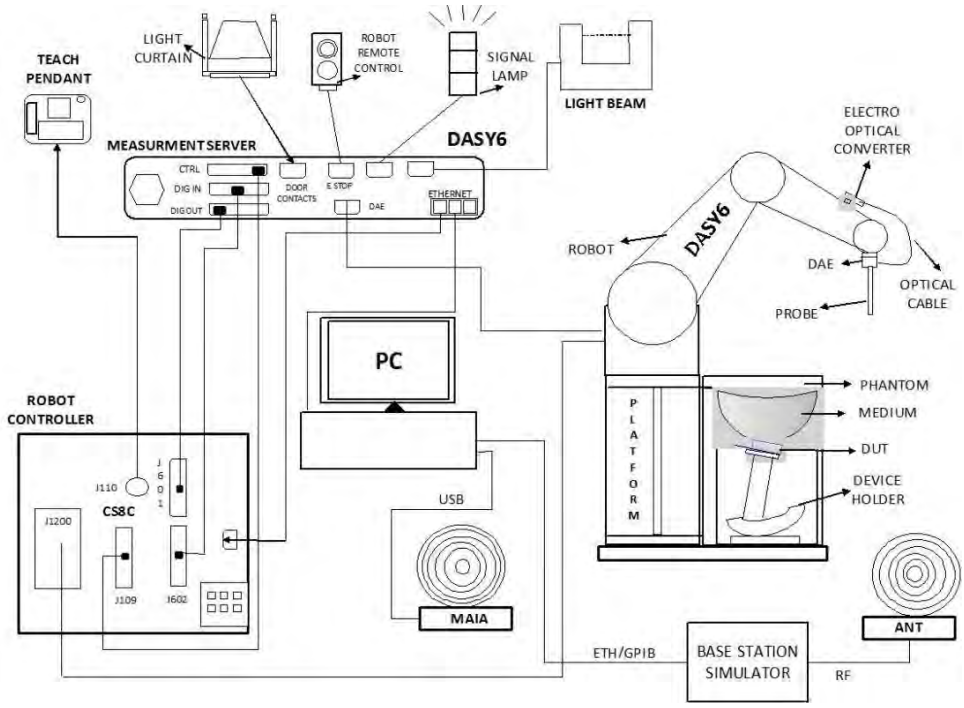


Fig. a A block diagram of the SAR measurement system

- 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 10 and the DASY6 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

1.9.1 Power density measurement system

DASY6 system

Power density measurements for mmWave frequencies were performed using SPEAG DASY6 with cDASY6 5G module. The DASY6 included a high precision robotics system (Staubli), robot controller, desktop computer, near-field probe, probe alignment sensor, and the 5G phantom cover.

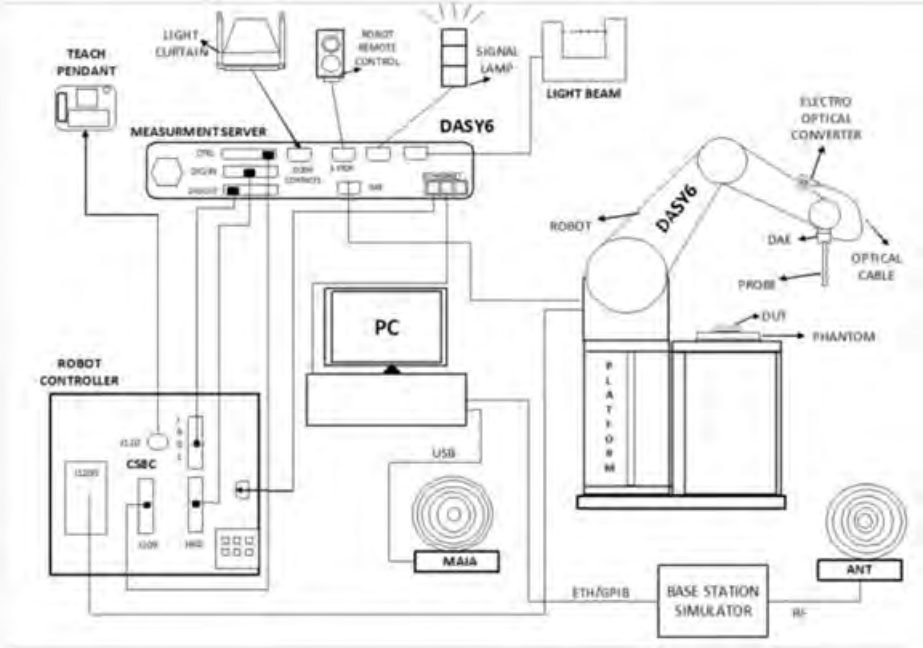
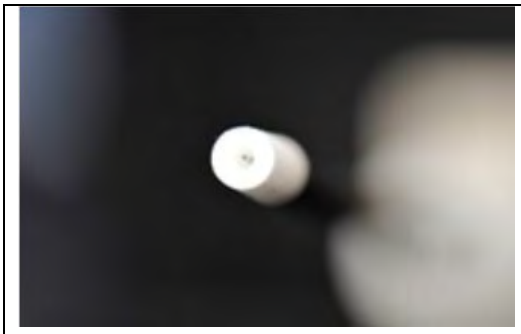
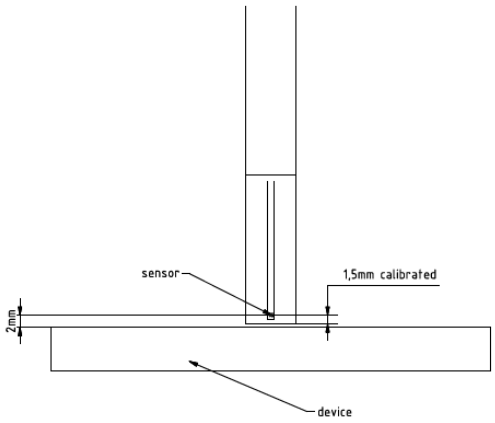


Fig-2.1 SPEAG DASY6 system

EUmmWVx probe

The EUmmWVx probe is based on the pseudo-vector probe design, which not only measures the field magnitude but also derives its polarization ellipse. The design entails two small 0.8mm dipole sensors mechanically protected by high-density foam, printed on both sides of a 0.9mm wide and 0.12mm thick glass substrate. The body of the probe is specifically constructed to minimize distortion by the scattered fields. The probe consist of two sensors with different angles (1 and 2) arranged in the same plane in the probe axis. Three or more measurements of the two sensors are taken for different probe rotational angles to derive the amplitude and polarization information. The probe design allows measurements at distances as small as 2mm from the sensors to the surface of the device under test (DUT). The typical sensor to probe tip distance is 1.5 mm. The exact distance is calibrated.

	Two dipoles optimally arranged to obtain pseudo-vector information.Minimum 3 measurements/ point, 120º rotated around probe axis. Sensors (0.8mm length) printed on glass substrate protected by high density foam.Low perturbation of the measured field. Requires positioner which can do accurate probe rotation.
Frequency Range	750 MHz – 110 GHz
Dynamic Range	< 20 V/m – 10,000 V/m with PRE-10 (min < 50 V/m - 3000 V/m)
Position Precision	< 0.2 mm (DASY6)
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: encapsulation 8 mm (internal sensor < 1mm) Distance from probe tip to dipole centers: < 2 mm. Sensor displacement to probe's calibration point: < 0.3 mm
Applications 	E-field measurements of 5G devices and other mm-wave transmitters operating above 10GHz in < 2 mm distance from device (free-space).Power density, H-field and far-field analysis using total field reconstruction (cDASY6 5G module required)
Compatibility	cDASY6 + 5G-Module SW1.0 and higher

1.9.2 SAR System Performance Check Results

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 10% (according to KDB865664D01) from the target SAR values.

These tests were done at 6500 MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1. During the tests, the liquid depth above the ear reference points was above 15 cm (≤3G) or 10 cm (>3G) in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

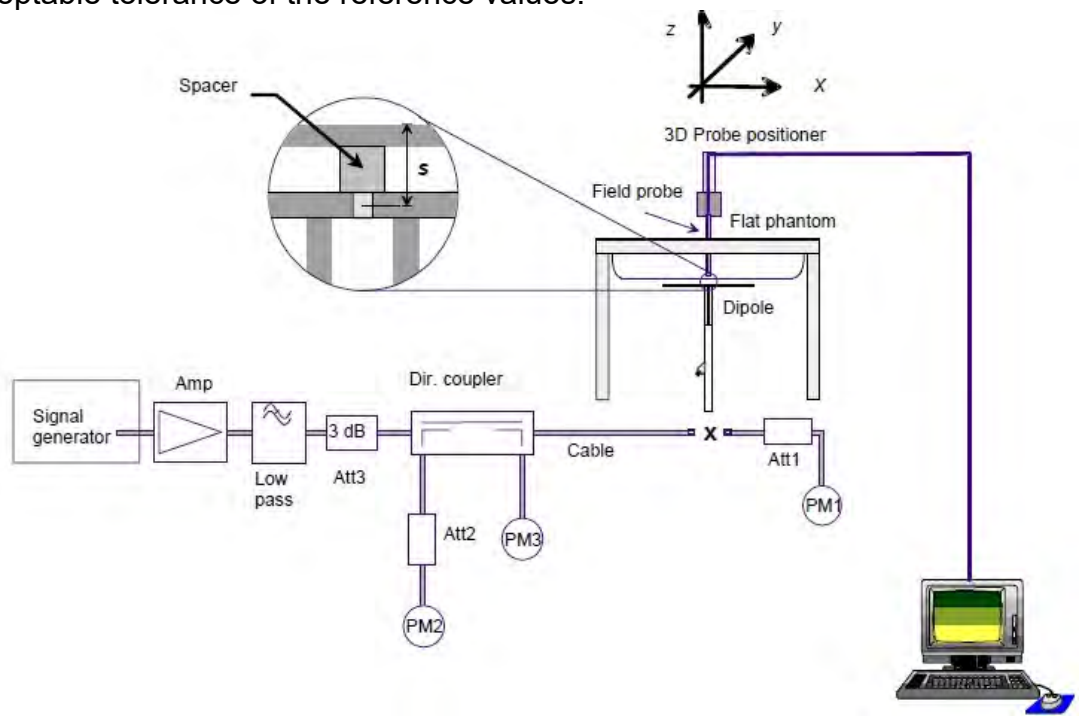


Fig. b The block diagram of system verification

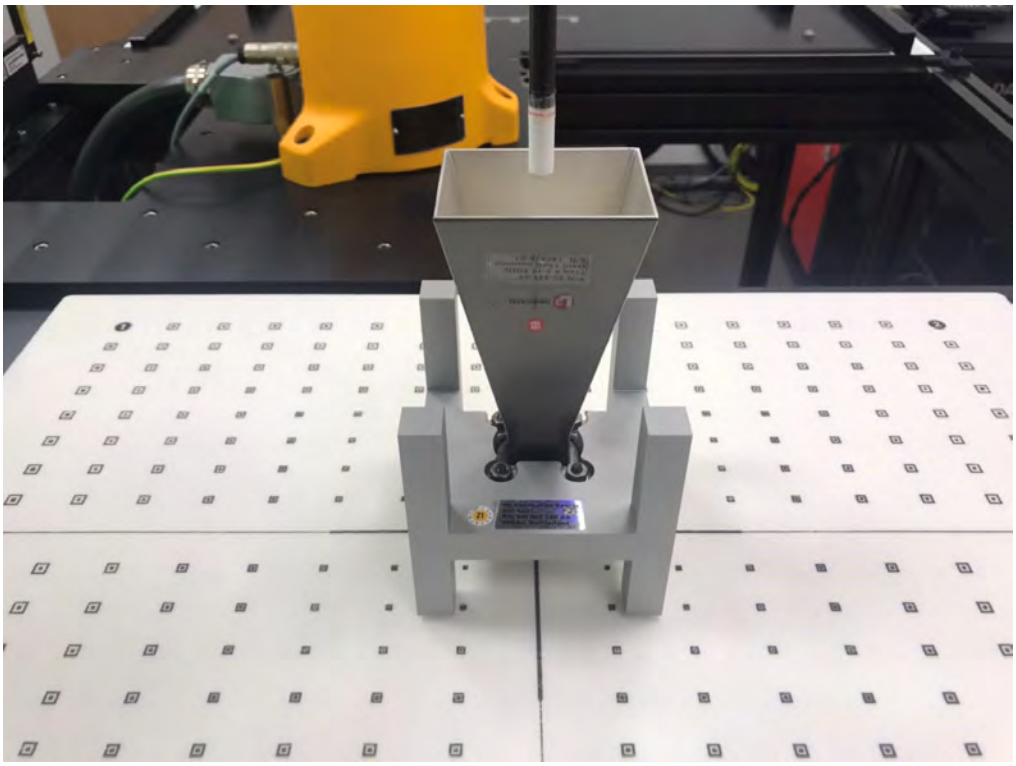
Validation Kit	S/N	Frequency (MHz)		1W Target SAR-1g (mW/g)	pin=100mW Measured SAR-1g (mW/g)	Measured SAR-1g normalized to 1W (mW/g)	Deviation (%)	Measured Date
D6.5GHzV2	1006	6500	Head	291	28.20	282.00	-3.09%	May. 13, 2021
D6.5GHzV2	1006	6500	Head	291	27.90	279.00	-4.12%	May. 14, 2021

Validation Kit	S/N	Frequency (MHz)		1W Target SAR-10g (mW/g)	pin=100mW Measured SAR-10g (mW/g)	Measured SAR-10g normalized to 1W (mW/g)	Deviation (%)	Measured Date
D6.5GHzV2	1006	6500	Head	53.2	5.16	51.60	-3.01%	May. 13, 2021
D6.5GHzV2	1006	6500	Head	53.2	5.10	51.00	-4.14%	May. 14, 2021

Power Density Test System Verification

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.



System Verification Setup Photo

PD System Verification 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.

Frequency (GHz)	PD Verification Source	Probe S/N	DAE S/N	Distance (mm)	Prad (mW)	Measured 4cm^2 (W/m^2)	Target 4cm^2 (W/m^2)	Deviation (dB)	Date
10G	10G	9548	1665	10	74	41.5	42.3	-0.08	2021/5/15

1.9.3 SAR Tissue Verification

The dielectric properties for this Head-simulant fluid were measured by using the SPEAG Dielectric Assessment Kit (DAKS-3.5)

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The measured conductivity and permittivity are all within ± 5% of the target values.

The depth of the tissue simulant in the flat section of the phantom was ≥ 15 cm ± 5 mm (Frequency ≤3G) or ≥ 10 cm ± 5 mm (Frequency >3G) during all tests. (Fig. 2)

Tissue Type	Measurement Date	Measured Frequency (MHz)	Target Dielectric Constant, εr	Target Conductivity, σ (S/m)	Measured Dielectric Constant, εr	Measured Conductivity, σ (S/m)	% dev εr	% dev σ
Head	May, 13. 2021	6025	35.043	5.501	34.900	5.490	-0.41%	-0.20%
		6185	34.860	5.665	34.500	5.770	-1.03%	1.85%
		6345	34.677	5.829	34.234	5.916	-1.28%	1.49%
		6500	34.500	5.988	34.000	6.080	-1.45%	1.54%
		6505	34.494	5.993	33.992	6.104	-1.46%	1.85%
		6825	34.129	6.321	33.600	6.420	-1.55%	1.57%
		6985	33.946	6.485	33.200	6.690	-2.20%	3.16%
	May, 14. 2021	6025	35.043	5.501	34.826	5.432	-0.62%	-1.25%
		6185	34.860	5.665	34.392	5.652	-1.34%	-0.23%
		6345	34.677	5.829	34.114	5.816	-1.62%	-0.22%
		6500	34.500	5.988	33.948	5.922	-1.60%	-1.10%
		6505	34.494	5.993	33.822	5.907	-1.95%	-1.44%
		6825	34.129	6.321	33.452	6.33	-1.98%	0.14%
		6985	33.946	6.485	33.139	6.6	-2.38%	1.77%

Table 2. Dielectric Parameters of Tissue Simulant Fluid

1.10 System Components

EX3DV4 E-Field Probe

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Calibration	Basic Broad Band Calibration in air Conversion Factors (CF) for HSL6500 MHz Additional CF for other liquids and frequencies upon request	
Frequency	10 MHz to > 6 GHz, Linearity: ± 0.6 dB	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)	
Dimensions	Tip diameter: 2.5 mm	
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.	

Phantom

Model	Twin SAM
Construction	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points with the robot.
Shell Thickness	2 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Height: 850 mm; Length: 1000 mm; Width: 500 mm

DEVICE HOLDER

Construction	In combination with the Twin SAM Phantom V4.0/V4.0C or Twin SAM, the Mounting Device (made from POM) enables the rotation of the mounted transmitter in spherical coordinates, whereby the rotation point is the ear opening. The devices can be easily and accurately positioned according to IEC, IEEE, CENELEC, FCC or other specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).

Device Holder

1.11 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (“SAR”) in Section 4.2 of “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,” ANSI/IEEE C95.1, By the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in “Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields,” NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter.
Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

1. Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over a 10 grams of tissue (defined as a tissue volume in the shape of a cube).

Occupational/Controlled limits apply when persons are exposed as a consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.

2. Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube).

Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube).
General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure.
Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.(Table .6)

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR (Brain)	1.60 W/kg	8.00 W/kg
Spatial Average SAR (Whole Body)	0.08 W/kg	0.40 W/kg
Spatial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 W/kg	20.00 W/kg

RF Exposure limit for above 6GHz

According to ANSI/IEEE C95.1-1992, the criteria listed in the following Table 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 4cm2 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

Table. RF exposure limits

Notes:

1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
2. Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

2. Summary of Results

2.1 Decision rules

Reported measurement data comply with IEC/IEEE 62209-1528:2020: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.2 Summary of SAR Results

Head WLAN only SISO+MIMO

WLAN Ant 7

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	RE Touch	0	47	6185	12.00	11.98	1.04	100.46%	0.817	0.851	0.276	54
	RE Touch	0	79	6345	12.00	11.92	1.04	101.86%	0.746	0.788	0.390	56
	RE Touch	0	111	6505	12.00	11.98	1.04	100.46%	0.844	0.880	0.450	57
	RE Touch	0	175	6825	12.00	11.99	1.04	100.23%	1.140	1.185	0.610	58
	RE Touch	0	207	6985	12.00	11.94	1.04	101.39%	0.623	0.655	0.120	59
	Re Tilt	0	47	6185	12.00	11.98	1.04	100.46%	0.385	0.401	0.084	-
	Re Tilt	0	79	6345	12.00	11.92	1.04	101.86%	0.343	0.362	0.120	-
	Re Tilt	0	111	6505	12.00	11.98	1.04	100.46%	0.390	0.406	0.196	-
	Re Tilt	0	175	6825	12.00	11.99	1.04	100.23%	0.654	0.680	0.247	-
	Re Tilt	0	207	6985	12.00	11.94	1.04	101.39%	0.322	0.339	0.052	-
	LE Touch	0	47	6185	12.00	11.98	1.04	100.46%	0.158	0.165	0.040	-
	LE Touch	0	79	6345	12.00	11.92	1.04	101.86%	0.182	0.192	0.057	-
	LE Touch	0	111	6505	12.00	11.98	1.04	100.46%	0.227	0.237	0.072	-
	LE Touch	0	175	6825	12.00	11.99	1.04	100.23%	0.338	0.351	0.101	-
	LE Touch	0	207	6985	12.00	11.94	1.04	101.39%	0.179	0.188	0.049	-
	LE Tilt	0	47	6185	12.00	11.98	1.04	100.46%	0.056	0.058	0.022	-
	LE Tilt	0	79	6345	12.00	11.92	1.04	101.86%	0.062	0.066	0.034	-
	LE Tilt	0	111	6505	12.00	11.98	1.04	100.46%	0.074	0.077	0.044	-
	LE Tilt	0	175	6825	12.00	11.99	1.04	100.23%	0.112	0.116	0.051	-
	LE Tilt	0	207	6985	12.00	11.94	1.04	101.39%	0.067	0.070	0.039	-

WLAN Ant 8

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	RE Touch	0	15	6025	10.50	10.49	1.03	100.23%	0.005	0.005	0.002	-
	RE Touch	0	47	6185	10.50	10.45	1.03	101.16%	0.025	0.026	0.009	-
	RE Touch	0	111	6505	10.50	10.44	1.03	101.39%	0.115	0.121	0.069	-
	RE Touch	0	175	6825	10.50	10.48	1.03	100.46%	0.108	0.112	0.045	-
	RE Touch	0	207	6985	10.50	10.47	1.03	100.69%	0.063	0.066	0.039	-
	Re Tilt	0	15	6025	10.50	10.49	1.03	100.23%	0.006	0.006	0.004	-
	Re Tilt	0	47	6185	10.50	10.45	1.03	101.16%	0.030	0.031	0.001	-
	Re Tilt	0	111	6505	10.50	10.44	1.03	101.39%	0.130	0.136	0.073	-
	Re Tilt	0	175	6825	10.50	10.48	1.03	100.46%	0.126	0.131	0.051	-
	Re Tilt	0	207	6985	10.50	10.47	1.03	100.69%	0.076	0.079	0.044	-
	LE Touch	0	15	6025	10.50	10.49	1.03	100.23%	0.007	0.007	0.005	-
	LE Touch	0	47	6185	10.50	10.45	1.03	101.16%	0.038	0.040	0.014	-
	LE Touch	0	111	6505	10.50	10.44	1.03	101.39%	0.170	0.178	0.086	-
	LE Touch	0	175	6825	10.50	10.48	1.03	100.46%	0.160	0.166	0.064	-
	LE Touch	0	207	6985	10.50	10.47	1.03	100.69%	0.111	0.116	0.061	-
	LE Tilt	0	15	6025	10.50	10.49	1.03	100.23%	0.013	0.013	0.009	60
	LE Tilt	0	47	6185	10.50	10.45	1.03	101.16%	0.047	0.049	0.018	61
	LE Tilt	0	111	6505	10.50	10.44	1.03	101.39%	0.189	0.198	0.099	62
	LE Tilt	0	175	6825	10.50	10.48	1.03	100.46%	0.181	0.188	0.087	63
	LE Tilt	0	207	6985	10.50	10.47	1.03	100.69%	0.120	0.125	0.073	64

Head WLAN only DBS

WLAN Ant 7

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	RE Touch	0	175	6825	9.50	9.49	1.04	100.23%	0.667	0.694	0.367	65
	Re Tilt	0	175	6825	9.50	9.49	1.04	100.23%	0.382	0.397	0.192	-
	LE Touch	0	175	6825	9.50	9.49	1.04	100.23%	0.197	0.205	0.074	-
	LE Tilt	0	175	6825	9.50	9.49	1.04	100.23%	0.065	0.068	0.026	-

WLAN Ant 8

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	RE Touch	0	111	6505	9.50	9.44	1.03	101.39%	0.095	0.100	0.042	-
	Re Tilt	0	111	6505	9.50	9.44	1.03	101.39%	0.108	0.113	0.047	-
	LE Touch	0	111	6505	9.50	9.44	1.03	101.39%	0.141	0.148	0.054	-
	LE Tilt	0	111	6505	9.50	9.44	1.03	101.39%	0.150	0.157	0.079	66

Head WWAN+WLAN MIMO

WLAN Ant 7

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	RE Touch	0	175	6825	7.50	7.45	1.04	101.16%	0.517	0.543	0.362	67
	Re Tilt	0	175	6825	7.50	7.45	1.04	101.16%	0.226	0.237	0.117	-
	LE Touch	0	175	6825	7.50	7.45	1.04	101.16%	0.122	0.128	0.082	-
	LE Tilt	0	175	6825	7.50	7.45	1.04	101.16%	0.040	0.042	0.021	-

WLAN Ant 8

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	RE Touch	0	111	6505	7.50	7.42	1.03	101.86%	0.058	0.061	0.022	-
	Re Tilt	0	111	6505	7.50	7.42	1.03	101.86%	0.065	0.069	0.027	-
	LE Touch	0	111	6505	7.50	7.42	1.03	101.86%	0.086	0.090	0.042	-
	LE Tilt	0	111	6505	7.50	7.42	1.03	101.86%	0.131	0.138	0.103	68

Head WWAN+WLAN DBS

WLAN Ant 7

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	RE Touch	0	175	6825	5.50	5.46	1.04	100.93%	0.247	0.259	0.127	69
	Re Tilt	0	175	6825	5.50	5.46	1.04	100.93%	0.146	0.153	0.091	-
	LE Touch	0	175	6825	5.50	5.46	1.04	100.93%	0.076	0.079	0.033	-
	LE Tilt	0	175	6825	5.50	5.46	1.04	100.93%	0.025	0.026	0.012	-

WLAN Ant 8

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	RE Touch	0	111	6505	5.50	5.44	1.03	101.39%	0.036	0.038	0.016	-
	Re Tilt	0	111	6505	5.50	5.44	1.03	101.39%	0.041	0.043	0.025	-
	LE Touch	0	111	6505	5.50	5.44	1.03	101.39%	0.054	0.057	0.037	-
	LE Tilt	0	111	6505	5.50	5.44	1.03	101.39%	0.060	0.063	0.045	70

Body-worn WLAN only SISO

WLAN Ant 7

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	Front Surface	15	47	6185	12.00	11.98	1.04	100.46%	0.044	0.046	0.031	-
	Front Surface	15	79	6345	12.00	11.92	1.04	101.86%	0.049	0.052	0.038	-
	Front Surface	15	111	6505	12.00	11.98	1.04	100.46%	0.067	0.070	0.046	-
	Front Surface	15	175	6825	12.00	11.99	1.04	100.23%	0.144	0.150	0.083	-
	Front Surface	15	207	6985	12.00	11.94	1.04	101.39%	0.071	0.075	0.052	-
	Back Surface	15	47	6185	12.00	11.98	1.04	100.46%	0.094	0.098	0.061	71
	Back Surface	15	79	6345	12.00	11.92	1.04	101.86%	0.092	0.097	0.06	72
	Back Surface	15	111	6505	12.00	11.98	1.04	100.46%	0.122	0.127	0.095	73
	Back Surface	15	175	6825	12.00	11.99	1.04	100.23%	0.201	0.209	0.171	74
	Back Surface	15	207	6985	12.00	11.94	1.04	101.39%	0.126	0.133	0.096	75

WLAN Ant 8

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	Front Surface	15	15	6025	10.50	10.49	1.03	100.23%	0.049	0.051	0.019	-
	Front Surface	15	47	6185	10.50	10.45	1.03	101.16%	0.058	0.061	0.021	-
	Front Surface	15	111	6505	10.50	10.44	1.03	101.39%	0.103	0.108	0.062	-
	Front Surface	15	175	6825	10.50	10.48	1.03	100.46%	0.120	0.125	0.071	-
	Front Surface	15	207	6985	10.50	10.47	1.03	100.69%	0.092	0.096	0.055	-
	Back Surface	15	15	6025	10.50	10.49	1.03	100.23%	0.110	0.114	0.074	76
	Back Surface	15	47	6185	10.50	10.45	1.03	101.16%	0.201	0.210	0.176	77
	Back Surface	15	111	6505	10.50	10.44	1.03	101.39%	0.250	0.262	0.229	78
	Back Surface	15	175	6825	10.50	10.48	1.03	100.46%	0.289	0.300	0.258	79
	Back Surface	15	207	6985	10.50	10.47	1.03	100.69%	0.177	0.184	0.143	80

Body-worn WWAN with WLAN

WLAN Ant 7

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	Front Surface	15	175	6825	7.50	7.49	1.04	100.23%	0.051	0.053	0.042	-
	Back Surface	15	175	6825	7.50	7.49	1.04	100.23%	0.070	0.073	0.060	81

WLAN Ant 8

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 1g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	Front Surface	15	175	6825	7.50	7.49	1.03	100.23%	0.064	0.066	0.058	-
	Back Surface	15	175	6825	7.50	7.49	1.03	100.23%	0.178	0.184	0.161	82

Product specific 10-g SAR WLAN only

WLAN Ant 7

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 10g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	Front Surface	0	47	6185	12.00	11.98	1.04	100.46%	0.301	0.314	0.273	-
	Front Surface	0	79	6345	12.00	11.92	1.04	101.86%	0.337	0.356	0.304	83
	Front Surface	0	111	6505	12.00	11.98	1.04	100.46%	0.287	0.299	0.237	-
	Front Surface	0	175	6825	12.00	11.99	1.04	100.23%	0.505	0.525	0.469	84
	Front Surface	0	207	6985	12.00	11.94	1.04	101.39%	0.390	0.410	0.358	85
	Back Surface	0	47	6185	12.00	11.98	1.04	100.46%	0.265	0.276	0.214	-
	Back Surface	0	79	6345	12.00	11.92	1.04	101.86%	0.167	0.176	0.132	-
	Back Surface	0	111	6505	12.00	11.98	1.04	100.46%	0.133	0.139	0.116	-
	Back Surface	0	175	6825	12.00	11.99	1.04	100.23%	0.153	0.159	0.138	-
	Back Surface	0	207	6985	12.00	11.94	1.04	101.39%	0.102	0.107	0.094	-
	Top Edge	0	47	6185	12.00	11.98	1.04	100.46%	0.149	0.155	0.126	-
	Top Edge	0	79	6345	12.00	11.92	1.04	101.86%	0.069	0.073	0.052	-
	Top Edge	0	111	6505	12.00	11.98	1.04	100.46%	0.048	0.050	0.033	-
	Top Edge	0	175	6825	12.00	11.99	1.04	100.23%	0.090	0.094	0.084	-
	Top Edge	0	207	6985	12.00	11.94	1.04	101.39%	0.034	0.036	0.027	-
	Bottom Edge	0	47	6185	12.00	11.98	1.04	100.46%	0.008	0.008	0.006	-
	Bottom Edge	0	79	6345	12.00	11.92	1.04	101.86%	0.006	0.006	0.004	-
	Bottom Edge	0	111	6505	12.00	11.98	1.04	100.46%	0.004	0.004	0.002	-
	Bottom Edge	0	175	6825	12.00	11.99	1.04	100.23%	0.006	0.006	0.005	-
	Bottom Edge	0	207	6985	12.00	11.94	1.04	101.39%	0.002	0.002	0.001	-
	Right Edge	0	47	6185	12.00	11.98	1.04	100.46%	0.028	0.029	0.021	-
	Right Edge	0	79	6345	12.00	11.92	1.04	101.86%	0.019	0.020	0.014	-
	Right Edge	0	111	6505	12.00	11.98	1.04	100.46%	0.014	0.015	0.011	-
	Right Edge	0	175	6825	12.00	11.99	1.04	100.23%	0.017	0.018	0.014	-
	Right Edge	0	207	6985	12.00	11.94	1.04	101.39%	0.005	0.005	0.002	-
	Left Edge	0	47	6185	12.00	11.98	1.04	100.46%	0.311	0.324	0.273	86
	Left Edge	0	79	6345	12.00	11.92	1.04	101.86%	0.246	0.260	0.215	-
	Left Edge	0	111	6505	12.00	11.98	1.04	100.46%	0.472	0.492	0.432	87
	Left Edge	0	175	6825	12.00	11.99	1.04	100.23%	0.384	0.399	0.346	-
	Left Edge	0	207	6985	12.00	11.94	1.04	101.39%	0.284	0.299	0.231	-

WLAN Ant 8

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 10g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	Front Surface	0	15	6025	10.50	10.49	1.03	100.23%	0.023	0.024	0.012	-
	Front Surface	0	47	6185	10.50	10.45	1.03	101.16%	0.043	0.045	0.027	-
	Front Surface	0	111	6505	10.50	10.44	1.03	101.39%	0.072	0.075	0.048	-
	Front Surface	0	175	6825	10.50	10.48	1.03	100.46%	0.077	0.080	0.052	-
	Front Surface	0	207	6985	10.50	10.47	1.03	100.69%	0.049	0.051	0.033	-
	Back Surface	0	15	6025	10.50	10.49	1.03	100.23%	0.084	0.087	0.050	88
	Back Surface	0	47	6185	10.50	10.45	1.03	101.16%	0.100	0.105	0.069	89
	Back Surface	0	111	6505	10.50	10.44	1.03	101.39%	0.204	0.214	0.173	90
	Back Surface	0	175	6825	10.50	10.48	1.03	100.46%	0.379	0.394	0.320	91
	Back Surface	0	207	6985	10.50	10.47	1.03	100.69%	0.205	0.213	0.176	92
	Top Edge	0	15	6025	10.50	10.49	1.03	100.23%	0.026	0.027	0.021	-
	Top Edge	0	47	6185	10.50	10.45	1.03	101.16%	0.055	0.058	0.047	-
	Top Edge	0	111	6505	10.50	10.44	1.03	101.39%	0.120	0.126	0.104	-
	Top Edge	0	175	6825	10.50	10.48	1.03	100.46%	0.279	0.290	0.238	-
	Top Edge	0	207	6985	10.50	10.47	1.03	100.69%	0.121	0.126	0.109	-
	Bottom Edge	0	15	6025	10.50	10.49	1.03	100.23%	0.001	0.001	0.001	-
	Bottom Edge	0	47	6185	10.50	10.45	1.03	101.16%	0.002	0.002	0.001	-
	Bottom Edge	0	111	6505	10.50	10.44	1.03	101.39%	0.004	0.004	0.002	-
	Bottom Edge	0	175	6825	10.50	10.48	1.03	100.46%	0.009	0.010	0.005	-
	Bottom Edge	0	207	6985	10.50	10.47	1.03	100.69%	0.003	0.003	0.002	-
	Right Edge	0	15	6025	10.50	10.49	1.03	100.23%	0.014	0.015	0.008	-
	Right Edge	0	47	6185	10.50	10.45	1.03	101.16%	0.016	0.017	0.010	-
	Right Edge	0	111	6505	10.50	10.44	1.03	101.39%	0.028	0.029	0.015	-
	Right Edge	0	175	6825	10.50	10.48	1.03	100.46%	0.040	0.042	0.026	-
	Right Edge	0	207	6985	10.50	10.47	1.03	100.69%	0.024	0.025	0.012	-
	Left Edge	0	15	6025	10.50	10.49	1.03	100.23%	0.004	0.004	0.001	-
	Left Edge	0	47	6185	10.50	10.45	1.03	101.16%	0.006	0.006	0.004	-
	Left Edge	0	111	6505	10.50	10.44	1.03	101.39%	0.025	0.026	0.018	-
	Left Edge	0	175	6825	10.50	10.48	1.03	100.46%	0.030	0.031	0.021	-
	Left Edge	0	207	6985	10.50	10.47	1.03	100.69%	0.024	0.025	0.016	-

Product specific 10-g SAR WWAN+WLAN

WLAN Ant 7

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 10g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	Front Surface	0	111	6505	7.50	7.42	1.04	101.86%	0.102	0.108	0.084	-
	Front Surface	0	175	6825	7.50	7.49	1.04	100.23%	0.171	0.178	0.156	93
	Back Surface	0	111	6505	7.50	7.42	1.04	101.86%	0.047	0.050	0.032	-
	Back Surface	0	175	6825	7.50	7.49	1.04	100.23%	0.054	0.056	0.042	-
	Top Edge	0	111	6505	7.50	7.42	1.04	101.86%	0.018	0.019	0.012	-
	Top Edge	0	175	6825	7.50	7.49	1.04	100.23%	0.032	0.033	0.025	-
	Bottom Edge	0	111	6505	7.50	7.42	1.04	101.86%	0.001	0.001	0.001	-
	Bottom Edge	0	175	6825	7.50	7.49	1.04	100.23%	0.002	0.002	0.001	-
	Right Edge	0	111	6505	7.50	7.42	1.04	101.86%	0.005	0.006	0.002	-
	Right Edge	0	175	6825	7.50	7.49	1.04	100.23%	0.006	0.007	0.003	-
	Left Edge	0	111	6505	7.50	7.42	1.04	101.86%	0.157	0.166	0.055	94
	Left Edge	0	175	6825	7.50	7.49	1.04	100.23%	0.136	0.141	0.045	-

WLAN Ant 8

Mode	Position	Distance (mm)	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Duty cycle scaling	Power scaling	Averaged SAR over 10g (W/kg)		Estimated APD mW/cm^2 (4cm^2)	Plot page
									Measured	Reported		
WLAN 6E 802.11ax(160M)	Front Surface	0	175	6825	7.50	7.49	1.03	100.23%	0.039	0.040	0.027	-
	Back Surface	0	175	6825	7.50	7.49	1.03	100.23%	0.163	0.169	0.140	95
	Top Edge	0	175	6825	7.50	7.49	1.03	100.23%	0.140	0.145	0.121	-
	Bottom Edge	0	175	6825	7.50	7.49	1.03	100.23%	0.005	0.005	0.001	-
	Right Edge	0	175	6825	7.50	7.49	1.03	100.23%	0.021	0.021	0.014	-
	Left Edge	0	175	6825	7.50	7.49	1.03	100.23%	0.015	0.016	0.009	-

2.3 Summary of PD Results

Mode	Position	Distance (mm)	Antenna	CH	Freq. (MHz)	Max. Rated Avg. Power + Max. Tolerance (dBm)	Measured Avg. Power (dBm)	Tune-up Scaling	Duty Cycle	Duty Factor	Measurement uncertainty	PD result(4cm)				Plot page
												Measured Total psPD (mW/cm^2)	Reported Total psPD (mW/cm^2)	Measured Normal psPD (mW/cm^2)	Reported Normal psPD (mW/cm^2)	
WLAN 6E 802.11ax HE160 MCS0	Left side	2	Ant7	47	6185	12	11.98	100.46%	0.964	1.037	1.55	0.347	0.561	0.275	0.444	
	Front side	2	Ant7	79	6345	12	11.92	101.86%	0.964	1.037	1.55	0.302	0.495	0.239	0.391	
	Left side	2	Ant7	111	6505	12	11.98	100.46%	0.964	1.037	1.55	0.615	0.993	0.490	0.791	96
	Front side	2	Ant7	175	6825	12	11.99	100.23%	0.964	1.037	1.55	0.438	0.706	0.374	0.603	
	Front side	2	Ant7	207	6985	12	11.94	101.39%	0.964	1.037	1.55	0.273	0.445	0.235	0.383	
	Back side	2	Ant8	15	6025	10.5	10.49	100.23%	0.967	1.034	1.55	0.331	0.532	0.172	0.276	
	Back side	2	Ant8	47	6185	10.5	10.45	101.16%	0.967	1.034	1.55	0.357	0.579	0.244	0.396	
	Back side	2	Ant8	111	6505	10.5	10.44	101.39%	0.967	1.034	1.55	0.429	0.697	0.358	0.582	
	Back side	2	Ant8	175	6825	10.5	10.48	100.46%	0.967	1.034	1.55	0.608	0.979	0.520	0.837	97
	Back side	2	Ant8	207	6985	10.5	10.47	100.69%	0.967	1.034	1.55	0.423	0.683	0.384	0.620	

Note:

Scaling = $\frac{\text{reported SAR}}{\text{measured SAR}} = \frac{\text{P2(mW)}}{\text{P1(mW)}} = 10^{\left(\frac{\text{P2}-\text{P1}}{10}\right)(\text{dBm})}$

Reported SAR = measured SAR * (scaling)

Where P2 is maximum specified power, P1 is measured conducted power

2.4 Reporting statements of conformity

The conformity statement in this report is based solely on the test results, measurement uncertainty is excluded.

3. Simultaneous Transmission Analysis

Simultaneous Transmission Scenarios:

Simultaneous Transmit Configurations	Head	Body	Product specific 10-g SAR
WWAN + WLAN 2.4GHz ANT7 + WLAN 2.4GHz ANT8 + BT ANT7	Yes	Yes	Yes
WWAN + WLAN 2.4GHz ANT7 + WLAN 2.4GHz ANT8 + BT ANT8	Yes	Yes	Yes
WWAN + WLAN 5GHz ANT7 + WLAN 5GHz ANT8 + BT ANT7	Yes	Yes	Yes
WWAN + WLAN 5GHz ANT7 + WLAN 5GHz ANT8 + BT ANT8	Yes	Yes	Yes
WWAN+WLAN 2.4GHz + 5GHz (ANT7)+WLAN 2.4GHz + 5GHz (ANT8)+BT ANT7	Yes	Yes	Yes
WWAN+WLAN 2.4GHz + 5GHz (ANT7)+WLAN 2.4GHz + 5GHz (ANT8)+BT ANT8	Yes	Yes	Yes

note:
Except the data of WLAN 6E addressed in this report, all the other data can be refered to the original test report (Report NO.:EN/2021/20002).

3.1 Estimated SAR calculation

According to KDB447498 D01v06 – When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

$$\text{Estimated SAR} = \frac{\text{Max. tune up power (mW)}}{\text{Min. test separation distance(mm)}} \times \frac{\sqrt{\text{f(GHz)}}}{7.5}$$

If the minimum test separation distance is < 5mm, a distance of 5mm is used for estimated SAR calculation. When the test separation distance is >50mm, the 0.4W/kg is used for SAR-1g.

3.2 SPLSR evaluation and analysis

Per KDB447498D01, when the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR sum to peak location separation ratio(SPLSR).

The simultaneous transmitting antennas in each operating mode and exposure condition combination must be considered one pair at a time to determine the SAR to peak location separation ratio to qualify for test exclusion.

The ratio is determined by **(SAR1 + SAR2)^1.5/Ri**, rounded to two decimal digits, and must be **≤ 0.04** for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

SAR1 and SAR2 are the highest reported or estimated SAR for each antenna in the pair, and Ri is the separation distance between the peak SAR locations for the antenna pair in mm.

When standalone test exclusion applies, SAR is estimated; the peak location is assumed to be at the feed-point or geometric center of the antenna.

Simultaneous Transmission Combination

Head SISO+MIMO

WWAN With WLAN SISO/MIMO

The simultaneous head exposure conditions:

WWAN	Exposure position 1g(W/kg)	1	2	3	4	5	6	7	1+2+3+6 Sum	1+2+3+7 Sum	1+4+5+6 Sum	1+4+5+7 Sum
		WWAN	WLAN 2.4GHz Ant7	WLAN 2.4GHz Ant8	WLAN 6E Ant7	WLAN 6E Ant8	Bluetooth Ant7	Bluetooth Ant8				
GSM 850 Ant1	ReCheek	0.068	0.470	0.136	0.543	0.061	0.202	0.125	0.876	0.800	0.873	0.797
	ReTilt	0.045	0.096	0.230	0.237	0.069	0.077	0.146	0.448	0.517	0.428	0.497
	LeCheek	0.088	0.234	0.372	0.128	0.090	0.131	0.204	0.824	0.898	0.437	0.511
	LeTilt	0.035	0.087	0.556	0.042	0.138	0.030	0.233	0.707	0.911	0.245	0.448
GSM 850 Ant3	ReCheek	0.756	0.470	0.136	0.543	0.061	0.202	0.125	1.564	1.487	1.561	1.484
	ReTilt	0.243	0.096	0.230	0.237	0.069	0.077	0.146	0.645	0.714	0.625	0.694
	LeCheek	0.373	0.234	0.372	0.128	0.090	0.131	0.204	1.109	1.183	0.722	0.795
	LeTilt	0.152	0.087	0.556	0.042	0.138	0.030	0.233	0.825	1.028	0.363	0.566
GSM 1900 Ant2	ReCheek	0.038	0.470	0.136	0.543	0.061	0.202	0.125	0.846	0.770	0.843	0.767
	ReTilt	0.003	0.096	0.230	0.237	0.069	0.077	0.146	0.405	0.474	0.385	0.454
	LeCheek	0.020	0.234	0.372	0.128	0.090	0.131	0.204	0.757	0.830	0.369	0.443
	LeTilt	0.004	0.087	0.556	0.042	0.138	0.030	0.233	0.676	0.879	0.214	0.417
WCDMA Band II Ant2	ReCheek	0.098	0.470	0.136	0.543	0.061	0.202	0.125	0.907	0.830	0.903	0.827
	ReTilt	0.007	0.096	0.230	0.237	0.069	0.077	0.146	0.410	0.479	0.390	0.459
	LeCheek	0.088	0.234	0.372	0.128	0.090	0.131	0.204	0.824	0.898	0.437	0.510
	LeTilt	0.006	0.087	0.556	0.042	0.138	0.030	0.233	0.678	0.881	0.216	0.419
WCDMA Band IV Ant2	ReCheek	0.038	0.470	0.136	0.543	0.061	0.202	0.125	0.846	0.770	0.843	0.766
	ReTilt	0.004	0.096	0.230	0.237	0.069	0.077	0.146	0.407	0.476	0.387	0.456
	LeCheek	0.056	0.234	0.372	0.128	0.090	0.131	0.204	0.792	0.865	0.404	0.478
	LeTilt	0.006	0.087	0.556	0.042	0.138	0.030	0.233	0.678	0.881	0.216	0.419
WCDMA Band V Ant1	ReCheek	0.064	0.470	0.136	0.543	0.061	0.202	0.125	0.872	0.795	0.869	0.792
	ReTilt	0.044	0.096	0.230	0.237	0.069	0.077	0.146	0.446	0.516	0.427	0.496
	LeCheek	0.116	0.234	0.372	0.128	0.090	0.131	0.204	0.852	0.926	0.465	0.539
	LeTilt	0.034	0.087	0.556	0.042	0.138	0.030	0.233	0.706	0.909	0.244	0.447
WCDMA Band V Ant3	ReCheek	0.762	0.470	0.136	0.543	0.061	0.202	0.125	1.570	1.493	1.567	1.490
	ReTilt	0.163	0.096	0.230	0.237	0.069	0.077	0.146	0.565	0.634	0.545	0.614
	LeCheek	0.345	0.234	0.372	0.128	0.090	0.131	0.204	1.081	1.155	0.694	0.768
	LeTilt	0.128	0.087	0.556	0.042	0.138	0.030	0.233	0.800	1.003	0.338	0.541
LTE Band 2 Ant2	ReCheek	0.100	0.470	0.136	0.543	0.061	0.202	0.125	0.909	0.832	0.905	0.829
	ReTilt	0.027	0.096	0.230	0.237	0.069	0.077	0.146	0.429	0.498	0.409	0.478
	LeCheek	0.049	0.234	0.372	0.128	0.090	0.131	0.204	0.785	0.859	0.398	0.471
	LeTilt	0.018	0.087	0.556	0.042	0.138	0.030	0.233	0.691	0.894	0.229	0.432
LTE Band 4 Ant1	ReCheek	0.082	0.470	0.136	0.543	0.061	0.202	0.125	0.890	0.813	0.887	0.810
	ReTilt	0.035	0.096	0.230	0.237	0.069	0.077	0.146	0.438	0.507	0.418	0.487
	LeCheek	0.029	0.234	0.372	0.128	0.090	0.131	0.204	0.765	0.839	0.378	0.452
	LeTilt	0.042	0.087	0.556	0.042	0.138	0.030	0.233	0.714	0.917	0.252	0.455
LTE Band 5 Ant1	ReCheek	0.066	0.470	0.136	0.543	0.061	0.202	0.125	0.874	0.797	0.871	0.794
	ReTilt	0.038	0.096	0.230	0.237	0.069	0.077	0.146	0.440	0.509	0.420	0.489
	LeCheek	0.164	0.234	0.372	0.128	0.090	0.131	0.204	0.901	0.974	0.513	0.587
	LeTilt	0.005	0.087	0.556	0.042	0.138	0.030	0.233	0.677	0.880	0.215	0.418
LTE Band 5 Ant3	ReCheek	0.746	0.470	0.136	0.543	0.061	0.202	0.125	1.554	1.478	1.551	1.475
	ReTilt	0.179	0.096	0.230	0.237	0.069	0.077	0.146	0.582	0.651	0.562	0.631
	LeCheek	0.434	0.234	0.372	0.128	0.090	0.131	0.204	1.170	1.244	0.783	0.857
	LeTilt	0.150	0.087	0.556	0.042	0.138	0.030	0.233	0.822	1.025	0.360	0.563
LTE Band 7 Ant1	ReCheek	0.052	0.470	0.136	0.543	0.061	0.202	0.125	0.860	0.783	0.857	0.780
	ReTilt	0.015	0.096	0.230	0.237	0.069	0.077	0.146	0.417	0.487	0.398	0.467
	LeCheek	0.039	0.234	0.372	0.128	0.090	0.131	0.204	0.775	0.849	0.388	0.461
	LeTilt	0.013	0.087	0.556	0.042	0.138	0.030	0.233	0.685	0.888	0.223	0.426
LTE Band 7 Ant2	ReCheek	0.268	0.470	0.136	0.543	0.061	0.202	0.125	1.076	1.000	1.073	0.997
	ReTilt	0.090	0.096	0.230	0.237	0.069	0.077	0.146	0.493	0.562	0.473	0.542
	LeCheek	0.182	0.234	0.372	0.128	0.090	0.131	0.204	0.918	0.992	0.531	0.605
	LeTilt	0.067	0.087	0.556	0.042	0.138	0.030	0.233	0.739	0.942	0.277	0.480
LTE Band 12 Ant1	ReCheek	0.046	0.470	0.136	0.543	0.061	0.202	0.125	0.854	0.778	0.851	0.775
	ReTilt	0.036	0.096	0.230	0.237	0.069	0.077	0.146	0.438	0.507	0.418	0.487
	LeCheek	0.125	0.234	0.372	0.128	0.090	0.131	0.204	0.862	0.935	0.474	0.548
	LeTilt	0.045	0.087	0.556	0.042	0.138	0.030	0.233	0.717	0.920	0.255	0.458
LTE Band 12 Ant3	ReCheek	0.519	0.470	0.136	0.543	0.061	0.202	0.125	1.327	1.251	1.324	1.248
	ReTilt	0.211	0.096	0.230	0.237	0.069	0.077	0.146	0.613	0.682	0.593	0.662
	LeCheek	0.281	0.234	0.372	0.128	0.090	0.131	0.204	1.017	1.091	0.630	0.703
	LeTilt	0.026	0.087	0.556	0.042	0.138	0.030	0.233	0.698	0.901	0.236	0.439
LTE Band 17 Ant1	ReCheek	0.035	0.470	0.136	0.543	0.061	0.202	0.125	0.843	0.766	0.840	0.763
	ReTilt	0.027	0.096	0.230	0.237	0.069	0.077	0.146	0.430	0.499	0.410	0.479
	LeCheek	0.133	0.234	0.372	0.128	0.090	0.131	0.204	0.870	0.943	0.482	0.556
	LeTilt	0.038	0.087	0.556	0.042	0.138	0.030	0.233	0.710	0.913	0.248	0.451
LTE Band 17 Ant3	ReCheek	0.507	0.470	0.136	0.543	0.061	0.202	0.125	1.315	1.239	1.312	1.236
	ReTilt	0.206	0.096	0.230	0.237	0.069	0.077	0.146	0.608	0.677	0.588	0.657
	LeCheek	0.385	0.234	0.372	0.128	0.090	0.131	0.204	1.121	1.195	0.734	0.808
	LeTilt	0.025	0.087	0.556	0.042	0.138	0.030	0.233	0.697	0.900	0.235	0.438
LTE Band 25 Ant2	ReCheek	0.096	0.470	0.136	0.543	0.061	0.202	0.125	0.904	0.828	0.901	0.825
	ReTilt	0.024	0.096	0.230	0.237	0.069	0.077	0.146	0.427	0.496	0.407	0.476
	LeCheek	0.063	0.234	0.372	0.128	0.090	0.131	0.204	0.799	0.873	0.412	0.486
	LeTilt	0.036	0.087	0.556	0.042	0.138	0.030	0.233	0.708	0.911	0.246	0.449

WWAN With WLAN SISO/MIMO

The simultaneous head exposure conditions:

WWAN	Exposure position 1g(W/kg)	1	2	3	4	5	6	7	1+2+3+6 Sum	1+2+3+7 Sum	1+4+5+6 Sum	1+4+5+7 Sum
		WWAN	WLAN 2.4GHz Ant7	WLAN 2.4GHz Ant8	WLAN 6E Ant7	WLAN 6E Ant8	Bluetooth Ant7	Bluetooth Ant8				
LTE Band 26 Ant1	ReCheek	0.050	0.470	0.136	0.543	0.061	0.202	0.125	0.858	0.782	0.855	0.779
	ReTilt	0.035	0.096	0.230	0.237	0.069	0.077	0.146	0.437	0.506	0.417	0.486
	LeCheek	0.122	0.234	0.372	0.128	0.090	0.131	0.204	0.858	0.932	0.471	0.545
	LeTilt	0.018	0.087	0.556	0.042	0.138	0.030	0.233	0.690	0.893	0.228	0.431
LTE Band 26 Ant3	ReCheek	0.733	0.470	0.136	0.543	0.061	0.202	0.125	1.541	1.465	1.538	1.462
	ReTilt	0.201	0.096	0.230	0.237	0.069	0.077	0.146	0.604	0.673	0.584	0.653
	LeCheek	0.372	0.234	0.372	0.128	0.090	0.131	0.204	1.108	1.182	0.721	0.795
	LeTilt	0.130	0.087	0.556	0.042	0.138	0.030	0.233	0.802	1.005	0.340	0.543
LTE Band 30 Ant2	ReCheek	0.221	0.470	0.136	0.543	0.061	0.202	0.125	1.029	0.953	1.026	0.949
	ReTilt	0.080	0.096	0.230	0.237	0.069	0.077	0.146	0.483	0.552	0.463	0.532
	LeCheek	0.142	0.234	0.372	0.128	0.090	0.131	0.204	0.878	0.952	0.491	0.564
	LeTilt	0.065	0.087	0.556	0.042	0.138	0.030	0.233	0.737	0.941	0.275	0.478
LTE Band 38 Ant2	ReCheek	0.115	0.470	0.136	0.543	0.061	0.202	0.125	0.923	0.847	0.920	0.844
	ReTilt	0.036	0.096	0.230	0.237	0.069	0.077	0.146	0.438	0.507	0.418	0.487
	LeCheek	0.084	0.234	0.372	0.128	0.090	0.131	0.204	0.821	0.894	0.433	0.507
	LeTilt	0.038	0.087	0.556	0.042	0.138	0.030	0.233	0.711	0.914	0.248	0.452
LTE Band 41 Ant2	ReCheek	0.153	0.470	0.136	0.543	0.061	0.202	0.125	0.961	0.884	0.958	0.881
	ReTilt	0.022	0.096	0.230	0.237	0.069	0.077	0.146	0.424	0.494	0.405	0.474
	LeCheek	0.072	0.234	0.372	0.128	0.090	0.131	0.204	0.808	0.881	0.420	0.494
	LeTilt	0.028	0.087	0.556	0.042	0.138	0.030	0.233	0.700	0.903	0.238	0.441
LTE Band 66 Ant2	ReCheek	0.079	0.470	0.136	0.543	0.061	0.202	0.125	0.888	0.811	0.884	0.808
	ReTilt	0.037	0.096	0.230	0.237	0.069	0.077	0.146	0.440	0.509	0.420	0.489
	LeCheek	0.055	0.234	0.372	0.128	0.090	0.131	0.204	0.792	0.865	0.404	0.478
	LeTilt	0.016	0.087	0.556	0.042	0.138	0.030	0.233	0.689	0.892	0.227	0.430
LTE Band 71 Ant1	ReCheek	0.036	0.470	0.136	0.543	0.061	0.202	0.125	0.844	0.767	0.841	0.764
	ReTilt	0.018	0.096	0.230	0.237	0.069	0.077	0.146	0.421	0.490	0.401	0.470
	LeCheek	0.092	0.234	0.372	0.128	0.090	0.131	0.204	0.828	0.902	0.441	0.514
	LeTilt	0.011	0.087	0.556	0.042	0.138	0.030	0.233	0.684	0.887	0.221	0.425
LTE Band 71 Ant3	ReCheek	0.732	0.470	0.136	0.543	0.061	0.202	0.125	1.540	1.464	1.537	1.461
	ReTilt	0.241	0.096	0.230	0.237	0.069	0.077	0.146	0.644	0.713	0.624	0.693
	LeCheek	0.578	0.234	0.372	0.128	0.090	0.131	0.204	1.314	1.388	0.927	1.000
	LeTilt	0.006	0.087	0.556	0.042	0.138	0.030	0.233	0.678	0.881	0.216	0.419
NR n2 Ant2	ReCheek	0.124	0.470	0.136	0.543	0.061	0.202	0.125	0.932	0.855	0.928	0.852
	ReTilt	0.018	0.096	0.230	0.237	0.069	0.077	0.146	0.420	0.489	0.400	0.469
	LeCheek	0.080	0.234	0.372	0.128	0.090	0.131	0.204	0.816	0.890	0.429	0.502
	LeTilt	0.034	0.087	0.556	0.042	0.138	0.030	0.233	0.706	0.909	0.244	0.447
NR n5 Ant1	ReCheek	0.065	0.470	0.136	0.543	0.061	0.202	0.125	0.873	0.796	0.870	0.793
	ReTilt	0.026	0.096	0.230	0.237	0.069	0.077	0.146	0.428	0.497	0.408	0.477
	LeCheek	0.098	0.234	0.372	0.128	0.090	0.131	0.204	0.835	0.908	0.447	0.521
	LeTilt	0.021	0.087	0.556	0.042	0.138	0.030	0.233	0.693	0.896	0.231	0.434
NR n5 Ant3	ReCheek	0.772	0.470	0.136	0.543	0.061	0.202	0.125	1.581	1.504	1.577	1.501
	ReTilt	0.237	0.096	0.230	0.237	0.069	0.077	0.146	0.640	0.709	0.620	0.689
	LeCheek	0.652	0.234	0.372	0.128	0.090	0.131	0.204	1.388	1.462	1.001	1.075
	LeTilt	0.106	0.087	0.556	0.042	0.138	0.030	0.233	0.779	0.982	0.317	0.520
NR n7 Ant2	ReCheek	0.338	0.470	0.136	0.543	0.061	0.202	0.125	1.146	1.070	1.143	1.067
	ReTilt	0.067	0.096	0.230	0.237	0.069	0.077	0.146	0.469	0.539	0.449	0.519
	LeCheek	0.218	0.234	0.372	0.128	0.090	0.131	0.204	0.955	1.028	0.567	0.641
	LeTilt	0.112	0.087	0.556	0.042	0.138	0.030	0.233	0.785	0.988	0.322	0.526
NR n12 Ant1	ReCheek	0.043	0.470	0.136	0.543	0.061	0.202	0.125	0.851	0.775	0.848	0.772
	ReTilt	0.032	0.096	0.230	0.237	0.069	0.077	0.146	0.434	0.504	0.415	0.484
	LeCheek	0.052	0.234	0.372	0.128	0.090	0.131	0.204	0.788	0.861	0.400	0.474
	LeTilt	0.041	0.087	0.556	0.042	0.138	0.030	0.233	0.714	0.917	0.252	0.455
NR n12 Ant3	ReCheek	0.737	0.470	0.136	0.543	0.061	0.202	0.125	1.545	1.469	1.542	1.466
	ReTilt	0.202	0.096	0.230	0.237	0.069	0.077	0.146	0.605	0.674	0.585	0.654
	LeCheek	0.531	0.234	0.372	0.128	0.090	0.131	0.204	1.267	1.341	0.880	0.954
	LeTilt	0.071	0.087	0.556	0.042	0.138	0.030	0.233	0.743	0.947	0.281	0.484
NR n25 Ant1	ReCheek	0.138	0.470	0.136	0.543	0.061	0.202	0.125	0.947	0.870	0.943	0.867
	ReTilt	0.023	0.096	0.230	0.237	0.069	0.077	0.146	0.425	0.494	0.405	0.474
	LeCheek	0.062	0.234	0.372	0.128	0.090	0.131	0.204	0.798	0.872	0.411	0.485
	LeTilt	0.041	0.087	0.556	0.042	0.138	0.030	0.233	0.713	0.916	0.251	0.454
NR n38 Ant2	ReCheek	0.436	0.470	0.136	0.543	0.061	0.202	0.125	1.244	1.168	1.241	1.164
	ReTilt	0.081	0.096	0.230	0.237	0.069	0.077	0.146	0.484	0.553	0.464	0.533
	LeCheek	0.185	0.234	0.372	0.128	0.090	0.131	0.204	0.921	0.995	0.534	0.608
	LeTilt	0.126	0.087	0.556	0.042	0.138	0.030	0.233	0.798	1.002	0.336	0.540
NR n66 Ant2	ReCheek	0.090	0.470	0.136	0.543	0.061	0.202	0.125	0.898	0.821	0.894	0.818
	ReTilt	0.012	0.096	0.230	0.237	0.069	0.077	0.146	0.415	0.484	0.395	0.464
	LeCheek	0.028	0.234	0.372	0.128	0.090	0.131	0.204	0.764	0.837	0.376	0.450
	LeTilt	0.007	0.087	0.556	0.042	0.138	0.030	0.233	0.680	0.883	0.217	0.421
NR n77 Ant4	ReCheek	0.707	0.470	0.136	0.543	0.061	0.202	0.125	1.515	1.438	1.512	1.435
	ReTilt	0.440	0.096	0.230	0.237	0.069	0.077	0.146	0.842	0.912	0.822	0.892
	LeCheek	0.133	0.234	0.372	0.128	0.090	0.131	0.204	0.869	0.943	0.482	0.556
	LeTilt	0.109	0.087	0.556	0.042	0.138	0.030	0.233	0.781	0.984	0.319	0.522
NR n77 Ant5	ReCheek	0.762	0.470	0.136	0.543	0.061	0.202	0.125	1.571	1.494	1.567	1.491
	ReTilt	0.410	0.096	0.230	0.237	0.069	0.077	0.146	0.812	0.881	0.792	0.862
	LeCheek	0.141	0.234	0.372	0.128	0.090	0.131	0.204	0.878	0.951	0.490	0.564
	LeTilt	0.122	0.087	0.556	0.042	0.138	0.030	0.233	0.794	0.998	0.332	0.536

Head DBS

WWAN With WLAN DBS

The simultaneous head exposure conditions:										
WWAN	Exposure position 1g(W/kg)	1	2	3	4	5	6	7	1+2+3+4+5+6 Sum	1+2+3+4+5+7 Sum
		WWAN	WLAN 2.4GHz Ant7	WLAN 2.4GHz Ant8	WLAN 6E Ant7	WLAN 6E Ant8	Bluetooth Ant7	Bluetooth Ant8		
GSM 850 Ant1	ReCheek	0.068	0.239	0.074	0.259	0.038	0.202	0.125	0.880	0.803
	ReTilt	0.045	0.045	0.118	0.153	0.043	0.077	0.146	0.481	0.550
	LeCheek	0.088	0.110	0.190	0.079	0.057	0.131	0.204	0.654	0.728
	LeTilt	0.035	0.044	0.277	0.026	0.063	0.030	0.233	0.475	0.678
GSM 850 Ant3	ReCheek	0.756	0.239	0.074	0.259	0.038	0.202	0.125	1.567	1.491
	ReTilt	0.243	0.045	0.118	0.153	0.043	0.077	0.146	0.679	0.748
	LeCheek	0.373	0.110	0.190	0.079	0.057	0.131	0.204	0.939	1.012
	LeTilt	0.152	0.044	0.277	0.026	0.063	0.030	0.233	0.592	0.795
GSM 1900 Ant2	ReCheek	0.038	0.239	0.074	0.259	0.038	0.202	0.125	0.850	0.773
	ReTilt	0.003	0.045	0.118	0.153	0.043	0.077	0.146	0.439	0.508
	LeCheek	0.020	0.110	0.190	0.079	0.057	0.131	0.204	0.586	0.660
	LeTilt	0.004	0.044	0.277	0.026	0.063	0.030	0.233	0.443	0.647
WCDMA Band II Ant2	ReCheek	0.098	0.239	0.074	0.259	0.038	0.202	0.125	0.910	0.833
	ReTilt	0.007	0.045	0.118	0.153	0.043	0.077	0.146	0.443	0.512
	LeCheek	0.088	0.110	0.190	0.079	0.057	0.131	0.204	0.653	0.727
	LeTilt	0.006	0.044	0.277	0.026	0.063	0.030	0.233	0.446	0.649
WCDMA Band IV Ant2	ReCheek	0.038	0.239	0.074	0.259	0.038	0.202	0.125	0.849	0.773
	ReTilt	0.004	0.045	0.118	0.153	0.043	0.077	0.146	0.440	0.509
	LeCheek	0.056	0.110	0.190	0.079	0.057	0.131	0.204	0.621	0.695
	LeTilt	0.006	0.044	0.277	0.026	0.063	0.030	0.233	0.445	0.648
WCDMA Band V Ant1	ReCheek	0.064	0.239	0.074	0.259	0.038	0.202	0.125	0.875	0.798
	ReTilt	0.044	0.045	0.118	0.153	0.043	0.077	0.146	0.480	0.549
	LeCheek	0.116	0.110	0.190	0.079	0.057	0.131	0.204	0.682	0.755
	LeTilt	0.034	0.044	0.277	0.026	0.063	0.030	0.233	0.474	0.677
WCDMA Band V Ant3	ReCheek	0.762	0.239	0.074	0.259	0.038	0.202	0.125	1.573	1.497
	ReTilt	0.163	0.045	0.118	0.153	0.043	0.077	0.146	0.599	0.668
	LeCheek	0.345	0.110	0.190	0.079	0.057	0.131	0.204	0.911	0.985
	LeTilt	0.128	0.044	0.277	0.026	0.063	0.030	0.233	0.567	0.771
LTE Band 2 Ant2	ReCheek	0.100	0.239	0.074	0.259	0.038	0.202	0.125	0.912	0.835
	ReTilt	0.027	0.045	0.118	0.153	0.043	0.077	0.146	0.463	0.532
	LeCheek	0.049	0.110	0.190	0.079	0.057	0.131	0.204	0.614	0.688
	LeTilt	0.018	0.044	0.277	0.026	0.063	0.030	0.233	0.458	0.661
LTE Band 4 Ant1	ReCheek	0.082	0.239	0.074	0.259	0.038	0.202	0.125	0.893	0.817
	ReTilt	0.035	0.045	0.118	0.153	0.043	0.077	0.146	0.471	0.540
	LeCheek	0.029	0.110	0.190	0.079	0.057	0.131	0.204	0.595	0.669
	LeTilt	0.042	0.044	0.277	0.026	0.063	0.030	0.233	0.482	0.685
LTE Band 5 Ant1	ReCheek	0.066	0.239	0.074	0.259	0.038	0.202	0.125	0.877	0.801
	ReTilt	0.038	0.045	0.118	0.153	0.043	0.077	0.146	0.474	0.543
	LeCheek	0.164	0.110	0.190	0.079	0.057	0.131	0.204	0.730	0.804
	LeTilt	0.005	0.044	0.277	0.026	0.063	0.030	0.233	0.444	0.647
LTE Band 5 Ant3	ReCheek	0.746	0.239	0.074	0.259	0.038	0.202	0.125	1.558	1.481
	ReTilt	0.179	0.045	0.118	0.153	0.043	0.077	0.146	0.615	0.684
	LeCheek	0.434	0.110	0.190	0.079	0.057	0.131	0.204	1.000	1.074
	LeTilt	0.150	0.044	0.277	0.026	0.063	0.030	0.233	0.590	0.793
LTE Band 7 Ant1	ReCheek	0.052	0.239	0.074	0.259	0.038	0.202	0.125	0.863	0.786
	ReTilt	0.015	0.045	0.118	0.153	0.043	0.077	0.146	0.451	0.520
	LeCheek	0.039	0.110	0.190	0.079	0.057	0.131	0.204	0.604	0.678
	LeTilt	0.013	0.044	0.277	0.026	0.063	0.030	0.233	0.453	0.656
LTE Band 7 Ant2	ReCheek	0.268	0.239	0.074	0.259	0.038	0.202	0.125	1.080	1.003
	ReTilt	0.090	0.045	0.118	0.153	0.043	0.077	0.146	0.526	0.595
	LeCheek	0.182	0.110	0.190	0.079	0.057	0.131	0.204	0.748	0.821
	LeTilt	0.067	0.044	0.277	0.026	0.063	0.030	0.233	0.506	0.709
LTE Band 12 Ant1	ReCheek	0.046	0.239	0.074	0.259	0.038	0.202	0.125	0.858	0.781
	ReTilt	0.036	0.045	0.118	0.153	0.043	0.077	0.146	0.472	0.541
	LeCheek	0.125	0.110	0.190	0.079	0.057	0.131	0.204	0.691	0.765
	LeTilt	0.045	0.044	0.277	0.026	0.063	0.030	0.233	0.485	0.688
LTE Band 12 Ant3	ReCheek	0.519	0.239	0.074	0.259	0.038	0.202	0.125	1.331	1.254
	ReTilt	0.211	0.045	0.118	0.153	0.043	0.077	0.146	0.647	0.716
	LeCheek	0.281	0.110	0.190	0.079	0.057	0.131	0.204	0.847	0.920
	LeTilt	0.026	0.044	0.277	0.026	0.063	0.030	0.233	0.465	0.668
LTE Band 17 Ant1	ReCheek	0.035	0.239	0.074	0.259	0.038	0.202	0.125	0.846	0.770
	ReTilt	0.027	0.045	0.118	0.153	0.043	0.077	0.146	0.463	0.532
	LeCheek	0.133	0.110	0.190	0.079	0.057	0.131	0.204	0.699	0.773
	LeTilt	0.038	0.044	0.277	0.026	0.063	0.030	0.233	0.477	0.681
LTE Band 17 Ant3	ReCheek	0.507	0.239	0.074	0.259	0.038	0.202	0.125	1.319	1.242
	ReTilt	0.206	0.045	0.118	0.153	0.043	0.077	0.146	0.642	0.711
	LeCheek	0.385	0.110	0.190	0.079	0.057	0.131	0.204	0.951	1.025
	LeTilt	0.025	0.044	0.277	0.026	0.063	0.030	0.233	0.464	0.668
LTE Band 25 Ant2	ReCheek	0.096	0.239	0.074	0.259	0.038	0.202	0.125	0.908	0.831
	ReTilt	0.024	0.045	0.118	0.153	0.043	0.077	0.146	0.460	0.529
	LeCheek	0.063	0.110	0.190	0.079	0.057	0.131	0.204	0.629	0.702
	LeTilt	0.036	0.044	0.277	0.026	0.063	0.030	0.233	0.475	0.678

WWAN With WLAN DBS

The simultaneous head exposure conditions:										
WWAN	Exposure position 1g(W/kg)	1	2	3	4	5	6	7	1+2+3+4+5+6 Sum	1+2+3+4+5+7 Sum
		WWAN	WLAN 2.4GHz Ant7	WLAN 2.4GHz Ant8	WLAN 6E Ant7	WLAN 6E Ant8	Bluetooth Ant7	Bluetooth Ant8		
LTE Band 26 Ant1	ReCheek	0.050	0.239	0.074	0.242	0.044	0.202	0.125	0.851	0.774
	ReTilt	0.035	0.045	0.118	0.117	0.065	0.077	0.146	0.457	0.526
	LeCheek	0.122	0.110	0.190	0.067	0.117	0.131	0.204	0.735	0.809
	LeTilt	0.018	0.044	0.277	0.032	0.123	0.030	0.233	0.524	0.727
LTE Band 26 Ant3	ReCheek	0.733	0.239	0.074	0.242	0.044	0.202	0.125	1.534	1.457
	ReTilt	0.201	0.045	0.118	0.117	0.065	0.077	0.146	0.624	0.693
	LeCheek	0.372	0.110	0.190	0.067	0.117	0.131	0.204	0.985	1.059
	LeTilt	0.130	0.044	0.277	0.032	0.123	0.030	0.233	0.635	0.838
LTE Band 30 Ant2	ReCheek	0.221	0.239	0.074	0.242	0.044	0.202	0.125	1.022	0.945
	ReTilt	0.080	0.045	0.118	0.117	0.065	0.077	0.146	0.502	0.572
	LeCheek	0.142	0.110	0.190	0.067	0.117	0.131	0.204	0.755	0.829
	LeTilt	0.065	0.044	0.277	0.032	0.123	0.030	0.233	0.571	0.774
LTE Band 38 Ant2	ReCheek	0.115	0.239	0.074	0.242	0.044	0.202	0.125	0.916	0.839
	ReTilt	0.036	0.045	0.118	0.117	0.065	0.077	0.146	0.458	0.527
	LeCheek	0.084	0.110	0.190	0.067	0.117	0.131	0.204	0.698	0.771
	LeTilt	0.038	0.044	0.277	0.032	0.123	0.030	0.233	0.544	0.747
LTE Band 41 Ant2	ReCheek	0.153	0.239	0.074	0.242	0.044	0.202	0.125	0.953	0.877
	ReTilt	0.022	0.045	0.118	0.117	0.065	0.077	0.146	0.444	0.513
	LeCheek	0.072	0.110	0.190	0.067	0.117	0.131	0.204	0.685	0.759
	LeTilt	0.028	0.044	0.277	0.032	0.123	0.030	0.233	0.534	0.737
LTE Band 66 Ant2	ReCheek	0.079	0.239	0.074	0.242	0.044	0.202	0.125	0.880	0.804
	ReTilt	0.037	0.045	0.118	0.117	0.065	0.077	0.146	0.460	0.529
	LeCheek	0.055	0.110	0.190	0.067	0.117	0.131	0.204	0.669	0.742
	LeTilt	0.016	0.044	0.277	0.032	0.123	0.030	0.233	0.522	0.725
LTE Band 71 Ant1	ReCheek	0.036	0.239	0.074	0.242	0.044	0.202	0.125	0.836	0.760
	ReTilt	0.018	0.045	0.118	0.117	0.065	0.077	0.146	0.441	0.510
	LeCheek	0.092	0.110	0.190	0.067	0.117	0.131	0.204	0.705	0.779
	LeTilt	0.011	0.044	0.277	0.032	0.123	0.030	0.233	0.517	0.720
LTE Band 71 Ant3	ReCheek	0.732	0.239	0.074	0.242	0.044	0.202	0.125	1.533	1.456
	ReTilt	0.241	0.045	0.118	0.117	0.065	0.077	0.146	0.663	0.732
	LeCheek	0.578	0.110	0.190	0.067	0.117	0.131	0.204	1.191	1.265
	LeTilt	0.006	0.044	0.277	0.032	0.123	0.030	0.233	0.512	0.715
NR n2 Ant2	ReCheek	0.124	0.239	0.074	0.242	0.044	0.202	0.125	0.924	0.848
	ReTilt	0.018	0.045	0.118	0.117	0.065	0.077	0.146	0.440	0.509
	LeCheek	0.080	0.110	0.190	0.067	0.117	0.131	0.204	0.693	0.767
	LeTilt	0.034	0.044	0.277	0.032	0.123	0.030	0.233	0.539	0.742
NR n5 Ant1	ReCheek	0.065	0.239	0.074	0.242	0.044	0.202	0.125	0.865	0.789
	ReTilt	0.026	0.045	0.118	0.117	0.065	0.077	0.146	0.448	0.517
	LeCheek	0.098	0.110	0.190	0.067	0.117	0.131	0.204	0.712	0.786
	LeTilt	0.021	0.044	0.277	0.032	0.123	0.030	0.233	0.527	0.730
NR n5 Ant3	ReCheek	0.772	0.239	0.074	0.242	0.044	0.202	0.125	1.573	1.497
	ReTilt	0.237	0.045	0.118	0.117	0.065	0.077	0.146	0.660	0.729
	LeCheek	0.652	0.110	0.190	0.067	0.117	0.131	0.204	1.265	1.339
	LeTilt	0.106	0.044	0.277	0.032	0.123	0.030	0.233	0.612	0.815
NR n7 Ant2	ReCheek	0.338	0.239	0.074	0.242	0.044	0.202	0.125	1.139	1.062
	ReTilt	0.067	0.045	0.118	0.117	0.065	0.077	0.146	0.489	0.558
	LeCheek	0.218	0.110	0.190	0.067	0.117	0.131	0.204	0.832	0.905
	LeTilt	0.112	0.044	0.277	0.032	0.123	0.030	0.233	0.618	0.821
NR n12 Ant1	ReCheek	0.043	0.239	0.074	0.242	0.044	0.202	0.125	0.844	0.767
	ReTilt	0.032	0.045	0.118	0.117	0.065	0.077	0.146	0.454	0.523
	LeCheek	0.052	0.110	0.190	0.067	0.117	0.131	0.204	0.665	0.739
	LeTilt	0.041	0.044	0.277	0.032	0.123	0.030	0.233	0.547	0.750
NR n12 Ant3	ReCheek	0.737	0.239	0.074	0.242	0.044	0.202	0.125	1.538	1.461
	ReTilt	0.202	0.045	0.118	0.117	0.065	0.077	0.146	0.624	0.694
	LeCheek	0.531	0.110	0.190	0.067	0.117	0.131	0.204	1.144	1.218
	LeTilt	0.071	0.044	0.277	0.032	0.123	0.030	0.233	0.577	0.780
NR n25 Ant1	ReCheek	0.138	0.239	0.074	0.242	0.044	0.202	0.125	0.939	0.863
	ReTilt	0.023	0.045	0.118	0.117	0.065	0.077	0.146	0.445	0.514
	LeCheek	0.062	0.110	0.190	0.067	0.117	0.131	0.204	0.675	0.749
	LeTilt	0.041	0.044	0.277	0.032	0.123	0.030	0.233	0.547	0.750
NR n38 Ant2	ReCheek	0.436	0.239	0.074	0.242	0.044	0.202	0.125	1.237	1.160
	ReTilt	0.081	0.045	0.118	0.117	0.065	0.077	0.146	0.503	0.573
	LeCheek	0.185	0.110	0.190	0.067	0.117	0.131	0.204	0.798	0.872
	LeTilt	0.126	0.044	0.277	0.032	0.123	0.030	0.233	0.632	0.835
NR n66 Ant2	ReCheek	0.090	0.239	0.074	0.242	0.044	0.202	0.125	0.890	0.814
	ReTilt	0.012	0.045	0.118	0.117	0.065	0.077	0.146	0.434	0.503
	LeCheek	0.028	0.110	0.190	0.067	0.117	0.131	0.204	0.641	0.715
	LeTilt	0.007	0.044	0.277	0.032	0.123	0.030	0.233	0.513	0.716
NR n77 Ant4	ReCheek	0.707	0.239	0.074	0.242	0.044	0.202	0.125	1.508	1.431
	ReTilt	0.440	0.045	0.118	0.117	0.065	0.077	0.146	0.862	0.931
	LeCheek	0.133	0.110	0.190	0.067	0.117	0.131	0.204	0.746	0.820
	LeTilt	0.109	0.044	0.277	0.032	0.123	0.030	0.233	0.614	0.818
NR n77 Ant5	ReCheek	0.762	0.239	0.074	0.242	0.044	0.202	0.125	1.563	1.487
	ReTilt	0.410	0.045	0.118	0.117	0.065	0.077	0.146	0.832	0.901
	LeCheek	0.141	0.110	0.190	0.067	0.117	0.131	0.204	0.755	0.828
	LeTilt	0.122	0.044	0.277	0.032	0.123	0.030	0.233	0.628	0.831

Head_WLAN only SISO&MIMO

WLAN SISO/MIMO

The simultaneous head exposure conditions:

Exposure position 1g(W/kg)	1	2	3	4	5	6	1+2+5 Sum	1+2+6 Sum	3+4+5 Sum	3+4+6 Sum
	WLAN 2.4GHz Ant7	WLAN 2.4GHz Ant8	WLAN 6E Ant7	WLAN 6E Ant8	Bluetooth Ant7	Bluetooth Ant8				
ReCheek	0.719	0.250	1.216	0.121	0.202	0.125	1.171	1.094	1.539	1.462
ReTilt	0.157	0.351	0.680	0.136	0.077	0.146	0.586	0.655	0.893	0.962
LeCheek	0.323	0.577	0.351	0.178	0.131	0.204	1.031	1.105	0.660	0.734
LeTilt	0.139	0.851	0.116	0.198	0.030	0.233	1.020	1.223	0.345	0.548

Head_WLAN only DBS

WLAN DBS

The simultaneous head exposure conditions:

Exposure position 1g(W/kg)	1	2	3	4	5	6	1+2+3+4+5 Sum	1+2+3+4+6 Sum
	WLAN 2.4GHz Ant7	WLAN 2.4GHz Ant8	WLAN 6E Ant7	WLAN 6E Ant8	Bluetooth Ant7	Bluetooth Ant8		
ReCheek	0.470	0.136	0.684	0.100	0.202	0.125	1.592	1.515
ReTilt	0.096	0.230	0.382	0.113	0.077	0.146	0.898	0.967
LeCheek	0.234	0.372	0.198	0.148	0.131	0.204	1.082	1.155
LeTilt	0.087	0.556	0.065	0.157	0.030	0.233	0.895	1.098

Body-worn_WLAN only

Exposure position 1g(W/kg)	1	2	3	4	5	6	1+2+5 Sum	1+2+6 Sum	3+4+5 Sum	3+4+6 Sum	1+2+3+4+5 Sum	1+2+3+4+6 Sum
	WLAN 2.4GHz Chain 0	WLAN 2.4GHz Chain 1	WLAN 6E Chain 0	WLAN 6E Chain 1	Bluetooth Chain0	Bluetooth Chain1						
Front side	0.153	0.028	0.150	0.125	0.021	0.003	0.202	0.183	0.296	0.277	0.477	0.458
Back side	0.142	0.028	0.209	0.300	0.033	0.009	0.202	0.179	0.542	0.518	0.712	0.688

Body-worn_WWAN+WLAN

The simultaneous hotspot mode exposure conditions:

WWAN	Exposure position 1g(W/kg)	1	2	3	4	5	6	7	1+2+3+4+5+6 Sum	1+2+3+4+5+7 Sum
		WWAN	WLAN 2.4GHz Chain 0	WLAN 2.4GHz Chain 1	WLAN 6E Chain 0	WLAN 6E Chain 1	Bluetooth Chain0	Bluetooth Chain1		
GSM 850 Ant1	Front side	0.107	0.153	0.028	0.053	0.066	0.021	0.003	0.429	0.410
	Back side	0.125	0.142	0.028	0.073	0.184	0.033	0.009	0.585	0.561
GSM 850 Ant3	Front side	0.234	0.153	0.028	0.053	0.066	0.021	0.003	0.555	0.536
	Back side	0.159	0.142	0.028	0.073	0.184	0.033	0.009	0.619	0.595
GSM 1900 Ant2	Front side	0.081	0.153	0.028	0.053	0.066	0.021	0.003	0.402	0.383
	Back side	0.074	0.142	0.028	0.073	0.184	0.033	0.009	0.533	0.510
WCDMA Band II	Front side	0.310	0.153	0.028	0.053	0.066	0.021	0.003	0.631	0.612
	Back side	0.411	0.142	0.028	0.073	0.184	0.033	0.009	0.871	0.847
WCDMA Band IV	Front side	0.233	0.153	0.028	0.053	0.066	0.021	0.003	0.554	0.536
	Back side	0.333	0.142	0.028	0.073	0.184	0.033	0.009	0.793	0.769
WCDMA Band V	Front side	0.113	0.153	0.028	0.053	0.066	0.021	0.003	0.434	0.415
	Back side	0.122	0.142	0.028	0.073	0.184	0.033	0.009	0.582	0.558
WCDMA Band V	Front side	0.256	0.153	0.028	0.053	0.066	0.021	0.003	0.577	0.558
	Back side	0.123	0.142	0.028	0.073	0.184	0.033	0.009	0.582	0.559
LTE Band 2 Ant2	Front side	0.213	0.153	0.028	0.053	0.066	0.021	0.003	0.534	0.515
	Back side	0.265	0.142	0.028	0.073	0.184	0.033	0.009	0.724	0.701
LTE Band 4 Ant2	Front side	0.179	0.153	0.028	0.053	0.066	0.021	0.003	0.500	0.481
	Back side	0.234	0.142	0.028	0.073	0.184	0.033	0.009	0.694	0.670
LTE Band 5 Ant1	Front side	0.093	0.153	0.028	0.053	0.066	0.021	0.003	0.414	0.396
	Back side	0.070	0.142	0.028	0.073	0.184	0.033	0.009	0.529	0.506
LTE Band 5 Ant3	Front side	0.151	0.153	0.028	0.053	0.066	0.021	0.003	0.473	0.454
	Back side	0.127	0.142	0.028	0.073	0.184	0.033	0.009	0.587	0.563
LTE Band 7 Ant1	Front side	0.370	0.153	0.028	0.053	0.066	0.021	0.003	0.691	0.673
	Back side	0.325	0.142	0.028	0.073	0.184	0.033	0.009	0.785	0.761
LTE Band 7 Ant2	Front side	0.555	0.153	0.028	0.053	0.066	0.021	0.003	0.876	0.858
	Back side	0.564	0.142	0.028	0.073	0.184	0.033	0.009	1.023	1.000
LTE Band 12	Front side	0.044	0.153	0.028	0.053	0.066	0.021	0.003	0.366	0.347
	Back side	0.070	0.142	0.028	0.073	0.184	0.033	0.009	0.530	0.506
LTE Band 12	Front side	0.178	0.153	0.028	0.053	0.066	0.021	0.003	0.500	0.481
	Back side	0.151	0.142	0.028	0.073	0.184	0.033	0.009	0.610	0.587
LTE Band 17	Front side	0.039	0.153	0.028	0.053	0.066	0.021	0.003	0.360	0.342
	Back side	0.054	0.142	0.028	0.073	0.184	0.033	0.009	0.514	0.490
LTE Band 17	Front side	0.185	0.153	0.028	0.053	0.066	0.021	0.003	0.506	0.488
	Back side	0.147	0.142	0.028	0.073	0.184	0.033	0.009	0.607	0.583
LTE Band 25	Front side	0.224	0.153	0.028	0.053	0.066	0.021	0.003	0.545	0.526
	Back side	0.271	0.142	0.028	0.073	0.184	0.033	0.009	0.730	0.707
LTE Band 26	Front side	0.082	0.153	0.028	0.053	0.066	0.021	0.003	0.403	0.385
	Back side	0.088	0.142	0.028	0.073	0.184	0.033	0.009	0.548	0.524
LTE Band 26	Front side	0.136	0.153	0.028	0.053	0.066	0.021	0.003	0.457	0.439
	Back side	0.108	0.142	0.028	0.073	0.184	0.033	0.009	0.568	0.544
LTE Band 30	Front side	0.685	0.153	0.028	0.053	0.066	0.021	0.003	1.006	0.987
	Back side	0.506	0.142	0.028	0.073	0.184	0.033	0.009	0.965	0.942
LTE Band 38	Front side	0.274	0.153	0.028	0.053	0.066	0.021	0.003	0.595	0.576
	Back side	0.200	0.142	0.028	0.073	0.184	0.033	0.009	0.660	0.636
LTE Band 41	Front side	0.287	0.153	0.028	0.053	0.066	0.021	0.003	0.608	0.590
	Back side	0.264	0.142	0.028	0.073	0.184	0.033	0.009	0.724	0.700
LTE Band 66	Front side	0.192	0.153	0.028	0.053	0.066	0.021	0.003	0.513	0.494
	Back side	0.257	0.142	0.028	0.073	0.184	0.033	0.009	0.717	0.693
LTE Band 71	Front side	0.030	0.153	0.028	0.053	0.066	0.021	0.003	0.351	0.332
	Back side	0.037	0.142	0.028	0.073	0.184	0.033	0.009	0.497	0.473
LTE Band 71	Front side	0.445	0.153	0.028	0.053	0.066	0.021	0.003	0.766	0.747
	Back side	0.477	0.142	0.028	0.073	0.184	0.033	0.009	0.936	0.913
NR n2 Ant2	Front side	0.285	0.153	0.028	0.053	0.066	0.021	0.003	0.607	0.588
	Back side	0.312	0.142	0.028	0.073	0.184	0.033	0.009	0.772	0.748
NR n5 Ant1	Front side	0.096	0.153	0.028	0.053	0.066	0.021	0.003	0.417	0.398
	Back side	0.103	0.142	0.028	0.073	0.184	0.033	0.009	0.563	0.539
NR n5 Ant3	Front side	0.299	0.153	0.028	0.053	0.066	0.021	0.003	0.620	0.601
	Back side	0.334	0.142	0.028	0.073	0.184	0.033	0.009	0.794	0.770
NR n7 Ant2	Front side	0.717	0.153	0.028	0.053	0.066	0.021	0.003	1.038	1.019
	Back side	0.435	0.142	0.028	0.073	0.184	0.033	0.009	0.895	0.871
NR n12 Ant1	Front side	0.101	0.153	0.028	0.053	0.066	0.021	0.003	0.422	0.403
	Back side	0.042	0.142	0.028	0.073	0.184	0.033	0.009	0.502	0.478
NR n12 Ant3	Front side	0.324	0.153	0.028	0.053	0.066	0.021	0.003	0.645	0.626
	Back side	0.140	0.142	0.028	0.073	0.184	0.033	0.009	0.599	0.576
NR n25 Ant2	Front side	0.282	0.153	0.028	0.053	0.066	0.021	0.003	0.603	0.584
	Back side	0.294	0.142	0.028	0.073	0.184	0.033	0.009	0.754	0.730
NR n38 Ant2	Front side	0.933	0.153	0.028	0.053	0.066	0.021	0.003	1.254	1.235
	Back side	0.757	0.142	0.028	0.073	0.184	0.033	0.009	1.216	1.193
NR n66 Ant2	Front side	0.315	0.153	0.028	0.053	0.066	0.021	0.003	0.636	0.618
	Back side	0.293	0.142	0.028	0.073	0.184	0.033	0.009	0.753	0.729
NR n77 Ant4	Front side	0.178	0.153	0.028	0.053	0.066	0.021	0.003	0.499	0.480
	Back side	0.160	0.142	0.028	0.073	0.184	0.033	0.009	0.619	0.596
NR n77 Ant5	Front side	0.268	0.153	0.028	0.053	0.066	0.021	0.003	0.589	0.571
	Back side	0.271	0.142	0.028	0.073	0.184	0.033	0.009	0.731	0.707

Product specific 10-g SAR_WLAN only

Exposure position 1g(W/kg)	1	2	3	4	1+2+3 Sum	1+2+4 Sum
	WLAN 6E Chain 0	WLAN 6E Chain 1	Bluetooth Chain0	Bluetooth Chain1		
Front side	0.525	0.080	0.144	0.055	0.749	0.660
Back side	0.276	0.394	0.132	0.098	0.802	0.768
Top side	0.155	0.290	0.049	0.259	0.494	0.704
Bottom side	0.008	0.010	0.003	0.002	0.021	0.020
Right side	0.029	0.042	0.052	0.041	0.123	0.112
Left side	0.492	0.031	0.148	0.008	0.671	0.531

Product specific 10-g SAR_WWAN+WLAN

The simultaneous hotspot mode exposure conditions:

WWAN	Exposure position 1g(W/kg)	1	2	3	4	5	1+2+3+4 Sum	1+2+3+5 Sum
		WWAN	WLAN 6E Chain 0	WLAN 6E Chain 1	Bluetooth Chain0	Bluetooth Chain1		
NR n7 Ant2	Front side		0.178	0.040	0.371	0.143	0.589	0.362
	Back side		0.056	0.169	0.421	0.790	0.646	1.015
	Top side		0.033	0.145	0.186	0.390	0.365	0.568
	Bottom side	3.527	0.002	0.005	0.011	0.014	3.546	3.549
	Right side		0.007	0.021	0.013	0.097	0.041	0.124
	Left side		0.166	0.016	0.255	0.033	0.437	0.214
NR n38 Ant2	Front side	-	0.178	0.040	0.371	0.143	0.589	0.362
	Back side	-	0.056	0.169	0.421	0.790	0.646	1.015
	Top side	-	0.033	0.145	0.186	0.390	0.365	0.568
	Bottom side	3.234	0.002	0.005	0.011	0.014	3.253	3.255
	Right side	-	0.007	0.021	0.013	0.097	0.041	0.124
	Left side	-	0.166	0.016	0.255	0.033	0.437	0.214
NR n77 Ant4	Front side	-	0.178	0.040	0.371	0.143	0.589	0.362
	Back side	-	0.056	0.169	0.421	0.790	0.646	1.015
	Top side	-	0.033	0.145	0.186	0.390	0.365	0.568
	Bottom side	-	0.002	0.005	0.011	0.014	0.019	0.022
	Right side	-	0.007	0.021	0.013	0.097	0.041	0.124
	Left side	3.359	0.166	0.016	0.255	0.033	3.796	3.573
NR n77 Ant5	Front side	-	0.178	0.040	0.371	0.143	0.589	0.362
	Back side	-	0.056	0.169	0.421	0.790	0.646	1.015
	Top side	-	0.033	0.145	0.186	0.390	0.365	0.568
	Bottom side	-	0.002	0.005	0.011	0.014	0.019	0.022
	Right side	-	0.007	0.021	0.013	0.097	0.041	0.124
	Left side	3.553	0.166	0.016	0.255	0.033	3.990	3.767

4. Instruments List

Manufacturer	Device	Type	Serial number	Date of last calibration	Date of next calibration
SPEAG	Dosimetric E-Field Probe	EX3DV4	7466	Jan.29,2021	Jan.28,2022
		EUmmWV4	9548	Jan.28,2021	Jan.27,2022
SPEAG	System Validation Dipole	D6.5GHzV2	1006	Aug.21,2020	Aug.20,2021
		5G-Veri10	1021	Jan.18,2021	Jan.17,2022
SPEAG	Data acquisition Electronics	DAE4	1665	Apr.21,2021	Apr.20,2022
SPEAG	Software	DASY 52 V52.10.4	N/A	Calibration not required	Calibration not required
SPEAG	Phantom	SAM	N/A	Calibration not required	Calibration not required
		mmWave			
SPEAG	Dielectric Assessment Kit	DAKS-3.5	1053	Feb.17,2021	Feb.16,2022
Agilent	Dual-directional coupler	772D	MY52180142	Oct.06,2020	Oct.05,2021
		778D	MY52180302	Oct.06,2020	Oct.05,2021
Agilent	Signal Generator	N5181A	MY50145142	Dec.27,2020	Dec.26,2021
Agilent	Power Meter	E4417A	MY52200004	Oct.18,2020	Oct.17,2021
Agilent	Power Sensor	E9301H	MY52240003	Oct.18,2020	Oct.17,2021
			MY52200003	Oct.18,2020	Oct.17,2021
TECPEL	Digital thermometer	DTM-303A	TP190085	Dec.22,2020	Dec.14,2021
Anritsu	Radio Communication Test	MT8821C	6262044739	Dec.02.2020	Dec.01.2021
R&S	Power Sensor	NRP18S	1429.0029K02-101973-em	Jun.24.2020	Jun.23.2021

5. Measurements

Report No. :EN/2021/20005-01
Measurement Report for Device, CHEEK, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 47 (6185.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	CHEEK, 0.00	U-NII-5	WLAN, 10743-AAC	6185.0, 47	5.7	5.77	34.5

Hardware Setup

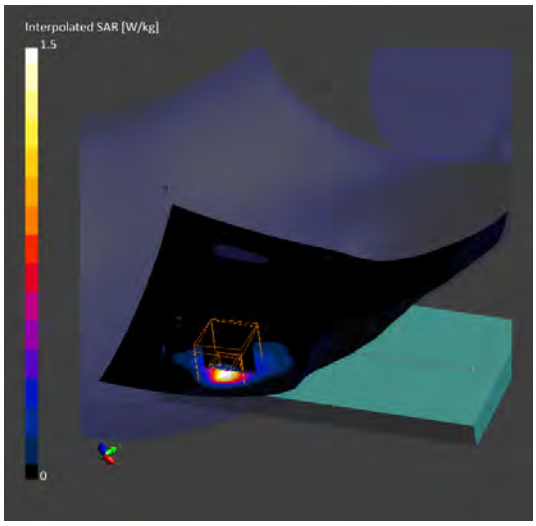
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.2
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 01:35	2021-05-13, 01:47
psSAR1g [W/Kg]	0.980	0.817
psSAR10g [W/Kg]	0.270	0.301
Power Drift [dB]	0.15	-0.19
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		57.9
Dist 3dB Peak [mm]		4.4



Report No. :EN/2021/20005-01
Measurement Report for Device, CHEEK, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 79 (6345.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	CHEEK, 0.00	U-NII-5	WLAN, 10743-AAC	6345.0, 79	5.7	5.916	34.234

Hardware Setup

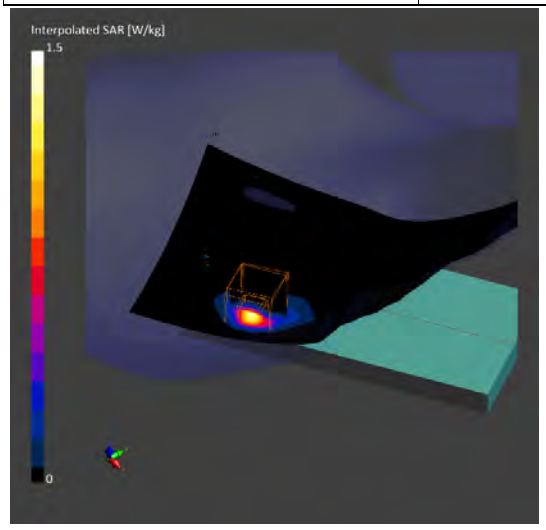
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 02:12	2021-05-13, 02:24
psSAR1g [W/Kg]	0.868	0.746
psSAR10g [W/Kg]	0.236	0.223
Power Drift [dB]	-0.06	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		51.9
Dist 3dB Peak [mm]		4.8



Report No. :EN/2021/20005-01
Measurement Report for Device, CHEEK, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	CHEEK, 0.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	5.7	6.104	33.992

Hardware Setup

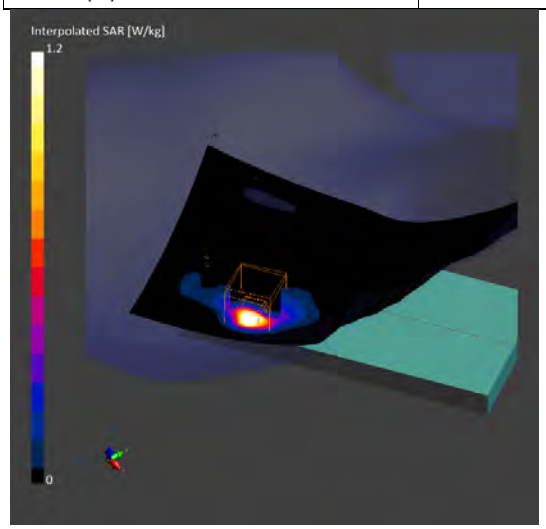
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 02:48	2021-05-13, 03:01
psSAR1g [W/Kg]	0.752	0.844
psSAR10g [W/Kg]	0.238	0.247
Power Drift [dB]	-0.09	0.06
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		48.2
Dist 3dB Peak [mm]		6



Report No. :EN/2021/20005-01
Measurement Report for Device, CHEEK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)
Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	CHEEK, 0.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.42	33.6

Hardware Setup

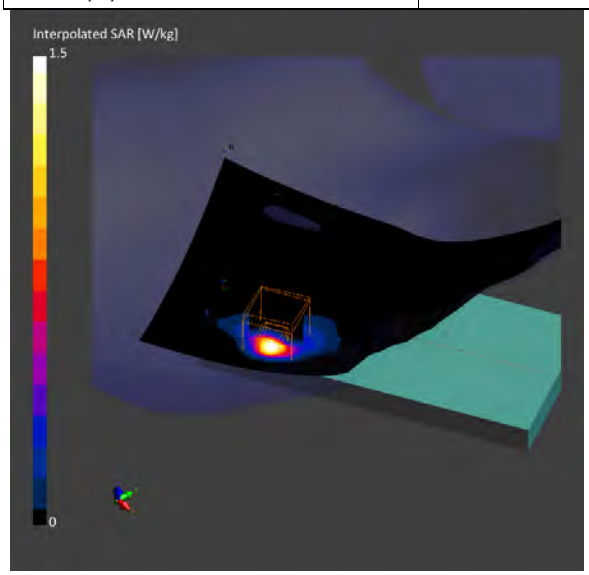
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 03:23	2021-05-13, 03:34
psSAR1g [W/Kg]	1.07	1.14
psSAR10g [W/Kg]	0.442	0.531
Power Drift [dB]	-0.11	0.09
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		54.1
Dist 3dB Peak [mm]		6.8



Report No. :EN/2021/20005-01
Measurement Report for Device, CHEEK, U-NII-8, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 207 (6985.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	CHEEK, 0.00	U-NII-8	WLAN, 10743-AAC	6985.0, 207	5.85	6.69	33.2

Hardware Setup

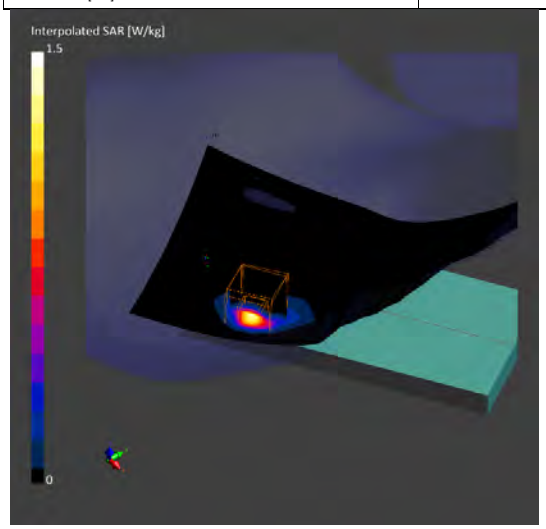
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 03:52	2021-05-13, 04:10
psSAR1g [W/Kg]	0.582	0.623
psSAR10g [W/Kg]	0.194	0.217
Power Drift [dB]	-0.02	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		49.7
Dist 3dB Peak [mm]		5.2



Report No. :EN/2021/20005-01
Measurement Report for Device, TILT, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 15 (6025.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	TILT, 0.00	U-NII-5	WLAN, 10743-AAC	6025.0, 15	5.7	5.49	34.9

Hardware Setup

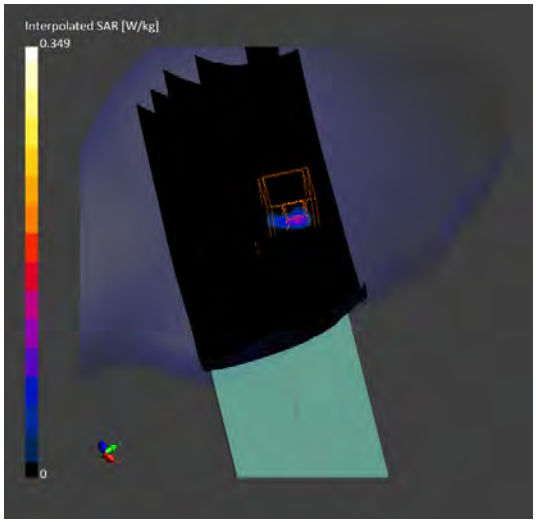
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	85.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 04:33	2021-05-13, 04:45
psSAR1g [W/Kg]	0.018	0.013
psSAR10g [W/Kg]	0.003	0.007
Power Drift [dB]	-0.01	-0.17
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		64.4
Dist 3dB Peak [mm]		5.8



Report No. :EN/2021/20005-01
Measurement Report for Device, TILT, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 47 (6185.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	TILT, 0.00	U-NII-5	WLAN, 10743-AAC	6185.0, 47	5.7	5.77	34.5

Hardware Setup

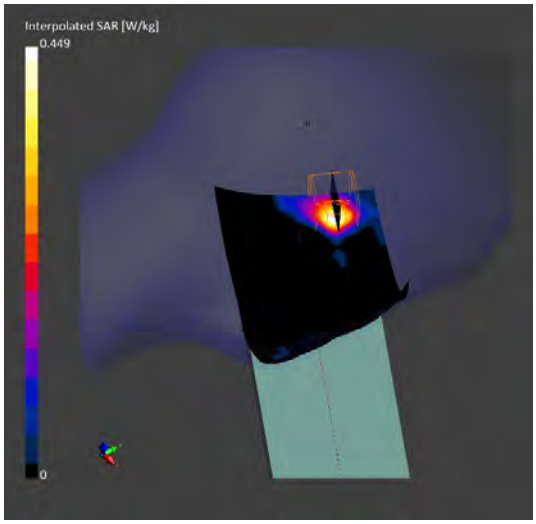
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	85.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 05:06	2021-05-13, 05:18
psSAR1g [W/Kg]	0.094	0.047
psSAR10g [W/Kg]	0.030	0.013
Power Drift [dB]	n/a	0.18
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		56.9
Dist 3dB Peak [mm]		5.8



Report No. :EN/2021/20005-01
Measurement Report for Device, TILT, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	TILT, 0.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	5.7	6.104	33.992

Hardware Setup

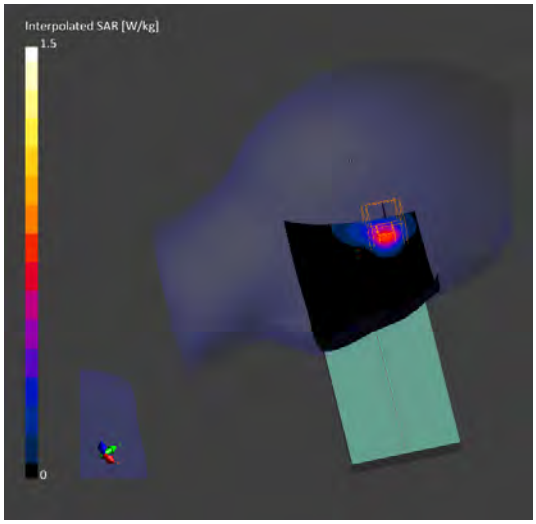
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	85.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 05:46	2021-05-13, 05:58
psSAR1g [W/Kg]	0.119	0.189
psSAR10g [W/Kg]	0.0504	0.0532
Power Drift [dB]	n/a	0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		52.9
Dist 3dB Peak [mm]		5.5



Report No. :EN/2021/20005-01
Measurement Report for Device, TILT, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	TILT, 0.00	U-NII-7	WLAN, 10743-AAC	6825.0. 175	5.7	6.42	33.6

Hardware Setup

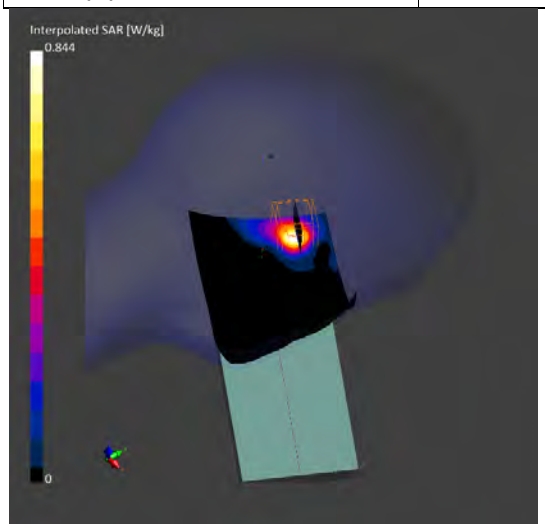
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	85.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 06:29	2021-05-13, 06:40
psSAR1g [W/Kg]	0.082	0.181
psSAR10g [W/Kg]	0.020	0.017
Power Drift [dB]	n/a	0.12
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		54.2
Dist 3dB Peak [mm]		6



Report No. :EN/2021/20005-01
Measurement Report for Device, TILT, U-NII-8, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 207 (6985.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	TILT, 0.00	U-NII-8	WLAN, 10743-AAC	6985.0, 207	5.85	6.69	33.2

Hardware Setup

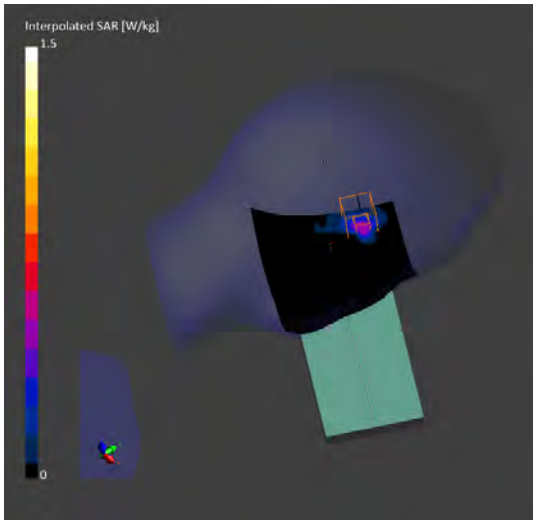
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 07:01	2021-05-13, 07:12
psSAR1g [W/Kg]	0.109	0.120
psSAR10g [W/Kg]	0.035	0.054
Power Drift [dB]	0.06	0.08
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		49.8
Dist 3dB Peak [mm]		4.8



Report No. :EN/2021/20005-01
Measurement Report for Device, CHEEK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	CHEEK, 0.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.42	33.6

Hardware Setup

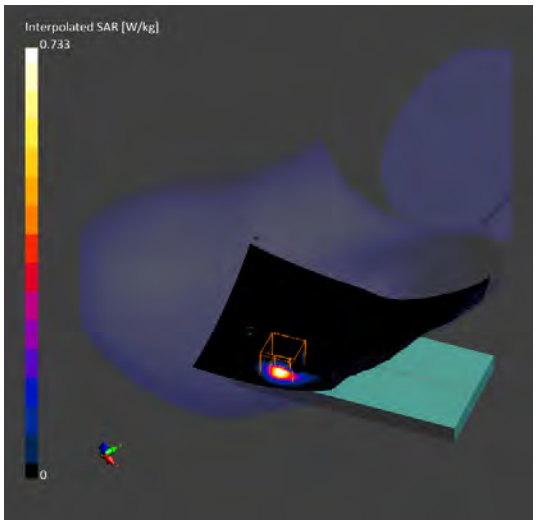
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 09:27	2021-05-13, 09:39
psSAR1g [W/Kg]	0.643	0.667
psSAR10g [W/Kg]	0.186	0.197
Power Drift [dB]	-0.12	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		51.7
Dist 3dB Peak [mm]		5.4



Report No. :EN/2021/20005-01
Measurement Report for Device, TILT, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	TILT, 0.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	5.7	6.104	33.992

Hardware Setup

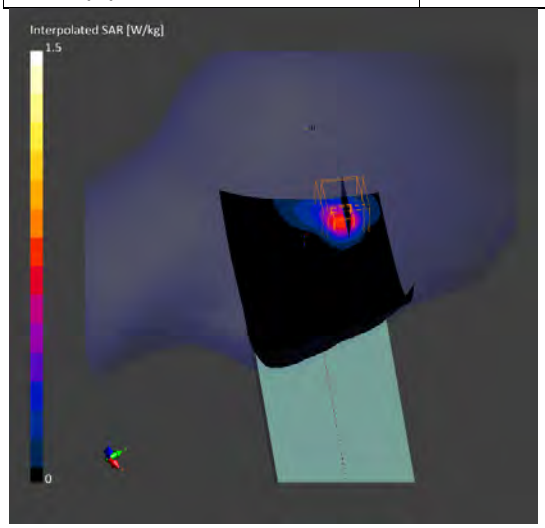
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	85.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 11:55	2021-05-13, 12:07
psSAR1g [W/Kg]	0.184	0.150
psSAR10g [W/Kg]	0.072	0.0429
Power Drift [dB]	n/a	0.06
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		51.6
Dist 3dB Peak [mm]		5.4



Report No. :EN/2021/20005-01
Measurement Report for Device, CHEEK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	CHEEK, 0.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.42	33.6

Hardware Setup

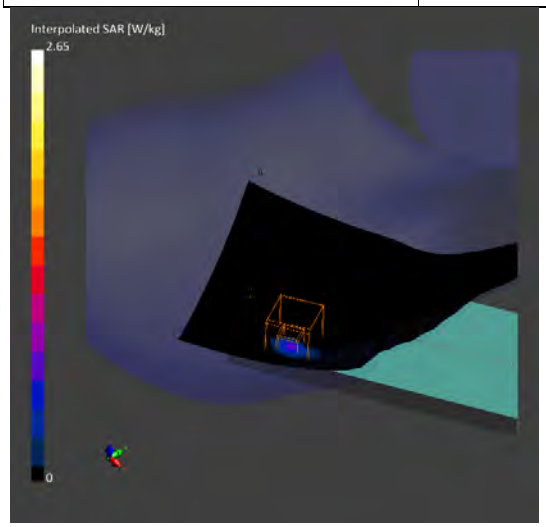
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 13:44	2021-05-13, 13:55
psSAR1g [W/Kg]	0.451	0.517
psSAR10g [W/Kg]	0.094	0.104
Power Drift [dB]	n/a	0.11
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.7
Dist 3dB Peak [mm]		6.5



Report No. :EN/2021/20005-01
Measurement Report for Device, TILT, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	TILT, 0.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	5.7	6.104	33.992

Hardware Setup

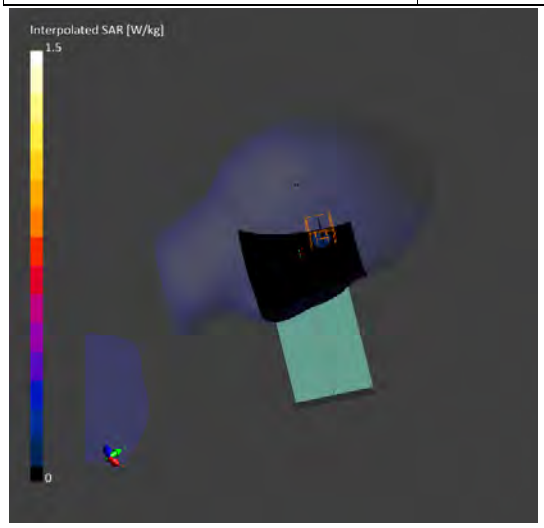
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 14:27	2021-05-13, 14:39
psSAR1g [W/Kg]	0.118	0.131
psSAR10g [W/Kg]	0.037	0.041
Power Drift [dB]	0.12	-0.17
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		56.2
Dist 3dB Peak [mm]		5.9



Report No. :EN/2021/20005-01
Measurement Report for Device, CHEEK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	CHEEK, 0.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.42	33.6

Hardware Setup

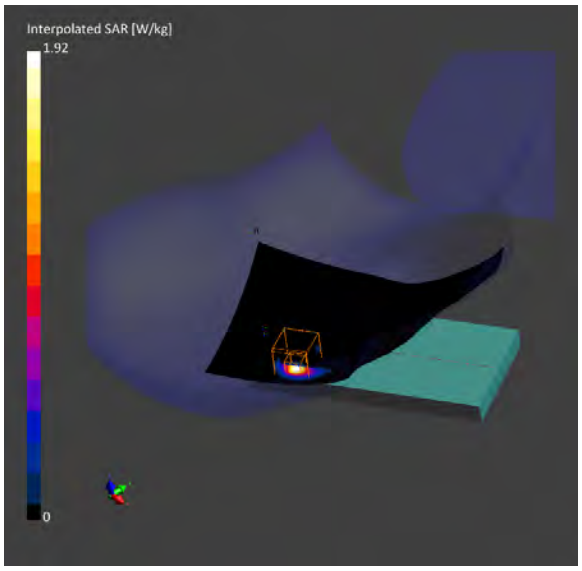
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 14:59	2021-05-13, 15:11
psSAR1g [W/Kg]	0.208	0.247
psSAR10g [W/Kg]	0.081	0.091
Power Drift [dB]	0.07	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		52.3
Dist 3dB Peak [mm]		4.9



Report No. :EN/2021/20005-01
Measurement Report for Device, TILT, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	TILT, 0.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	5.7	6.104	33.992

Hardware Setup

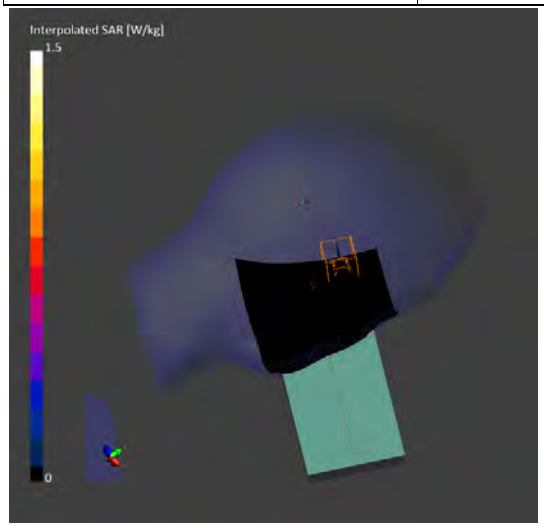
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-13	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 15:46	2021-05-13, 15:58
psSAR1g [W/Kg]	0.055	0.060
psSAR10g [W/Kg]	0.015	0.018
Power Drift [dB]	0.45	-0.15
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.1
Dist 3dB Peak [mm]		4.9



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 47 (6185.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-5	WLAN, 10743-AAC	6185.0, 47	5.7	5.652	34.392

Hardware Setup

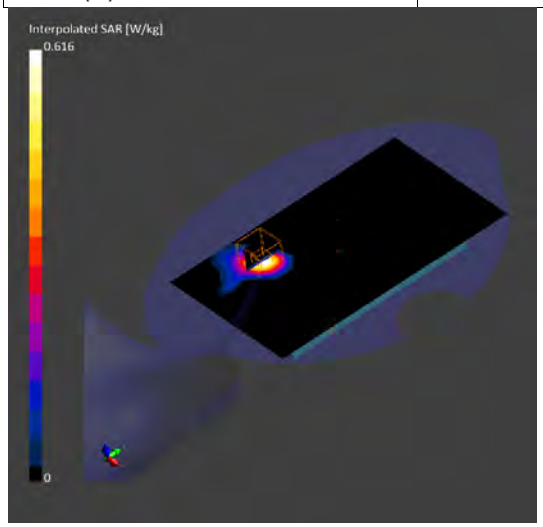
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 01:31	2021-05-14, 01:44
psSAR1g [W/Kg]	0.084	0.094
psSAR10g [W/Kg]	0.031	0.034
Power Drift [dB]	-0.14	-0.12
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		52.4
Dist 3dB Peak [mm]		9.8



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 79 (6345.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-5	WLAN, 10743-AAC	6345.0, 79	5.7	5.816	34.114

Hardware Setup

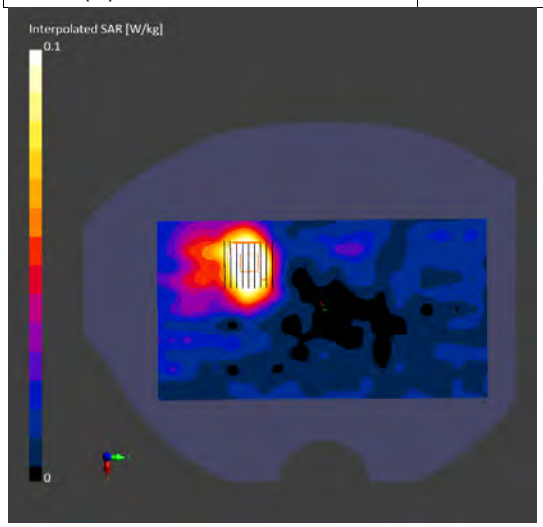
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 02:28	2021-05-14, 02:41
psSAR1g [W/Kg]	0.079	0.092
psSAR10g [W/Kg]	0.024	0.031
Power Drift [dB]	n/a	-0.16
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		50.3
Dist 3dB Peak [mm]		8.9



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	5.7	5.907	33.822

Hardware Setup

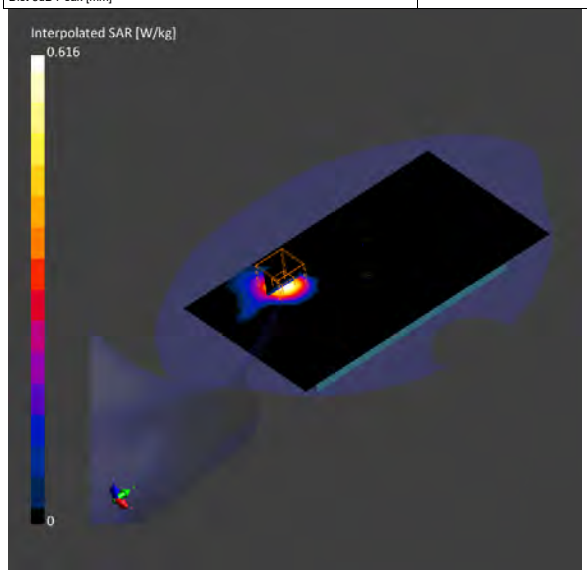
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 03:19	2021-05-14, 03:31
psSAR1g [W/Kg]	0.118	0.122
psSAR10g [W/Kg]	0.043	0.045
Power Drift [dB]	-0.06	-0.12
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		50.0
Dist 3dB Peak [mm]		9.1



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.33	33.452

Hardware Setup

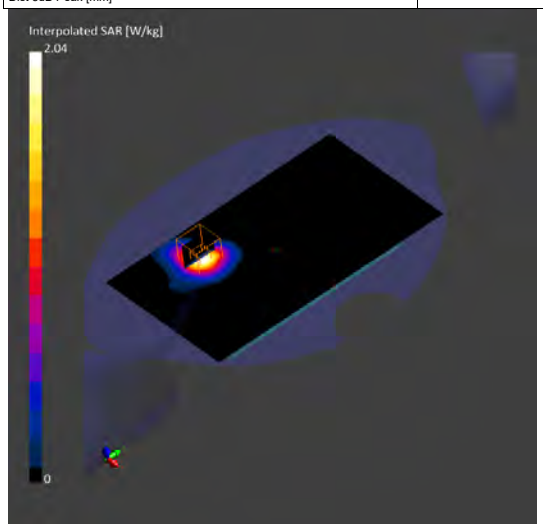
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 03:56	2021-05-14, 04:08
psSAR1g [W/Kg]	0.184	0.201
psSAR10g [W/Kg]	0.082	0.094
Power Drift [dB]	-0.12	-0.16
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		52.4
Dist 3dB Peak [mm]		9.5



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-8, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 207 (6985.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-8	WLAN, 10743-AAC	6985.0, 207	5.85	6.6	33.139

Hardware Setup

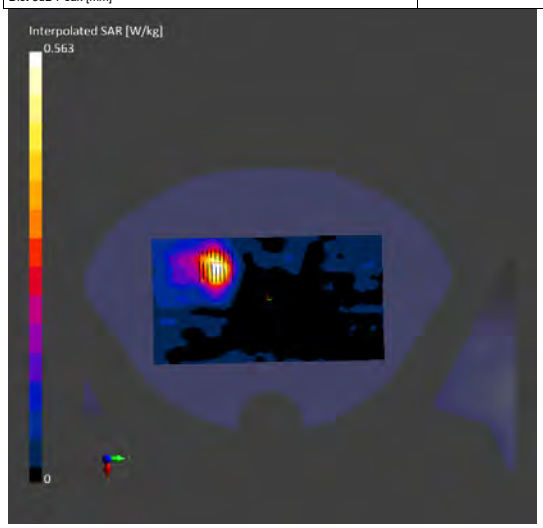
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 04:37	2021-05-14, 04:49
psSAR1g [W/Kg]	0.112	0.126
psSAR10g [W/Kg]	0.060	0.066
Power Drift [dB]	n/a	-0.18
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		54.1
Dist 3dB Peak [mm]		9.0



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 15 (6025.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-5	WLAN, 10743-AAC	6025.0, 15	5.7	5.432	34.826

Hardware Setup

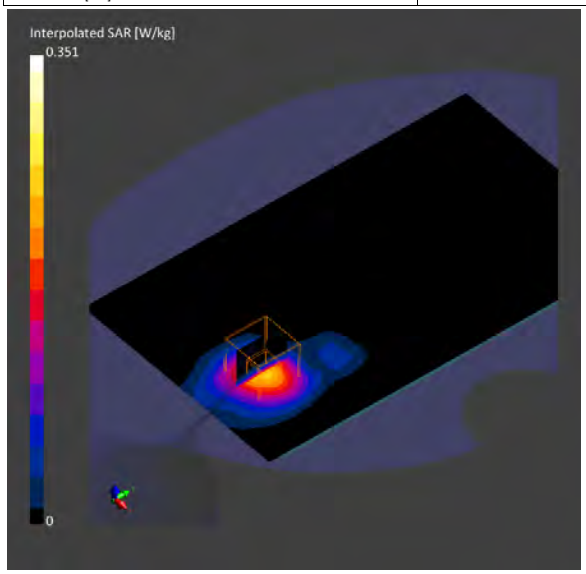
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	Unknown method	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 05:19	2021-05-14, 05:31
psSAR1g [W/Kg]	0.064	0.110
psSAR10g [W/Kg]	0.025	0.028
Power Drift [dB]	n/a	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		34.6
Dist 3dB Peak [mm]		4.2



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 47 (6185.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-5	WLAN, 10743-AAC	6185.0, 47	5.7	5.652	34.392

Hardware Setup

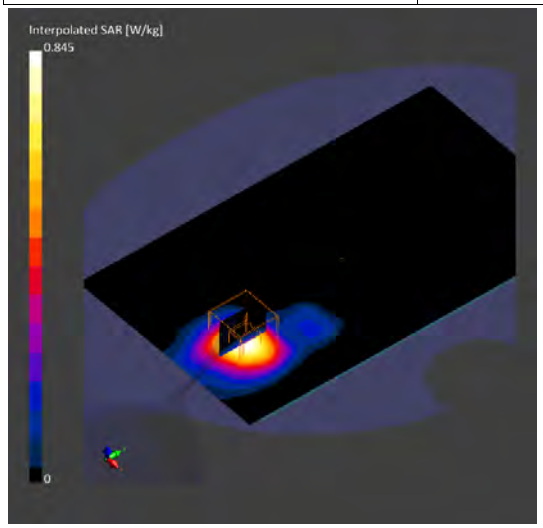
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 05:58	2021-05-14, 06:10
psSAR1g [W/Kg]	0.196	0.201
psSAR10g [W/Kg]	0.077	0.082
Power Drift [dB]	-0.05	-0.10
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		57.9
Dist 3dB Peak [mm]		11.0



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	5.7	5.907	33.822

Hardware Setup

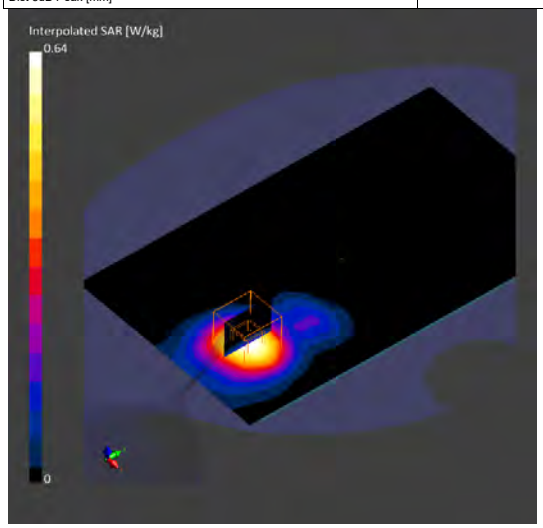
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 06:46	2021-05-14, 06:58
psSAR1g [W/Kg]	0.239	0.250
psSAR10g [W/Kg]	0.131	0.152
Power Drift [dB]	n/a	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		54.3
Dist 3dB Peak [mm]		14.1



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.33	33.452

Hardware Setup

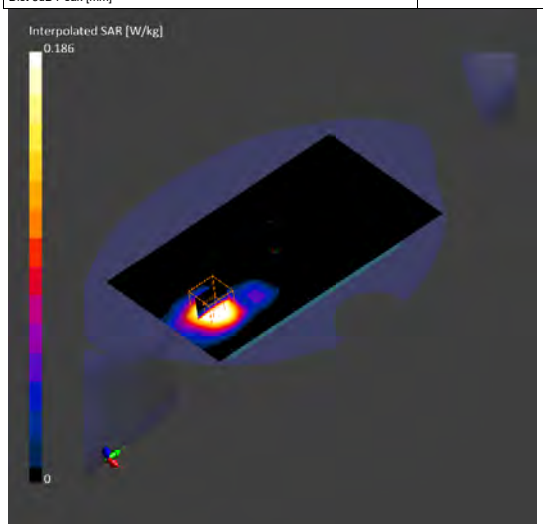
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 07:22	2021-05-14, 07:34
psSAR1g [W/Kg]	0.274	0.289
psSAR10g [W/Kg]	0.156	0.161
Power Drift [dB]	-0.012	-0.016
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		56.4
Dist 3dB Peak [mm]		13.2



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-8, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 207 (6985.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-8	WLAN, 10743-AAC	6985.0, 207	5.85	6.6	33.139

Hardware Setup

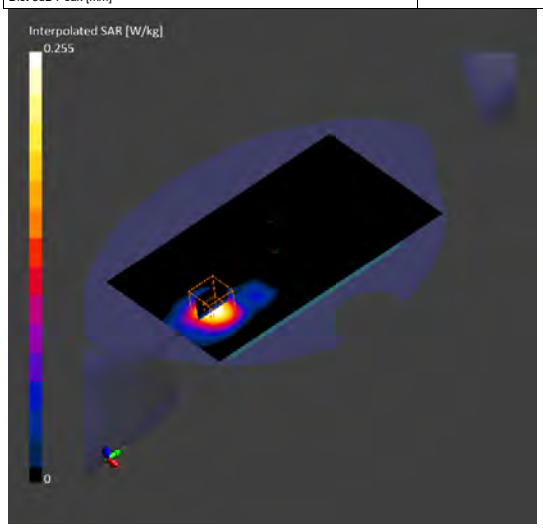
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 18:49	2021-05-14, 19:00
psSAR1g [W/Kg]	0.163	0.177
psSAR10g [W/Kg]	0.114	0.123
Power Drift [dB]	n/a	-0.017
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		55.9
Dist 3dB Peak [mm]		12.8



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.33	33.452

Hardware Setup

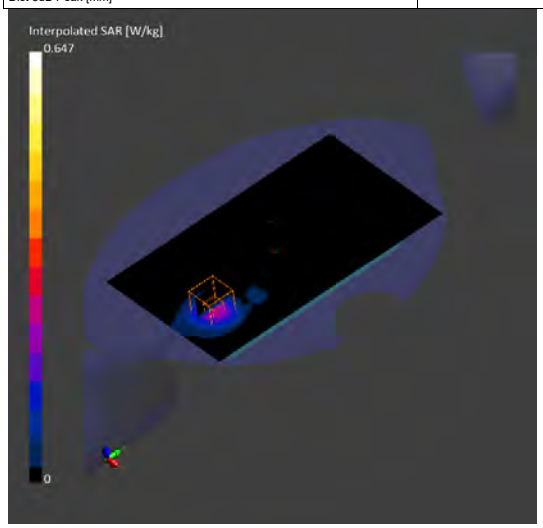
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 18:12	2021-05-14, 18:23
psSAR1g [W/Kg]	0.059	0.070
psSAR10g [W/Kg]	0.015	0.021
Power Drift [dB]	n/a	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		46.9
Dist 3dB Peak [mm]		8.4



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 15.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.33	33.452

Hardware Setup

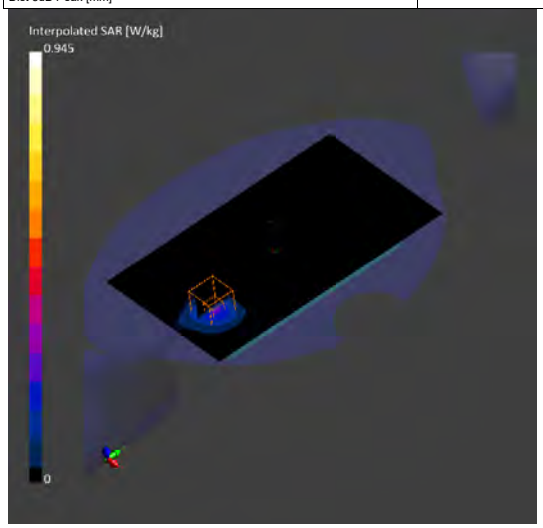
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 18:12	2021-05-14, 18:23
psSAR1g [W/Kg]	0.164	0.178
psSAR10g [W/Kg]	0.075	0.094
Power Drift [dB]	n/a	0.09
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		42.4
Dist 3dB Peak [mm]		8.8



Report No. :EN/2021/20005-01
Measurement Report for Device, EDGE LEFT, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 47 (6185.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	EDGE LEFT, 0.00	U-NII-5	WLAN, 10743-AAC	6185.0, 47	5.7	5.652	34.392

Hardware Setup

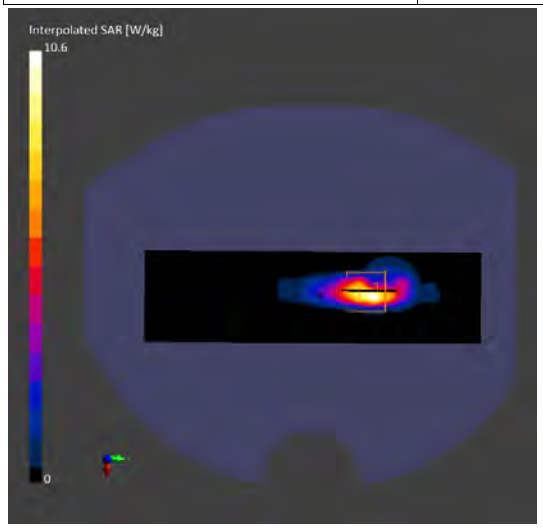
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	51.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 09:01	2021-05-14, 09:13
psSAR1g [W/Kg]	1.08	1.29
psSAR10g [W/Kg]	0.249	0.311
Power Drift [dB]	0.15	-0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		49.2
Dist 3dB Peak [mm]		3.8



Report No. :EN/2021/20005-01
Measurement Report for Device, FRONT, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 79 (6345.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 0.00	U-NII-5	WLAN, 10743-AAC	6345.0, 79	5.7	5.816	34.114

Hardware Setup

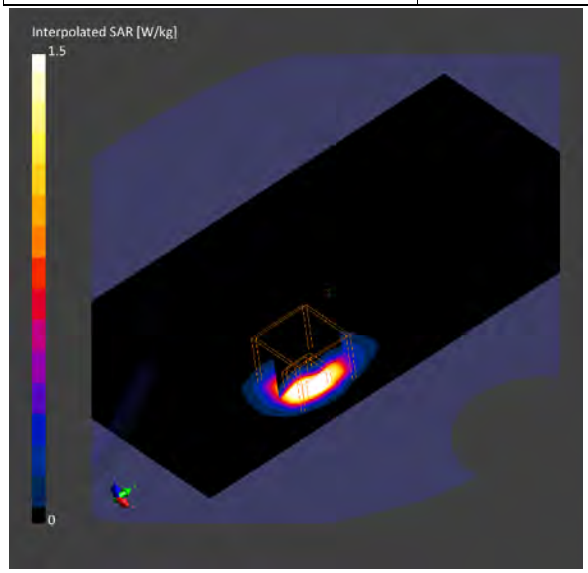
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 10:37	2021-05-14, 10:48
psSAR1g [W/Kg]	1.43	1.39
psSAR10g [W/Kg]	0.405	0.337
Power Drift [dB]	0.06	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		48.3
Dist 3dB Peak [mm]		4.4



Report No. :EN/2021/20005-01
Measurement Report for Device, EDGE LEFT, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	EDGE LEFT, 0.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	5.7	5.907	33.822

Hardware Setup

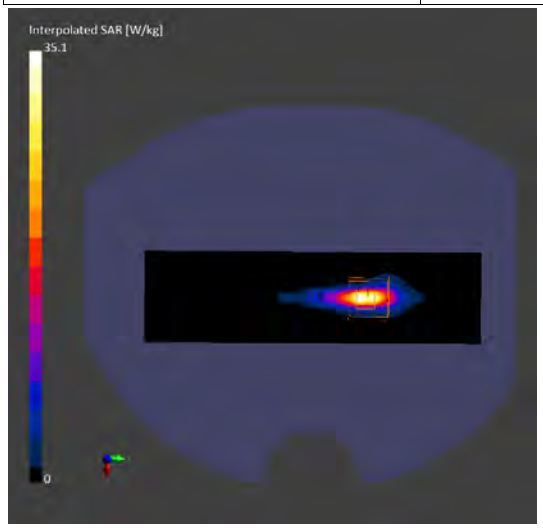
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	51.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.1 x 3.1 x 1.2
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.2
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 11:20	2021-05-14, 11:31
psSAR1g [W/Kg]	2.28	2.12
psSAR10g [W/Kg]	0.532	0.472
Power Drift [dB]	0.04	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		54.3
Dist 3dB Peak [mm]		3.6



Report No. :EN/2021/20005-01
Measurement Report for Device, FRONT, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 0.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.33	33.452

Hardware Setup

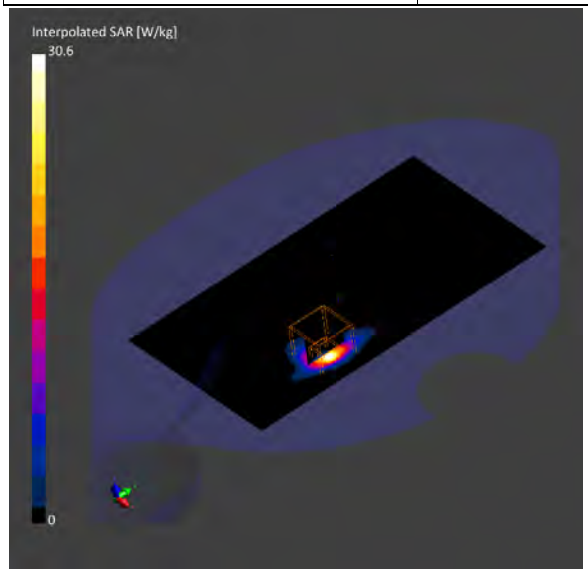
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 12:22	2021-05-14, 12:34
psSAR1g [W/Kg]	1.82	2.0
psSAR10g [W/Kg]	0.486	0.505
Power Drift [dB]	0.05	-0.01
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		47.3
Dist 3dB Peak [mm]		3.8



Report No. :EN/2021/20005-01
Measurement Report for Device, FRONT, U-NII-8, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 207 (6985.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 0.00	U-NII-8	WLAN, 10743-AAC	6985.0, 207	5.85	6.6	33.139

Hardware Setup

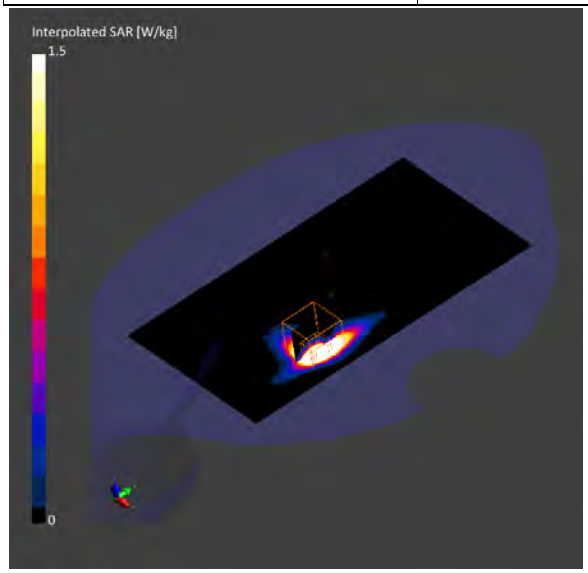
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 13:14	2021-05-14, 13:25
psSAR1g [W/Kg]	1.67	1.58
psSAR10g [W/Kg]	0.482	0.390
Power Drift [dB]	0.05	-0.03
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		47.0
Dist 3dB Peak [mm]		4.6



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 15 (6025.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-5	WLAN, 10743-AAC	6025.0, 15	5.7	5.432	34.826

Hardware Setup

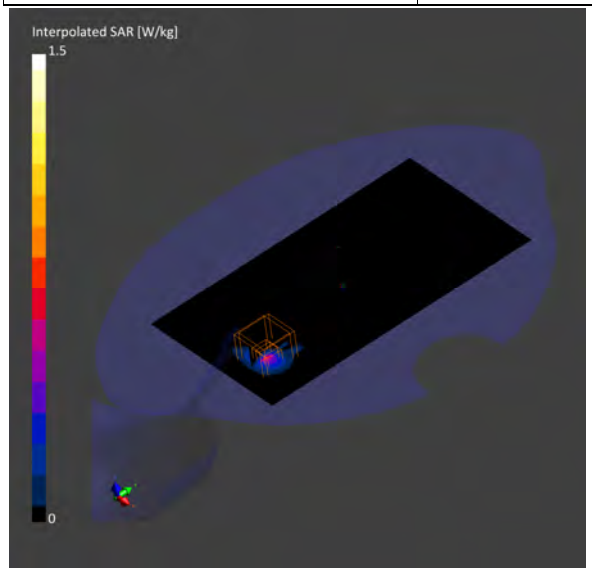
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.2
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.2
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 13:49	2021-05-14, 14:01
psSAR1g [W/Kg]	0.369	0.341
psSAR10g [W/Kg]	0.101	0.084
Power Drift [dB]	n/a	0.10
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		58.1
Dist 3dB Peak [mm]		4.3



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 47 (6185.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-5	WLAN, 10743-AAC	6185.0, 47	5.7	5.652	34.392

Hardware Setup

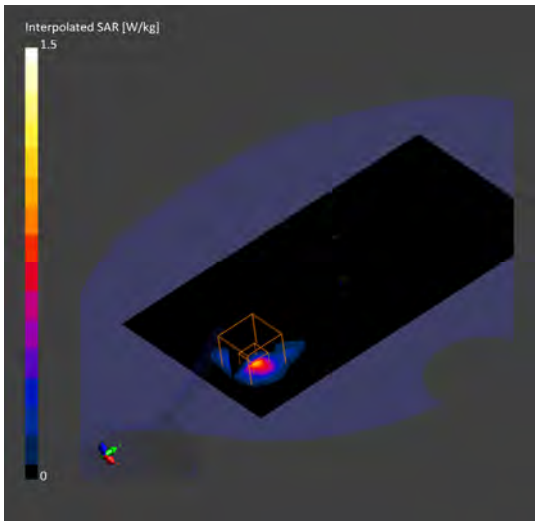
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 14:39	2021-05-14, 14:51
psSAR1g [W/Kg]	0.438	0.429
psSAR10g [W/Kg]	0.124	0.100
Power Drift [dB]	0.04	-0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		53.3
Dist 3dB Peak [mm]		4.8



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	5.7	5.907	33.822

Hardware Setup

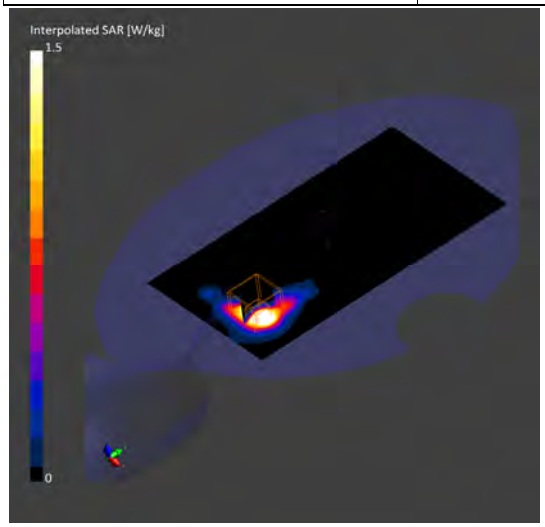
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 15:28	2021-05-15, 15:38
psSAR1g [W/Kg]	0.814	0.794
psSAR10g [W/Kg]	0.291	0.204
Power Drift [dB]	-0.02	-0.06
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		52.9
Dist 3dB Peak [mm]		4.8



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.33	33.452

Hardware Setup

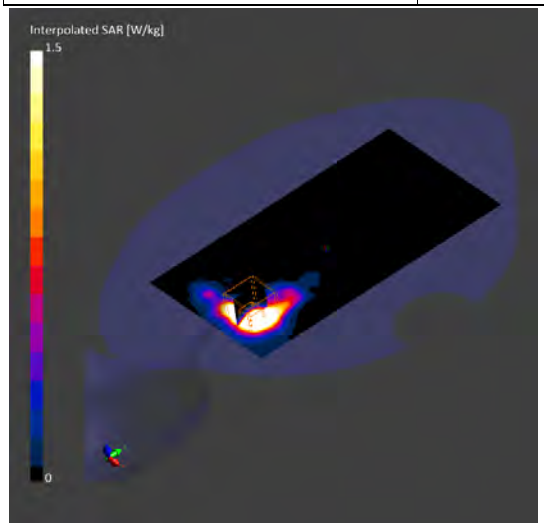
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 16:05	2021-05-14, 16:17
psSAR1g [W/Kg]	1.76	1.48
psSAR10g [W/Kg]	0.416	0.379
Power Drift [dB]	-0.10	-0.07
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		48.6
Dist 3dB Peak [mm]		4.8



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-8, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 207 (6985.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-8	WLAN, 10743-AAC	6985.0, 207	5.85	6.6	33.139

Hardware Setup

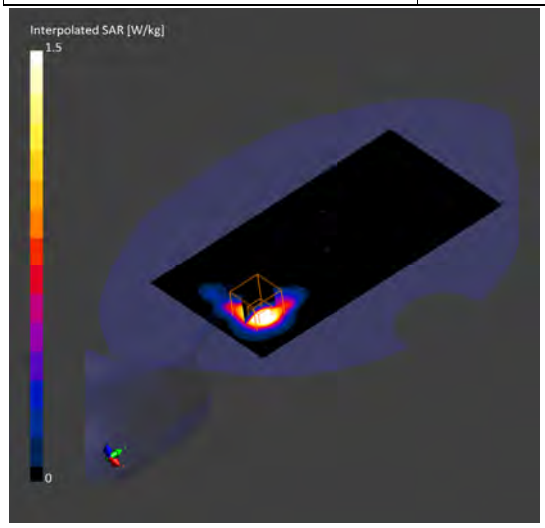
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 16:48	2021-05-14, 15:01
psSAR1g [W/Kg]	0.814	0.791
psSAR10g [W/Kg]	0.196	0.205
Power Drift [dB]	0.04	0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		50.0
Dist 3dB Peak [mm]		5.2



Report No. :EN/2021/20005-01
Measurement Report for Device, EDGE LEFT, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	EDGE LEFT, 0.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	5.7	5.907	33.822

Hardware Setup

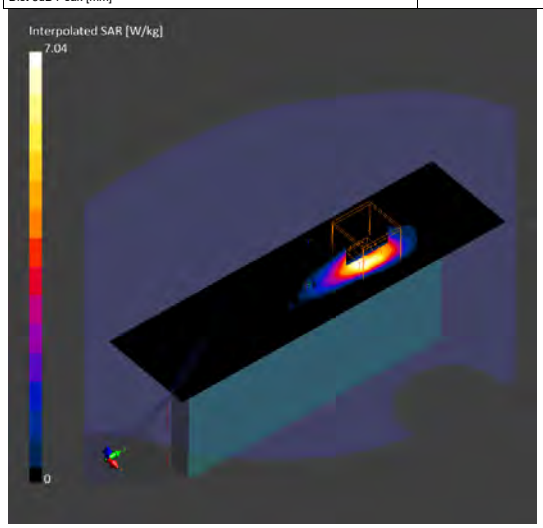
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	51.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.1 x 3.1 x 1.2
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.2
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 20:35	2021-05-14, 20:47
psSAR1g [W/Kg]	0.552	0.571
psSAR10g [W/Kg]	0.142	0.157
Power Drift [dB]	-0.07	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		52.8
Dist 3dB Peak [mm]		3.8



Report No. :EN/2021/20005-01
Measurement Report for Device, FRONT, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 0.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.33	33.452

Hardware Setup

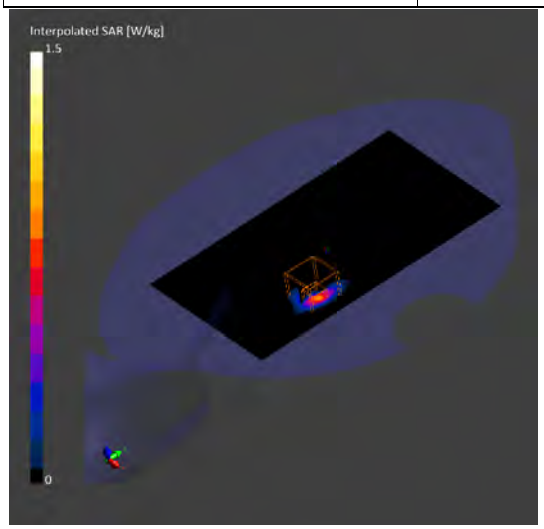
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 21:31	2021-05-14, 21:41
psSAR1g [W/Kg]	0.615	0.712
psSAR10g [W/Kg]	0.153	0.171
Power Drift [dB]	-0.02	-0.06
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		45.8
Dist 3dB Peak [mm]		3.8



Report No. :EN/2021/20005-01
Measurement Report for Device, BACK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	5.7	6.33	33.452

Hardware Setup

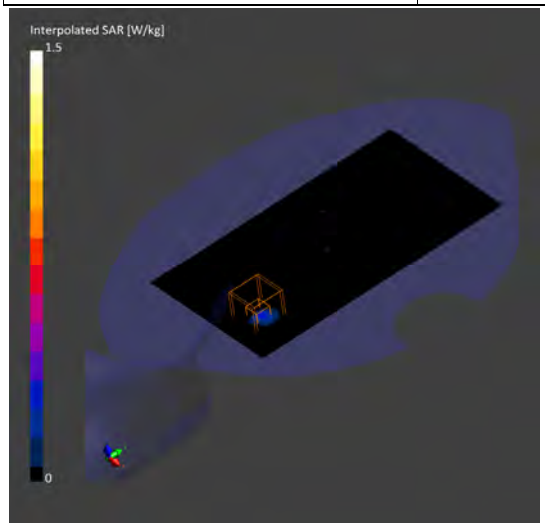
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 ,2021-May-14	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	102.0 x 187.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 22:38	2021-05-14, 22:51
psSAR1g [W/Kg]	0.250	0.306
psSAR10g [W/Kg]	0.142	0.163
Power Drift [dB]	-0.03	-0.08
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		47.0
Dist 3dB Peak [mm]		4.6



Report No. : EN/2021/20002A-01
Measurement Report for Sake, EDGE LEFT, U-NII-6, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 111 (6505.0 MHz)
Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
SAKE,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	EDGE LEFT, 2.00	U-NII-6	WLAN, 10743-AAC	6505.0, 111	1.0

Hardware Setup

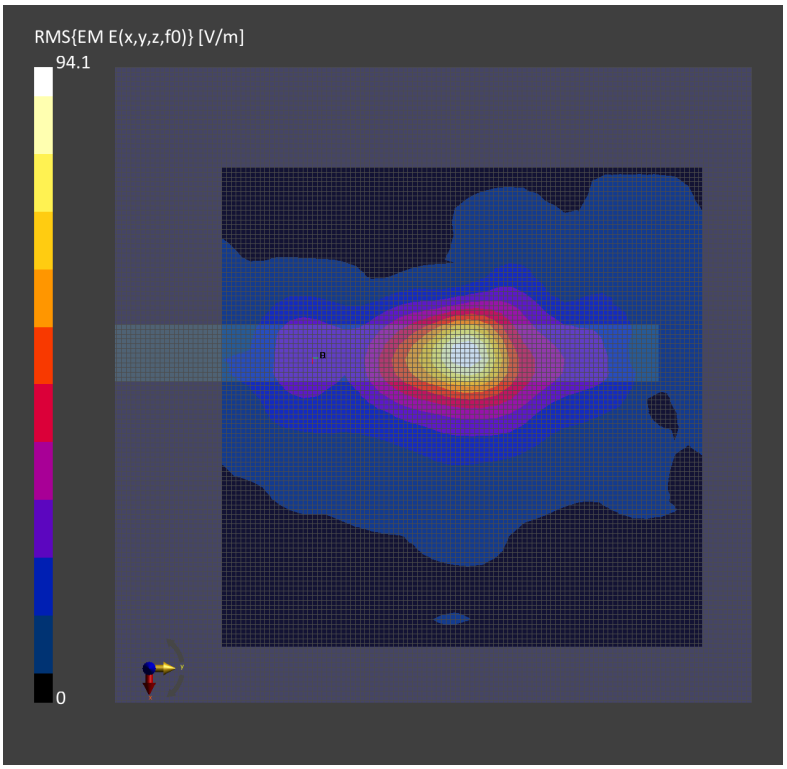
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave - 1076	Air -	EUmmWV4 - SN9548_F1-55GHz, 2021-04-01	DAE4 Sn1665, 2021-03-01

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	100.0 x 100.0
Grid Steps [lambda]	0.0625 x 0.0625
Sensor Surface [mm]	2.0
MAIA	N/A

Measurement Results

Scan Type	5G Scan
Date	2021-05-15, 19:50
Avg. Area [cm²]	4.00
psPDn+ [W/m²]	4.90
psPDtot+ [W/m²]	6.15
psPDmod+ [W/m²]	7.71
E_{max} [V/m]	94.1
Power Drift [dB]	0.07



Report No. : EN/2021/20002A-01
Measurement Report for SAKE, BACK, U-NII-7, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 175 (6825.0 MHz)
Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
SAKE_,	146.0 x 70.0 x 12.0		Phone

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	BACK, 2.00	U-NII-7	WLAN, 10743-AAC	6825.0, 175	1.0

Hardware Setup

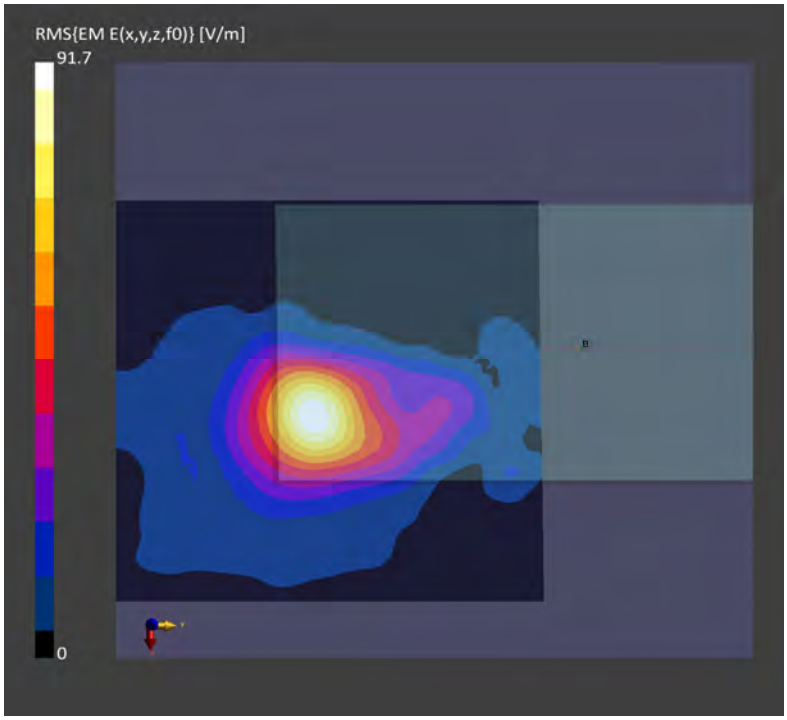
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave - 1076	Air -	EUmmWV4 - SN9548_F1-55GHz, 2021-04-01	DAE4 Sn1665, 2021-03-01

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	100.0 x 100.0
Grid Steps [lambda]	0.0625 x 0.0625
Sensor Surface [mm]	2.0
MAIA	N/A

Measurement Results

Scan Type	5G Scan
Date	2021-05-1, 22:33
Avg. Area [cm^2]	4.00
psPDn+ [W/m^2]	5.20
psPDtot+ [W/m^2]	6.08
psPDmod+ [W/m^2]	8.19
E_{max} [V/m]	91.7
Power Drift [dB]	-0.18



6. SAR System Performance Verification

Report No. :EN/2021/20005A-01
Measurement Report for Device, FRONT, Validation band, CW, Channel 6500 (6500.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	16.0 x 6.0 x 300.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 5.00	Validation band	CW, 0--	6500.0, 6500	5.7	6.08	34.0

Hardware Setup

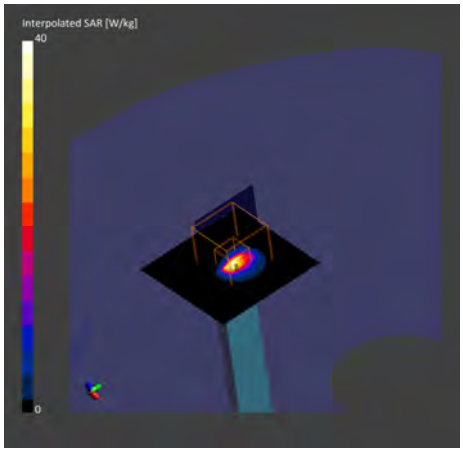
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	51.0 x 51.0	28.0 x 28.0 x 24.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-13, 00:44	2021-05-13, 00:56
psSAR1g [W/Kg]	23.7	28.2
psSAR10g [W/Kg]	4.69	5.16
Power Drift [dB]	-0.03	-0.02
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		51.3
Dist 3dB Peak [mm]		4.8



Report No. :EN/2021/20005A-01
Measurement Report for Device, FRONT, Validation band, CW, Channel 6500 (6500.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	16.0 x 6.0 x 300.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 5.00	Validation band	CW, 0--	6500.0, 6500	5.7	5.922	33.948

Hardware Setup

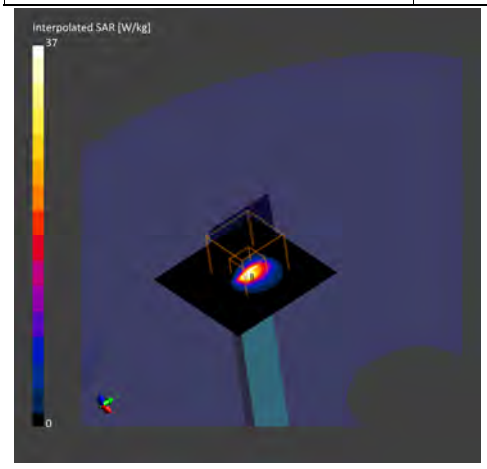
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2036	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7466, 2021-01-29	DAE4 Sn1665, 2021-03-01

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	51.0 x 51.0	28.0 x 28.0 x 24.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	No	Yes
Grading Ratio	n/a	1.4
MAIA	N/A	N/A
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2021-05-14, 00:32	2021-05-14, 00:44
psSAR1g [W/Kg]	22.9	27.9
psSAR10g [W/Kg]	4.49	5.1
Power Drift [dB]	-0.09	-0.06
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	No correction	No correction
M2/M1 [%]		51.3
Dist 3dB Peak [mm]		4.8



Report No. : EN/2021/20002A-01
Measurement Report for Device, FRONT, Validation band, CW, Channel 10000 (10000.0 MHz)
Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	100.0 x 100.0 x 172.0		Phone

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	FRONT, 10.00	Validation band	CW, 0--	10000.0, 10000	1.0

Hardware Setup

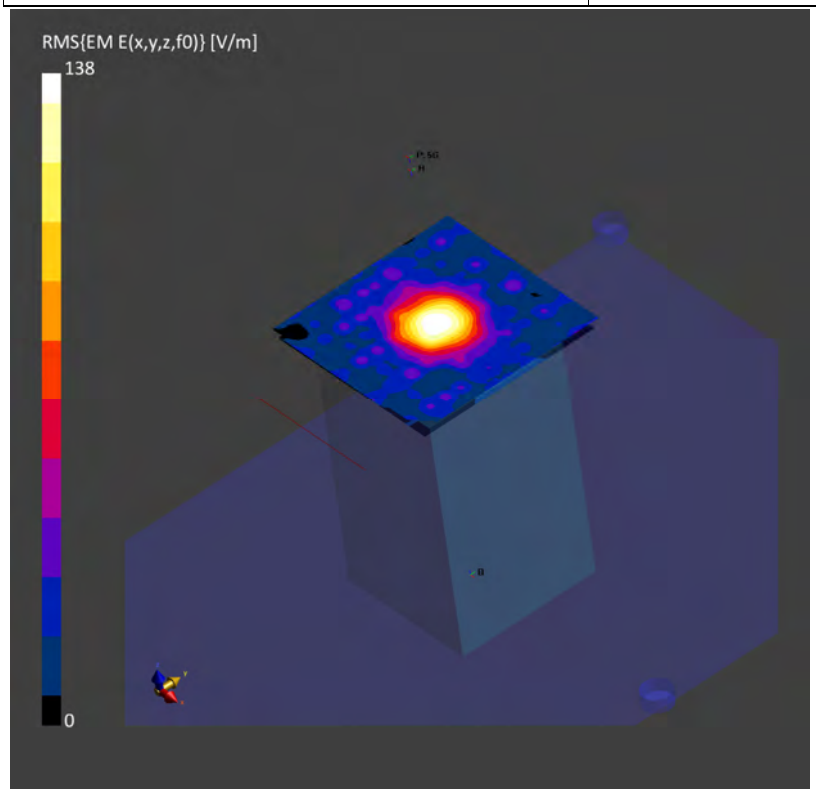
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave - 1076	Air -	EUmmWV4 - SN9548_F1-55GHz, 2021-04-01	DAE4 Sn1665, 2021-03-01

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	N/A

Measurement Results

Scan Type	5G Scan
Date	2021-05-15, 00:39
Avg. Area [cm²]	4.00
psPDn+ [W/m²]	41.3
psPDtot+ [W/m²]	41.5
psPDmod+ [W/m²]	41.6
E_{max} [V/m]	136
Power Drift [dB]	0.06



7. Uncertainty Budget

DASY6 Uncertainty Budget
According to IEC/IEEE 62209-1528
(Frequency band: 6GHz - 10GHz range)

a	b	c	d		e	e	f=b * e / d	f=b * e / d
Source of Uncertainty	Uncertainty Value (±%)	Probability Distributioin	Div.	Div. Value	(ci) 1g	(ci) 10g	Std. uncertainty (1g) (±%)	Std. uncertainty (10g) (±%)
Measurement system errors								
Probe calibration	18.6	N	2	2	1	1	9.3	9.3
Probe Calibration Drift	1.7	R	√3	1.732	1	1	1.0	1.0
Probe Linearity	4.7	R	√3	1.732	1	1	2.7	2.7
Broadband Signal	2.8	R	√3	1.732	1	1	1.6	1.6
Probe Isotropy	7.6	R	√3	1.732	1	1	4.4	4.4
Data Acquisition	0.3	N	1	1	1	1	0.3	0.3
RF Ambient	1.8	N	1	1	1	1	1.8	1.8
Probe positioning	0.2	N	1	1	0.67	0.67	0.1	0.1
Data Processing	3.5	N	1	1	1	1	3.5	3.5
Phantom and device errors								
Conductivity (meas.)DAK	2.5	N	1	1	0.78	0.71	2.0	1.8
Conductivity (temp.)BB	2.4	R	√3	1.732	0.78	0.71	1.1	1.0
Phantom Permittivity	14.0	R	√3	1.732	0.5	0.5	4.0	4.0
Distance DUT - TSL	2.0	N	1	1	2	2	4.0	4.0
Device Positioning (±0.5mm)	1.0	N	1	1	1	1	1.0	1.0
Device Holder	3.6	N	1	1	1	1	3.6	3.6
DUT Modulationm	2.4	R	√3	1.732	1	1	1.4	1.4
Time-average SAR	0.0	R	√3	1.732	1	1	0.0	0.0
DUT drift	2.5	N	1	1	1	1	2.5	2.5
Val Antenna Unc.	0.0	N	1	1	1	1	0.0	0.0
Unc. Input Power	0.0	N	1	1	1	1	0.0	0.0
Correction to the SAR results								
Deviation to Target	1.90	N	1	1	1	0.84	1.9	1.6
SAR scaling	1.19	R	√3	1.732	1	1	0.7	0.7
Combined Std. uncertainty							14.0	13.9
Expanded Std. uncertainty (95% confidence interval), K=2							28.0	27.8

cDASY6 Module mmWave Uncertainty Budget for PD
Evaluation Distances to the Antennas ≧ λ / 5
In Compliance with IEC/IEEE 63195

a	b	c	d		e	f=b * e / d	g
Source of Uncertainty	Uncertainty Value (+-dB)	Probability Distributioin	Div.	Div. Value	ci	Std. uncertainty (+-dB)	(vi) Veff
Uncertainty terms dependent on the measurement system							
Probe calibration	0.49	N	1	1	1	0.49	∞
Probe correction	0.00	R	√3	1.732	1	0.00	∞
Frequency response (BW≦1GHz)	0.20	R	√3	1.732	1	0.12	∞
Sensor cross coupling	0.00	R	√3	1.732	1	0.00	∞
Isotropy	0.50	R	√3	1.732	1	0.29	∞
Linearity	0.20	R	√3	1.732	1	0.12	∞
Probe scattering	0.00	R	√3	1.732	1	0.00	∞
Probe positioning offset	0.30	R	√3	1.732	1	0.17	∞
Probe positioning repeatability	0.04	R	√3	1.732	1	0.02	∞
Sensor mechanical offset	0.00	R	√3	1.732	1	0.00	∞
Probe spatial resolution	0.00	R	√3	1.732	1	0.00	∞
Field impedance dependance	0.00	R	√3	1.732	1	0.00	∞
Amplitude and phase drift	0.00	R	√3	1.732	1	0.00	∞
Amplitude and phase noise	0.04	R	√3	1.732	1	0.02	∞
Measurement area truncation	0.00	R	√3	1.732	1	0.00	∞
Data acquisition	0.03	N	1	1	1	0.03	∞
Sampling	0.00	R	√3	1	1	0.00	∞
Field reconstruction	2.00	R	√3	1.732	1	1.15	∞
Forward transformation	0.00	R	√3	1.732	1	0.00	∞
Power density scaling	-	R	√3	1.732	1	-	∞
Spatial averaging	0.10	R	√3	1.732	1	0.06	∞
System detection limit	0.04	R	√3	1.732	1	0.02	∞
Uncertainty terms dependent on the DUT and environmental factors							
Probe coupling with DUT	0.00	R	√3	1.732	1	0.00	∞
Modulation response	0.40	R	√3	1.732	1	0.23	∞
Integration time	0.00	R	√3	1.732	1	0.00	∞
Response time	0.00	R	√3	1.732	1	0.00	∞
Device holder influence	0.10	R	√3	1.732	1	0.06	∞
DUT alignment	0.00	R	√3	1.732	1	0.00	∞
RF ambient conditions	0.04	R	√3	1.732	1	0.02	∞
Ambient reflections	0.04	R	√3	1.732	1	0.02	∞
Immunity / secondary reception	0.00	R	√3	1.732	1	0.00	∞
Drift of the DUT	-	R	√3	1.732	1	-	∞
Combined Std. uncertainty						1.33	
Expanded Std. uncertainty (95% confidence interval), K=2						2.67	

Appendixes

Refer to separated files for the following appendixes.

EN202120002-01 SAR_Appendix A Photographs

EN202120002-01 SAR_Appendix B DAE & Probe Cal. Certificate

EN202120002-01 SAR_Appendix C Phantom Description & Dipole Cal. Certificate

- End of report -