

Annex A. Plots of SAR and Power Density System Verification

The plots for system verification are shown as follows.

S01 System Check_H2450_210823

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 835

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0823 Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.873$ S/m; $\epsilon_r = 38.701$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.59, 7.59, 7.59) @ 2450 MHz; Calibrated: 2020/09/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2021/06/02
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 4.85 W/kg

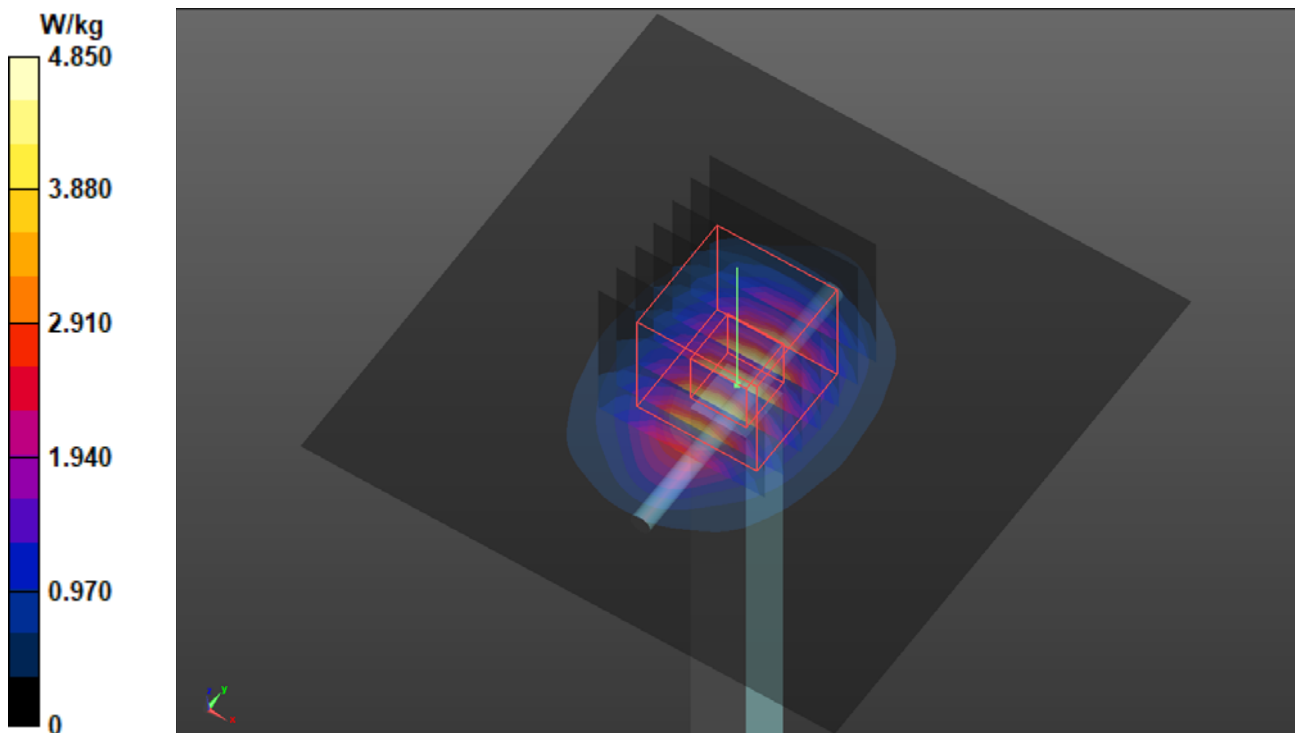
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.44 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 5.90 W/kg

SAR(1 g) = 2.8 W/kg; SAR(10 g) = 1.32 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.79 W/kg



S02 System Check_H5250_210824

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0824 Medium parameters used (interpolated): $f = 5250$ MHz; $\sigma = 4.736$ S/m; $\epsilon_r = 36.974$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5.41, 5.41, 5.41) @ 5250 MHz; Calibrated: 2020/09/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2021/06/02
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 9.43 W/kg

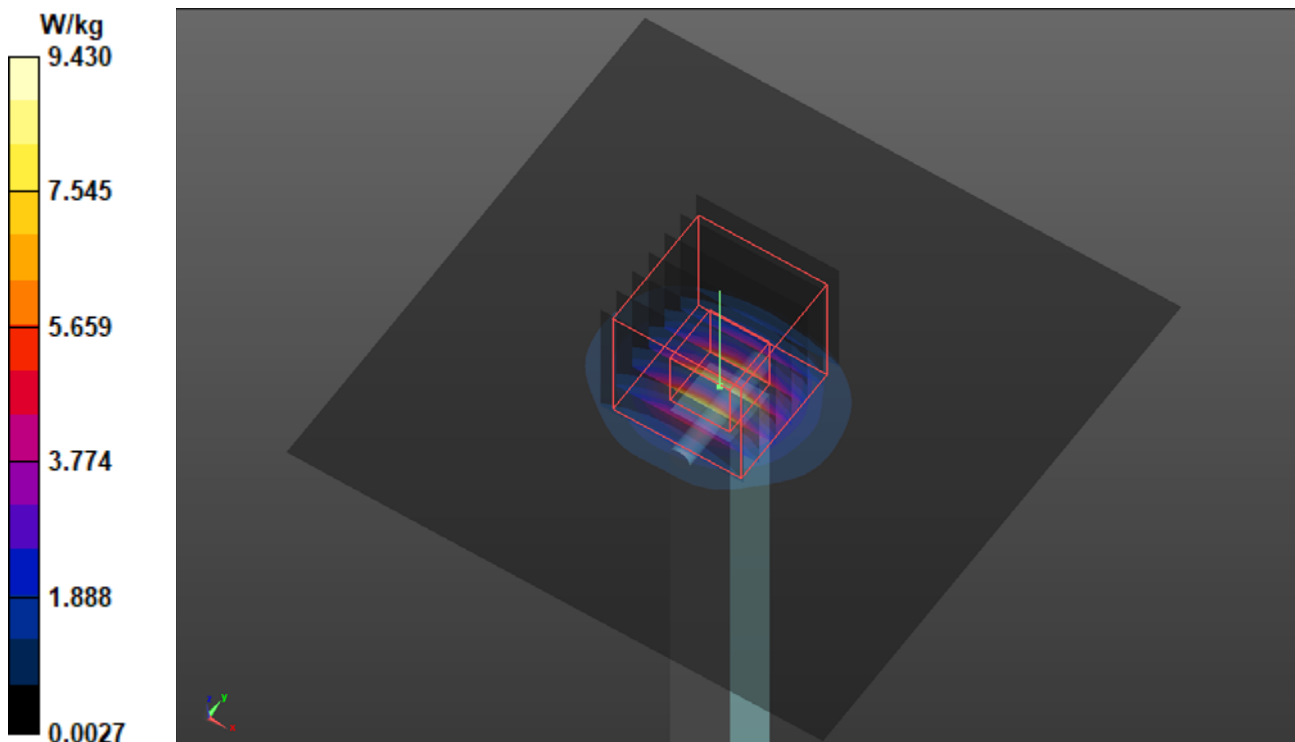
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 49.96 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 16.5 W/kg

SAR(1 g) = 4.16 W/kg; SAR(10 g) = 1.19 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 10.4 W/kg



S03 System Check_H5600_210823

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0823 Medium parameters used: $f = 5600$ MHz; $\sigma = 4.997$ S/m; $\epsilon_r = 37.061$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(4.8, 4.8, 4.8) @ 5600 MHz; Calibrated: 2020/09/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2021/06/02
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 10.4 W/kg

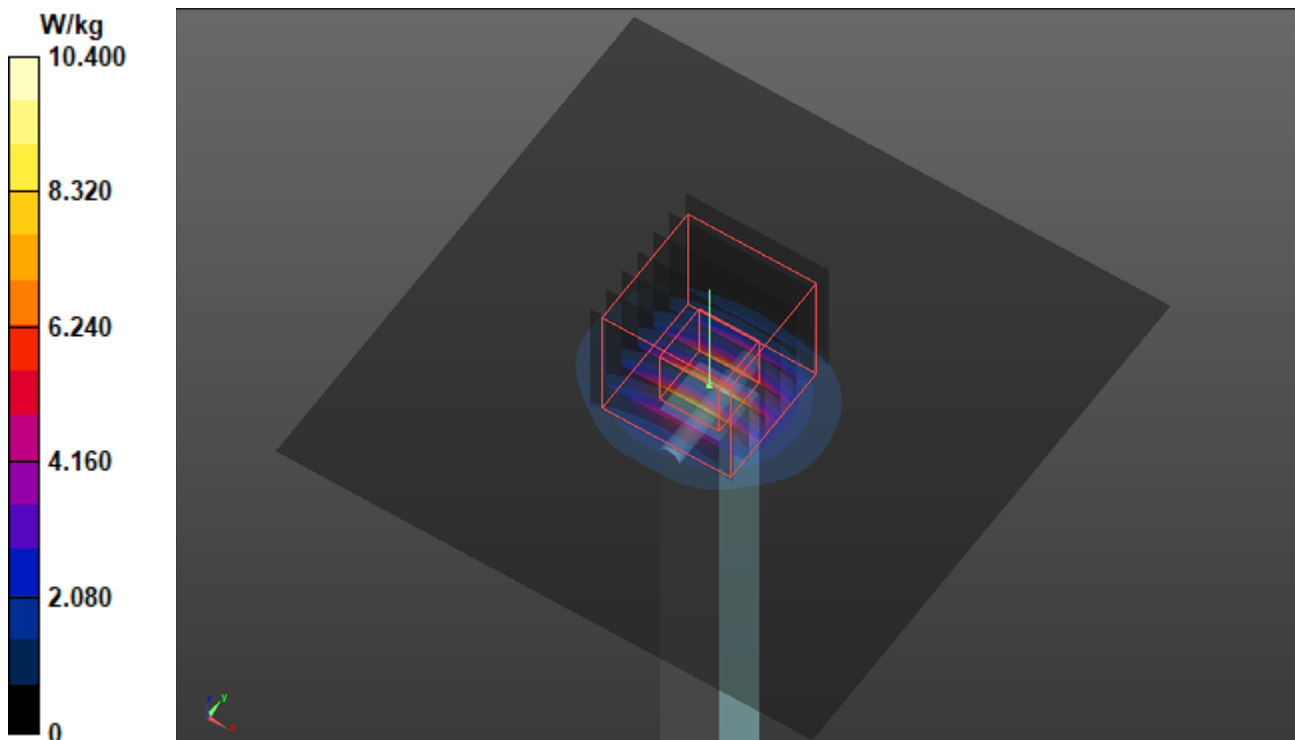
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 50.72 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 19.1 W/kg

SAR(1 g) = 4.36 W/kg; SAR(10 g) = 1.24 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 11.3 W/kg



S04 System Check_H5750_210824**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019**

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0824 Medium parameters used: $f = 5750$ MHz; $\sigma = 5.251$ S/m; $\epsilon_r = 36.285$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5, 5, 5) @ 5750 MHz; Calibrated: 2020/09/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2021/06/02
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 9.41 W/kg

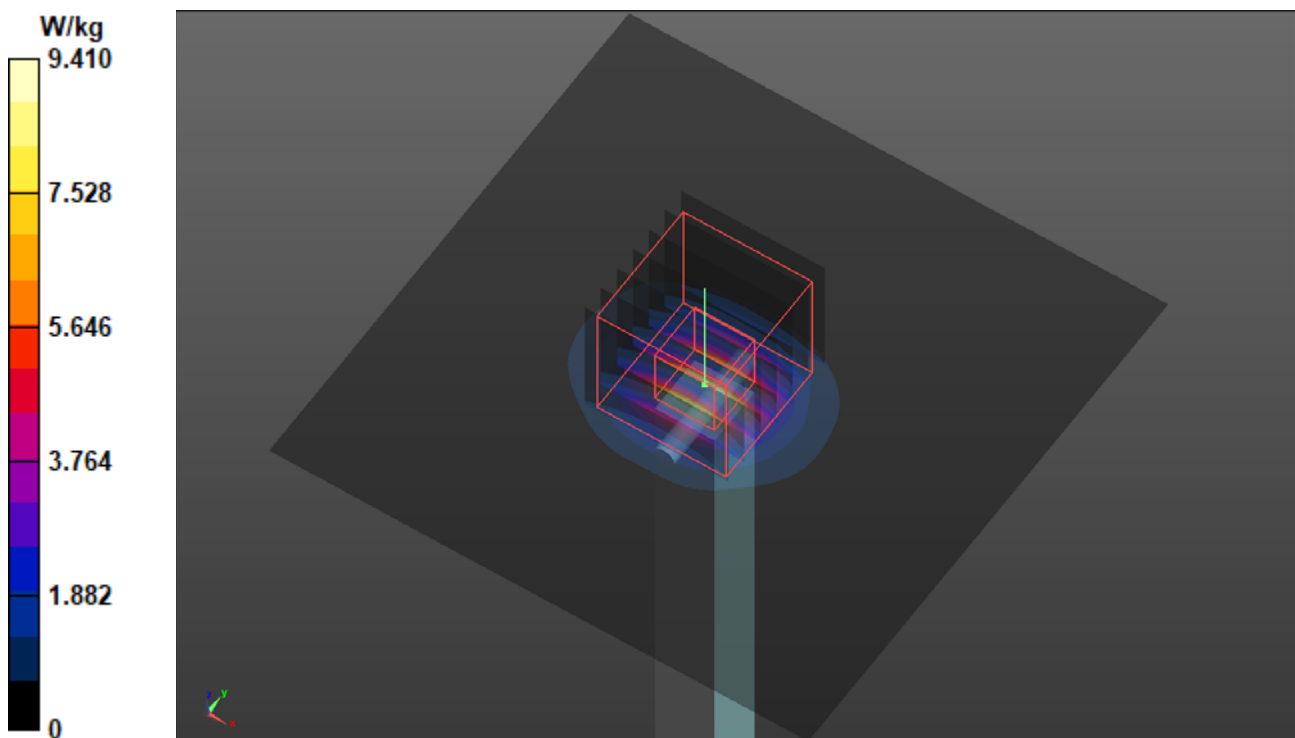
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 47.22 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 3.91 W/kg; SAR(10 g) = 1.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 10.3 W/kg



S05 System Check_H2450_210824

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 835

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0824 Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.859$ S/m; $\epsilon_r = 38.805$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.59, 7.59, 7.59) @ 2450 MHz; Calibrated: 2020/09/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2021/06/02
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 4.81 W/kg

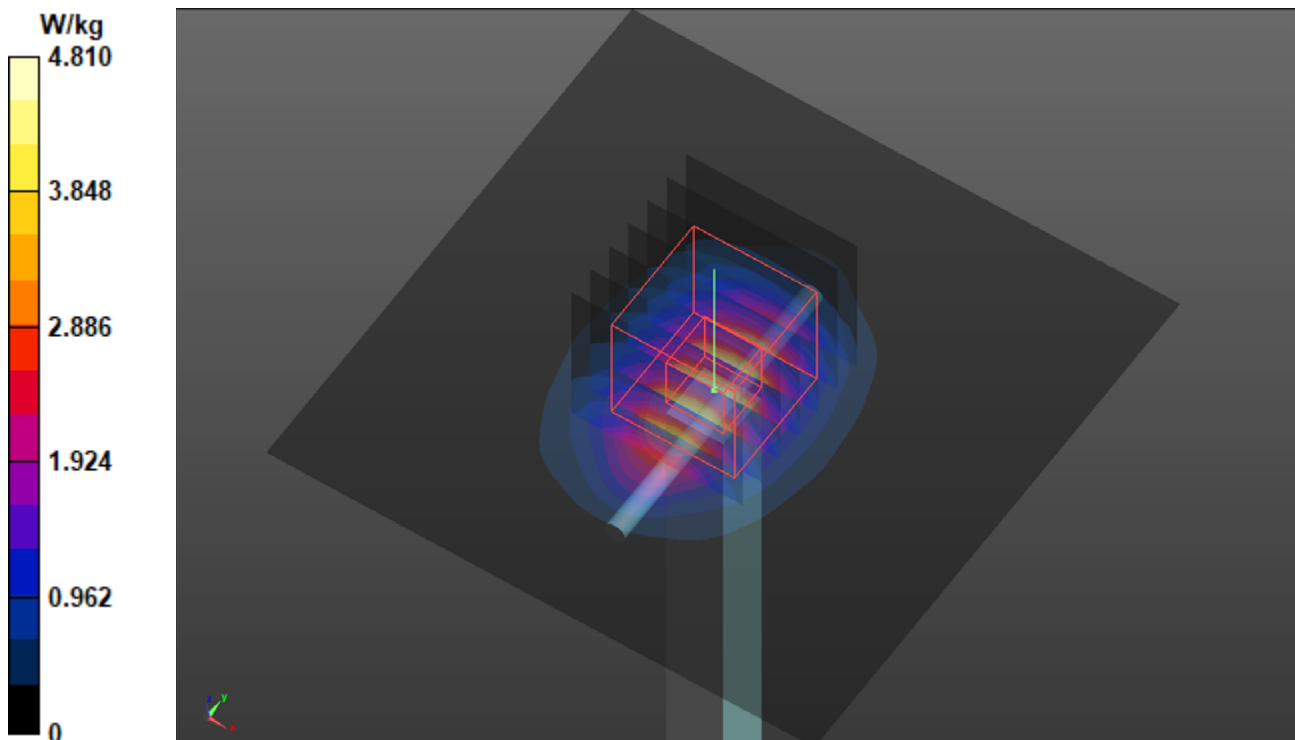
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.44 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 5.86 W/kg

SAR(1 g) = 2.79 W/kg; SAR(10 g) = 1.32 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.75 W/kg



S06S System Check_H6.5GHz_210825

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	50.0 x 10.0 x 8.0		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,	,		,	6500.0,	5.65	6.15	34.2

Hardware Setup

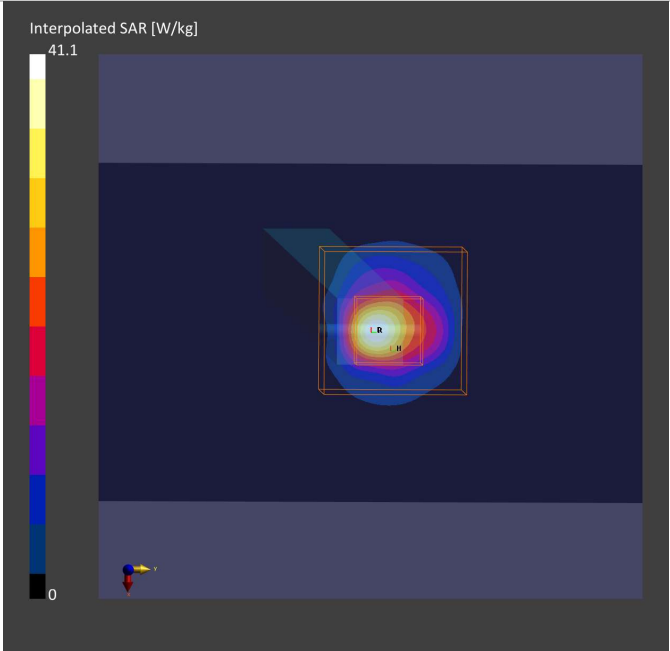
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V5.0 (20deg probe tilt) - 1204	H50T72N1, 2021-Aug-25	EX3DV4 - SN7555, 2020-09-28	DAE4 Sn915, 2021-06-22

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	51.0 x 85.0	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

Measurement Results

	Area Scan	Zoom Scan
Date	2021-08-25	2021-08-25
psSAR1g [W/kg]	23.7	29.5
psSAR10g [W/kg]	4.97	5.44
Power Drift [dB]	0.02	-0.01



Test Lab: Bureau Veritas ADT SAR/HAC/PD Testing Lab

Power Density Plot No.:

S06P_PD_System Check_10 GHz_2021.08.30

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
SPEAG, 5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1025	-

Exposure Conditions

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

Hardware Setup

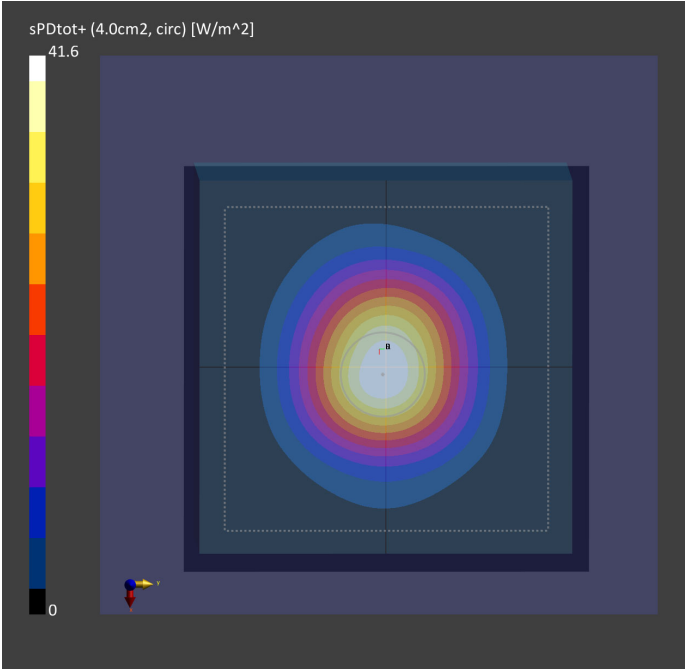
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave	--Air--	EUmmWV4 - SN9438_F1-55GHz, 2021-07-26	DAE4 Sn915, 2021-06-02

Scan Setup

	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0

Measurement Results

	5G Scan
Date	2021-08-30
Avg. Area [cm²]	4.00
pStotavg[W/m²]	41.6
pSnavg [W/m²]	41.4
Epeak [V/m]	135
Power Drift [dB]	0.05



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/01/05

S07 System Check_H5750_220105

DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0105 Medium parameters used: $f = 5750$ MHz; $\sigma = 5.123$ S/m; $\epsilon_r = 36.45$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(5.1, 5.1, 5.1) @ 5750 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: ELI V5.0 1204; Type: QD OVA 002 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 9.43 W/kg

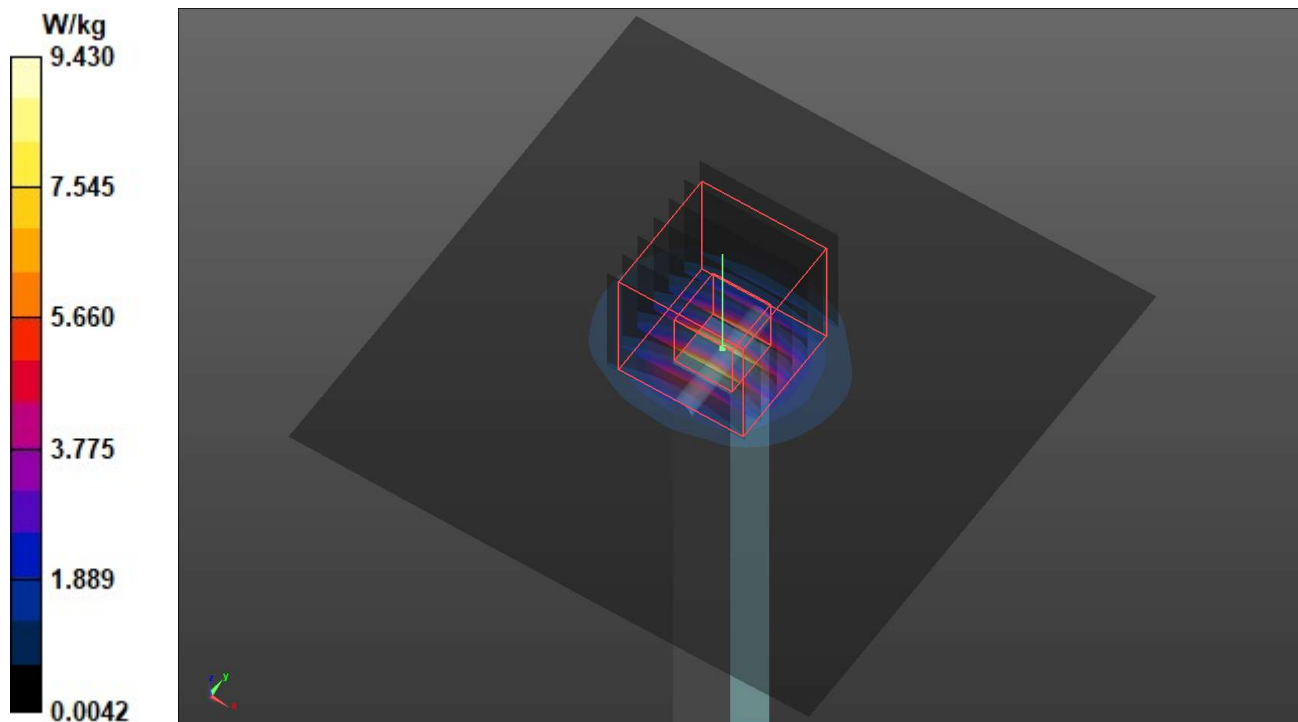
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 45.92 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 17.4 W/kg

SAR(1 g) = 3.87 W/kg; SAR(10 g) = 1.13 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 9.98 W/kg



Annex B. Plots of SAR and Power Density Measurement

The plots for highest measured SAR and Power Density in each exposure configuration, wireless mode and frequency band combination are shown as follows.

P01 WLAN2.4G_802.11b_Bottom Side_5mm_Ch1_Ant 0+1**DUT: BFYX-WTW-P21080607**

Communication System: UID 10012 - CAB, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps);

Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0823 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.827$ S/m; $\epsilon_r = 38.849$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.59, 7.59, 7.59) @ 2412 MHz; Calibrated: 2020/09/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2021/06/02
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x231x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.42 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.51 V/m; Power Drift = -0.06 dB

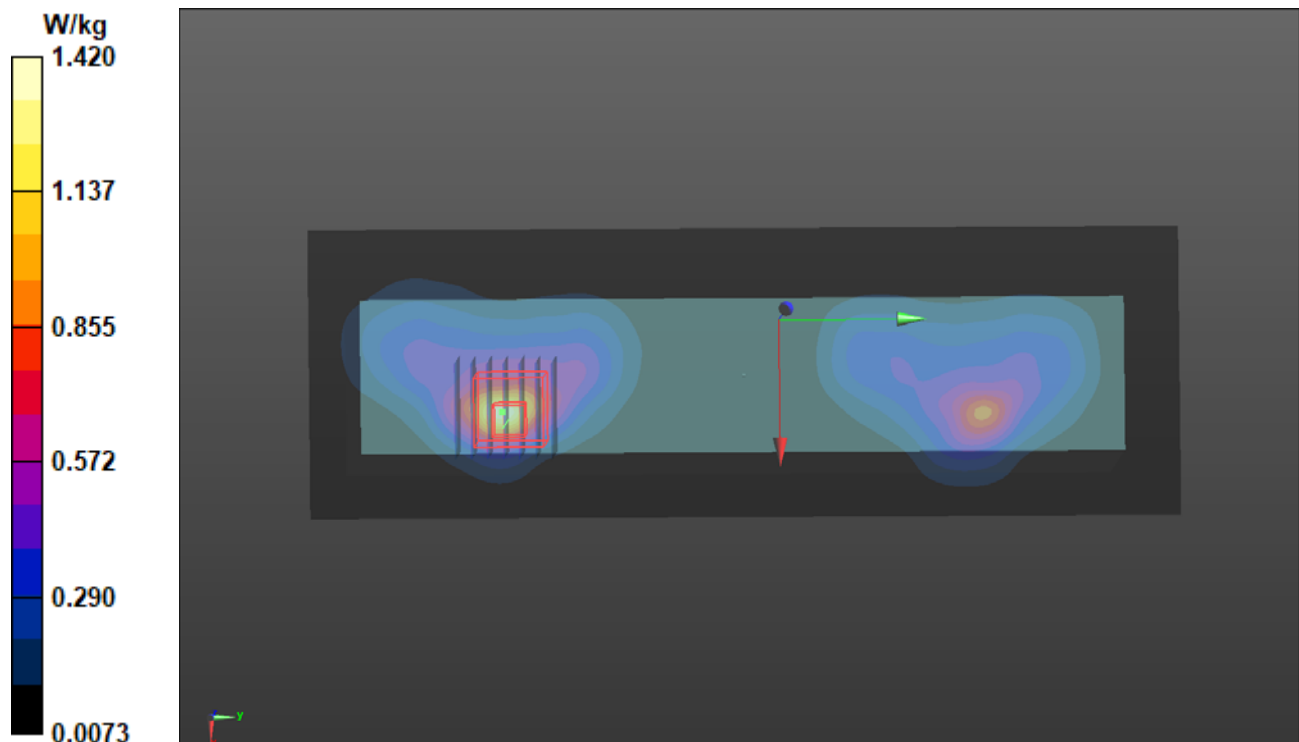
Peak SAR (extrapolated) = 1.69 W/kg

SAR(1 g) = 0.713 W/kg; SAR(10 g) = 0.342 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 7.6 mm

Ratio of SAR at M2 to SAR at M1 = 43.7%

Maximum value of SAR (measured) = 1.28 W/kg



P02 WLAN5.3G_802.11ac VHT80_Bottom Side_5mm_Ch58_Ant 0+1

DUT: BFYX-WTW-P21080607

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5290 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0824 Medium parameters used (interpolated): $f = 5290$ MHz; $\sigma = 4.776$ S/m; $\epsilon_r = 36.932$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5.41, 5.41, 5.41) @ 5290 MHz; Calibrated: 2020/09/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2021/06/02
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x271x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.86 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 21.23 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 2.64 W/kg

SAR(1 g) = 0.776 W/kg; SAR(10 g) = 0.423 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.4 mm

Ratio of SAR at M2 to SAR at M1 = 69.2%

Maximum value of SAR (measured) = 1.61 W/kg

Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 21.23 V/m; Power Drift = -0.05 dB

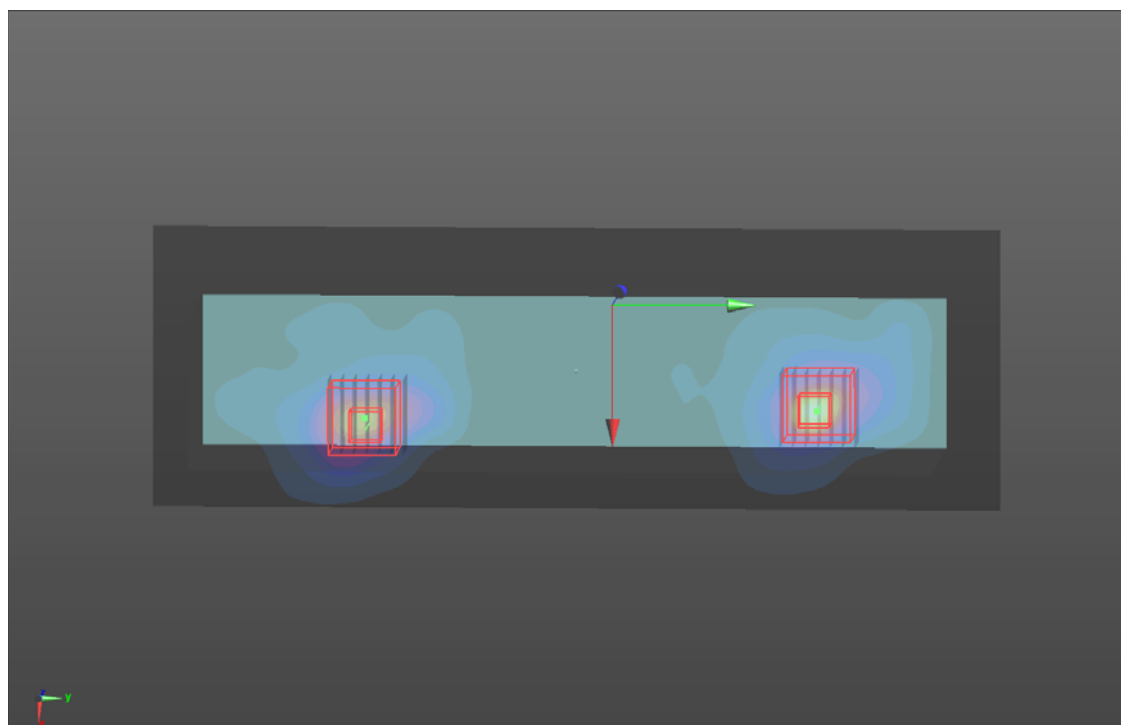
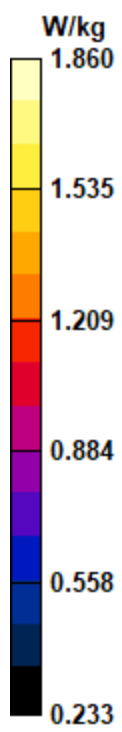
Peak SAR (extrapolated) = 2.44 W/kg

SAR(1 g) = 0.717 W/kg; SAR(10 g) = 0.408 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 9.1 mm

Ratio of SAR at M2 to SAR at M1 = 68.4%

Maximum value of SAR (measured) = 1.48 W/kg



P03 WLAN5.6G_802.11ac VHT80_Bottom Side_5mm_Ch106_Ant 0+1

DUT: BFYX-WTW-P21080607

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5530 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0823 Medium parameters used (interpolated): $f = 5530$ MHz; $\sigma = 4.919$ S/m; $\epsilon_r = 37.163$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.8 °C ; Liquid Temperature : 23.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(4.8, 4.8, 4.8) @ 5530 MHz; Calibrated: 2020/09/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2021/06/02
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x271x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.37 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 17.82 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 3.34 W/kg

SAR(1 g) = 0.751 W/kg; SAR(10 g) = 0.303 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 7.9 mm

Ratio of SAR at M2 to SAR at M1 = 62%

Maximum value of SAR (measured) = 1.84 W/kg

Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 17.82 V/m; Power Drift = 0.07 dB

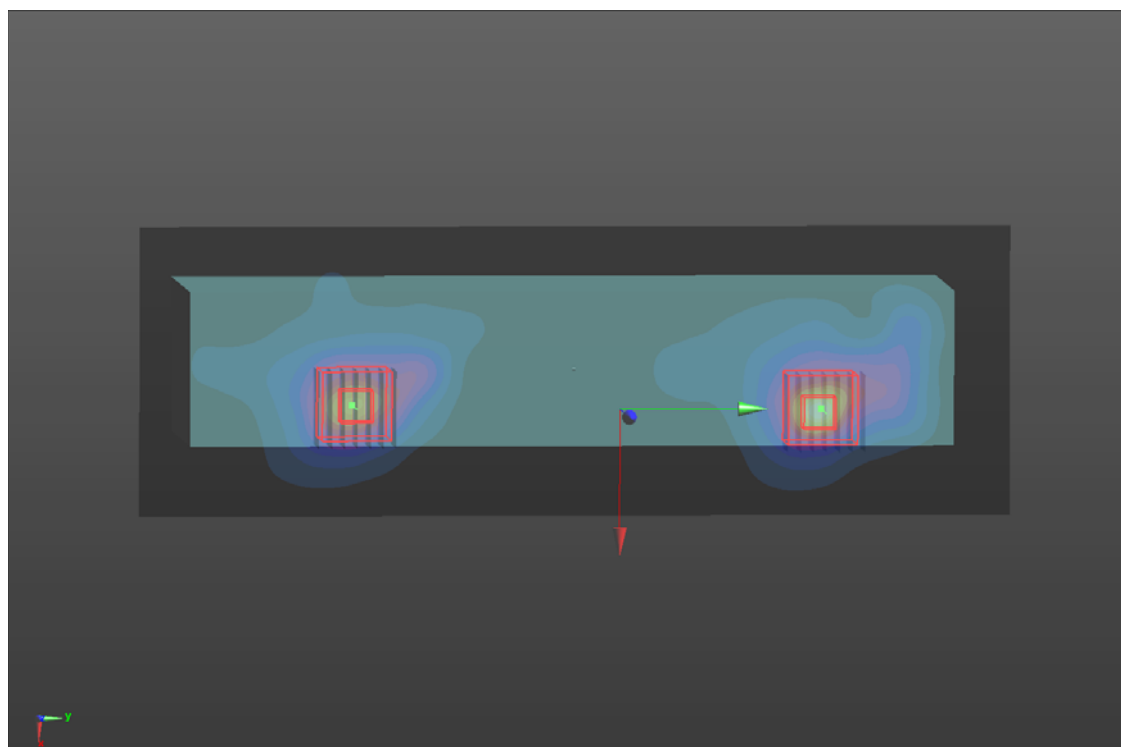
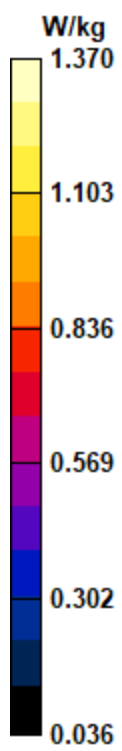
Peak SAR (extrapolated) = 3.37 W/kg

SAR(1 g) = 0.739 W/kg; SAR(10 g) = 0.297 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 7.9 mm

Ratio of SAR at M2 to SAR at M1 = 61%

Maximum value of SAR (measured) = 1.85 W/kg



P04 WLAN5.8G_802.11ac VHT80_Bottom Side_5mm_Ch155_Ant 0+1

DUT: BFYX-WTW-P21080607

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5775 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0824 Medium parameters used: $f = 5775$ MHz; $\sigma = 5.275$ S/m; $\epsilon_r = 36.262$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5, 5, 5) @ 5775 MHz; Calibrated: 2020/09/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2021/06/02
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x271x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.87 W/kg

Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 20.57 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.21 W/kg

SAR(1 g) = 0.742 W/kg; SAR(10 g) = 0.381 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.6 mm

Ratio of SAR at M2 to SAR at M1 = 63.4%

Maximum value of SAR (measured) = 1.75 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 20.57 V/m; Power Drift = -0.04 dB

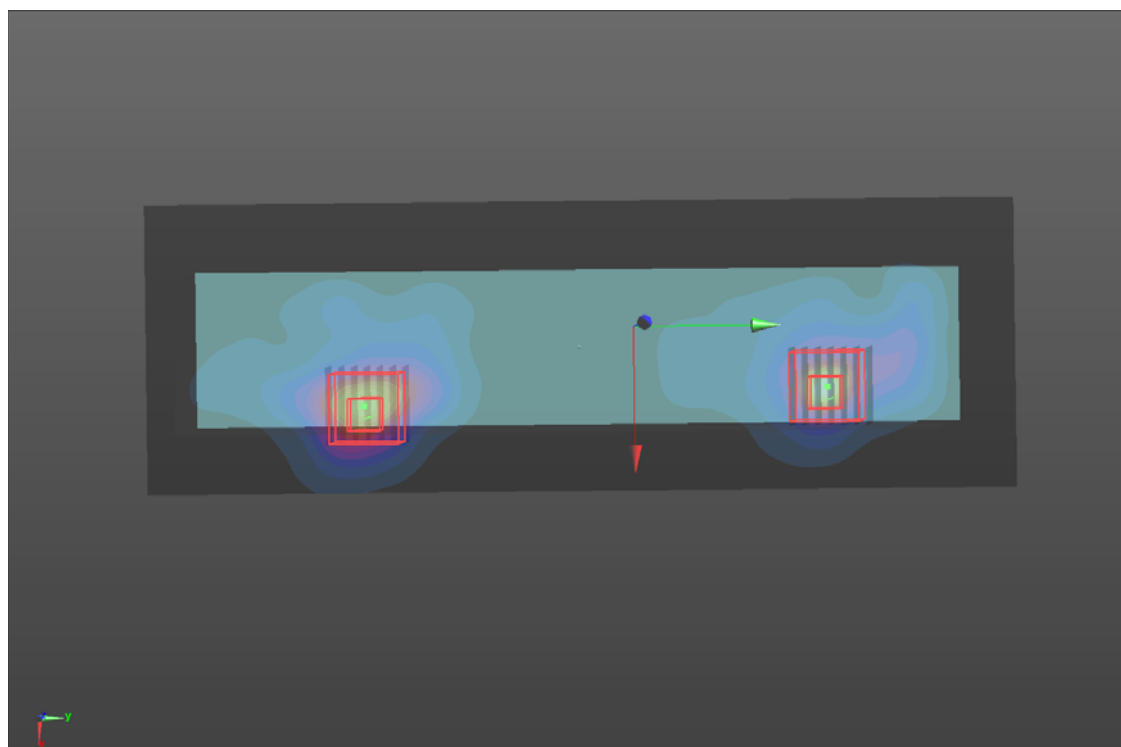
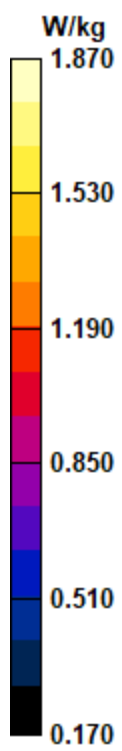
Peak SAR (extrapolated) = 2.59 W/kg

SAR(1 g) = 0.689 W/kg; SAR(10 g) = 0.359 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 9.3 mm

Ratio of SAR at M2 to SAR at M1 = 65.4%

Maximum value of SAR (measured) = 1.43 W/kg



P05 BT_LE_Bottom Side_5mm_Ch19_Ant 1**DUT: BFYX-WTW-P21080607**

Communication System: UID 10670 - AAA, Bluetooth Low Energy; Frequency: 2440 MHz; Duty Cycle: 1:1.72

Medium: H19T27N1_0824 Medium parameters used: $f = 2440$ MHz; $\sigma = 1.848$ S/m; $\epsilon_r = 38.845$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.59, 7.59, 7.59) @ 2440 MHz; Calibrated: 2020/09/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2021/06/02
- Phantom: ELI Phantom_2105; Type: QD OVA 004 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x231x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0590 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.795 V/m; Power Drift = -0.12 dB

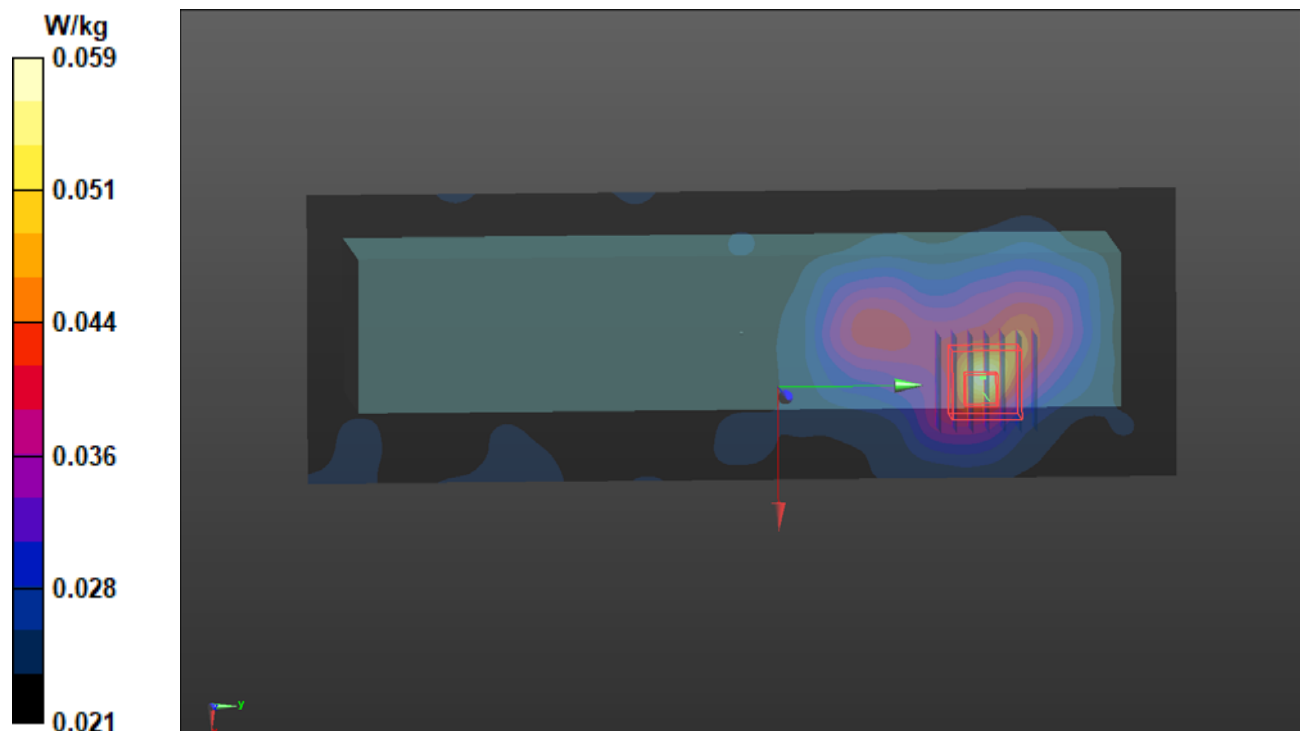
Peak SAR (extrapolated) = 0.0670 W/kg

SAR(1 g) = 0.043 W/kg; SAR(10 g) = 0.033 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 68.4%

Maximum value of SAR (measured) = 0.0571 W/kg



Measurement Report for Device,

P06S UNII-8_802.11ax HE80_Bottom Side_5mm_Ch215_Ant 0+1

Device under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
BFYX-WTW-P21080607	237.0 x 74.0 x 48.0		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,	Bottom Side, 5.00	U-NII-8	WLAN, 10731-AAC	7025.0,	5.65	6.73	32.7

Hardware Setup

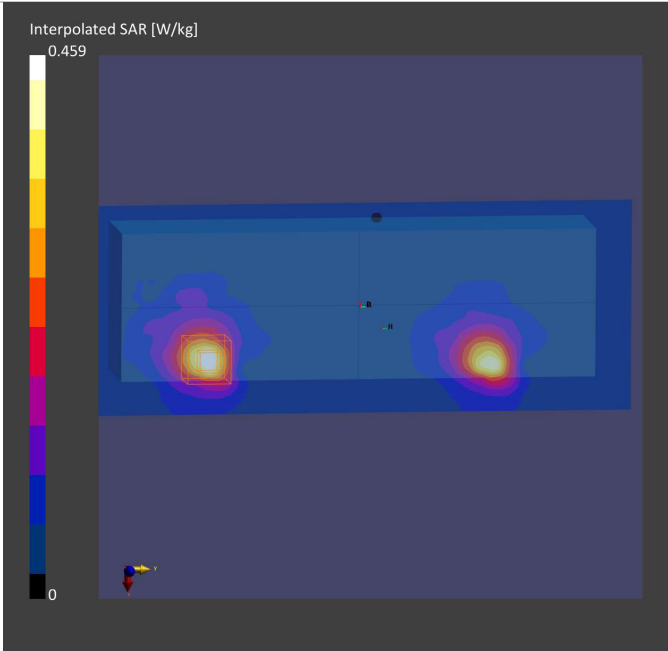
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V8.0 (20deg probe tilt) - 2105	H50T72N1 , 2021-Aug-25	EX3DV4 - SN7555, 2020-09-28	DAE4 Sn915, 2021-06-02

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	105.0 x 270.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	7.5 x 7.5	3.0 x 3.0 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
Date	2021-08-25	2021-08-25
psSAR1g [W/kg]	0.383	0.401
psSAR10g [W/kg]	0.137	0.141
Power Drift [dB]	-0.06	-0.17



Test Lab: Bureau Veritas ADT SAR/HAC/PD Testing Lab Power

Density Plot No.:

P06P UNII-8_802.11ax HE80_Bottom Side_5mm_Ch215_Ant0+1

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
P21080607	237.0 x 74.0 x 48.0		Phone

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5GAir	Bottom Side 2.00	U-NII-8	WLAN 10731	7025.0	1.0

Hardware Setup

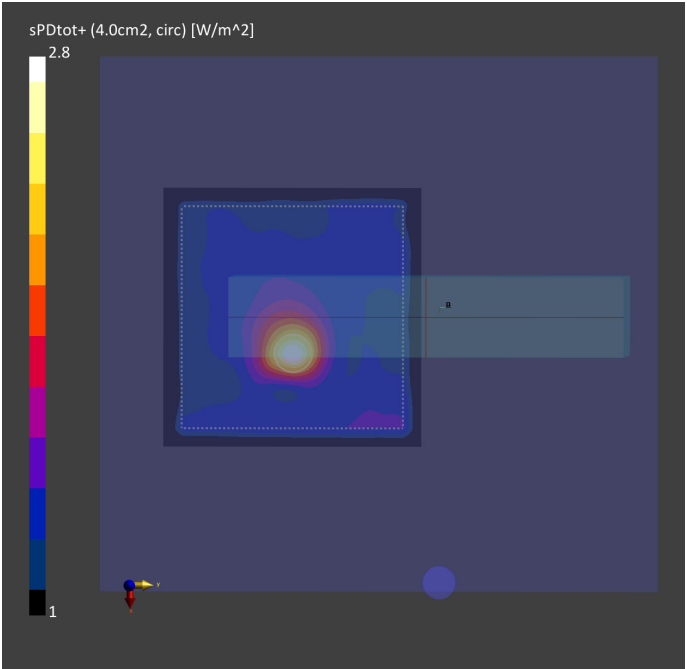
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave	Air---	EUmmWV4 - SN9438_F1-55GHz, 2021-07-26	DAE4 Sn915, 2021-06-02

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	2.0

Measurement Results

	5G Scan
Date	2021-08-30
Avg. Area [cm²]	1.00
pStotavg[W/m²]	2.69
pSnavg [W/m²]	2.65
E_peak [V/m]	42.2
Power Drift [dB]	-0.01



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/01/05

P07 WLAN5.9G_802.11ac VHT80_Bottom Side_5mm_Ch171_Ant 0+1

DUT: BFX-XTW-P21080607

Communication System: UID 10554 - AAD, IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle); Frequency: 5855 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0105 Medium parameters used: $f = 5855$ MHz; $\sigma = 5.293$ S/m; $\epsilon_r = 35.817$; $\rho = 1000$ kg/m³
Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(5.1, 5.1, 5.1) @ 5855 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: ELI V5.0 1204; Type: QD OVA 002 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.84 W/kg

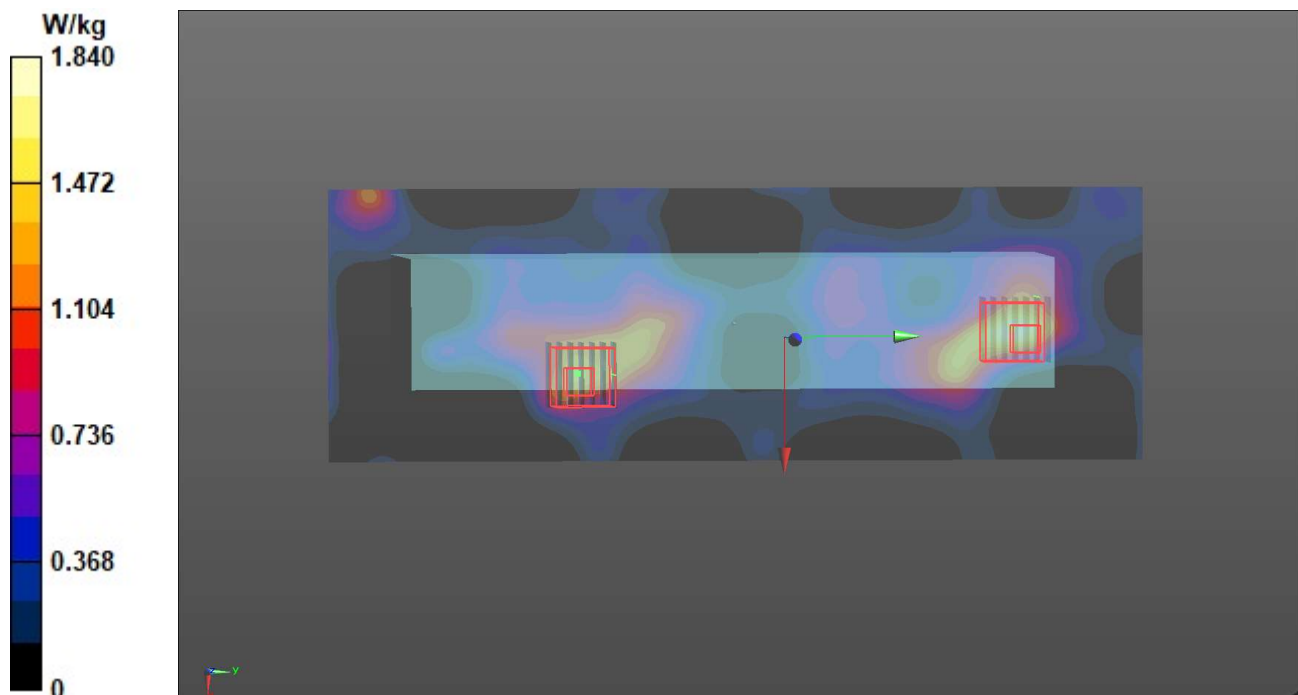
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.252 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 3.22 W/kg

SAR(1 g) = 0.751 W/kg; SAR(10 g) = 0.227 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 57.9%

Maximum value of SAR (measured) = 1.62 W/kg



Annex C. Tissue & System Verification

The measuring results for tissue simulating liquid and system check are shown as below.

Note:

1. For Section 4.3, the dielectric properties of the tissue simulating liquid have been measured within 24 hours before the SAR testing and within $\pm 10\%$ of the target values. Liquid temperature during the SAR testing has kept within $\pm 2^\circ\text{C}$.
2. For Section 4.4, The SAR measurement system was validated according to procedures in KDB 865664 D01. The validation status in tabulated summary is as below.
3. For Section 4.5, Comparing to the reference SAR value provided by SPEAG in dipole calibration certificate, the deviation of system check results is within its specification of 10 %. The result indicates the system check can meet the variation criterion and the plots please refer to Annex A of this report.

Tissue Verification									Validation for CW			Validation for Modulation				System Validation					Note		
Plot No.	Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Targeted Conductivity (σ)	Targeted Permittivity (ε _r)	Deviation Conductivity (σ)	Deviation Permittivity (ε _r)	Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR	Date	Frequency (MHz)	Targeted 1g SAR (W/kg)	Measured 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
S01	2450	23.5	1.873	38.701	1.8	39.2	4.06	-1.27	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 23, 2021	2450	52.70	2.8	56.00	6.26	835	7555	915
S02	5250	23.3	4.736	36.974	4.71	35.9	0.55	2.99	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 24, 2021	5250	80.60	4.16	83.20	3.23	1019	7555	915
S03	5600	23.5	4.997	37.061	5.07	35.5	-1.44	4.40	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 23, 2021	5600	82.40	4.36	87.20	5.83	1019	7555	915
S04	5750	23.3	5.251	36.285	5.22	35.4	0.59	2.50	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 24, 2021	5750	79.40	3.91	78.20	-1.51	1019	7555	915
S05	2450	23.3	1.859	38.805	1.8	39.2	3.28	-1.01	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 24, 2021	2450	52.70	2.79	55.80	5.88	835	7555	915
S06S	6500	23.2	6.15	34.2	6.07	34.5	1.32	-0.87	Pass	Pass	Pass	OFDM	N/A	Pass	Aug. 25, 2021	6500	285.00	29.5	295.00	3.51	1008	7555	915
S07	5750	23.2	5.123	36.45	5.22	35.4	-1.86	2.97	Pass	Pass	Pass	OFDM	N/A	Pass	Jan. 05, 2022	5750	79.40	3.87	77.40	-2.52	1019	3650	1590

Plot No.	Test Date	Frequency [GHz]	mmWave Probe S/N	Verification Source S/N	Averaging Area [cm ²]	Distance [mm]	Target Power Density [W/m ²]	Measured Power Density [W/m ²]	Deviation [%]
S6P	Aug. 30, 2021	10	9438	1025	1	10.0	45.8	41.6	-9.17%

Annex D. Maximum Target Conducted Power

The maximum conducted average power (Unit: dBm) including tune-up tolerance is shown as below.

WLAN Tune-up Power (Full)					
WLAN 2.4GHz					
Mode	Channel	Frequency	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11b	1	2412	15.5	15.5	18.5
	6	2437	15.5	15.5	18.5
	11	2462	15.5	15.5	18.5
	12	2467	15.5	15.5	18.5
	13	2472	9.5	9.5	12.5
802.11g	1	2412	15.5	15.5	18.5
	6	2437	15.5	15.5	18.5
	11	2462	15.5	15.5	18.5
	12	2467	12.5	12.5	15.5
	13	2472	7.5	7.5	10.5
802.11ac VHT20	1	2412	15.5	15.5	18.5
	6	2437	15.5	15.5	18.5
	11	2462	15.5	15.5	18.5
	12	2467	11.0	11.0	14.0
	13	2472	6.0	6.0	9.0
802.11ac VHT40	3	2422	15.5	15.5	18.5
	6	2437	15.5	15.5	18.5
	9	2452	15.5	15.5	18.5
	10	2457	9.0	9.0	12.0
	11	2462	7.0	7.0	10.0
802.11ax HE20	1	2412	15.5	15.5	18.5
	6	2437	15.5	15.5	18.5
	11	2462	15.5	15.5	18.5
	12	2467	11.0	11.0	14.0
	13	2472	6.5	6.5	9.5
802.11ax HE40	3	2422	15.5	15.5	18.5
	6	2437	15.5	15.5	18.5
	9	2452	15.5	15.5	18.5
	10	2457	9.5	9.5	12.5
	11	2462	7.5	7.5	10.5

WLAN Tune-up Power (Full)					
Bluetooth					
Mode	Channel	Frequency		Ant 1 Max Tune-up	
BR / EDR	0	2402		12.5	
	39	2441		12.5	
	78	2480		12.5	
LE	0	2402		12.5	
	19	2440		12.5	
	39	2480		12.5	

WLAN Tune-up Power (Full)					
WLAN 5.2GHz					
Mode	Channel	Frequency	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	36	5180	13.5	13.5	16.5
	40	5200	13.5	13.5	16.5
	44	5220	13.5	13.5	16.5
	48	5240	13.5	13.5	16.5
802.11ac VHT20	36	5180	13.5	13.5	16.5
	40	5200	13.5	13.5	16.5
	44	5220	13.5	13.5	16.5
	48	5240	13.5	13.5	16.5
802.11ac VHT40	38	5190	13.5	13.5	16.5
	46	5230	13.5	13.5	16.5
802.11ac VHT80	42	5210	13.5	13.5	16.5
802.11ax HE20	36	5180	13.5	13.5	16.5
	40	5200	13.5	13.5	16.5
	44	5220	13.5	13.5	16.5
	48	5240	13.5	13.5	16.5
802.11ax HE40	38	5190	13.5	13.5	16.5
	46	5230	13.5	13.5	16.5
802.11ax HE80	42	5210	13.5	13.5	16.5

WLAN Tune-up Power (Full)					
WLAN 5.3GHz					
Mode	Channel	Frequency	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	52	5260	13.5	13.5	16.5
	56	5280	13.5	13.5	16.5
	60	5300	13.5	13.5	16.5
	64	5320	13.5	13.5	16.5
802.11ac VHT20	52	5260	13.5	13.5	16.5
	56	5280	13.5	13.5	16.5
	60	5300	13.5	13.5	16.5
	64	5320	13.5	13.5	16.5
802.11ac VHT40	54	5270	13.5	13.5	16.5
	62	5310	13.5	13.5	16.5
802.11ac VHT80	58	5290	13.5	13.5	16.5
802.11ax HE20	52	5260	13.5	13.5	16.5
	56	5280	13.5	13.5	16.5
	60	5300	13.5	13.5	16.5
	64	5320	13.5	13.5	16.5
802.11ax HE40	54	5270	13.5	13.5	16.5
	62	5310	13.5	13.5	16.5
802.11ax HE80	58	5290	13.5	13.5	16.5

WLAN Tune-up Power (Full)					
WLAN 5.6GHz					
Mode	Channel	Frequency	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	100	5500	13.5	13.5	16.5
	116	5580	13.5	13.5	16.5
	120	5600	13.5	13.5	16.5
	124	5620	13.5	13.5	16.5
	132	5660	13.5	13.5	16.5
	140	5700	13.5	13.5	16.5
	144	5720	13.5	13.5	16.5
802.11ac VHT20	100	5500	13.5	13.5	16.5
	116	5580	13.5	13.5	16.5
	120	5600	13.5	13.5	16.5
	124	5620	13.5	13.5	16.5
	132	5660	13.5	13.5	16.5
	140	5700	13.5	13.5	16.5
	144	5720	13.5	13.5	16.5
802.11ac VHT40	102	5510	13.5	13.5	16.5
	110	5550	13.5	13.5	16.5
	118	5590	13.5	13.5	16.5
	126	5630	13.5	13.5	16.5
	134	5670	13.5	13.5	16.5
	142	5710	13.5	13.5	16.5
802.11ac VHT80	106	5530	13.5	13.5	16.5
	122	5610	13.5	13.5	16.5
	138	5690	13.5	13.5	16.5
802.11ax HE20	100	5500	13.5	13.5	16.5
	116	5580	13.5	13.5	16.5
	120	5600	13.5	13.5	16.5
	124	5620	13.5	13.5	16.5
	132	5660	13.5	13.5	16.5
	140	5700	13.5	13.5	16.5
	144	5720	13.5	13.5	16.5
802.11ax HE40	102	5510	13.5	13.5	16.5
	110	5550	13.5	13.5	16.5
	118	5590	13.5	13.5	16.5
	126	5630	13.5	13.5	16.5
	134	5670	13.5	13.5	16.5
	142	5710	13.5	13.5	16.5
802.11ax HE80	106	5530	13.5	13.5	16.5
	122	5610	13.5	13.5	16.5
	138	5690	13.5	13.5	16.5

WLAN Tune-up Power (Full)					
WLAN 5.8GHz					
Mode	Channel	Frequency	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	149	5745	13.5	13.5	16.5
	153	5765	13.5	13.5	16.5
	157	5785	13.5	13.5	16.5
	161	5805	13.5	13.5	16.5
	165	5825	13.5	13.5	16.5
802.11ac VHT20	149	5745	13.5	13.5	16.5
	153	5765	13.5	13.5	16.5
	157	5785	13.5	13.5	16.5
	161	5805	13.5	13.5	16.5
	165	5825	13.5	13.5	16.5
802.11ac VHT40	151	5755	13.5	13.5	16.5
	159	5795	13.5	13.5	16.5
802.11ac VHT80	155	5775	13.5	13.5	16.5
802.11ax HE20	149	5745	13.5	13.5	16.5
	153	5765	13.5	13.5	16.5
	157	5785	13.5	13.5	16.5
	161	5805	13.5	13.5	16.5
	165	5825	13.5	13.5	16.5
802.11ax HE40	151	5755	13.5	13.5	16.5
	159	5795	13.5	13.5	16.5
802.11ax HE80	155	5775	13.5	13.5	16.5

WLAN Tune-up Power (Full)					
WLAN 5.9GHz					
Mode	Channel	Frequency	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	169	5845	13.5	13.5	16.5
	173	5865	13.5	13.5	16.5
	177	5885	13.5	13.5	16.5
802.11ac VHT20	169	5845	13.5	13.5	16.5
	173	5865	13.5	13.5	16.5
	177	5885	13.5	13.5	16.5
802.11ac VHT40	167	5835	13.5	13.5	16.5
	175	5875	13.5	13.5	16.5
802.11ac VHT80	171	5855	13.5	13.5	16.5
802.11ax HE20	169	5845	13.5	13.5	16.5
	173	5865	13.5	13.5	16.5
	177	5885	13.5	13.5	16.5
802.11ax HE40	167	5835	13.5	13.5	16.5
	175	5875	13.5	13.5	16.5
802.11ax HE80	171	5855	13.5	13.5	16.5

WLAN Tune-up Power (Full)					
UNII-5					
Mode	Channel	Frequency	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11ax HE20	1	5955	1.5	1.5	4.5
	5	5975	1.5	1.5	4.5
	9	5995	1.5	1.5	4.5
	13	6015	1.5	1.5	4.5
	17	6035	1.5	1.5	4.5
	21	6055	1.5	1.5	4.5
	25	6075	1.5	1.5	4.5
	29	6095	1.5	1.5	4.5
	33	6115	1.5	1.5	4.5
	37	6135	1.5	1.5	4.5
	41	6155	1.5	1.5	4.5
	45	6175	1.5	1.5	4.5
	49	6195	1.5	1.5	4.5
	53	6215	1.5	1.5	4.5
	57	6235	1.5	1.5	4.5
	61	6255	1.5	1.5	4.5
	65	6275	1.5	1.5	4.5
	69	6295	1.5	1.5	4.5
	73	6315	1.5	1.5	4.5
	77	6335	1.5	1.5	4.5
	81	6355	1.5	1.5	4.5
	85	6375	1.5	1.5	4.5
	89	6395	1.5	1.5	4.5
	93	6415	1.5	1.5	4.5
802.11ax HE40	3	5965	4.5	4.5	7.5
	11	6005	4.5	4.5	7.5
	19	6045	4.5	4.5	7.5
	27	6085	4.5	4.5	7.5
	35	6125	4.5	4.5	7.5
	43	6165	4.5	4.5	7.5
	51	6205	4.5	4.5	7.5
	59	6245	4.5	4.5	7.5
	67	6285	4.5	4.5	7.5
	75	6325	4.5	4.5	7.5
	83	6365	4.5	4.5	7.5
	91	6405	4.5	4.5	7.5
802.11ax HE80	7	5985	8.0	8.0	11.0
	23	6065	8.0	8.0	11.0
	39	6145	8.0	8.0	11.0
	55	6225	8.0	8.0	11.0
	71	6305	8.0	8.0	11.0
	87	6385	8.0	8.0	11.0

WLAN Tune-up Power (Full)					
UNII-6					
Mode	Channel	Frequency	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11ax HE20	97	6435	2.0	2.0	5.0
	101	6455	2.0	2.0	5.0
	105	6475	2.0	2.0	5.0
	109	6495	2.0	2.0	5.0
	113	6515	2.0	2.0	5.0
	117	6535	2.0	2.0	5.0
802.11ax HE40	99	6445	4.5	4.5	7.5
	107	6485	4.5	4.5	7.5
	115	6525	4.5	4.5	7.5
802.11ax HE80	103	6465	8.0	8.0	11.0
	119	6545	8.0	8.0	11.0

WLAN Tune-up Power (Full)					
UNII-7					
Mode	Channel	Frequency	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11ax HE20	121	6555	2.0	2.0	5.0
	125	6575	2.0	2.0	5.0
	129	6595	2.0	2.0	5.0
	133	6615	2.0	2.0	5.0
	137	6635	2.0	2.0	5.0
	141	6655	2.0	2.0	5.0
	145	6675	2.0	2.0	5.0
	149	6695	2.0	2.0	5.0
	153	6715	2.0	2.0	5.0
	157	6735	2.0	2.0	5.0
	161	6755	2.0	2.0	5.0
	165	6775	2.0	2.0	5.0
	169	6795	2.0	2.0	5.0
	173	6815	2.0	2.0	5.0
	177	6835	2.0	2.0	5.0
	181	6855	2.0	2.0	5.0
	185	6875	2.0	2.0	5.0
802.11ax HE40	123	6565	4.5	4.5	7.5
	131	6605	4.5	4.5	7.5
	139	6645	4.5	4.5	7.5
	147	6685	4.5	4.5	7.5
	155	6725	4.5	4.5	7.5
	163	6765	4.5	4.5	7.5
	171	6805	4.5	4.5	7.5
	179	6845	4.5	4.5	7.5
	187	6885	4.5	4.5	7.5
802.11ax HE80	135	6625	8.0	8.0	11.0
	151	6705	8.0	8.0	11.0
	167	6785	8.0	8.0	11.0
	183	6865	8.0	8.0	11.0

WLAN Tune-up Power (Full)					
UNII-8					
Mode	Channel	Frequency	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11ax HE20	189	6895	2.0	2.0	5.0
	193	6915	2.0	2.0	5.0
	197	6935	2.0	2.0	5.0
	201	6955	2.0	2.0	5.0
	205	6975	2.0	2.0	5.0
	209	6995	2.0	2.0	5.0
	213	7015	2.0	2.0	5.0
	217	7035	2.0	2.0	5.0
	221	7055	2.0	2.0	5.0
	225	7075	2.0	2.0	5.0
	229	7095	2.0	2.0	5.0
	233	7115	2.0	2.0	5.0
802.11ax HE40	195	6925	5.0	5.0	8.0
	203	6965	5.0	5.0	8.0
	211	7005	5.0	5.0	8.0
	219	7045	5.0	5.0	8.0
	227	7085	5.0	5.0	8.0
802.11ax HE80	199	6945	8.0	8.0	11.0
	215	7025	8.0	8.0	11.0

Annex E. Measured Conducted Power Result

The measuring conducted power (Unit: dBm) are shown as below.

WLAN Conducted Power (Full)					
WLAN2.4GHz Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11b	1	2412	15.49	15.41	18.46
	6	2437	15.39	15.31	18.36
	11	2462	15.42	15.33	18.39
	12	2467	15.38	15.29	18.35
	13	2472	8.98	8.86	11.93

WLAN 5.3GHz Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11ac VHT80	58	5290	13.36	13.43	16.41

WLAN 5.6GHz Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11ac VHT80	106	5530	13.38	13.43	16.42
	122	5610	13.36	13.41	16.4
	138	5690	13.35	13.39	16.38

WLAN 5.8GHz Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11ac VHT80	155	5775	13.21	13.39	16.31

WLAN 5.9GHz Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11ac VHT80	171	5775	13.47	13.42	16.46

WLAN Conducted Power (Full)			
Bluetooth Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
BR / EDR	0	2402	11.76
	39	2441	11.82
	78	2480	11.93
LE	0	2402	11.85
	19	2440	12.03
	39	2480	11.94

WLAN Conducted Power (Full)					
UNII-5 Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11ax HE80	7	5985	7.91	7.89	10.91
	23	6065	7.83	7.92	10.89
	39	6145	7.94	7.96	10.96
	55	6225	7.9	7.82	10.87
	71	6305	7.93	7.91	10.93
	87	6385	7.94	7.87	10.92

UNII-6 Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11ax HE80	103	6465	7.93	7.9	10.93
	119	6545	7.02	6.98	10.01

UNII-7 Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11ax HE80	135	6625	7.93	7.91	10.93
	151	6705	7.91	7.9	10.92
	167	6785	7.93	7.85	10.9
	183	6865	6.78	6.67	9.74

UNII-8 Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11ax HE80	199	6945	7.92	7.87	10.91
	215	7025	7.91	7.84	10.89

Annex F. SAR and Power Density Test Result

SAR Results for Body Exposure Condition.

Note:

1. SAR testing for WLAN was performed on the maximum power mode.

Body SAR Test Result														
System & Position						DUT & Accessory	SAR							
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	Ant Status	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	WLAN2.4G	802.11b	Front Face	5	1	Ant 0+1	99.90	1.00	18.50	18.46	1.01	-0.12	0.299	0.30
	WLAN2.4G	802.11b	Rear Face	5	1	Ant 0+1	99.90	1.00	18.50	18.46	1.01	0.05	0.136	0.14
	WLAN2.4G	802.11b	Left Side	5	1	Ant 0+1	99.90	1.00	18.50	18.46	1.01	0.03	0.276	0.28
	WLAN2.4G	802.11b	Right Side	5	1	Ant 0+1	99.90	1.00	18.50	18.46	1.01	-0.07	0.373	0.38
	WLAN2.4G	802.11b	Top Side	5	1	Ant 0+1	99.90	1.00	18.50	18.46	1.01	0.02	0.321	0.32
1	WLAN2.4G	802.11b	Bottom Side	5	1	Ant 0+1	99.90	1.00	18.50	18.46	1.01	-0.06	0.713	0.72
	WLAN2.4G	802.11b	Bottom Side	5	6	Ant 0+1	99.90	1.00	18.50	18.36	1.03	0.11	0.662	0.68
	WLAN2.4G	802.11b	Bottom Side	5	11	Ant 0+1	99.90	1.00	18.50	18.39	1.03	-0.01	0.658	0.68
	WLAN2.4G	802.11b	Bottom Side	5	12	Ant 0+1	99.90	1.00	18.50	18.35	1.04	0.05	0.679	0.71
	WLAN2.4G	802.11b	Bottom Side	5	13	Ant 0+1	99.90	1.00	12.50	11.93	1.14	-0.06	0.178	0.20
	WLAN5.3G	802.11ac VHT80	Front Face	5	58	Ant 0+1	99.90	1.00	16.50	16.41	1.02	-0.08	0.516	0.53
	WLAN5.3G	802.11ac VHT80	Rear Face	5	58	Ant 0+1	99.90	1.00	16.50	16.41	1.02	0.03	0.164	0.17
	WLAN5.3G	802.11ac VHT80	Left Side	5	58	Ant 0+1	99.90	1.00	16.50	16.41	1.02	0.12	0.724	0.74
	WLAN5.3G	802.11ac VHT80	Right Side	5	58	Ant 0+1	99.90	1.00	16.50	16.41	1.02	0.05	0.121	0.12
	WLAN5.3G	802.11ac VHT80	Top Side	5	58	Ant 0+1	99.90	1.00	16.50	16.41	1.02	0.17	0.546	0.56
2	WLAN5.3G	802.11ac VHT80	Bottom Side	5	58	Ant 0+1	99.90	1.00	16.50	16.41	1.02	-0.05	0.776	0.79
	WLAN5.6G	802.11ac VHT80	Front Face	5	106	Ant 0+1	99.90	1.00	16.50	16.42	1.02	-0.03	0.499	0.51
	WLAN5.6G	802.11ac VHT80	Rear Face	5	106	Ant 0+1	99.90	1.00	16.50	16.42	1.02	0.08	0.159	0.16
	WLAN5.6G	802.11ac VHT80	Left Side	5	106	Ant 0+1	99.90	1.00	16.50	16.42	1.02	0.12	0.701	0.72
	WLAN5.6G	802.11ac VHT80	Right Side	5	106	Ant 0+1	99.90	1.00	16.50	16.42	1.02	0.05	0.117	0.12
	WLAN5.6G	802.11ac VHT80	Top Side	5	106	Ant 0+1	99.90	1.00	16.50	16.42	1.02	-0.06	0.528	0.54
3	WLAN5.6G	802.11ac VHT80	Bottom Side	5	106	Ant 0+1	99.90	1.00	16.50	16.42	1.02	0.07	0.751	0.77
	WLAN5.6G	802.11ac VHT80	Bottom Side	5	122	Ant 0+1	99.90	1.00	16.50	16.40	1.02	0.09	0.721	0.74
	WLAN5.6G	802.11ac VHT80	Bottom Side	5	138	Ant 0+1	99.90	1.00	16.50	16.38	1.03	0.11	0.732	0.75
	WLAN5.8G	802.11ac VHT80	Front Face	5	155	Ant 0+1	99.90	1.00	16.50	16.31	1.04	0.07	0.493	0.51
	WLAN5.8G	802.11ac VHT80	Rear Face	5	155	Ant 0+1	99.90	1.00	16.50	16.31	1.04	0.03	0.157	0.16
	WLAN5.8G	802.11ac VHT80	Left Side	5	155	Ant 0+1	99.90	1						

Body SAR Test Result

System & Position						DUT & Accessory	SAR							
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	Ant Status	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	WLAN5.9G	802.11ac VHT80	Front Face	5	171	Ant 0+1	99.90	1.00	16.50	16.46	1.01	0.07	0.462	0.47
	WLAN5.9G	802.11ac VHT80	Rear Face	5	171	Ant 0+1	99.90	1.00	16.50	16.46	1.01	0.03	0.143	0.14
	WLAN5.9G	802.11ac VHT80	Left Side	5	171	Ant 0+1	99.90	1.00	16.50	16.46	1.01	-0.13	0.655	0.66
	WLAN5.9G	802.11ac VHT80	Right Side	5	171	Ant 0+1	99.90	1.00	16.50	16.46	1.01	0.08	0.107	0.11
	WLAN5.9G	802.11ac VHT80	Top Side	5	171	Ant 0+1	99.90	1.00	16.50	16.46	1.01	0.01	0.511	0.52
7	WLAN5.9G	802.11ac VHT80	Bottom Side	5	171	Ant 0+1	99.90	1.00	16.50	16.46	1.01	-0.04	0.751	0.76
				-										
	BT	LE	Front Face	5	19	Ant 1	58.06	1.72	12.50	12.03	1.11	0.12	0.018	0.03
	BT	LE	Rear Face	5	19	Ant 1	58.06	1.72	12.50	12.03	1.11	0.05	0.00823	0.02
	BT	LE	Left Side	5	19	Ant 1	58.06	1.72	12.50	12.03	1.11	-0.06	0.016	0.03
	BT	LE	Right Side	5	19	Ant 1	58.06	1.72	12.50	12.03	1.11	0.03	0.022	0.04
	BT	LE	Top Side	5	19	Ant 1	58.06	1.72	12.50	12.03	1.11	0.01	0.019	0.04
5	BT	LE	Bottom Side	5	19	Ant 1	58.06	1.72	12.50	12.03	1.11	-0.12	0.043	0.08
	BT	LE	Bottom Side	5	0	Ant 1	58.06	1.72	12.50	11.85	1.16	0.02	0.039	0.08
	BT	LE	Bottom Side	5	39	Ant 1	58.06	1.72	12.50	11.94	1.14	-0.09	0.037	0.07

Body SAR and Power Density Test Result																								
System & Position						DUT & Accessory	SAR								Power Density									
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	Ant Status	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)	Measured APD W/m ² (4cm ²)	Grid Step [λ]	iPD [W/m ²]	Scaling Factor for Measurement Uncertainty	Averaging Area [cm ²]	Power Drift [dB]	Normal psPD [W/m ²]	Scaled Normal psPD [W/m ²]	Total psPD [W/m ²]	Scaled Total psPD [W/m ²]
	UNII-5	802.11ax HE80	Front Face	5	39	Ant 0+1	86.70	1.15	11.00	10.96	1.01	0.283	0.283	0.33	1.92							-		-
	UNII-5	802.11ax HE80	Rear Face	5	39	Ant 0+1	86.70	1.15	11.00	10.96	1.01	0.154	0.154	0.18	1.04							-		-
	UNII-5	802.11ax HE80	Left Side	5	39	Ant 0+1	86.70	1.15	11.00	10.96	1.01	0.141	0.141	0.16	0.96							-		-
	UNII-5	802.11ax HE80	Right Side	5	39	Ant 0+1	86.70	1.15	11.00	10.96	1.01	0.281	0.281	0.33	1.9							-		-
	UNII-5	802.11ax HE80	Top Side	5	39	Ant 0+1	86.70	1.15	11.00	10.96	1.01	0.321	0.321	0.37	2.17							-		-
	UNII-5	802.11ax HE80	Bottom Side	5	39	Ant 0+1	86.70	1.15	11.00	10.96	1.01	0.378	0.378	0.44	2.56							-		-
	UNII-5	802.11ax HE80	Bottom Side	5	7	Ant 0+1	86.70	1.15	11.00	10.91	1.02	0.292	0.292	0.34	1.98							-		-
	UNII-5	802.11ax HE80	Bottom Side	5	23	Ant 0+1	86.70	1.15	11.00	10.89	1.03	0.309	0.309	0.37	2.1							-		-
	UNII-5	802.11ax HE80	Bottom Side	5	55	Ant 0+1	86.70	1.15	11.00	10.87	1.03	0.34	0.34	0.40	2.3							-		-
	UNII-5	802.11ax HE80	Bottom Side	5	71	Ant 0+1	86.70	1.15	11.00	10.93	1.02	0.358	0.358	0.42	2.43							-		-
	UNII-5	802.11ax HE80	Bottom Side	5	87	Ant 0+1	86.70	1.15	11.00	10.92	1.02	0.395	0.395	0.46	2.68							-		-
	UNII-6	802.11ax HE80	Bottom Side	5	103	Ant 0+1	86.70	1.15	11.00	10.93	1.02	0.338	0.338	0.40	2.29							-		-
	UNII-6	802.11ax HE80	Bottom Side	5	119	Ant 0+1	86.70	1.15	11.00	10.01	1.26	0.318	0.318	0.46	2.68							-		-
	UNII-7	802.11ax HE80	Bottom Side	5	135	Ant 0+1	86.70	1.15	11.00	10.93	1.02	0.375	0.375	0.44	2.54							-		-
	UNII-7	802.11ax HE80	Bottom Side	5	151	Ant 0+1	86.70	1.15	11.00	10.92	1.02	0.36	0.36	0.42	2.44							-		-
	UNII-7	802.11ax HE80	Bottom Side	5	167	Ant 0+1	86.70	1.15	11.00	10.90	1.02	0.346	0.346	0.41	2.34							-		-
	UNII-7	802.11ax HE80	Bottom Side	5	183	Ant 0+1	86.70	1.15	11.00	9.74	1.34	0.301	0.301	0.46	2.68							-		-
	UNII-8	802.11ax HE80	Bottom Side	5	199	Ant 0+1	86.70	1.15	11.00	10.91	1.02	0.375	0.375	0.44	2.54							-		-
6	UNII-8	802.11ax HE80	Bottom Side	5	215	Ant 0+1	86.70	1.15	11.00	10.89	1.03	0.401	0.401	0.47	2.72	0.25	22.40	1.545	4.00	-0.01	2.65	4.85	2.69	4.92

Annex G. SAR Measurement Variability

Since all the measured SAR_{1g} are less than 0.8 W/kg, the repeated measurement is not required.

Annex H. Analysis of Simultaneous Transmission SAR

The analysis of simultaneous transmission SAR are shown as below.

<Possibilities of Simultaneous Transmission>

The simultaneous transmission possibilities for this device are listed as below.

Simultaneous TX Combination	Capable Transmit Configurations	Body Exposure Condition
A	WLAN 2.4G + BT	Yes
B	WLAN 5G + BT	Yes
Notes	1. The WLAN 2.4G, WLAN 5G and WLAN 6G cannot transmit simultaneously.	

Simultaneous Transmission SAR Evaluation (Body)								
Position	Gap (mm)	1	2	3	4	A (1+4)	B (2+4)	C (3+4)
		Max WLAN 2.4GHz	Max WLAN 5GHz	Max WLAN 6E	BT Ant 1	Summimg result 1g SAR W/kg	Summimg result 1g SAR W/kg	Summimg result 1g SAR W/kg
		1g SAR W/kg	1g SAR W/kg	1g SAR W/kg	1g SAR W/kg			
Front Face	5	0.30	0.53	0.33	0.03	0.33	0.56	0.36
Rear Face	5	0.14	0.17	0.18	0.02	0.16	0.19	0.20
Left Side	5	0.28	0.74	0.16	0.03	0.31	0.77	0.19
Right Side	5	0.38	0.12	0.33	0.04	0.42	0.16	0.37
Top Side	5	0.32	0.56	0.37	0.04	0.36	0.60	0.41
Bottom Side	5	0.72	0.79	0.47	0.08	0.80	0.87	0.55

Annex I. SAR to Peak Location Separation Ratio Analysis.

Since sum of simultaneous transmission SAR is less than the SAR limit for Body : SAR_{1g} 1.6 W/kg. There is no requirement for SAR to Peak Location Separation Ratio Analysis.

Annex J. Calibration of Test Equipment List

Calibration of Test Equipment List are shown as below.

Equipment for SAR Test					
Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Dipole	SPEAG	D2450V2	835	Jun. 22, 2021	1 Year
System Validation Dipole	SPEAG	D5GHzV2	1019	Mar. 19, 2021	1 Year
System Validation Dipole	SPEAG	D6.5GHzV2	1008	Sep. 16, 2020	1 Year
System Verification Source	SPEAG	5G Verification Source 10 GHz	1025	Jan. 19, 2021	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7555	Sep. 28, 2020	1 Year
E-Field Probe	SPEAG	EUmmWV4	9438	Jul. 26, 2021	1 Year
Data Acquisition Electronics	SPEAG	DAE4	915	Jun. 22, 2021	1 Year
Spectrum Analyzer	R&S	FSL6	102006	Apr. 06, 2021	1 Year
Universal Wireless Test Set	Anritsu	MT8870A/MU887000A	6201699387	Sep. 28, 2020	1 Year
Thermometer	YFE	YF-160A	191100743	Apr. 12, 2021	1 Year
Dielectric Assessment Kit	SPEAG	DAKS-3.5	1151	Jul. 14, 2021	1 Year
Powersource1	SPEAG	SE_UMS_160 BA	4010	Jul. 13, 2021	1 Year

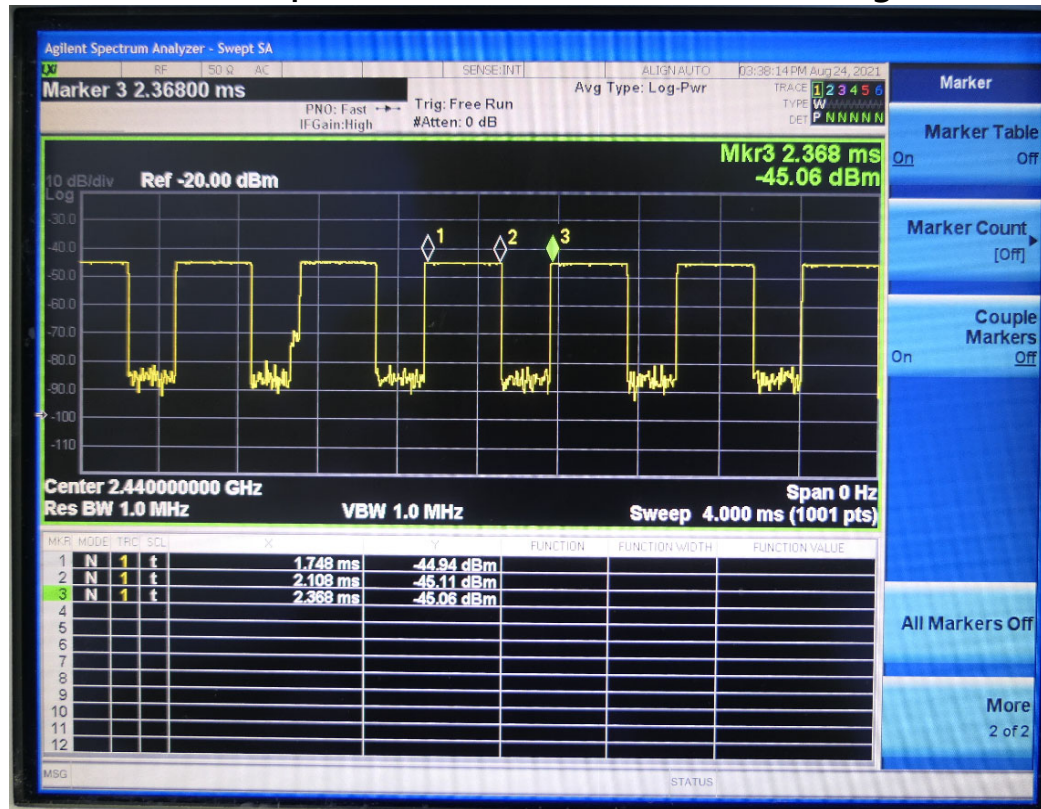
Annex K. Considerations Related to Bluetooth for Setup and Testing

This device has installed Bluetooth engineering testing software which can provide continuous transmitting RF signal. During Bluetooth SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power.

The Bluetooth call box has been used during SAR measurement and the EUT was set to LE mode at the maximum output power. Its duty factor was calculated as below and the measured SAR for Bluetooth would be scaled to the 100% transmission duty factor to determine compliance.

The duty factor of Bluetooth signal are shown as below.

<Time-domain plot for Bluetooth transmission signal>



Time-domain plot for Bluetooth transmission signal

The duty factor of Bluetooth signal has been calculated as following.

$$\text{Duty Factor} = \text{Pulse Width} / \text{Total Period} = (2.108 - 1.748) / (2.368 - 1.748) = 58.06\%$$