

## Plots of System Verification

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### **Annex A. Plots of System Verification**

The plots for system verification are shown as follows.

## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/03/23

### S01 System Check\_H2450\_220323

**DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737**

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

Medium: H19T27N1\_0323 Medium parameters used (interpolated):  $f = 2450$  MHz;  $\sigma = 1.854$  S/m;  $\epsilon_r = 38.402$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.9, 7.9, 7.9) @ 2450 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

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

Maximum value of SAR (interpolated) = 4.15 W/kg

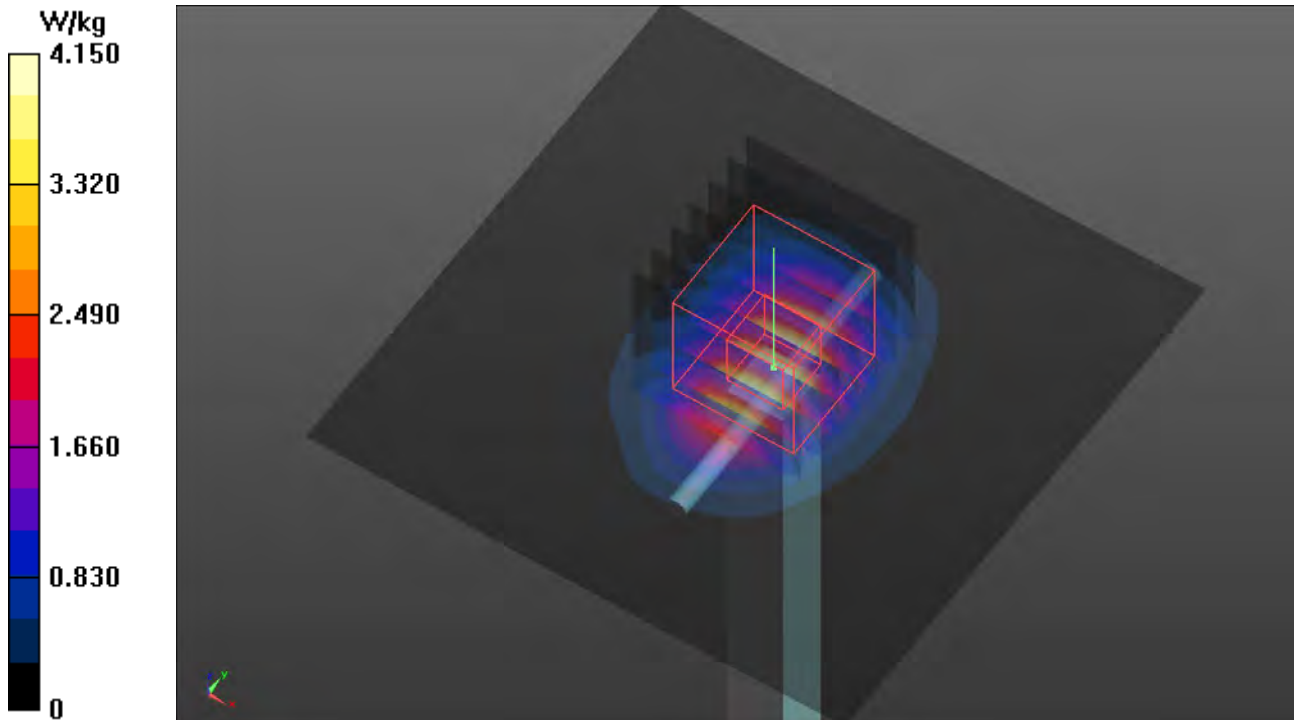
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 48.14 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 5.20 W/kg

**SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.19 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.19 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/03/23

### S02 System Check\_H5250\_220323

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

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

Medium: H34T60N1\_0323 Medium parameters used (interpolated):  $f = 5250$  MHz;  $\sigma = 4.787$  S/m;  $\epsilon_r = 37.294$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5.45, 5.45, 5.45) @ 5250 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

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

Maximum value of SAR (interpolated) = 8.58 W/kg

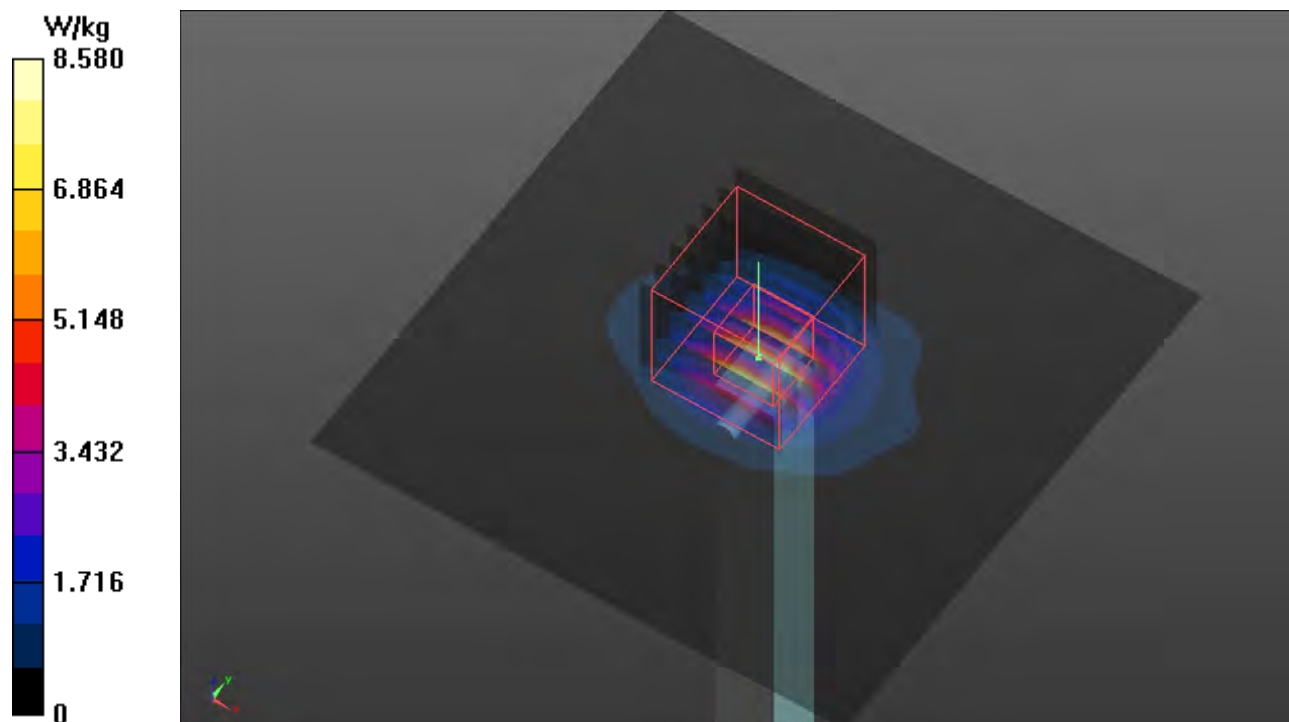
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 49.42 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 15.1 W/kg

**SAR(1 g) = 4.38 W/kg; SAR(10 g) = 1.42 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 10.0 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/03/23

### S03 System Check\_H5750\_220323

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

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

Medium: H34T60N1\_0323 Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.276$  S/m;  $\epsilon_r = 36.327$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5, 5, 5) @ 5750 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

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

Maximum value of SAR (interpolated) = 8.23 W/kg

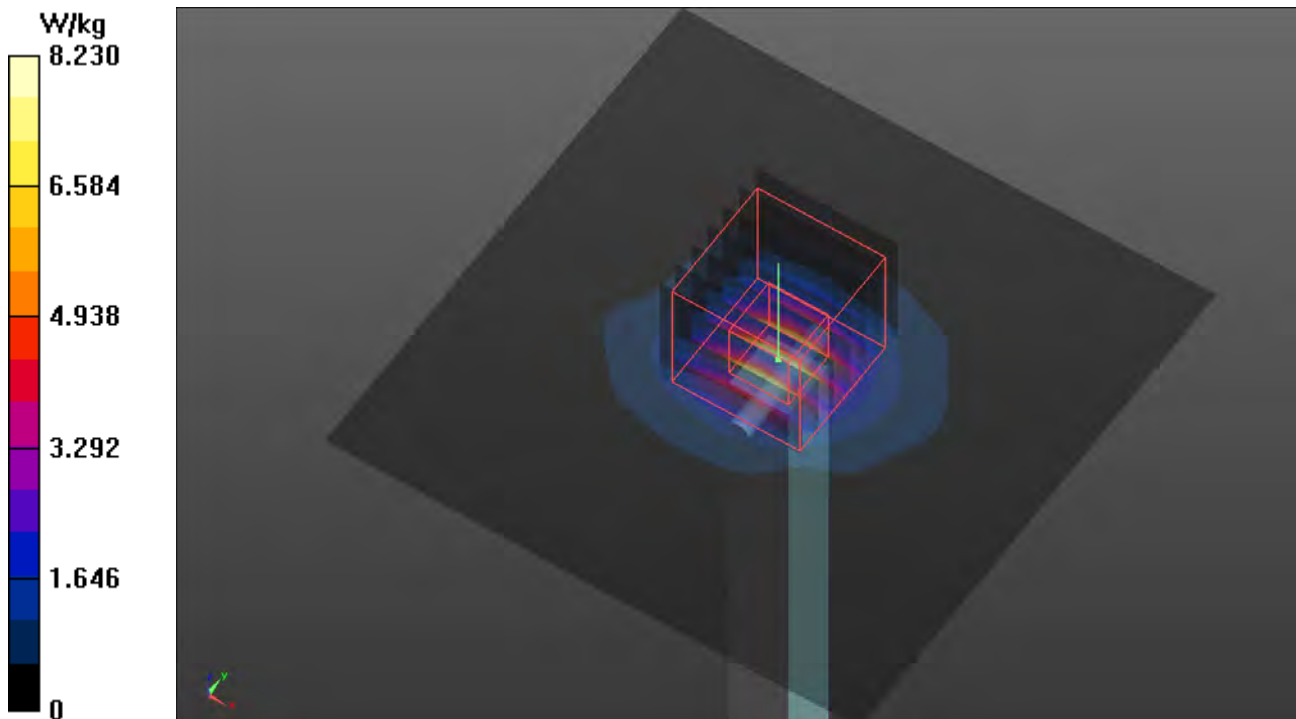
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 45.88 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 16.2 W/kg

**SAR(1 g) = 4 W/kg; SAR(10 g) = 1.17 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 9.81 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/03/23

### S04 System Check\_H2450\_220323

**DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737**

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

Medium: H19T27N1\_0323 Medium parameters used (interpolated):  $f = 2450$  MHz;  $\sigma = 1.854$  S/m;  $\epsilon_r = 38.402$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.9, 7.9, 7.9) @ 2450 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

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

Maximum value of SAR (interpolated) = 4.15 W/kg

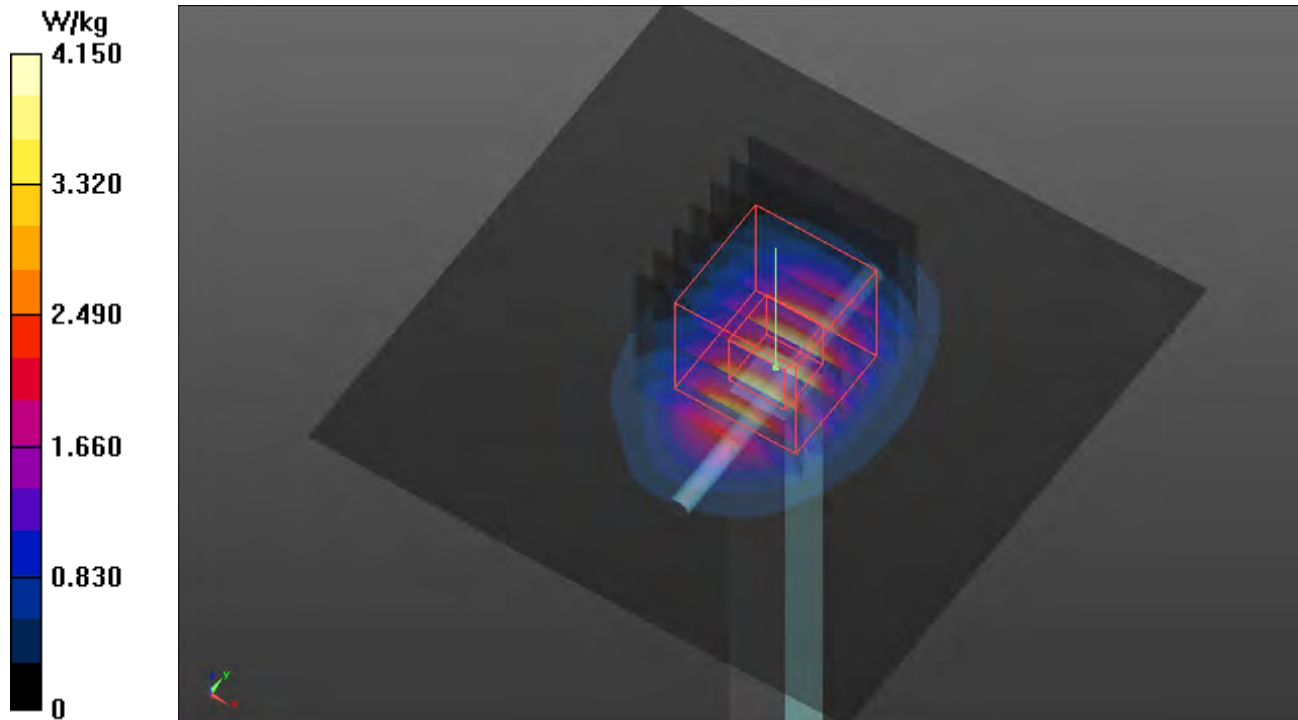
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 48.14 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 5.20 W/kg

**SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.19 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.19 W/kg



## Plots of Measurement

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### Annex B. Plots of Measurement

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

## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/03/23

**P01 WLAN2.4G\_802.11b\_Rear Face\_0mm\_Ch6\_Ant 0**

**DUT: BEMI-WTW-P22010621**

Communication System: UID 10013 - CAB, IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps); Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: H19T27N1\_0323 Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.853$  S/m;  $\epsilon_r = 39.128$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.9, 7.9, 7.9) @ 2437 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

**Area Scan (101x151x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.04 W/kg

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

Reference Value = 23.44 V/m; Power Drift = 0.17 dB

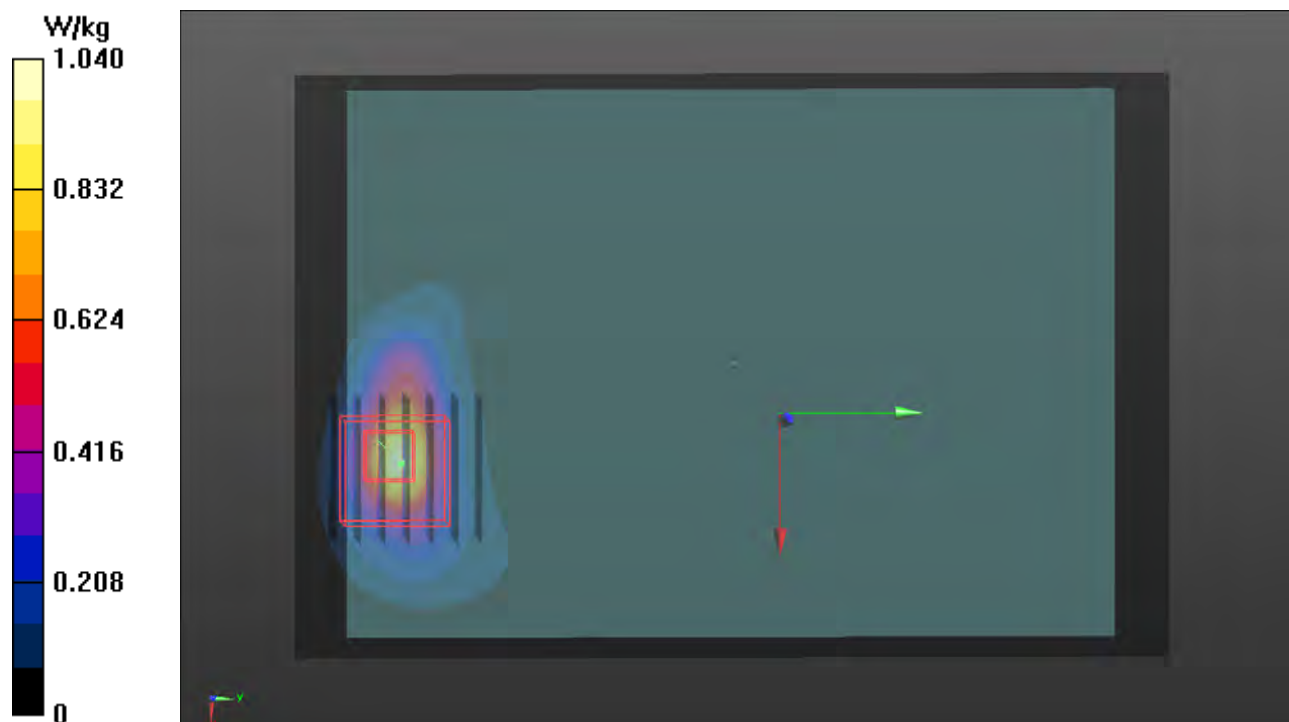
Peak SAR (extrapolated) = 1.69 W/kg

**SAR(1 g) = 0.528 W/kg; SAR(10 g) = 0.195 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 5.1 mm

Ratio of SAR at M2 to SAR at M1 = 32%

Maximum value of SAR (measured) = 1.14 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/03/23

**P02 WLAN5.2G\_802.11ac VHT80\_Bottom Side\_0mm\_Ch42\_Ant 0**

**DUT: BEMI-WTW-P22010621**

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5210 MHz; Duty Cycle: 1:1.02

Medium: H34T60N1\_0323 Medium parameters used (interpolated):  $f = 5210$  MHz;  $\sigma = 4.749$  S/m;  $\epsilon_r = 37.114$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5.45, 5.45, 5.45) @ 5210 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

**Area Scan (41x141x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

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

Reference Value = 20.57 V/m; Power Drift = 0.08 dB

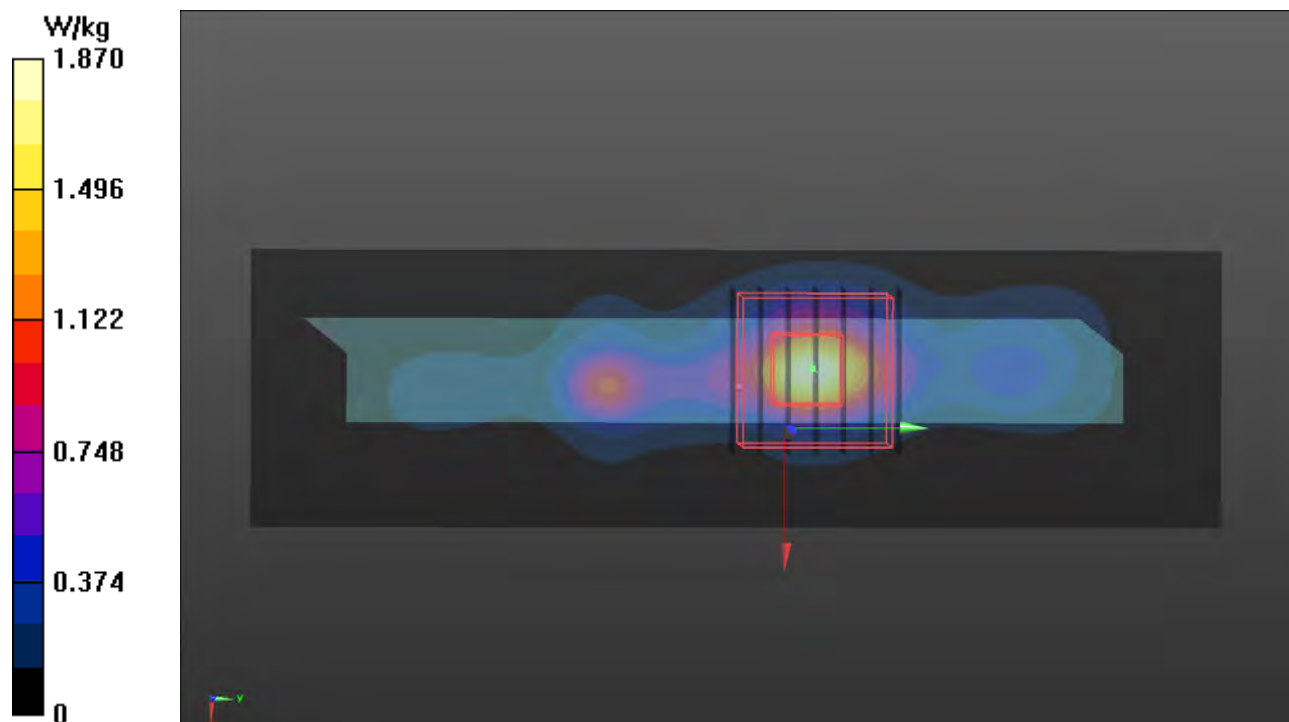
Peak SAR (extrapolated) = 3.72 W/kg

**SAR(1 g) = 0.821 W/kg; SAR(10 g) = 0.226 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 4.9 mm

Ratio of SAR at M2 to SAR at M1 = 62.5%

Maximum value of SAR (measured) = 2.20 W/kg





## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/03/23

**P03 WLAN5.8G\_802.11ac VHT80\_Bottom Side\_0mm\_Ch155\_Ant 0**

**DUT: BEMI-WTW-P22010621**

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5775 MHz; Duty Cycle: 1:1.02

Medium: H34T60N1\_0323 Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.338$  S/m;  $\epsilon_r = 36.319$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5, 5, 5) @ 5775 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

**Area Scan (41x141x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.542 W/kg

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

Reference Value = 10.22 V/m; Power Drift = 0.01 dB

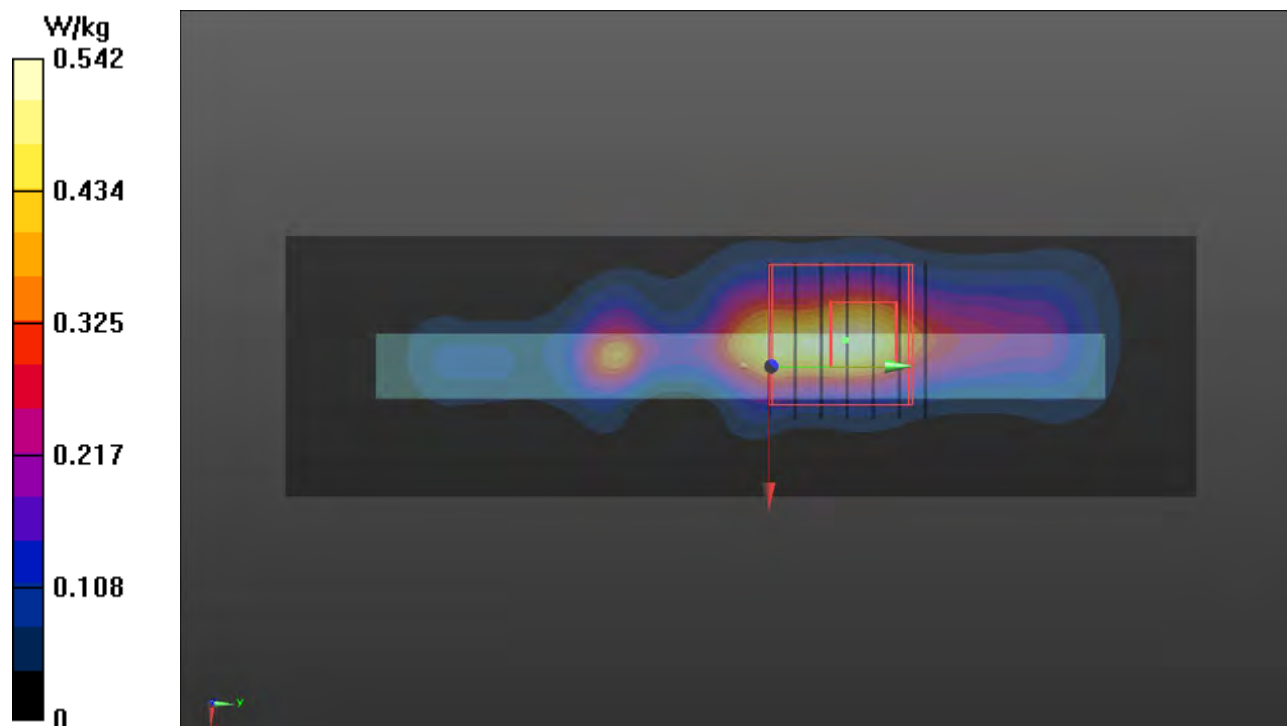
Peak SAR (extrapolated) = 1.34 W/kg

**SAR(1 g) = 0.206 W/kg; SAR(10 g) = 0.059 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 5.1 mm

Ratio of SAR at M2 to SAR at M1 = 57.2%

Maximum value of SAR (measured) = 0.728 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2022/03/23

**P04 BT\_BDR\_Rear Face\_0mm\_Ch78\_Ant 0**

**DUT: BEMI-WTW-P22010621**

Communication System: UID 10032 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH5); Frequency: 2480 MHz; Duty Cycle: 1:1.3

Medium: H19T27N1\_0323 Medium parameters used:  $f = 2480$  MHz;  $\sigma = 1.901$  S/m;  $\epsilon_r = 39.017$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.9, 7.9, 7.9) @ 2480 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

**Area Scan (101x151x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.147 W/kg

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

Reference Value = 9.269 V/m; Power Drift = -0.06 dB

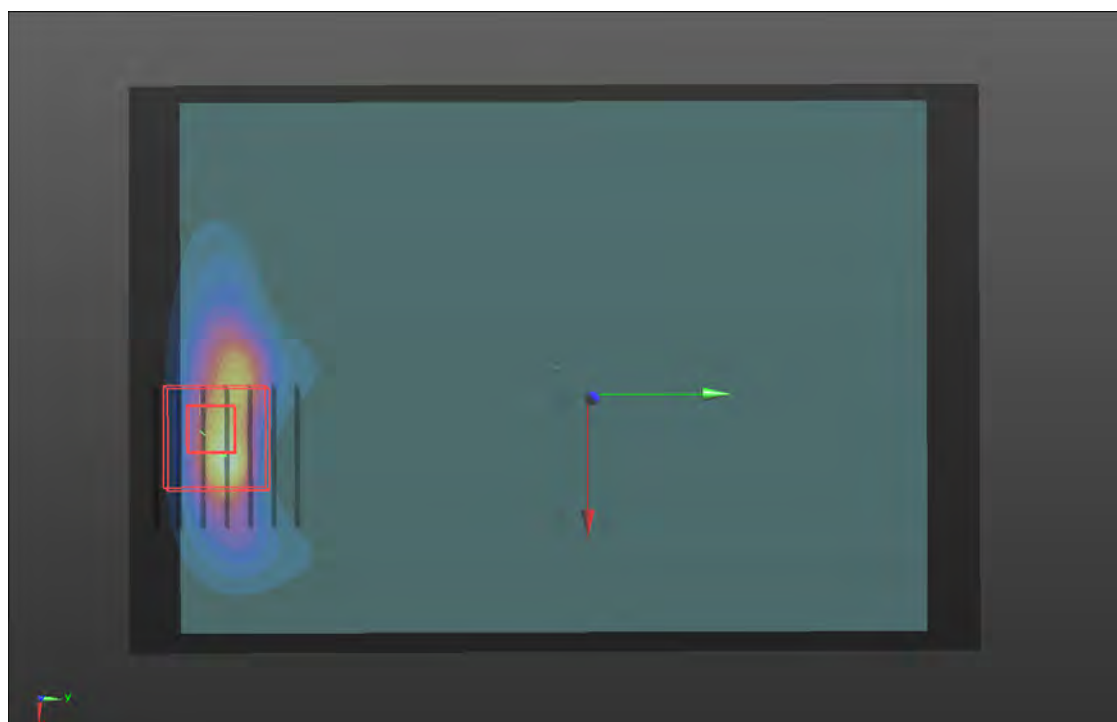
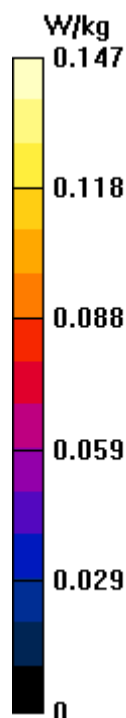
Peak SAR (extrapolated) = 0.375 W/kg

**SAR(1 g) = 0.071 W/kg; SAR(10 g) = 0.021 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 5.5 mm

Ratio of SAR at M2 to SAR at M1 = 15.4%

Maximum value of SAR (measured) = 0.201 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  $\pm 2\text{ }^{\circ}\text{C}$ .
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 <sub>r</sub> )	Targeted Conductivity (σ)	Targeted Permittivity (ε <sub>r</sub> )	Deviation Conductivity (σ)	Deviation Permittivity (ε <sub>r</sub> )	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	Output Power (dB)
S01	2450	23.1	1.854	38.402	1.8	39.2	3.00	-2.04	Pass	Pass	Pass	OFDM	N/A	Pass	Mar. 23, 2022	2450	52.60	2.48	49.88	-5.17	737	7555	1341	17
S02	5250	23.1	4.787	37.294	4.71	35.9	1.63	3.88	Pass	Pass	Pass	OFDM	N/A	Pass	Mar. 23, 2022	5250	80.60	4.38	87.39	8.43	1019	7555	1341	17
S03	5750	23.1	5.276	36.327	5.22	35.4	1.07	2.62	Pass	Pass	Pass	OFDM	N/A	Pass	Mar. 23, 2022	5750	79.40	4	79.81	0.52	1019	7555	1341	17
S04	2450	23.1	1.854	38.402	1.8	39.2	3.00	-2.04	Pass	Pass	Pass	OFDM	N/A	Pass	Mar. 23, 2022	2450	52.60	2.48	49.88	-5.17	737	7555	1341	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	SISO Ant 0 Max Tune up
802.11b	1	2412	12.0
	6	2437	12.0
	11	2462	12.0
802.11g	1	2412	12.0
	6	2437	12.0
	11	2462	12.0
802.11n HT20	1	2412	12.0
	6	2437	12.0
	11	2462	12.0

WLAN Tune-up Power (Full)			
Bluetooth			
Mode	Channel	Frequency	Ant 0 Max Tune-up
BR / EDR	0	2402	5.0
	39	2441	5.0
	78	2480	5.0
LE	0	2402	5.0
	19	2440	5.0
	39	2480	5.0

WLAN Tune-up Power (Full)			
WLAN 5.2GHz			
Mode	Channel	Frequency	SISO Ant 0 Max Tune up
802.11a	36	5180	11.0
	40	5200	11.0
	44	5220	11.0
	48	5240	11.0
802.11n HT20	36	5180	11.0
	40	5200	11.0
	44	5220	11.0
	48	5240	11.0
802.11n HT40	38	5190	11.0
	46	5230	11.0
802.11ac VHT20	36	5180	11.0
	40	5200	11.0
	44	5220	11.0
	48	5240	11.0
802.11ac VHT40	38	5190	11.0
	46	5230	11.0
802.11ac VHT80	42	5210	11.0



WLAN Tune-up Power (Full)			
WLAN 5.8GHz			
Mode	Channel	Frequency	SISO Ant 0 Max Tune up
802.11a	149	5745	6.0
	153	5765	6.0
	157	5785	6.0
	161	5805	6.0
	165	5825	6.0
802.11n HT20	149	5745	6.0
	153	5765	6.0
	157	5785	6.0
	161	5805	6.0
	165	5825	6.0
802.11n HT40	151	5755	6.0
	159	5795	6.0
802.11ac VHT20	149	5745	6.0
	153	5765	6.0
	157	5785	6.0
	161	5805	6.0
	165	5825	6.0
802.11ac VHT40	151	5755	6.0
	159	5795	6.0
802.11ac VHT80	155	5775	6.0

## **Annex E. Measured Conducted Power Result**

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

WLAN Conducted Power (Full)			
WLAN2.4GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11b	1	2412	11.99
	6	2437	11.73
	11	2462	11.59

WLAN Conducted Power (Full)			
Bluetooth Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
BR / EDR	0	2402	4.65
	39	2441	4.79
	78	2480	4.96
LE	0	2402	4.34
	19	2440	4.51
	39	2480	4.62

WLAN Conducted Power (Full)			
WLAN 5.2GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11ac VHT80	42	5210	10.98

WLAN Conducted Power (Full)			
WLAN 5.8GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11ac VHT80	155	5775	5.97

## **Annex F. SAR Test Result**

SAR Results for Body Exposure Condition.

### **Note:**

1. SAR testing for WLAN was performed on the maximum power mode.
2. The "< 0.001" means there is no SAR value or the SAR is too low to be measured.

**Body SAR Test Result**

System & Position																DUT & Accessory		SAR						
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	Ant Status	Power Setting	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	0	1	Ant 0	12	100.00	1.00	12.00	11.99	1.00	-0.06	0.464	0.46									
	WLAN2.4G	802.11b	Rear Face	0	1	Ant 0	12	100.00	1.00	12.00	11.99	1.00	-0.02	0.485	0.49									
	WLAN2.4G	802.11b	Left Side	0	1	Ant 0	12	100.00	1.00	12.00	11.99	1.00	0	<0.001	0.00									
	WLAN2.4G	802.11b	Right Side	0	1	Ant 0	12	100.00	1.00	12.00	11.99	1.00	0	<0.001	0.00									
	WLAN2.4G	802.11b	Top Side	0	1	Ant 0	12	100.00	1.00	12.00	11.99	1.00	0	<0.001	0.00									
	WLAN2.4G	802.11b	Bottom Side	0	1	Ant 0	12	100.00	1.00	12.00	11.99	1.00	-0.05	0.245	0.25									
1	WLAN2.4G	802.11b	Rear Face	0	6	Ant 0	12	100.00	1.00	12.00	11.73	1.06	0.17	0.528	0.56									
	WLAN2.4G	802.11b	Rear Face	0	11	Ant 0	12	100.00	1.00	12.00	11.59	1.10	-0.19	0.491	0.54									
	WLAN5.2G	802.11ac VHT80	Front Face	0	42	Ant 0	9	98.50	1.02	11.00	10.98	1.00	-0.19	0.593	0.60									
	WLAN5.2G	802.11ac VHT80	Rear Face	0	42	Ant 0	9	98.50	1.02	11.00	10.98	1.00	0.02	0.61	0.62									
	WLAN5.2G	802.11ac VHT80	Left Side	0	42	Ant 0	9	98.50	1.02	11.00	10.98	1.00	0.05	0.142	0.14									
	WLAN5.2G	802.11ac VHT80	Right Side	0	42	Ant 0	9	98.50	1.02	11.00	10.98	1.00	0.1	0.095	0.10									
	WLAN5.2G	802.11ac VHT80	Top Side	0	42	Ant 0	9	98.50	1.02	11.00	10.98	1.00	0	<0.001	0.00									
2	WLAN5.2G	802.11ac VHT80	Bottom Side	0	42	Ant 0	9	98.50	1.02	11.00	10.98	1.00	0.08	0.821	0.84									
	WLAN5.2G	802.11ac VHT80	Bottom Side	0	42	Ant 0	9	98.50	1.02	11.00	10.98	1.00	0.08	0.802	0.82									
	WLAN5.8G	802.11ac VHT80	Front Face	0	155	Ant 0	6	98.50	1.02	6.00	5.97	1.01	0.09	0.151	0.16									
	WLAN5.8G	802.11ac VHT80	Rear Face	0	155	Ant 0	6	98.50	1.02	6.00	5.97	1.01	-0.19	0.19	0.20									
	WLAN5.8G	802.11ac VHT80	Left Side	0	155	Ant 0	6	98.50	1.02	6.00	5.97	1.01	0	<0.001	0.00									
	WLAN5.8G	802.11ac VHT80	Right Side	0	155	Ant 0	6	98.50	1.02	6.00	5.97	1.01	0	<0.001	0.00									
	WLAN5.8G	802.11ac VHT80	Top Side	0	155	Ant 0	6	98.50	1.02	6.00	5.97	1.01	0	<0.001	0.00									
3	WLAN5.8G	802.11ac VHT80	Bottom Side	0	155	Ant 0	6	98.50	1.02	6.00	5.97	1.01	0.01	0.206	0.21									
	BT	BR/EDR	Front Face	0	78	Ant 0	4	77.07	1.30	5.00	4.96	1.01	-0.18	0.063	0.08									
4	BT	BR/EDR	Rear Face	0	78	Ant 0	4	77.07	1.30	5.00	4.96	1.01	-0.06	0.071	0.09									
	BT	BR/EDR	Left Side	0	78	Ant 0	4	77.07	1.30	5.00	4.96	1.01	0	<0.001	0.00									
	BT	BR/EDR	Right Side	0	78	Ant 0	4	77.07	1.30	5.00	4.96	1.01	0	<0.001	0.00									
	BT	BR/EDR	Top Side	0	78	Ant 0	4	77.07	1.30	5.00	4.96	1.01	0	<0.001	0.00									
	BT	BR/EDR	Bottom Side	0	78	Ant 0	4	77.07	1.30	5.00	4.96	1.01	0.16	0.023	0.03									
	BT	BR/EDR	Rear Face	0	0	Ant 0	4	77.07	1.30	5.00	4.65	1.08	-0.08	0.051	0.07									
	BT	BR/EDR	Rear Face	0	39	Ant 0	4	77.07	1.30	5.00	4.79	1.05	-0.16	0.05	0.07									



## **Annex G. SAR Measurement Variability**

SAR repeated measurement are shown as below.

Repeat SAR

Plot	Band	Mode	Test Position	Ch.	Original Measured SAR-1g (W/kg)	1st Repeated SAR-1g (W/kg)	L/S Ratio
R02	WLAN5.2G	802.11ac VHT80	Bottom Side	42	0.821	0.802	1.02

# 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_Ant 0 + BT_Ant 0	Yes
B	WLAN 5G_Ant 0 + BT_Ant 0	Yes

### Notes

1. The WLAN 2.4G and WLAN 5G cannot transmit simultaneously.

Simultaneous Transmission SAR Evaluation (Body)					
Position	1	2	3	A(1+3)	B(2+3)
	WLAN 2.4GHz Ant 0	WLAN 5GHz Ant 0	BT Ant 0	Summimg result 1g SAR W/kg	Summimg result 1g SAR W/kg
	1g SAR W/kg	1g SAR W/kg	1g SAR W/kg		
Front Face	0.46	0.60	0.08	0.54	0.68
Rear Face	0.56	0.62	0.09	0.65	0.71
Left Side	0.00	0.14	0.00	0.00	0.14
Right Side	0.00	0.00	0.00	0.00	0.00
Top Side	0.00	0.00	0.00	0.00	0.00
Bottom Side	0.25	0.84	0.03	0.28	0.87

## **Annex I. SAR to Peak Location Separation Ratio Analysis.**

Since sum of simultaneous transmission SAR is less than the SAR limit for Body / Head : SAR<sub>1g</sub> 1.6 W/kg ;  
Extremity SAR<sub>10g</sub> 4.0 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	737	Aug. 26, 2021	1 Year
System Validation Dipole	SPEAG	D5GHzV2	1019	Mar. 19, 2021	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7555	Sep. 27, 2021	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1341	Aug. 20, 2021	1 Year
Spectrum Analyzer	R&S	FSL6	102006	Apr. 06, 2021	1 Year
Universal Wireless Test Set	Anritsu	MT8870A/MU887000A	6201699387	Sep. 22, 2021	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

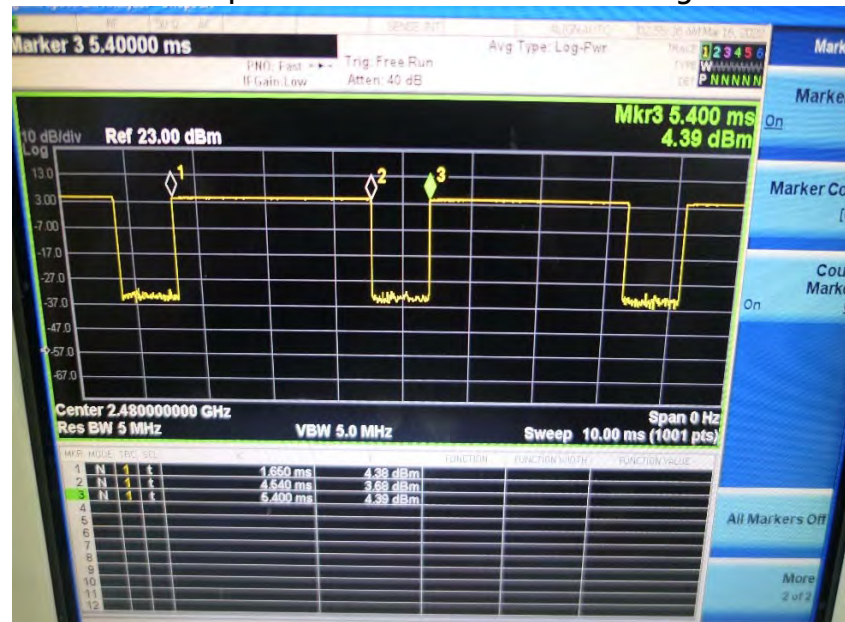
## Annex K. Considerations Related to Bluetooth for Setup and Testing

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 **DH5** 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.

$$\text{Duty Factor} = \text{Pulse Width} / \text{Total Period} = (4.54 - 1.65) / (5.4 - 1.65) = 77.07\%$$