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: 2022/05/03

S01 System Check_H2450_220503

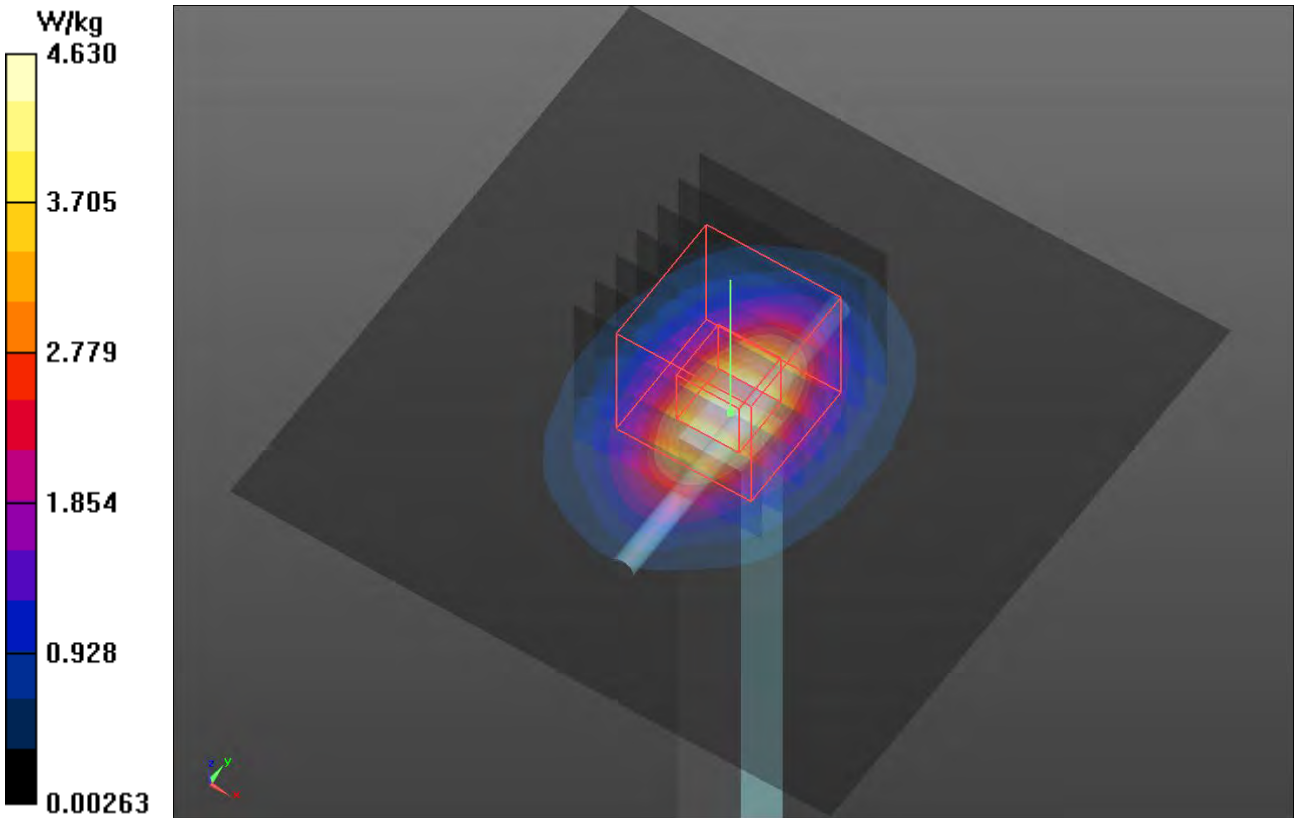
DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: UID 0, CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: H19T27N1_0503 Medium parameters used (interpolated): f = 2450 MHz; σ = 1.865 S/m; ε_r = 39.175; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.1 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3820; ConvF(6.81, 6.81, 6.81) @ 2450 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2022/02/23
- Phantom: ELI Phantom_1206; Type: QDOVA001BB; Serial: 1206
- 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) = 4.63 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.69 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 5.69 W/kg
SAR(1 g) = 2.77 W/kg; SAR(10 g) = 1.32 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 4.66 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2022/05/04

S02 System Check_H5250_220504

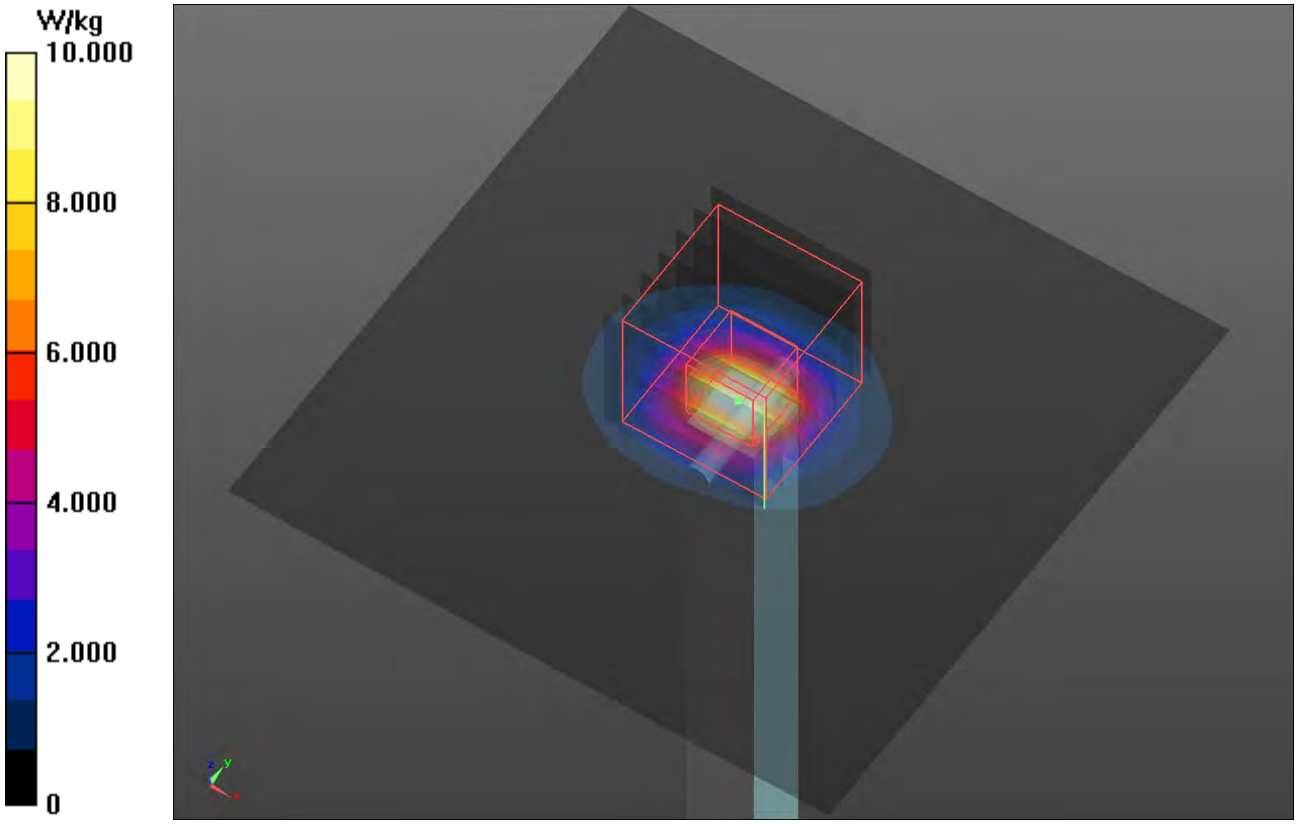
DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: UID 0, CW; Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: H34T60N1_0504 Medium parameters used: f = 5250 MHz; σ = 4.703 S/m; ε_r = 36.115; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃； Liquid Temperature：23.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3820; ConvF(4.75, 4.75, 4.75) @ 5250 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2022/02/23
- Phantom: ELI Phantom_1206; Type: QDOVA001BB; Serial: 1206
- 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) = 10.0 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 51.11 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 17.4 W/kg
SAR(1 g) = 4.42 W/kg; SAR(10 g) = 1.32 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 65.2%
Maximum value of SAR (measured) = 10.9 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2022/05/04

S03 System Check_H5600_220504

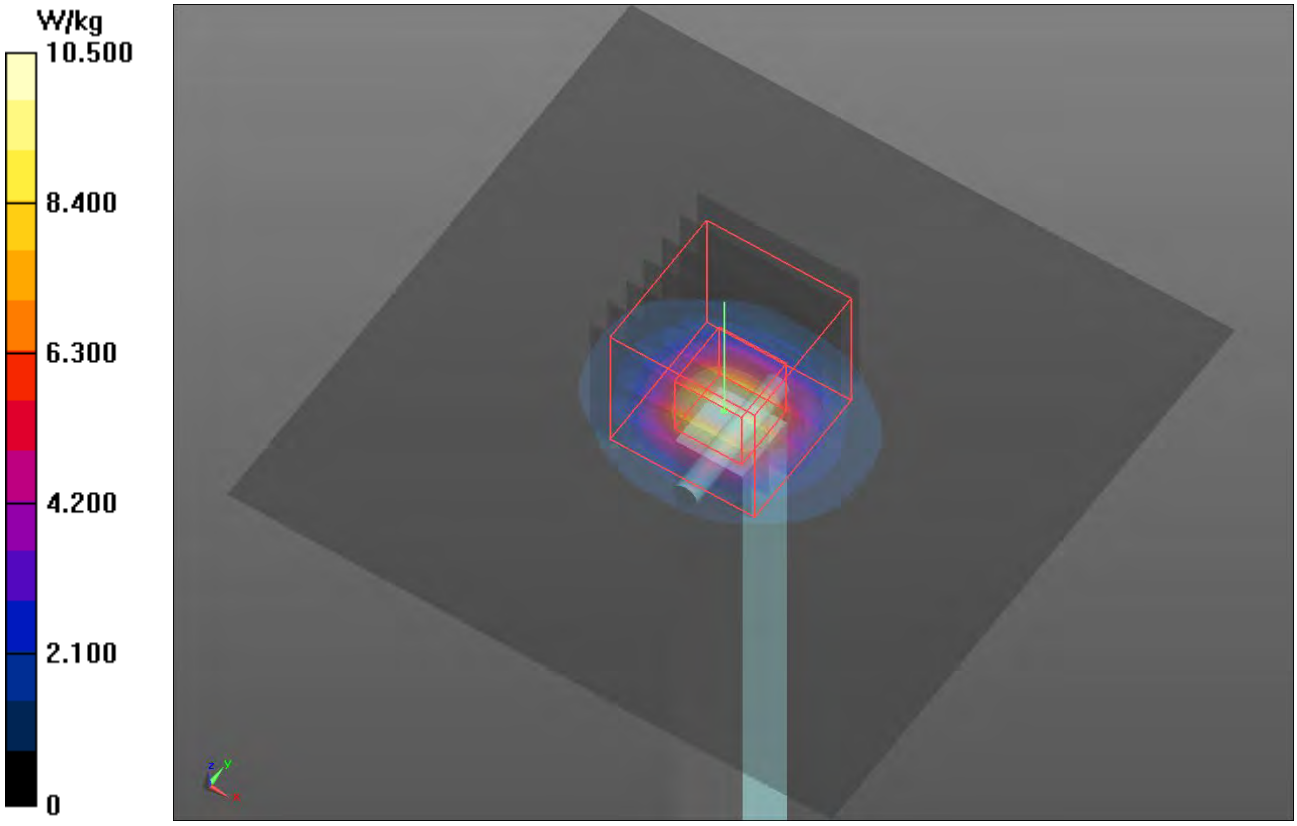
DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: UID 0, CW; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: H34T60N1_0504 Medium parameters used: f = 5600 MHz; σ = 5.129 S/m; ε_r = 35.495; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃； Liquid Temperature：23.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3820; ConvF(4.38, 4.38, 4.38) @ 5600 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2022/02/23
- Phantom: ELI Phantom_1206; Type: QDOVA001BB; Serial: 1206
- 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) = 10.5 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 51.75 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 18.8 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



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2022/05/05

S04 System Check_H5750_220505

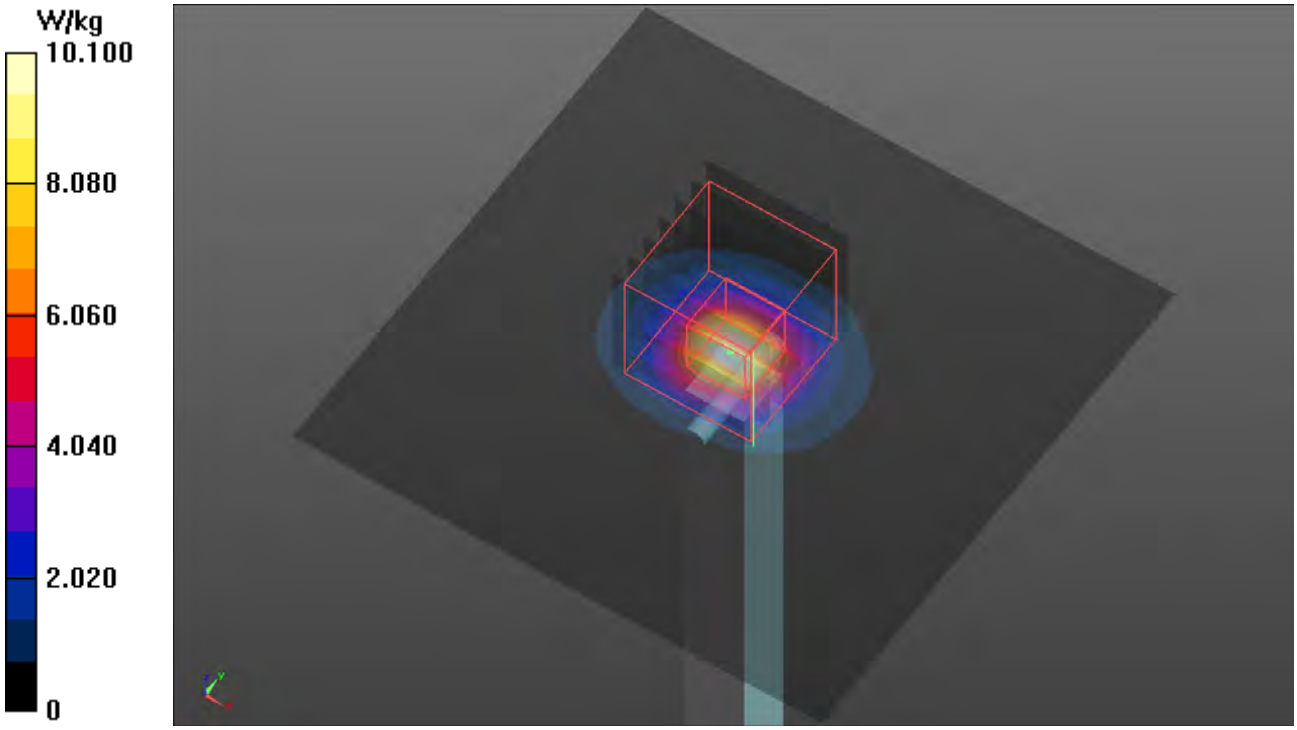
DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: UID 0, CW; Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: H34T60N1_0505 Medium parameters used: f = 5750 MHz; σ = 5.249 S/m; ε_r = 36.271; ρ = 1000 kg/m^3
Ambient Temperature：23.7 ℃； Liquid Temperature：23.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3820; ConvF(4.4, 4.4, 4.4) @ 5750 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2022/02/23
- Phantom: ELI Phantom_1206; Type: QDOVA001BB; Serial: 1206
- 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) = 10.1 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.70 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 18.4 W/kg
SAR(1 g) = 4.25 W/kg; SAR(10 g) = 1.24 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 10.9 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2022/05/03

S05 System Check_H2450_220503

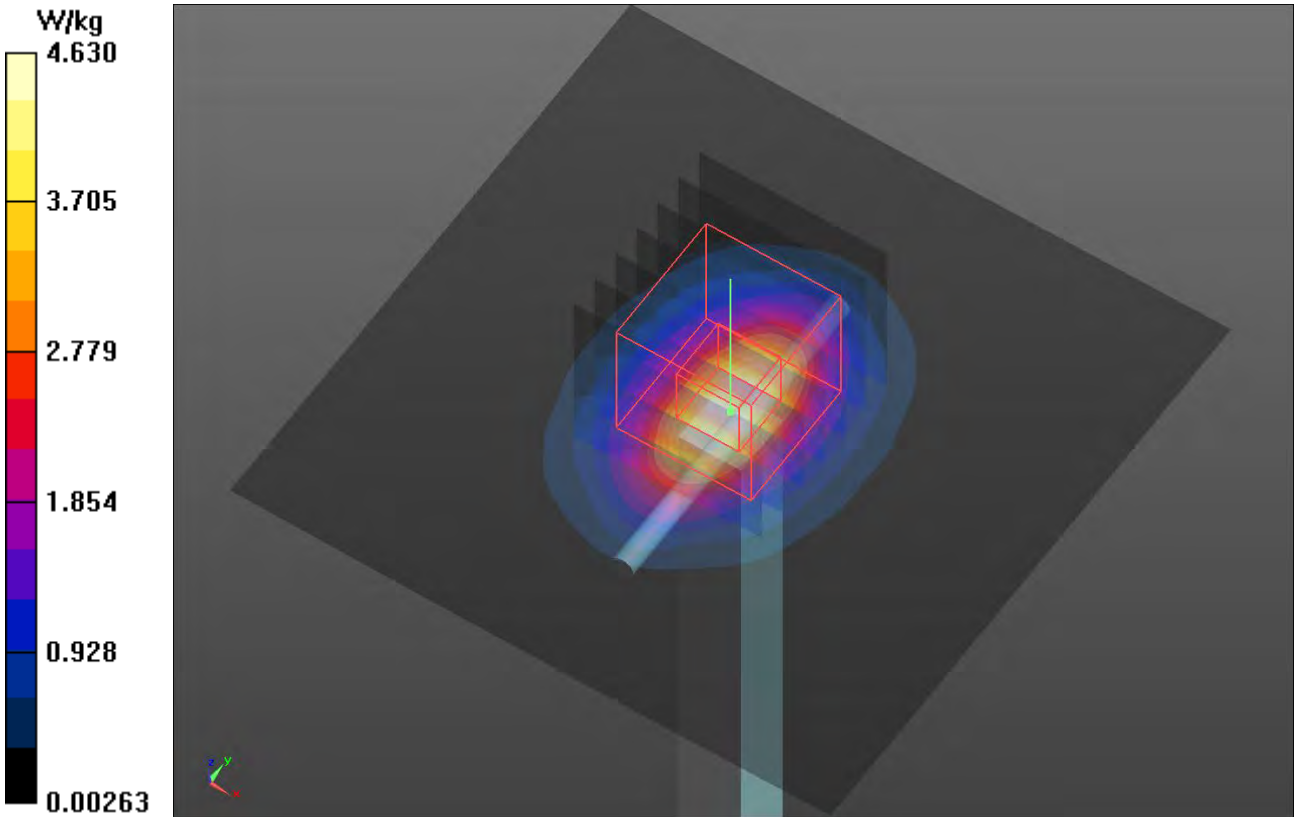
DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: UID 0, CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: H19T27N1_0503 Medium parameters used (interpolated): f = 2450 MHz; σ = 1.865 S/m; ε_r = 39.175; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.1 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3820; ConvF(6.81, 6.81, 6.81) @ 2450 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2022/02/23
- Phantom: ELI Phantom_1206; Type: QDOVA001BB; Serial: 1206
- 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) = 4.63 W/kg

Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.69 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 5.69 W/kg
SAR(1 g) = 2.77 W/kg; SAR(10 g) = 1.32 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 4.66 W/kg



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: 2022/05/03

P01 WLAN2.4G_802.11b_Top Side_0mm_Ch6_Sample INPAQ_Ant 0

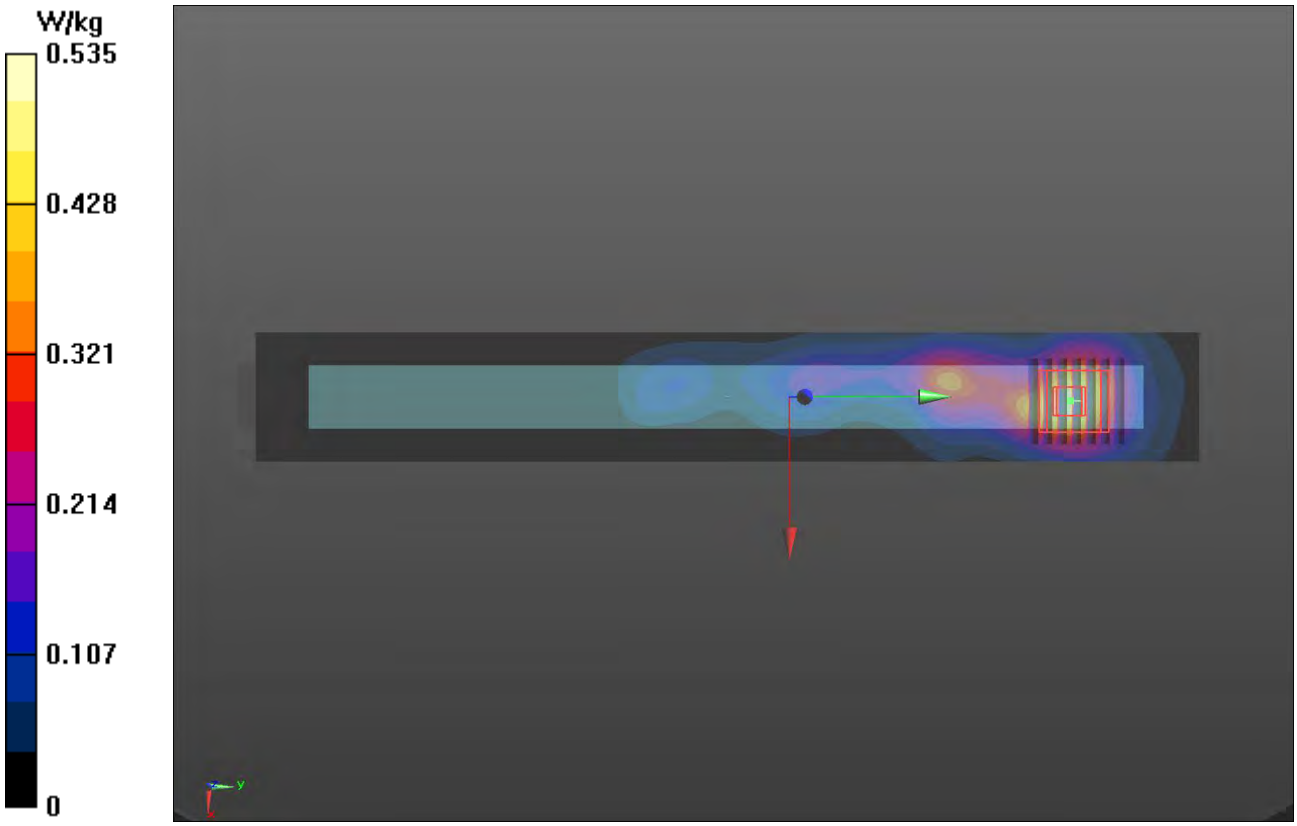
DUT: BFLF-WTW-P22040779

Communication System: UID 10012 - CAB, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps); Frequency: 2437 MHz;Duty Cycle: 1:1.01
Medium: H19T27N1_0503 Medium parameters used (interpolated): f = 2437 MHz; σ = 1.853 S/m; ε_r = 39.215; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃ ； Liquid Temperature：23.1 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3820; ConvF(6.81, 6.81, 6.81) @ 2437 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2022/02/23
- Phantom: ELI Phantom_1206; Type: QDOVA001BB; Serial: 1206
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (41x281x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.535 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.84 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.695 W/kg
SAR(1 g) = 0.367 W/kg; SAR(10 g) = 0.194 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 11.7 mm
Ratio of SAR at M2 to SAR at M1 = 54%
Maximum value of SAR (measured) = 0.574 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2022/05/04

P02 WLAN5.3G_802.11ac VHT80_Top Side_0mm_Ch58_Sample PULSE_Ant 0

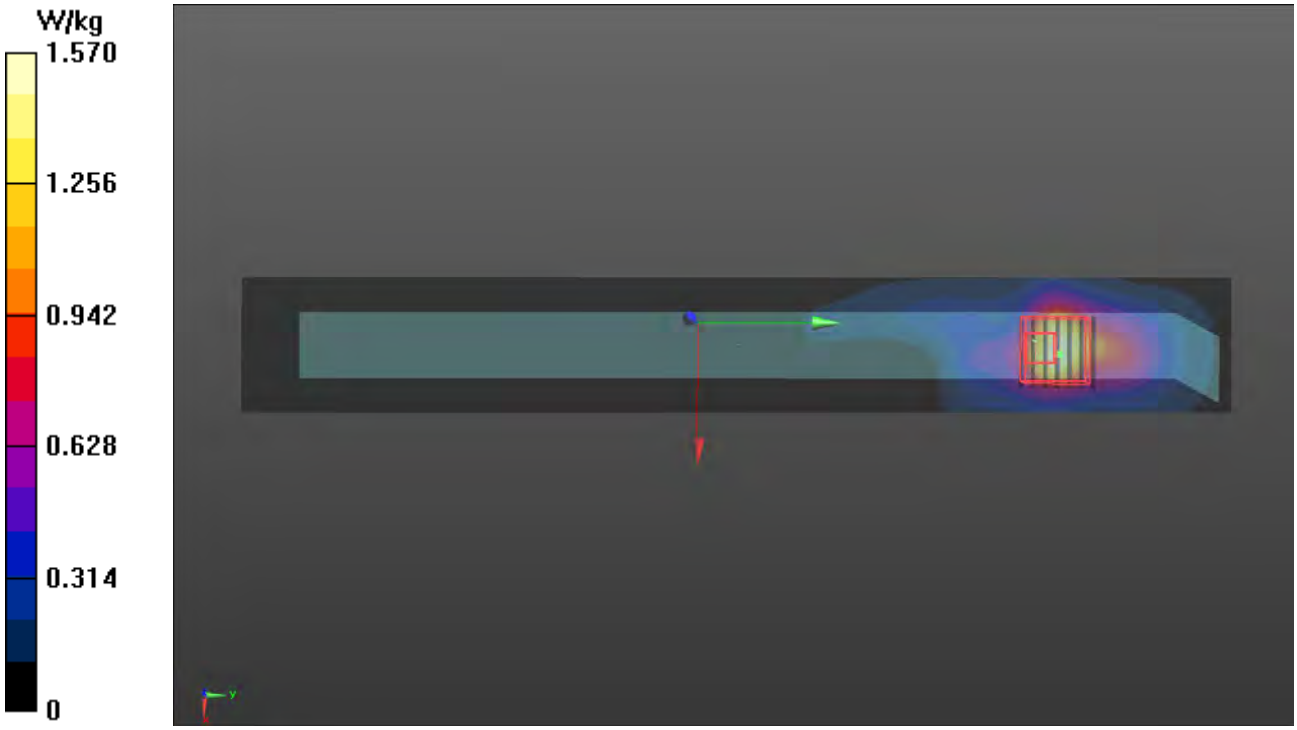
DUT: BFLF-WTW-P22040779

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5290 MHz;Duty Cycle: 1:1.02
Medium: H34T60N1_0504 Medium parameters used: f = 5290 MHz; σ = 4.756 S/m; ε_r = 36.068; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃； Liquid Temperature：23.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3820; ConvF(4.75, 4.75, 4.75) @ 5290 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2022/02/23
- Phantom: ELI Phantom_1206; Type: QDOVA001BB; Serial: 1206
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (51x331x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.57 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 19.08 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 3.68 W/kg
SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.336 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 67%
Maximum value of SAR (measured) = 2.29 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2022/05/04

P03 WLAN5.6G_802.11ac VHT80_Top Side_0mm_Ch138_Sample INPAQ_Ant 0

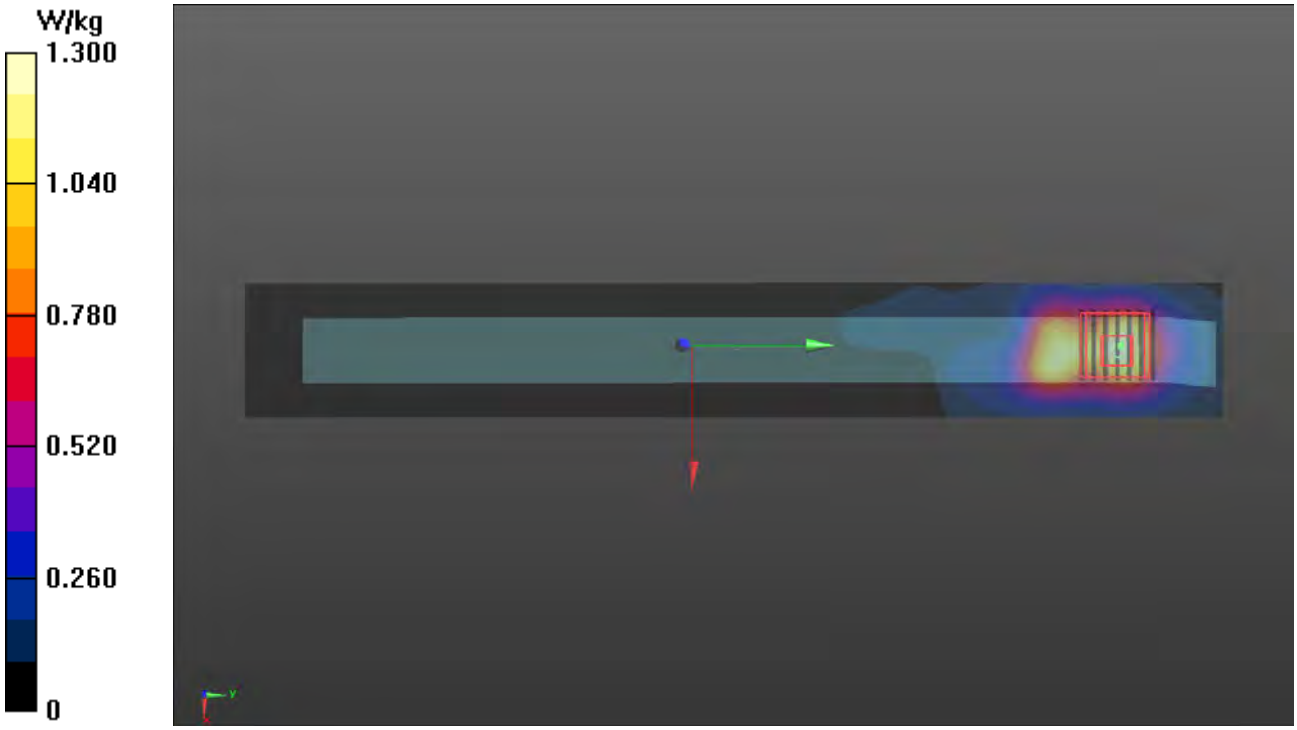
DUT: BFLF-WTW-P22040779

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5690 MHz;Duty Cycle: 1:1.02
Medium: H34T60N1_0504 Medium parameters used: f = 5690 MHz; σ = 5.23 S/m; ε_r = 35.332; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃； Liquid Temperature：23.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3820; ConvF(4.4, 4.4, 4.4) @ 5690 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2022/02/23
- Phantom: ELI Phantom_1206; Type: QDOVA001BB; Serial: 1206
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (51x331x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.30 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 16.06 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 2.68 W/kg
SAR(1 g) = 0.690 W/kg; SAR(10 g) = 0.268 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 8.8 mm
Ratio of SAR at M2 to SAR at M1 = 62.7%
Maximum value of SAR (measured) = 1.59 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2022/05/05

P04 WLAN5.8G_802.11ac VHT80_Top Side_0mm_Ch155_Sample INPAQ_Ant 0

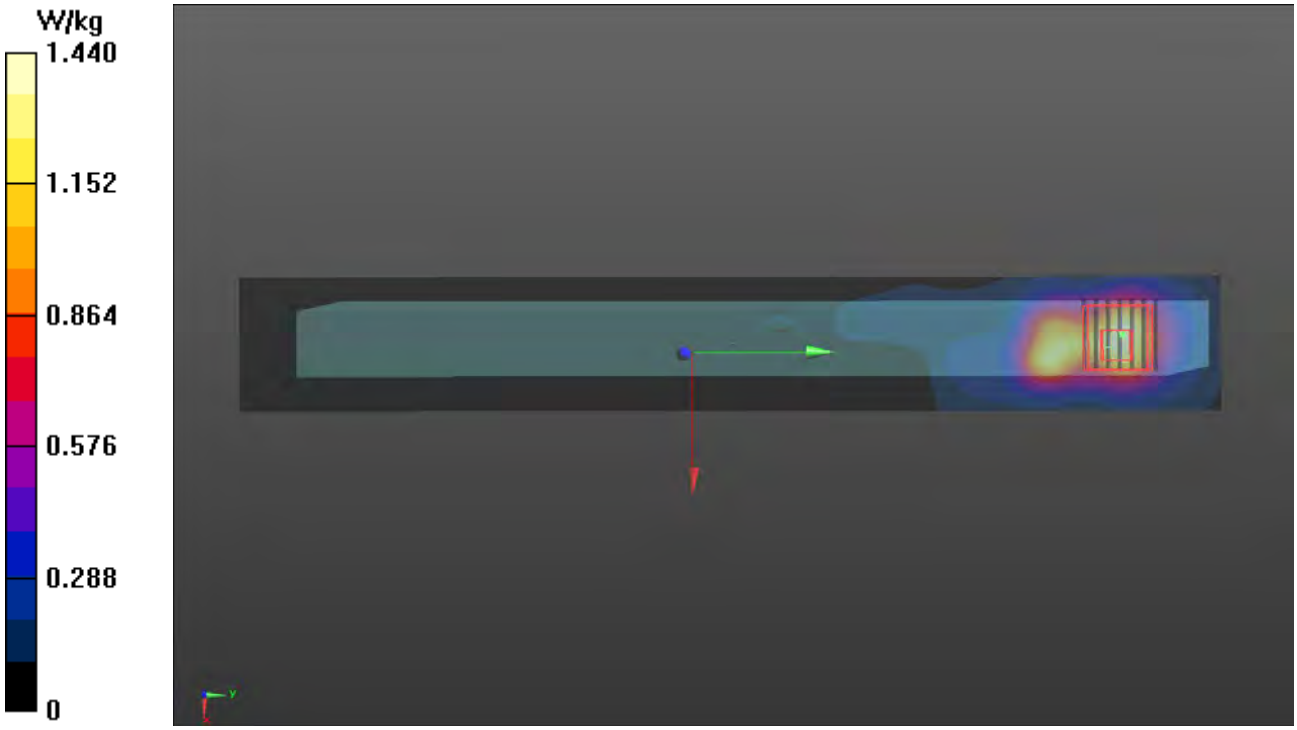
DUT: BFLF-WTW-P22040779

Communication System: UID 10544 - AAC, IEEE 802.11ac WiFi (80MHz, MCS0); Frequency: 5775 MHz;Duty Cycle: 1:1.02
Medium: H34T60N1_0505 Medium parameters used: f = 5775 MHz; σ = 5.274 S/m; ε_r = 36.25; ρ = 1000 kg/m^3
Ambient Temperature：23.7 ℃； Liquid Temperature：23.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3820; ConvF(4.4, 4.4, 4.4) @ 5775 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2022/02/23
- Phantom: ELI Phantom_1206; Type: QDOVA001BB; Serial: 1206
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (51x331x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.44 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 17.01 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 2.93 W/kg
SAR(1 g) = 0.736 W/kg; SAR(10 g) = 0.286 W/kg (SAR corrected for target medium)
Smallest distance from peaks to all points 3 dB below = 8.9 mm
Ratio of SAR at M2 to SAR at M1 = 61.7%
Maximum value of SAR (measured) = 1.73 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2022/05/03

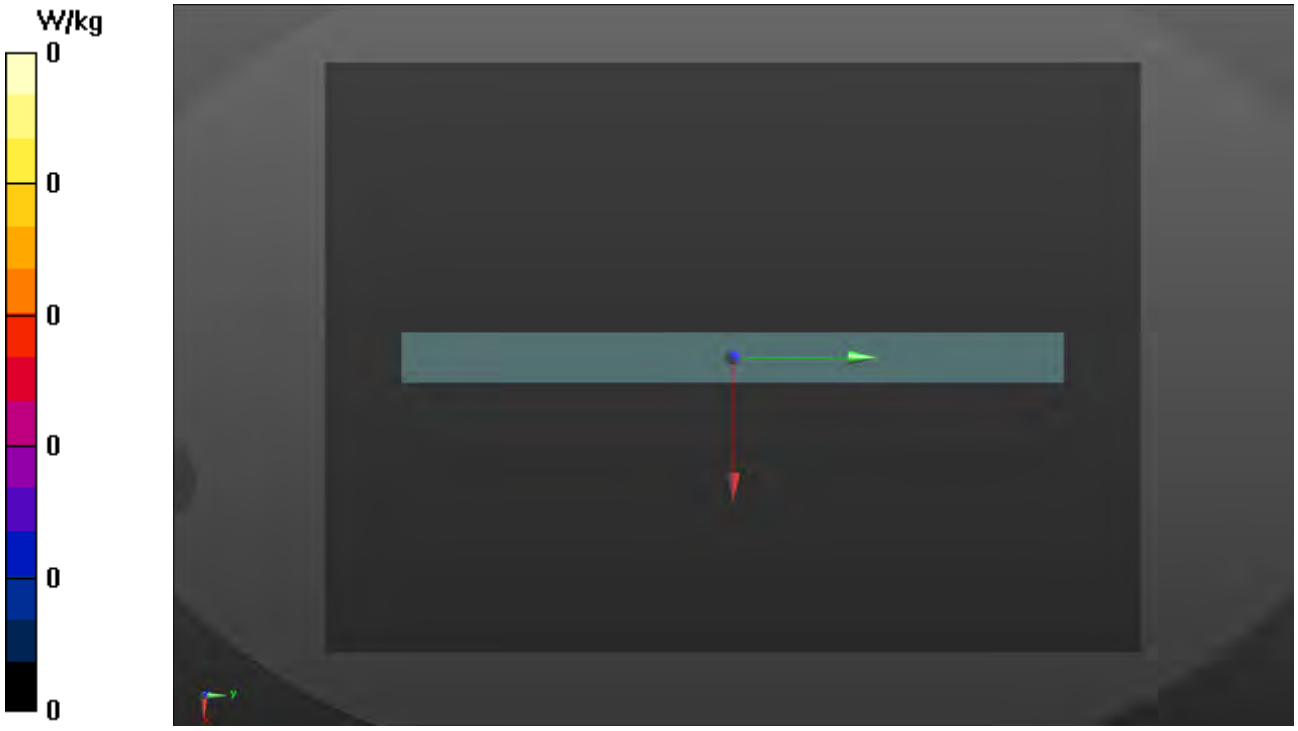
P05 BT_BDR_Top Side_0mm_Ch0_ Sample INPAQ_Ant 1

DUT: BFLF-WTW-P22040779

Communication System: UID 10032 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH5); Frequency: 2402 MHz;Duty Cycle: 1:1.29
Medium: H19T27N1_0503 Medium parameters used (interpolated): f = 2402 MHz; σ = 1.819 S/m; ε_r = 39.331; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：23.1 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3820; ConvF(6.81, 6.81, 6.81) @ 2402 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2022/02/23
- Phantom: ELI Phantom_1206; Type: QDOVA001BB; Serial: 1206
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Area Scan (221x301x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0 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 ±10 % of the target values. Liquid temperature during the SAR testing has kept within ±2 ℃.

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. (℃)	Conductivity (σ)	Permittivity (εr)	Targeted Conductivity (σ)	Targeted Permittivity (εr)	Deviation Conductivity (σ)	Deviation Permittivity (εr)	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	1.865	39.175	1.8	39.2	3.61	-0.06	Pass	Pass	Pass	OFDM	N/A	Pass	May 03, 2022	2450	52.60	2.77	55.27	5.07	737	3820	1431	17
S02	5250	23.2	4.703	36.115	4.71	35.9	-0.15	0.60	Pass	Pass	Pass	OFDM	N/A	Pass	May 04, 2022	5250	80.60	4.42	88.19	9.42	1019	3820	1431	17
S03	5600	23.2	5.129	35.495	5.07	35.5	1.16	-0.01	Pass	Pass	Pass	OFDM	N/A	Pass	May 04, 2022	5600	82.40	4.36	86.99	5.57	1019	3820	1431	17
S04	5750	23.4	5.249	36.271	5.22	35.4	0.56	2.46	Pass	Pass	Pass	OFDM	N/A	Pass	May 05, 2022	5750	79.40	4.25	84.80	6.80	1019	3820	1431	17
S05	2450	23.1	1.865	39.175	1.8	39.2	3.61	-0.06	Pass	Pass	Pass	OFDM	N/A	Pass	May 03, 2022	2450	52.60	2.77	55.27	5.07	737	3820	1431	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 (Laptop&Tablet)							
WLAN 2.4GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11b	1	2412	17.50	17.50			
	6	2437	17.50	17.50			
	11	2462	17.50	17.50			
	12	2467	17.50	17.50			
	13	2472	15.00	15.00			
802.11g	1	2412	17.00	17.00			
	6	2437	17.50	17.50			
	11	2462	17.00	17.00			
	12	2467	15.00	15.00			
	13	2472	1.50	1.50			
802.11n HT20	1	2412	17.00	17.00	14.00	14.00	17.00
	6	2437	17.50	17.50	17.50	17.50	20.50
	11	2462	15.50	15.50	15.00	15.00	18.00
	12	2467	15.00	15.00	12.00	12.00	15.00
	13	2472	1.50	1.50	-1.50	-1.50	1.50
802.11n HT40	3	2422	16.50	16.50	13.50	13.50	16.50
	6	2437	15.50	15.50	14.50	14.50	17.50
	9	2452	16.00	14.50	13.00	13.00	16.00
	10	2457	12.50	12.50	9.50	9.50	12.50
	11	2462	5.00	5.00	2.00	2.00	5.00
802.11ax HE20	1	2412	17.0	17.0	14.0	14.0	17.0
	6	2437	17.5	17.5	17.5	17.5	20.5
	11	2462	15.5	15.5	14.5	14.5	17.5
	12	2467	15.0	15.0	12.0	12.0	15.0
	13	2472	1.5	1.5	-1.5	-1.5	1.5
802.11ax HE40	3	2422	16.5	16.5	13.5	13.5	16.5
	6	2437	15.5	15.5	14.5	14.5	17.5
	9	2452	16.0	15.0	13.0	13.0	16.0
	10	2457	12.5	12.5	9.5	9.5	12.5
	11	2462	5.0	5.0	2.0	2.0	5.0

WLAN Tune-up Power (Laptop&Tablet)					
Bluetooth					
Mode	Channel	Frequency		Ant 1 Max Tune-up	
BR / EDR	0	2402		8.0	
	39	2441		8.0	
	78	2480		8.0	
LE	0	2402		7.0	
	19	2440		7.0	
	39	2480		7.0	

WLAN Tune-up Power (Laptop&Tablet)							
WLAN 5.2GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	36	5180	16.00	16.00			
	40	5200	16.00	16.00			
	44	5220	16.00	16.00			
	48	5240	16.00	16.00			
802.11n HT20	36	5180	16.00	16.00	15.50	15.50	18.50
	40	5200	16.00	16.00	16.00	16.00	19.00
	44	5220	16.00	16.00	16.00	16.00	19.00
	48	5240	16.00	16.00	16.00	16.00	19.00
802.11n HT40	38	5190	16.00	16.00	15.50	15.50	18.50
	46	5230	16.00	16.00	16.00	16.00	19.00
802.11ac VHT80	42	5210	16.00	16.00	15.25	15.25	18.25
802.11ax HE20	36	5180	16.00	16.00	15.50	15.50	18.50
	40	5200	16.00	16.00	16.00	16.00	19.00
	44	5220	16.00	16.00	16.00	16.00	19.00
	48	5240	16.00	16.00	16.00	16.00	19.00
802.11ax HE40	38	5190	16.00	16.00	15.50	15.50	18.50
	46	5230	16.00	16.00	16.00	16.00	19.00
802.11ax HE80	42	5210	15.00	15.00	15.25	15.25	18.25

WLAN Tune-up Power (Laptop&Tablet)							
WLAN 5.3GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	52	5260	16.00	16.00			
	56	5280	16.00	16.00			
	60	5300	16.00	16.00			
	64	5320	16.00	16.00			
802.11n HT20	52	5260	16.00	16.00	16.00	16.00	19.00
	56	5280	16.00	16.00	16.00	16.00	19.00
	60	5300	16.00	16.00	16.00	16.00	19.00
	64	5320	16.00	16.00	15.00	15.00	18.00
802.11n HT40	54	5270	16.00	16.00	16.00	16.00	19.00
	62	5310	16.00	16.00	14.00	14.00	17.00
802.11ac VHT80	58	5290	16.00	16.00	14.25	14.25	17.25
802.11ac VHT160	50	5250	14.25	14.00	11.00	11.00	14.00
802.11ax HE20	52	5260	16.00	16.00	16.00	16.00	19.00
	56	5280	16.00	16.00	16.00	16.00	19.00
	60	5300	16.00	16.00	16.00	16.00	19.00
	64	5320	16.00	16.00	15.00	15.00	18.00
802.11ax HE40	54	5270	16.00	16.00	16.00	16.00	19.00
	62	5310	16.00	16.00	14.00	14.00	17.00
802.11ax HE80	58	5290	16.00	16.00	14.25	14.25	17.25
802.11ax HE160	50	5250	14.25	14.00	11.00	11.00	14.00

WLAN Tune-up Power (Laptop&Tablet)							
WLAN 5.6GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	100	5500	16.00	16.00			
	116	5580	16.00	16.00			
	120	5600	16.00	16.00			
	124	5620	16.00	16.00			
	132	5660	16.00	16.00			
	140	5700	16.00	16.00			
	144	5720	16.00	16.00			
802.11n HT20	100	5500	16.00	16.00	15.50	15.50	18.50
	116	5580	16.00	16.00	16.00	16.00	19.00
	120	5600	16.00	16.00	16.00	16.00	19.00
	124	5620	16.00	16.00	16.00	16.00	19.00
	132	5660	16.00	16.00	16.00	16.00	19.00
	140	5700	16.00	16.00	14.50	14.50	17.50
	144	5720	16.00	16.00	16.00	16.00	19.00
802.11n HT40	102	5510	16.00	16.00	14.50	14.50	17.50
	110	5550	16.00	16.00	15.50	15.50	18.50
	118	5590	16.00	16.00	16.00	16.00	19.00
	126	5630	16.00	16.00	16.00	16.00	19.00
	134	5670	16.00	16.00	16.00	16.00	19.00
	142	5710	16.00	16.00	16.00	16.00	19.00
802.11ac VHT80	106	5530	16.00	16.00	15.50	15.50	18.50
	122	5610	16.00	16.00	16.00	16.00	19.00
	138	5690	16.00	16.00	16.00	16.00	19.00
802.11ac VHT160	114	5570	13.75	13.75	10.75	10.75	13.75
802.11ax HE20	100	5500	16.00	16.00	15.50	15.50	18.50
	116	5580	16.00	16.00	16.00	16.00	19.00
	120	5600	16.00	16.00	16.00	16.00	19.00
	124	5620	16.00	16.00	16.00	16.00	19.00
	132	5660	16.00	16.00	16.00	16.00	19.00
	140	5700	16.00	16.00	14.50	14.50	17.50
	144	5720	16.00	16.00	16.00	16.00	19.00
802.11ax HE40	102	5510	16.00	16.00	14.50	14.50	17.50
	110	5550	16.00	16.00	15.50	15.50	18.50
	118	5590	16.00	16.00	16.00	16.00	19.00
	126	5630	16.00	16.00	16.00	16.00	19.00
	134	5670	16.00	16.00	16.00	16.00	19.00
	142	5710	16.00	16.00	16.00	16.00	19.00
802.11ax HE80	106	5530	16.00	16.00	15.50	15.50	18.50
	122	5610	16.00	16.00	16.00	16.00	19.00
	138	5690	16.00	16.00	16.00	16.00	19.00
802.11ax HE160	114	5570	13.75	13.75	10.75	10.75	13.75

WLAN Tune-up Power (Laptop&Tablet)							
WLAN 5.8GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	149	5745	16.0	16.0			
	153	5765	16.0	16.0			
	157	5785	16.0	16.0			
	161	5805	16.0	16.0			
	165	5825	16.0	16.0			
802.11n HT20	149	5745	16.0	16.0	16.0	16.0	19.0
	153	5765	16.0	16.0	16.0	16.0	19.0
	157	5785	16.0	16.0	16.0	16.0	19.0
	161	5805	16.0	16.0	16.0	16.0	19.0
	165	5825	16.0	16.0	16.0	16.0	19.0
802.11n HT40	151	5755	16.0	16.0	16.0	16.0	19.0
	159	5795	16.0	16.0	16.0	16.0	19.0
802.11ac VHT80	155	5775	16.0	16.0	16.0	16.0	19.0
802.11ax HE20	149	5745	16.0	16.0	16.0	16.0	19.0
	153	5765	16.0	16.0	16.0	16.0	19.0
	157	5785	16.0	16.0	16.0	16.0	19.0
	161	5805	16.0	16.0	16.0	16.0	19.0
	165	5825	16.0	16.0	16.0	16.0	19.0
802.11ax HE40	151	5755	16.0	16.0	16.0	16.0	19.0
	159	5795	16.0	16.0	16.0	16.0	19.0
802.11ax HE80	155	5775	16.0	16.0	16.0	16.0	19.0

Annex E. Measured Conducted Power Result

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

WLAN Conducted Power (Laptop&Tablet)			
WLAN2.4GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11b	1	2412	17.42
	6	2437	17.49
	11	2462	17.47
	12	2467	17.43
	13	2472	14.96
802.11g	1	2412	16.89
	6	2437	17.38
	11	2462	16.84
	12	2467	14.92
	13	2472	1.42
802.11n HT20	1	2412	16.89
	6	2437	17.32
	11	2462	15.42
	12	2467	14.9
	13	2472	1.43
802.11n HT40	3	2422	16.36
	6	2437	15.37
	9	2452	15.88
	10	2457	12.38
	11	2462	4.87
802.11ax HE20	1	2412	16.88
	6	2437	17.41
	11	2462	15.37
	12	2467	14.89
	13	2472	1.33
802.11ax HE40	3	2422	16.42
	6	2437	15.43
	9	2452	15.89
	10	2457	12.39
	11	2462	4.82

WLAN Conducted Power (Laptop&Tablet)			
WLAN2.4GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11b	1	2412	17.44
	6	2437	17.48
	11	2462	17.45
	12	2467	17.43
	13	2472	14.98
802.11g	1	2412	16.83
	6	2437	17.41
	11	2462	16.87
	12	2467	14.81
	13	2472	1.41
802.11n HT20	1	2412	16.91
	6	2437	17.32
	11	2462	15.37
	12	2467	14.85
	13	2472	1.39
802.11n HT40	3	2422	16.32
	6	2437	15.35
	9	2452	14.33
	10	2457	12.31
	11	2462	4.86
802.11ax HE20	1	2412	16.92
	6	2437	17.38
	11	2462	15.31
	12	2467	14.86
	13	2472	1.35
802.11ax HE40	3	2422	16.35
	6	2437	15.37
	9	2452	14.83
	10	2457	12.33
	11	2462	4.83

WLAN Conducted Power (Laptop&Tablet)					
WLAN2.4GHz Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
[redacted]					
802.11n HT20	1	2412	13.92	13.96	16.95
	6	2437	17.48	17.44	20.47
	11	2462	14.94	14.9	17.93
	12	2467	11.96	11.95	14.97
	13	2472	-1.65	-1.58	1.40
802.11n HT40	3	2422	13.34	13.34	16.35
	6	2437	14.39	14.33	17.37
	9	2452	12.88	12.91	15.91
	10	2457	9.35	9.32	12.35
	11	2462	1.88	1.85	4.88
802.11ax HE20	1	2412	13.88	13.89	16.90
	6	2437	17.42	17.35	20.40
	11	2462	14.39	14.33	17.37
	12	2467	11.8	11.89	14.86
	13	2472	-1.62	-1.62	1.39
802.11ax HE40	3	2422	13.38	13.42	16.41
	6	2437	14.32	14.33	17.34
	9	2452	12.86	12.89	15.89
	10	2457	9.33	9.35	12.35
	11	2462	1.88	1.89	4.90

WLAN Conducted Power (Laptop&Tablet)			
Bluetooth Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
BR / EDR	0	2402	7.94
	39	2441	6.75
	78	2480	7.31
LE	0	2402	6.82
	19	2440	6.92
	39	2480	6.88

WLAN Conducted Power (Laptop&Tablet)			
WLAN 5.3GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11a	52	5260	15.87
	56	5280	15.92
	60	5300	15.88
	64	5320	15.86
802.11n HT20	52	5260	15.92
	56	5280	15.81
	60	5300	15.87
	64	5320	15.8
802.11n HT40	54	5270	15.91
	62	5310	15.85
802.11ac VHT80	58	5290	15.99
802.11ac VHT160	50	5250	14.05
802.11ax HE20	52	5260	15.86
	56	5280	15.87
	60	5300	15.92
	64	5320	15.85
802.11ax HE40	54	5270	15.82
	62	5310	15.81
802.11ax HE80	58	5290	15.92
802.11ax HE160	50	5250	14.06

WLAN Conducted Power (Laptop&Tablet)			
WLAN 5.3GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11a	52	5260	15.87
	56	5280	15.81
	60	5300	15.83
	64	5320	15.89
802.11n HT20	52	5260	15.86
	56	5280	15.92
	60	5300	15.79
	64	5320	15.91
802.11n HT40	54	5270	15.93
	62	5310	15.83
802.11ac VHT80	58	5290	15.98
802.11ac VHT160	50	5250	13.91
802.11ax HE20	52	5260	15.92
	56	5280	15.89
	60	5300	15.88
	64	5320	15.85
802.11ax HE40	54	5270	15.79
	62	5310	15.84
802.11ax HE80	58	5290	15.83
802.11ax HE160	50	5250	13.87

WLAN Conducted Power (Laptop&Tablet)					
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
802.11n HT20	52	5260	15.88	15.86	18.88
	56	5280	15.84	15.87	18.87
	60	5300	15.91	15.79	18.86
	64	5320	14.91	14.83	17.88
802.11n HT40	54	5270	15.96	15.93	18.96
	62	5310	13.96	13.92	16.95
802.11ac VHT80	58	5290	14.12	14.08	17.11
802.11ac VHT160	50	5250	10.86	10.85	13.87
802.11ax HE20	52	5260	15.85	15.83	18.85
	56	5280	15.92	15.82	18.88
	60	5300	15.82	15.86	18.85
	64	5320	14.88	14.92	17.91
802.11ax HE40	54	5270	15.91	15.84	18.89
	62	5310	13.79	13.87	16.84
802.11ax HE80	58	5290	14.15	14.07	17.12
802.11ax HE160	50	5250	10.88	10.92	13.91

WLAN Conducted Power (Laptop&Tablet)			
WLAN 5.6GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11a	100	5500	15.83
	116	5580	15.85
	120	5600	15.89
	124	5620	15.87
	132	5660	15.85
	140	5700	15.91
	144	5720	15.92
802.11n HT20	100	5500	15.91
	116	5580	15.93
	120	5600	15.92
	124	5620	15.88
	132	5660	15.82
	140	5700	15.79
	144	5720	15.92
802.11n HT40	102	5510	15.82
	110	5550	15.91
	118	5590	15.88
	126	5630	15.86
	134	5670	15.89
	142	5710	15.82
802.11ac VHT80	106	5530	15.92
	122	5610	15.91
	138	5690	15.96
802.11ac VHT160	114	5570	13.66
802.11ax HE20	100	5500	15.93
	116	5580	15.89
	120	5600	15.81
	124	5620	15.83
	132	5660	15.92
	140	5700	15.87
	144	5720	15.85
802.11ax HE40	102	5510	15.84
	110	5550	15.92
	118	5590	15.85
	126	5630	15.88
	134	5670	15.81
	142	5710	15.78
802.11ax HE80	106	5530	15.91
	122	5610	15.86
	138	5690	15.92
802.11ax HE160	114	5570	13.63

WLAN Conducted Power (Laptop&Tablet)			
WLAN 5.6GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11a	100	5500	15.91
	116	5580	15.81
	120	5600	15.85
	124	5620	15.89
	132	5660	15.81
	140	5700	15.86
	144	5720	15.78
802.11n HT20	100	5500	15.81
	116	5580	15.82
	120	5600	15.91
	124	5620	15.92
	132	5660	15.83
	140	5700	15.87
	144	5720	15.89
802.11n HT40	102	5510	15.82
	110	5550	15.86
	118	5590	15.92
	126	5630	15.91
	134	5670	15.76
	142	5710	15.83
802.11ac VHT80	106	5530	15.94
	122	5610	15.91
	138	5690	15.98
802.11ac VHT160	114	5570	13.62
802.11ax HE20	100	5500	15.88
	116	5580	15.85
	120	5600	15.89
	124	5620	15.77
	132	5660	15.89
	140	5700	15.88
	144	5720	15.92
802.11ax HE40	102	5510	15.84
	110	5550	15.83
	118	5590	15.92
	126	5630	15.83
	134	5670	15.88
	142	5710	15.87
802.11ax HE80	106	5530	15.82
	122	5610	15.83
	138	5690	15.86
802.11ax HE160	114	5570	13.57

WLAN Conducted Power (Laptop&Tablet)					
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
[redacted]					
802.11n HT20	100	5500	15.33	15.39	18.37
	116	5580	15.76	15.82	18.80
	120	5600	15.81	15.88	18.86
	124	5620	15.84	15.82	18.84
	132	5660	15.9	15.86	18.89
	140	5700	14.32	14.3	17.32
	144	5720	15.81	15.92	18.88
802.11n HT40	102	5510	14.42	14.32	17.38
	110	5550	15.32	15.28	18.31
	118	5590	15.87	15.84	18.87
	126	5630	15.81	15.79	18.81
	134	5670	15.91	15.82	18.88
	142	5710	15.87	15.83	18.86
802.11ac VHT80	106	5530	15.48	15.47	18.49
	122	5610	15.91	15.92	18.93
	138	5690	15.98	15.97	18.99
802.11ac VHT160	114	5570	10.6	10.59	13.61
802.11ax HE20	100	5500	15.34	15.41	18.39
	116	5580	15.87	15.92	18.91
	120	5600	15.8	15.81	18.82
	124	5620	15.92	15.84	18.89
	132	5660	15.91	15.89	18.91
	140	5700	14.33	14.39	17.37
	144	5720	15.81	15.81	18.82
802.11ax HE40	102	5510	14.42	14.37	17.41
	110	5550	15.4	15.42	18.42
	118	5590	15.84	15.92	18.89
	126	5630	15.81	15.79	18.81
	134	5670	15.91	15.81	18.87
	142	5710	15.89	15.87	18.89
802.11ax HE80	106	5530	15.37	15.29	18.34
	122	5610	15.92	15.82	18.88
	138	5690	15.87	15.92	18.91
802.11ax HE160	114	5570	10.58	10.62	13.61

WLAN Conducted Power (Laptop&Tablet)			
WLAN 5.8GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11a	149	5745	15.82
	153	5765	15.85
	157	5785	15.89
	161	5805	15.84
	165	5825	15.82
802.11n HT20	149	5745	15.88
	153	5765	15.83
	157	5785	15.91
	161	5805	15.91
	165	5825	15.89
802.11n HT40	151	5755	15.92
	159	5795	15.87
802.11ac VHT80	155	5775	15.93
802.11ax HE20	149	5745	15.85
	153	5765	15.92
	157	5785	15.89
	161	5805	15.87
	165	5825	15.86
802.11ax HE40	151	5755	15.87
	159	5795	15.81
802.11ax HE80	155	5775	15.82

WLAN Conducted Power (Laptop&Tablet)			
WLAN 5.8GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11a	149	5745	15.91
	153	5765	15.86
	157	5785	15.85
	161	5805	15.87
	165	5825	15.85
802.11n HT20	149	5745	15.89
	153	5765	15.82
	157	5785	15.86
	161	5805	15.79
	165	5825	15.85
802.11n HT40	151	5755	15.88
	159	5795	15.89
802.11ac VHT80	155	5775	15.96
802.11ax HE20	149	5745	15.89
	153	5765	15.92
	157	5785	15.81
	161	5805	15.84
	165	5825	15.91
802.11ax HE40	151	5755	15.84
	159	5795	15.85
802.11ax HE80	155	5775	15.87

WLAN Conducted Power (Laptop&Tablet)					
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
802.11n HT20	149	5745	15.89	15.87	18.89
	153	5765	15.82	15.81	18.83
	157	5785	15.83	15.87	18.86
	161	5805	15.82	15.79	18.82
	165	5825	15.85	15.84	18.86
802.11n HT40	151	5755	15.87	15.93	18.91
	159	5795	15.84	15.81	18.84
802.11ac VHT80	155	5775	15.98	15.96	18.98
802.11ax HE20	149	5745	15.86	15.93	18.91
	153	5765	15.9	15.83	18.88
	157	5785	15.81	15.86	18.85
	161	5805	15.83	15.79	18.82
	165	5825	15.89	15.86	18.89
802.11ax HE40	151	5755	15.92	15.8	18.87
	159	5795	15.82	15.79	18.82
802.11ax HE80	155	5775	15.87	15.86	18.88

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 ñ< 0.001òmeans 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 Brand	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	Bottom for Laptop	0	6	INPAQ	Ant 0	99.40	1.01	17.50	17.49	1.00	0	<0.001	0.00
	WLAN2.4G	802.11b	Bottom for Laptop	0	6	INPAQ	Ant 1	99.05	1.01	17.50	17.48	1.00	0	<0.001	0.00
	WLAN2.4G	802.11n HT20	Bottom for Laptop	0	6	INPAQ	Ant 0+1	99.50	1.01	20.50	20.47	1.01	0	<0.001	0.00
	WLAN2.4G	802.11b	Rear Face	0	6	INPAQ	Ant 0	99.40	1.01	17.50	17.49	1.00	-0.1	0.256	0.26
	WLAN2.4G	802.11b	Left Side	0	6	INPAQ	Ant 0	99.40	1.01	17.50	17.49	1.00	0	<0.001	0.00
	WLAN2.4G	802.11b	Right Side	0	6	INPAQ	Ant 0	99.40	1.01	17.50	17.49	1.00	-0.11	0.207	0.21
1	WLAN2.4G	802.11b	Top Side	0	6	INPAQ	Ant 0	99.40	1.01	17.50	17.49	1.00	0.17	0.367	0.37
	WLAN2.4G	802.11b	Bottom Side	0	6	INPAQ	Ant 0	99.40	1.01	17.50	17.49	1.00	0	<0.001	0.00
	WLAN2.4G	802.11b	Rear Face	0	6	INPAQ	Ant 1	99.05	1.01	17.50	17.48	1.00	0.13	0.147	0.15
	WLAN2.4G	802.11b	Left Side	0	6	INPAQ	Ant 1	99.05	1.01	17.50	17.48	1.00	0	<0.001	0.00
	WLAN2.4G	802.11b	Right Side	0	6	INPAQ	Ant 1	99.05	1.01	17.50	17.48	1.00	0	<0.001	0.00
	WLAN2.4G	802.11b	Top Side	0	6	INPAQ	Ant 1	99.05	1.01	17.50	17.48	1.00	-0.12	0.249	0.25
	WLAN2.4G	802.11b	Bottom Side	0	6	INPAQ	Ant 1	99.05	1.01	17.50	17.48	1.00	0	<0.001	0.00
	WLAN2.4G	802.11n HT20	Rear Face	0	6	INPAQ	Ant 0+1	99.50	1.01	20.50	20.47	1.01	-0.16	0.32	0.33
	WLAN2.4G	802.11n HT20	Left Side	0	6	INPAQ	Ant 0+1	99.50	1.01	20.50	20.47	1.01	0	<0.001	0.00
	WLAN2.4G	802.11n HT20	Right Side	0	6	INPAQ	Ant 0+1	99.50	1.01	20.50	20.47	1.01	-0.07	0.223	0.23
	WLAN2.4G	802.11n HT20	Top Side	0	6	INPAQ	Ant 0+1	99.50	1.01	20.50	20.47	1.01	0.11	0.351	0.36
	WLAN2.4G	802.11n HT20	Bottom Side	0	6	INPAQ	Ant 0+1	99.50	1.01	20.50	20.47	1.01	0	<0.001	0.00
	WLAN2.4G	802.11b	Top Side	0	1	INPAQ	Ant 0	99.40	1.01	17.50	17.42	1.02	0.14	0.347	0.36
	WLAN2.4G	802.11b	Top Side	0	11	INPAQ	Ant 0	99.40	1.01	17.50	17.47	1.01	-0.13	0.351	0.36
	WLAN2.4G	802.11b	Top Side	0	12	INPAQ	Ant 0	99.40	1.01	17.50	17.43	1.02	-0.11	0.347	0.36
	WLAN2.4G	802.11b	Top Side	0	13	INPAQ	Ant 0	99.40	1.01	15.00	14.96	1.01	0.12	0.208	0.21
	WLAN2.4G	802.11b	Top Side	0	6	PULSE	Ant 0	99.40	1.01	17.50	17.49	1.00	0.15	0.345	0.35
	WLAN5.3G	802.11ac VHT80	Bottom for Laptop	0	58	INPAQ	Ant 0	98.20	1.02	16.00	15.99	1.00	0	<0.001	0.00
	WLAN5.3G	802.11ac VHT80	Bottom for Laptop	0	58	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0	<0.001	0.00
	WLAN5.3G	802.11n HT40	Bottom for Laptop	0	54	INPAQ	Ant 0+1	98.87	1.01	19.00	18.96	1.01	0	<0.001	0.00
	WLAN5.3G	802.11ac VHT80	Rear Face	0	58	INPAQ	Ant 0	98.20	1.02	16.00	15.99	1.00	0.16	0.427	0.44
	WLAN5.3G	802.11ac VHT80	Left Side	0	58	INPAQ	Ant 0	98.20	1.02	16.00	15.99	1.00	0	<0.001	0.00
	WLAN5.3G	802.11ac VHT80	Right Side	0	58	INPAQ	Ant 0	98.20	1.02	16.00	15.99	1.00	0.09	0.203	0.21
	WLAN5.3G	802.11ac VHT80	Top Side	0	58	INPAQ	Ant 0	98.20	1.02	16.00	15.99	1.00	0.07	0.786	0.80
	WLAN5.3G	802.11ac VHT80	Bottom Side	0	58	INPAQ	Ant 0	98.20	1.02	16.00	15.99	1.00	0	<0.001	0.00
	WLAN5.3G	802.11ac VHT80	Rear Face	0	58	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0.03	0.345	0.35
	WLAN5.3G	802.11ac VHT80	Left Side	0	58	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0.11	0.136	0.14
	WLAN5.3G	802.11ac VHT80	Right Side	0	58	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0	<0.001	0.00
	WLAN5.3G	802.11ac VHT80	Top Side	0	58	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	-0.02	0.384	0.39
	WLAN5.3G	802.11ac VHT80	Bottom Side	0	58	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0	<0.001	0.00
	WLAN5.3G	802.11n HT40	Rear Face	0	54	INPAQ	Ant 0+1	98.87	1.01	19.00	18.96	1.01	0.15	0.362	0.37
	WLAN5.3G	802.11n HT40	Left Side	0	54	INPAQ	Ant 0+1	98.87	1.01	19.00	18.96	1.01	0.11	0.094	0.10
	WLAN5.3G	802.11n HT40	Right Side	0	54	INPAQ	Ant 0+1	98.87	1.01	19.00	18.96	1.01	-0.09	0.211	0.22
	WLAN5.3G	802.11n HT40	Top Side	0	54	INPAQ	Ant 0+1	98.87	1.01	19.00	18.96	1.01	-0.13	0.745	0.76
	WLAN5.3G	802.11n HT40	Bottom Side	0	54	INPAQ	Ant 0+1	98.87	1.01	19.00	18.96	1.01	0	<0.001	0.00
2	WLAN5.3G	802.11ac VHT80	Top Side	0	58	PULSE	Ant 0	98.20	1.02	16.00	15.99	1.00	0.08	1.04	1.06
	WLAN5.3G	802.11ac VHT80	Top Side	0	58	PULSE	Ant 0	98.20	1.02	16.00	15.99	1.00	0.08	1.03	1.05

Body SAR Test Result

System & Position						DUT & Accessory		SAR							
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	Ant Brand	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)
	WLAN5.6G	802.11ac VHT80	Bottom for Laptop	0	138	INPAQ	Ant 0	98.20	1.02	16.00	15.96	1.01	0	<0.001	0.00
	WLAN5.6G	802.11ac VHT80	Bottom for Laptop	0	138	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0	<0.001	0.00
	WLAN5.6G	802.11ac VHT80	Bottom for Laptop	0	138	INPAQ	Ant 0+1	98.65	1.01	19.00	18.99	1.00	0	<0.001	0.00
	WLAN5.6G	802.11ac VHT80	Rear Face	0	138	INPAQ	Ant 0	98.20	1.02	16.00	15.96	1.01	0.18	0.281	0.29
	WLAN5.6G	802.11ac VHT80	Left Side	0	138	INPAQ	Ant 0	98.20	1.02	16.00	15.96	1.01	0	<0.001	0.00
	WLAN5.6G	802.11ac VHT80	Right Side	0	138	INPAQ	Ant 0	98.20	1.02	16.00	15.96	1.01	0.02	0.32	0.33
3	WLAN5.6G	802.11ac VHT80	Top Side	0	138	INPAQ	Ant 0	98.20	1.02	16.00	15.96	1.01	-0.09	0.69	0.71
	WLAN5.6G	802.11ac VHT80	Bottom Side	0	138	INPAQ	Ant 0	98.20	1.02	16.00	15.96	1.01	0	<0.001	0.00
	WLAN5.6G	802.11ac VHT80	Rear Face	0	138	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0.01	0.161	0.16
	WLAN5.6G	802.11ac VHT80	Left Side	0	138	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0.02	0.11	0.11
	WLAN5.6G	802.11ac VHT80	Right Side	0	138	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0	<0.001	0.00
	WLAN5.6G	802.11ac VHT80	Top Side	0	138	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0.05	0.321	0.33
	WLAN5.6G	802.11ac VHT80	Bottom Side	0	138	INPAQ	Ant 1	98.50	1.02	16.00	15.98	1.00	0	<0.001	0.00
	WLAN5.6G	802.11ac VHT80	Rear Face	0	138	INPAQ	Ant 0+1	98.65	1.01	19.00	18.99	1.00	0.03	0.348	0.35
	WLAN5.6G	802.11ac VHT80	Left Side	0	138	INPAQ	Ant 0+1	98.65	1.01	19.00	18.99	1.00	-0.04	0.117	0.12
	WLAN5.6G	802.11ac VHT80	Right Side	0	138	INPAQ	Ant 0+1	98.65	1.01	19.00	18.99	1.00	0.11	0.421	0.43
	WLAN5.6G	802.11ac VHT80	Top Side	0	138	INPAQ	Ant 0+1	98.65	1.01	19.00	18.99	1.00	-0.01	0.696	0.70
	WLAN5.6G	802.11ac VHT80	Bottom Side	0	138	INPAQ	Ant 0+1	98.65	1.01	19.00	18.99	1.00	0	<0.001	0.00
	WLAN5.6G	802.11ac VHT80	Top Side	0	106	INPAQ	Ant 0	98.20	1.02	16.00	15.92	1.02	-0.11	0.582	0.61
	WLAN5.6G	802.11ac VHT80	Top Side	0	122	INPAQ	Ant 0	98.20	1.02	16.00	15.91	1.02	-0.06	0.572	0.60
	WLAN5.6G	802.11ac VHT80	Top Side	0	138	PULSE	Ant 0	98.20	1.02	16.00	15.96	1.01	0.07	0.588	0.61
	WLAN5.8G	802.11ac VHT80	Bottom for Laptop	0	155	INPAQ	Ant 0	98.20	1.02	16.00	15.93	1.02	0	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Bottom for Laptop	0	155	INPAQ	Ant 1	98.50	1.02	16.00	15.96	1.01	0	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Bottom for Laptop	0	155	INPAQ	Ant 0+1	98.65	1.01	19.00	18.98	1.00	0	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Rear Face	0	155	INPAQ	Ant 0	98.20	1.02	16.00	15.93	1.02	0.08	0.315	0.33
	WLAN5.8G	802.11ac VHT80	Left Side	0	155	INPAQ	Ant 0	98.20	1.02	16.00	15.93	1.02	0	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Right Side	0	155	INPAQ	Ant 0	98.20	1.02	16.00	15.93	1.02	-0.13	0.432	0.45
4	WLAN5.8G	802.11ac VHT80	Top Side	0	155	INPAQ	Ant 0	98.20	1.02	16.00	15.93	1.02	-0.09	0.736	0.77
	WLAN5.8G	802.11ac VHT80	Bottom Side	0	155	INPAQ	Ant 0	98.20	1.02	16.00	15.93	1.02	0	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Rear Face	0	155	INPAQ	Ant 1	98.50	1.02	16.00	15.96	1.01	0.11	0.171	0.18
	WLAN5.8G	802.11ac VHT80	Left Side	0	155	INPAQ	Ant 1	98.50	1.02	16.00	15.96	1.01	-0.12	0.124	0.13
	WLAN5.8G	802.11ac VHT80	Right Side	0	155	INPAQ	Ant 1	98.50	1.02	16.00	15.96	1.01	0	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Top Side	0	155	INPAQ	Ant 1	98.50	1.02	16.00	15.96	1.01	0.07	0.366	0.38
	WLAN5.8G	802.11ac VHT80	Bottom Side	0	155	INPAQ	Ant 1	98.50	1.02	16.00	15.96	1.01	0	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Rear Face	0	155	INPAQ	Ant 0+1	98.65	1.01	19.00	18.98	1.00	-0.13	0.371	0.37
	WLAN5.8G	802.11ac VHT80	Left Side	0	155	INPAQ	Ant 0+1	98.65	1.01	19.00	18.98	1.00	-0.08	0.202	0.20
	WLAN5.8G	802.11ac VHT80	Right Side	0	155	INPAQ	Ant 0+1	98.65	1.01	19.00	18.98	1.00	0.07	0.432	0.44
	WLAN5.8G	802.11ac VHT80	Top Side	0	155	INPAQ	Ant 0+1	98.65	1.01	19.00	18.98	1.00	-0.12	0.756	0.76
	WLAN5.8G	802.11ac VHT80	Bottom Side	0	155	INPAQ	Ant 0+1	98.65	1.01	19.00	18.98	1.00	0	<0.001	0.00
	WLAN5.8G	802.11ac VHT80	Top Side	0	155	PULSE	Ant 0	98.20	1.02	16.00	15.93	1.02	-0.01	0.665	0.69

Body SAR Test Result

System & Position						DUT & Accessory		SAR							
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	Ant Brand	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)
	BT	BDR	Bottom for Laptop	0	0	INPAQ	Ant 1	77.47	1.29	8.00	7.94	1.01	0	<0.001	0.00
	BT	BDR	Rear Face	0	0	INPAQ	Ant 1	77.47	1.29	8.00	7.94	1.01	0	<0.001	0.00
	BT	BDR	Left Side	0	0	INPAQ	Ant 1	77.47	1.29	8.00	7.94	1.01	0	<0.001	0.00
	BT	BDR	Right Side	0	0	INPAQ	Ant 1	77.47	1.29	8.00	7.94	1.01	0	<0.001	0.00
5	BT	BDR	Top Side	0	0	INPAQ	Ant 1	77.47	1.29	8.00	7.94	1.01	0	<0.001	0.00
	BT	BDR	Bottom Side	0	0	INPAQ	Ant 1	77.47	1.29	8.00	7.94	1.01	0	<0.001	0.00
	BT	BDR	Top Side	0	39	INPAQ	Ant 1	77.47	1.29	8.00	6.75	1.33	0	<0.001	0.00
	BT	BDR	Top Side	0	78	INPAQ	Ant 1	77.47	1.29	8.00	7.31	1.17	0	<0.001	0.00
	BT	BDR	Top Side	0	0	PULSE	Ant 1	77.47	1.29	8.00	7.94	1.01	0	<0.001	0.00

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	WLAN5.3G	802.11ac VHT80	Top Side	58	1.04	1.03	1.01

Annex G. 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 1	Yes
B	WLAN 5G_Ant 0 + BT_Ant 1	Yes
C	WLAN 5G_Ant 0+1 + BT_Ant 1	Yes

Notes

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

Simultaneous Transmission SAR Evaluation (Body)							
Position	1	2	3	4	A(1+4)	B(2+4)	C(3+4)
	WLAN 2.4GHz Ant 0	WLAN 5GHz Ant 0	WLAN 5GHz Ant 0+1	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			
Bottom for Laptop	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rear Face	0.26	0.44	0.37	0.00	0.26	0.44	0.37
Left Side	0.00	0.00	0.20	0.00	0.00	0.00	0.20
Right Side	0.21	0.45	0.44	0.00	0.21	0.45	0.44
Top Side	0.37	1.06	0.76	0.00	0.37	1.06	0.76
Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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_{1g} 1.6 W/kg ; Extremity SAR_{10g} 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	2 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3820	Jul. 28, 2021	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1431	Feb. 23, 2022	1 Year
Spectrum Analyzer	R&S	FSL6	102006	Apr. 12, 2022	1 Year
Universal Wireless Test Set	Anritsu	MT8870A	6201699387	Sep. 22, 2021	1 Year
Thermometer	YFE	YF-160A	120702365	Aug. 06, 2021	1 Year
Dielectric Assessment Kit	SPEAG	DAK-12	1164	Mar. 21, 2022	1 Year
Powersource1	SPEAG	SE_UMS_160 BA	4010	Jul. 13, 2021	1 Year

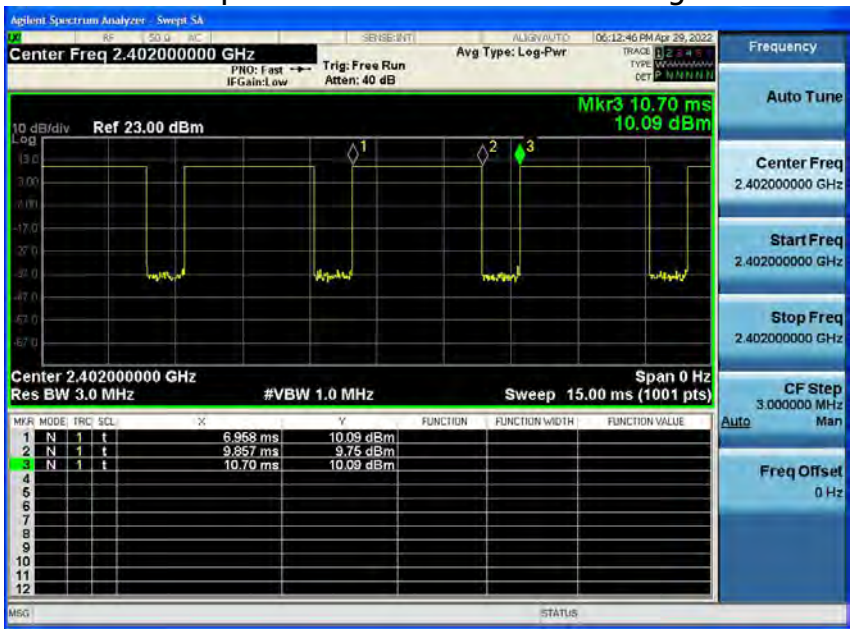
Annex K. Considerations Related to Bluetooth for Setup and Testing

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.
Duty Factor = Pulse Width / Total Period = (9.857 - 6.958) / (10.7 - 6.958) = 77.47%