

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: 2021/10/28

S01 System Check_H3900_211028

DUT: Dipole 3900 MHz D3900V2

Communication System: UID 0, CW; Frequency: 3900 MHz; Duty Cycle: 1:1

Medium: H33T42N0_1028 Medium parameters used: $f = 3900$ MHz; $\sigma = 3.202$ S/m; $\epsilon_r = 36.431$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(6.52, 6.52, 6.52) @ 3900 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- 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) = 5.91 W/kg

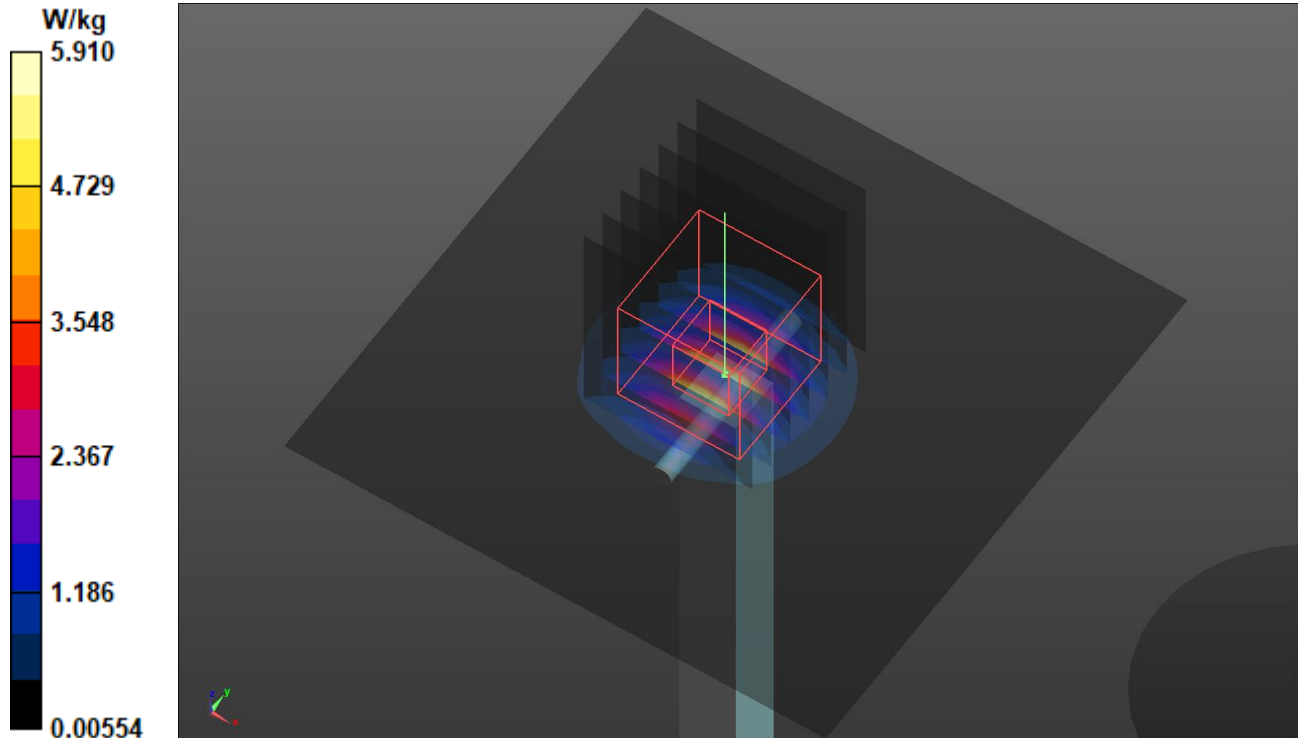
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=2.5$ mm

Reference Value = 46.49 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 7.95 W/kg

SAR(1 g) = 3.39 W/kg; SAR(10 g) = 1.13 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.05 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/29

S02 System Check_H3900_211029

DUT: Dipole 3900 MHz D3900V2

Communication System: UID 0, CW; Frequency: 3900 MHz; Duty Cycle: 1:1

Medium: H33T42N0_1029 Medium parameters used: $f = 3900$ MHz; $\sigma = 3.204$ S/m; $\epsilon_r = 36.426$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(6.52, 6.52, 6.52) @ 3900 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA
- 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) = 6.34 W/kg

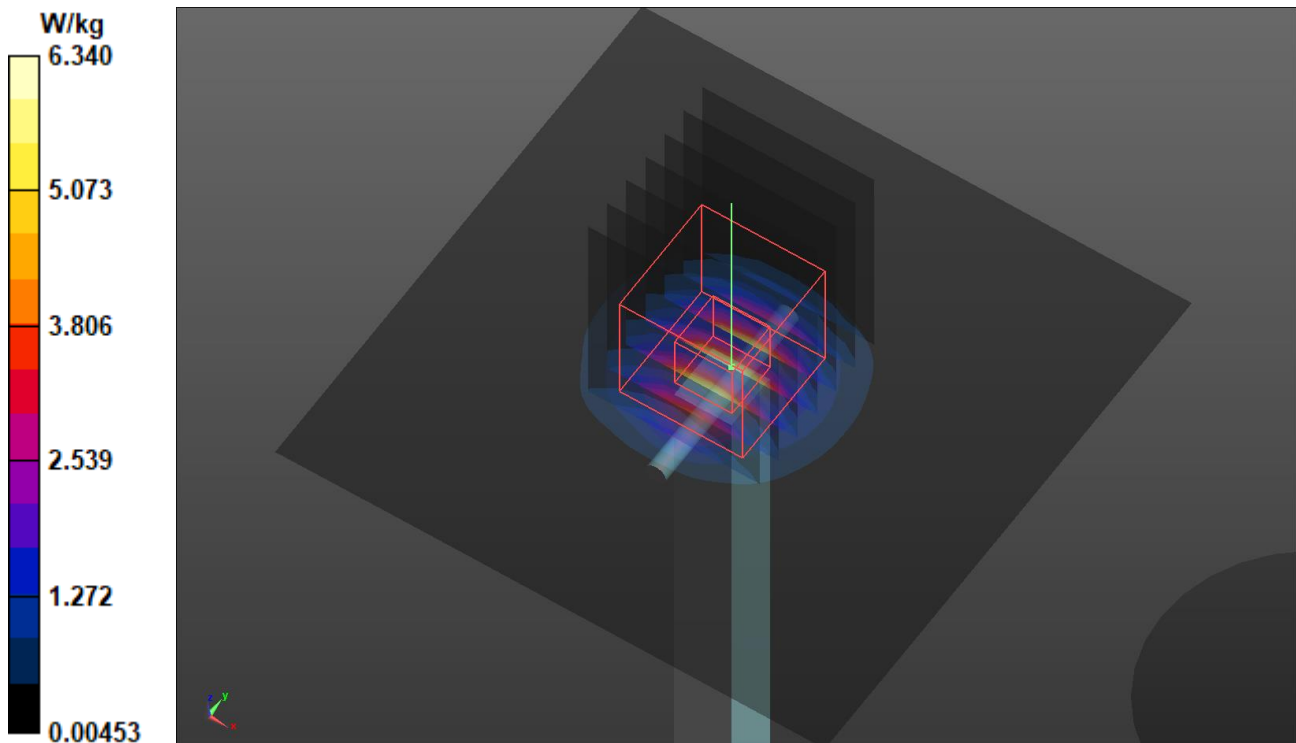
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=2.5$ mm

Reference Value = 47.79 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 9.13 W/kg

SAR(1 g) = 3.28 W/kg; SAR(10 g) = 1.19 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.59 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/29

S03 System Check_H3900_211029

DUT: Dipole 3900 MHz D3900V2

Communication System: UID 0, CW; Frequency: 3900 MHz; Duty Cycle: 1:1

Medium: H33T42N0_1029 Medium parameters used: $f = 3900$ MHz; $\sigma = 3.204$ S/m; $\epsilon_r = 36.426$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(6.52, 6.52, 6.52) @ 3900 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA
- 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) = 6.34 W/kg

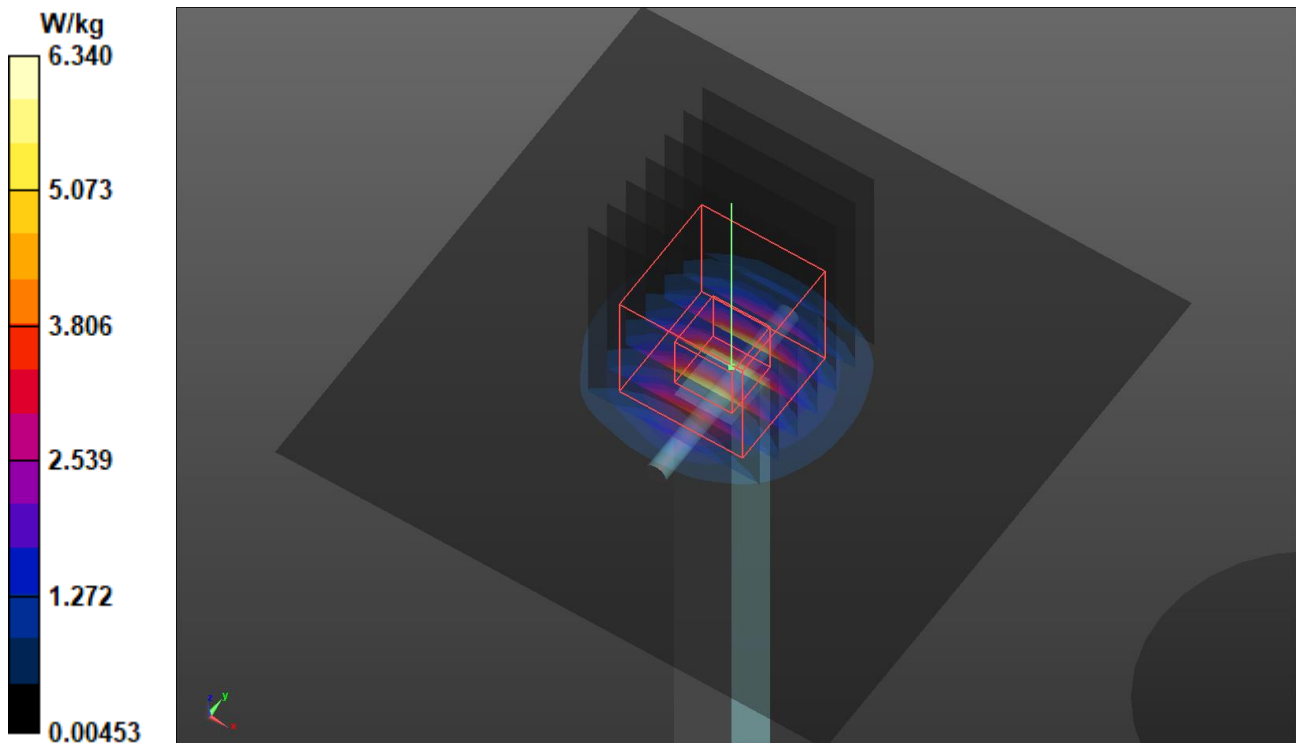
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=2.5$ mm

Reference Value = 47.79 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 9.13 W/kg

SAR(1 g) = 3.28 W/kg; SAR(10 g) = 1.19 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 6.59 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/27

S04 System Check_H3900_211027

DUT: Dipole 3900 MHz D3900V2

Communication System: UID 0, CW; Frequency: 3900 MHz; Duty Cycle: 1:1

Medium: H33T42N0_1027 Medium parameters used: $f = 3900$ MHz; $\sigma = 3.202$ S/m; $\epsilon_r = 36.431$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3820; ConvF(6, 6, 6) @ 3900 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- 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) = 8.68 W/kg

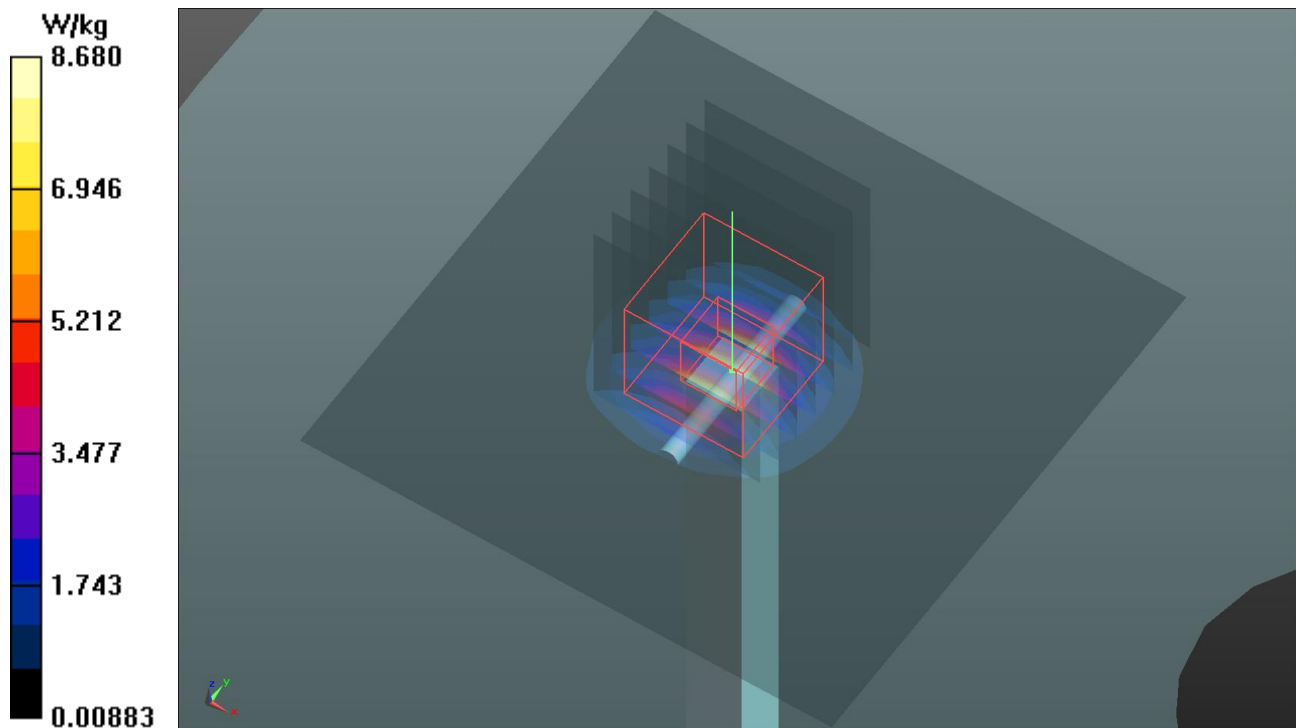
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=2.5$ mm

Reference Value = 55.89 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 11.8 W/kg

SAR(1 g) = 3.51 W/kg; SAR(10 g) = 1.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 8.87 W/kg



Annex B. SAR Plots of SAR 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: 2021/10/28

P01 5GNR-n77_DFT-S QPSK100M_Right Cheek_Ch662000_1RB_OS1_Ant 1

DUT: BFJZ-WTW-P21100637

Communication System: UID 10866 - AAD, 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz); Frequency: 3930 MHz; Duty Cycle: 1:3.7

Medium: H33T42N0_1028 Medium parameters used: $f = 3930$ MHz; $\sigma = 3.21$ S/m; $\epsilon_r = 36.378$; $\rho = 1000$ kg/m³
Ambient Temperature : 23.4 °C; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(6.52, 6.52, 6.52) @ 3930 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x141x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 0.656 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=2.5$ mm

Reference Value = 15.44 V/m; Power Drift = -0.08 dB

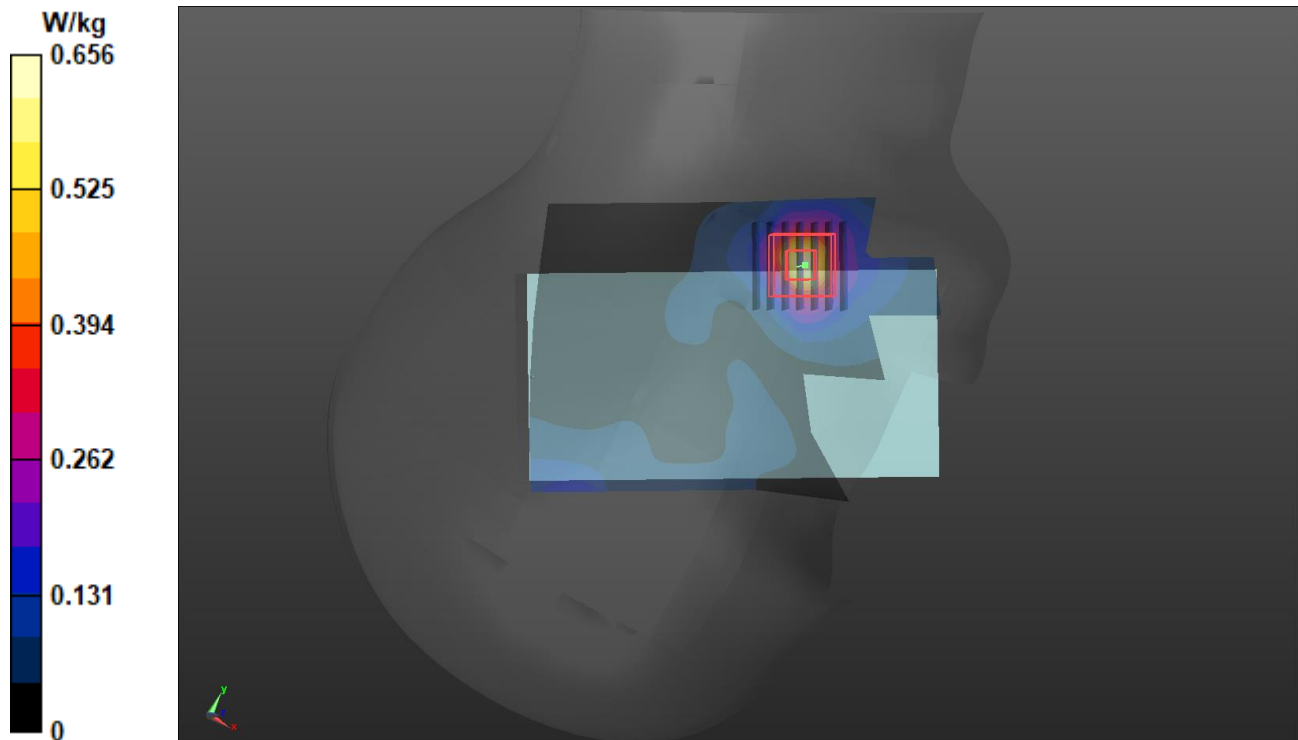
Peak SAR (extrapolated) = 0.770 W/kg

SAR(1 g) = 0.537 W/kg; SAR(10 g) = 0.201 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 = 68.6%

Maximum value of SAR (measured) = 0.601 W/kg



P02 5G NR-n77_DFT-S QPSK100M_Rear Face_15mm_Ch653000_1RB_OS1_Ant 1**DUT: BFJZ-WTW-P21100637**

Communication System: UID 10866 - AAD, 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz); Frequency: 3795 MHz; Duty Cycle: 1:3.7

Medium: H33T42N0_1029 Medium parameters used: $f = 3600$ MHz; $\sigma = 2.993$ S/m; $\epsilon_r = 36.635$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(6.55, 6.55, 6.55) @ 3795 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 2.195 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2.5mm

Reference Value = 24.73 V/m; Power Drift = -0.01 dB

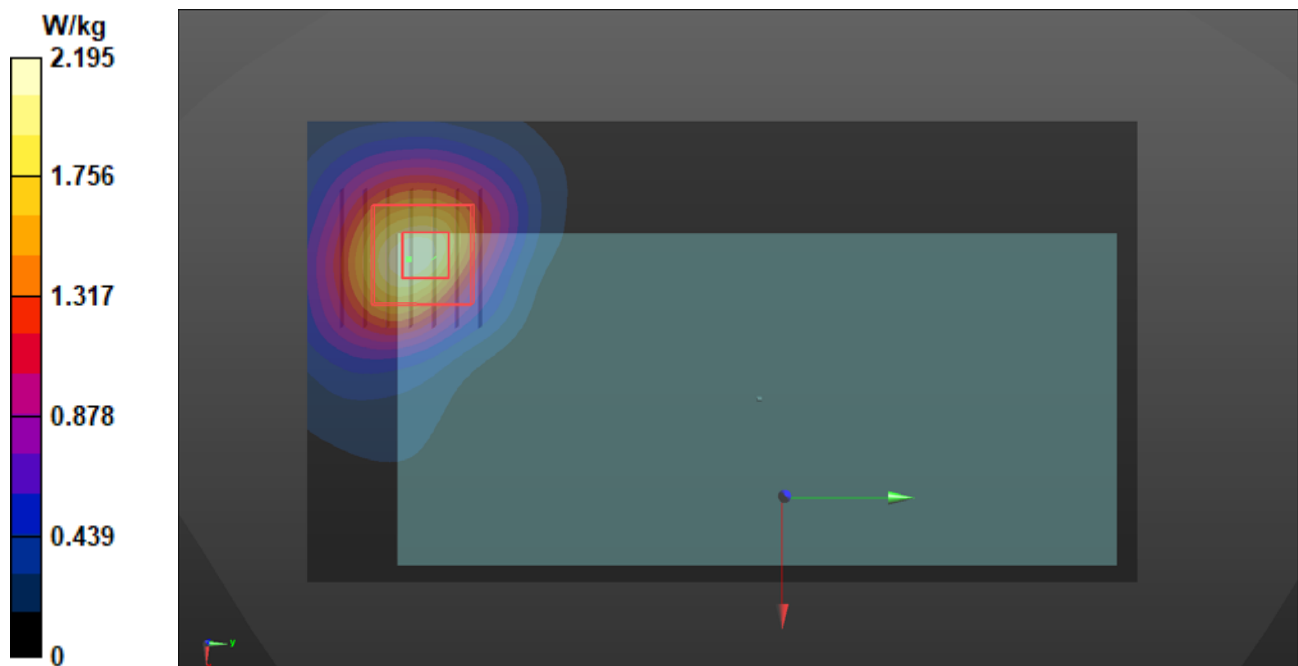
Peak SAR (extrapolated) = 2.72 W/kg

SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.545 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 12.5 mm

Ratio of SAR at M2 to SAR at M1 = 63.7%

Maximum value of SAR (measured) = 2.08 W/kg



P03 5G NR-n77_DFT-S QPSK100M_Rear Face_10mm_Ch650000_1RB_OS1_Ant 1**DUT: BFJZ-WTW-P21100637**

Communication System: UID 10866 - AAD, 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz); Frequency: 3750 MHz; Duty Cycle: 1:3.7

Medium: H33T42N0_1029 Medium parameters used: $f = 3750$ MHz; $\sigma = 3.141$ S/m; $\epsilon_r = 36.36$; $\rho = 1000$ kg/m³

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(6.55, 6.55, 6.55) @ 3750 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: Twin SAM Phantom_1986; Type: QD 000 P40 CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 2.716 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2.5mm

Reference Value = 29.78 V/m; Power Drift = -0.05 dB

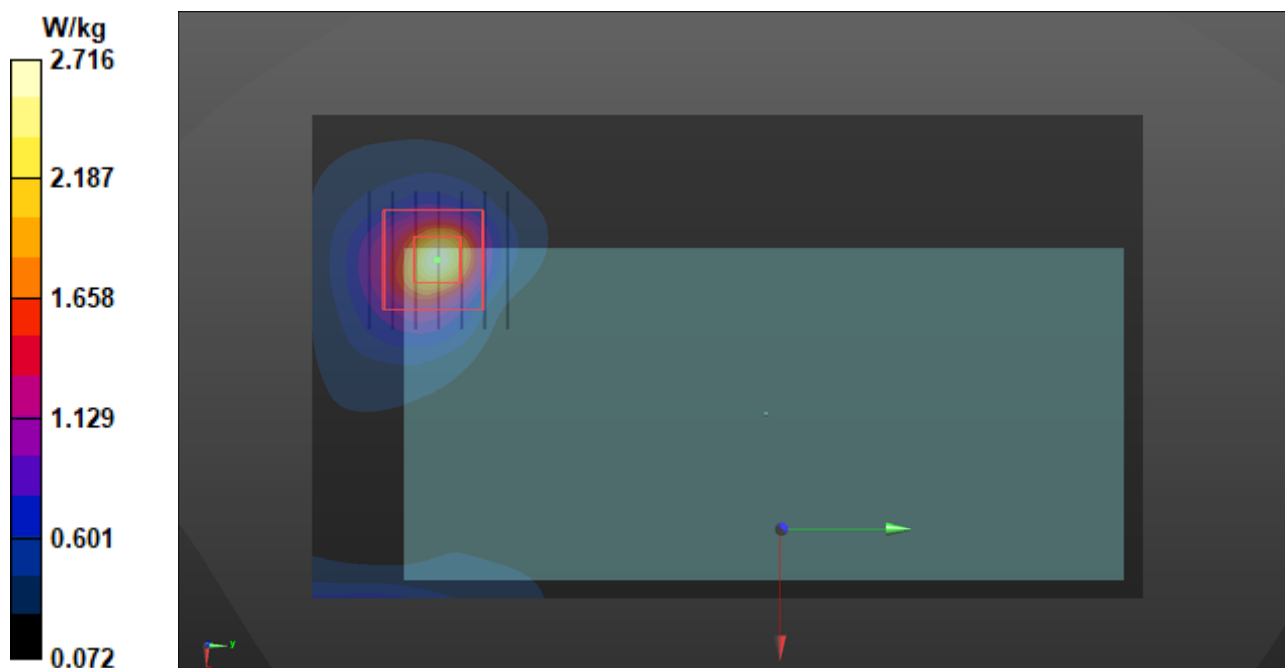
Peak SAR (extrapolated) = 3.33 W/kg

SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.519 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.5 mm

Ratio of SAR at M2 to SAR at M1 = 63%

Maximum value of SAR (measured) = 2.54 W/kg



P04 5G NR-n77_DFT-S QPSK100M_Rear Face_0mm_Ch659000_1RB_OS1_Ant 1**DUT: BFBJZ-WTW-P21100637**

Communication System: UID 10866 - AAD, 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz); Frequency: 3885 MHz; Duty Cycle: 1:3.7

Medium: H33T42N0_1027 Medium parameters used (interpolated): $f = 3885$ MHz; $\sigma = 3.2$ S/m; $\epsilon_r = 36.37$; $\rho = 1000$ kg/m³

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3820; ConvF(6, 6, 6) @ 3885 MHz; Calibrated: 2021/07/28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1341; Calibrated: 2021/08/20
- Phantom: Twin SAM Phantom_1986; Type: QD 000 P40 CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 22.702 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2.5mm

Reference Value = 90.70 V/m; Power Drift = -0.13 dB

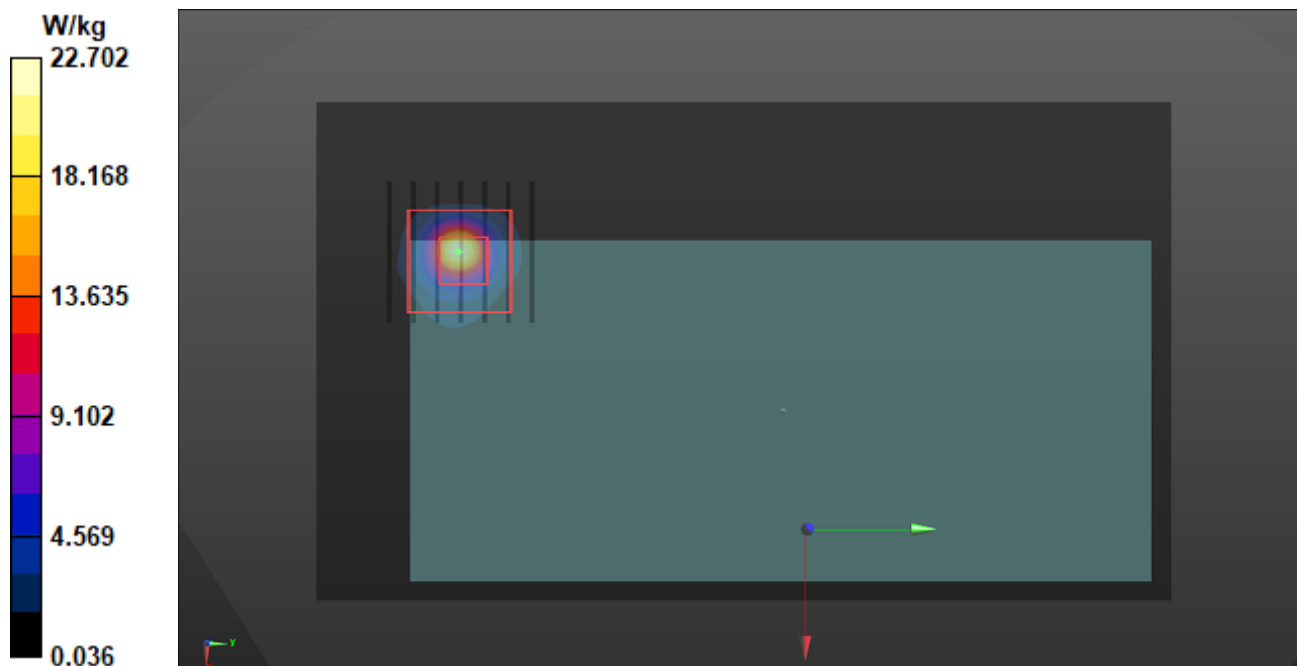
Peak SAR (extrapolated) = 41.2 W/kg

SAR(1 g) = 12 W/kg; SAR(10 g) = 2.73 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 5 mm

Ratio of SAR at M2 to SAR at M1 = 60.4%

Maximum value of SAR (measured) = 26.1 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 °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)	Ambient Temp. (°C)	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	Output Power (dB)
S01	3900	23.4	23.2	3.202	36.431	3.32	37.5	-3.55	-2.85	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 28, 2021	3900	70.90	3.39	67.64	-4.60	1020	7537	1585	17
S02	3900	23.4	23.2	3.204	36.426	3.32	37.5	-3.49	-2.86	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 29, 2021	3900	70.90	3.28	65.44	-7.69	1020	7537	1585	17
S03	3900	23.4	23.2	3.204	36.426	3.32	37.5	-3.49	-2.86	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 29, 2021	3900	70.90	3.28	65.44	-7.69	1020	7537	1585	17

Tissue Verification											System Validation					Note			
Plot No.	Frequency (MHz)	Ambient Temp. (°C)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Targeted Conductivity (σ)	Targeted Permittivity (ε _r)	Deviation Conductivity (σ)	Deviation Permittivity (ε _r)	Date	Frequency (MHz)	Targeted 10g SAR (W/kg)	Measured 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N	Output Power (dB)
S04	3900	23.3	23.2	3.202	36.431	3.32	37.5	-3.55	-2.85	Oct. 27, 2021	3900	24.50	1.11	22.15	-9.60	1020	3820	1341	17

Annex D. Maximum Target Conducted Power

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

5G NR Max. Tune-up Power (DSI-0)					
DFT-S Mode	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM
	Maximum Target Power	Maximum Target Power	Maximum Target Power	Maximum Target Power	Maximum Target Power
NR 77	24.7	24.7	23.7	22.2	20.2

5G NR Max. Tune-up Power (DSI-0)				
CP Mode	QPSK	16QAM	64QAM	256QAM
	Maximum Target Power	Maximum Target Power	Maximum Target Power	Maximum Target Power
NR 77	23.2	22.7	21.2	18.2

5G NR Max. Tune-up Power (DSI-1,2,3)					
DFT-S Mode	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM
	Maximum Target Power	Maximum Target Power	Maximum Target Power	Maximum Target Power	Maximum Target Power
NR 77	19.7	19.7	18.7	18.7	15.2

5G NR Max. Tune-up Power (DSI-1,2,3)				
CP Mode	QPSK	16QAM	64QAM	256QAM
	Maximum Target Power	Maximum Target Power	Maximum Target Power	Maximum Target Power
NR 77	18.2	17.7	16.2	13.2

5G NR Max. Tune-up Power (DSI-4)					
DFT-S Mode	PI/2 BPSK	QPSK	16QAM	64QAM	256QAM
	Maximum Target Power	Maximum Target Power	Maximum Target Power	Maximum Target Power	Maximum Target Power
NR 77	20.5	20.5	19.5	19.5	16.0

5G NR Max. Tune-up Power (DSI-4)				
CP Mode	QPSK	16QAM	64QAM	256QAM
	Maximum Target Power	Maximum Target Power	Maximum Target Power	Maximum Target Power
NR 77	19.0	18.5	17.0	14.0

Annex E. Measured Conducted Power Result

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

NR Conducted Power (DSI-0)								
NR Band 77								
BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High
		Channel		650000	653000	656000	659000	662000
		Frequency (MHz)		3750	3795	3840	3885	3930
100M	DFT-S PI/2 BPSK	1	1	24.41	24.46	24.41	24.38	24.42
100M	DFT-S QPSK	1	1	24.52	24.55	24.61	24.46	24.51
		1	137	24.41	24.43	24.55	24.38	24.43
		1	271	24.37	24.41	24.52	24.41	24.38
		135	0	23.38	23.48	23.54	23.42	23.43
		135	69	24.16	24.20	24.32	24.23	24.22
		135	138	23.23	23.33	23.42	23.25	23.34
		270	0	23.26	23.28	23.38	23.24	23.26
100M	DFT-S 16QAM	1	1	23.14	23.24	23.31	23.17	23.25
100M	CP QPSK	1	1	22.72	22.72	22.79	22.71	22.70
BW	MCS Index	Channel		649334	652666	656000	659334	662666
		Frequency (MHz)		3740.01	3789.99	3840	3890.01	3939.99
80M	DFT-S PI/2 BPSK	1	1	24.42	24.47	24.48	24.45	24.37
80M	DFT-S QPSK	1	1	24.51	24.52	24.54	24.45	24.47
		1	109	24.38	24.40	24.46	24.38	24.44
		1	215	24.42	24.37	24.38	24.38	24.35
		108	0	23.45	23.38	23.46	23.35	23.34
		108	55	24.17	24.18	24.22	24.22	24.22
		108	109	23.33	23.35	23.26	23.23	23.31
		216	0	23.29	23.25	23.32	23.20	23.22
80M	DFT-S 16QAM	1	1	23.12	23.18	23.22	23.12	23.17
80M	CP QPSK	1	1	22.76	22.76	22.81	22.67	22.70

NR Conducted Power (DSI-0)								
NR Band 77								
BW	MCS Index	Channel		648668	652334	656000	659666	663332
		Frequency (MHz)		3730.02	3785.01	3840	3894.99	3949.98
60M	DFT-S PI/2 BPSK	1	1	24.44	24.45	24.43	24.39	23.38
60M	DFT-S QPSK	1	1	24.49	24.47	24.49	24.43	24.43
		1	81	24.44	24.45	24.42	24.38	24.43
		1	160	24.43	24.44	24.38	24.39	24.36
		81	0	23.45	23.40	23.48	23.37	23.34
		81	41	24.21	24.20	24.25	24.21	24.18
		81	81	23.23	23.29	23.30	23.32	23.31
		162	0	23.21	23.32	23.30	23.20	23.26
60M	DFT-S 16QAM	1	1	23.15	23.21	23.15	23.14	23.13
60M	CP QPSK	1	1	22.73	22.72	22.73	22.73	22.67
BW	MCS Index	Channel		648000	652000	656000	660000	664000
		Frequency (MHz)		3720	3780	3840	3900	3960
40M	DFT-S PI/2 BPSK	1	1	24.45	24.41	24.40	24.41	24.35
40M	DFT-S QPSK	1	1	24.50	24.50	24.54	24.43	24.51
		1	53	24.40	24.49	24.41	24.35	24.43
		1	104	24.36	24.36	24.38	24.41	24.36
		50	0	23.36	23.40	23.45	23.38	23.34
		50	28	24.18	24.26	24.26	24.17	24.17
		50	56	23.23	23.32	23.33	23.24	23.29
		100	0	23.23	23.26	23.30	23.23	23.28
40M	DFT-S 16QAM	1	1	23.19	23.17	23.24	23.16	23.20
40M	CP QPSK	1	1	22.69	22.71	22.80	22.73	22.76

NR Conducted Power (DSI-0)								
NR Band 77								
BW	MCS Index	Channel		647668	651834	656000	660166	664332
		Frequency (MHz)		3715.02	3777.51	3840	3902.49	3964.98
30M	DFT-S PI/2 BPSK	1	1	24.44	24.42	24.40	24.42	24.45
30M	DFT-S QPSK	1	1	24.51	24.48	24.48	24.50	24.50
		1	39	24.36	24.39	24.39	24.43	24.41
		1	76	24.39	24.45	24.40	24.40	24.38
		36	0	23.35	23.47	23.45	23.38	23.34
		36	21	24.13	24.23	24.25	24.22	24.17
		36	42	23.31	23.28	23.33	23.28	23.32
		75	0	23.24	23.30	23.26	23.19	23.25
30M	DFT-S 16QAM	1	1	23.19	23.23	23.20	23.21	23.17
30M	CP QPSK	1	1	22.78	22.75	22.75	22.75	22.69
BW	MCS Index	Channel		647334	651666	656000	660266	664666
		Frequency (MHz)		3710.01	3774.99	3840	3903.99	3969.99
20M	DFT-S PI/2 BPSK	1	1	24.40	24.49	24.47	24.42	24.45
20M	DFT-S QPSK	1	1	24.49	24.53	24.51	24.49	24.48
		1	26	24.43	24.42	24.42	24.41	24.44
		1	49	24.41	24.36	24.42	24.36	24.36
		25	0	23.37	23.47	23.40	23.35	23.35
		25	13	24.18	24.20	24.23	24.19	24.16
		25	26	23.32	23.29	23.36	23.25	23.26
		50	0	23.26	23.25	23.23	23.24	23.22
20M	DFT-S 16QAM	1	1	23.13	23.24	23.19	23.18	23.18
20M	CP QPSK	1	1	22.68	22.72	22.81	22.73	22.73

NR Conducted Power (DSI-123)								
NR Band 77								
BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High
		Channel		650000	653000	656000	659000	662000
		Frequency (MHz)		3750	3795	3840	3885	3930
100M	DFT-S PI/2 BPSK	1	1	19.58	19.59	19.61	19.62	19.61
100M	DFT-S QPSK	1	1	19.61	19.63	19.65	19.68	19.69
		1	137	19.50	19.57	19.62	19.55	19.62
		1	271	19.46	19.53	19.59	19.55	19.57
		135	0	18.49	18.61	18.63	18.56	18.62
		135	69	19.44	19.47	19.54	19.48	19.48
		135	138	18.51	18.49	18.60	18.61	18.57
		270	0	18.53	18.52	18.54	18.60	18.59
100M	DFT-S 16QAM	1	1	18.58	18.63	18.51	18.68	18.60
100M	CP QPSK	1	1	18.04	18.09	18.09	18.12	18.07
BW	MCS Index	Channel		649334	652666	656000	659334	662666
		Frequency (MHz)		3740.01	3789.99	3840	3890.01	3939.99
80M	DFT-S PI/2 BPSK	1	1	19.49	19.56	19.58	19.62	19.60
80M	DFT-S QPSK	1	1	19.58	19.56	19.63	19.60	19.68
		1	109	19.54	19.60	19.57	19.64	19.57
		1	215	19.45	19.54	19.51	19.57	19.59
		108	0	18.58	18.57	18.57	18.66	18.64
		108	55	19.45	19.52	19.47	19.47	19.51
		108	109	18.49	18.50	18.59	18.60	18.63
		216	0	18.57	18.50	18.61	18.59	18.60
80M	DFT-S 16QAM	1	1	18.59	18.61	18.64	18.65	18.63
80M	CP QPSK	1	1	17.91	18.04	18.03	18.04	18.11

NR Conducted Power (DSI-123)								
NR Band 77								
BW	MCS Index	Channel		648668	652334	656000	659666	663332
		Frequency (MHz)		3730.02	3785.01	3840	3894.99	3949.98
60M	DFT-S PI/2 BPSK	1	1	19.50	19.52	19.54	19.54	19.56
60M	DFT-S QPSK	1	1	19.55	19.57	19.57	19.64	19.65
		1	81	19.52	19.60	19.54	19.60	19.64
		1	160	19.53	19.47	19.53	19.53	19.62
		81	0	18.54	18.53	18.56	18.66	18.63
		81	41	19.50	19.42	19.45	19.53	19.58
		81	81	18.52	18.48	18.52	18.57	18.56
		162	0	18.58	18.54	18.55	18.54	18.61
60M	DFT-S 16QAM	1	1	18.51	18.59	18.65	18.61	18.59
60M	CP QPSK	1	1	17.92	18.02	17.99	17.99	18.06
BW	MCS Index	Channel		648000	652000	656000	660000	664000
		Frequency (MHz)		3720	3780	3840	3900	3960
40M	DFT-S PI/2 BPSK	1	1	19.49	19.39	19.57	19.48	19.49
40M	DFT-S QPSK	1	1	19.54	19.54	19.58	19.66	19.57
		1	53	19.47	19.48	19.60	19.52	19.51
		1	104	19.46	19.57	19.48	19.53	19.50
		50	0	18.55	18.41	18.55	18.59	18.51
		50	28	19.48	19.38	19.43	19.49	19.47
		50	56	18.38	18.47	18.57	18.50	18.49
		100	0	18.49	18.46	18.49	18.54	18.48
40M	DFT-S 16QAM	1	1	18.52	18.51	18.61	18.62	18.60
40M	CP QPSK	1	1	18.01	17.94	18.00	18.13	18.09

NR Conducted Power (DSI-123)								
NR Band 77								
BW	MCS Index	Channel		647668	651834	656000	660166	664332
		Frequency (MHz)		3715.02	3777.51	3840	3902.49	3964.98
30M	DFT-S PI/2 BPSK	1	1	19.44	19.47	19.58	19.48	19.56
30M	DFT-S QPSK	1	1	19.52	19.56	19.57	19.61	19.59
		1	39	19.51	19.49	19.47	19.60	19.54
		1	76	19.42	19.46	19.48	19.53	19.50
		36	0	18.46	18.45	18.52	18.53	18.53
		36	21	19.40	19.38	19.48	19.45	19.50
		36	42	18.45	18.46	18.44	18.53	18.58
		75	0	18.52	18.49	18.55	18.52	18.55
30M	DFT-S 16QAM	1	1	18.58	18.58	18.56	18.54	18.50
30M	CP QPSK	1	1	18.06	17.98	18.04	18.06	18.10
BW	MCS Index	Channel		647334	651666	656000	660266	664666
		Frequency (MHz)		3710.01	3774.99	3840	3903.99	3969.99
20M	DFT-S PI/2 BPSK	1	1	19.48	19.45	19.46	19.48	19.47
20M	DFT-S QPSK	1	1	19.44	19.60	19.52	19.59	19.60
		1	26	19.44	19.50	19.57	19.53	19.64
		1	49	19.39	19.48	19.45	19.59	19.50
		25	0	18.50	18.42	18.51	18.51	18.54
		25	13	19.40	19.36	19.45	19.53	19.40
		25	26	18.49	18.48	18.50	18.54	18.58
		50	0	18.46	18.51	18.43	18.48	18.43
20M	DFT-S 16QAM	1	1	18.54	18.59	18.55	18.56	18.61
20M	CP QPSK	1	1	18.04	17.96	17.97	18.05	18.03

NR Conducted Power (DSI-4)								
NR Band 77								
BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High
		Channel		650000	653000	656000	659000	662000
		Frequency (MHz)		3750	3795	3840	3885	3930
100M	DFT-S PI/2 BPSK	1	1	20.35	20.32	20.36	20.25	20.31
100M	DFT-S QPSK	1	1	20.37	20.35	20.39	20.30	20.33
		1	137	20.33	20.28	20.36	20.25	20.29
		1	271	20.24	20.21	20.32	20.21	20.25
		135	0	19.37	19.27	19.41	19.32	19.30
		135	69	20.22	20.18	20.25	20.12	20.09
		135	138	19.35	19.27	19.37	19.26	19.27
		270	0	19.28	19.23	19.34	19.20	19.24
100M	DFT-S 16QAM	1	1	19.30	19.35	19.31	19.28	19.27
100M	CP QPSK	1	1	18.76	18.80	18.69	18.83	18.76
BW	MCS Index	Channel		649334	652666	656000	659334	662666
		Frequency (MHz)		3740.01	3789.99	3840	3890.01	3939.99
80M	DFT-S PI/2 BPSK	1	1	20.33	20.23	20.31	20.22	20.23
80M	DFT-S QPSK	1	1	20.34	20.30	20.36	20.22	20.32
		1	109	20.28	20.29	20.27	20.22	20.30
		1	215	20.25	20.24	20.23	20.23	20.18
		108	0	19.29	19.35	19.32	19.32	19.25
		108	55	20.23	20.15	20.19	20.13	20.17
		108	109	19.28	19.25	19.35	19.18	19.26
		216	0	19.32	19.32	19.36	19.23	19.31
80M	DFT-S 16QAM	1	1	19.33	19.33	19.32	19.25	19.27
80M	CP QPSK	1	1	18.78	18.78	18.84	18.74	18.71

NR Conducted Power (DSI-4)								
NR Band 77								
BW	MCS Index	Channel		648668	652334	656000	659666	663332
		Frequency (MHz)		3730.02	3785.01	3840	3894.99	3949.98
60M	DFT-S PI/2 BPSK	1	1	20.29	20.28	20.35	20.22	20.25
60M	DFT-S QPSK	1	1	20.28	20.29	20.34	20.29	20.24
		1	81	20.33	20.30	20.36	20.24	20.24
		1	160	20.27	20.18	20.27	20.20	20.18
		81	0	19.35	19.36	19.37	19.24	19.27
		81	41	20.20	20.13	20.23	20.16	20.13
		81	81	19.27	19.26	19.30	19.20	19.24
		162	0	19.25	19.28	19.34	19.23	19.22
60M	DFT-S 16QAM	1	1	19.37	19.26	19.39	19.29	19.32
60M	CP QPSK	1	1	18.74	18.76	18.86	18.77	18.70
BW	MCS Index	Channel		648000	652000	656000	660000	664000
		Frequency (MHz)		3720	3780	3840	3900	3960
40M	DFT-S PI/2 BPSK	1	1	20.35	20.26	20.34	20.19	20.31
40M	DFT-S QPSK	1	1	20.31	20.26	20.36	20.20	20.24
		1	53	20.30	20.28	20.28	20.22	20.27
		1	104	20.23	20.25	20.24	20.23	20.17
		50	0	19.32	19.30	19.40	19.31	19.30
		50	28	20.17	20.21	20.21	20.13	20.18
		50	56	19.32	19.30	19.34	19.19	19.26
		100	0	19.29	19.24	19.26	19.17	19.21
40M	DFT-S 16QAM	1	1	19.34	19.35	19.30	19.21	19.27
40M	CP QPSK	1	1	18.76	18.71	18.85	18.62	18.72

NR Conducted Power (DSI-4)								
NR Band 77								
BW	MCS Index	Channel		647668	651834	656000	660166	664332
		Frequency (MHz)		3715.02	3777.51	3840	3902.49	3964.98
30M	DFT-S PI/2 BPSK	1	1	20.30	20.29	20.31	20.19	20.21
30M	DFT-S QPSK	1	1	20.28	20.35	20.32	20.27	20.31
		1	39	20.27	20.23	20.27	20.24	20.29
		1	76	20.27	20.27	20.28	20.23	20.17
		36	0	19.39	19.29	19.34	19.24	19.26
		36	21	20.18	20.12	20.21	20.12	20.12
		36	42	19.30	19.23	19.36	19.19	19.28
		75	0	19.25	19.23	19.31	19.21	19.31
30M	DFT-S 16QAM	1	1	19.35	19.33	19.37	19.26	19.27
30M	CP QPSK	1	1	18.81	18.73	18.77	18.70	18.79
BW	MCS Index	Channel		647334	651666	656000	660266	664666
		Frequency (MHz)		3710.01	3774.99	3840	3903.99	3969.99
20M	DFT-S PI/2 BPSK	1	1	20.29	20.32	20.35	20.21	20.22
20M	DFT-S QPSK	1	1	20.31	20.28	20.35	20.21	20.30
		1	26	20.26	20.25	20.33	20.23	20.23
		1	49	20.23	20.22	20.29	20.13	20.25
		25	0	19.37	19.30	19.38	19.26	19.28
		25	13	20.16	20.16	20.23	20.14	20.12
		25	26	19.32	19.25	19.33	19.22	19.28
		50	0	19.30	19.22	19.35	19.25	19.23
20M	DFT-S 16QAM	1	1	19.28	19.34	19.35	19.22	19.31
20M	CP QPSK	1	1	18.80	18.79	18.82	18.70	18.71

Annex F. SAR Test Result

SAR Results for Head / Body / Hotspot / Extremity Exposure Condition.

Note:

1. SAR testing for NR 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.
3. Since NR of this device supports VOIP capability through 3rd party apps software, we have evaluated data mode for head SAR.

Head SAR Test Result

System & Position								DUT & Accessory		SAR					
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Ant Status	DSI	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	5GNR-n77	DFT-S QPSK100M	Right Cheek	-	656000	1	1	Ant 1	0	24.70	24.61	1.02	0.12	0.38	0.39
	5GNR-n77	DFT-S QPSK100M	Right Tilted	-	656000	1	1	Ant 1	0	24.70	24.61	1.02	-0.18	0.313	0.32
	5GNR-n77	DFT-S QPSK100M	Left Cheek	-	656000	1	1	Ant 1	0	24.70	24.61	1.02	0.09	0.225	0.23
	5GNR-n77	DFT-S QPSK100M	Left Tilted	-	656000	1	1	Ant 1	0	24.70	24.61	1.02	-0.09	0.196	0.20
	5GNR-n77	DFT-S QPSK100M	Right Cheek	-	656000	135	0	Ant 1	0	23.70	23.54	1.04	0.12	0.21	0.22
	5GNR-n77	DFT-S QPSK100M	Right Tilted	-	656000	135	0	Ant 1	0	23.70	23.54	1.04	-0.05	0.148	0.15
	5GNR-n77	DFT-S QPSK100M	Left Cheek	-	656000	135	0	Ant 1	0	23.70	23.54	1.04	0.11	0.134	0.14
	5GNR-n77	DFT-S QPSK100M	Left Tilted	-	656000	135	0	Ant 1	0	23.70	23.54	1.04	-0.05	0.105	0.11
	5GNR-n77	DFT-S QPSK100M	Right Cheek	-	650000	1	1	Ant 1	0	24.70	24.52	1.04	0.01	0.37	0.38
	5GNR-n77	DFT-S QPSK100M	Right Cheek	-	653000	1	1	Ant 1	0	24.70	24.55	1.04	0.02	0.326	0.34
	5GNR-n77	DFT-S QPSK100M	Right Cheek	-	659000	1	1	Ant 1	0	24.70	24.46	1.06	0.13	0.41	0.43
1	5GNR-n77	DFT-S QPSK100M	Right Cheek	-	662000	1	1	Ant 1	0	24.70	24.51	1.04	-0.08	0.537	0.56

Body SAR Test Result

System & Position								DUT & Accessory		SAR					
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Ant Status	DSI	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	5GNR-n77	DFT-S QPSK100M	Front Face	15	656000	1	1	Ant 1	0	24.70	24.61	1.02	0.19	0.304	0.31
	5GNR-n77	DFT-S QPSK100M	Rear Face	15	656000	1	1	Ant 1	0	24.70	24.61	1.02	0.06	1.17	1.19
	5GNR-n77	DFT-S QPSK100M	Front Face	15	656000	135	0	Ant 1	0	23.70	23.54	1.04	0	0.297	0.31
	5GNR-n77	DFT-S QPSK100M	Rear Face	15	656000	135	0	Ant 1	0	23.70	23.54	1.04	0.13	0.895	0.93
	5GNR-n77	DFT-S QPSK100M	Rear Face	15	656000	270	0	Ant 1	0	23.70	23.38	1.08	0.11	0.909	0.98
	5GNR-n77	DFT-S QPSK100M	Rear Face	15	650000	1	1	Ant 1	0	24.70	24.52	1.04	0.09	1.14	1.19
2	5GNR-n77	DFT-S QPSK100M	Rear Face	15	653000	1	1	Ant 1	0	24.70	24.55	1.04	-0.11	1.18	1.23
	5GNR-n77	DFT-S QPSK100M	Rear Face	15	659000	1	1	Ant 1	0	24.70	24.46	1.06	0.02	0.955	1.01
	5GNR-n77	DFT-S QPSK100M	Rear Face	15	662000	1	1	Ant 1	0	24.70	24.51	1.04	-0.13	0.95	0.99
	5GNR-n77	DFT-S QPSK100M	Rear Face	15	653000	1	1	Ant 1	0	24.70	24.55	1.04	0.01	1.11	1.15

Hotspot SAR Test Result

System & Position								DUT & Accessory		SAR					
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Ant Status	DSI	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	5G NR-n77	DFT-S QPSK100M	Front Face	10	656000	1	1	Ant 1	4	20.50	20.39	1.03	0.06	0.302	0.31
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	656000	1	1	Ant 1	4	20.50	20.39	1.03	-0.17	1.01	1.04
	5G NR-n77	DFT-S QPSK100M	Left Side	10	656000	1	1	Ant 1	4	20.50	20.39	1.03	0.19	0.04	0.04
	5G NR-n77	DFT-S QPSK100M	Right Side	10	656000	1	1	Ant 1	4	20.50	20.39	1.03	0.1	0.644	0.66
	5G NR-n77	DFT-S QPSK100M	Top Side	10	656000	1	1	Ant 1	4	20.50	20.39	1.03	-0.18	<0.001	0.00
	5G NR-n77	DFT-S QPSK100M	Bottom Side	10	656000	1	1	Ant 1	4	20.50	20.39	1.03	-0.17	0.517	0.53
	5G NR-n77	DFT-S QPSK100M	Front Face	10	656000	135	0	Ant 1	4	19.50	19.41	1.02	0.12	0.332	0.34
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	656000	135	0	Ant 1	4	19.50	19.41	1.02	0.12	0.947	0.97
	5G NR-n77	DFT-S QPSK100M	Left Side	10	656000	135	0	Ant 1	4	19.50	19.41	1.02	-0.03	0.034	0.03
	5G NR-n77	DFT-S QPSK100M	Right Side	10	656000	135	0	Ant 1	4	19.50	19.41	1.02	0.06	0.639	0.65
	5G NR-n77	DFT-S QPSK100M	Top Side	10	656000	135	0	Ant 1	4	19.50	19.41	1.02	-0.17	<0.001	0.00
	5G NR-n77	DFT-S QPSK100M	Bottom Side	10	656000	135	0	Ant 1	4	19.50	19.41	1.02	0.19	0.509	0.52
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	656000	270	0	Ant 1	4	19.50	19.34	1.04	0.1	1	1.04
3	5G NR-n77	DFT-S QPSK100M	Rear Face	10	650000	1	1	Ant 1	4	20.50	20.37	1.03	-0.17	1.12	1.15
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	653000	1	1	Ant 1	4	20.50	20.35	1.04	0.19	1.01	1.05
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	659000	1	1	Ant 1	4	20.50	20.30	1.05	0.1	1	1.05
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	662000	1	1	Ant 1	4	20.50	20.33	1.04	-0.18	1.04	1.08
	5G NR-n77	DFT-S QPSK100M	Right Side	10	650000	1	1	Ant 1	4	20.50	20.37	1.03	-0.17	0.59	0.61
	5G NR-n77	DFT-S QPSK100M	Right Side	10	653000	1	1	Ant 1	4	20.50	20.35	1.04	0.12	0.603	0.63
	5G NR-n77	DFT-S QPSK100M	Right Side	10	659000	1	1	Ant 1	4	20.50	20.30	1.05	0.12	0.608	0.64
	5G NR-n77	DFT-S QPSK100M	Right Side	10	662000	1	1	Ant 1	4	20.50	20.33	1.04	-0.03	0.636	0.66
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	650000	135	0	Ant 1	4	19.50	19.37	1.03	0.06	1.03	1.06
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	653000	135	0	Ant 1	4	19.50	19.27	1.05	-0.17	1.01	1.06
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	659000	135	0	Ant 1	4	19.50	19.32	1.04	0.19	1.01	1.05
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	662000	135	0	Ant 1	4	19.50	19.30	1.05	0.1	0.997	1.05
	5G NR-n77	DFT-S QPSK100M	Right Side	10	650000	135	0	Ant 1	4	19.50	19.37	1.03	-0.01	0.596	0.61
	5G NR-n77	DFT-S QPSK100M	Right Side	10	653000	135	0	Ant 1	4	19.50	19.27	1.05	-0.17	0.644	0.68
	5G NR-n77	DFT-S QPSK100M	Right Side	10	659000	135	0	Ant 1	4	19.50	19.32	1.04	0.12	0.637	0.66
	5G NR-n77	DFT-S QPSK100M	Right Side	10	662000	135	0	Ant 1	4	19.50	19.30	1.05	0.06	0.692	0.73
	5G NR-n77	DFT-S QPSK100M	Rear Face	10	650000	1	1	Ant 1	4	20.50	20.37	1.03	-0.17	1.11	1.14

Extremity SAR Test Result

System & Position								DUT & Accessory		SAR					
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Ant Status	DSI	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-10g (W/kg)	Scaled SAR-10g (W/kg)
	5GNR-n77	DFT-S QPSK100M	Front Face	0	656000	1	1	Ant 1	2	19.70	19.65	1.01	0.06	0.556	0.56
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	656000	1	1	Ant 1	2	19.70	19.65	1.01	0.13	2.27	2.29
	5GNR-n77	DFT-S QPSK100M	Left Side	0	656000	1	1	Ant 1	2	19.70	19.65	1.01	0.11	0.026	0.03
	5GNR-n77	DFT-S QPSK100M	Right Side	0	656000	1	1	Ant 1	2	19.70	19.65	1.01	0.01	0.832	0.84
	5GNR-n77	DFT-S QPSK100M	Top Side	0	656000	1	1	Ant 1	2	19.70	19.65	1.01	-0.07	0.00505	0.01
	5GNR-n77	DFT-S QPSK100M	Bottom Side	0	656000	1	1	Ant 1	2	19.70	19.65	1.01	-0.04	0.727	0.73
	5GNR-n77	DFT-S QPSK100M	Front Face	0	656000	135	0	Ant 1	2	18.70	18.63	1.02	0.014	0.579	0.59
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	656000	135	0	Ant 1	2	18.70	18.63	1.02	-0.04	2.24	2.28
	5GNR-n77	DFT-S QPSK100M	Left Side	0	656000	135	0	Ant 1	2	18.70	18.63	1.02	0.019	0.027	0.03
	5GNR-n77	DFT-S QPSK100M	Right Side	0	656000	135	0	Ant 1	2	18.70	18.63	1.02	0.07	0.793	0.81
	5GNR-n77	DFT-S QPSK100M	Top Side	0	656000	135	0	Ant 1	2	18.70	18.63	1.02	0.14	0.00505	0.01
	5GNR-n77	DFT-S QPSK100M	Bottom Side	0	656000	135	0	Ant 1	2	18.70	18.63	1.02	-0.16	0.723	0.74
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	656000	270	0	Ant 1	2	18.70	18.54	1.04	0.01	2.61	2.71
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	650000	1	1	Ant 1	2	19.70	19.61	1.02	-0.09	2.67	2.72
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	653000	1	1	Ant 1	2	19.70	19.63	1.02	0.05	2.65	2.70
4	5GNR-n77	DFT-S QPSK100M	Rear Face	0	659000	1	1	Ant 1	2	19.70	19.68	1.00	-0.13	2.73	2.73
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	662000	1	1	Ant 1	2	19.70	19.69	1.00	-0.08	2.65	2.65
	5GNR-n77	DFT-S QPSK100M	Right Side	0	650000	1	1	Ant 1	2	19.70	19.61	1.02	-0.02	1.23	1.25
	5GNR-n77	DFT-S QPSK100M	Right Side	0	653000	1	1	Ant 1	2	19.70	19.63	1.02	0.01	1.2	1.22
	5GNR-n77	DFT-S QPSK100M	Right Side	0	659000	1	1	Ant 1	2	19.70	19.68	1.00	0.04	1.28	1.28
	5GNR-n77	DFT-S QPSK100M	Right Side	0	662000	1	1	Ant 1	2	19.70	19.69	1.00	-0.02	1.2	1.20
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	650000	135	0	Ant 1	2	18.70	18.49	1.05	0.04	2.58	2.71
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	653000	135	0	Ant 1	2	18.70	18.61	1.02	-0.04	2.45	2.50
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	659000	135	0	Ant 1	2	18.70	18.56	1.03	-0.08	2.58	2.66
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	662000	135	0	Ant 1	2	18.70	18.62	1.02	-0.03	2.57	2.62
	5GNR-n77	DFT-S QPSK100M	Right Side	0	650000	135	0	Ant 1	2	18.70	18.49	1.05	-0.02	1.16	1.22
	5GNR-n77	DFT-S QPSK100M	Right Side	0	653000	135	0	Ant 1	2	18.70	18.61	1.02	0.13	1.13	1.15
	5GNR-n77	DFT-S QPSK100M	Right Side	0	659000	135	0	Ant 1	2	18.70	18.56	1.03	0.03	1.19	1.23
	5GNR-n77	DFT-S QPSK100M	Right Side	0	662000	135	0	Ant 1	2	18.70	18.62	1.02	0.02	1.18	1.20
	5GNR-n77	DFT-S QPSK100M	Rear Face	0	659000	1	1	Ant 1	2	19.70	19.68	1.00	-0.13	2.7	2.72

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	n77	DFT-S QPSK100M	Rear Face	653000	1.18	1.11	1.06
R03	n77	DFT-S QPSK100M	Rear Face	650000	1.12	1.11	1.01

Repeat SAR (Extrimity)							
Plot	Band	Mode	Test Position	Ch.	Original Measured SAR-10g (W/kg)	1st Repeated SAR-10g (W/kg)	L/S Ratio
R04	n77	DFT-S QPSK100M	Rear Face	65900	2.73	2.7	1.01

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	Head Exposure Condition	Body Exposure Condition	Hotspot Exposure Condition	Extremity Exposure Condition
A	WWAN + WLAN 2.4GHz	Yes	Yes	Yes	Yes
B	WWAN + WLAN 5GHz	Yes	Yes	Yes	Yes
C	WWAN + BT	Yes	Yes	Yes	Yes
D	WWAN + WLAN 5GHz +BT	Yes	Yes	Yes	Yes
Notes	1. The WLAN 2.4GHz and BT cannot transmit simultaneously. 2. Simultaneous TX Combination B, C can be covered by D				

Simultaneous Transmission SAR Evaluation (Head)							
Band	Position	1	2	3	4	A(1+2)	D(1+3+4)
		Max WWAN	Max WLAN 2.4GHz	Max WLAN 5GHz	BT Ant 1	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		
5GNR-n77	Right Cheek	0.56	0.18	0.07	0.07	0.74	0.70
	Right Tilted	0.32	0.06	0.03	0.03	0.38	0.38
	Left Cheek	0.23	0.11	0.05	0.05	0.34	0.33
	Left Tilted	0.20	0.06	0.03	0.03	0.26	0.26

Simultaneous Transmission SAR Evaluation(Body-worn Mode)							
Band	Position	1	2	3		A(1+2)	D(1+3+4)
		Max WWAN	Max WLAN 2.4GHz	Max WLAN 5GHz	BT Ant 1	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		
5GNR-n77	Front Face	0.31	0.06	0.06	0.00	0.37	0.37
	Rear Face	1.23	0.26	0.21	0.00	1.49	1.44
	Left Side	0.00	0.18	0.11	0.00	0.18	0.11
	Right Side	0.00	0.00	0.00	0.00	0.00	0.00
	Top Side	0.00	0.00	0.00	0.00	0.00	0.00
	Bottom Side	0.00	0.00	0.00	0.00	0.00	0.00

Simultaneous Transmission SAR Evaluation (Hotspot Mode)						
Position	1	2	3	4	A(1+2)	D(1+3+4)
	Max WWAN	Max WLAN 2.4GHz	Max WLAN 5GHz	BT Ant 0	Summing result	Summing result
	1g SAR W/kg	1g SAR W/kg	1g SAR W/kg	1g SAR W/kg	1g SAR W/kg	1g SAR W/kg
Front Face	0.34	0.06	0.06	0.00	0.40	0.40
Rear Face	1.15	0.26	0.21	0.07	1.41	1.36
Left Side	0.04	0.18	0.11	0.00	0.22	0.15
Right Side	0.73	0.00	0.00	0.00	0.73	0.73
Top Side	0.00	0.00	0.00	0.00	0.00	0.00
Bottom Side	0.53	0.00	0.00	0.00	0.53	0.53

Simultaneous Transmission SAR Evaluation(Extremity Mode)			
Position	1	3	B(1+3)
	Max WWAN	Max WLAN 5GHz	Summimg result
	10g SAR W/kg	10g SAR W/kg	10g SAR W/kg
Front Face	0.59	0.06	0.65
Rear Face	2.73	0.64	3.37
Left Side	0.03	0.04	0.07
Right Side	1.28	0.00	1.28
Top Side	0.01	0.00	0.01
Bottom Side	0.74	0.00	0.74

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	D3500V2	1007	Jan. 20, 2021	1 Year
System Validation Dipole	SPEAG	D3700V2	1017	Aug. 19, 2021	1 Year
System Validation Dipole	SPEAG	D3900V2	1020	Mar. 21, 2021	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3971	Jan. 27, 2021	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7537	Apr. 26, 2021	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3820	Jul. 28, 2021	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1585	Apr. 15, 2021	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1431	Mar. 24, 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
Spectrum Analyzer	Anritsu	MS2720T	1513085	May. 26, 2021	1 Year
Power Meter	Anritsu	ML2495A	1232003	Jan. 05, 2021	1 Year