Appendix A. System Check Data

Test Laboratory: DEKRA Date: 2023/08/31

System Performance Check_2450MHz-Head

DUT: D2450V2; Type: D2450V2

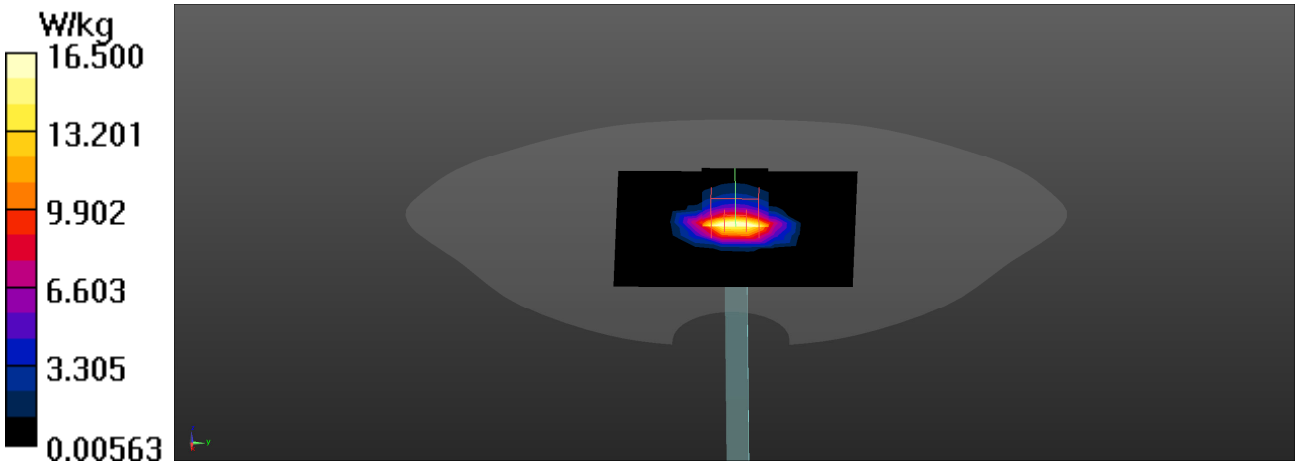
Communication System: UID 0, CW; Frequency: 2450 MHz
Communication System PAR: 0dB
Medium parameters used: f = 2450 MHz; σ = 1.78 S/m; ε_r = 39.31; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN7631; ConvF(7.85, 8.9, 7.36) @ 2450 MHz; Calibrated: 2023/02/22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1651; Calibrated: 2023/02/22
- Phantom: Twin-SAM V8.0; Type: QD 000 P41 AA; Serial: 2030
- Measurement SW: V52.10.4.1535

Configuration/2450MHz_Head/Area Scan (10x10x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 16.5 W/kg

Configuration/2450MHz_Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 108.1 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 23.1 W/kg
SAR(1 g) = 12.3 W/kg; SAR(10 g) = 5.79 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 51.3%
Maximum value of SAR (measured) = 20.2 W/kg



Test Laboratory: DEKRA Date: 2023/09/01

System Performance Check_5250MHz-Head

DUT: D5GHzV2; Type: D5GHzV2

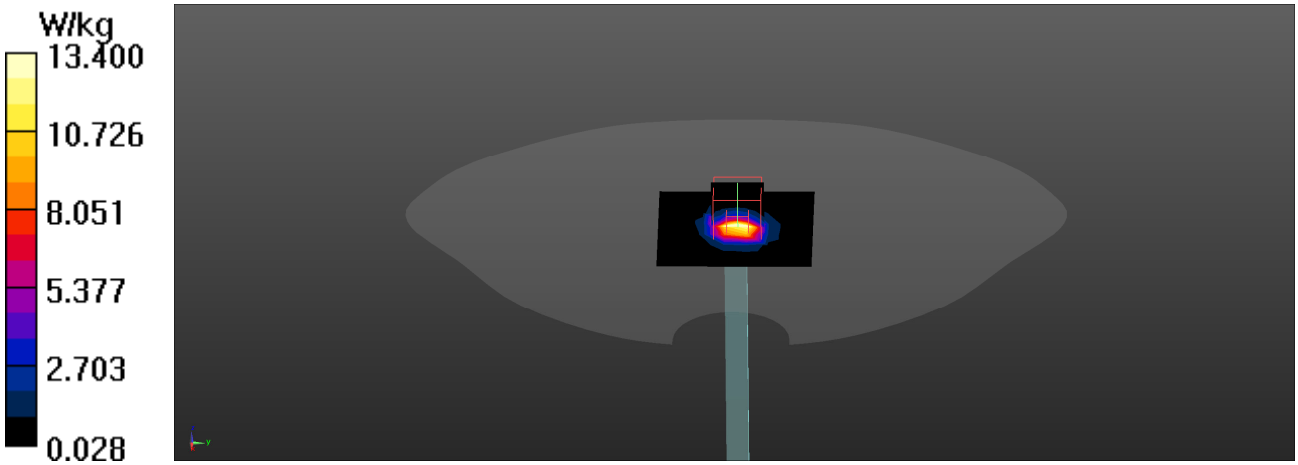
Communication System: UID 0, CW; Frequency: 5250 MHz
Communication System PAR: 0dB
Medium parameters used: f = 5250 MHz; σ = 4.77 S/m; ε_r = 36.60; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN7631; ConvF(5.67, 6.32, 5.35) @ 5250 MHz; Calibrated: 2023/02/22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1651; Calibrated: 2023/02/22
- Phantom: Twin-SAM V8.0; Type: QD 000 P41 AA; Serial: 2030
- Measurement SW: V52.10.4.1535

Configuration/5250MHz-Head/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 13.4 W/kg

Configuration/5250MHz-Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 70.75 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 26.9 W/kg
SAR(1 g) = 7.96 W/kg; SAR(10 g) = 2.28 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 65.1%
Maximum value of SAR (measured) = 19.9 W/kg



Test Laboratory: DEKRA Date: 2023/09/01

System Performance Check_5600MHz-Head

DUT: D5GHzV2; Type: D5GHzV2

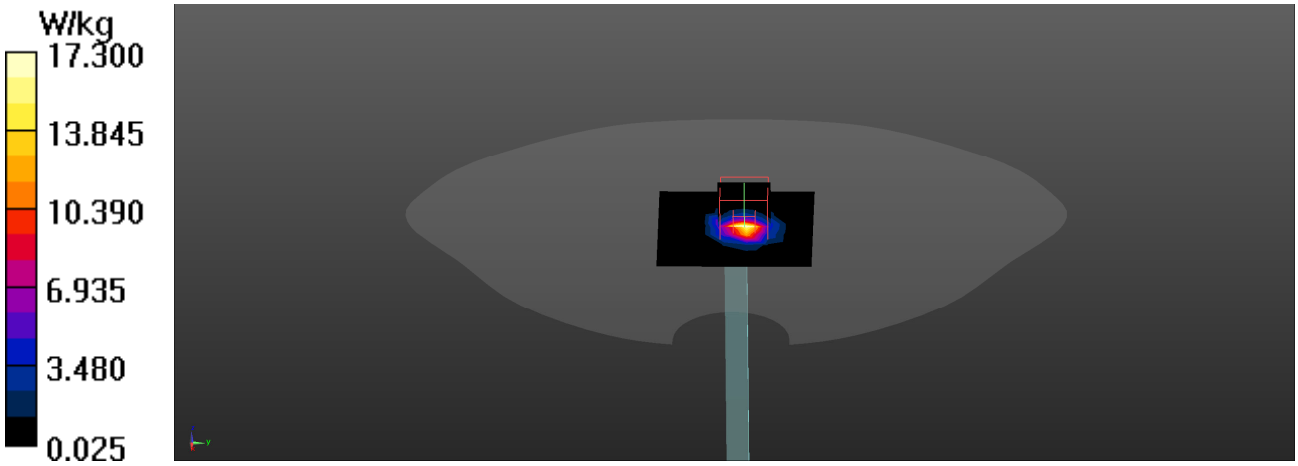
Communication System: UID 0, CW; Frequency: 5600 MHz
Communication System PAR: 0dB
Medium parameters used: f = 5600 MHz; σ = 5.25 S/m; ε_r = 35.63; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN7631; ConvF(4.85, 5.34, 4.58) @ 5600 MHz; Calibrated: 2023/02/22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1651; Calibrated: 2023/02/22
- Phantom: Twin-SAM V8.0; Type: QD 000 P41 AA; Serial: 2030
- Measurement SW: V52.10.4.1535

Configuration/5600MHz-Head/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 17.3 W/kg

Configuration/5600MHz-Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 66.30 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 29.8 W/kg
SAR(1 g) = 8.21 W/kg; SAR(10 g) = 2.34 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 64.1%
Maximum value of SAR (measured) = 21.0 W/kg



Test Laboratory: DEKRA Date: 2023/09/01

System Performance Check_5800MHz-Head

DUT: D5GHzV2; Type: D5GHzV2

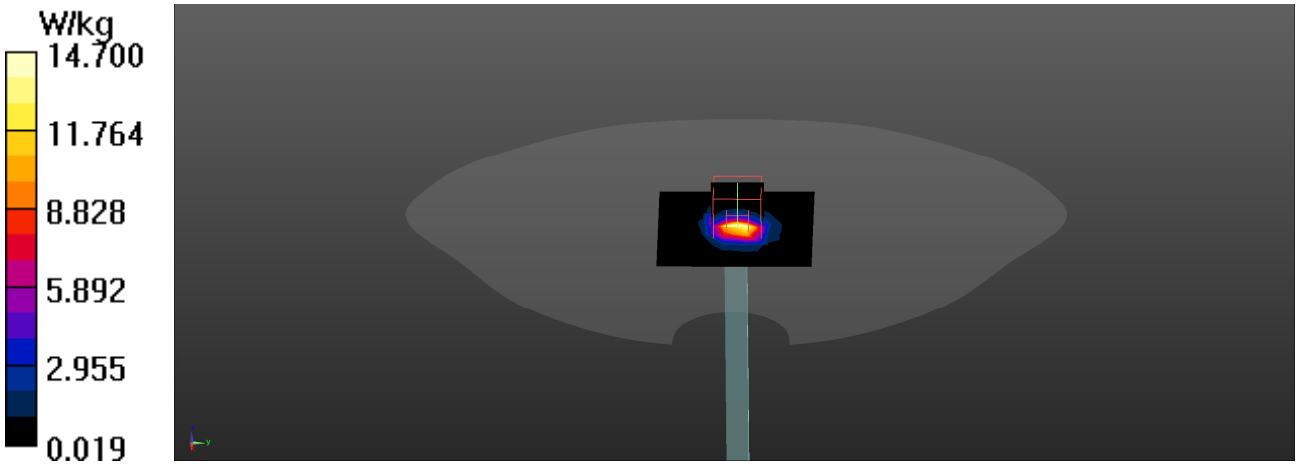
Communication System: UID 0, CW; Frequency: 5800 MHz
Communication System PAR: 0dB
Medium parameters used: f = 5800 MHz; σ = 5.51 S/m; ε_r = 35.08; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN7631; ConvF(4.84, 5.4, 4.63) @ 5800 MHz; Calibrated: 2023/02/22
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1651; Calibrated: 2023/02/22
- Phantom: Twin-SAM V8.0; Type: QD 000 P41 AA; Serial: 2030
- Measurement SW: V52.10.4.1535

Configuration/5800MHz-Head/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 14.7 W/kg

Configuration/5800MHz-Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 66.54 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 30.6 W/kg
SAR(1 g) = 7.88 W/kg; SAR(10 g) = 2.26 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 63%
Maximum value of SAR (measured) = 20.5 W/kg



Test Laboratory: DEKRA Date: 2023-09-04

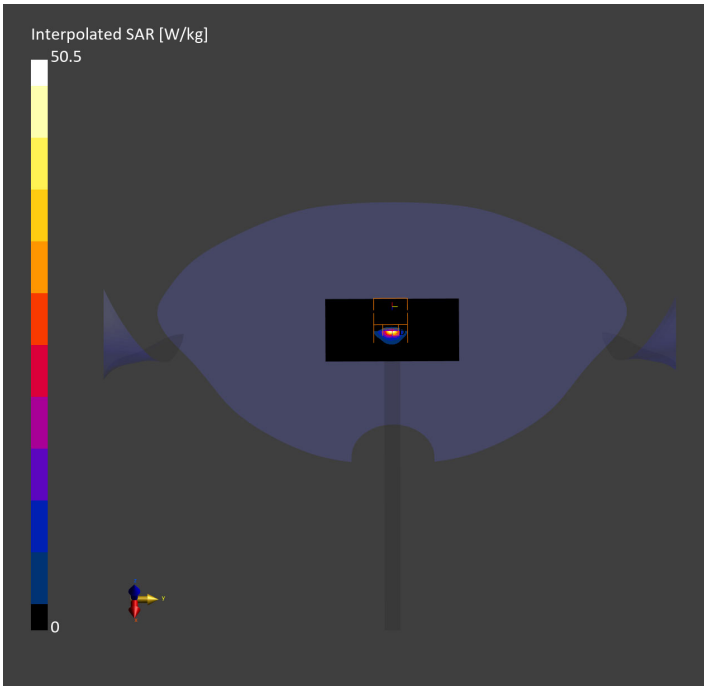
System Performance Check_6500MHz-Head

Communication System: UID 0--, CW; Frequency: 6500.000 MHz
Medium parameters used: f = 6500.000 MHz; Conductivity = 5.96 S/m; Permittivity = 34.19
Phantom section: Flat
DASY Configuration:

- Probe: EX3DV4 - SN7631; ConvF(5.18, 5.95, 5.0); Calibrated: 2023-02-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1651; Calibrated: 2023-02-22
- Phantom: Twin-SAM V8.0 (30deg probe tilt)
- Measurement SW: V16.2.4.2524

Area Scan (51.0 mm x 85.0 mm): Measurement grid: 8.5 mm x 8.5 mm
SAR(1 g) = 25.8 W/kg; SAR(10 g) = 5.04 W/kg

Zoom Scan (22.0 mm x 22.0 mm x 22.0 mm): Measurement grid: 3.4 mm x 3.4 mm x 1.4 mm
Power Drift = -0.02 dB
SAR(1 g) = 30.6 W/kg; SAR(10 g) = 5.77 W/kg
psAPD (4.0cm2, sq) = 141 W/m2
Smallest distance from peaks to all points 3 dB below = 4.8
Ratio of SAR at M2 to SAR at M1 = 51.1



Test Laboratory: DEKRA Date: 2023-09-05

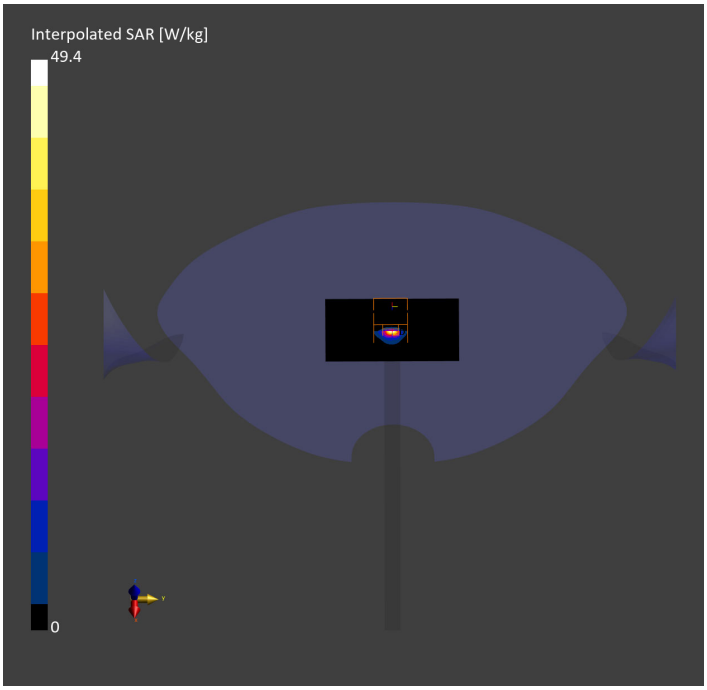
System Performance Check_6500MHz-Head

Communication System: UID 0--, CW; Frequency: 6500.000 MHz
Medium parameters used: f = 6500.000 MHz; Conductivity = 5.97 S/m; Permittivity = 34.20
Phantom section: Flat
DASY Configuration:

- Probe: EX3DV4 - SN7631; ConvF(5.18, 5.95, 5.0); Calibrated: 2023-02-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1651; Calibrated: 2023-02-22
- Phantom: Twin-SAM V8.0 (30deg probe tilt)
- Measurement SW: V16.2.4.2524

Area Scan (51.0 mm x 85.0 mm): Measurement grid: 8.5 mm x 8.5 mm
SAR(1 g) = 25.2 W/kg; SAR(10 g) = 4.92 W/kg

Zoom Scan (22.0 mm x 22.0 mm x 22.0 mm): Measurement grid: 3.4 mm x 3.4 mm x 1.4 mm
Power Drift = -0.01 dB
SAR(1 g) = 29.9 W/kg; SAR(10 g) = 5.63 W/kg
psAPD (4.0cm2, sq) = 137 W/m2
Smallest distance from peaks to all points 3 dB below = 4.8
Ratio of SAR at M2 to SAR at M1 = 51.3



System Performance Check_10GHz
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 100.0	SN:2006	

Exposure Conditions

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

Hardware Setup

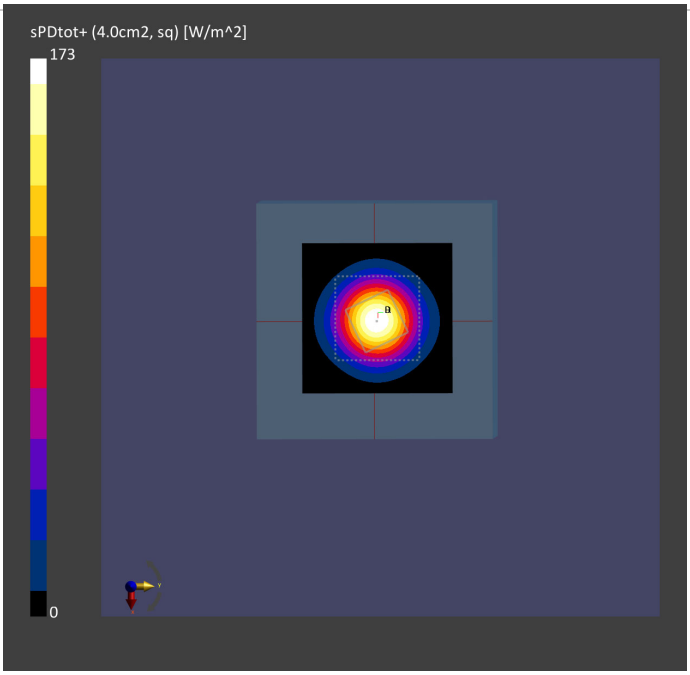
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave- 1068	Air---	EUmmWV4 - SN9546_F1-55GHz, 2023-04-18	DAE4 Sn1651, 2023-02-22

Scan Setup

	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.125 x 0.125
Sensor Surface [mm]	10.0
MAIA	N/A

Measurement Results

	5G Scan
Date	2023-09-07
Avg. Area [cm^2]	4.00
psPDn+ [W/m^2]	172
psPDtot+ [W/m^2]	173
psPDmod+ [W/m^2]	177
E_{max} [V/m]	294
Power Drift [dB]	0.00



System Performance Check_10GHz
Device under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 100.0	SN:2006	

Exposure Conditions

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

Hardware Setup

Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave- 1068	Air---	EUmmWV4 - SN9546_F1-55GHz, 2023-04-18	DAE4 Sn1651, 2023-02-22

Scan Setup

	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.125 x 0.125
Sensor Surface [mm]	10.0
MAIA	N/A

Measurement Results

	5G Scan
Date	2023-09-08
Avg. Area [cm^2]	4.00
psPDn+ [W/m^2]	166
psPDtot+ [W/m^2]	166
psPDmod+ [W/m^2]	170
E_{max} [V/m]	287
Power Drift [dB]	-0.01