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## Appendix A. System Check Data

Test Laboratory: DEKRA

Date: 2024/02/19

**System Performance Check\_2450MHz-Head****DUT: Dipole 2450 MHz; Type: D2450V2**

Communication System: UID 0, CW; Frequency: 2450 MHz

Communication System PAR: 0 dB

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.78$  S/m;  $\epsilon_r = 39.21$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

- Probe: EX3DV4 - SN3698; ConvF(7.15, 7.15, 7.15) @ 2450 MHz; Calibrated: 2023/11/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2023/11/22
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (4);

**Configuration/2450MHz-Head/Area Scan (8x9x1):** Measurement grid: dx=12mm, dy=12mm  
Maximum value of SAR (measured) = 20.1 W/kg**Configuration/2450MHz-Head/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 115.9 V/m; Power Drift = 0.10 dB

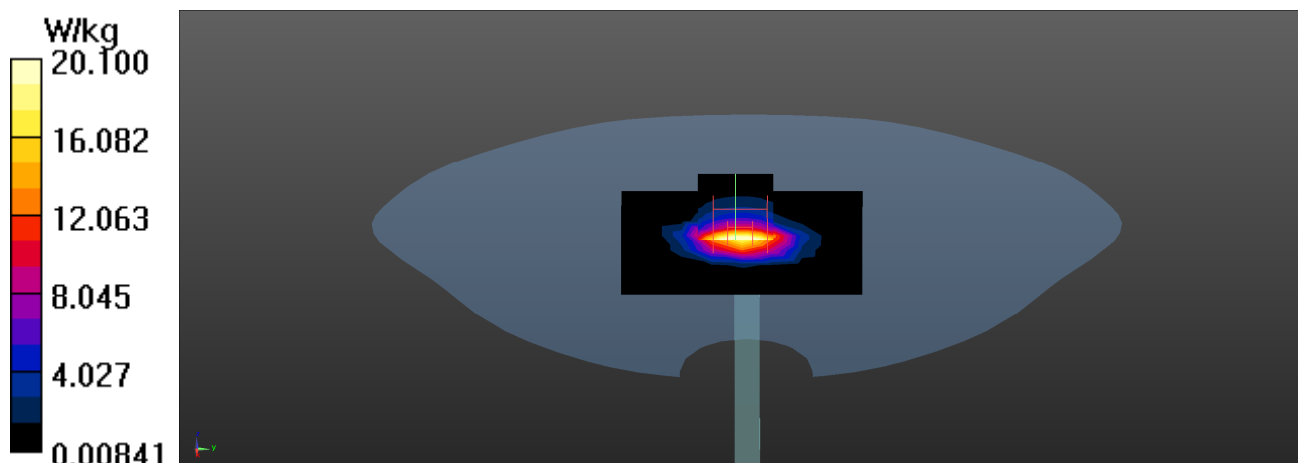
Peak SAR (extrapolated) = 26.9 W/kg

**SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.15 W/kg**

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 46.9%

Maximum value of SAR (measured) = 23.0 W/kg



Test Laboratory: DEKRA

Date: 2024/02/27

**System Performance Check\_5250MHz-Head****DUT: Dipole 5GHz; Type: D5GHzV2**

Communication System: UID 0, CW; Frequency: 5250 MHz

Communication System PAR: 0 dB

Medium parameters used:  $f = 5250$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.43$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

- Probe: EX3DV4 - SN3698; ConvF(4.71, 4.71, 4.71) @ 5250 MHz; Calibrated: 2023/11/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2023/11/22
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (4);

**Configuration/5250MHz-Head/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 15.9 W/kg**Configuration/5250MHz-Head/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 72.92 V/m; Power Drift = 0.16 dB

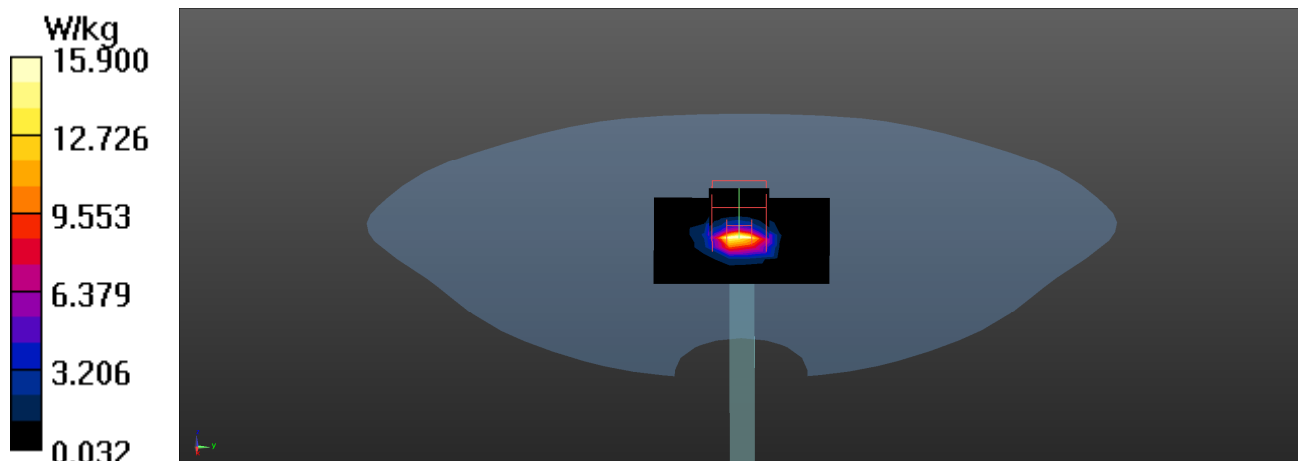
Peak SAR (extrapolated) = 27.5 W/kg

**SAR(1 g) = 8.38 W/kg; SAR(10 g) = 2.41 W/kg**

Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 65.9%

Maximum value of SAR (measured) = 21.6 W/kg



Test Laboratory: DEKRA

Date: 2024/02/27

**System Performance Check\_5600MHz-Head****DUT: Dipole 5GHz; Type: D5GHzV2**

Communication System: UID 0, CW; Frequency: 5600 MHz

Communication System PAR: 0 dB

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.26$  S/m;  $\epsilon_r = 35.46$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

- Probe: EX3DV4 - SN3698; ConvF(4.41, 4.41, 4.41) @ 5600 MHz; Calibrated: 2023/11/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2023/11/22
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (4);

**Configuration/5600MHz-Head/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 13.0 W/kg**Configuration/5600MHz-Head/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 72.85 V/m; Power Drift = 0.04 dB

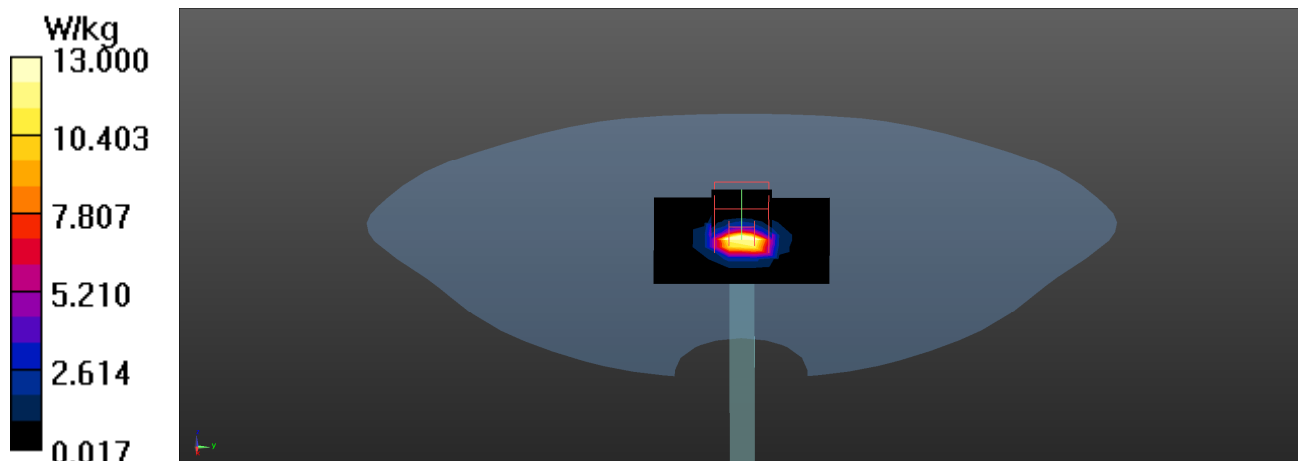
Peak SAR (extrapolated) = 30.8 W/kg

**SAR(1 g) = 8.46 W/kg; SAR(10 g) = 2.38 W/kg**

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

Ratio of SAR at M2 to SAR at M1 = 62.4%

Maximum value of SAR (measured) = 22.1 W/kg



Test Laboratory: DEKRA

Date: 2024/02/27

**System Performance Check\_5750MHz-Head****DUT: Dipole 5GHz; Type: D5GHzV2**

Communication System: UID 0, CW; Frequency: 5750 MHz

Communication System PAR: 0 dB

Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.45$  S/m;  $\epsilon_r = 35.05$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

- Probe: EX3DV4 - SN3698; ConvF(4.6, 4.6, 4.6) @ 5750 MHz; Calibrated: 2023/11/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2023/11/22
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (4);

**Configuration/5750MHz-Head/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 12.7 W/kg**Configuration/5750MHz-Head/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 69.78 V/m; Power Drift = 0.11 dB

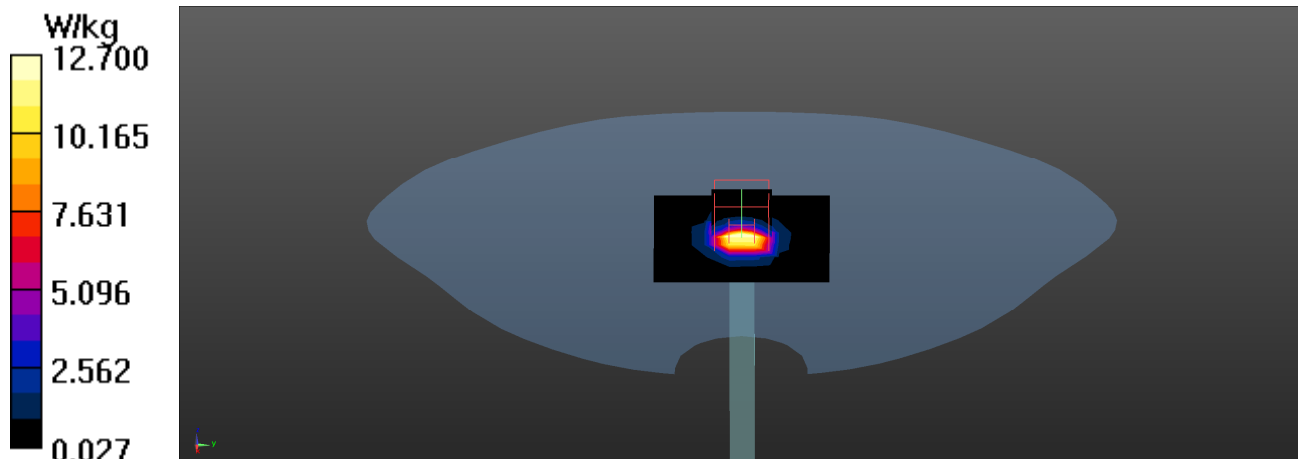
Peak SAR (extrapolated) = 30.1 W/kg

**SAR(1 g) = 8.14 W/kg; SAR(10 g) = 2.32 W/kg**

Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 61.4%

Maximum value of SAR (measured) = 21.4 W/kg



Test Laboratory: DEKRA

Date: 2024/02/27

**System Performance Check\_5850MHz-Head****DUT: Dipole 5GHz; Type: D5GHzV2**

Communication System: UID 0, CW; Frequency: 5850 MHz

Communication System PAR: 0 dB

Medium parameters used:  $f = 5850$  MHz;  $\sigma = 5.58$  S/m;  $\epsilon_r = 34.77$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

## DASY Configuration:

- Probe: EX3DV4 - SN3698; ConvF(4.6, 4.6, 4.6) @ 5850 MHz; Calibrated: 2023/11/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1207; Calibrated: 2023/11/22
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (4);

**Configuration/5850MHz-Head/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 11.2 W/kg**Configuration/5850MHz-Head/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 67.73 V/m; Power Drift = 0.06 dB

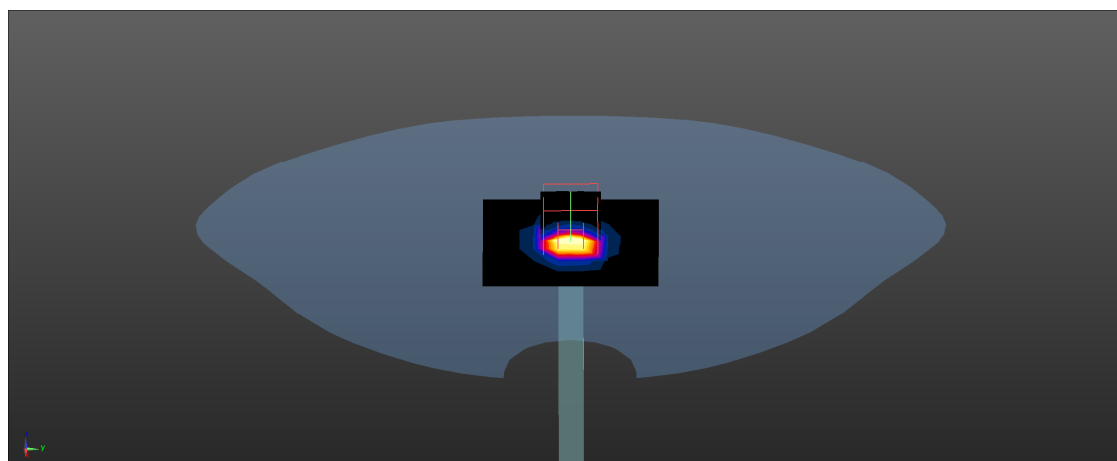
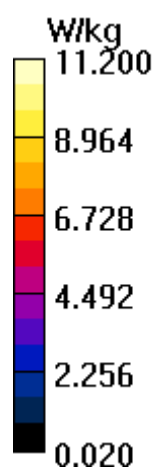
Peak SAR (extrapolated) = 33.7 W/kg

**SAR(1 g) = 7.34 W/kg; SAR(10 g) = 2.09 W/kg**

Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 60.8%

Maximum value of SAR (measured) = 19.4 W/kg



Test Laboratory: DEKRA

Date: 2024-02-20

## System Performance Check\_6500MHz-Head

Communication System: UID 0--, CW; Frequency: 6500.000 MHz

Medium parameters used:  $f = 6500.000$  MHz; Conductivity = 6.03 S/m; Permittivity = 34.32

Phantom section: Flat

DASY Configuration:

- Probe: EX3DV4 - SN7728; ConvF(5.40, 5.64, 5.34); Calibrated: 2023-11-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn916; Calibrated: 2023-11-29
- 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) = 23.3 W/kg; SAR (10 g) = 4.67 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

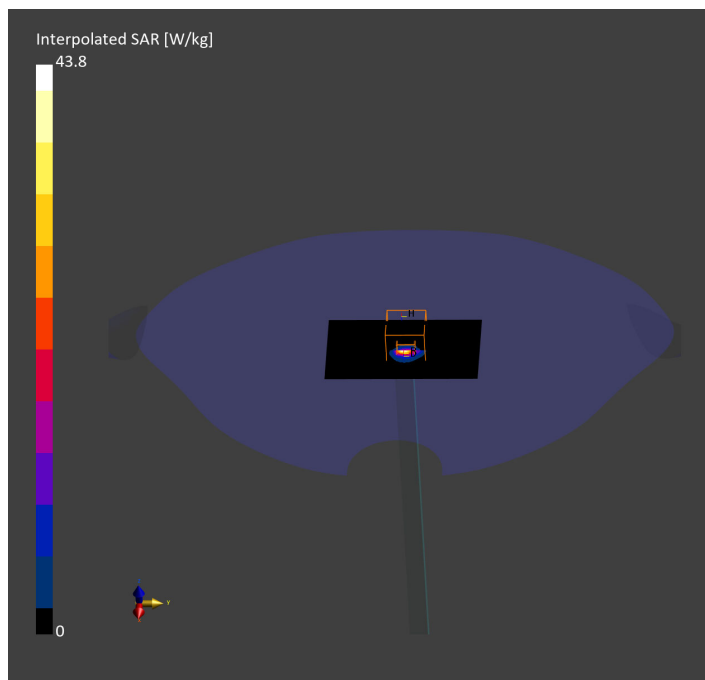
Power Drift = -0.01 dB

SAR(1 g) = 28.0 W/kg; SAR(10 g) = 5.24 W/kg

psAPD (4.0cm<sup>2</sup>, sq) = 127 W/m<sup>2</sup>

Smallest distance from peaks to all points 3 dB below = 4.6

Ratio of SAR at M2 to SAR at M1 = 50.4



**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	DAE3 Sn360, 2023-12-11

**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	2024-02-15
Avg. Area [cm <sup>2</sup> ]	4.00
psPDn+ [W/m <sup>2</sup> ]	171
psPDtot+ [W/m <sup>2</sup> ]	172
psPDmod+ [W/m <sup>2</sup> ]	176
E <sub>max</sub> [V/m]	293
Power Drift [dB]	0.01

