
Appendix A. System Check Data

Test Laboratory: DEKRA

Date: 2024/01/11

System Performance Check_2450MHz-Head**DUT: D2450V2; Type: D2450V2**

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

Communication System PAR: 0 dB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.81$ S/m; $\epsilon_r = 39.26$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (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: ELI V8.0; Type: QD OVA 004 AA; Serial: 2139
- Measurement SW: DASYS2, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Configuration/2450MHz_Head/Area Scan (10x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 18.8 W/kg

Configuration/2450MHz_Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.9 V/m; Power Drift = 0.05 dB

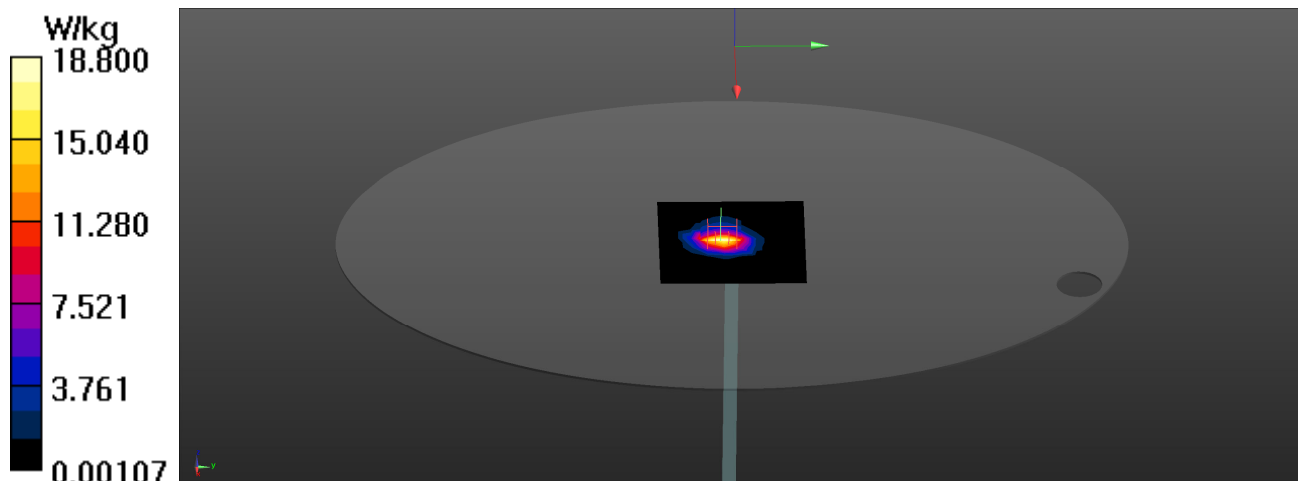
Peak SAR (extrapolated) = 25.5 W/kg

SAR(1 g) = 13 W/kg; SAR(10 g) = 6.21 W/kg

Smallest distance from peaks to all points 3 dB below = 9.1 mm

Ratio of SAR at M2 to SAR at M1 = 52.2%

Maximum value of SAR (measured) = 20.8 W/kg



Test Laboratory: DEKRA

Date: 2023/01/12

System Performance Check_5250MHz-Head**DUT: D5GHzV2; Type: D5GHzV2**

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

Communication System PAR: 0 dB

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.73$ S/m; $\epsilon_r = 36.57$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (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: ELI V8.0; Type: QD OVA 004 AA; Serial: 2139
- Measurement SW: DASYS2, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Configuration/5250MHz-Head/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 16.0 W/kg

Configuration/5250MHz-Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 55.75 V/m; Power Drift = -0.03 dB

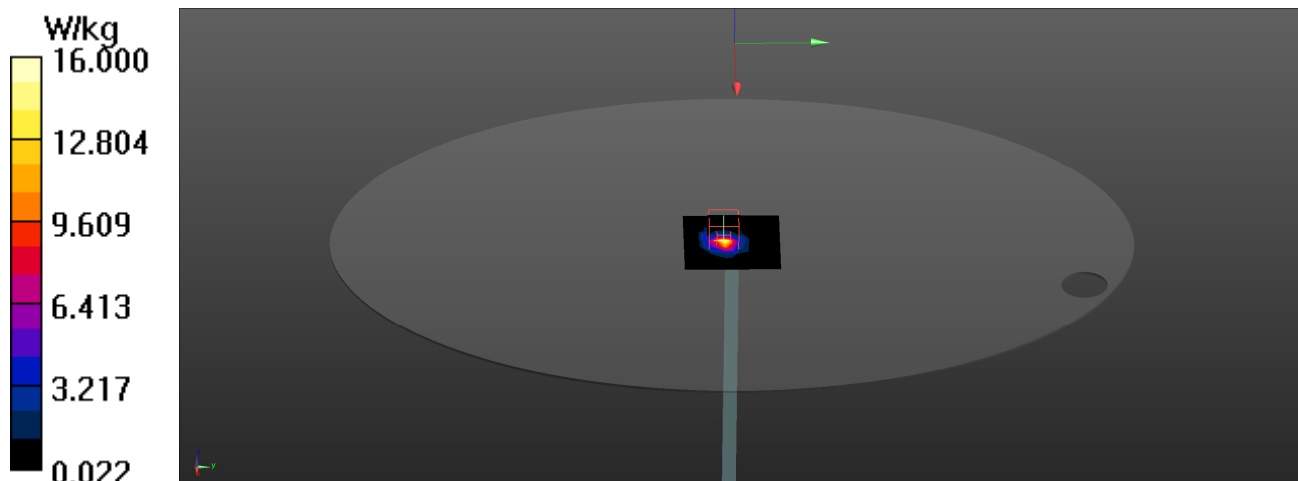
Peak SAR (extrapolated) = 25.3 W/kg

SAR(1 g) = 7.43 W/kg; SAR(10 g) = 2.17 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 64.2%

Maximum value of SAR (measured) = 18.3 W/kg



Test Laboratory: DEKRA

Date: 2023/01/12

System Performance Check_5600MHz-Head**DUT: D5GHzV2; Type: D5GHzV2**

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

Communication System PAR: 0 dB

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.21$ S/m; $\epsilon_r = 35.61$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (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: ELI V8.0; Type: QD OVA 004 AA; Serial: 2139
- Measurement SW: DASYS2, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Configuration/5600MHz-Head/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 18.4 W/kg

Configuration/5600MHz-Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 51.95 V/m; Power Drift = 0.19 dB

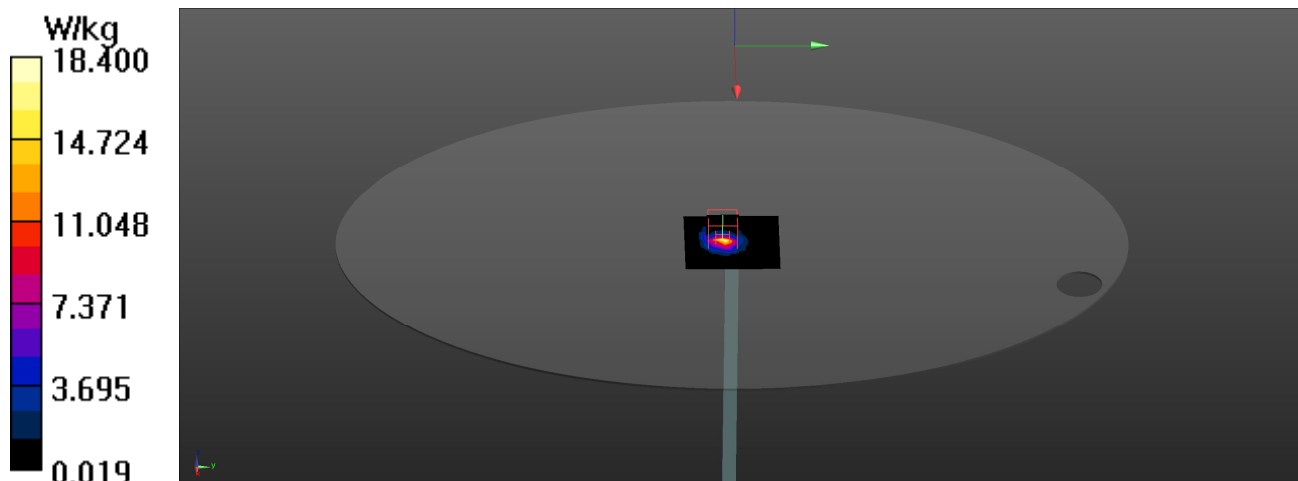
Peak SAR (extrapolated) = 29.6 W/kg

SAR(1 g) = 8.02 W/kg; SAR(10 g) = 2.32 W/kg

Smallest distance from peaks to all points 3 dB below = 7.5 mm

Ratio of SAR at M2 to SAR at M1 = 64.6%

Maximum value of SAR (measured) = 20.3 W/kg



Test Laboratory: DEKRA

Date: 2023/01/12

System Performance Check_5800MHz-Head**DUT: D5GHzV2; Type: D5GHzV2**

Communication System: UID 0, CW; Frequency: 5800 MHz

Communication System PAR: 0 dB

Medium parameters used: $f = 5800$ MHz; $\sigma = 5.47$ S/m; $\epsilon_r = 35.05$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (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: ELI V8.0; Type: QD OVA 004 AA; Serial: 2139
- Measurement SW: DASYS2, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Configuration/5800MHz-Head/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 17.2 W/kg

Configuration/5800MHz-Head/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 50.84 V/m; Power Drift = 0.05 dB

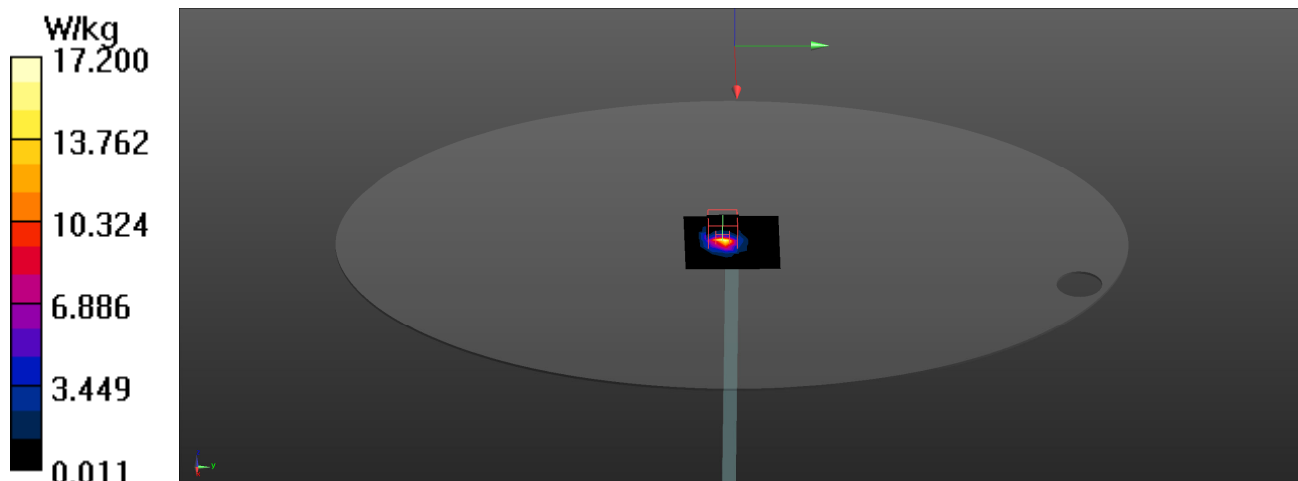
Peak SAR (extrapolated) = 30.8 W/kg

SAR(1 g) = 7.63 W/kg; SAR(10 g) = 2.18 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 62.7%

Maximum value of SAR (measured) = 19.7 W/kg



Test Laboratory: DEKRA

Date: 2023-01-15

System Performance Check_6500MHz-Head

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

Medium parameters used: $f = 6500.000$ MHz; Conductivity = 6.07 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: ELI V8.0 (20deg 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) = 20.3 W/kg; SAR (10 g) = 4.63 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

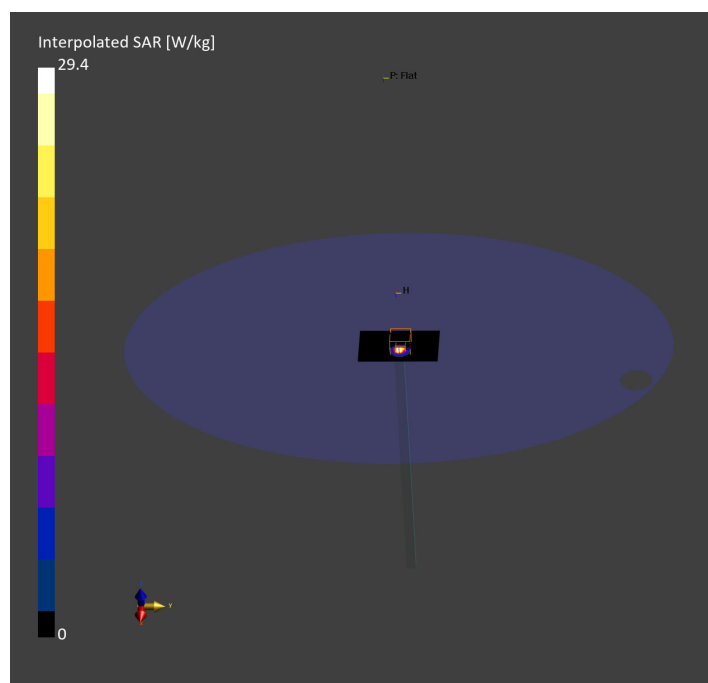
Power Drift = -0.05 dB

SAR(1 g) = 27.0 W/kg; SAR(10 g) = 5.29 W/kg

psAPD (4.0cm², sq) = 128 W/m²

Smallest distance from peaks to all points 3 dB below = 5.0

Ratio of SAR at M2 to SAR at M1 = 52.0



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	2024-01-08
Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	168
psPDtot+ [W/m ²]	169
psPDmod+ [W/m ²]	173
E _{max} [V/m]	292
Power Drift [dB]	-0.02

