
Appendix A. System Check Data

Test Laboratory: DEKRA

Date: 2023-10-06

System Performance Check_2450MHz-Head

Communication System: UID 0--, CW; Frequency: 2450.000 MHz

Medium parameters used: $f = 2450.000$ MHz; Conductivity = 1.79 S/m; Permittivity = 40.2

Phantom section: Flat

DASY Configuration:

- Probe: EX3DV4 - SN7784; ConvF(6.59, 6.82, 6.72); Calibrated: 2023-02-01
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1791; Calibrated: 2023-02-01
- Phantom: ELI V8.0 (20deg probe tilt)
- Measurement SW: V16.2.4.2524

Area Scan (40.0 mm x 80.0 mm): Measurement grid: 10.0 mm x 10.0 mm

SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.23 W/kg

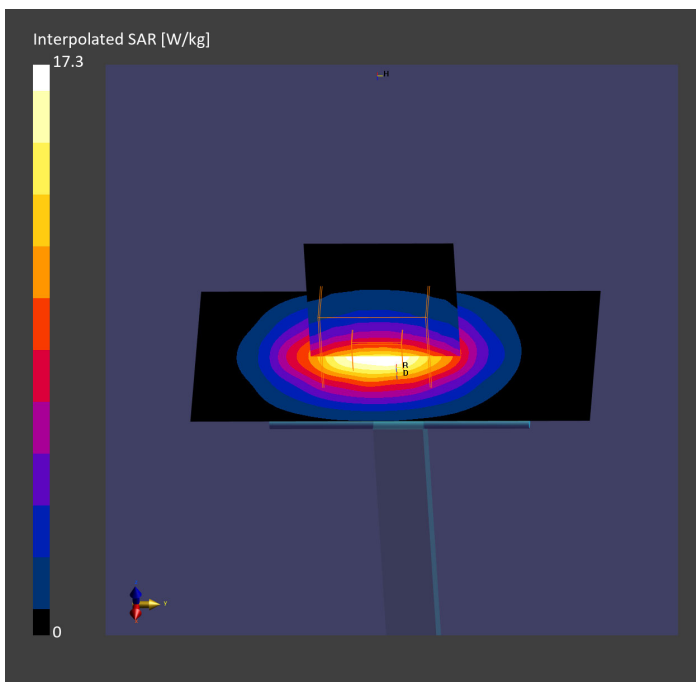
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement grid: 5.0 mm x 5.0 mm x 1.5 mm

Power Drift = 0.00 dB

SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.35 W/kg

Smallest distance from peaks to all points 3 dB below = 9.0

Ratio of SAR at M2 to SAR at M1 = 80.5



Test Laboratory: DEKRA

Date: 2023-10-03

System Performance Check_5250MHz-Head

Communication System: UID 0--, CW; Frequency: 5250.000 MHz

Medium parameters used: $f = 5250.000$ MHz; Conductivity = 4.61 S/m; Permittivity = 35.8

Phantom section: Flat

DASY Configuration:

- Probe: EX3DV4 - SN7784; ConvF(5.22, 5.31, 5.26); Calibrated: 2023-02-01
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1791; Calibrated: 2023-02-01
- Phantom: ELI V8.0 (20deg probe tilt)
- Measurement SW: V16.2.4.2524

Area Scan (40.0 mm x 80.0 mm): Measurement grid: 10.0 mm x 10.0 mm

SAR(1 g) = 7.27 W/kg; SAR(10 g) = 2.12 W/kg

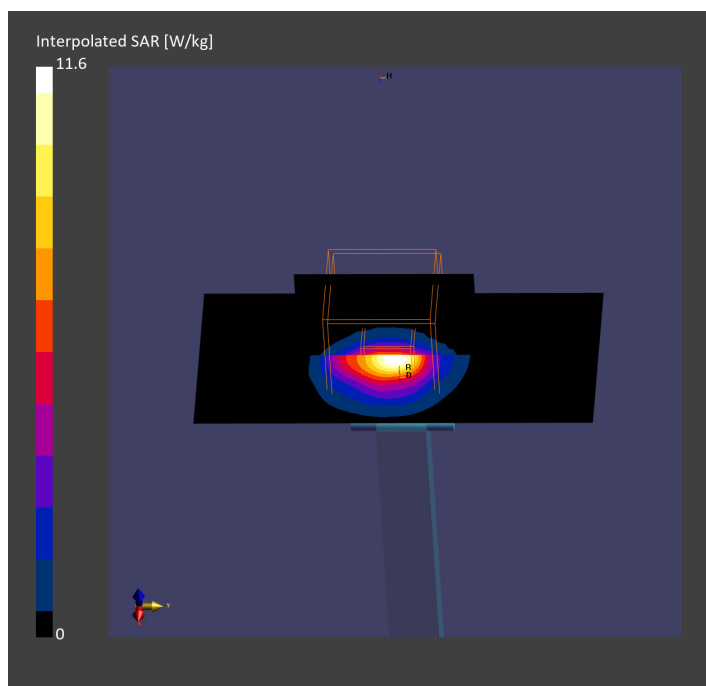
Zoom Scan (22.0 mm x 22.0 mm x 22.0 mm): Measurement grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = -0.01 dB

SAR(1 g) = 7.94 W/kg; SAR(10 g) = 2.31 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 64.9



Test Laboratory: DEKRA

Date: 2023-10-03

System Performance Check_5600MHz-Head

Communication System: UID 0--, CW; Frequency: 5600.000 MHz

Medium parameters used: $f = 5600.000$ MHz; Conductivity = 5.08 S/m; Permittivity = 34.8

Phantom section: Flat

DASY Configuration:

- Probe: EX3DV4 - SN7784; ConvF(4.31, 4.62, 4.51); Calibrated: 2023-02-01
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1791; Calibrated: 2023-02-01
- Phantom: ELI V8.0 (20deg probe tilt)
- Measurement SW: V16.2.4.2524

Area Scan (40.0 mm x 80.0 mm): Measurement grid: 10.0 mm x 10.0 mm

SAR(1 g) = 8.19 W/kg; SAR(10 g) = 2.38 W/kg

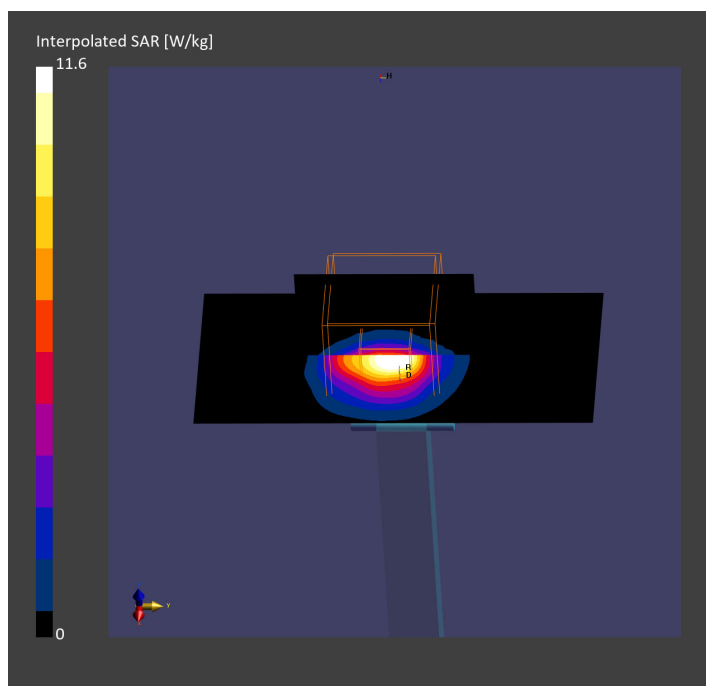
Zoom Scan (22.0 mm x 22.0 mm x 22.0 mm): Measurement grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = -0.02 dB

SAR(1 g) = 8.84 W/kg; SAR(10 g) = 2.54 W/kg

Smallest distance from peaks to all points 3 dB below = 7.3

Ratio of SAR at M2 to SAR at M1 = 63.5



Test Laboratory: DEKRA

Date: 2023-10-03

System Performance Check_5800MHz-Head

Communication System: UID 0--, CW; Frequency: 5800.000 MHz

Medium parameters used: $f = 5800.000$ MHz; Conductivity = 5.34 S/m; Permittivity = 34.3

Phantom section: Flat

DASY Configuration:

- Probe: EX3DV4 - SN7784; ConvF(4.45, 4.57, 4.5); Calibrated: 2023-02-01
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1791; Calibrated: 2023-02-01
- Phantom: ELI V8.0 (20deg probe tilt)
- Measurement SW: V16.2.2.1588

Area Scan (40.0 mm x 80.0 mm): Measurement grid: 10.0 mm x 10.0 mm

SAR(1 g) = 7.83 W/kg; SAR(10 g) = 2.27 W/kg

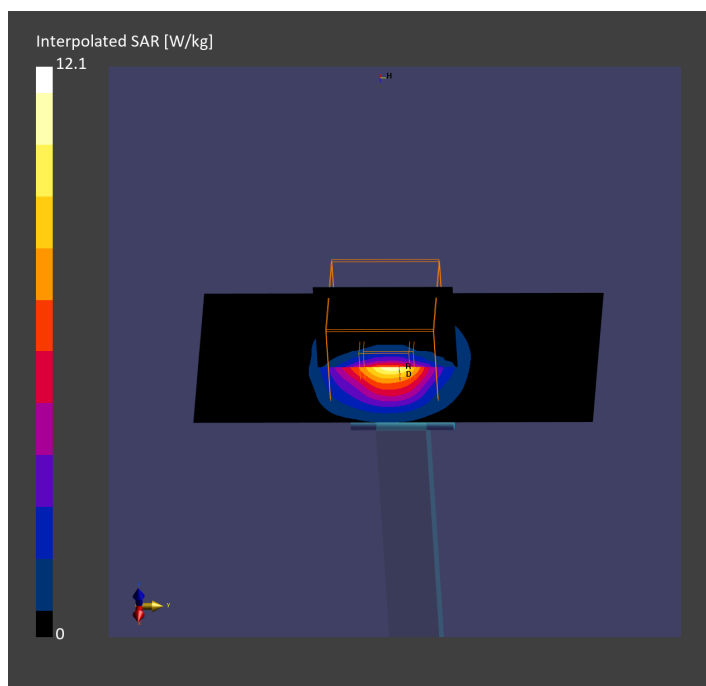
Zoom Scan (22.0 mm x 22.0 mm x 22.0 mm): Measurement grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = 0.02 dB

SAR(1 g) = 8.61 W/kg; SAR(10 g) = 2.43 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 60.6



Test Laboratory: DEKRA

Date: 2023-10-04

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 = 35.3

Phantom section: Flat

DASY Configuration:

- Probe: EX3DV4 - SN7784; ConvF(4.63, 4.59, 4.78); Calibrated: 2023-02-01
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1791; Calibrated: 2023-02-01
- 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) = 25.8 W/kg; SAR(10 g) = 5.13 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

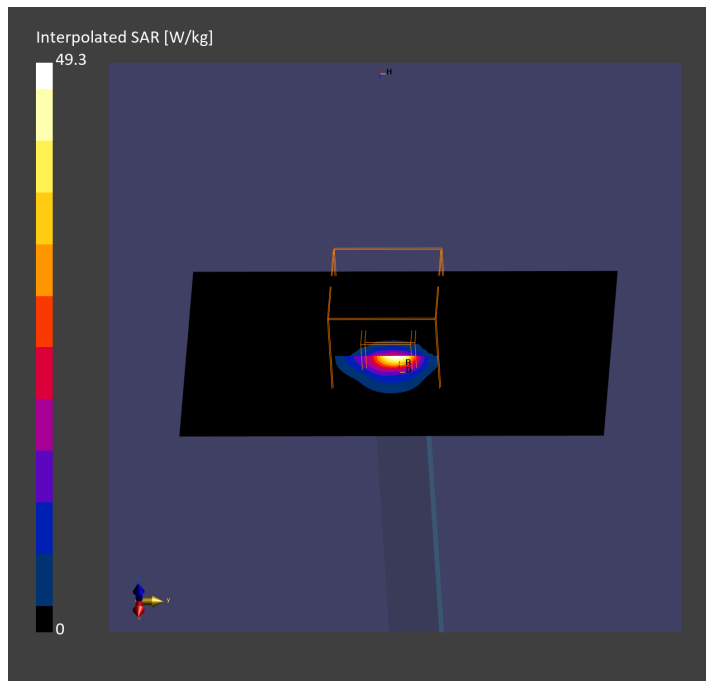
Power Drift = -0.00 dB

SAR(1 g) = 29.7 W/kg; SAR(10 g) = 5.67 W/kg

psAPD (4.0cm², sq) = 138 W/m²

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

Ratio of SAR at M2 to SAR at M1 = 50.7



Test Laboratory: DEKRA

Date: 2023-11-29

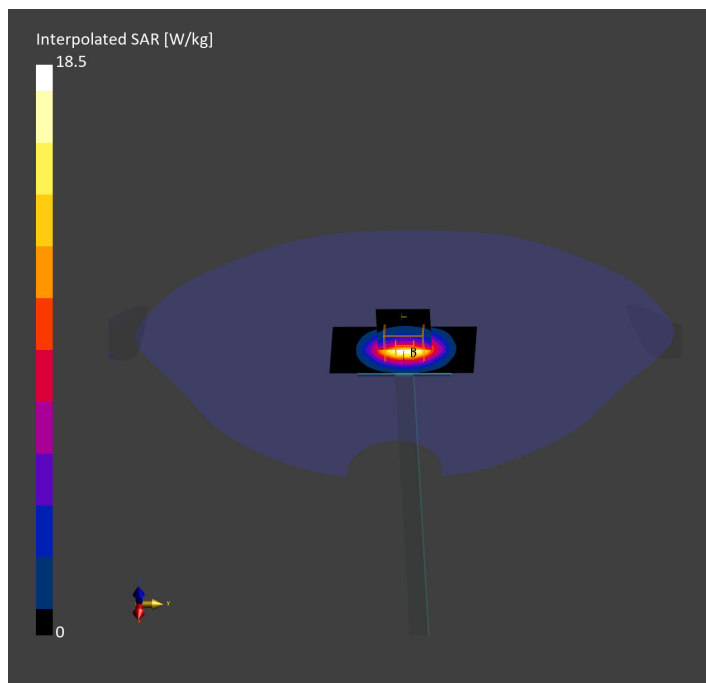
System Performance Check_2450MHz-Head

Communication System: UID 0--, CW; Frequency: 2450.000 MHz
Medium parameters used: $f = 2450.000$ MHz; Conductivity = 1.77 S/m; Permittivity = 40.27
Phantom section: Flat
DASY Configuration:

- Probe: EX3DV4 - SN7784; ConvF(6.59, 6.82, 6.72); Calibrated: 2023-02-01
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1791; Calibrated: 2023-02-01
- Phantom: Twin-SAM V8.0 (30deg probe tilt)
- Measurement SW: V16.2.4.2524

Area Scan (40.0 mm x 80.0 mm): Measurement grid: 10.0 mm x 10.0 mm
SAR (1 g) = 14.1 W/kg; SAR (10 g) = 6.51 W/kg

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement grid: 5.0 mm x 5.0 mm x 1.5 mm
Power Drift = -0.02 dB
SAR(1 g) = 14.0 W/kg; SAR(10 g) = 6.58 W/kg
Smallest distance from peaks to all points 3 dB below = 9.0
Ratio of SAR at M2 to SAR at M1 = 80.0



Test Laboratory: DEKRA

Date: 2023-11-29

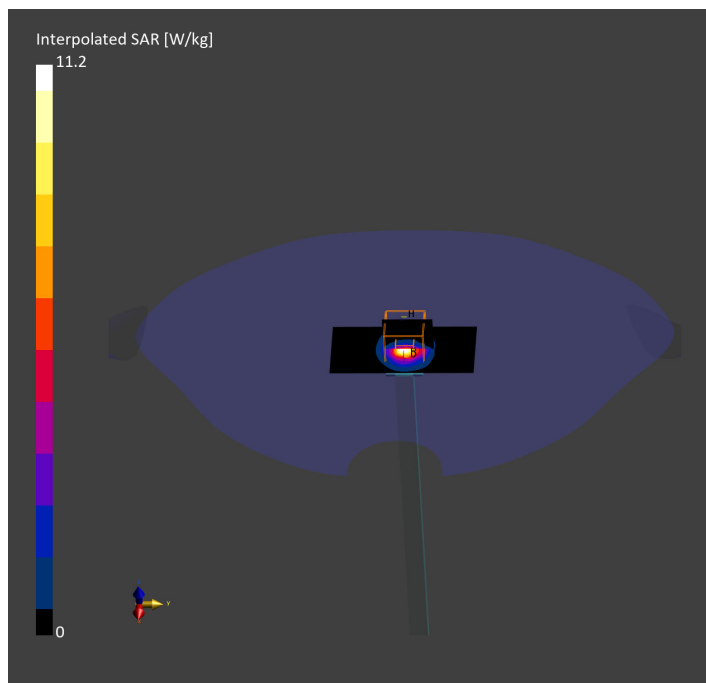
System Performance Check_5250MHz-Head

Communication System: UID 0--, CW; Frequency: 5250.000 MHz
Medium parameters used: $f = 5250.000$ MHz; Conductivity = 4.71 S/m; Permittivity = 36.46
Phantom section: Flat
DASY Configuration:

- Probe: EX3DV4 - SN7784; ConvF(5.22, 5.31, 5.26); Calibrated: 2023-02-01
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1791; Calibrated: 2023-02-01
- Phantom: Twin-SAM V8.0 (30deg probe tilt)
- Measurement SW: V16.2.4.2524

Area Scan (40.0 mm x 80.0 mm): Measurement grid: 10.0 mm x 10.0 mm
SAR (1 g) = 6.96 W/kg; SAR (10 g) = 2.04 W/kg

Zoom Scan (22.0 mm x 22.0 mm x 22.0 mm): Measurement grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = -0.01 dB
SAR(1 g) = 7.75 W/kg; SAR(10 g) = 2.27 W/kg
Smallest distance from peaks to all points 3 dB below = 7.3
Ratio of SAR at M2 to SAR at M1 = 63.0



Test Laboratory: DEKRA

Date: 2023-11-29

System Performance Check_5600MHz-Head

Communication System: UID 0--, CW; Frequency: 5600.000 MHz

Medium parameters used: $f = 5600.000$ MHz; Conductivity = 5.19 S/m; Permittivity = 35.49

Phantom section: Flat

DASY Configuration:

- Probe: EX3DV4 - SN7784; ConvF(4.31, 4.62, 4.51); Calibrated: 2023-02-01
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1791; Calibrated: 2023-02-01
- Phantom: Twin-SAM V8.0 (30deg probe tilt)
- Measurement SW: V16.2.4.2524

Area Scan (40.0 mm x 80.0 mm): Measurement grid: 10.0 mm x 10.0 mm

SAR (1 g) = 8.49 W/kg; SAR (10 g) = 2.41 W/kg

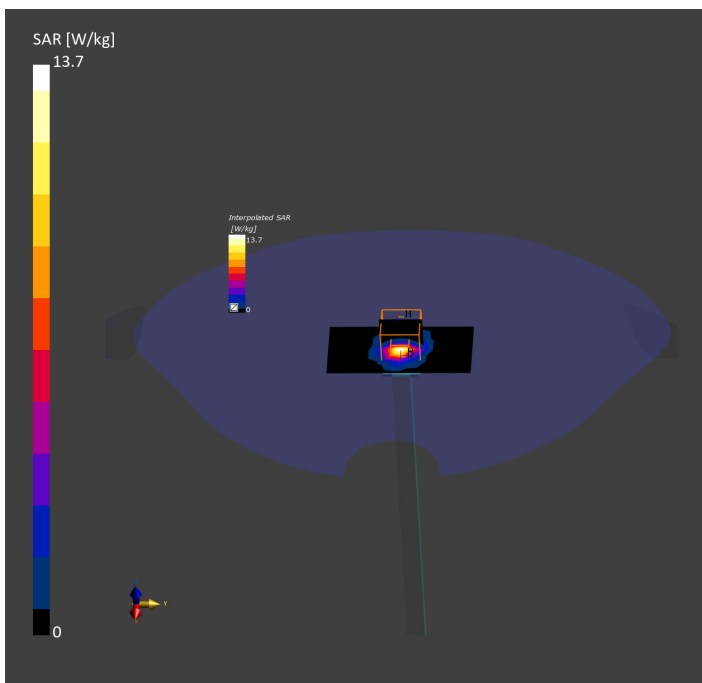
Zoom Scan (22.0 mm x 22.0 mm x 22.0 mm): Measurement grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = -0.03 dB

SAR(1 g) = 9.13 W/kg; SAR(10 g) = 2.60 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 62.8



Test Laboratory: DEKRA

Date: 2023-11-29

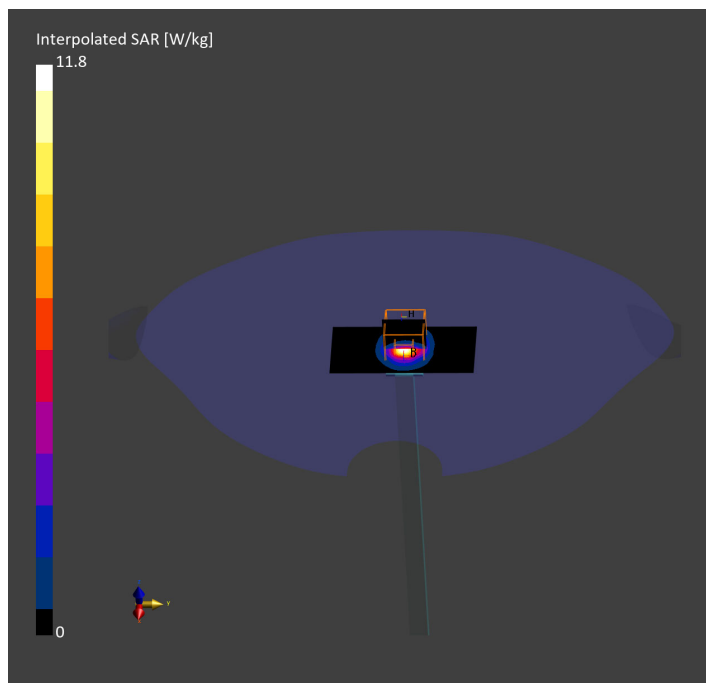
System Performance Check_5800MHz-Head

Communication System: UID 0--, CW; Frequency: 5800.000 MHz
Medium parameters used: $f = 5800.000$ MHz; Conductivity = 5.45 S/m; Permittivity = 34.94
Phantom section: Flat
DASY Configuration:

- Probe: EX3DV4 - SN7784; ConvF(4.45, 4.57, 4.5); Calibrated: 2023-02-01
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1791; Calibrated: 2023-02-01
- Phantom: Twin-SAM V8.0 (30deg probe tilt)
- Measurement SW: V16.2.4.2524

Area Scan (40.0 mm x 80.0 mm): Measurement grid: 10.0 mm x 10.0 mm
SAR (1 g) = 7.47 W/kg; SAR (10 g) = 2.15 W/kg

Zoom Scan (22.0 mm x 22.0 mm x 22.0 mm): Measurement grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = -0.02 dB
SAR(1 g) = 8.09 W/kg; SAR(10 g) = 2.31 W/kg
Smallest distance from peaks to all points 3 dB below = 7.4
Ratio of SAR at M2 to SAR at M1 = 61.3



Test Laboratory: DEKRA

Date: 2023-11-29

System Performance Check_6500MHz-Head

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

Medium parameters used: $f = 6500.000$ MHz; Conductivity = 6.11 S/m; Permittivity = 35.40

Phantom section: Flat

DASY Configuration:

- Probe: EX3DV4 - SN7784; ConvF(4.63, 4.59, 4.78); Calibrated: 2023-02-01
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1791; Calibrated: 2023-02-01
- 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) = 24.4 W/kg; SAR (10 g) = 5.09 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

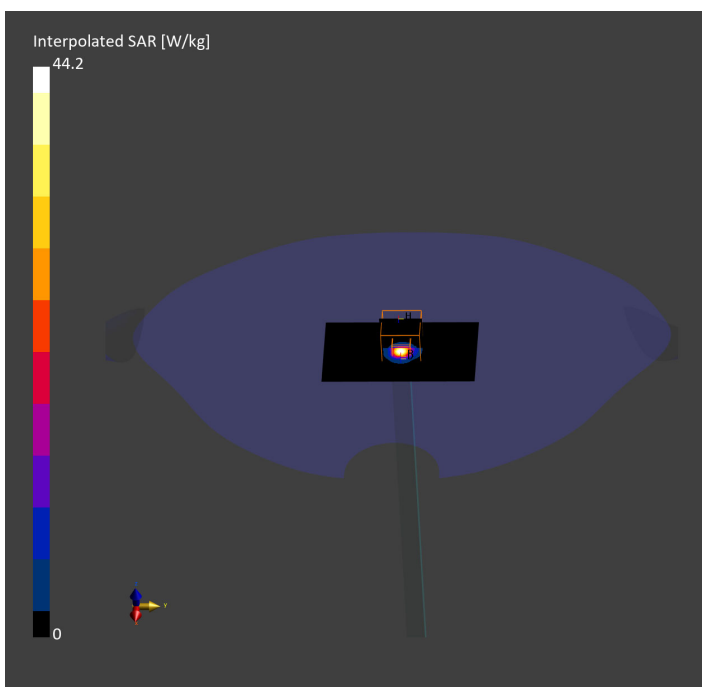
Power Drift = 0.01 dB

SAR(1 g) = 30.9 W/kg; SAR(10 g) = 5.87 W/kg

psAPD (4.0cm², sq) = 143 W/m²

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

Ratio of SAR at M2 to SAR at M1 = 50.0



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	2023-10-05
Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	162
psPDtot+ [W/m ²]	163
psPDmod+ [W/m ²]	167
E _{max} [V/m]	285
Power Drift [dB]	-0.01

