

Appendix B – System Check Plots

Date: 2024/5/7

System Performance Check at 2450 MHz

DUT: D2450V2_SN712

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 2450$ MHz; $\sigma = 1.71$ S/m; $\epsilon_r = 41.042$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.17, 7.17, 7.17) @ 2450 MHz; Calibrated: 2024/2/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1253; Calibrated: 2024/4/22
- Phantom: ELI; Type: QD OVA 001 BB; Serial: 1036
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at 2450MHz/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 3.93 W/kg

System Performance Check at 2450MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 51.22 V/m; Power Drift = 0.08 dB

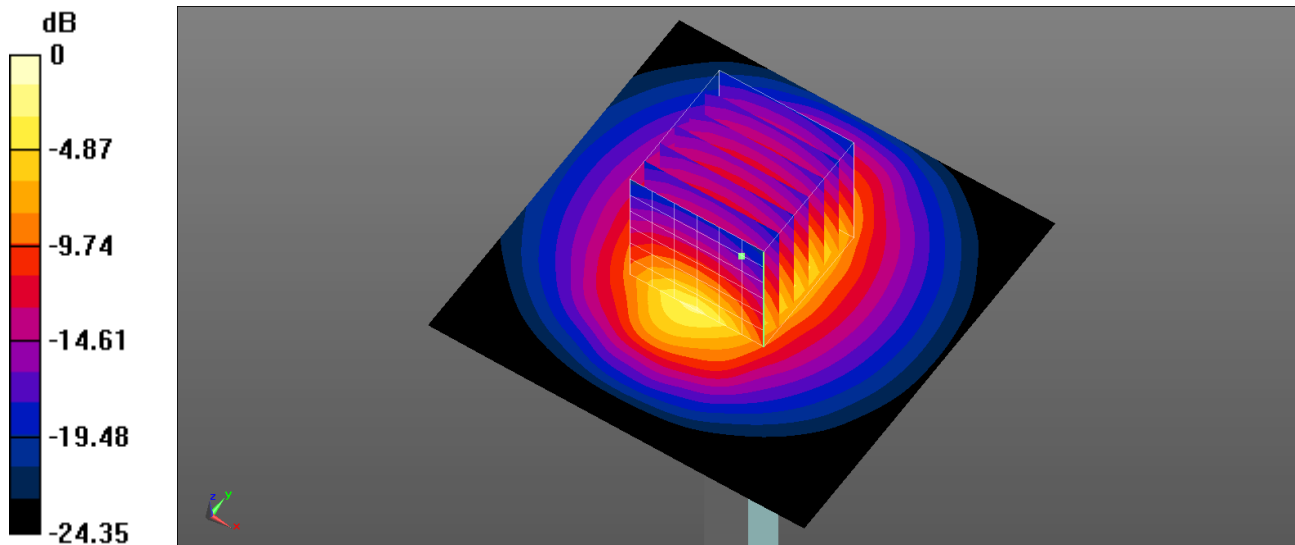
Peak SAR (extrapolated) = 4.87 W/kg

SAR(1 g) = 2.66 W/kg; SAR(10 g) = 1.28 W/kg

Smallest distance from peaks to all points 3 dB below = 9.2 mm

Ratio of SAR at M2 to SAR at M1 = 52.8%

Maximum value of SAR (measured) = 3.82 W/kg



0 dB = 3.82 W/kg = 5.82 dBW/kg

Date: 2024/5/23

System Performance Check at 2450 MHz

DUT: D2450V2_SN712

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 2450$ MHz; $\sigma = 1.891$ S/m; $\epsilon_r = 42.367$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS

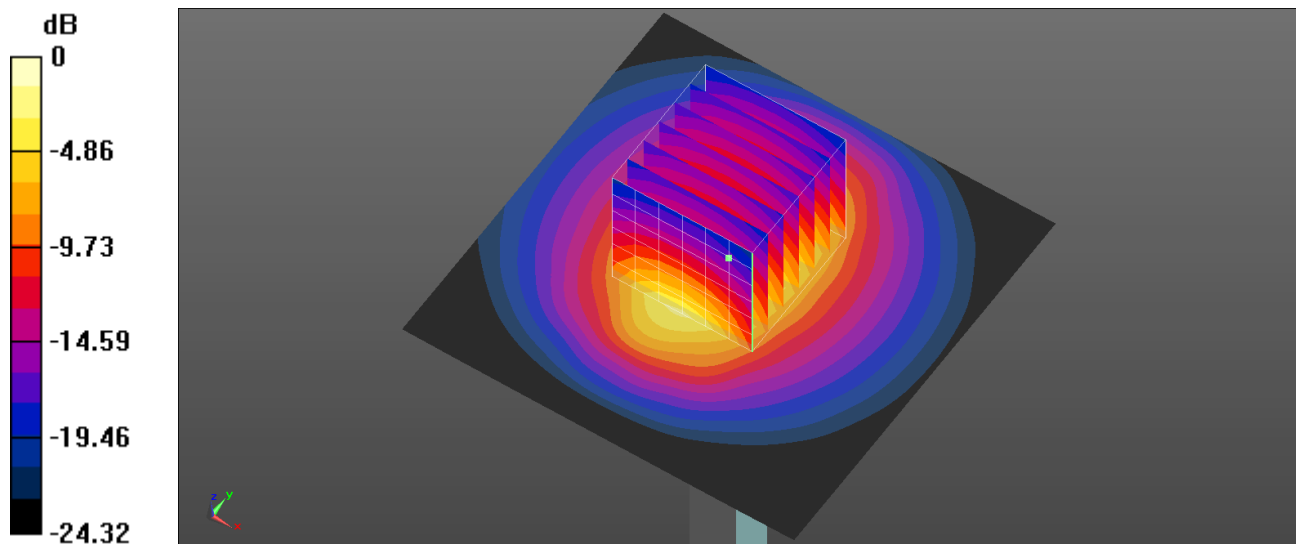
DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(7.17, 7.17, 7.17) @ 2450 MHz; Calibrated: 2024/2/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1253; Calibrated: 2024/4/22
- Phantom: ELI; Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at 2450MHz/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 4.29 W/kg

System Performance Check at 2450MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 45.94 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 5.27 W/kg
SAR(1 g) = 2.72 W/kg; SAR(10 g) = 1.31 W/kg
Smallest distance from peaks to all points 3 dB below = 9.3 mm
Ratio of SAR at M2 to SAR at M1 = 54.2%
Maximum value of SAR (measured) = 4.37 W/kg



0 dB = 4.37 W/kg = 6.4 dBW/kg

Date: 2024/5/7

System Performance Check at 5250 MHz

DUT: D5GHzV2_SN1358

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 5250$ MHz; $\sigma = 4.644$ S/m; $\epsilon_r = 38.306$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASy5

DASy5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.35, 5.35, 5.35) @ 5250 MHz; Calibrated: 2024/2/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1253; Calibrated: 2024/4/22
- Phantom: ELI; Type: QD OVA 001 BB; Serial: 1036
- Measurement SW: DASy52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at 5250MHz/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 10.4 W/kg

System Performance Check at 5250MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 49.22 V/m; Power Drift = -0.06 dB

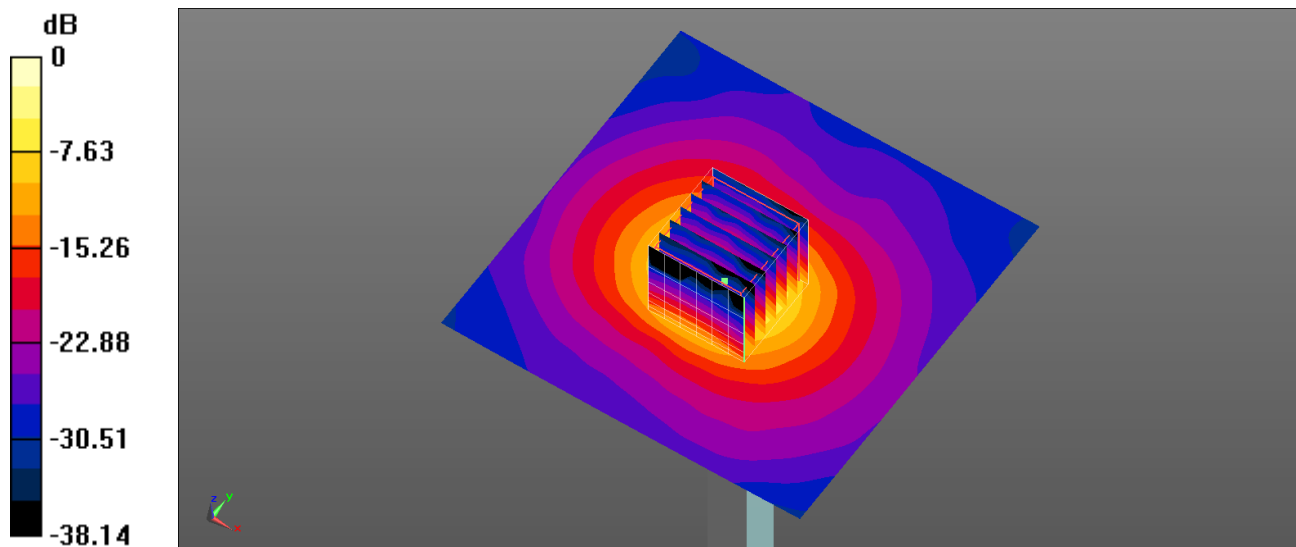
Peak SAR (extrapolated) = 17.3 W/kg

SAR(1 g) = 4.14 W/kg; SAR(10 g) = 1.18 W/kg

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

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

Maximum value of SAR (measured) = 10.2 W/kg



0 dB = 10.2 W/kg = 10.09 dBW/kg

Date: 2024/5/24

System Performance Check at 5250 MHz

DUT: D5GHzV2_SN1358

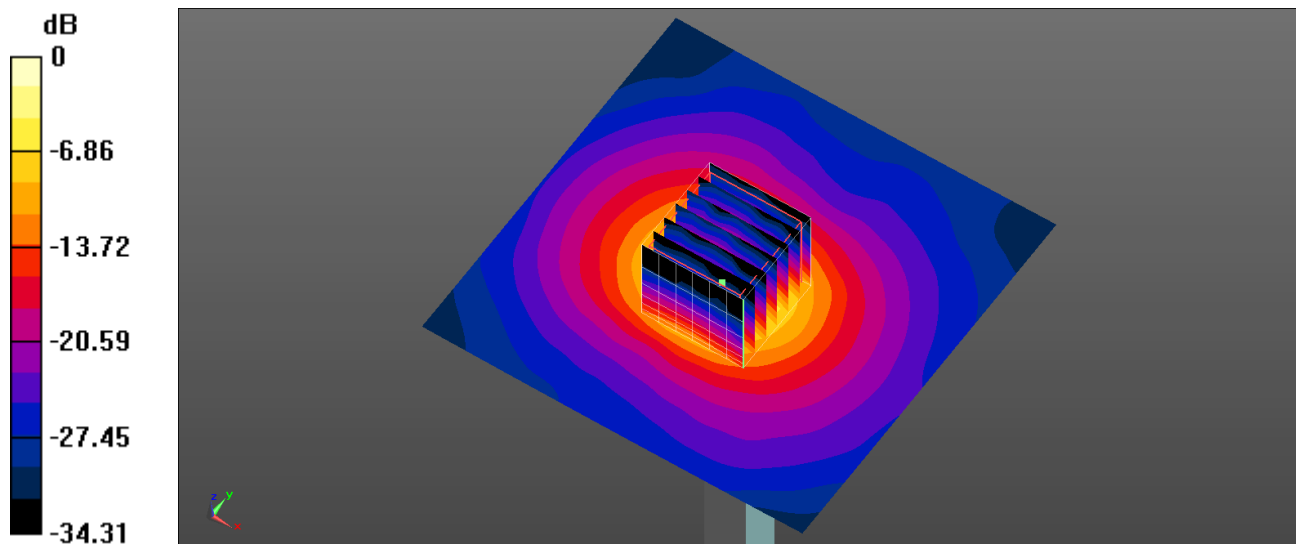
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 5250$ MHz; $\sigma = 4.67$ S/m; $\epsilon_r = 37.632$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(5.35, 5.35, 5.35) @ 5250 MHz; Calibrated: 2024/2/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1253; Calibrated: 2024/4/22
- Phantom: ELI; Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at 5250MHz/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 9.77 W/kg

System Performance Check at 5250MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 46.23 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 17.14 W/kg
SAR(1 g) = 4.21 W/kg; SAR(10 g) = 1.17 W/kg
Smallest distance from peaks to all points 3 dB below = 7.5 mm
Ratio of SAR at M2 to SAR at M1 = 61.9%
Maximum value of SAR (measured) = 10.11 W/kg



0 dB = 10.11 W/kg = 10.05 dBW/kg

Date: 2024/5/7

System Performance Check at 5600 MHz

DUT: D5GHzV2_SN1358

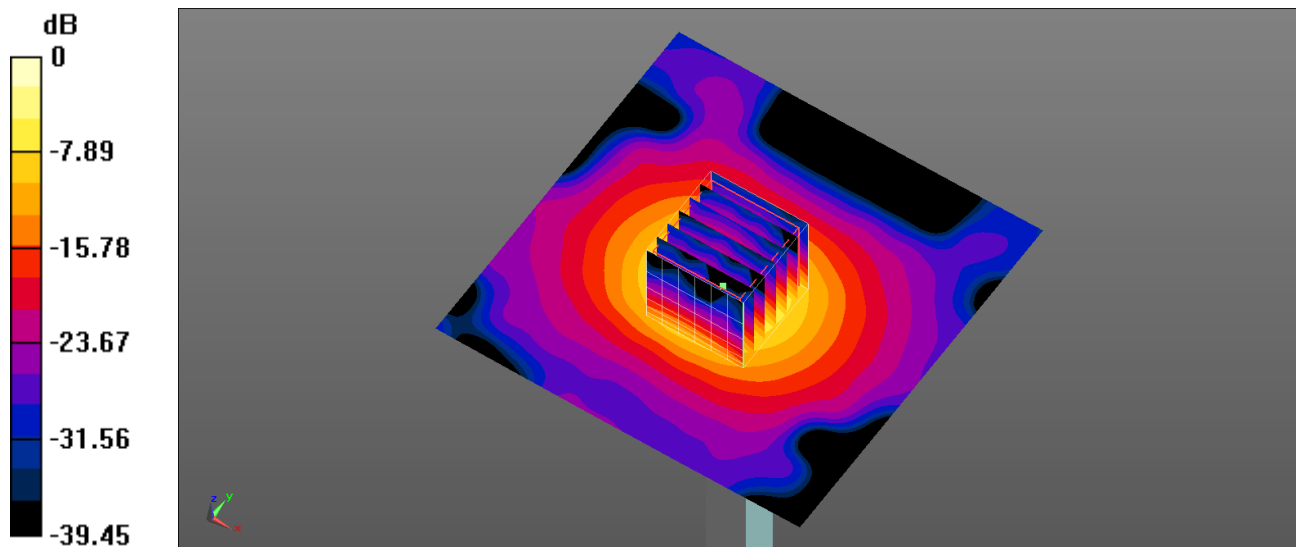
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 5600$ MHz; $\sigma = 4.982$ S/m; $\epsilon_r = 37.949$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.66, 4.66, 4.66) @ 5600 MHz; Calibrated: 2024/2/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1253; Calibrated: 2024/4/22
- Phantom: ELI; Type: QD OVA 001 BB; Serial: 1036
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at 5600MHz/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 12.0 W/kg

System Performance Check at 5600MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 52.33 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 20.2 W/kg
SAR(1 g) = 4.34 W/kg; SAR(10 g) = 1.24 W/kg
Smallest distance from peaks to all points 3 dB below = 7.4 mm
Ratio of SAR at M2 to SAR at M1 = 61.8%
Maximum value of SAR (measured) = 11.8 W/kg



0 dB = 11.8 W/kg = 10.72 dBW/kg

Date: 2024/5/24

System Performance Check at 5600 MHz

DUT: D5GHzV2_SN1358

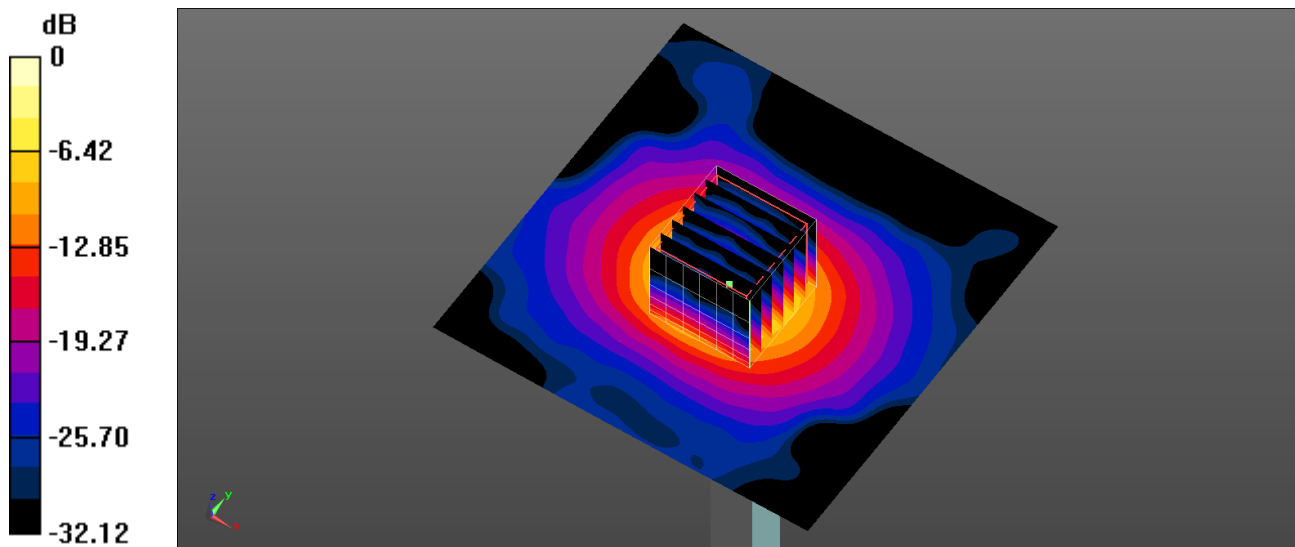
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 5600$ MHz; $\sigma = 5.13$ S/m; $\epsilon_r = 37.584$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.66, 4.66, 4.66) @ 5600 MHz; Calibrated: 2024/2/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1253; Calibrated: 2024/4/22
- Phantom: ELI; Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at 5600MHz/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 10.56 W/kg

System Performance Check at 5600MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 44.96 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 19.66 W/kg
SAR(1 g) = 4.42 W/kg; SAR(10 g) = 1.22 W/kg
Smallest distance from peaks to all points 3 dB below = 6.5 mm
Ratio of SAR at M2 to SAR at M1 = 59.2%
Maximum value of SAR (measured) = 11.13 W/kg



0 dB = 11.13 W/kg = 10.46 dBW/kg

Date: 2024/5/25

System Performance Check at 5800 MHz

DUT: D5GHzV2_SN1358

Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 5800$ MHz; $\sigma = 4.996$ S/m; $\epsilon_r = 37.836$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS

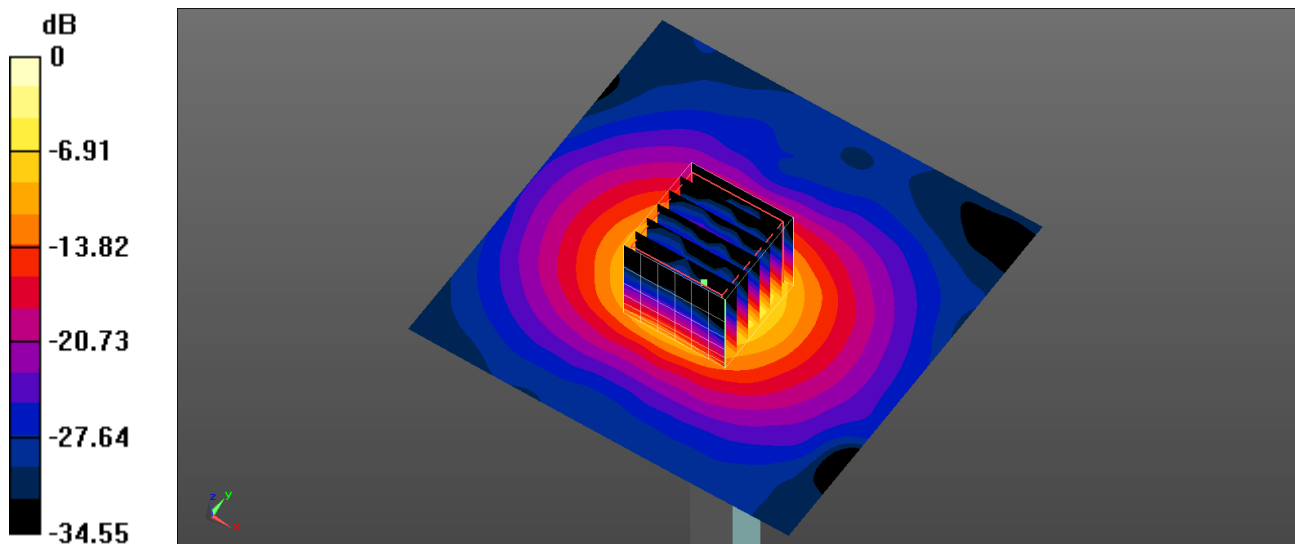
DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within:2.0dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3847; ConvF(4.79, 4.79, 4.79) @ 5800 MHz; Calibrated: 2024/2/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1253; Calibrated: 2024/4/22
- Phantom: ELI; Type: QD OVA 002 AA; Serial: 1133
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at 5800MHz/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 9.4 W/kg

System Performance Check at 5800MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 42.04 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 18.06 W/kg
SAR(1 g) = 3.83 W/kg; SAR(10 g) = 1.07 W/kg
Smallest distance from peaks to all points 3 dB below = 7.1 mm
Ratio of SAR at M2 to SAR at M1 = 52.5%
Maximum value of SAR (measured) = 9.57 W/kg



0 dB = 9.57 W/kg = 9.81 dBW/kg

Test Date : 2024-05-21 | Ambient Temp : 22.8 °C | Tissue Temp : 22.1 °C

System Performance Check

System Performance Check at 6500 MHz

Verification Source Properties

Manufacturer	Model No.	Serial No.	Input Power [dBm]
SPEAG	D6.5GHz	1016	20.0

Exposure Conditions

Phantom Section	Group	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat	CW	6500.000	5.43	6.05	34.0

Hardware Setup

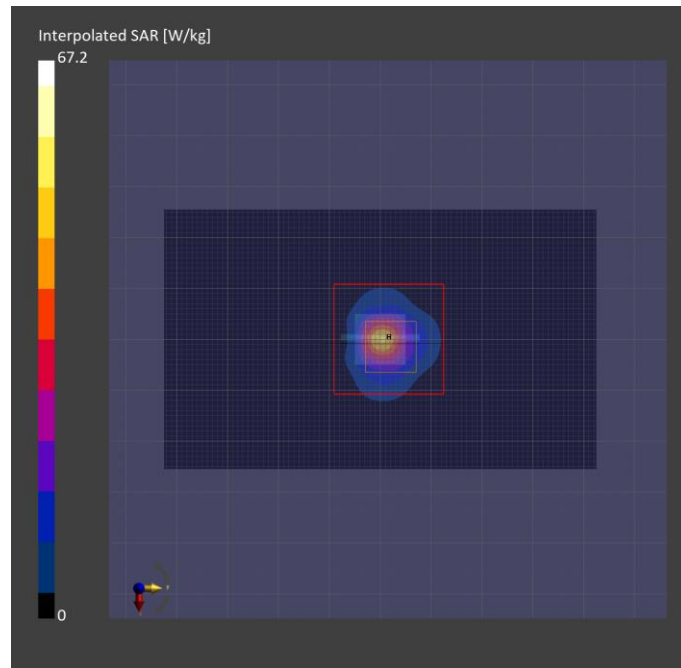
Phantom	Tissue Simulating Liquid	Probe Calibration Date	DAE Calibration Date
ELI V5.0 (20deg probe tilt) - 1175	HBBL-600-10000	EX3DV4 - SN3977 / 2024-03-21	DAE4 Sn541 / 2024-03-11

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	51.0 x 85.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Graded Grid	N/A	Yes
Grading Ratio	N/A	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR-1g [W/kg]	23.6	27.8
psSAR-8g [W/kg]	5.75	6.23
psSAR-10g [W/kg]	4.72	5.18
psAPD (1.0 cm ² , sq) [W/m ²]		272
psAPD (4.0 cm ² , sq) [W/m ²]		125
Power Drift [dB]		0.01
TSL Correction	Positive only	Positive only



Test Date : 2024-05-28 | Ambient Temp : 22.8 °C

System Performance Check

System Performance Check at 10 GHz

Verification Source Properties

Manufacturer	Model No.	Serial No.
SPEAG	10G Verification Source	2003

Exposure Conditions

Phantom Section	Group	Frequency [MHz]	Conversion Factor
5G	CW	10000.0	1.0

Hardware Setup

Phantom	Medium	Probe Calibration Date	DAE Calibration Date
mmWave - 5G Phantom	Air	EUmmWV4 - SN9639_F1-55GHz / 2023-08-18	DAE4 Sn541 / 2024-03-11

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [mm]	0.125 x 0.125
Sensor Surface [mm]	10.0

Measurement Results

	5G Scan
Avg. Area [cm ²]	4.00
psPD n+ [W/m ²]	172
psPD tot+ [W/m ²]	174
psPD mod+ [W/m ²]	175
E max [V/m]	292
Power Drift [dB]	0.03

