
Appendix B – System Check Plots

Date: 2024/4/15

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; $\sigma = 1.826$ S/m; $\epsilon_r = 40.099$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3977; ConvF(7.73, 7.11, 7.58) @ 2450 MHz; Calibrated: 2024/3/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/3/14
- Phantom: ELI; Type: QD OVA 002 AA; Serial: 1175
- 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) = 3.89 W/kg

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

Reference Value = 47.22 V/m; Power Drift = 0.13 dB

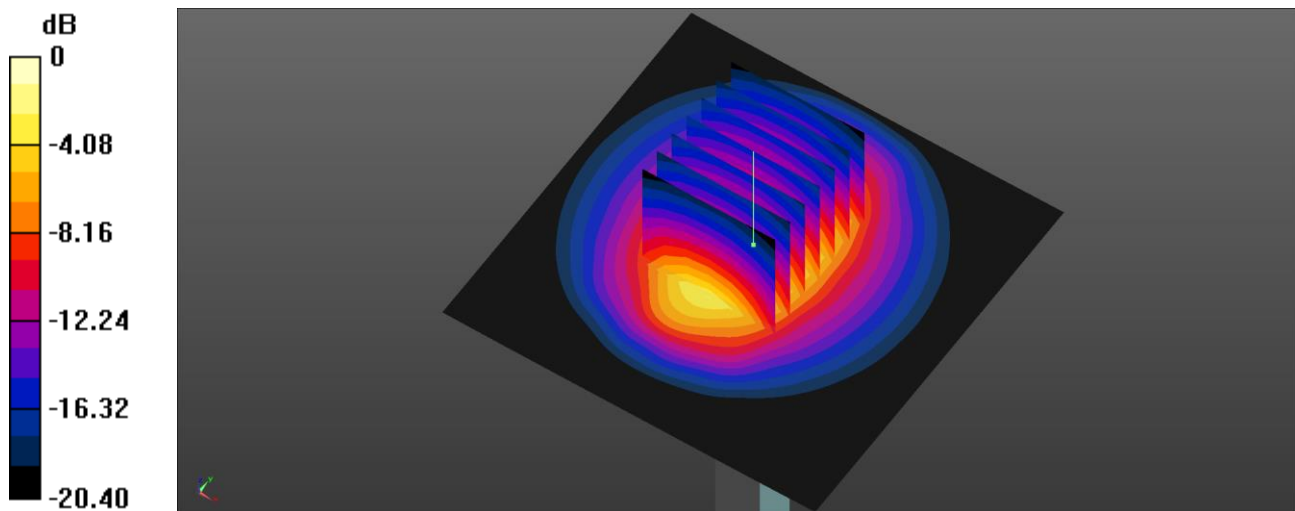
Peak SAR (extrapolated) = 4.86 W/kg

SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.16 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 50.4%

Maximum value of SAR (measured) = 3.96 W/kg



0 dB = 3.96 W/kg = 5.98 dBW/kg

Date: 2024/4/15

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; $\sigma = 4.525$ S/m; $\epsilon_r = 36.991$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3977; ConvF(5.68, 5.15, 5.5) @ 5250 MHz; Calibrated: 2024/3/21
- Sensor-Surface: 1.4 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/3/14
- Phantom: ELI; Type: QD OVA 002 AA; Serial: 1175
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

System Performance Check at 5250 MHz/Area Scan (91x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 8.17 W/kg

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

Reference Value = 47.06 V/m; Power Drift = 0.03 dB

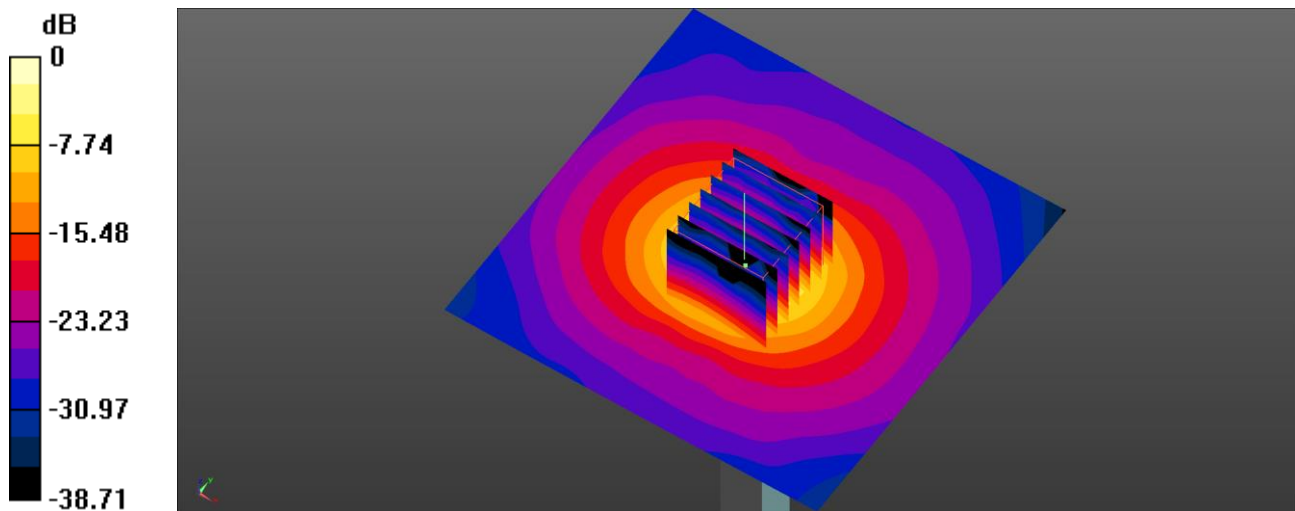
Peak SAR (extrapolated) = 14.8 W/kg

SAR(1 g) = 3.66 W/kg; SAR(10 g) = 1.07 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 63.2%

Maximum value of SAR (measured) = 8.75 W/kg



0 dB = 8.75 W/kg = 9.42 dBW/kg

Date: 2024/4/15

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; $\sigma = 4.904$ S/m; $\epsilon_r = 36.572$; $\rho = 1000$ 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 - SN3977; ConvF(4.9, 4.47, 4.74) @ 5600 MHz; Calibrated: 2024/3/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/3/14
- Phantom: ELI; Type: QD OVA 002 AA; Serial: 1175
- 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) = 11.1 W/kg

System Performance Check at 5600MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 53.56 V/m; Power Drift = 0.04 dB

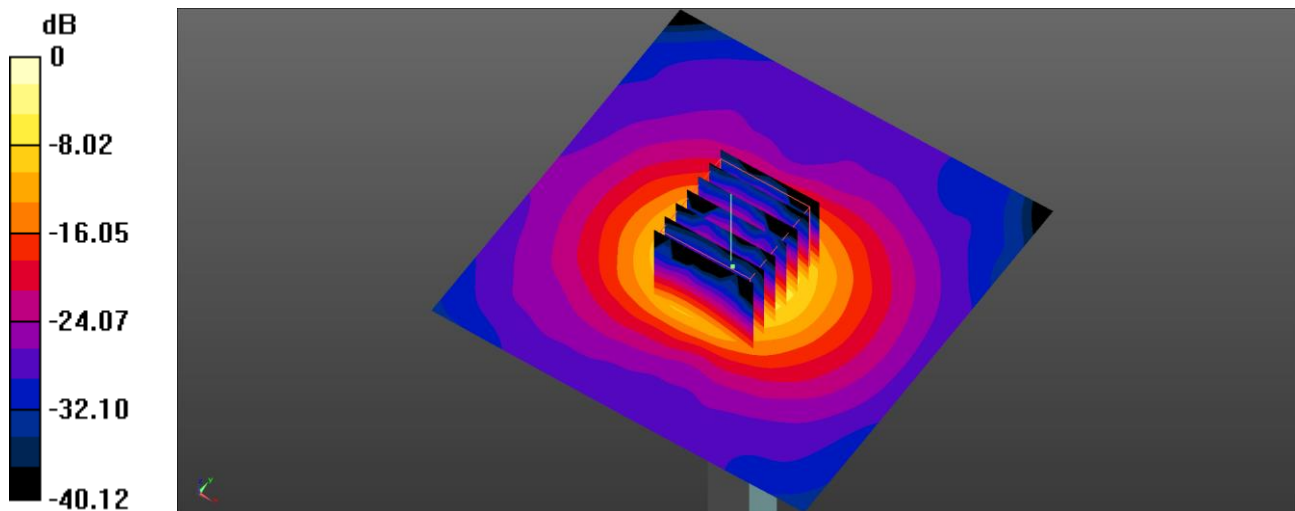
Peak SAR (extrapolated) = 20.4 W/kg

SAR(1 g) = 4.17 W/kg; SAR(10 g) = 1.23 W/kg

Smallest distance from peaks to all points 3 dB below = 6.8 mm

Ratio of SAR at M2 to SAR at M1 = 61.3%

Maximum value of SAR (measured) = 11.6 W/kg



0 dB = 11.6 W/kg = 10.64 dBW/kg

Date: 2024/4/15

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; $\sigma = 5.125$ S/m; $\epsilon_r = 36.393$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5

DASY5.2 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.5 W/Kg
- Probe: EX3DV4 - SN3977; ConvF(5.03, 4.62, 4.96) @ 5800 MHz; Calibrated: 2024/3/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/3/14
- Phantom: ELI; Type: QD OVA 002 AA; Serial: 1175
- 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) = 8.18 W/kg

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

Reference Value = 45.30 V/m; Power Drift = 0.00 dB

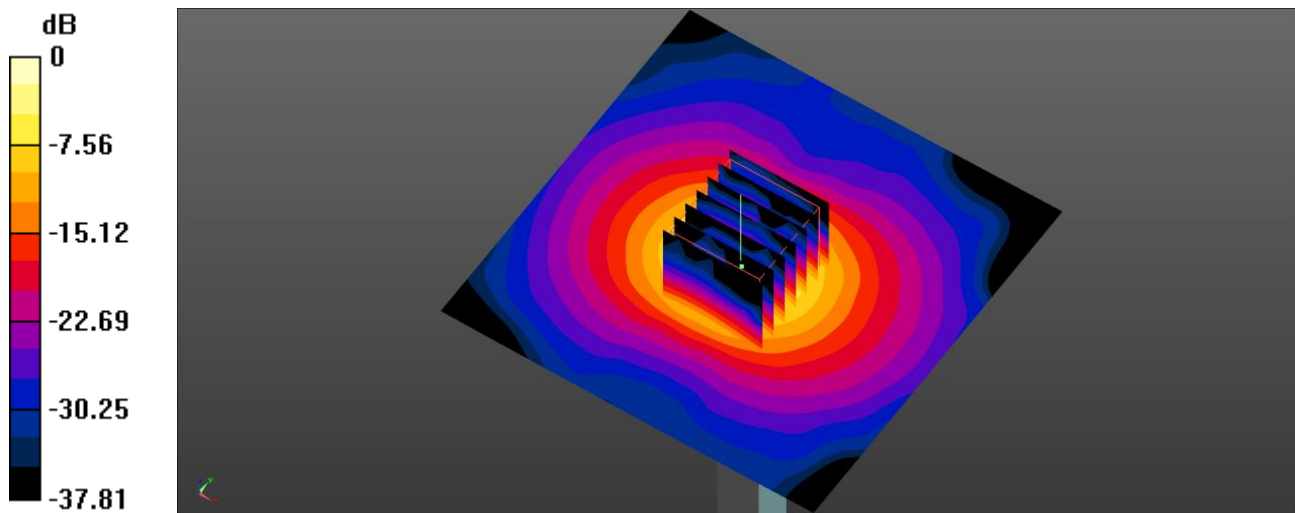
Peak SAR (extrapolated) = 16.1 W/kg

SAR(1 g) = 3.81 W/kg; SAR(10 g) = 1.11 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 59.4%

Maximum value of SAR (measured) = 8.83 W/kg



Test Date : 2024-4-16 | Ambient Temp : 22.8 °C | Tissue Temp : 22.0 °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	6.06	35.1

Hardware Setup

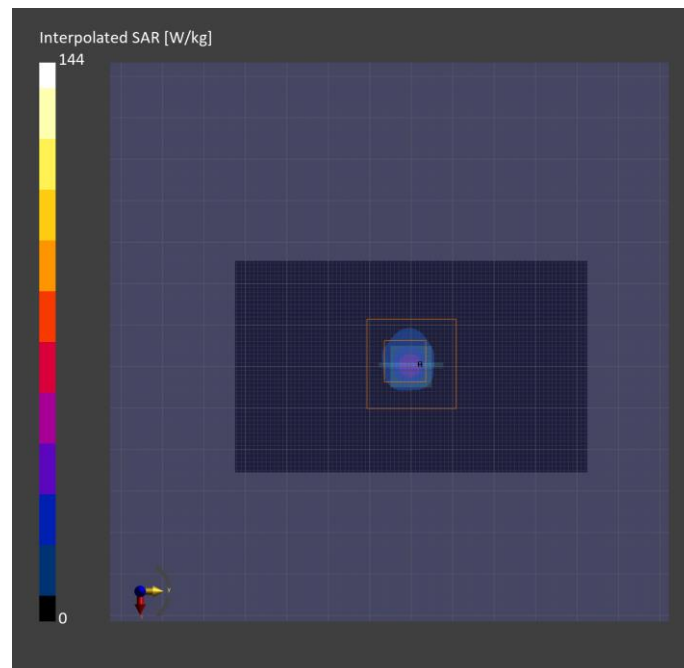
Phantom	Tissue Simulating Liquid	Probe Calibration Date	DAE Calibration Date
ELI V5.0 (20deg probe tilt) - 1175	HBBL-600-10000N2	EX3DV4 - SN3977 / 2024-03-21	DAE4 Sn779 / 2024-3-14

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]	24.1	27.3
psSAR-8g [W/kg]	5.58	6.12
psSAR-10g [W/kg]	4.73	5.11
psAPD (1.0 cm ² , sq) [W/m ²]		273
psAPD (4.0 cm ² , sq) [W/m ²]		125
Power Drift [dB]		0.04
TSL Correction	Positive only	Positive only



Test Date : 2024-04-17 | Ambient Temp : 22.9 °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 Sn779 / 2024-03-14

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]	169
psPD tot+ [W/m ²]	171
psPD mod+ [W/m ²]	175
E max [V/m]	294
Power Drift [dB]	0.11

