

Appendix B – System Check Plots

Date: 2025/1/6

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 (interpolated): $f = 2450$ MHz; $\sigma = 1.788$ S/m; $\epsilon_r = 39.264$; $\rho = 1000$ 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 - SN3847; ConvF(7.17, 7.17, 7.17) @ 2450 MHz; Calibrated: 2024/2/21
- Sensor-Surface: 1.4 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2024/10/28
- 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 2450 MHz/Area Scan (71x71x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 5.72 W/kg

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

Reference Value = 60.06 V/m; Power Drift = 0.12 dB

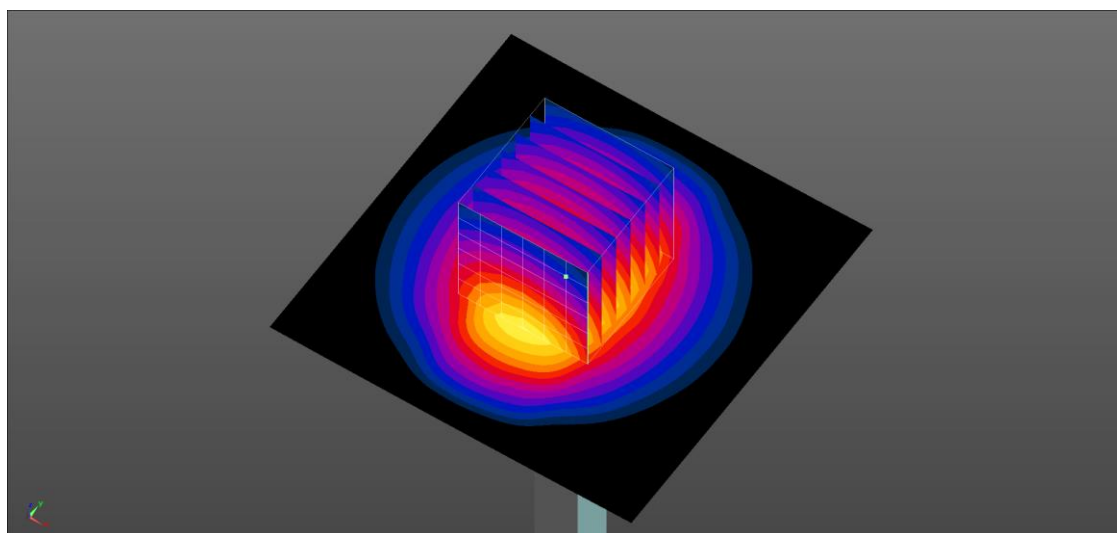
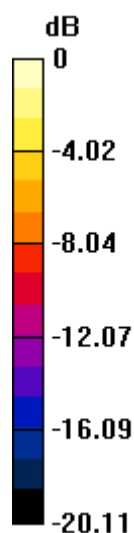
Peak SAR (extrapolated) = 6.44 W/kg

SAR(1 g) = 2.8 W/kg; SAR(10 g) = 1.38 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.4 mm

Ratio of SAR at M2 to SAR at M1 = 59.8%

Maximum value of SAR (measured) = 5.62 W/kg



0 dB = 5.62 W/kg = 7.50 dBW/kg

Date: 2025/1/7

System Performance Check at 5250 MHz

DUT: D5GHzV2_SN1021

Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5250$ MHz; $\sigma = 4.754$ S/m; $\epsilon_r = 34.413$; $\rho = 1000$ 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 Sn541; Calibrated: 2024/10/28
- 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 5250MHz/Area Scan (91x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 12.5 W/kg

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

Reference Value = 59.64 V/m; Power Drift = -0.02 dB

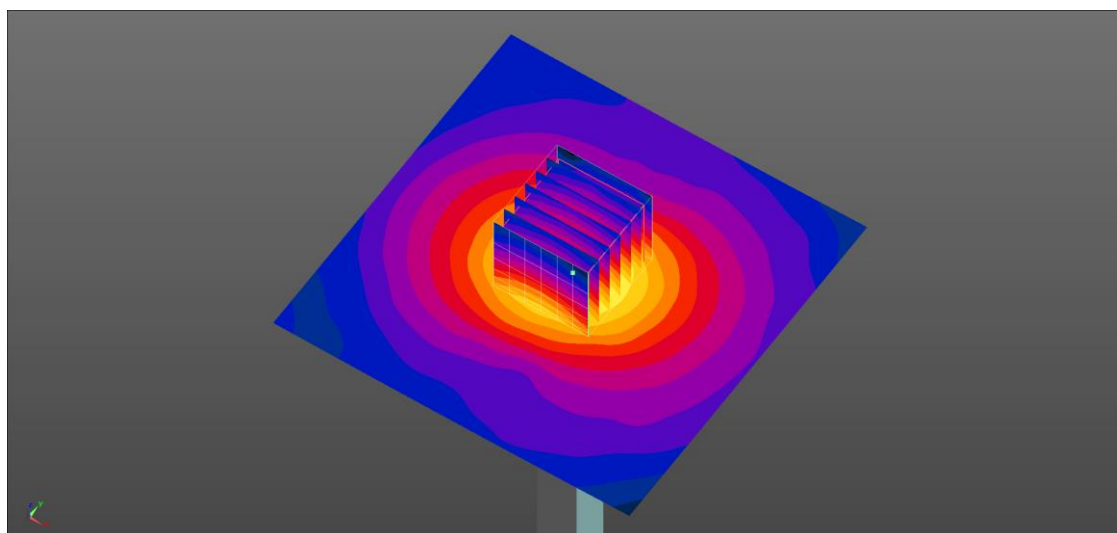
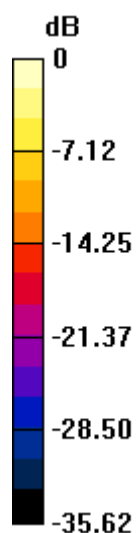
Peak SAR (extrapolated) = 19.5 W/kg

SAR(1 g) = 3.95 W/kg; SAR(10 g) = 1.15 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.2 mm

Ratio of SAR at M2 to SAR at M1 = 60%

Maximum value of SAR (measured) = 13.4 W/kg



0 dB = 13.4 W/kg = 11.27 dBW/kg

Date: 2025/1/7

System Performance Check at 5600 MHz

DUT: D5GHzV2_SN1021

Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.141$ S/m; $\epsilon_r = 33.997$; $\rho = 1000$ 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 - SN3847; ConvF(4.66, 4.66, 4.66) @ 5600 MHz; Calibrated: 2024/2/21
- Sensor-Surface: 1.4 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn541; Calibrated: 2024/10/28
- 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 5600 MHz/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 5600 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 53.23 V/m; Power Drift = -0.01 dB

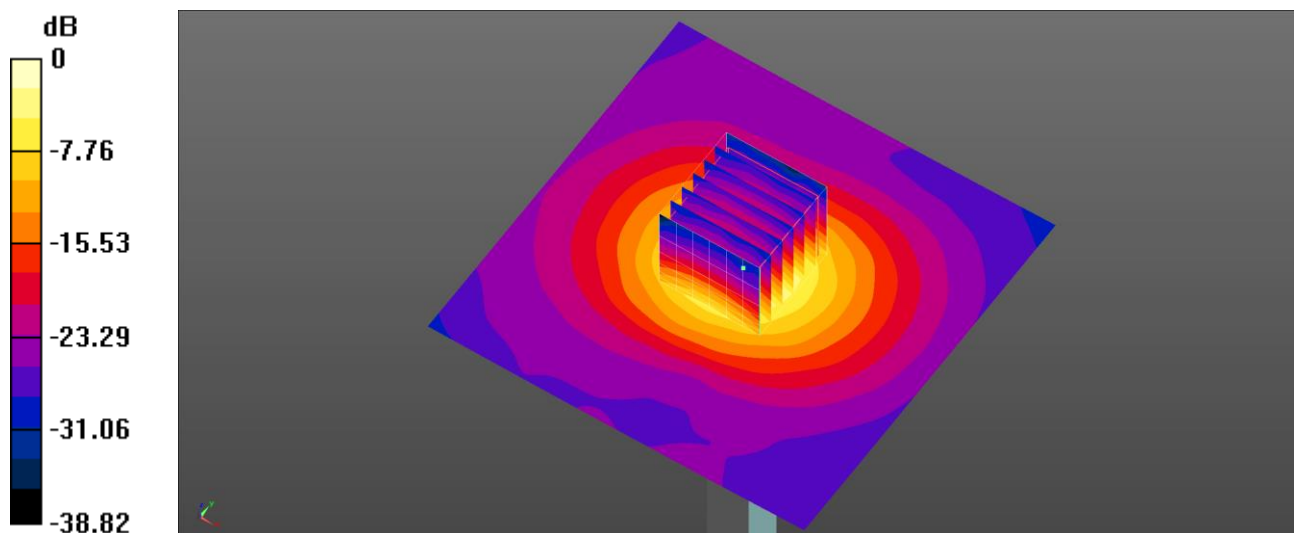
Peak SAR (extrapolated) = 19.5 W/kg

SAR(1 g) = 4.33 W/kg; SAR(10 g) = 1.28 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.2 mm

Ratio of SAR at M2 to SAR at M1 = 66.6%

Maximum value of SAR (measured) = 12.4 W/kg



0 dB = 12.4 W/kg = 10.93 dBW/kg

Date: 2025/1/7

System Performance Check at 5800 MHz

DUT: D5GHzV2_SN1021

Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5800$ MHz; $\sigma = 5.385$ S/m; $\epsilon_r = 33.823$; $\rho = 1000$ 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 Sn541; Calibrated: 2024/10/28
- 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) = 13.4 W/kg

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

Reference Value = 55.64 V/m; Power Drift = -0.14 dB

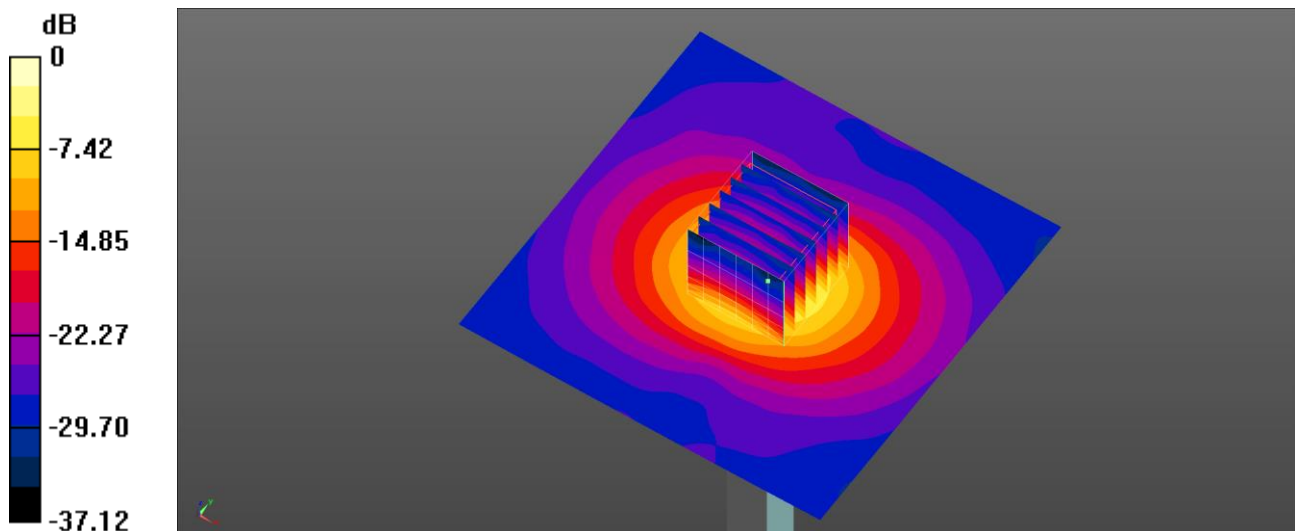
Peak SAR (extrapolated) = 22.3 W/kg

SAR(1 g) = 4.01 W/kg; SAR(10 g) = 1.15 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 7.6 mm

Ratio of SAR at M2 to SAR at M1 = 65.2%

Maximum value of SAR (measured) = 13.8 W/kg



Test Date : 2025-01-08 | Ambient Temp : 21.6 °C | Tissue Temp : 20.6 °C

System Performance Check**System Performance Check at 6500 MHz****Verification Source Properties**

Manufacturer	Model No.	Serial No.	Input Power [dBm]
SPEAG	D6.5GHzV2	1016	20.0

Exposure Conditions

Phantom Section	Group	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat	CW	6500.000	5.5	6.18	33.0

Hardware Setup

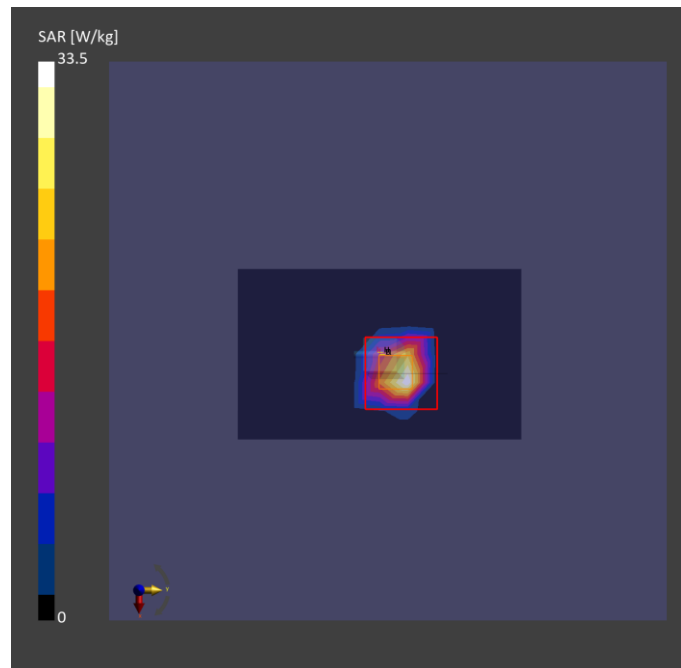
Phantom	Tissue Simulating Liquid	Probe Calibration Date	DAE Calibration Date
ELI V5.0 (20deg probe tilt) - 1175	HBBL-600-10000V6	EX3DV4 - SN3847 / 2024-02-21	DAE4 Sn541 / 2024-10-28

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]	23.8	30.8
psSAR-8g [W/kg]	6.57	7.16
psSAR-10g [W/kg]	5.46	5.89
psAPD (1.0 cm ² , sq) [W/m ²]		308
psAPD (4.0 cm ² , sq) [W/m ²]		144
Power Drift [dB]		0.03
TSL Correction	Positive only	Positive only



Test Date : 2025-01-10 | Ambient Temp : 22.4 °C

System Performance Check**System Performance Check at 10 GHz****Verification Source Properties**

Manufacturer	Model No.	Serial No.
SPEAG	5G Verification Source 10GHz	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	EUmmWV3 - SN9403_F1- 55GHz / 2024-11-15	DAE4 Sn541 / 2024-10-28

Scan Setup

	5G Scan
Grid Extents [mm]	60.0 x 60.0
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]	171
psPD tot+ [W/m ²]	173
psPD mod+ [W/m ²]	176
E max [V/m]	272
Power Drift [dB]	0.15

