

## **Appendix B – System Check Plots**

Date: 2025/3/12

**System Performance Check at 2450**

**DUT: D2450V2\_SN712**

Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.849$  S/m;  $\epsilon_r = 39.837$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 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(7.01, 6.75, 6.74) @ 2450 MHz; Calibrated: 2025/2/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/6/5
- 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) = 6.15 W/kg

**System Performance Check at 2450MHz/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 60.82 V/m; Power Drift = 0.07 dB

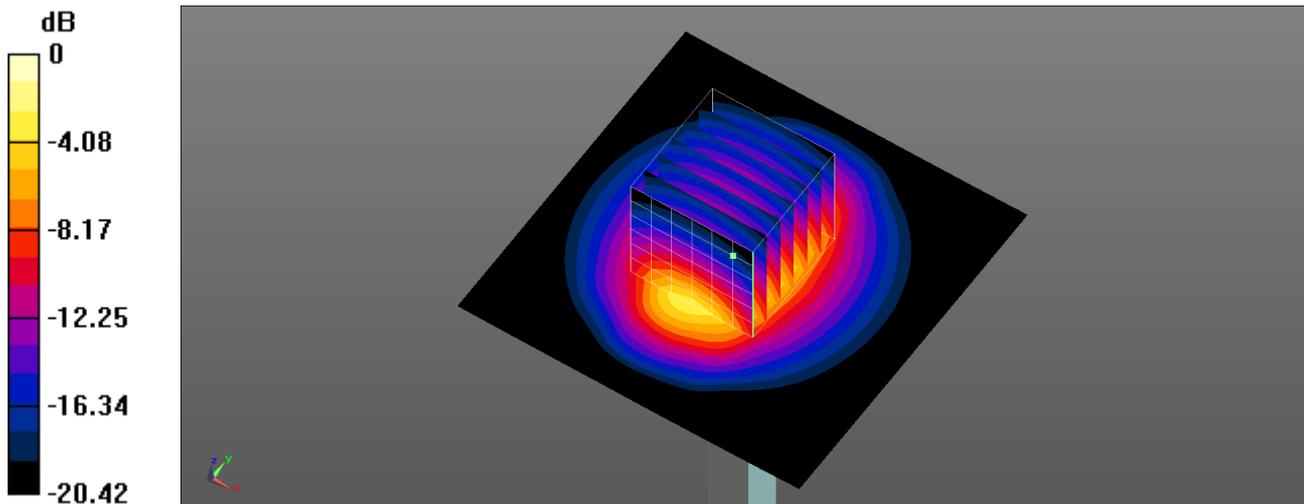
Peak SAR (extrapolated) = 7.27 W/kg

**SAR(1 g) = 2.66 W/kg; SAR(10 g) = 1.27 W/kg** (SAR corrected for target medium)

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

Ratio of SAR at M2 to SAR at M1 = 51.9%

Maximum value of SAR (measured) = 6.11 W/kg



0 dB = 5.86 W/kg = 7.68 dBW/kg

Date: 2025/3/13

**System Performance Check at 5250 MHz**

**DUT: D5GHzV2\_SN1021**

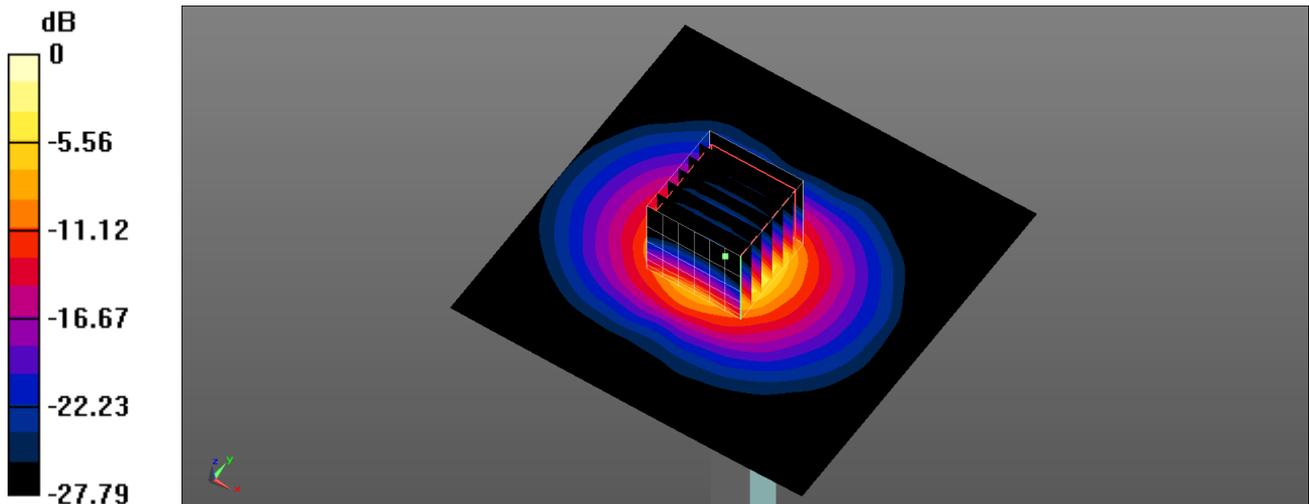
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1  
Medium parameters used: f = 5250 MHz;  $\sigma = 4.749$  S/m;  $\epsilon_r = 35.465$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS

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(5.47, 5.26, 5.25) @ 5250 MHz; Calibrated: 2025/2/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/6/5
- 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) = 13.6 W/kg

**System Performance Check at 5250MHz/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 52.56 V/m; Power Drift = 0.02 dB  
Peak SAR (extrapolated) = 24.2 W/kg  
**SAR(1 g) = 3.85 W/kg; SAR(10 g) = 1.08 W/kg** (SAR corrected for target medium)  
Smallest distance from peaks to all points 3 dB below = 7.2 mm  
Ratio of SAR at M2 to SAR at M1 = 62%  
Maximum value of SAR (measured) = 14.2 W/kg



0 dB = 14.2 W/kg = 11.52 dBW/kg

Date: 2025/3/14

**System Performance Check at 5600 MHz**

**DUT: D5GHzV2\_SN1021**

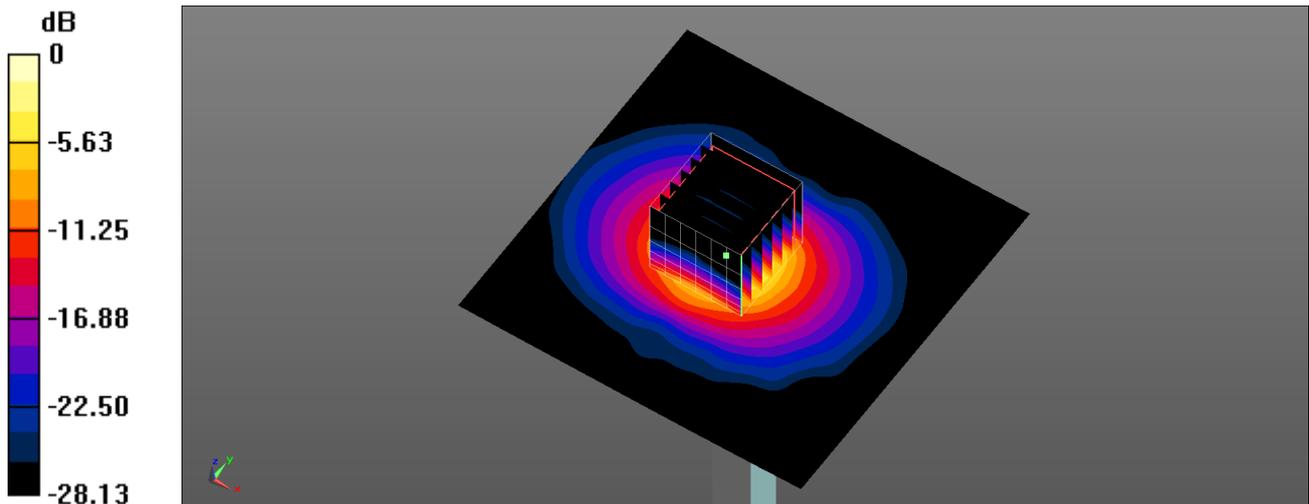
Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.068$  S/m;  $\epsilon_r = 35.178$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section  
 Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

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(5.19, 5, 4.99) @ 5600 MHz; Calibrated: 2025/2/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/6/5
- Phantom: ELI; Type: QD OVA 001 BB; Serial: 1036
- Measurement SW: DASYS2, 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) = 14.3 W/kg

**System Performance Check at 5600MHz/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
 Reference Value = 51.12 V/m; Power Drift = 0.01 dB  
 Peak SAR (extrapolated) = 27.7 W/kg  
**SAR(1 g) = 3.96 W/kg; SAR(10 g) = 1.12 W/kg** (SAR corrected for target medium)  
 Smallest distance from peaks to all points 3 dB below = 7.2 mm  
 Ratio of SAR at M2 to SAR at M1 = 58.6%  
 Maximum value of SAR (measured) = 15.0 W/kg



0 dB = 15.0 W/kg = 11.76 dBW/kg

Date: 2025/3/15

**System Performance Check at 5800 MHz**

**DUT: D5GHzV2 - SN1021**

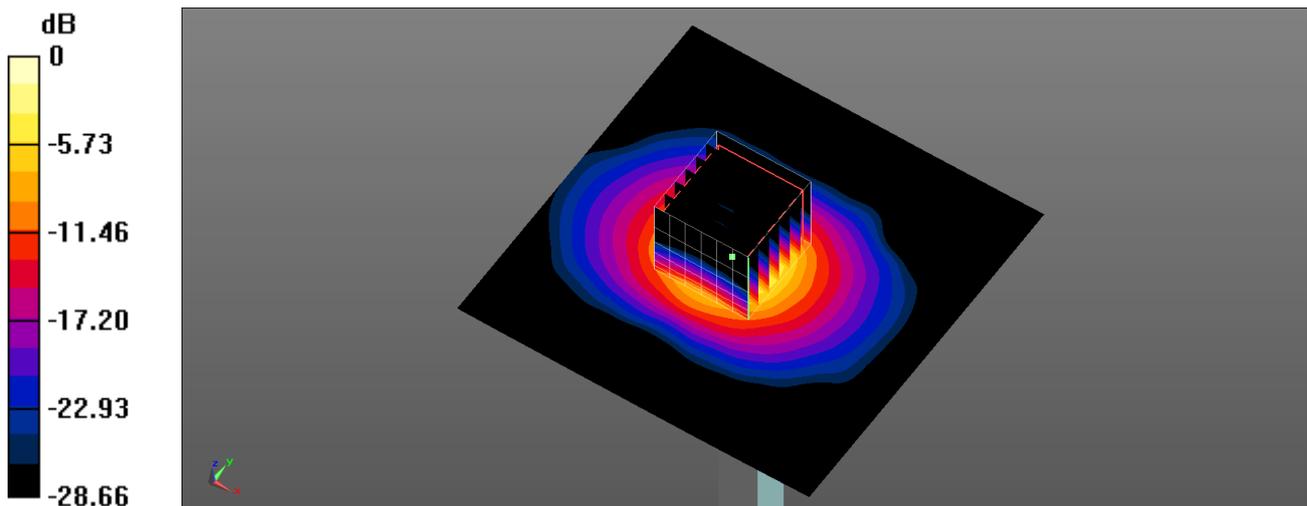
Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.286$  S/m;  $\epsilon_r = 35.013$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS

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(5.03, 4.84, 4.83) @ 5800 MHz; Calibrated: 2025/2/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/6/5
- 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 5800MHz/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 13.9 W/kg

**System Performance Check at 5800MHz/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 49.46 V/m; Power Drift = 0.06 dB  
Peak SAR (extrapolated) = 28.3 W/kg  
**SAR(1 g) = 3.89 W/kg; SAR(10 g) = 1.08 W/kg** (SAR corrected for target medium)  
Smallest distance from peaks to all points 3 dB below = 7.2 mm  
Ratio of SAR at M2 to SAR at M1 = 56.9%  
Maximum value of SAR (measured) = 14.7 W/kg



0 dB = 14.7 W/kg = 11.67 dBW/kg

Test Date : 2025-03-15 | Ambient Temp : 22.2 °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	Device	1016	20.0

**Exposure Conditions**

Phantom Section	Group	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat	CW	6500.000	5.65	6.08	32.5

**Hardware Setup**

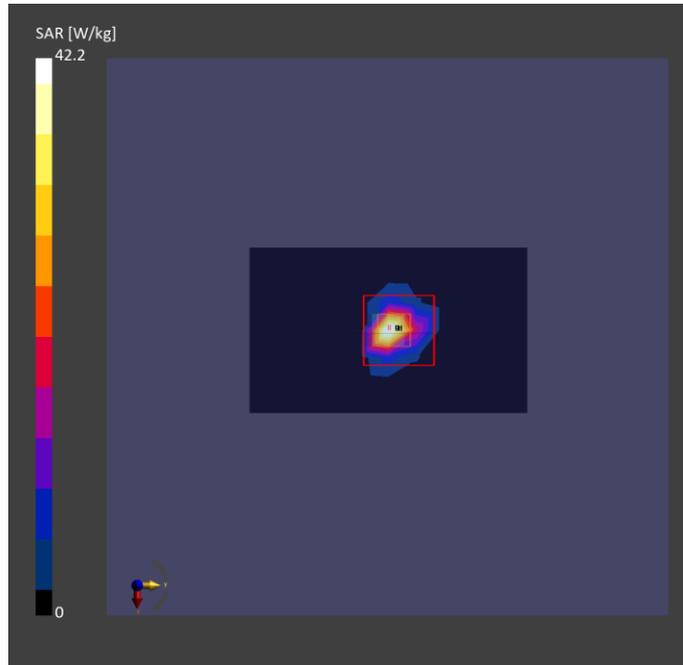
Phantom	Tissue Simulating Liquid	Probe   Calibration Date	DAE   Calibration Date
ELI V5.0 (20deg probe tilt) - 1175	HBBL-600-10000V6	EX3DV4 - SN7647 / 2024-04-24	DAE4 Sn1253 / 2024-04-22
<b>Measurement Software Version</b>		16.4.0.5005	

**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]	25.2	<b>28.6</b>
psSAR-8g [W/kg]	6.12	<b>6.51</b>
psSAR-10g [W/kg]	5.08	<b>5.39</b>
psAPD (1.0 cm <sup>2</sup> , sq) [W/m <sup>2</sup> ]		<b>286</b>
psAPD (4.0 cm <sup>2</sup> , sq) [W/m <sup>2</sup> ]		<b>130</b>
Power Drift [dB]		-0.05
TSL Correction	Positive only	Positive only



Test Date : 2025-03-16 | Ambient Temp : 22.6 °C

**System Performance Check**

**System Performance Check at 10GHz**

**Verification Source Properties**

Manufacturer	Model No.	Serial No.
SPEAG	5G Verification Source 10GHz	1060

**Exposure Conditions**

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

**Hardware Setup**

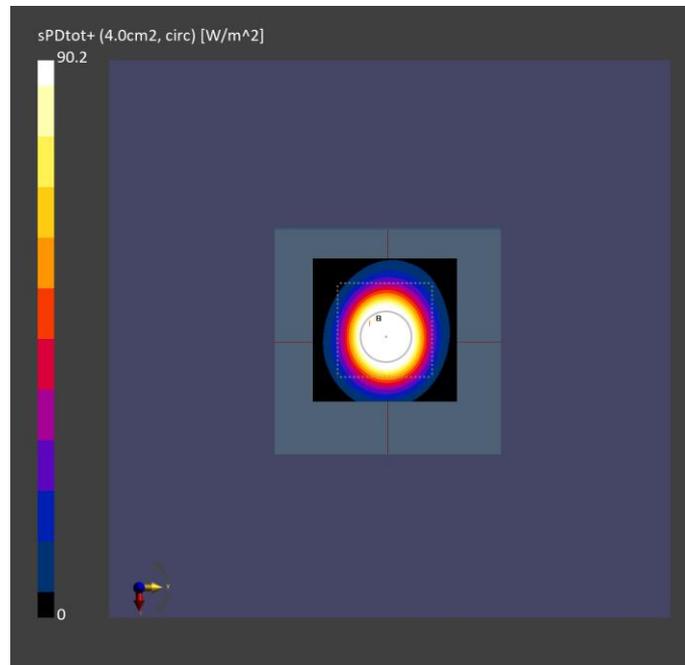
Phantom	Medium	Probe   Calibration Date	DAE   Calibration Date
mmWave - 5G Phantom	Air	EUmmWV3 - SN9403_F1-55GHz / 2024-11-15	DAE4 Sn1253 / 2024-04-22
Measurement Software Version		3.2.2.2358	

**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 <sup>2</sup> ]	4.00
psPD n+ [W/m <sup>2</sup> ]	<b>53.3</b>
psPD tot+ [W/m <sup>2</sup> ]	<b>53.6</b>
psPD mod+ [W/m <sup>2</sup> ]	54.9
E max [V/m]	121
Power Drift [dB]	0.13



Test Date : 2025-03-17 | Ambient Temp : 21.8 °C

**System Performance Check**

**System Performance Check at 10GHz**

**Verification Source Properties**

Manufacturer	Model No.	Serial No.
SPEAG	5G Verification Source 10GHz	1060

**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 Sn1253 / 2024-04-22
Measurement Software Version		3.2.2.2358	

**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 <sup>2</sup> ]	4.00
psPD n+ [W/m <sup>2</sup> ]	<b>52.7</b>
psPD tot+ [W/m <sup>2</sup> ]	<b>52.9</b>
psPD mod+ [W/m <sup>2</sup> ]	53.5
E max [V/m]	139
Power Drift [dB]	-0.03

