

Appendix B – System Check Plots

Date: 2025/1/9

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; $\sigma = 1.814$ S/m; $\epsilon_r = 42.169$; $\rho = 1000$ 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(7.73, 7.11, 7.58) @ 2450 MHz; Calibrated: 2024/3/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/6/5
- 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) = 4.31 W/kg

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

Reference Value = 47.53 V/m; Power Drift = 0.19 dB

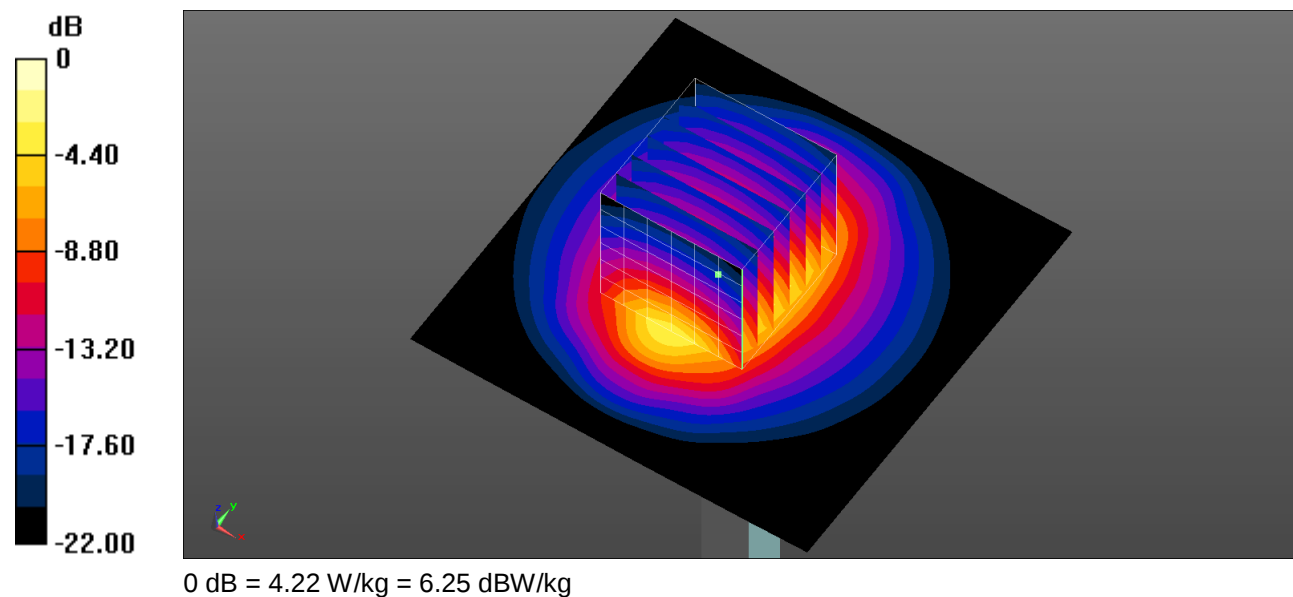
Peak SAR (extrapolated) = 5.18 W/kg

SAR(1 g) = 2.6 W/kg; SAR(10 g) = 1.21 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 = 50.2%

Maximum value of SAR (measured) = 4.22 W/kg



Date: 2025/1/10

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; $\sigma = 4.593$ S/m; $\epsilon_r = 37.518$; $\rho = 1000$ 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(5.68, 5.15, 5.5) @ 5250 MHz; Calibrated: 2024/3/21
- Sensor-Surface: 1.4 mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/6/5
- 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 5250 MHz/Area Scan (91x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 9.37 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 = 50.49 V/m; Power Drift = -0.15 dB

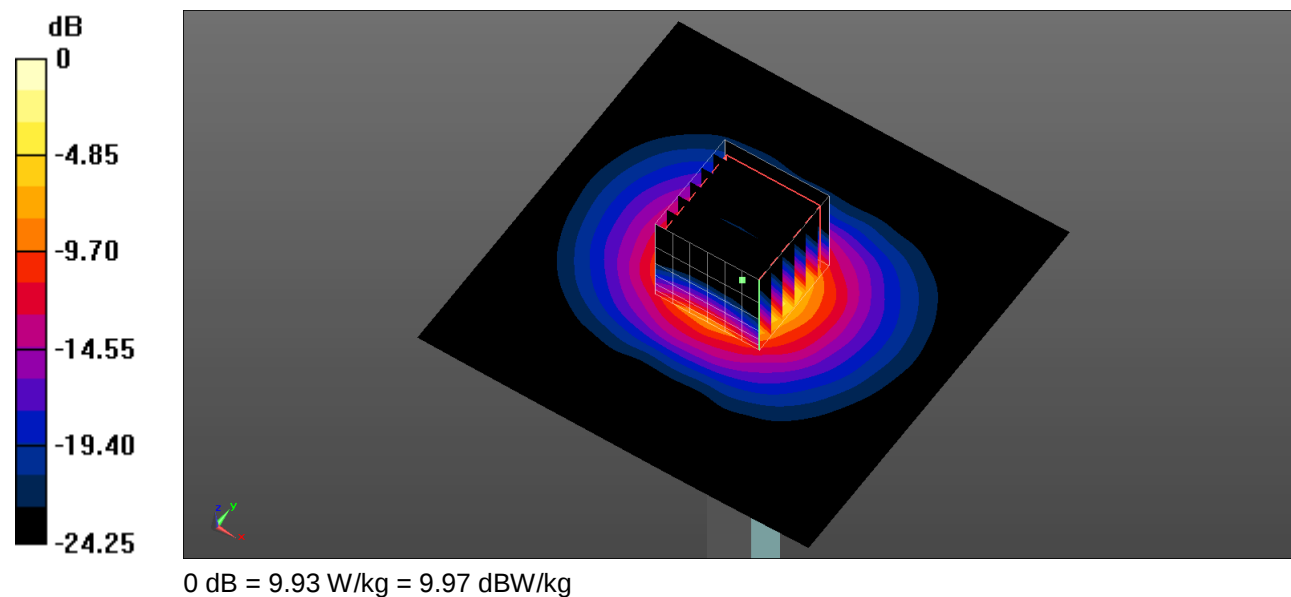
Peak SAR (extrapolated) = 16.4 W/kg

SAR(1 g) = 3.89 W/kg; SAR(10 g) = 1.1 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 = 63.1%

Maximum value of SAR (measured) = 9.93 W/kg



Date: 2025/1/11

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; $\sigma = 4.985$ S/m; $\epsilon_r = 36.905$; $\rho = 1000$ 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: 2024/6/5
- 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) = 10.4 W/kg

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

Reference Value = 51.53 V/m; Power Drift = 0.04 dB

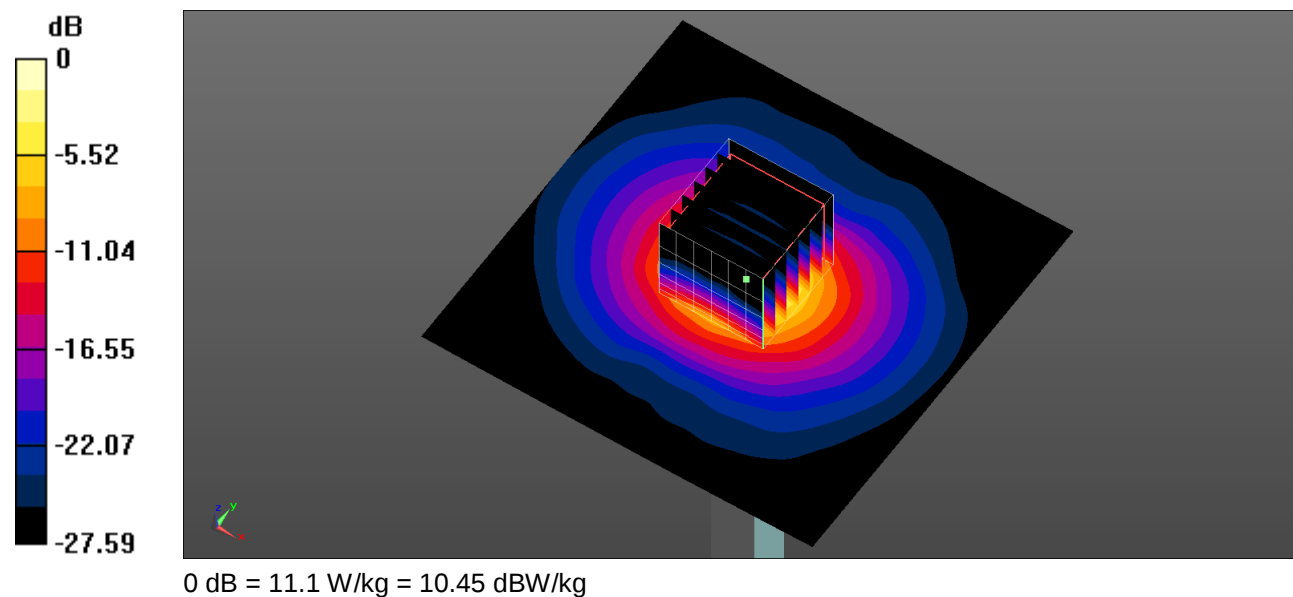
Peak SAR (extrapolated) = 18.9 W/kg

SAR(1 g) = 4.23 W/kg; SAR(10 g) = 1.18 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 = 61.7%

Maximum value of SAR (measured) = 11.1 W/kg



Date: 2025/1/12

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; $\sigma = 5.227$ 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(5.03, 4.62, 4.96) @ 5800 MHz; Calibrated: 2024/3/21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn779; Calibrated: 2024/6/5
- 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) = 9.18 W/kg

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

Reference Value = 47.66 V/m; Power Drift = -0.02 dB

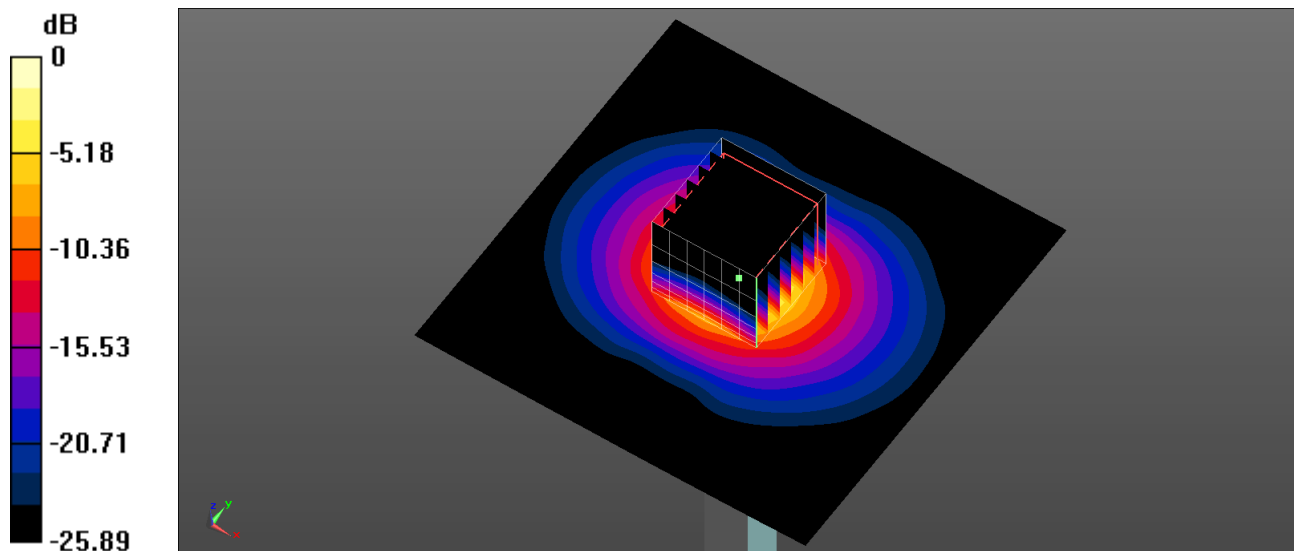
Peak SAR (extrapolated) = 17.1 W/kg

SAR(1 g) = 3.69 W/kg; SAR(10 g) = 1.04 W/kg (SAR corrected for target medium)

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

Ratio of SAR at M2 to SAR at M1 = 60.4%

Maximum value of SAR (measured) = 9.78 W/kg



0 dB = 9.78 W/kg = 9.90 dBW/kg

Test Date : 2025-01-14 | Ambient Temp : 22.6 °C | Tissue Temp : 21.8 °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	6.14	34.8

Hardware Setup

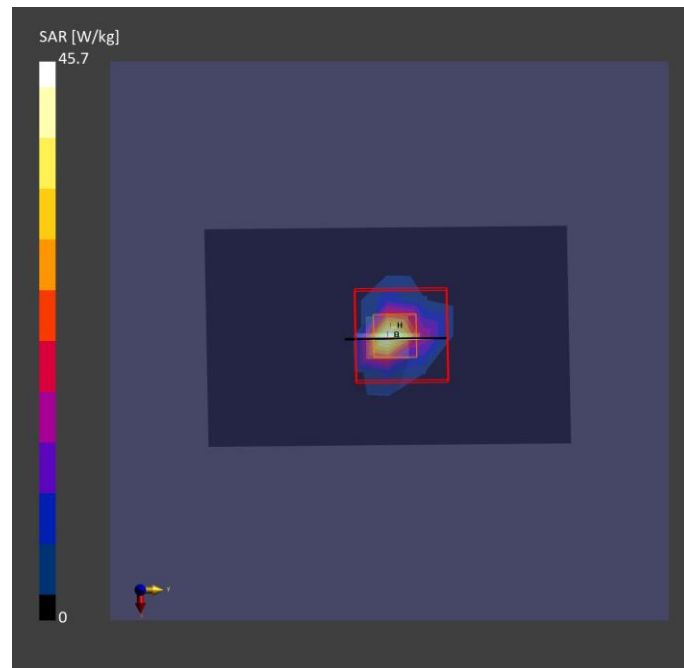
Phantom	Tissue Simulating Liquid	Probe Calibration Date	DAE Calibration Date
ELI V5.0 (20deg probe tilt) - 1175	HBBL-600-10000V6	EX3DV4 - SN3847 / 2024-02-21	DAE4 Sn541 / 2024-10-28

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]	25.5	29.1
psSAR-8g [W/kg]	6.28	6.52
psSAR-10g [W/kg]	4.99	5.39
psAPD (1.0 cm ² , sq) [W/m ²]		291
psAPD (4.0 cm ² , sq) [W/m ²]		133
Power Drift [dB]		-0.05
TSL Correction	Positive only	Positive only



Test Date : 2025-01-15 | Ambient Temp : 22.4 °C | Tissue Temp : 21.5 °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	6.12	34.7

Hardware Setup

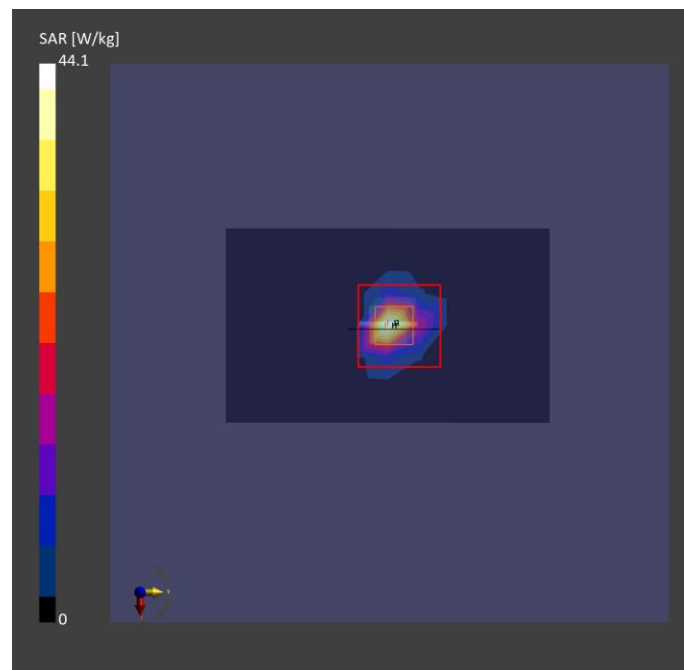
Phantom	Tissue Simulating Liquid	Probe Calibration Date	DAE Calibration Date
ELI V5.0 (20deg probe tilt) - 1175	HBBL-600-10000V6	EX3DV4 - SN3847 / 2024-02-21	DAE4 Sn541 / 2024-10-28

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]	25.2	28.8
psSAR-8g [W/kg]	5.93	6.39
psSAR-10g [W/kg]	4.89	5.27
psAPD (1.0 cm ² , sq) [W/m ²]		288
psAPD (4.0 cm ² , sq) [W/m ²]		129
Power Drift [dB]		0.11
TSL Correction	Positive only	Positive only



Test Date : 2025-01-20 | Ambient Temp : 22.2 °C

System Performance Check

System Performance Check at 10GHz

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

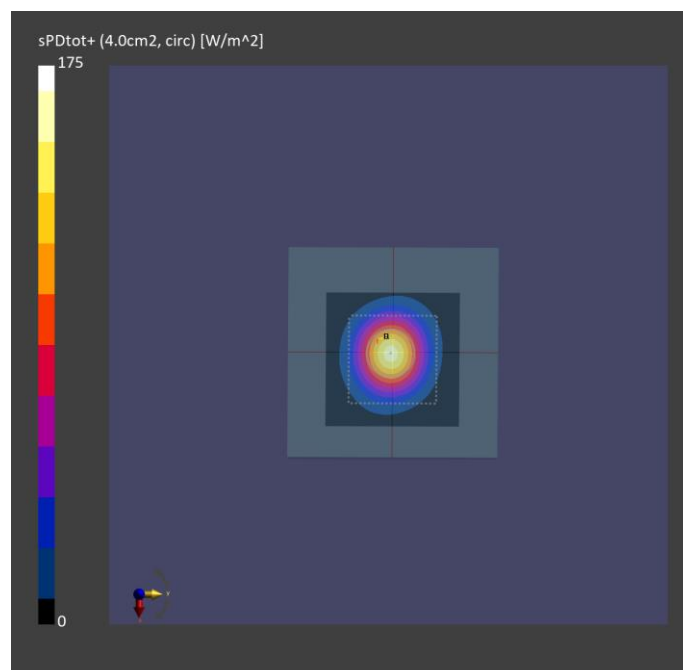
Phantom	Medium	Probe / Calibration Date	DAE / Calibration Date
mmWave - 5G Phantom	Air	EUmmWV3 - SN9403_F1-55GHz / 2024-11-15	DAE4 Sn541 / 2024-10-28

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]	175
psPD tot+ [W/m ²]	177
psPD mod+ [W/m ²]	179
E max [V/m]	287
Power Drift [dB]	0.12



Test Date : 2025-01-21 | Ambient Temp : 22.4 °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	EUmmWV4 - SN9639_F1- 55GHz / 2024-09-16	DAE4 Sn1742 / 2024-08-15

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]	56.3
psPD tot+ [W/m ²]	56.3
psPD mod+ [W/m ²]	56.4
E max [V/m]	153
Power Drift [dB]	0.06

