

Test Laboratory: BTL Inc.

Date: 2023/11/14

## System Check\_H2450\_1114

**DUT: Dipole 2450 MHz D2450V2;SN:973;**

Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2450$  MHz;  $\sigma = 1.882$  S/m;  $\epsilon_r = 37.956$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 21.7 °C; Liquid Temperature: 21.2 °C

DASY Configuration:

- Probe: EX3DV4 - SN7678; ConvF(8.59, 8.17, 8.18) @ 2450 MHz; Calibrated: 2023/8/17
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1486; Calibrated: 2023/6/16
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: 2149
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Area Scan (7x9x1):** Measurement grid:  $dx=12$ mm,  $dy=12$ mm

Maximum value of SAR (measured) = 21.5 W/kg

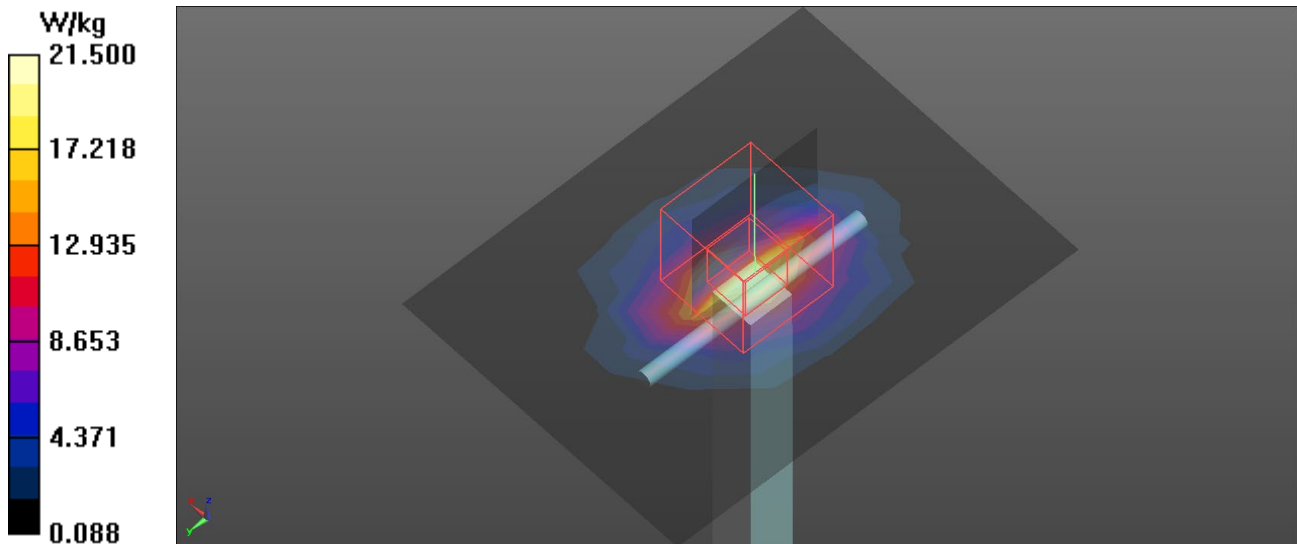
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 112.7 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 26.5 W/kg

**SAR(1 g) = 12.9 W/kg; SAR(10 g) = 5.88 W/kg**

Maximum value of SAR (measured) = 21.5 W/kg



Test Laboratory: BTL Inc.

Date: 2023/11/30

## System Check\_H2450\_1130

**DUT: Dipole 2450 MHz D2450V2; SN:973;**

Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2450$  MHz;  $\sigma = 1.879$  S/m;  $\epsilon_r = 38.103$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22 °C; Liquid Temperature: 21.5 °C

DASY Configuration:

- Probe: EX3DV4 - SN7678; ConvF(8.59, 8.17, 8.18) @ 2450 MHz; Calibrated: 2023/8/17
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1289; Calibrated: 2023/6/16
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: 2149
- DASY52 52.10.4(1535); SEMCAD X 14.6.12(7450)

**Area Scan (7x9x1):** Measurement grid:  $dx=12$ mm,  $dy=12$ mm

Maximum value of SAR (measured) = 21.7 W/kg

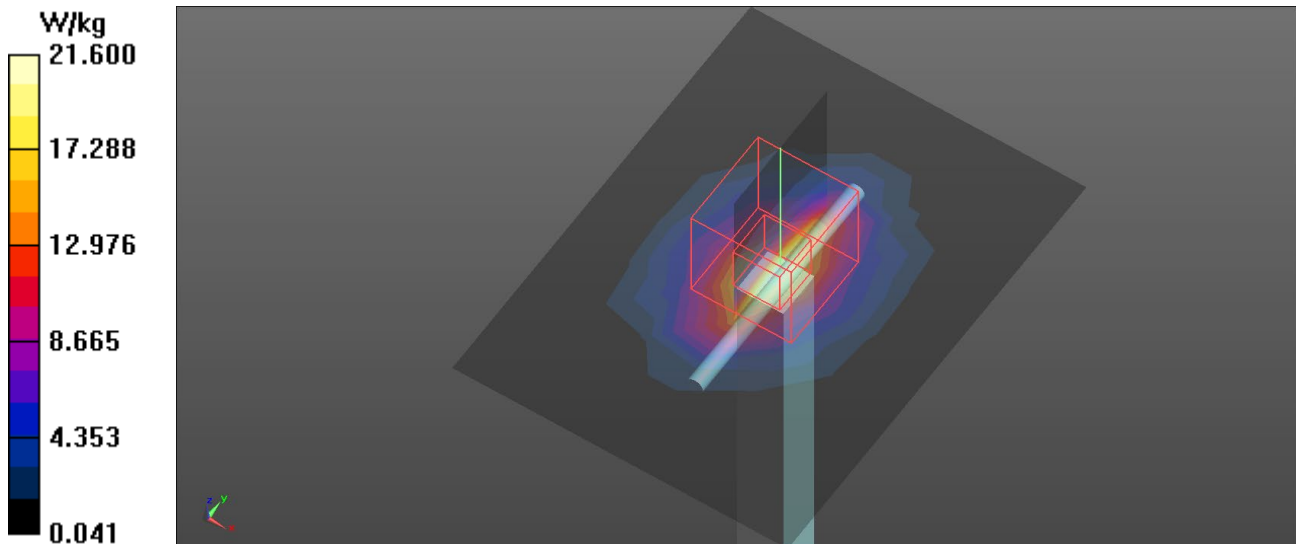
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 113.9 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 27.0 W/kg

**SAR(1 g) = 13 W/kg; SAR(10 g) = 5.91 W/kg**

Maximum value of SAR (measured) = 21.6 W/kg



Test Laboratory: BTL Inc.

Date: 2023/11/15

## System Check\_H5300\_1115

**DUT: Dipole D5GHzV2;SN:1221;**

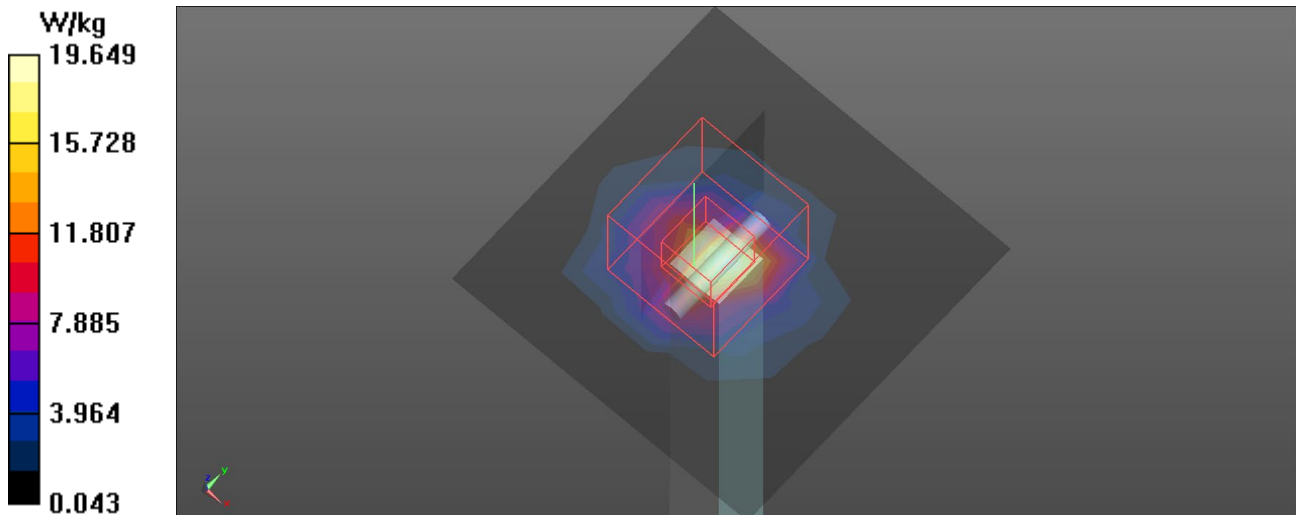
Communication System: UID 0, CW (0); Frequency: 5300 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5300$  MHz;  $\sigma = 4.732$  S/m;  $\epsilon_r = 35.969$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature: 21.8 °C; Liquid Temperature: 21.1 °C

DASY Configuration:

- Probe: EX3DV4 - SN7678; ConvF(6.16, 5.79, 5.78) @ 5300 MHz; Calibrated: 2023/8/17
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1486; Calibrated: 2023/6/16
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: 2149
- DASY52 52.10.4(1535); SEMCAD X 14.6.12(7450)

**Area Scan (7x7x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 19.6 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm  
Reference Value = 69.58 V/m; Power Drift = 0.08 dB  
Peak SAR (extrapolated) = 38.0 W/kg  
**SAR(1 g) = 8.75 W/kg; SAR(10 g) = 2.48 W/kg**  
Maximum value of SAR (measured) = 21.2 W/kg



Test Laboratory: BTL Inc.

Date: 2023/12/4

## System Check\_H5300\_1204

**DUT: Dipole D5GHzV2; SN:1221;**

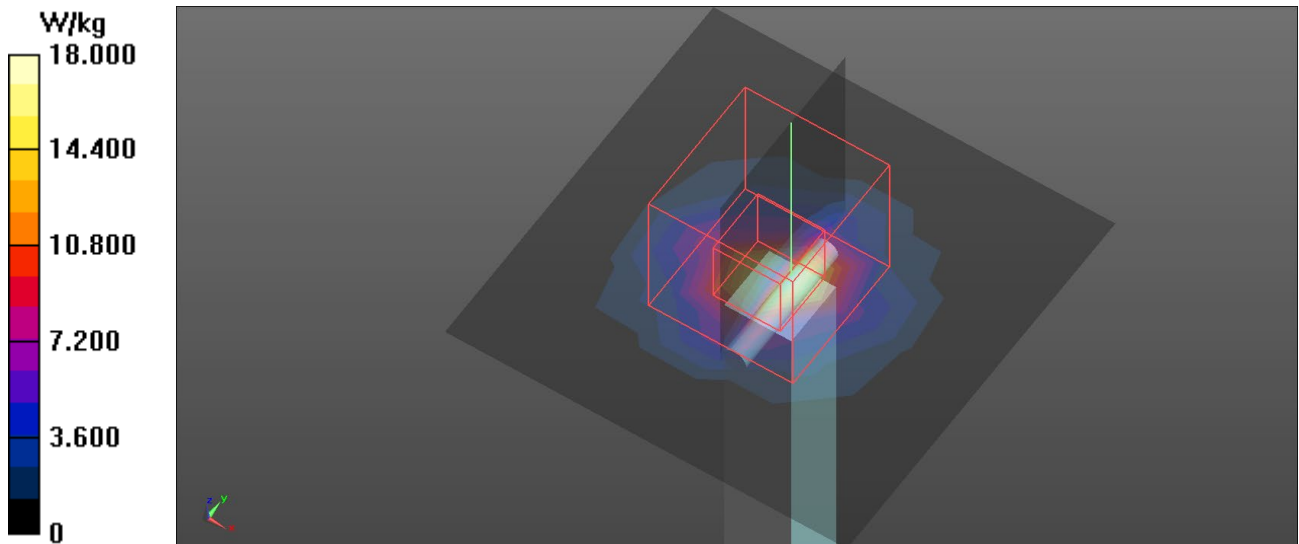
Communication System: UID 0, CW (0); Frequency: 5300 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5300$  MHz;  $\sigma = 4.88$  S/m;  $\epsilon_r = 35.252$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature: 22.3 °C; Liquid Temperature: 21.4 °C

DASY Configuration:

- Probe: EX3DV4 - SN7678; ConvF(6.16, 5.79, 5.78) @ 5300 MHz; Calibrated: 2023/8/17
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1289; Calibrated: 2023/6/16
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: 2149
- DASY52 52.10.4(1535); SEMCAD X 14.6.12(7450)

**Area Scan (7x7x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 19.1 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm  
Reference Value = 67.19 V/m; Power Drift = 0.03 dB  
Peak SAR (extrapolated) = 31.9 W/kg  
**SAR(1 g) = 7.62 W/kg; SAR(10 g) = 2.18 W/kg**  
Maximum value of SAR (measured) = 18.0 W/kg



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**System Check\_H5600\_1115****DUT: Dipole D5GHzV2; SN:1221;**

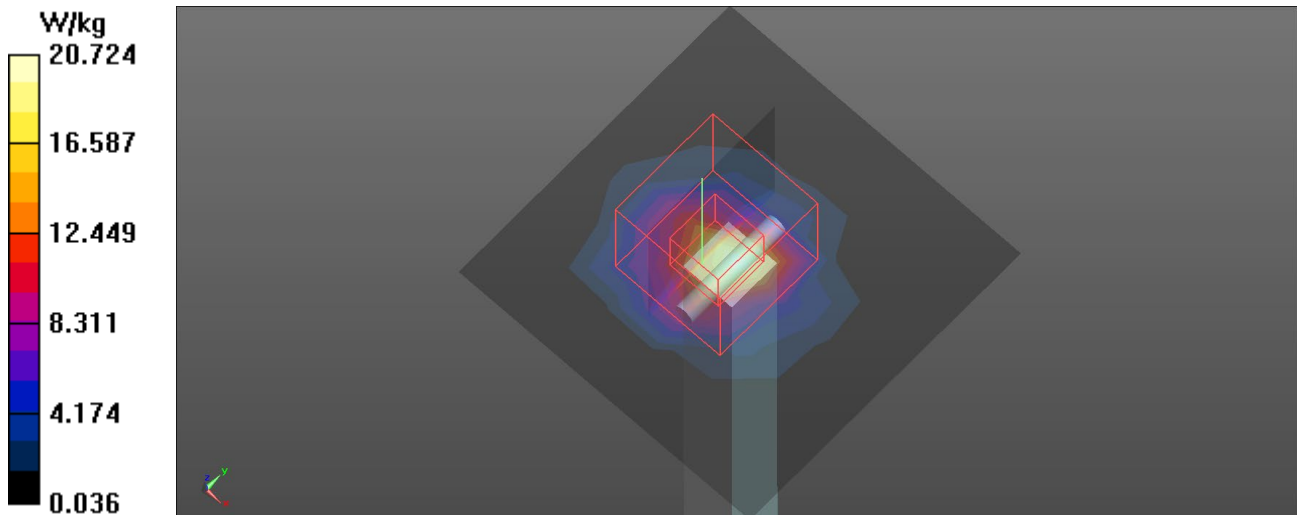
Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.081$  S/m;  $\epsilon_r = 35.260$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature: 21.8 °C; Liquid Temperature: 21.1 °C

DASY Configuration:

- Probe: EX3DV4 - SN7678; ConvF(5.39, 5.05, 5.05) @ 5600 MHz; Calibrated: 2023/8/17
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1486; Calibrated: 2023/6/16
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: 2149
- DASY52 52.10.4(1535); SEMCAD X 14.6.12(7450)

**Area Scan (7x7x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 20.7 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm  
Reference Value = 69.63 V/m; Power Drift = 0.11 dB  
Peak SAR (extrapolated) = 41.2 W/kg  
**SAR(1 g) = 9.1 W/kg; SAR(10 g) = 2.57 W/kg**  
Maximum value of SAR (measured) = 22.7 W/kg



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Date: 2023/12/4

**System Check\_H5600\_1204****DUT: Dipole D5GHzV2; SN:1221;**

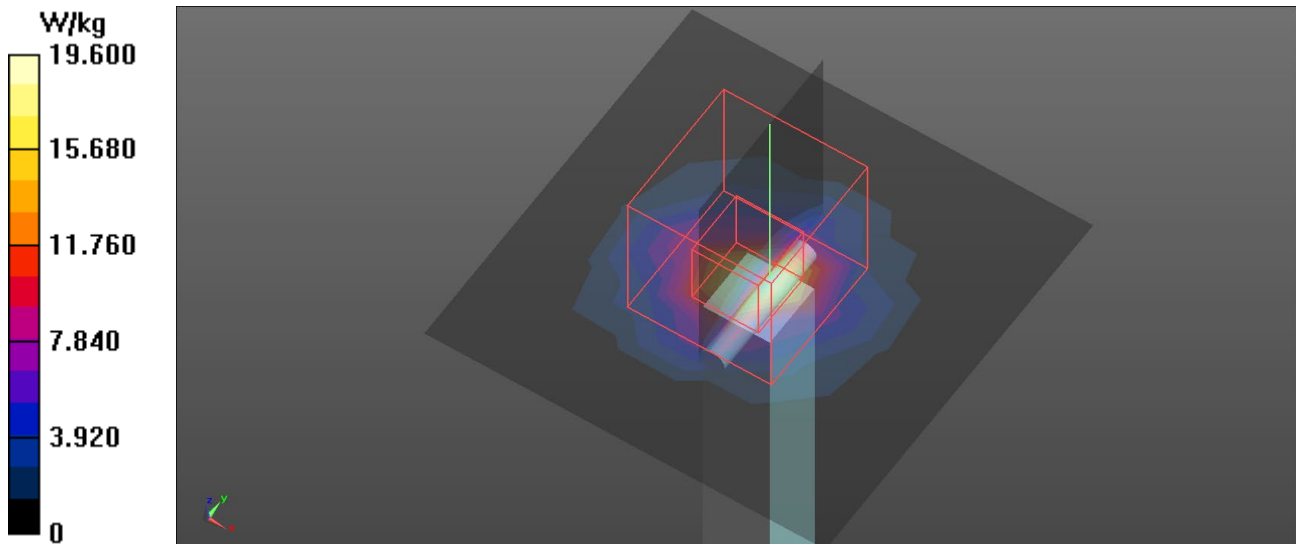
Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.264$  S/m;  $\epsilon_r = 34.496$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature: 22.3 °C; Liquid Temperature: 21.4 °C

DASY Configuration:

- Probe: EX3DV4 - SN7678; ConvF(5.39, 5.05, 5.05) @ 5600 MHz; Calibrated: 2023/8/17
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1289; Calibrated: 2023/6/16
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: 2149
- DASY52 52.10.4(1535); SEMCAD X 14.6.12(7450)

**Area Scan (7x7x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 20.6 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm  
Reference Value = 68.63 V/m; Power Drift = 0.04 dB  
Peak SAR (extrapolated) = 36.8 W/kg  
**SAR(1 g) = 8.07 W/kg; SAR(10 g) = 2.28 W/kg**  
Maximum value of SAR (measured) = 19.6 W/kg



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Date: 2023/11/17

**System Check\_H5800\_1117****DUT: Dipole D5GHzV2;SN:1041;**

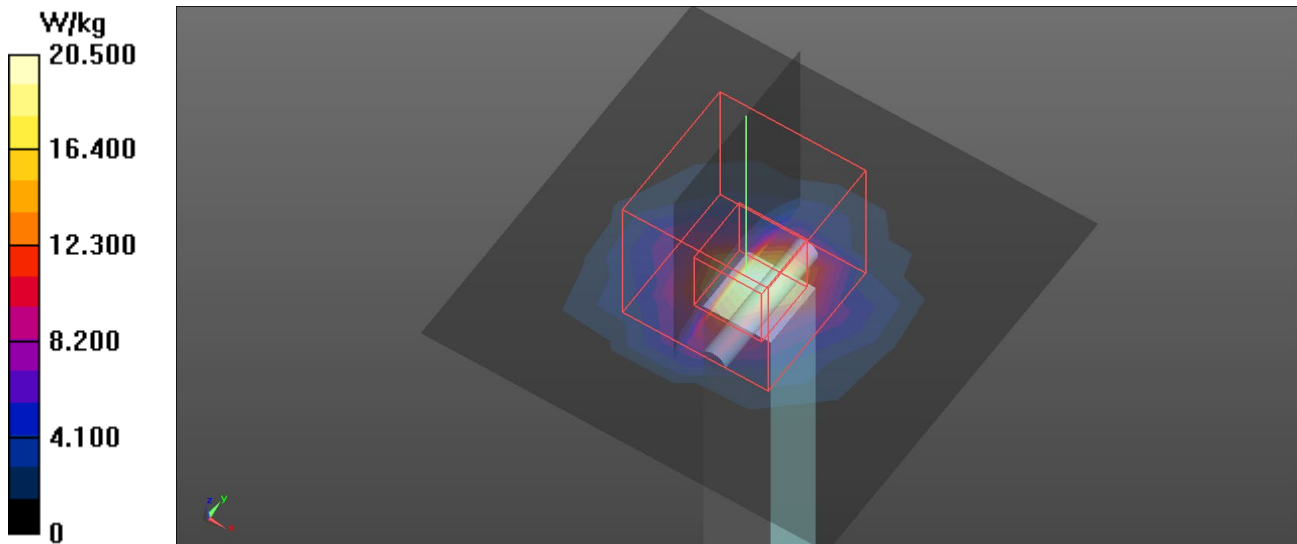
Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.332$  S/m;  $\epsilon_r = 34.780$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature: 22 °C; Liquid Temperature: 21.8 °C

DASY Configuration:

- Probe: EX3DV4 - SN7678; ConvF(5.47, 5.09, 5.13) @ 5800 MHz; Calibrated: 2023/8/17
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1486; Calibrated: 2023/6/16
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: 2149
- DASY52 52.10.4(1535); SEMCAD X 14.6.12(7450)

**Area Scan (7x7x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 20.8 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm  
Reference Value = 68.14 V/m; Power Drift = 0.06 dB  
Peak SAR (extrapolated) = 39.5 W/kg  
**SAR(1 g) = 8.24 W/kg; SAR(10 g) = 2.33 W/kg**  
Maximum value of SAR (measured) = 20.5 W/kg



Test Laboratory: BTL Inc.

Date: 2023/12/5

## System Check\_H5800\_1205

**DUT: Dipole D5GHzV2;SN:1041;**

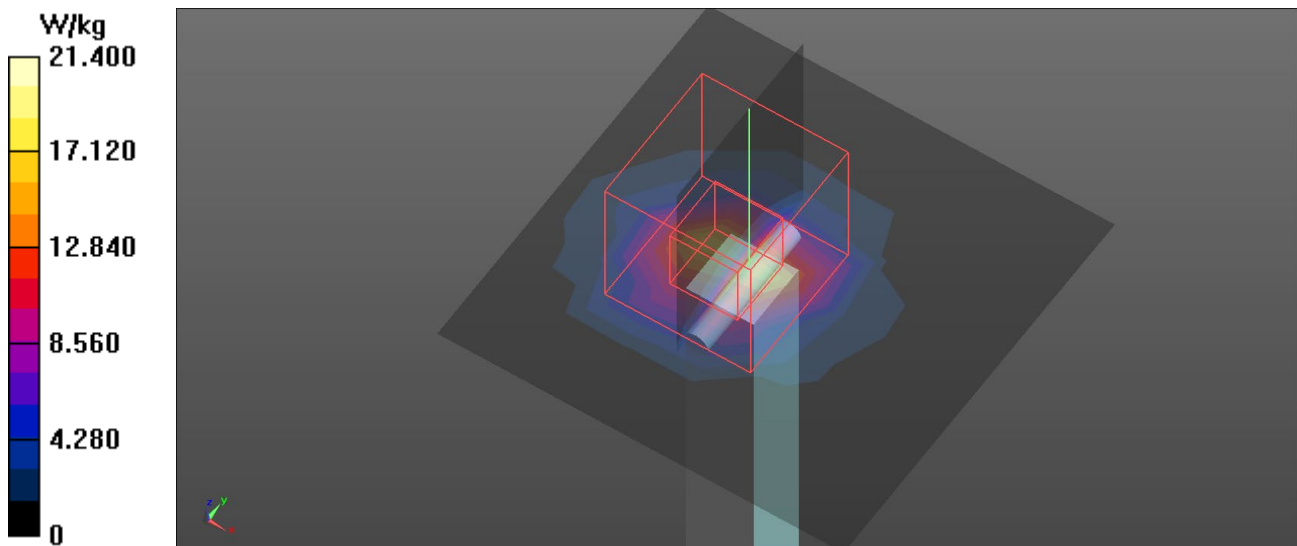
Communication System: UID 0, CW (0); Frequency: 5800 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.503$  S/m;  $\epsilon_r = 34.001$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature: 21.7 °C; Liquid Temperature: 21.2 °C

DASY Configuration:

- Probe: EX3DV4 - SN7678; ConvF(5.47, 5.09, 5.13) @ 5800 MHz; Calibrated: 2023/8/17
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1289; Calibrated: 2023/6/16
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: 2149
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Area Scan (7x7x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 17.1 W/kg

**Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm  
Reference Value = 56.94 V/m; Power Drift = 0.09 dB  
Peak SAR (extrapolated) = 41.0 W/kg  
**SAR(1 g) = 8.45 W/kg; SAR(10 g) = 2.39 W/kg**  
Maximum value of SAR (measured) = 21.4 W/kg





Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	16.0 x 6.0 x 300.0		

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0-	6500.000, 0	5.4	6.20	33.2

Hardware Setup

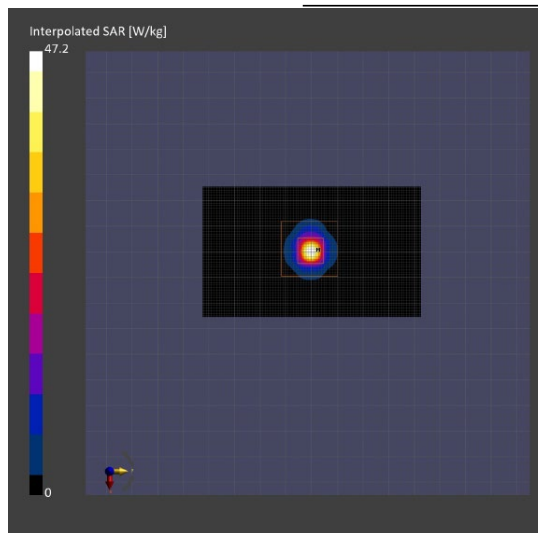
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V5.0 (20deg probe tilt) - 1240	H6E-231116, 2023-Nov-16	EX3DV4 - SN7369, 2023-05-22	DAE4 Sn1486, 2023-06-16

Scans 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
MAIA	N/A	N/A
Surface Detection	All points	All points
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2023-11-16	2023-11-16
psSAR1g [W/kg]	23.5	27.7
psSAR10g [W/kg]	4.47	5.07
psAPD (1.0cm2, sq) [W/m2]		277
psAPD (4.0cm2, sq) [W/m2]		123
Power Drift [dB]	0.07	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		51.1
Dist 3dB Peak [mm]		4.6



Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	16.0 x 6.0 x 300.0		

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0-	6500.000, 0	5.4	6.29	35.9

Hardware Setup

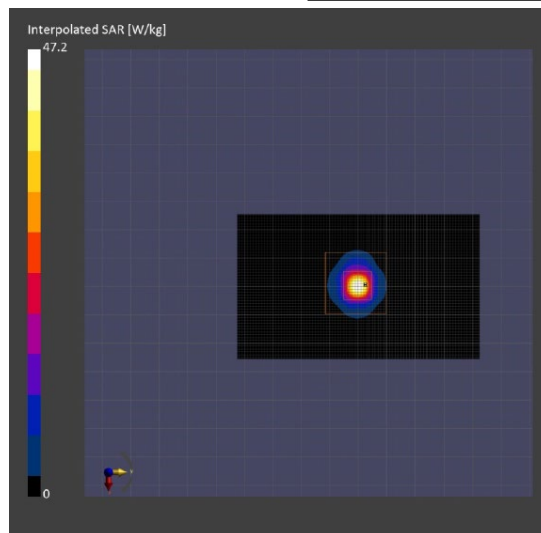
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V5.0 (20deg probe tilt) - 1240	H6E-231130, 2023-11-30	EX3DV4 - SN7369, 2023-05-22	DAE4 Sn1486, 2023-06-16

Scans 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
MAIA	N/A	N/A
Surface Detection	All points	All points
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
Date	2023-11-30	2023-11-30
psSAR1g [W/kg]	24.0	28.3
psSAR10g [W/kg]	4.58	5.20
psAPD (1.0cm2, sq) [W/m2]		283
psAPD (4.0cm2, sq) [W/m2]		126
Power Drift [dB]	0.07	0.04
Power Scaling	Disabled	Disabled
Scaling Factor [dB]		
TSL Correction	Positive only	Positive only
M2/M1 [%]		51.1
Dist 3dB Peak [mm]		4.6



**Device Under Test Properties**

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	100.0 x 100.0 x 100.0		

**Exposure Conditions**

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	FRONT, 10.00	Validation band	CW, 0--	10000.0, 10000	1.0

**Hardware Setup**

Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave - 1085	Air -	EUmmWV4 - SN9583_F1-55GHz, 2023-04-18	DAE4 Sn1486, 2023-06-16

**Scans Setup**

Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.125 x 0.125
Sensor Surface [mm]	10.0
MAIA	N/A

**Measurement Results**

Scan Type	5G Scan
Date	2023-11-22
Avg. Area [cm <sup>2</sup> ]	4.00
psPDn+ [W/m <sup>2</sup> ]	163
psPDtot+ [W/m <sup>2</sup> ]	166
psPDmod+ [W/m <sup>2</sup> ]	168
E <sub>max</sub> [V/m]	283
Power Drift [dB]	0.03

