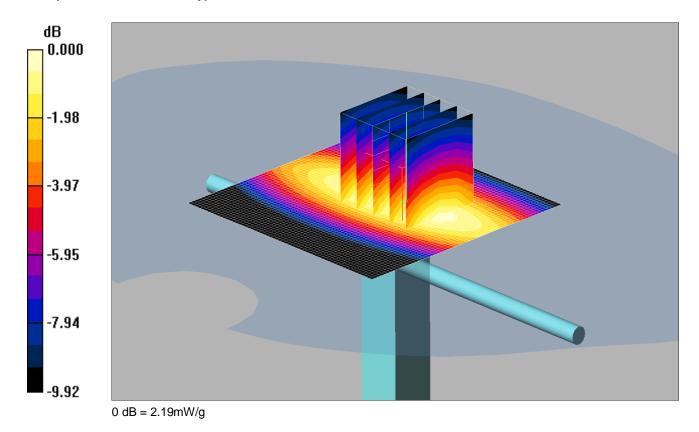
# 12.2.System Check Plots

Scan Reference Number	Title
SYS/001	System Performance Check 750MHz Head 15 04 16
SYS/002	System Performance Check 750MHz Head 18 04 16
SYS/003	System Performance Check 750MHz Body 10 05 16
SYS/004	System Performance Check 750MHz Body 12 05 16
SYS/005	System Performance Check 750MHz Body 12 05 16  System Performance Check 750MHz Body 16 05 16
SYS/006	System Performance Check 900MHz Head 19 04 16
SYS/007	System Performance Check 900MHz Head 20 04 16
SYS/008	System Performance Check 900MHz Head 20 04 10
SYS/009	System Performance Check 900MHz Body 22 04 16
SYS/010	,
SYS/011	System Performance Check 900MHz Body 25 04 16
SYS/012	System Performance Check 900MHz Body 28 04 16
	System Performance Check 900MHz Body 06 05 16
SYS/013	System Performance Check 900MHz Body 09 05 16
SYS/014	System Performance Check 1450MHz Head 18 05 16
SYS/015	System Performance Check 1800MHz Head 22 04 16
SYS/016	System Performance Check 1800MHz Head 25 04 16
SYS/017	System Performance Check 1800MHz Head 16 05 16
SYS/018	System Performance Check 1800MHz Body 26 04 16
SYS/019	System Performance Check 1800MHz Body 29 04 16
SYS/020	System Performance Check 1800MHz Body 03 05 16
SYS/021	System Performance Check 1900MHz Head 14 04 16
SYS/022	System Performance Check 1900MHz Head 18 04 16
SYS/023	System Performance Check 1900MHz Body 04 05 16
SYS/024	System Performance Check 1900 MHz Body 16 05 16
SYS/025	System Performance Check 1900 MHz Body 19 05 16
SYS/026	System Performance Check 2300MHz Head 03 05 16
SYS/027	System Performance Check 2300MHz Body 16 05 16
SYS/028	System Performance Check 2300MHz Body 19 05 16
SYS/029	System Performance Check 2450MHz Head 21 04 16
SYS/030	System Performance Check 2450MHz Head 18 04 16
SYS/031	System Performance Check 2450MHz Body 06 05 16
SYS/032	System Performance Check 2450MHz Body 09 05 16
SYS/033	System Performance Check 2450MHz Body 17 05 16
SYS/034	System Performance Check 2600MHz Head 07 04 16
SYS/035	System Performance Check 2600MHz Head 25 04 16
SYS/036	System Performance Check 2600MHz Head 28 04 16
SYS/037	System Performance Check 2600 MHz Body 08 04 16
SYS/038	System Performance Check 2600 MHz Body 10 05 16
SYS/039	System Performance Check 2600MHz Body 12 05 16
SYS/040	System Performance Check 5250 MHz Head 19 04 16
SYS/041	System Performance Check 5600 MHz Head 19 04 16
SYS/042	System Performance Check 5750 MHz Head 19 04 16
SYS/043	System Performance Check 5250 MHz Body 25 04 16
SYS/044	System Performance Check 5250 MHz Body 28 04 16
SYS/045	System Performance Check 5250 MHz Body 03 05 16
SYS/046	System Performance Check 5600 MHz Body 25 04 16
SYS/047	System Performance Check 5600 MHz Body 28 04 16
SYS/048	System Performance Check 5600 MHz Body 03 05 16
SYS/049	System Performance Check 5750 MHz Body 25 04 16
SYS/050	System Performance Check 5750 MHz Body 28 04 16
SYS/051	System Performance Check 5750 MHz Body 03 05 16

Issue Date: 04 November 2016

Date: 15/04/2016

# DUT: Dipole 750 MHz SN:1147; Type: D750V3; Serial: D750V3 - SN:1147



Communication System: CW 750; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 750 MHz HSL Medium parameters used: f = 750 MHz;  $\sigma = 0.926$  mho/m;  $\epsilon_r = 40.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ET3DV6 SN1586; ConvF(6.6, 6.6, 6.6);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 28/09/2015
- Phantom: SAM 12b (Site 57); Type: SAM 4.0; Serial: TP:1031
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=250m 2/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.18 mW/g

d=15mm, Pin=250m 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.5 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 2.84 W/kg

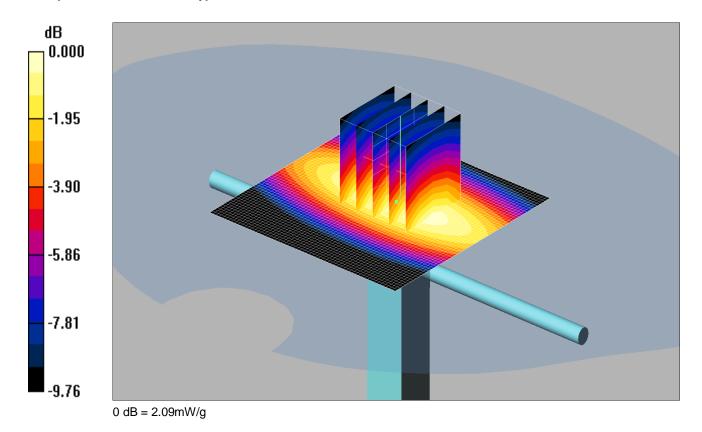
SAR(1 g) = 2.03 mW/g; SAR(10 g) = 1.37 mW/g

Maximum value of SAR (measured) = 2.19 mW/g

Date: 18/04/2016

Issue Date: 04 November 2016

# DUT: Dipole 750 MHz SN:1147; Type: D750V3; Serial: D750V3 - SN:1147



Communication System: CW 750; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 750 MHz HSL Medium parameters used: f = 750 MHz;  $\sigma = 0.864$  mho/m;  $\epsilon_r = 40.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ET3DV6 SN1586; ConvF(6.6, 6.6, 6.6);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 28/09/2015
- Phantom: SAM 12b (Site 57); Type: SAM 4.0; Serial: TP:1031
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=250m/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.06 mW/g

d=15mm, Pin=250m/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

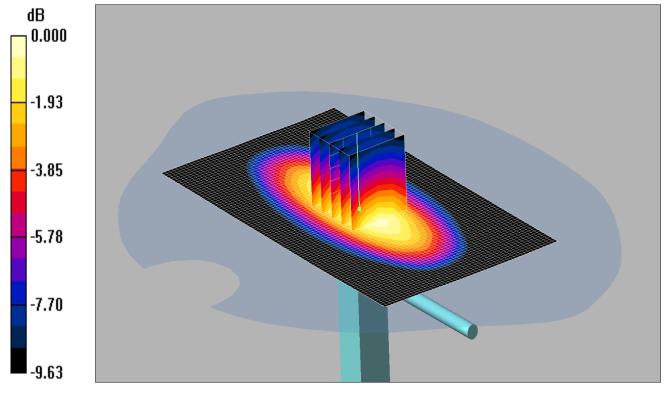
Reference Value = 50.9 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 2.69 W/kg

SAR(1 g) = 1.94 mW/g; SAR(10 g) = 1.31 mW/g Maximum value of SAR (measured) = 2.09 mW/g

Date: 10/05/2016

# DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1011



0 dB = 2.42 mW/g

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 900/750 MHz MSL Medium parameters used: f = 750 MHz;  $\sigma = 0.935$  mho/m;  $\varepsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1528; ConvF(6.11, 6.11, 6.11);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 28/09/2015
- Phantom: SAM 12a (Site 56); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW 2 2 2 2/Area Scan (51x91x1): Measurement grid: dx=20mm, dy=20mm

Maximum value of SAR (interpolated) = 2.38 mW/g

d=15mm, Pin=250mW 2 2 2 2/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 52.5 V/m; Power Drift = 0.018 dB

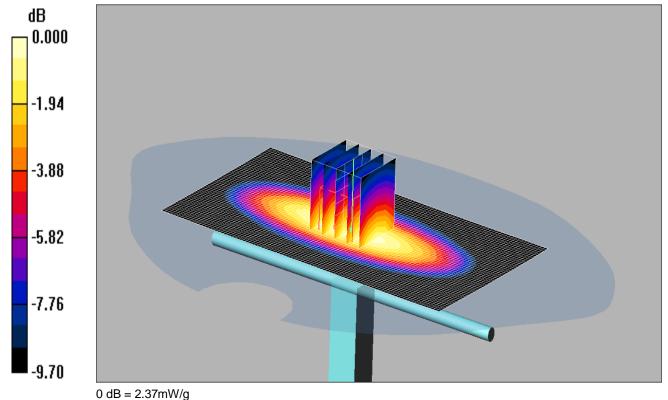
Peak SAR (extrapolated) = 3.14 W/kg

SAR(1 g) = 2.23 mW/g; SAR(10 g) = 1.5 mW/g Maximum value of SAR (measured) = 2.42 mW/g

Date: 12/05/2016

Issue Date: 04 November 2016

# DUT: Dipole 750 MHz SN:1147; Type: D750V3; Serial: D750V3 - SN:1147



0 dB = 2.01 mm,

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 900/750 MHz MSL Medium parameters used: f = 750 MHz;  $\sigma = 0.929$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ET3DV6 SN1528; ConvF(6.11, 6.11, 6.11);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 28/09/2015
- Phantom: SAM 12a (Site 56); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

# **d=15mm, Pin=250mW 2 2 2 2/Area Scan (51x91x1):** Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 2.35 mW/g

d=15mm, Pin=250mW 2 2 2 2/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 52.6 V/m; Power Drift = -0.076 dB

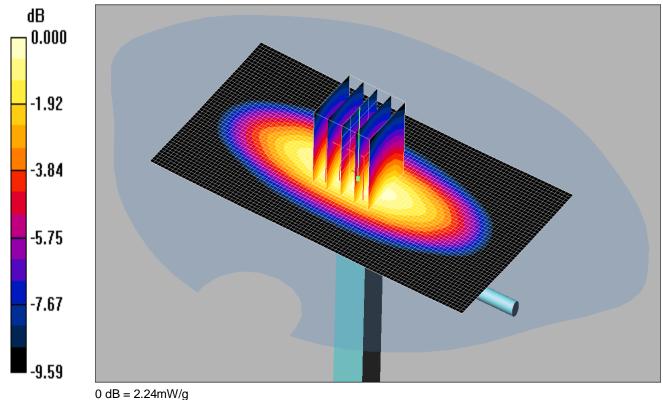
Peak SAR (extrapolated) = 3.07 W/kg

SAR(1 g) = 2.18 mW/g; SAR(10 g) = 1.47 mW/g

Maximum value of SAR (measured) = 2.37 mW/g

Date/Time: 16/05/2016

# DUT: Dipole 750 MHz SN:1147; Type: D750V3; Serial: D750V3 - SN:1147



0 dB = 2:2 iiiivi,

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 900/750 MHz MSL Medium parameters used: f = 750 MHz;  $\sigma$  = 0.924 mho/m;  $\epsilon_r$  = 54.1;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ET3DV6 SN1528; ConvF(6.11, 6.11, 6.11);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 28/09/2015
- Phantom: SAM 12a (Site 56); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

**d=15mm, Pin=250mW/Area Scan (51x91x1):** Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 2.22 mW/g

d=15mm, Pin=250mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 51.1 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 2.92 W/kg

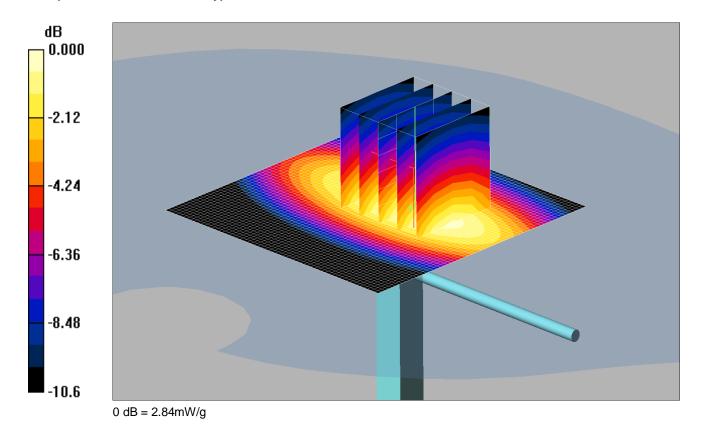
SAR(1 g) = 2.08 mW/g; SAR(10 g) = 1.41 mW/g

Maximum value of SAR (measured) = 2.24 mW/g

Date: 19/04/2016

Issue Date: 04 November 2016

# DUT: Dipole 900 MHz; SN: 1d168; Type: D900V2; Serial: SN1d168



Communication System: CW 900; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz HSL Medium parameters used: f = 900 MHz;  $\sigma = 0.938$  mho/m;  $\epsilon_r = 40.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ET3DV6 SN1586; ConvF(6.17, 6.17, 6.17);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 28/09/2015
- Phantom: SAM 12b (Site 57); Type: SAM 4.0; Serial: TP:1031
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=250m 2/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.82 mW/g

d=15mm, Pin=250m 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 57.4 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 3.58 W/kg

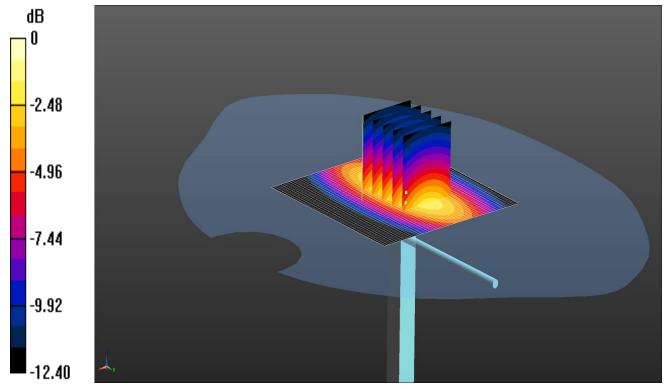
SAR(1 g) = 2.62 mW/g; SAR(10 g) = 1.74 mW/g

Maximum value of SAR (measured) = 2.84 mW/g

SYS/007: System Performance Check 900MHz Head 20 04 16

Date: 20/4/2016

DUT: Dipole 900 MHz; SN: 1d168; Type: D900V2; Serial: SN1d168



0 dB = 3.89 W/kg = 5.90 dBW/kg

Communication System: UID 0, CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz HSL Medium parameters used: f = 900 MHz;  $\sigma = 0.963$  S/m;  $\epsilon_r = 40.03$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3341; ConvF(6.17, 6.17, 6.17); Calibrated: 25/8/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 12/2/2016
- Phantom: SAM B (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1836
- -; SEMCAD X Version 14.6.10 (7331)

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.79 W/kg

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2/Zoom Scan (5x5x7) (21x21x36)/Cube 0: Interpolated grid:

dx=1.600 mm, dy=1.600 mm, dz=1.000 mm

Reference Value = 55.08 V/m; Power Drift = -0.03 dB

Penetration depth = 12.48 (12.02, 13.04) [mm]

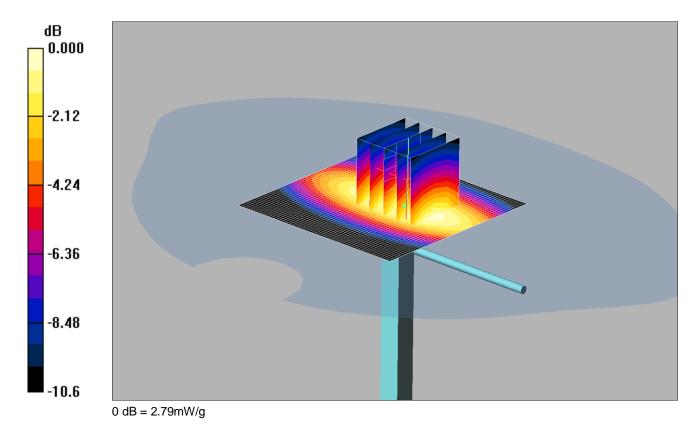
Maximum value of SAR (interpolated) = 3.89 W/kg

1

Date: 04/05/2016

Issue Date: 04 November 2016

# DUT: Dipole 900 MHz; SN:035; Type: D900V2; Serial: SN1d168



Communication System: CW 900; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz HSL Medium parameters used: f = 900 MHz;  $\sigma$  = 0.961 mho/m;  $\epsilon_r$  = 39.7;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ET3DV6 SN1586; ConvF(6.17, 6.17, 6.17);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 28/09/2015
- Phantom: SAM 12b (Site 57); Type: SAM 4.0; Serial: TP:1031
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**d=15mm, Pin=250m 2/Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 2.76 mW/g

**d=15mm, Pin=250m 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 56.9 V/m; Power Drift = -0.066 dB

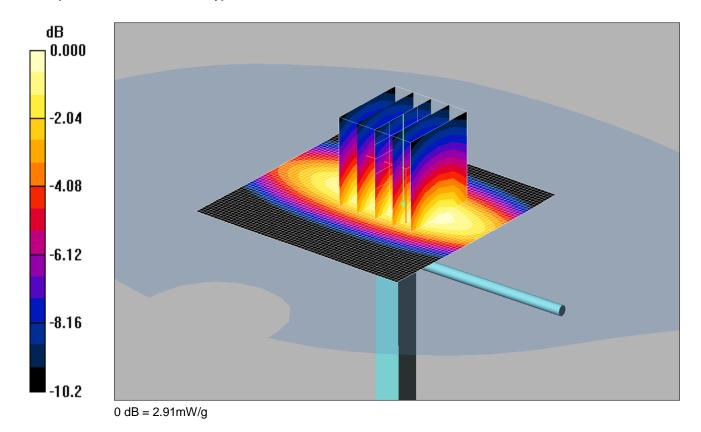
Peak SAR (extrapolated) = 3.49 W/kg

SAR(1 g) = 2.57 mW/g; SAR(10 g) = 1.71 mW/g Maximum value of SAR (measured) = 2.79 mW/g

Date: 22/04/2016

Issue Date: 04 November 2016

# DUT: Dipole 900 MHz; SN: 1d168; Type: D900V2; Serial: SN1d168



Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used: f = 900 MHz;  $\sigma = 1$  mho/m;  $\epsilon_r = 54$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ET3DV6 SN1529; ConvF(5.8, 5.8, 5.8);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/05/2015
- Phantom: SAM 12a (Site 56); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.92 mW/g

d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

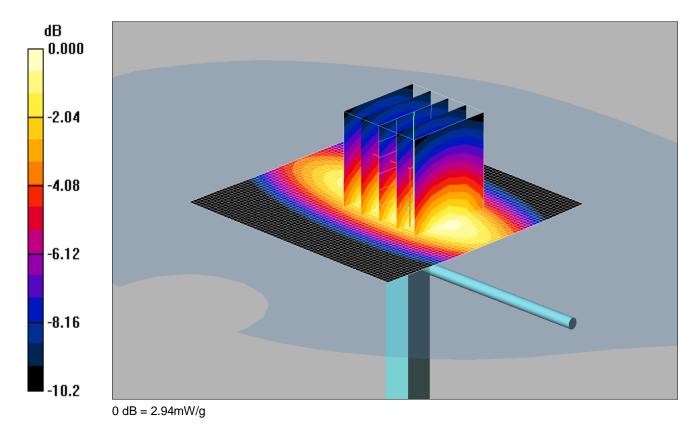
Reference Value = 56.0 V/m; Power Drift = -0.043 dB

Peak SAR (extrapolated) = 3.72 W/kg

SAR(1 g) = 2.68 mW/g; SAR(10 g) = 1.77 mW/g Maximum value of SAR (measured) = 2.91 mW/g

Date: 25/04/2016

# DUT: Dipole 900 MHz; SN:1d168; Type: D900V2; Serial: SN1d168



Communication System: CW 900; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used: f = 900 MHz;  $\sigma$  = 1.01 mho/m;  $\varepsilon_r$  = 54.5;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

UL VS Ltd.

- Probe: ET3DV6 SN1529; ConvF(5.8, 5.8, 5.8);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/05/2015
- Phantom: SAM 12a (Site 56); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250m 2 2/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.98 mW/g

d=15mm, Pin=250m 2 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 56.7 V/m; Power Drift = 0.013 dB

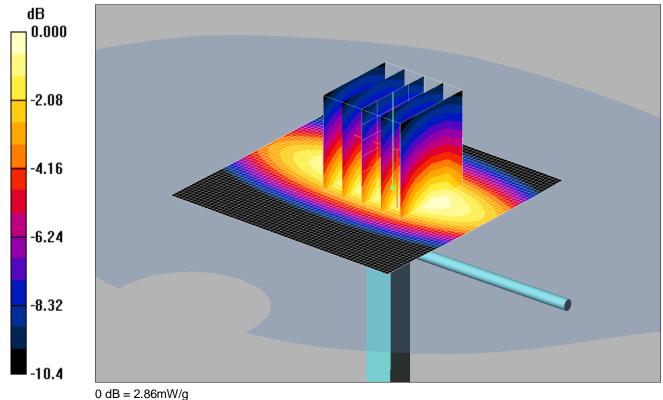
Peak SAR (extrapolated) = 3.76 W/kg

SAR(1 g) = 2.71 mW/g; SAR(10 g) = 1.8 mW/g Maximum value of SAR (measured) = 2.94 mW/g

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Date: 28/04/2016

# DUT: Dipole 900 MHz; SN: 1d168; Type: D900V2; Serial: SN1d168



0 dB = 2.00111117

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used: f = 900 MHz;  $\sigma = 1.02$  mho/m;  $\epsilon_r = 52.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ET3DV6 SN1529; ConvF(5.8, 5.8, 5.8);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/05/2015
- Phantom: SAM 12a (Site 56); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.89 mW/g

d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 55.3 V/m; Power Drift = 0.015 dB

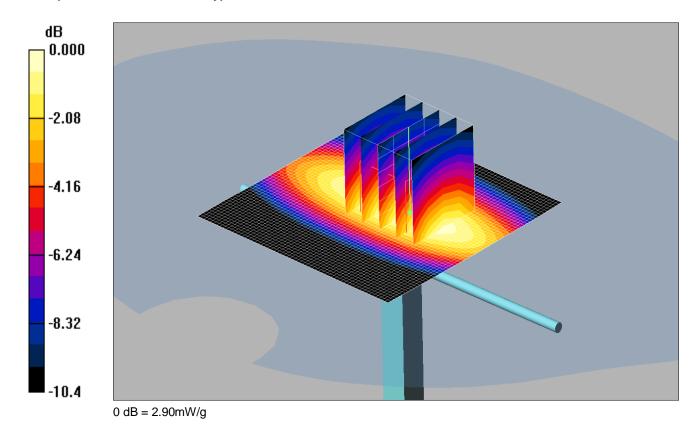
Peak SAR (extrapolated) = 3.65 W/kg

SAR(1 g) = 2.64 mW/g; SAR(10 g) = 1.75 mW/g

Maximum value of SAR (measured) = 2.86 mW/g

Date: 06/05/2016

# DUT: Dipole 900 MHz; SN: 1d168; Type: D900V2; Serial: SN1d168



Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used: f = 900 MHz;  $\sigma = 1.03$  mho/m;  $\varepsilon_r = 52.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ET3DV6 SN1529; ConvF(5.8, 5.8, 5.8);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/05/2015
- Phantom: SAM 12a (Site 56); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.92 mW/g

d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 55.7 V/m; Power Drift = -0.034 dB

Peak SAR (extrapolated) = 3.70 W/kg

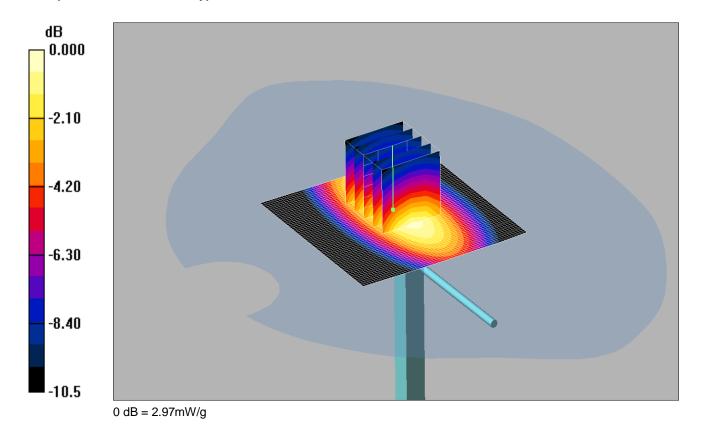
SAR(1 g) = 2.67 mW/g; SAR(10 g) = 1.77 mW/g

Maximum value of SAR (measured) = 2.90 mW/g

Date: 09/05/2016

Issue Date: 04 November 2016

# DUT: Dipole 900 MHz; SN: 035; Type: D900V2; Serial: SN035



Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900 MHz MSL Medium parameters used: f = 900 MHz;  $\sigma = 1.02$  mho/m;  $\varepsilon_r = 52.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ET3DV6 SN1528; ConvF(5.93, 5.93, 5.93);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 28/09/2015
- Phantom: SAM 12a (Site 56); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

d=15mm, Pin=250mW 2/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.94 mW/g

d=15mm, Pin=250mW 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.6 V/m; Power Drift = -0.056 dB

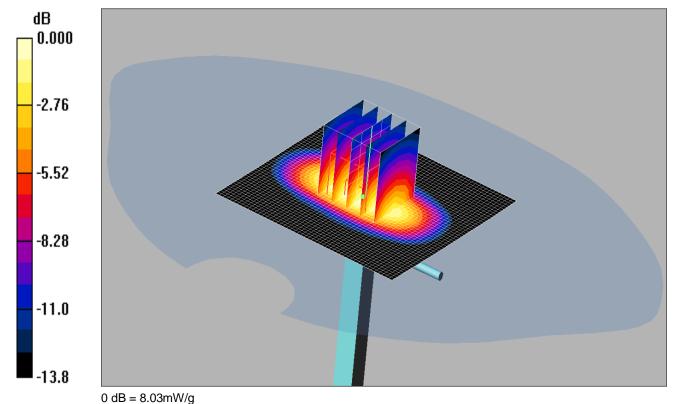
Peak SAR (extrapolated) = 3.85 W/kg

SAR(1 g) = 2.73 mW/g; SAR(10 g) = 1.79 mW/g Maximum value of SAR (measured) = 2.97 mW/g

Date: 18/05/2016

Issue Date: 04 November 2016

# DUT: Dipole 1450 MHz; Type: D1450V2; Serial: 1044



0 dB = 0.0011111

Communication System: CW; Frequency: 1450 MHz; Duty Cycle: 1:1

Medium: 1450 MHz HSL Medium parameters used: f = 1450 MHz;  $\sigma = 1.14$  mho/m;  $\varepsilon_r = 41.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ET3DV6 SN1528; ConvF(5.3, 5.3, 5.3);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 28/09/2015
- Phantom: SAM 12a (Site 56); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

**d=15mm, Pin=250mW 2 2 2/Area Scan (51x51x1):** Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 10.3 mW/g

d=15mm, Pin=250mW 2 2 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 87.7 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 11.1 W/kg

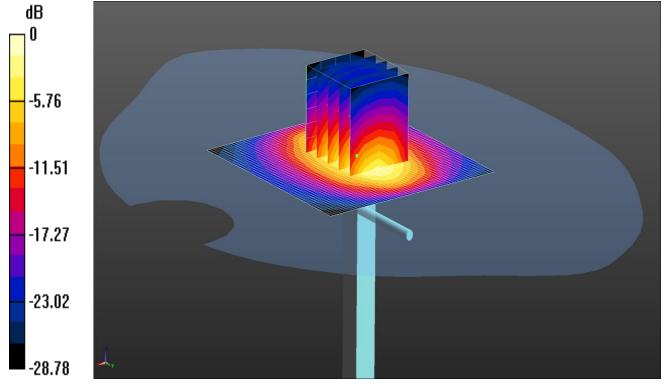
SAR(1 g) = 7.22 mW/g; SAR(10 g) = 4.23 mW/g

Maximum value of SAR (measured) = 8.03 mW/g

SYS/015: System Performance Check 1800MHz Head 22 04 16

Date: 22/4/2016

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: 264



0 dB = 11.4 W/kg = 10.58 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: 1800 MHz HSL Medium parameters used: f = 1800 MHz;  $\sigma = 1.339$  S/m;  $\epsilon_r = 40.381$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3341; ConvF(5.27, 5.27, 5.27); Calibrated: 25/8/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 12/2/2016
- Phantom: SAM A (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1836
- -; SEMCAD X Version 14.6.10 (7331)

SAR/d=10mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2 2/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 11.4 W/kg

SAR/d=10mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mm

Reference Value = 92.14 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 18.3 W/kg

SAR(1 g) = 10 W/kg; SAR(10 g) = 5.29 W/kg

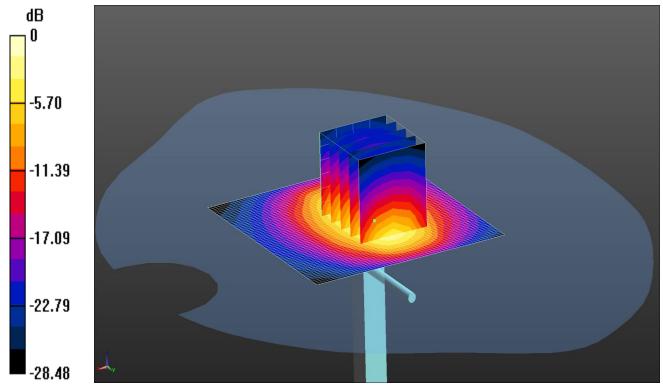
Maximum value of SAR (measured) = 11.2 W/kg

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SYS/016: System Performance Check 1800MHz Head 25 04 16

Date: 25/4/2016

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: 264



0 dB = 11.4 W/kg = 10.58 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: 1800 MHz HSL Medium parameters used: f = 1800 MHz;  $\sigma$  = 1.335 S/m;  $\epsilon_r$  = 40.715;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3341; ConvF(5.27, 5.27, 5.27); Calibrated: 25/8/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 12/2/2016
- Phantom: SAM A (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1836
- -; SEMCAD X Version 14.6.10 (7331)

SAR/d=10mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2 2/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 11.4 W/kg

SAR/d=10mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mm

Reference Value = 91.44 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 17.7 W/kg

SAR(1 g) = 9.73 W/kg; SAR(10 g) = 5.18 W/kg

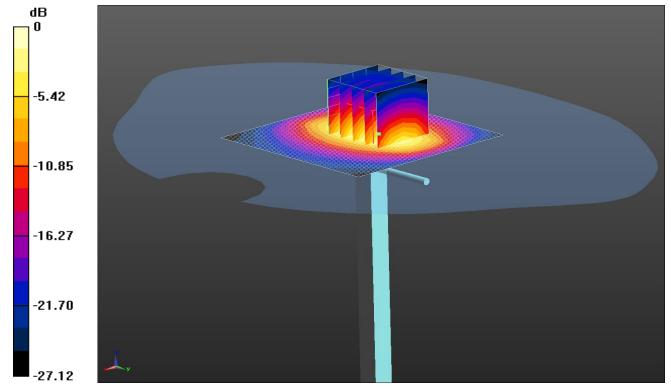
Maximum value of SAR (measured) = 10.8 W/kg

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SYS/017: System Performance Check 1800MHz Head 16 05 16

Date: 16/05/2016

DUT: Dipole 1800 MHz SN:264; Type: D1800V2; Serial: 264



0 dB = 11.0 W/kg = 10.40 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: 1800MHz HSL Medium parameters used: f = 1800 MHz;  $\sigma$  = 1.388 S/m;  $\epsilon_r$  = 39.226;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3814; ConvF(7.78, 7.78, 7.78); Calibrated: 06/10/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/2015
- Phantom: SAM (20deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:1031
- -; SEMCAD X Version 14.6.10 (7372)

SAR/d=10mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 11.0 W/kgSAR/d=10mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2/Zoom Scan

(5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 86.45 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 9.54 W/kg; SAR(10 g) = 5.02 W/kg

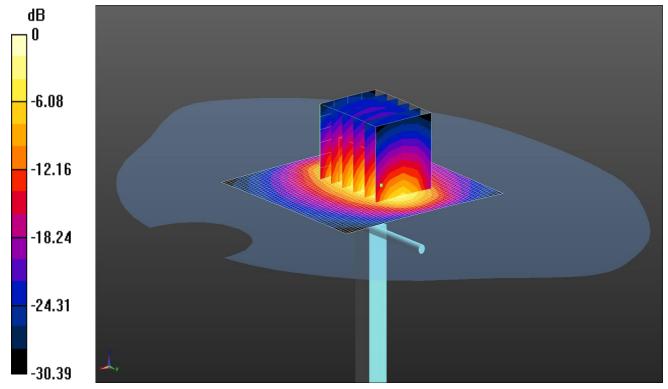
Maximum value of SAR (measured) = 10.6 W/kg

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SYS/018: System Performance Check 1800MHz Body 26 04 16

Date: 26/4/2016

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: 264



0 dB = 11.4 W/kg = 10.58 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: 1800 MHz MSL Medium parameters used: f = 1800 MHz;  $\sigma = 1.536$  S/m;  $\varepsilon_r = 52.647$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3341; ConvF(4.93, 4.93, 4.93); Calibrated: 25/8/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 12/2/2016
- Phantom: SAM B (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1836
- -; SEMCAD X Version 14.6.10 (7331)

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe)/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm Maximum value of SAR (interpolated) = 11.4 W/kg

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe)/Zoom Scan (5x5x7) (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 83.55 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 16.6 W/kg

SAR(1 g) = 9.17 W/kg; SAR(10 g) = 4.84 W/kg

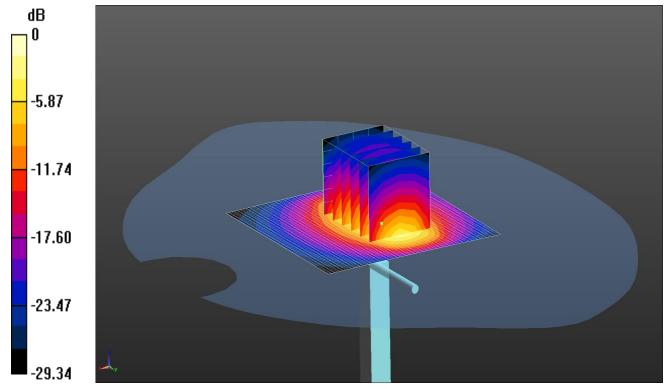
Maximum value of SAR (measured) = 10.2 W/kg

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SYS/019: System Performance Check 1800MHz Body 29 04 16

Date: 29/4/2016

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: 264



0 dB = 10.7 W/kg = 10.28 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: 1800 MHz MSL Medium parameters used: f = 1800 MHz;  $\sigma = 1.549$  S/m;  $\varepsilon_r = 50.755$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3341; ConvF(4.93, 4.93, 4.93); Calibrated: 25/8/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 12/2/2016
- Phantom: SAM B (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1836
- -; SEMCAD X Version 14.6.10 (7331)

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 10.7 W/kg

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2/Zoom Scan (5x5x7) (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 80.53 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 16.2 W/kg

SAR(1 g) = 8.88 W/kg; SAR(10 g) = 4.65 W/kg

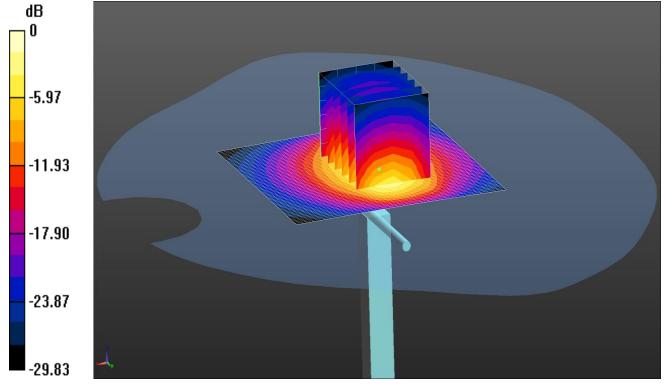
Maximum value of SAR (measured) = 9.89 W/kg

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SYS/020: System Performance Check 1800MHz Body 03 05 16

Date: 3/5/2016

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: 264



0 dB = 10.9 W/kg = 10.37 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: 1800 MHz MSL Medium parameters used: f = 1800 MHz;  $\sigma = 1.583$  S/m;  $\epsilon_r = 52.92$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3341; ConvF(4.93, 4.93, 4.93); Calibrated: 25/8/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 12/2/2016
- Phantom: SAM B (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1836
- -; SEMCAD X Version 14.6.10 (7331)

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 10.9 W/kg

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2/Zoom Scan (5x5x7) (5x6x7)/Cube 0: Measurement grid: dx=8mm, dv=8mm. dz=5mm

Reference Value = 82.68 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 16.8 W/kg

SAR(1 g) = 9.3 W/kg; SAR(10 g) = 4.91 W/kg

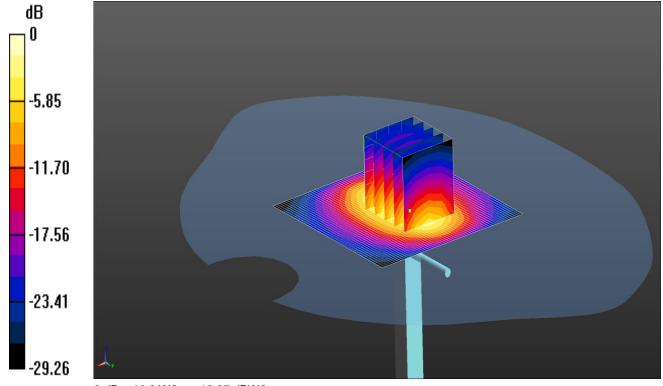
Maximum value of SAR (measured) = 10.3 W/kg

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SYS/021: System Performance Check 1900MHz Head 14 04 16

Date: 14/4/2016

DUT: Dipole 1900 MHz; SN540; Type: D1900V2; Serial: SN540



0 dB = 12.2 W/kg = 10.87 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 MHz HSL Medium parameters used: f = 1900 MHz;  $\sigma = 1.431$  S/m;  $\epsilon_r = 39.855$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3341; ConvF(5.07, 5.07, 5.07); Calibrated: 25/8/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 12/2/2016
- Phantom: SAM A (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1836
- -; SEMCAD X Version 14.6.10 (7331)

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 12.2 W/kg

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dv=8mm. dz=5mm

Reference Value = 89.42 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 19.0 W/kg

SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.29 W/kg

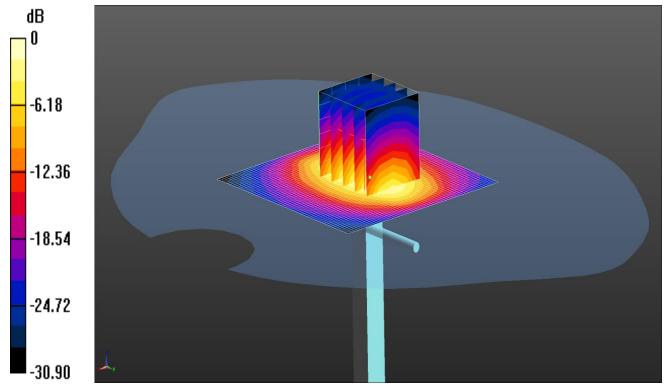
Maximum value of SAR (measured) = 11.2 W/kg

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SYS/022: System Performance Check 1900MHz Head 18 04 16

Date: 18/4/2016

DUT: Dipole 1900 MHz; SN540; Type: D1900V2; Serial: SN540



0 dB = 11.6 W/kg = 10.66 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 MHz HSL Medium parameters used: f = 1900 MHz;  $\sigma = 1.43$  S/m;  $\epsilon_r = 38.978$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3341; ConvF(5.07, 5.07, 5.07); Calibrated: 25/8/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 12/2/2016
- Phantom: SAM A (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1836
- -; SEMCAD X Version 14.6.10 (7331)

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 90.20 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 19.0 W/kg

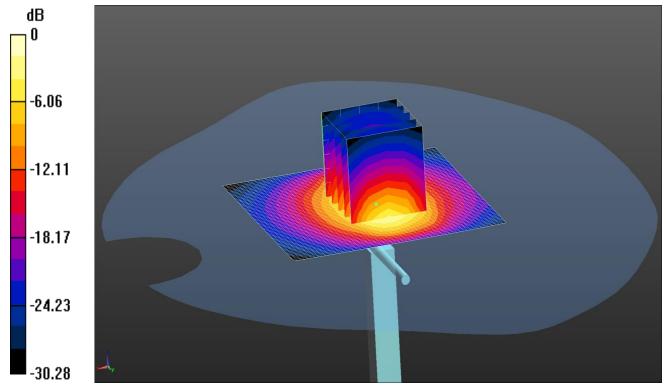
**SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.29 W/kg** Maximum value of SAR (measured) = 11.3 W/kg

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SYS/023: System Performance Check 1900MHz Body 04 05 16

Date: 4/5/2016

DUT: Dipole 1900 MHz; SN540; Type: D1900V2; Serial: SN540



0 dB = 11.5 W/kg = 10.60 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 MHz MSL Medium parameters used: f = 1900 MHz;  $\sigma = 1.592$  S/m;  $\varepsilon_r = 51.333$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3341; ConvF(4.78, 4.78, 4.78); Calibrated: 25/8/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 12/2/2016
- Phantom: SAM A (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1836
- -; SEMCAD X Version 14.6.10 (7331)

**SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2 2/Area Scan (61x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 11.5 W/kg

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2 2 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mm

Reference Value = 85.74 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 18.2 W/kg

SAR(1 g) = 10 W/kg; SAR(10 g) = 5.23 W/kg

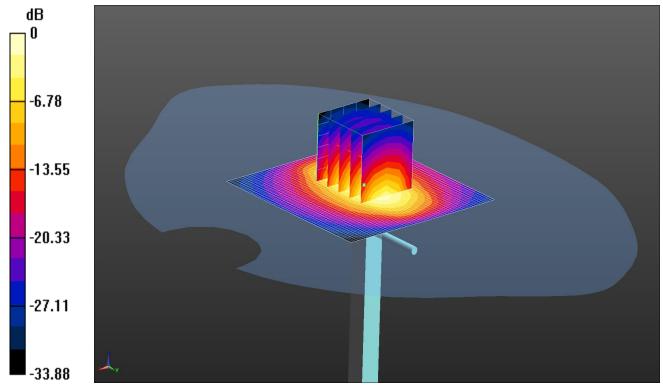
Maximum value of SAR (measured) = 11.3 W/kg

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SYS/024: System Performance Check 1900 MHz Body 16 05 16

Date: 16/05/2016

DUT: Dipole 1900 MHz; SN540; Type: D1900V2; Serial: SN540



0 dB = 12.2 W/kg = 10.86 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 MHz MSL Medium parameters used: f = 1900 MHz;  $\sigma = 1.535$  S/m;  $\varepsilon_r = 51.666$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3995; ConvF(7.84, 7.84, 7.84); Calibrated: 26/04/2016;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 12/02/2016
- Phantom: SAM 1-2 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1817
- -; SEMCAD X Version 14.6.10 (7372)

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 12.2 W/kg

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

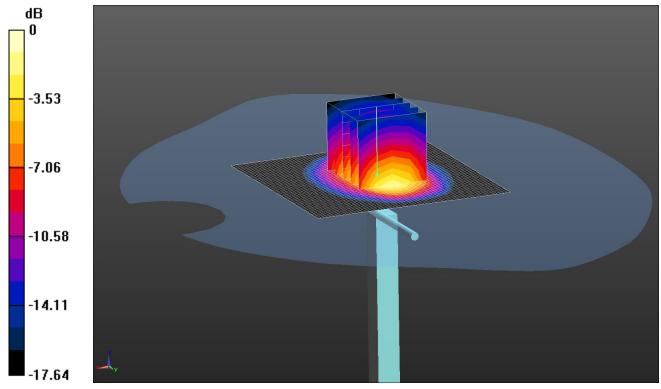
Reference Value = 87.19 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 18.8 W/kg

SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.41 W/kg Maximum value of SAR (measured) = 11.6 W/kg SYS/025: System Performance Check 1900 MHz Body 19 05 16

Date: 19/05/2016

DUT: Dipole 1900 MHz; SN540; Type: D1900V2; Serial: SN540



0 dB = 11.4 W/kg = 10.57 dBW/kg

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 MHz MSL Medium parameters used: f = 1900 MHz;  $\sigma = 1.563$  S/m;  $\varepsilon_r = 50.982$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3995; ConvF(7.84, 7.84, 7.84); Calibrated: 26/04/2016;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: SAM 1-2 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1817
- -; SEMCAD X Version 14.6.10 (7372)

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 11.7 W/kg

SAR/d=15mm, Pin=250 mW, dist=10.0mm (ET-Probe) 2/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dv=8mm. dz=5mm

Reference Value = 85.56 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 18.5 W/kg

SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.31 W/kg

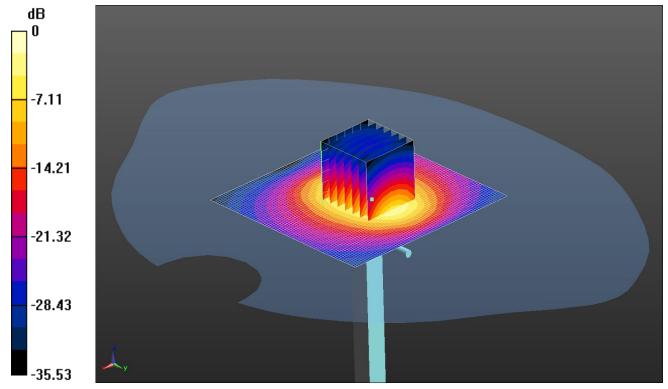
Maximum value of SAR (measured) = 11.4 W/kg

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SYS/026: System Performance Check 2300MHz Head 03 05 16

Date: 03/05/2016

DUT: Dipole 2300 MHz SN:1057; Type: D2300V3; Serial: D2300V3 - SN:1057



0 dB = 14.9 W/kg = 11.75 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2300 MHz; Duty Cycle: 1:1

Medium: 2450 MHz HSL Medium parameters used: f = 2300 MHz;  $\sigma$  = 1.709 S/m;  $\epsilon_r$  = 40.168;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3335; ConvF(4.78, 4.78, 4.78); Calibrated: 23/07/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAMB (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7164)

Configuration/d=10mm, Pin=250mW 2 2/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm Maximum value of SAR (interpolated) = 14.9 W/kg

Configuration/d=10mm, Pin=250mW 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.258 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 25.4 W/kg

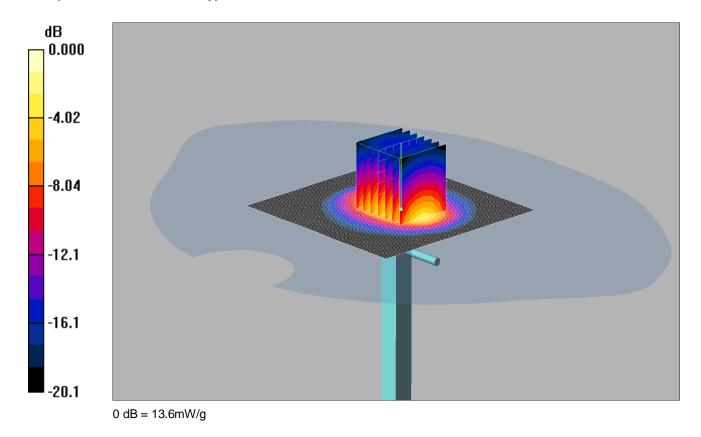
SAR(1 g) = 12.6 W/kg; SAR(10 g) = 6 W/kg

Maximum value of SAR (measured) = 18.9 W/kg

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Date: 16/05/2016

# DUT: Dipole 2300 MHz D2300V2; Type: D2300V3; Serial: D2300V3 - SN:1036



Communication System: CW; Frequency: 2300 MHz; Duty Cycle: 1:1

Medium: 2300/2450 MHz MSL Medium parameters used: f = 2300 MHz;  $\sigma = 1.86$  mho/m;  $\epsilon_r = 51$ ;  $\rho = 1000$  kg/m<sup>3</sup> Phantom section: Flat Section

#### DASY4 Configuration:

- Probe: ES3DV3 - SN3341; ConvF(4.54, 4.54, 4.54);

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAM 12a (Site 57); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

2300 MHz System Check d=10mm, Pin=250mW 2/Area Scan (81x81x1): Measurement grid: dx=12mm, dy=12mm Maximum value of SAR (interpolated) = 13.7 mW/g

2300 MHz System Check d=10mm, Pin=250mW 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 86.2 V/m; Power Drift = 0.002 dB

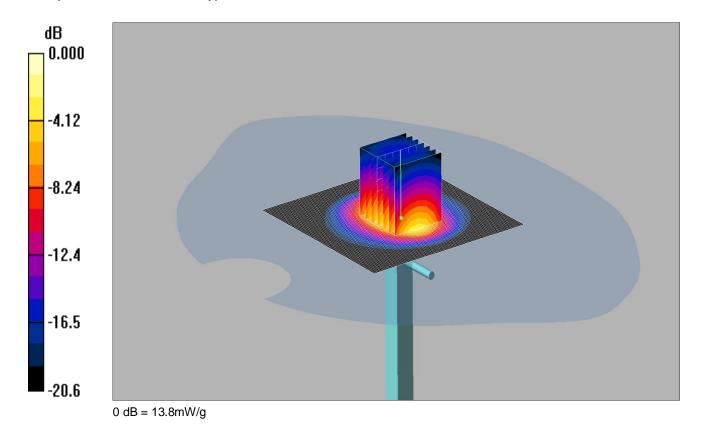
Peak SAR (extrapolated) = 24.2 W/kg

SAR(1 g) = 11.9 mW/g; SAR(10 g) = 5.69 mW/g

Maximum value of SAR (measured) = 13.6 mW/g

Date: 19/05/2016

# DUT: Dipole 2300 MHz D2300V2; Type: D2300V2; Serial: D2300V3 - SN:1057



Communication System: CW; Frequency: 2300 MHz; Duty Cycle: 1:1

Medium: 2300/2450 MHz MSL Medium parameters used: f = 2300 MHz;  $\sigma = 1.84$  mho/m;  $\varepsilon_r = 50.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ES3DV3 SN3341; ConvF(4.54, 4.54, 4.54);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAM 12a (Site 57); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

2300 MHz System Check d=10mm, Pin=250mW 2/Area Scan (81x81x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 13.9 mW/g

2300 MHz System Check d=10mm, Pin=250mW 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

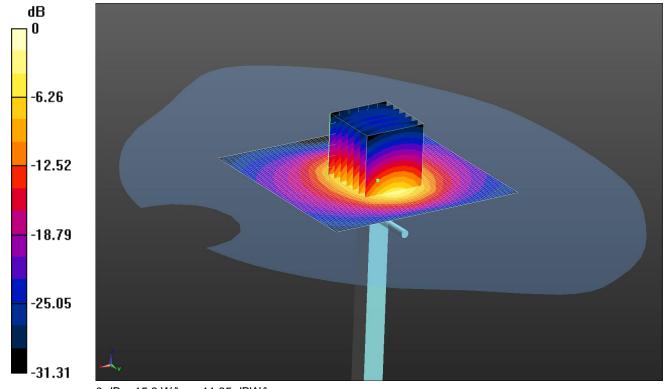
Reference Value = 87.8 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 25.0 W/kg

SAR(1 g) = 12.1 mW/g; SAR(10 g) = 5.71 mW/g Maximum value of SAR (measured) = 13.8 mW/g SYS/029: System Performance Check 2450MHz Head 21 04 16

Date: 21/04/2016

DUT: Dipole 2450 MHz; SN725; Type: D2450V2; Serial: D2450V2 - SN:725



0 dB = 15.3 W/kg = 11.85 dBW/kg

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

Medium: 2450 MHz HSL Medium parameters used: f = 2450 MHz;  $\sigma$  = 1.846 S/m;  $\epsilon_r$  = 39.899;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

UL VS Ltd.

- Probe: ES3DV3 SN3335; ConvF(4.42, 4.42, 4.42); Calibrated: 23/07/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAMB (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7372)

Configuration/d=10mm, Pin=250mW 2 2 2 2 2/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm Maximum value of SAR (interpolated) = 15.3 W/kg

Configuration/d=10mm, Pin=250mW 2 2 2 2 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 89.00 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 28.7 W/kg

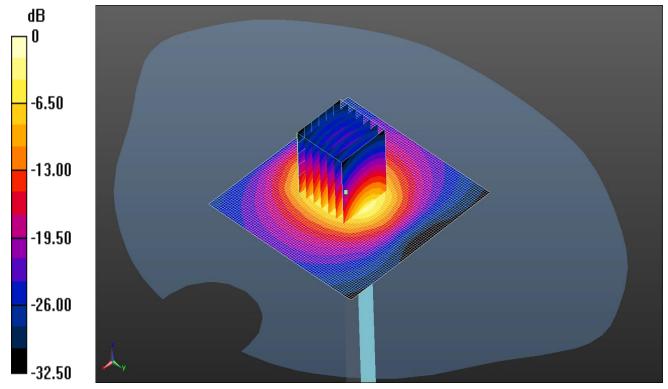
SAR(1 g) = 12.9 W/kg; SAR(10 g) = 5.85 W/kgMaximum value of SAR (measured) = 20.1 W/kg

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SYS/030: System Performance Check 2450MHz Head 18 04 16

Date: 18/04/2016

DUT: Dipole 2450 MHz; SN725; Type: D2450V2; Serial: D2450V2 - SN:725



0 dB = 15.6 W/kg = 11.92 dBW/kg

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

Medium: 2450 MHz HSL Medium parameters used: f = 2450 MHz;  $\sigma = 1.785$  S/m;  $\varepsilon_r = 37.839$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3335; ConvF(4.42, 4.42, 4.42); Calibrated: 23/07/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAMB (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7164)

Configuration/d=10mm, Pin=250mW 2 2 2/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm Maximum value of SAR (interpolated) = 15.6 W/kg

Configuration/d=10mm, Pin=250mW 2 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

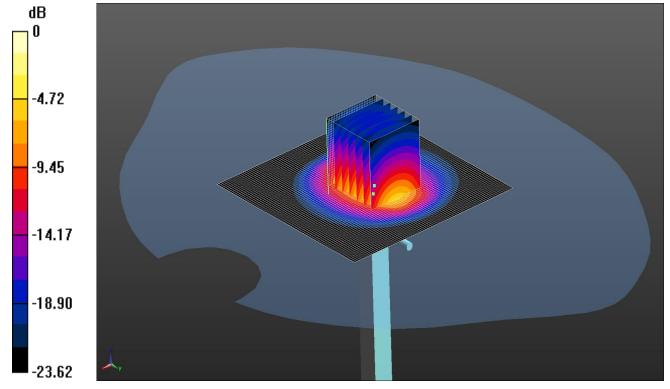
Reference Value = 87.484 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 29.1 W/kg

SAR(1 g) = 13.1 W/kg; SAR(10 g) = 5.94 W/kg Maximum value of SAR (measured) = 20.5 W/kg SYS/031: System Performance Check 2450MHz Body 06 05 16

Date: 06/05/16

DUT: Dipole 2450 MHz; SN725; Type: D2450V2; Serial: D2450V2 - SN:725



0 dB = 25.1 W/kg = 14.00 dBW/kg

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

Medium: 2450 MHz MSL Medium parameters used: f = 2450 MHz;  $\sigma = 2.032$  S/m;  $\epsilon_r = 51.899$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section DASY4 Configuration:

- Probe: EX3DV4 SN3814; ConvF(7.04, 7.04, 7.04); Calibrated: 06/10/15;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/15
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7331)

Configuration/d=10mm, Pin=250mW 2 2/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 14.7 W/kg

Configuration/d=10mm, Pin=250mW 2 2/Zoom Scan (7x7x7) (31x31x36)/Cube 0: Interpolated grid: dx=1.000 mm, dy=1.000 mm, dz=1.000 mm

Reference Value = 83.81 V/m; Power Drift = 0.06 dB

Penetration depth = 7.683 (7.424, 7.925) [mm]

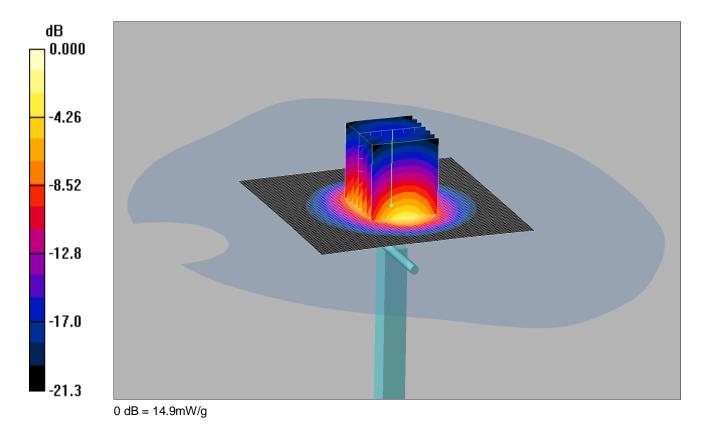
Maximum value of SAR (interpolated) = 25.1 W/kg

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Date/Time: 09/05/2016

Issue Date: 04 November 2016

# DUT: Dipole 2450 MHz; SN725; Type: D2450V2; Serial: D2450V2 - SN:725



Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: 2450/2600 MHz MSL Medium parameters used: f = 2450 MHz;  $\sigma = 2.02$  mho/m;  $\varepsilon_r = 50.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ES3DV3 SN3335; ConvF(4.31, 4.31, 4.31);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAM 12a (Site 57); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186 d=10mm, Pin=250mW 2 2/Area Scan (81x81x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 14.9 mW/g

d=10mm, Pin=250mW 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 86.3 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 27.3 W/kg

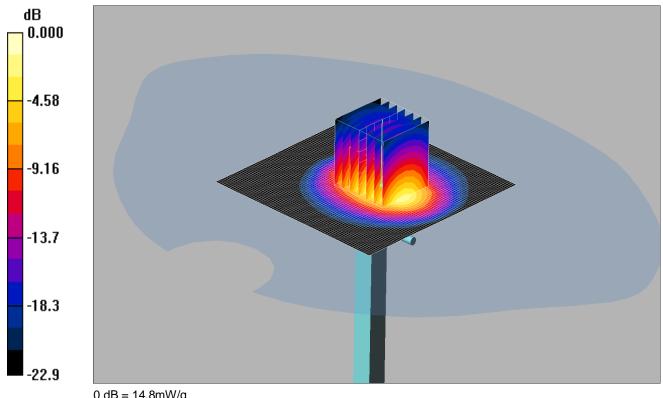
SAR(1 g) = 13.1 mW/g; SAR(10 g) = 6.1 mW/g

Maximum value of SAR (measured) = 14.9 mW/g

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Date: 17/05/2016

# DUT: Dipole 2450 MHz; SN725; Type: D2450V2; Serial: D2450V2 - SN:725



0 dB = 14.8 mW/g

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: 2450/2600 MHz MSL Medium parameters used: f = 2450 MHz;  $\sigma$  = 2.04 mho/m;  $\epsilon_r$  = 50.5;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ES3DV3 SN3341; ConvF(4.31, 4.31, 4.31);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAM 12a (Site 57); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186d=10mm, Pin=250mW 2 2 2 2/Area Scan (81x81x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 15.8 mW/g

d=10mm, Pin=250mW 2 2 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 83.3 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 27.8 W/kg

SAR(1 g) = 13 mW/g; SAR(10 g) = 5.87 mW/g

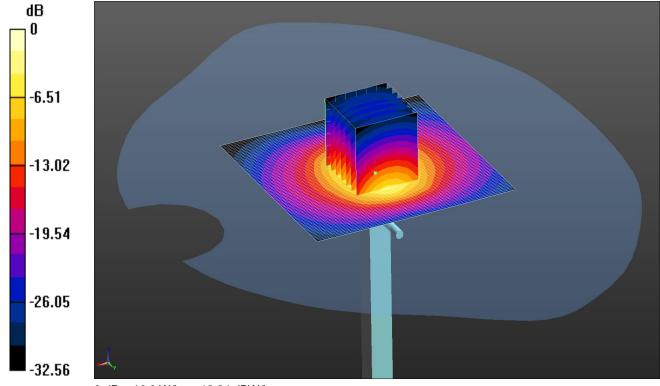
Maximum value of SAR (measured) = 14.8 mW/g

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SYS/034: System Performance Check 2600MHz Head 07 04 16

Date: 07/04/2016

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1109



0 dB = 16.8 W/kg = 12.24 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: 2450 MHz HSL Medium parameters used: f = 2600 MHz;  $\sigma$  = 1.876 S/m;  $\epsilon_r$  = 39.685;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 SN3994; ConvF(7.07, 7.07, 7.07); Calibrated: 21/03/2016;
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAMB (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7372)

Configuration/d=10mm, Pin=250mW 2 2/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm Maximum value of SAR (interpolated) = 16.8 W/kg

Configuration/d=10mm, Pin=250mW 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm,

Reference Value = 92.79 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 31.5 W/kg

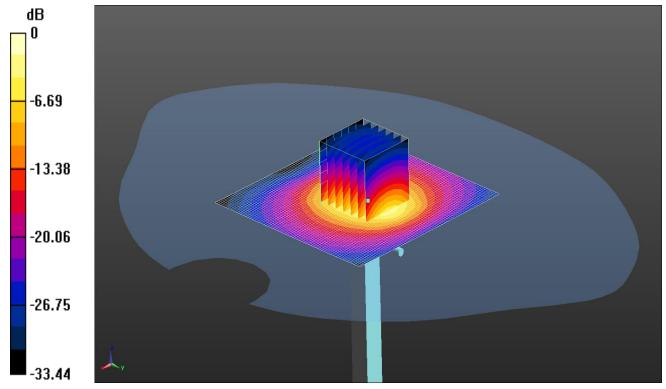
SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.34 W/kg

Maximum value of SAR (measured) = 22.0 W/kg

SYS/035: System Performance Check 2600MHz Head 25 04 16

Date: 25/04/2016

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1109



0 dB = 16.6 W/kg = 12.19 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: 2450 MHz HSL Medium parameters used: f = 2600 MHz;  $\sigma = 1.977$  S/m;  $\varepsilon_r = 38.213$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3335; ConvF(4.33, 4.33, 4.33); Calibrated: 23/07/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAMB (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7164)

Configuration/d=10mm, Pin=250mW 2 2 2 2/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm Maximum value of SAR (interpolated) = 16.6 W/kg

Configuration/d=10mm, Pin=250mW 2 2 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

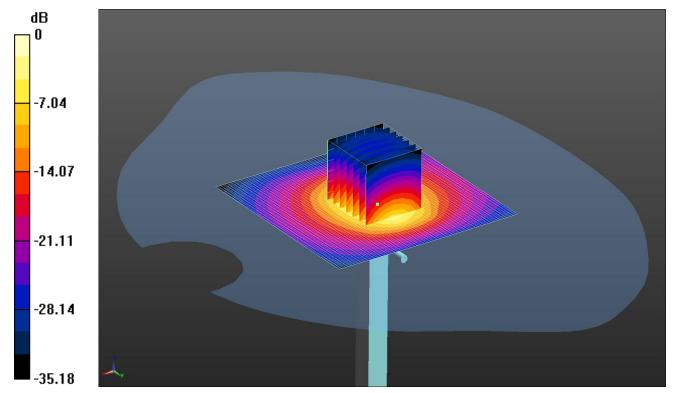
Reference Value = 89.810 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 32.0 W/kg

SAR(1 g) = 13.8 W/kg; SAR(10 g) = 6.05 W/kg Maximum value of SAR (measured) = 22.1 W/kg SYS/036: System Performance Check 2600MHz Head 28 04 16

Date: 28/04/2016

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1109



0 dB = 16.6 W/kg = 12.20 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: 2450 MHz HSL Medium parameters used: f = 2600 MHz;  $\sigma$  = 1.999 S/m;  $\epsilon_r$  = 38.958;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: ES3DV3 SN3335; ConvF(4.33, 4.33, 4.33); Calibrated: 23/07/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAMB (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7372)

Configuration/d=10mm, Pin=250mW 2 2 2 2/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm Maximum value of SAR (interpolated) = 16.6 W/kg

Configuration/d=10mm, Pin=250mW 2 2 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.52 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 32.5 W/kg

SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.31 W/kg

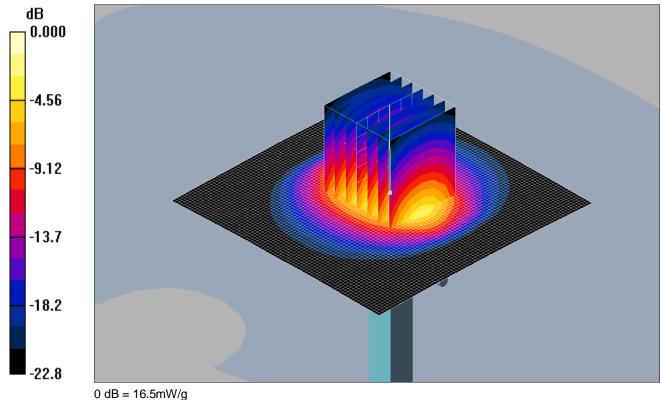
Maximum value of SAR (measured) = 22.8 W/kg

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Issue Date: 04 November 2016

Date: 08/04/2016

## DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1046



0 45 - 10.011117

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: 2600 MHz MSL Medium parameters used: f = 2600 MHz;  $\sigma = 2.12$  mho/m;  $\varepsilon_r = 50.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: EX3DV4 SN3814; ConvF(6.79, 6.79, 6.79);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 28/09/2015
- Phantom: SAM 12a (Site 57); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**d=10mm, Pin=250mW/Area Scan (81x81x1):** Measurement grid: dx=12mm, dy=12mm Maximum value of SAR (interpolated) = 16.4 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.6 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 30.8 W/kg

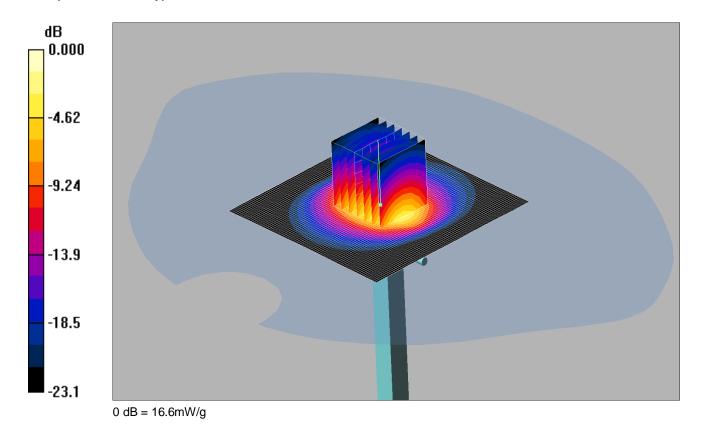
SAR(1 g) = 14.3 mW/g; SAR(10 g) = 6.35 mW/g

Maximum value of SAR (measured) = 16.5 mW/g

Issue Date: 04 November 2016

Date/Time: 10/05/2016 11:25:19

## DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1109



Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: 2600 MHz MSL Medium parameters used: f = 2600 MHz;  $\sigma = 2.2$  mho/m;  $\epsilon_r = 50.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ES3DV3 SN3335; ConvF(4.16, 4.16, 4.16);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAM 12a (Site 57); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**d=10mm, Pin=250mW/Area Scan (81x81x1):** Measurement grid: dx=12mm, dy=12mm Maximum value of SAR (interpolated) = 18.8 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.3 V/m; Power Drift = -0.421 dB

Peak SAR (extrapolated) = 32.0 W/kg

SAR(1 g) = 14.5 mW/g; SAR(10 g) = 6.4 mW/g

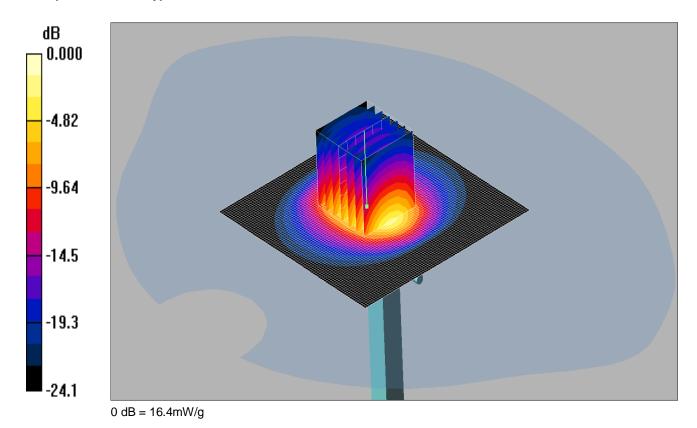
Maximum value of SAR (measured) = 16.6 mW/g

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Date/Time: 19/05/2016

Issue Date: 04 November 2016

## DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1109



Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: 2600 MHz MSL Medium parameters used: f = 2600 MHz;  $\sigma = 2.17$  mho/m;  $\varepsilon_r = 50.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

# DASY4 Configuration:

- Probe: ES3DV3 SN3341; ConvF(4.1, 4.1, 4.1);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn432; Calibrated: 25/08/2015
- Phantom: SAM 12a (Site 57); Type: SAM 4.0; Serial: TP:1020
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=250mW 2 2 2/Area Scan (81x81x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 16.9 mW/g

d=10mm, Pin=250mW 2 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 83.2 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 31.5 W/kg

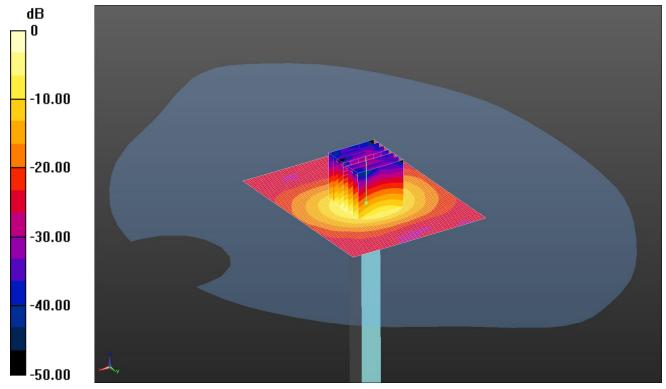
SAR(1 g) = 14.3 mW/g; SAR(10 g) = 6.23 mW/g

Maximum value of SAR (measured) = 16.4 mW/g

SYS/040: System Performance Check 5250 MHz Head 19 04 16

Date: 18/04/2016

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1222



0 dB = 16.3 W/kg = 12.12 dBW/kg

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

Medium: 5250/5600/5750 MHz HSL Medium parameters used: f = 5250 MHz; σ = 4.667 S/m;  $ε_r = 34.423$ ; ρ = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3994; ConvF(5.2, 5.2, 5.2); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/2015
- Phantom: SAM (20deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7372)

Configuration/d=10mm, Pin=100mW 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 16.4 W/kg

Configuration/d=10mm, Pin=100mW 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

dz=2mm

Reference Value = 41.00 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 32.7 W/kg

SAR(1 g) = 7.89 W/kg; SAR(10 g) = 2.27 W/kg

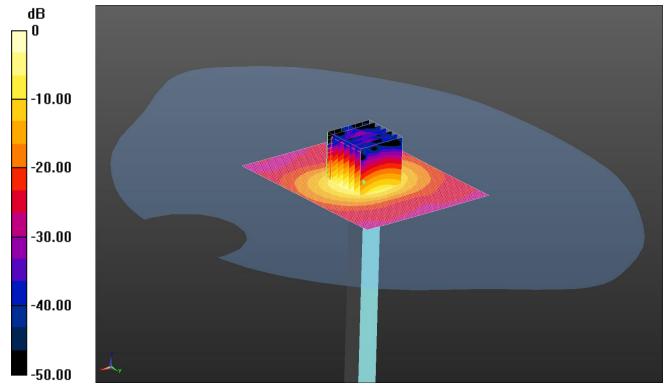
Maximum value of SAR (measured) = 16.3 W/kg

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SYS/041: System Performance Check 5600 MHz Head 19 04 16

Date: 18/04/2016

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1222



0 dB = 17.3 W/kg = 12.38 dBW/kg

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

Medium: 5250/5600/5750 MHz HSL Medium parameters used: f = 5600 MHz; σ = 5.027 S/m;  $ε_r = 34.095$ ; ρ = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3994; ConvF(4.5, 4.5, 4.5); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/2015
- Phantom: SAM (20deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7372)

Configuration/d=10mm, Pin=100mW 2 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 19.0 W/kg

Configuration/d=10mm, Pin=100mW 2 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

Reference Value = 43.59 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 34.1 W/kg

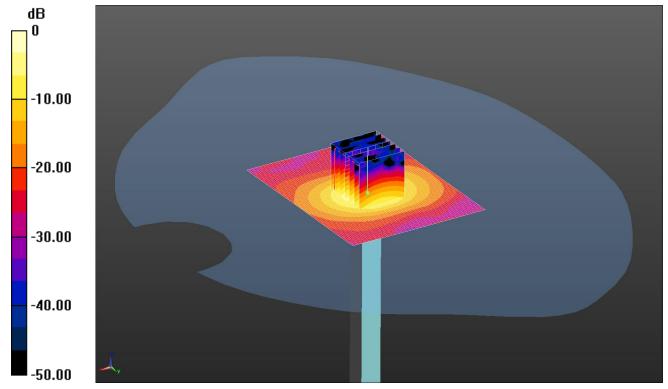
SAR(1 g) = 8.18 W/kg; SAR(10 g) = 2.31 W/kg

Maximum value of SAR (measured) = 17.3 W/kg

SYS/042: System Performance Check 5750 MHz Head 19 04 16

Date: 18/04/2016

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1222



0 dB = 16.9 W/kg = 12.28 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: 5250/5600/5750 MHz HSL Medium parameters used: f = 5750 MHz; σ = 5.197 S/m;  $ε_r = 33.851$ ; ρ = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3994; ConvF(4.51, 4.51, 4.51); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/2015
- Phantom: SAM (20deg probe tilt) with CRP v4.0; Type: QD000P40CC; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7372)

Configuration/d=10mm, Pin=100mW 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 17.1 W/kg

Configuration/d=10mm, Pin=100mW 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 39.76 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 34.2 W/kg

SAR(1 g) = 8.07 W/kg; SAR(10 g) = 2.29 W/kg

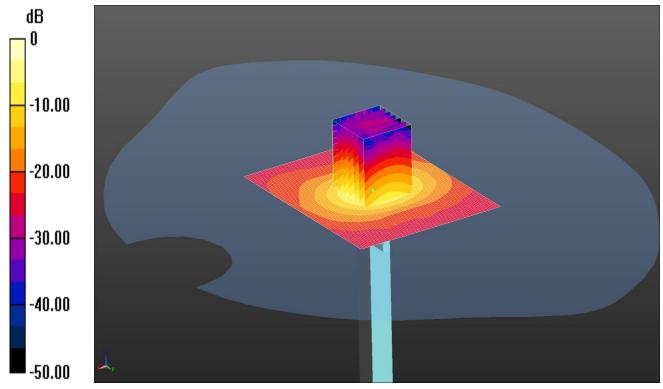
Maximum value of SAR (measured) = 16.9 W/kg

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SYS/043: System Performance Check 5250 MHz Body 25 04 16

Date: 25/04/16

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1016



0 dB = 15.9 W/kg = 12.01 dBW/kg

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

Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5250 MHz; σ = 5.464 S/m;  $ε_r = 47.653$ ; ρ = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 SN3994; ConvF(4.38, 4.38, 4.38); Calibrated: 21/03/16;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/15
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7331)

Configuration/d=10mm, Pin=100mW 2 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 16.7 W/kg

Configuration/d=10mm, Pin=100mW 2 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

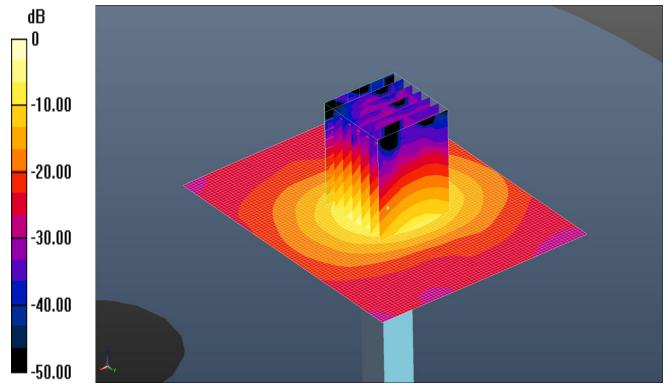
Reference Value = 41.17 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 29.5 W/kg

SAR(1 g) = 7.69 W/kg; SAR(10 g) = 2.17 W/kg Maximum value of SAR (measured) = 15.9 W/kg SYS/044: System Performance Check 5250 MHz Body 28 04 16

Date: 28/04/16

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1016



0 dB = 16.9 W/kg = 12.28 dBW/kg

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

Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5250 MHz;  $\sigma$  = 5.409 S/m;  $\epsilon_r$  = 47.678;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3994; ConvF(4.38, 4.38, 4.38); Calibrated: 21/03/16;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/15
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7331)

Configuration/d=10mm, Pin=100mW 2 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 17.9 W/kg

Configuration/d=10mm, Pin=100mW 2 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

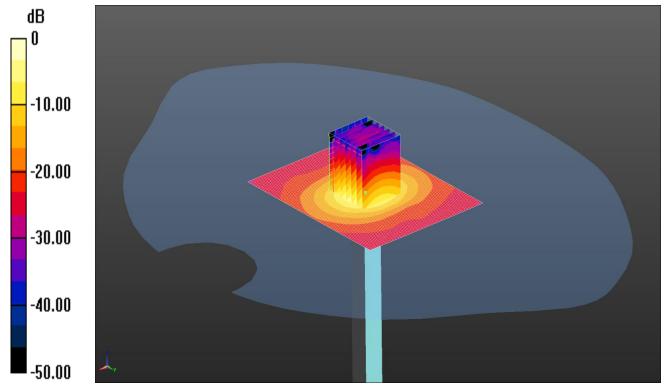
Reference Value = 42.41 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 32.1 W/kg

SAR(1 g) = 8.03 W/kg; SAR(10 g) = 2.24 W/kg Maximum value of SAR (measured) = 16.9 W/kg SYS/045: System Performance Check 5250 MHz Body 03 05 16

Date: 03/05/16

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1016



0 dB = 16.1 W/kg = 12.07 dBW/kg

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

Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5250 MHz; σ = 5.207 S/m;  $ε_r = 49.043$ ; ρ = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3814; ConvF(4.24, 4.24, 4.24); Calibrated: 06/10/15;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/15
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7331)

Configuration/d=10mm, Pin=100mW 2 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 17.4 W/kg

Configuration/d=10mm, Pin=100mW 2 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

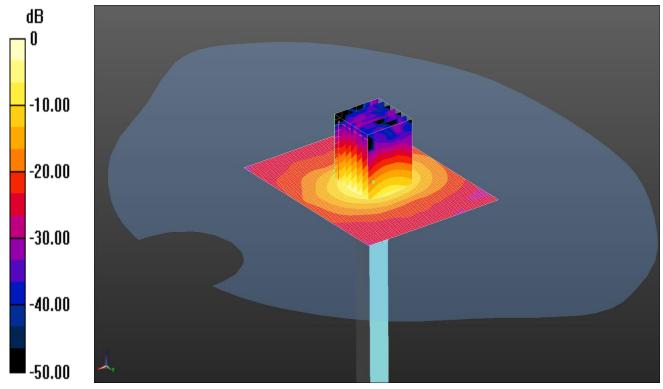
Reference Value = 42.73 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 30.9 W/kg

SAR(1 g) = 7.7 W/kg; SAR(10 g) = 2.15 W/kg Maximum value of SAR (measured) = 16.1 W/kg SYS/046: System Performance Check 5600 MHz Body 25 04 16

Date: 25/04/16

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1016



0 dB = 16.4 W/kg = 12.15 dBW/kg

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

Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5600 MHz;  $\sigma = 6.013$  S/m;  $\epsilon_r = 46.842$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3994; ConvF(3.76, 3.76, 3.76); Calibrated: 21/03/16;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/15
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7331)

Configuration/d=10mm, Pin=100mW 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 17.2 W/kg

Configuration/d=10mm, Pin=100mW 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 38.82 V/m; Power Drift = 0.15 dB

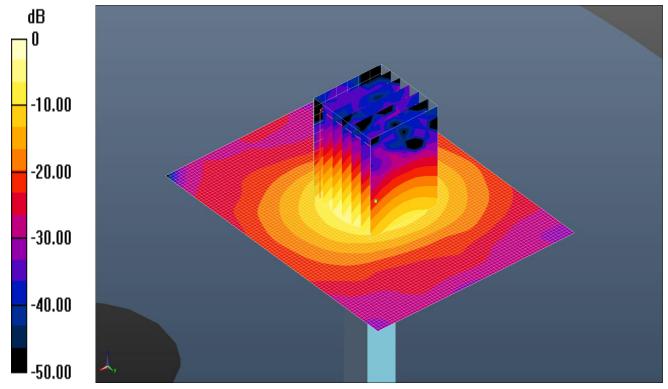
Peak SAR (extrapolated) = 31.2 W/kg

**SAR(1 g) = 7.68 W/kg; SAR(10 g) = 2.14 W/kg** Maximum value of SAR (measured) = 16.4 W/kg

SYS/047: System Performance Check 5600 MHz Body 28 04 16

Date: 28/04/16

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1016



0 dB = 17.8 W/kg = 12.50 dBW/kg

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

Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5600 MHz;  $\sigma$  = 5.962 S/m;  $\epsilon_r$  = 46.959;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3994; ConvF(3.76, 3.76, 3.76); Calibrated: 21/03/16;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/15
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7331)

Configuration/d=10mm, Pin=100mW 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 18.4 W/kg

Configuration/d=10mm, Pin=100mW 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

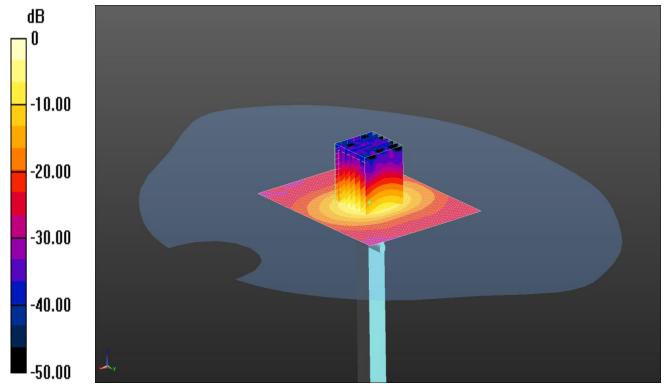
Reference Value = 40.49 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 35.1 W/kg

SAR(1 g) = 8.23 W/kg; SAR(10 g) = 2.28 W/kg Maximum value of SAR (measured) = 17.8 W/kg SYS/048: System Performance Check 5600 MHz Body 03 05 16

Date: 03/05/16

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1016



0 dB = 17.6 W/kg = 12.46 dBW/kg

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

Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5600 MHz;  $\sigma$  = 5.787 S/m;  $\epsilon_r$  = 48.418;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3814; ConvF(3.81, 3.81, 3.81); Calibrated: 06/10/15;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/15
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7331)

Configuration/d=10mm, Pin=100mW 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 19.2 W/kg

Configuration/d=10mm, Pin=100mW 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

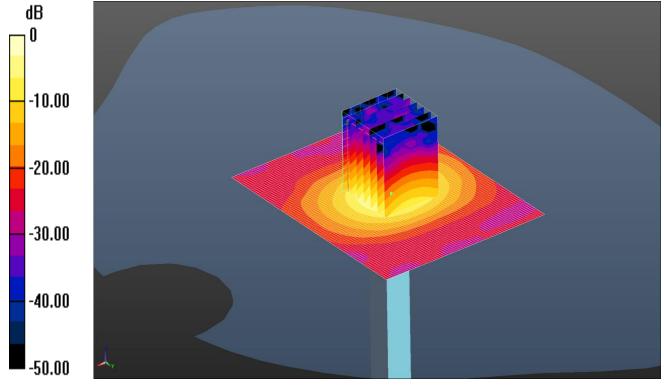
Reference Value = 41.22 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 35.9 W/kg

SAR(1 g) = 8.27 W/kg; SAR(10 g) = 2.3 W/kg Maximum value of SAR (measured) = 17.6 W/kg SYS/049: System Performance Check 5750 MHz Body 25 04 16

Date: 25/04/16

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1016



0 dB = 15.8 W/kg = 11.99 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5750 MHz; σ = 6.204 S/m;  $ε_r = 46.367$ ; ρ = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3994; ConvF(3.99, 3.99, 3.99); Calibrated: 21/03/16;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/15
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7331)

Configuration/d=10mm, Pin=100mW 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 16.8 W/kg

Configuration/d=10mm, Pin=100mW 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

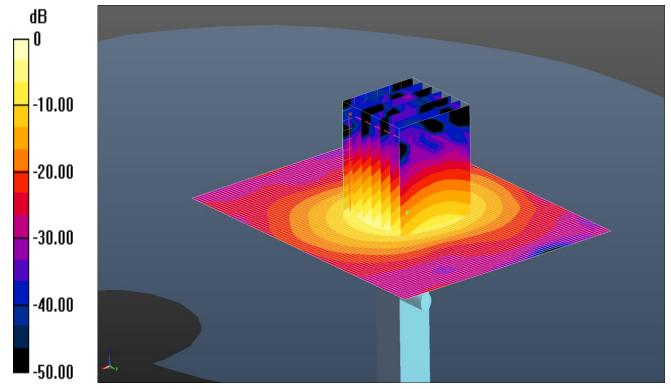
Reference Value = 37.68 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 30.7 W/kg

SAR(1 g) = 7.44 W/kg; SAR(10 g) = 2.09 W/kg Maximum value of SAR (measured) = 15.8 W/kg SYS/050: System Performance Check 5750 MHz Body 28 04 16

Date: 28/04/16

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1016



0 dB = 16.6 W/kg = 12.20 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5750 MHz;  $\sigma$  = 6.206 S/m;  $\epsilon_r$  = 46.557;  $\rho$  = 1000 kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4** Configuration:

- Probe: EX3DV4 SN3994; ConvF(3.99, 3.99, 3.99); Calibrated: 21/03/16;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/15
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7331)

Configuration/d=10mm, Pin=100mW 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 17.1 W/kg

Configuration/d=10mm, Pin=100mW 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

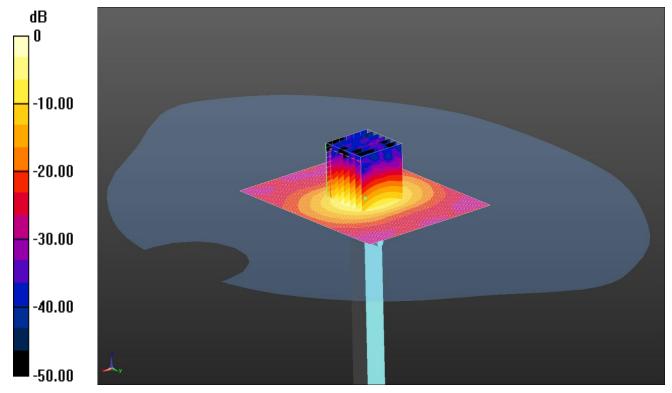
Reference Value = 38.17 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 33.4 W/kg

SAR(1 g) = 7.74 W/kg; SAR(10 g) = 2.16 W/kg Maximum value of SAR (measured) = 16.6 W/kg SYS/051: System Performance Check 5750 MHz Body 03 05 16

Date: 03/05/16

DUT: 5GHz Dipole; Type: D5GHzV2; Serial: SN 1016



0 dB = 17.2 W/kg = 12.36 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5750 MHz;  $\sigma = 6.025$  S/m;  $\epsilon_r = 47.998$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

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- Probe: EX3DV4 SN3814; ConvF(3.99, 3.99, 3.99); Calibrated: 06/10/15;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 17/11/15
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- -; SEMCAD X Version 14.6.10 (7331)

Configuration/d=10mm, Pin=100mW 2/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm Maximum value of SAR (interpolated) = 18.1 W/kg

Configuration/d=10mm, Pin=100mW 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 39.43 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 35.0 W/kg

SAR(1 g) = 7.91 W/kg; SAR(10 g) = 2.21 W/kg Maximum value of SAR (measured) = 17.2 W/kg