

Test Laboratory: UL CCS SAR Lab D

## UMTS band V

Communication System: UMTS Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 826.4$  MHz;  $\sigma = 0.949$  mho/m;  $\epsilon_r = 53.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(8.79, 8.79, 8.79); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1259; Calibrated: 5/3/2011
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BB; Serial: 1017
- Measurement SW: DASY4, V4.7 Build 80; Post processing SW: SEMCAD, V1.8 Build 186

**Rear/Base\_L ch/Area Scan (101x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.59 mW/g

**Rear/Base\_L ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

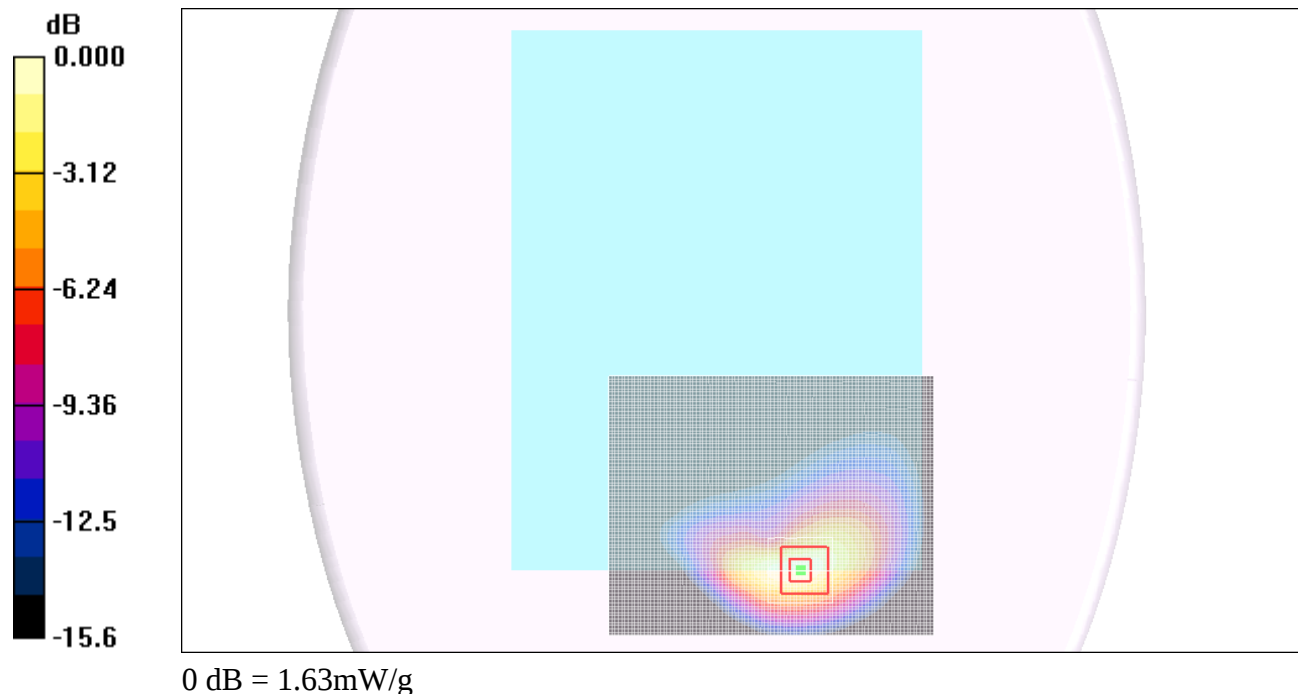
Reference Value = 41.8 V/m; Power Drift = -0.075 dB

Peak SAR (extrapolated) = 2.43 W/kg

**SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.610 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.63 mW/g



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## UMTS band V

Communication System: UMTS Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.959$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(8.79, 8.79, 8.79); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1259; Calibrated: 5/3/2011
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BB; Serial: 1017
- Measurement SW: DASY4, V4.7 Build 80; Post processing SW: SEMCAD, V1.8 Build 186

**Rear/Base\_M ch/Area Scan (141x201x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.52 mW/g

**Rear/Base\_M ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

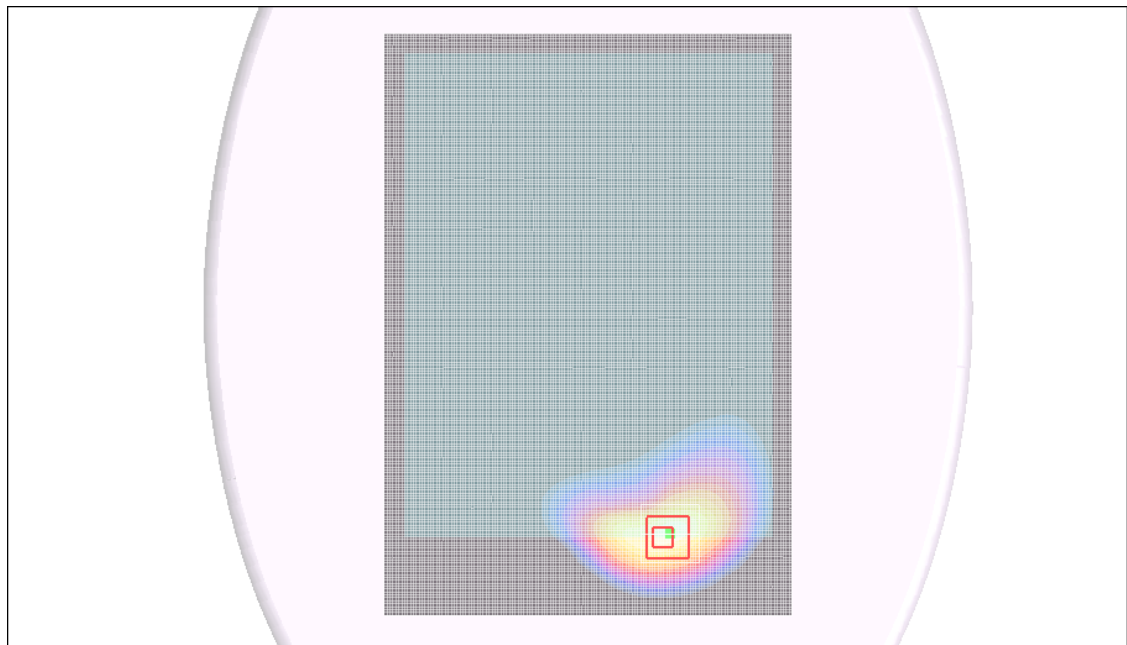
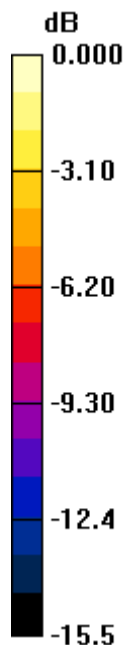
Reference Value = 39.9 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 2.48 W/kg

**SAR(1 g) = 1.18 mW/g; SAR(10 g) = 0.620 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.63 mW/g



0 dB = 1.63mW/g

Test Laboratory: UL CCS SAR Lab D

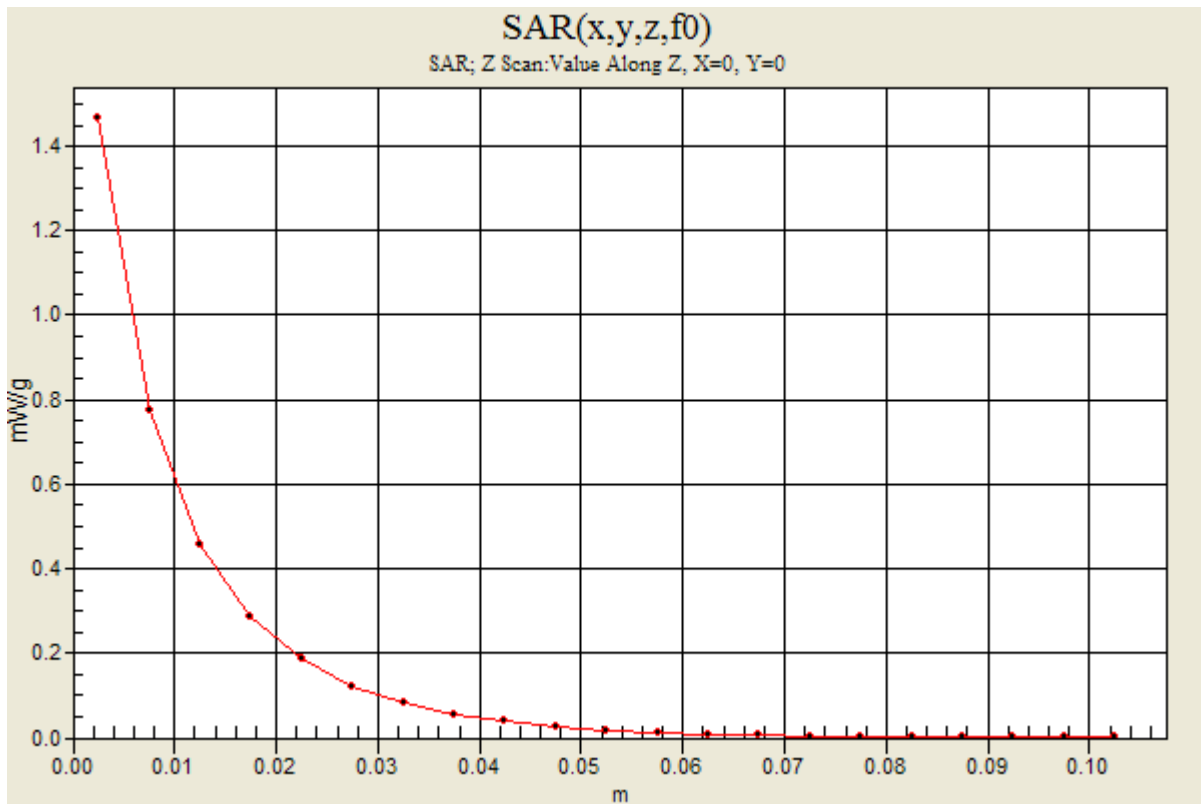
## UMTS band V

Communication System: UMTS Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

**Rear/Base\_M ch/Z Scan (1x1x21):** Measurement grid: dx=20mm, dy=20mm, dz=5mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.47 mW/g



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## UMTS band V

Communication System: UMTS Band V; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 846.6$  MHz;  $\sigma = 0.97$  mho/m;  $\epsilon_r = 53.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(8.79, 8.79, 8.79); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1259; Calibrated: 5/3/2011
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BB; Serial: 1017
- Measurement SW: DASY4, V4.7 Build 80; Post processing SW: SEMCAD, V1.8 Build 186

**Rear/Base\_H ch/Area Scan (101x81x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.60 mW/g

**Rear/Base\_H ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

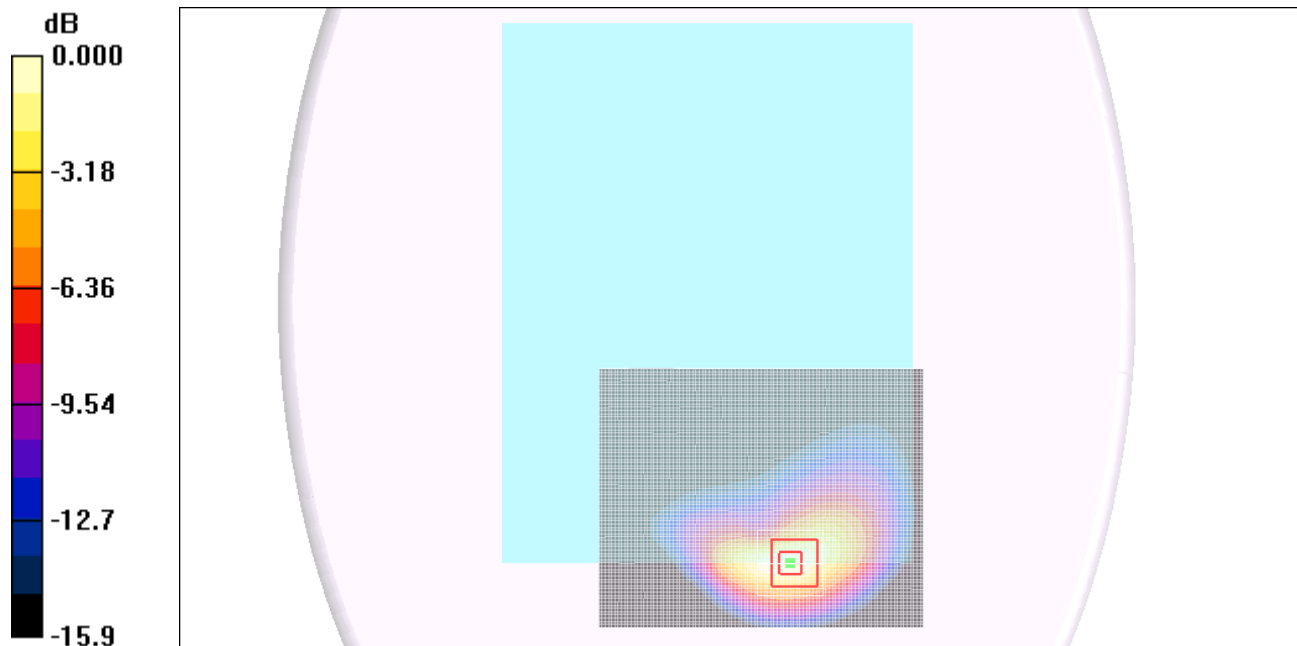
Reference Value = 40.5 V/m; Power Drift = 0.005 dB

Peak SAR (extrapolated) = 2.34 W/kg

**SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.586 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.57 mW/g



0 dB = 1.57mW/g

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## UMTS band V

Communication System: UMTS Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.959$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(8.79, 8.79, 8.79); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1259; Calibrated: 5/3/2011
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BB; Serial: 1017
- Measurement SW: DASY4, V4.7 Build 80; Post processing SW: SEMCAD, V1.8 Build 186

**Top Edge\_M ch/Area Scan (51x141x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.873 mW/g

**Top Edge\_M ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

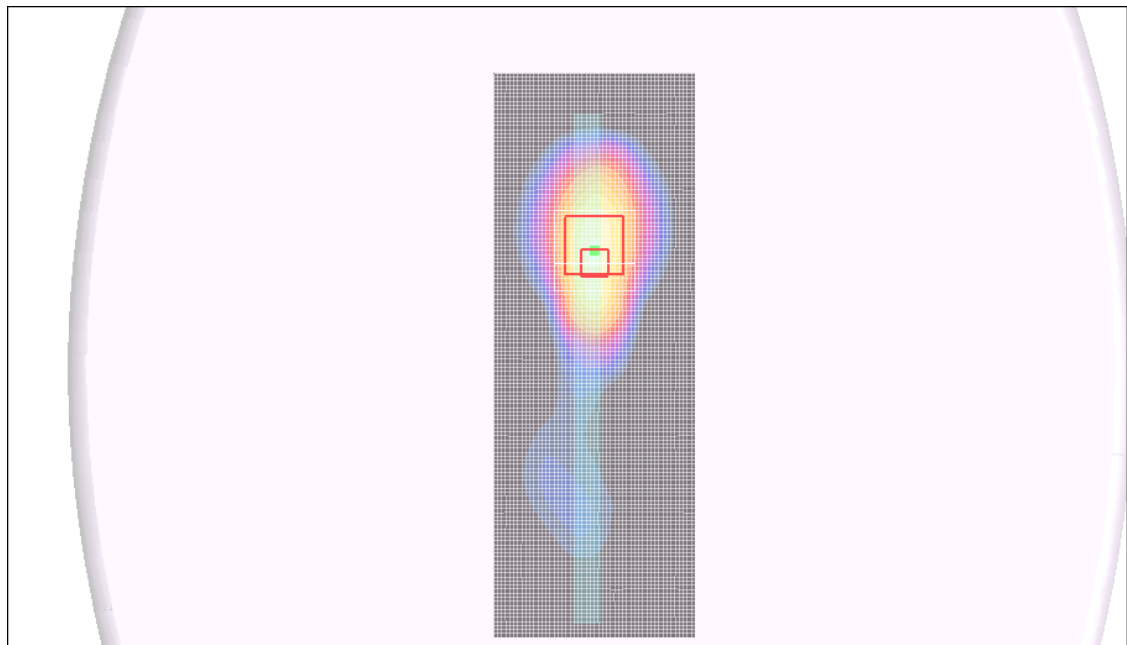
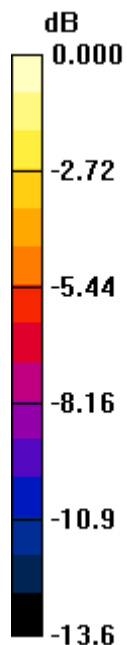
Reference Value = 25.5 V/m; Power Drift = 0.196 dB

Peak SAR (extrapolated) = 1.56 W/kg

**SAR(1 g) = 0.729 mW/g; SAR(10 g) = 0.398 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.03 mW/g



0 dB = 1.03mW/g

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## UMTS band V

Communication System: UMTS Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.959$  mho/m;  $\epsilon_r = 53.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(8.79, 8.79, 8.79); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1259; Calibrated: 5/3/2011
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BB; Serial: 1017
- Measurement SW: DASY4, V4.7 Build 80; Post processing SW: SEMCAD, V1.8 Build 186

**Right Edge\_M ch/Area Scan (51x191x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.333 mW/g

**Right Edge\_M ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

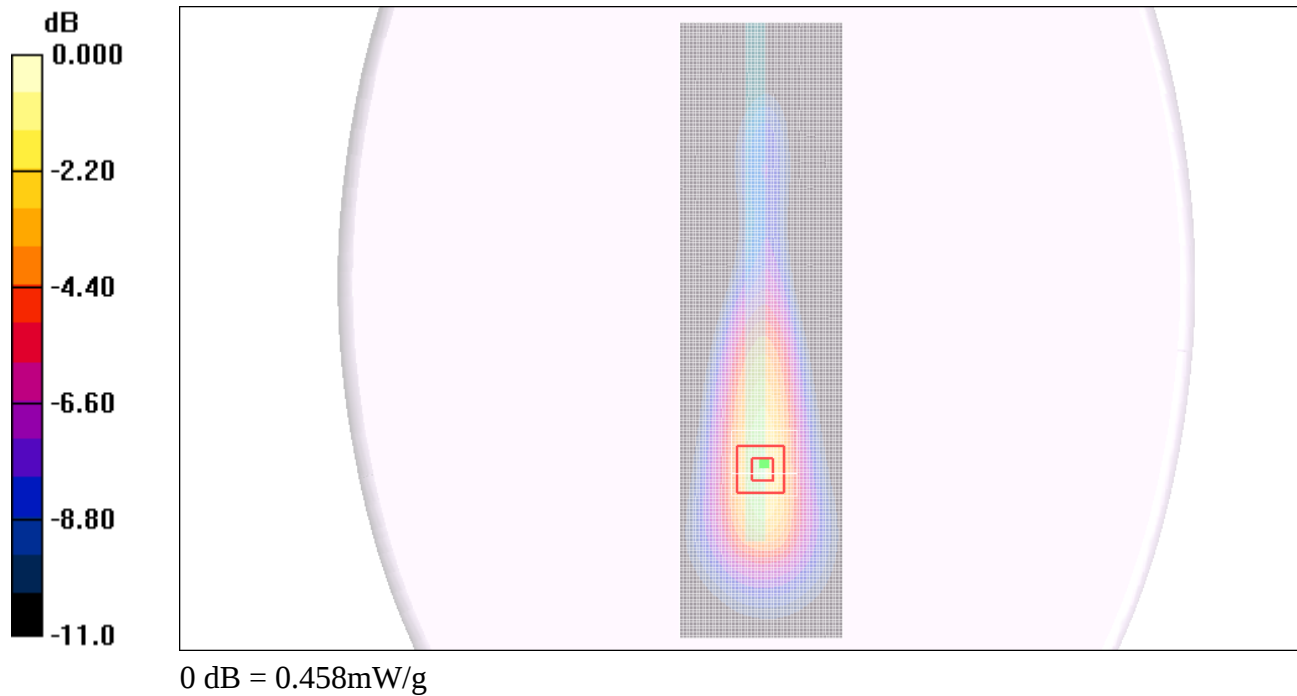
Reference Value = 17.0 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.723 W/kg

**SAR(1 g) = 0.316 mW/g; SAR(10 g) = 0.179 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.458 mW/g



Test Laboratory: UL CCS SAR Lab D

## UMTS band V\_W\_Seperation

Communication System: UMTS Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 826.4$  MHz;  $\sigma = 0.951$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(8.79, 8.79, 8.79); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1259; Calibrated: 5/3/2011
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BB; Serial: 1017
- Measurement SW: DASY4, V4.7 Build 80; Post processing SW: SEMCAD, V1.8 Build 186

**Rear/Base\_L ch with 11mm/Area Scan (141x201x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.14 mW/g

**Rear/Base\_L ch with 11mm/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

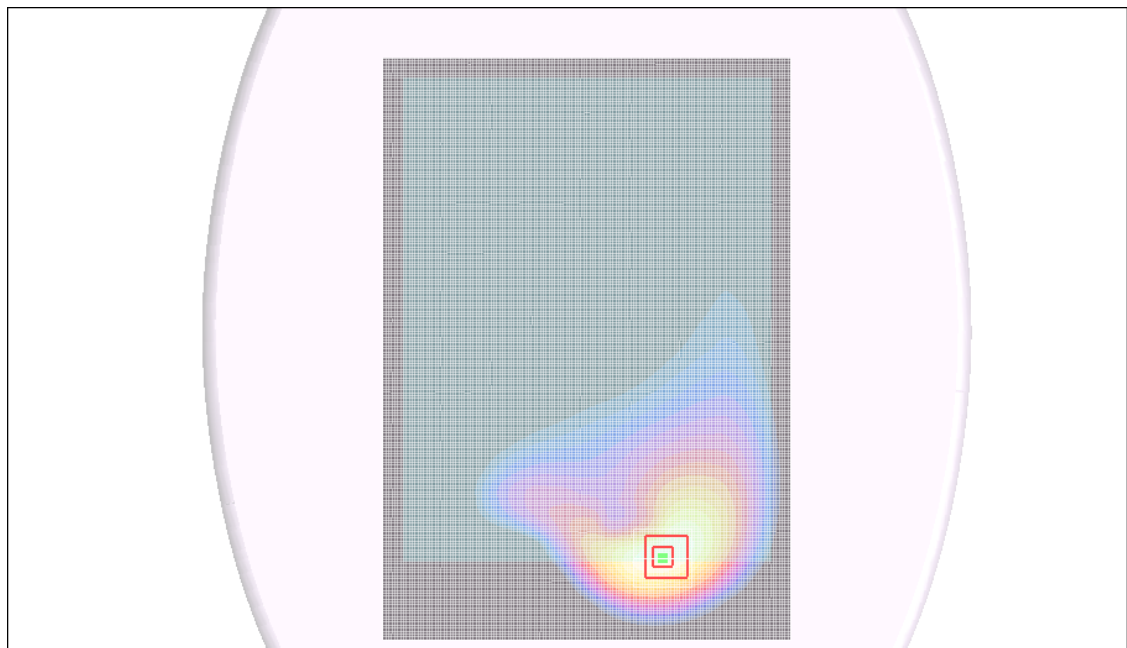
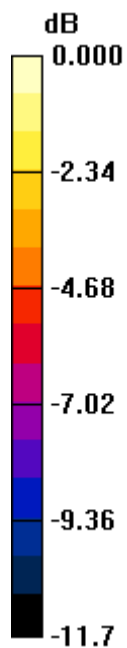
Reference Value = 33.6 V/m; Power Drift = -0.118 dB

Peak SAR (extrapolated) = 1.40 W/kg

**SAR(1 g) = 0.884 mW/g; SAR(10 g) = 0.553 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.10 mW/g



0 dB = 1.10mW/g

Test Laboratory: UL CCS SAR Lab D

## UMTS band V\_W\_Seperation

Communication System: UMTS Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.962$  mho/m;  $\epsilon_r = 54.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(8.79, 8.79, 8.79); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1259; Calibrated: 5/3/2011
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BB; Serial: 1017
- Measurement SW: DASY4, V4.7 Build 80; Post processing SW: SEMCAD, V1.8 Build 186

**Rear/Base\_M ch with 11mm/Area Scan (141x201x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.12 mW/g

**Rear/Base\_M ch with 11mm/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

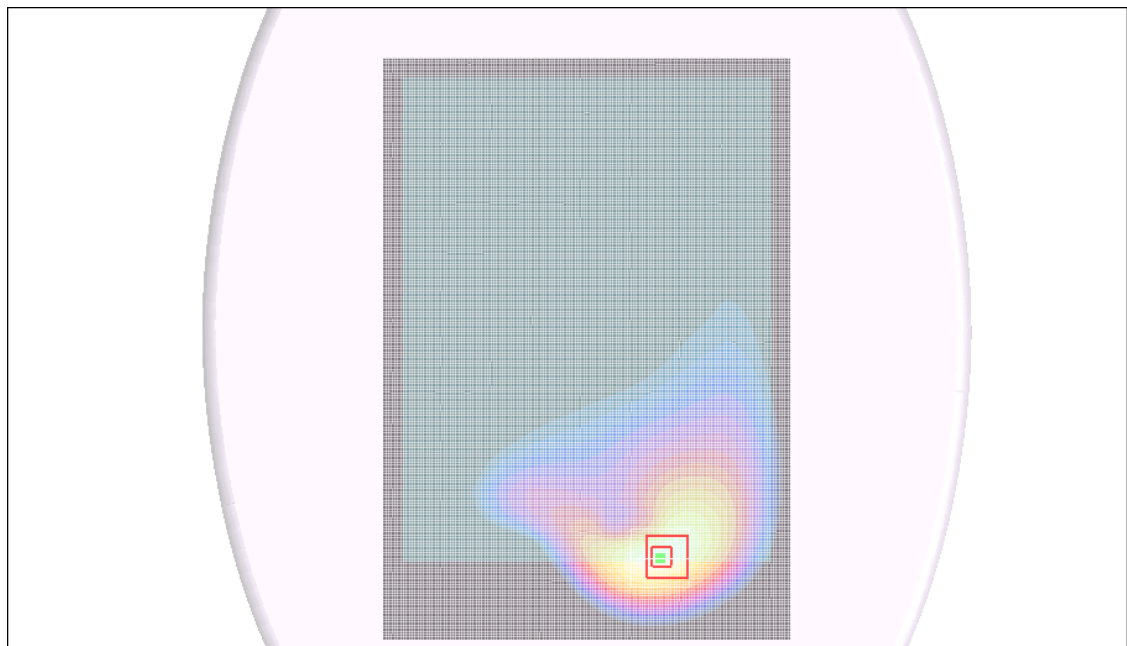
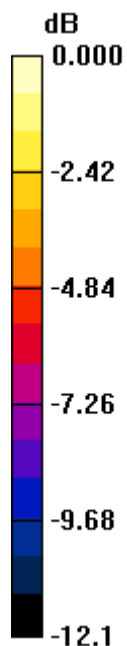
Reference Value = 34.0 V/m; Power Drift = 0.069 dB

Peak SAR (extrapolated) = 1.46 W/kg

**SAR(1 g) = 0.910 mW/g; SAR(10 g) = 0.571 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.15 mW/g



0 dB = 1.15mW/g

Test Laboratory: UL CCS SAR Lab D

## UMTS band V\_W\_Seperation

Communication System: UMTS Band V; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 846.6$  MHz;  $\sigma = 0.973$  mho/m;  $\epsilon_r = 54.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(8.79, 8.79, 8.79); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1259; Calibrated: 5/3/2011
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BB; Serial: 1017
- Measurement SW: DASY4, V4.7 Build 80; Post processing SW: SEMCAD, V1.8 Build 186

**Rear/Base\_H ch with 11mm/Area Scan (141x201x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.11 mW/g

**Rear/Base\_H ch with 11mm/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

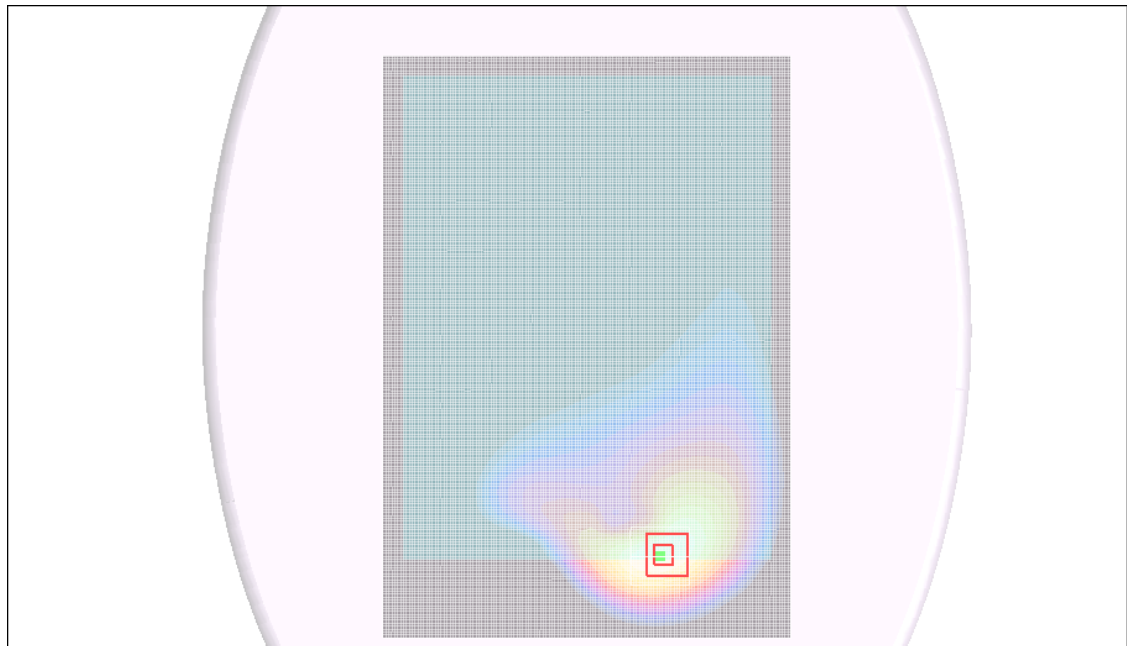
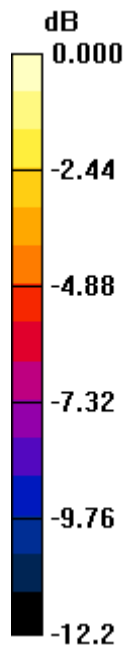
Reference Value = 32.4 V/m; Power Drift = -0.116 dB

Peak SAR (extrapolated) = 1.33 W/kg

**SAR(1 g) = 0.846 mW/g; SAR(10 g) = 0.527 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.05mW/g

Test Laboratory: UL CCS SAR Lab D

## UMTS band V\_W\_Seperation

Communication System: UMTS Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.962$  mho/m;  $\epsilon_r = 54.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(8.79, 8.79, 8.79); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1259; Calibrated: 5/3/2011
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BB; Serial: 1017
- Measurement SW: DASY4, V4.7 Build 80; Post processing SW: SEMCAD, V1.8 Build 186

**Top Edge\_M ch with 14mm/Area Scan (51x141x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.536 mW/g

**Top Edge\_M ch with 14mm/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

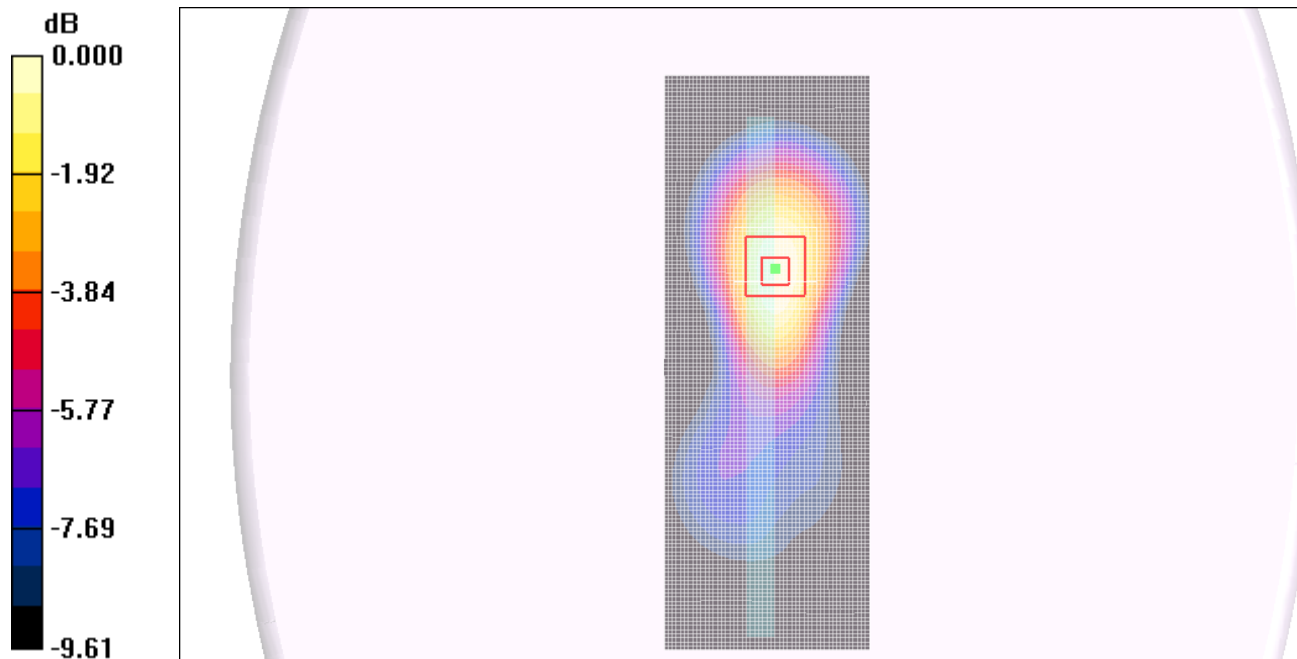
Reference Value = 23.0 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 0.636 W/kg

**SAR(1 g) = 0.430 mW/g; SAR(10 g) = 0.283 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.519 mW/g



0 dB = 0.519mW/g

Test Laboratory: UL CCS SAR Lab A

## UMTS band V

Communication System: WCDMA (UMTS); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.984$  mho/m;  $\epsilon_r = 55.254$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(8.79, 8.79, 8.79); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 7/14/2011
- Phantom: ELI v4.0(A); Type: QDOVA001BB; Serial: 1119
- Measurement SW: DASY52, Version 52.6 (2);SEMCAD X Version 14.4.5 (3634)

**Top Edge/M ch\_Tilt 15 deg./Area Scan (51x141x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.916 mW/g

**Top Edge/M ch\_Tilt 15 deg./Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

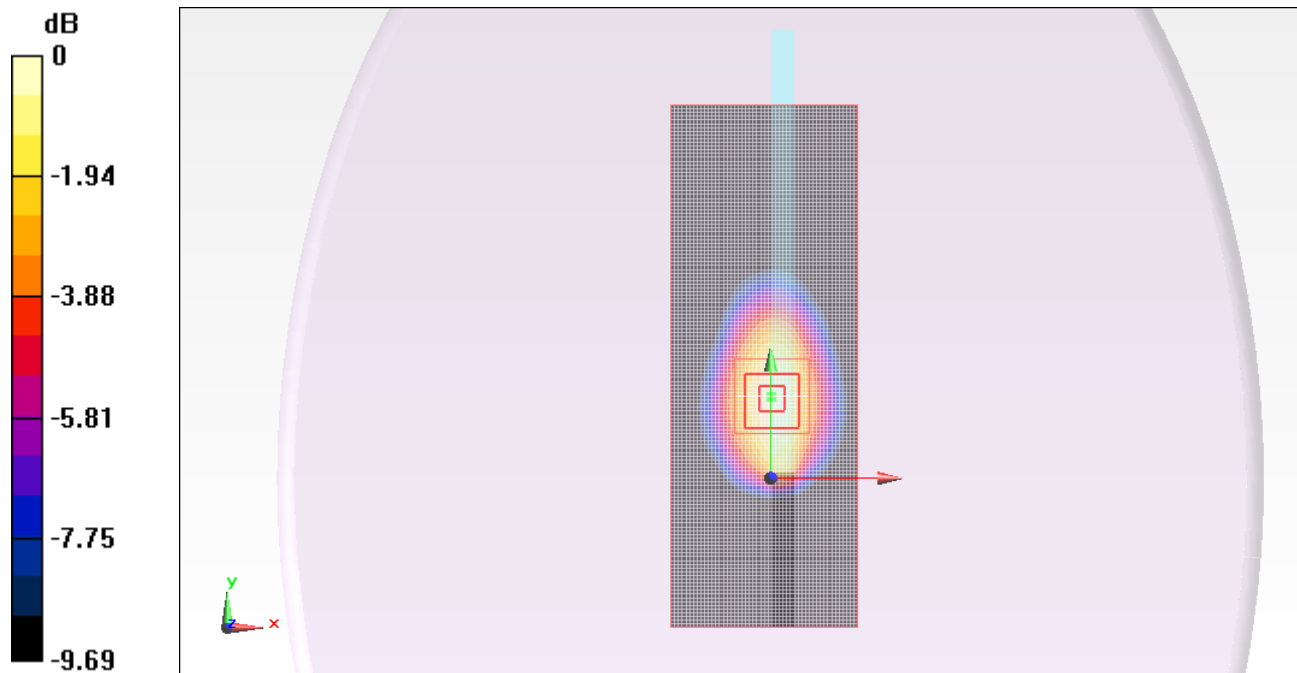
Reference Value = 29.927 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.098 W/kg

**SAR(1 g) = 0.753 mW/g; SAR(10 g) = 0.487 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.912 mW/g



0 dB = 0.910mW/g