

Test Laboratory: UL CCS SAR Lab B

## UMTS Band V

Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.891$  mho/m;  $\epsilon_r = 41.244$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Left 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: EX3DV3 - SN3531; ConvF(9.81, 9.81, 9.81); Calibrated: 12/19/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: SAM; Type: QD000P40CD; Serial: 1629
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Left/Touch\_R99 RMC, 12.2 kbps \_M ch/Area Scan (10x13x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.402 mW/g

**Left/Touch\_R99 RMC, 12.2 kbps\_M ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

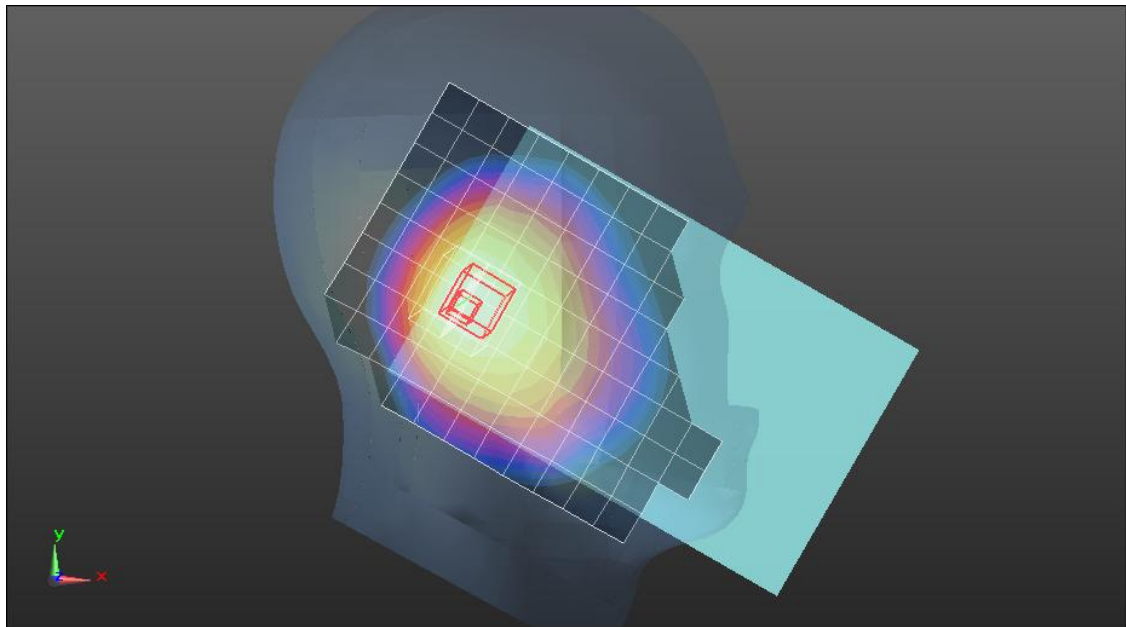
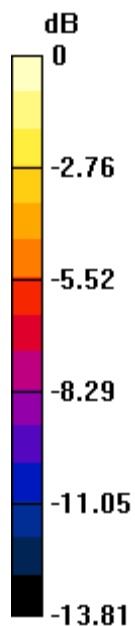
Reference Value = 21.321 V/m; Power Drift = 0.0074 dB

Peak SAR (extrapolated) = 0.5260

**SAR(1 g) = 0.364 mW/g; SAR(10 g) = 0.253 mW/g**

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

Maximum value of SAR (measured) = 0.433 mW/g



0 dB = 0.430mW/g = -7.33 dB mW/g

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 Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.891$  mho/m;  $\epsilon_r = 41.244$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Left 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: EX3DV3 - SN3531; ConvF(9.81, 9.81, 9.81); Calibrated: 12/19/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: SAM; Type: QD000P40CD; Serial: 1629
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Left/Tilt\_R99 RMC, 12.2 kbps M ch/Area Scan (10x13x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.520 mW/g

**Left/Tilt\_R99 RMC, 12.2 kbps M ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm,

dy=8mm, dz=5mm

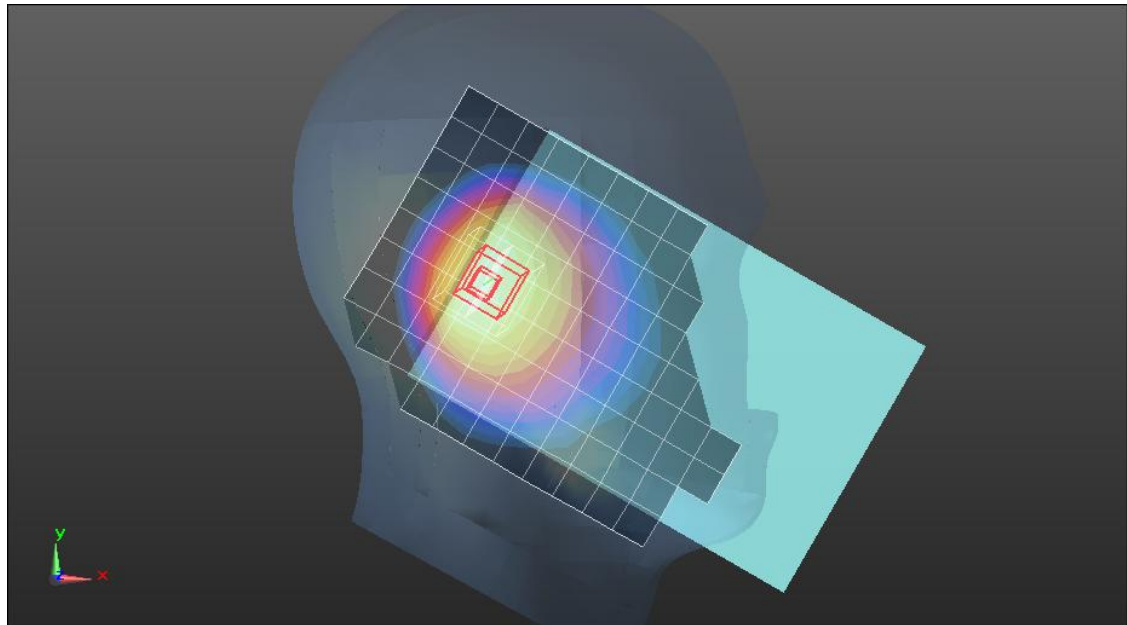
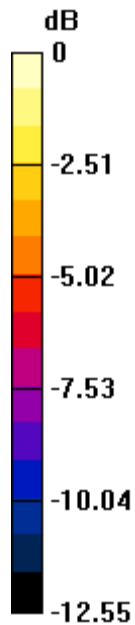
Reference Value = 24.410 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.6330

**SAR(1 g) = 0.443 mW/g; SAR(10 g) = 0.298 mW/g**

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

Maximum value of SAR (measured) = 0.527 mW/g



0 dB = 0.530mW/g = -5.51 dB mW/g

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Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.891$  mho/m;  $\epsilon_r = 41.244$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right 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: EX3DV3 - SN3531; ConvF(9.81, 9.81, 9.81); Calibrated: 12/19/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: SAM; Type: QD000P40CD; Serial: 1629
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Right/Touch\_R99 RMC, 12.2 kbps \_M ch/Area Scan (10x13x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.977 mW/g

**Right/Touch\_R99 RMC, 12.2 kbps \_M ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

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

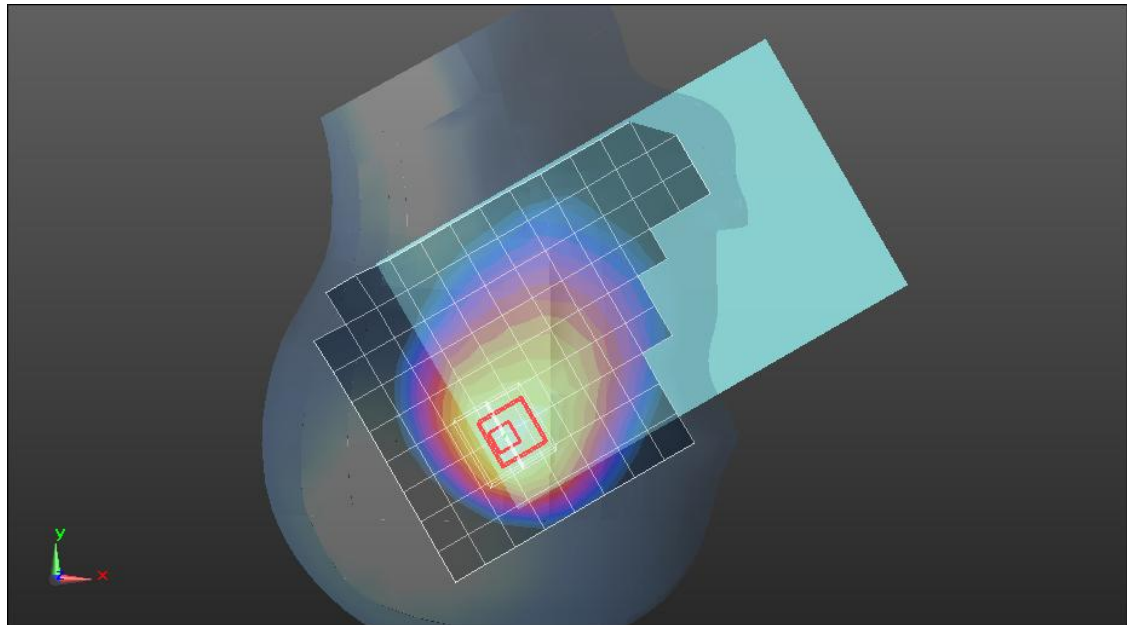
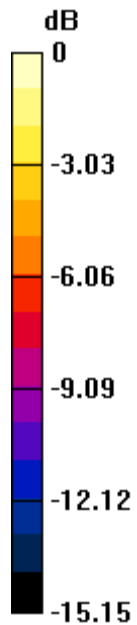
Reference Value = 33.476 V/m; Power Drift = 0.0067 dB

Peak SAR (extrapolated) = 1.2520

**SAR(1 g) = 0.792 mW/g; SAR(10 g) = 0.505 mW/g**

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

Maximum value of SAR (measured) = 0.971 mW/g



0 dB = 0.970mW/g = -0.26 dB mW/g

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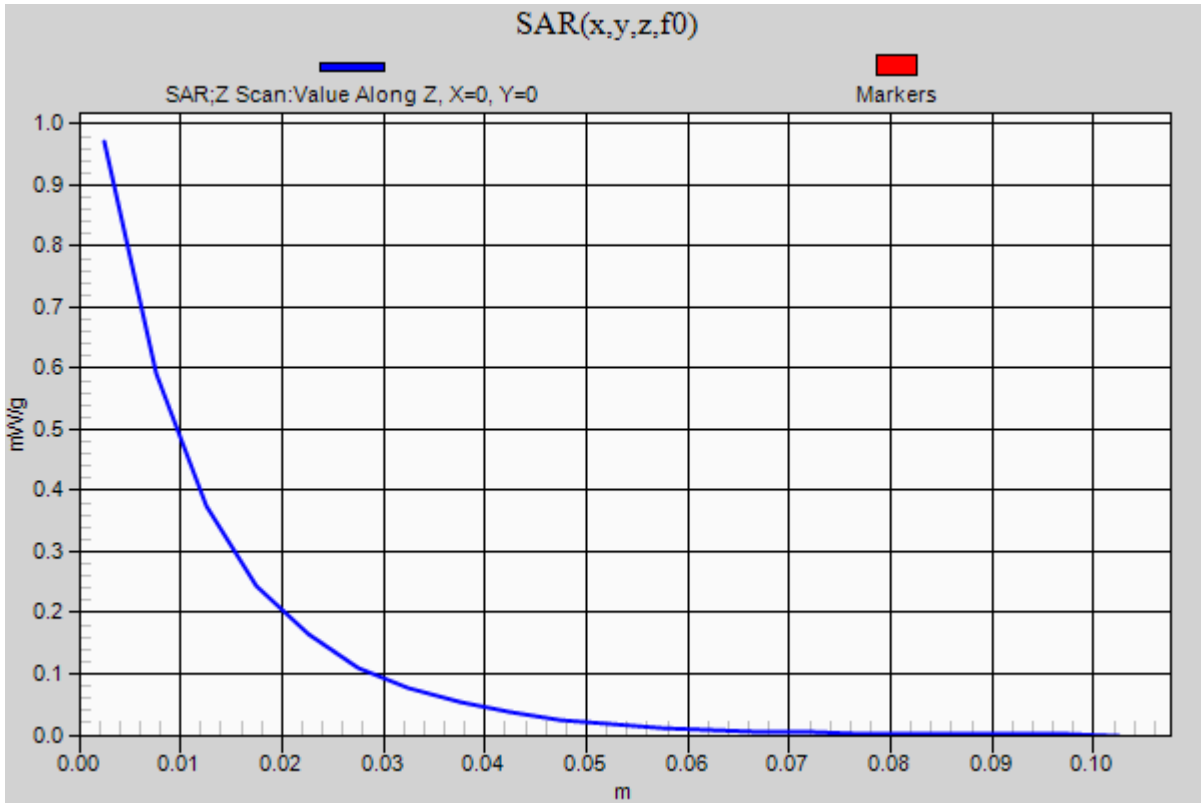
## UMTS Band V

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

**Right/Touch\_R99 RMC, 12.2 kbps \_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) = 0.971 mW/g



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## UMTS Band V

Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.891$  mho/m;  $\epsilon_r = 41.244$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Right 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: EX3DV3 - SN3531; ConvF(9.81, 9.81, 9.81); Calibrated: 12/19/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: SAM; Type: QD000P40CD; Serial: 1629
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Right/Tilt\_R99 RMC, 12.2 kbps \_M ch /Area Scan (10x13x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.932 mW/g

**Right/Tilt\_R99 RMC, 12.2 kbps \_M ch /Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

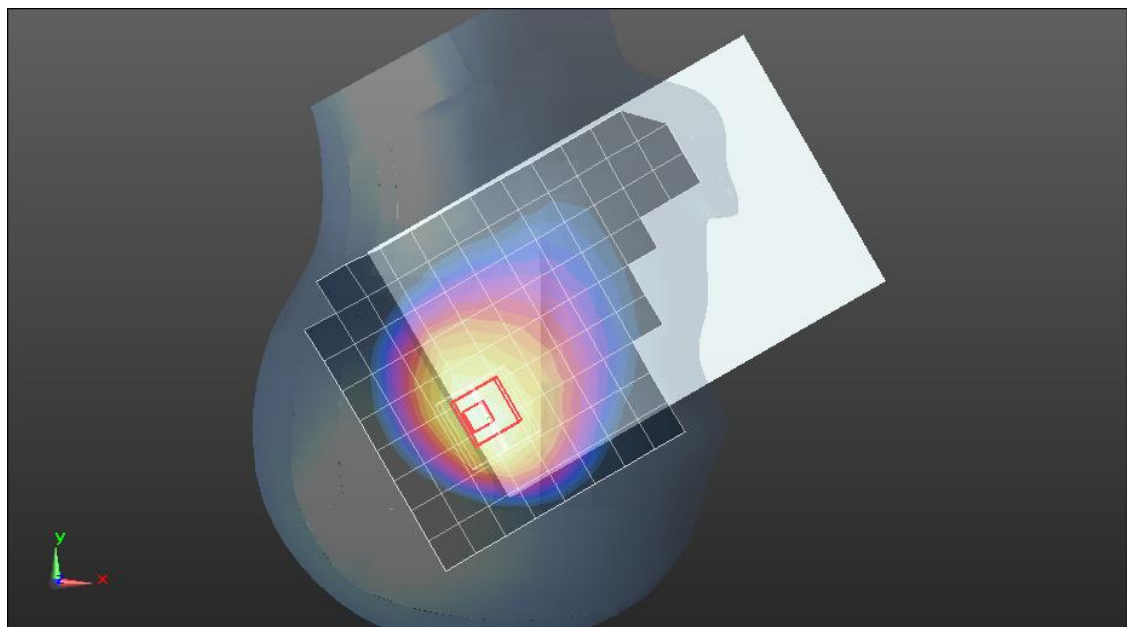
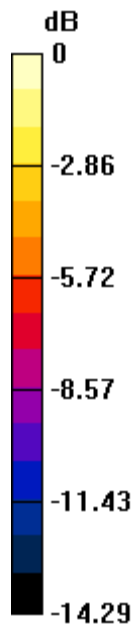
Reference Value = 32.730 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.2550

**SAR(1 g) = 0.769 mW/g; SAR(10 g) = 0.488 mW/g**

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

Maximum value of SAR (measured) = 0.914 mW/g



0 dB = 0.910mW/g = -0.82 dB mW/g

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## UMTS Band V

Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.994$  mho/m;  $\epsilon_r = 53.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section

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

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(10, 10, 10); Calibrated: 12/19/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: ELI v5.0 (B); Type: QDOVA001BB; Serial: 1118
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Rear 8mm\_R99 RMC, 12.2 kbps /M-Ch/Area Scan (11x13x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.405 mW/g

**Rear 8mm\_R99 RMC, 12.2 kbps /M-Ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

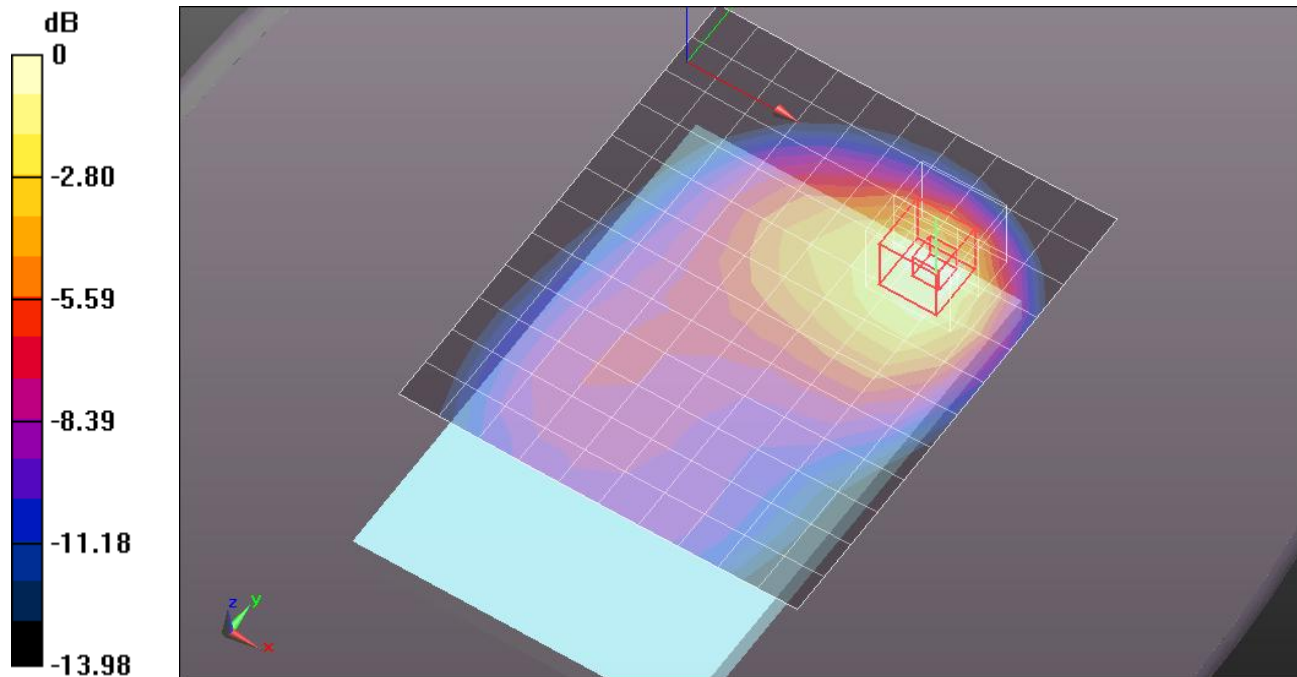
Reference Value = 20.541 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.5570

**SAR(1 g) = 0.368 mW/g; SAR(10 g) = 0.235 mW/g**

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

Maximum value of SAR (measured) = 0.443 mW/g



0 dB = 0.440mW/g = -7.13 dB mW/g

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Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.994$  mho/m;  $\epsilon_r = 53.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: Flat Section

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

DASY5 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(10, 10, 10); Calibrated: 12/19/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: ELI v5.0 (B); Type: QDOVA001BB; Serial: 1118
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Edge 1 5mm\_R99 RMC, 12.2 kbps /M-Ch/Area Scan (7x12x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.440 mW/g

**Edge 1 5mm\_R99 RMC, 12.2 kbps /M-Ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

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

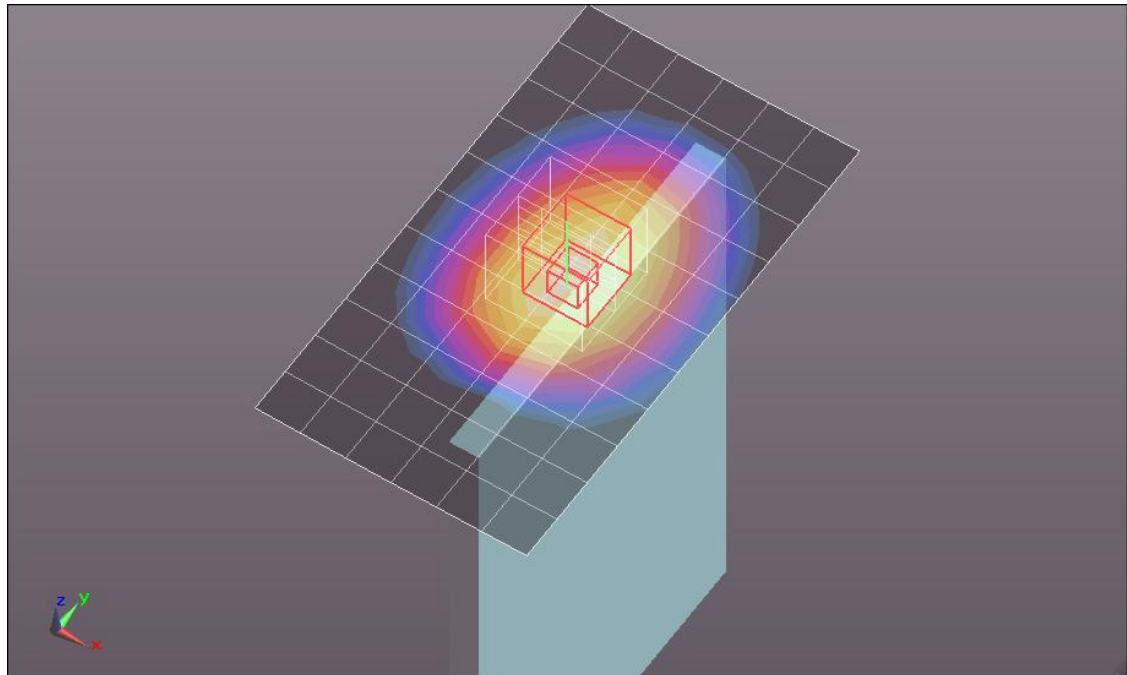
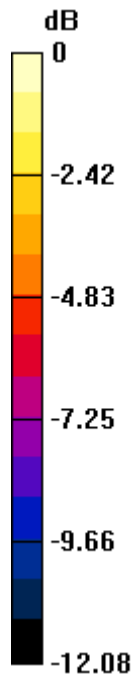
Reference Value = 21.373 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.5720

**SAR(1 g) = 0.394 mW/g; SAR(10 g) = 0.259 mW/g**

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

Maximum value of SAR (measured) = 0.476 mW/g



0 dB = 0.480mW/g = -6.38 dB mW/g

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## UMTS Band V

Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.975$  mho/m;  $\epsilon_r = 53.354$ ;  $\rho = 1000$  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: EX3DV3 - SN3531; ConvF(10, 10, 10); Calibrated: 12/19/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: ELI v5.0 (B); Type: QDOVA001BB; Serial: 1118
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Edge 1 at 45deg\_R99 RMC, 12.2 kbps /M ch/Area Scan (9x13x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.209 mW/g

**Edge 1 at 45deg\_R99 RMC, 12.2 kbps /M ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:

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

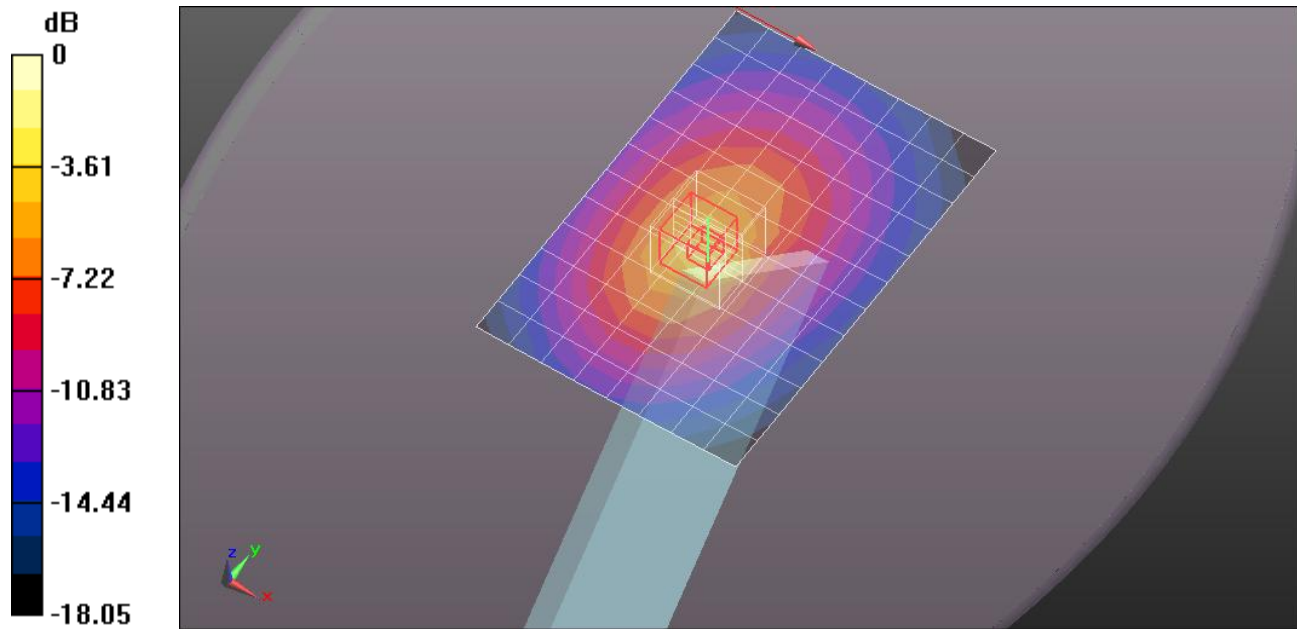
Reference Value = 14.776 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.6970

**SAR(1 g) = 0.241 mW/g; SAR(10 g) = 0.103 mW/g**

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

Maximum value of SAR (measured) = 0.337 mW/g



0 dB = 0.340mW/g = -9.37 dB mW/g

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## UMTS Band V

Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.998$  mho/m;  $\epsilon_r = 54.381$ ;  $\rho = 1000$  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: EX3DV3 - SN3531; ConvF(10, 10, 10); Calibrated: 12/19/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: ELI v5.0 (B); Type: QDOVA001BB; Serial: 1118
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Edge 4\_R99 RMC, 12.2 kbps /M-Ch/Area Scan (8x16x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.342 mW/g

**Edge 4\_R99 RMC, 12.2 kbps /M-Ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm,

dy=8mm, dz=5mm

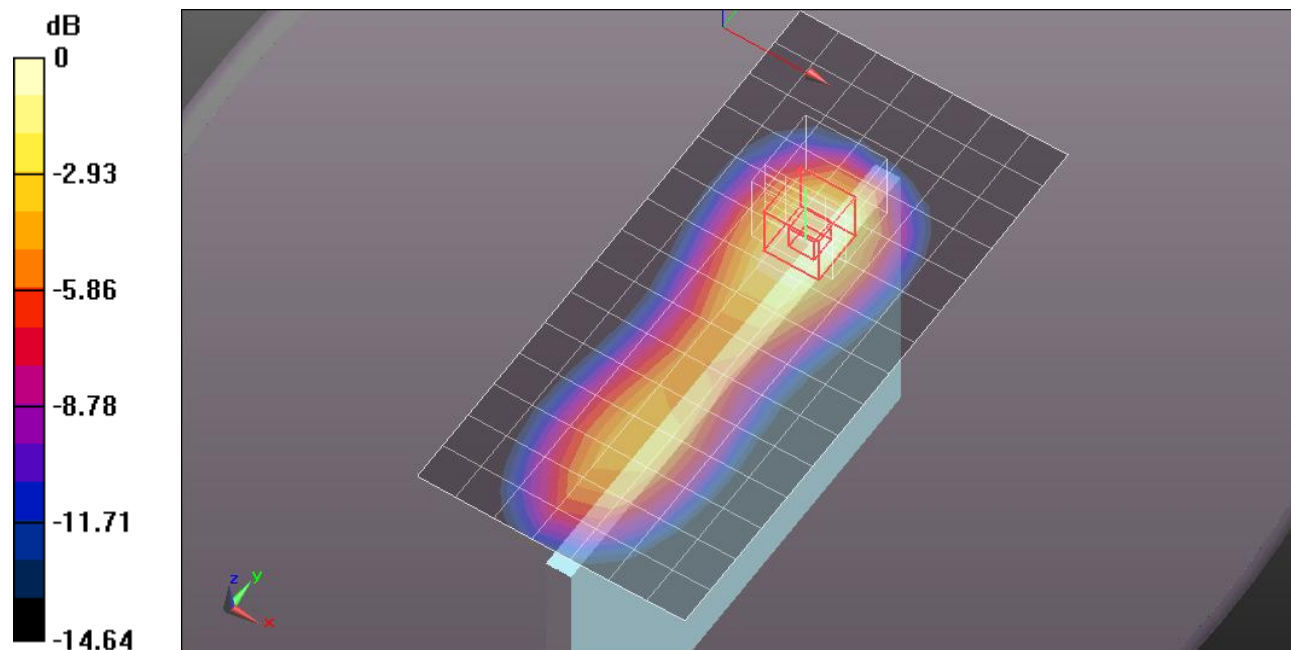
Reference Value = 13.806 V/m; Power Drift = 0.0021 dB

Peak SAR (extrapolated) = 0.6160

**SAR(1 g) = 0.385 mW/g; SAR(10 g) = 0.237 mW/g**

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

Maximum value of SAR (measured) = 0.424 mW/g



0 dB = 0.420mW/g = -7.54 dB mW/g

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Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.998$  mho/m;  $\epsilon_r = 54.381$ ;  $\rho = 1000$  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: EX3DV3 - SN3531; ConvF(10, 10, 10); Calibrated: 12/19/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: ELI v5.0 (B); Type: QDOVA001BB; Serial: 1118
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

### Rear with power back off\_R99 RMC, 12.2 kbps /M ch/Area Scan (11x13x1): Measurement grid:

$dx=15$ mm,  $dy=15$ mm

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

Maximum value of SAR (measured) = 0.468 mW/g

### Rear with power back off\_R99 RMC, 12.2 kbps /M ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

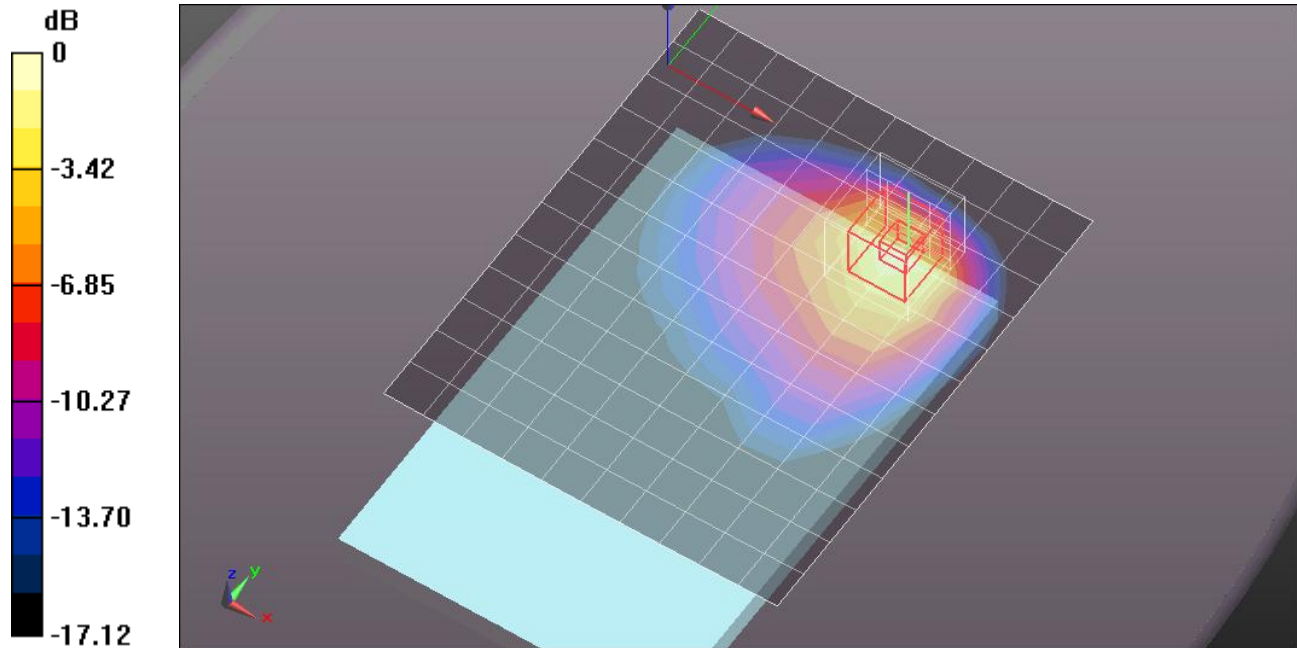
Reference Value = 22.060 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.7830

**SAR(1 g) = 0.406 mW/g; SAR(10 g) = 0.220 mW/g**

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

Maximum value of SAR (measured) = 0.561 mW/g



0 dB = 0.560mW/g = -5.04 dB mW/g

Test Laboratory: UL CCS SAR Lab B

## UMTS Band V

Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.998$  mho/m;  $\epsilon_r = 54.381$ ;  $\rho = 1000$  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: EX3DV3 - SN3531; ConvF(10, 10, 10); Calibrated: 12/19/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: ELI v5.0 (B); Type: QDOVA001BB; Serial: 1118
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

### Rear with power back off\_R99 RMC, 12.2 kbps /M ch w/Headset/Area Scan (11x13x1):

Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.489 mW/g

### Rear with power back off\_R99 RMC, 12.2 kbps /M ch w/Headset/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

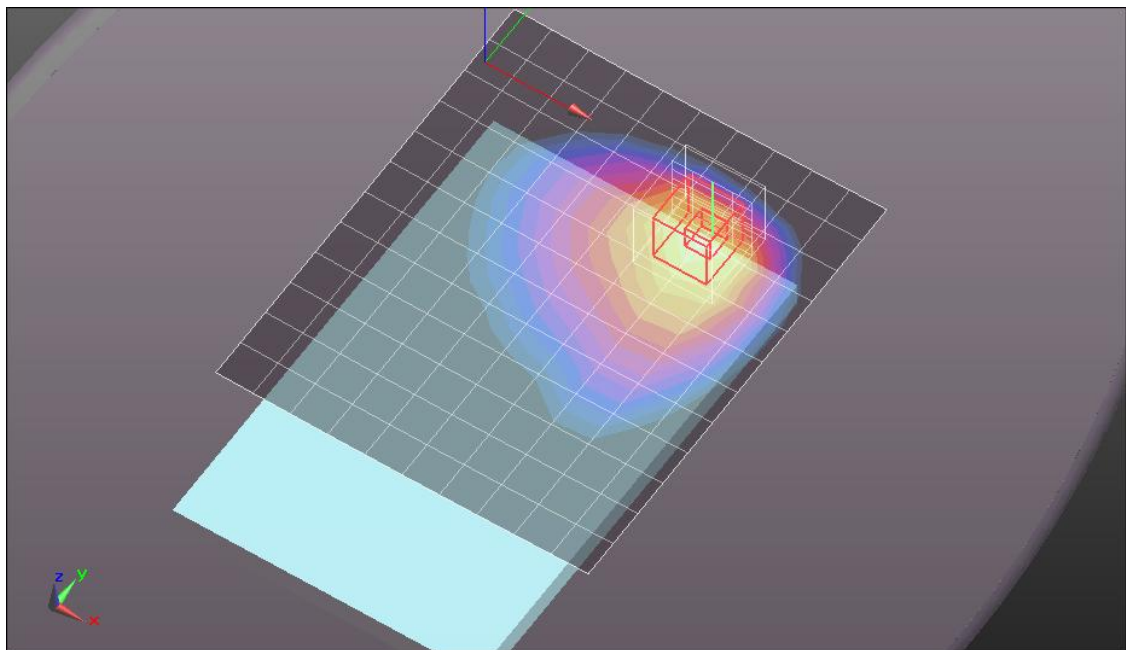
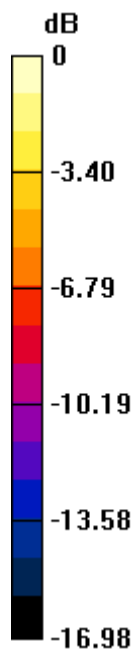
Reference Value = 22.399 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.7940

**SAR(1 g) = 0.412 mW/g; SAR(10 g) = 0.224 mW/g**

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

Maximum value of SAR (measured) = 0.564 mW/g



0 dB = 0.560mW/g = -5.04 dB mW/g

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## UMTS Band V

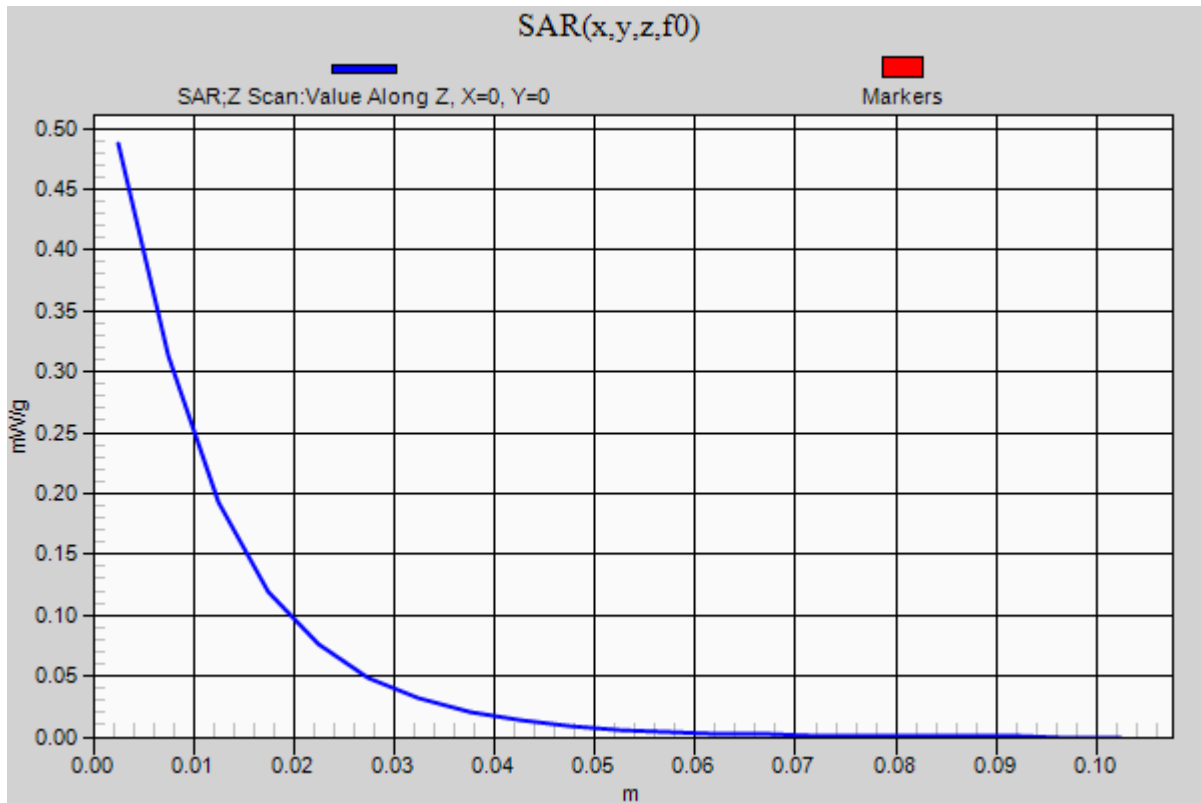
Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1

### Rear with power back off\_R99 RMC, 12.2 kbps /M ch w/Headset/Z Scan (1x1x21):

Measurement grid: dx=20mm, dy=20mm, dz=5mm

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

Maximum value of SAR (measured) = 0.487 mW/g



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## UMTS Band V

Communication System: UMTS-FDD (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.998$  mho/m;  $\epsilon_r = 54.381$ ;  $\rho = 1000$  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: EX3DV3 - SN3531; ConvF(10, 10, 10); Calibrated: 12/19/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1258; Calibrated: 5/2/2011
- Phantom: ELI v5.0 (B); Type: QDOVA001BB; Serial: 1118
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.4 (4989)

**Edge 1 with power back off\_R99 RMC, 12.2 kbps /M ch/Area Scan (6x11x1):** Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.241 mW/g

**Edge 1 with power back off\_R99 RMC, 12.2 kbps /M ch/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid: dx=8mm, dy=8mm, dz=5mm

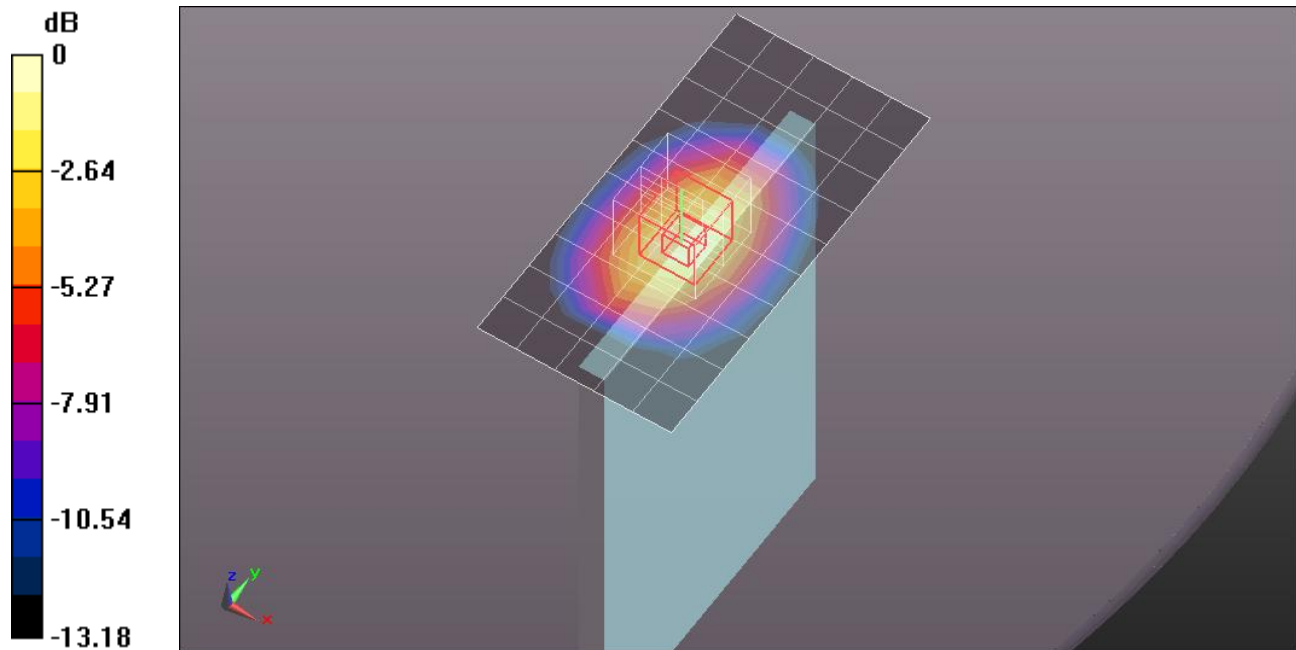
Reference Value = 15.759 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.3670

**SAR(1 g) = 0.232 mW/g; SAR(10 g) = 0.141 mW/g**

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

Maximum value of SAR (measured) = 0.296 mW/g



0 dB = 0.300mW/g = -10.46 dB mW/g