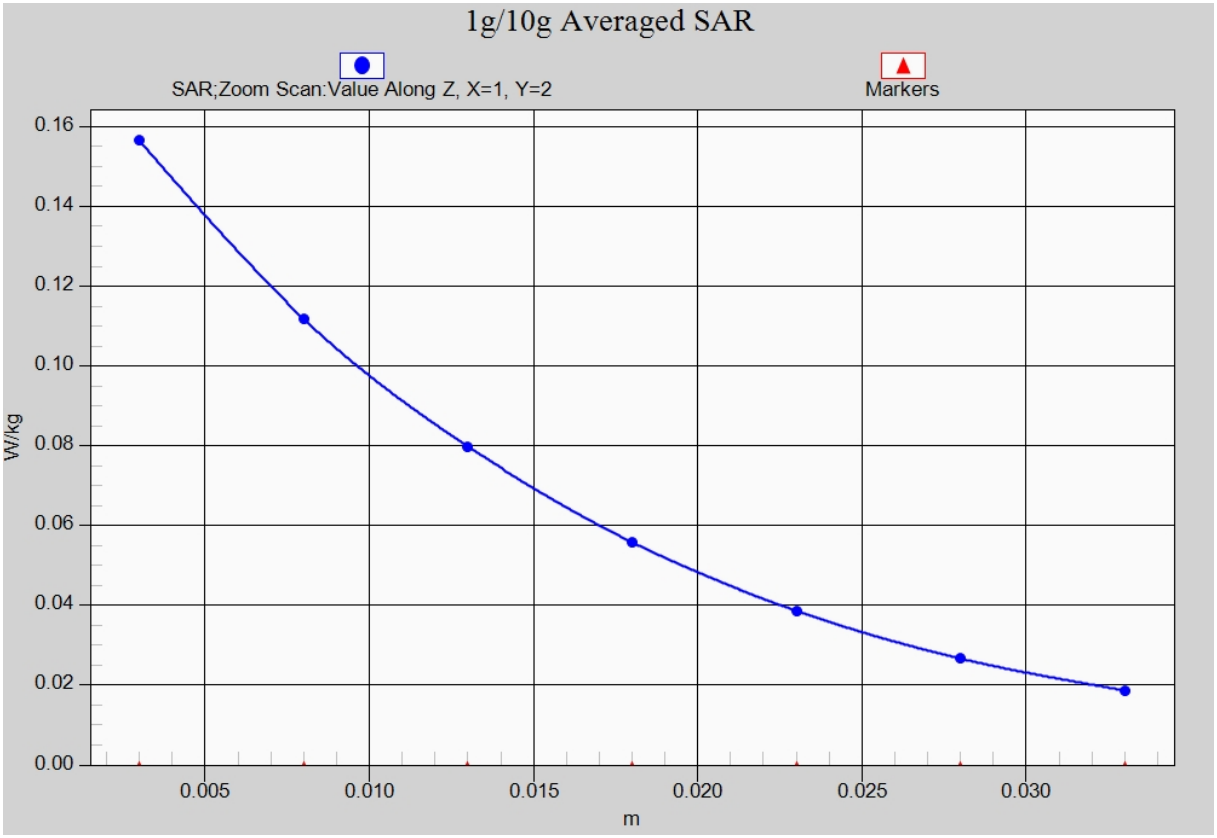


Fig. 10-1 Z-Scan at power reference point (WCDMA1900)

WCDMA 1900 Body FrontLow

Date: 2017-8-9
Electronics: DAE4 Sn1331
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.501 mho/m; εr = 53.18; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WCDMA 1900 Frequency: 1852.4 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(7.57, 7.57, 7.57)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.69 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.14 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 1.22 W/kg; SAR(10 g) = 0.708 W/kg
Maximum value of SAR (measured) = 1.37 W/kg

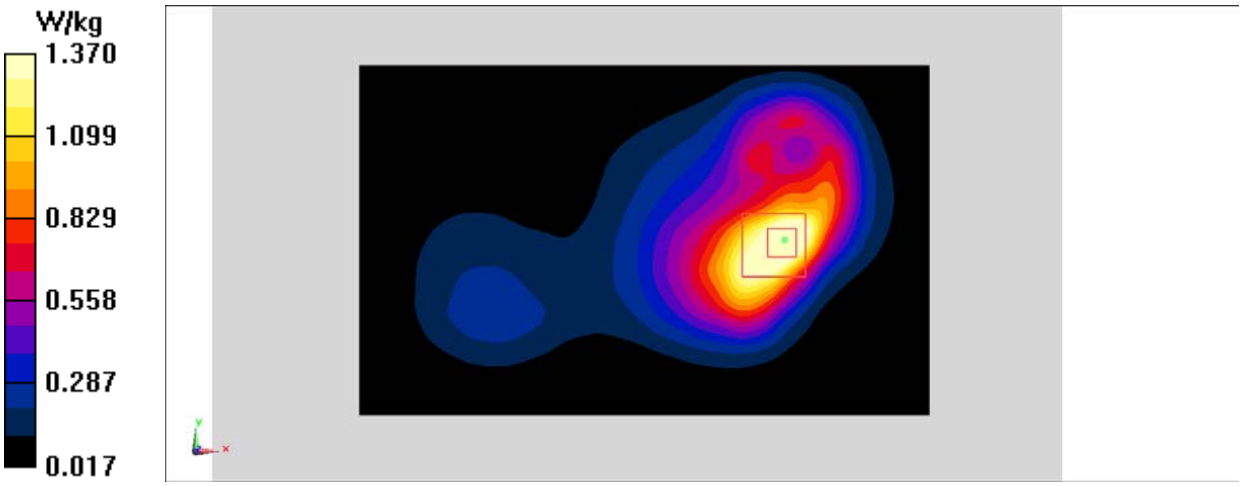


Fig.11WCDMA1900

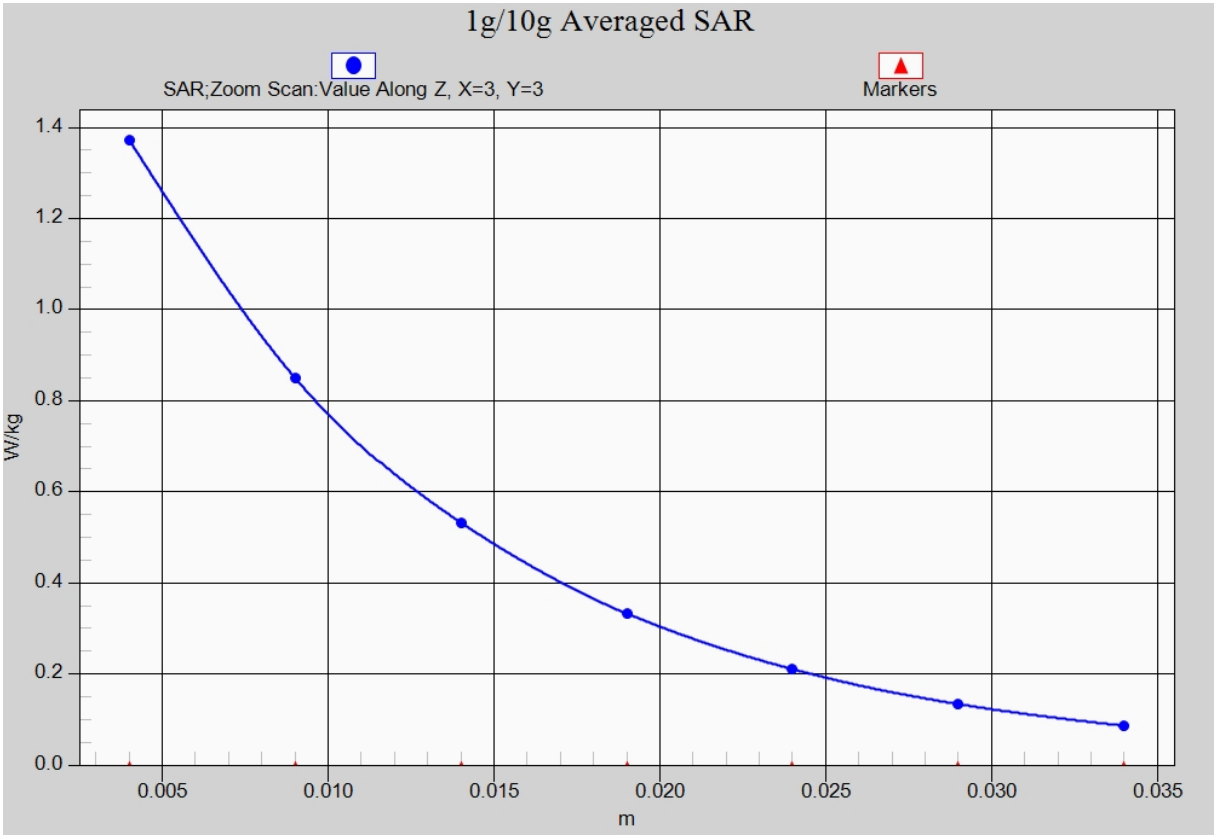


Fig. 11-1 Z-Scan at power reference point (WCDMA1900)

LTE Band2Left Cheek High with QPSK_20M_1RB_Low
Date: 2017-8-9
Electronics: DAE4 Sn1331
Medium: Head 1900 MHz
Medium parameters used: f = 1900 MHz; σ =1.411. mho/m; εr = 40.61; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band2Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(7.89, 7.89, 7.89)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.216 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.889 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.236 W/kg
SAR(1 g) = 0.163 W/kg; SAR(10 g) = 0.108 W/kg
Maximum value of SAR (measured) = 0.189 W/kg

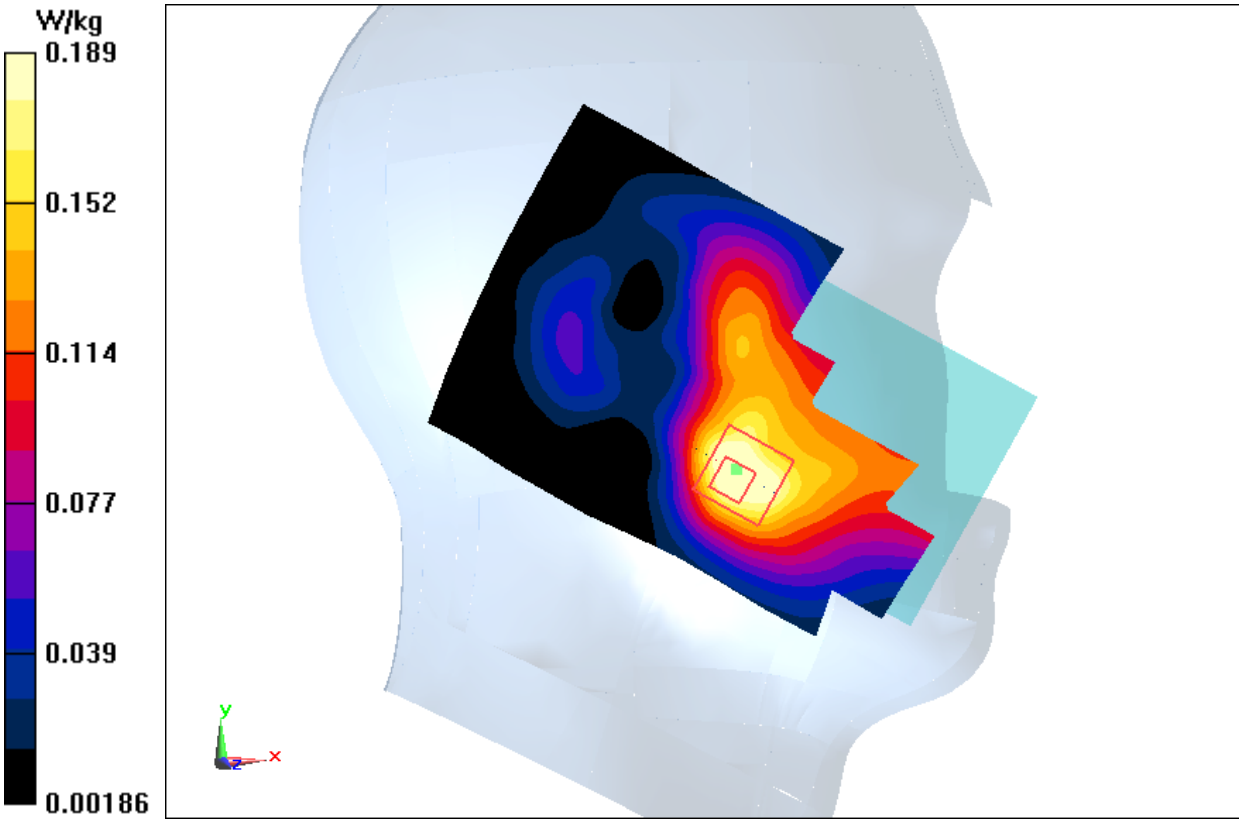


Fig.12 LTE Band2

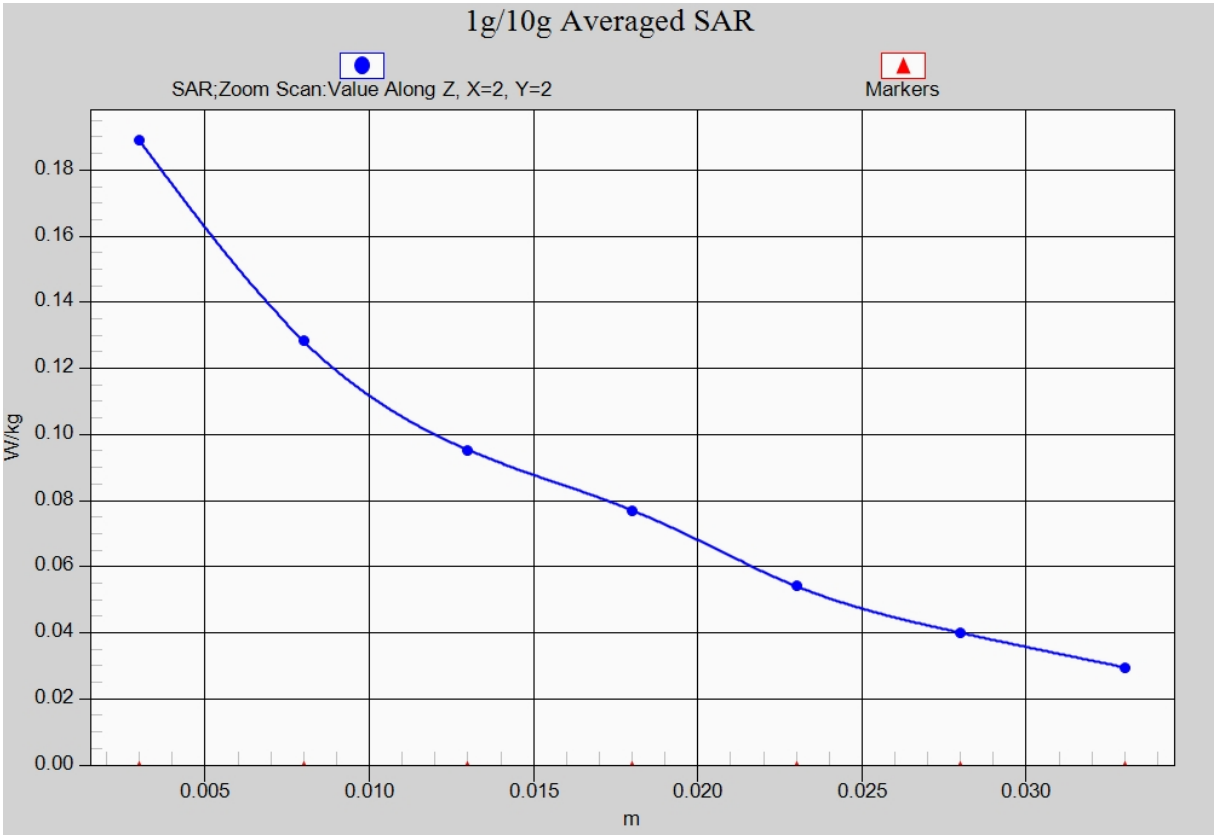


Fig. 12-1 Z-Scan at power reference point (LTE Band2)

LTE Band2Body RearHigh with QPSK_20M_1RB_Low
Date: 2017-8-9
Electronics: DAE4 Sn1331
Medium: Body 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.507 mho/m; εr = 52.71; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band2 Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(7.57, 7.57, 7.57)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.925 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.879 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.761 W/kg; SAR(10 g) = 0.444 W/kg
Maximum value of SAR (measured) = 0.870 W/kg

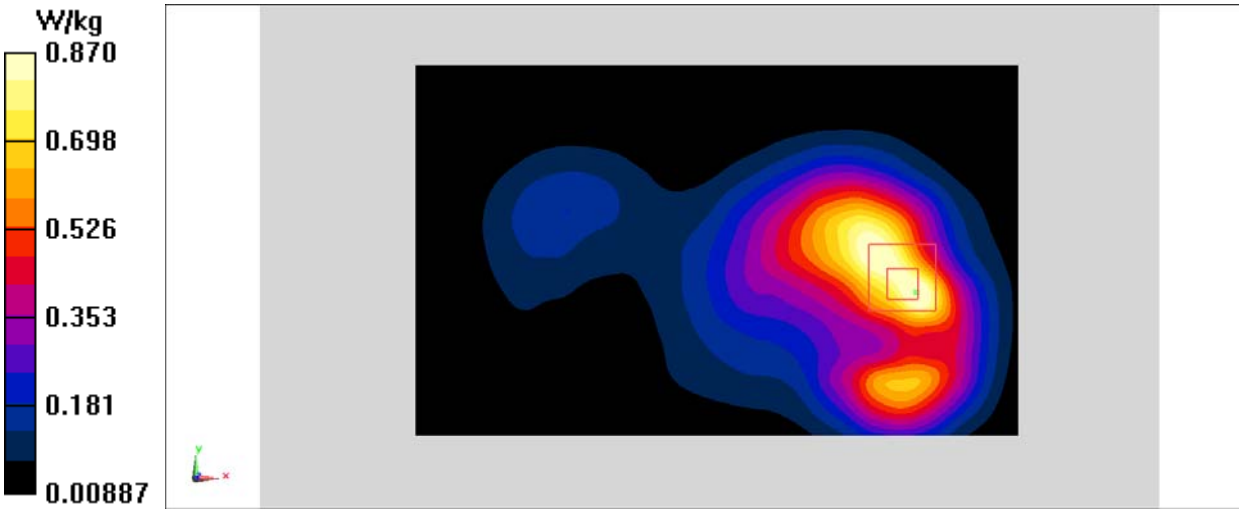


Fig.13 LTE Band2

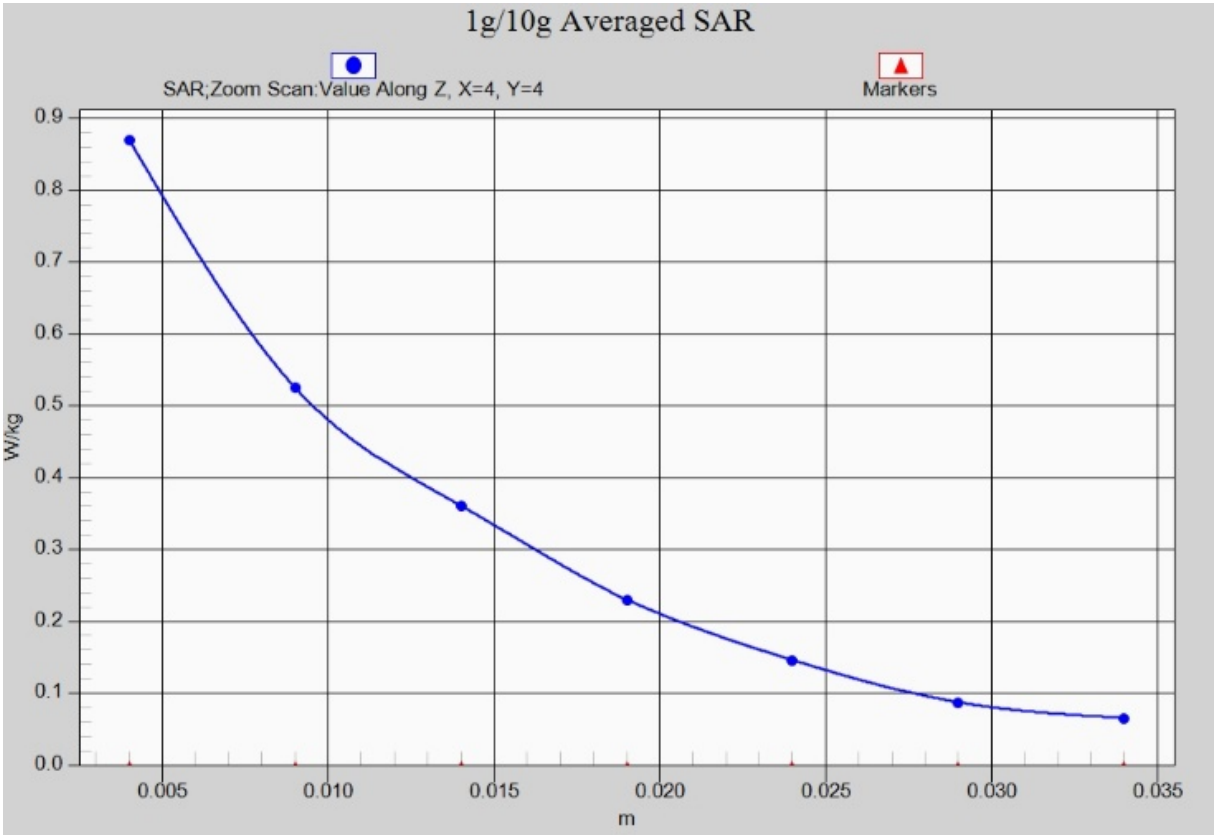


Fig. 13-1 Z-Scan at power reference point (LTE Band2)

LTE Band5 RightCheek Low with QPSK_10M_1RB_High
Date: 2017-8-8
Electronics: DAE4 Sn1331
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 829 MHz; σ = 0.904 mho/m; εr = 41.851; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band5 Frequency: 829 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3846 ConvF(9.33, 9.33, 9.33)

Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.452 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.428 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.527 W/kg
SAR(1 g) = 0.407 W/kg; SAR(10 g) = 0.310 W/kg
Maximum value of SAR (measured) = 0.444 W/kg

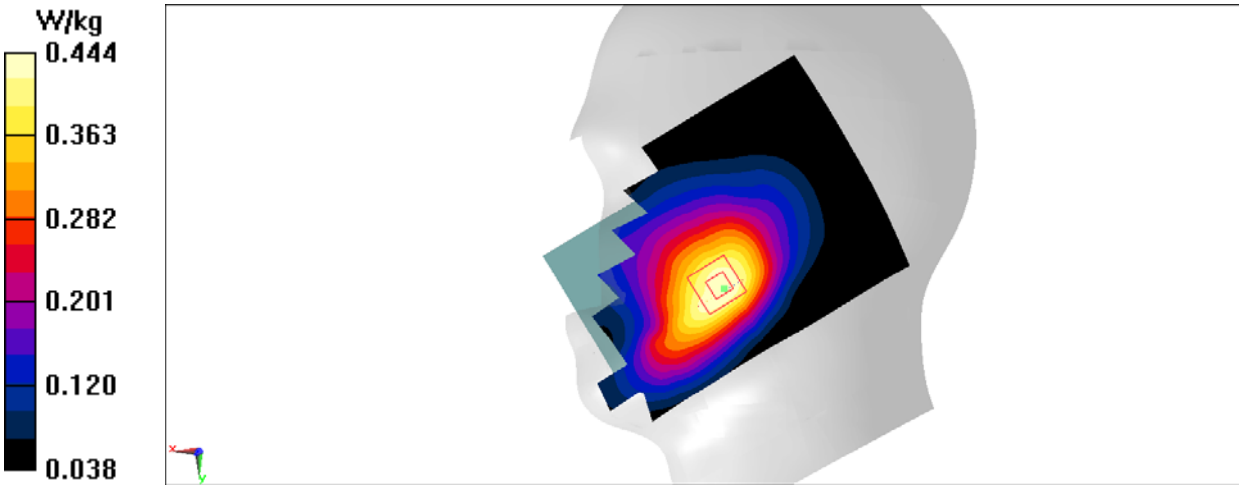


Fig.14 LTE Band5

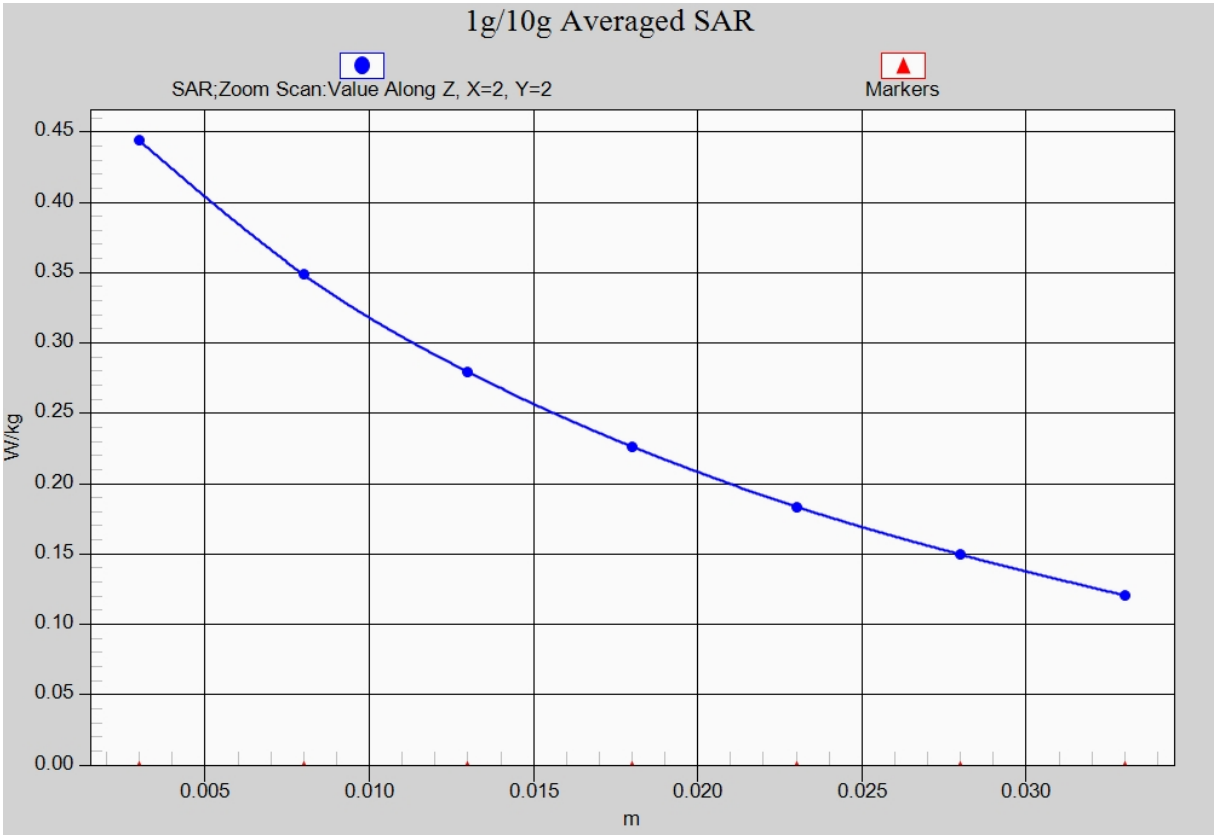


Fig. 14-1 Z-Scan at power reference point (LTE Band5)

LTE Band5 Body RearLow with QPSK_10M_1RB_High
Date: 2017-8-8
Electronics: DAE4 Sn1331
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 829 MHz; σ = 1.003 mho/m; εr = 55.694; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band5 Frequency: 829 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN3846 ConvF(9.52, 9.52, 9.52)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.766 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.71 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.869 W/kg
SAR(1 g) = 0.641 W/kg; SAR(10 g) = 0.461 W/kg
Maximum value of SAR (measured) = 0.683 W/kg

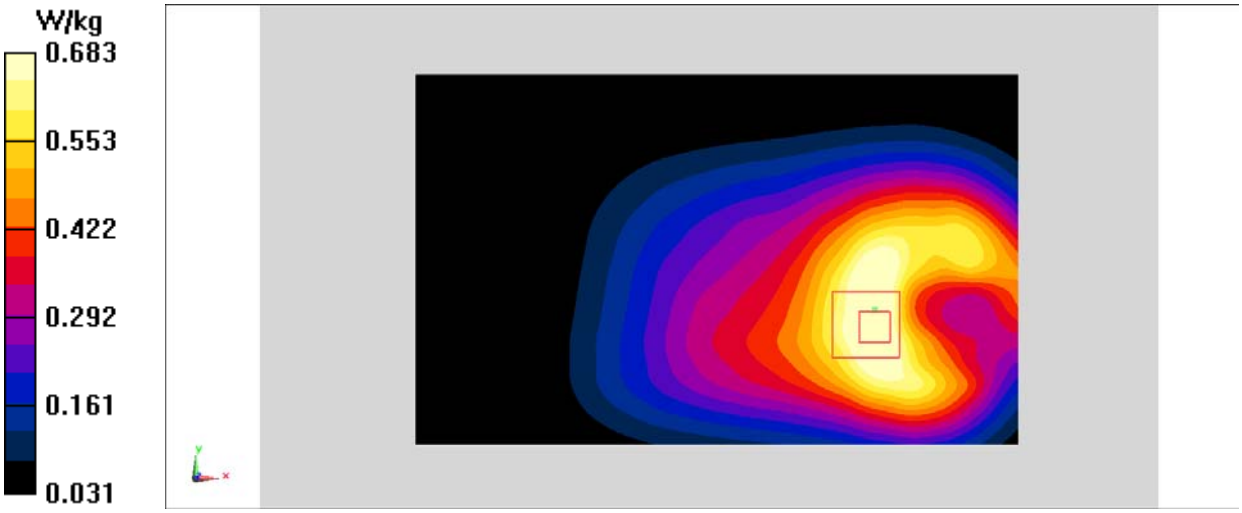


Fig.15 LTE Band5

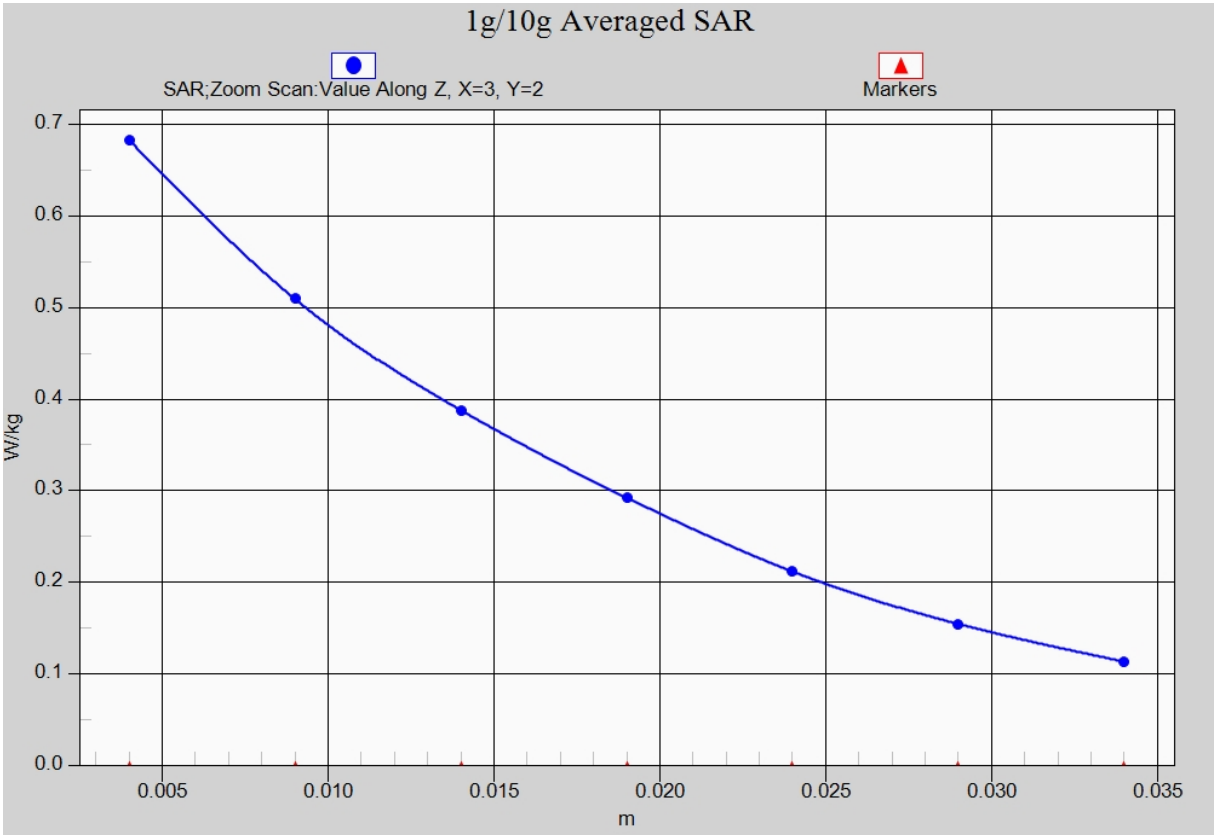


Fig. 15-1 Z-Scan at power reference point (LTE Band5)

LTE Band7Right Cheek Low with QPSK_20M_1RB_Low
Date: 2017-8-12
Electronics: DAE4 Sn1331
Medium: Head2600 MHz
Medium parameters used: f = 2510 MHz; σ = 1.925mho/m; εr = 38.52; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band7Frequency: 2510 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(7.12, 7.12, 7.12)

Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.498 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.725 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.641 W/kg
SAR(1 g) = 0.347 W/kg; SAR(10 g) = 0.183 W/kg
Maximum value of SAR (measured) = 0.434 W/kg

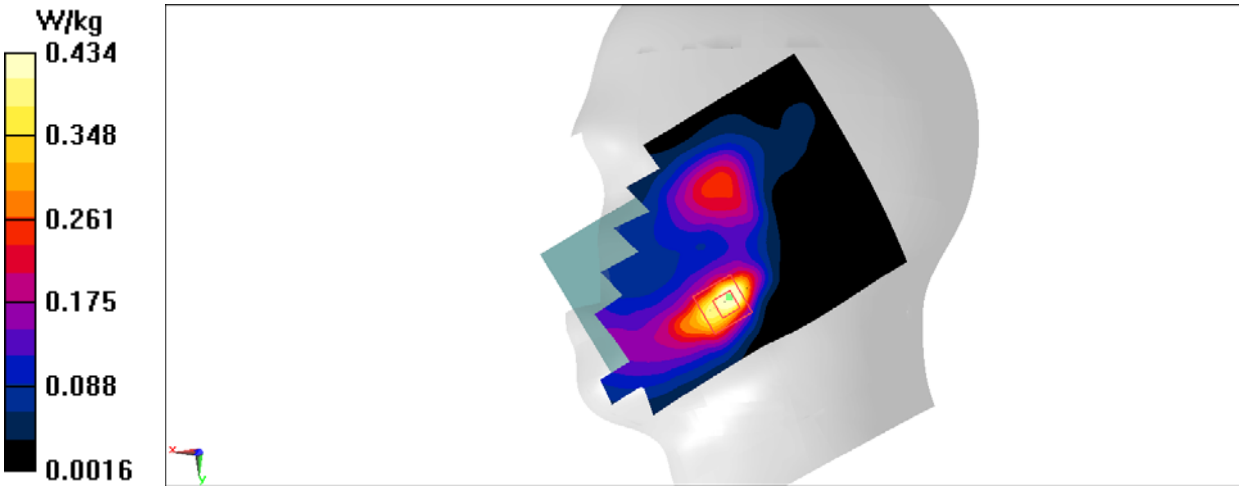


Fig.16 LTE Band7

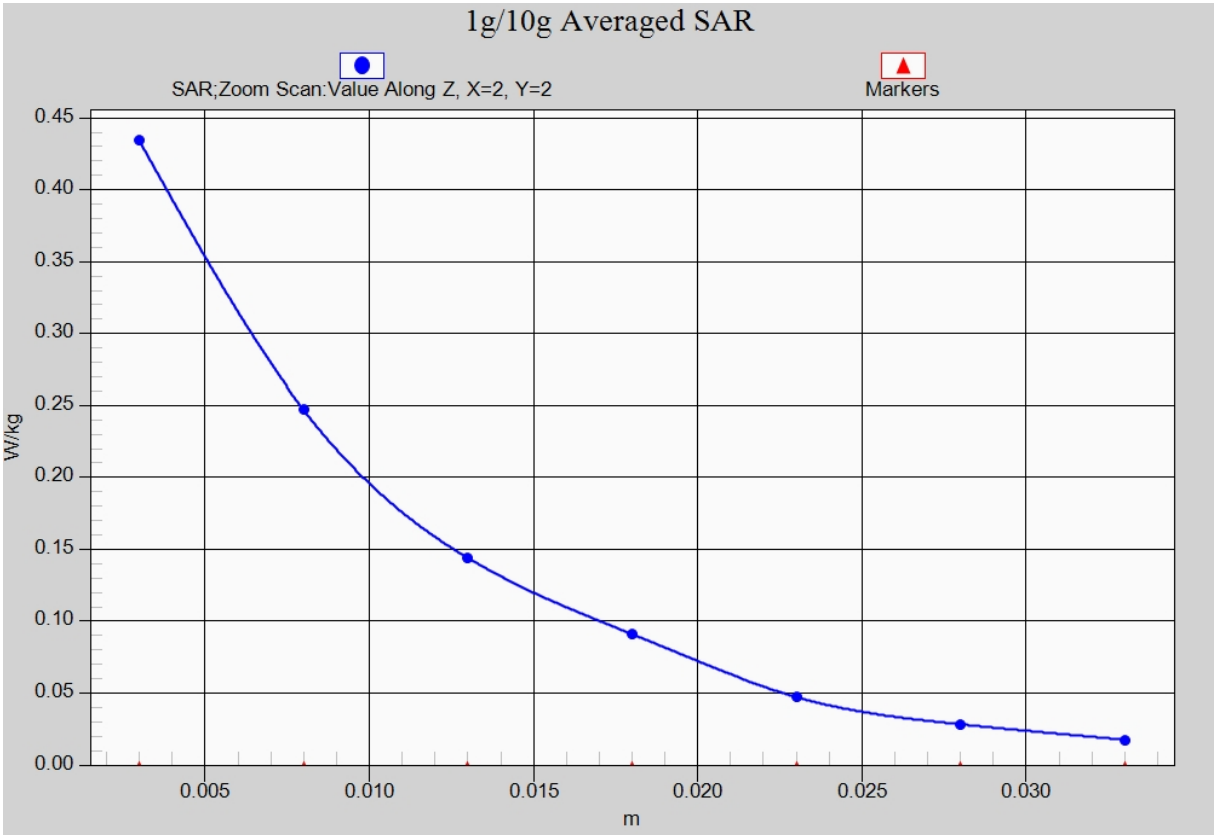


Fig. 16-1 Z-Scan at power reference point (LTE Band7)

LTE Band7Body BottomLow with QPSK_20M_100RB – 10mm
Date: 2017-8-12
Electronics: DAE4 Sn1331
Medium: Body2600 MHz
Medium parameters used: f = 2510 MHz; σ = 2.095 mho/m; εr = 51.85; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band7 Frequency: 2510 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(7.25, 7.25, 7.25)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.45 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.05 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.87 W/kg
SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.538 W/kg
Maximum value of SAR (measured) = 1.16 W/kg

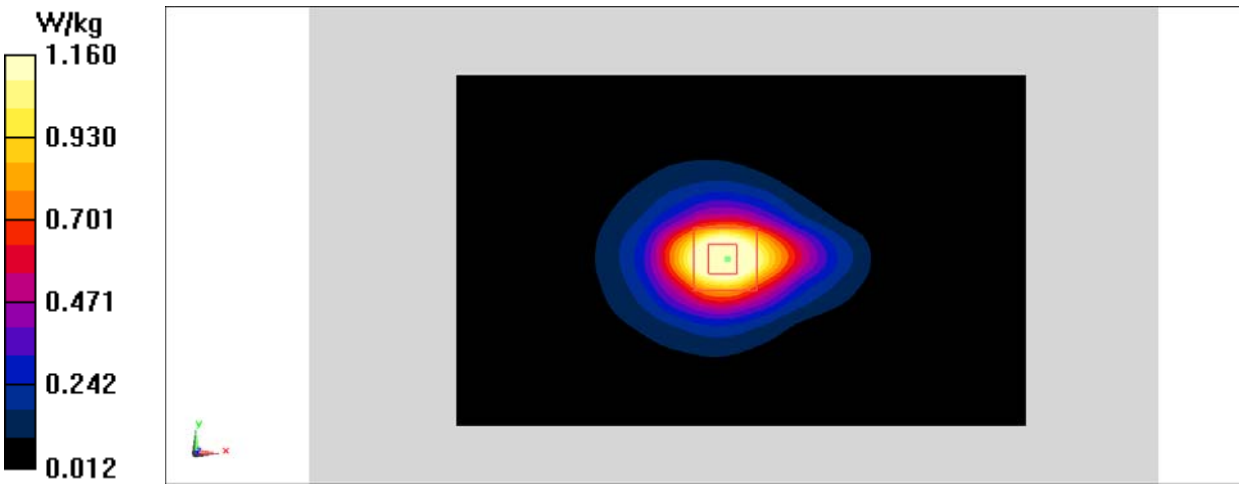


Fig.17 LTE Band7

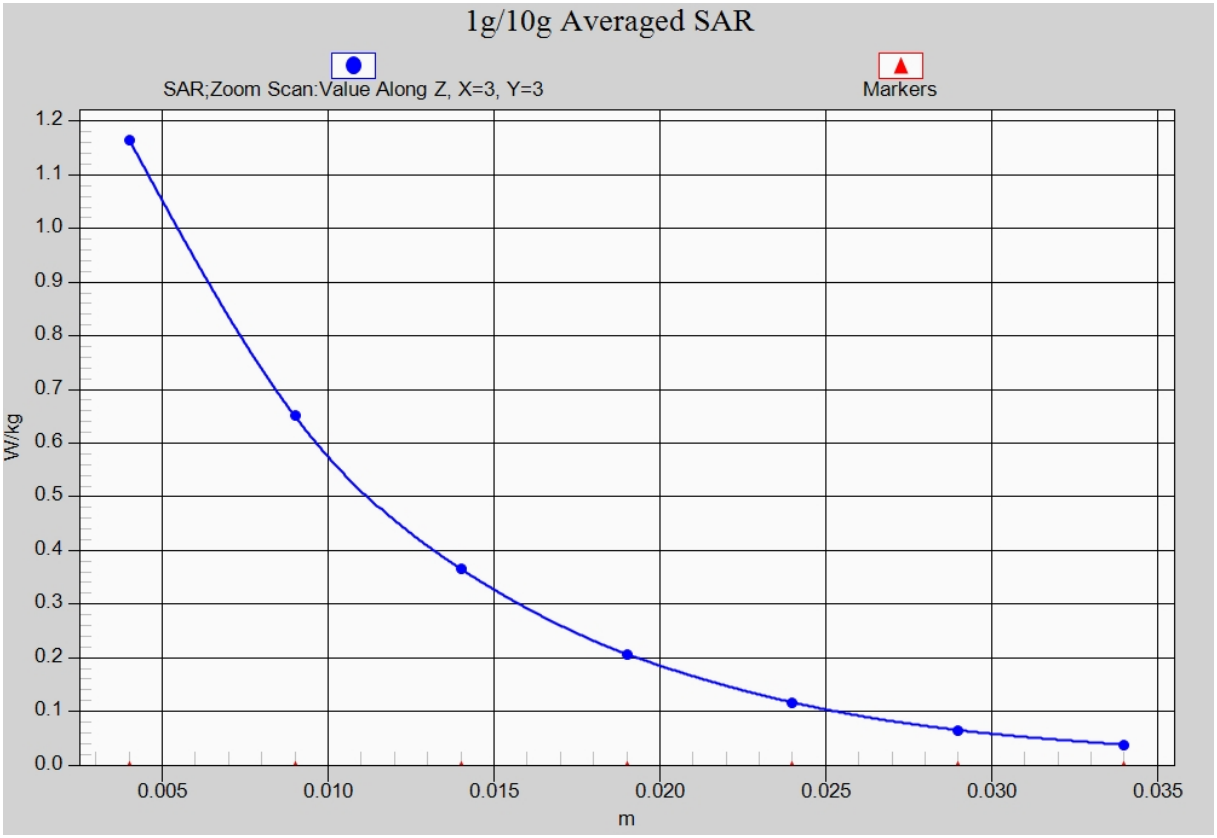


Fig. 17-1 Z-Scan at power reference point (LTE Band7)

LTE Band7Body FrontLow with QPSK_20M_1RB_Low – 15mm
Date: 2017-8-12
Electronics: DAE4 Sn1331
Medium: Body2600 MHz
Medium parameters used: f = 2510 MHz; σ = 2.095 mho/m; εr = 51.85; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band7 Frequency: 2510 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(7.25, 7.25, 7.25)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.653 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.752 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.822 W/kg
SAR(1 g) = 0.488 W/kg; SAR(10 g) = 0.278 W/kg
Maximum value of SAR (measured) = 0.529 W/kg

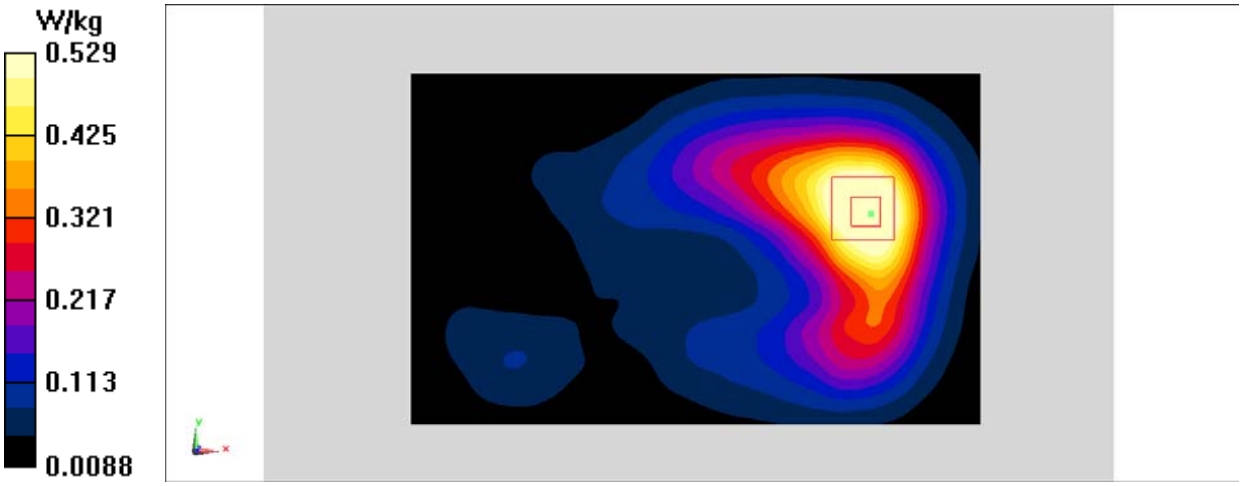


Fig.18 LTE Band7

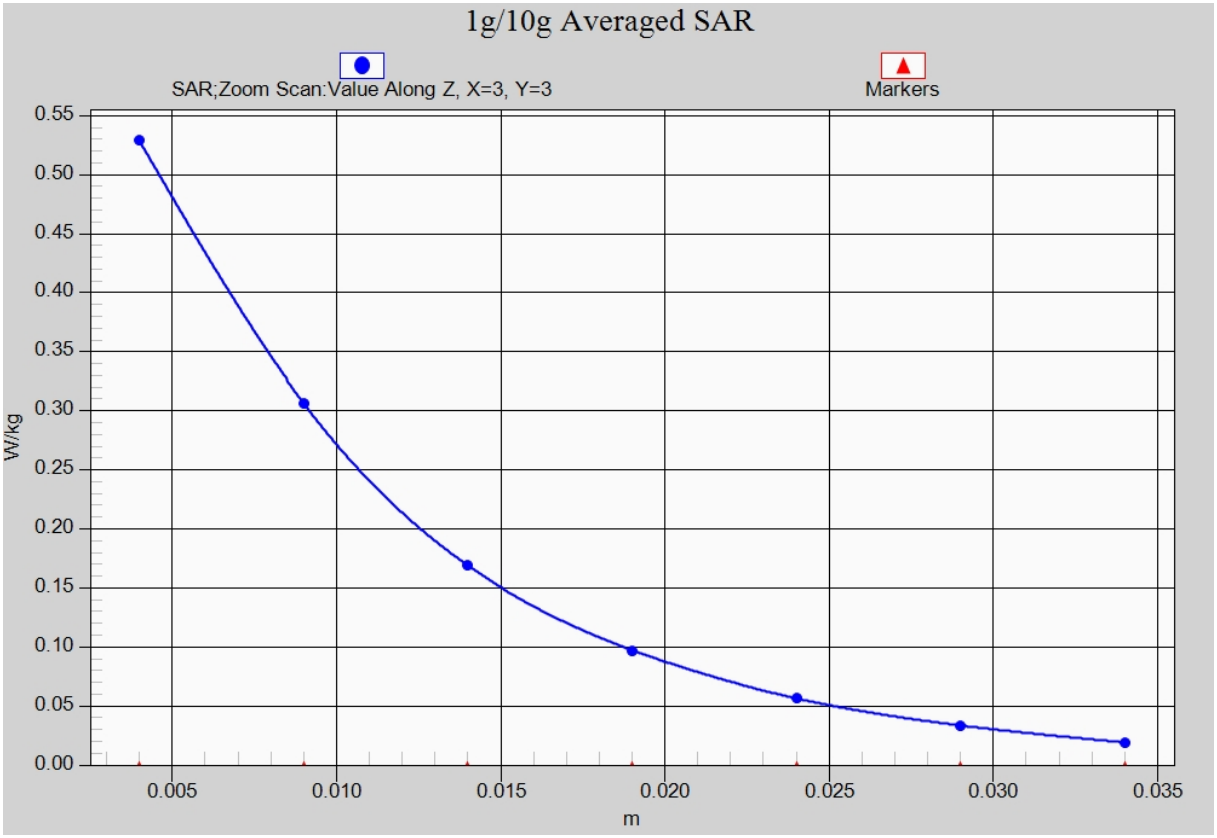


Fig. 18-1 Z-Scan at power reference point (LTE Band7)

LTE Band12Right Cheek High with QPSK_10M_1RB_HIgh

Date: 2017-8-10
Electronics: DAE4 Sn1331
Medium: Head750 MHz
Medium parameters used (interpolated): f = 711 MHz; σ = 0.861 mho/m; εr = 42.25; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band12Frequency: 711 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(10.47,10.47, 10.47)

Area Scan (81x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.169 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.600 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.188 W/kg
SAR(1 g) = 0.147 W/kg; SAR(10 g) = 0.119 W/kg
Maximum value of SAR (measured) = 0.156 W/kg

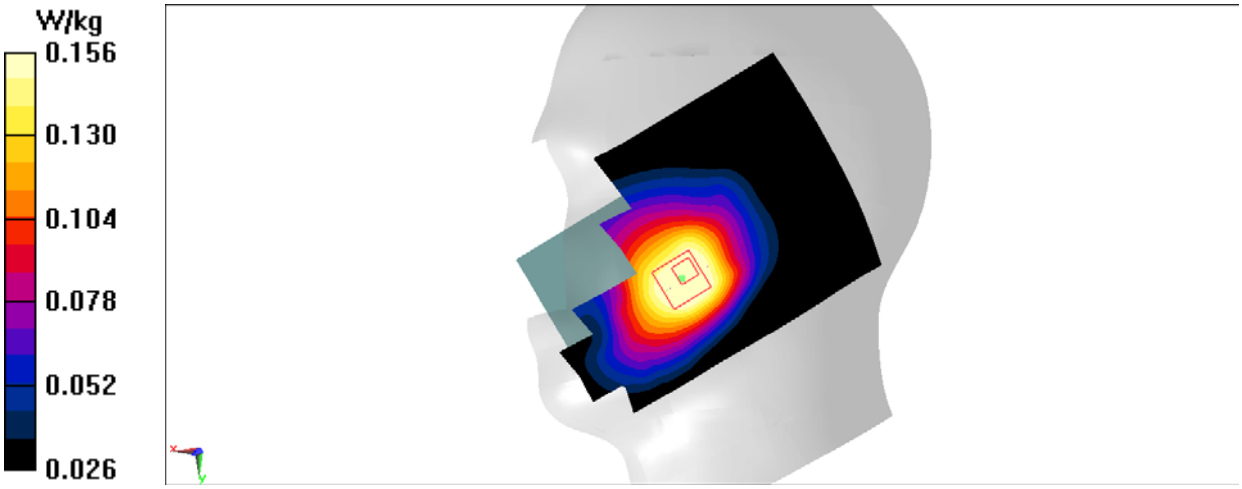


Fig.19 LTE Band12

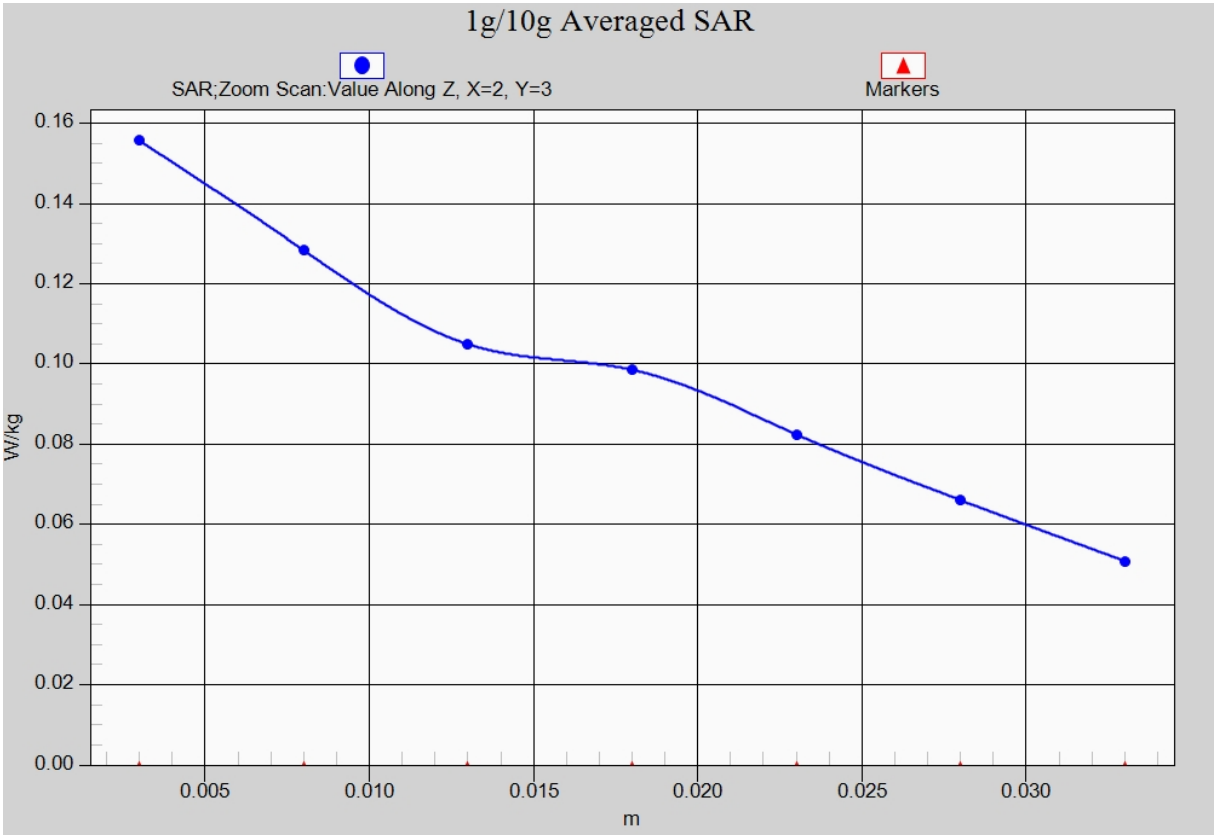


Fig. 19-1 Z-Scan at power reference point (LTE Band12)

LTE Band12Body Rear High with QPSK_10M_1RB_High
Date: 2017-8-10
Electronics: DAE4 Sn1331
Medium: Body750 MHz
Medium parameters used (interpolated): f = 711 MHz; σ = 0.933 mho/m; εr = 56.45; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band12Frequency: 711 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(9.96, 9.96, 9.96)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.336 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.17 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.384 W/kg
SAR(1 g) = 0.281 W/kg; SAR(10 g) = 0.200 W/kg
Maximum value of SAR (measured) = 0.304 W/kg

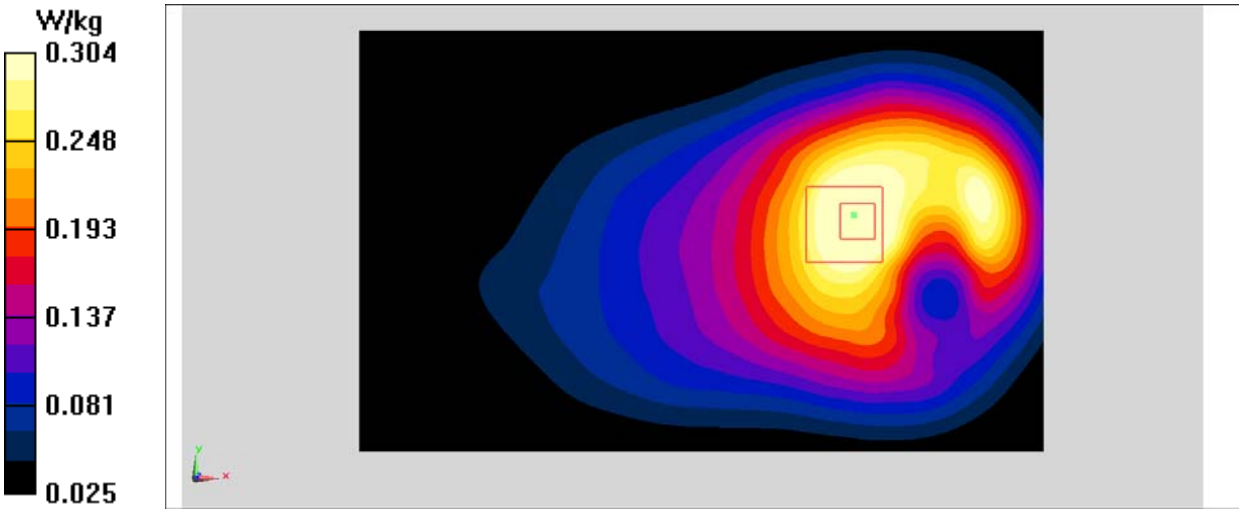


Fig.20 LTE Band12

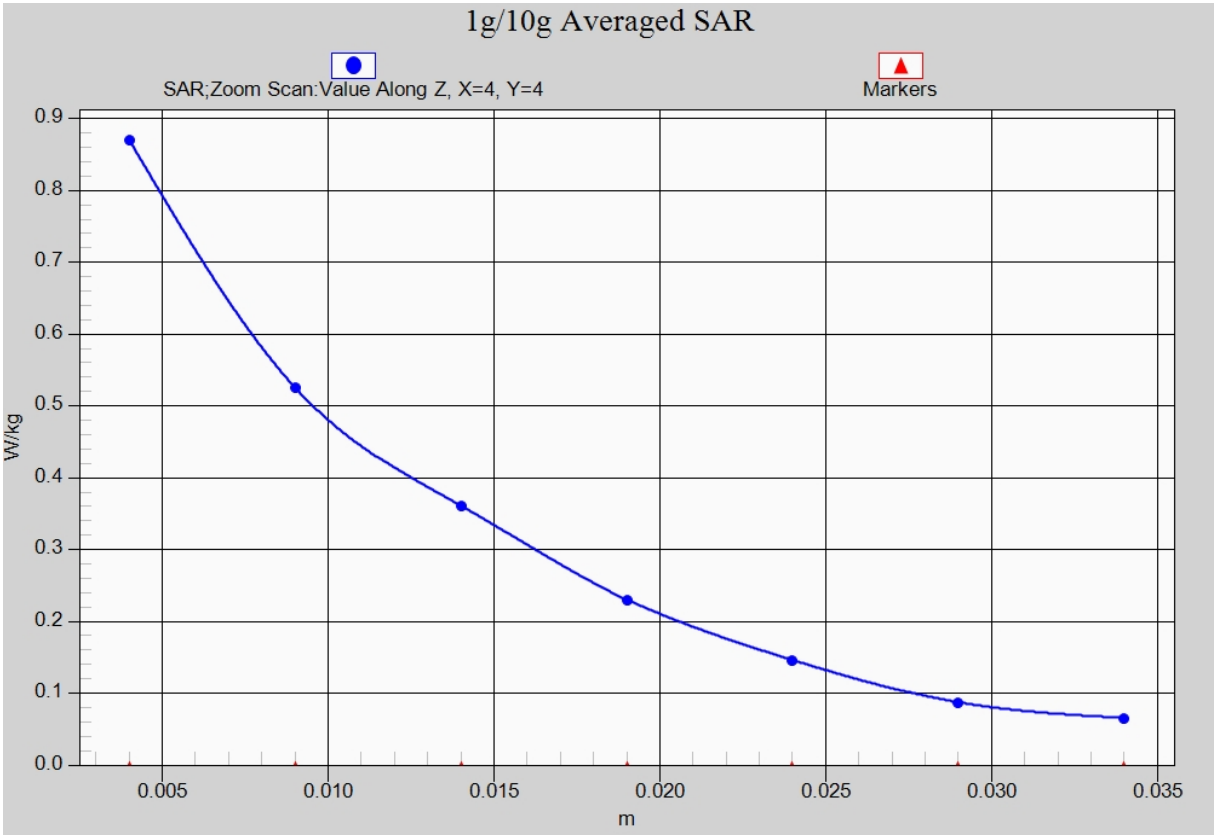


Fig. 20-1 Z-Scan at power reference point (LTE Band12)

LTE Band13Right Cheek with QPSK_10M_1RB_Low
Date: 2017-8-10
Electronics: DAE4 Sn1331
Medium: Head750 MHz
Medium parameters used (interpolated): f = 782 MHz; σ = 0.899 mho/m; εr = 42.28; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band13Frequency: 782 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(9.65, 9.65, 9.65)

Area Scan (81x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.324 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.699 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.420 W/kg
SAR(1 g) = 0.293 W/kg; SAR(10 g) = 0.229 W/kg
Maximum value of SAR (measured) = 0.345 W/kg

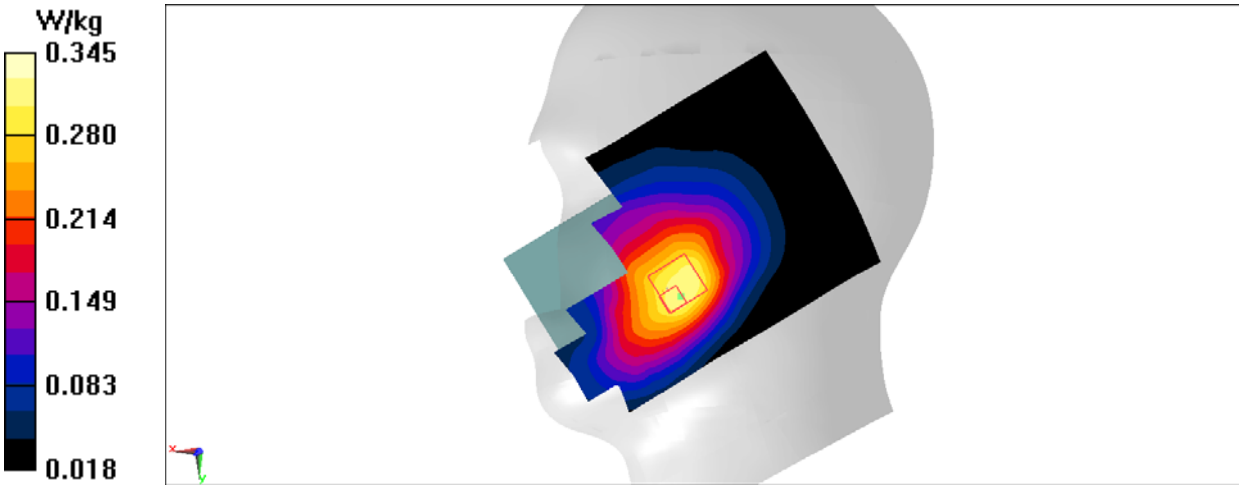


Fig.21 LTE Band13

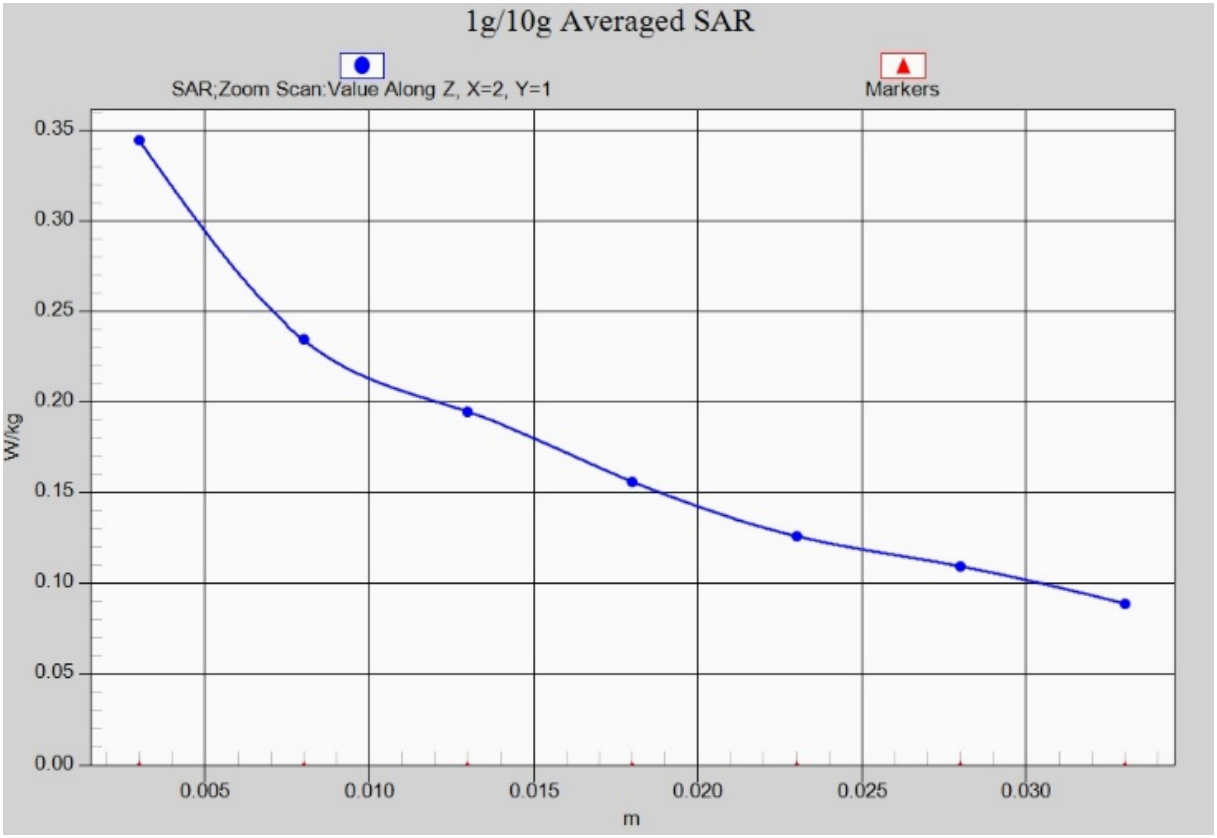


Fig. 21-1 Z-Scan at power reference point (LTE Band13)

LTE Band13Body Rearwith QPSK_10M_1RB_Low
Date: 2017-8-10
Electronics: DAE4 Sn1331
Medium: Body750 MHz
Medium parameters used (interpolated): f = 782 MHz; σ = 0.96 mho/m; εr = 56.36; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band13Frequency: 782 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(9.96, 9.96, 9.96)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.676 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.19 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.800 W/kg
SAR(1 g) = 0.446 W/kg; SAR(10 g) = 0.284 W/kg
Maximum value of SAR (measured) = 0.583 W/kg

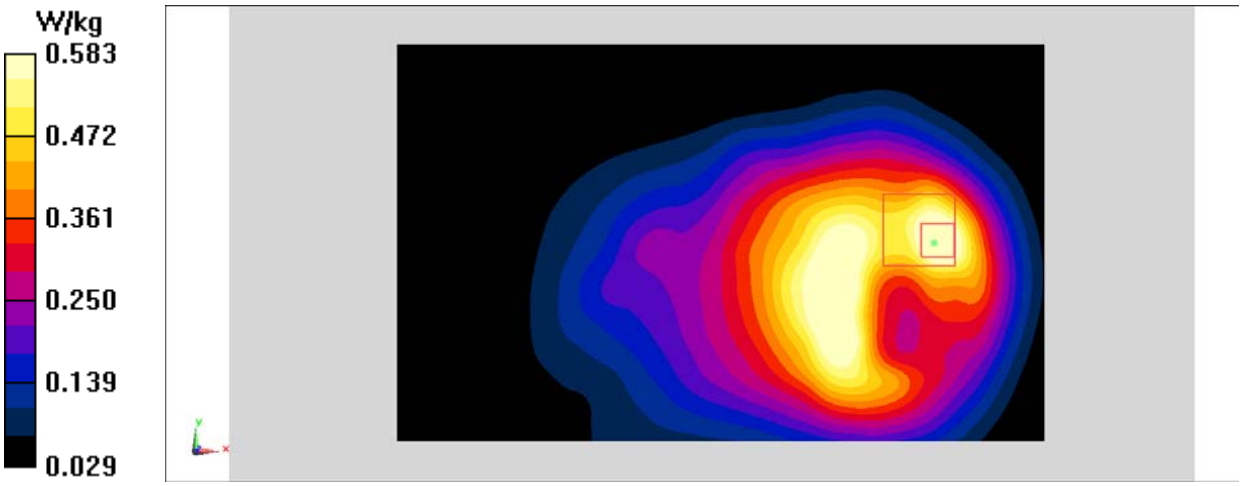


Fig.22 LTE Band13

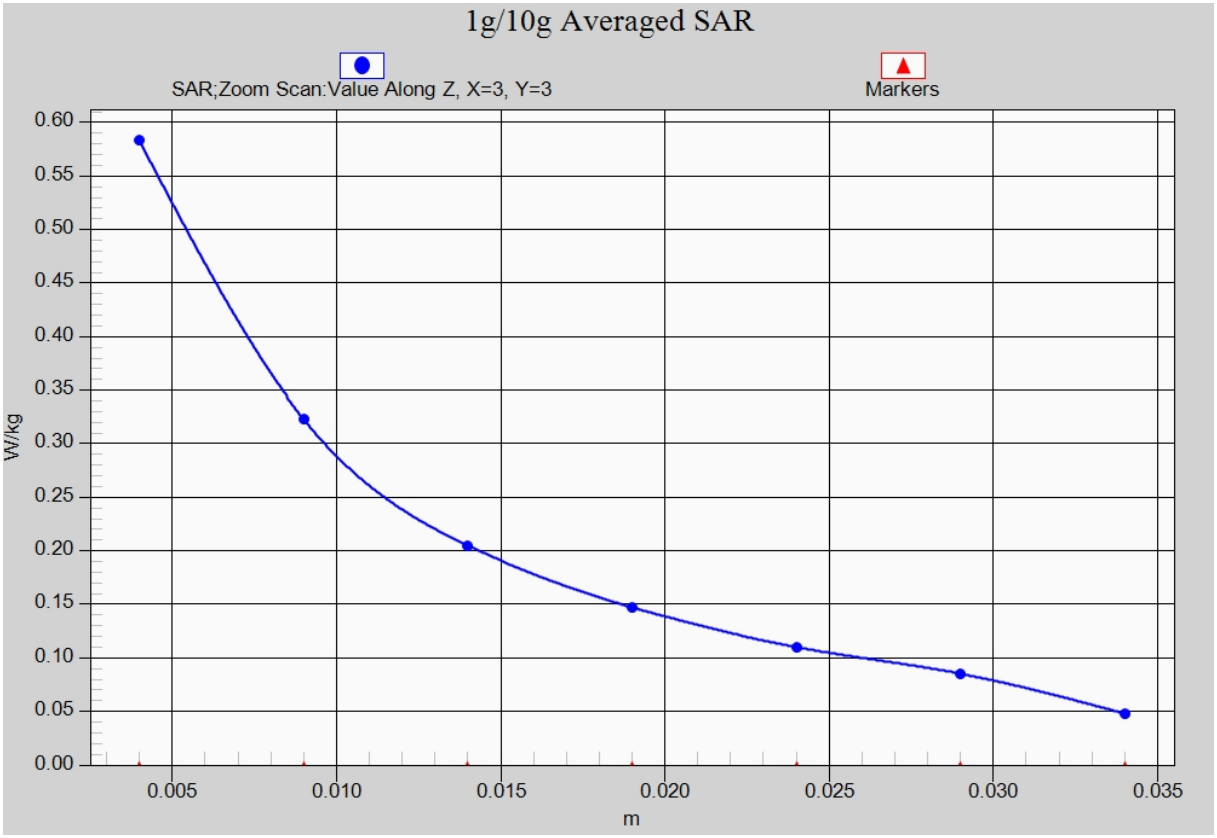


Fig. 22-1 Z-Scan at power reference point (LTE Band13)

LTE Band38 Right Cheek High with QPSK_20M_1RB_Middle

Date: 2017-8-12
Electronics: DAE4 Sn1331
Medium: Head 2600 MHz
Medium parameters used: f = 2610 MHz; σ = 1.962 mho/m; εr = 38.41; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band38 Frequency: 2610 MHz Duty Cycle: 1:1.58
Probe: EX3DV4– SN3846 ConvF(7.12, 7.12,7.12)

Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.113 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.404 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.155 W/kg
SAR(1 g) = 0.083 W/kg; SAR(10 g) = 0.044 W/kg
Maximum value of SAR (measured) = 0.105 W/kg

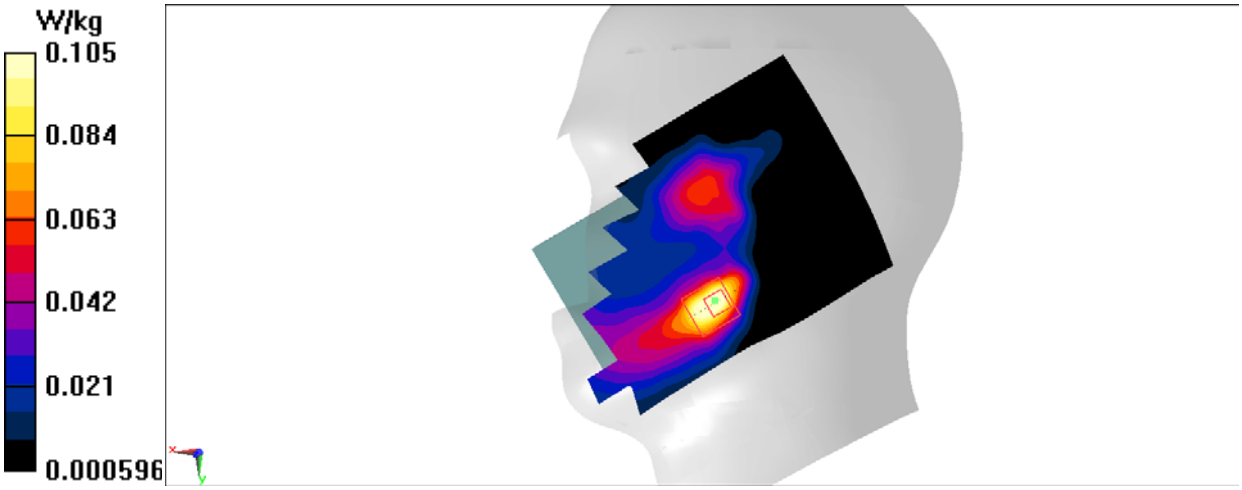


Fig.23 LTE Band38

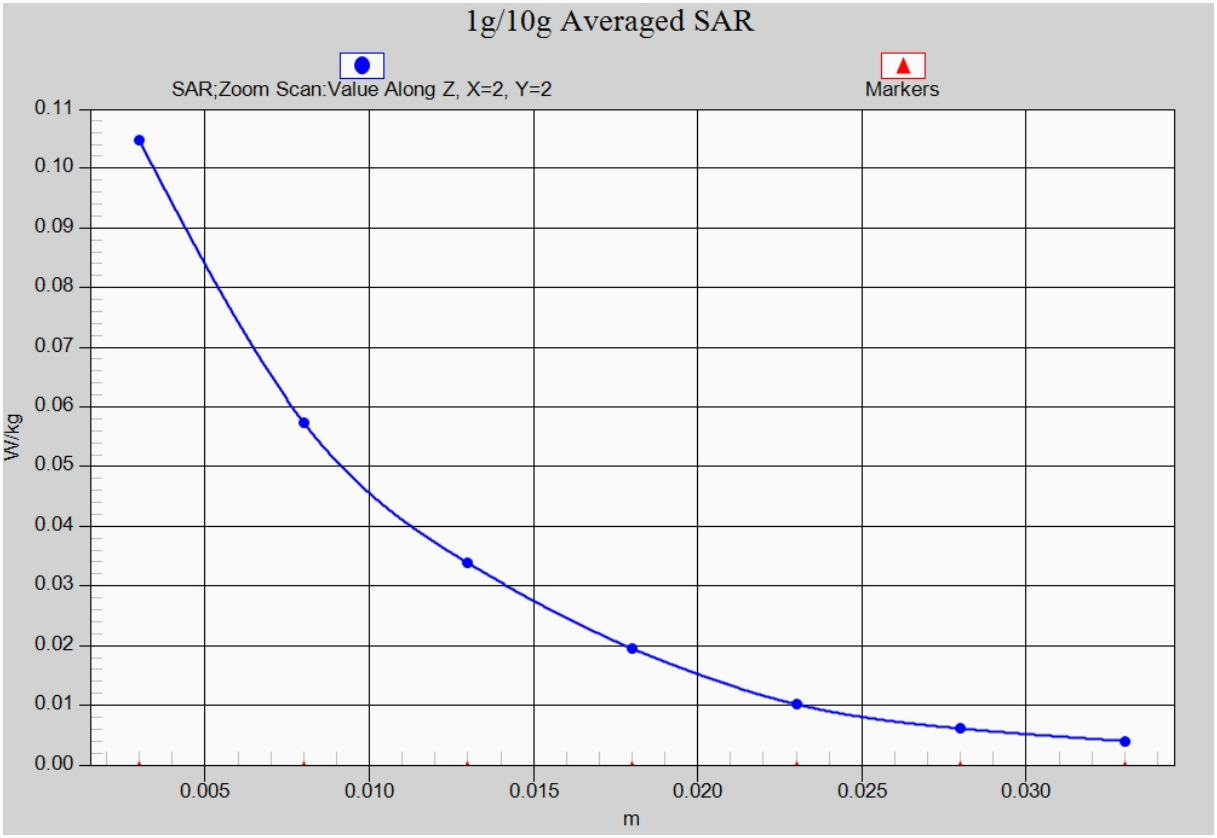


Fig. 23-1 Z-Scan at power reference point (LTE Band38)

LTE Band38 Body Bottom High with QPSK_20M_1RB_Middle

Date: 2017-8-12
Electronics: DAE4 Sn1331
Medium: Body 2600 MHz
Medium parameters used: f = 2610 MHz; σ = 2.161 mho/m; εr = 51.663; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band38 Frequency: 2610 MHz Duty Cycle: 1:1.58
Probe: EX3DV4– SN3846 ConvF(7.25, 7.25, 7.25)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.862 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.46 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.24 W/kg
SAR(1 g) = 0.672 W/kg; SAR(10 g) = 0.345 W/kg
Maximum value of SAR (measured) = 0.760 W/kg

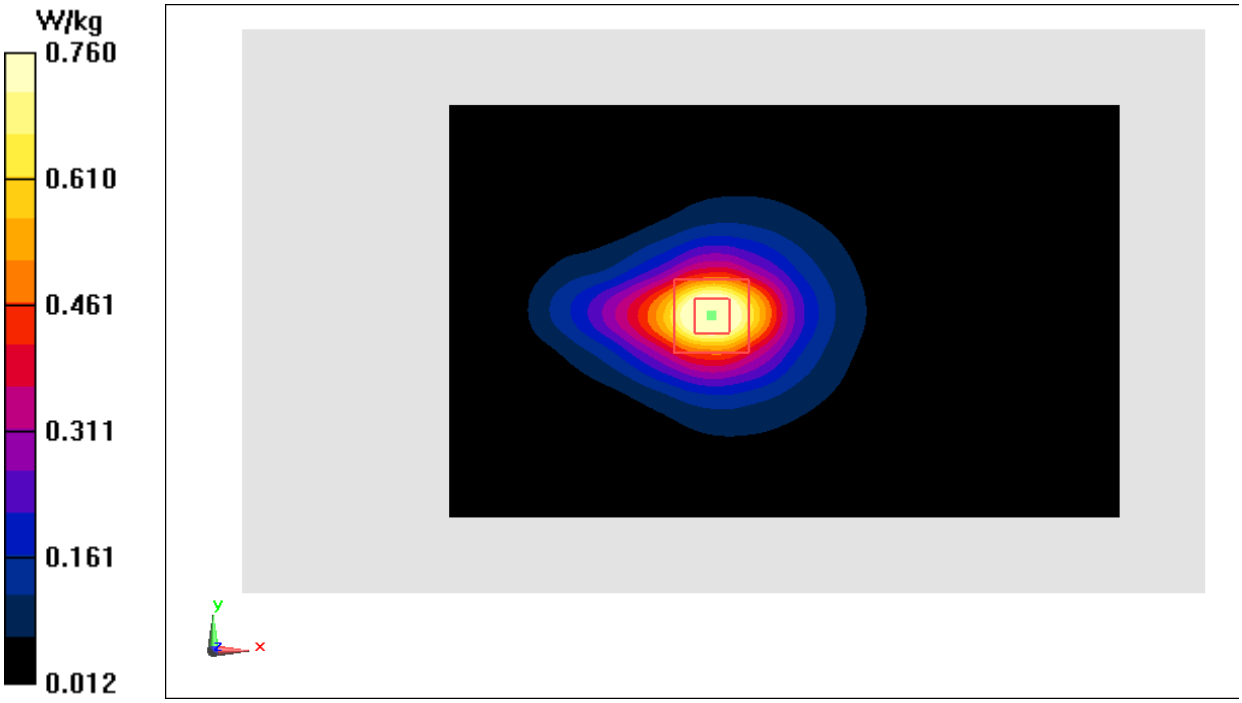


Fig.24 LTE Band38

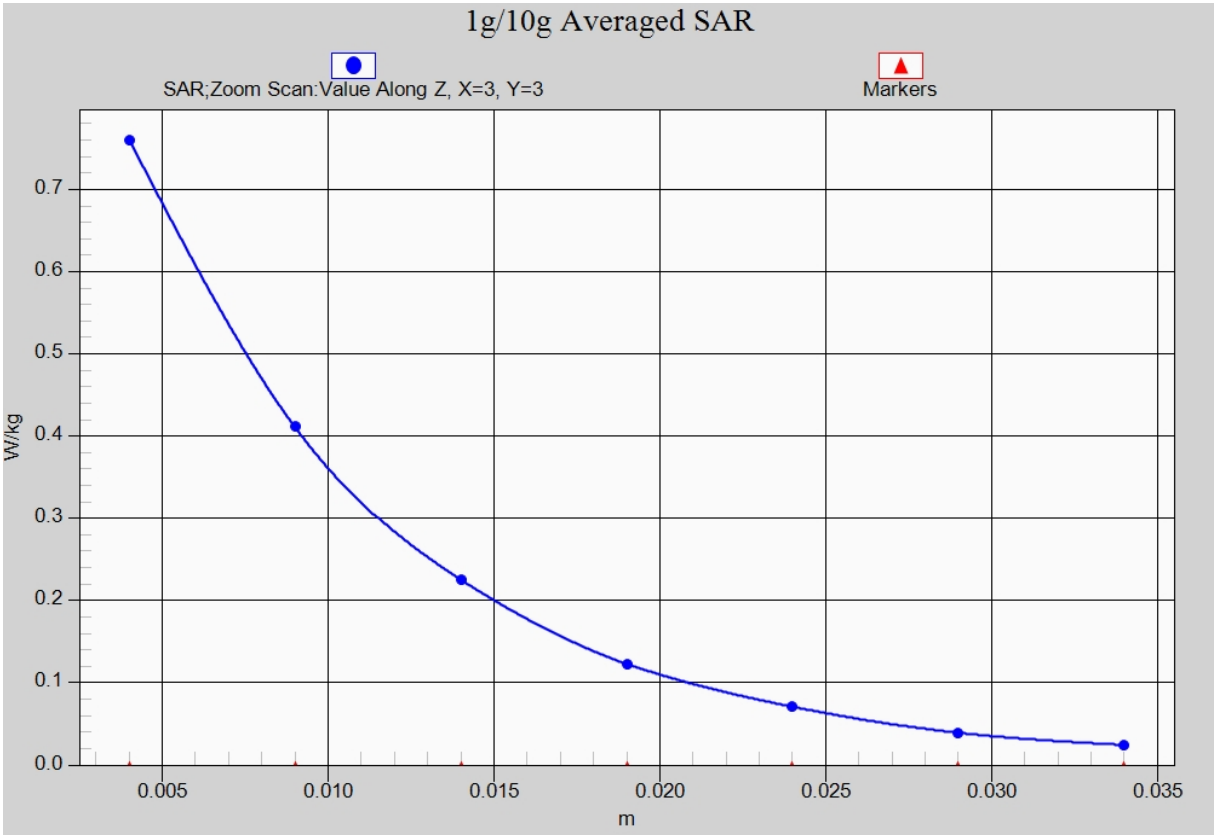


Fig. 24-1 Z-Scan at power reference point (LTE Band38)

LTE Band 41Right Cheek High with QPSK_20M_1RB_High
Date: 2017-8-12
Electronics: DAE4 Sn1331
Medium: Head2600 MHz
Medium parameters used: f = 2680 MHz; σ = 2.029 mho/m; εr = 38.28; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band41Frequency: 2680 MHz Duty Cycle: 1:1.58
Probe: EX3DV4 - SN3846 ConvF(7.12, 7.12,7.12)

Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.102 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.457 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.153 W/kg
SAR(1 g) = 0.080 W/kg; SAR(10 g) = 0.041 W/kg
Maximum value of SAR (measured) = 0.0985 W/kg

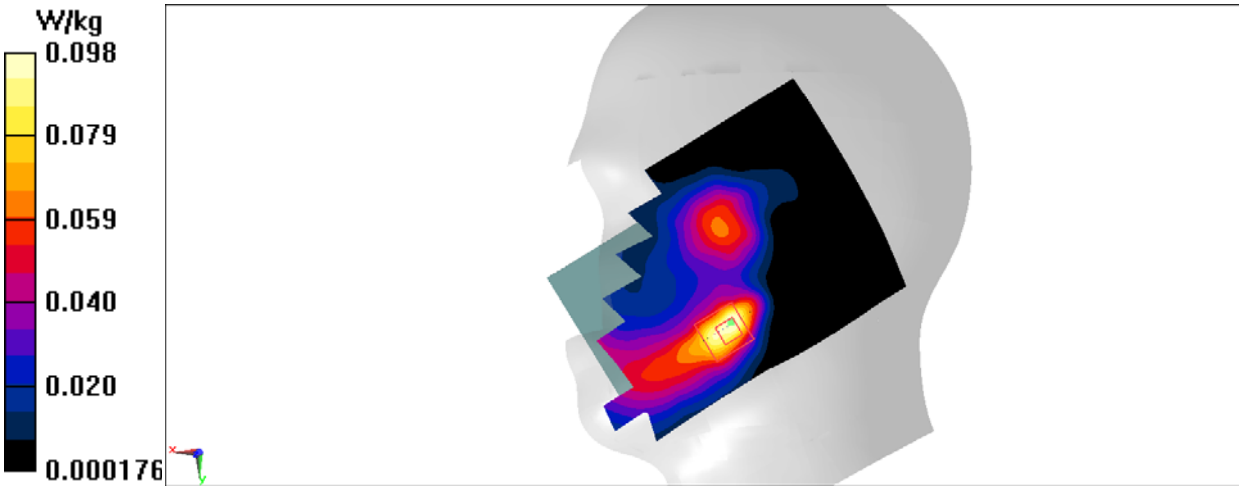


Fig.27 LTE Band 41

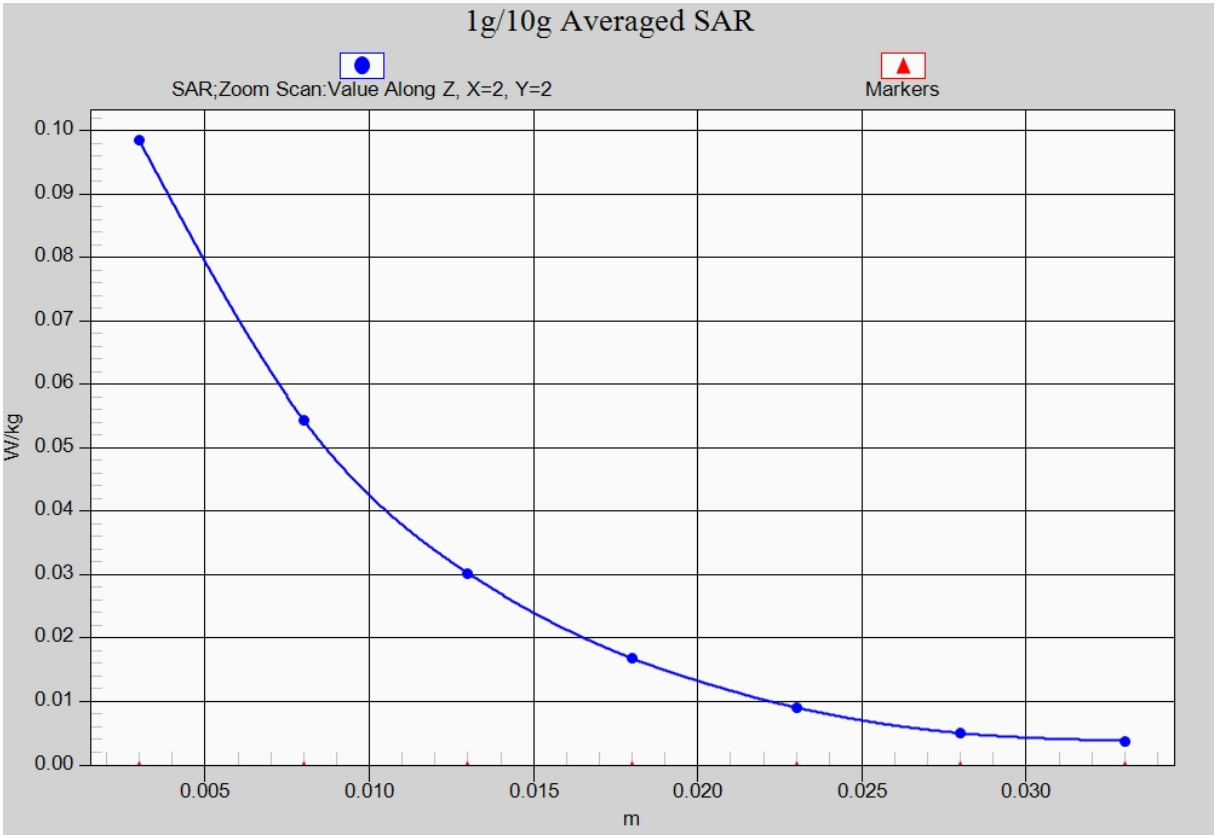


Fig. 27-1 Z-Scan at power reference point (LTE Band 41)

LTE Band 41Body Bottom Low with QPSK_20M_1RB_High
Date: 2017-8-12
Electronics: DAE4 Sn1331
Medium: Body2600 MHz
Medium parameters use (interpolated): f = 2506 MHz; σ = 2.013 mho/m; εr = 52.139; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band41 Frequency: 2506 MHz Duty Cycle: 1:1.58
Probe: EX3DV4 - SN3846 ConvF(7.25, 7.25, 7.25)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.08 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.74 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.853 W/kg; SAR(10 g) = 0.443 W/kg
Maximum value of SAR (measured) = 0.957 W/kg

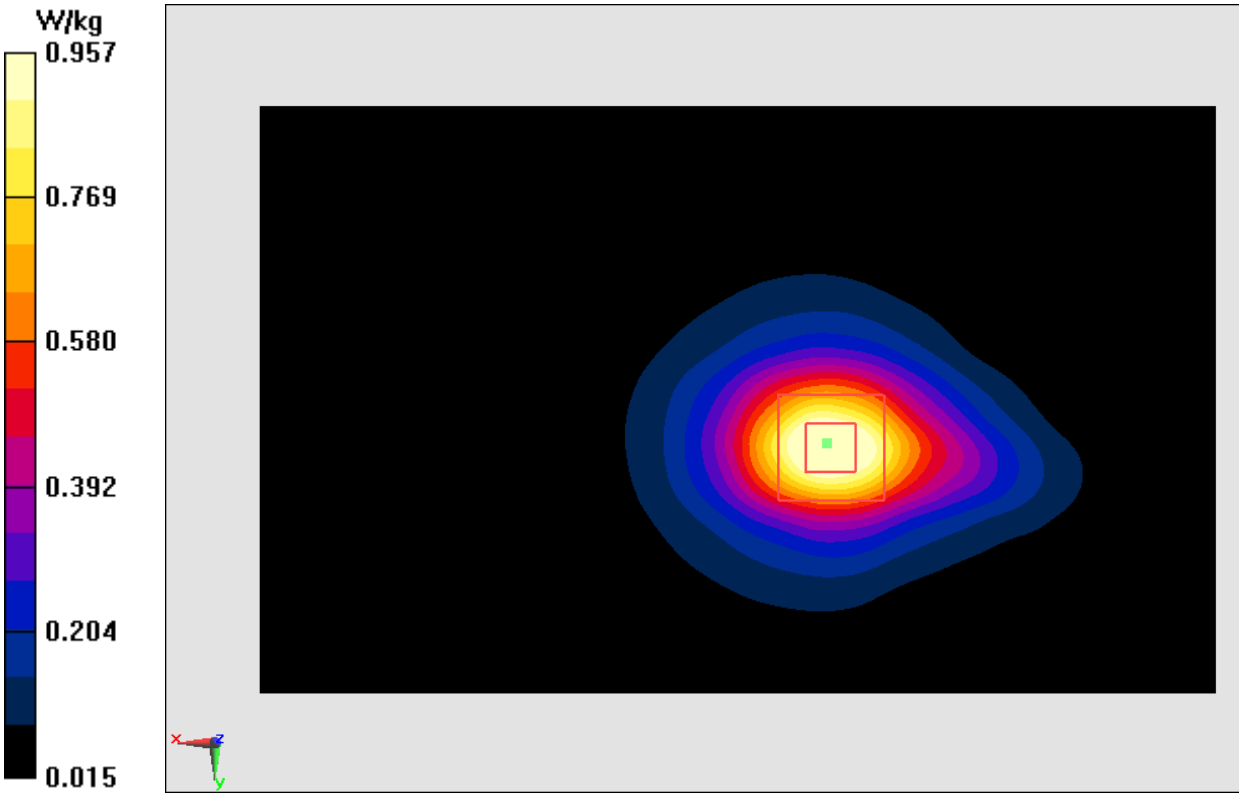


Fig.28 LTE Band 41

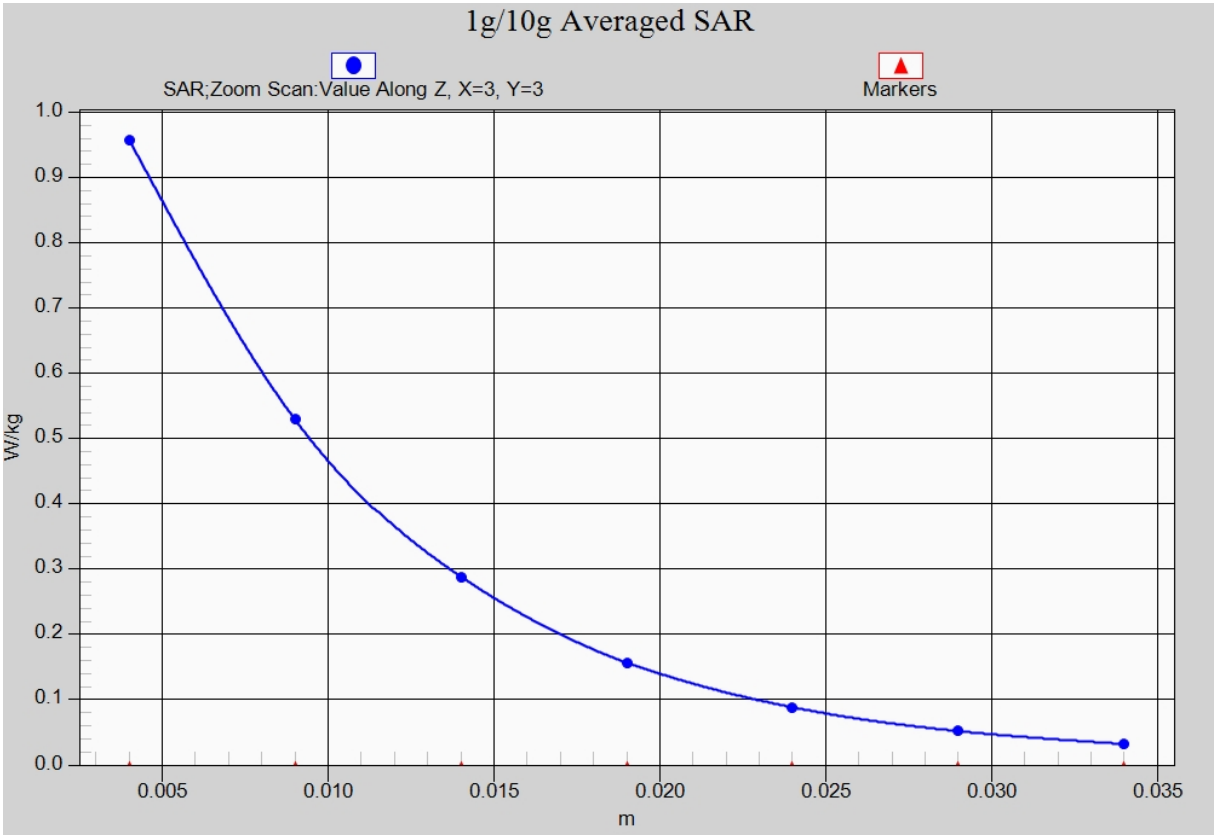


Fig. 28-1 Z-Scan at power reference point (LTE Band 41)

LTE Band4Left Cheek Low with QPSK_20M_1RB_High
Date: 2017-8-13
Electronics: DAE4 Sn1331
Medium: Head 1750 MHz
Medium parameters used f = 1720 MHz; σ = 1.398 mho/m; εr = 40.485; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band4Frequency: 1720MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846ConvF(8.16, 8.16, 8.16)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.246 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.436 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.285 W/kg
SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.138 W/kg
Maximum value of SAR (measured) = 0.238 W/kg

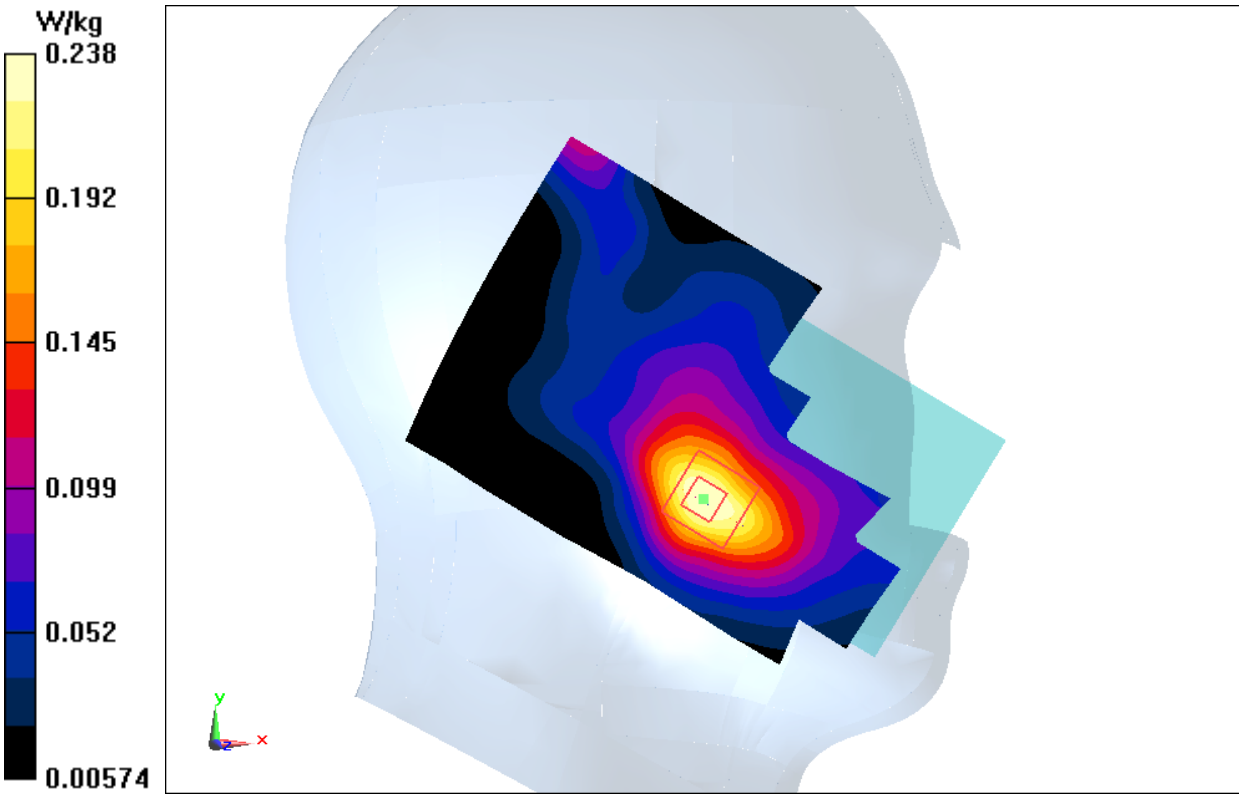


Fig.29 LTE Band4

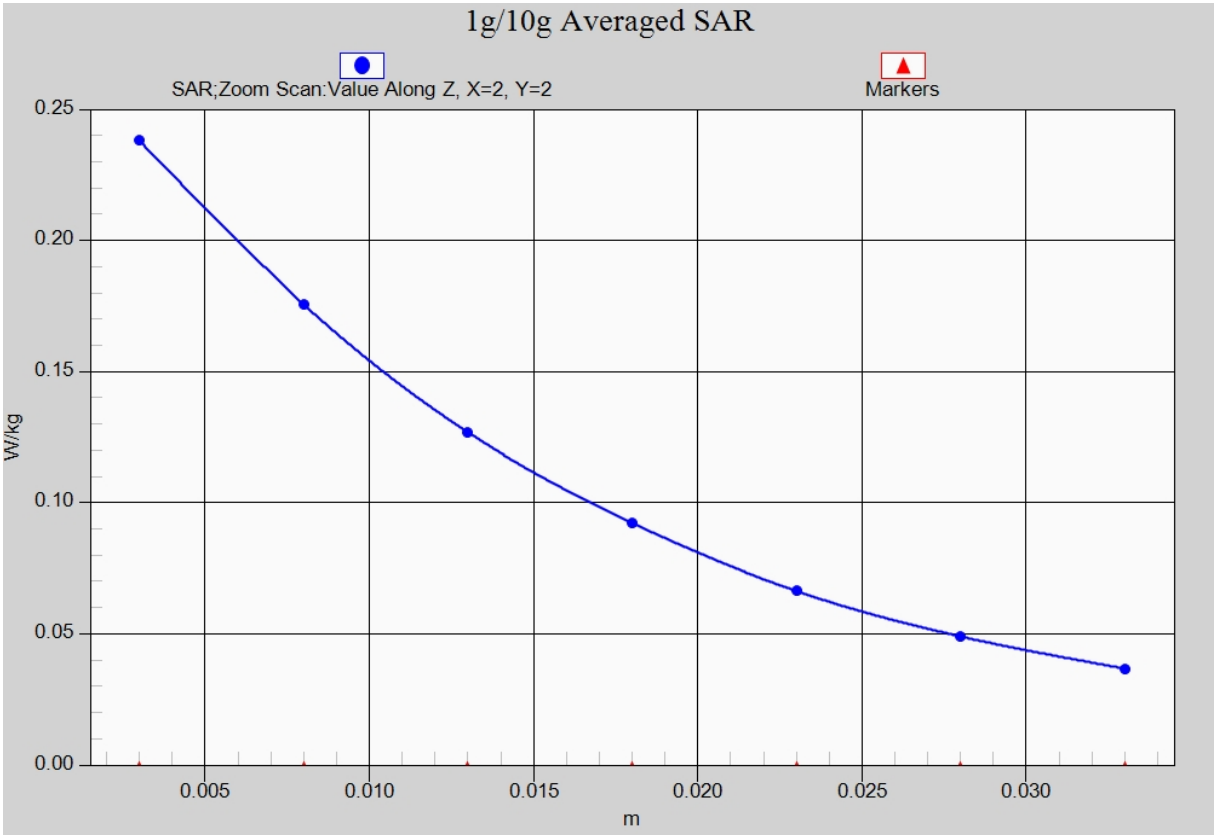


Fig. 29-1 Z-Scan at power reference point (LTE Band4)

LTE Band4 Body Bottom High with QPSK_20M_50RB_Low– 10mm
Date: 2017-8-13
Electronics: DAE4 Sn1331
Medium: Body 1750 MHz
Medium parameters used: f = 1745 MHz; σ =1.514 mho/m; εr = 53.614; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band4Frequency: 1745 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846ConvF(7.90, 7.90, 7.90)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.27 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.17 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.884 W/kg; SAR(10 g) = 0.510 W/kg
Maximum value of SAR (measured) = 0.961 W/kg

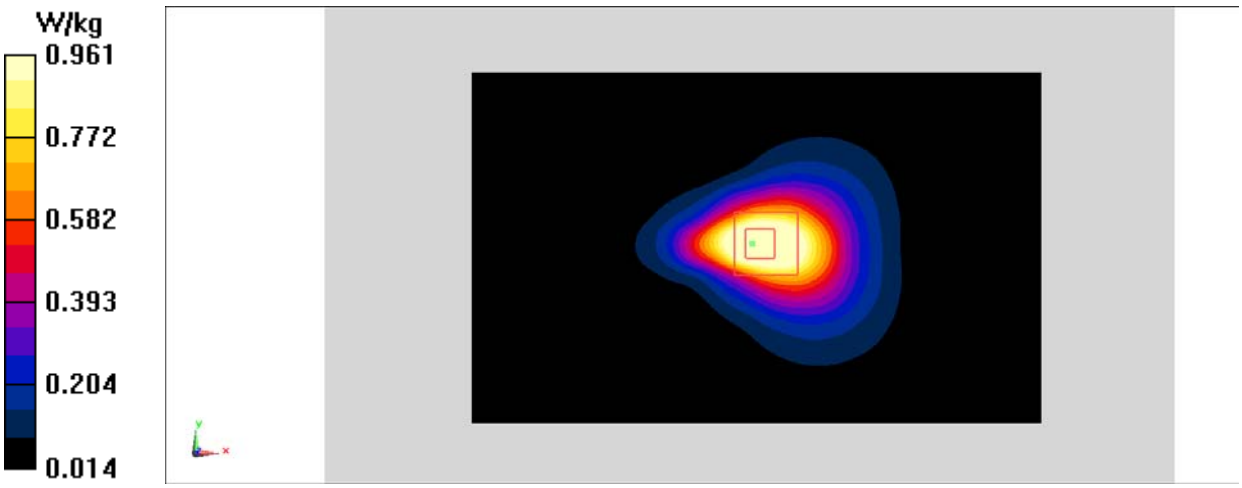


Fig.30 LTE Band4

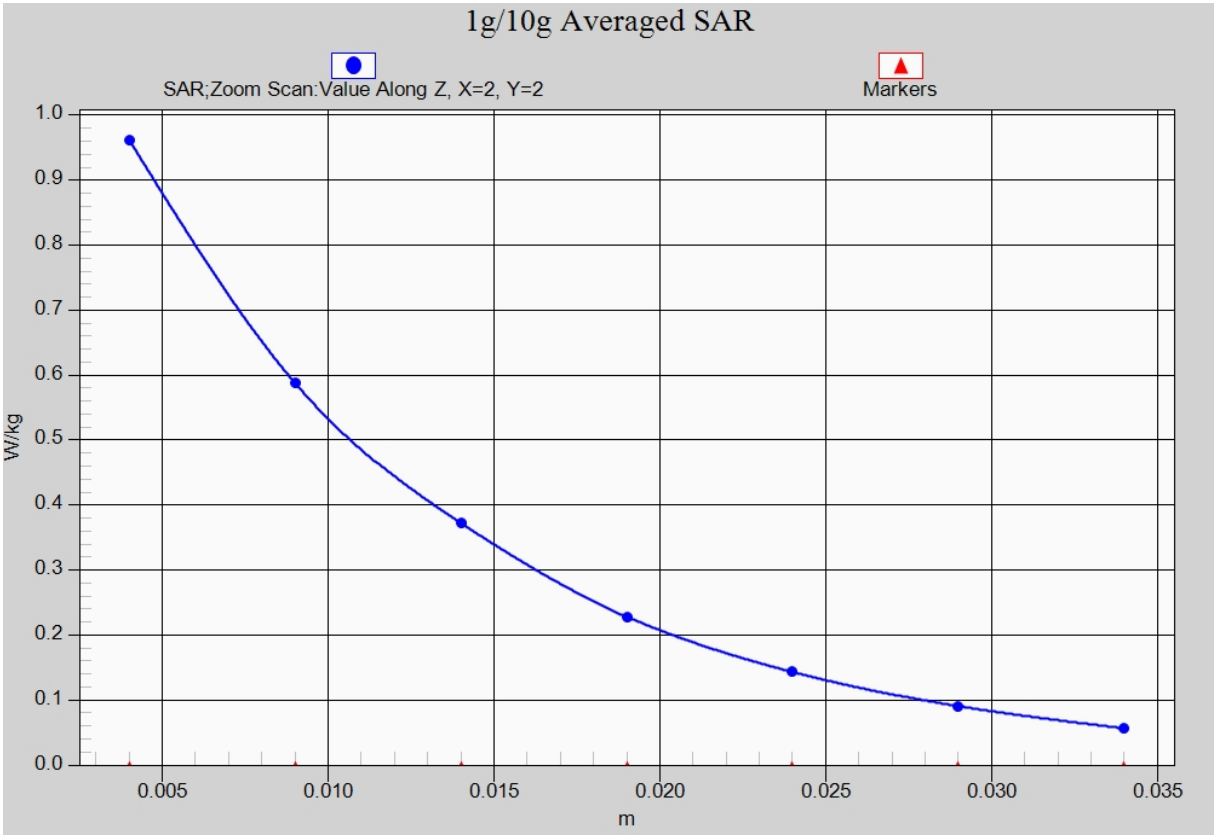


Fig. 30-1 Z-Scan at power reference point (LTE Band4)

LTE Band4 Body FrontMiddle with QPSK_20M_1RB_High– 15mm
Date: 2017-8-13
Electronics: DAE4 Sn1331
Medium: Body 1750 MHz
Medium parameters used (interpolated): f = 1732.5 MHz; σ =1.505 mho/m; εr = 53.664; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: LTE Band4Frequency: 1732.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846ConvF(7.90, 7.90, 7.90)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.01 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.778 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.838 W/kg; SAR(10 g) = 0.505 W/kg
Maximum value of SAR (measured) = 0.951 W/kg

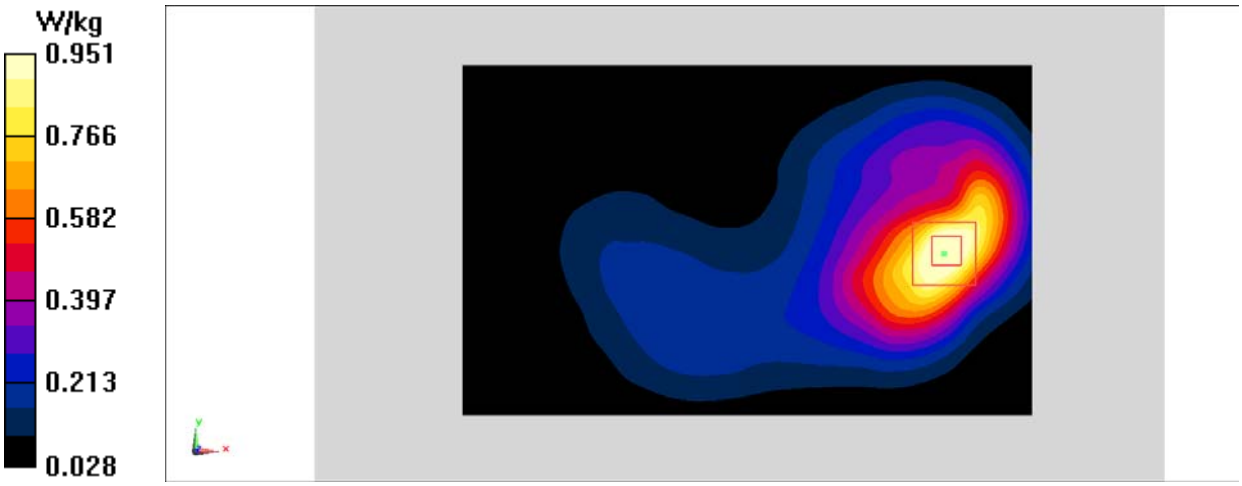


Fig.31 LTE Band4

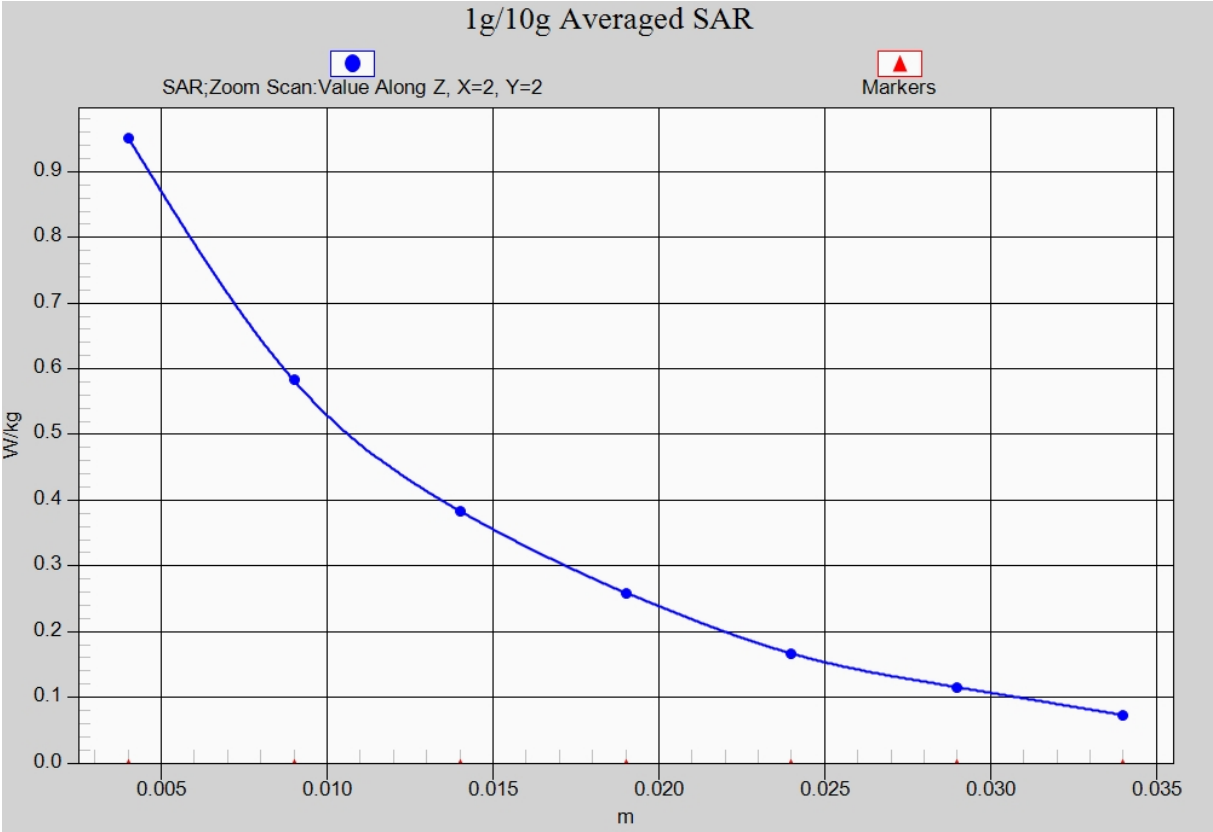


Fig. 31-1 Z-Scan at power reference point (LTE Band4)

LTE Band26Right Cheek High with QPSK_15M_1RB_Low

Date: 2017-8-4
Electronics: DAE4 Sn1331
Medium: Head 835 MHz
Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.913 mho/m; εr = 40.89; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C, Liquid Temperature: 22.5°C
Communication System: LTE Band26 841.5 MHz Duty Cycle: 1：1
Probe: EX3DV4 – SN3846ConvF(9.33,9.33,9.33)

Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.393 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.369 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.567 W/kg
SAR(1 g) = 0.370 W/kg; SAR(10 g) = 0.278 W/kg
Maximum value of SAR (measured) = 0.456 W/kg

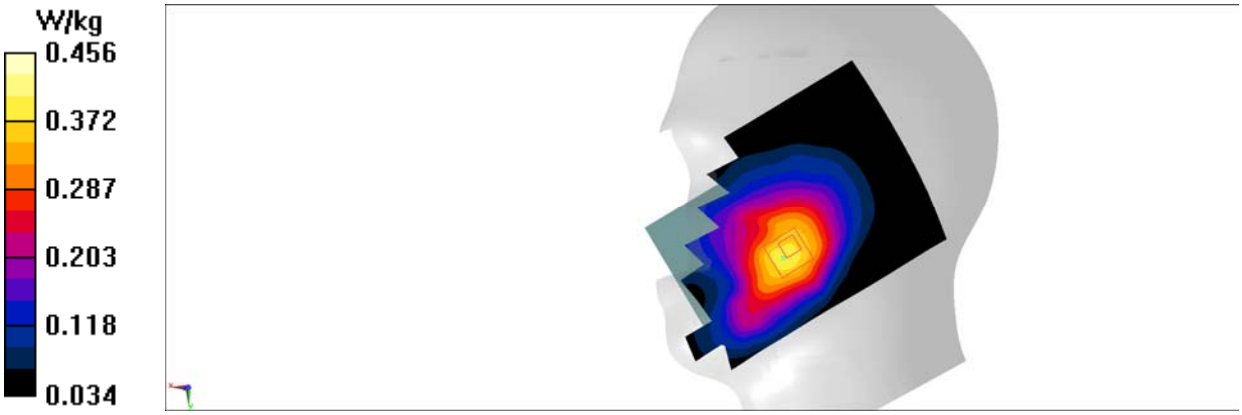


Fig.32 LTE Band26

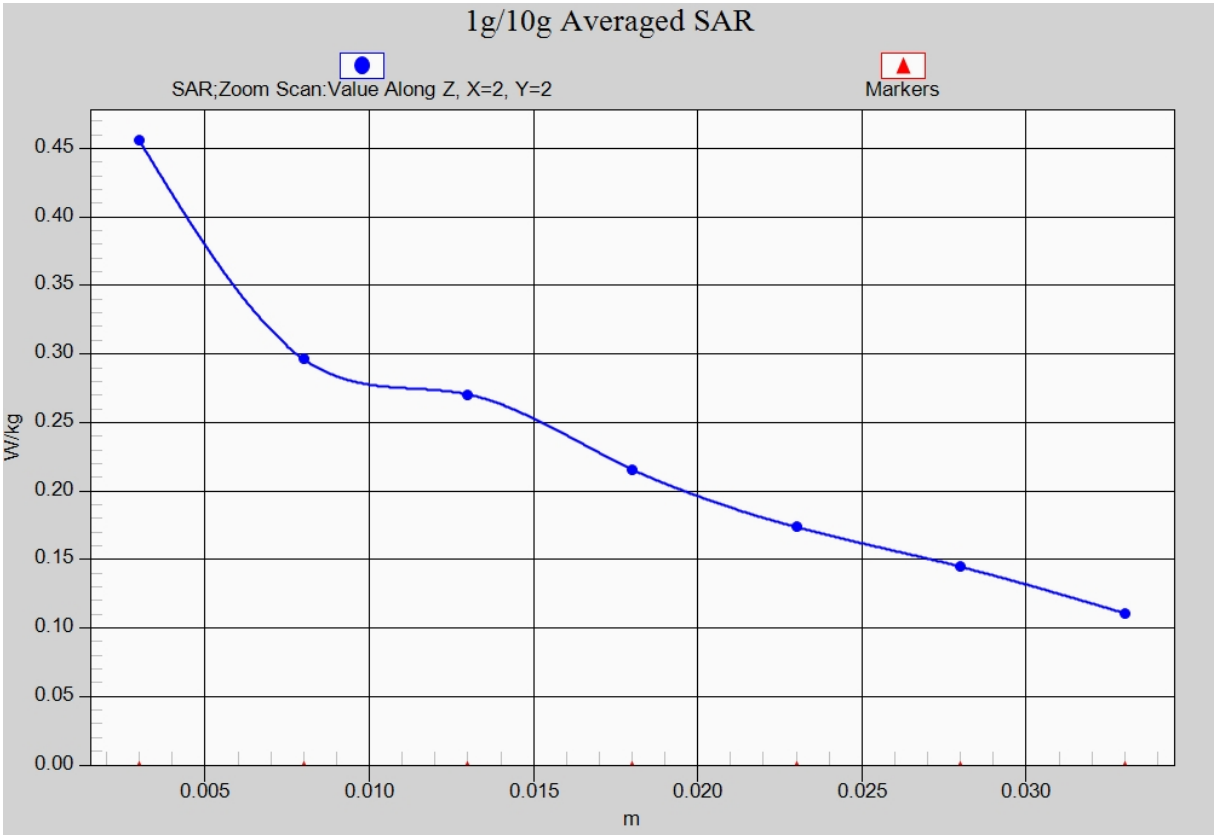


Fig. 32-1 Z-Scan at power reference point (LTE Band 26)

LTE Band26RearHigh with QPSK_15M_1RB_Low
Date: 2017-8-4
Electronics: DAE4 Sn1331
Medium: Body835 MHz
Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.984 mho/m; εr = 56.1; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C, Liquid Temperature: 22.5°C
Communication System: LTE Band26 841.5 MHz Duty Cycle: 1：1
Probe: EX3DV4 – SN3846ConvF(9.52,9.52,9.52)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.944 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.75 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.720 W/kg; SAR(10 g) = 0.505 W/kg
Maximum value of SAR (measured) = 0.763 W/kg

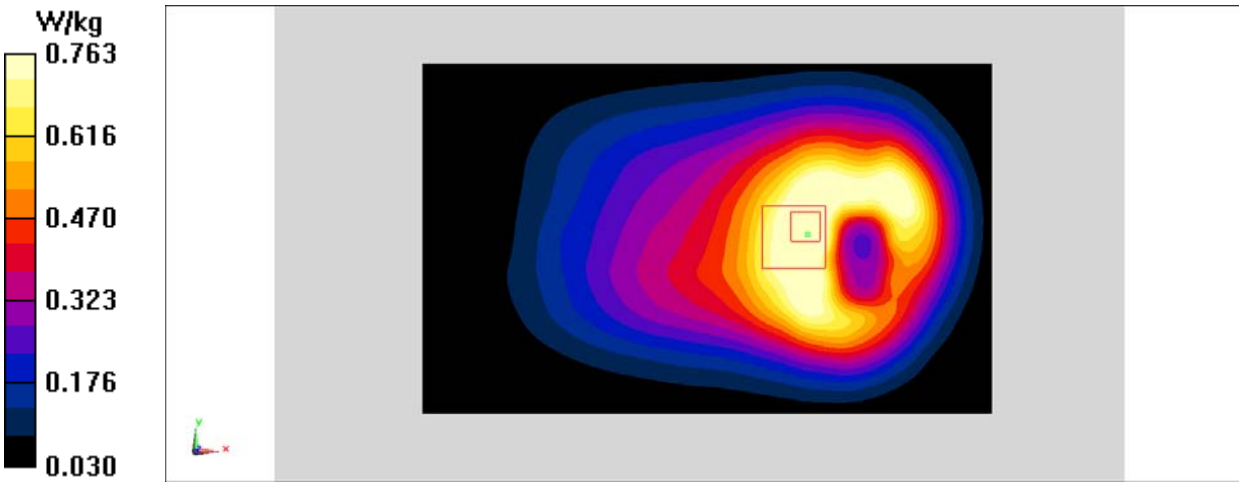


Fig.33 LTE Band26

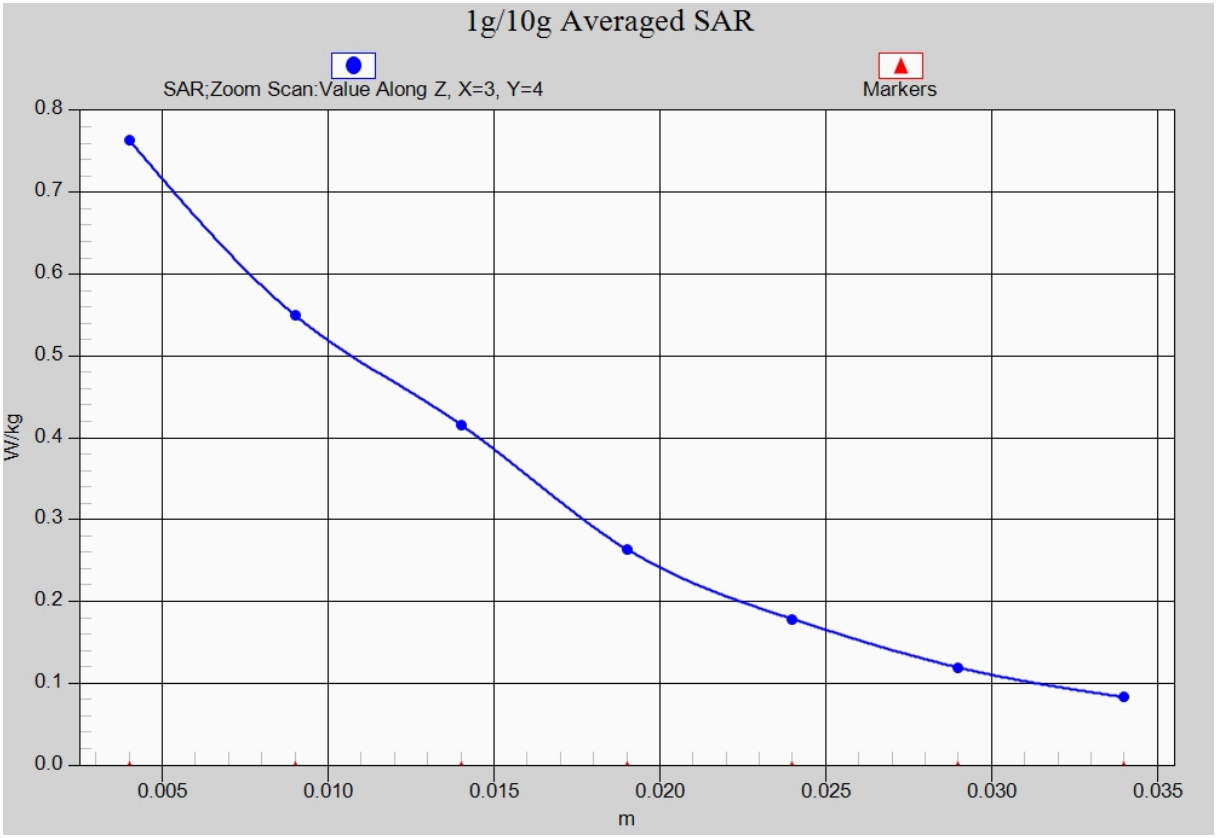


Fig. 33-1 Z-Scan at power reference point (LTE Band 26)

Wifi 802.11bLeftTiltChannel 6
Date: 2017-8-14
Electronics: DAE4 Sn1331
Medium: Head 2450 MHz
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.799 mho/m; ε_r = 38.97; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(7.22, 7.22, 7.22)

Area Scan (91x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.47 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.08 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 2.38 W/kg
SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.435 W/kg
Maximum value of SAR (measured) = 1.46 W/kg

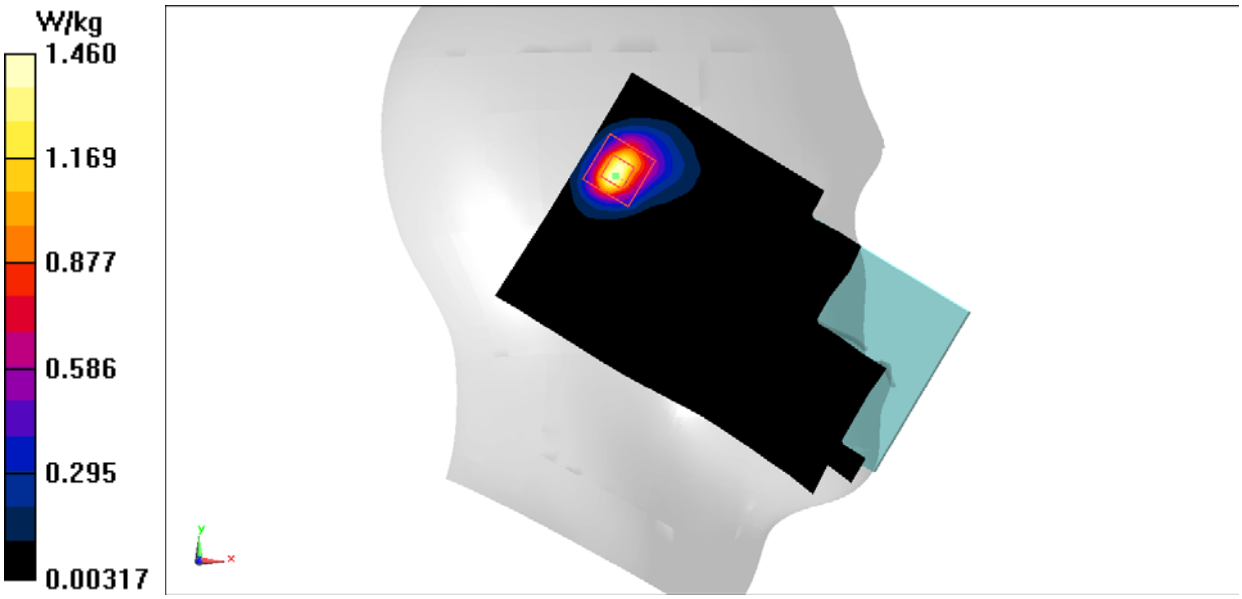


Fig.342450 MHz

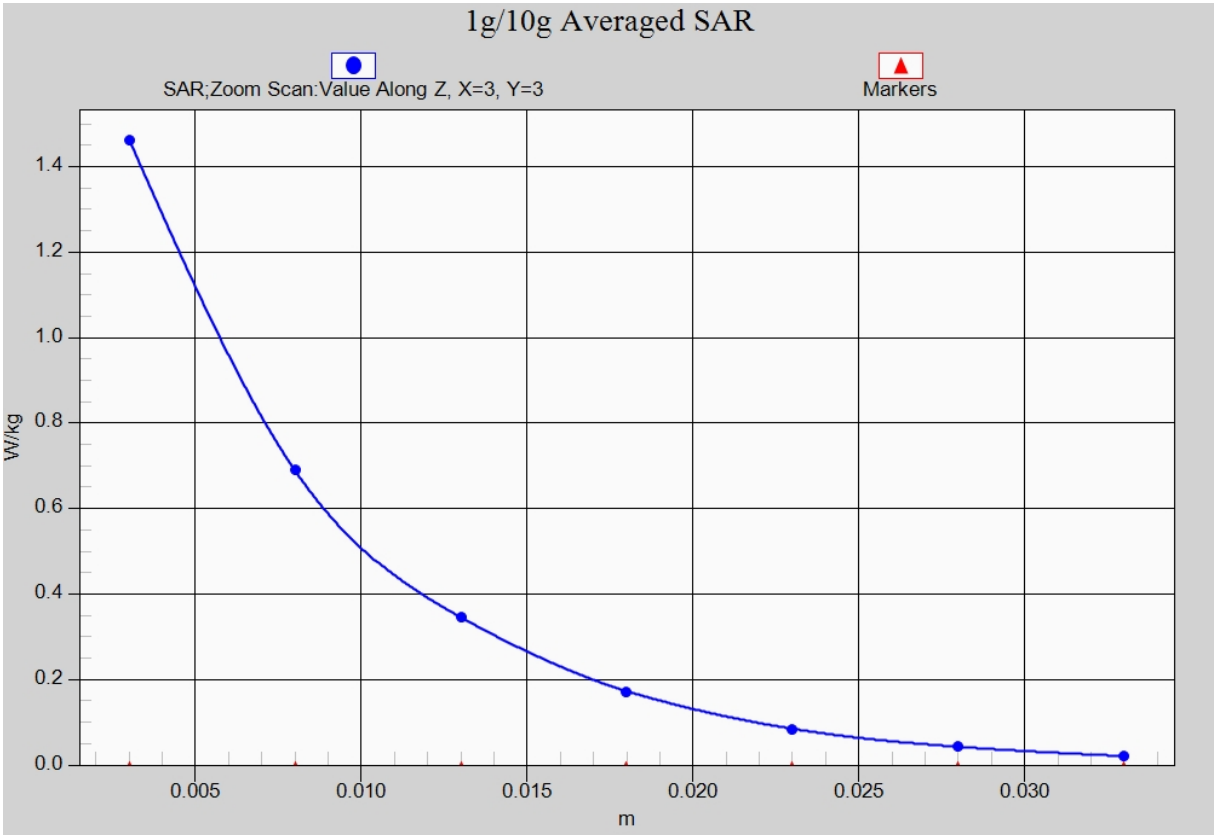


Fig. 34-1 Z-Scan at power reference point (2450 MHz)

Wifi 802.11b Body TopChannel 6
Date: 2017-8-14
Electronics: DAE4 Sn1331
Medium: Body 2450 MHz
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.966 mho/m; ε_r = 52.12; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1
Probe: EX3DV4 –SN3846 ConvF(7.31, 7.31, 7.31)

Area Scan (131x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.664 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.14 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.840 W/kg
SAR(1 g) = 0.463 W/kg; SAR(10 g) = 0.228 W/kg
Maximum value of SAR (measured) = 0.528 W/kg

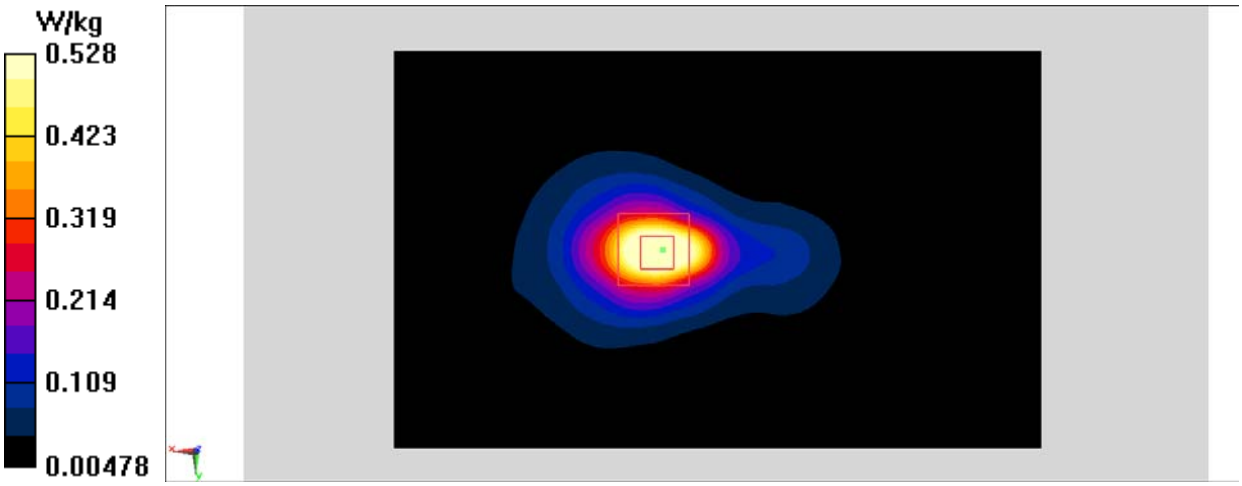


Fig.352450 MHz

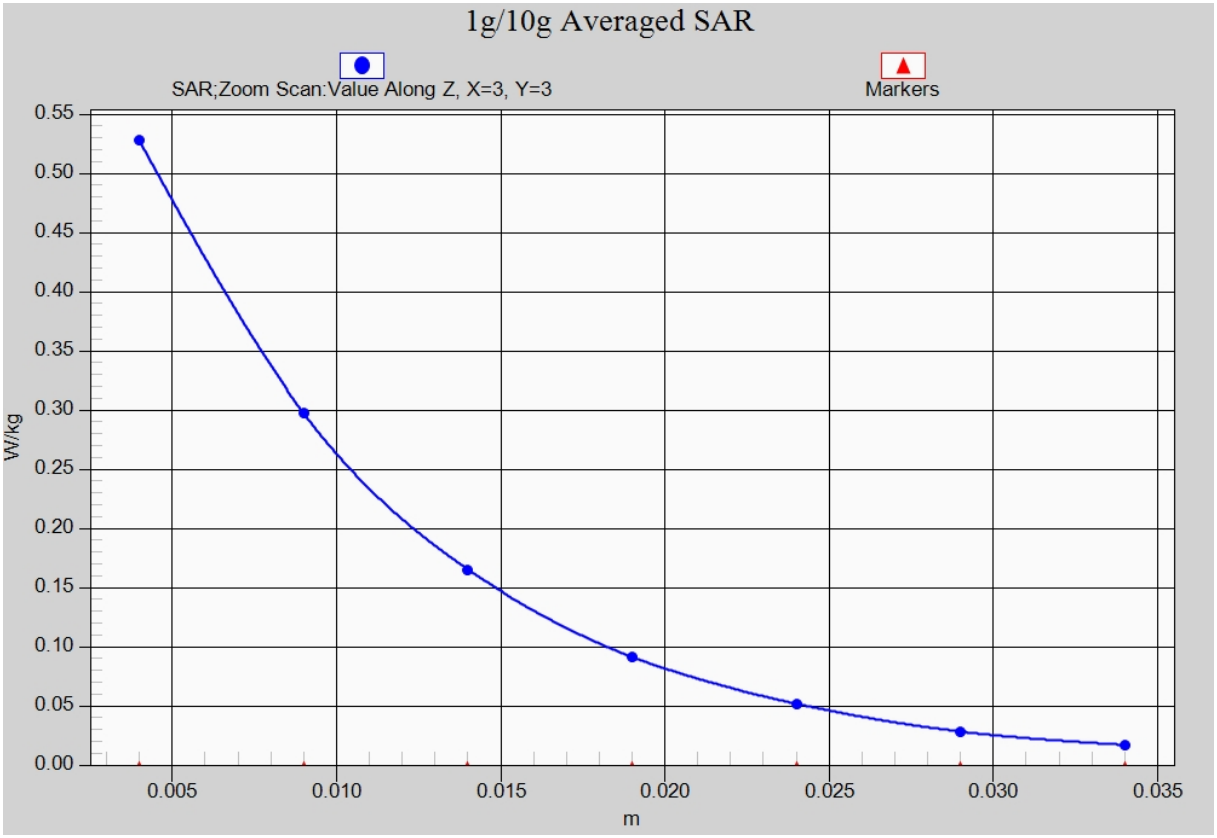


Fig. 35-1 Z-Scan at power reference point (2450 MHz)

Wifi 802.11aRightTiltChannel 120
Date: 2017-8-15
Electronics: DAE4 Sn1331
Medium: Head 5 GHz
Medium parameters used: f = 5600 MHz; σ = 5.06 mho/m; ε_r = 35.297; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WLan 5G Frequency: 5600 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(4.72, 4.72, 4.72)

Area Scan (111x171x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.27 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 8.023 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 3.48 W/kg
SAR(1 g) = 0.796 W/kg; SAR(10 g) = 0.225 W/kg
Maximum value of SAR (measured) = 1.96 W/kg

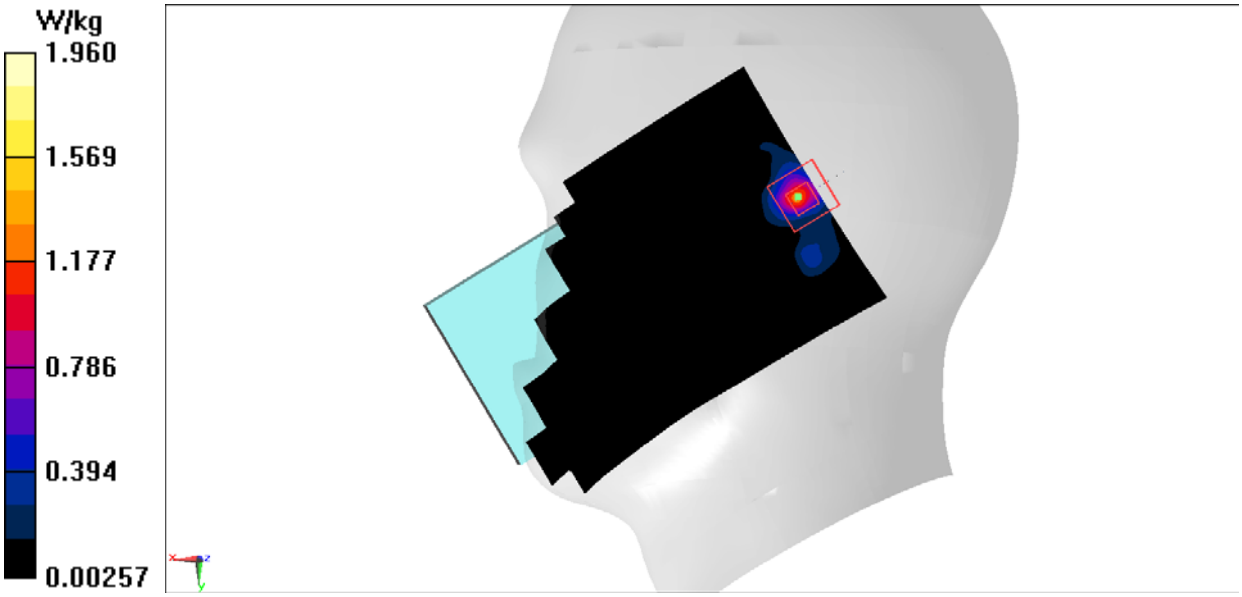


Fig.365GHz

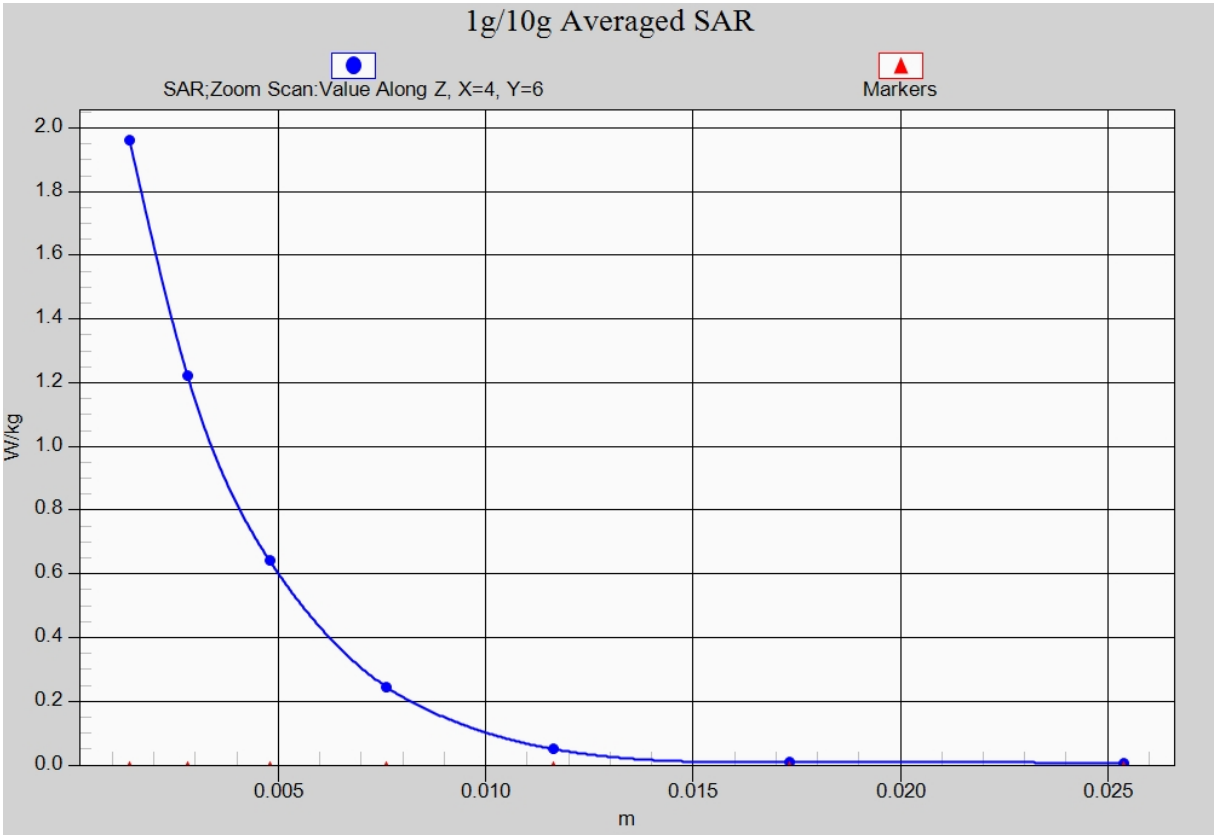


Fig. 36-1 Z-Scan at power reference point (5GHz)

Wifi 802.11aTopChannel 120
Date: 2017-8-15
Electronics: DAE4 Sn1331
Medium: Body5 GHz
Medium parameters used: f = 5600 MHz; σ = 5.709 mho/m; ε_r = 46.843; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: WLan 5G Frequency: 5600 MHz Duty Cycle: 1:1
Probe: EX3DV4–SN3846 ConvF(4.18, 4.18, 4.18)

Area Scan (181x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.272 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 3.210 V/m; Power Drift = 0.39 dB
Peak SAR (extrapolated) = 0.475 W/kg
SAR(1 g) = 0.132 W/kg; SAR(10 g) = 0.045 W/kg
Maximum value of SAR (measured) = 0.308 W/kg

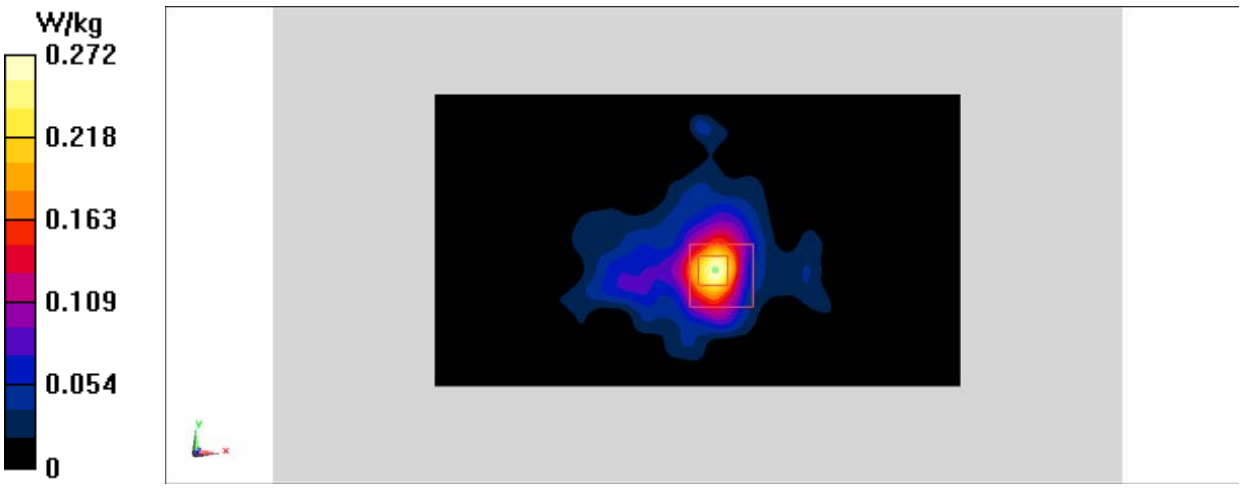


Fig.375GHz

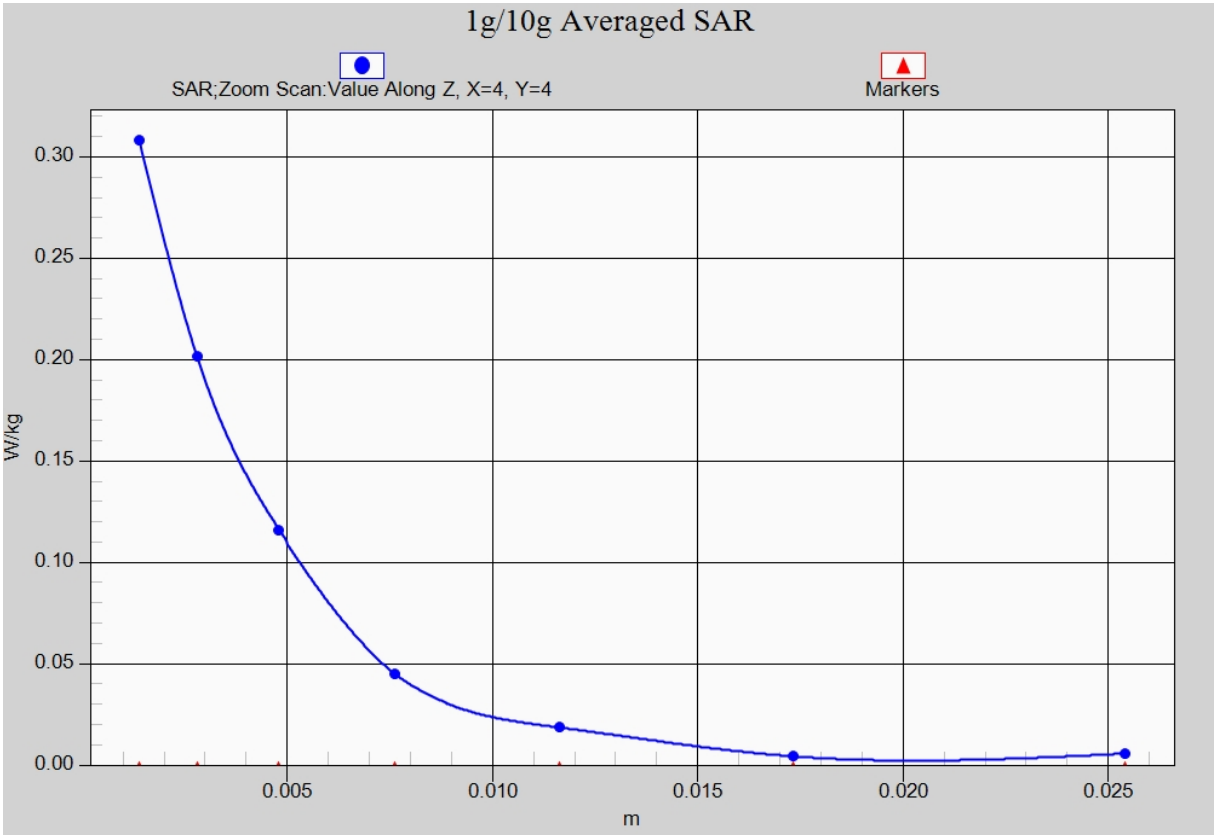


Fig. 37-1 Z-Scan at power reference point (5GHz)

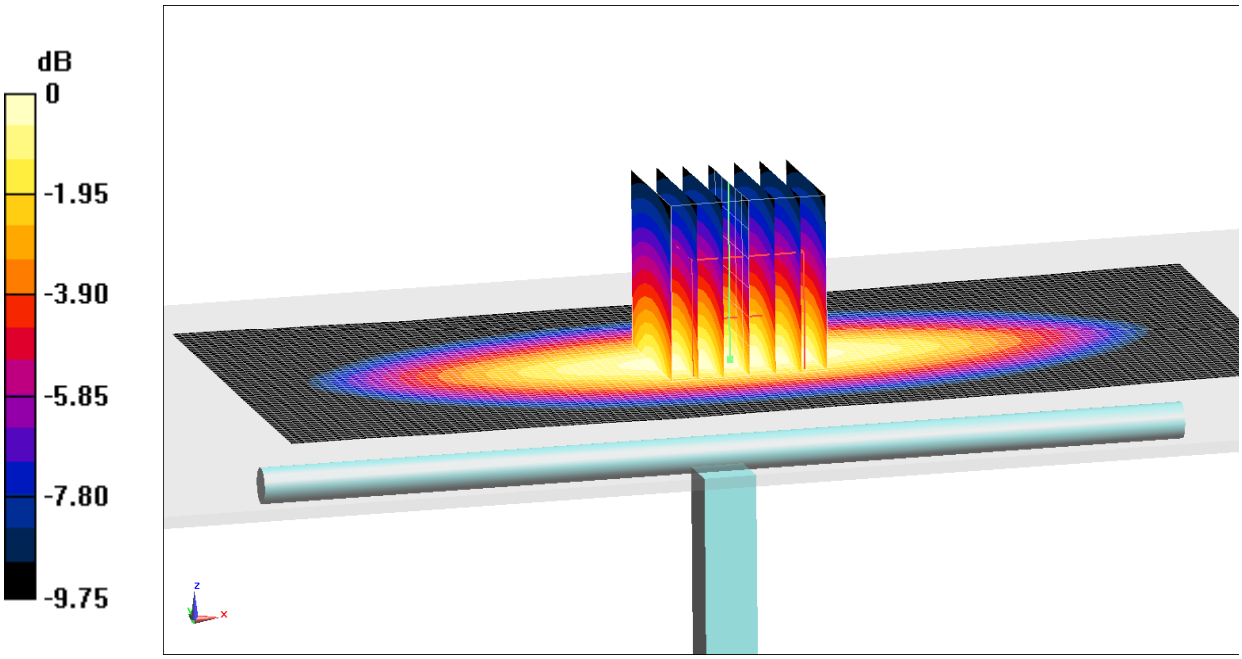
ANNEX B SystemVerification Results

750MHz

Date: 2017-8-10
Electronics: DAE4 Sn1331
Medium: Head 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.886 mho/m; ε_r = 42.31; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 750 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.65, 9.65, 9.65)

System Validation /Area Scan (81x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 49.217 V/m; Power Drift = -0.07 dB
Fast SAR: SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.40 W/kg
Maximum value of SAR (interpolated) = 2.20 W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.217 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 2.84 W/kg
SAR(1 g) = 2.05W/kg; SAR(10 g) = 1.38 W/kg
Maximum value of SAR (measured) = 2.18 W/kg



0 dB = 2.18 W/kg = 3.38 dB W/kg

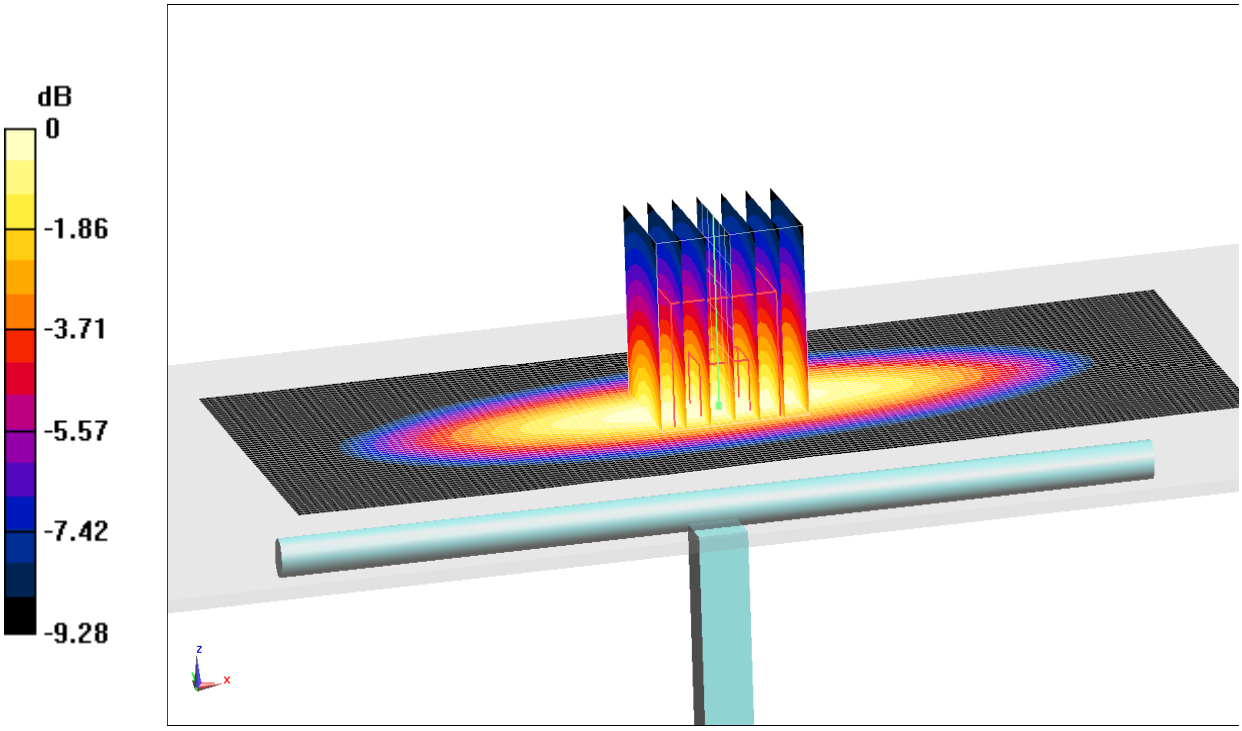
Fig.B.1 validation 750MHz 250mW

750MHz

Date: 2017-8-10
Electronics: DAE4 Sn1331
Medium: Body750 MHz
Medium parameters used: f = 750 MHz; σ = 0.944 mho/m; ε_r = 56.42; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 750 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.96, 9.96, 9.96)

System Validation/Area Scan (81x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 51.669 V/m; Power Drift = -0.05 dB
Fast SAR: SAR(1 g) = 2.16 W/kg; SAR(10 g) = 1.42 W/kg
Maximum value of SAR (interpolated) = 2.41 W/kg

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.669 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 3.06 W/kg
SAR(1 g) = 2.19 W/kg; SAR(10 g) = 1.44 W/kg
Maximum value of SAR (measured) = 2.43 W/kg



0 dB = 2.43 W/kg = 3.86 dB W/kg

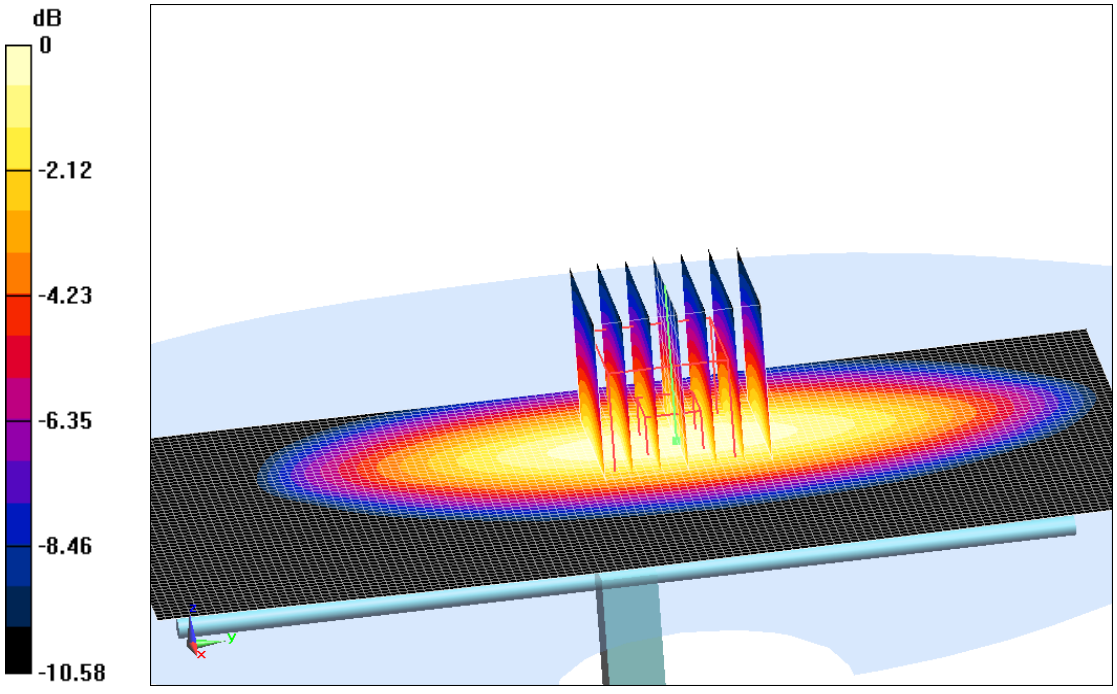
Fig.B.2 validation 750MHz 250mW

835MHz

Date: 2017-8-8
Electronics: DAE4 Sn1331
Medium: Head 850 MHz
Medium parameters used: f = 835 MHz; σ = 0.908 S/m; ε_r = 41.76; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846ConvF(9.33, 9.33, 9.33)

System Validation/Area Scan (61x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 54.82 V/m; Power Drift = 0.04 dB
Fast SAR: SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.55 W/kg
Maximum value of SAR (interpolated) = 2.60 W/kg

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.82 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.14 W/kg
SAR(1 g) = 2.37 W/kg; SAR(10 g) = 1.53 W/kg
Maximum value of SAR (measured) = 2.57 W/kg



0 dB = 2.57 W/kg = 4.00 dBW/kg

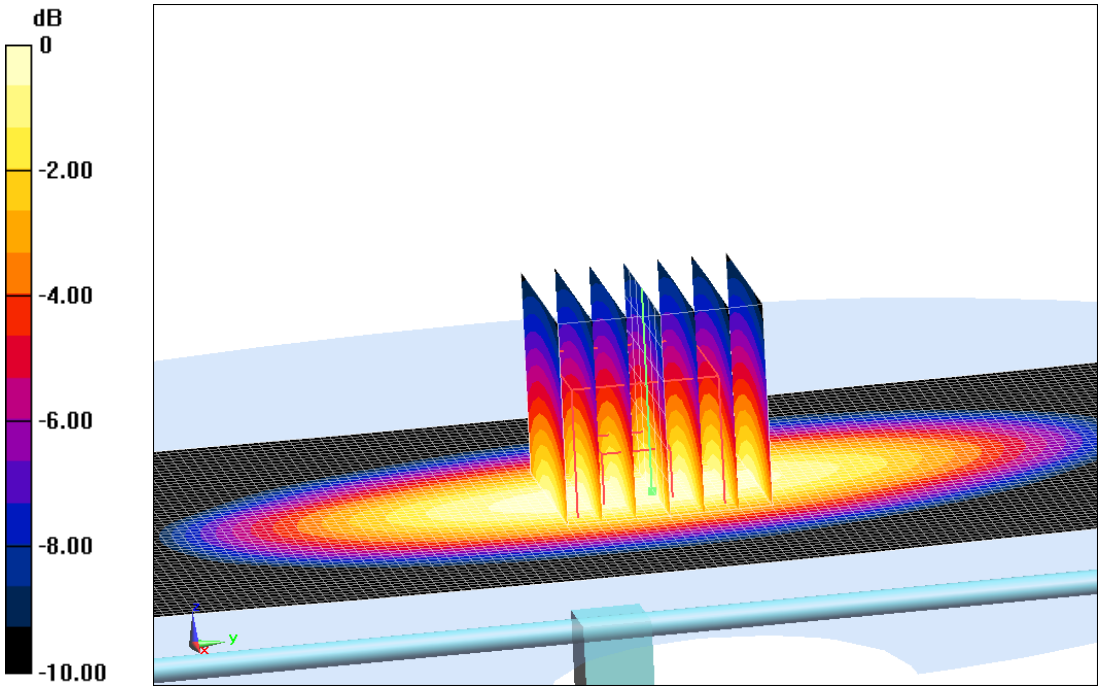
Fig.B.3 validation 835MHz 250mW

835MHz

Date: 2017-8-8
Electronics: DAE4 Sn1331
Medium: Body 850 MHz
Medium parameters used: f = 835 MHz; σ = 0.979 S/m; ε_r = 55.91; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846ConvF(9.52, 9.52, 9.52)

System Validation /Area Scan (61x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 52.95 V/m; Power Drift = -0.04 dB
Fast SAR: SAR(1 g) = 2.38 W/kg; SAR(10 g) = 1.56 W/kg
Maximum value of SAR (interpolated) = 2.72 W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.95 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.19 W/kg
SAR(1 g) = 2.43 W/kg; SAR(10 g) = 1.59 W/kg
Maximum value of SAR (measured) = 2.76 W/kg



0 dB = 2.76 W/kg = 4.41 dBW/kg

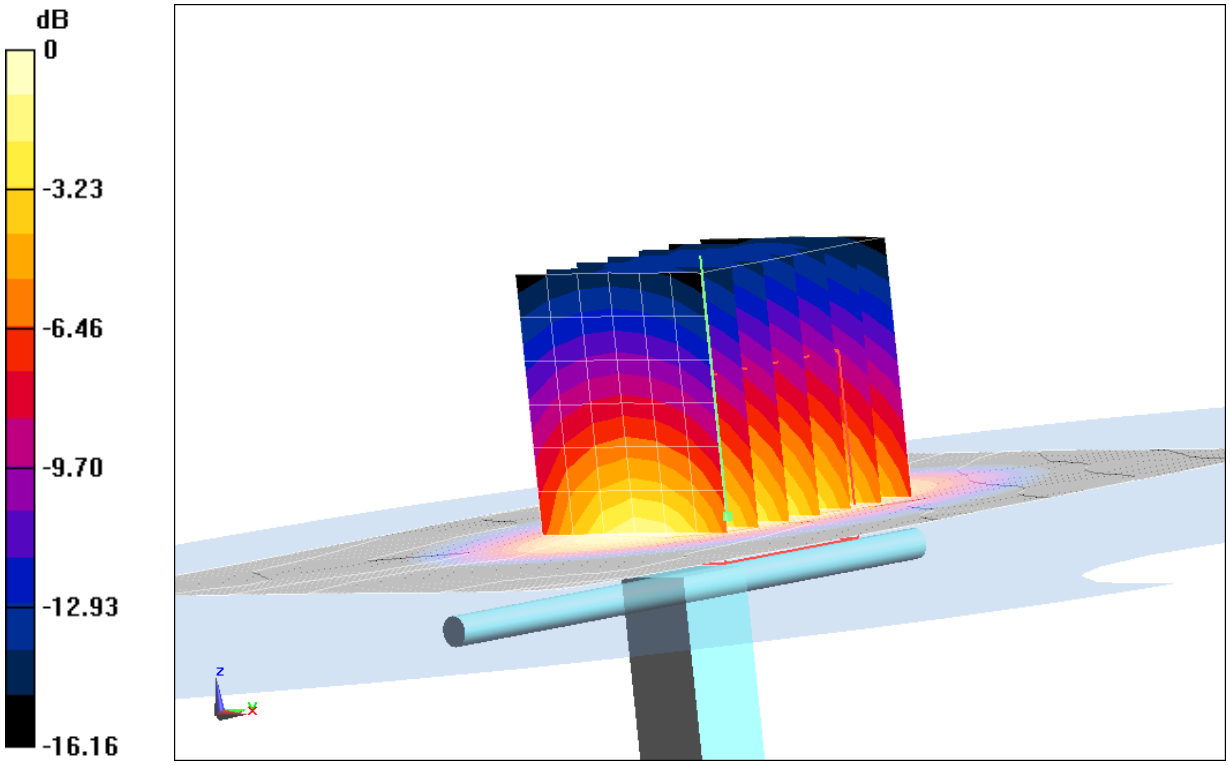
Fig.B.4 validation 835MHz 250mW

1750MHz

Date: 2017-8-13
Electronics: DAE4 Sn1331
Medium: Head 1750 MHz
Medium parameters used: f=1750 MHz; σ = 1.421 mho/m; εr = 40.41; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 1750 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846ConvF(8.16, 8.16, 8.16)

System Validation/Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 89.61 V/m; Power Drift = 0.06 dB
Fast SAR: SAR(1 g) = 9.08 W/kg; SAR(10 g) = 4.80 W/kg
Maximum value of SAR (interpolated) = 10.0 W/kg

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 89.61 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 15.59 W/kg
SAR(1 g) = 9.18 W/kg; SAR(10 g) = 4.88 W/kg
Maximum value of SAR (measured) = 10.1 W/kg



0 dB = 10.1W/kg = 10.04 dB W/kg

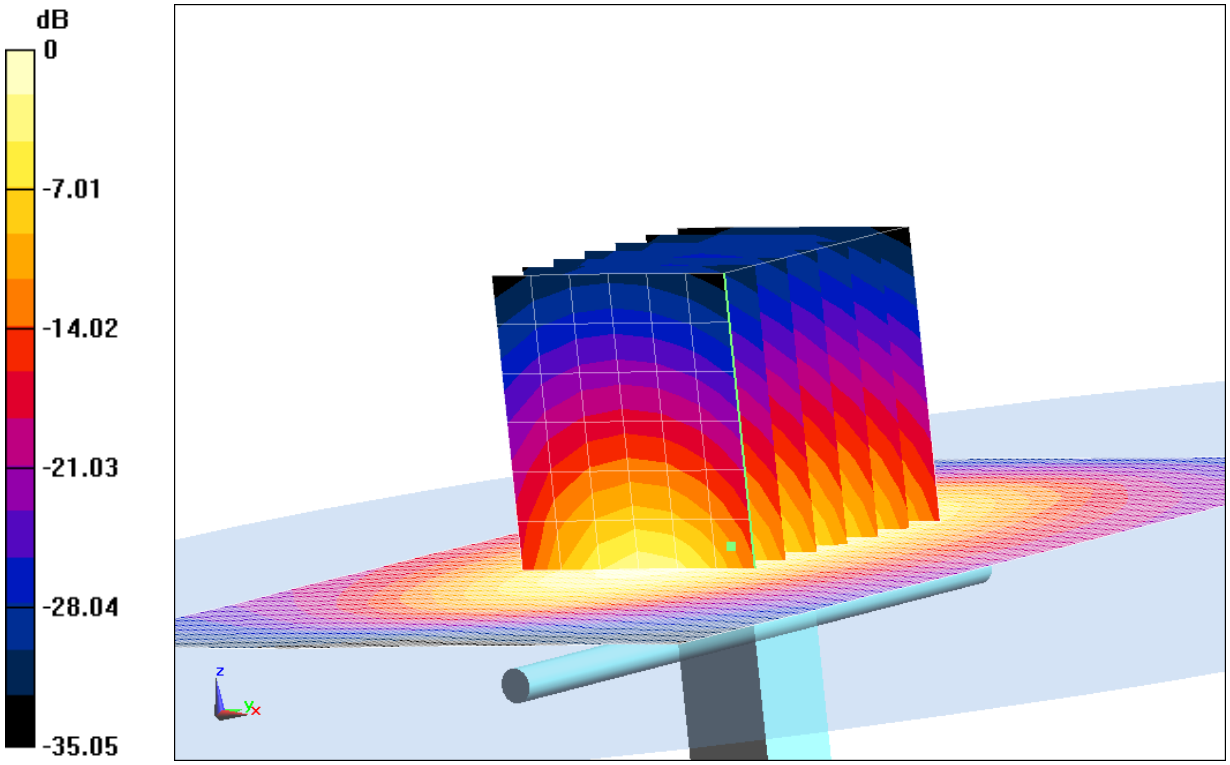
Fig.B.5 validation 1750MHz 250mW

1750MHz

Date: 2017-8-13
Electronics: DAE4 Sn1331
Medium: Body 1750 MHz
Medium parameters used: f=1750 MHz; σ = 1.506 mho/m; εr = 53.72; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 1750 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846ConvF(7.90, 7.90, 7.90)

System Validation/Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 95.17 V/m; Power Drift = -0.03 dB
Fast SAR: SAR(1 g) = 9.51 W/kg; SAR(10 g) = 5.07 W/kg
Maximum value of SAR (interpolated) = 10.4 W/kg

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.17 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 15.54 W/kg
SAR(1 g) = 9.42W/kg; SAR(10 g) = 4.99 W/kg
Maximum value of SAR (measured) = 10.3 W/kg



0 dB = 10.3 W/kg = 10.13 dB W/kg

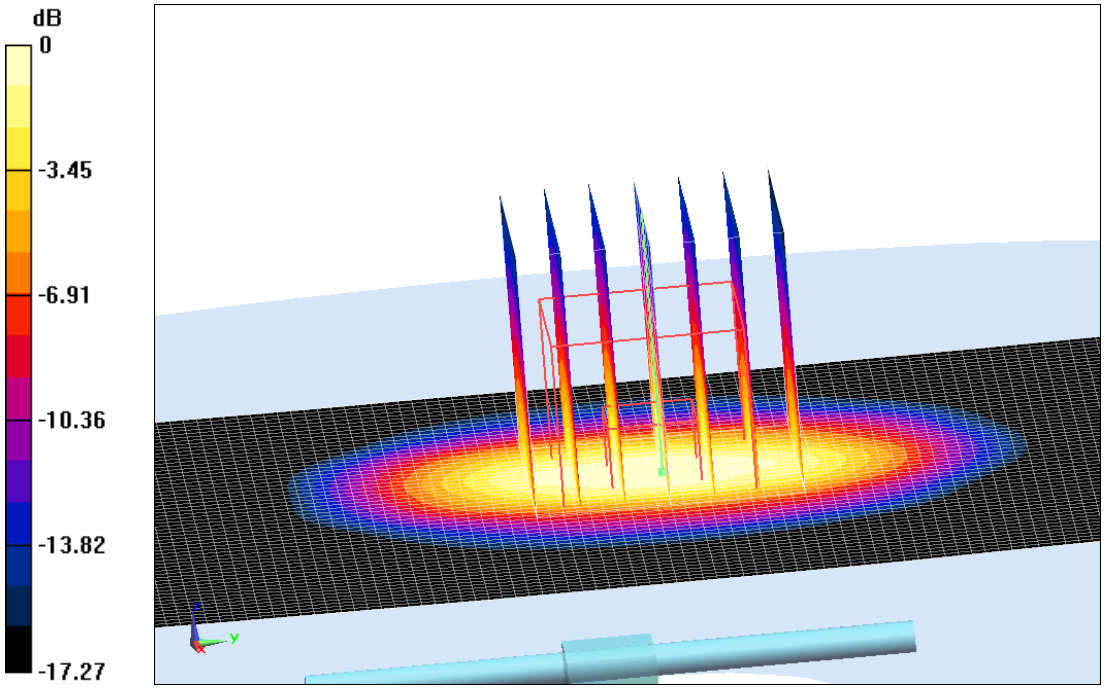
Fig.B.6 validation 1750MHz 250mW

1900MHz

Date: 2017-8-9
Electronics: DAE4 Sn1331
Medium: Head 1900 MHz
Medium parameters used:f = 1900 MHz;σ = 1.411 mho/m; ε_r = 40.61; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(7.89, 7.89, 7.89)

System Validation /Area Scan(61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 92.19 V/m; Power Drift = 0.05 dB
SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.52 W/kg
Maximum value of SAR (interpolated) = 12.6 W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.19 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 18.05 W/kg
SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.38W/kg
Maximum value of SAR (measured) = 12.4 W/kg



0 dB = 12.4 W/kg = 10.93 dBW/kg

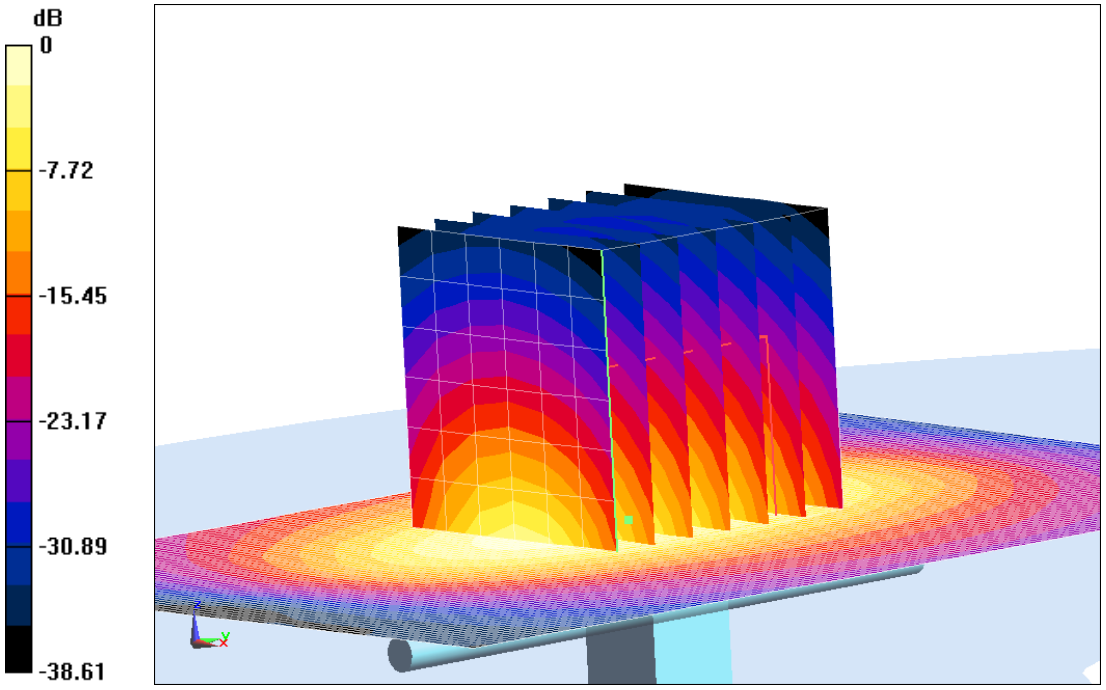
Fig.B.7 validation 1900MHz 250mW

1900MHz

Date: 2017-8-9
Electronics: DAE4 Sn1331
Medium: Body 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.527 S/m; ε_r = 52.71; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(7.57, 7.57, 7.57)

System Validation/Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 94.27 V/m; Power Drift = -0.03 dB
Fast SAR: SAR(1 g) = 10.5 W/kg; SAR(10 g) = 5.58 W/kg
Maximum value of SAR (interpolated) = 12.5 W/kg

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 94.27 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 19.18 W/kg
SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.49 W/kg
Maximum value of SAR (measured) = 12.4 W/kg



0 dB = 12.4 W/kg = 10.93 dB W/kg

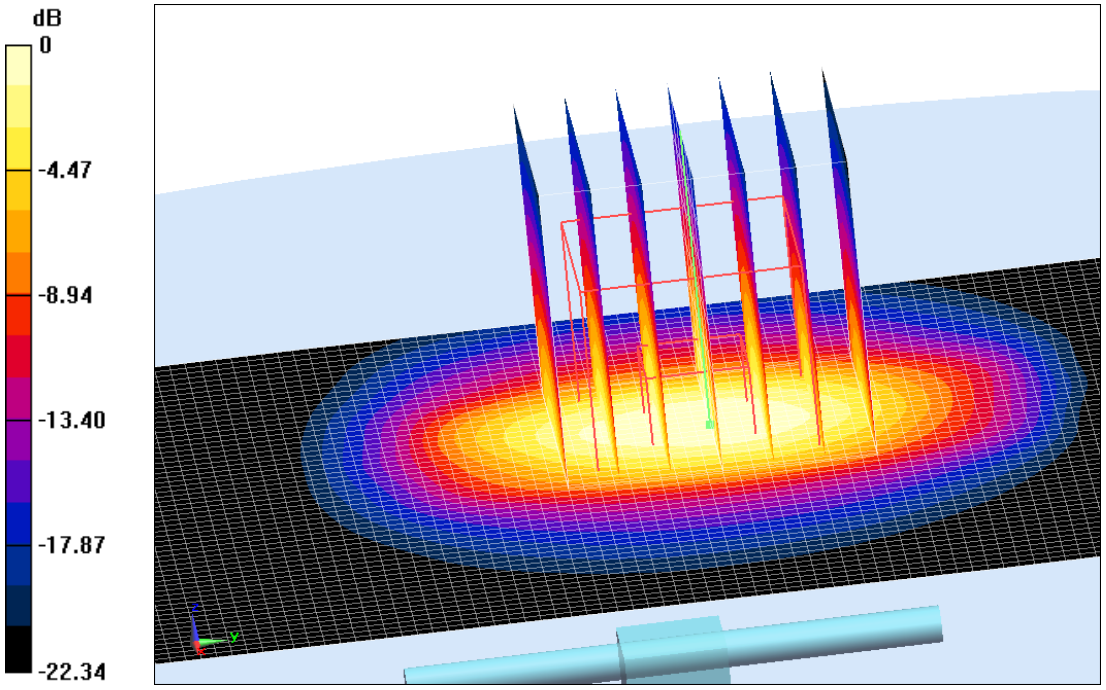
Fig.B.8 validation 1900MHz 250mW

2450MHz

Date: 2017-8-14
Electronics: DAE4 Sn1331
Medium: Head 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 1.811 mho/m; ε_r = 38.91; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(7.22, 7.22, 7.22)

System Validation /Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 90.36 V/m; Power Drift = 0.02 dB
SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.46 W/kg
Maximum value of SAR (interpolated) = 16.8 W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 90.36 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 27.41 W/kg
SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.27 W/kg
Maximum value of SAR (measured) = 16.5 W/kg



0 dB = 16.5 W/kg = 12.17 dBW/kg

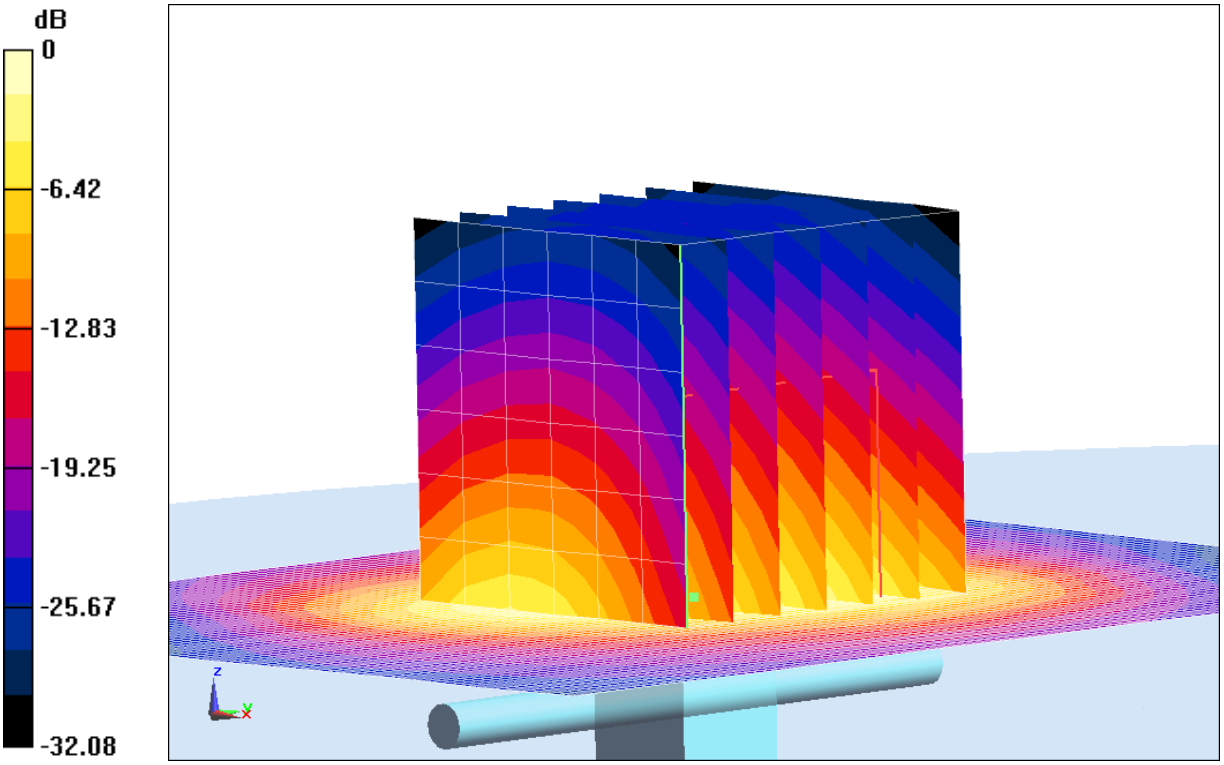
Fig.B.9 validation 2450MHz 250mW

2450MHz

Date: 2017-8-14
Electronics: DAE4 Sn1331
Medium: Body 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 1.982 S/m; ε_r = 52.09; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(7.31, 7.31, 7.31)

System Validation/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 90.06 V/m; Power Drift = -0.01 dB
SAR(1 g) = 12.8 W/kg; SAR(10 g) = 5.92 W/kg
Maximum value of SAR (interpolated) = 14.4 W/kg

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 90.06 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 24.63 W/kg
SAR(1 g) = 13.0 W/kg; SAR(10 g) = 6.08 W/kg
Maximum value of SAR (measured) = 14.6 W/kg



0 dB = 14.6 W/kg = 11.64 dB W/kg

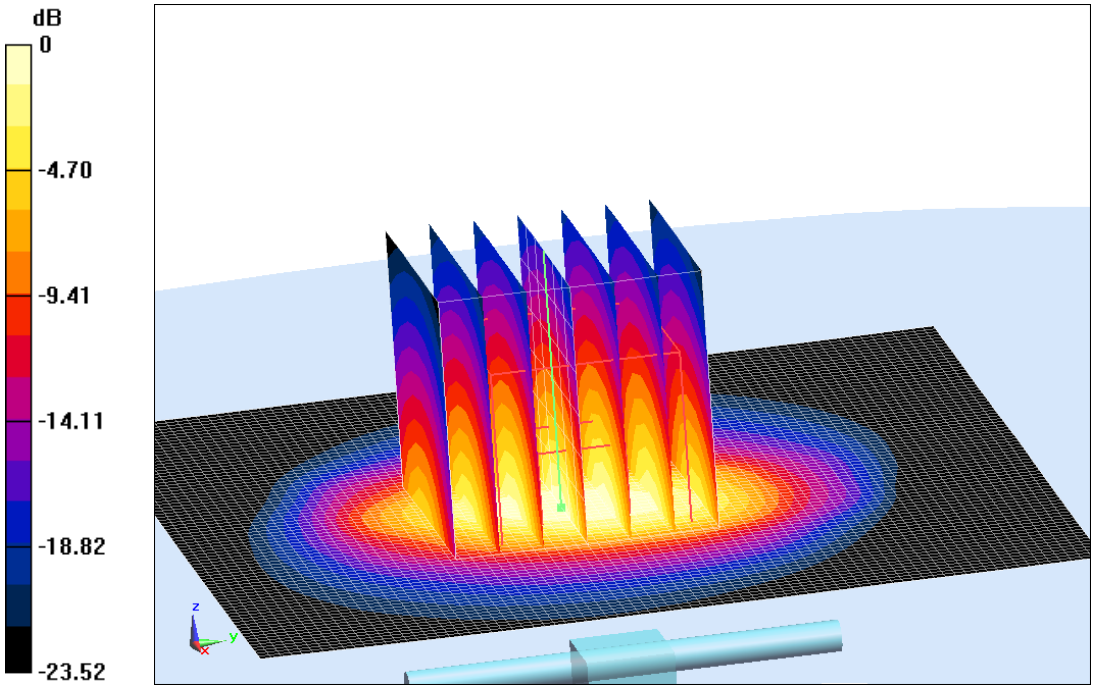
Fig.B.10validation 2450MHz 250mW

2600MHz

Date: 2017-8-12
Electronics: DAE4 Sn1331
Medium: Head 2600 MHz
Medium parameters used: f = 2600 MHz; σ = 1.949 mho/m; ε_r = 38.49; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 2600 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(7.12, 7.12, 7.12)

System Validation/Area Scan(81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 81.33 V/m; Power Drift = 0.05 dB
SAR(1 g) = 14.8W/kg; SAR(10 g) = 6.73 W/kg
Maximum value of SAR (interpolated) = 22.5 W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 81.33 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 31.14 W/kg
SAR(1 g) = 14.6 W/kg; SAR(10 g) = 6.55 W/kg
Maximum value of SAR (measured) = 22.2 W/kg



0 dB = 22.2 W/kg = 13.46 dBW/kg

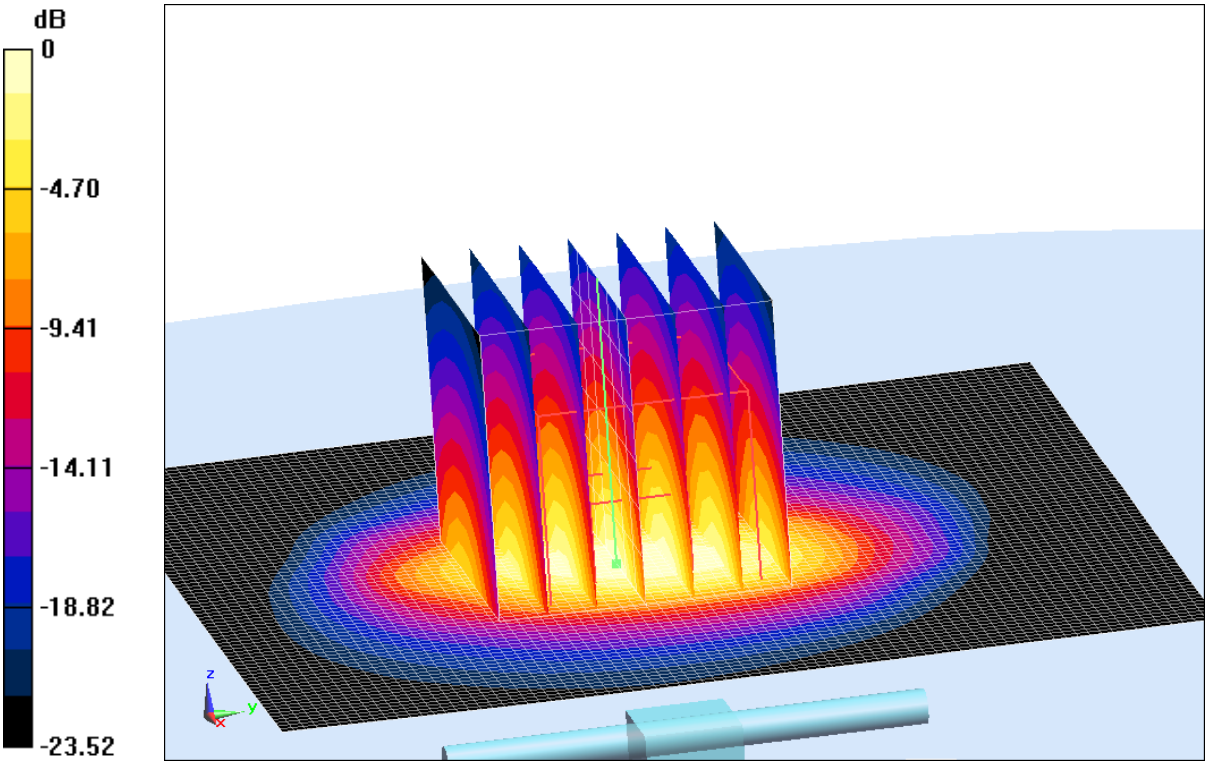
Fig.B.11 validation 2600MHz 250mW

2600MHz

Date: 2017-8-12
Electronics: DAE4 Sn1331
Medium: Body 2600 MHz
Medium parameters used: f = 2600 MHz; σ = 2.14 mho/m; ε_r = 51.81; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 2600 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(7.25, 7.25, 7.25)

System Validation /Area Scan(81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 82.47 V/m; Power Drift = -0.02 dB
Fast SAR: SAR(1 g) = 14.4 W/kg; SAR(10 g) = 6.44 W/kg
Maximum value of SAR (interpolated) = 22.5W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 82.47 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 31.15 W/kg
SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.35 W/kg
Maximum value of SAR (measured) = 22.4 W/kg



0 dB = 22.4 W/kg = 13.50 dB W/kg

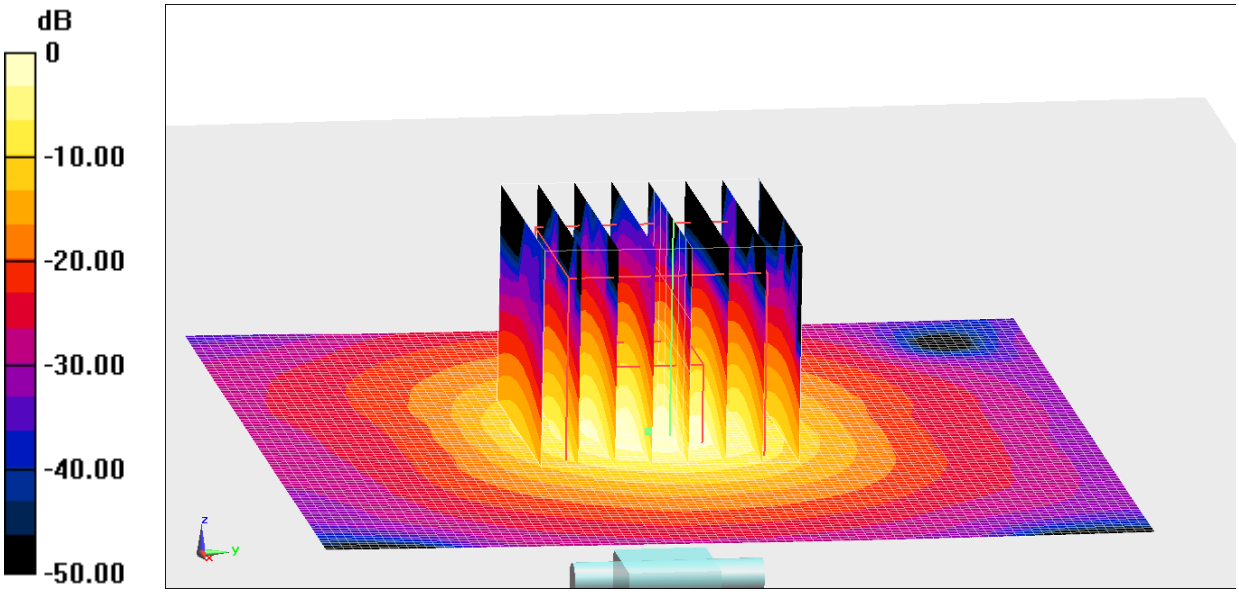
Fig.B.12 validation 2600MHz 250mW

5300MHz

Date: 2017-8-15
Electronics: DAE4 Sn1331
Medium: Head 5GHz
Medium parameters used: f = 5300 MHz; σ = 4.718 mho/m; ε_r = 36; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 5300 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(5.37, 5.37, 5.37)

System Validation /Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 19.1 W/kg

System Validation /Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 71.83 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 35.25 W/kg
SAR(1 g) = 8.08 W/kg; SAR(10 g) = 2.35 W/kg
Maximum value of SAR (measured) = 19.3 W/kg



0 dB = 19.3 W/kg = 12.86 dBW/kg

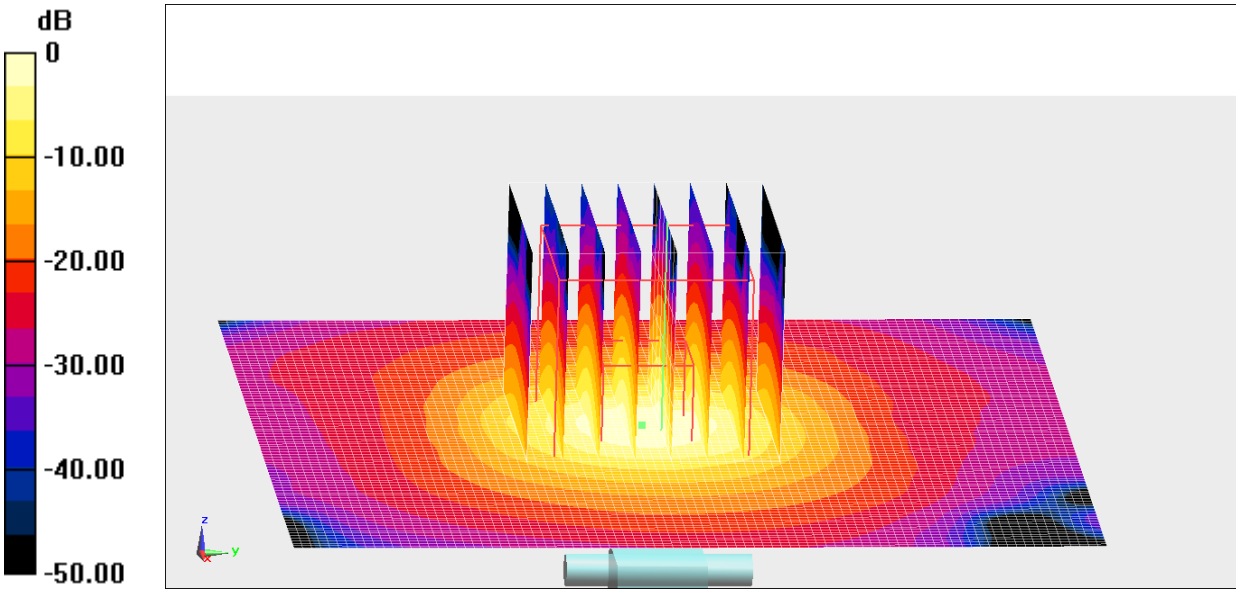
Fig.B.13validation 5300MHz 100mW

5300MHz

Date: 2017-8-15
Electronics: DAE4 Sn1331
Medium: Body5GHz
Medium parameters used: f = 5300 MHz; σ = 5.291 mho/m; ε_r = 47.5; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 5300 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(4.95, 4.95, 4.95)

System Validation /Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 18.4 W/kg

System Validation /Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 64.61 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 31.7 W/kg
SAR(1 g) = 7.58 W/kg; SAR(10 g) = 2.13 W/kg
Maximum value of SAR (measured) = 18.2 W/kg



0 dB = 18.2 W/kg = 12.60 dBW/kg

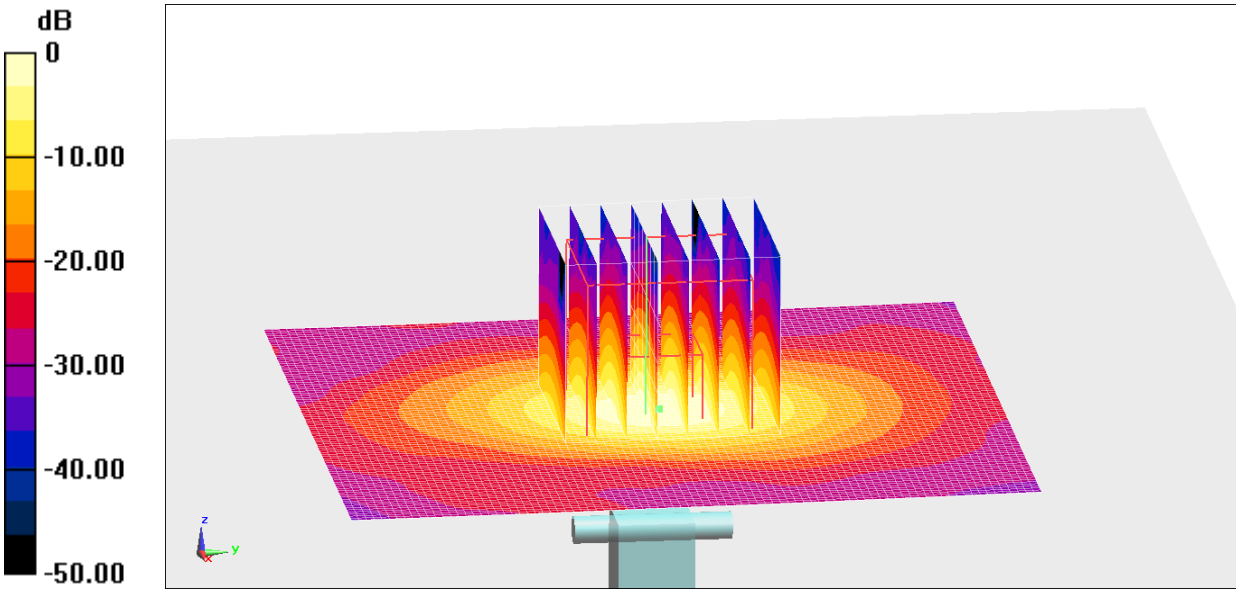
Fig.B.14validation 5300MHz 100mW

5600MHz

Date: 2017-8-15
Electronics: DAE4 Sn1331
Medium: Head 5GHz
Medium parameters used: f = 5600 MHz; σ = 5.06 mho/m; ε_r = 35.3; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 5600 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(4.72, 4.72, 4.72)

System Validation /Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 19.7 W/kg

System Validation /Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 73.13 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 35.2 W/kg
SAR(1 g) = 8.16 W/kg; SAR(10 g) = 2.34 W/kg
Maximum value of SAR (measured) = 19.5 W/kg



0 dB = 19.5 W/kg = 12.90 dBW/kg

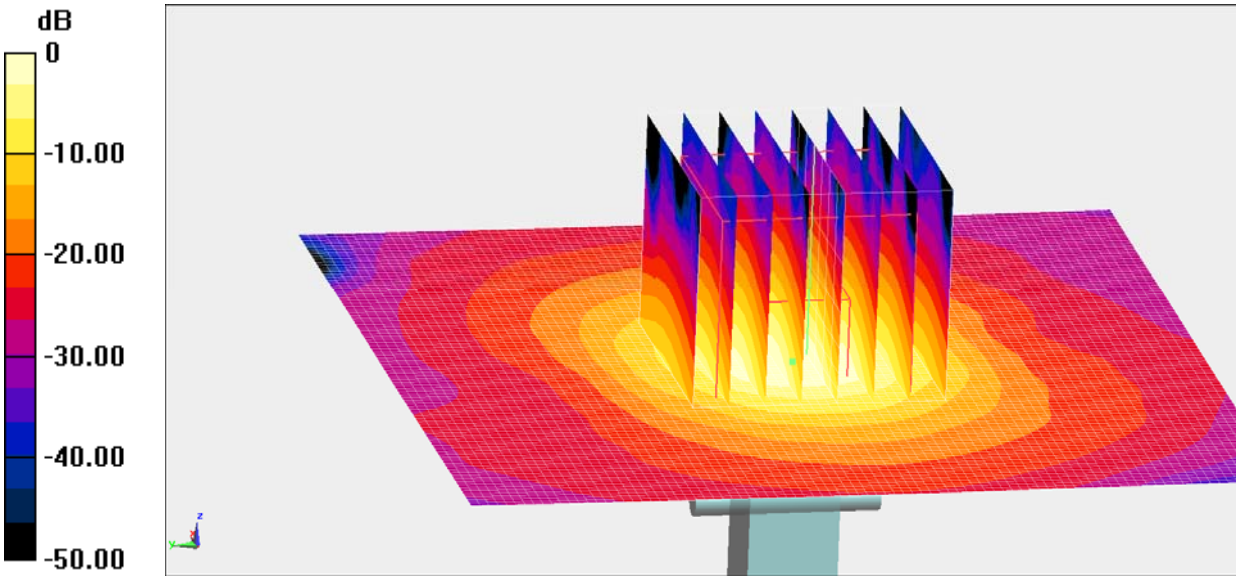
Fig.B.15validation 5600MHz 100mW

5600MHz

Date: 2017-8-15
Electronics: DAE4 Sn1331
Medium: Body5GHz
Medium parameters used: f = 5600 MHz; σ = 5.709 mho/m; ε_r = 46.84; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 5600 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(4.18, 4.18, 4.18)

System Validation /Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 20.4 W/kg

System Validation /Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 66.39 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 37.1 W/kg
SAR(1 g) = 7.91 W/kg; SAR(10 g) = 2.21 W/kg
Maximum value of SAR (measured) = 20.1 W/kg



0 dB = 20.1 W/kg = 13.03 dBW/kg

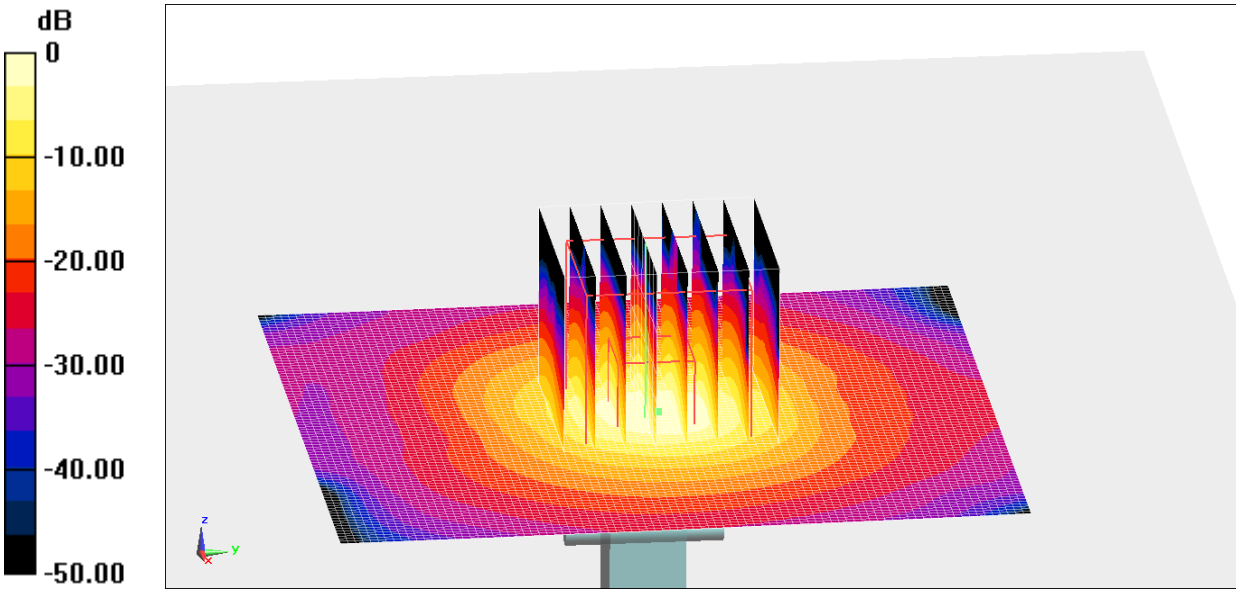
Fig.B.16validation 5600MHz 100mW

5800MHz

Date: 2017-8-15
Electronics: DAE4 Sn1331
Medium: Head 5GHz
Medium parameters used: f = 5800 MHz; σ = 5.271 mho/m; ε_r = 34.91; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 5800 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(4.95, 4.95, 4.95)

System Validation /Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 20.1 W/kg

System Validation /Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 70.45 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 39.9 W/kg
SAR(1 g) = 7.97 W/kg; SAR(10 g) = 2.25 W/kg
Maximum value of SAR (measured) = 20.3 W/kg



0 dB = 20.3 W/kg = 13.07 dBW/kg

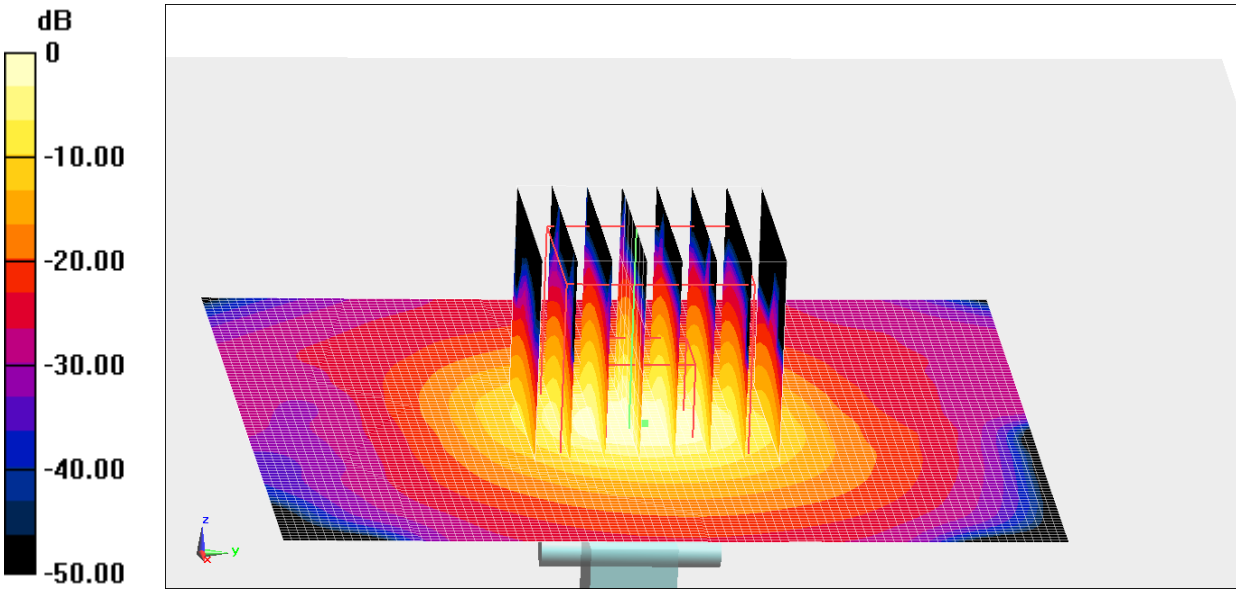
Fig.B.17validation 5800MHz 100mW

5800MHz

Date: 2017-8-15
Electronics: DAE4 Sn1331
Medium: Body5GHz
Medium parameters used: f = 5800 MHz; σ = 5.988 mho/m; ε_r = 46.44; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 5800 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(4.53, 4.53, 4.53)

System Validation /Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 18.4 W/kg

System Validation /Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 66.09 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 35.5 W/kg
SAR(1 g) = 7.55 W/kg; SAR(10 g) = 2.12 W/kg
Maximum value of SAR (measured) = 18.7 W/kg



0 dB = 18.7 W/kg = 12.72 dBW/kg

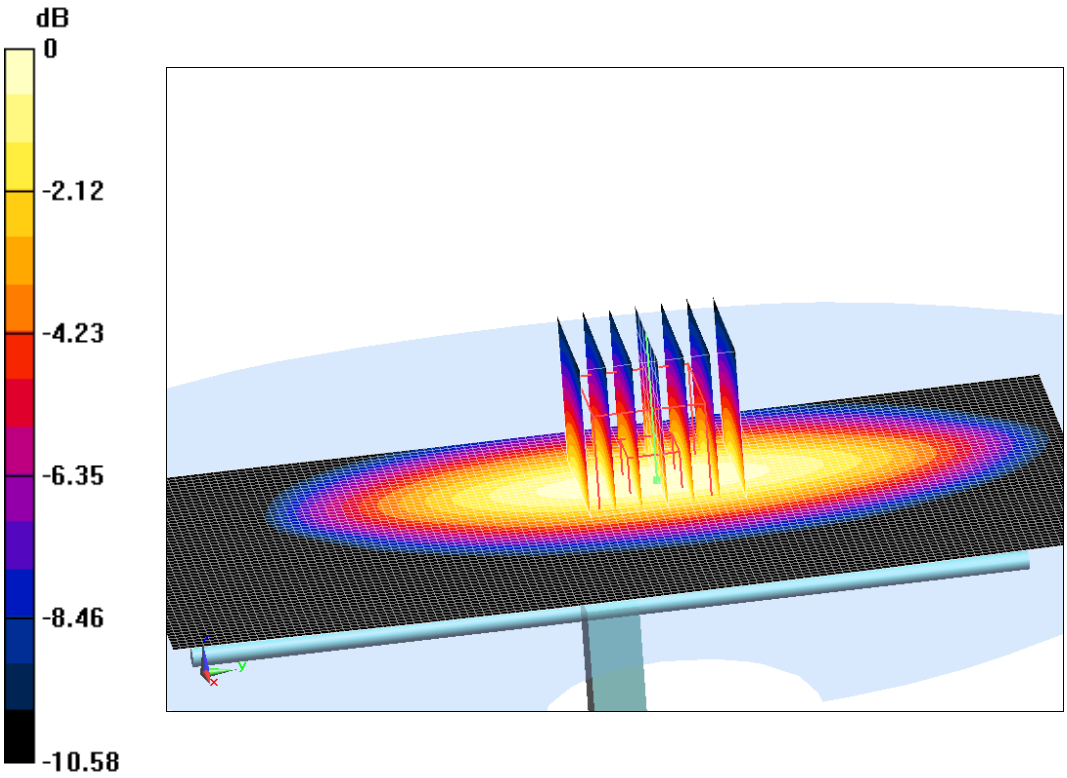
Fig.B.18 validation 5800MHz 100mW

835 MHz

Date: 8/4/2017
Electronics: DAE4 Sn1331
Medium: Head835 MHz
Medium parameters used: f = 835 MHz; σ =0.903 mho/m; ε_r = 40.89; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.33,9.33,9.33)

System Validation /Area Scan (81x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 60.93 V/m; Power Drift = 0.04
Fast SAR: SAR(1 g) = 2.36W/kg; SAR(10 g) = 1.5 W/kg
Maximum value of SAR (interpolated) = 3.16 W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value =60.93 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.75 W/kg
SAR(1 g) = 2.35W/kg; SAR(10 g) = 1.52 W/kg
Maximum value of SAR (measured) = 3.2 W/kg



0 dB = 3.2 W/kg = 5.05 dB W/kg

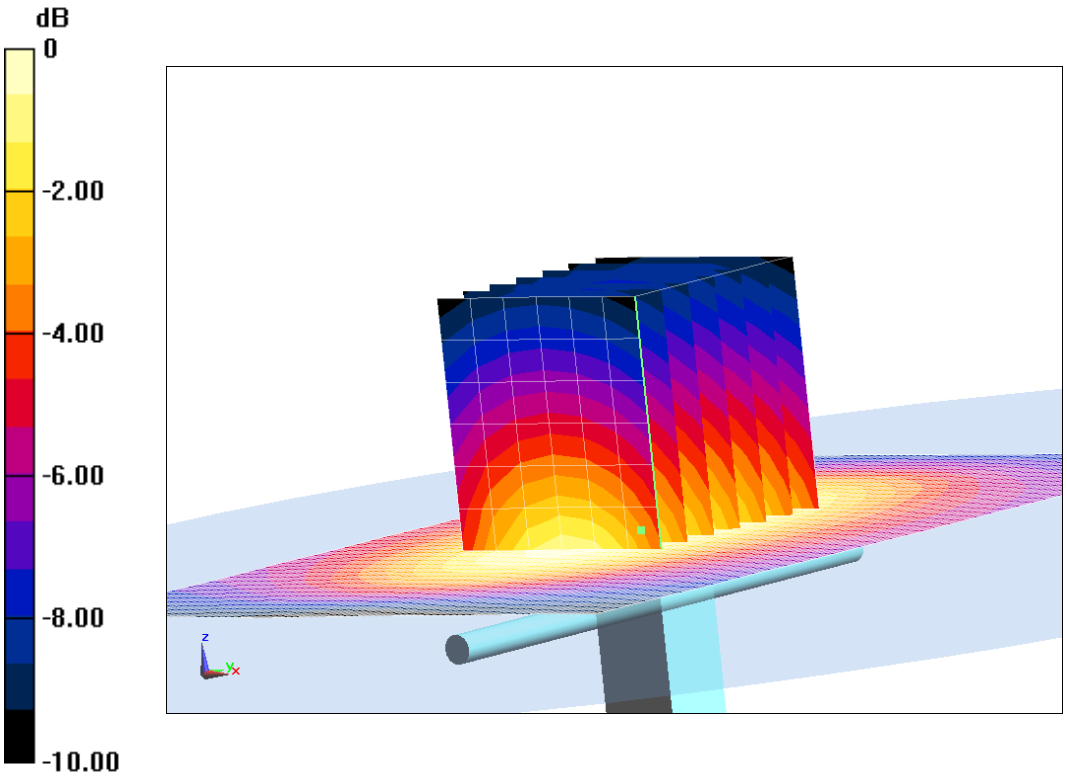
Fig.B.19 validation 835 MHz 250mW

835 MHz

Date: 8/4/2017
Electronics: DAE4 Sn1331
Medium: Body835 MHz
Medium parameters used: f = 835 MHz; σ =0.971 mho/m; ε_r = 56.08; ρ = 1000 kg/m^3
Ambient Temperature: 22.9°C Liquid Temperature: 22.5°C
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.52,9.52,9.52)

System Validation /Area Scan (81x191x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 61.35 V/m; Power Drift = -0.05
Fast SAR: SAR(1 g) = 2.34W/kg; SAR(10 g) = 1.54 W/kg
Maximum value of SAR (interpolated) = 3.33 W/kg

System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value =61.35 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 3.68 W/kg
SAR(1 g) = 2.35W/kg; SAR(10 g) = 1.55 W/kg
Maximum value of SAR (measured) = 3.26 W/kg



0 dB = 3.26 W/kg = 5.13 dB W/kg

Fig.B.20 validation 835 MHz 250mW

The SAR system verification must be required that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR.

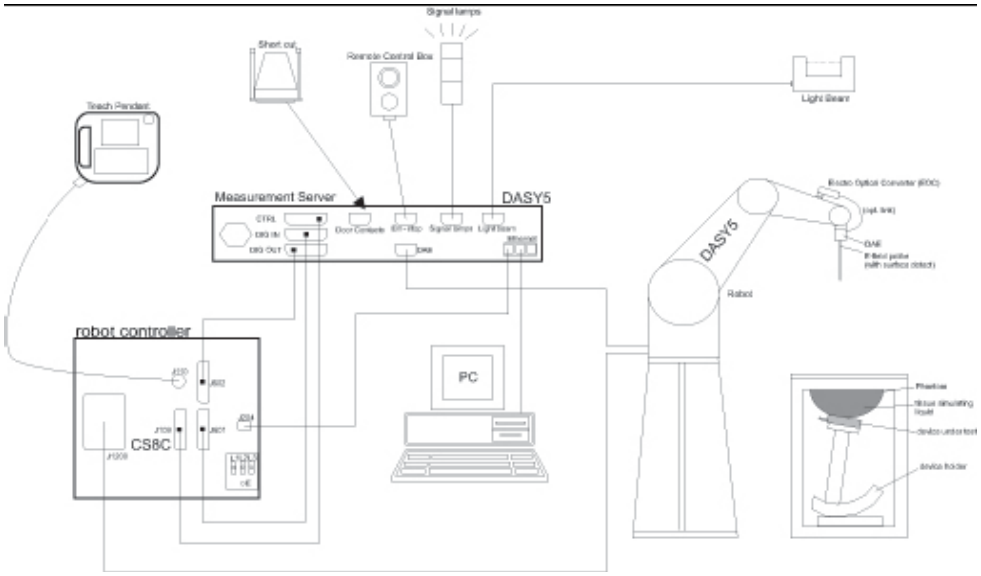
Table B.1 Comparison between area scan and zoom scan for system verification

Date	Band	Position	Area scan (1g)	Zoom scan (1g)	Drift (%)
2017-8-10	750	Head	2.07	2.05	0.98
	750	Body	2.16	2.19	-1.37
2017-8-8	835	Head	2.41	2.37	1.69
	835	Body	2.38	2.43	-2.06
2017-8-13	1750	Head	9.08	9.18	-1.09
	1750	Body	9.51	9.42	0.96
2017-8-9	1900	Head	10.4	10.2	1.96
	1900	Body	10.5	10.4	0.96
2017-8-14	2450	Head	13.5	13.3	1.50
	2450	Body	12.8	13	-1.54
2017-8-12	2600	Head	14.8	14.6	1.37
	2600	Body	14.4	14.3	0.70
2017-8-4	835	Head	2.36	2.35	0.43
	835	Body	2.34	2.35	-0.43

ANNEX CSAR Measurement Setup

C.1 Measurement Set-up

The Dasy4 or DASY5 system for performing compliance tests is illustrated above graphically. This system consists of the following items:



Picture C.1SAR Lab Test Measurement Set-up

- A standard high precision 6-axis robot (StäubliTX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP and the DASY4 or DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as
- warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.