

LTE Band2 Body Bottom High with QPSK_20M_1RB_Low – AP OFF

Date: 2015-1-18

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.492$ mho/m; $\epsilon_r = 55.556$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C

Communication System: LTE Band4 Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(7.15, 7.15, 7.15)

Bottom High/Area Scan (61x41x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 0.756 W/kg

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

Reference Value = 21.86 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.00 W/kg

SAR(1 g) = 0.623 W/kg; SAR(10 g) = 0.359 W/kg

Maximum value of SAR (measured) = 0.762 W/kg

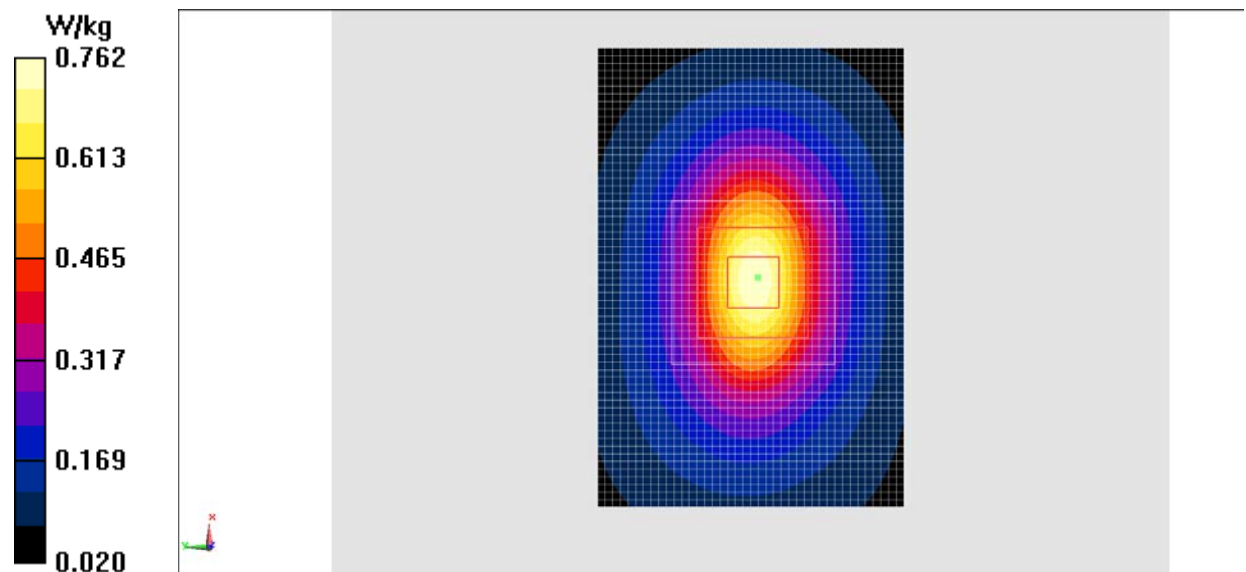


Fig.14 LTE Band2

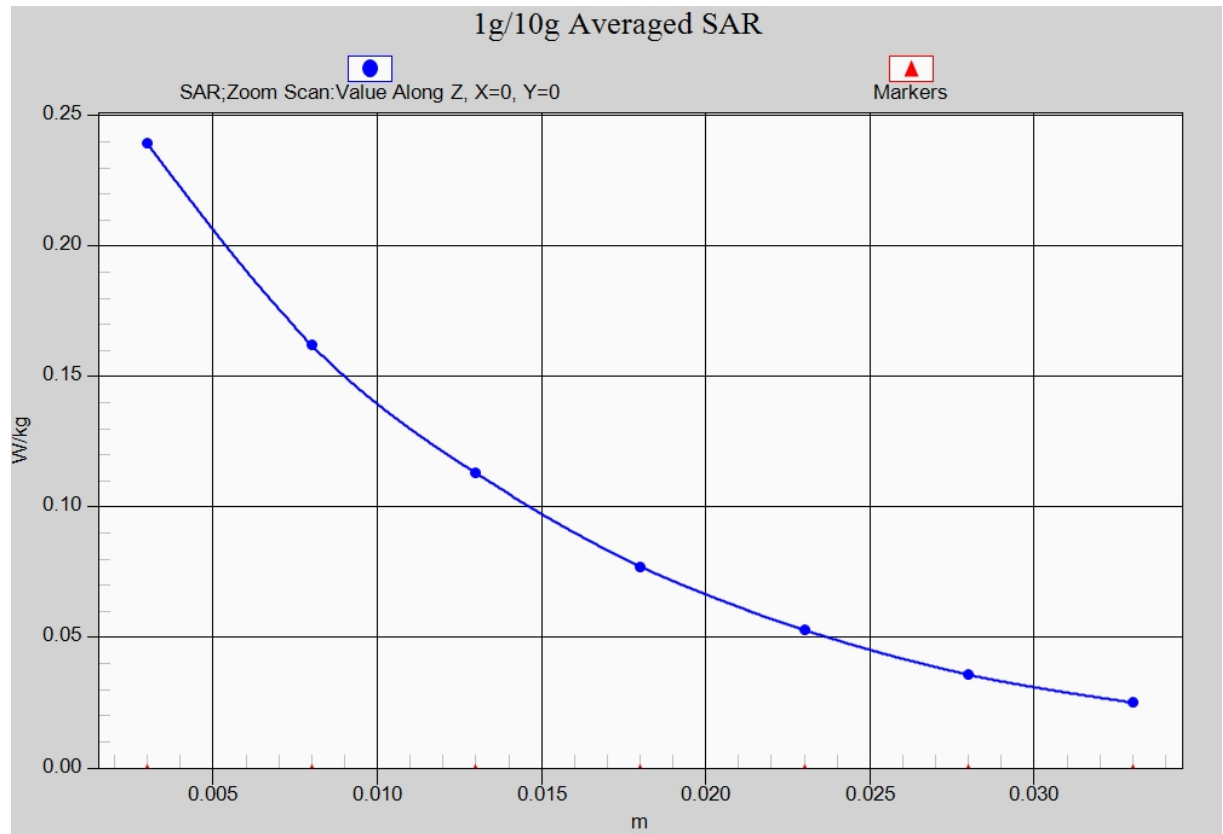


Fig. 14-1 Z-Scan at power reference point (LTE Band2)

LTE Band2 Body Bottom Low with QPSK_20M_1RB_High – AP ON

Date: 2015-1-18

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.453$ mho/m; $\epsilon_r = 55.676$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C

Communication System: LTE Band4 Frequency: 1860 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(7.15, 7.15, 7.15)

Bottom Low/Area Scan (61x41x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.746 W/kg

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

Reference Value = 21.46 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 0.962 W/kg

SAR(1 g) = 0.571 W/kg; SAR(10 g) = 0.305 W/kg

Maximum value of SAR (measured) = 0.725 W/kg

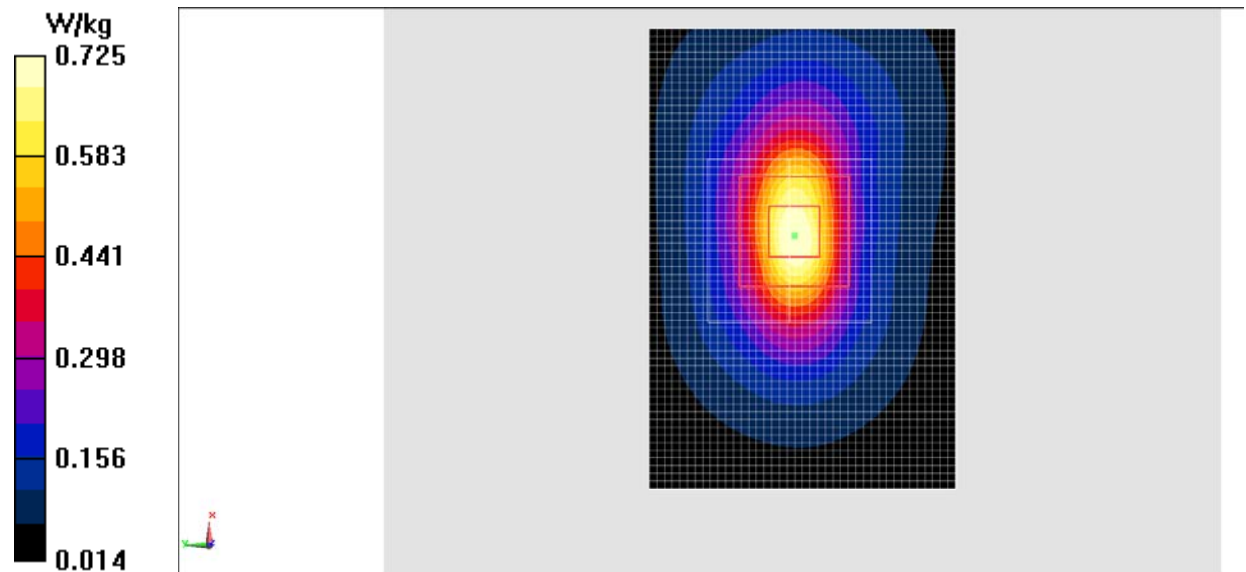


Fig.15 LTE Band2

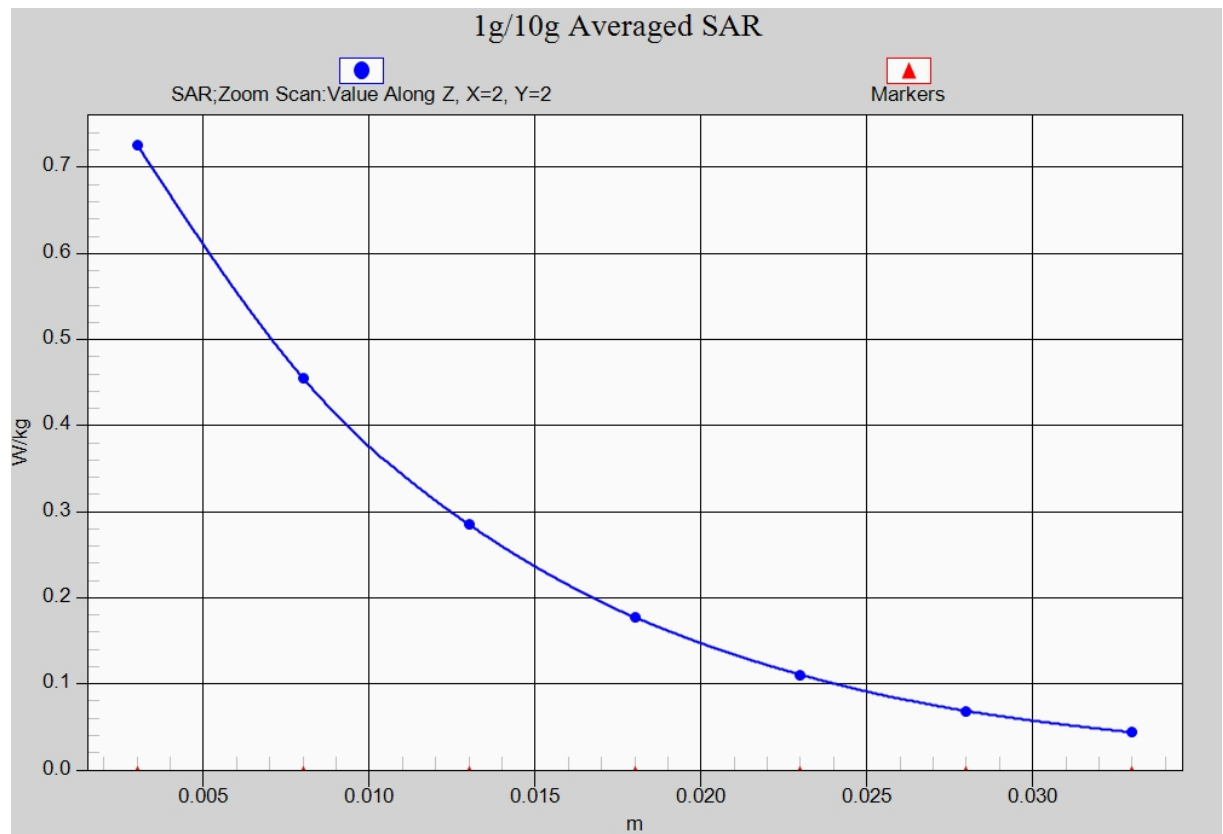


Fig. 15-1 Z-Scan at power reference point (LTE Band2)

LTE Band4 Left Cheek High with QPSK_20M_1RB_High – AP OFF

Date: 2015-1-17

Electronics: DAE4 Sn777

Medium: Head 1750 MHz

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.346$ S/m; $\epsilon_r = 41.237$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C

Communication System: LTE Band4 Frequency: 1745 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(7.64, 7.64, 7.64)

Cheek High/Area Scan (61x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.707 W/kg

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

Reference Value = 4.765 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.970 W/kg

SAR(1 g) = 0.635 W/kg; SAR(10 g) = 0.391 W/kg

Maximum value of SAR (measured) = 0.689 W/kg

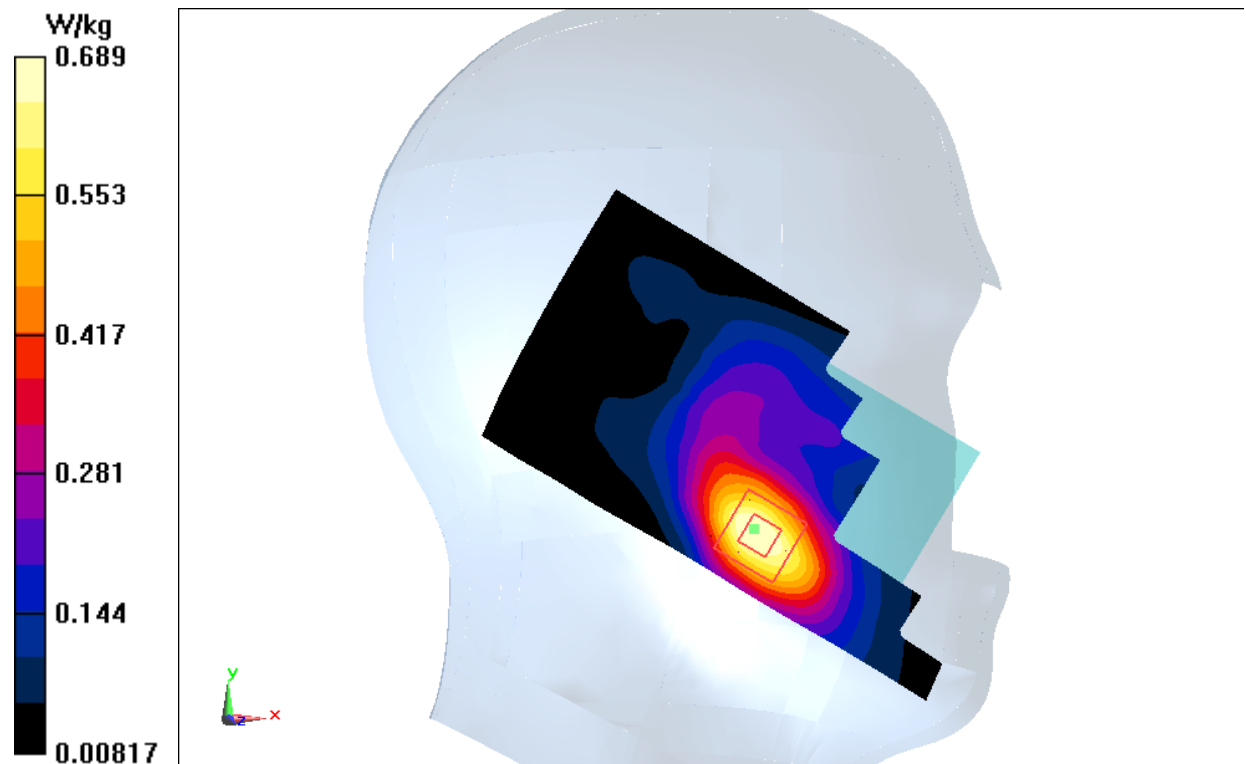


Fig.16 LTE Band4

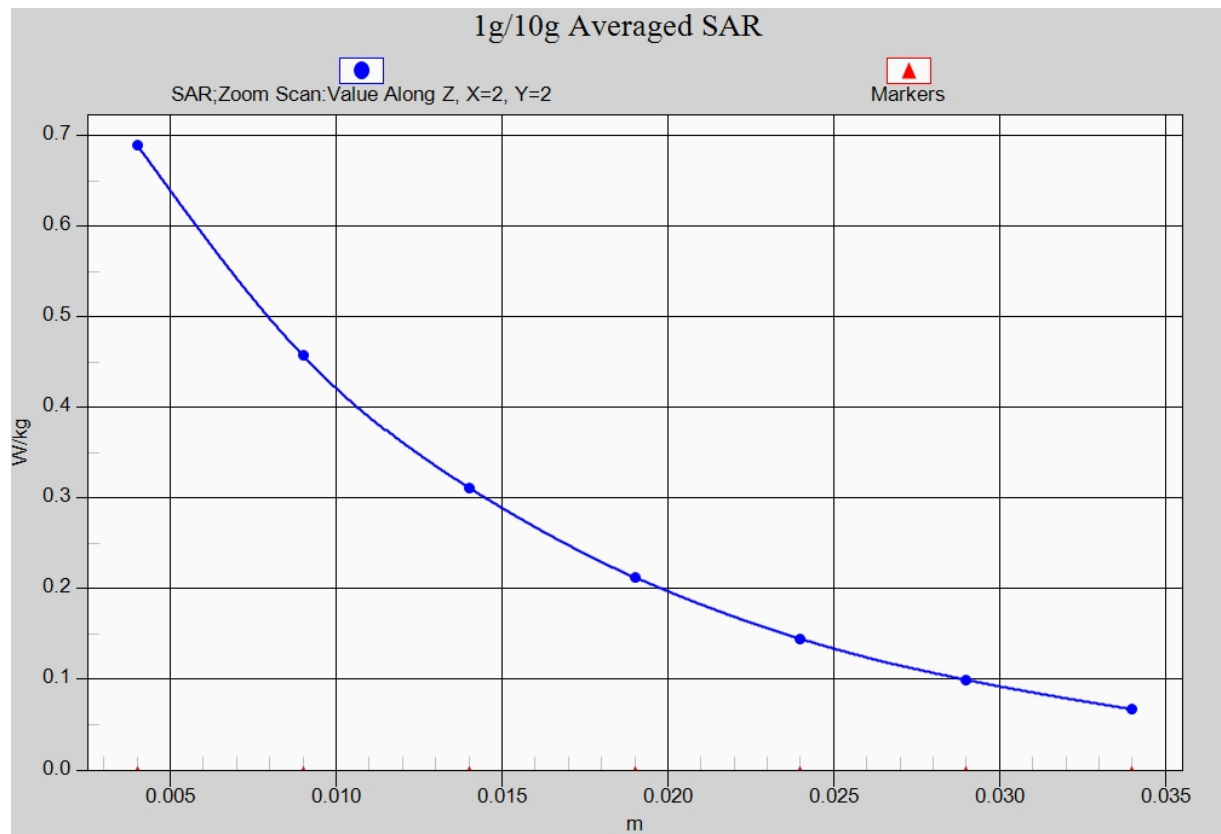


Fig. 16-1 Z-Scan at power reference point (LTE Band4)

LTE Band4 Body Rear High with QPSK_20M_1RB_High – AP OFF

Date: 2015-1-17

Electronics: DAE4 Sn777

Medium: Body 1750 MHz

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.458$ S/m; $\epsilon_r = 52.012$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C

Communication System: LTE Band4 Frequency: 1745 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(7.43, 7.43, 7.43)

Rear High/Area Scan (111x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.666 W/kg

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

Reference Value = 16.72 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.861 W/kg

SAR(1 g) = 0.564 W/kg; SAR(10 g) = 0.350 W/kg

Maximum value of SAR (measured) = 0.652 W/kg

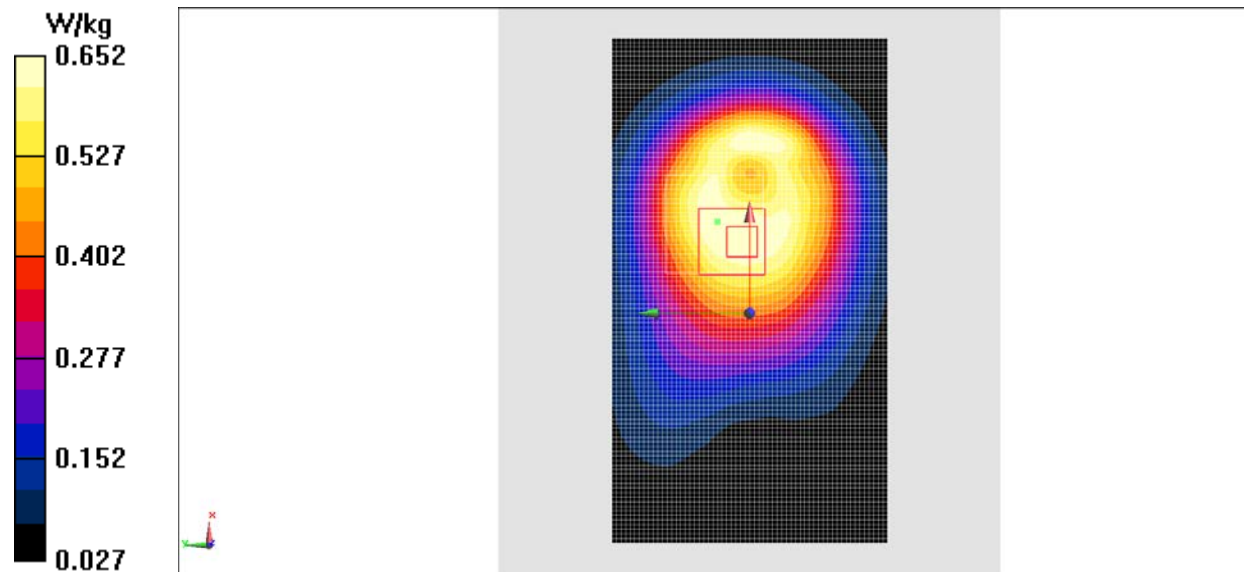


Fig.17 LTE Band4

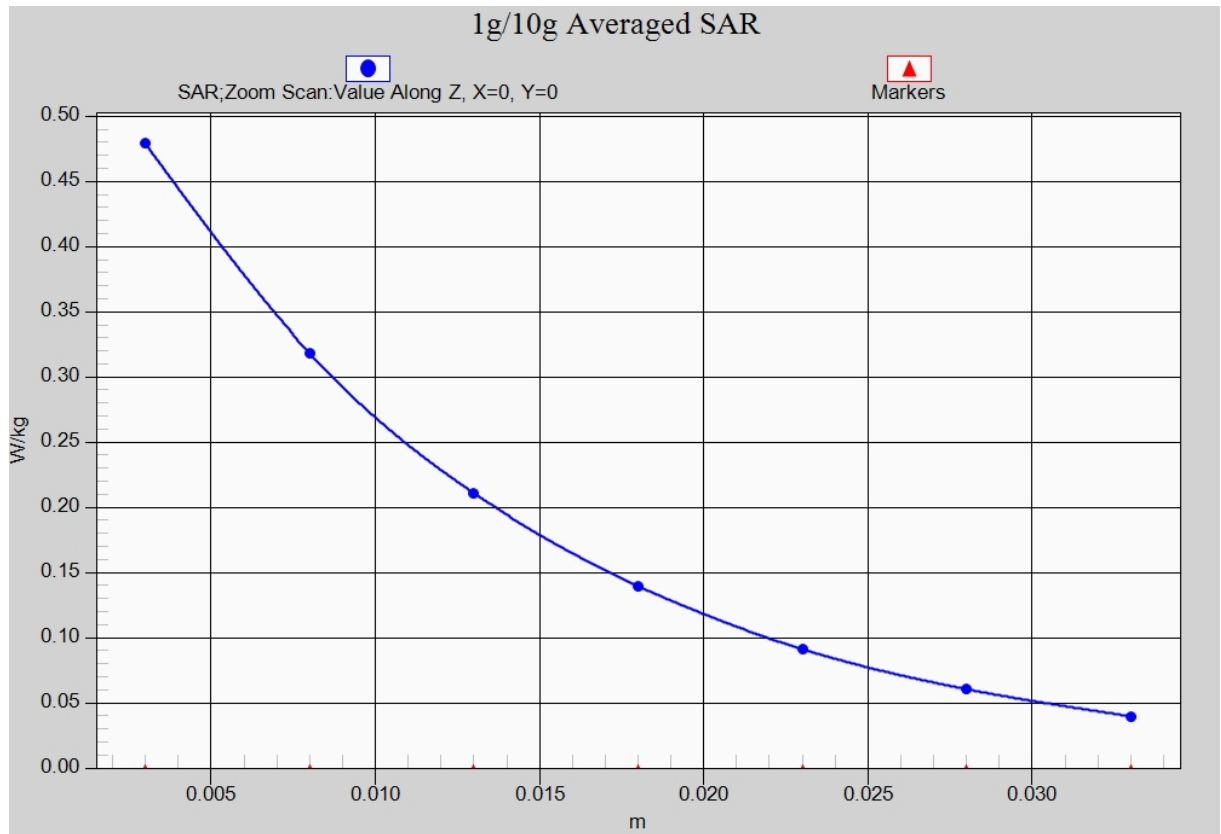


Fig. 17-1 Z-Scan at power reference point (LTE Band4)

LTE Band4 Body Rear Low with QPSK_20M_50RB_Low – AP ON

Date: 2015-1-17

Electronics: DAE4 Sn777

Medium: Body 1750 MHz

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.435$ S/m; $\epsilon_r = 52.112$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C

Communication System: LTE Band4 Frequency: 1720 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(7.43, 7.43, 7.43)

Rear Low/Area Scan (111x61x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 0.569 W/kg

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

Reference Value = 13.20 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.748 W/kg

SAR(1 g) = 0.483 W/kg; SAR(10 g) = 0.301 W/kg

Maximum value of SAR (measured) = 0.571 W/kg

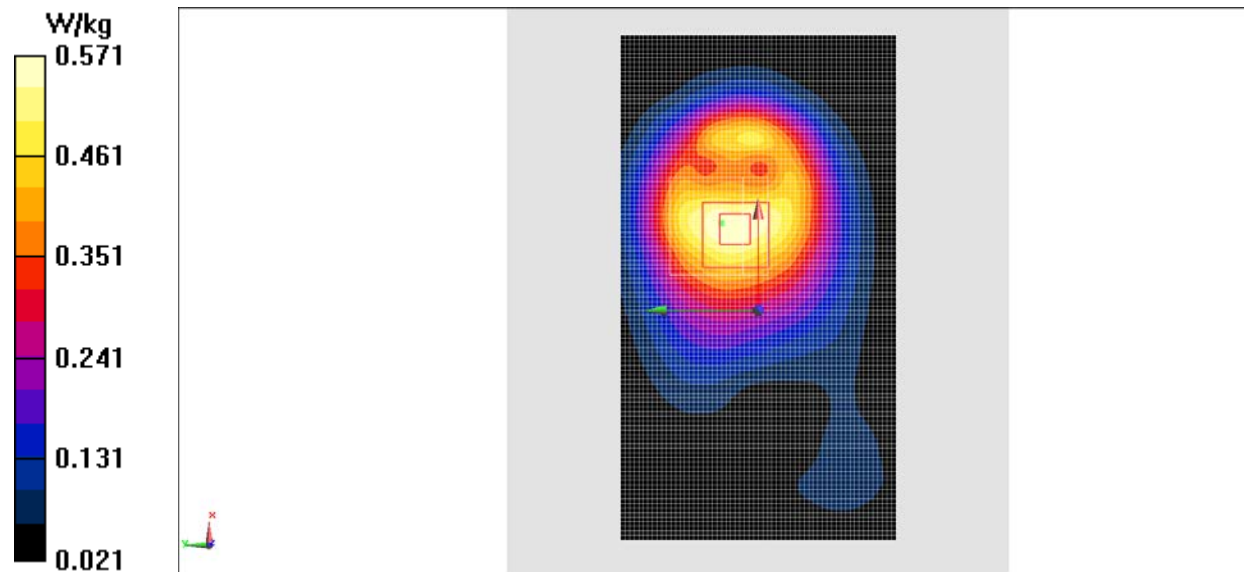


Fig.18 LTE Band4

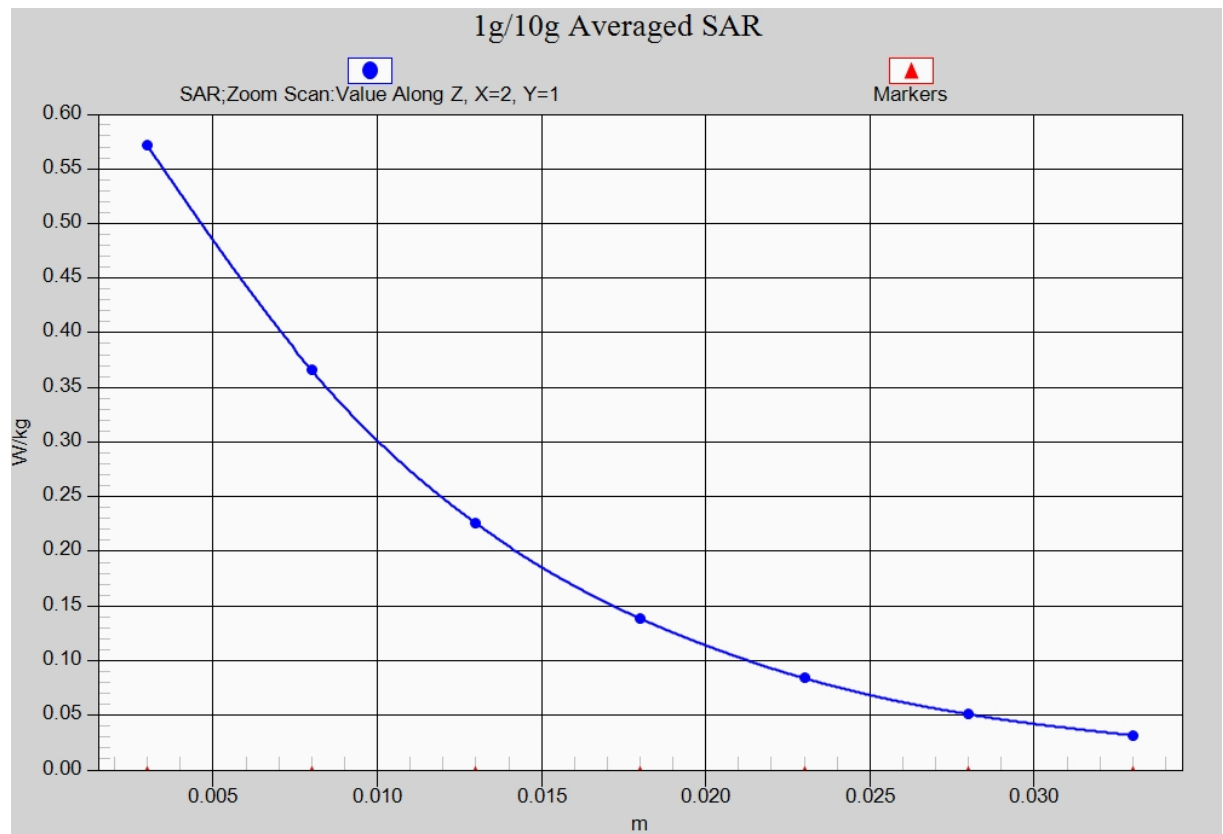


Fig. 18-1 Z-Scan at power reference point (LTE Band4)

LTE Band12 Left Cheek Middle with QPSK_10M_1RB_High – AP OFF

Date: 2015-1-16

Electronics: DAE4 Sn777

Medium: Head750 MHz

Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.895$ S/m; $\epsilon_r = 41.311$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C

Communication System: LTE Band12 Frequency: 707.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(9.53, 9.53, 9.53)

Cheek Middle/Area Scan (71x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.363 W/kg

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

Reference Value = 7.883 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.390 W/kg

SAR(1 g) = 0.326 W/kg; SAR(10 g) = 0.258 W/kg

Maximum value of SAR (measured) = 0.361 W/kg

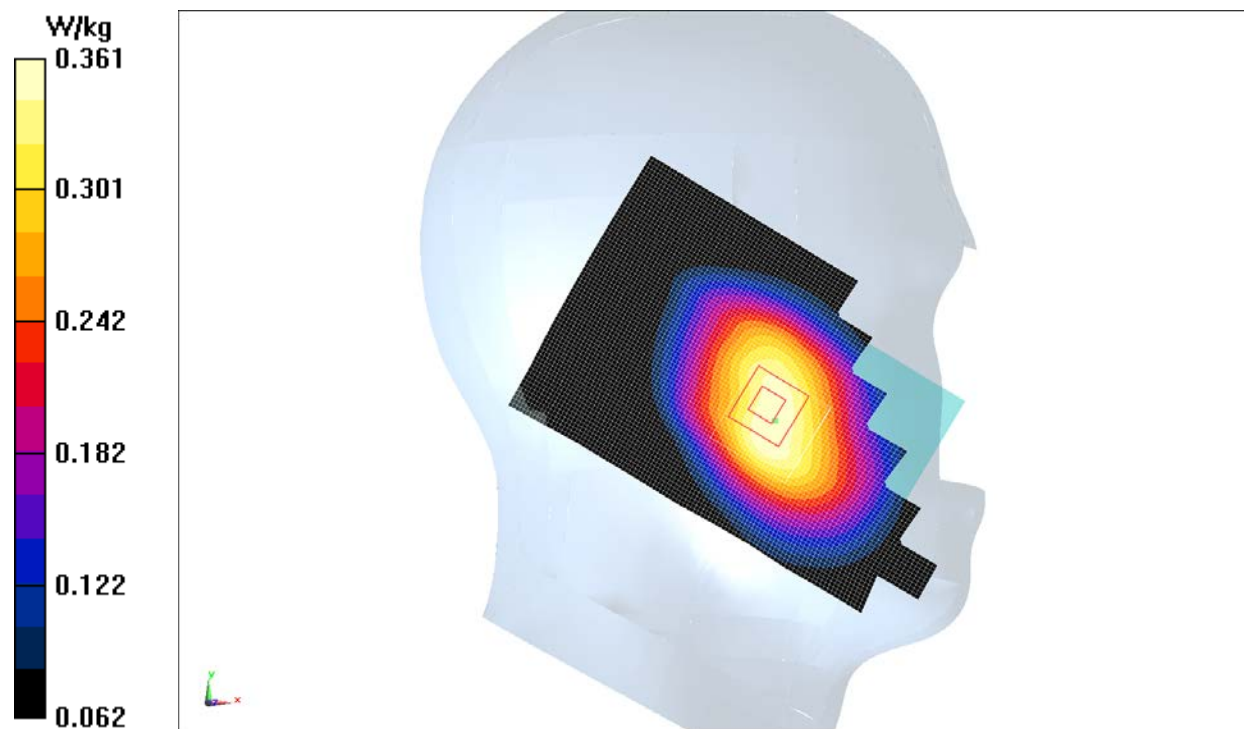


Fig.19 LTE Band12

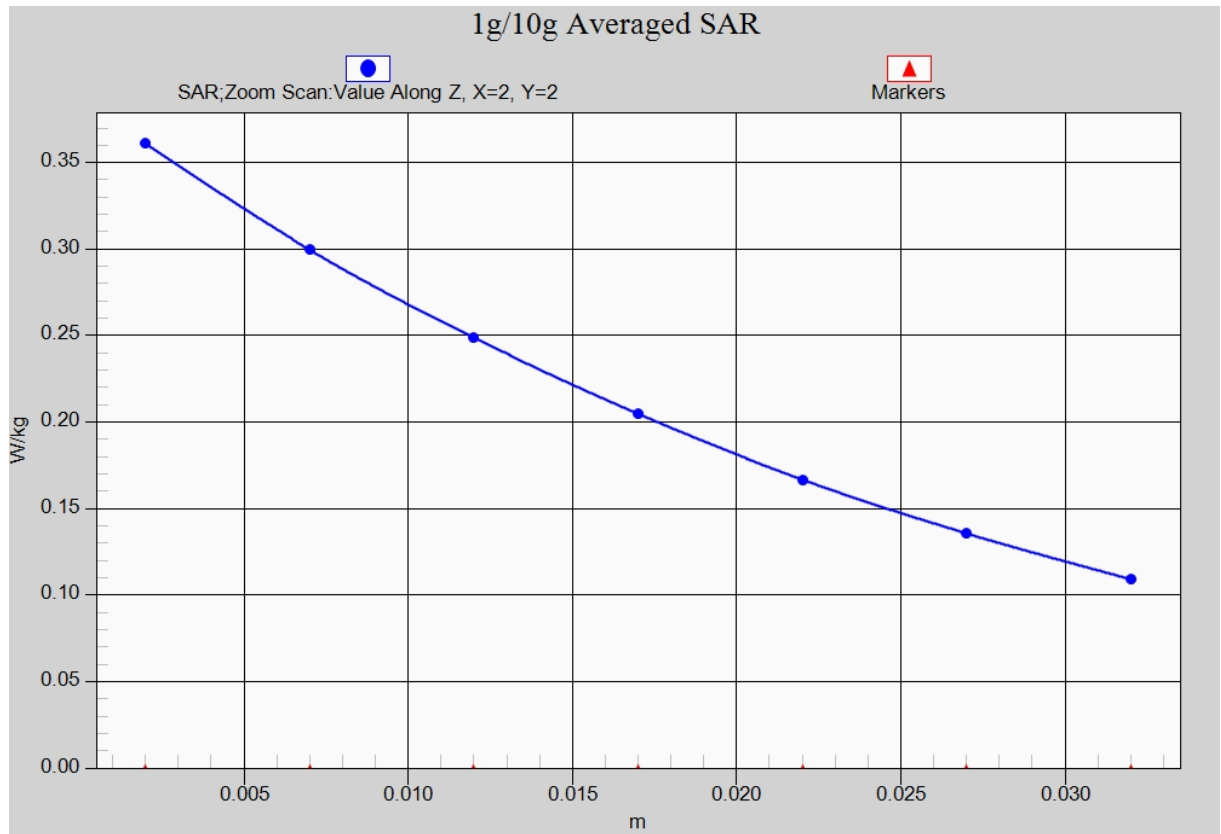


Fig. 19-1 Z-Scan at power reference point (LTE Band12)

LTE Band12 Body Rear Middle with QPSK_10M_1RB_High – AP OFF

Date: 2015-1-16

Electronics: DAE4 Sn777

Medium: Body750 MHz

Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.875$ S/m; $\epsilon_r = 54.689$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C

Communication System: LTE Band12 Frequency: 707.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(9.18, 9.18, 9.18)

Rear Middle/Area Scan (111x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.461 W/kg

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

Reference Value = 22.00 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.535 W/kg

SAR(1 g) = 0.420 W/kg; SAR(10 g) = 0.321 W/kg

Maximum value of SAR (measured) = 0.460 W/kg

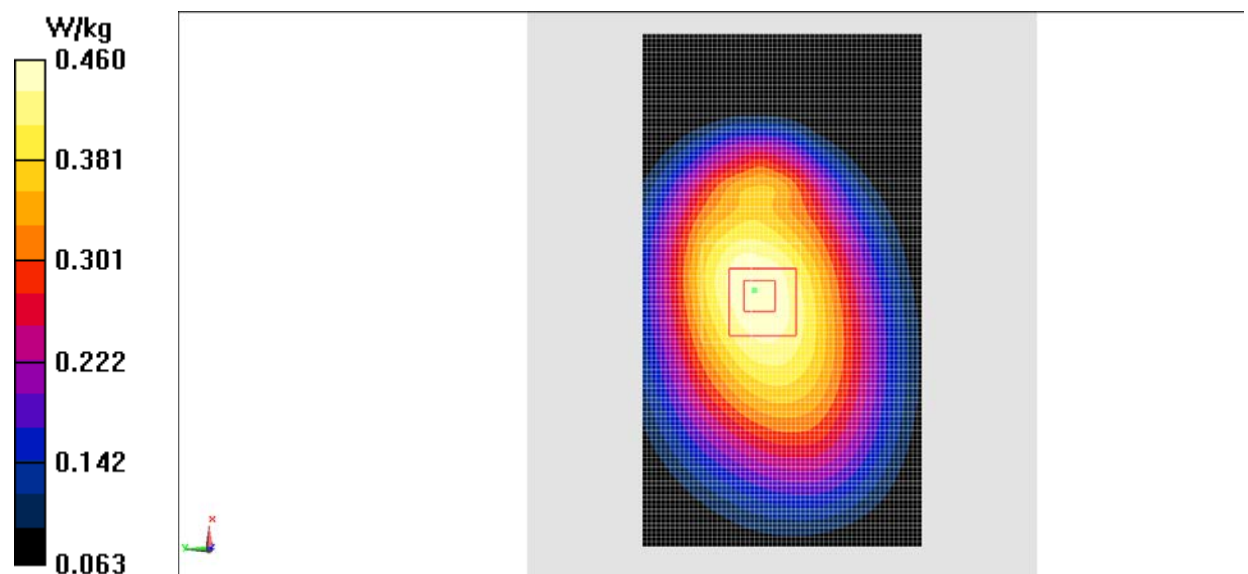


Fig.20 LTE Band12

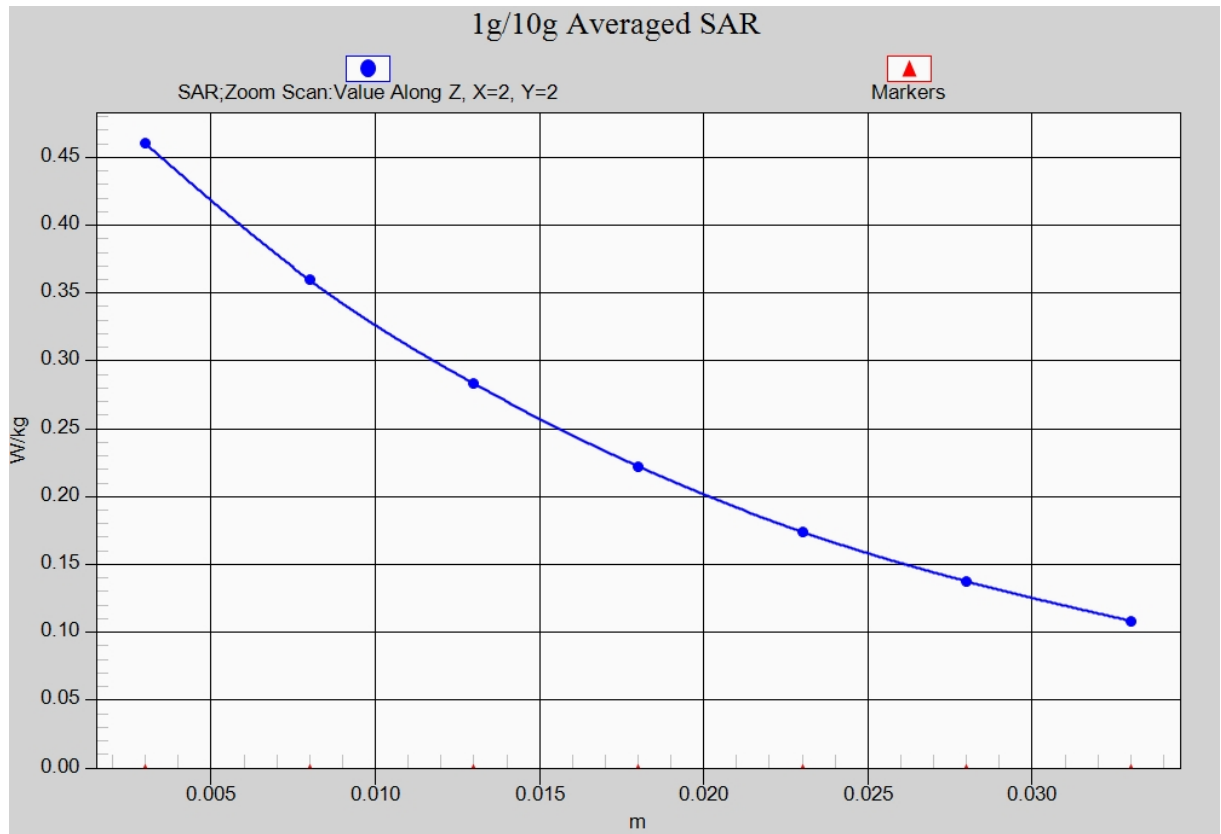


Fig. 20-1 Z-Scan at power reference point (LTE Band12)

LTE Band12 Body Rear Middle with QPSK_10M_25RB_High – AP ON

Date: 2015-1-16

Electronics: DAE4 Sn777

Medium: Body750 MHz

Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.875$ S/m; $\epsilon_r = 54.689$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5 °C Liquid Temperature: 22.0 °C

Communication System: LTE Band12Frequency: 707.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(9.18, 9.18, 9.18)

Rear Middle/Area Scan (111x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.263 W/kg

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

Reference Value = 16.39 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.309 W/kg

SAR(1 g) = 0.241 W/kg; SAR(10 g) = 0.184 W/kg

Maximum value of SAR (measured) = 0.262 W/kg

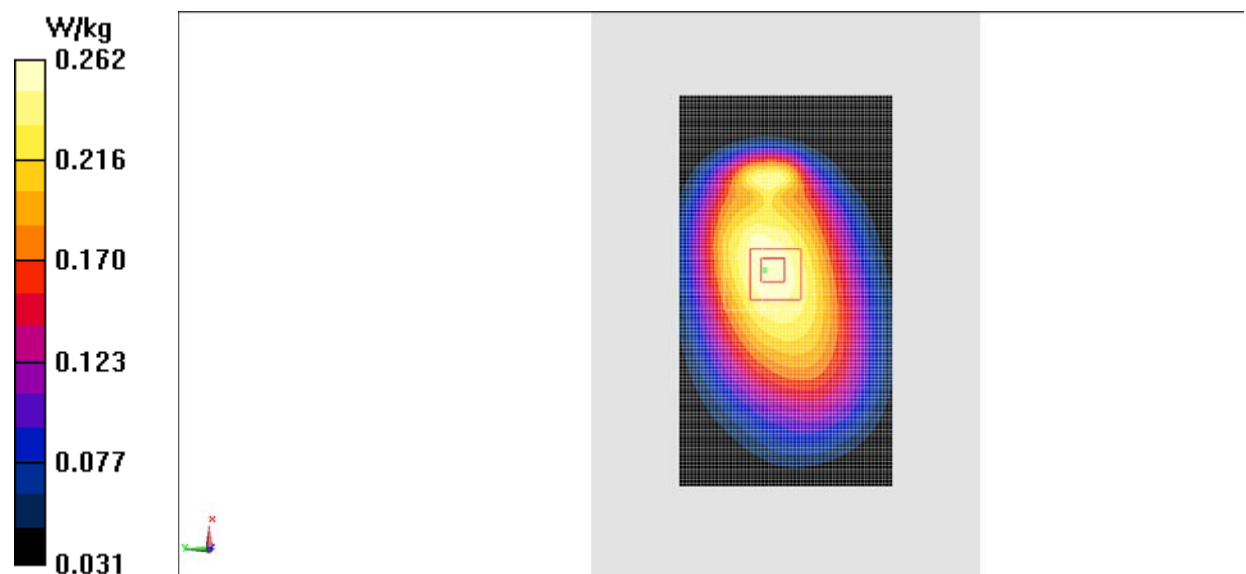


Fig.21 LTE Band12

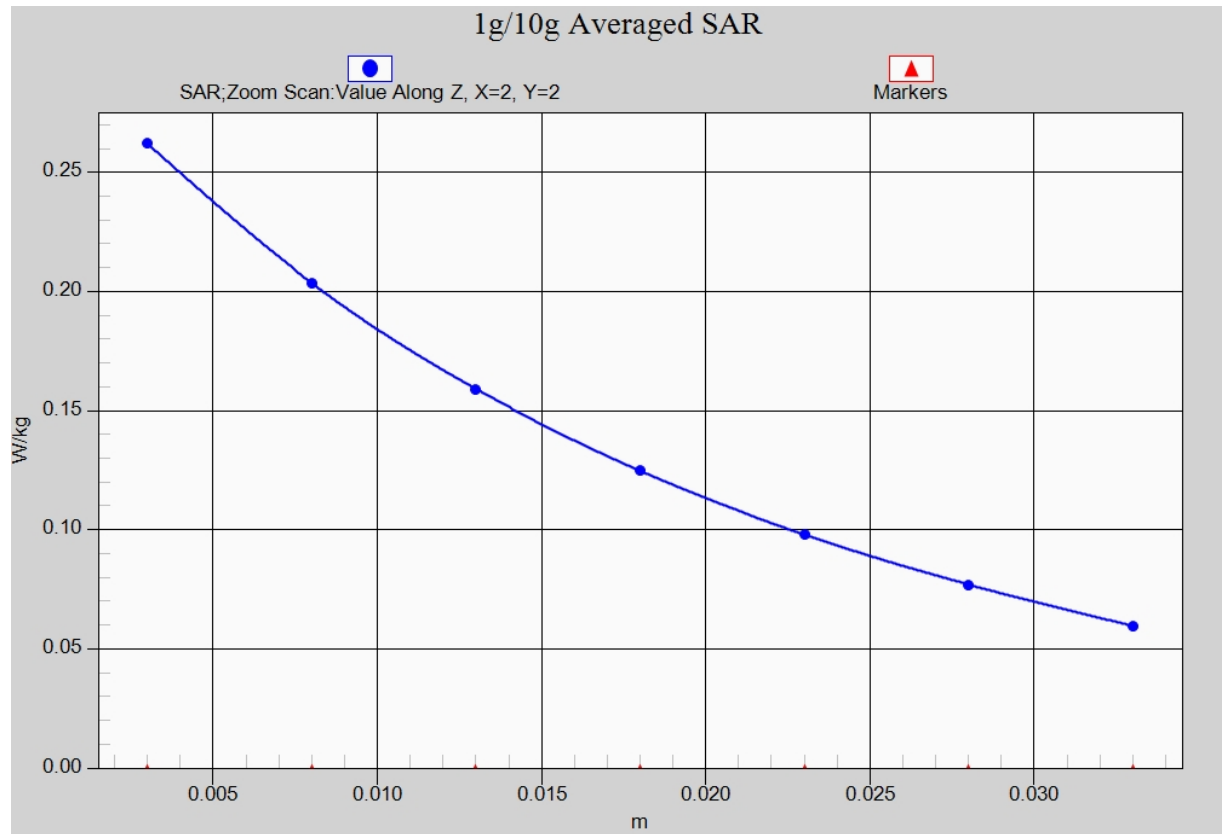


Fig. 21-1 Z-Scan at power reference point (LTE Band12)

Wifi 802.11b Right Cheek Channel 6 – AP OFF

Date: 2015-1-11

Electronics: DAE4 Sn777

Medium: Head 2450 MHz

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.822$ mho/m; $\epsilon_r = 38.452$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(6.56, 6.56, 6.56)

Cheek Middle/Area Scan (71x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.35 W/kg

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

Reference Value = 14.71 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 2.29 W/kg

SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.502 W/kg

Maximum value of SAR (measured) = 1.16 W/kg

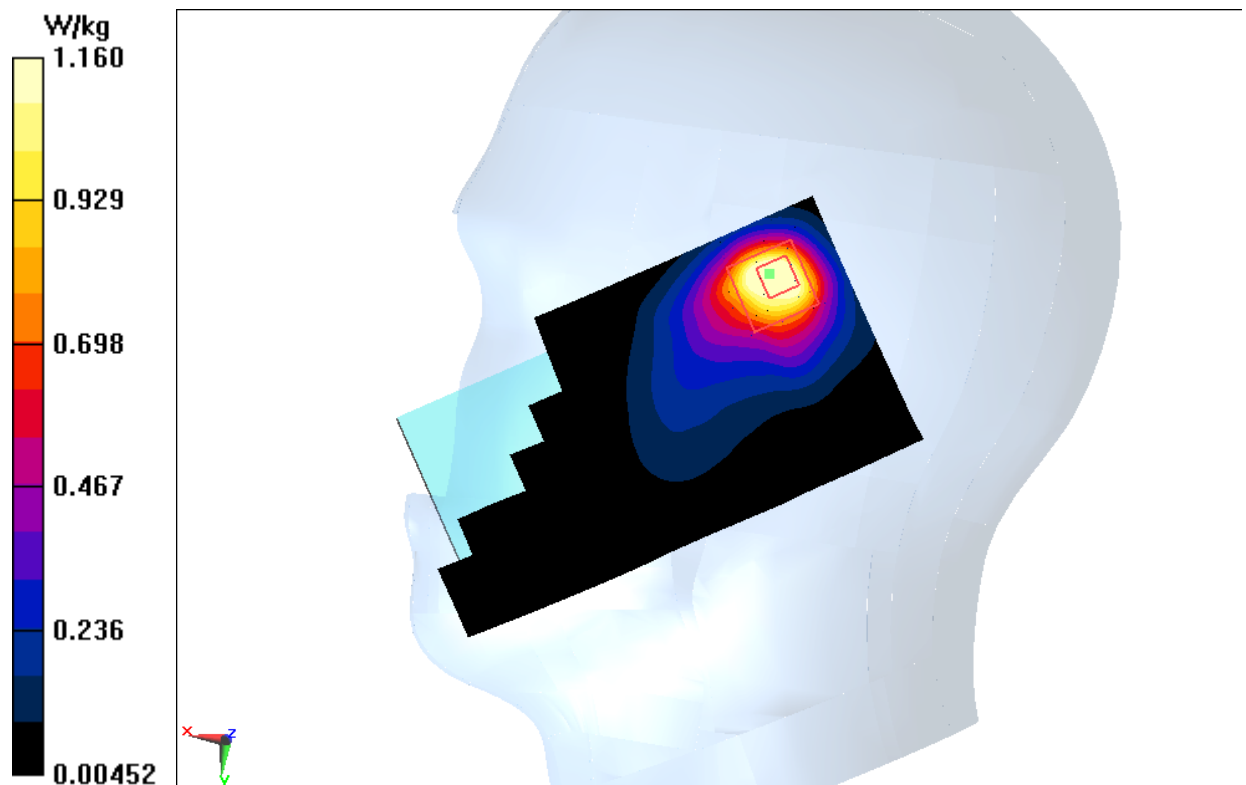


Fig.22 2450 MHz

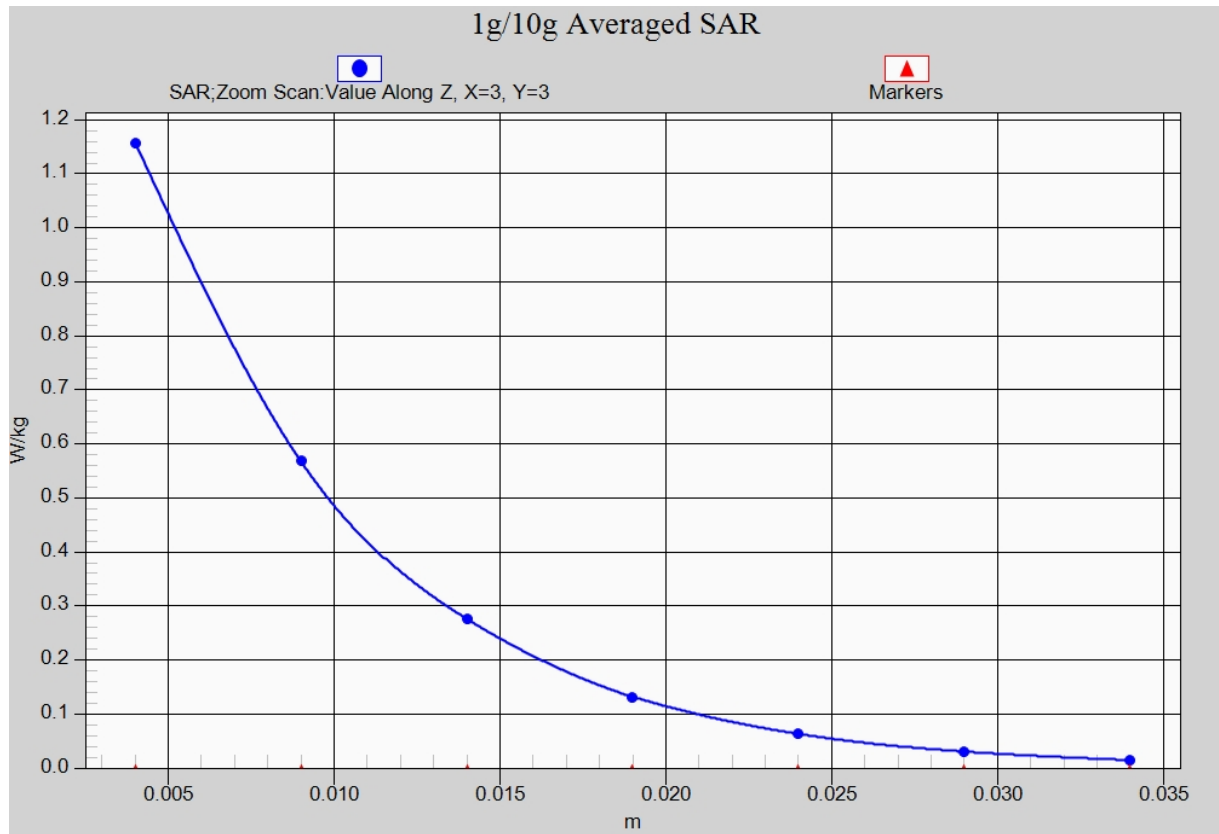


Fig. 22-1 Z-Scan at power reference point (2450 MHz)

Wifi 802.11b Body Rear Channel 6 – AP OFF

Date: 2015-1-11

Electronics: DAE4 Sn777

Medium: Body 2450 MHz

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.996$ mho/m; $\epsilon_r = 51.963$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: WLan 2450 Frequency: 2437 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(6.90, 6.90, 6.90)

Rear Low/Area Scan (111x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.481 W/kg

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

Reference Value = 8.288 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.827 W/kg

SAR(1 g) = 0.385 W/kg; SAR(10 g) = 0.184 W/kg

Maximum value of SAR (measured) = 0.499 W/kg

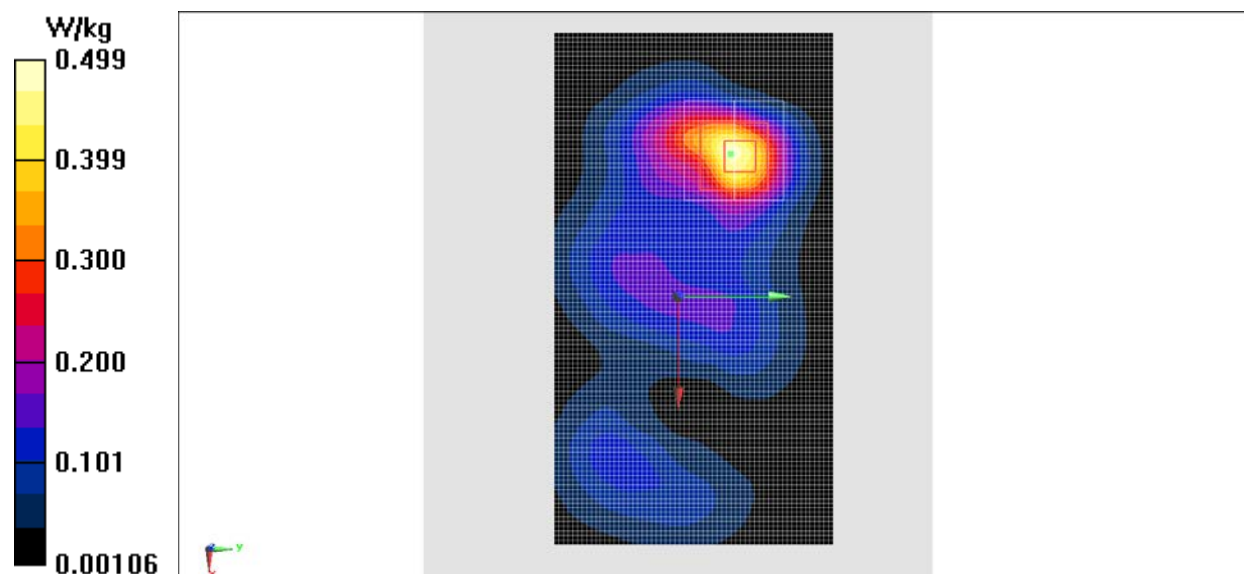


Fig.23 2450 MHz

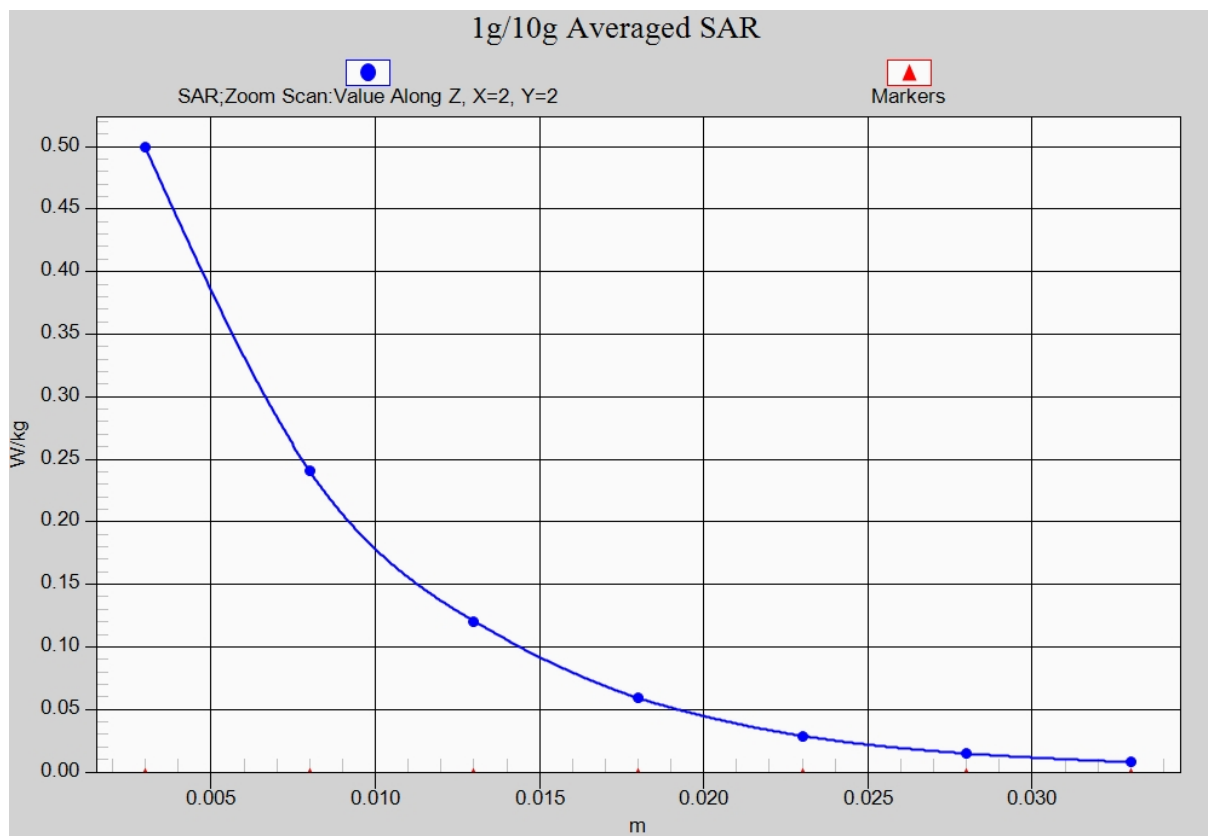


Fig. 23-1 Z-Scan at power reference point (2450 MHz)

ANNEX B SystemVerification Results

750MHz

Date: 2015-1-16

Electronics: DAE4 Sn777

Medium: Head 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.916 \text{ mho/m}$; $\epsilon_r = 40.63$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

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

Probe: EX3DV4 - SN3846 ConvF(9.53, 9.53, 9.53)

System Validation /Area Scan (81x191x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 49.835 V/m ; Power Drift = 0.02 dB

Fast SAR: SAR(1 g) = 2.12 W/kg ; SAR(10 g) = 1.38 W/kg

Maximum value of SAR (interpolated) = 2.26 W/kg

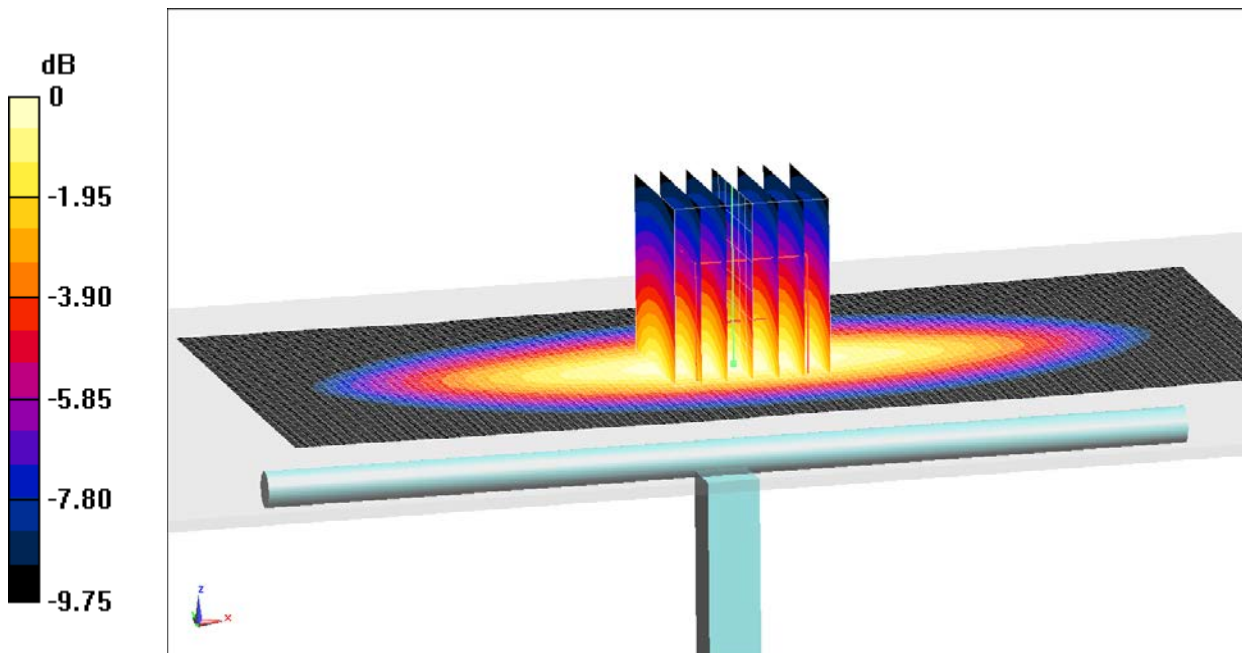
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 49.835 V/m ; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.95 W/kg

SAR(1 g) = 2.08 W/kg ; SAR(10 g) = 1.36 W/kg

Maximum value of SAR (measured) = 2.24 W/kg



$0 \text{ dB} = 2.24 \text{ W/kg} = 3.50 \text{ dB W/kg}$

Fig.B.1 validation 750MHz 250mW

750MHz

Date: 2015-1-16

Electronics: DAE4 Sn777

Medium: Body750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.925 \text{ mho/m}$; $\epsilon_r = 54.21$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

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

Probe: EX3DV4 - SN3846 ConvF(9.18, 9.18, 9.18)

System Validation/Area Scan (81x191x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 51.98 V/m ; Power Drift = -0.06 dB

Fast SAR: SAR(1 g) = 2.29 W/kg ; SAR(10 g) = 1.50 W/kg

Maximum value of SAR (interpolated) = 2.43 W/kg

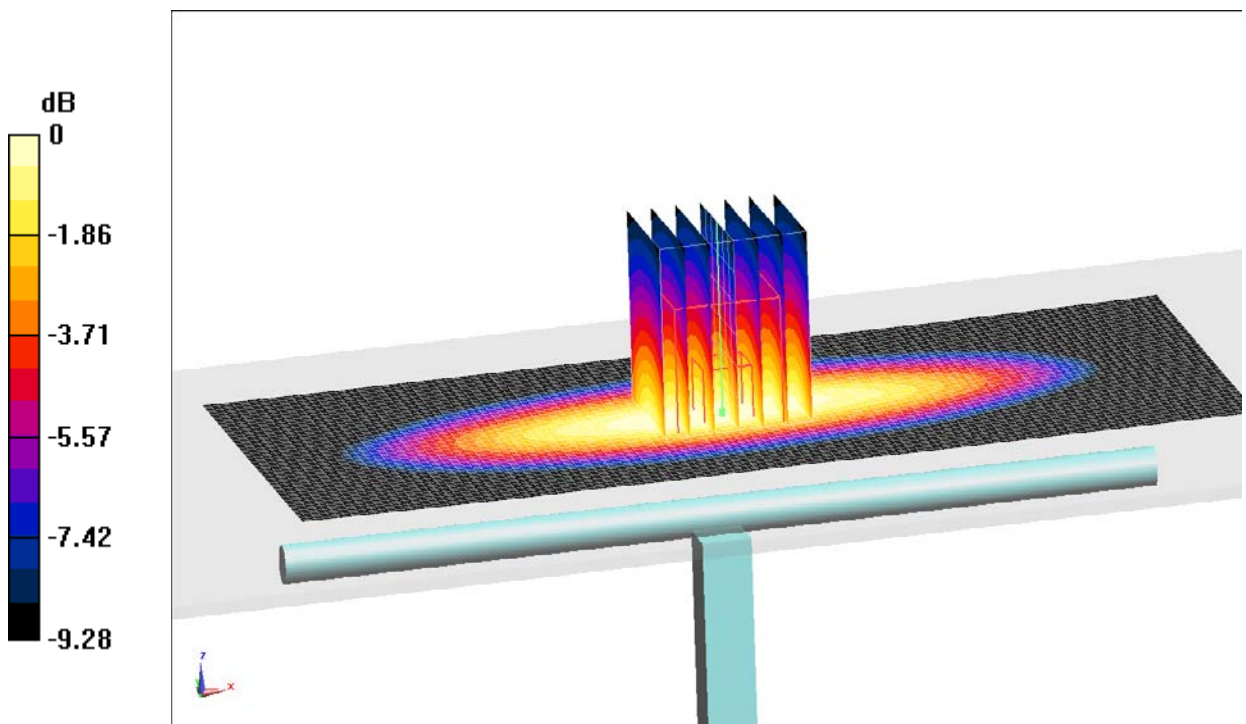
System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 51.98 V/m ; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.16 W/kg

SAR(1 g) = 2.25 W/kg ; SAR(10 g) = 1.47 W/kg

Maximum value of SAR (measured) = 2.40 W/kg



0 dB = 2.40 W/kg = 3.80 dB W/kg

Fig.B.2 validation 750MHz 250mW

835MHz

Date: 2015-1-15

Electronics: DAE4 Sn777

Medium: Head 850 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.923 \text{ S/m}$; $\epsilon_r = 41.18$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(9.18, 9.18, 9.18)

System Validation/Area Scan (61x121x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 54.229 V/m ; Power Drift = 0.02 dB

Fast SAR: SAR(1 g) = 2.40 W/kg ; SAR(10 g) = 1.56 W/kg

Maximum value of SAR (interpolated) = 2.63 W/kg

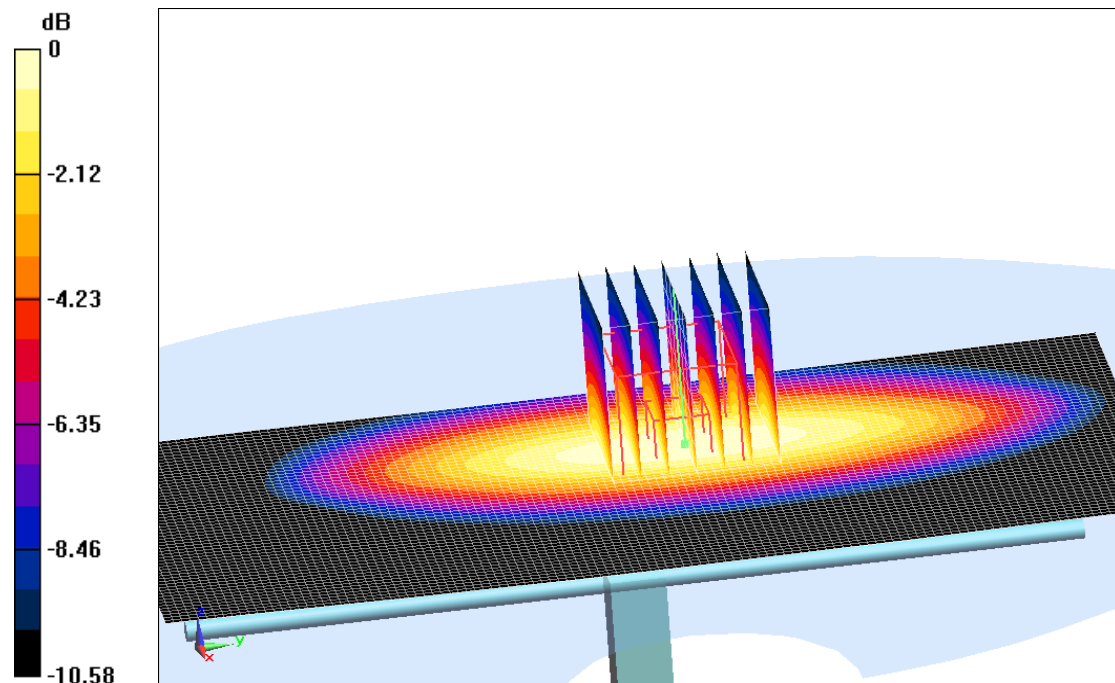
System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 54.229 V/m ; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 3.06 W/kg

SAR(1 g) = 2.36 W/kg ; SAR(10 g) = 1.53 W/kg

Maximum value of SAR (measured) = 2.60 W/kg



$0 \text{ dB} = 2.60 \text{ W/kg} = 4.15 \text{ dBW/kg}$

Fig.B.3 validation 835MHz 250mW

835MHz

Date: 2015-1-15

Electronics: DAE4 Sn777

Medium: Body 850 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.988 \text{ S/m}$; $\epsilon_r = 54.09$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(9.09, 9.09, 9.09)

System Validation /Area Scan (61x121x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 52.017 V/m ; Power Drift = 0.03 dB

Fast SAR: SAR(1 g) = 2.29 W/kg ; SAR(10 g) = 1.51 W/kg

Maximum value of SAR (interpolated) = 2.55 W/kg

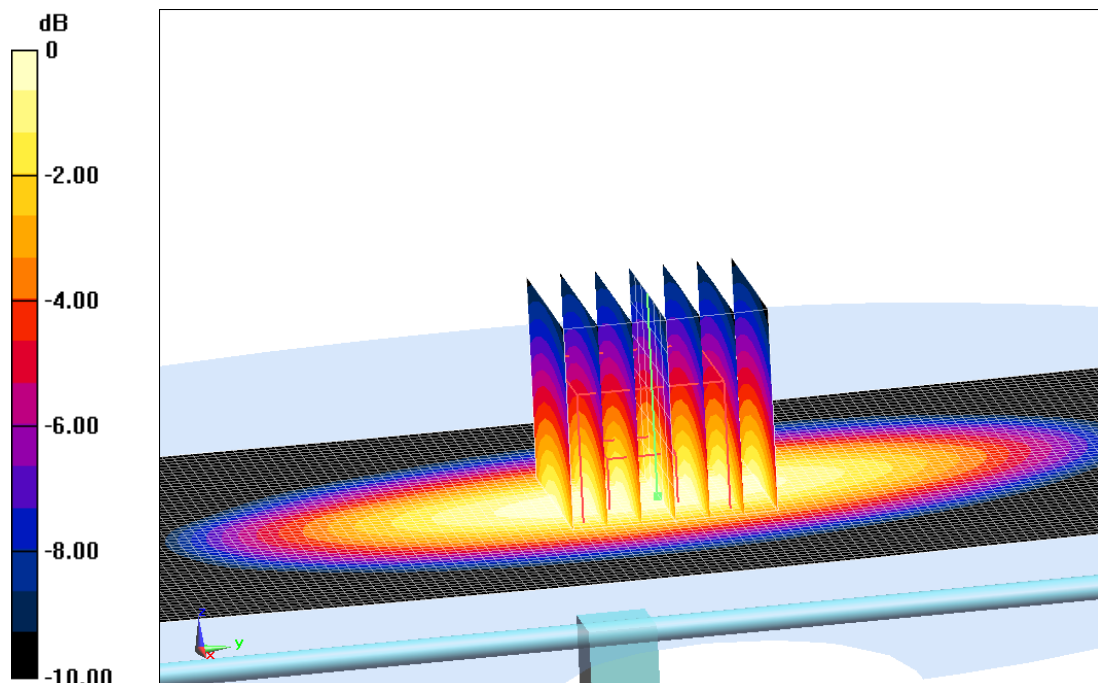
System Validation /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 52.017 V/m ; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.04 W/kg

SAR(1 g) = 2.33 W/kg ; SAR(10 g) = 1.54 W/kg

Maximum value of SAR (measured) = 2.58 W/kg



0 dB = 2.58 W/kg = 4.12 dBW/kg

Fig.B.4 validation 835MHz 250mW

1750MHz

Date: 2015-1-17

Electronics: DAE4 Sn777

Medium: Head 1750 MHz

Medium parameters used: $f=1750$ MHz; $\sigma = 1.352$ mho/m; $\epsilon_r = 41.21$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.5°C Liquid Temperature: 22.0°C

Communication System: CW Frequency: 1750 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3846 ConvF(7.64, 7.64, 7.64)

System Validation/Area Scan (81x121x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Reference Value = 88.361 V/m; Power Drift = -0.05 dB

Fast SAR: SAR(1 g) = 9.01 W/kg; SAR(10 g) = 4.77 W/kg

Maximum value of SAR (interpolated) = 10.0 W/kg

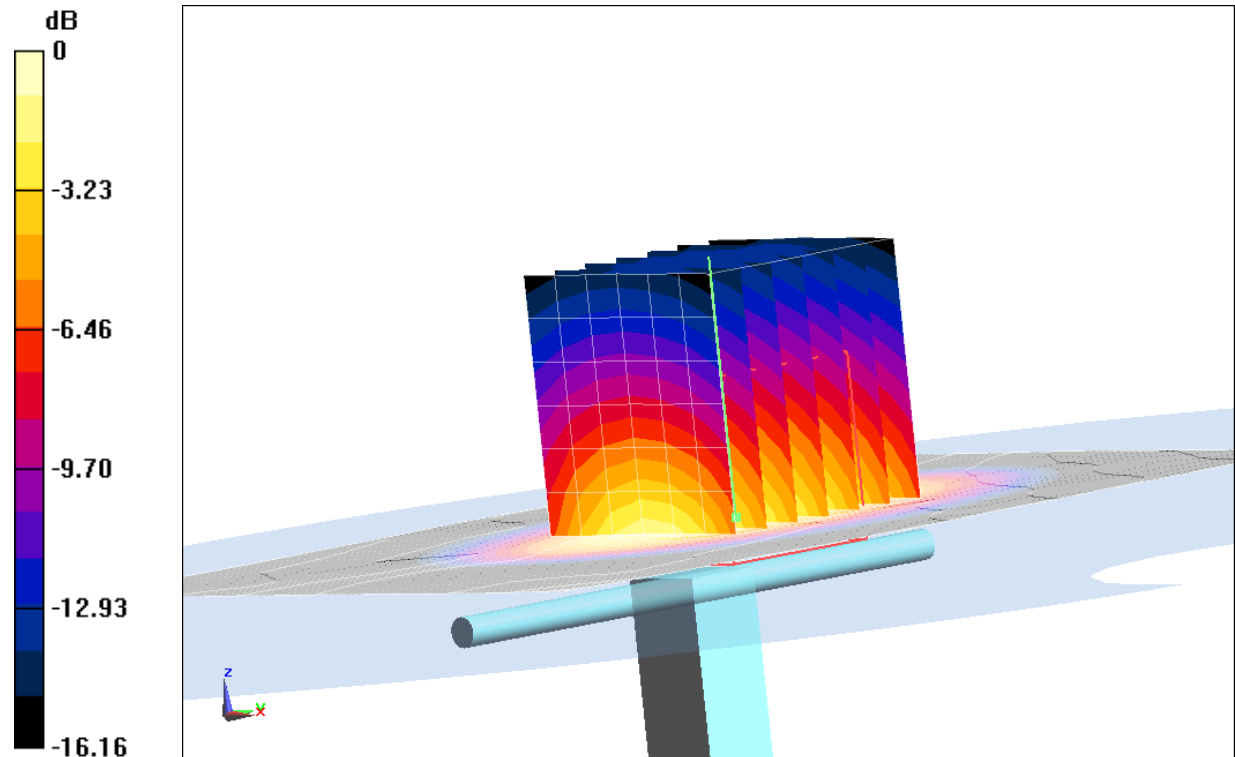
System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 88.361 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 15.67 W/kg

SAR(1 g) = 9.09 W/kg; SAR(10 g) = 4.85 W/kg

Maximum value of SAR (measured) = 10.1 W/kg



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

Fig.B.5 validation 1750MHz 250mW