

### 1900 Body Rear High

Date: 2018-5-28

Electronics: DAE4 Sn1525

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1909.8$  MHz;  $\sigma = 1.594$  mho/m;  $\epsilon_r = 52.88$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz GPRS Frequency: 1909.8 MHz Duty Cycle: 1:2

Probe: EX3DV4- SN7464 ConvF(8.32, 8.32, 8.32)

**Area Scan (121x71x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm

Maximum value of SAR (interpolated) = 0.831 W/kg

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

Reference Value = 7.397 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.738 W/kg; SAR(10 g) = 0.387 W/kg

Maximum value of SAR (measured) = 0.888 W/kg

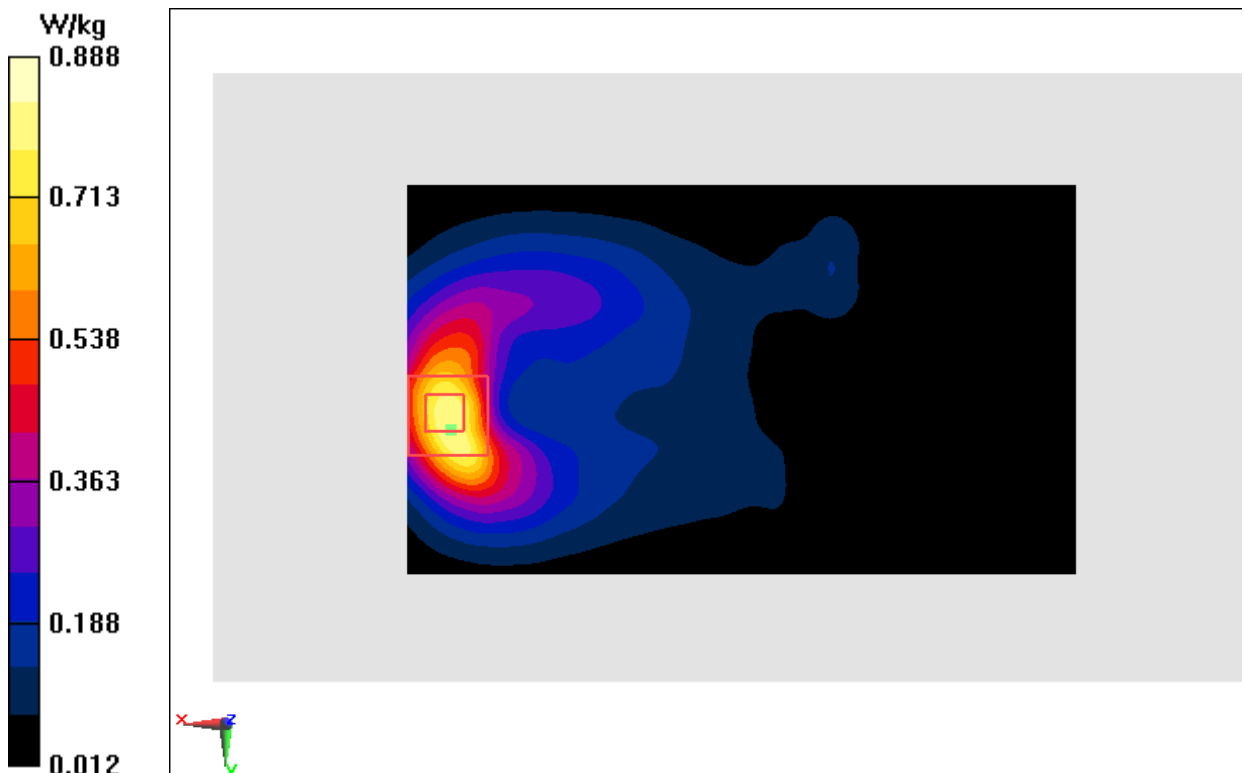


Fig.4 1900 MHz

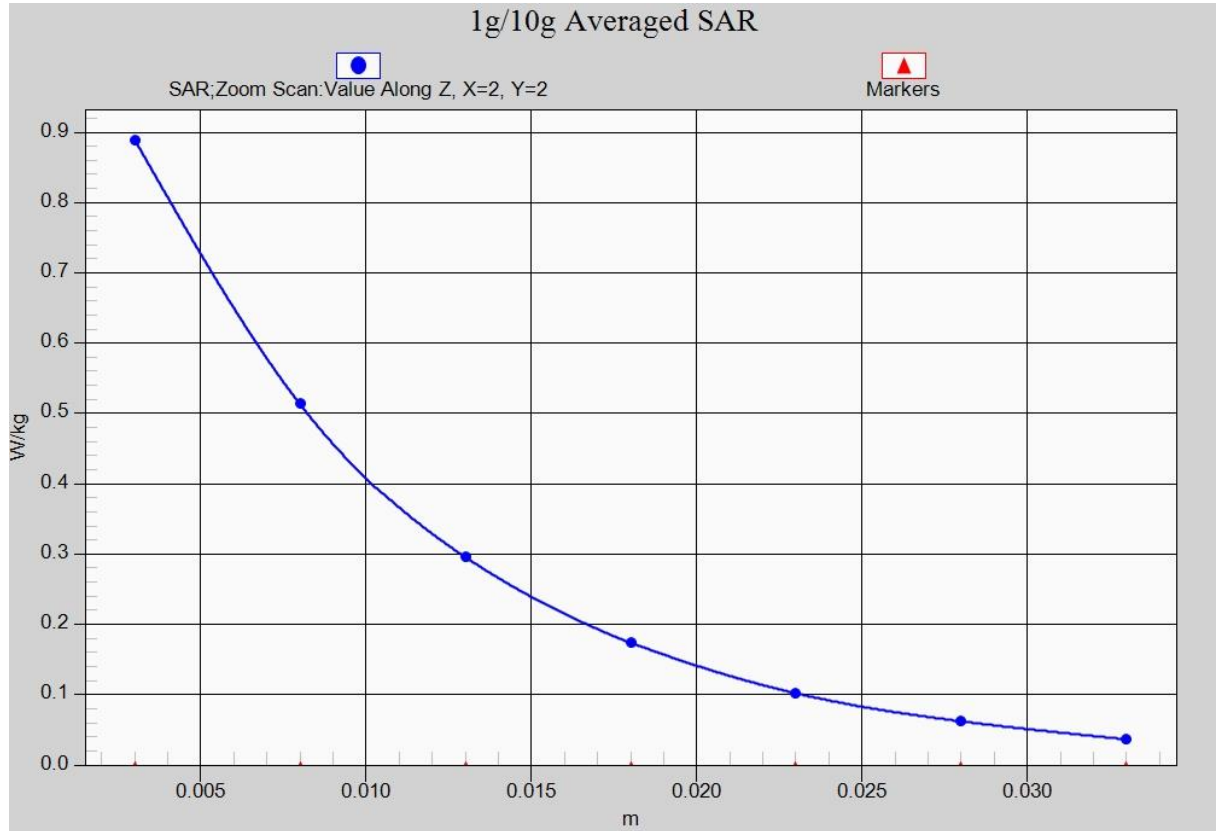


Fig. 4-1 Z-Scan at power reference point (1900 MHz)

### WCDMA 850 Right Cheek Middle

Date: 2018-5-27

Electronics: DAE4 Sn1525

Medium: Head 850 MHz

Medium parameters used (interpolated):  $f = 836.4$  MHz;  $\sigma = 0.889$  mho/m;  $\epsilon_r = 42.065$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(10.28, 10.28, 10.28)

**Area Scan (71x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.221 W/kg

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

Reference Value = 3.916 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.255 W/kg

SAR(1 g) = 0.201 W/kg; SAR(10 g) = 0.151 W/kg

Maximum value of SAR (measured) = 0.219 W/kg

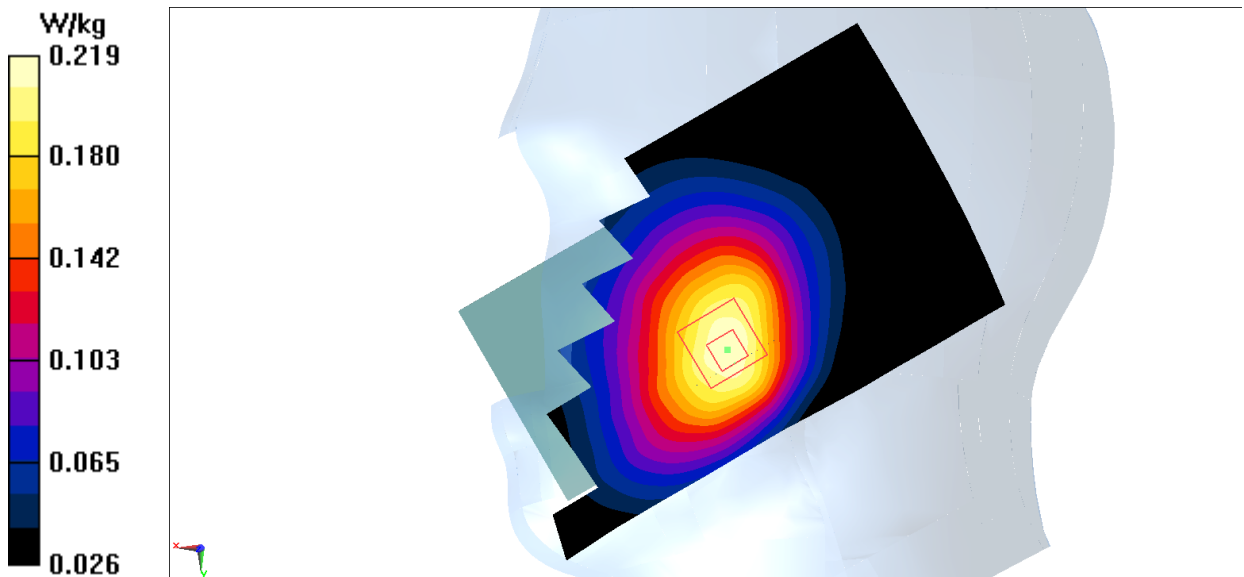


Fig.5 WCDMA 850

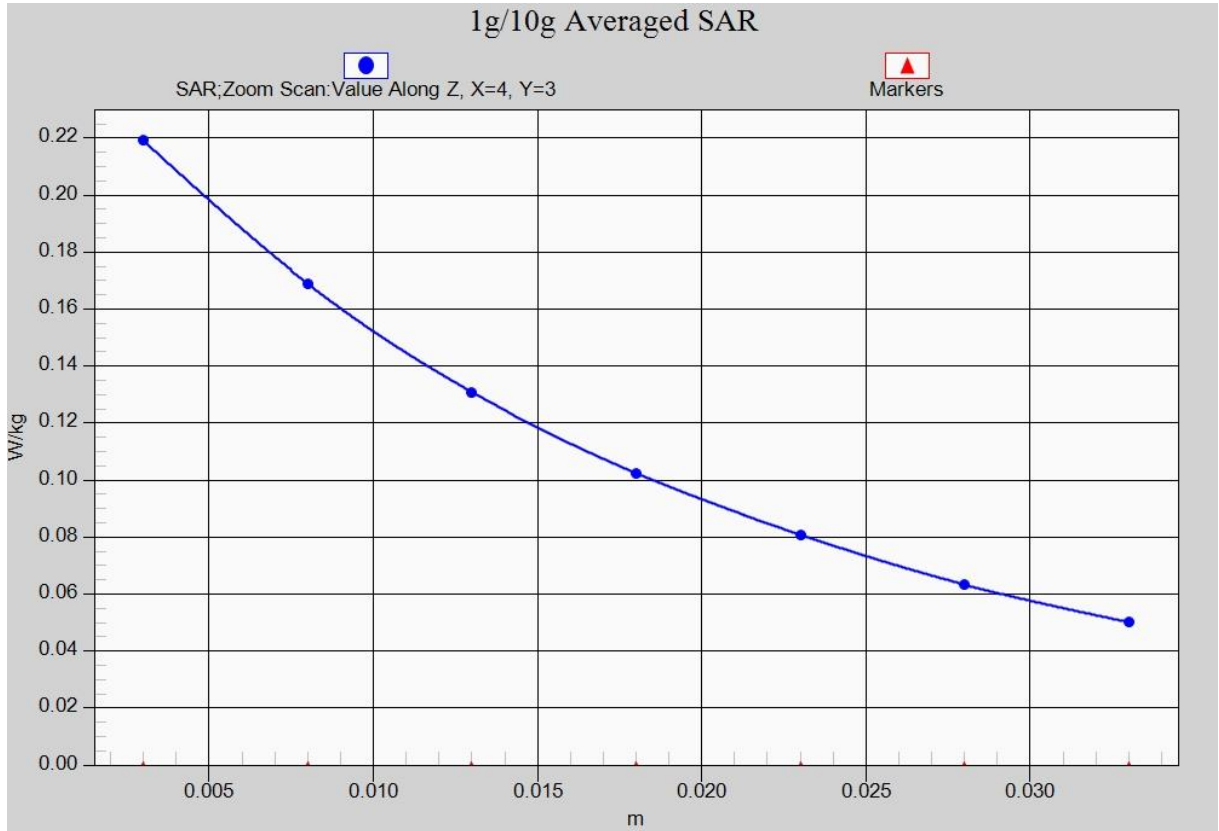


Fig. 5-1 Z-Scan at power reference point (850 MHz)

### WCDMA 850 Body Rear Low

Date: 2018-5-27

Electronics: DAE4 Sn1525

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 826.4$  MHz;  $\sigma = 0.971$  mho/m;  $\epsilon_r = 55.956$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(10.21, 10.21, 10.21)

**Area Scan (71x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.394 W/kg

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

Reference Value = 15.71 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.562 W/kg

SAR(1 g) = 0.328 W/kg; SAR(10 g) = 0.190 W/kg

Maximum value of SAR (measured) = 0.401 W/kg

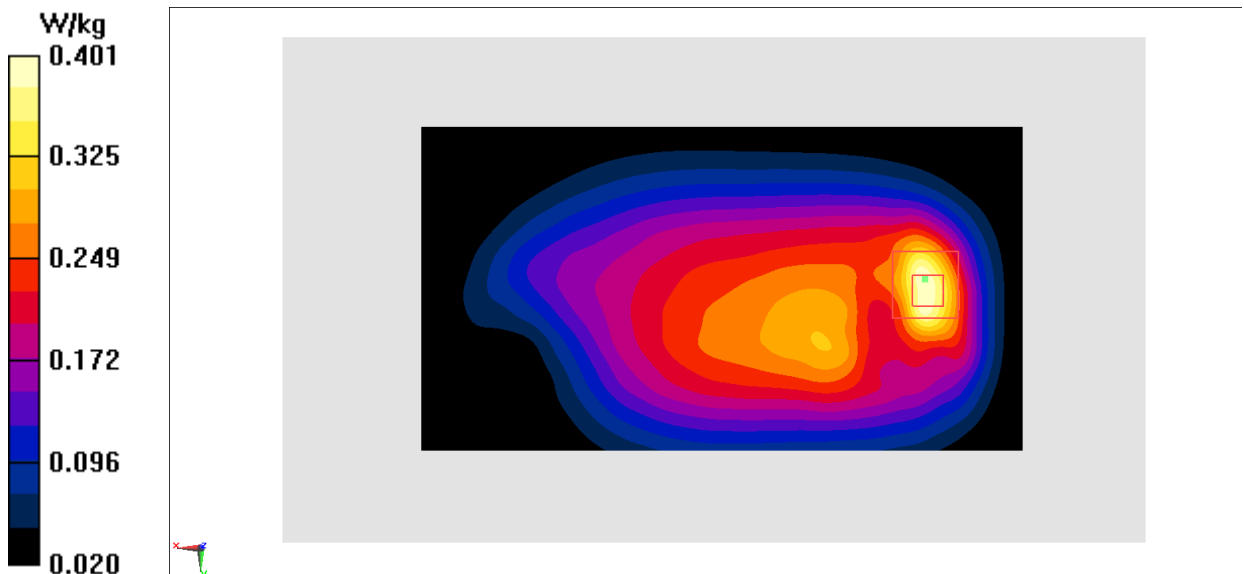


Fig.6 WCDMA 850

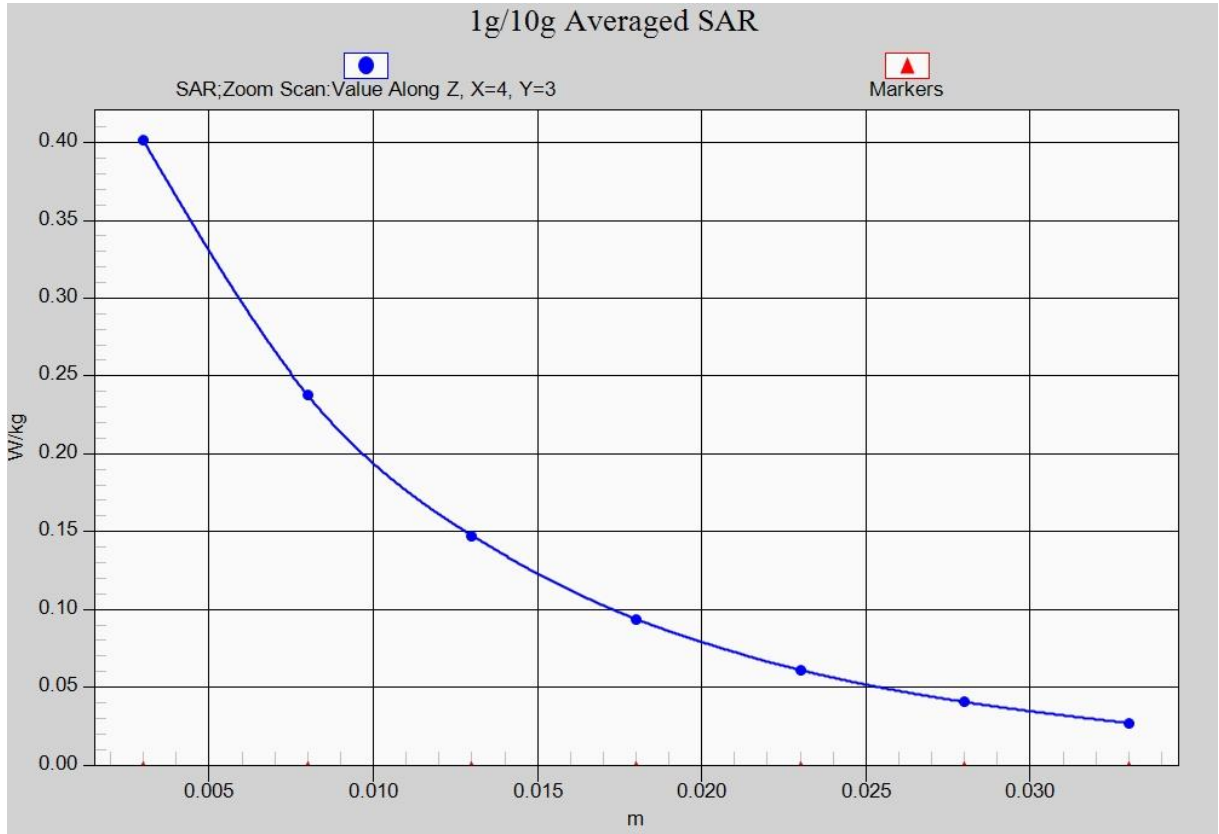


Fig. 6-1 Z-Scan at power reference point (WCDMA850)

### WCDMA 1700 Left Cheek Low

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Head 1750 MHz

Medium parameters used (interpolated):  $f = 1712.4$  MHz;  $\sigma = 1.307$  mho/m;  $\epsilon_r = 40.677$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1750 Frequency: 1712.4 MHz Duty Cycle: 1:1

Probe: EX3DV4- SN7464 ConvF(8.70, 8.70, 8.70)

**Area Scan (71x121x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm

Maximum value of SAR (interpolated) = 0.237 W/kg

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

Reference Value = 5.211 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.313 W/kg

SAR(1 g) = 0.203 W/kg; SAR(10 g) = 0.129 W/kg

Maximum value of SAR (measured) = 0.234 W/kg

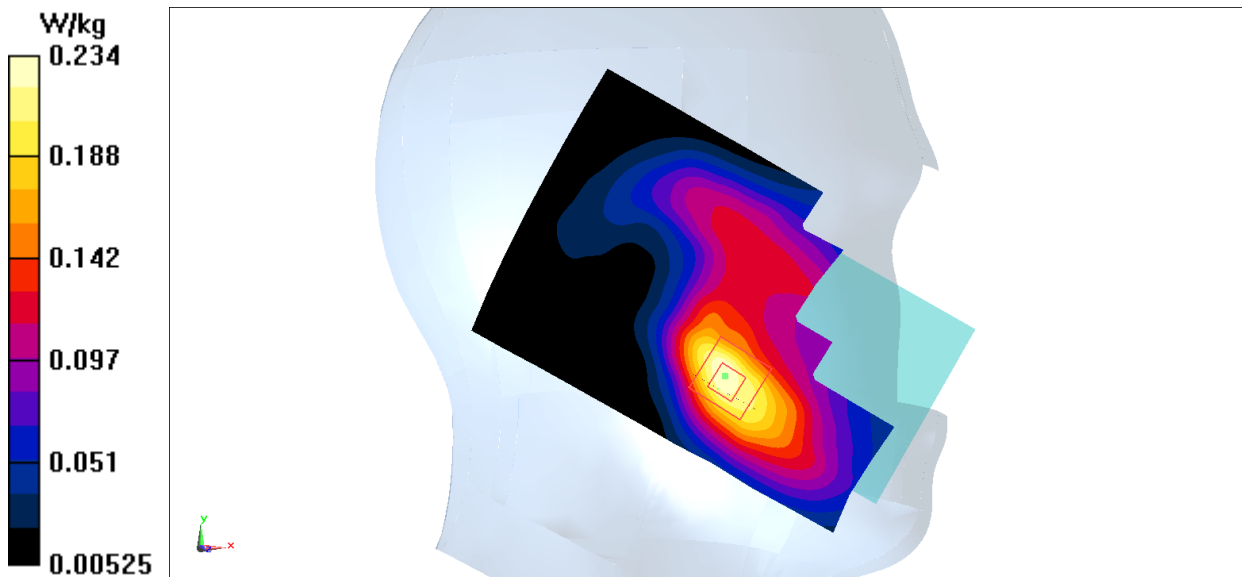


Fig.7 WCDMA1700

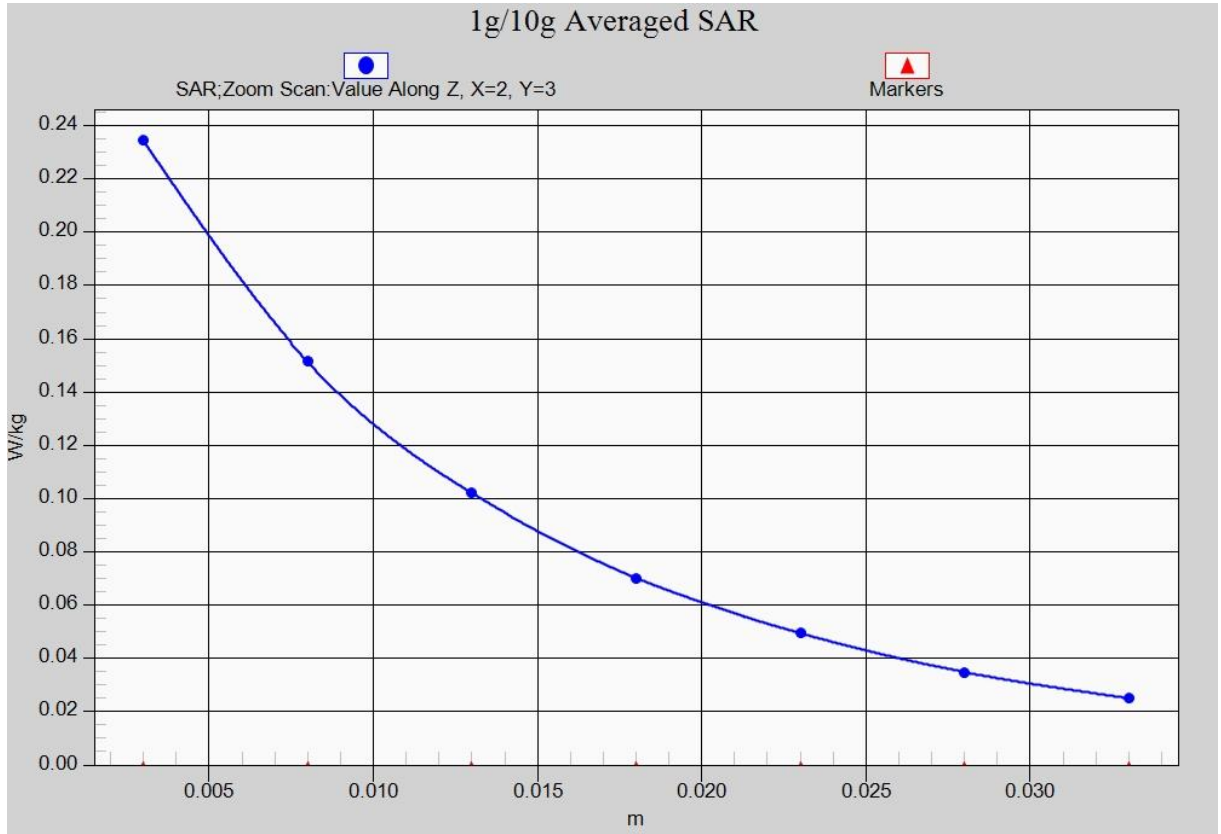


Fig. 7-1 Z-Scan at power reference point (WCDMA1700)



### WCDMA 1700 Body Rear Low

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Body 1750 MHz

Medium parameters used (interpolated):  $f = 1712.4$  MHz;  $\sigma = 1.503$  mho/m;  $\epsilon_r = 53.618$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1712.4 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN7464 ConvF(8.60, 8.60, 8.60)

**Area Scan (71x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.21 W/kg

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

Reference Value = 10.54 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.87 W/kg

SAR(1 g) = 1.07 W/kg; SAR(10 g) = 0.582 W/kg

Maximum value of SAR (measured) = 1.32 W/kg

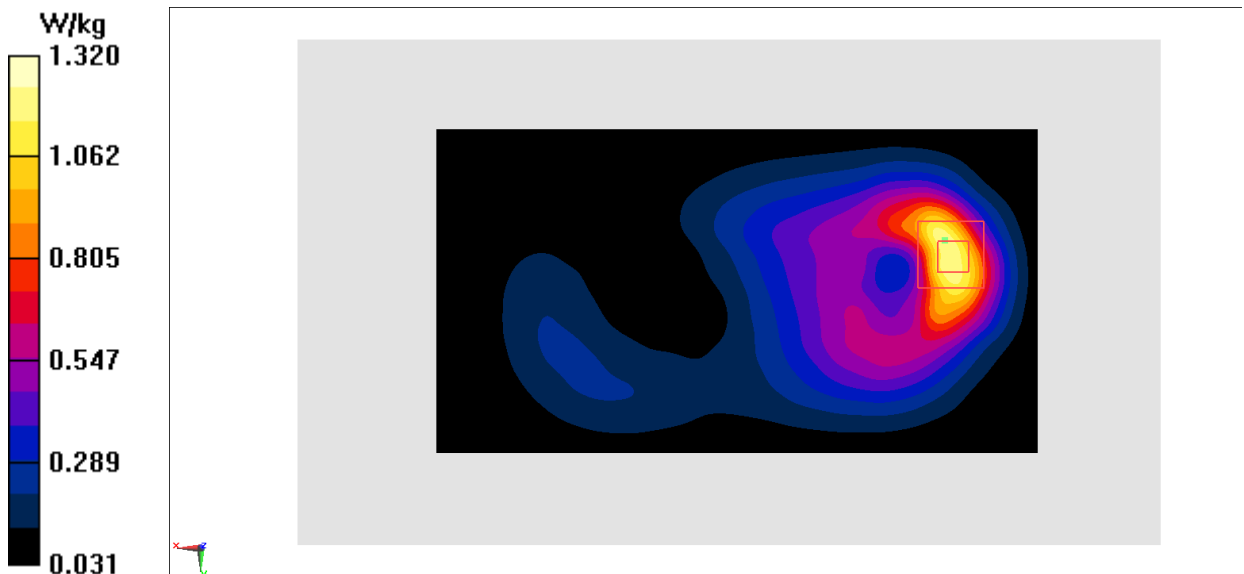


Fig.8 WCDMA1700

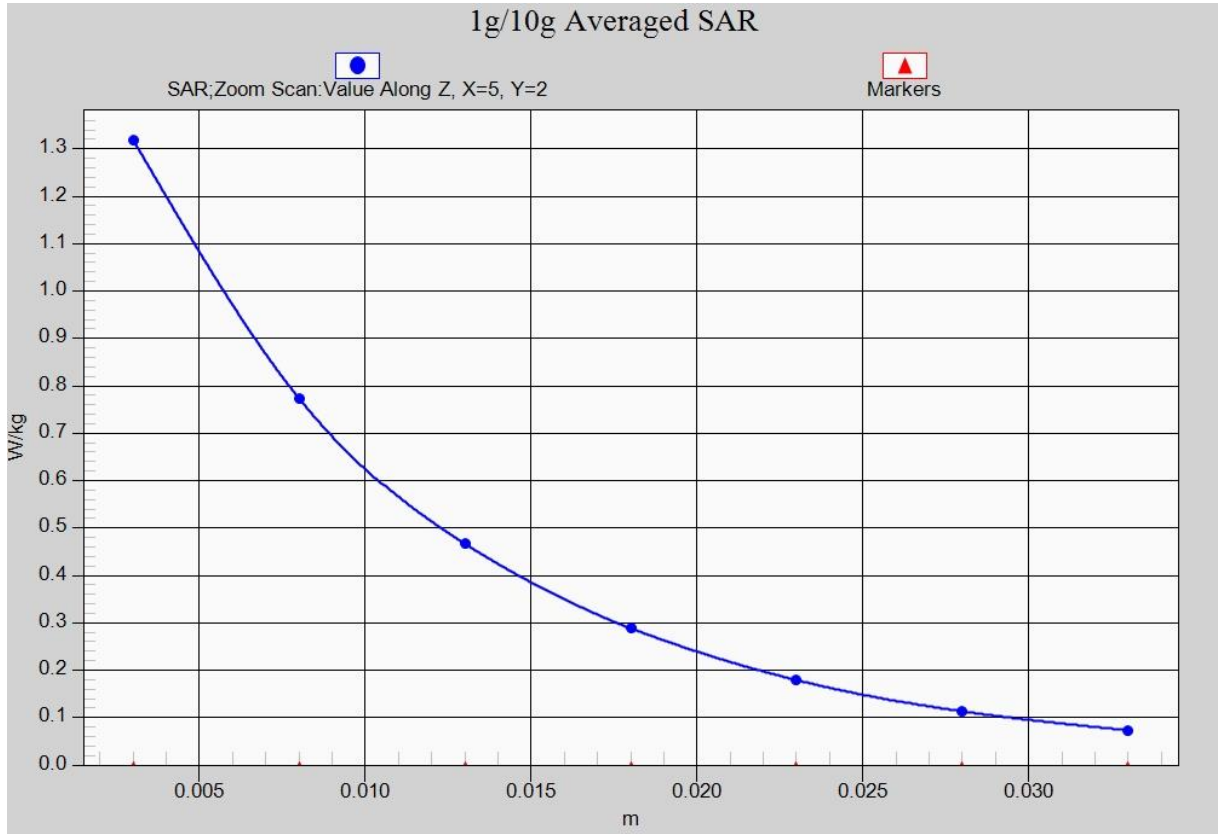


Fig. 8-1 Z-Scan at power reference point (WCDMA1700)

### WCDMA 1900 Right Cheek Middle

Date: 2018-5-28

Electronics: DAE4 Sn1525

Medium: Head 1900 MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.446$  mho/m;  $\epsilon_r = 40.71$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1880 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN7464 ConvF(8.39, 8.39, 8.39)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.273 W/kg

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

Reference Value = 5.546 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.321 W/kg

SAR(1 g) = 0.210 W/kg; SAR(10 g) = 0.129 W/kg

Maximum value of SAR (measured) = 0.249 W/kg

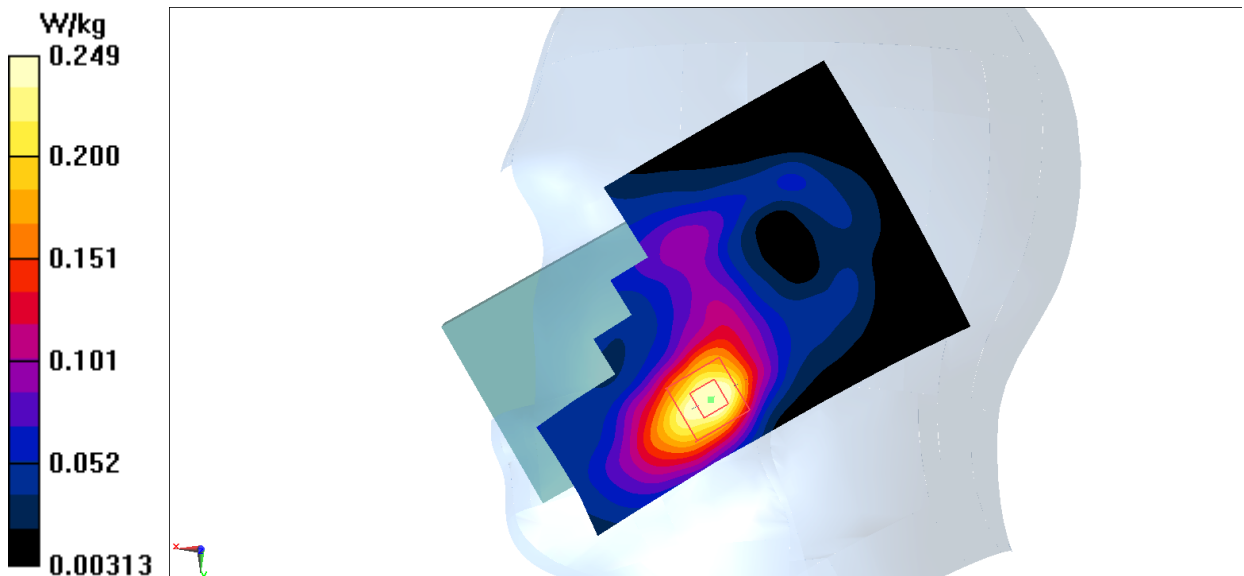


Fig.9 WCDMA1900

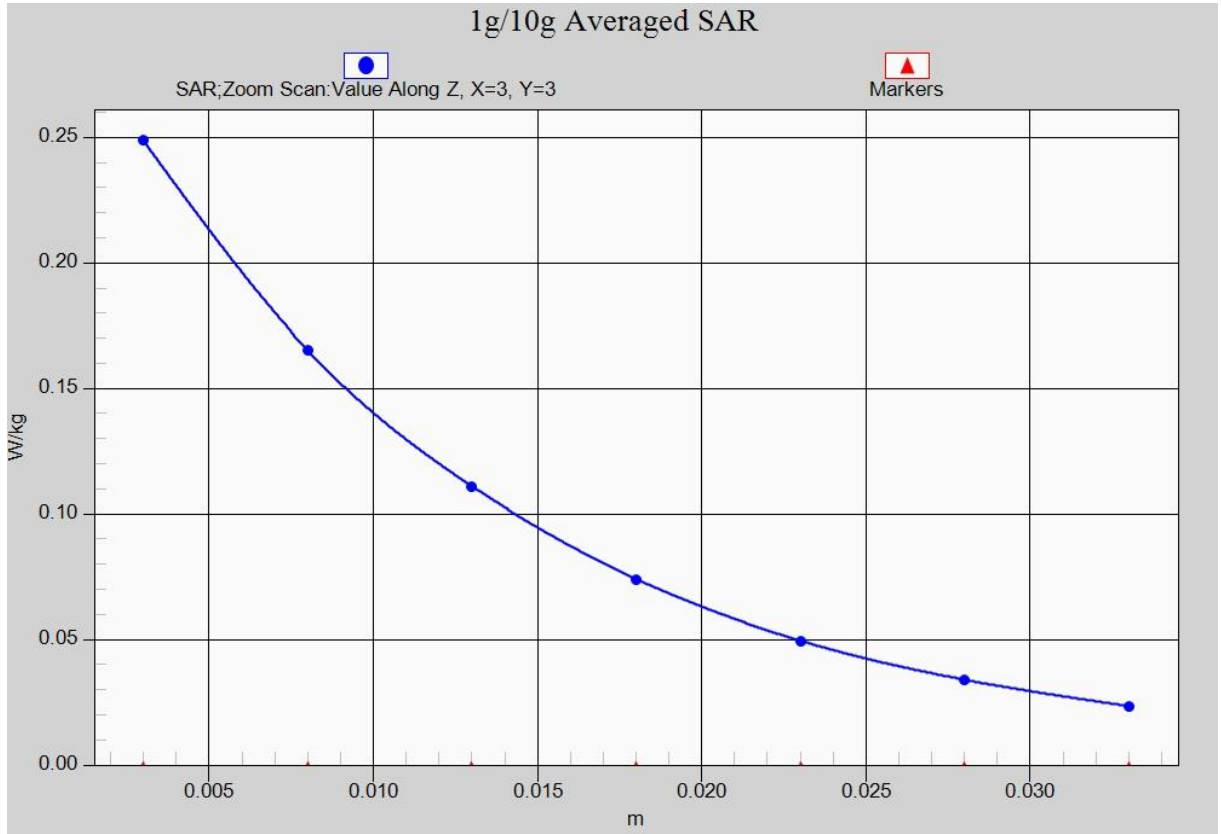


Fig. 9-1 Z-Scan at power reference point (WCDMA1900)

### WCDMA 1900 Body Rear High

Date: 2018-5-28

Electronics: DAE4 Sn1525

Medium: Body 1900 MHz

Medium parameters used (interpolated):  $f = 1907.6$  MHz;  $\sigma = 1.592$  mho/m;  $\epsilon_r = 53.15$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WCDMA 1900 Frequency: 1907.6 MHz Duty Cycle: 1:1

Probe: EX3DV4- SN7464 ConvF(8.32, 8.32, 8.32)

**Area Scan (71x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.28 W/kg

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

Reference Value = 8.127 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 1.90 W/kg

SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.570 W/kg

Maximum value of SAR (measured) = 1.37 W/kg

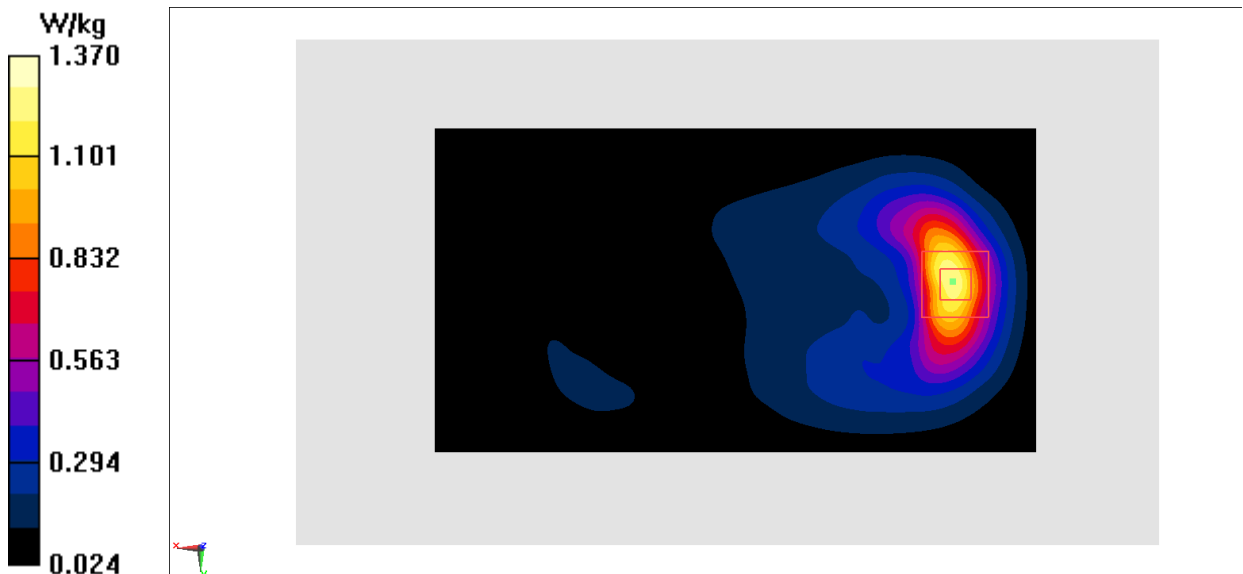
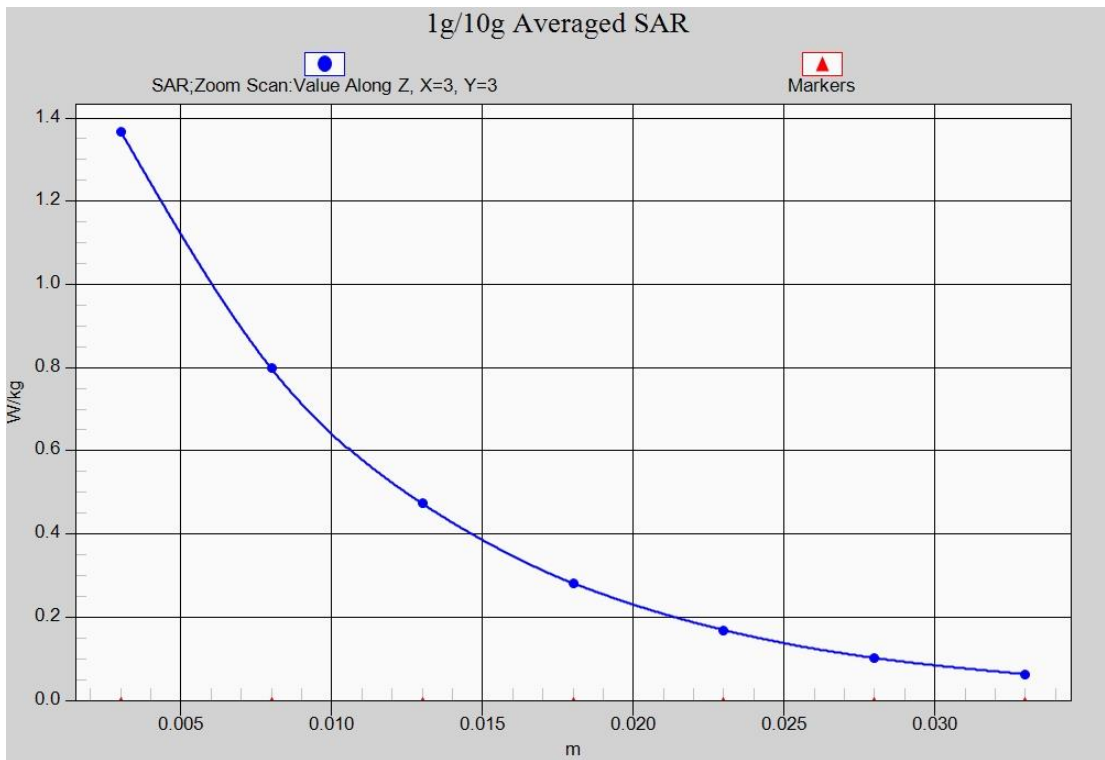


Fig.10 WCDMA1900



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

### LTE Band2 Right Cheek High with QPSK\_20M\_1RB\_Middle

Date: 2018-5-28

Electronics: DAE4 Sn1525

Medium: Head 1900 MHz

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.432$  mho/m;  $\epsilon_r = 40.81$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band2 Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN7464 ConvF(8.39, 8.39, 8.39)

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 = 4.736 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.291 W/kg

SAR(1 g) = 0.187 W/kg; SAR(10 g) = 0.113 W/kg

Maximum value of SAR (measured) = 0.223 W/kg

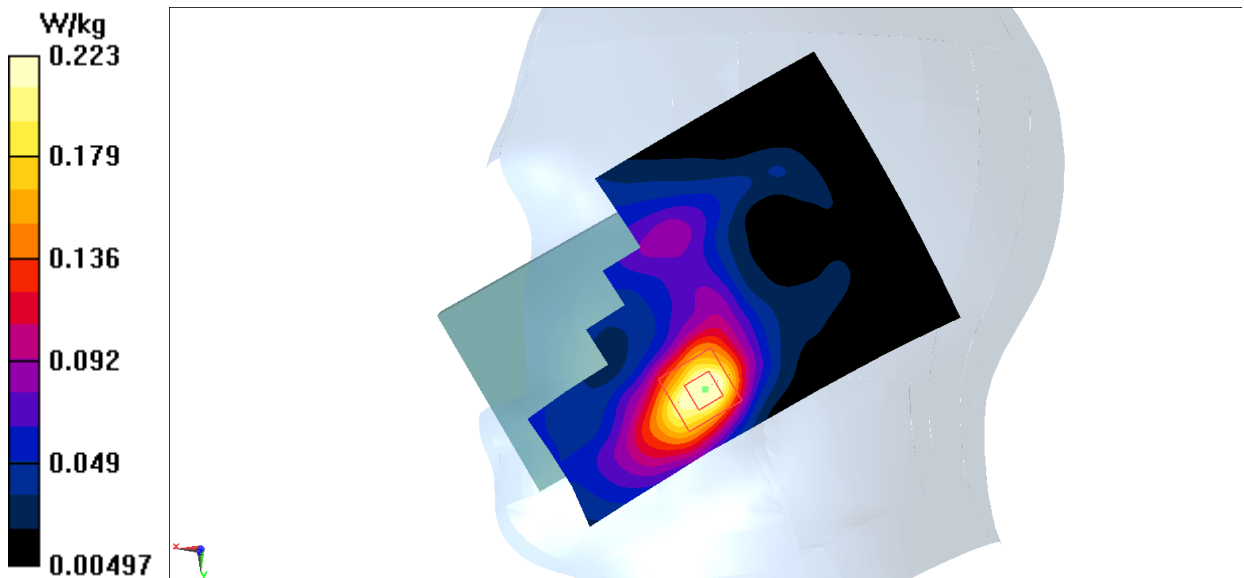


Fig.11 LTE Band2

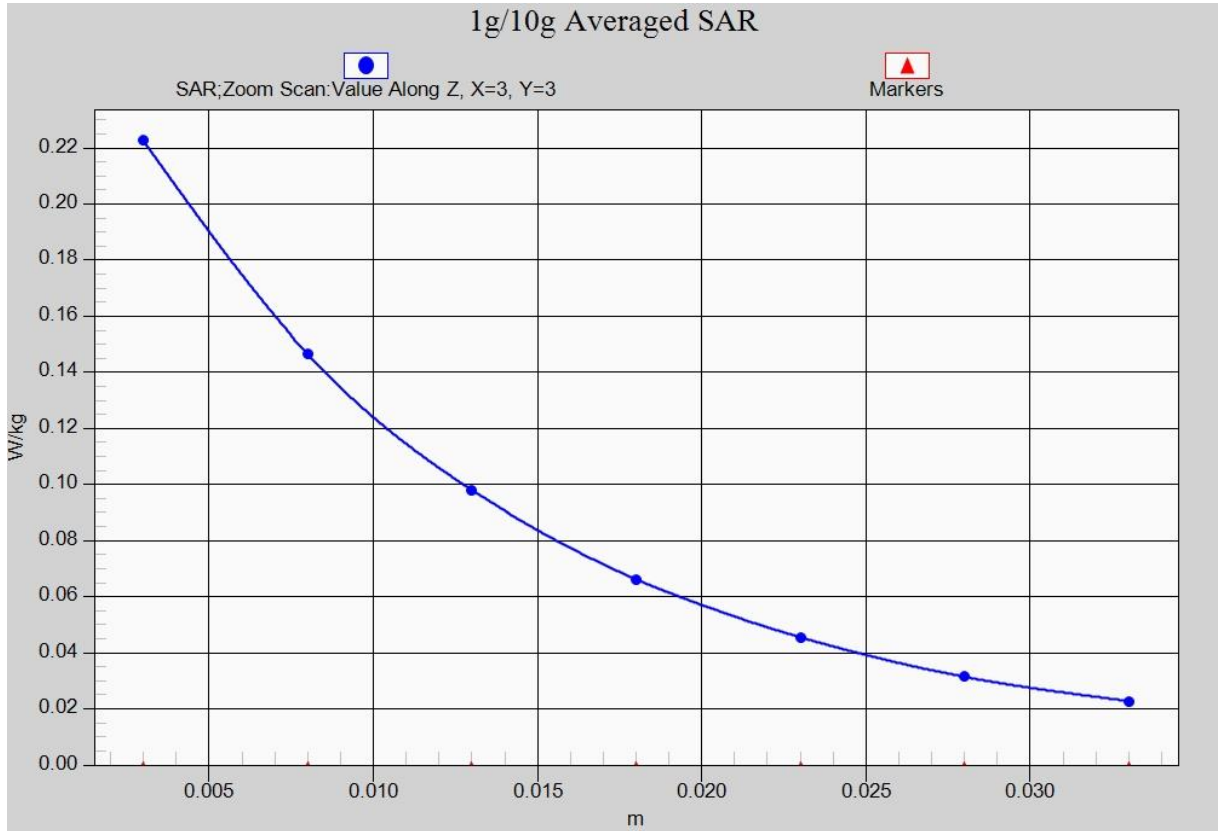


Fig. 11-1 Z-Scan at power reference point (LTE Band2)



**LTE Band2 Body Rear High with QPSK\_20M\_1RB\_Middle**

Date: 2018-5-28

Electronics: DAE4 Sn1525

Medium: Body 1900 MHz

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.548$  mho/m;  $\epsilon_r = 52.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band2 Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN7464 ConvF(8.32, 8.32, 8.32)

**Area Scan (71x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.17 W/kg

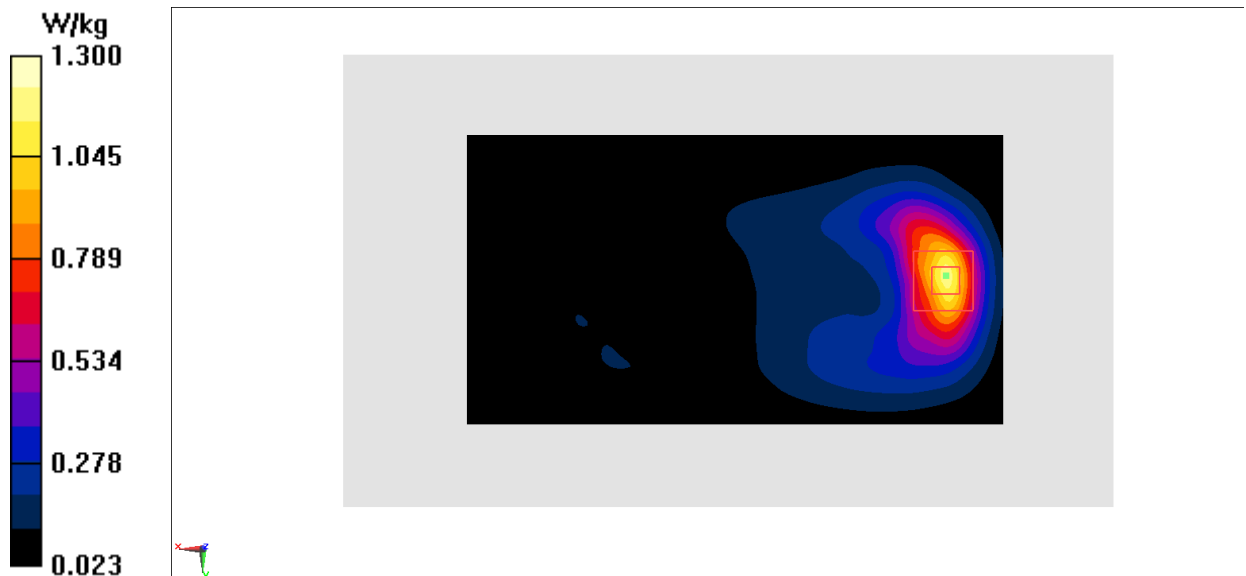
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.150 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.84 W/kg

SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.539 W/kg

Maximum value of SAR (measured) = 1.30 W/kg



**Fig.12 LTE Band2**

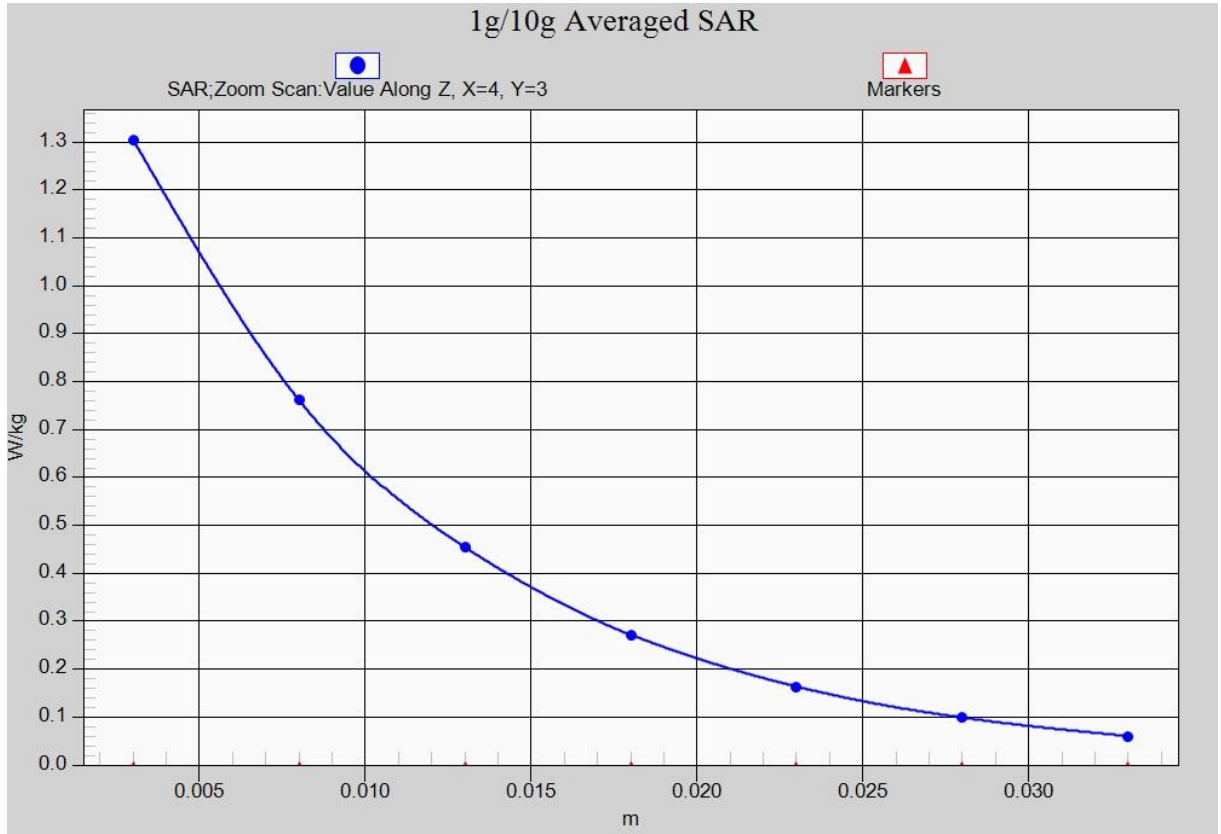


Fig. 12-1 Z-Scan at power reference point (LTE Band2)

### LTE Band5 Right Cheek Low with QPSK\_10M\_1RB\_High

Date: 2018-5-27

Electronics: DAE4 Sn1525

Medium: Head 850 MHz

Medium parameters used (interpolated):  $f = 829$  MHz;  $\sigma = 0.893$  mho/m;  $\epsilon_r = 42.061$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band5 Frequency: 829 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7464 ConvF(10.28, 10.28, 10.28)

**Area Scan (71x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.199 W/kg

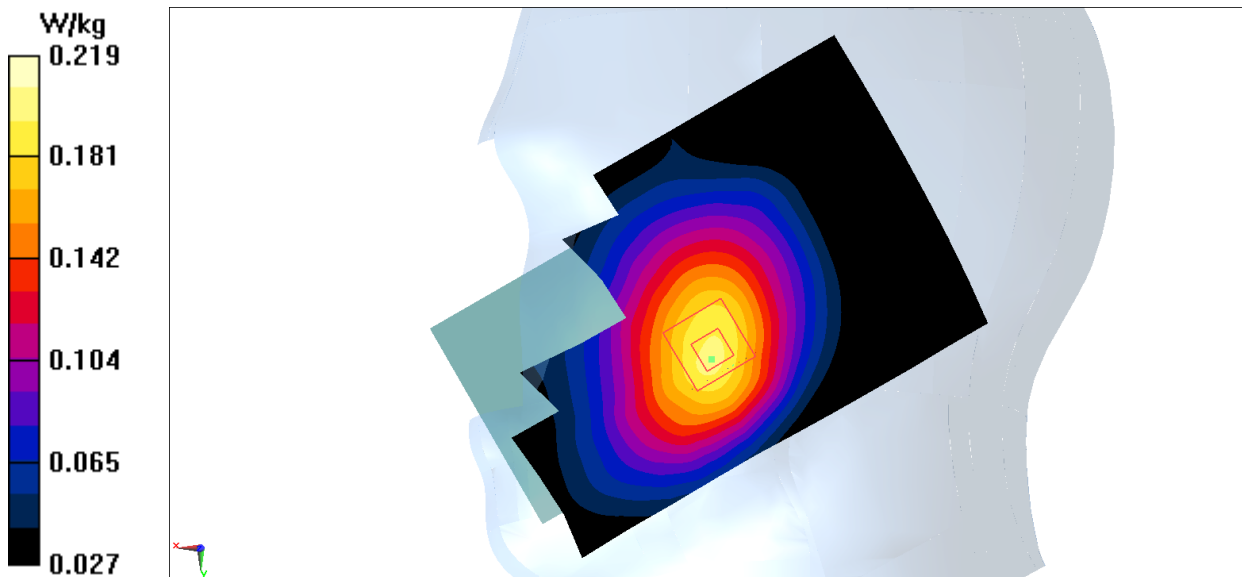
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.703 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.225 W/kg

SAR(1 g) = 0.182 W/kg; SAR(10 g) = 0.139 W/kg

Maximum value of SAR (measured) = 0.219 W/kg



**Fig.13 LTE Band5**

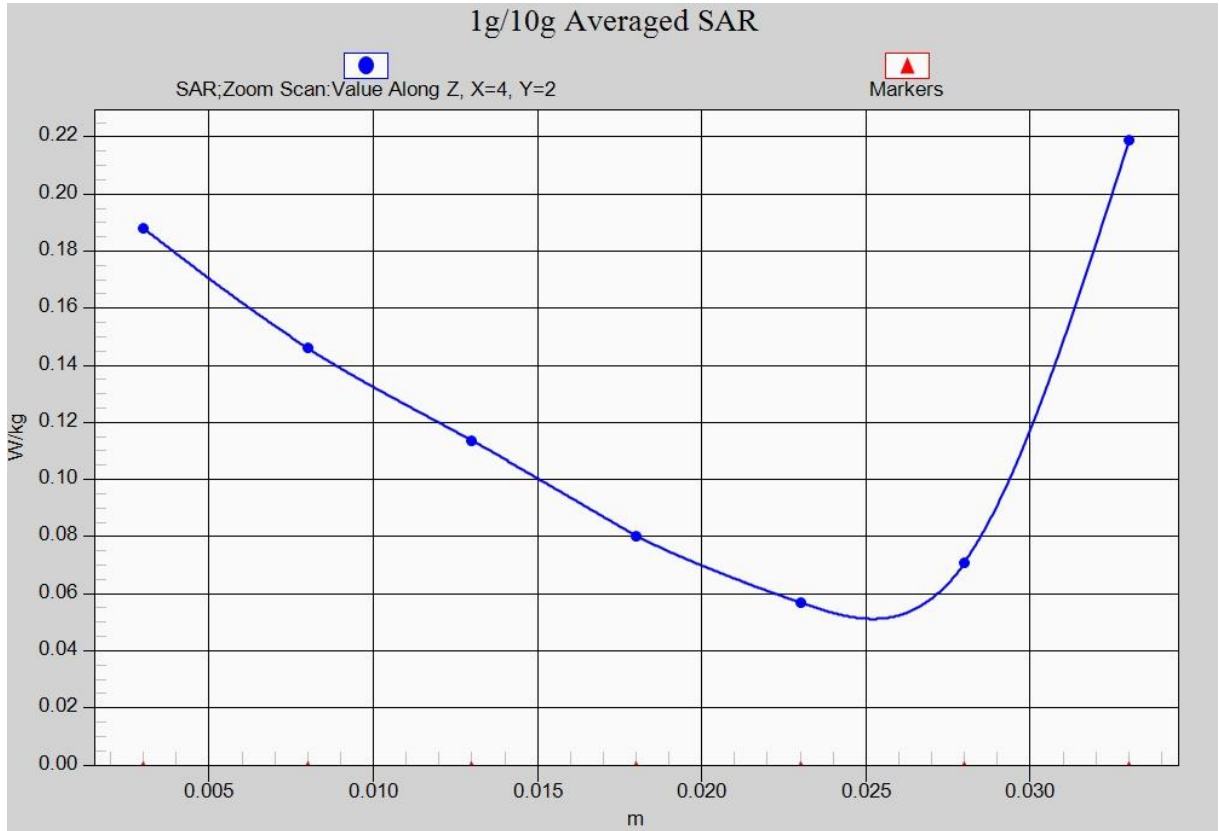


Fig. 13-1 Z-Scan at power reference point (LTE Band5)

### LTE Band5 Body Rear Low with QPSK\_10M\_1RB\_High

Date: 2018-5-27

Electronics: DAE4 Sn1525

Medium: Body 850 MHz

Medium parameters used (interpolated):  $f = 829$  MHz;  $\sigma = 1.012$  mho/m;  $\epsilon_r = 55.584$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band5 Frequency: 829 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7464 ConvF(10.21, 10.21, 10.21)

**Area Scan (71x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.323 W/kg

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

Reference Value = 18.21 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.367 W/kg

SAR(1 g) = 0.289 W/kg; SAR(10 g) = 0.222 W/kg

Maximum value of SAR (measured) = 0.318 W/kg

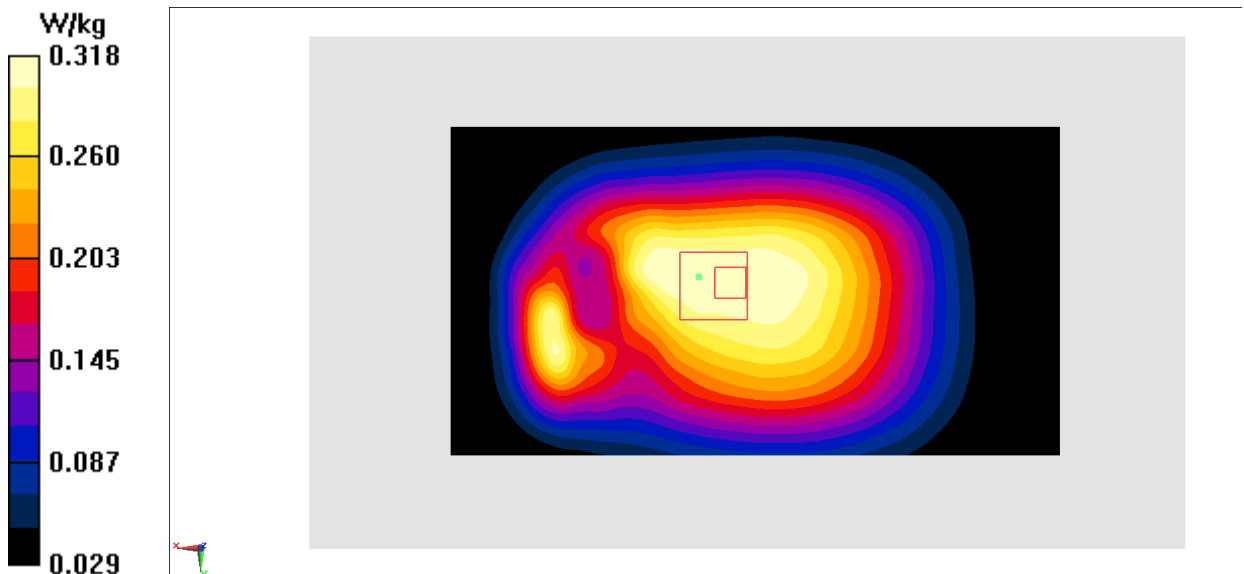


Fig.14 LTE Band5

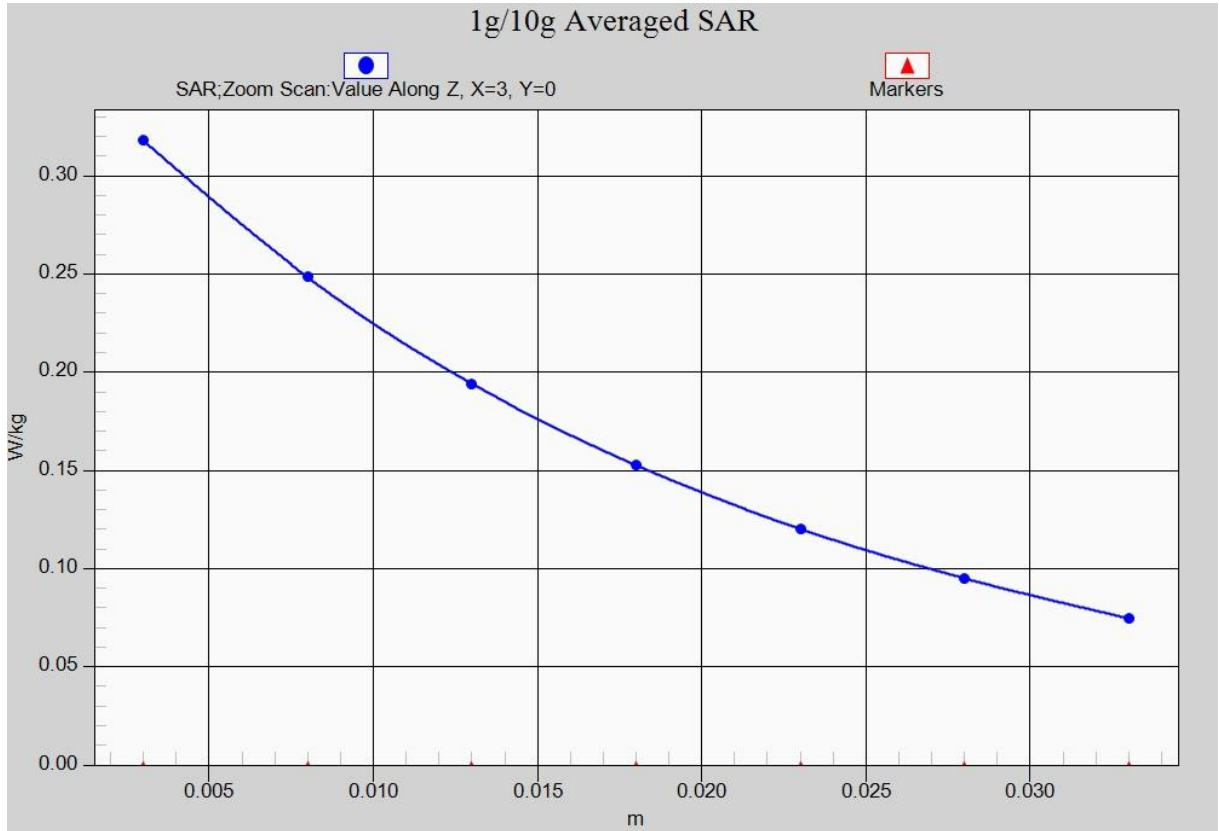


Fig. 14-1 Z-Scan at power reference point (LTE Band5)

### LTE Band7 Left Cheek Middle with QPSK\_20M\_1RB\_High

Date: 2018-5-30

Electronics: DAE4 Sn1525

Medium: Head 2600 MHz

Medium parameters used:  $f = 2535$  MHz;  $\sigma = 1.925$  mho/m;  $\epsilon_r = 38.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band7 Frequency: 2535 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN7464 ConvF(7.76, 7.76, 7.76)

**Area Scan (91x151x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.494 W/kg

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

Reference Value = 8.900 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.700 W/kg

SAR(1 g) = 0.362 W/kg; SAR(10 g) = 0.188 W/kg

Maximum value of SAR (measured) = 0.454 W/kg

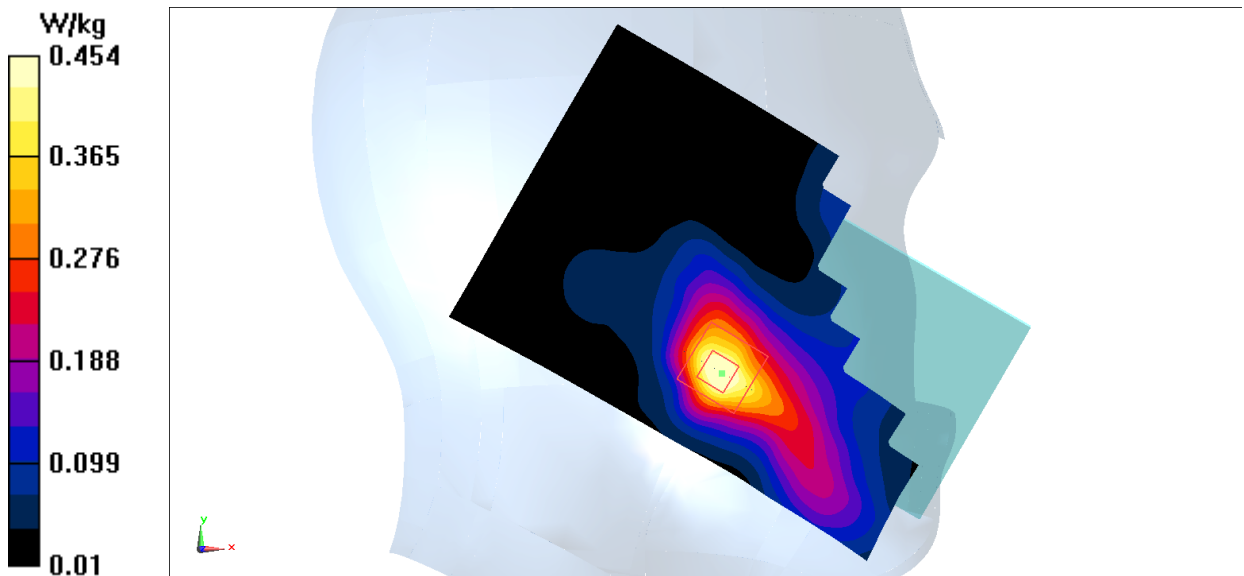


Fig.15 LTE Band7

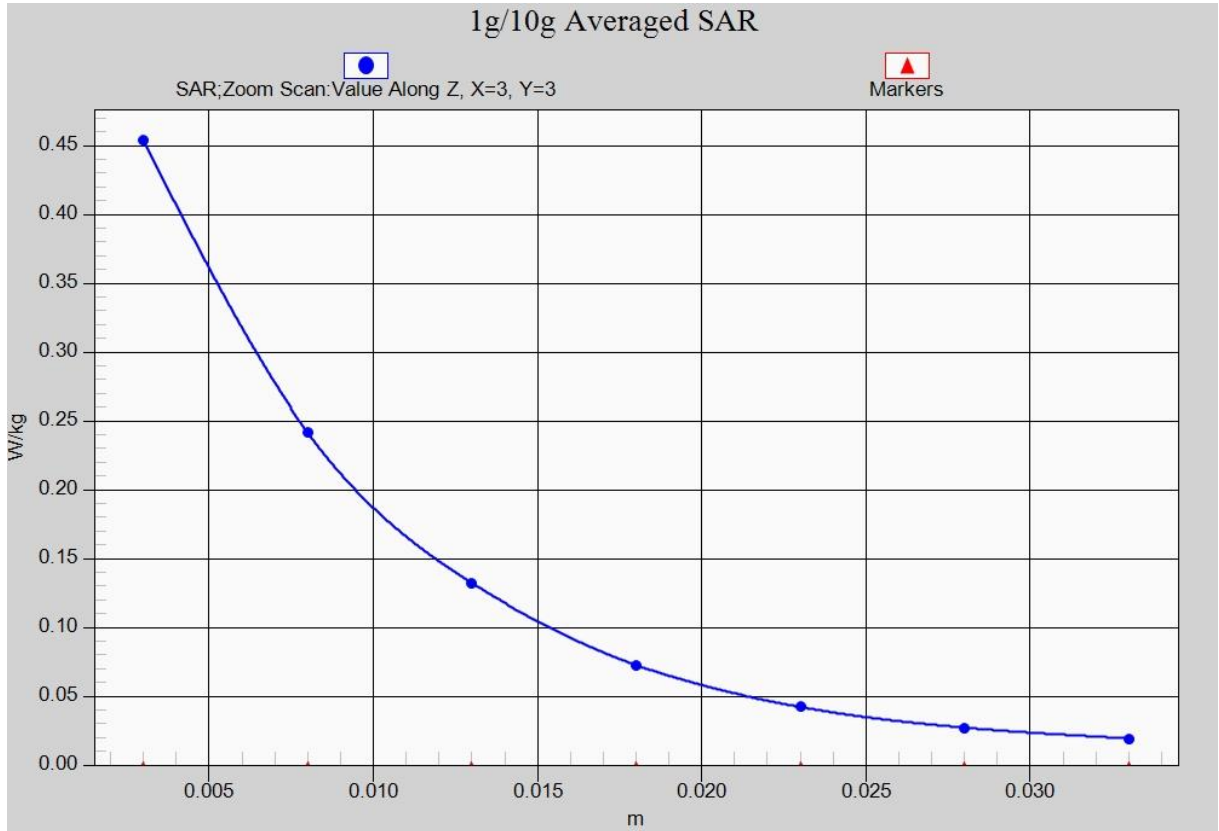


Fig. 15-1 Z-Scan at power reference point (LTE Band7)



### LTE Band7 Body Rear Middle with QPSK\_20M\_1RB\_High

Date: 2018-5-30

Electronics: DAE4 Sn1525

Medium: Body 2600 MHz

Medium parameters used:  $f = 2535$  MHz;  $\sigma = 2.212$  mho/m;  $\epsilon_r = 51.54$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band7 Frequency: 2535 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN7464 ConvF(7.84, 7.84, 7.84)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.995 W/kg

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

Reference Value = 7.931 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.38 W/kg

SAR(1 g) = 0.808 W/kg; SAR(10 g) = 0.442 W/kg

Maximum value of SAR (measured) = 0.989 W/kg

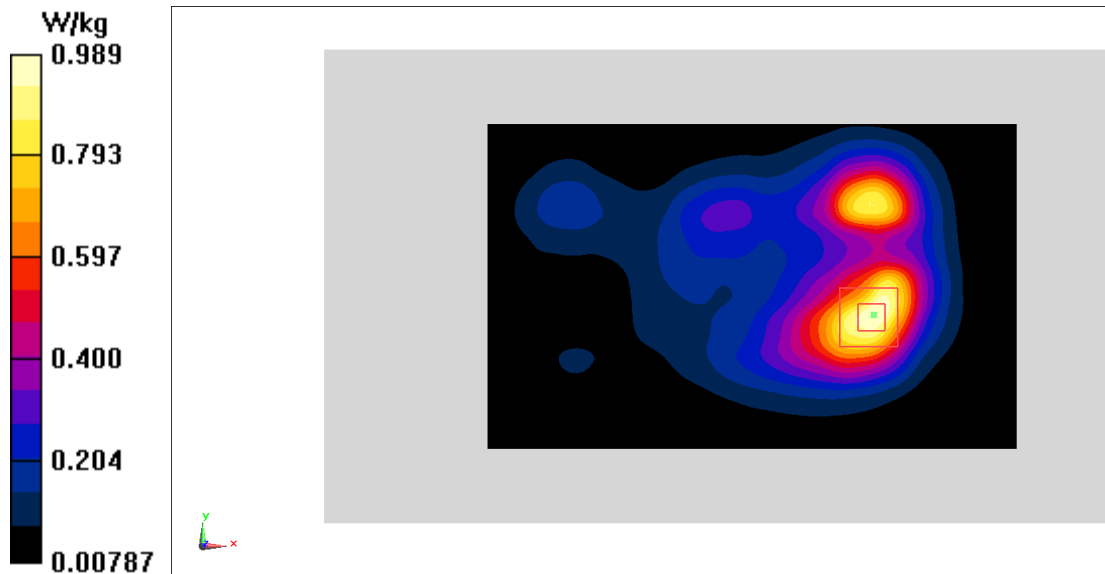


Fig.16 LTE Band7

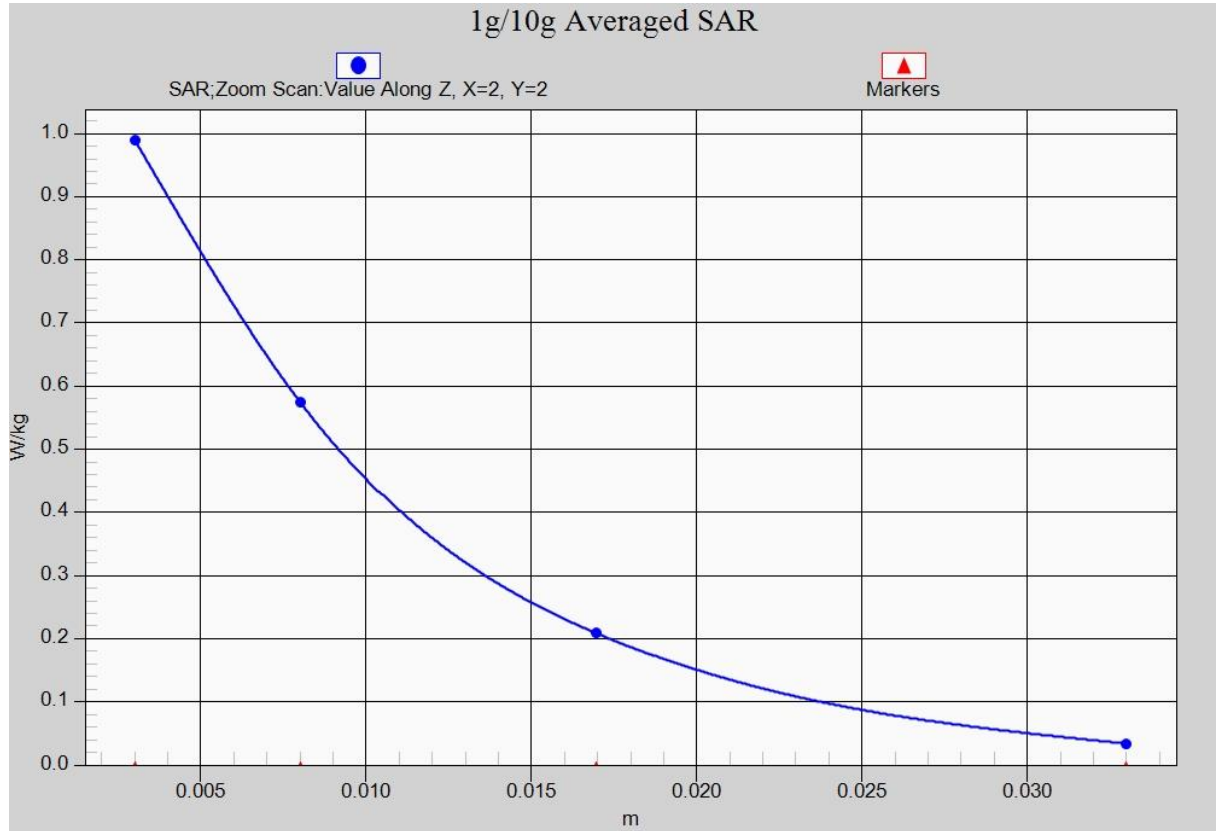


Fig. 16-1 Z-Scan at power reference point (LTE Band7)

### LTE Band12 Right Cheek High with QPSK\_10M\_1RB\_High

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Head 750 MHz

Medium parameters used (interpolated):  $f = 711$  MHz;  $\sigma = 0.859$  mho/m;  $\epsilon_r = 42.63$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band12 Frequency: 711 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN7464 ConvF(10.57, 10.57, 10.57)

**Area Scan (71x121x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm

Maximum value of SAR (interpolated) = 0.147 W/kg

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

Reference Value = 4.452 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.165 W/kg

SAR(1 g) = 0.135 W/kg; SAR(10 g) = 0.105 W/kg

Maximum value of SAR (measured) = 0.146 W/kg

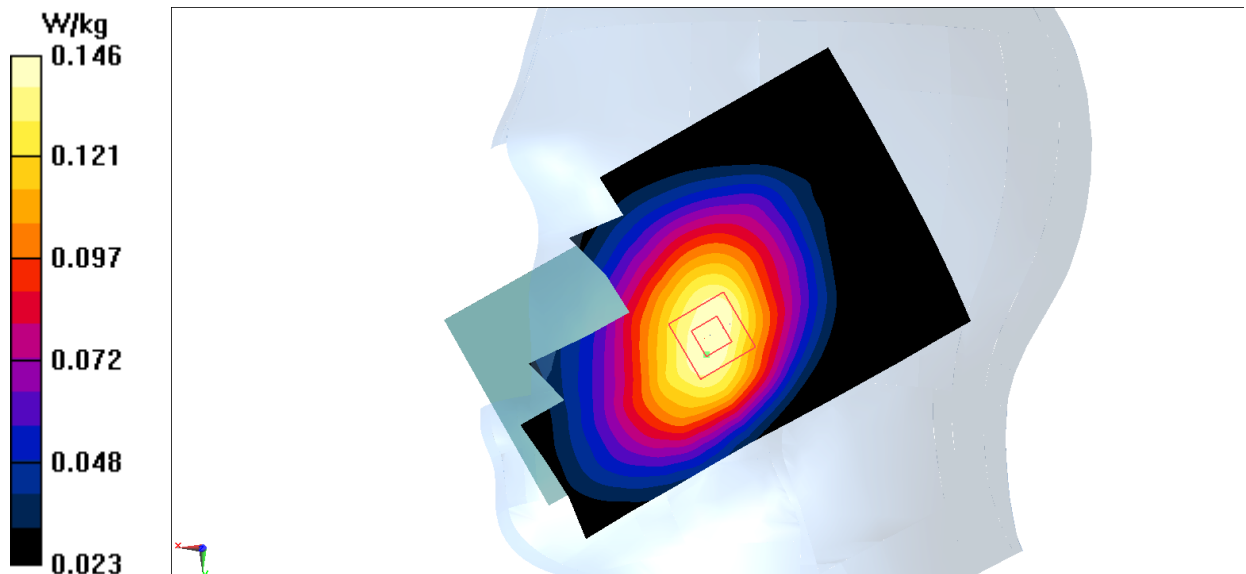


Fig.17 LTE Band12

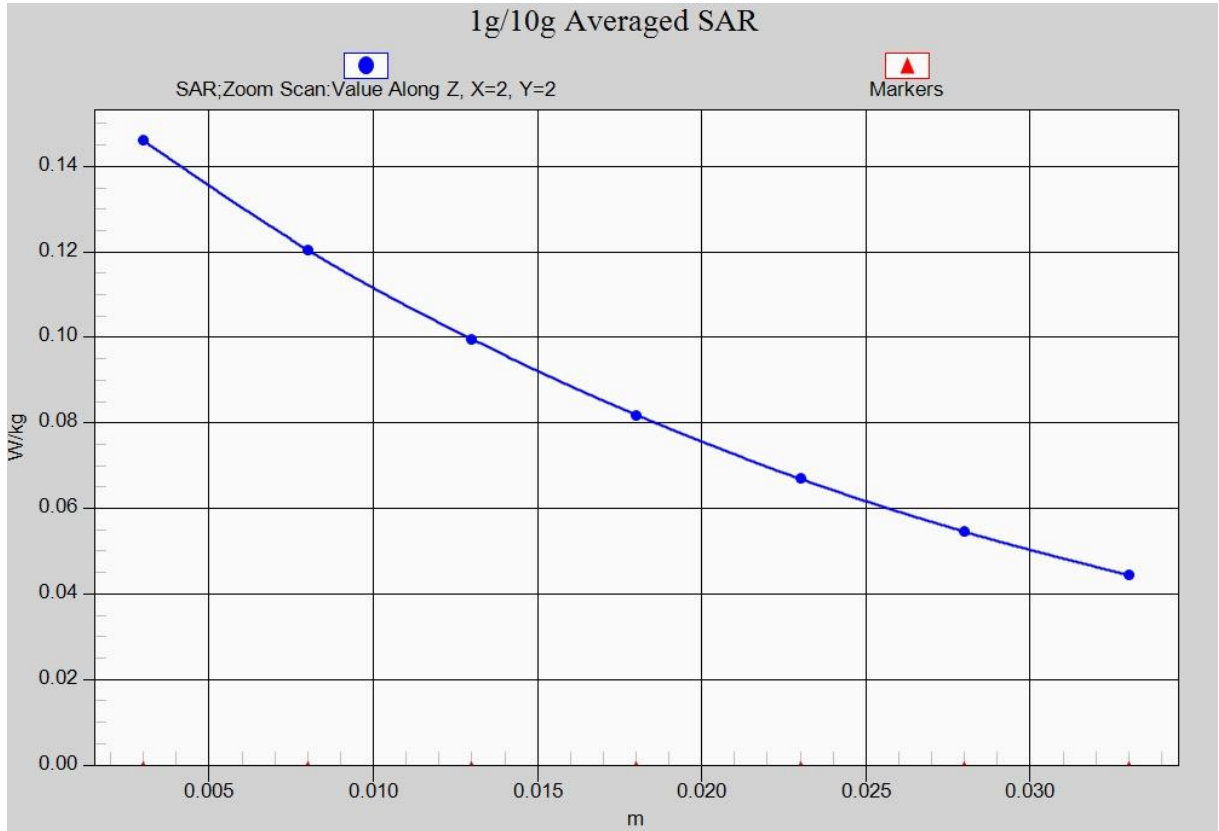


Fig. 17-1 Z-Scan at power reference point (LTE Band12)

### LTE Band12 Body Rear High with QPSK\_10M\_1RB\_High

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Body750 MHz

Medium parameters used (interpolated):  $f = 711$  MHz;  $\sigma = 0.944$  mho/m;  $\epsilon_r = 56.56$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band12 Frequency: 711 MHz Duty Cycle: 1:1

Probe: EX3DV4- SN7464 ConvF(10.63, 10.63, 10.63)

**Area Scan (71x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.376 W/kg

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

Reference Value = 19.93 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.428 W/kg

SAR(1 g) = 0.346 W/kg; SAR(10 g) = 0.270 W/kg

Maximum value of SAR (measured) = 0.375 W/kg

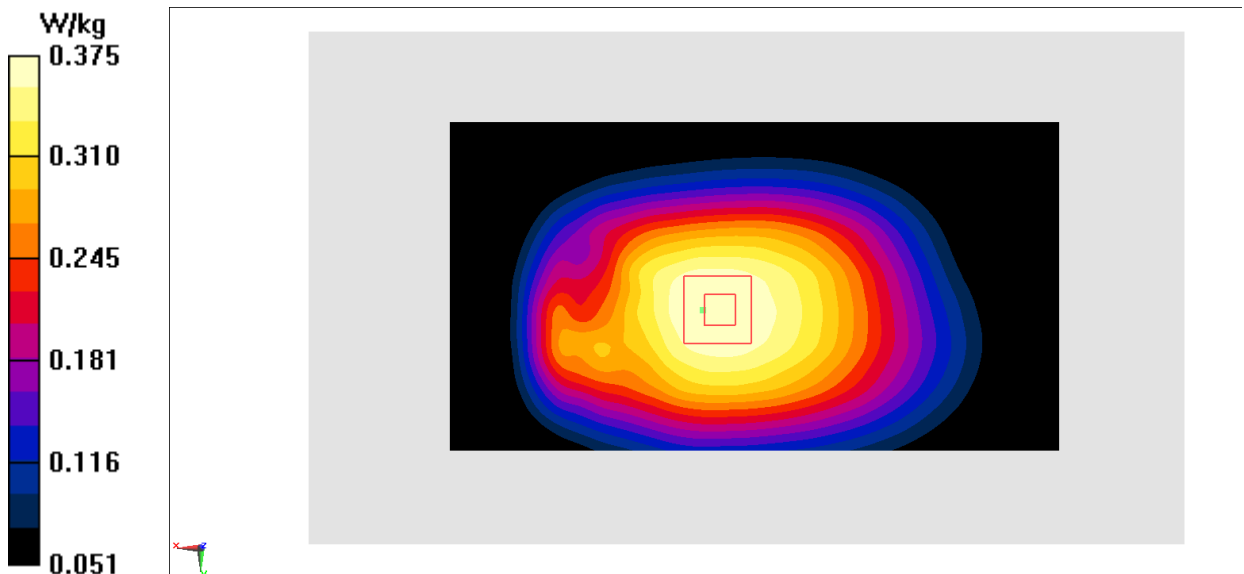


Fig.18 LTE Band12

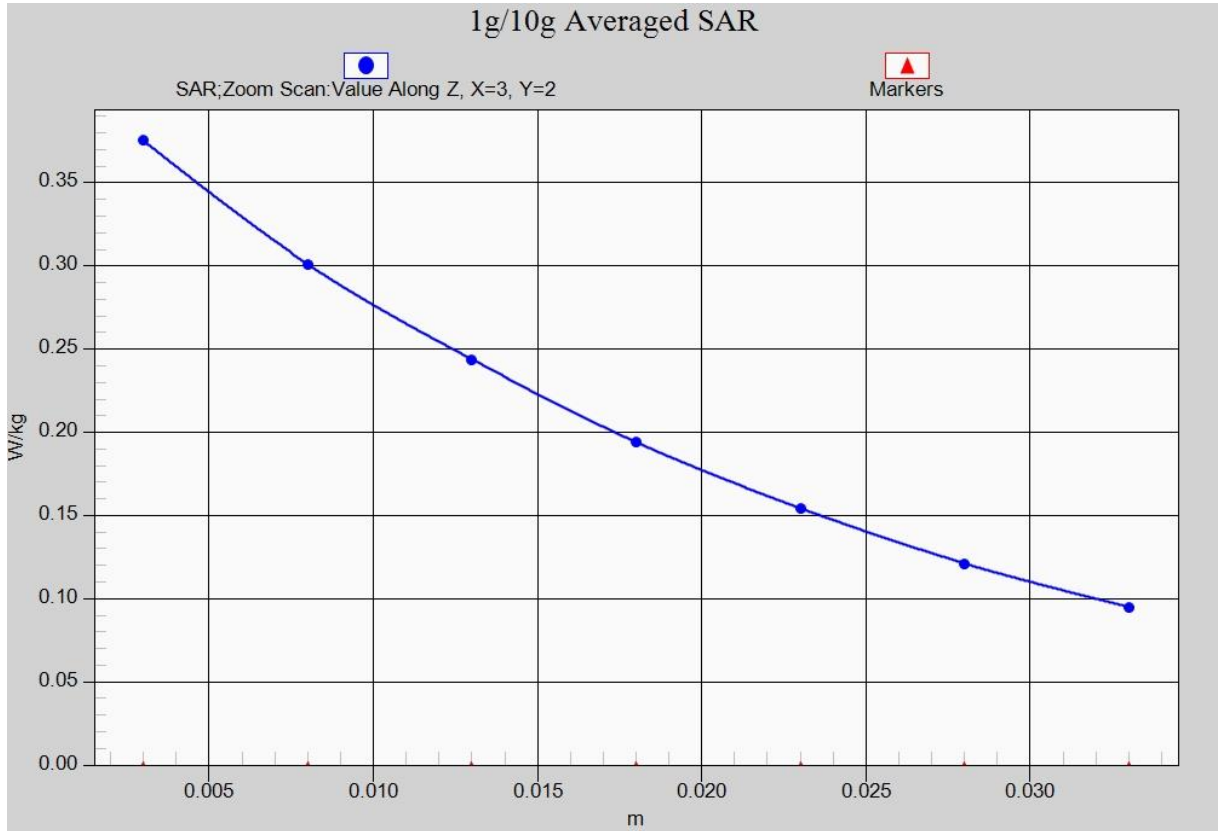


Fig. 18-1 Z-Scan at power reference point (LTE Band12)

### LTE Band13 Right Cheek with QPSK\_10M\_1RB\_Low

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Head 750 MHz

Medium parameters used (interpolated):  $f = 782$  MHz;  $\sigma = 0.887$  mho/m;  $\epsilon_r = 42.48$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band13 Frequency: 782 MHz Duty Cycle: 1:1

Probe: EX3DV4- SN7464 ConvF(10.57, 10.57, 10.57)

**Area Scan (71x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.150 W/kg

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

Reference Value = 3.856 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.170 W/kg

SAR(1 g) = 0.134 W/kg; SAR(10 g) = 0.103 W/kg

Maximum value of SAR (measured) = 0.146 W/kg

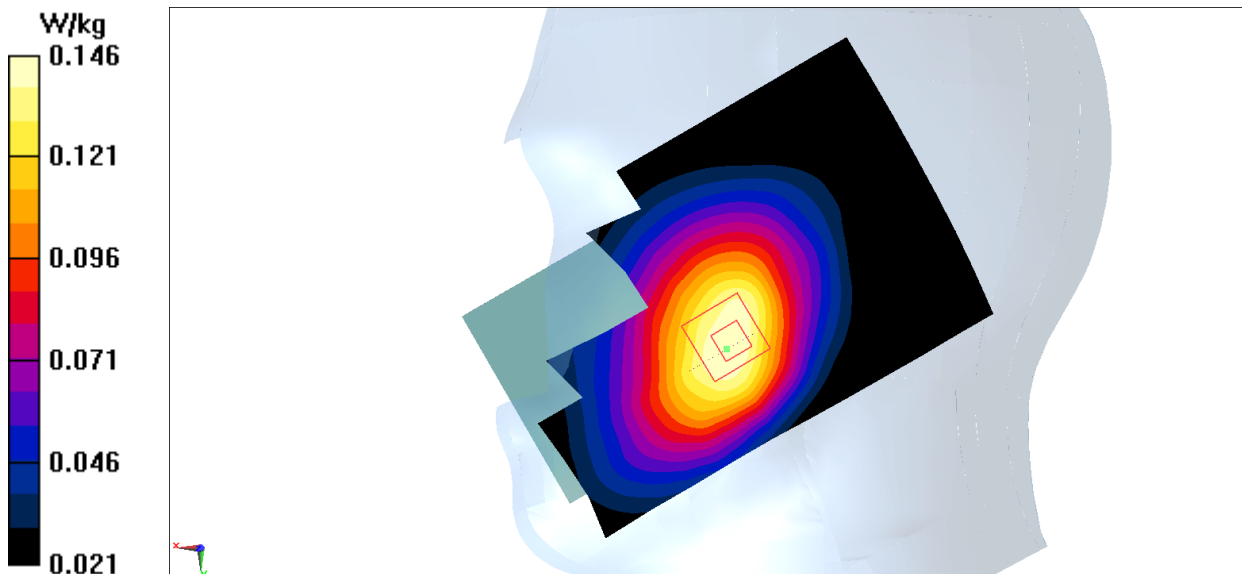


Fig.19 LTE Band13

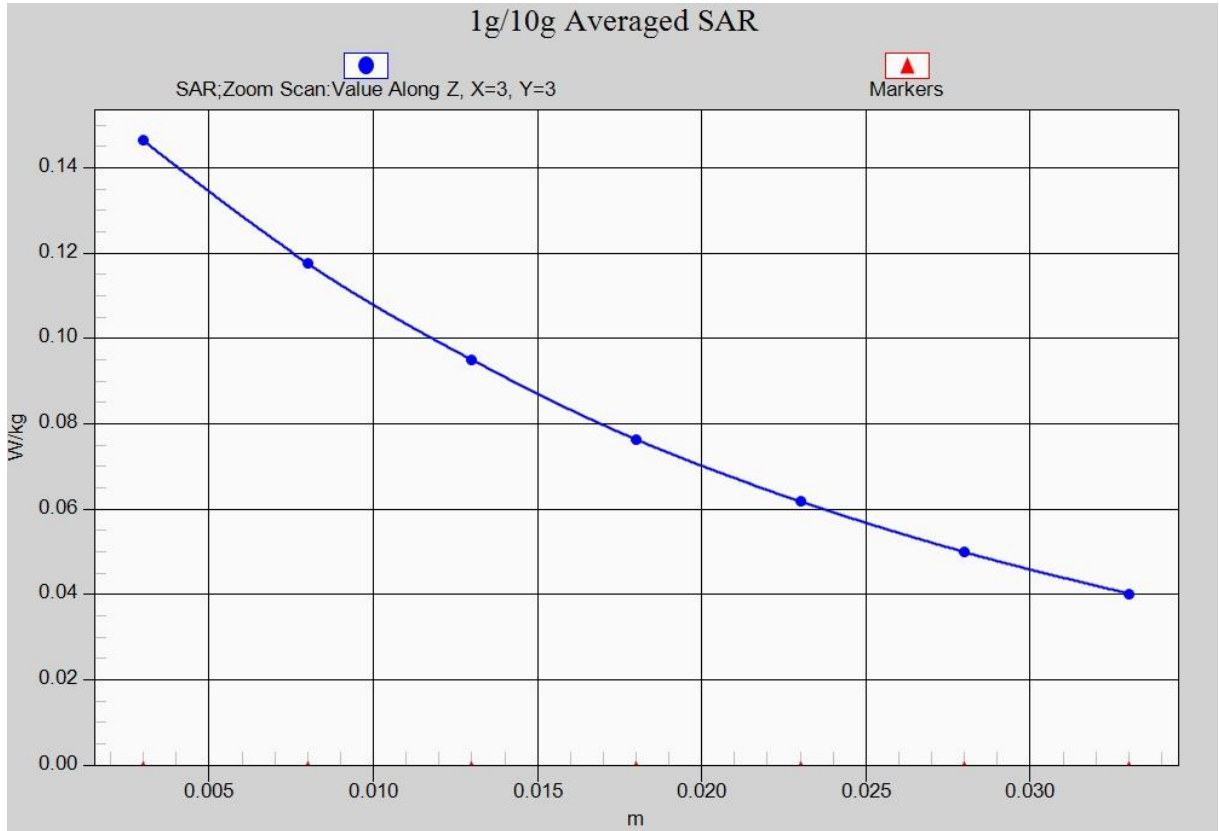


Fig. 19-1 Z-Scan at power reference point (LTE Band13)



### LTE Band13 Body Rear with QPSK\_10M\_1RB\_Low

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Body 750 MHz

Medium parameters used (interpolated):  $f = 782$  MHz;  $\sigma = 0.971$  mho/m;  $\epsilon_r = 56.47$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band13 Frequency: 782 MHz Duty Cycle: 1:1

Probe: EX3DV4– SN7464 ConvF(10.63, 10.63, 10.63)

**Area Scan (71x131x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.321 W/kg

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

Reference Value = 17.39 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.537 W/kg

SAR(1 g) = 0.298 W/kg; SAR(10 g) = 0.167 W/kg

Maximum value of SAR (measured) = 0.359 W/kg

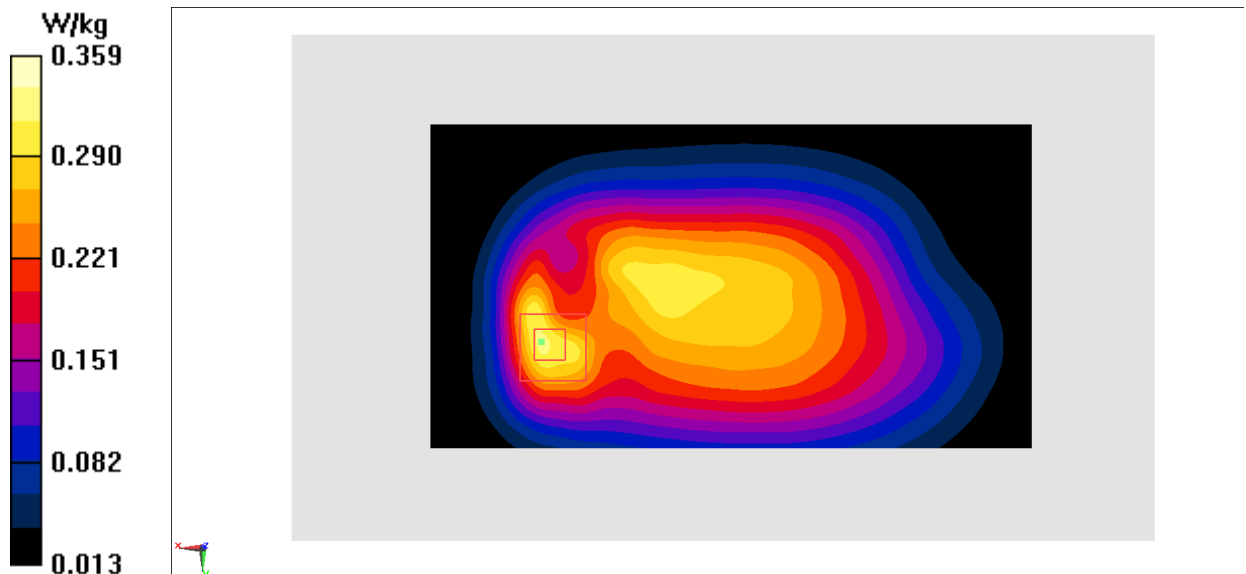


Fig.20 LTE Band13

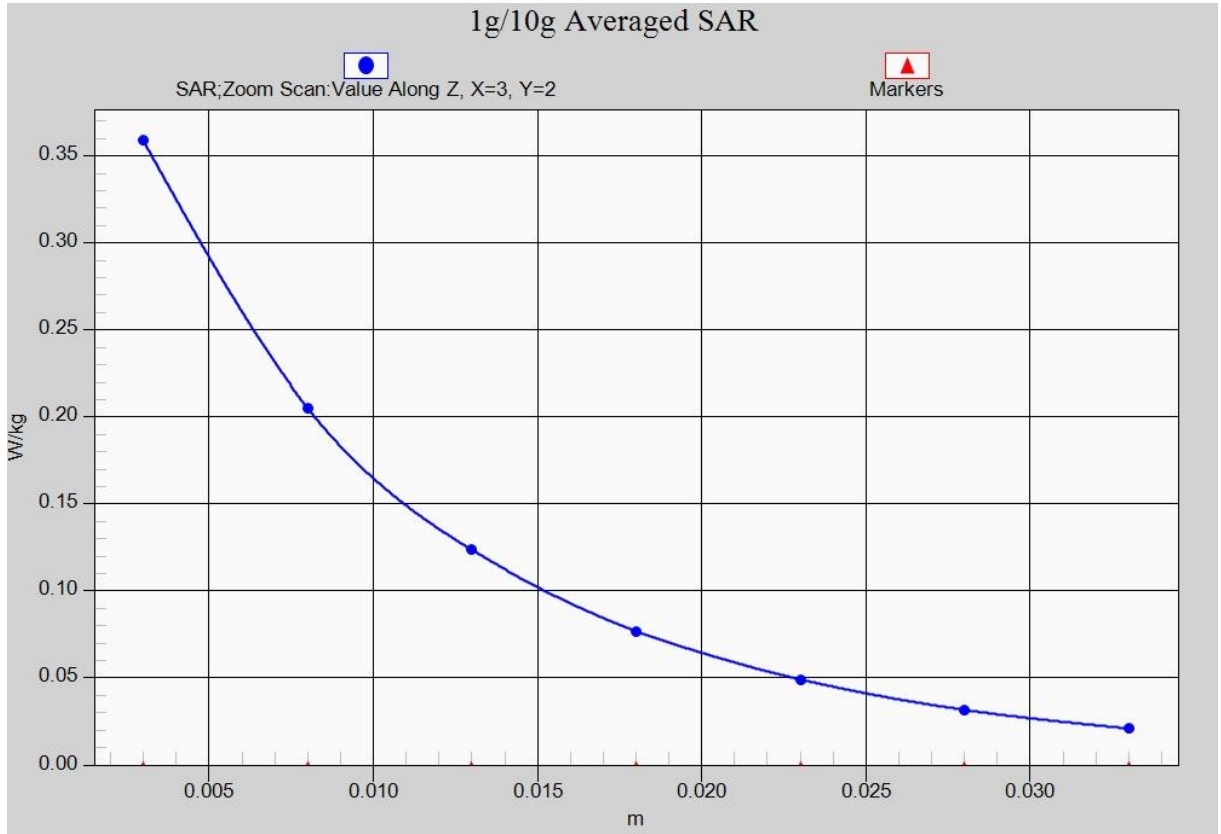


Fig. 20-1 Z-Scan at power reference point (LTE Band13)

### LTE Band 41 Left Cheek with QPSK\_20M\_1RB\_Low

Date: 2018-5-30

Electronics: DAE4 Sn1525

Medium: Head 2600 MHz

Medium parameters used:  $f = 2680$  MHz;  $\sigma = 2.008$  mho/m;  $\epsilon_r = 38.98$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band41 Frequency: 2680 MHz Duty Cycle: 1:1.58

Probe: EX3DV4 - SN7464 ConvF(7.76, 7.76, 7.76)

**Area Scan (91x151x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.208 W/kg

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

Reference Value = 9.173 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.318 W/kg

SAR(1 g) = 0.155 W/kg; SAR(10 g) = 0.077 W/kg

Maximum value of SAR (measured) = 0.199 W/kg

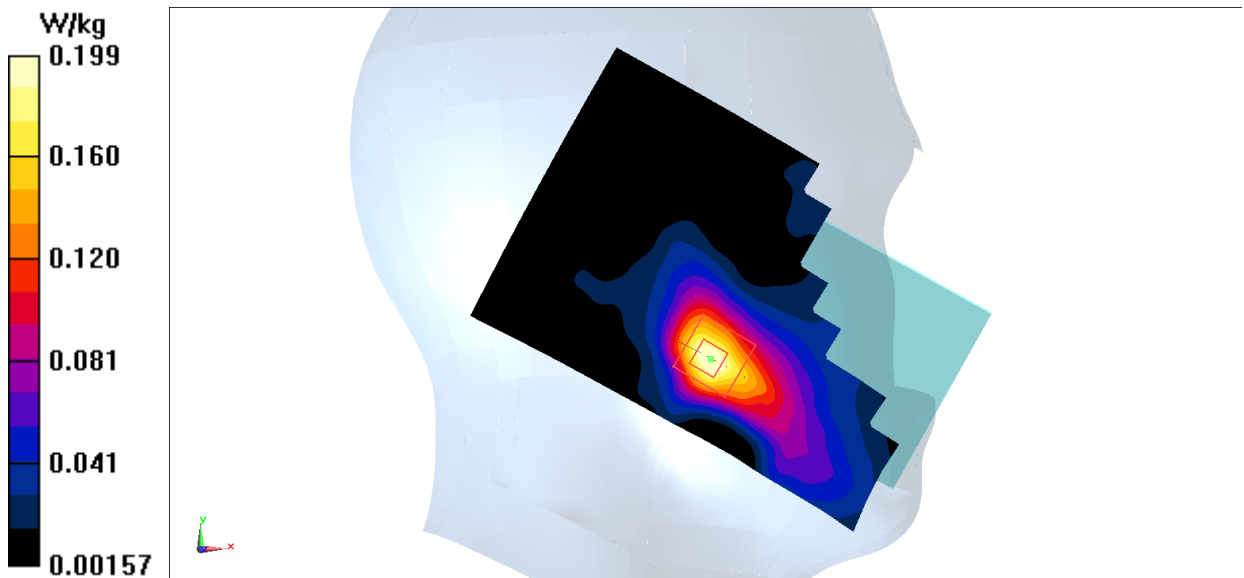


Fig.21 LTE Band 41

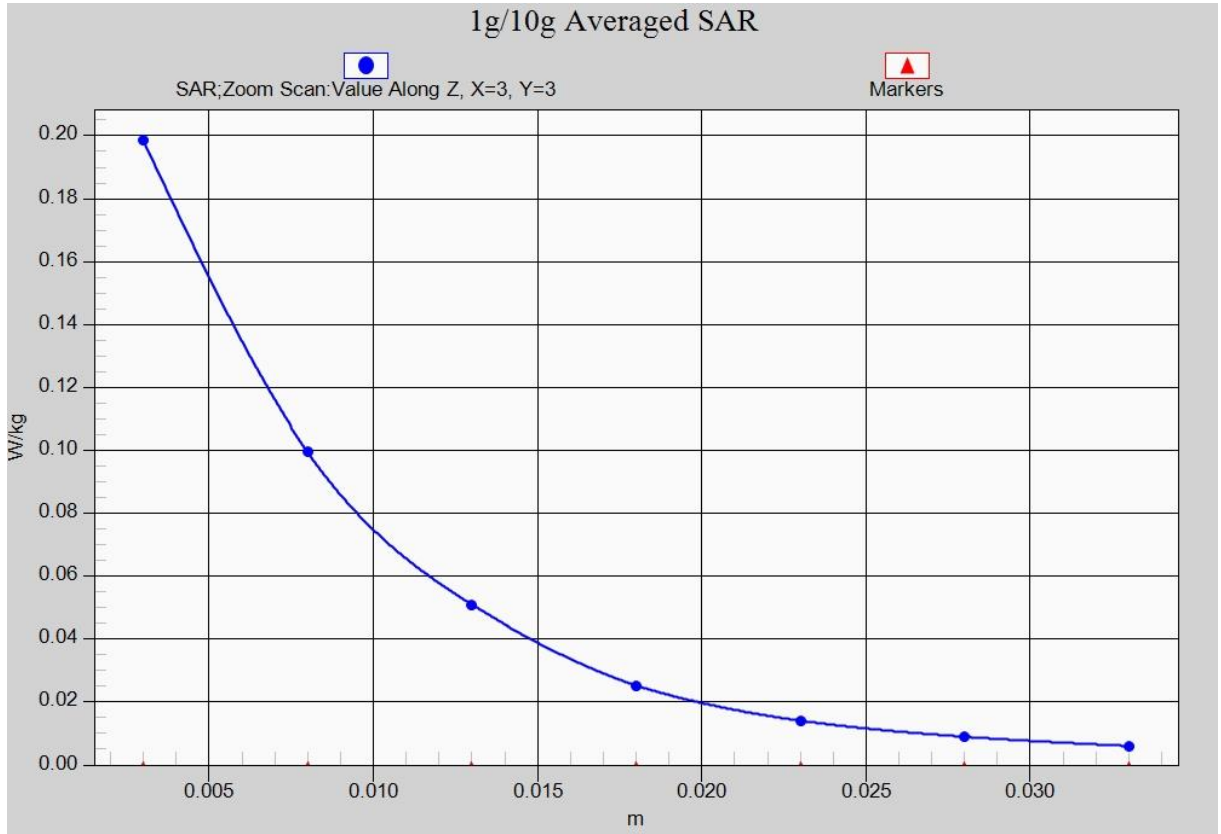


Fig. 21-1 Z-Scan at power reference point (LTE Band 41)

### LTE Band 41 Body Bottom with QPSK\_20M\_1RB\_Low

Date: 2018-5-30

Electronics: DAE4 Sn1525

Medium: Body 2600 MHz

Medium parameters use:  $f = 2680$  MHz;  $\sigma = 2.306$  mho/m;  $\epsilon_r = 51.329$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band41 Frequency: 2680 MHz Duty Cycle: 1:1.58

Probe: EX3DV4 - SN7464 ConvF(7.84, 7.84, 7.84)

**Area Scan (91x31x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.438 W/kg

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

Reference Value = 7.208 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.639 W/kg

SAR(1 g) = 0.333 W/kg; SAR(10 g) = 0.163 W/kg

Maximum value of SAR (measured) = 0.432 W/kg

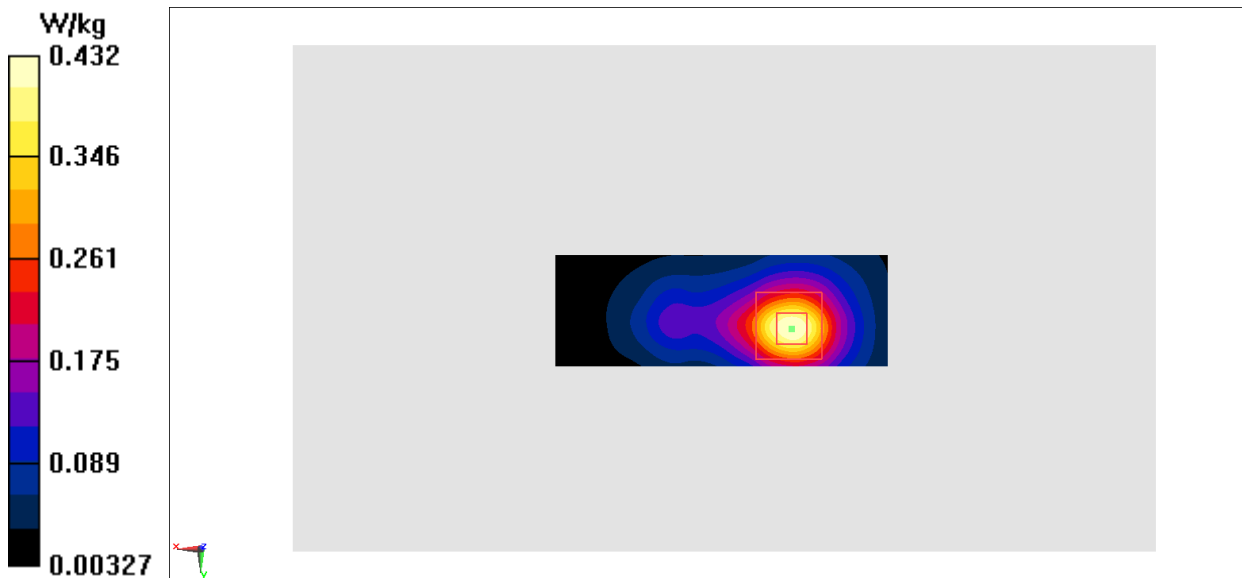


Fig.22 LTE Band 41

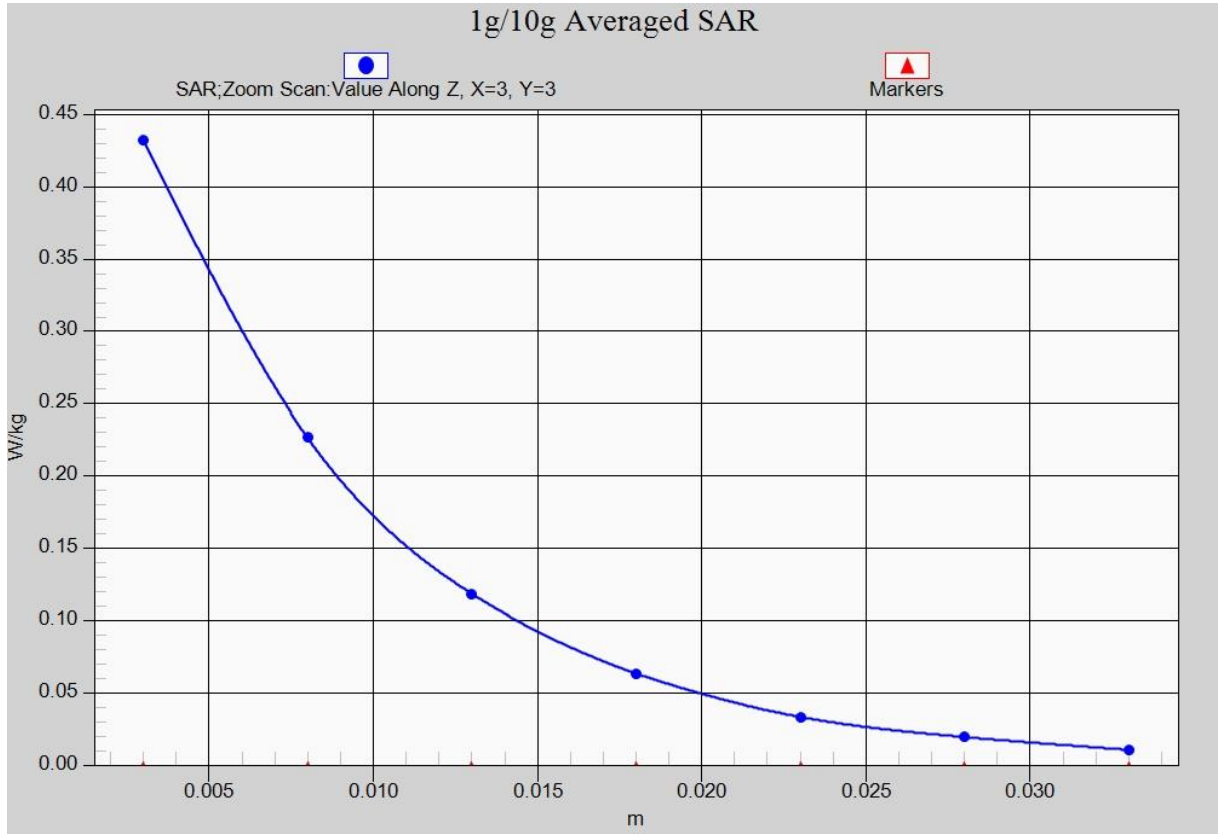


Fig. 22-1 Z-Scan at power reference point (LTE Band 41)

### LTE Band66 Right Cheek Low with QPSK\_20M\_1RB\_Middle

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Head 1750 MHz

Medium parameters used  $f = 1720$  MHz;  $\sigma = 1.378$  mho/m;  $\epsilon_r = 40.715$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band66 Frequency: 1720 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(8.70, 8.70, 8.70)

**Area Scan (71x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.266 W/kg

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

Reference Value = 5.709 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.320 W/kg

SAR(1 g) = 0.214 W/kg; SAR(10 g) = 0.134 W/kg

Maximum value of SAR (measured) = 0.252 W/kg

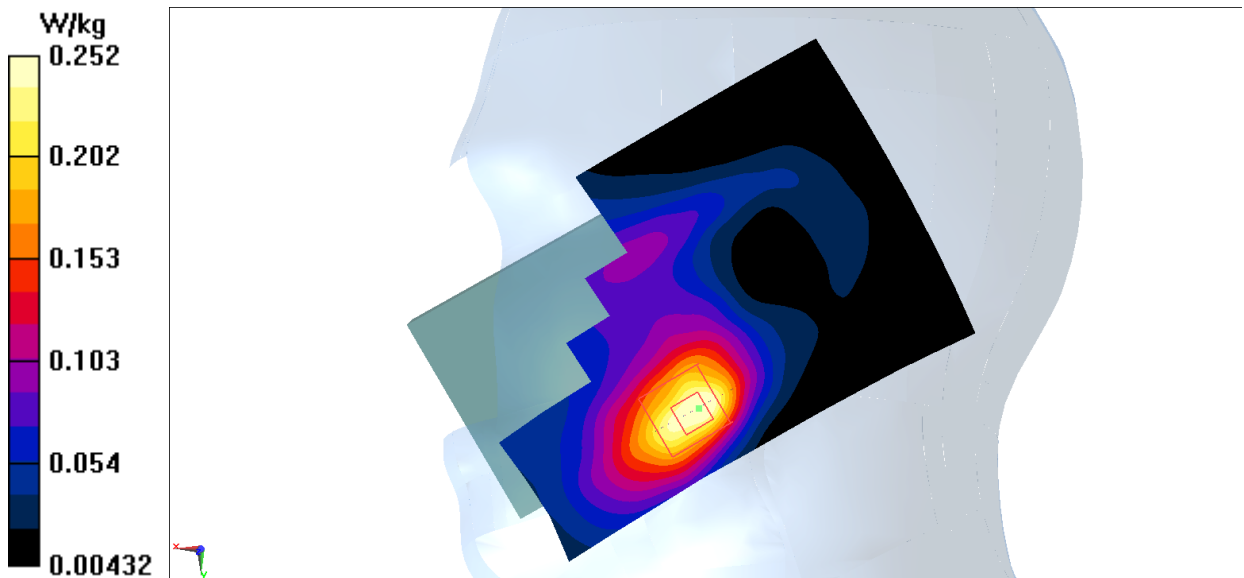


Fig.23 LTE Band66

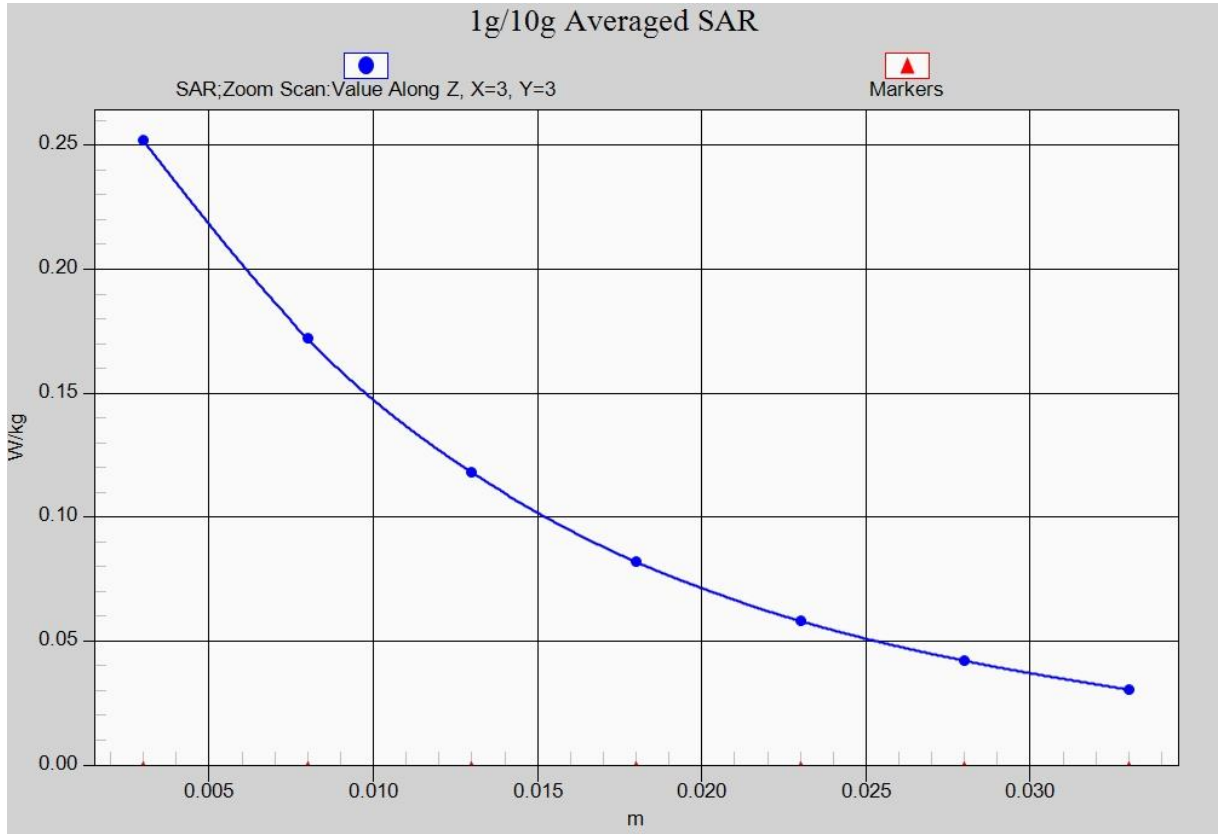


Fig. 23-1 Z-Scan at power reference point (LTE Band66)



### LTE Band66 Body Rear Low with QPSK\_20M\_1RB\_Middle

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Body 1750 MHz

Medium parameters used:  $f = 1720$  MHz;  $\sigma = 1.524$  mho/m;  $\epsilon_r = 53.504$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: LTE Band66 Frequency: 1720 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(8.60, 8.60, 8.60)

**Area Scan (131x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.19 W/kg

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

Reference Value = 8.629 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.64 W/kg

SAR(1 g) = 0.926 W/kg; SAR(10 g) = 0.496 W/kg

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

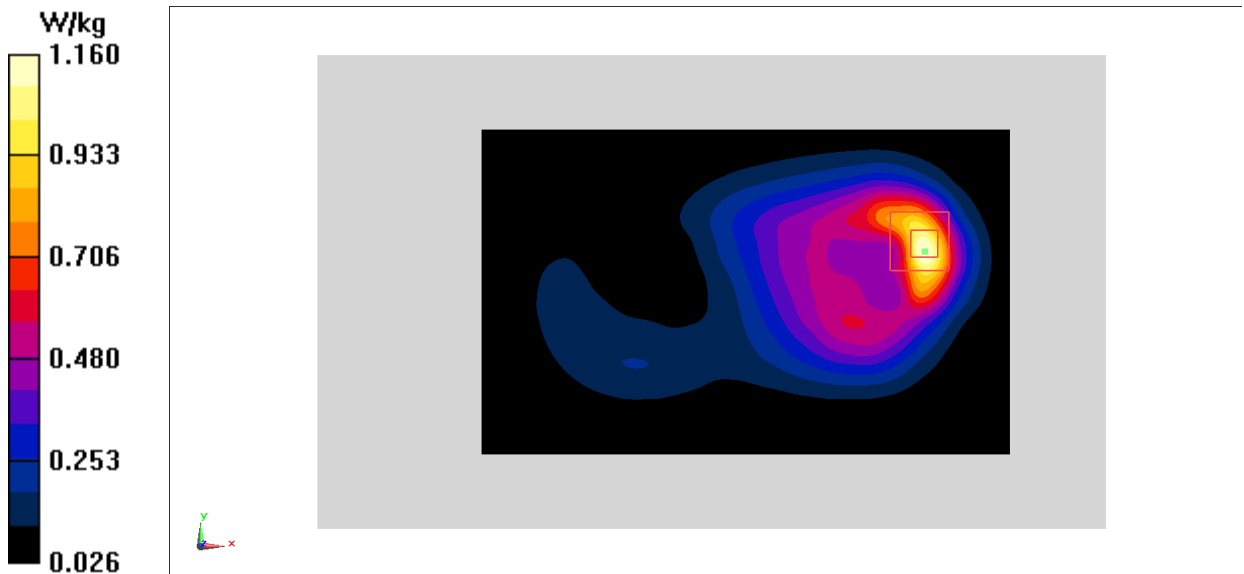


Fig.24 LTE Band66

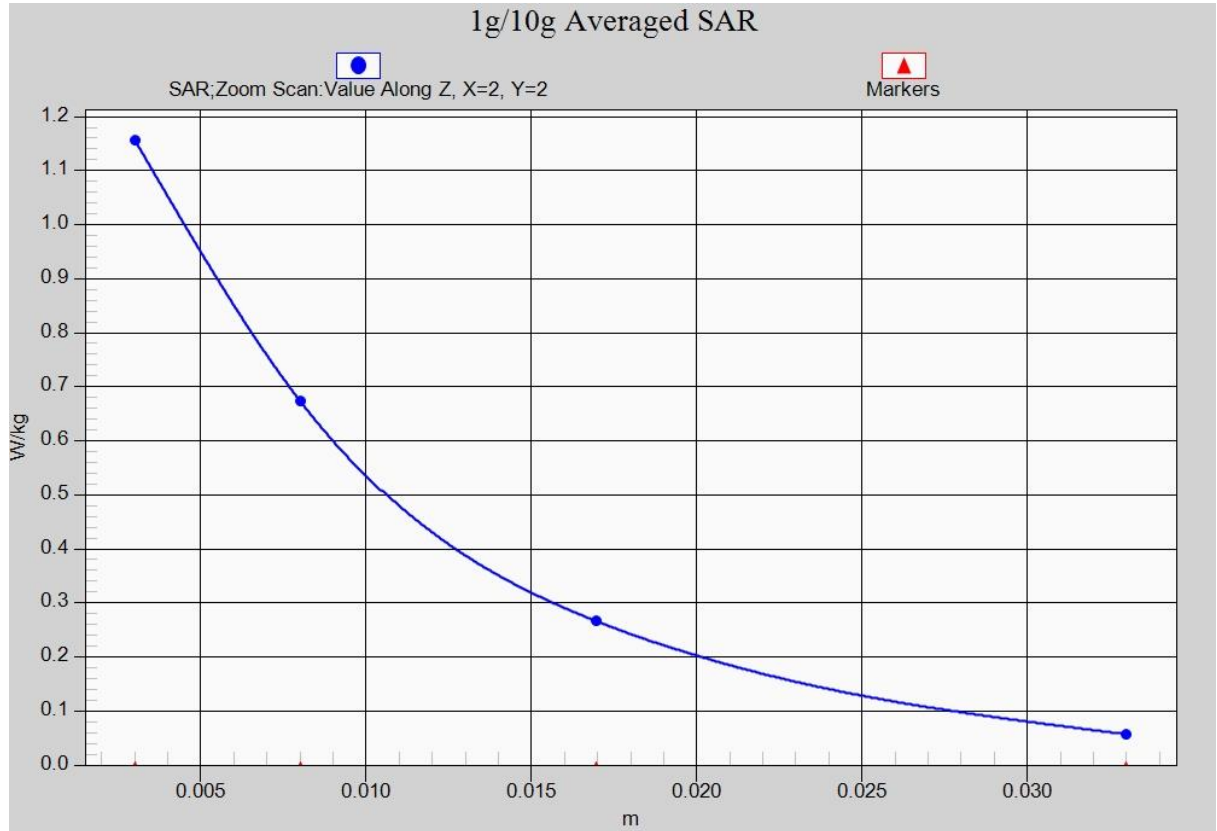


Fig. 24-1 Z-Scan at power reference point (LTE Band66)

### Wifi 802.11b Left Tilt Channel 1

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Head 2450 MHz

Medium parameters used (interpolated):  $f = 2412$  MHz;  $\sigma = 1.794$  mho/m;  $\epsilon_r = 38.85$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WLAN 2450 Frequency: 2412 MHz Duty Cycle: 1:1

Probe: EX3DV4- SN7464 ConvF(7.89, 7.89, 7.89)

**Area Scan (91x151x1):** 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 = 15.88 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.81 W/kg

SAR(1 g) = 0.812 W/kg; SAR(10 g) = 0.341 W/kg

Maximum value of SAR (measured) = 1.13 W/kg

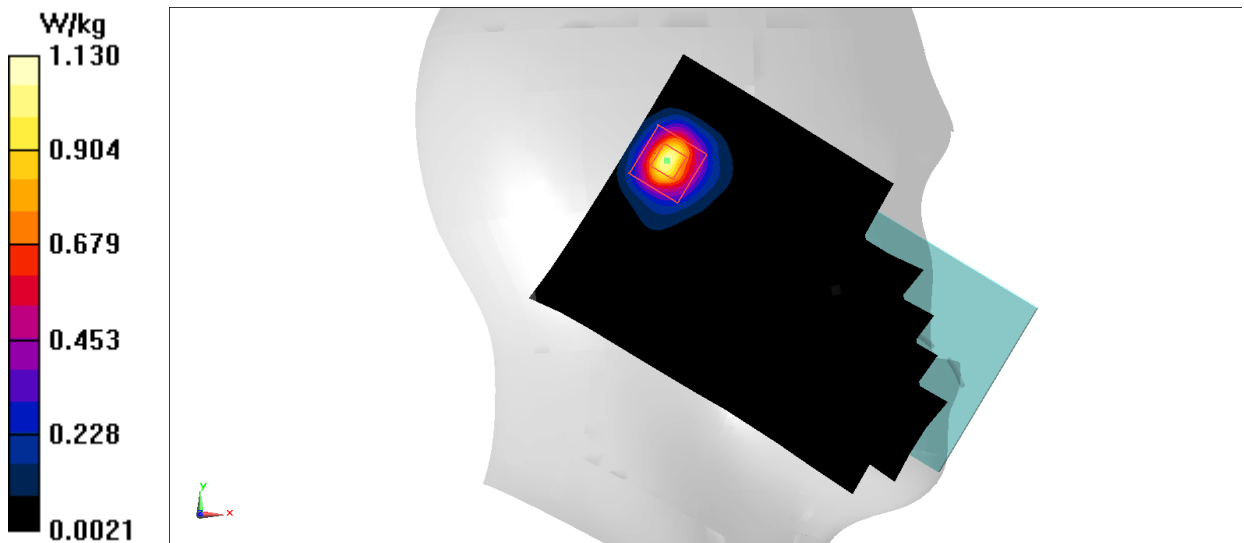


Fig.25 2450 MHz

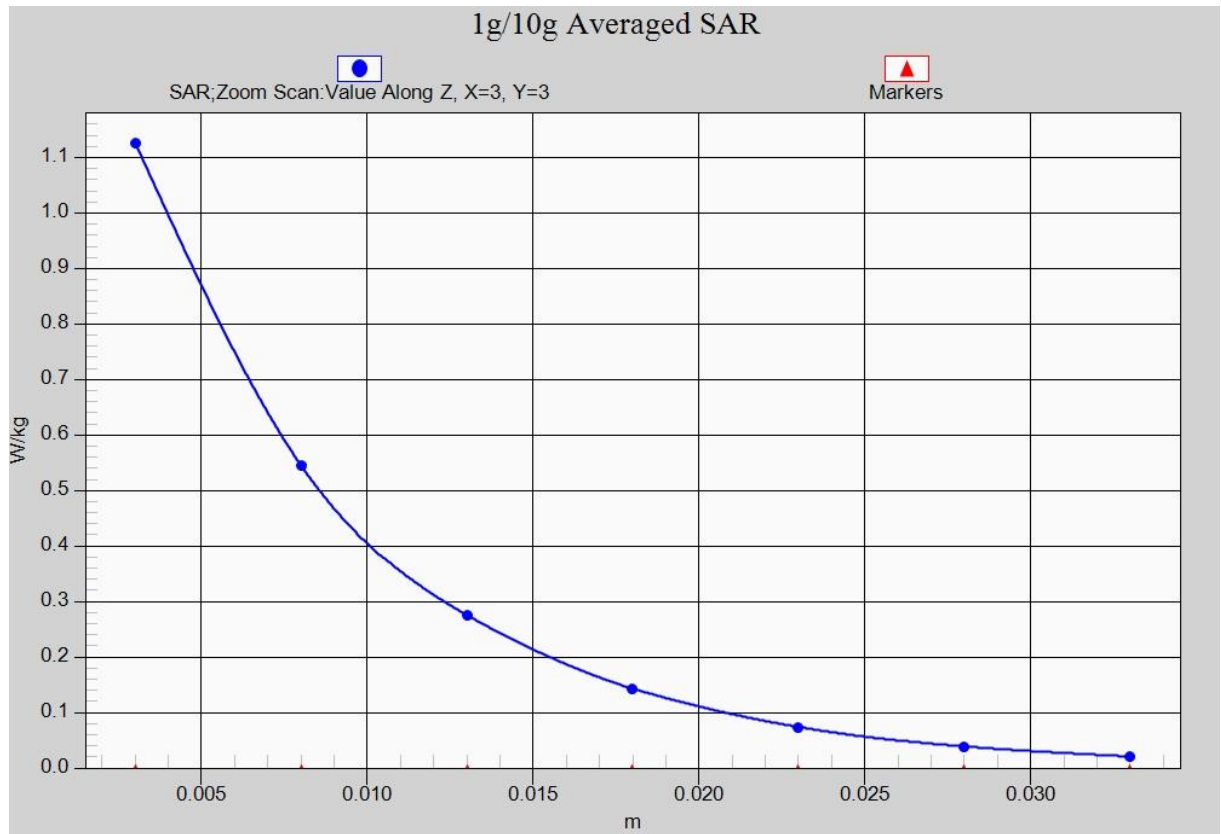


Fig. 25-1 Z-Scan at power reference point (2450 MHz)

### Wifi 802.11b Body Top Edge Channel 1

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Body 2450 MHz

Medium parameters used (interpolated):  $f = 2412$  MHz;  $\sigma = 1.918$  mho/m;  $\epsilon_r = 52.29$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: WLAN 2450 Frequency: 2412 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(8.09, 8.09, 8.09)

**Area Scan (151x91x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm

Maximum value of SAR (interpolated) = 0.681 W/kg

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

Reference Value = 9.607 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.921 W/kg

**SAR(1 g) = 0.487 W/kg; SAR(10 g) = 0.230 W/kg**

Maximum value of SAR (measured) = 0.636 W/kg

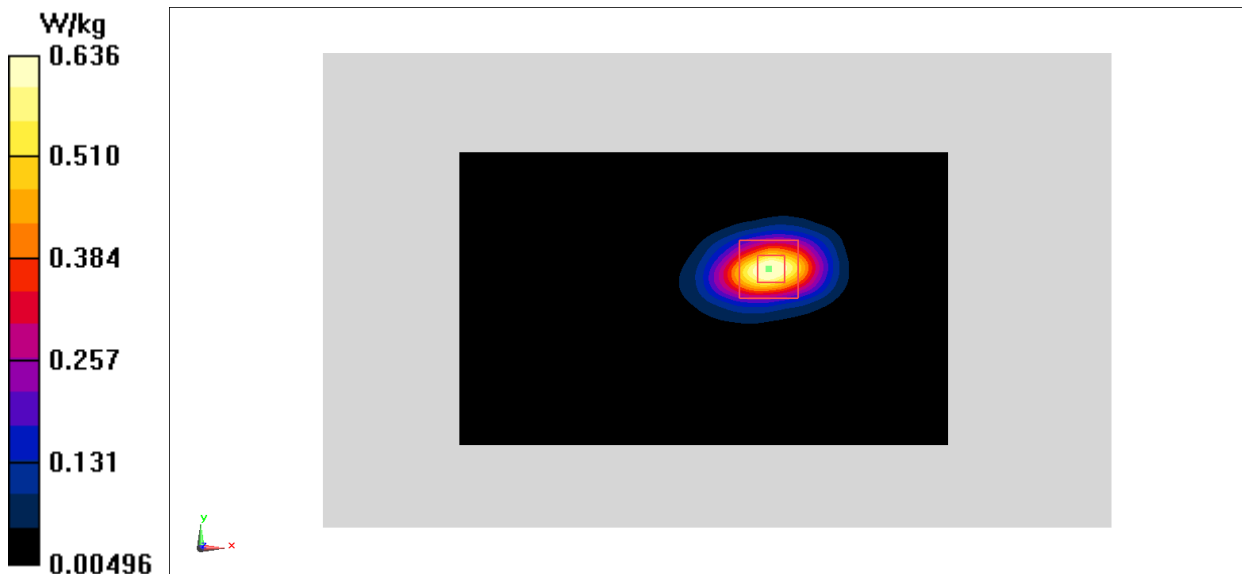


Fig.26 2450 MHz

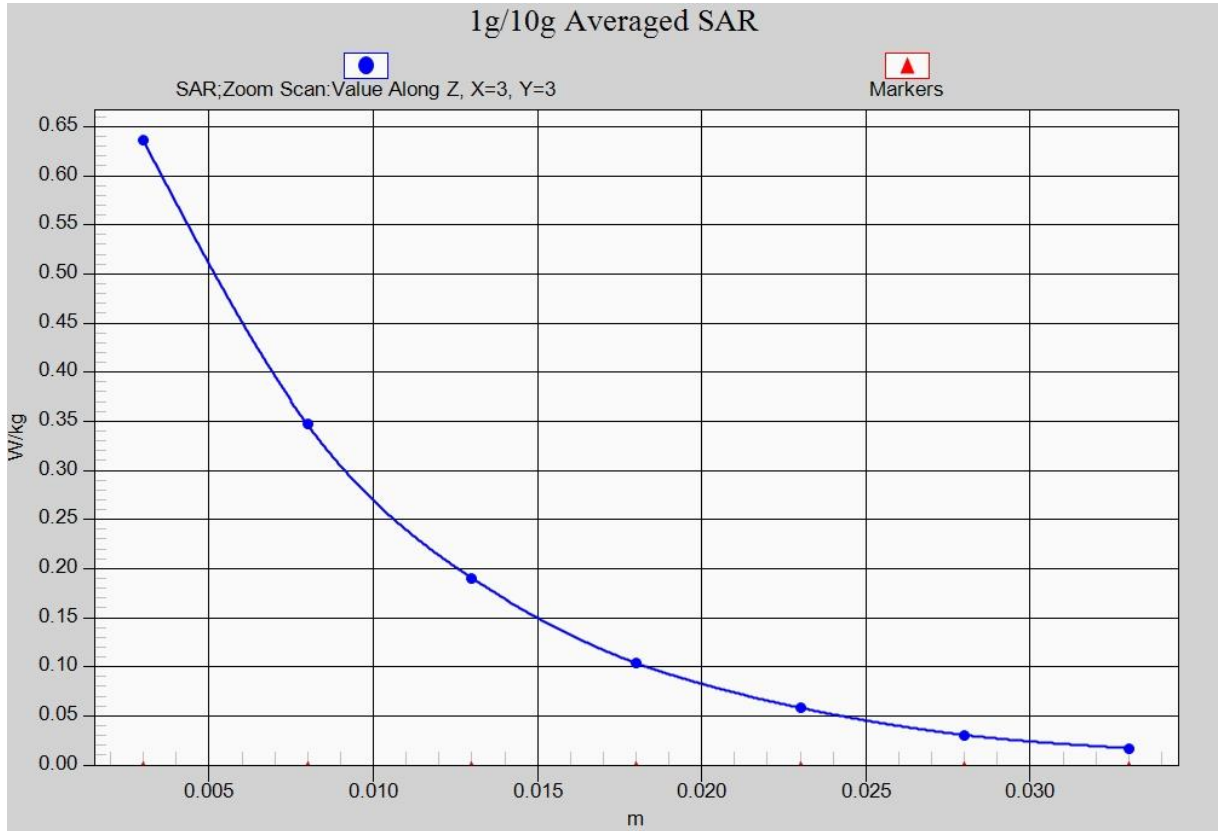


Fig. 26-1 Z-Scan at power reference point (2450 MHz)

### Wifi 802.11a Right Cheek Channel 56

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Head 5 GHz

Medium parameters used:  $f = 5280$  MHz;  $\sigma = 4.729$  mho/m;  $\epsilon_r = 36.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: Wlan 5G Frequency: 5280 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(5.53, 5.53, 5.53)

**Area Scan (101x181x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm

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

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 7.523 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 2.25 W/kg

SAR(1 g) = 0.479 W/kg; SAR(10 g) = 0.153 W/kg

Maximum value of SAR (measured) = 1.27 W/kg

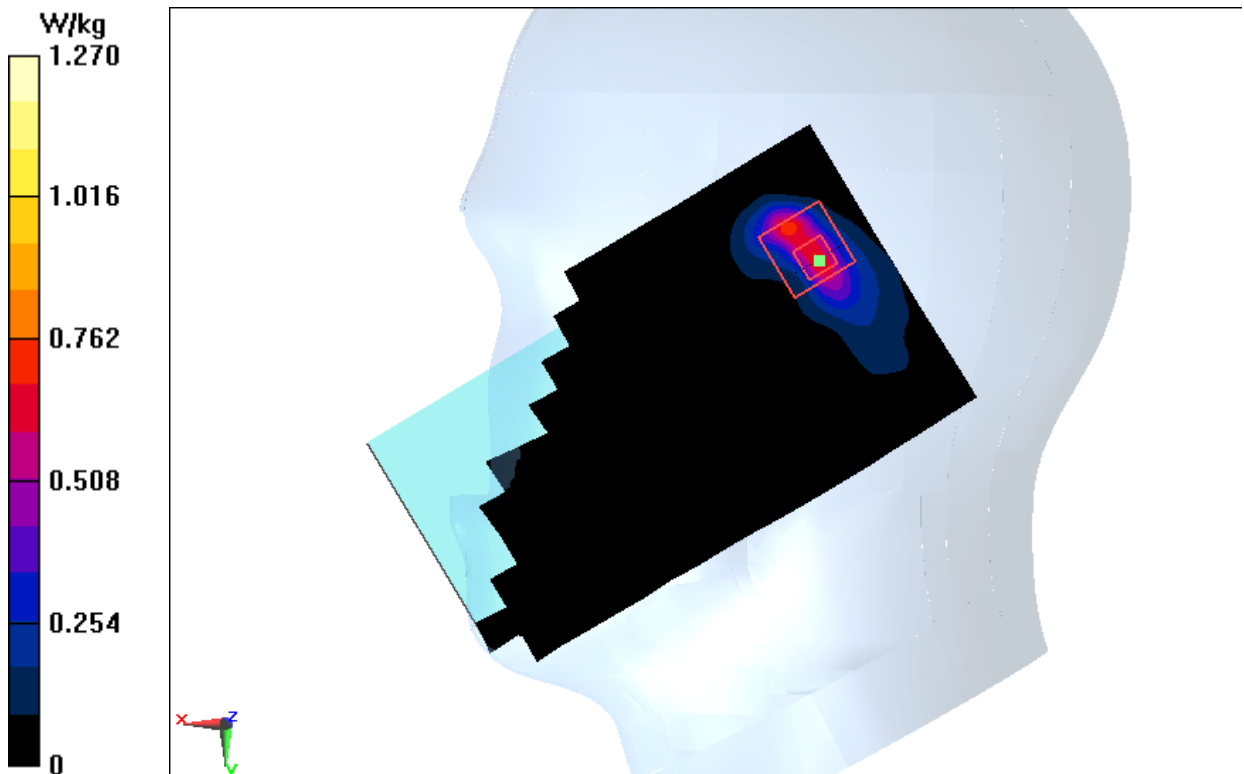


Fig.27 5GHz

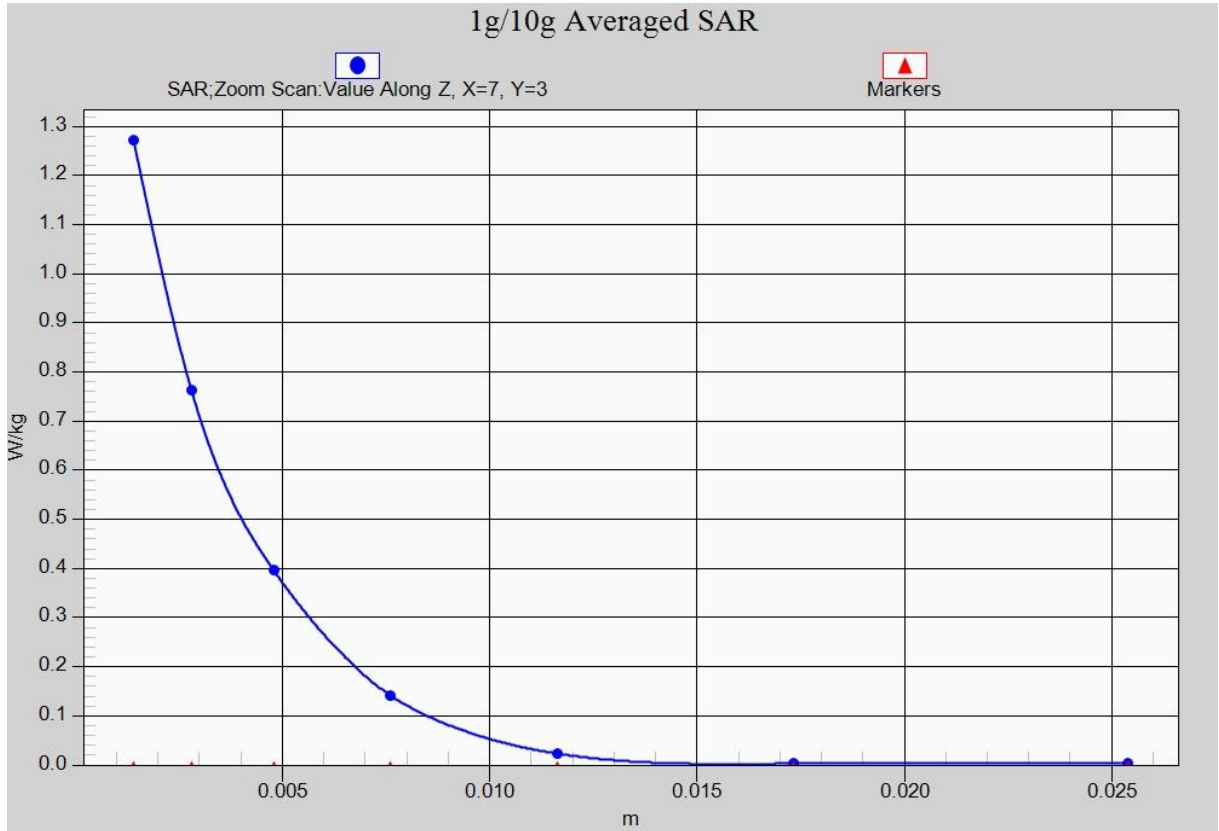


Fig. 27-1 Z-Scan at power reference point (5GHz)



### Wifi 802.11a Top Edge Channel 132

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Body 5 GHz

Medium parameters used:  $f = 5660$  MHz;  $\sigma = 5.779$  mho/m;  $\epsilon_r = 46.89$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: Wlan 5G Frequency: 5660 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(4.50, 4.50, 4.50)

**Area Scan (121x71x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.742 W/kg

**Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 5.445 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.82 W/kg

SAR(1 g) = 0.467 W/kg; SAR(10 g) = 0.169 W/kg

Maximum value of SAR (measured) = 1.07 W/kg

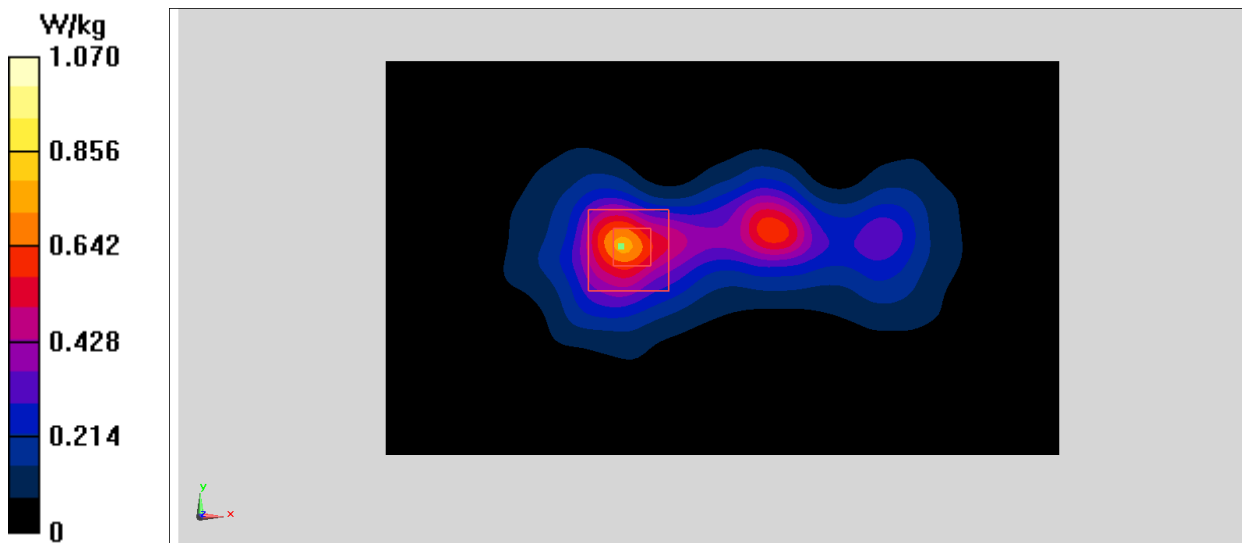


Fig.28 5GHz

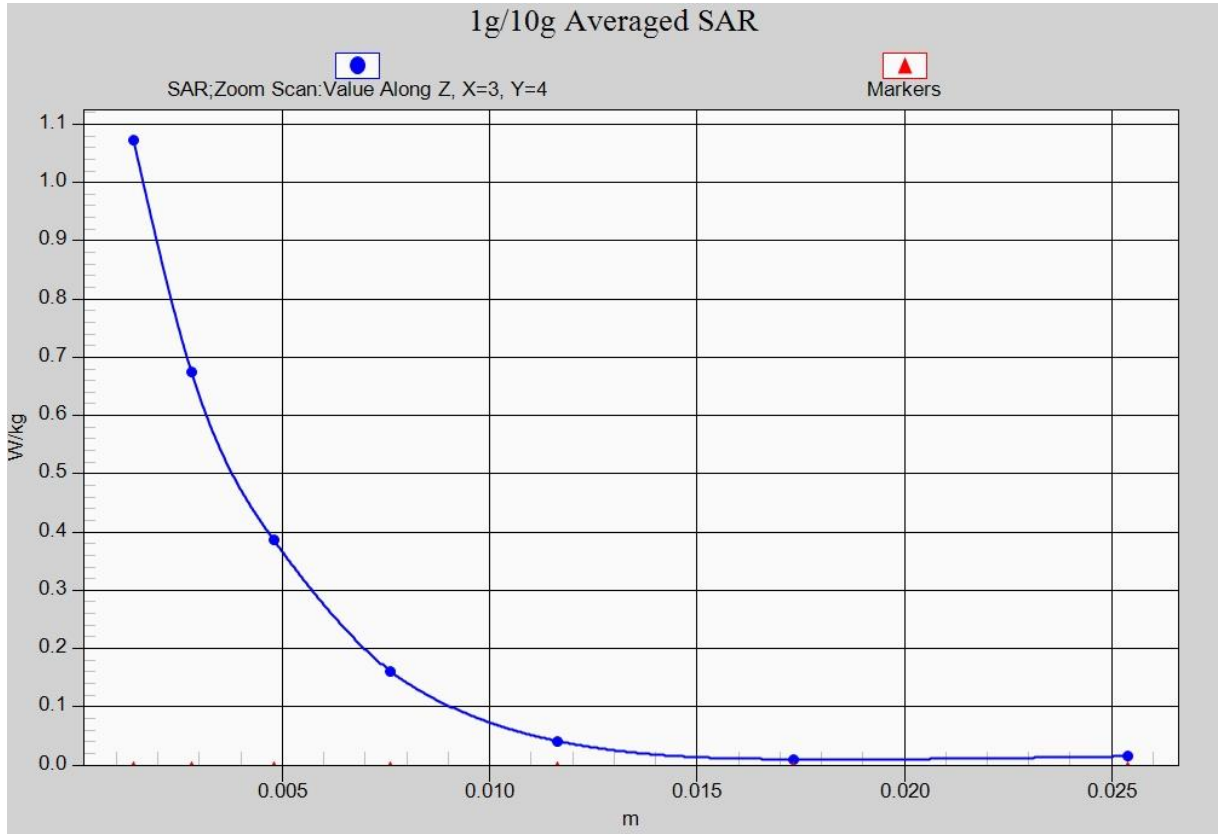


Fig. 28-1 Z-Scan at power reference point (5GHz)

## ANNEX B System Verification Results

### 750MHz

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Head 750 MHz

Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.874$  mho/m;  $\epsilon_r = 42.51$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(10.57, 10.57, 10.57)

**System Validation /Area Scan (81x191x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 50.02 V/m; Power Drift = 0.04 dB

**Fast SAR: SAR(1 g) = 2.15 W/kg; SAR(10 g) = 1.41 W/kg**

Maximum value of SAR (interpolated) = 2.28 W/kg

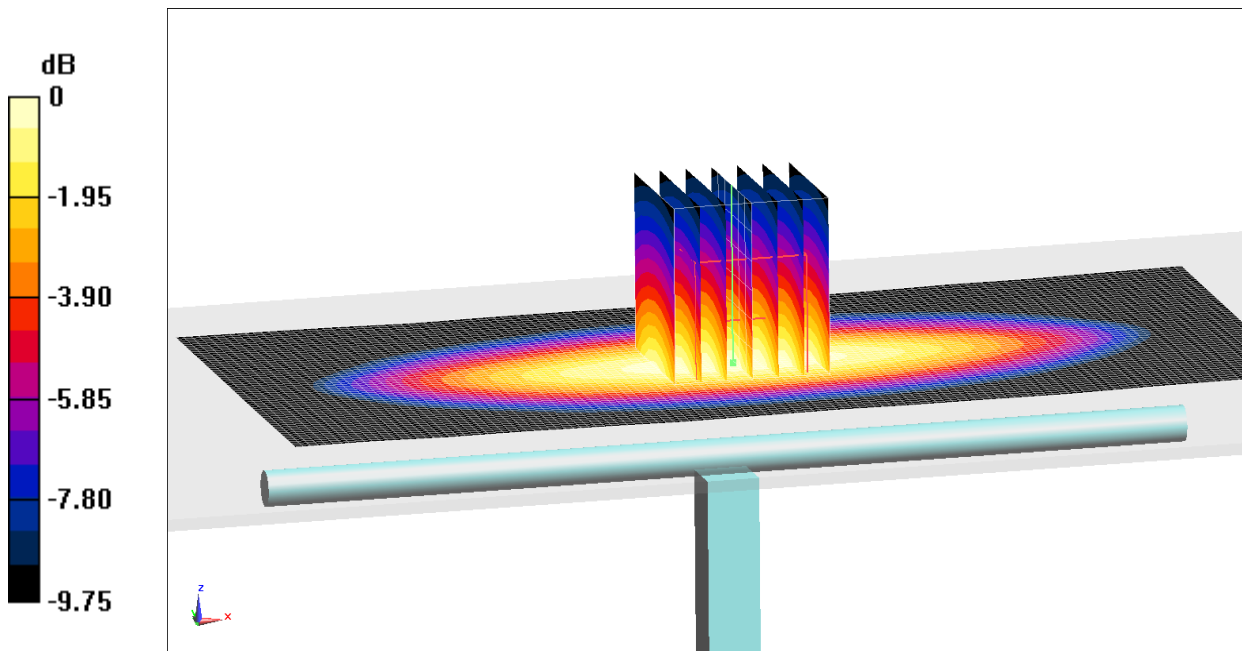
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.02 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 2.92 W/kg

**SAR(1 g) = 2.12 W/kg; SAR(10 g) = 1.39 W/kg**

Maximum value of SAR (measured) = 2.25 W/kg



0 dB = 2.25 W/kg = 3.52 dB W/kg

**Fig.B.1 validation 750MHz 250mW**

## 750MHz

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Body750 MHz

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.955 \text{ mho/m}$ ;  $\epsilon_r = 56.53$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

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

Probe: EX3DV4 – SN7464 ConvF(10.63, 10.63, 10.63)

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

Reference Value =  $51.01 \text{ V/m}$ ; Power Drift =  $-0.03 \text{ dB}$

**Fast SAR: SAR(1 g) = 2.23 W/kg; SAR(10 g) = 1.45 W/kg**

Maximum value of SAR (interpolated) =  $2.47 \text{ W/kg}$

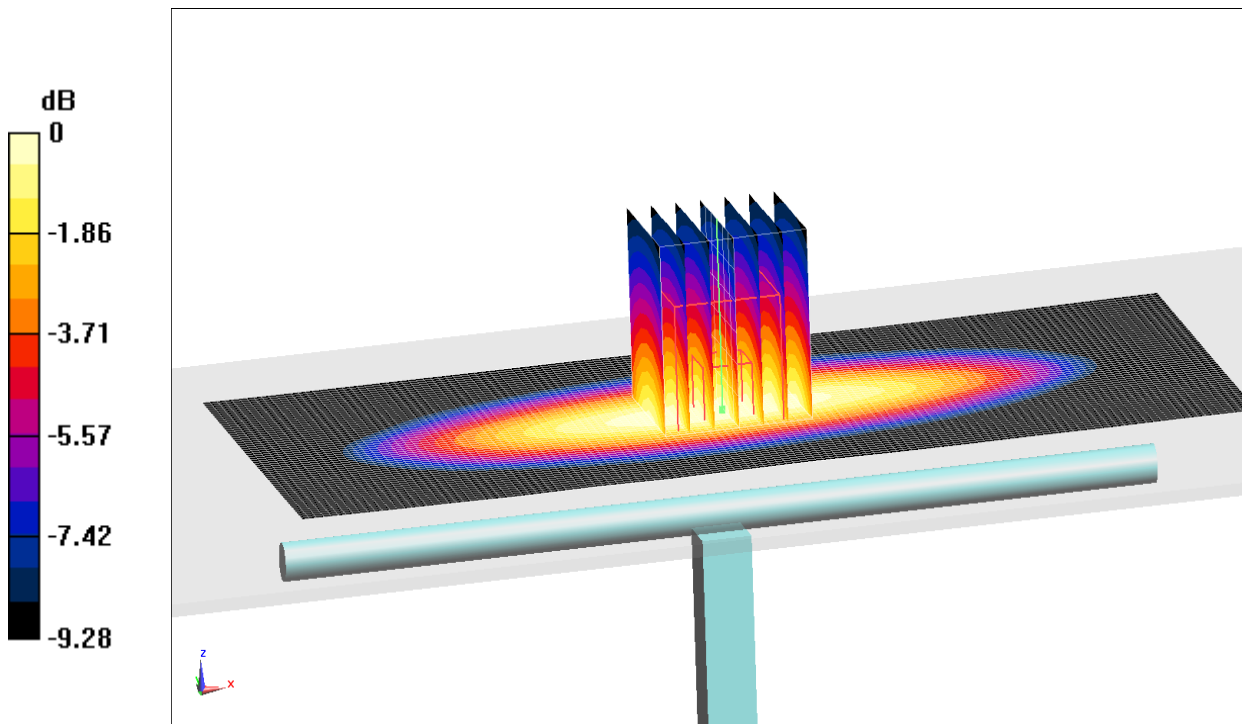
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $51.01 \text{ V/m}$ ; Power Drift =  $-0.03 \text{ dB}$

Peak SAR (extrapolated) =  $3.01 \text{ W/kg}$

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

Maximum value of SAR (measured) =  $2.49 \text{ W/kg}$



0 dB =  $2.49 \text{ W/kg} = 3.96 \text{ dB W/kg}$

**Fig.B.2 validation 750MHz 250mW**

## 835MHz

Date: 2018-5-27

Electronics: DAE4 Sn1525

Medium: Head 850 MHz

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.897 \text{ S/m}$ ;  $\epsilon_r = 41.97$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

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

Probe: EX3DV4 – SN7464 ConvF(10.28, 10.28, 10.28)

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

Reference Value =  $54.21 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$

**Fast SAR: SAR(1 g) =  $2.34 \text{ W/kg}$ ; SAR(10 g) =  $1.51 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $2.54 \text{ W/kg}$

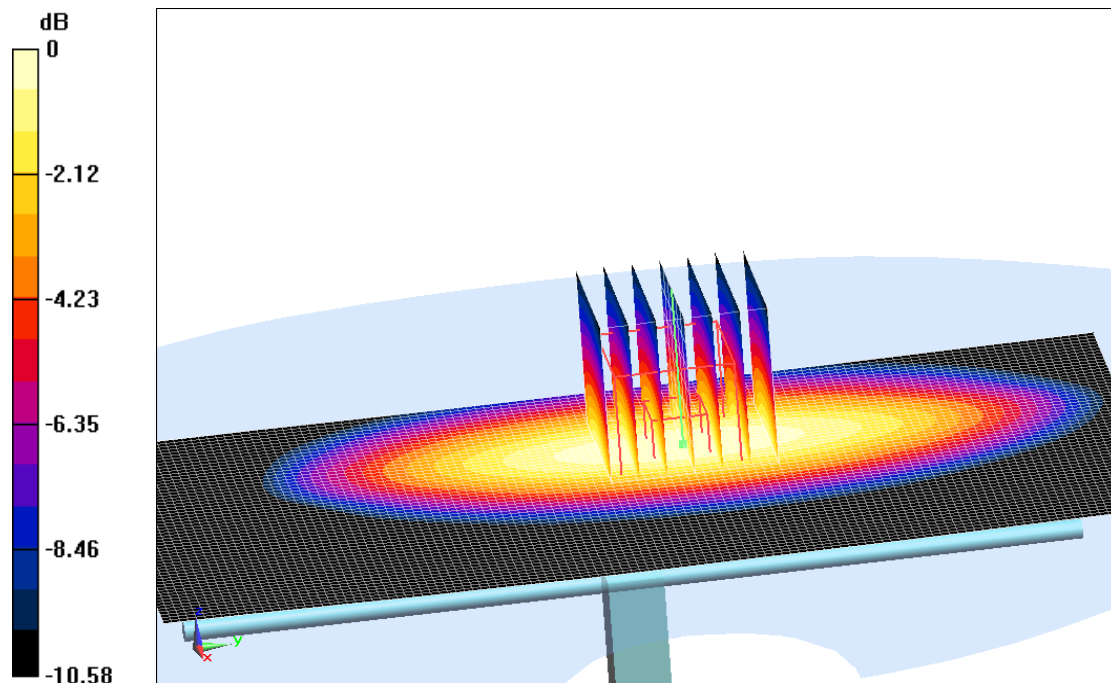
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $54.21 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$

Peak SAR (extrapolated) =  $3.08 \text{ W/kg}$

**SAR(1 g) =  $2.31 \text{ W/kg}$ ; SAR(10 g) =  $1.49 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.51 \text{ W/kg}$



0 dB =  $2.51 \text{ W/kg}$  =  $4.00 \text{ dBW/kg}$

**Fig.B.3 validation 835MHz 250mW**

## 835MHz

Date: 2018-5-27

Electronics: DAE4 Sn1525

Medium: Body 850 MHz

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.988 \text{ S/m}$ ;  $\epsilon_r = 55.8$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

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

Probe: EX3DV4 – SN7464 ConvF(10.21, 10.21, 10.21)

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

Reference Value =  $52.53 \text{ V/m}$ ; Power Drift =  $0.02 \text{ dB}$

**Fast SAR: SAR(1 g) =  $2.35 \text{ W/kg}$ ; SAR(10 g) =  $1.52 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $2.68 \text{ W/kg}$

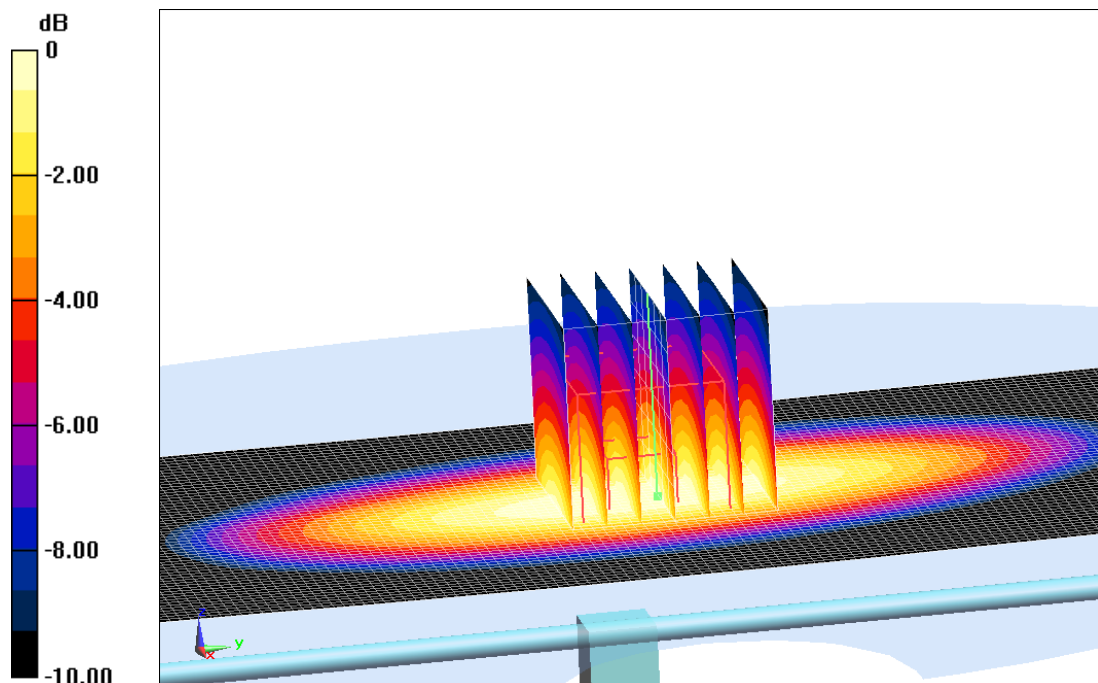
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $52.53 \text{ V/m}$ ; Power Drift =  $0.02 \text{ dB}$

Peak SAR (extrapolated) =  $3.12 \text{ W/kg}$

**SAR(1 g) =  $2.39 \text{ W/kg}$ ; SAR(10 g) =  $1.55 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.72 \text{ W/kg}$



0 dB =  $2.72 \text{ W/kg}$  =  $4.35 \text{ dBW/kg}$

**Fig.B.4 validation 835MHz 250mW**

## 1750MHz

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Head 1750 MHz

Medium parameters used:  $f=1750$  MHz;  $\sigma = 1.401$  mho/m;  $\epsilon_r = 40.64$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(8.70, 8.70, 8.70)

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

Reference Value = 90.25 V/m; Power Drift = -0.06 dB

**Fast SAR: SAR(1 g) = 9.15 W/kg; SAR(10 g) = 4.83 W/kg**

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

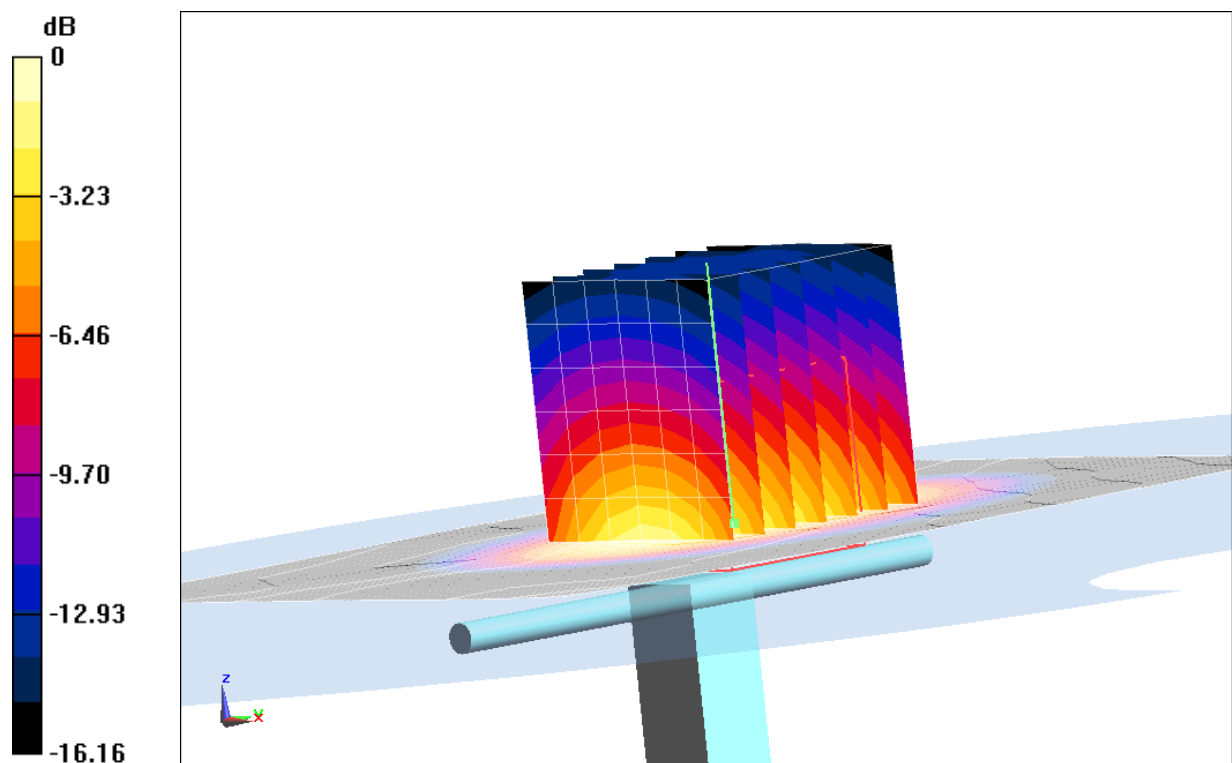
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 90.25 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 15.66 W/kg

**SAR(1 g) = 9.24 W/kg; SAR(10 g) = 4.91 W/kg**

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



0 dB = 10.2 W/kg = 10.09 dB W/kg

**Fig.B.5 validation 1750MHz 250mW**

## 1750MHz

Date: 2018-5-29

Electronics: DAE4 Sn1525

Medium: Body 1750 MHz

Medium parameters used:  $f=1750$  MHz;  $\sigma = 1.528$  mho/m;  $\epsilon_r = 53.51$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(8.60, 8.60, 8.60)

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

Reference Value = 92.68 V/m; Power Drift = 0.03 dB

**Fast SAR: SAR(1 g) = 9.27 W/kg; SAR(10 g) = 4.97 W/kg**

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

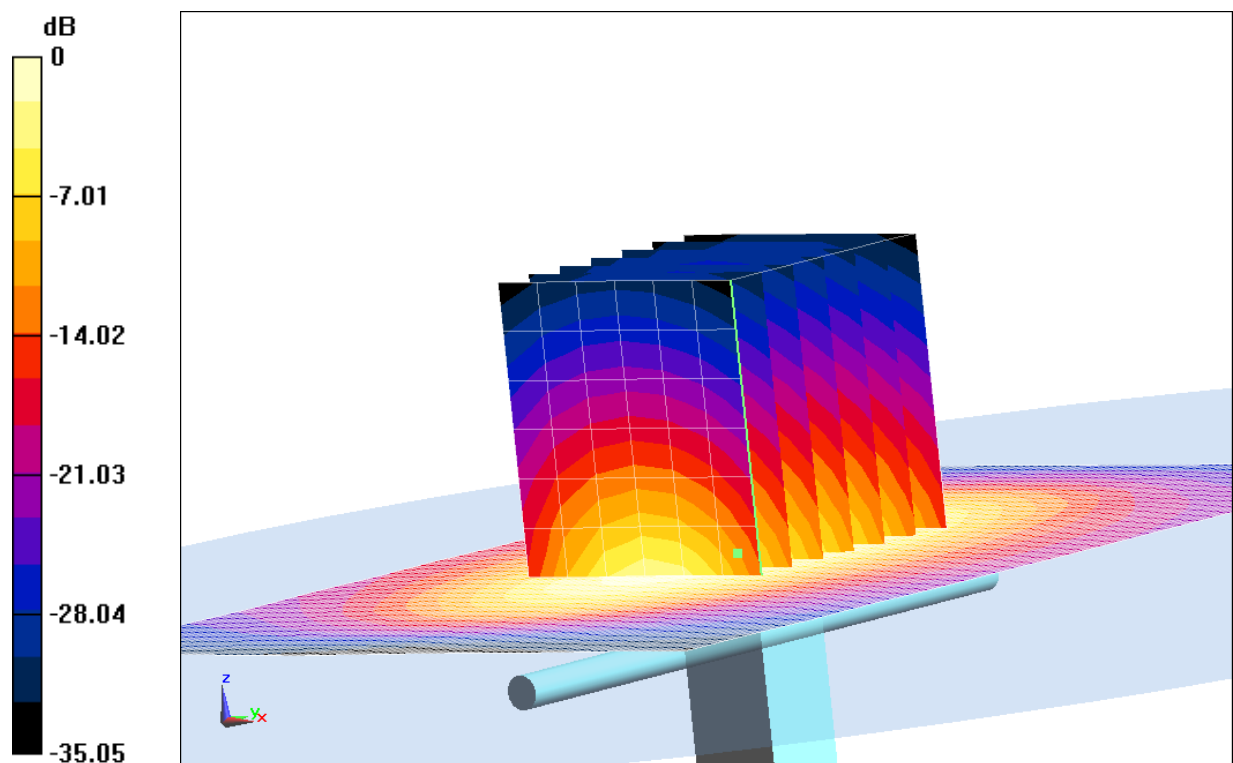
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.68 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 15.28 W/kg

**SAR(1 g) = 9.17 W/kg; SAR(10 g) = 4.89 W/kg**

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



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

**Fig.B.6 validation 1750MHz 250mW**



## 1900MHz

Date: 2018-5-28

Electronics: DAE4 Sn1525

Medium: Head 1900 MHz

Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.432 \text{ mho/m}$ ;  $\epsilon_r = 40.81$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF (8.39, 8.39, 8.39)

**System Validation /Area Scan(61x81x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$

Reference Value =  $91.02 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$

**SAR(1 g) =  $10.2 \text{ W/kg}$ ; SAR(10 g) =  $5.39 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $12.4 \text{ W/kg}$

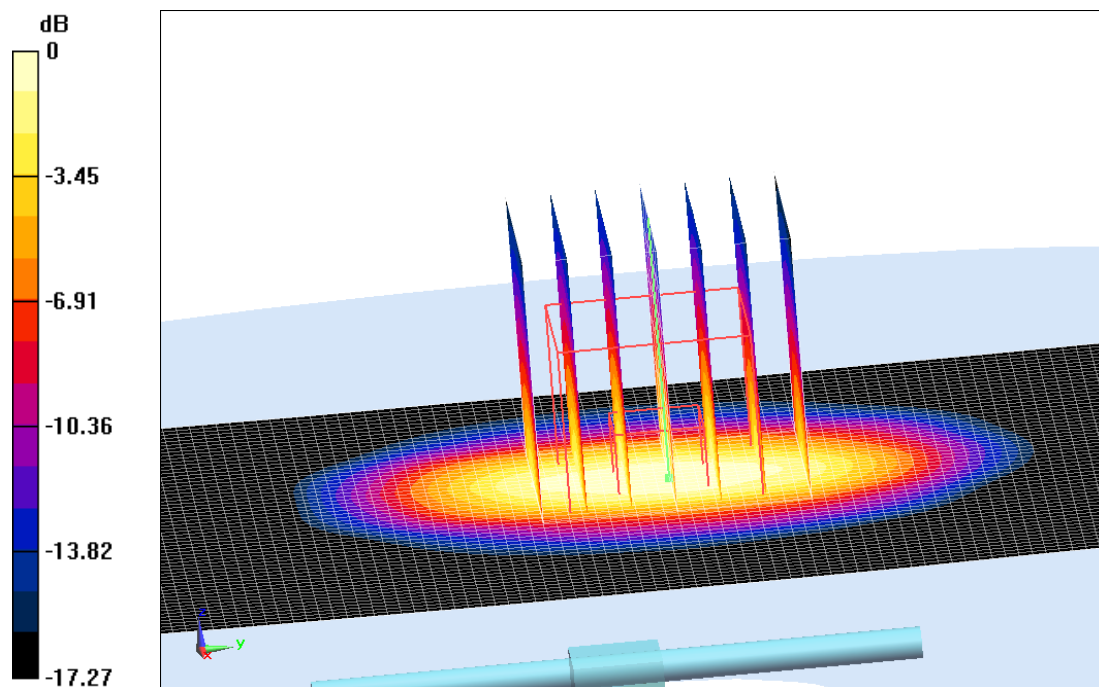
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $91.02 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$

Peak SAR (extrapolated) =  $17.91 \text{ W/kg}$

**SAR(1 g) =  $10.1 \text{ W/kg}$ ; SAR(10 g) =  $5.3 \text{ W/kg}$**

Maximum value of SAR (measured) =  $12.3 \text{ W/kg}$



$0 \text{ dB} = 12.3 \text{ W/kg} = 10.90 \text{ dBW/kg}$

**Fig.B.7 validation 1900MHz 250mW**

## 1900MHz

Date: 2018-5-28

Electronics: DAE4 Sn1525

Medium: Body 1900 MHz

Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.548 \text{ S/m}$ ;  $\epsilon_r = 52.94$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(8.32, 8.32, 8.32)

**System Validation/Area Scan (81x121x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$

Reference Value =  $93.51 \text{ V/m}$ ; Power Drift =  $-0.04 \text{ dB}$

**Fast SAR: SAR(1 g) =  $10.4 \text{ W/kg}$ ; SAR(10 g) =  $5.52 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $12.4 \text{ W/kg}$

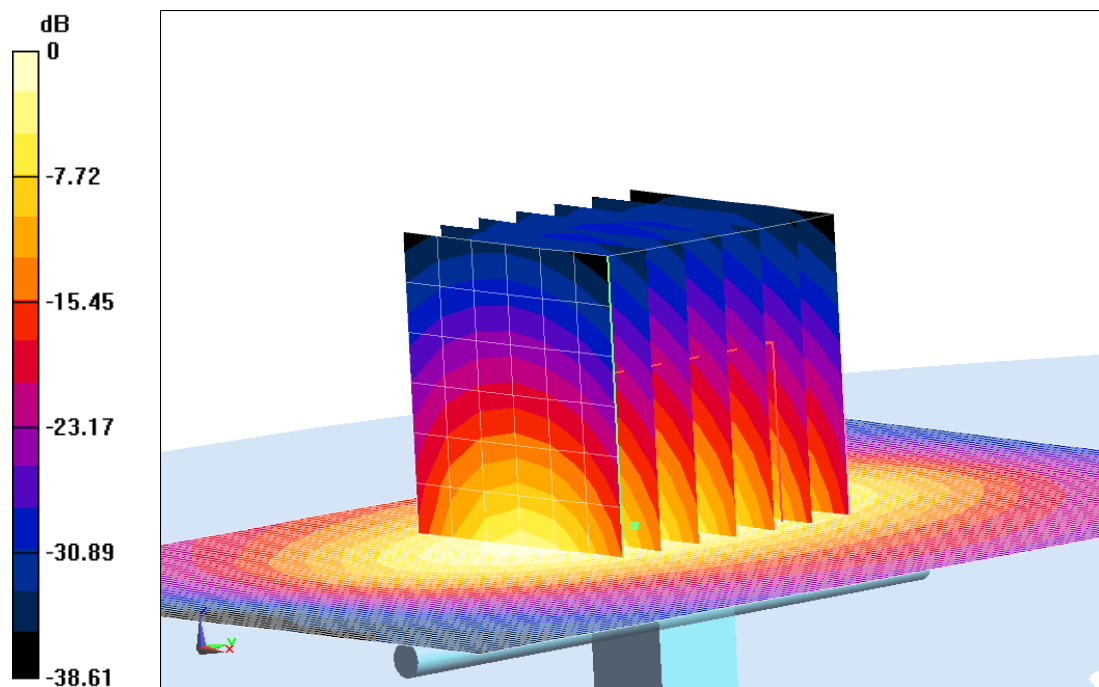
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $93.51 \text{ V/m}$ ; Power Drift =  $-0.04 \text{ dB}$

Peak SAR (extrapolated) =  $18.89 \text{ W/kg}$

**SAR(1 g) =  $10.3 \text{ W/kg}$ ; SAR(10 g) =  $5.43 \text{ W/kg}$**

Maximum value of SAR (measured) =  $12.3 \text{ W/kg}$



$0 \text{ dB} = 12.3 \text{ W/kg} = 10.90 \text{ dB W/kg}$

**Fig.B.8 validation 1900MHz 250mW**

## 2450MHz

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Head 2450 MHz

Medium parameters used:  $f = 2450 \text{ MHz}$ ;  $\sigma = 1.834 \text{ mho/m}$ ;  $\epsilon_r = 38.7$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

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

Probe: EX3DV4 – SN7464 ConvF(7.89, 7.89, 7.89)

**System Validation /Area Scan (61x81x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$

Reference Value =  $86.2 \text{ V/m}$ ; Power Drift =  $0.01 \text{ dB}$

**SAR(1 g) =  $13.1 \text{ W/kg}$ ; SAR(10 g) =  $6.22 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $16.3 \text{ W/kg}$

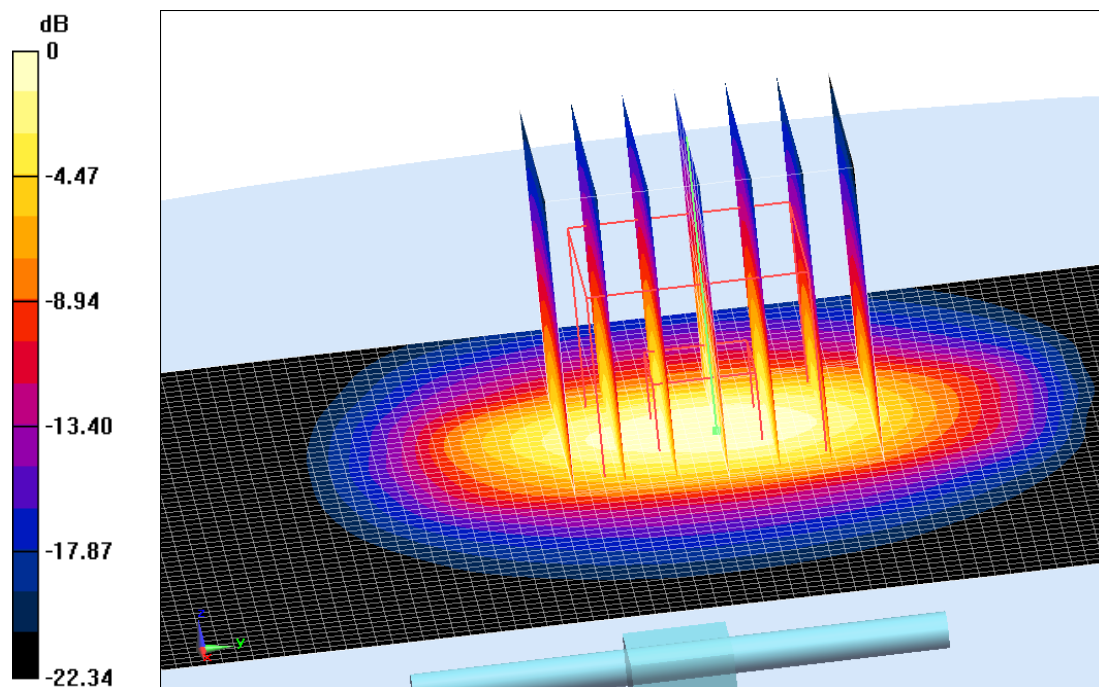
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $86.2 \text{ V/m}$ ; Power Drift =  $0.01 \text{ dB}$

Peak SAR (extrapolated) =  $26.97 \text{ W/kg}$

**SAR(1 g) =  $12.9 \text{ W/kg}$ ; SAR(10 g) =  $6.05 \text{ W/kg}$**

Maximum value of SAR (measured) =  $16.1 \text{ W/kg}$



$0 \text{ dB} = 16.1 \text{ W/kg} = 12.07 \text{ dBW/kg}$

**Fig.B.9 validation 2450MHz 250mW**

## 2450MHz

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Body 2450 MHz

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.962$  S/m;  $\epsilon_r = 52.18$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(8.09, 8.09, 8.09)

**System Validation/Area Scan (81x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 88.35 V/m; Power Drift = 0.02 dB

**SAR(1 g) = 12.6 W/kg; SAR(10 g) = 5.81 W/kg**

Maximum value of SAR (interpolated) = 14.2 W/kg

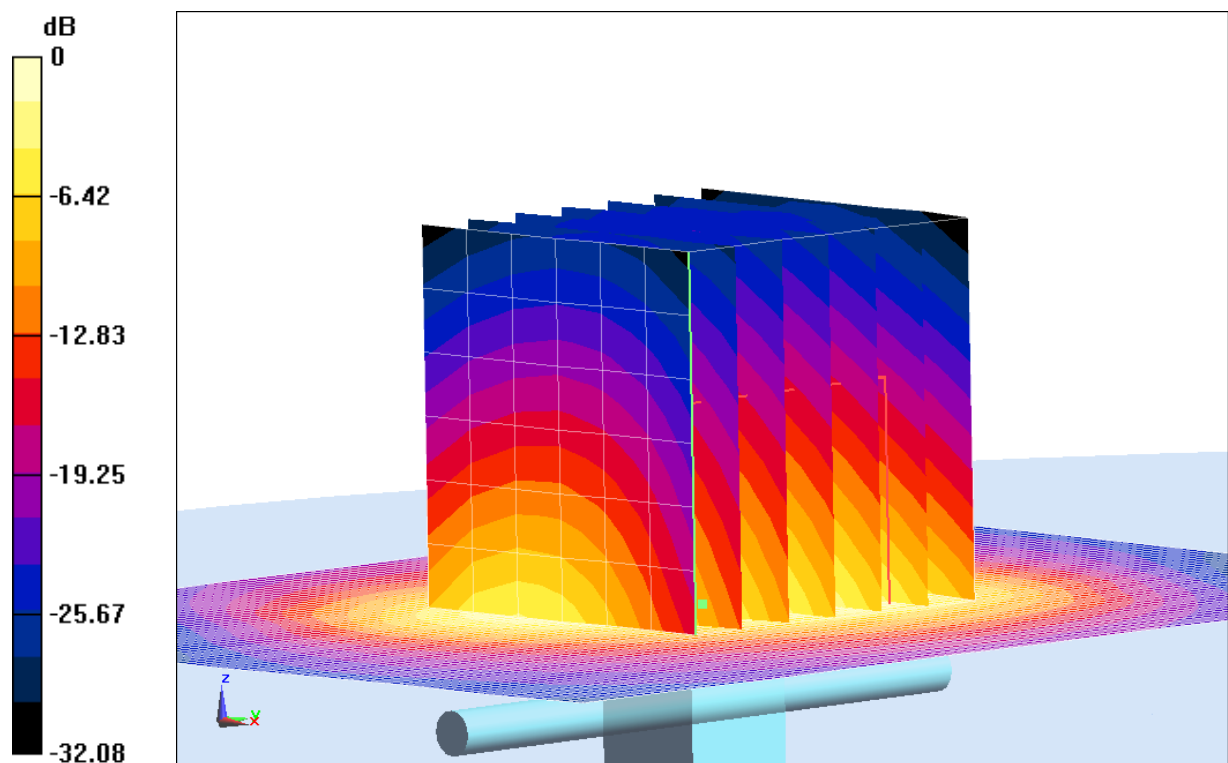
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.35 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 24.41 W/kg

**SAR(1 g) = 12.8 W/kg; SAR(10 g) = 5.99 W/kg**

Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.4 W/kg = 11.58 dB W/kg

**Fig.B.10 validation 2450MHz 250mW**

## 2600MHz

Date: 2018-5-30

Electronics: DAE4 Sn1525

Medium: Head 2600 MHz

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.928$  mho/m;  $\epsilon_r = 38.27$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(7.76, 7.76, 7.76)

**System Validation/Area Scan(81x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 79.46 V/m; Power Drift = -0.03 dB

**SAR(1 g) = 14.6 W/kg; SAR(10 g) = 6.56 W/kg**

Maximum value of SAR (interpolated) = 22.2 W/kg

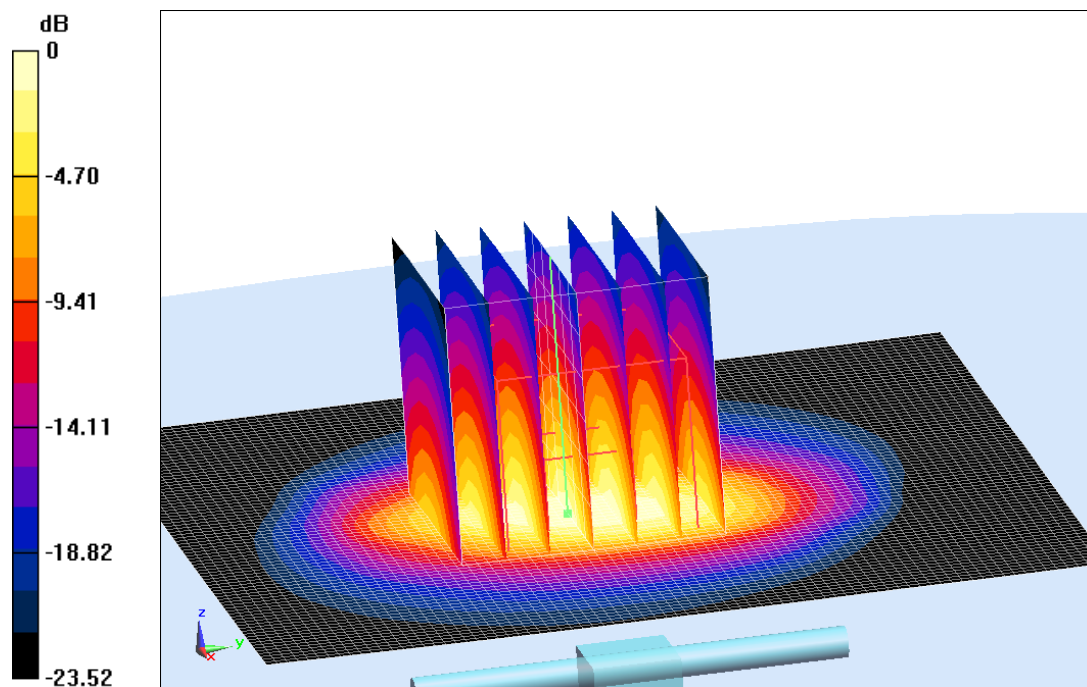
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 79.46 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 30.86 W/kg

**SAR(1 g) = 14.4 W/kg; SAR(10 g) = 6.39 W/kg**

Maximum value of SAR (measured) = 22 W/kg



0 dB = 22 W/kg = 13.42 dBW/kg

**Fig.B.11 validation 2600MHz 250mW**

## 2600MHz

Date: 2018-5-30

Electronics: DAE4 Sn1525

Medium: Body 2600 MHz

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.24$  mho/m;  $\epsilon_r = 51.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(7.84, 7.84, 7.84)

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

Reference Value = 82.21 V/m; Power Drift = -0.02 dB

**Fast SAR: SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.39 W/kg**

Maximum value of SAR (interpolated) = 22.4 W/kg

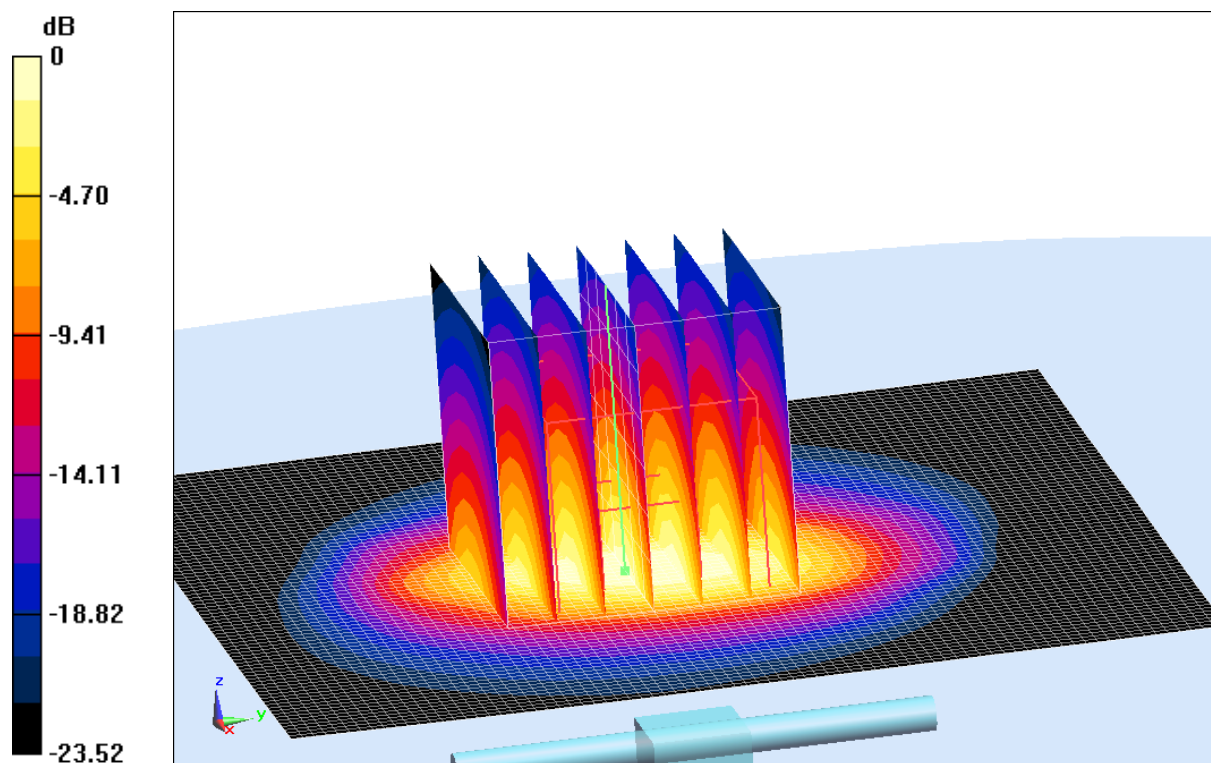
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 82.21 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 31.02 W/kg

**SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.31 W/kg**

Maximum value of SAR (measured) = 22.3 W/kg



0 dB = 22.3 W/kg = 13.48 dB W/kg

**Fig.B.12 validation 2600MHz 250mW**

## 5200MHz

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Head 5 GHz

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 4.726$  mho/m;  $\epsilon_r = 36.62$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: CW Frequency: 5200 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(5.82, 5.82, 5.82)

**System Validation /Area Scan (91x91x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 17.9 W/kg

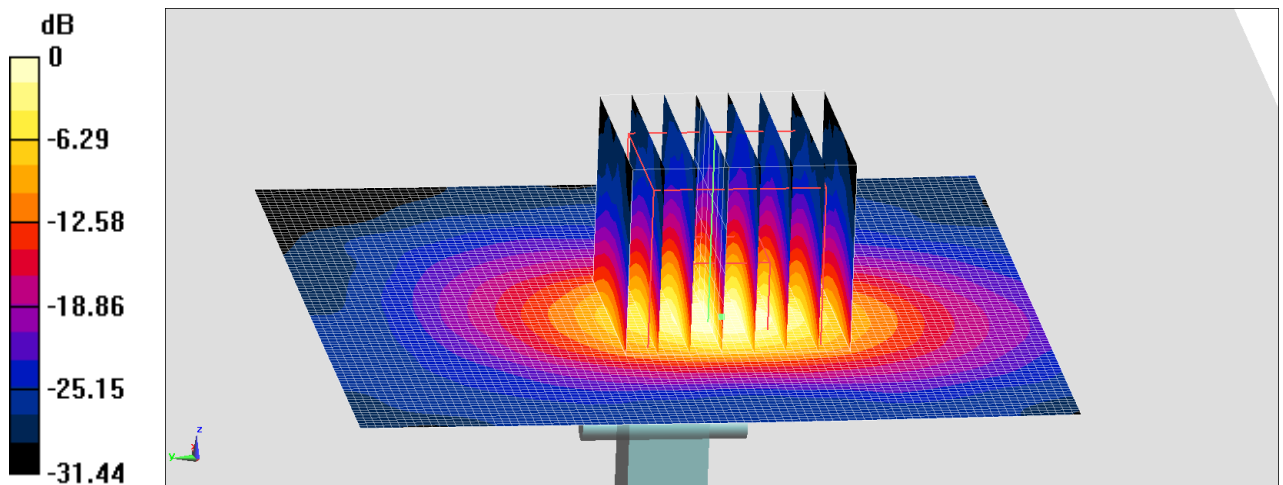
**System Validation /Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm,  
dz=1.4mm

Reference Value = 57.41 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 31.32 W/kg

**SAR(1 g) = 7.93 W/kg; SAR(10 g) = 2.25 W/kg**

Maximum value of SAR (measured) = 18.1 W/kg



0 dB = 18.1 W/kg = 12.58 dBW/kg

**Fig.B.13 validation 5200MHz 100mW**

## 5200MHz

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Body 5 GHz

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.402$  mho/m;  $\epsilon_r = 49.67$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: CW Frequency: 5200 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(5.39, 5.39, 5.39)

**System Validation /Area Scan (91x91x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 18.1 W/kg

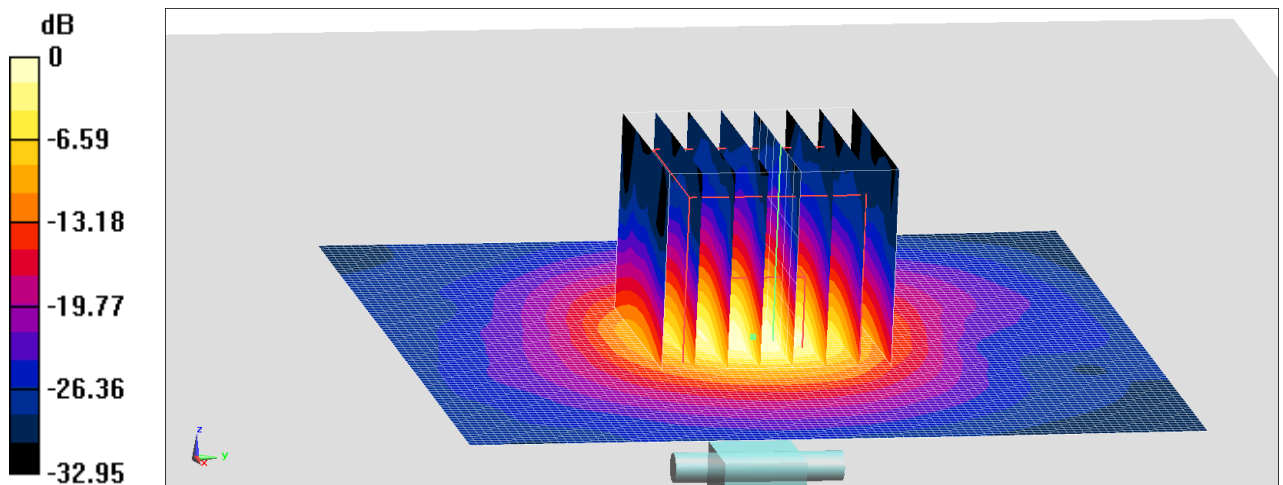
**System Validation /Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 53.28 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 29.59 W/kg

**SAR(1 g) = 7.36 W/kg; SAR(10 g) = 2.05 W/kg**

Maximum value of SAR (measured) = 17.9 W/kg



0 dB = 17.9 W/kg = 12.53 dBW/kg

**Fig.B.14 validation 5200MHz 100mW**



## 5300MHz

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Head 5 GHz

Medium parameters used:  $f = 5300$  MHz;  $\sigma = 4.828$  mho/m;  $\epsilon_r = 36.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: CW Frequency: 5300 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(5.53, 5.53, 5.53)

**System Validation /Area Scan (91x91x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 19.3 W/kg

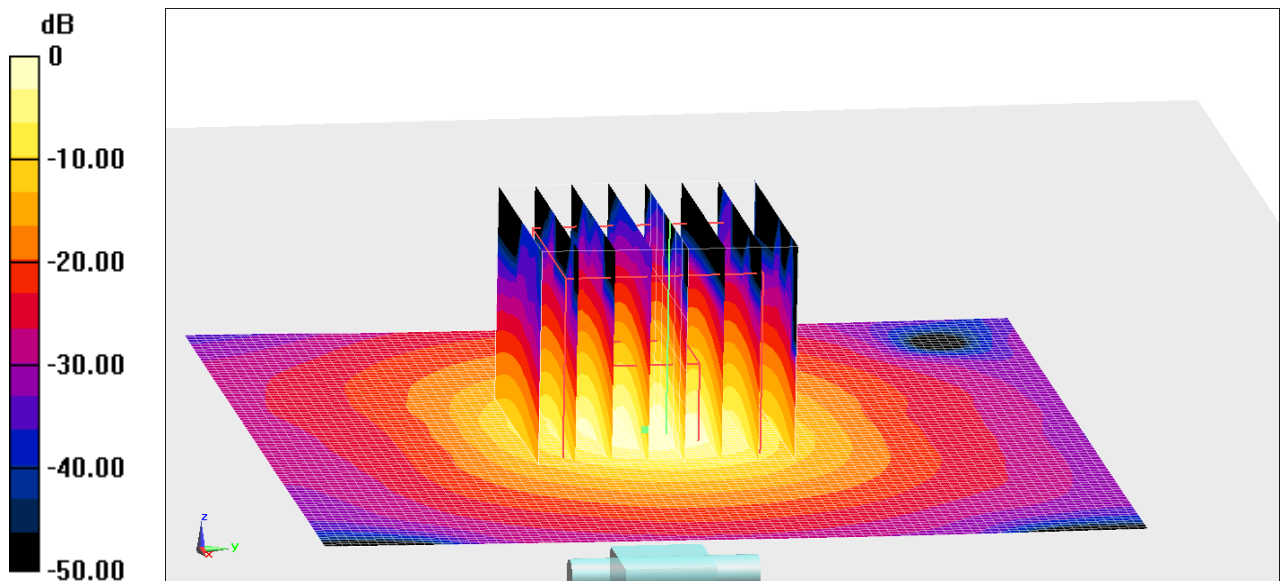
**System Validation /Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 73.64 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 35.42 W/kg

**SAR(1 g) = 8.25 W/kg; SAR(10 g) = 2.36 W/kg**

Maximum value of SAR (measured) = 19.5 W/kg



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

**Fig.B.15 validation 5300MHz 100mW**

## 5300MHz

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Body 5 GHz

Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.311$  mho/m;  $\epsilon_r = 47.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: CW Frequency: 5300 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(5.11, 5.11, 5.11)

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

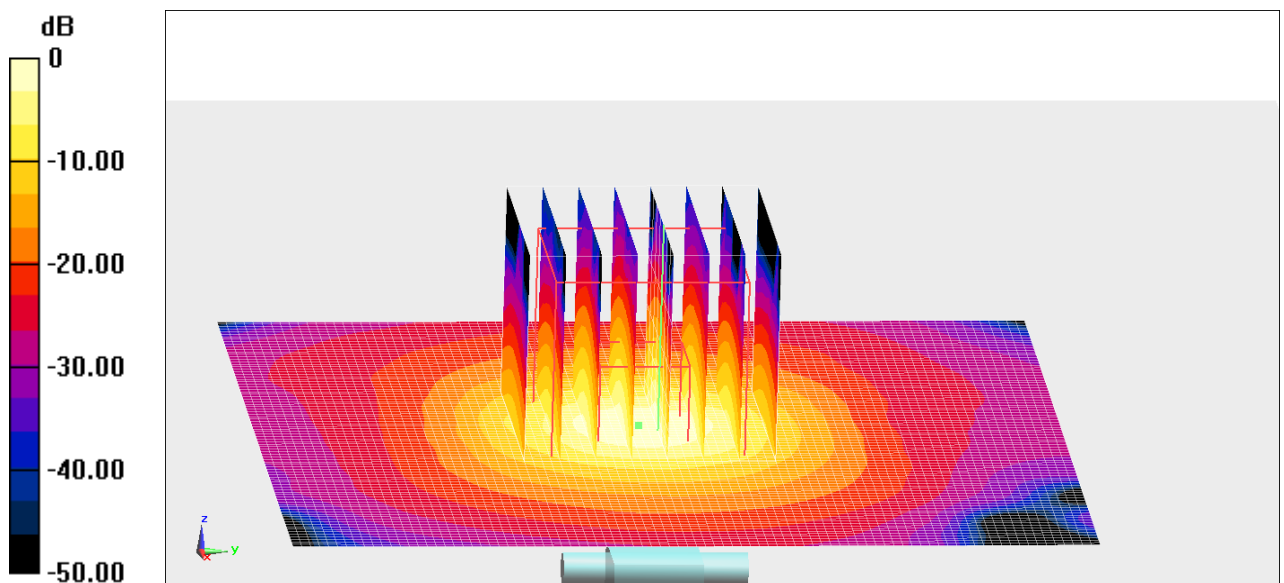
**System Validation /Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 64.17 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 31.54 W/kg

**SAR(1 g) = 7.55 W/kg; SAR(10 g) = 2.11 W/kg**

Maximum value of SAR (measured) = 18.2 W/kg



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

**Fig.B.16 validation 5300MHz 100mW**

## 5600MHz

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Head 5 GHz

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.171$  mho/m;  $\epsilon_r = 36.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: CW Frequency: 5600 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(4.98, 4.98, 4.98)

**System Validation /Area Scan (91x91x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 19.8 W/kg

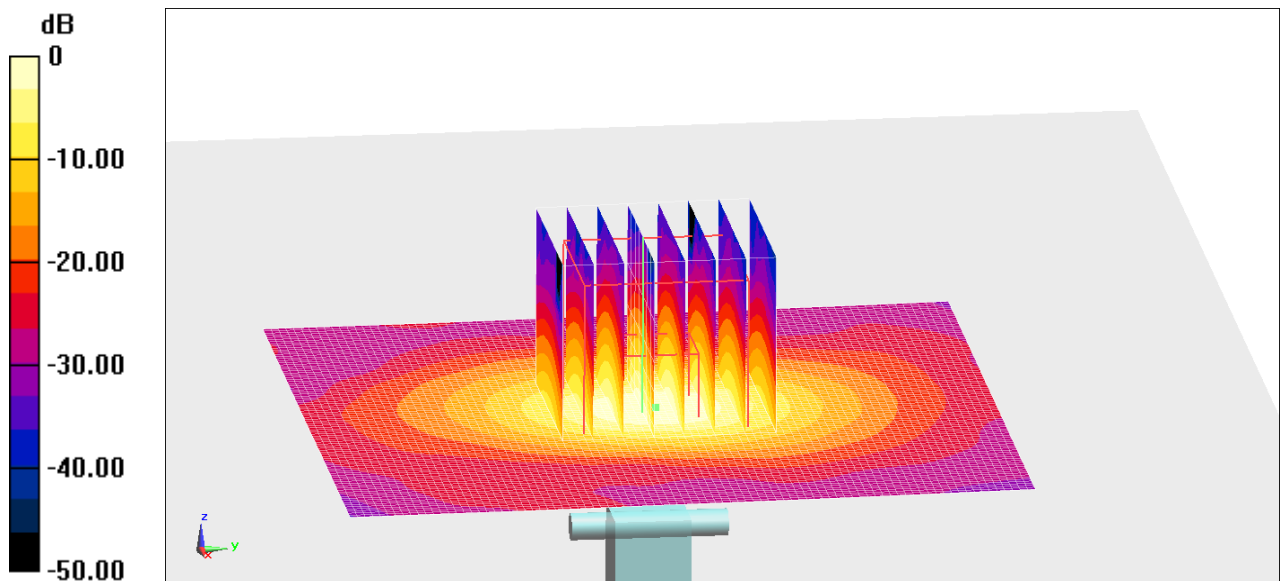
**System Validation /Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 74.66 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 35.4 W/kg

**SAR(1 g) = 8.3 W/kg; SAR(10 g) = 2.35 W/kg**

Maximum value of SAR (measured) = 19.6 W/kg



0 dB = 19.6 W/kg = 12.92 dBW/kg

**Fig.B.17 validation 5600MHz 100mW**

## 5600MHz

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Body 5 GHz

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.729$  mho/m;  $\epsilon_r = 47.04$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: CW Frequency: 5600 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(4.50, 4.50, 4.50)

**System Validation /Area Scan (91x91x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 20.3 W/kg

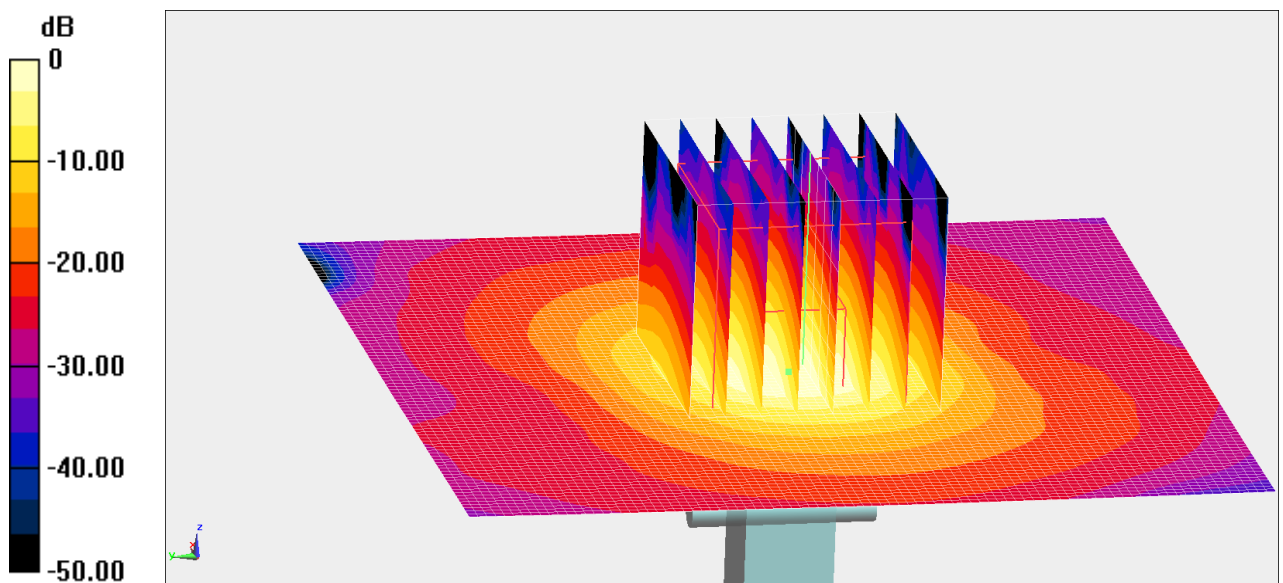
**System Validation /Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.62 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 37.13 W/kg

**SAR(1 g) = 7.93 W/kg; SAR(10 g) = 2.23 W/kg**

Maximum value of SAR (measured) = 20.1 W/kg



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

**Fig.B.18 validation 5600MHz 100mW**

## 5800MHz

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Head 5 GHz

Medium parameters used:  $f = 5800 \text{ MHz}$ ;  $\sigma = 5.381 \text{ mho/m}$ ;  $\epsilon_r = 35.81$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: CW Frequency: 5800 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(5.11, 5.11, 5.11)

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

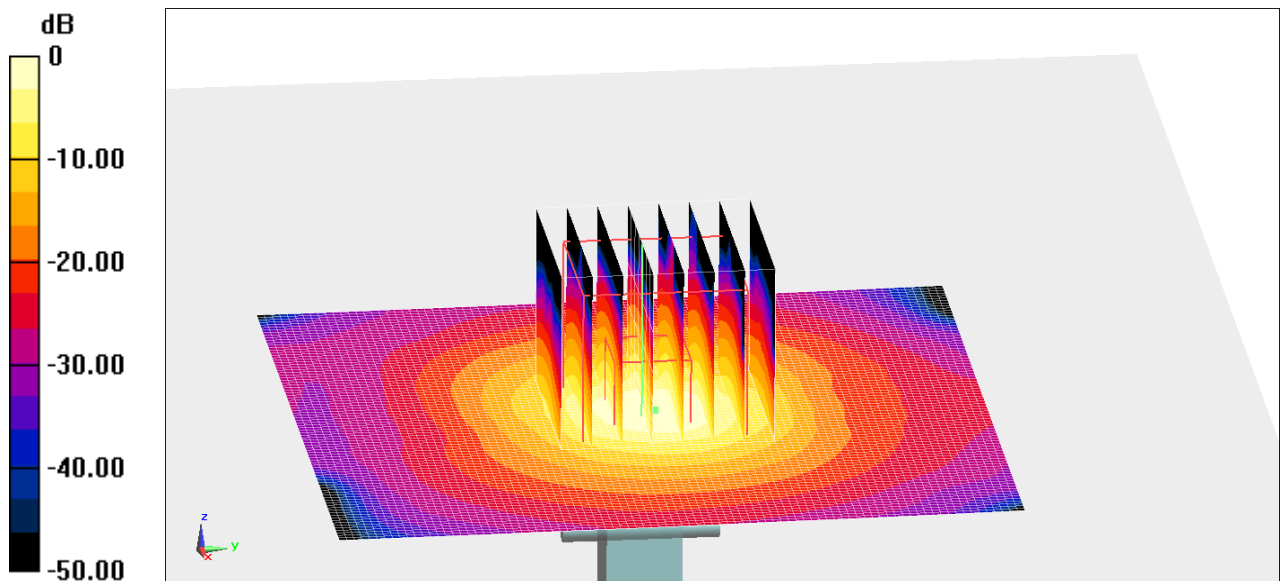
**System Validation /Zoom Scan (8x8x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  
 $dz=1.4\text{mm}$

Reference Value = 70.92 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 39.95 W/kg

**SAR(1 g) = 8.01 W/kg; SAR(10 g) = 2.28 W/kg**

Maximum value of SAR (measured) = 20.3 W/kg



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

**Fig.B.19 validation 5800MHz 100mW**

## 5800MHz

Date: 2018-5-31

Electronics: DAE4 Sn1525

Medium: Body 5 GHz

Medium parameters used:  $f = 5800$  MHz;  $\sigma = 6.008$  mho/m;  $\epsilon_r = 46.64$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: CW Frequency: 5800 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(4.67, 4.67, 4.67)

**System Validation /Area Scan (91x91x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 18.6 W/kg

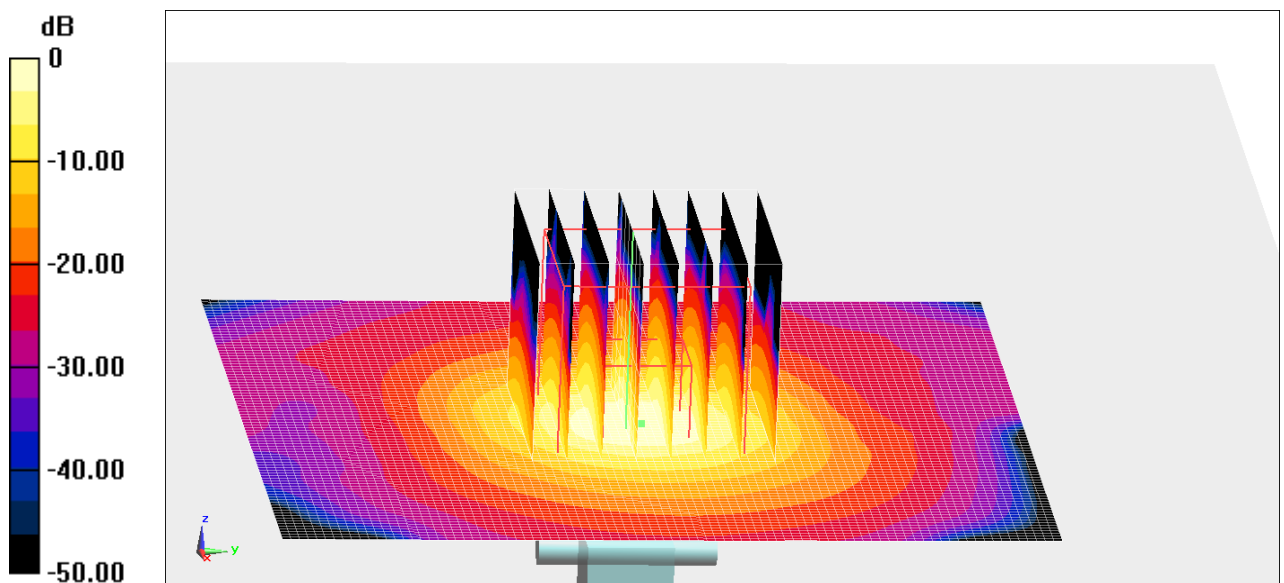
**System Validation /Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 67.15 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 35.63 W/kg

**SAR(1 g) = 7.65 W/kg; SAR(10 g) = 2.15 W/kg**

Maximum value of SAR (measured) = 18.8 W/kg



0 dB = 18.8 W/kg = 12.74 dBW/kg

**Fig.B.20 validation 5800MHz 100mW**

## 750MHz

Date: 2018-6-6

Electronics: DAE4 Sn1525

Medium: Head 750 MHz

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.895 \text{ mho/m}$ ;  $\epsilon_r = 42.4$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

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

Probe: EX3DV4 – SN7464 ConvF(10.57, 10.57, 10.57)

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

Reference Value =  $48.86 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$

**Fast SAR: SAR(1 g) =  $2.07 \text{ W/kg}$ ; SAR(10 g) =  $1.35 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $2.19 \text{ W/kg}$

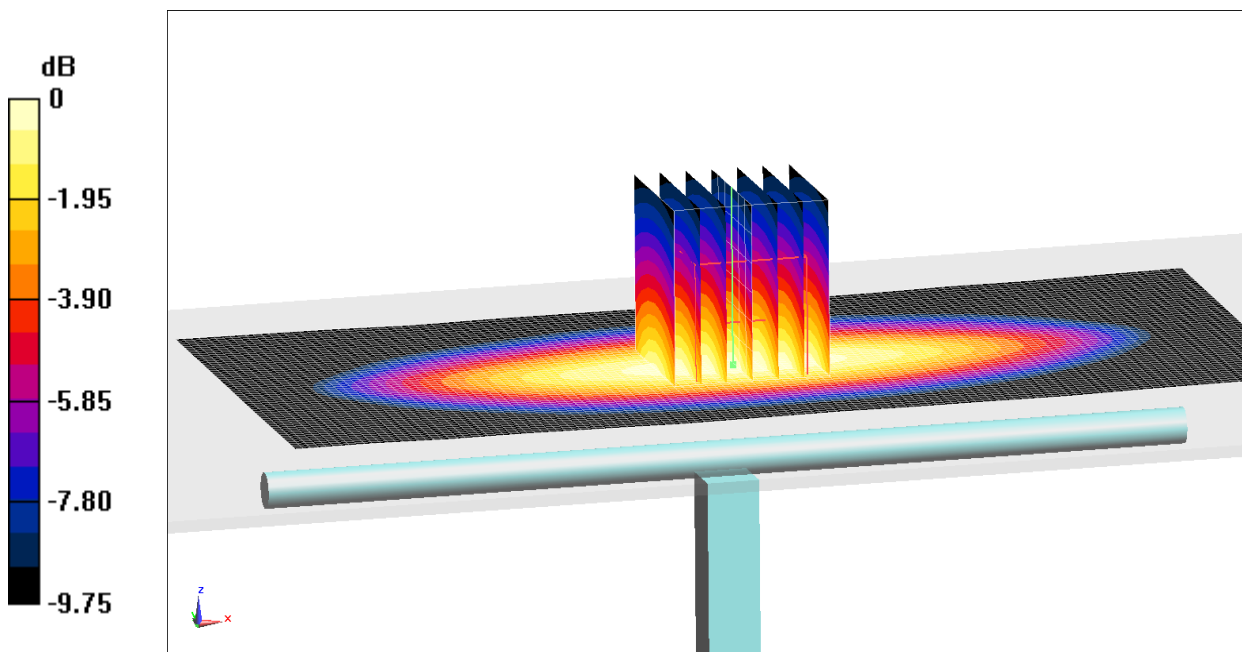
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $48.86 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$

Peak SAR (extrapolated) =  $2.80 \text{ W/kg}$

**SAR(1 g) =  $2.03 \text{ W/kg}$ ; SAR(10 g) =  $1.32 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.16 \text{ W/kg}$



0 dB =  $2.16 \text{ W/kg}$  =  $3.34 \text{ dB W/kg}$

**Fig.B.21 validation 750MHz 250mW**

## 750MHz

Date: 2018-6-6

Electronics: DAE4 Sn1525

Medium: Body750 MHz

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.965 \text{ mho/m}$ ;  $\epsilon_r = 56.31$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

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

Probe: EX3DV4 – SN7464 ConvF(10.63, 10.63, 10.63)

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

Reference Value =  $50.28 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$

**Fast SAR: SAR(1 g) =  $2.19 \text{ W/kg}$ ; SAR(10 g) =  $1.42 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $2.43 \text{ W/kg}$

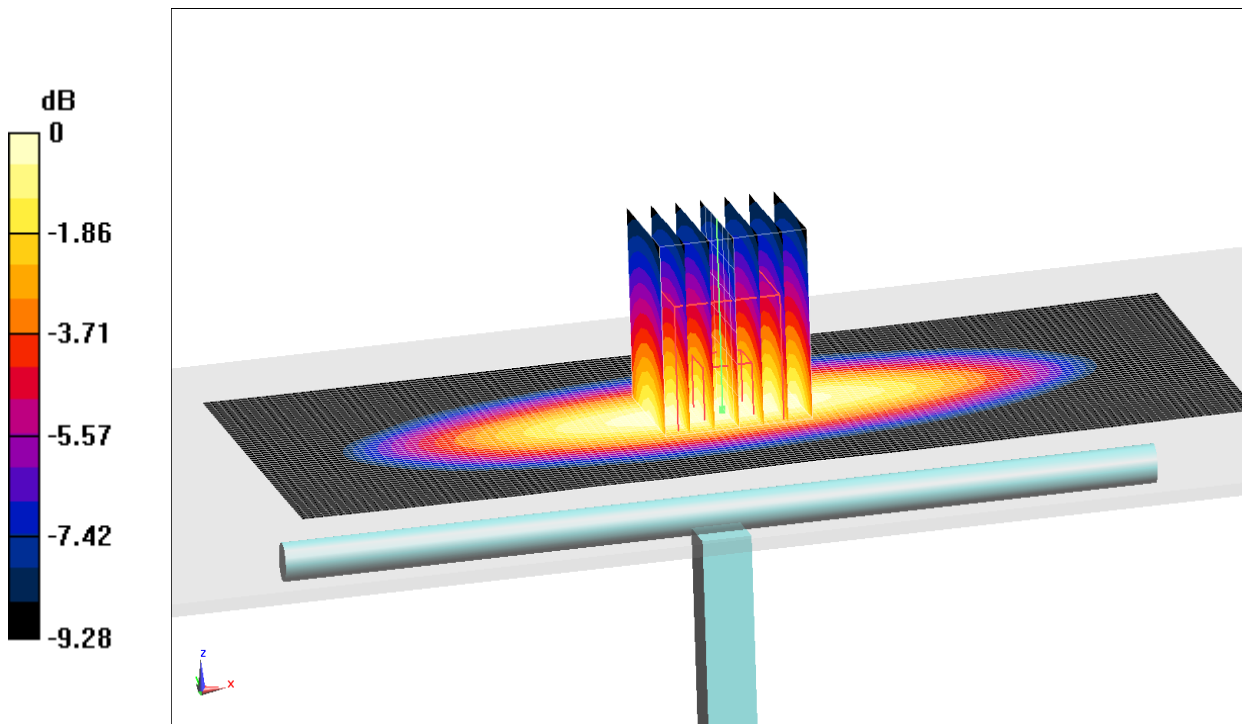
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $50.28 \text{ V/m}$ ; Power Drift =  $-0.06 \text{ dB}$

Peak SAR (extrapolated) =  $2.95 \text{ W/kg}$

**SAR(1 g) =  $2.21 \text{ W/kg}$ ; SAR(10 g) =  $1.44 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.45 \text{ W/kg}$



0 dB =  $2.45 \text{ W/kg} = 3.89 \text{ dB W/kg}$

**Fig.B.22 validation 750MHz 250mW**



## 835MHz

Date: 2018-6-4

Electronics: DAE4 Sn1525

Medium: Head 850 MHz

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.887 \text{ S/m}$ ;  $\epsilon_r = 41.87$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

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

Probe: EX3DV4 – SN7464 ConvF(10.28, 10.28, 10.28)

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

Reference Value =  $54.38 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$

**Fast SAR: SAR(1 g) =  $2.36 \text{ W/kg}$ ; SAR(10 g) =  $1.52 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $2.56 \text{ W/kg}$

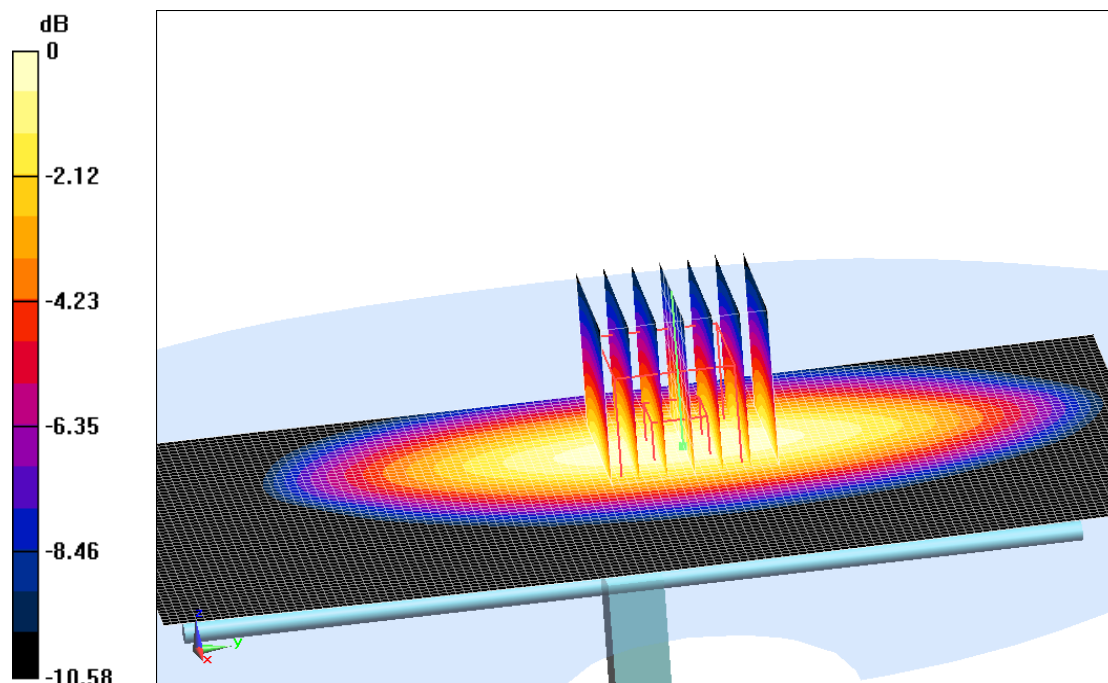
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $54.38 \text{ V/m}$ ; Power Drift =  $-0.05 \text{ dB}$

Peak SAR (extrapolated) =  $3.09 \text{ W/kg}$

**SAR(1 g) =  $2.33 \text{ W/kg}$ ; SAR(10 g) =  $1.49 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.53 \text{ W/kg}$



0 dB =  $2.53 \text{ W/kg}$  =  $4.03 \text{ dBW/kg}$

**Fig.B.23 validation 835MHz 250mW**

## 835MHz

Date: 2018-6-4

Electronics: DAE4 Sn1525

Medium: Body 850 MHz

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.986 \text{ S/m}$ ;  $\epsilon_r = 55.98$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

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

Probe: EX3DV4 – SN7464 ConvF(10.21, 10.21, 10.21)

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

Reference Value =  $52.31 \text{ V/m}$ ; Power Drift =  $-0.03 \text{ dB}$

**Fast SAR: SAR(1 g) =  $2.34 \text{ W/kg}$ ; SAR(10 g) =  $1.53 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $2.67 \text{ W/kg}$

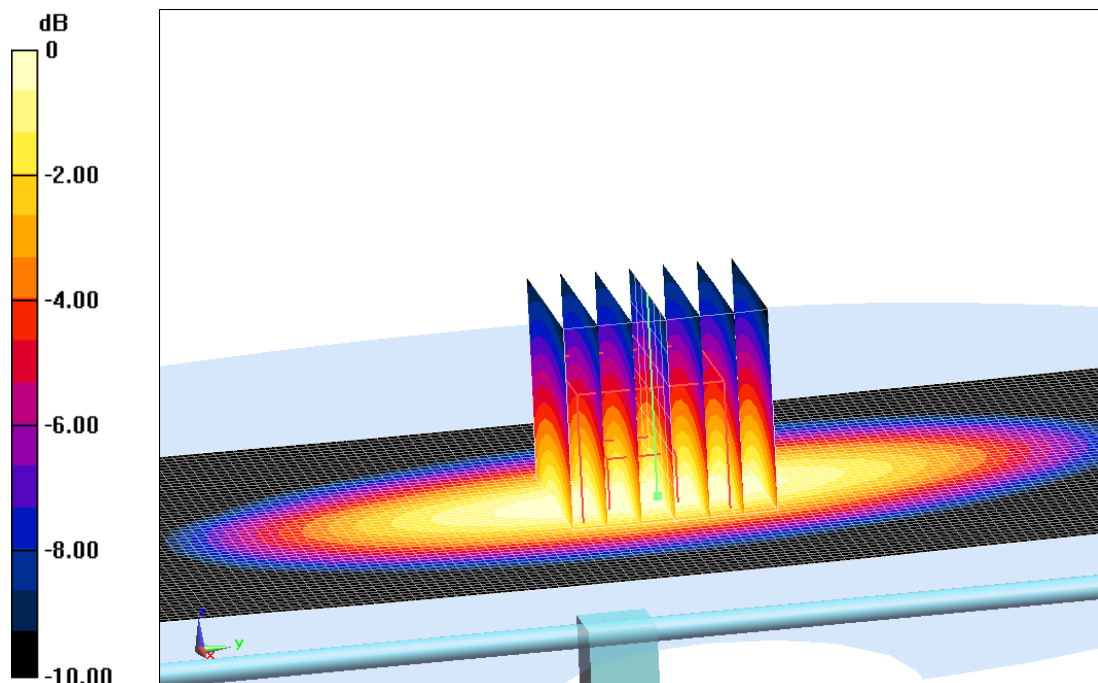
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $52.31 \text{ V/m}$ ; Power Drift =  $-0.03 \text{ dB}$

Peak SAR (extrapolated) =  $3.12 \text{ W/kg}$

**SAR(1 g) =  $2.37 \text{ W/kg}$ ; SAR(10 g) =  $1.55 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.70 \text{ W/kg}$



0 dB =  $2.70 \text{ W/kg}$  =  $4.31 \text{ dBW/kg}$

**Fig.B.24 validation 835MHz 250mW**

## 1750MHz

Date: 2018-6-6

Electronics: DAE4 Sn1525

Medium: Head 1750 MHz

Medium parameters used:  $f=1750$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.52$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(8.70, 8.70, 8.70)

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

Reference Value = 90.83 V/m; Power Drift = 0.02 dB

**Fast SAR: SAR(1 g) = 9.18 W/kg; SAR(10 g) = 4.85 W/kg**

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

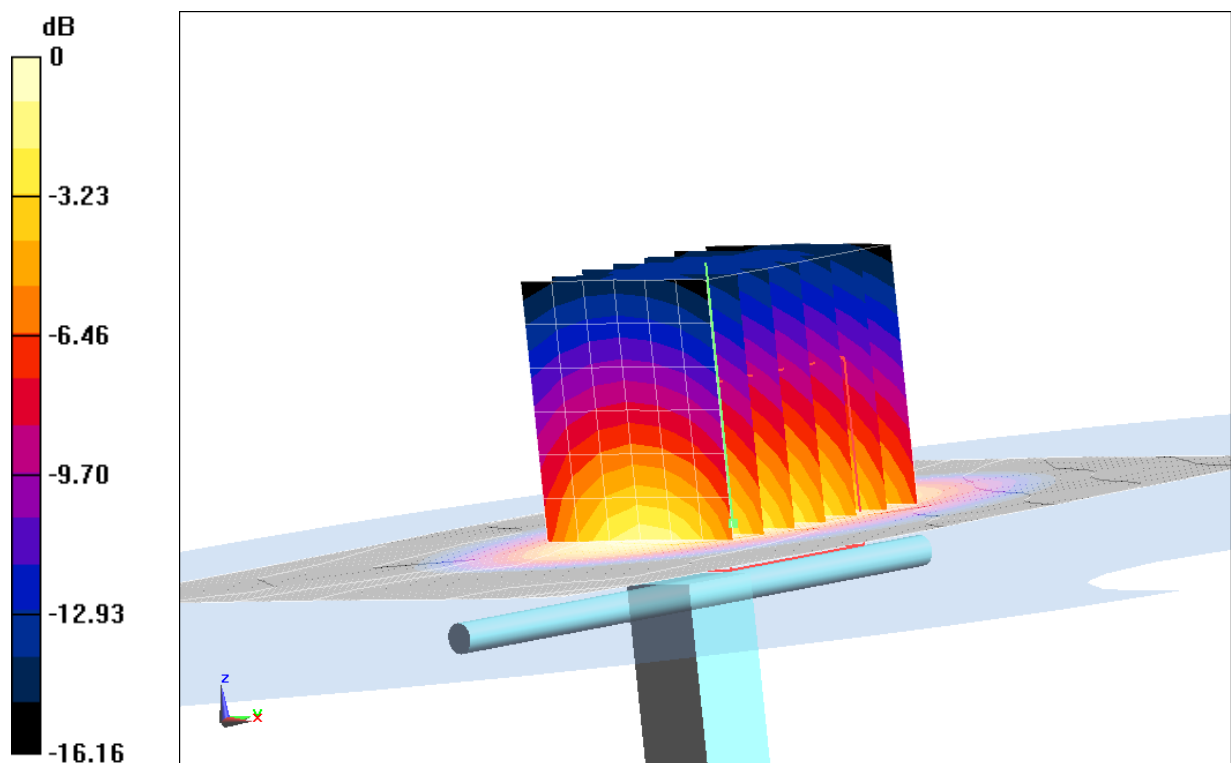
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 90.83 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 15.71 W/kg

**SAR(1 g) = 9.28 W/kg; SAR(10 g) = 4.93 W/kg**

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



0 dB = 10.2 W/kg = 10.09 dB W/kg

**Fig.B.25 validation 1750MHz 250mW**

## 1750MHz

Date: 2018-6-6

Electronics: DAE4 Sn1525

Medium: Body 1750 MHz

Medium parameters used:  $f=1750$  MHz;  $\sigma = 1.513$  mho/m;  $\epsilon_r = 53.63$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(8.60, 8.60, 8.60)

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

Reference Value = 92.19 V/m; Power Drift = -0.04 dB

**Fast SAR: SAR(1 g) = 9.23 W/kg; SAR(10 g) = 4.95 W/kg**

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

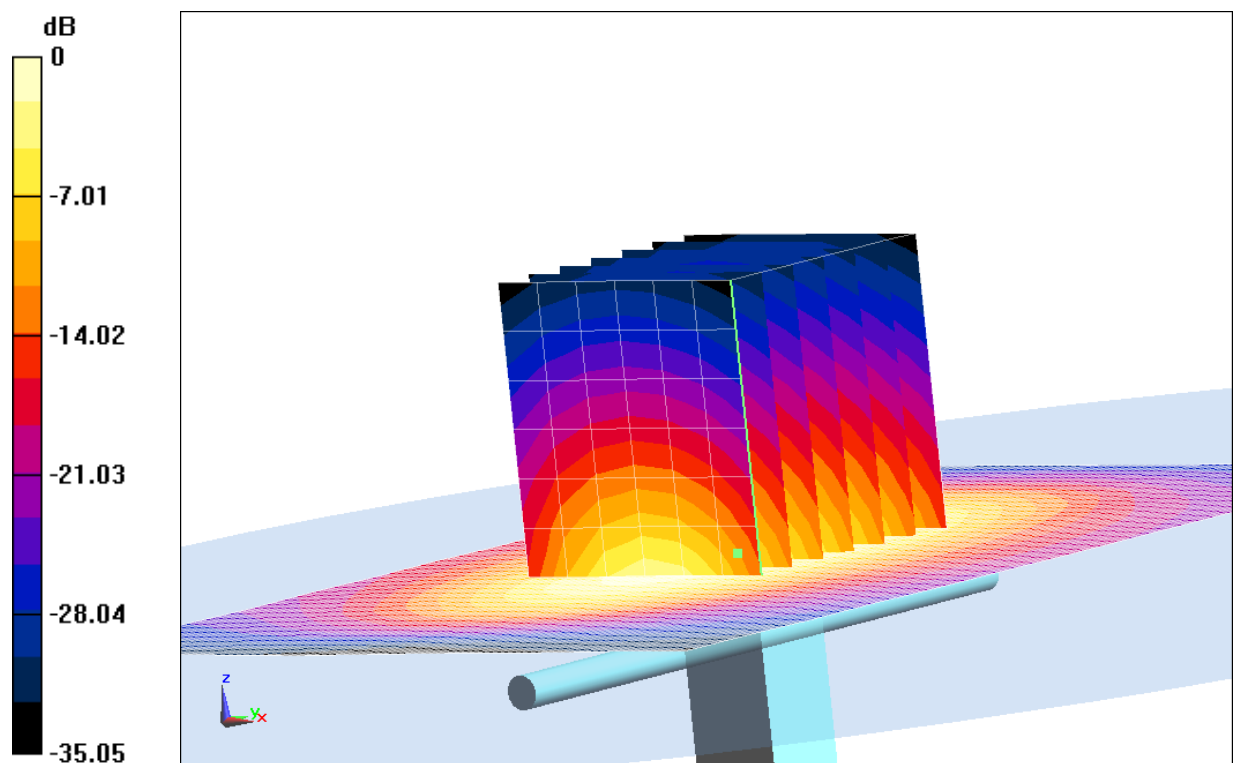
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.19 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 15.21 W/kg

**SAR(1 g) = 9.13 W/kg; SAR(10 g) = 4.86 W/kg**

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



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

**Fig.B.26 validation 1750MHz 250mW**

## 1900MHz

Date: 2018-6-5

Electronics: DAE4 Sn1525

Medium: Head 1900 MHz

Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.401 \text{ mho/m}$ ;  $\epsilon_r = 40.71$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF (8.39, 8.39, 8.39)

**System Validation /Area Scan(61x81x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$

Reference Value =  $91.04 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$

**SAR(1 g) =  $10.3 \text{ W/kg}$ ; SAR(10 g) =  $5.48 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $12.5 \text{ W/kg}$

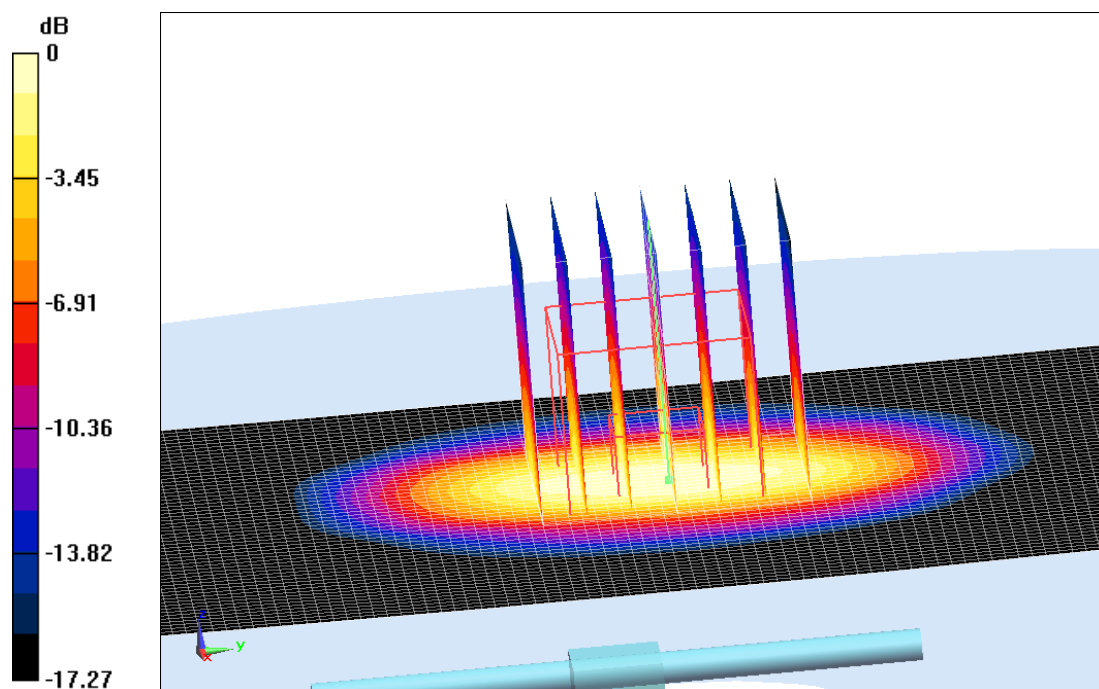
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $91.04 \text{ V/m}$ ; Power Drift =  $0.06 \text{ dB}$

Peak SAR (extrapolated) =  $17.88 \text{ W/kg}$

**SAR(1 g) =  $10.1 \text{ W/kg}$ ; SAR(10 g) =  $5.31 \text{ W/kg}$**

Maximum value of SAR (measured) =  $12.3 \text{ W/kg}$



$0 \text{ dB} = 12.3 \text{ W/kg} = 10.90 \text{ dBW/kg}$

**Fig.B.27 validation 1900MHz 250mW**

## 1900MHz

Date: 2018-6-5

Electronics: DAE4 Sn1525

Medium: Body 1900 MHz

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.538$  S/m;  $\epsilon_r = 52.62$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(8.32, 8.32, 8.32)

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

Reference Value = 94.98 V/m; Power Drift = 0.03 dB

**Fast SAR: SAR(1 g) = 10.6 W/kg; SAR(10 g) = 5.63 W/kg**

Maximum value of SAR (interpolated) = 12.6 W/kg

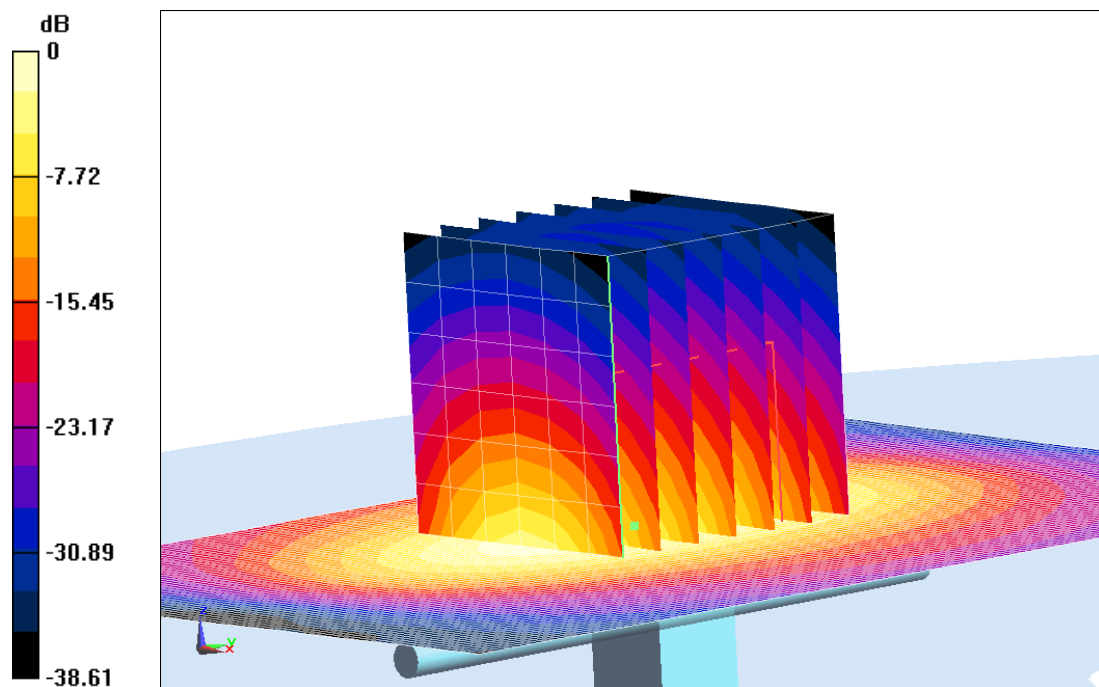
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.98 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 19.25 W/kg

**SAR(1 g) = 10.5 W/kg; SAR(10 g) = 5.55 W/kg**

Maximum value of SAR (measured) = 12.5 W/kg



0 dB = 12.5 W/kg = 10.97 dB W/kg

**Fig.B.28 validation 1900MHz 250mW**

## 2450MHz

Date: 2018-6-8

Electronics: DAE4 Sn1525

Medium: Head 2450 MHz

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.823$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(7.89, 7.89, 7.89)

**System Validation /Area Scan (61x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 90.2 V/m; Power Drift = -0.02 dB

**SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.41 W/kg**

Maximum value of SAR (interpolated) = 16.7 W/kg

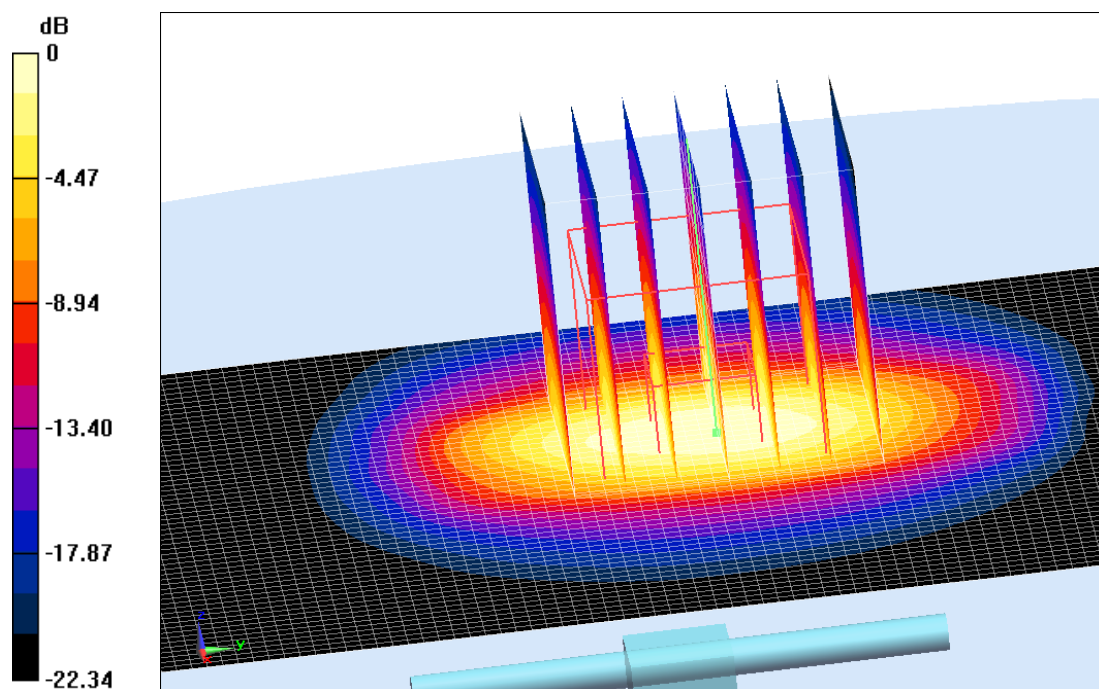
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 90.2 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 27.38 W/kg

**SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.24 W/kg**

Maximum value of SAR (measured) = 16.5 W/kg



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

**Fig.B.29 validation 2450MHz 250mW**

## 2450MHz

Date: 2018-6-8

Electronics: DAE4 Sn1525

Medium: Body 2450 MHz

Medium parameters used:  $f = 2450 \text{ MHz}$ ;  $\sigma = 1.965 \text{ S/m}$ ;  $\epsilon_r = 51.98$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

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

Probe: EX3DV4 – SN7464 ConvF(8.09, 8.09, 8.09)

**System Validation/Area Scan (81x101x1):** Interpolated grid:  $dx=1.000 \text{ mm}$ ,  $dy=1.000 \text{ mm}$

Reference Value =  $89.87 \text{ V/m}$ ; Power Drift =  $-0.04 \text{ dB}$

**SAR(1 g) =  $12.7 \text{ W/kg}$ ; SAR(10 g) =  $5.94 \text{ W/kg}$**

Maximum value of SAR (interpolated) =  $14.3 \text{ W/kg}$

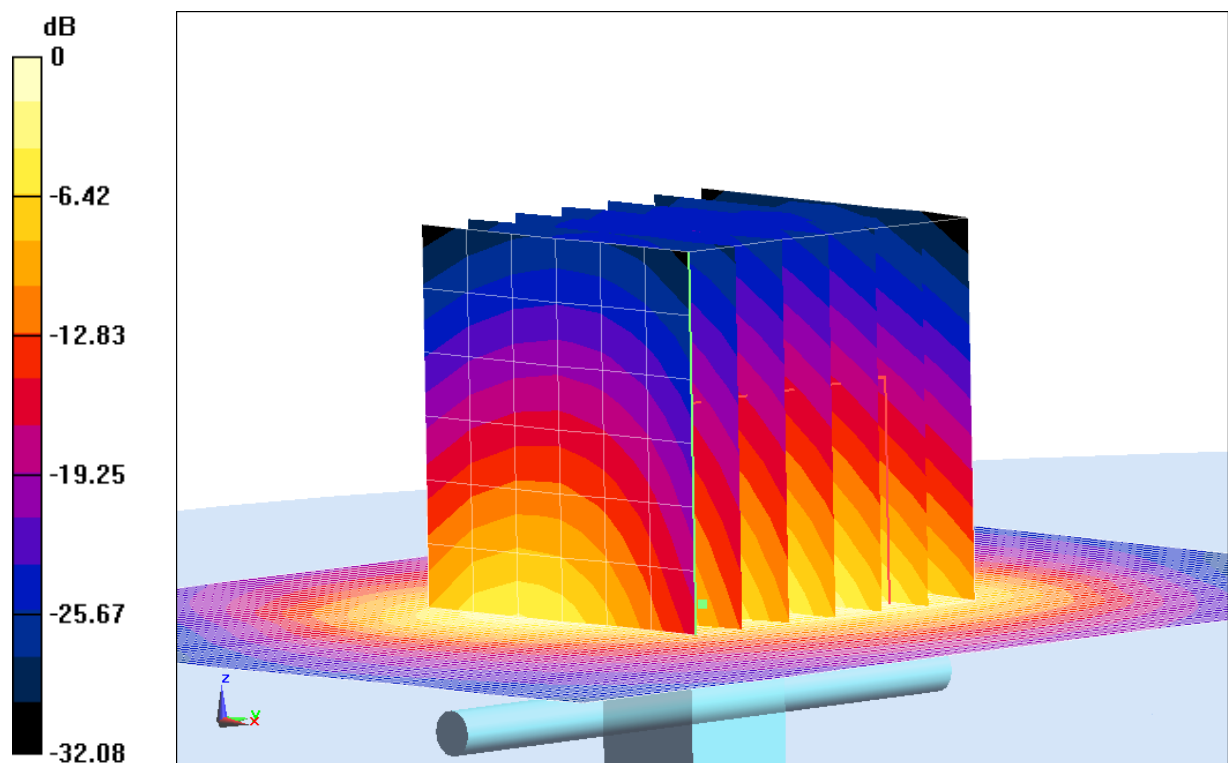
**System Validation/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $89.87 \text{ V/m}$ ; Power Drift =  $-0.04 \text{ dB}$

Peak SAR (extrapolated) =  $24.55 \text{ W/kg}$

**SAR(1 g) =  $12.9 \text{ W/kg}$ ; SAR(10 g) =  $6.11 \text{ W/kg}$**

Maximum value of SAR (measured) =  $14.5 \text{ W/kg}$



0 dB =  $14.5 \text{ W/kg}$  =  $11.61 \text{ dB W/kg}$

**Fig.B.30 validation 2450MHz 250mW**



## 2600MHz

Date: 2018-6-7

Electronics: DAE4 Sn1525

Medium: Head 2600 MHz

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.969$  mho/m;  $\epsilon_r = 38.38$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(7.76, 7.76, 7.76)

**System Validation/Area Scan(81x81x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 82.41 V/m; Power Drift = 0.01 dB

**SAR(1 g) = 14.9 W/kg; SAR(10 g) = 6.74 W/kg**

Maximum value of SAR (interpolated) = 22.5 W/kg

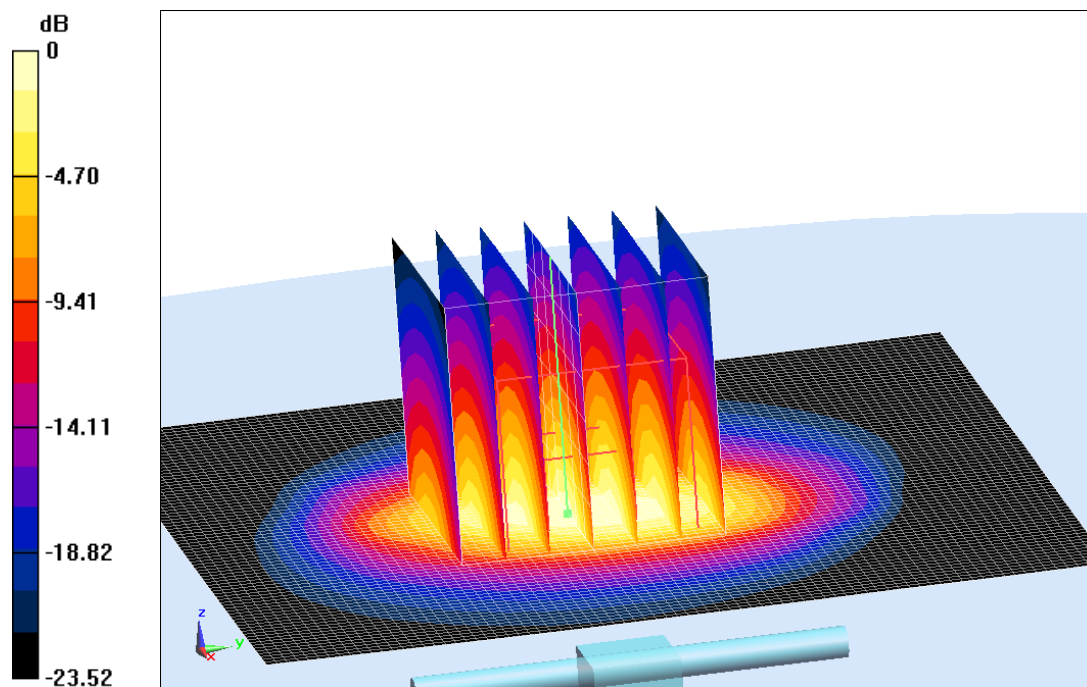
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 82.41 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 31.24 W/kg

**SAR(1 g) = 14.7 W/kg; SAR(10 g) = 6.57 W/kg**

Maximum value of SAR (measured) = 22.3 W/kg



0 dB = 22.3 W/kg = 13.48 dBW/kg

**Fig.B.31 validation 2600MHz 250mW**

## 2600MHz

Date: 2018-6-7

Electronics: DAE4 Sn1525

Medium: Body 2600 MHz

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.173$  mho/m;  $\epsilon_r = 52.81$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

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

Probe: EX3DV4 – SN7464 ConvF(7.84, 7.84, 7.84)

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

Reference Value = 81.33 V/m; Power Drift = -0.02 dB

**Fast SAR: SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.41 W/kg**

Maximum value of SAR (interpolated) = 22.4 W/kg

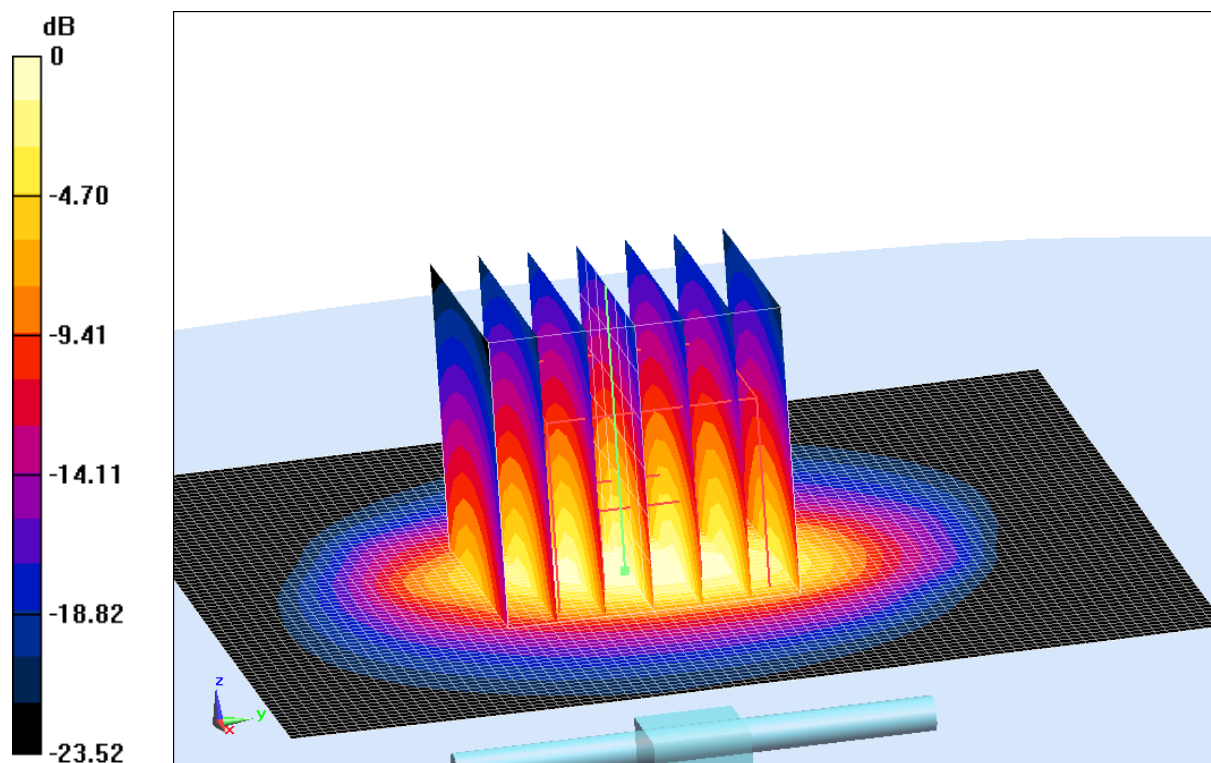
**System Validation /Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 81.33 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 31.01 W/kg

**SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.32 W/kg**

Maximum value of SAR (measured) = 22.3 W/kg



0 dB = 22.3 W/kg = 13.48 dB W/kg

**Fig.B.32 validation 2600MHz 250mW**

## 5300MHz

Date: 2018-6-8

Electronics: DAE4 Sn1525

Medium: Head 5 GHz

Medium parameters used:  $f = 5300 \text{ MHz}$ ;  $\sigma = 4.805 \text{ mho/m}$ ;  $\epsilon_r = 36.68$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.9^\circ\text{C}$       Liquid Temperature:  $22.5^\circ\text{C}$

Communication System: CW Frequency: 5300 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(5.53, 5.53, 5.53)

**System Validation /Area Scan (91x91x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$   
Maximum value of SAR (interpolated) =  $19.3 \text{ W/kg}$

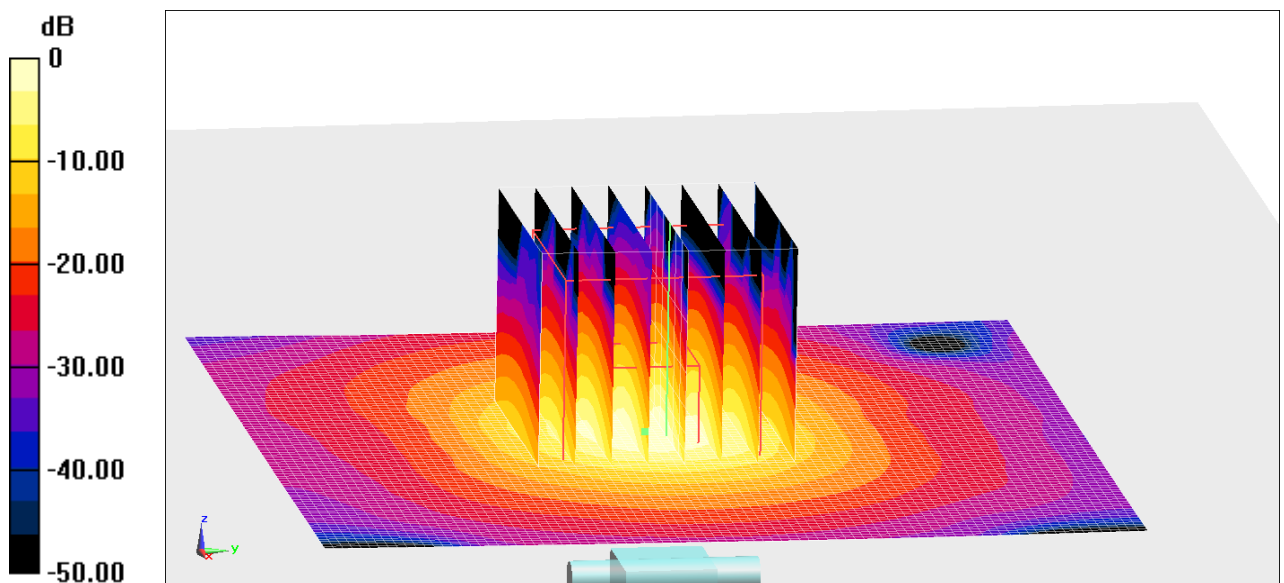
**System Validation /Zoom Scan (8x8x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  
 $dz=1.4\text{mm}$

Reference Value =  $73.98 \text{ V/m}$ ; Power Drift =  $0.03 \text{ dB}$

Peak SAR (extrapolated) =  $35.48 \text{ W/kg}$

**SAR(1 g) =  $8.28 \text{ W/kg}$ ; SAR(10 g) =  $2.38 \text{ W/kg}$**

Maximum value of SAR (measured) =  $19.5 \text{ W/kg}$



0 dB =  $19.5 \text{ W/kg} = 12.90 \text{ dBW/kg}$

**Fig.B.33 validation 5300MHz 100mW**

## 5600MHz

Date: 2018-6-8

Electronics: DAE4 Sn1525

Medium: Body 5 GHz

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.719$  mho/m;  $\epsilon_r = 47.59$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.9°C      Liquid Temperature: 22.5°C

Communication System: CW Frequency: 5600 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7464 ConvF(4.50, 4.50, 4.50)

**System Validation /Area Scan (91x91x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (interpolated) = 20.3 W/kg

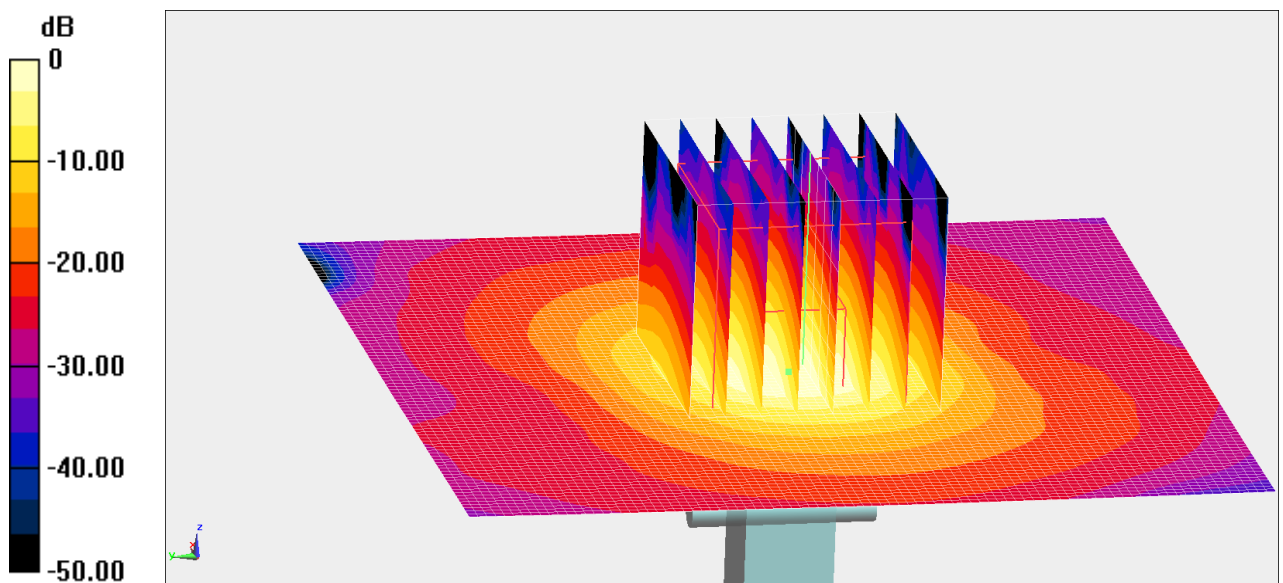
**System Validation /Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.25 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 36.95 W/kg

**SAR(1 g) = 7.9 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.34 validation 5600MHz 100mW**

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 (%)
2018-5-29	750	Head	2.15	2.12	1.42
	750	Body	2.23	2.25	-0.89
2018-5-27	835	Head	2.34	2.31	1.30
	835	Body	2.35	2.39	-1.67
2018-5-29	1750	Head	9.15	9.24	-0.97
	1750	Body	9.27	9.17	1.09
2018-5-28	1900	Head	10.2	10.1	0.99
	1900	Body	10.4	10.3	0.97
2018-5-31	2450	Head	13.1	12.9	1.55
	2450	Body	12.6	12.8	-1.56
2018-5-30	2600	Head	14.6	14.4	1.39
	2600	Body	14.3	14.2	0.70
2018-6-6	750	Head	2.07	2.03	1.97
	750	Body	2.19	2.21	-0.90
2018-6-4	835	Head	2.36	2.33	1.29
	835	Body	2.34	2.37	-1.27
2018-6-6	1750	Head	9.18	9.28	-1.08
	1750	Body	9.23	9.13	1.10
2018-6-5	1900	Head	10.3	10.1	1.98
	1900	Body	10.6	10.5	0.95
2018-6-8	2450	Head	13.5	13.3	1.50
	2450	Body	12.7	12.9	-1.55
2018-6-7	2600	Head	14.9	14.7	1.36
	2600	Body	14.3	14.2	0.70