

**GSM850\_CH190 Rear**

Date: 3/5/2018

Electronics: DAE4 Sn1525

Medium: body 835 MHz

Medium parameters used:  $f = 836.6$  MHz;  $\sigma = 0.969$  mho/m;  $\epsilon_r = 54.35$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: GSM850 836.6 MHz Duty Cycle: 1:2

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

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

Maximum value of SAR (interpolated) = 0.963 W/kg

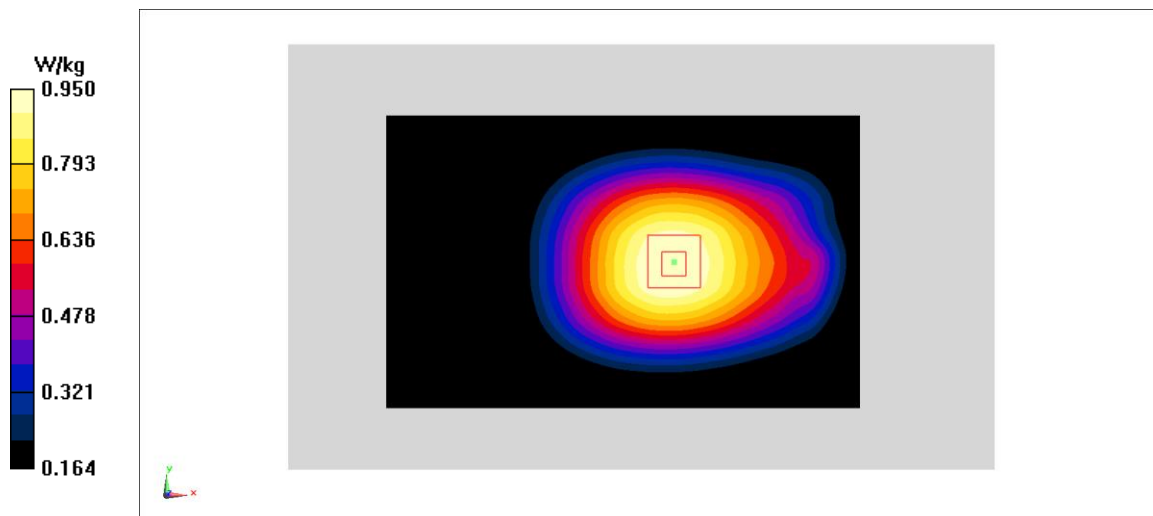
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 29.26 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.11 W/kg

**SAR(1 g) = 0.872 W/kg; SAR(10 g) = 0.666 W/kg**

Maximum value of SAR (measured) = 0.95 W/kg



**Fig A.2**

**PCS1900\_CH512 Left Cheek**

Date: 3/7/2018

Electronics: DAE4 Sn1525

Medium: head 1900 MHz

Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.338$  mho/m;  $\epsilon_r = 39.84$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: PCS1900 1850.2 MHz Duty Cycle: 1:8.3

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) = 0.12 W/kg

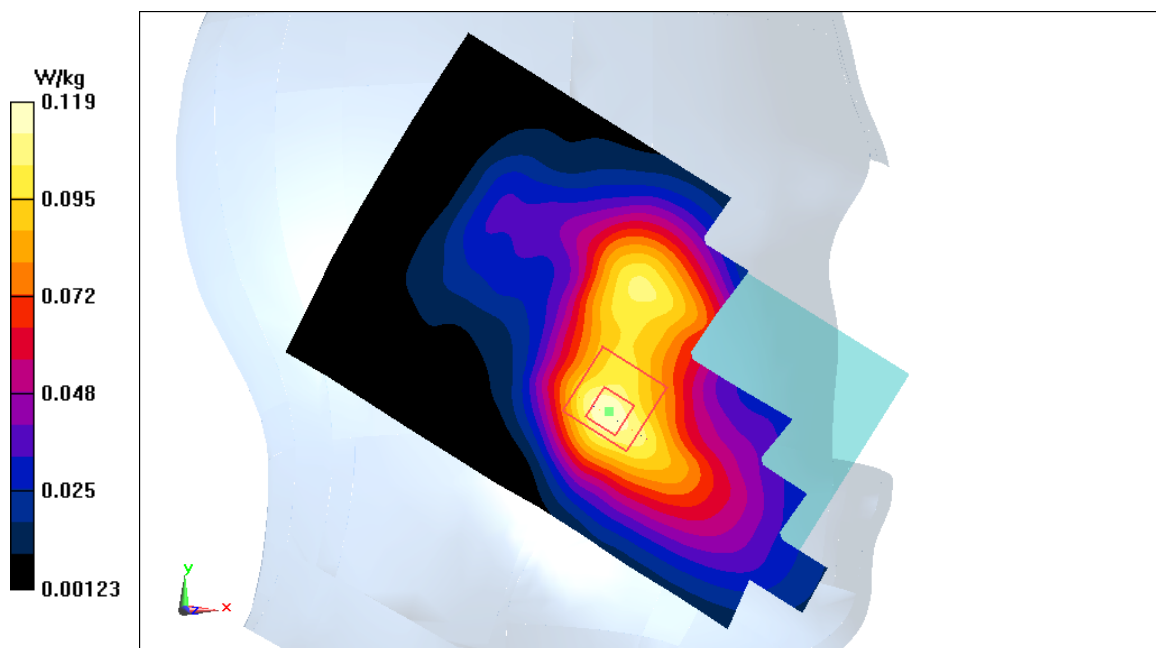
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.312 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.15 W/kg

**SAR(1 g) = 0.1 W/kg; SAR(10 g) = 0.065 W/kg**

Maximum value of SAR (measured) = 0.119 W/kg



**Fig A.3**

**PCS1900 #1\_CH512 Rear**

Date: 3/7/2018

Electronics: DAE4 Sn1525

Medium: body 1900 MHz

Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.477$  mho/m;  $\epsilon_r = 54.16$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: PCS1900 1850.2 MHz Duty Cycle: 1:2

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

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

Maximum value of SAR (interpolated) = 0.521 W/kg

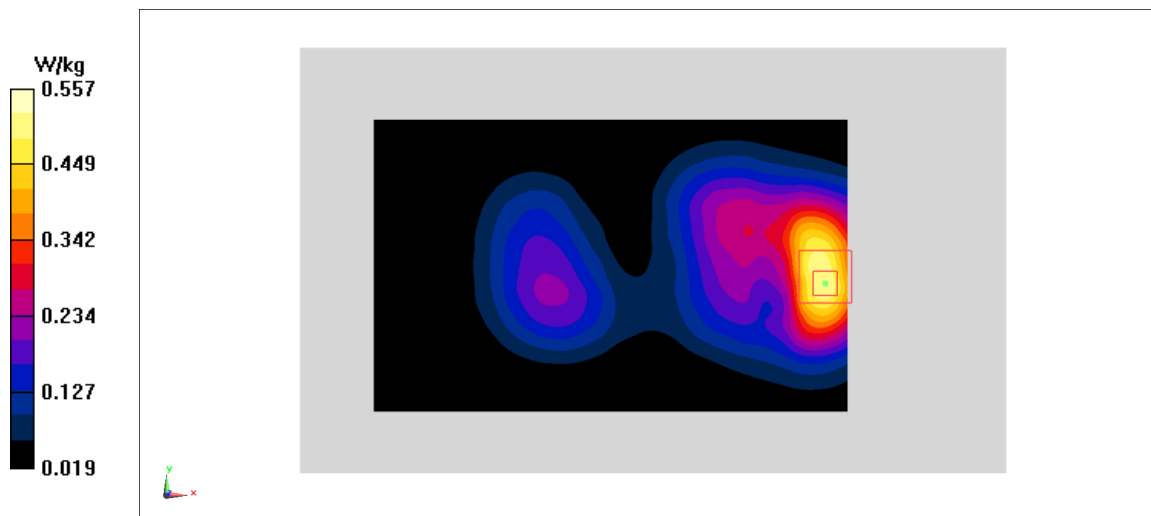
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.114 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.726 W/kg

**SAR(1 g) = 0.461 W/kg; SAR(10 g) = 0.275 W/kg**

Maximum value of SAR (measured) = 0.557 W/kg



**Fig A.4**

**PCS1900 #2\_CH512 Bottom edge**

Date: 3/7/2018

Electronics: DAE4 Sn1525

Medium: head 1900 MHz

Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.338$  mho/m;  $\epsilon_r = 39.84$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: PCS1900 1850.2 MHz Duty Cycle: 1:2.67

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

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

Maximum value of SAR (interpolated) = 0.713 W/kg

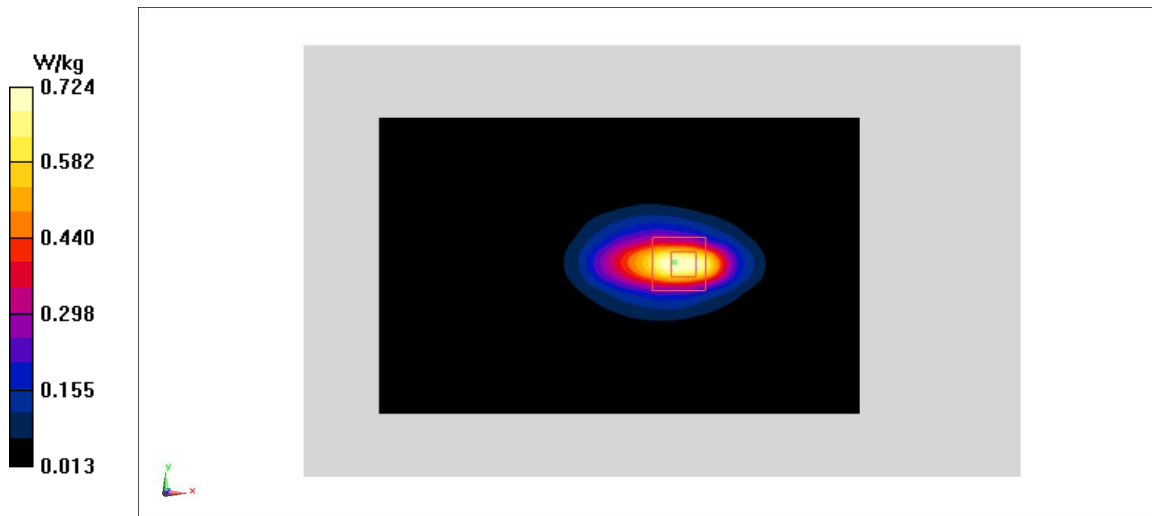
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.26 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.01 W/kg

**SAR(1 g) = 0.589 W/kg; SAR(10 g) = 0.312 W/kg**

Maximum value of SAR (measured) = 0.724 W/kg



**Fig A.5**

### WCDMA1900-BII\_CH9262 Left Cheek

Date: 3/7/2018

Electronics: DAE4 Sn1525

Medium: body 1900 MHz

Medium parameters used:  $f = 1852.4$  MHz;  $\sigma = 1.479$  mho/m;  $\epsilon_r = 54.16$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1900-BII 1852.4 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) = 0.193 W/kg

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

Reference Value = 4.985 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.223 W/kg

**SAR(1 g) = 0.155 W/kg; SAR(10 g) = 0.104 W/kg**

Maximum value of SAR (measured) = 0.178 W/kg

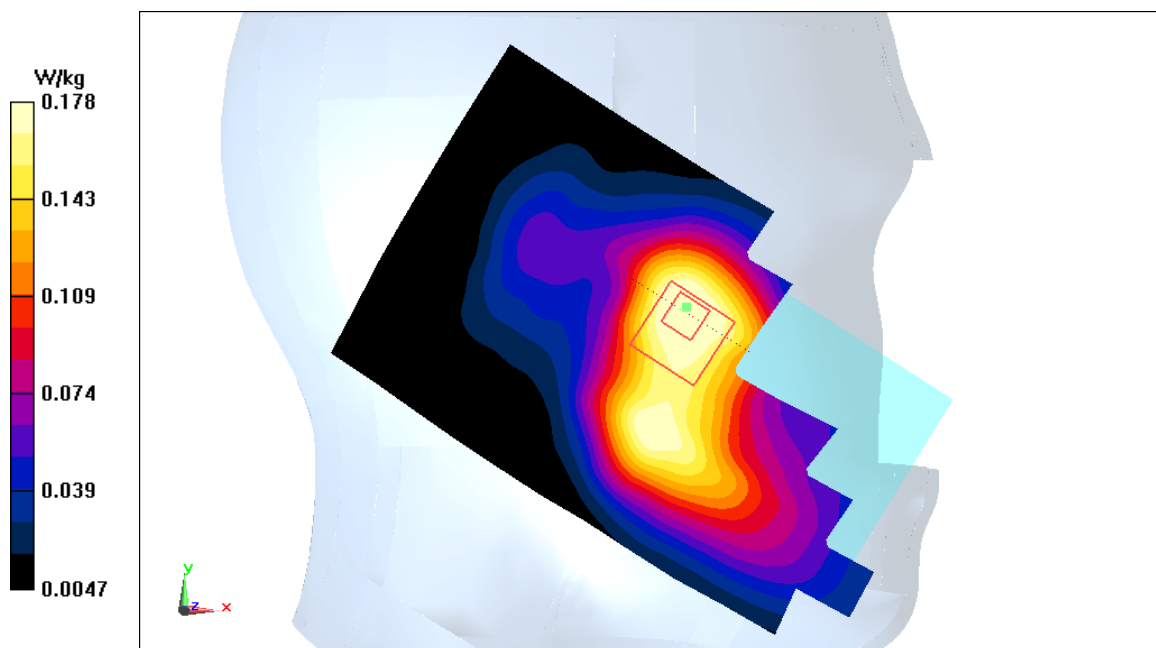


Fig A.6

**WCDMA1900-BII #1\_CH9262 Rear**

Date: 3/7/2018

Electronics: DAE4 Sn1525

Medium: head 1900 MHz

Medium parameters used:  $f = 1852.4$  MHz;  $\sigma = 1.339$  mho/m;  $\epsilon_r = 39.84$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1900-BII 1852.4 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.315 W/kg

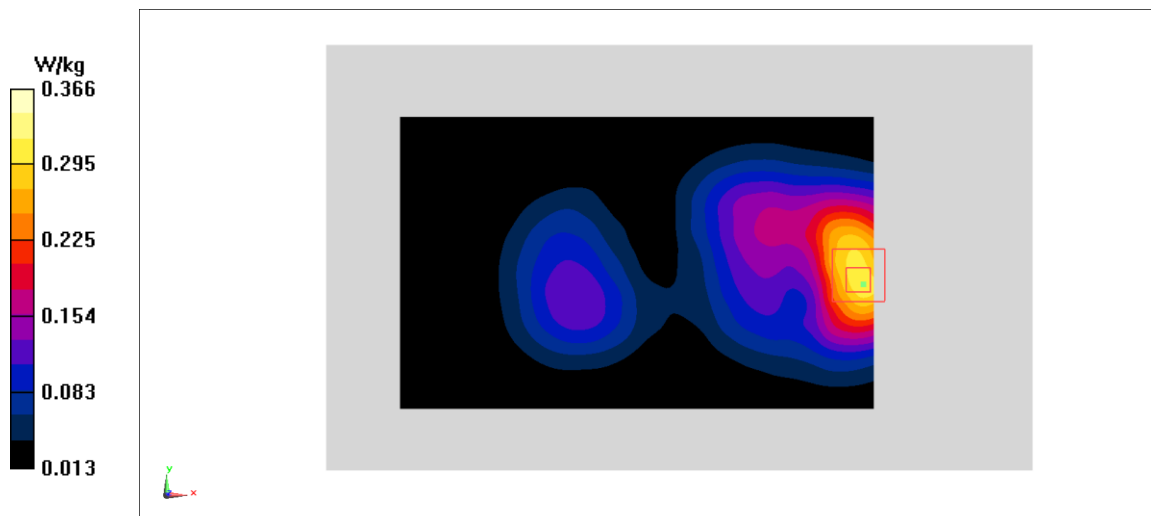
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.93 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.484 W/kg

**SAR(1 g) = 0.306 W/kg; SAR(10 g) = 0.182 W/kg**

Maximum value of SAR (measured) = 0.366 W/kg



**Fig A.7**

**WCDMA1900-BII #2\_CH9262 Bottom edge**

Date: 3/7/2018

Electronics: DAE4 Sn1525

Medium: body 1900 MHz

Medium parameters used:  $f = 1852.4$  MHz;  $\sigma = 1.479$  mho/m;  $\epsilon_r = 54.16$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1900-BII 1852.4 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.584 W/kg

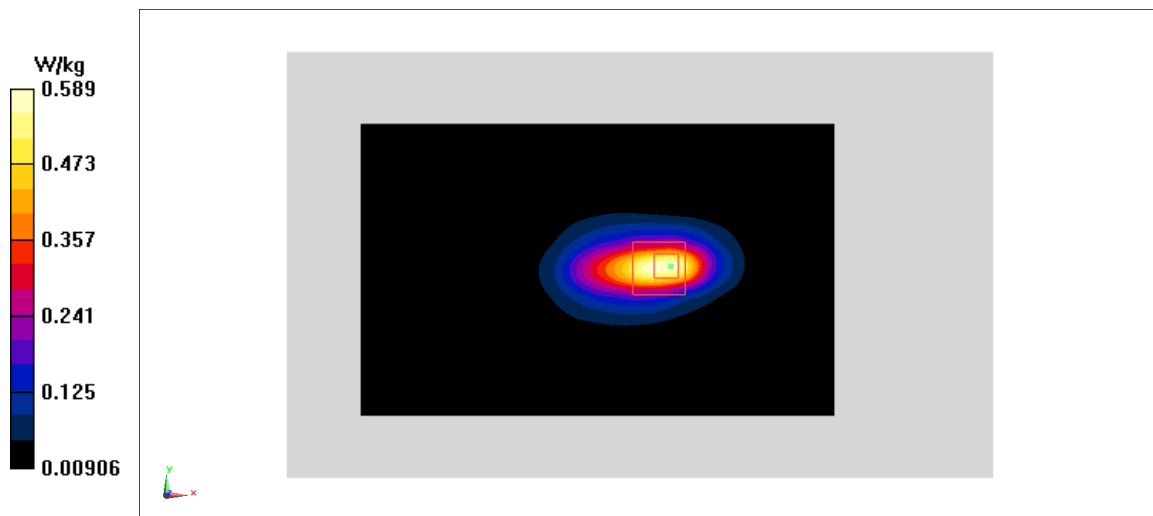
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.03 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.812 W/kg

**SAR(1 g) = 0.47 W/kg; SAR(10 g) = 0.249 W/kg**

Maximum value of SAR (measured) = 0.589 W/kg



**Fig A.8**

### WCDMA1700-BIV\_CH1312 Left Cheek

Date: 3/6/2018

Electronics: DAE4 Sn1525

Medium: head 1750 MHz

Medium parameters used:  $f = 1712.4$  MHz;  $\sigma = 1.361$  mho/m;  $\epsilon_r = 40.12$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1700-BIV 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) = 0.0893 W/kg

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

Reference Value = 3.966 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.1 W/kg

**SAR(1 g) = 0.072 W/kg; SAR(10 g) = 0.049 W/kg**

Maximum value of SAR (measured) = 0.083 W/kg

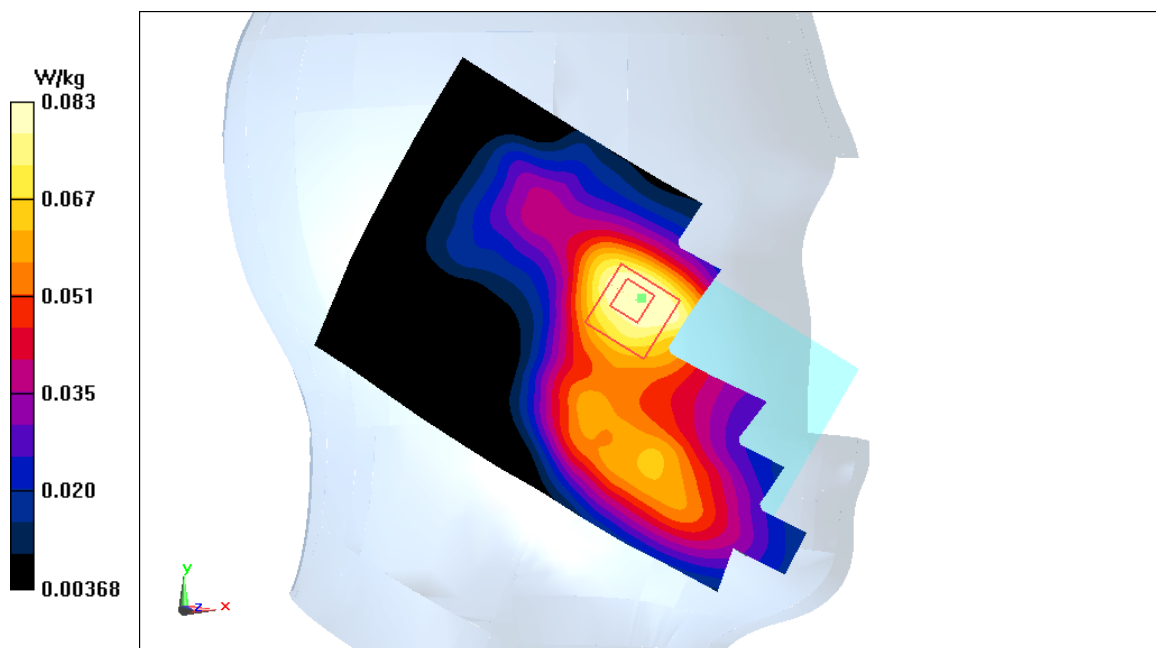


Fig A.9



### WCDMA1700-BIV #1\_CH1513 Rear

Date: 3/6/2018

Electronics: DAE4 Sn1525

Medium: body 1750 MHz

Medium parameters used:  $f = 1752.6$  MHz;  $\sigma = 1.483$  mho/m;  $\epsilon_r = 53.21$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1700-BIV 1752.6 MHz Duty Cycle: 1:1

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

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

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

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

Reference Value = 7.753 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.444 W/kg

**SAR(1 g) = 0.304 W/kg; SAR(10 g) = 0.191 W/kg**

Maximum value of SAR (measured) = 0.346 W/kg

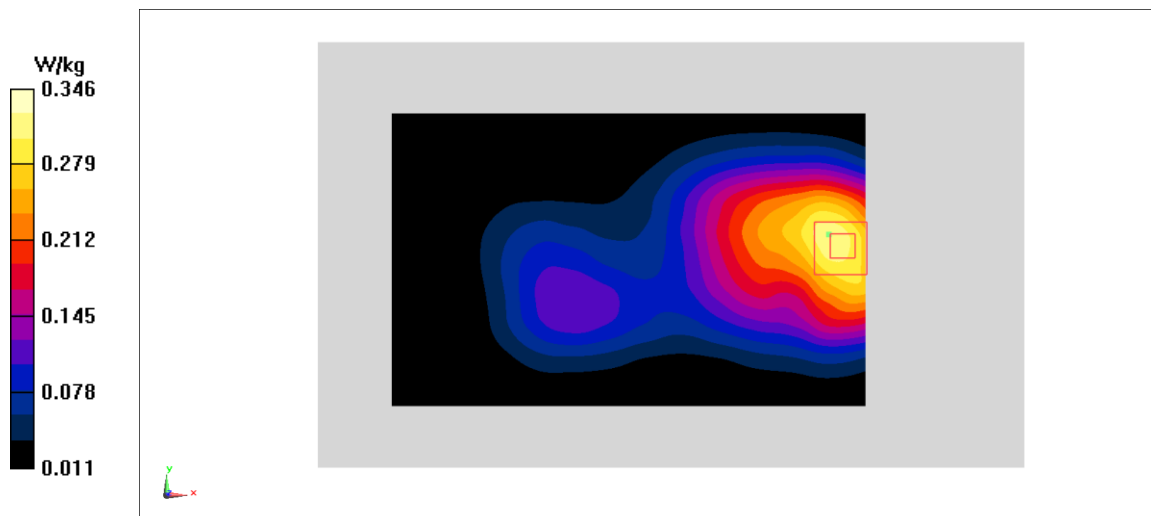


Fig A.10

**WCDMA1700-BIV #2\_CH1412 Bottom edge**

Date: 3/6/2018

Electronics: DAE4 Sn1525

Medium: head 1750 MHz

Medium parameters used:  $f = 1732.4$  MHz;  $\sigma = 1.38$  mho/m;  $\epsilon_r = 40.09$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA1700-BIV 1732.4 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 1.14 W/kg

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

Reference Value = 23 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.48 W/kg

**SAR(1 g) = 0.895 W/kg; SAR(10 g) = 0.488 W/kg**

Maximum value of SAR (measured) = 1.08 W/kg

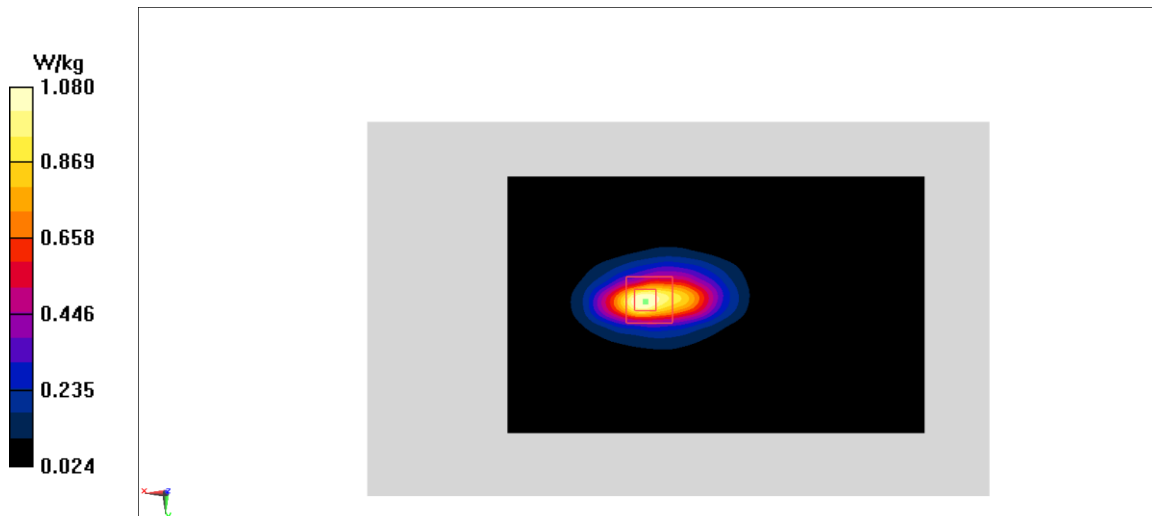


Fig A.11

### WCDMA850-BV\_CH4132 Left Cheek

Date: 3/5/2018

Electronics: DAE4 Sn1525

Medium: body 835 MHz

Medium parameters used:  $f = 826.4$  MHz;  $\sigma = 0.958$  mho/m;  $\epsilon_r = 54.36$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA850-BV 826.4 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) = 0.291 W/kg

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

Reference Value = 6.14 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.343 W/kg

**SAR(1 g) = 0.271 W/kg; SAR(10 g) = 0.206 W/kg**

Maximum value of SAR (measured) = 0.297 W/kg

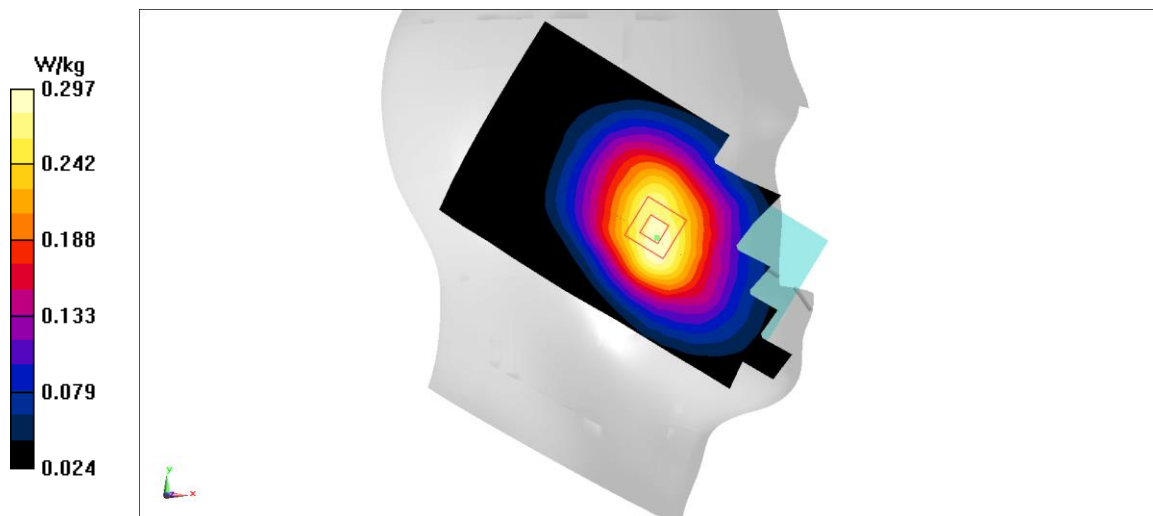


Fig A.12

**WCDMA850-BV\_CH4132 Rear**

Date: 3/5/2018

Electronics: DAE4 Sn1525

Medium: head 835 MHz

Medium parameters used:  $f = 826.4$  MHz;  $\sigma = 0.896$  mho/m;  $\epsilon_r = 42.27$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WCDMA850-BV 826.4 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.422 W/kg

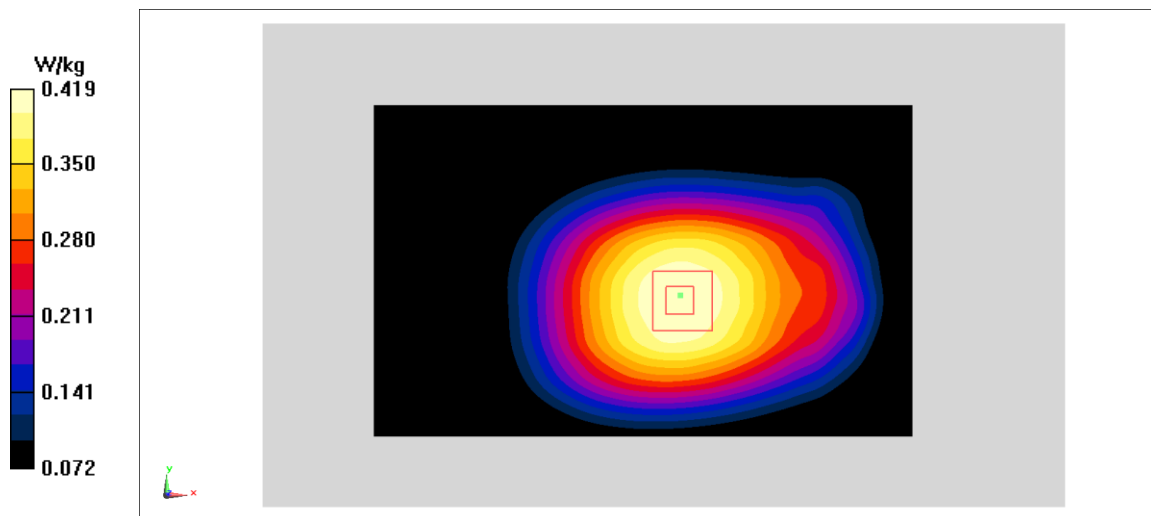
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.47 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.478 W/kg

**SAR(1 g) = 0.386 W/kg; SAR(10 g) = 0.301 W/kg**

Maximum value of SAR (measured) = 0.419 W/kg



**Fig A.13**

### WLAN2450\_CH11 Right Cheek

Date: 3/8/2018

Electronics: DAE4 Sn1525

Medium: body 2450 MHz

Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.978$  mho/m;  $\epsilon_r = 52.82$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WLAN2450 2462 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.75 W/kg

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

Reference Value = 11.85 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.25 W/kg

**SAR(1 g) = 0.519 W/kg; SAR(10 g) = 0.222 W/kg**

Maximum value of SAR (measured) = 0.709 W/kg

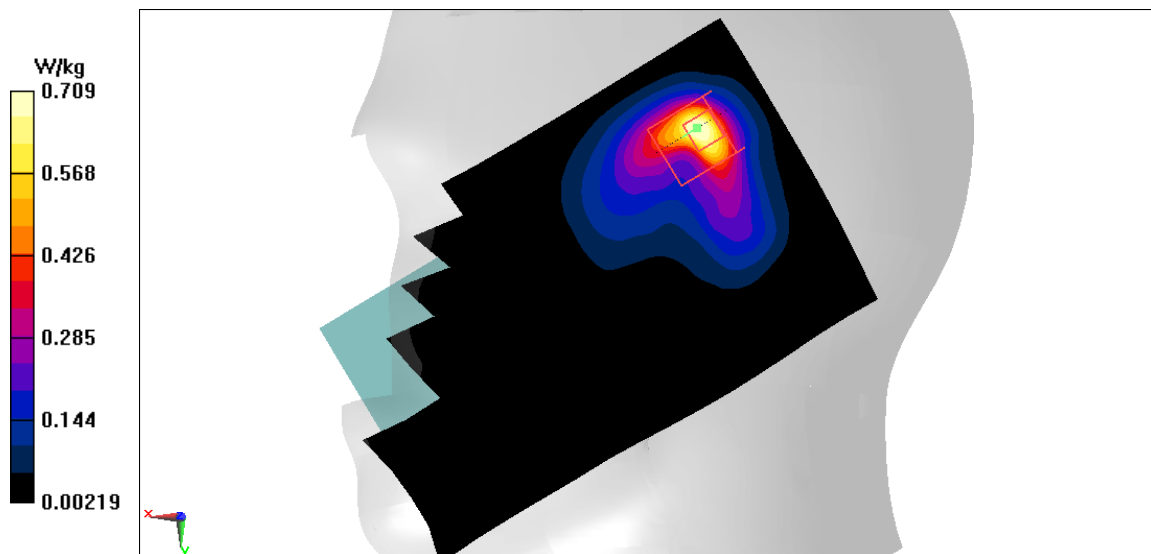


Fig A.14

**WLAN2450\_CH11 Rear**

Date: 3/8/2018

Electronics: DAE4 Sn1525

Medium: head 2450 MHz

Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.778$  mho/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C

Communication System: WLAN2450 2462 MHz Duty Cycle: 1:1

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

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

Maximum value of SAR (interpolated) = 0.185 W/kg

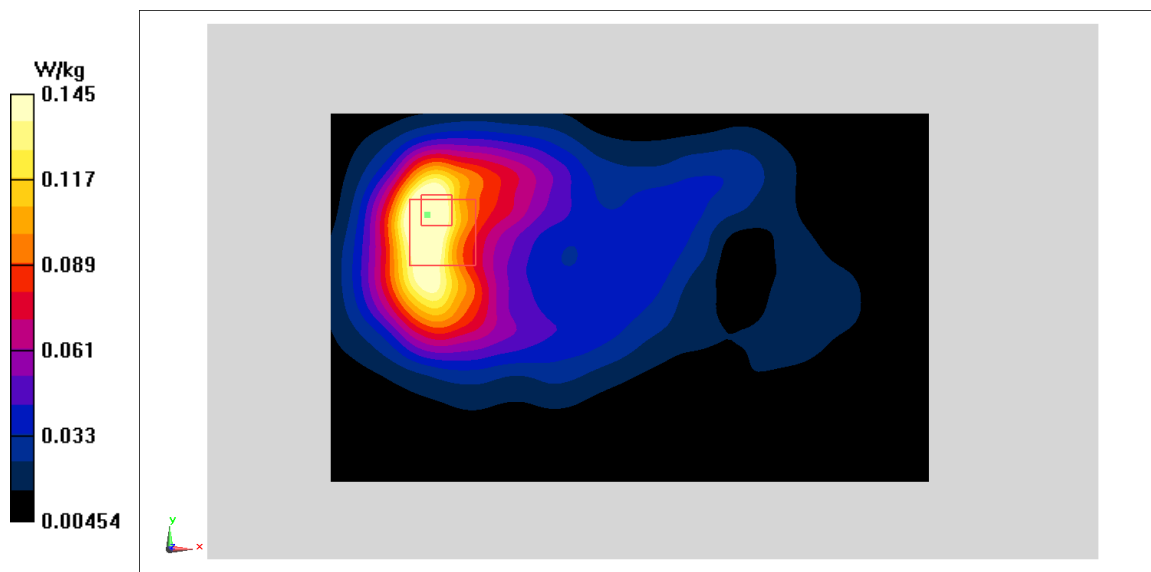
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.932 V/m; Power Drift = 0.09 dB

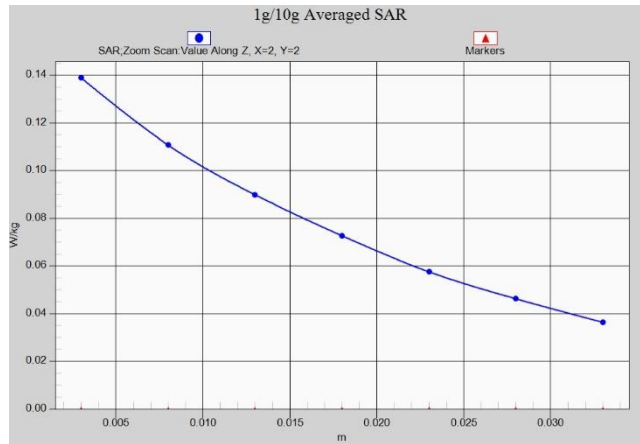
Peak SAR (extrapolated) = 0.24 W/kg

**SAR(1 g) = 0.124 W/kg; SAR(10 g) = 0.066 W/kg**

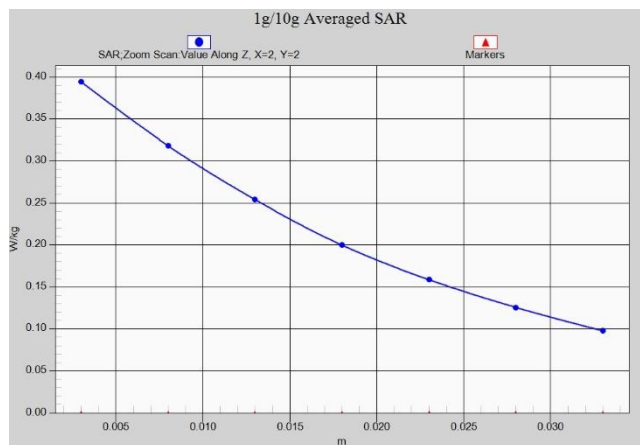
Maximum value of SAR (measured) = 0.145 W/kg



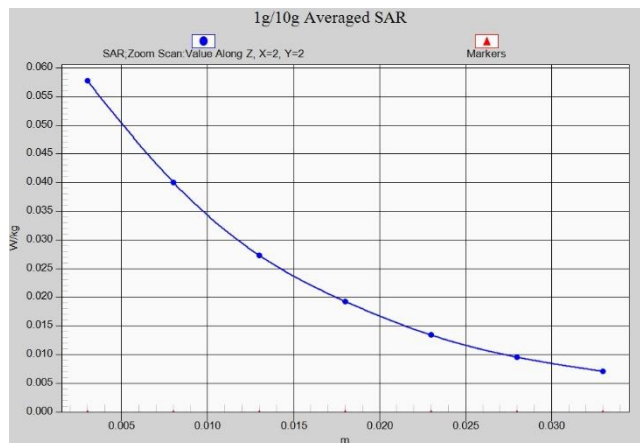
**Fig A.15**



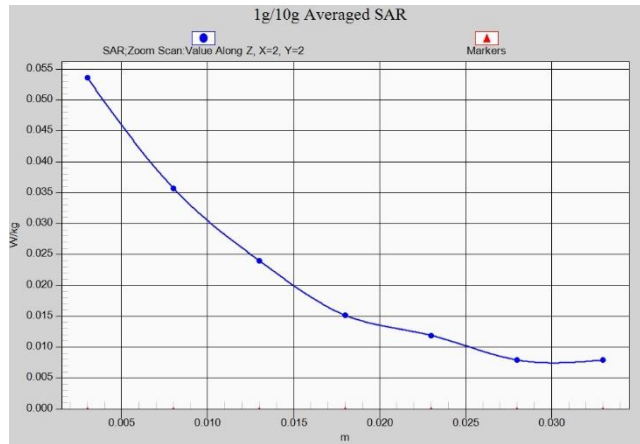
**Fig.A.1- 1 Z-Scan at power reference point (GSM850)**



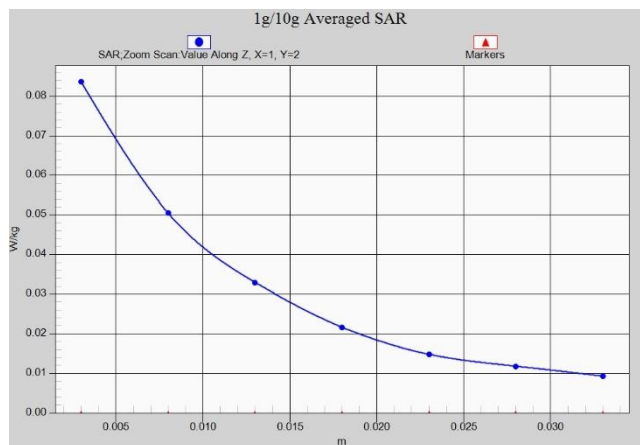
**Fig.A.1- 2 Z-Scan at power reference point (GSM850)**



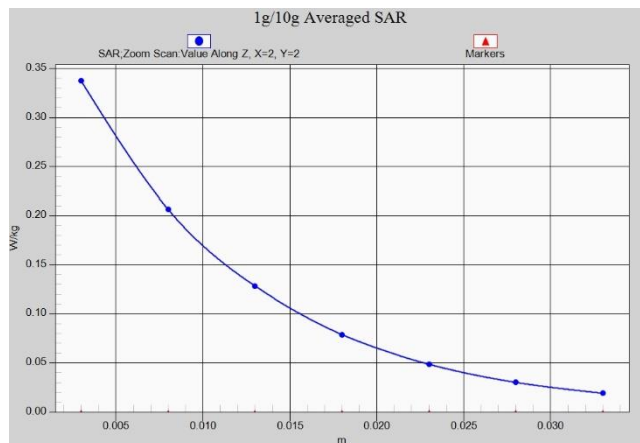
**Fig.A.1- 3 Z-Scan at power reference point (PCS1900)**



**Fig.A.1- 4 Z-Scan at power reference point (PCS1900)**

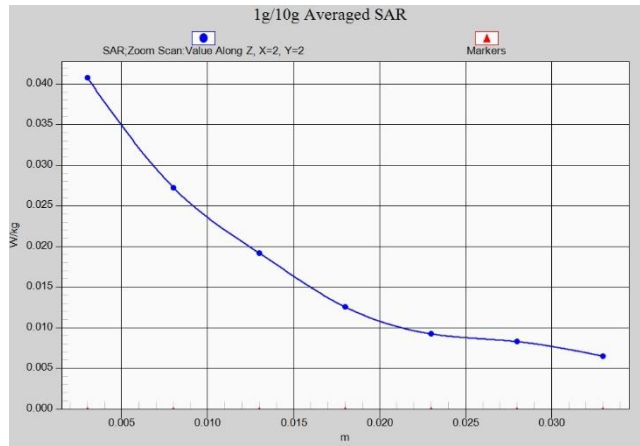


**Fig.A.1- 5 Z-Scan at power reference point (PCS1900)**

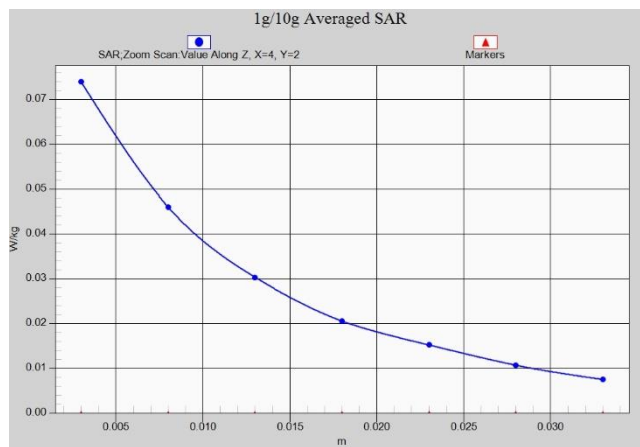


**Fig.A.1- 6 Z-Scan at power reference point (W1900)**

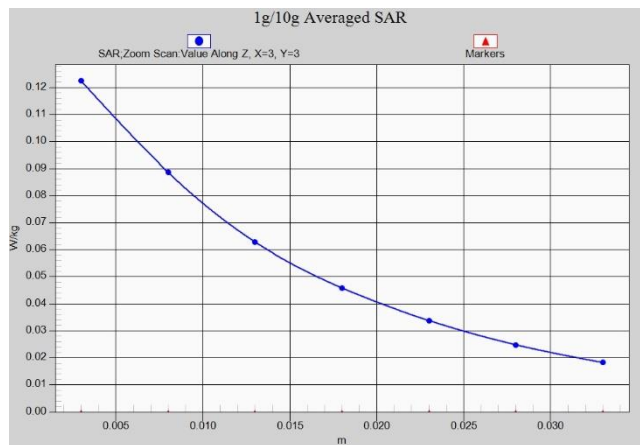




**Fig.A.1- 7 Z-Scan at power reference point (W1900)**



**Fig.A.1- 8 Z-Scan at power reference point (W1900)**



**Fig.A.1- 9 Z-Scan at power reference point (W1700)**