

**CDMA PCS Left Tilt Middle**

Communication System: CDMA PCS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Head 1900MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

- Electronics: DAE3 Sn452;

**Tilt Middle/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.754 mW/g

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

Reference Value = 22.6 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 1.00 W/kg

**SAR(1 g) = 0.658 mW/g; SAR(10 g) = 0.377 mW/g**

Maximum value of SAR (measured) = 0.727 mW/g

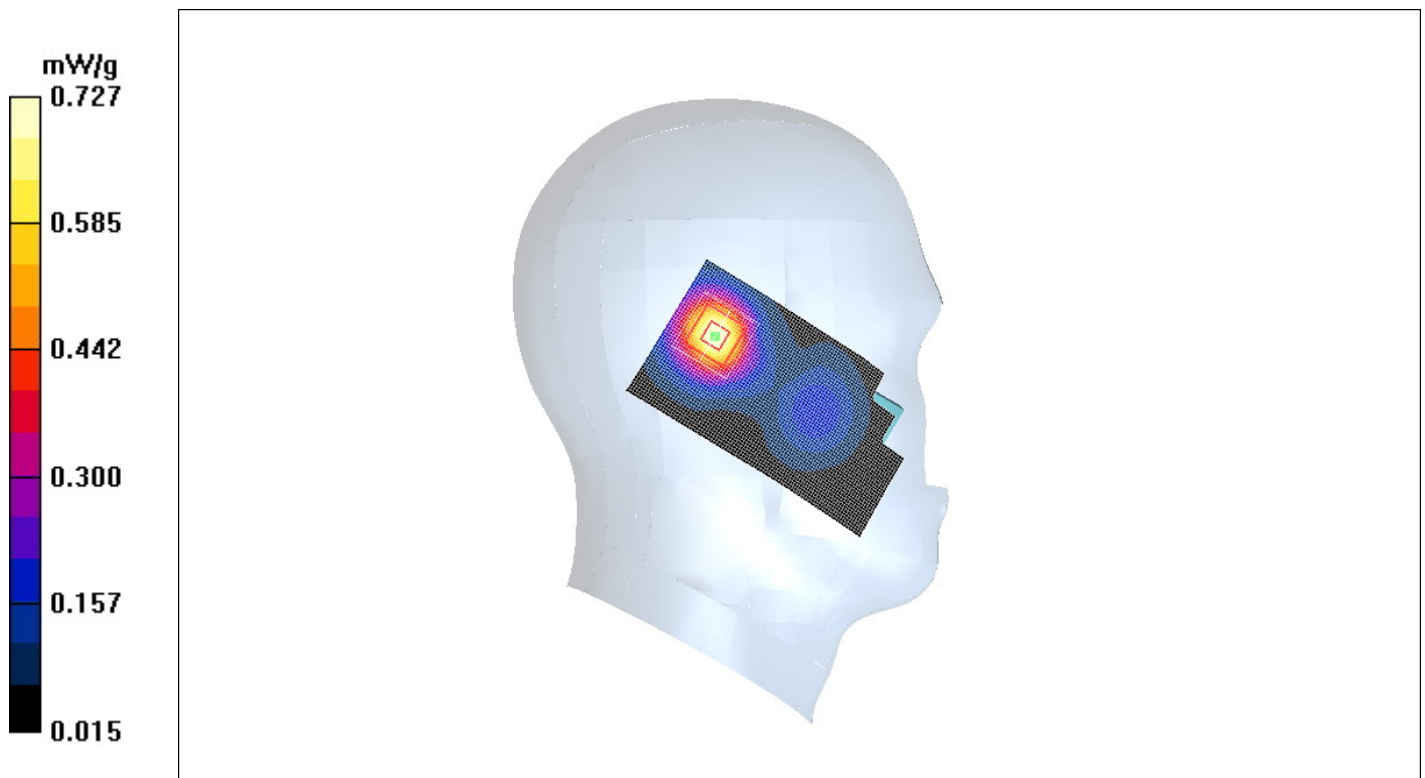


Figure. 15 Left Hand Tilt 15° CDMA PCS Channel 600

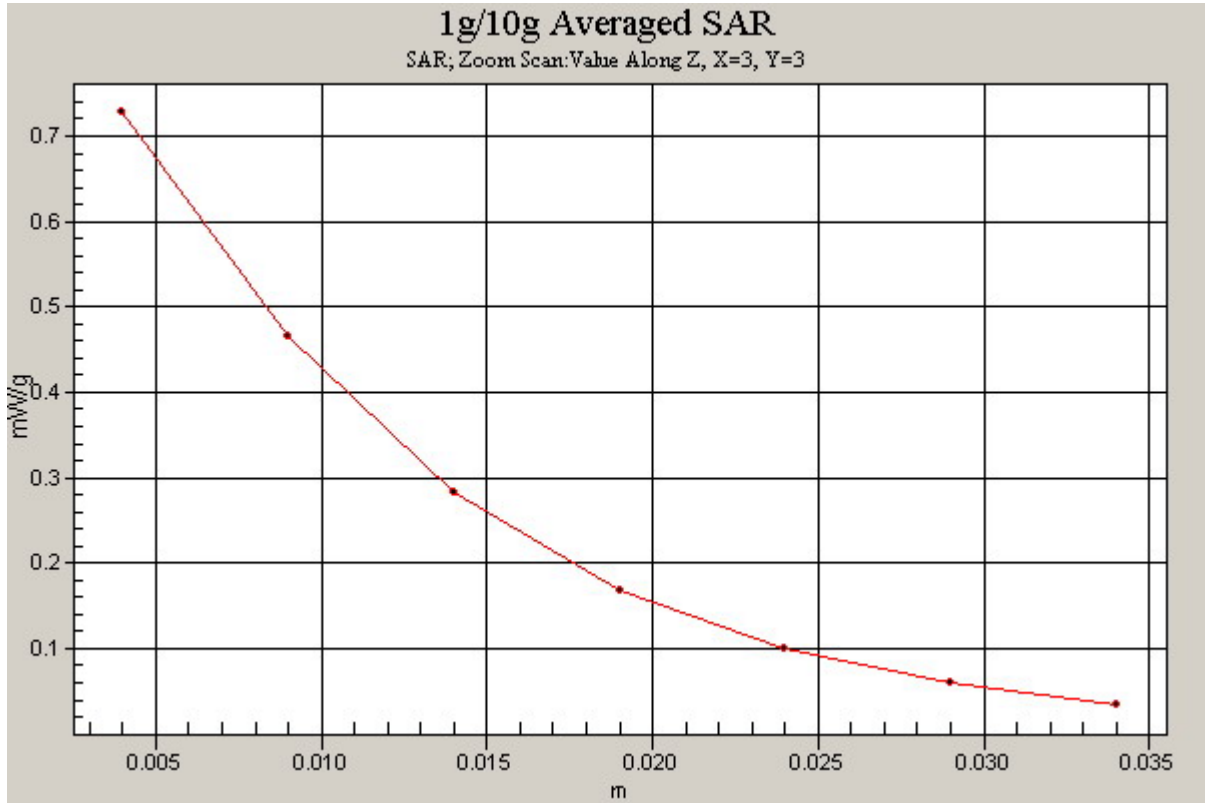


Figure. 16 Z-Scan at power reference point (Left Hand Tilt 15° CDMA PCS Channel 600)

**CDMA PCS Left Tilt Low**

Communication System: CDMA PCS; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: Head 1900MHz

Medium parameters used:  $f = 1852 \text{ MHz}$ ;  $\sigma = 1.39 \text{ mho/m}$ ;  $\epsilon_r = 39.7$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

- Electronics: DAE3 Sn452;

**Tilt Low/Area Scan (51x91x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.654 mW/g

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

Reference Value = 21.1 V/m; Power Drift = -0.113 dB

Peak SAR (extrapolated) = 0.872 W/kg

**SAR(1 g) = 0.567 mW/g; SAR(10 g) = 0.327 mW/g**

Maximum value of SAR (measured) = 0.618 mW/g

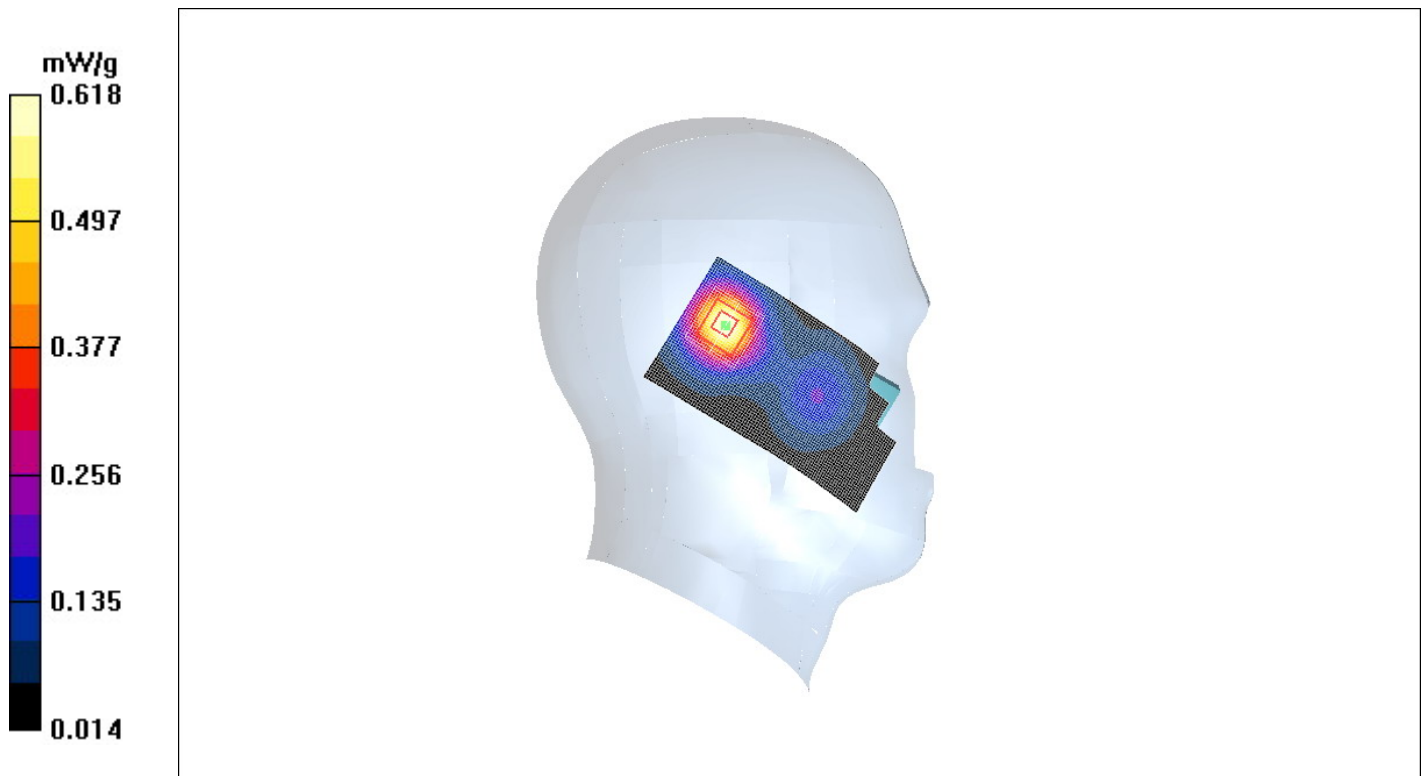


Figure. 17 Left Hand Tilt 15° CDMA PCS Channel 25

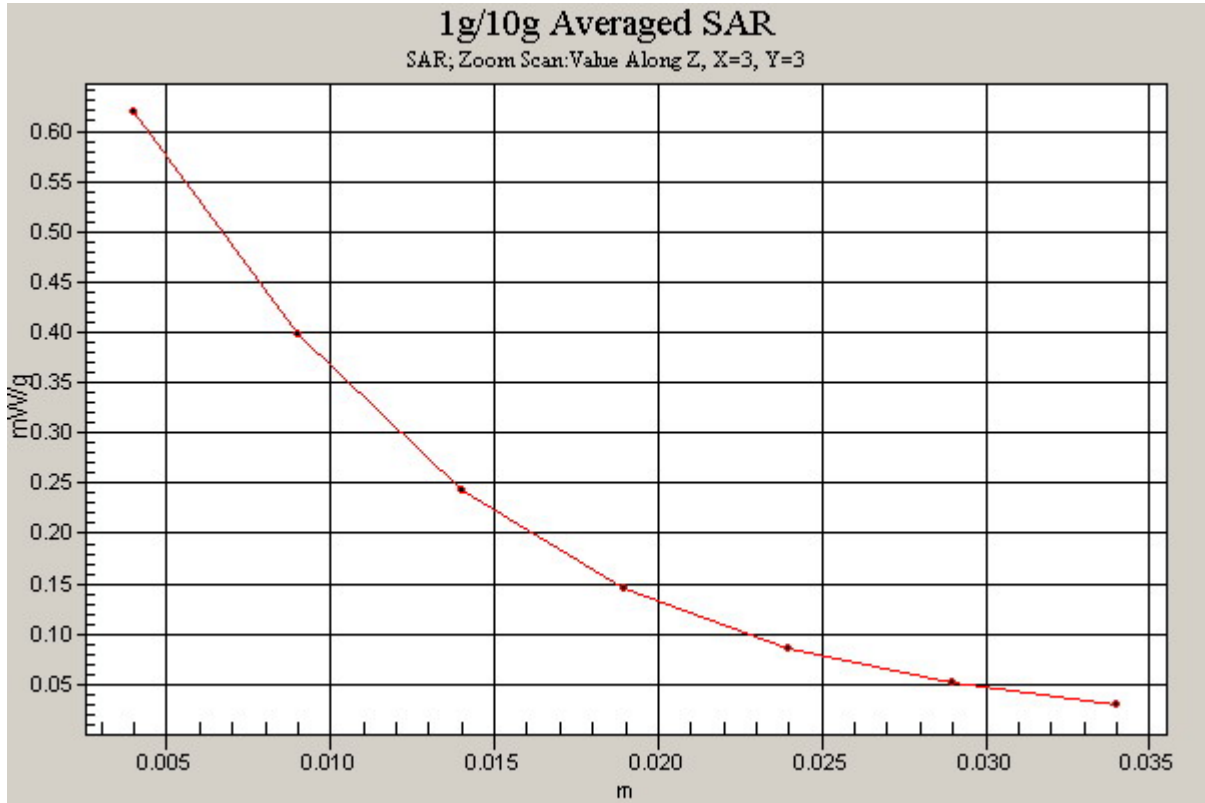


Figure.18 Z-Scan at power reference point (Left Hand Tilt 15° CDMA PCS Channel 25)

**CDMA PCS Right Cheek High**

Communication System: CDMA PCS; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: Head 1900MHz

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 39.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

- Electronics: DAE3 Sn452;

**Cheek High/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.613 mW/g

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

Reference Value = 21.5 V/m; Power Drift = -0.110 dB

Peak SAR (extrapolated) = 0.813 W/kg

**SAR(1 g) = 0.595 mW/g; SAR(10 g) = 0.369 mW/g**

Maximum value of SAR (measured) = 0.652 mW/g

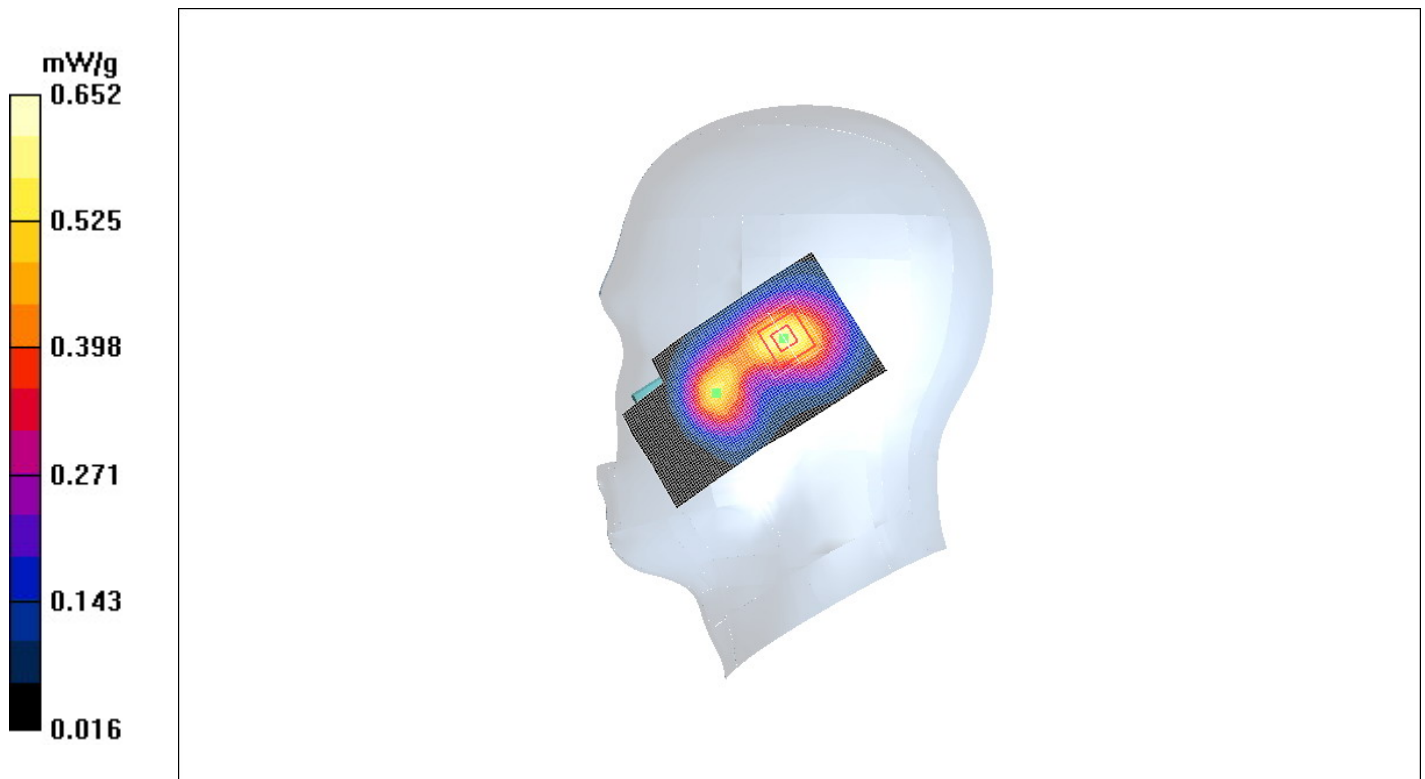


Figure. 19 Right Hand Touch Cheek CDMA PCS Channel 1175

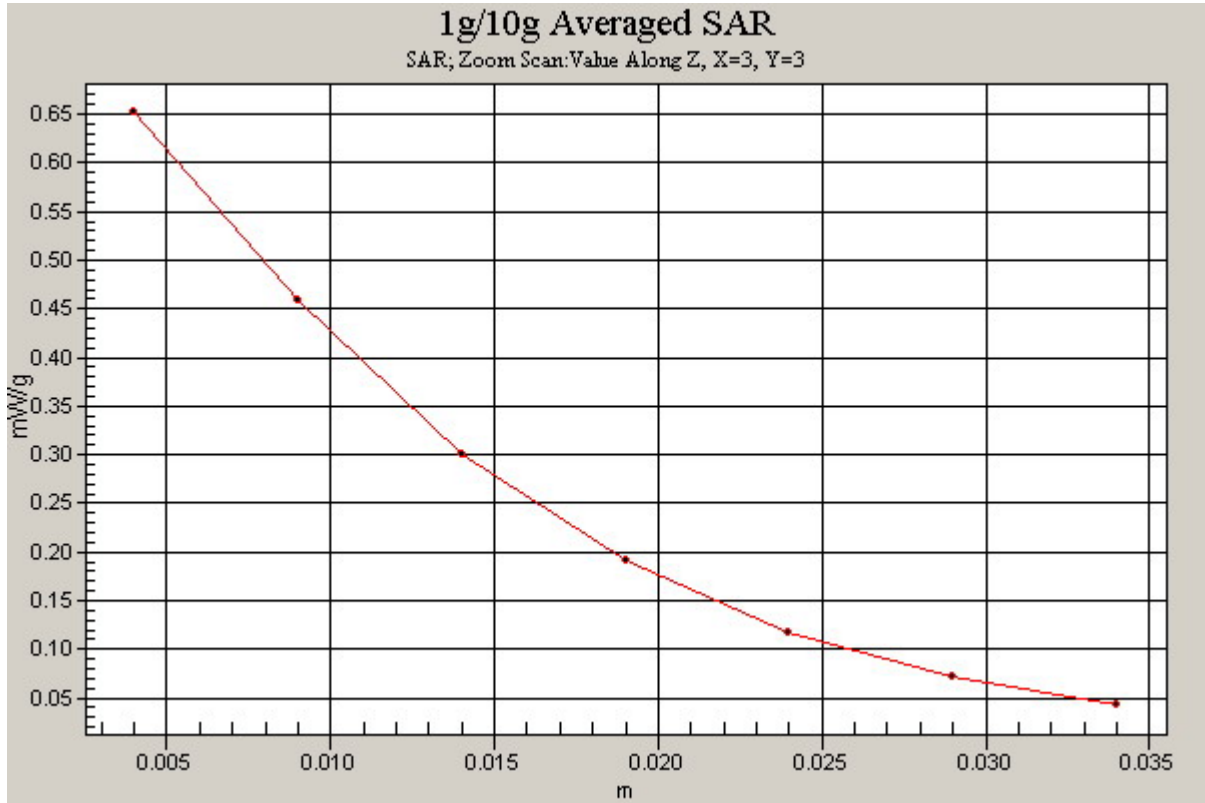


Figure. 20 Z-Scan at power reference point (Right Hand Touch Cheek CDMA PCS Channel 1175)

**CDMA PCS Right Cheek Middle**

Communication System: CDMA PCS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Head 1900MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

- Electronics: DAE3 Sn452;

**Cheek Middle/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.689 mW/g

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

Reference Value = 21.4 V/m; Power Drift = -0.089 dB

Peak SAR (extrapolated) = 0.772 W/kg

**SAR(1 g) = 0.621 mW/g; SAR(10 g) = 0.394 mW/g**

Maximum value of SAR (measured) = 0.685 mW/g

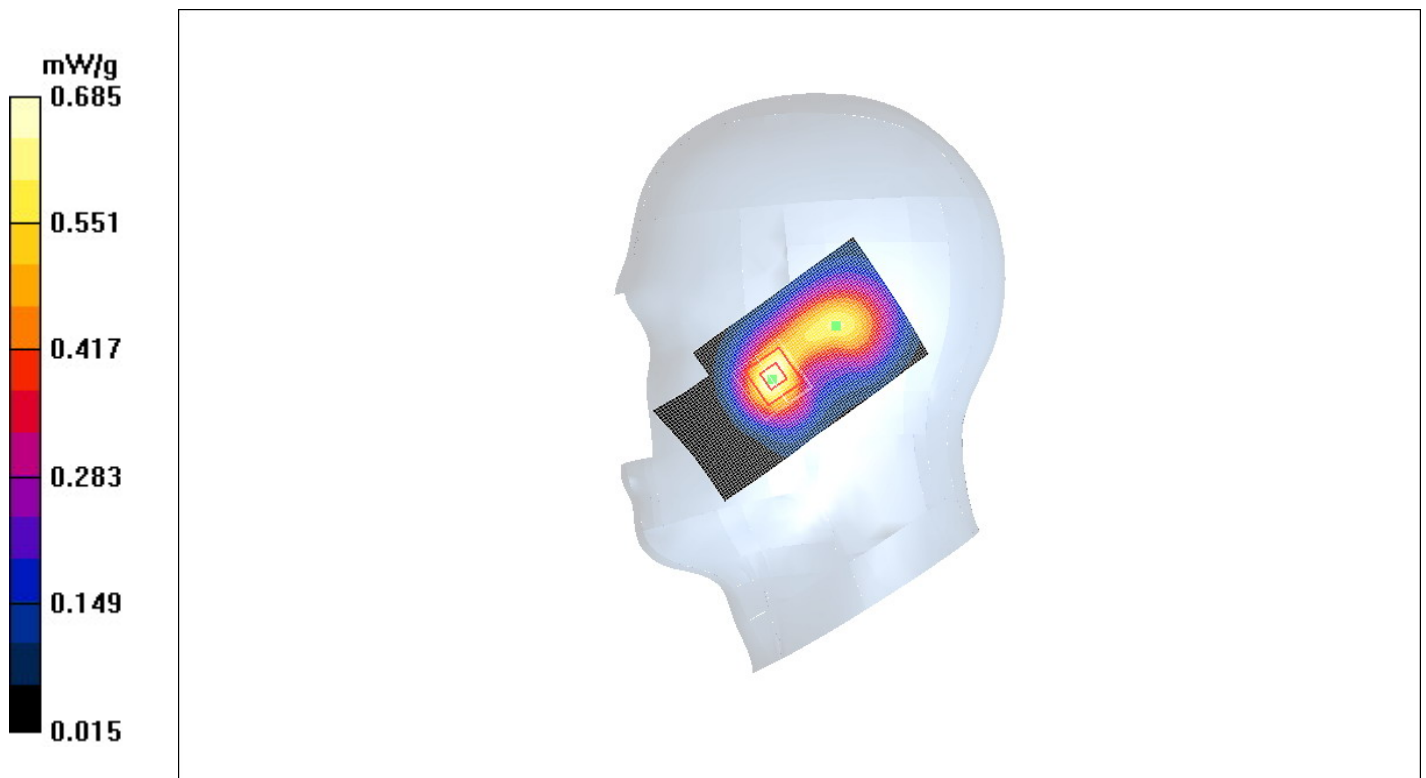


Figure. 21 Right Hand Touch Cheek CDMA PCS Channel 600

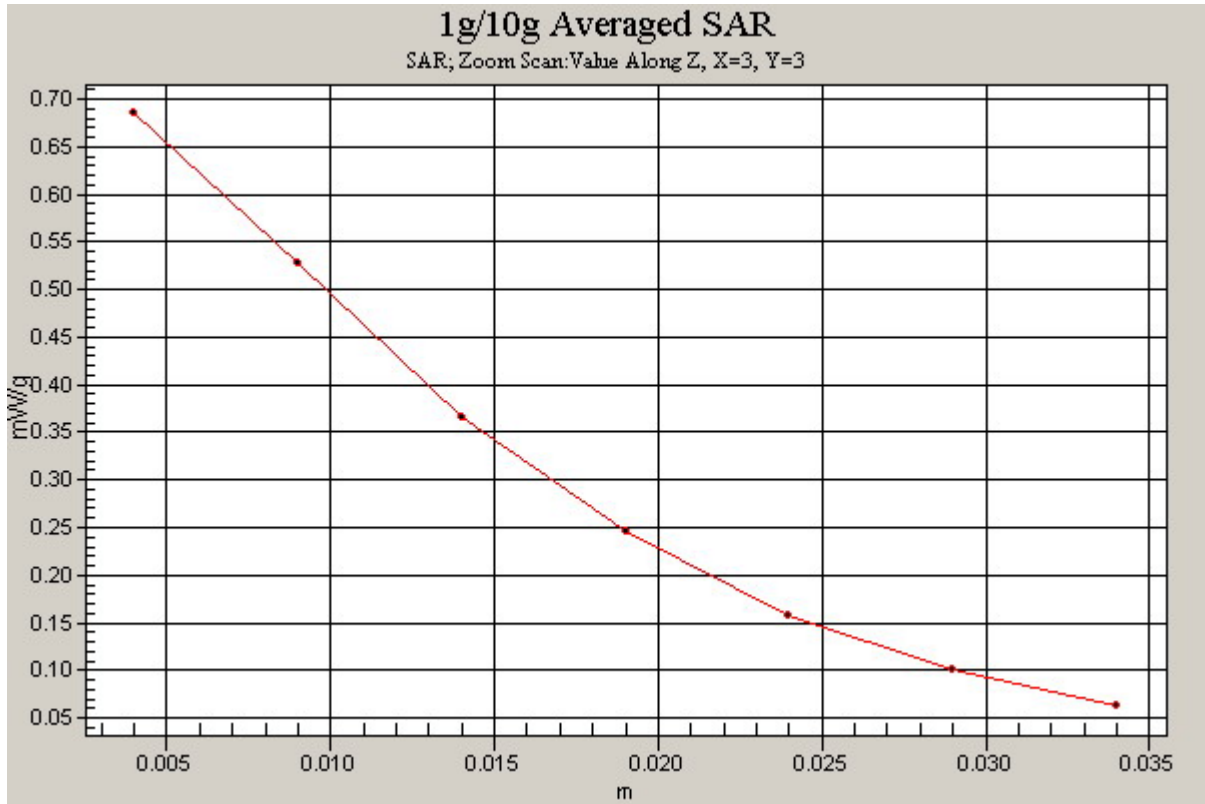


Figure. 22 Z-Scan at power reference point (Right Hand Touch Cheek CDMA PCS Channel 600)



**CDMA PCS Right Cheek Low**

Communication System: CDMA PCS; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: Head 1900MHz

Medium parameters used:  $f = 1852$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 39.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

- Electronics: DAE3 Sn452;

**Cheek Low/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.631 mW/g

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

Reference Value = 21.7 V/m; Power Drift = -0.155 dB

Peak SAR (extrapolated) = 0.712 W/kg

**SAR(1 g) = 0.579 mW/g; SAR(10 g) = 0.370 mW/g**

Maximum value of SAR (measured) = 0.638 mW/g

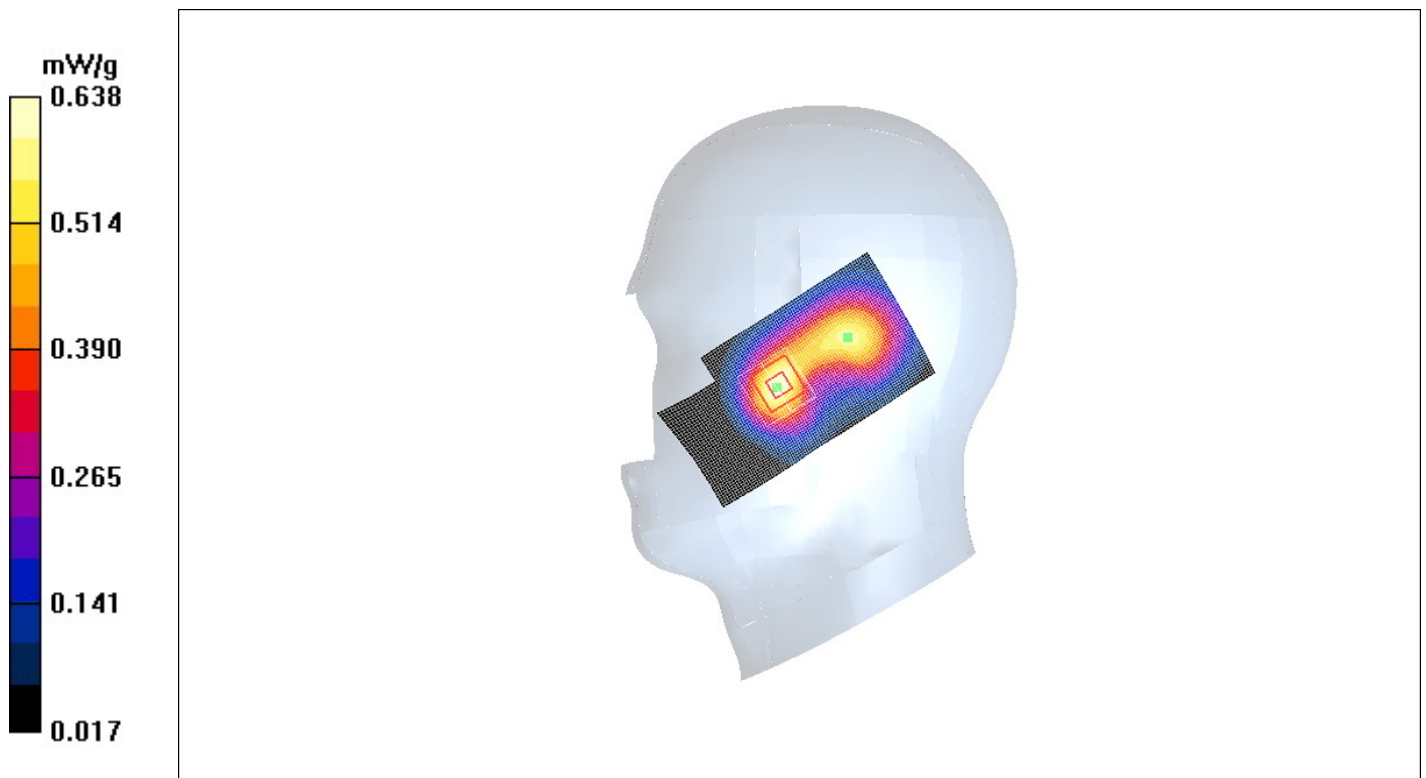


Figure. 23 Right Hand Touch Cheek CDMA PCS Channel 25

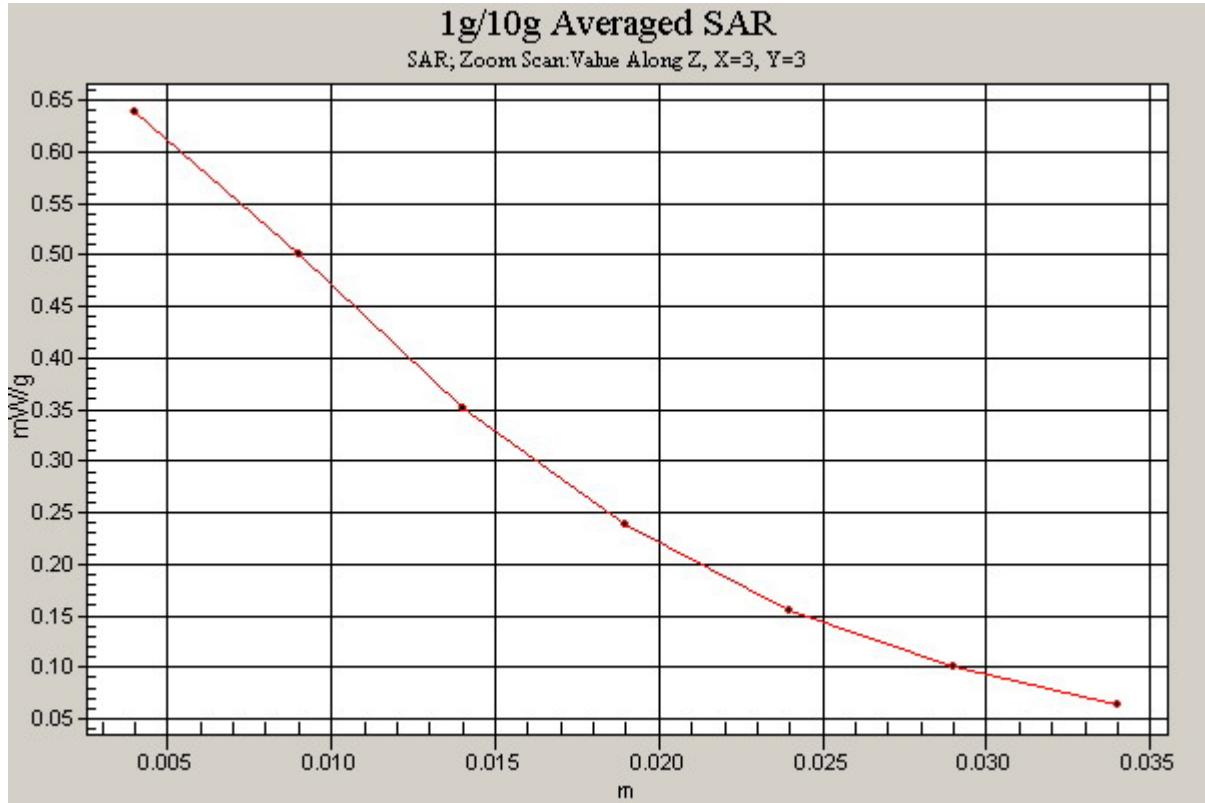


Figure. 24 Z-Scan at power reference point (Right Hand Touch Cheek CDMA PCS Channel 25)

**CDMA PCS Right Tilt High**

Communication System: CDMA PCS; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: Head 1900MHz

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.43$  mho/m;  $\epsilon_r = 39.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

- Electronics: DAE3 Sn452;

**Tilt High/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.505 mW/g

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

Reference Value = 20.8 V/m; Power Drift = -0.083 dB

Peak SAR (extrapolated) = 0.764 W/kg

**SAR(1 g) = 0.498 mW/g; SAR(10 g) = 0.289 mW/g**

Maximum value of SAR (measured) = 0.552 mW/g

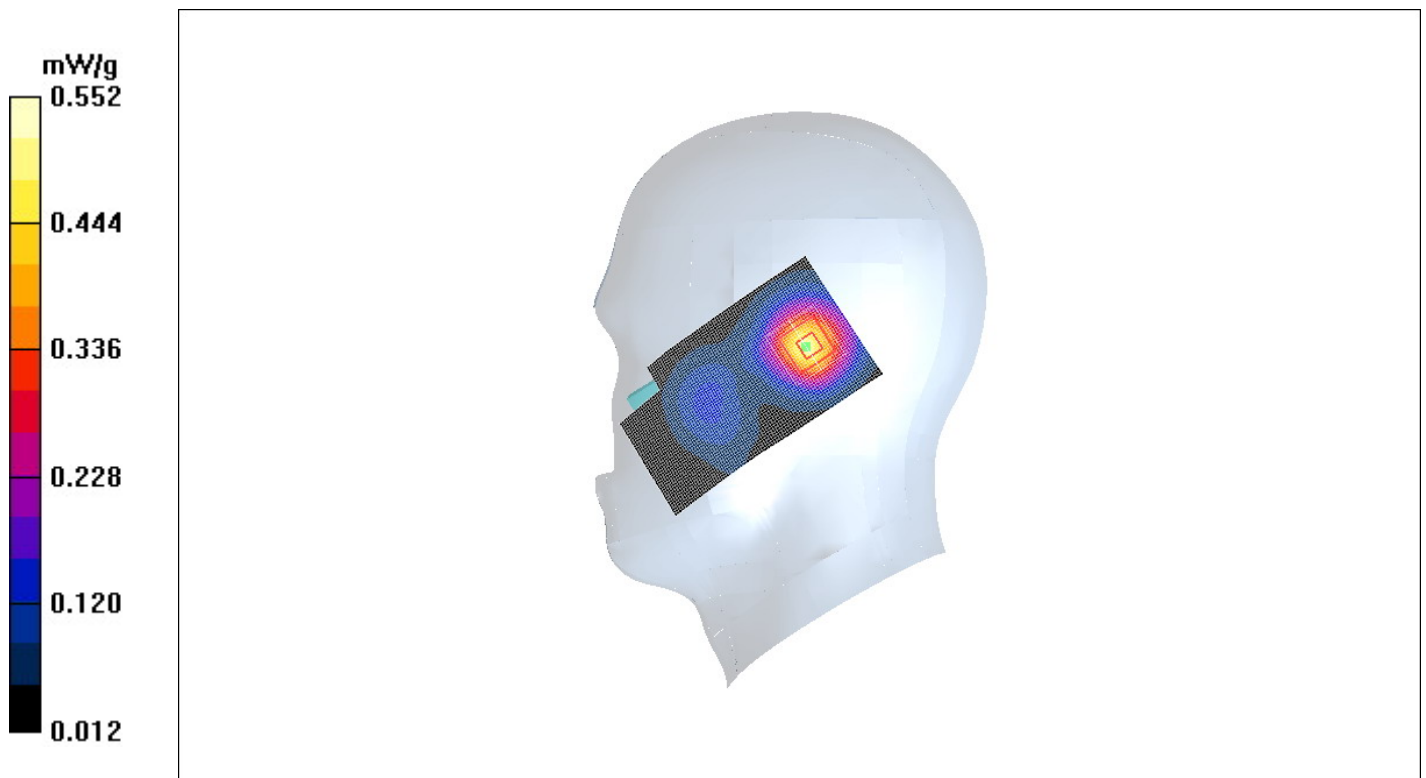


Figure. 25 Right Hand Tilt 15° CDMA PCS Channel 1175

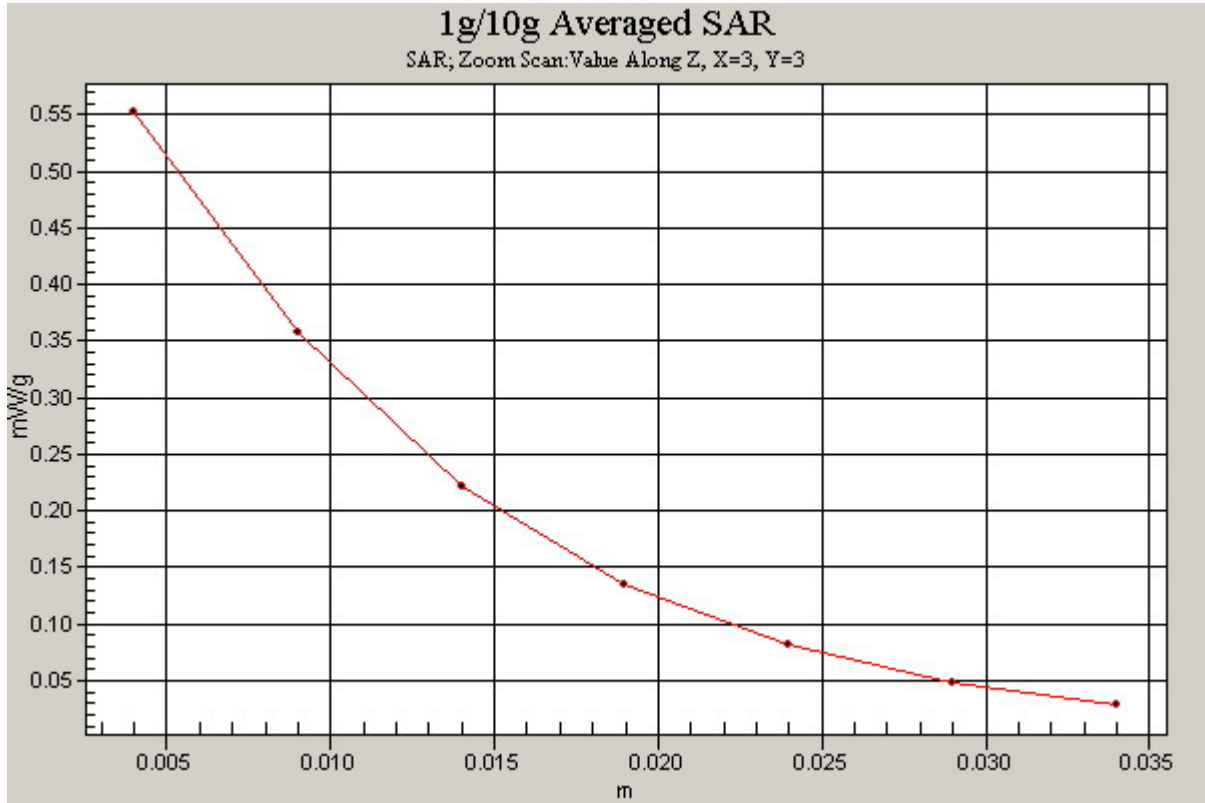


Figure. 26 Z-Scan at power reference point (Right Hand Tilt 15° CDMA PCS Channel 1175)

**CDMA PCS Right Tilt Middle**

Communication System: CDMA PCS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Head 1900MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

- Electronics: DAE3 Sn452;

**Tilt Middle/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.565 mW/g

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

Reference Value = 22.0 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 0.844 W/kg

**SAR(1 g) = 0.555 mW/g; SAR(10 g) = 0.326 mW/g**

Maximum value of SAR (measured) = 0.612 mW/g

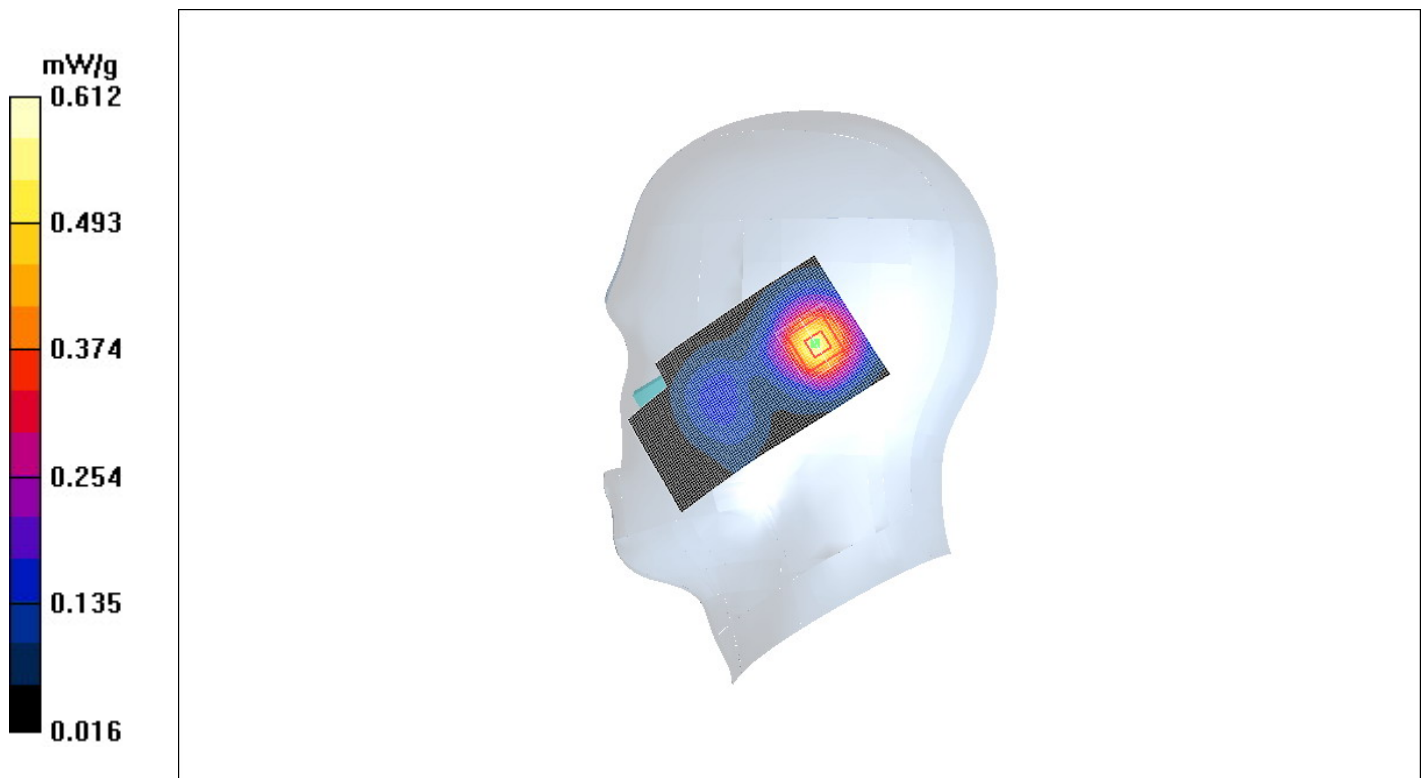


Figure. 27 Right Hand Tilt 15° CDMA PCS Channel 600

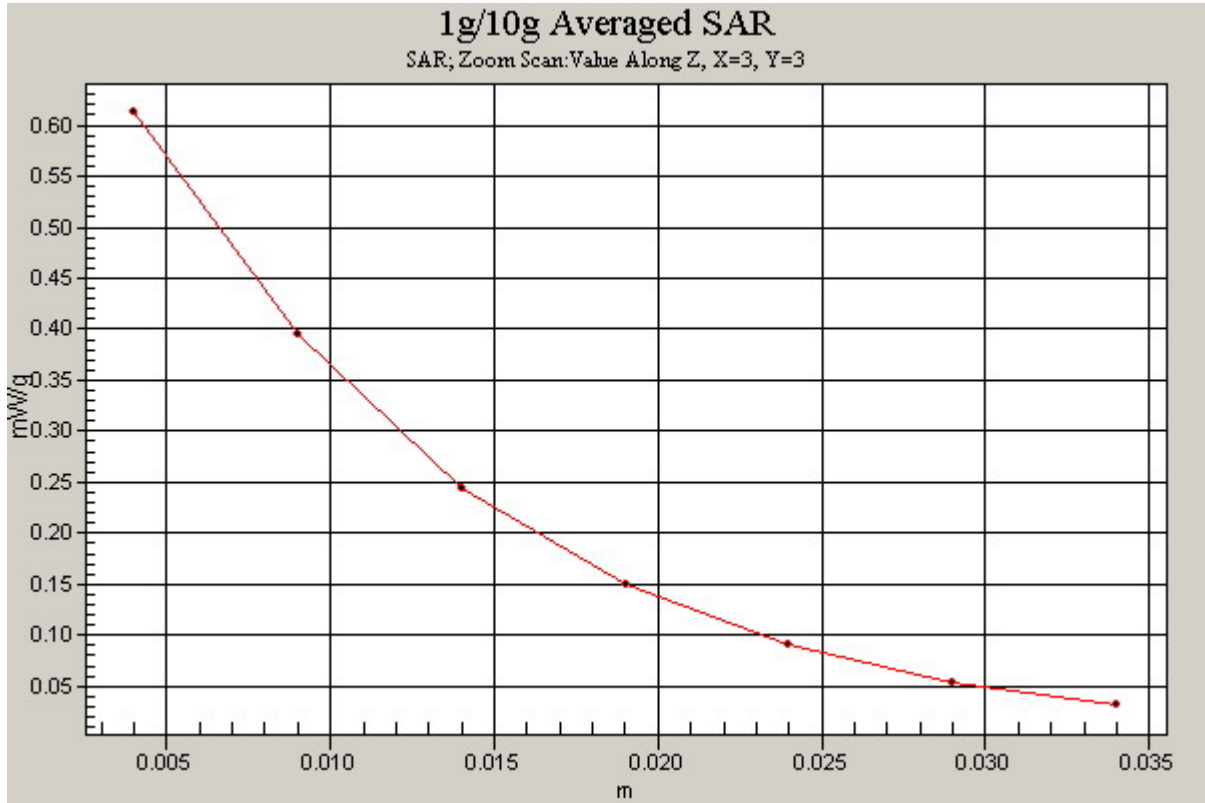


Figure.28 Z-Scan at power reference point (Right Hand Tilt 15° CDMA PCS Channel 600)

**CDMA PCS Right Tilt Low**

Communication System: CDMA PCS; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: Head 1900MHz

Medium parameters used:  $f = 1852 \text{ MHz}$ ;  $\sigma = 1.39 \text{ mho/m}$ ;  $\epsilon_r = 39.7$ ;  $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1737; ConvF(5.15, 5.15, 5.15);

- Electronics: DAE3 Sn452;

**Tilt Low/Area Scan (51x91x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.483 mW/g

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

Reference Value = 20.4 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 0.743 W/kg

**SAR(1 g) = 0.486 mW/g; SAR(10 g) = 0.286 mW/g**

Maximum value of SAR (measured) = 0.536 mW/g

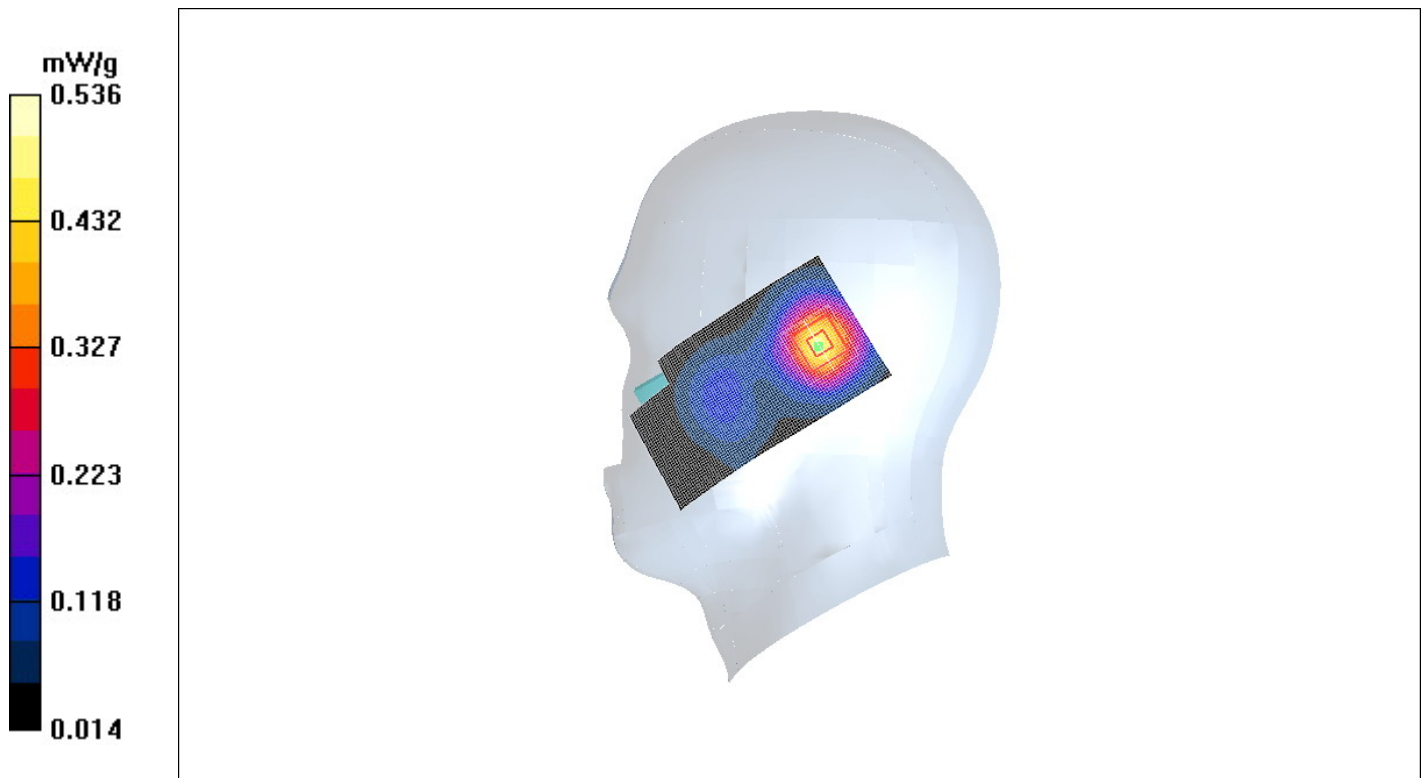


Figure. 29 Right Hand Tilt 15° CDMA PCS Channel 25

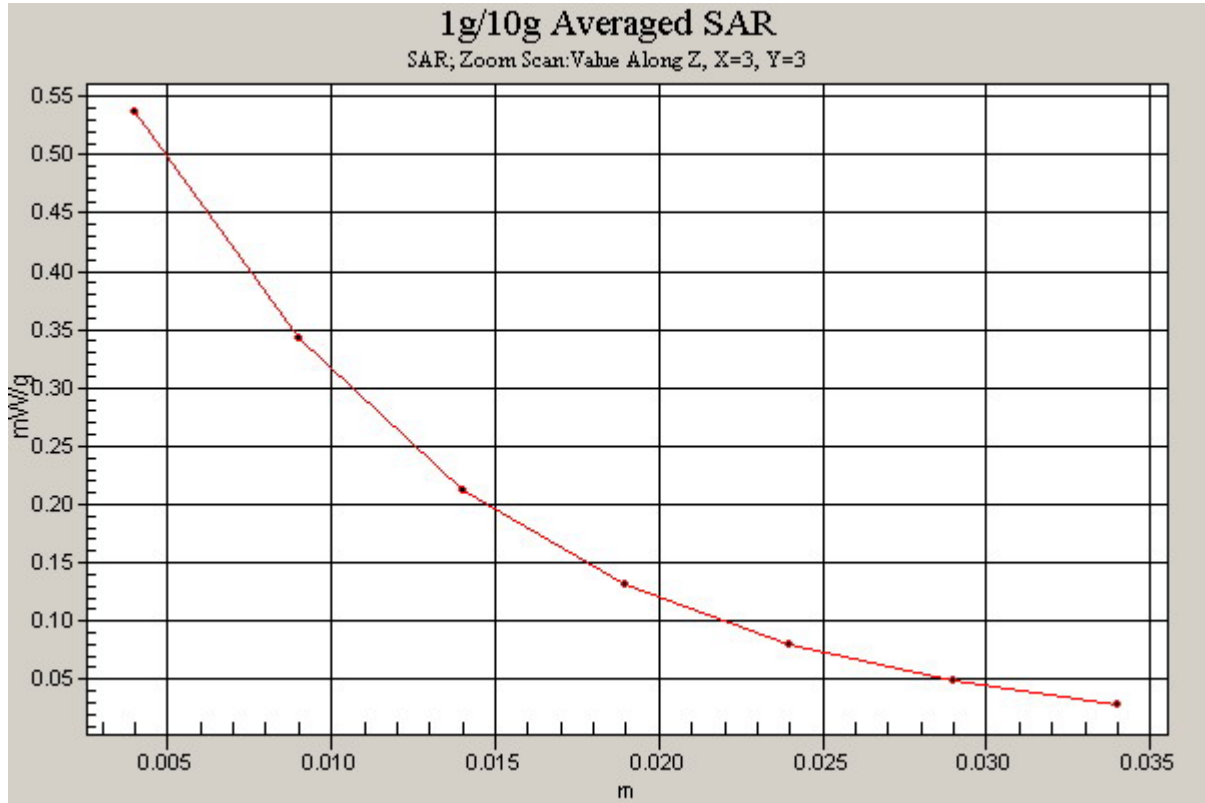


Figure. 30 Z-Scan at power reference point (Right Hand Tilt 15° CDMA PCS Channel 25)



**CDMA PCS Towards Phantom High**

Communication System: CDMA PCS; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: Body 1900MHz

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 52.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

- Electronics: DAE3 Sn452;

**Towards Phantom High/Area Scan (61x101x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.261 mW/g

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

Reference Value = 12.4 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 0.358 W/kg

**SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.147 mW/g**

Maximum value of SAR (measured) = 0.257 mW/g

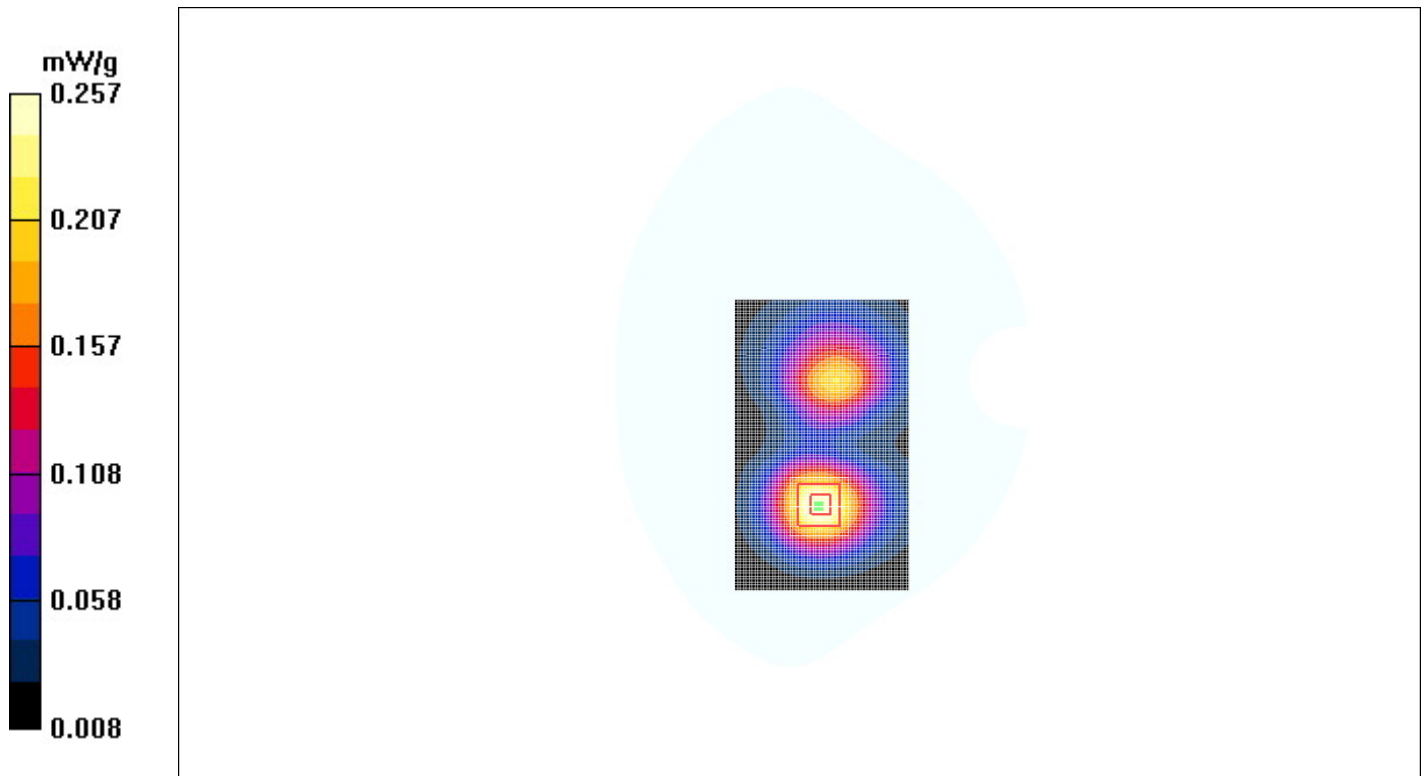


Figure. 31 Body, Towards Phantom, CDMA PCS Channel 1175

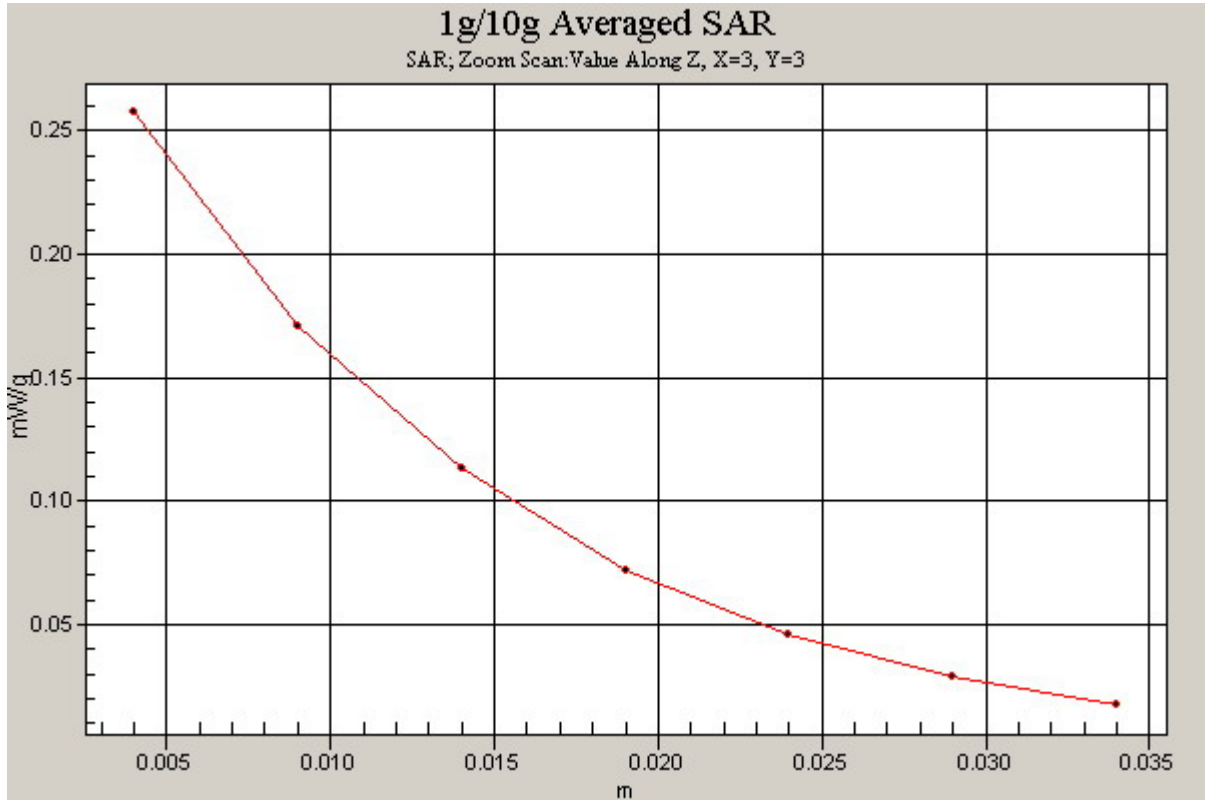


Figure. 32 Z-Scan at power reference point (Body, Towards Phantom, CDMA PCS Channel 1175)

**CDMA PCS Towards Phantom Middle**

Communication System: CDMA PCS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Body 1900MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.51$  mho/m;  $\epsilon_r = 52.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

- Electronics: DAE3 Sn452;

**Towards Phantom Middle/Area Scan (61x101x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.275 mW/g

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

Reference Value = 12.1 V/m; Power Drift = -0.071 dB

Peak SAR (extrapolated) = 0.375 W/kg

**SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.159 mW/g**

Maximum value of SAR (measured) = 0.273 mW/g

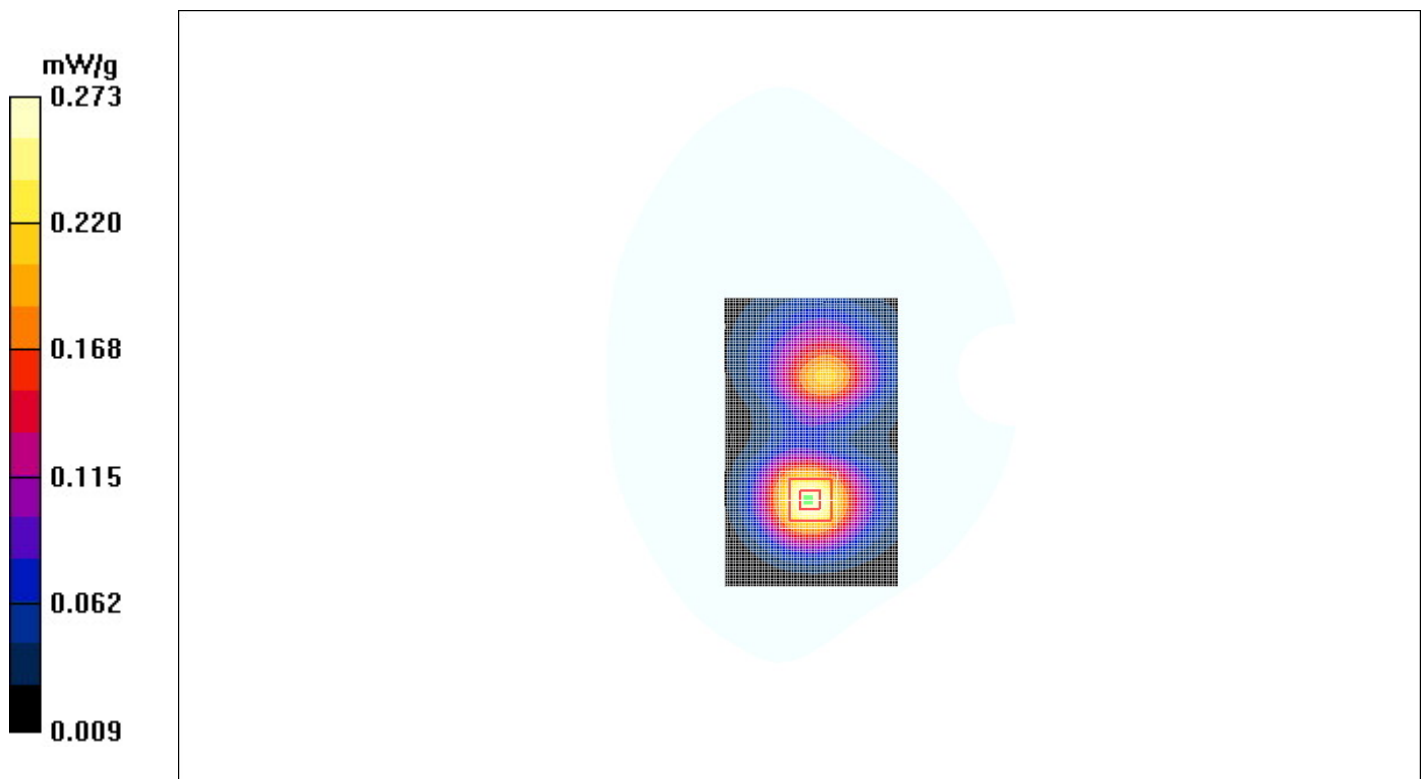


Figure. 33 Body, Towards Phantom, CDMA PCS Channel 600

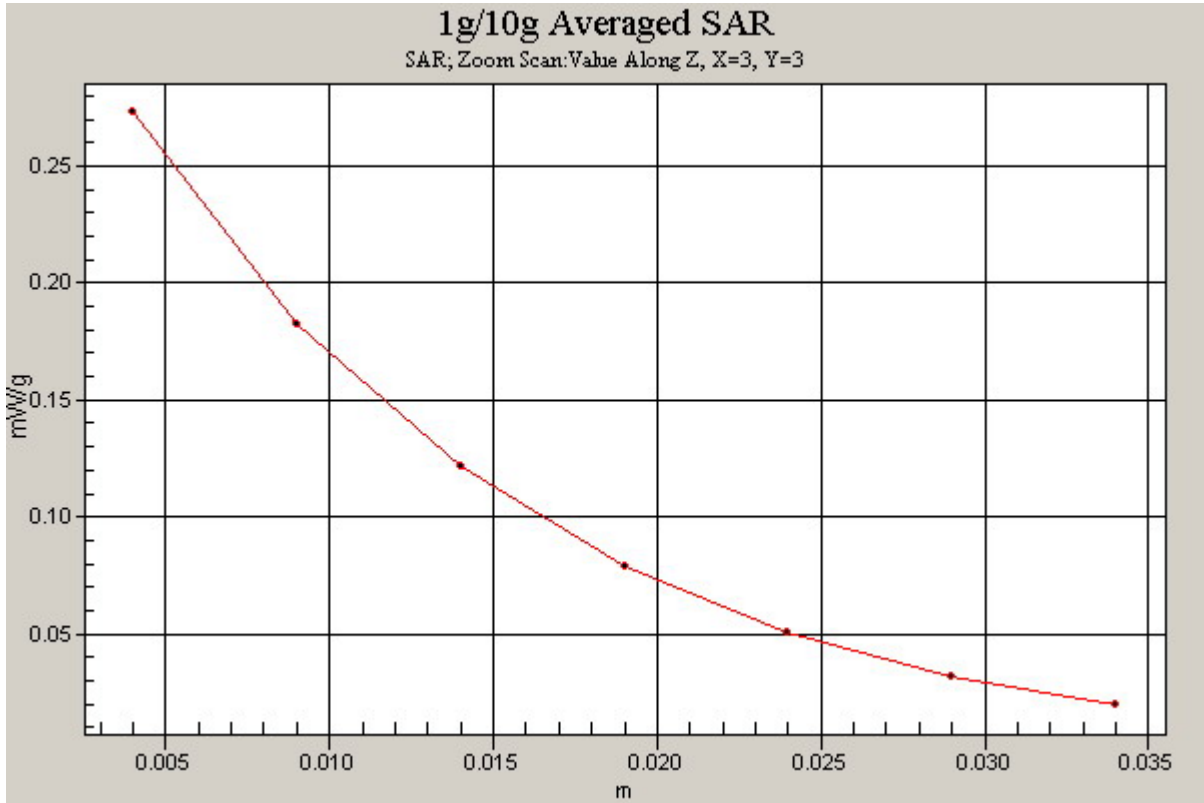


Figure. 34 Z-Scan at power reference point (Body, Towards Phantom, CDMA PCS Channel 600)

**CDMA PCS Towards Phantom Low**

Communication System: CDMA PCS; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: Body 1900MHz

Medium parameters used:  $f = 1852$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 52.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

- Electronics: DAE3 Sn452;

**Towards Phantom Low/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.264 mW/g

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

Reference Value = 11.3 V/m; Power Drift = -0.003 dB

Peak SAR (extrapolated) = 0.351 W/kg

**SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.152 mW/g**

Maximum value of SAR (measured) = 0.259 mW/g

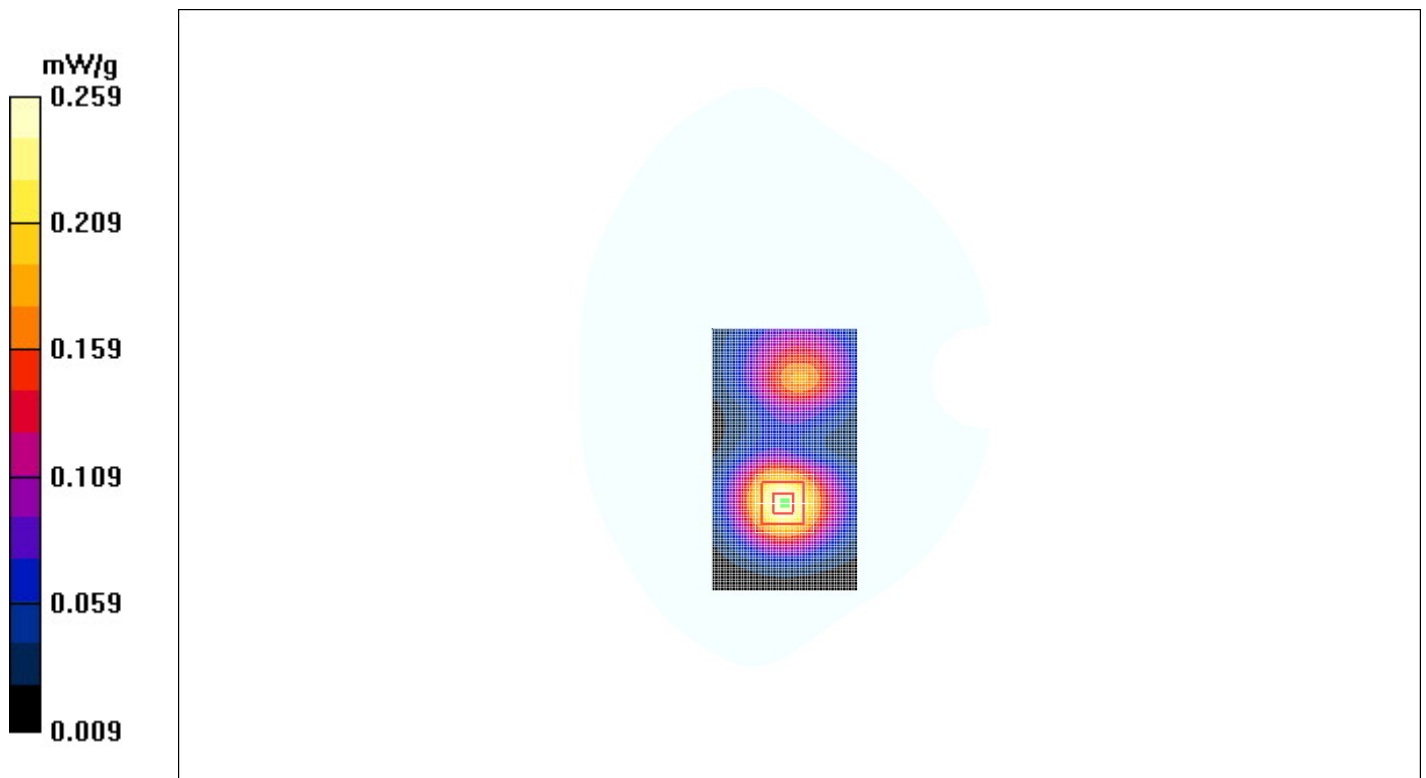


Figure. 35 Body, Towards Phantom, CDMA PCS Channel 25

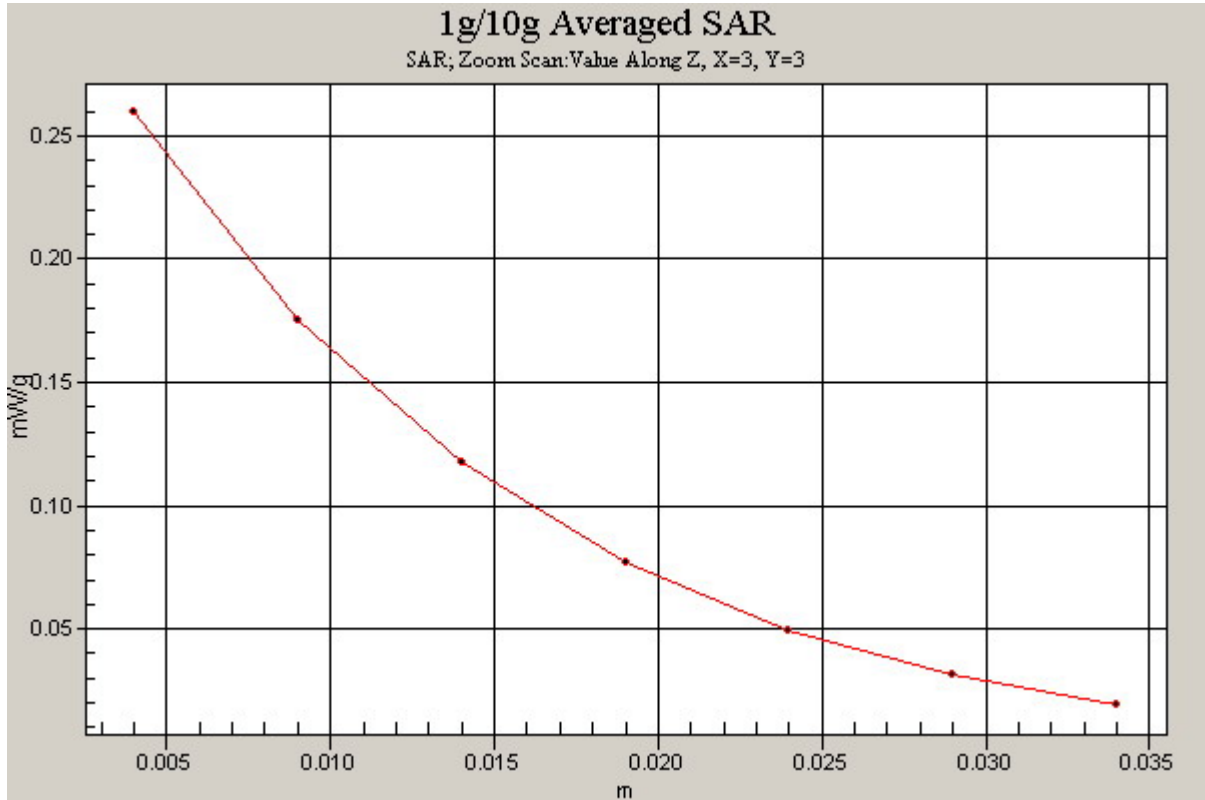


Figure. 36 Z-Scan at power reference point (Body, Towards Phantom, CDMA PCS Channel 25)

**CDMA PCS Towards Ground High**

Communication System: CDMA PCS; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: Body 1900MHz

Medium parameters used (interpolated):  $f = 1908.75$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 52.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

- Electronics: DAE3 Sn452;

**Towards Ground High/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (interpolated) = 0.564 mW/g

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

Reference Value = 17.5 V/m; Power Drift = 0.062 dB

Peak SAR (extrapolated) = 0.686 W/kg

**SAR(1 g) = 0.442 mW/g; SAR(10 g) = 0.270 mW/g**

Maximum value of SAR (measured) = 0.479 mW/g

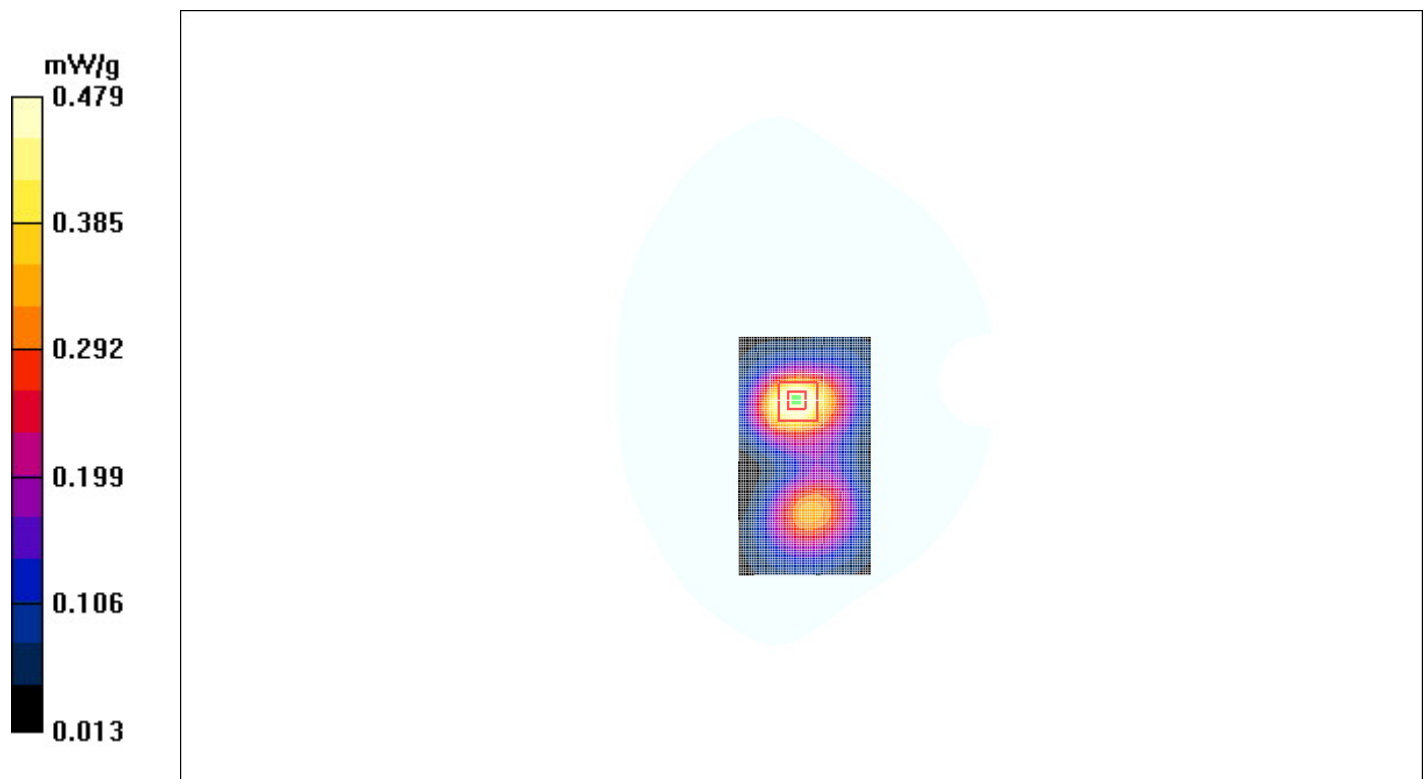


Figure. 37 Body, Towards Ground, CDMA PCS Channel 1175

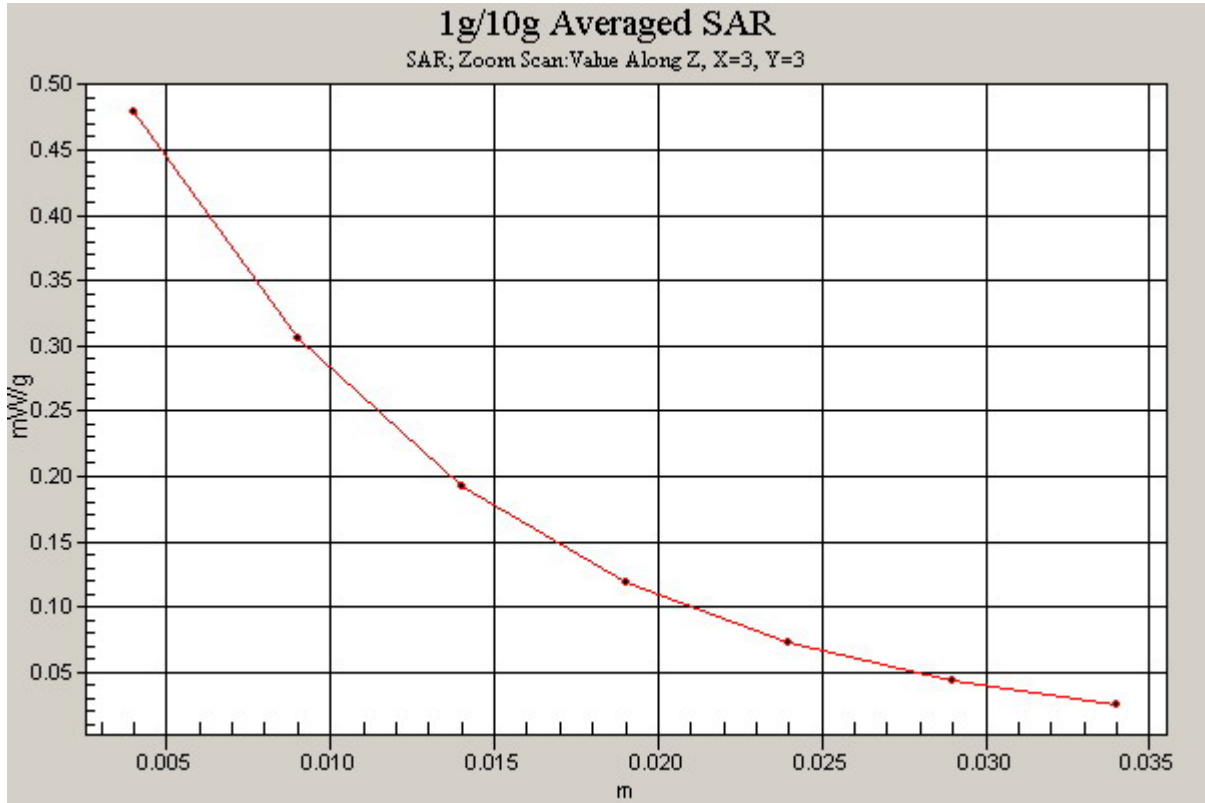


Figure. 38 Z-Scan at power reference point (Body, Towards Ground, CDMA PCS Channel 1175)



**CDMA PCS Towards Ground Middle**

Communication System: CDMA PCS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Body 1900MHz

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.51$  mho/m;  $\epsilon_r = 52.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

- Electronics: DAE3 Sn452;

**Towards Ground Middle/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.589 mW/g

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

Reference Value = 17.6 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 0.738 W/kg

**SAR(1 g) = 0.477 mW/g; SAR(10 g) = 0.292 mW/g**

Maximum value of SAR (measured) = 0.516 mW/g

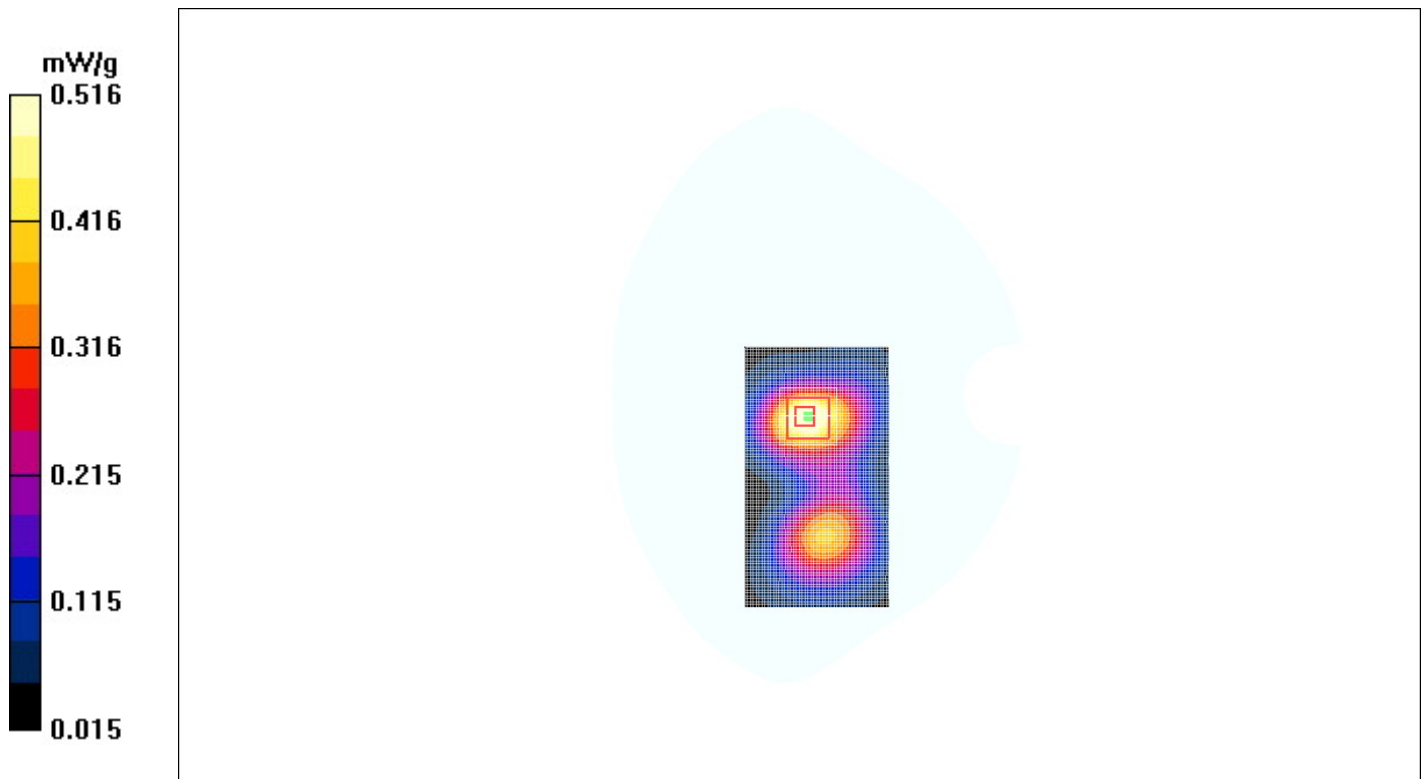


Figure. 39 Body, Towards Ground, CDMA PCS Channel 600

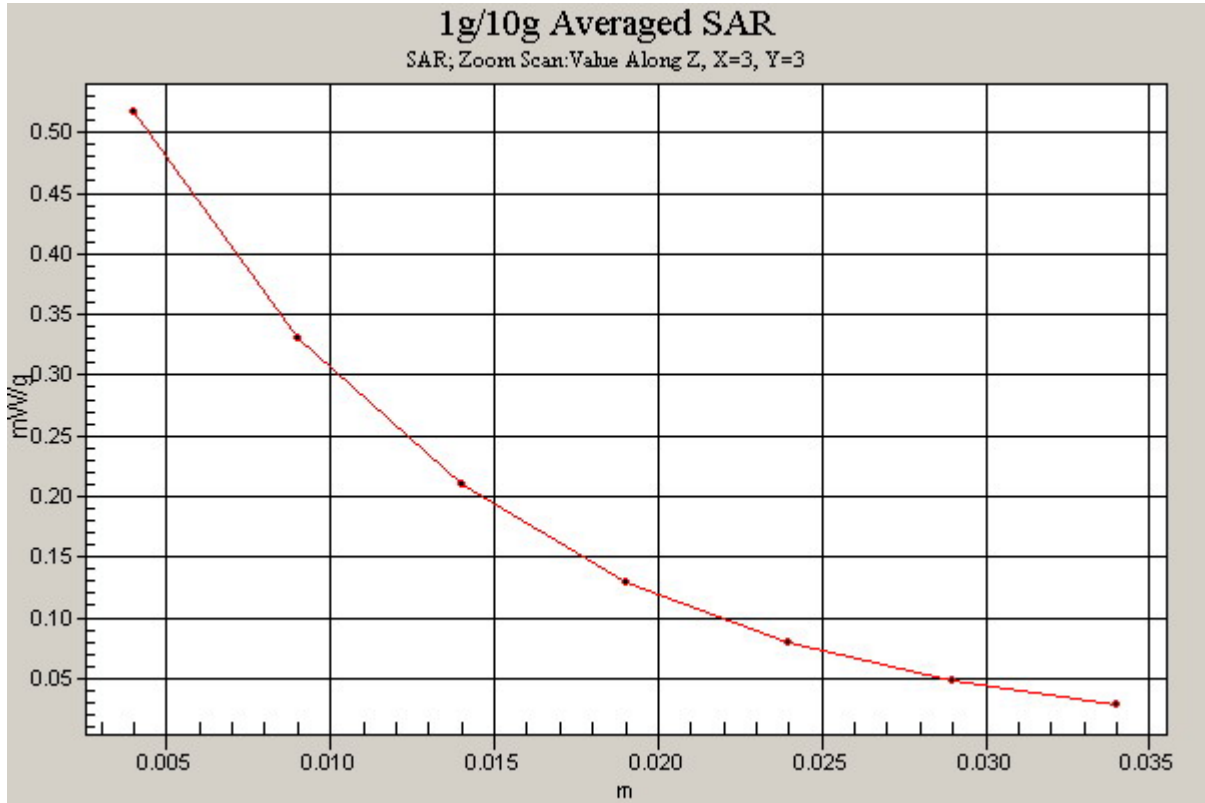


Figure. 40 Z-Scan at power reference point (Body, Towards Ground, CDMA PCS Channel 600)

**CDMA PCS Towards Ground Low**

Communication System: CDMA PCS; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: Body 1900MHz

Medium parameters used:  $f = 1852$  MHz;  $\sigma = 1.48$  mho/m;  $\epsilon_r = 52.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

- Electronics: DAE3 Sn452;

**Towards Ground Low/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.541 mW/g

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

Reference Value = 16.9 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 0.681 W/kg

**SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.266 mW/g**

Maximum value of SAR (measured) = 0.479 mW/g

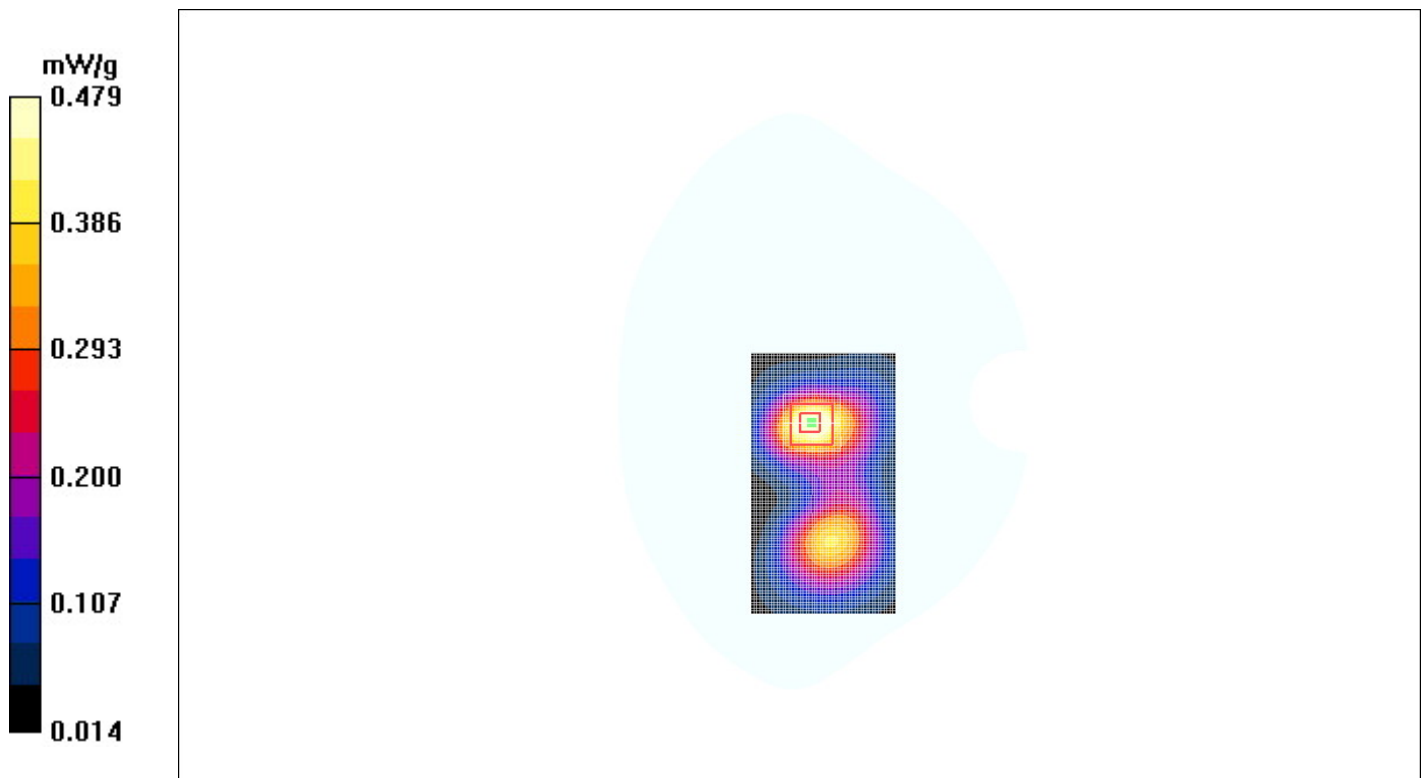


Figure. 41 Body, Towards Ground, CDMA PCS Channel 25

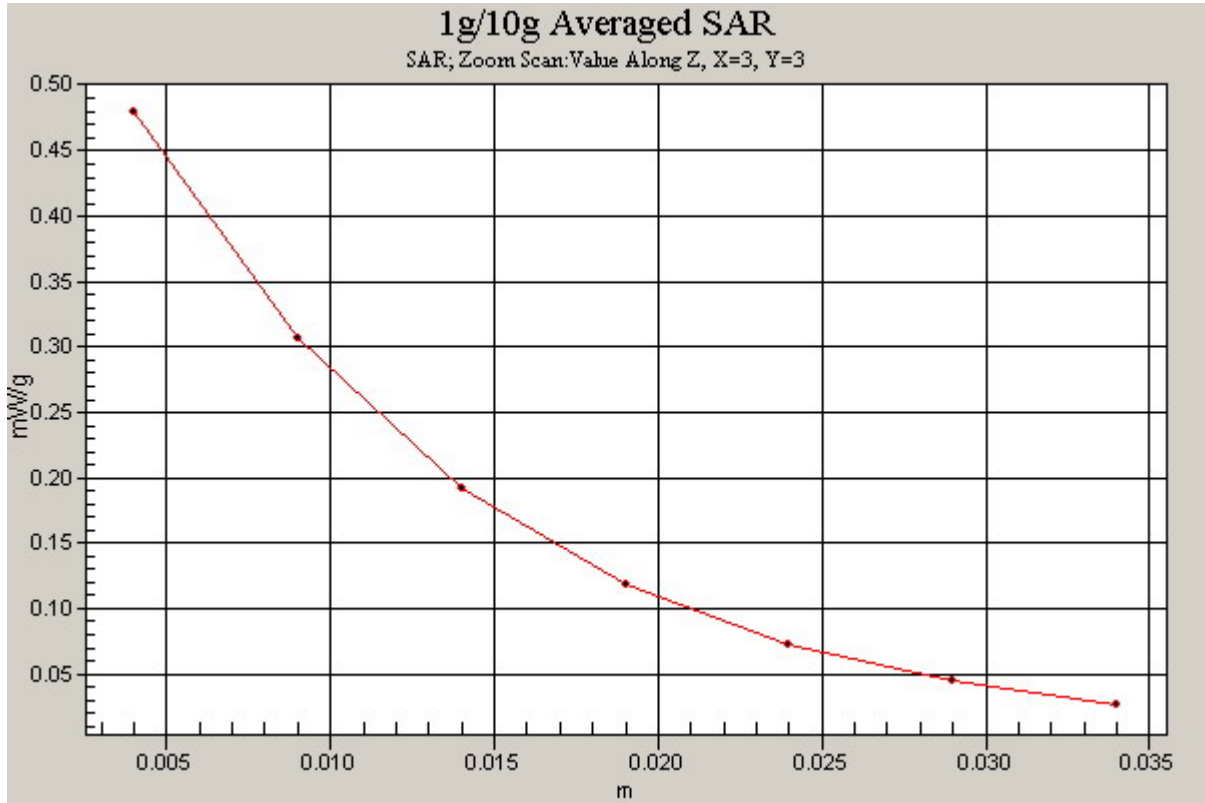


Figure. 42 Z-Scan at power reference point (Body, Towards Ground, CDMA PCS Channel 25)

**ANNEX D: SYSTEM VALIDATION RESULTS**

**System Performance Check at 1900 MHz**

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 541**

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

Medium: Head 1900 MHz

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 - SN1737; ConvF(4.64, 4.64, 4.64);

- Electronics: DAE3 Sn452;

**d=10mm, Pin=250mW/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 11.7 mW/g

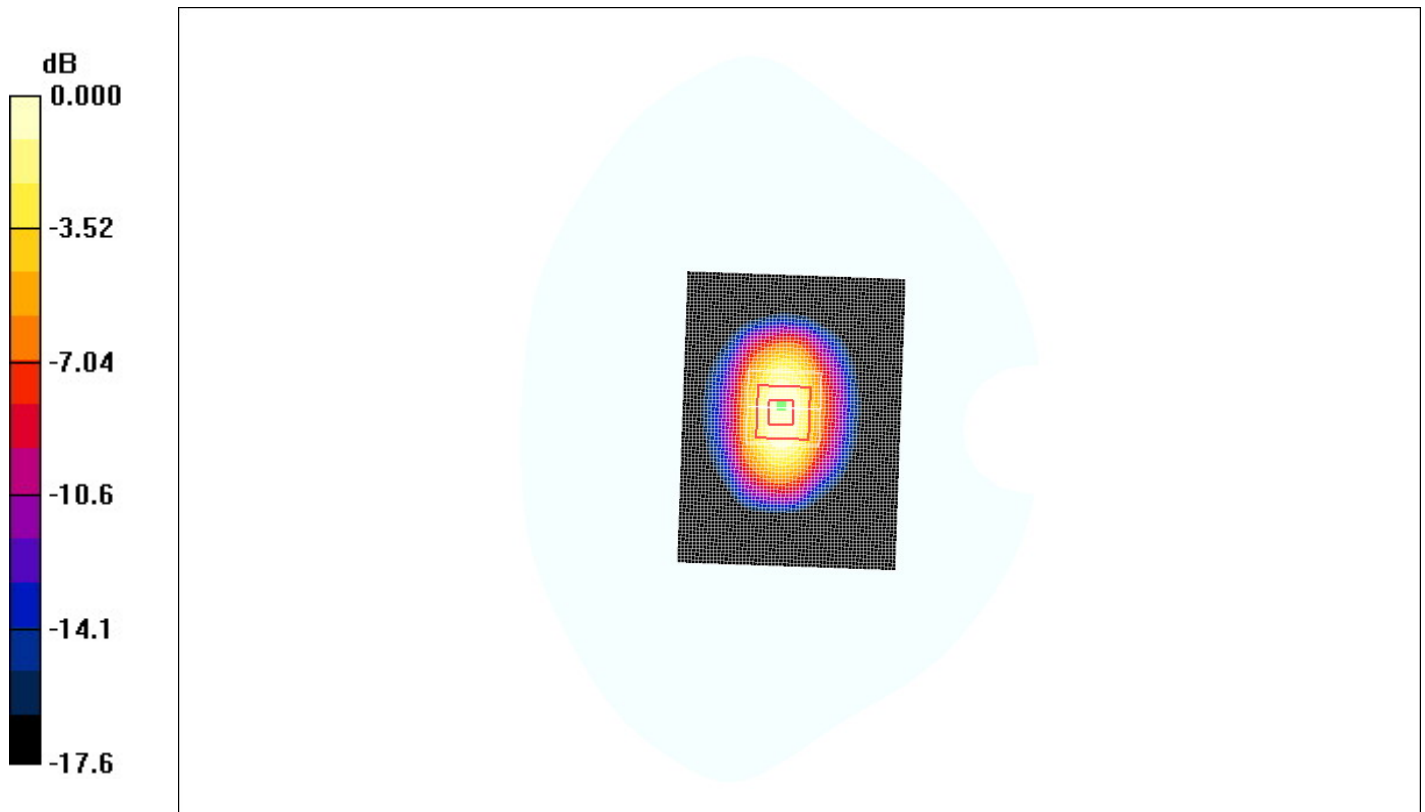
**d=10mm, Pin=250mW/Zoom Scan (7x7x7) /Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.4 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 16.8 W/kg

**SAR(1 g) = 9.69 mW/g; SAR(10 g) = 5.12 mW/g**

Maximum value of SAR (measured) = 10.9 mW/g



0 dB = 10.9mW/g

Figure.43 System Performance Check 1900MHz 250mW

# TA Technology (Shanghai) Co., Ltd. Test Report

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## ANNEX E: PROBE CALIBRATION CERTIFICATE

**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland



**S** Schweizerischer Kalibrierdienst  
**C** Service suisse d'étalonnage  
**S** Servizio svizzero di taratura  
**S** Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation  
The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **TMC-Auden**

Certificate No: **ET3-1737\_Feb07**

### CALIBRATION CERTIFICATE

Object **ET3DV6 - SN:1737**

Calibration procedure(s) **QA CAL-01.v5  
Calibration procedure for dosimetric E-field probes**

Calibration date: **February 19, 2007**

Condition of the calibrated item **In Tolerance**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Power sensor E4412A	MY41495277	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Power sensor E4412A	MY41498087	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Reference 3 dB Attenuator	SN: S5054 (3c)	10-Aug-06 (METAS, No. 217-00592)	Aug-07
Reference 20 dB Attenuator	SN: S5086 (20b)	4-Apr-06 (METAS, No. 251-00558)	Apr-07
Reference 30 dB Attenuator	SN: S5129 (30b)	10-Aug-06 (METAS, No. 217-00593)	Aug-07
Reference Probe ES3DV2	SN: 3013	4-Jan-07 (SPEAG, No. ES3-3013_Jan07)	Jan-08
DAE4	SN: 654	21-Jun-06 (SPEAG, No. DAE4-654_Jun06)	Jun-07
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (SPEAG, in house check Nov-05)	In house check: Nov-07
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Oct-06)	In house check: Oct-07

	<b>Name</b>	<b>Function</b>	<b>Signature</b>
Calibrated by:	<b>Katja Pokovic</b>	<b>Technical Manager</b>	
Approved by:	<b>Niels Kuster</b>	<b>Quality Manager</b>	

Issued: February 19, 2007

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.