

1900 Left Tilt Low

Date/Time: 2008-6-11 16:08:41

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.32$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1850.2 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.87, 4.87, 4.87)

Tilt Low/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.073 mW/g

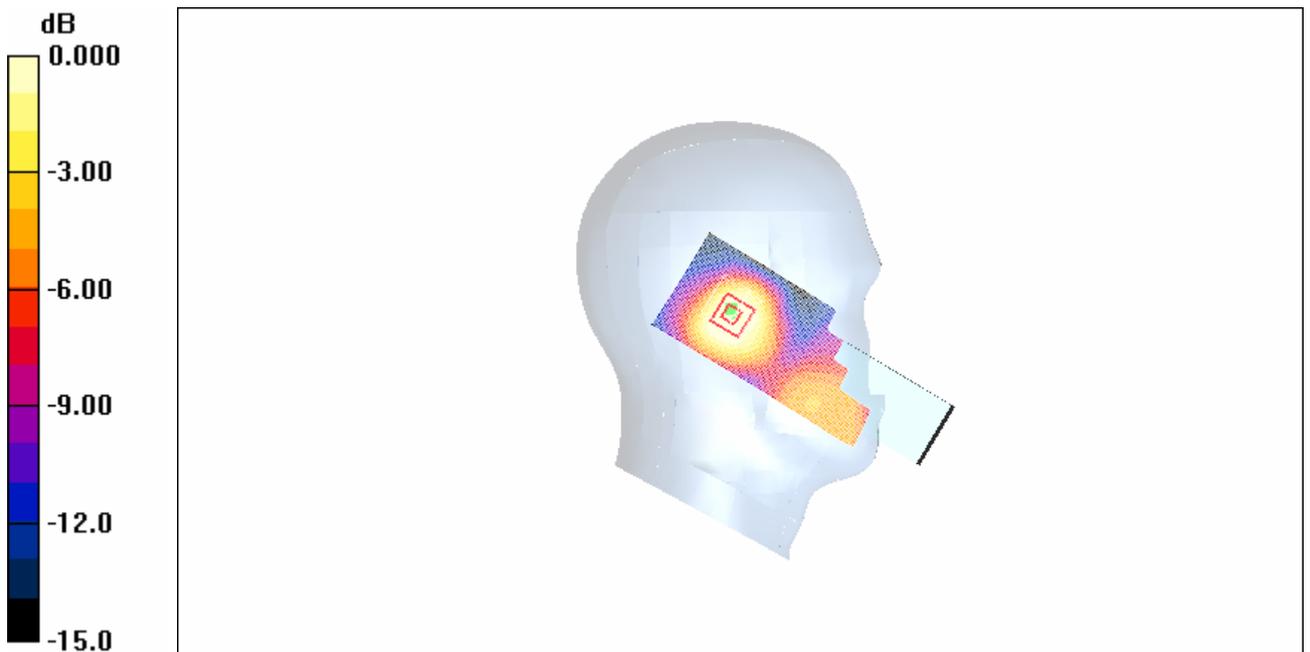
Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.13 V/m; Power Drift = 0.172 dB

Peak SAR (extrapolated) = 0.086 W/kg

SAR(1 g) = 0.062 mW/g; SAR(10 g) = 0.042 mW/g

Maximum value of SAR (measured) = 0.065 mW/g



0 dB = 0.065mW/g

Fig. 145 Left Hand Tilt 15° 1900MHz CH512

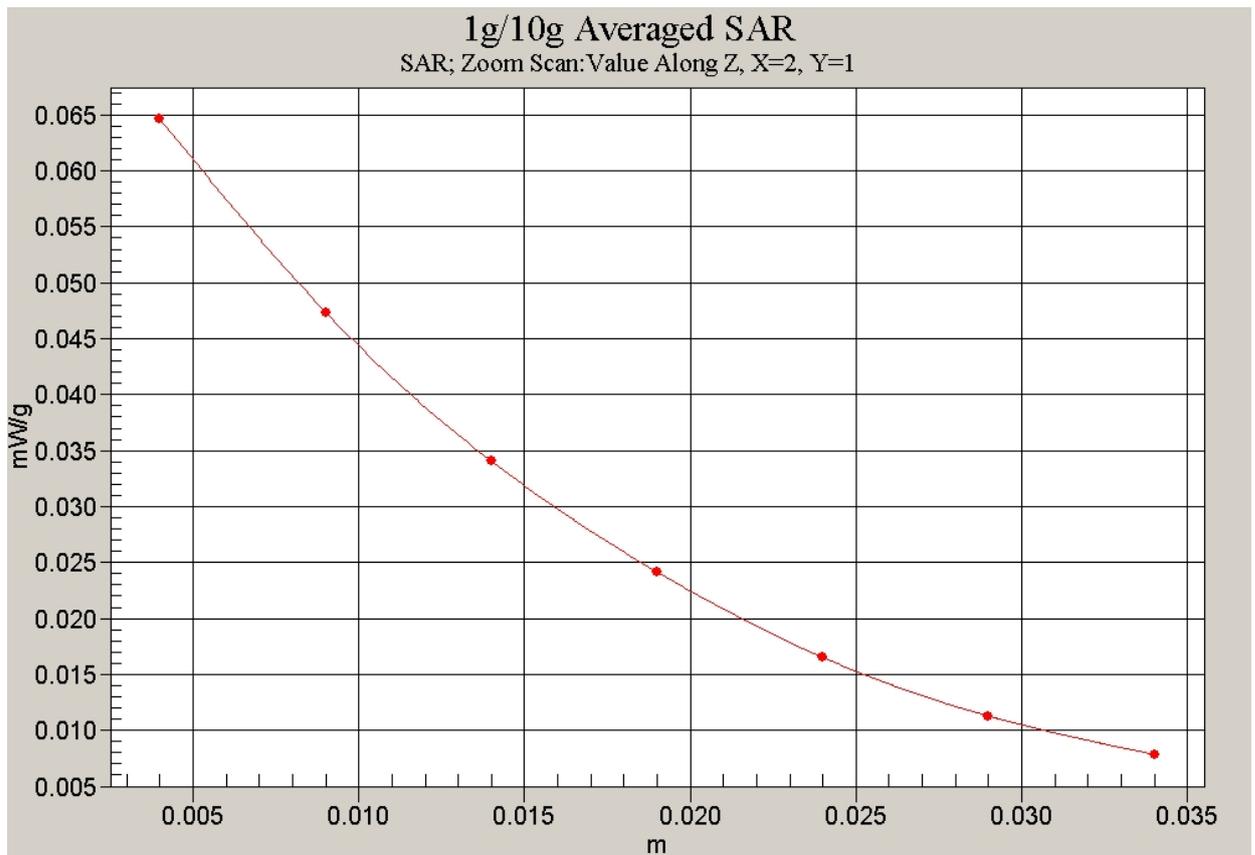


Fig. 146 Z-Scan at power reference point (1900MHz CH512)

1900 Right Cheek High

Date/Time: 2008-6-11 16:58:15

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1909.8 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.87, 4.87, 4.87)

Cheek High/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.227 mW/g

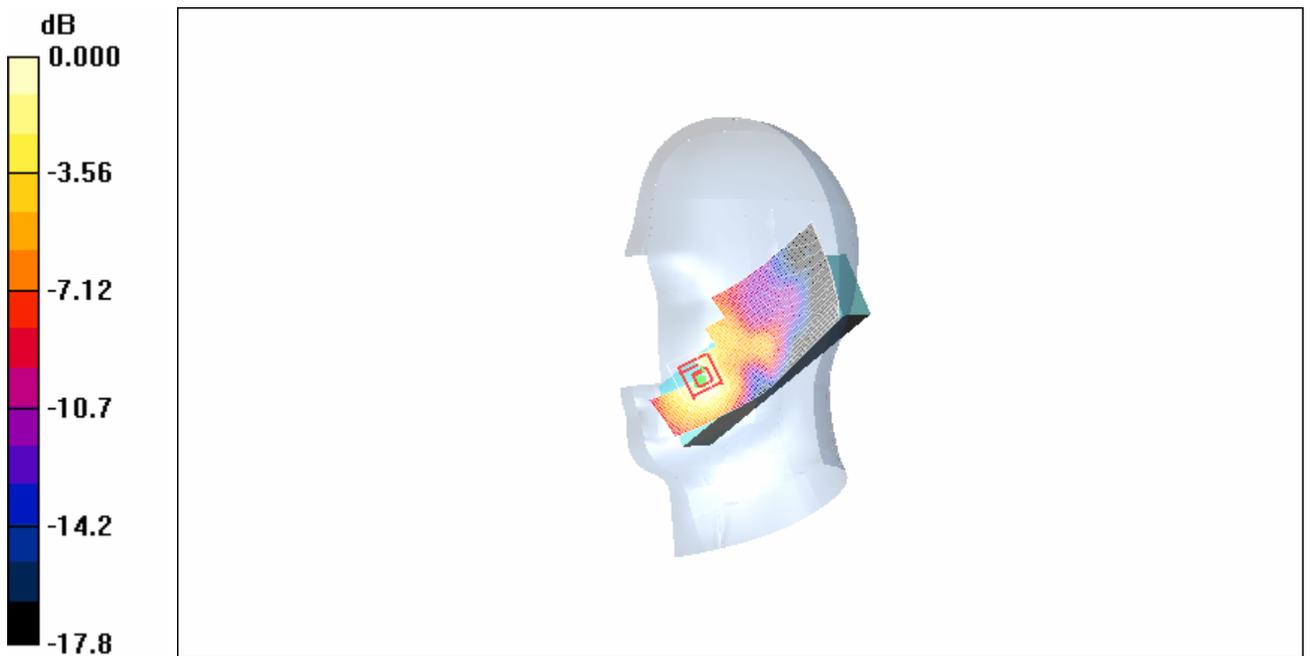
Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.95 V/m; Power Drift = 0.123 dB

Peak SAR (extrapolated) = 0.300 W/kg

SAR(1 g) = 0.197 mW/g; SAR(10 g) = 0.119 mW/g

Maximum value of SAR (measured) = 0.211 mW/g



0 dB = 0.211mW/g

Fig. 147 Right Hand Touch Cheek 1900MHz CH810

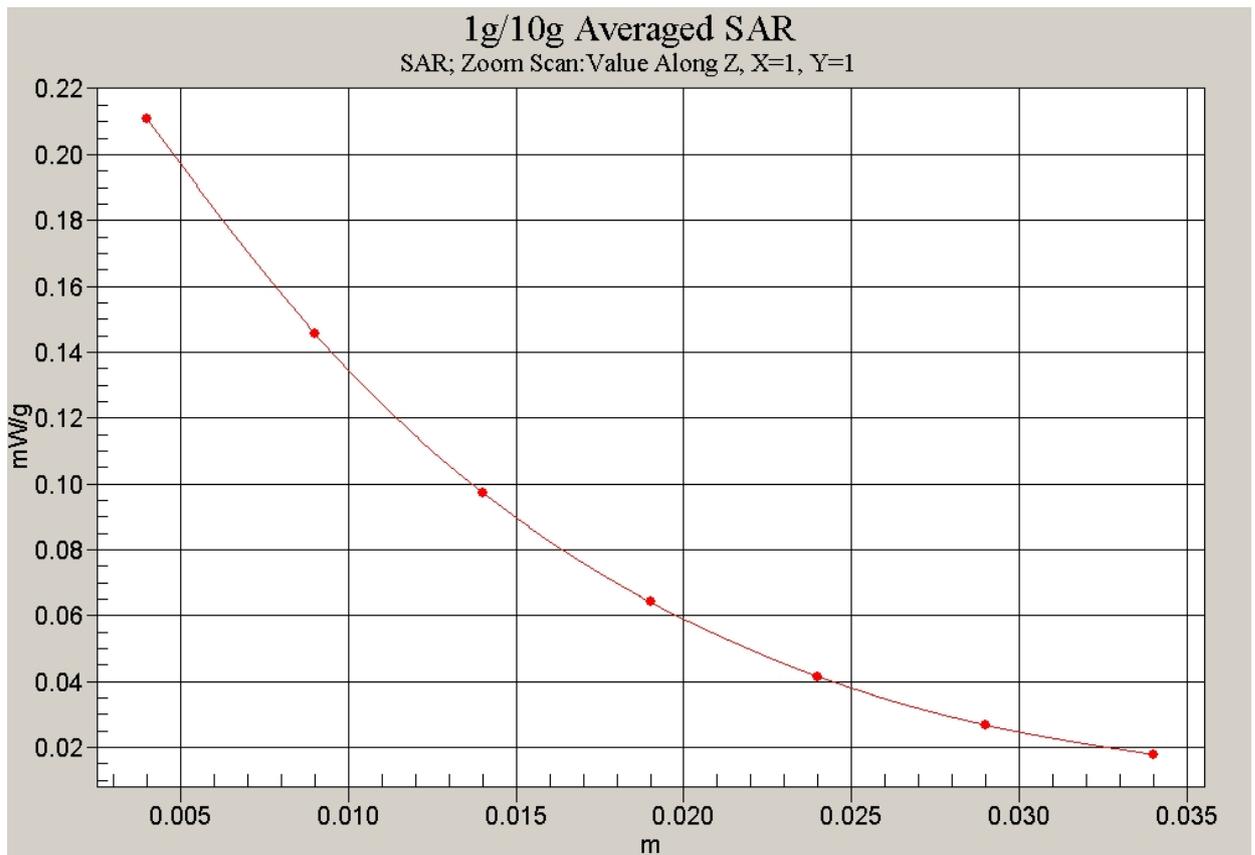


Fig. 148 Z-Scan at power reference point (1900MHz CH810)

1900 Right Cheek Middle

Date/Time: 2008-6-11 17:09:38

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.87, 4.87, 4.87)

Cheek Middle/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.228 mW/g

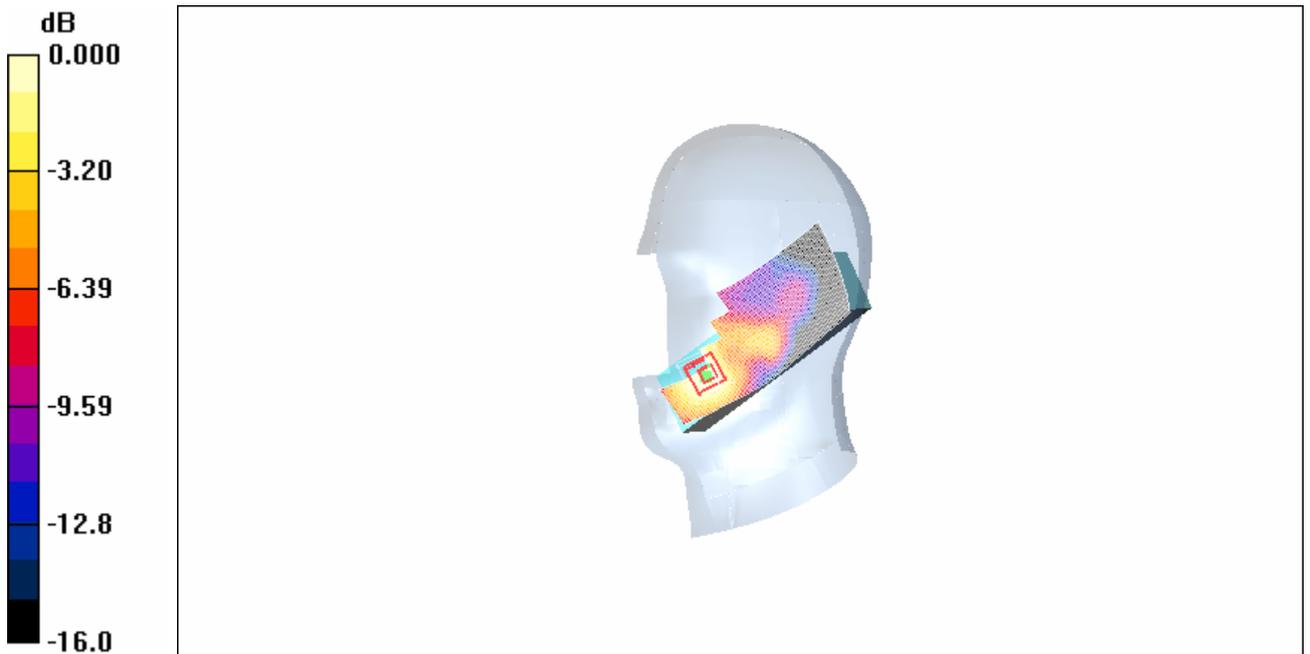
Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.64 V/m; Power Drift = 0.112 dB

Peak SAR (extrapolated) = 0.299 W/kg

SAR(1 g) = 0.195 mW/g; SAR(10 g) = 0.118 mW/g

Maximum value of SAR (measured) = 0.202 mW/g

**Fig.149 Right Hand Touch Cheek 1900MHz CH661**

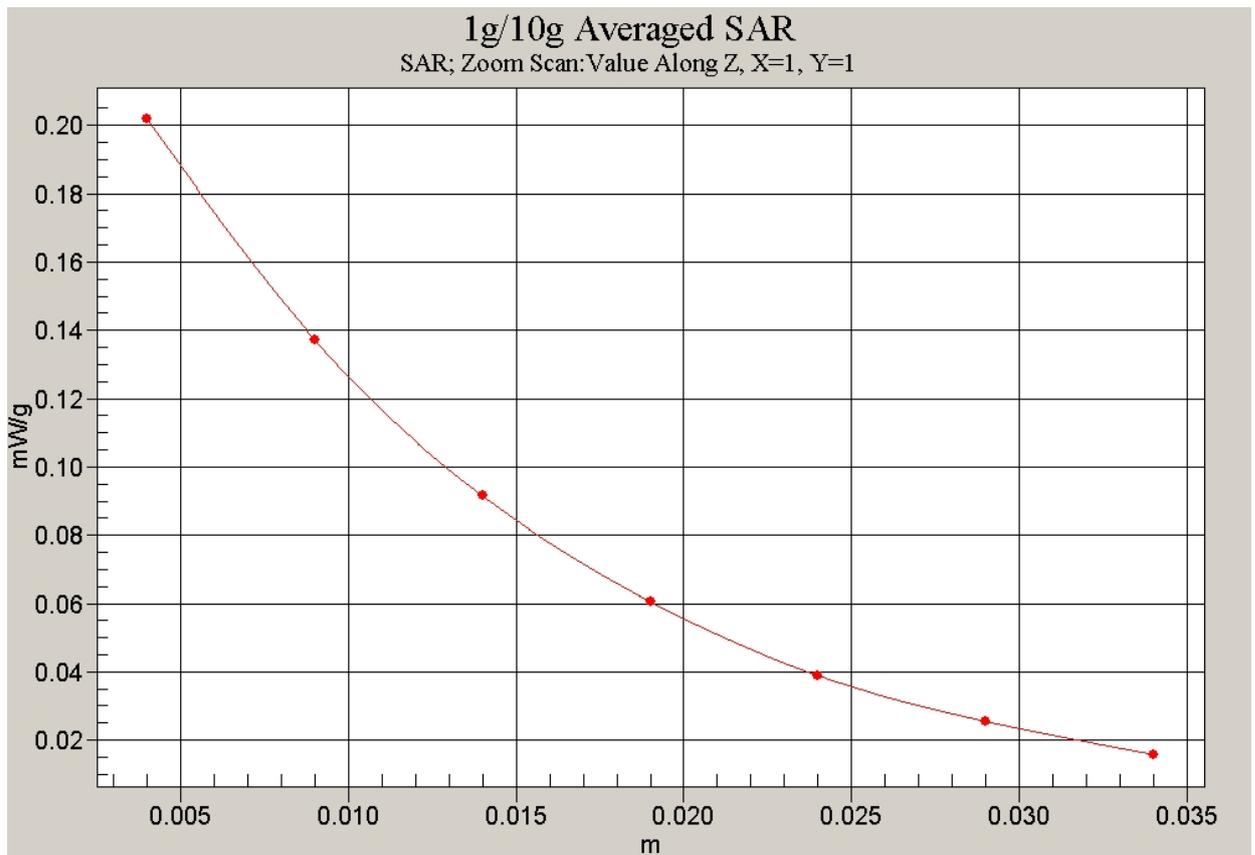


Fig.150 Z-Scan at power reference point (1900MHz CH661)

1900 Right Cheek Low

Date/Time: 2008-6-11 17:20:38

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.32$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1850.2 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.87, 4.87, 4.87)

Cheek Low/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.180 mW/g

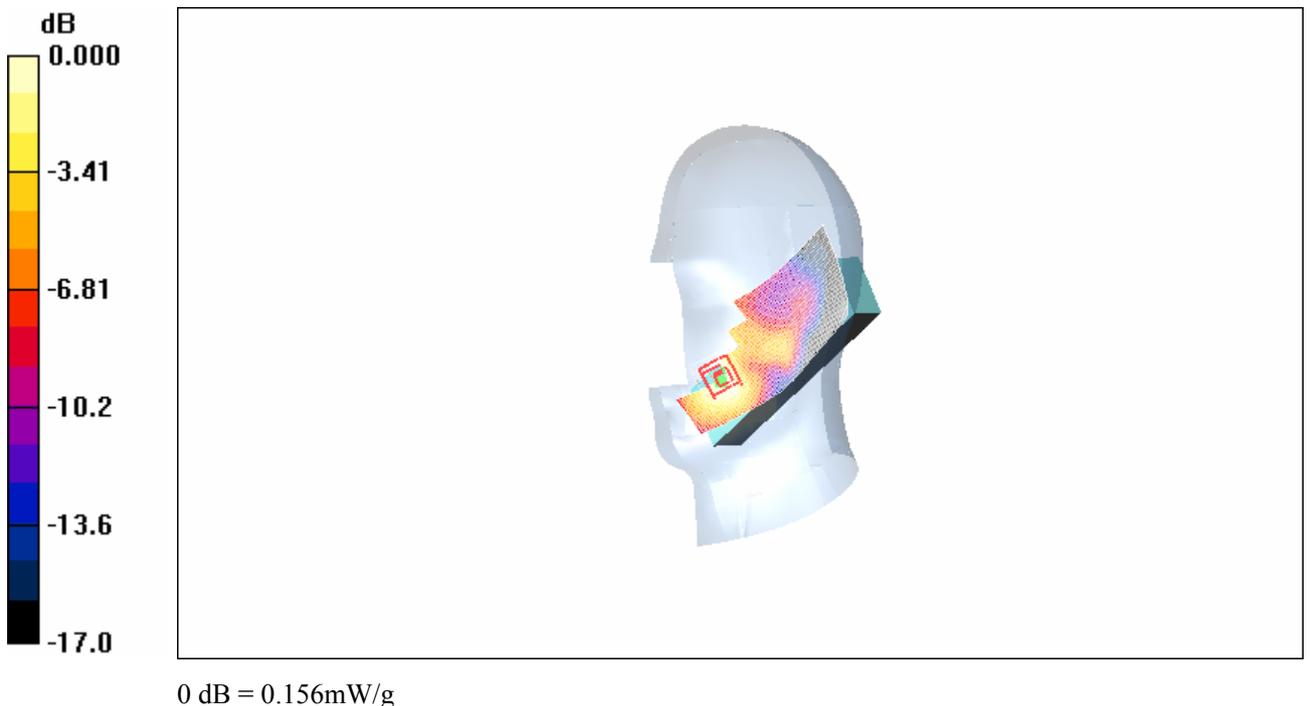
Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0.858 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 0.229 W/kg

SAR(1 g) = 0.147 mW/g; SAR(10 g) = 0.088 mW/g

Maximum value of SAR (measured) = 0.156 mW/g

**Fig. 151 Right Hand Touch Cheek 1900MHz CH512**

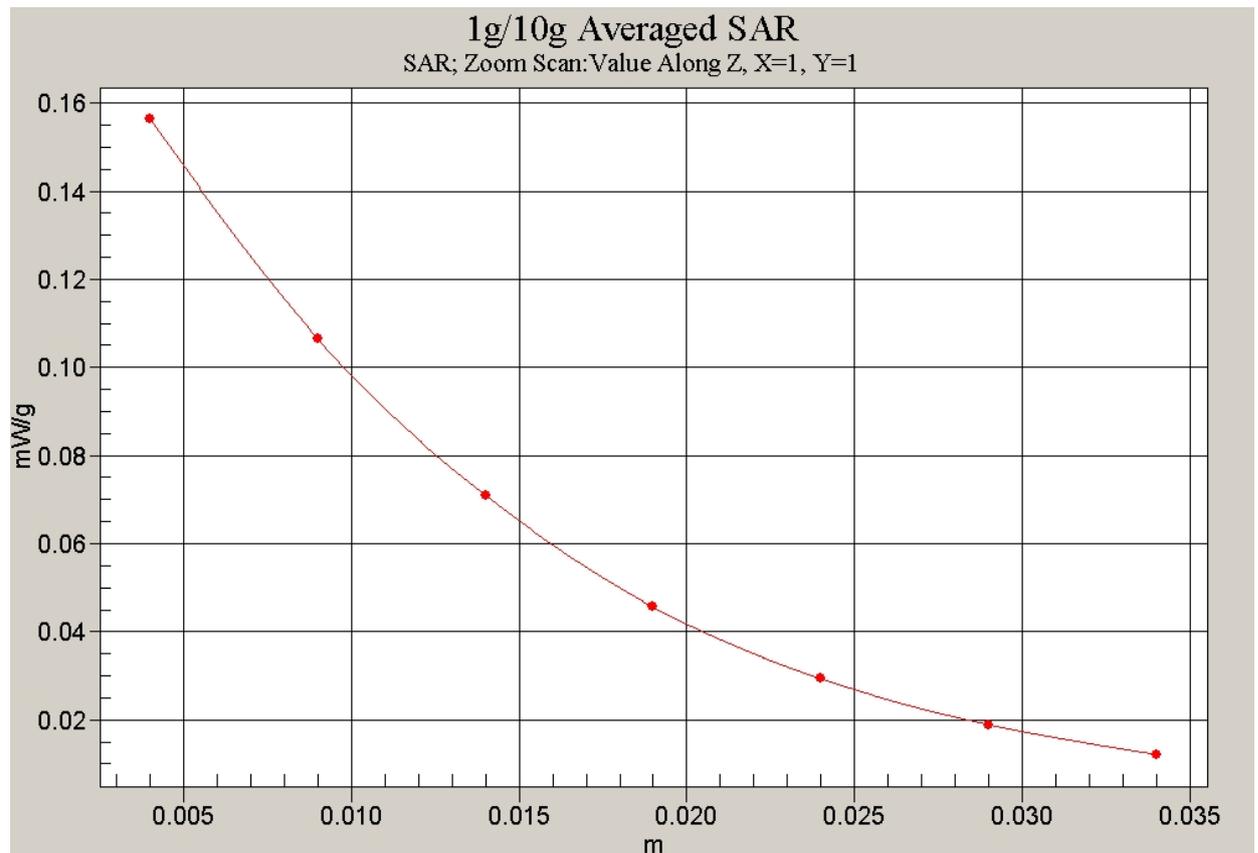


Fig. 152 Z-Scan at power reference point (1900MHz CH512)

1900 Right Tilt High

Date/Time: 2008-6-11 17:56:33

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1909.8 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.87, 4.87, 4.87)

Tilt High/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.089 mW/g

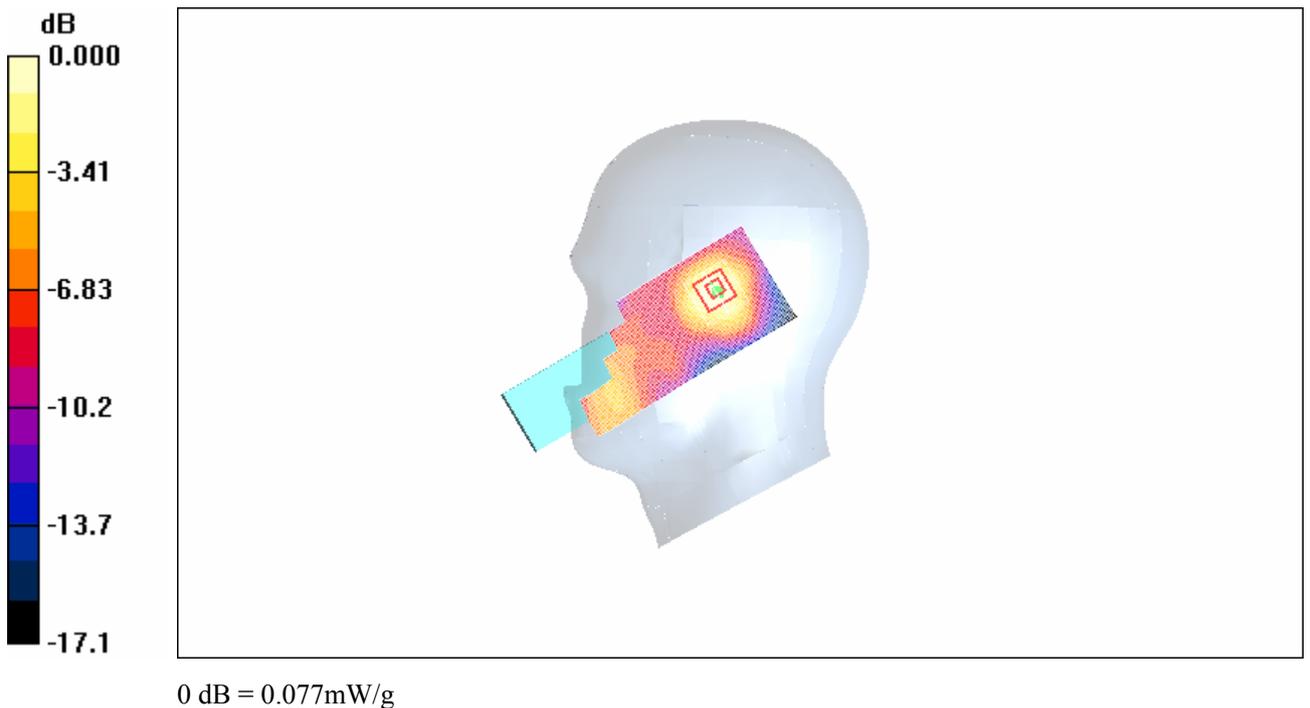
Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.38 V/m; Power Drift = -0.080 dB

Peak SAR (extrapolated) = 0.119 W/kg

SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.043 mW/g

Maximum value of SAR (measured) = 0.077 mW/g

**Fig. 153 Right Hand Tilt 15° 1900MHz CH810**

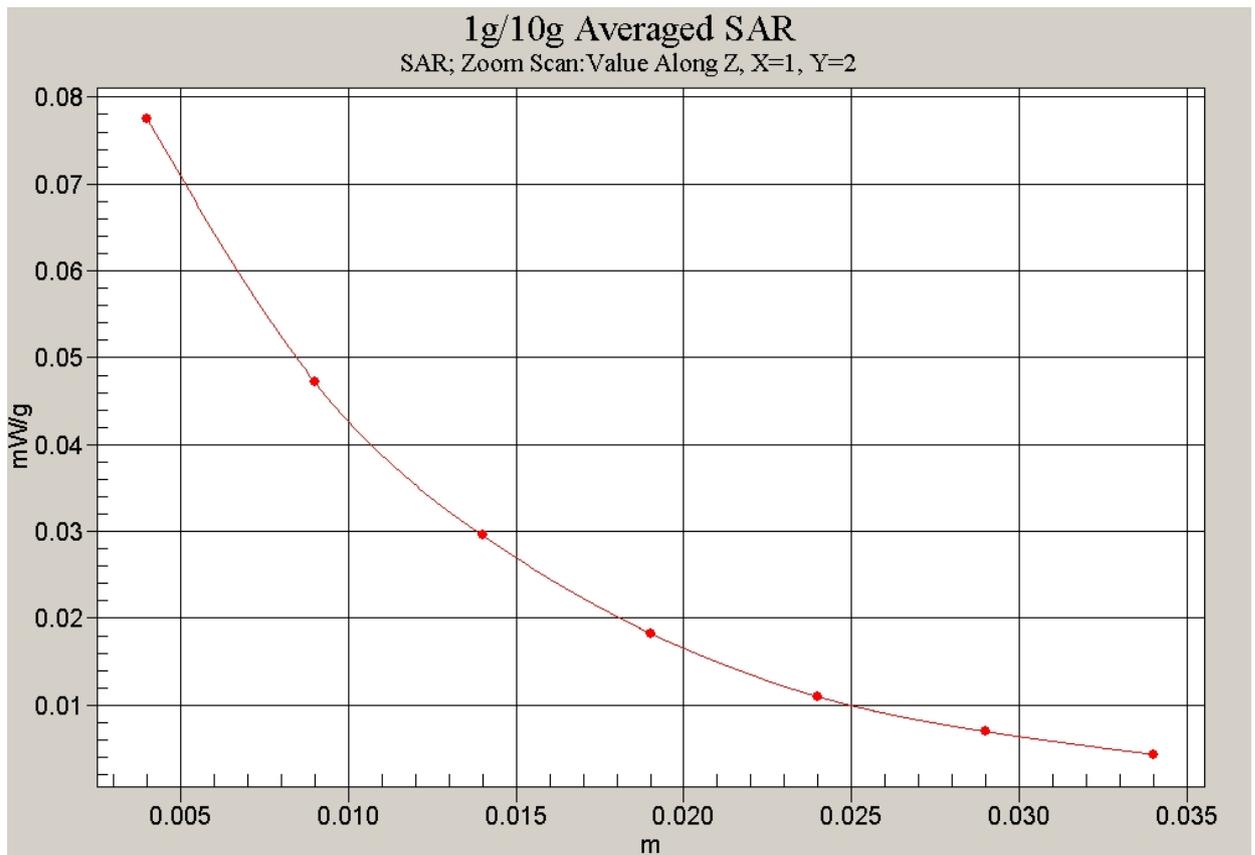


Fig. 154 Z-Scan at power reference point (1900MHz CH810)

1900 Right Tilt Middle

Date/Time: 2008-6-11 17:43:05

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.35$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.87, 4.87, 4.87)

Tilt Middle/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.114 mW/g

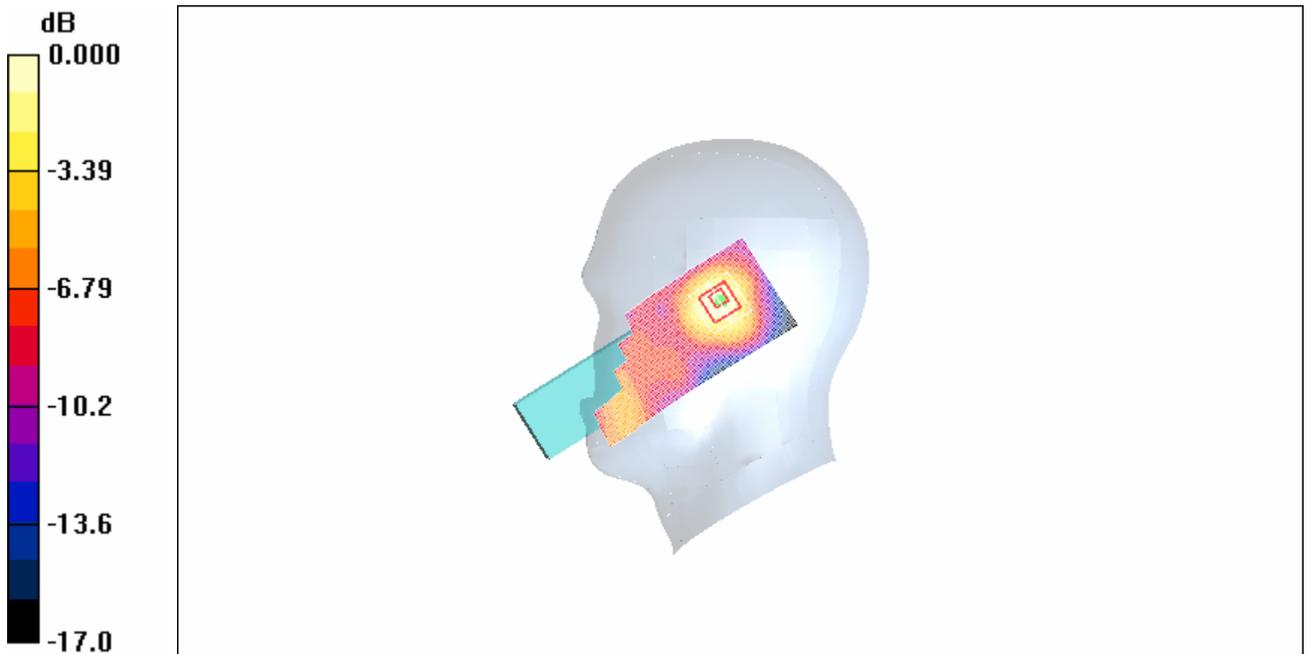
Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm,
 dz=5mm

Reference Value = 7.30 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 0.149 W/kg

SAR(1 g) = 0.094 mW/g; SAR(10 g) = 0.056 mW/g

Maximum value of SAR (measured) = 0.099 mW/g



0 dB = 0.099mW/g

Fig. 155 Right Hand Tilt 15° 1900MHz CH661

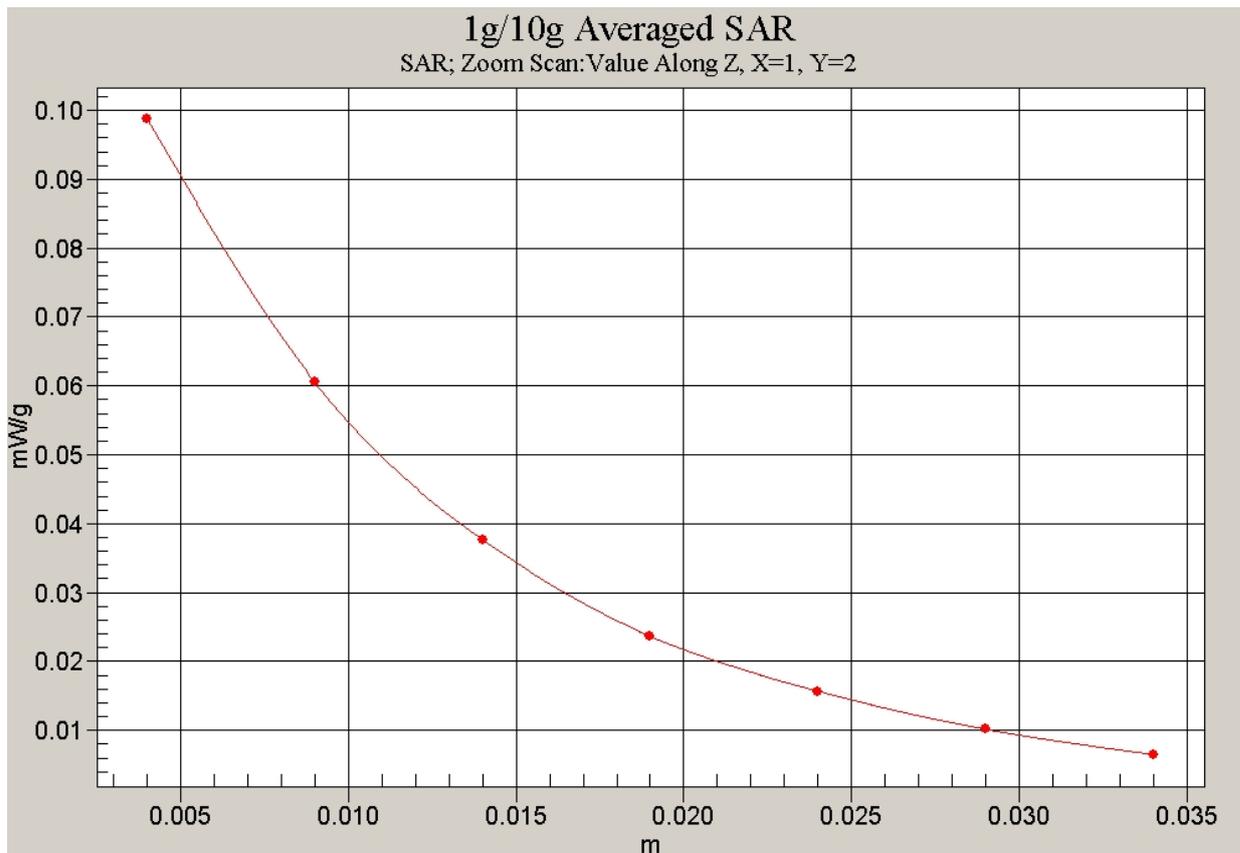


Fig. 156 Z-Scan at power reference point (1900MHz CH661)

1900 Right Tilt Low

Date/Time: 2008-6-11 17:31:39

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.32$ mho/m; $\epsilon_r = 39.4$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1850.2 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.87, 4.87, 4.87)

Tilt Low/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.111 mW/g

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

Reference Value = 7.28 V/m; Power Drift = 0.081 dB

Peak SAR (extrapolated) = 0.148 W/kg

SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.100 mW/g

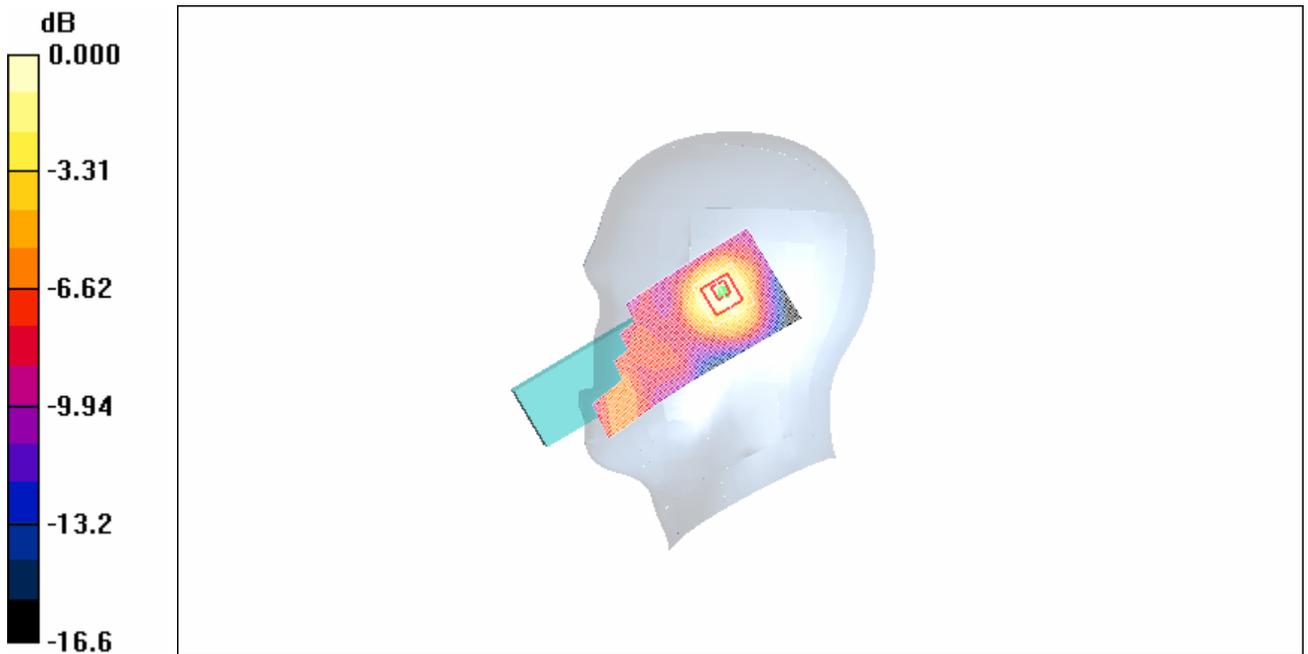


Fig. 157 Right Hand Tilt 15° 1900MHz CH512

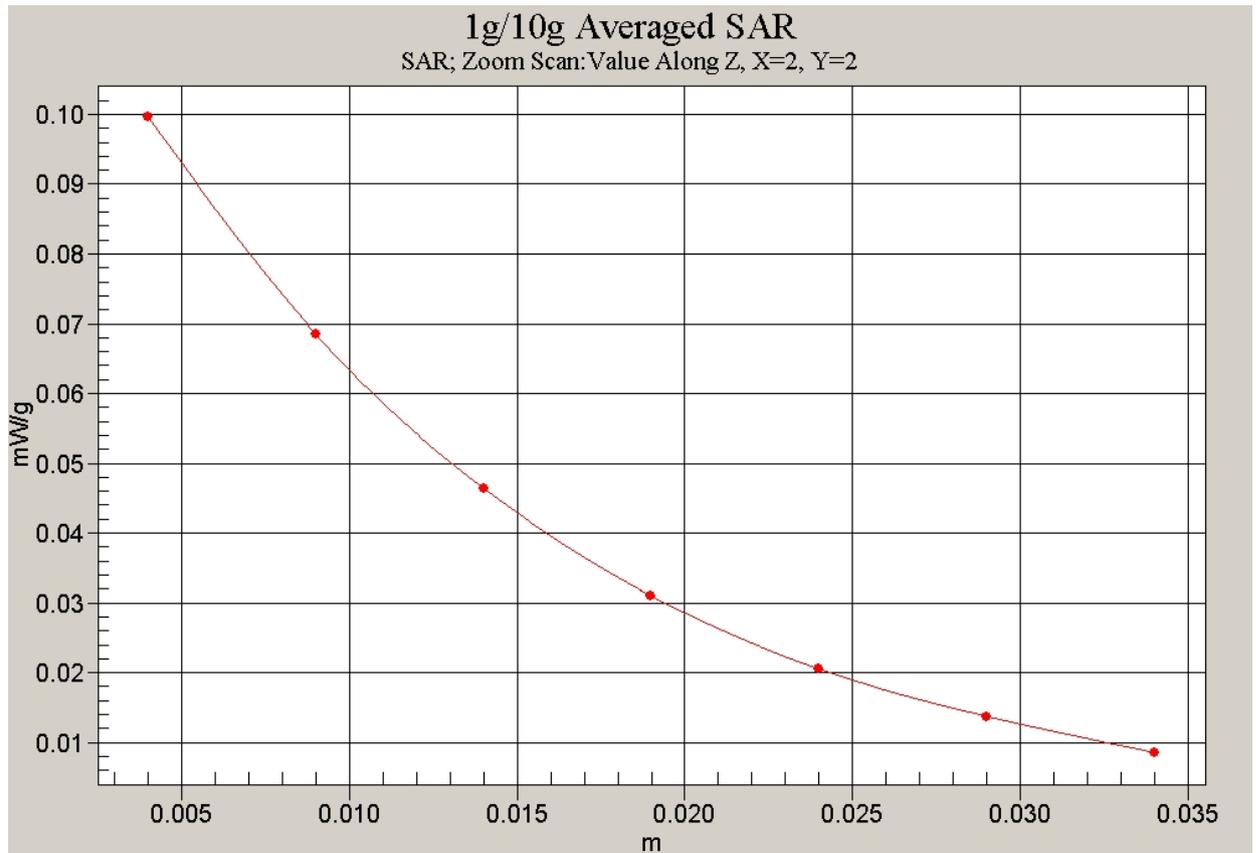


Fig. 158 Z-Scan at power reference point (1900MHz CH512)

1900 Body Toward Ground High with GPRS-flip opened

Date/Time: 2008-6-11 18:20:44

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz GPRS Frequency: 1909.8 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Ground High/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.441 mW/g

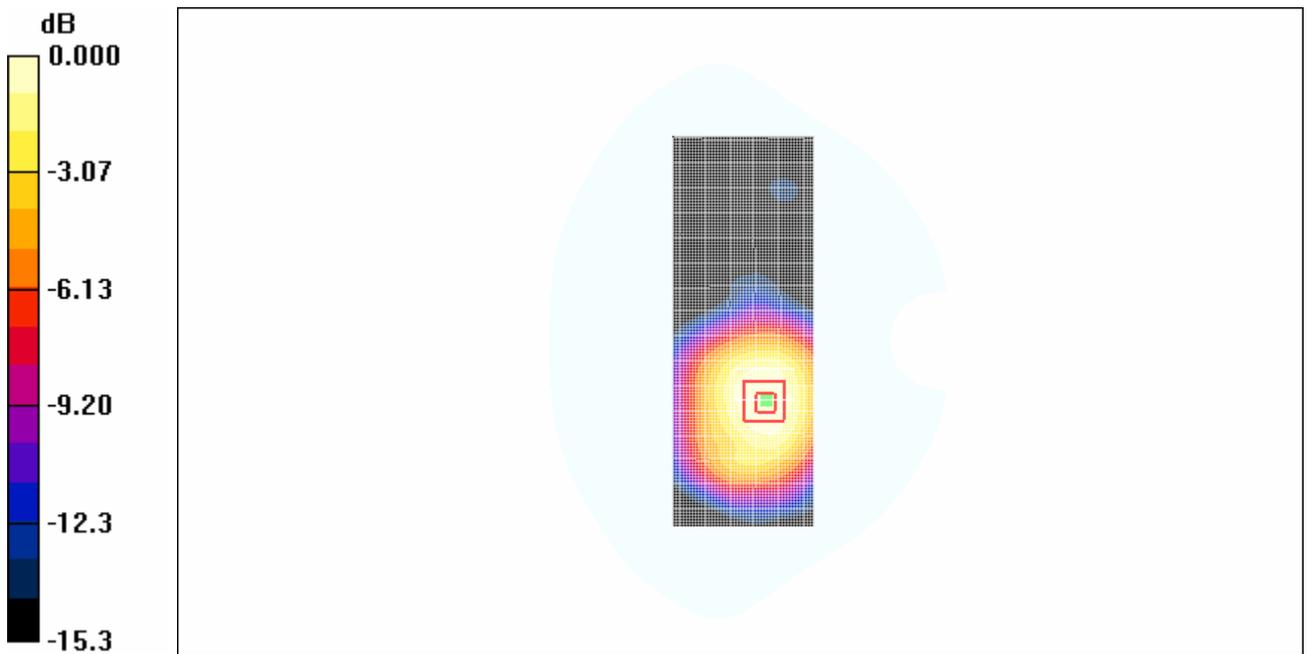
Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.1 V/m; Power Drift = -0.200 dB

Peak SAR (extrapolated) = 0.608 W/kg

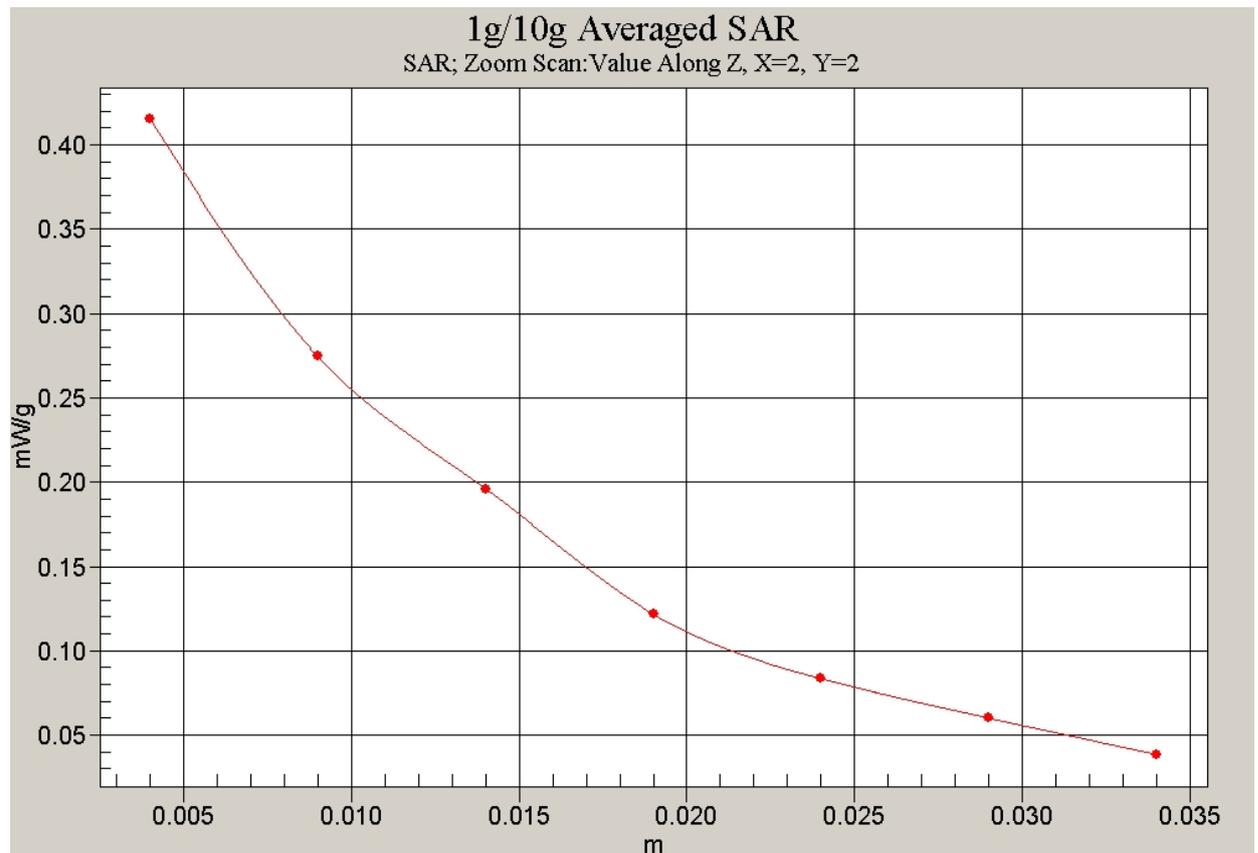
SAR(1 g) = 0.392 mW/g; SAR(10 g) = 0.255 mW/g

Maximum value of SAR (measured) = 0.415 mW/g



0 dB = 0.415mW/g

Fig. 159 1900MHz Body, Towards Ground with GPRS, CH810-flip opened



**Fig. 160 Z-Scan at power reference point
(1900MHz Body, Towards Ground with GPRS, CH810-flip opened)**

1900 Body Toward Ground Middle with GPRS-flip opened

Date/Time: 2008-6-11 18:43:15

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz GPRS Frequency: 1880 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Ground Middle/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.408 mW/g

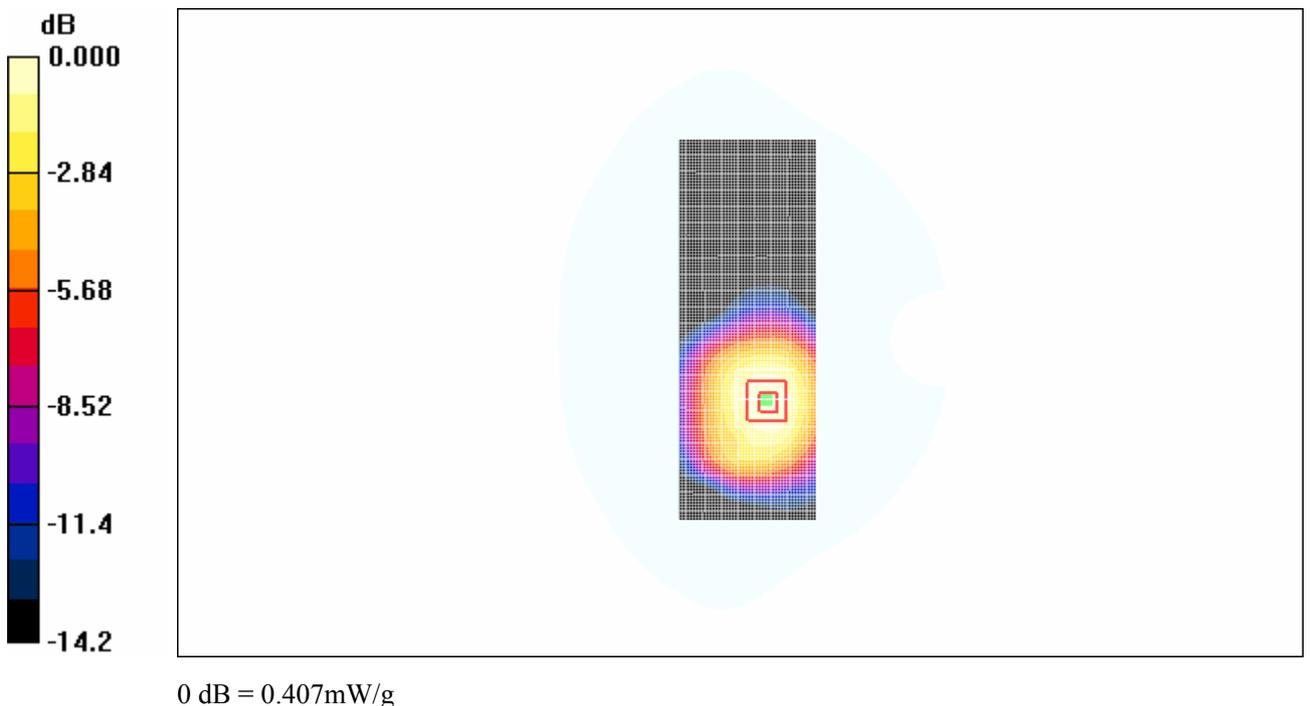
Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

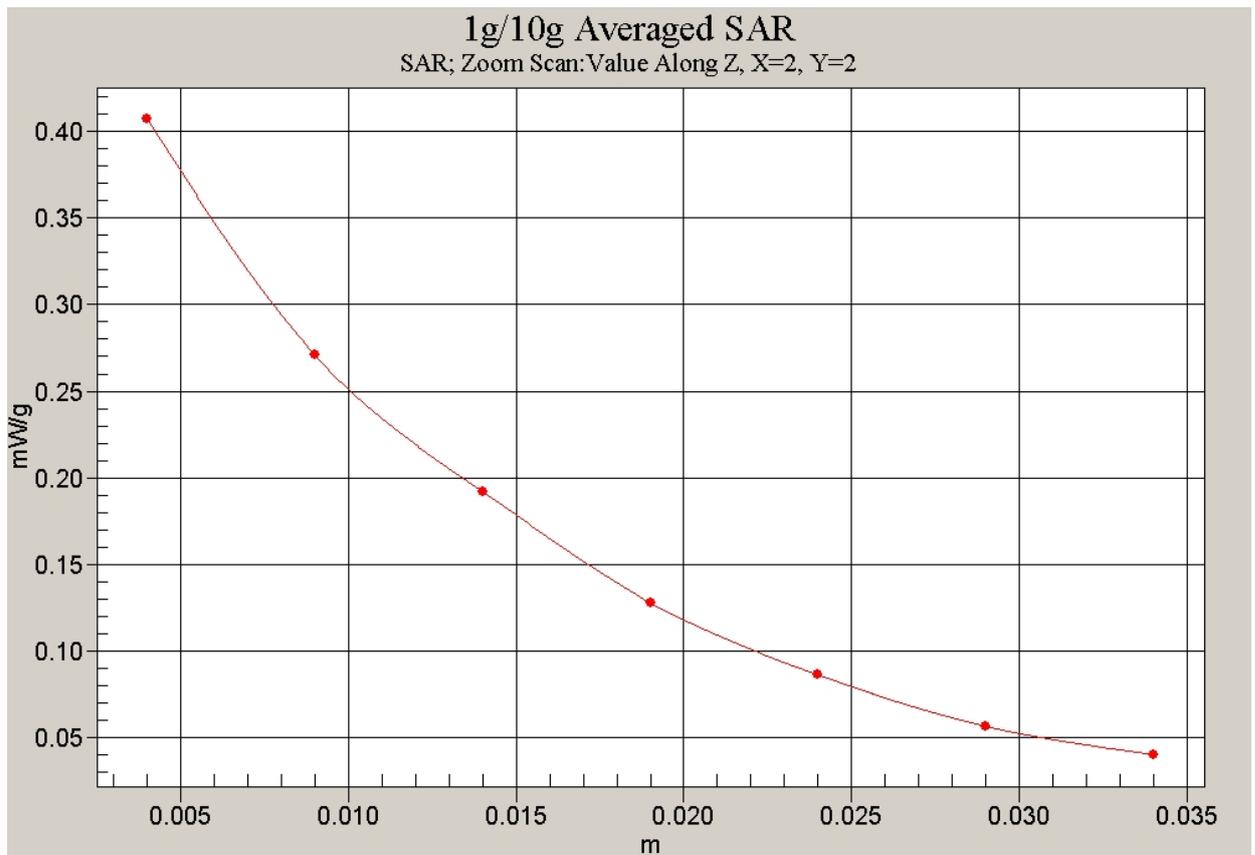
Reference Value = 9.19 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 0.586 W/kg

SAR(1 g) = 0.383 mW/g; SAR(10 g) = 0.250 mW/g

Maximum value of SAR (measured) = 0.407 mW/g

**Fig. 161 1900MHz Body, Towards Ground with GPRS, CH661-flip opened**



**Fig. 162 Z-Scan at power reference point
(1900MHz Body, Towards Ground with GPRS, CH661-flip opened)**

1900 Body Toward Ground Low with GPRS-flip opened

Date/Time: 2008-6-11 19:00:04

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz GPRS Frequency: 1850.2 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Ground Low/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.337 mW/g

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

Reference Value = 8.25 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 0.483 W/kg

SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.207 mW/g

Maximum value of SAR (measured) = 0.333 mW/g

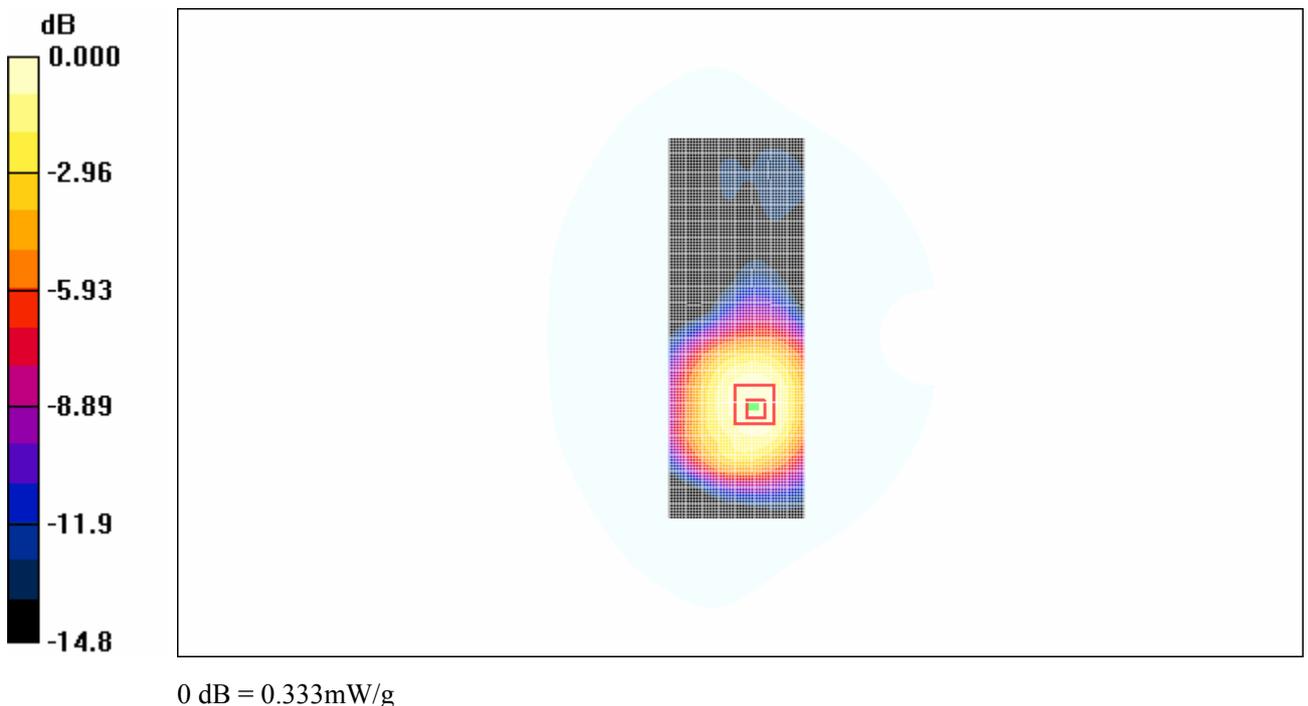
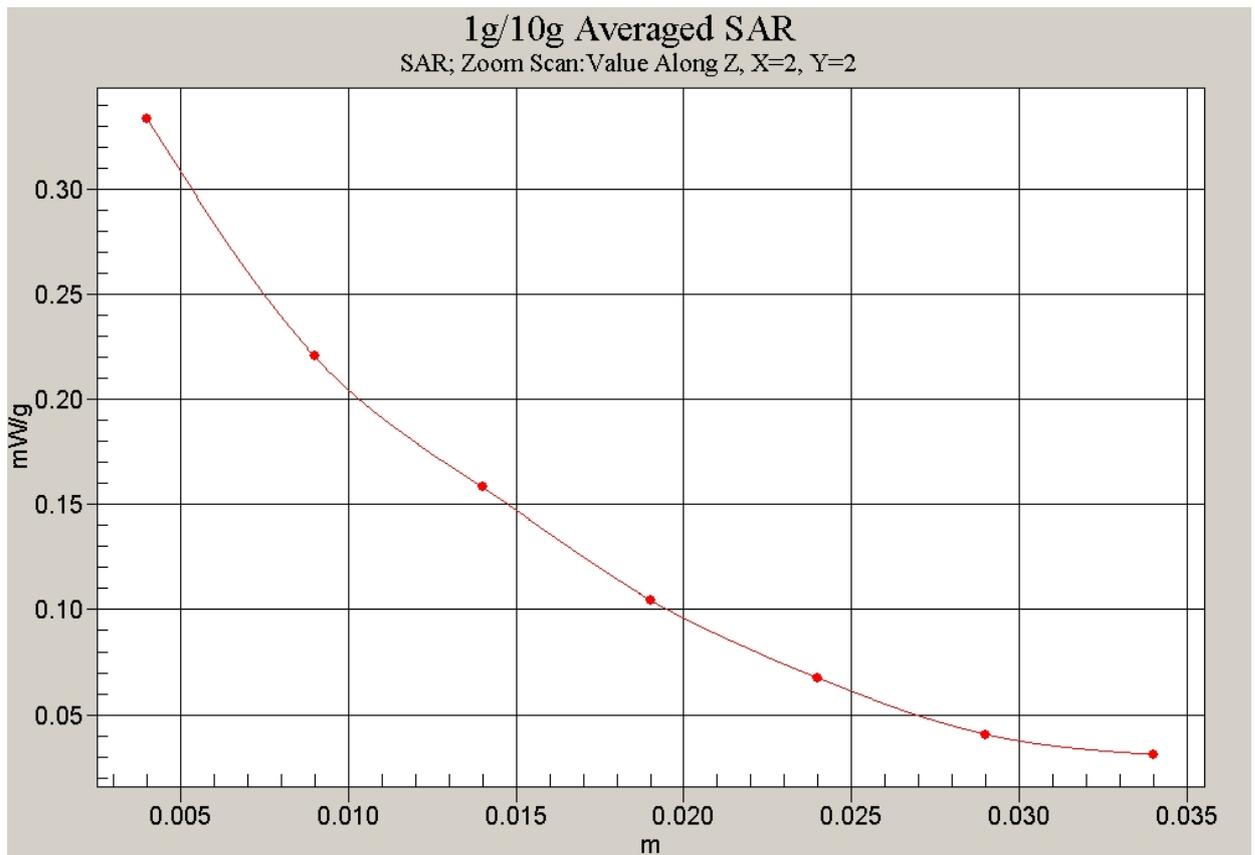


Fig. 163 1900MHz Body, Towards Ground with GPRS, CH512-flip opened



**Fig. 164 Z-Scan at power reference point
(1900MHz Body, Towards Ground with GPRS, CH512-flip opened)**

1900 Body Toward Ground High with EGPRS-flip opened

Date/Time: 2008-6-11 19:14:23

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz GPRS Frequency: 1909.8 MHz Duty Cycle: 1:4

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Ground High/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.284 mW/g

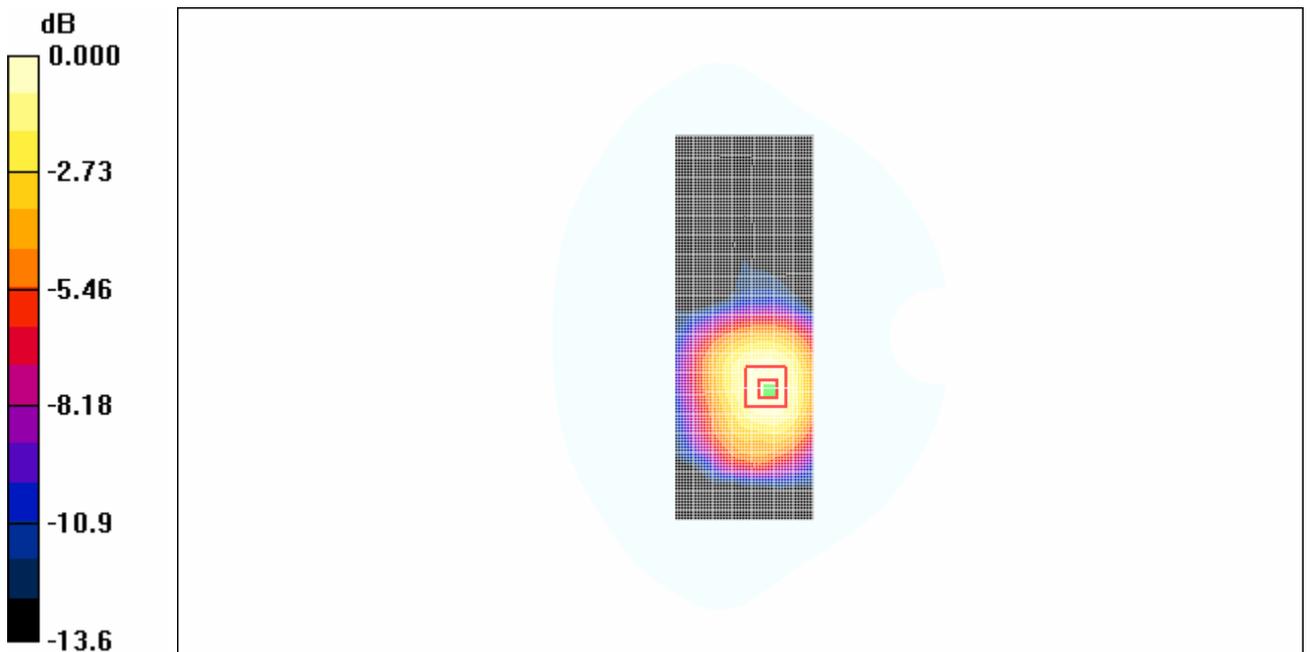
Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.36 V/m; Power Drift = -0.044 dB

Peak SAR (extrapolated) = 0.400 W/kg

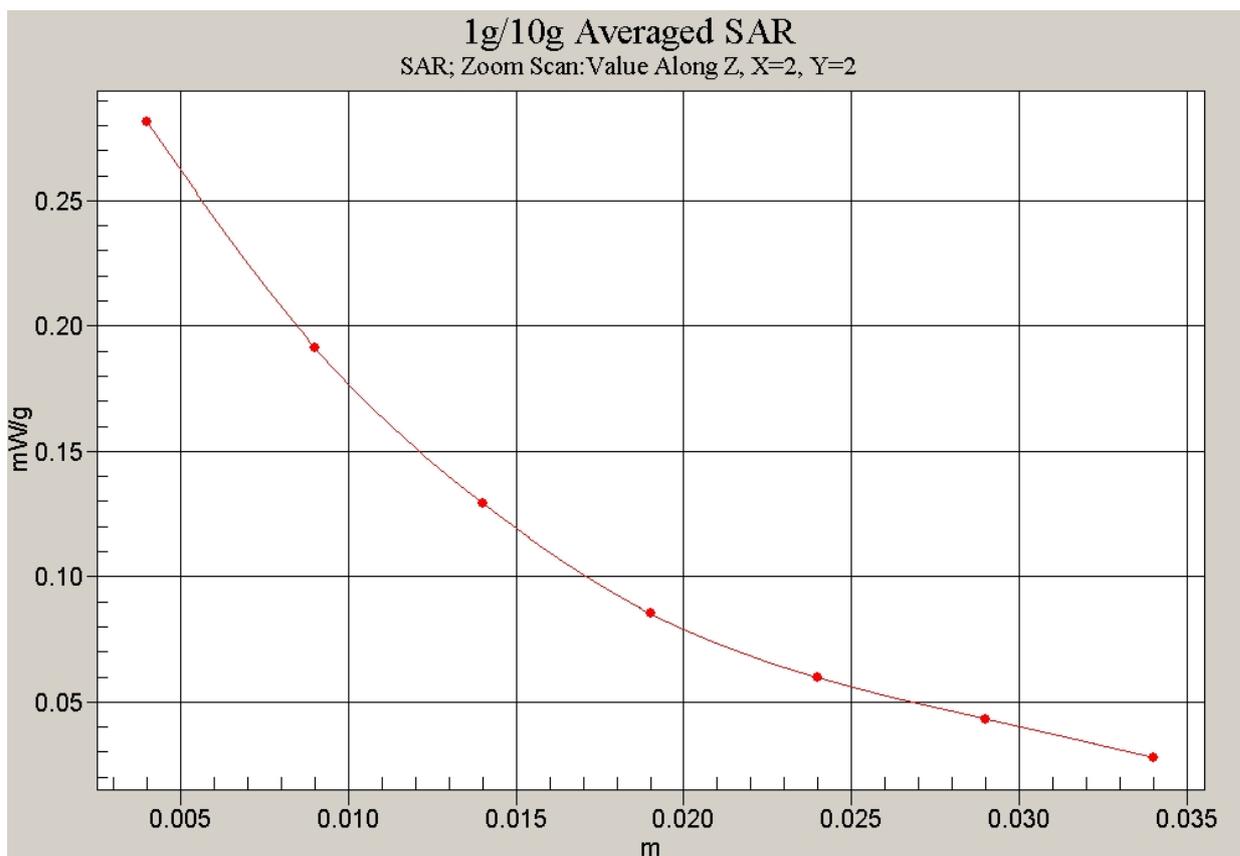
SAR(1 g) = 0.263 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.281 mW/g



0 dB = 0.281mW/g

Fig. 165 1900MHz Body, Towards ground with EGPRS, CH810-flip opened



**Fig. 166 Z-Scan at power reference point
(1900MHz Body, Towards ground with EGPRS, CH810-flip opened)**

1900 Body Toward Ground High with Bluetooth function-flip opened

Date/Time: 2008-6-11 19:26:17

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1909.8 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Ground High/Area Scan (51x141x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.256 mW/g

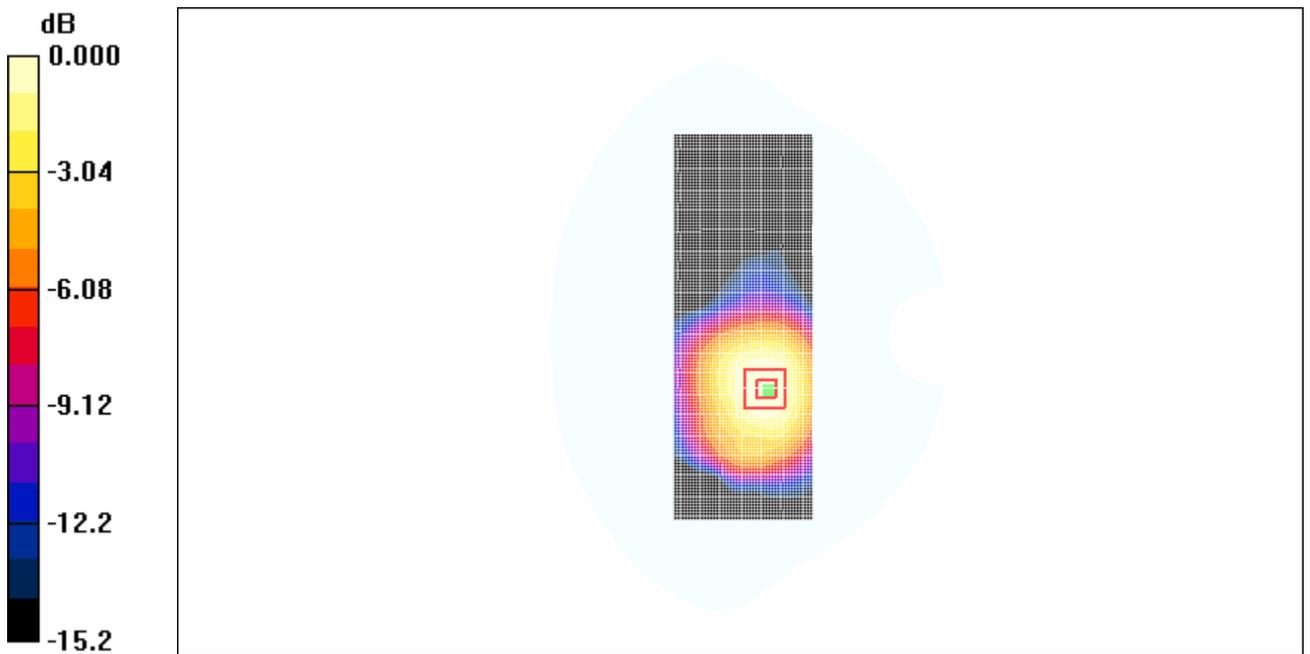
Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.13 V/m; Power Drift = -0.107 dB

Peak SAR (extrapolated) = 0.368 W/kg

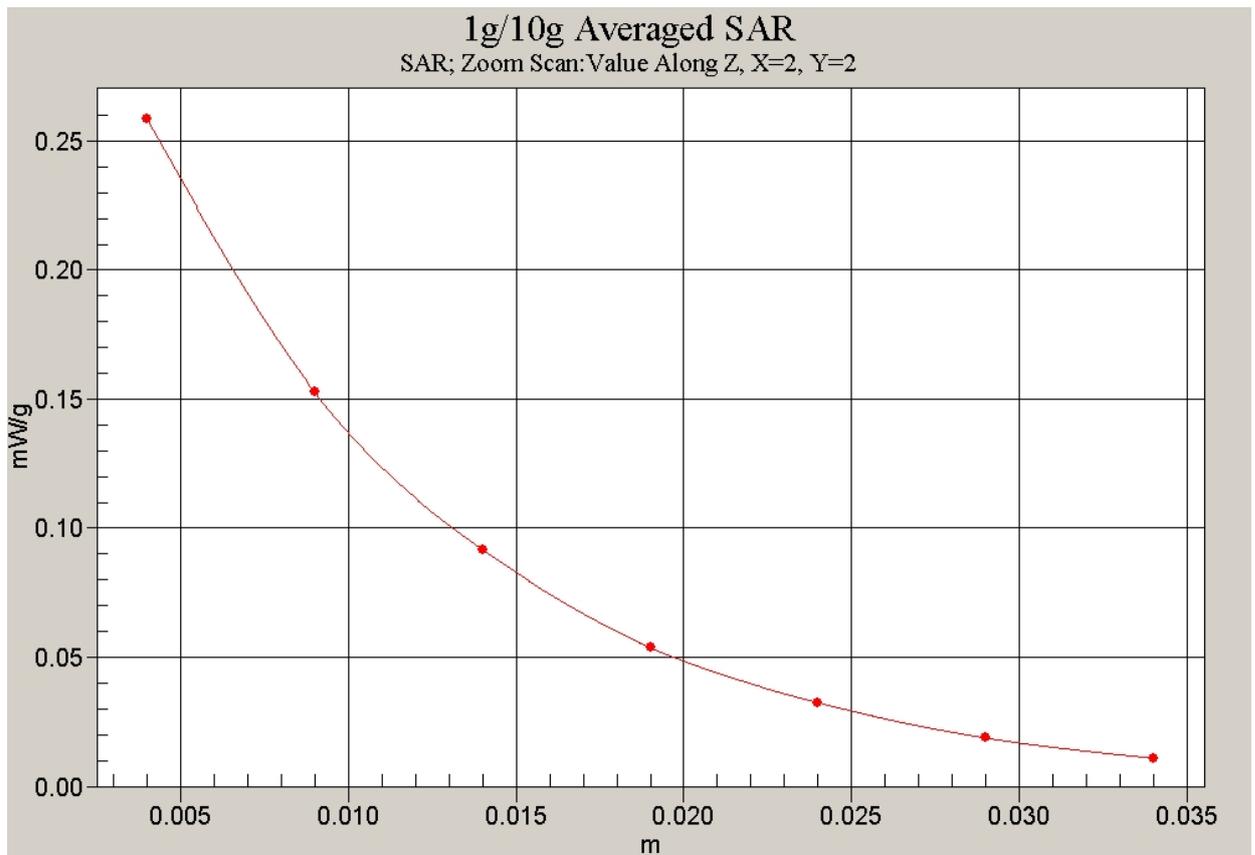
SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.251 mW/g



0 dB = 0.251mW/g

Fig.167 1900MHz Body, Towards ground with Bluetooth function, CH810-flip opened



**Fig. 168 Z-Scan at power reference point
(1900MHz Body, Towards ground with Bluetooth function, CH810-flip opened)**

1900 Body Toward Ground High with Headset-flip closed

Date/Time: 2008-6-11 19:38:13

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1909.8 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Ground High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.205 mW/g

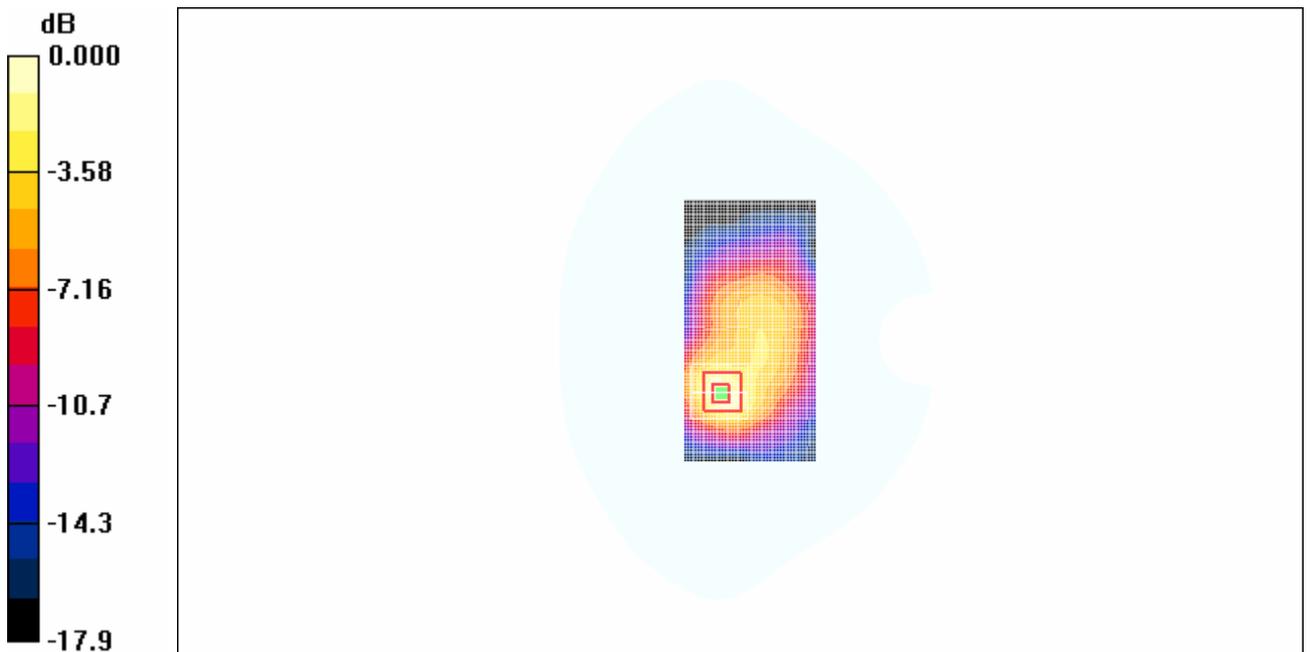
Toward Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.64 V/m; Power Drift = 0.076 dB

Peak SAR (extrapolated) = 0.368 W/kg

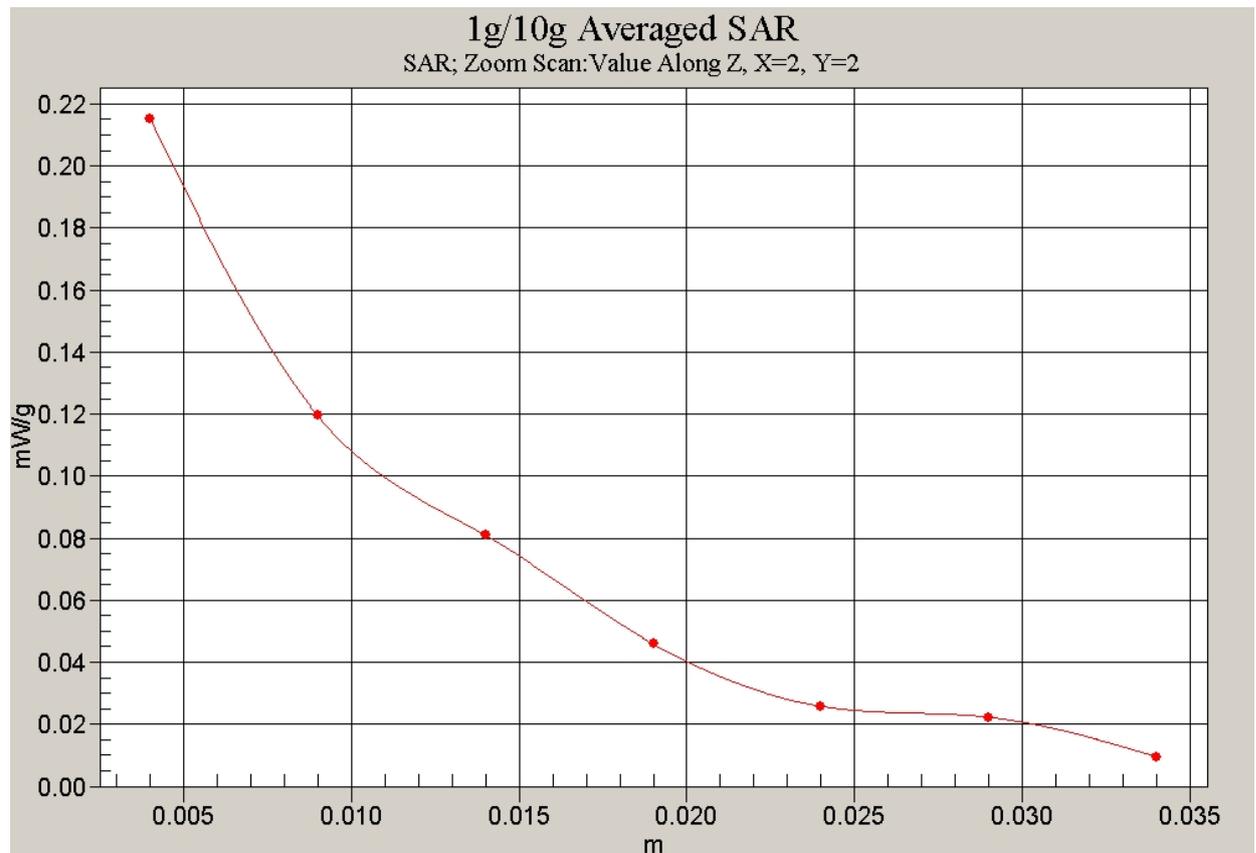
SAR(1 g) = 0.191 mW/g; SAR(10 g) = 0.101 mW/g

Maximum value of SAR (measured) = 0.215 mW/g



0 dB = 0.215mW/g

Fig. 169 1900MHz Body, Towards Ground, CH810-flip closed



**Fig. 170 Z-Scan at power reference point
(1900MHz Body, Towards Ground, CH810-flip closed)**

1900 Body Toward Ground Middle with Headset-flip closed

Date/Time: 2008-6-11 19:50:52

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Ground Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.229 mW/g

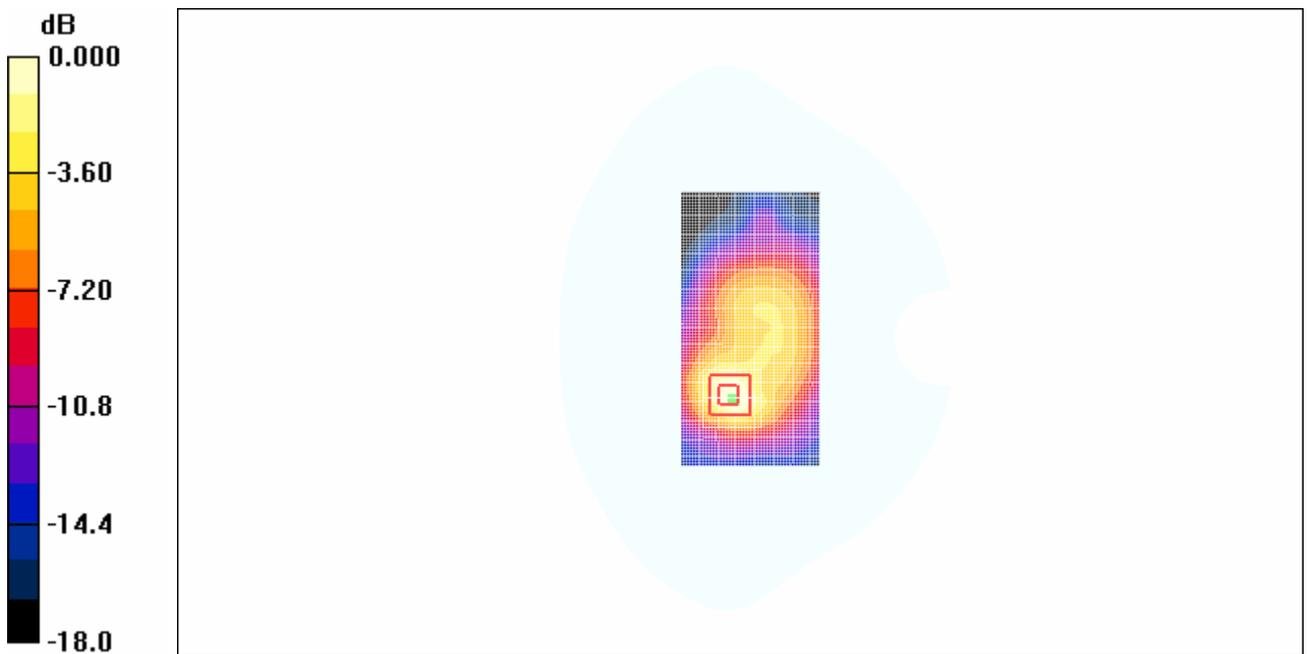
Toward Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.27 V/m; Power Drift = 0.051 dB

Peak SAR (extrapolated) = 0.387 W/kg

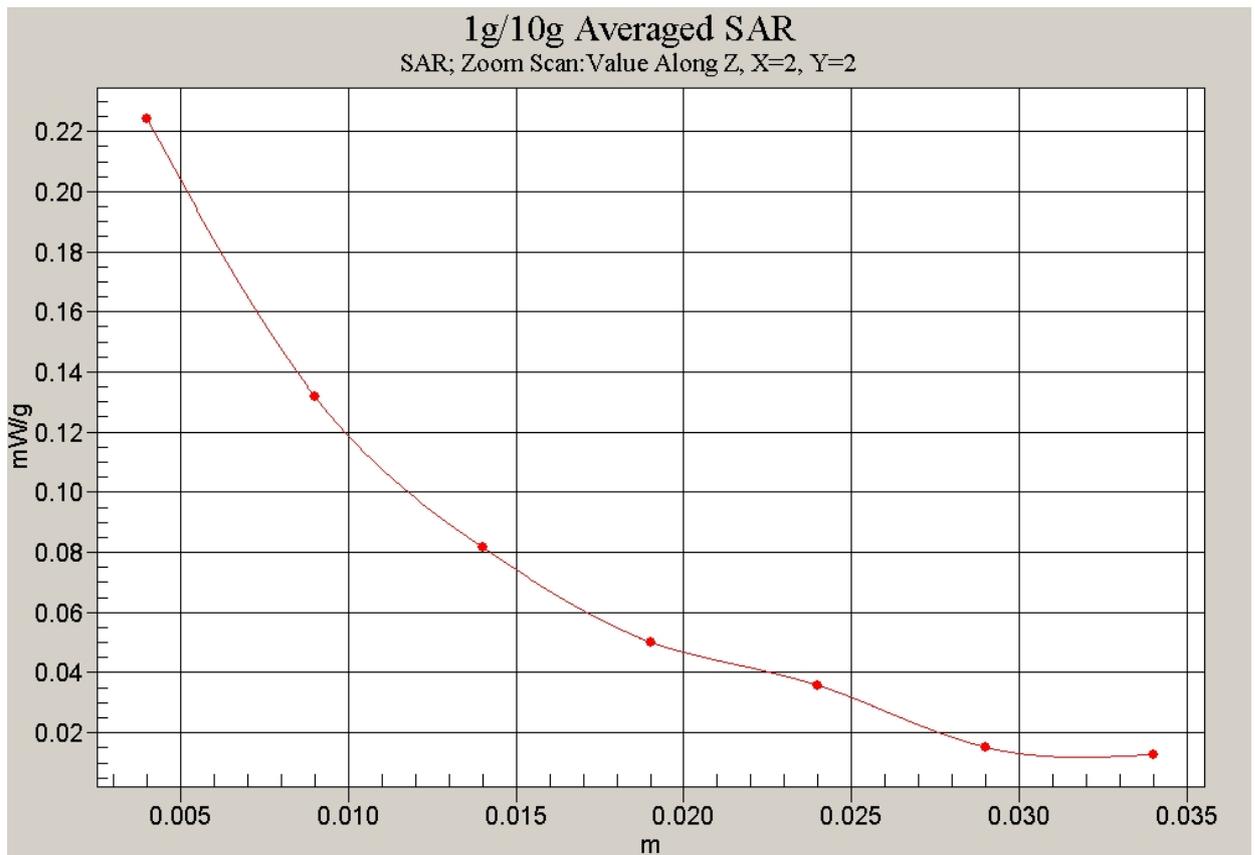
SAR(1 g) = 0.204 mW/g; SAR(10 g) = 0.108 mW/g

Maximum value of SAR (measured) = 0.224 mW/g



0 dB = 0.224mW/g

Fig. 171 1900MHz Body, Towards Ground, CH661-flip closed



**Fig. 172 Z-Scan at power reference point
(1900MHz Body, Towards Ground, CH661-flip closed)**

1900 Body Toward Ground Low with Headset-flip closed

Date/Time: 2008-6-11 20:03:07

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1850.2 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Ground Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.214 mW/g

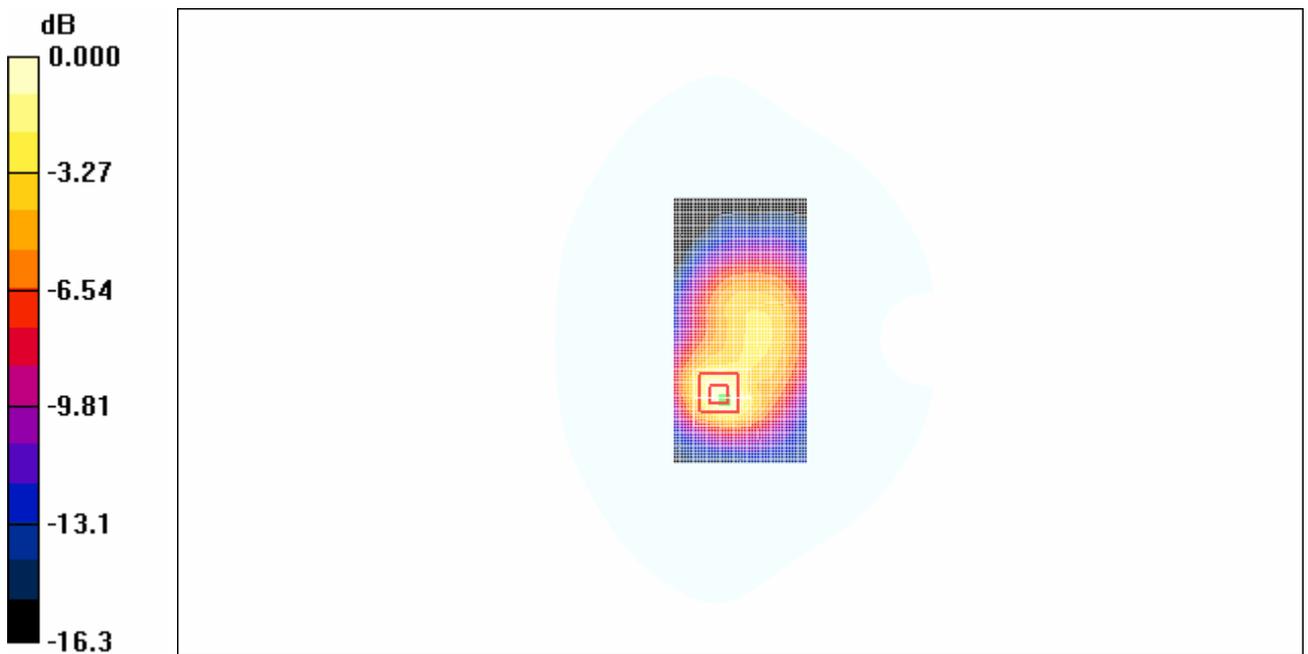
Toward Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.39 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 0.368 W/kg

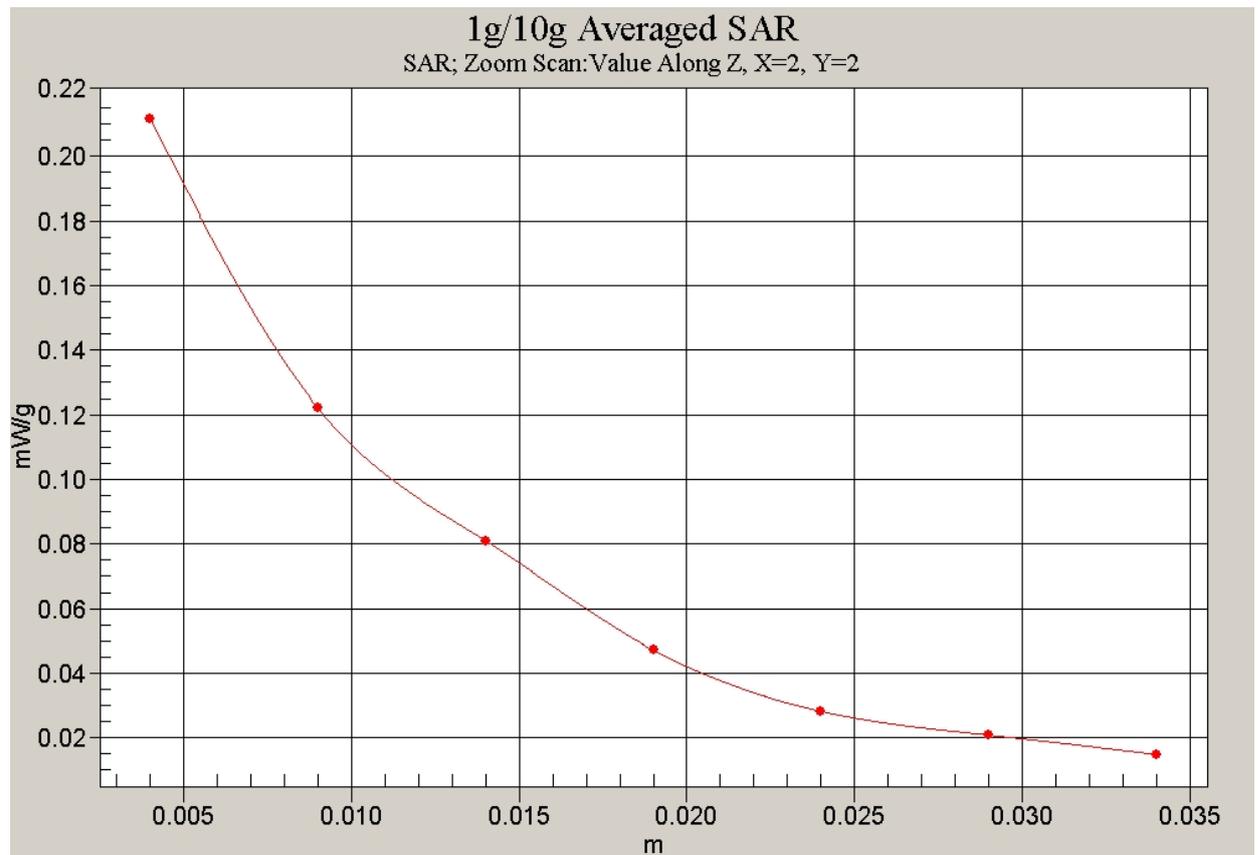
SAR(1 g) = 0.193 mW/g; SAR(10 g) = 0.102 mW/g

Maximum value of SAR (measured) = 0.210 mW/g



0 dB = 0.210mW/g

Fig. 173 1900MHz Body, Towards Ground, CH512-flip closed



**Fig. 174 Z-Scan at power reference point
(1900MHz Body, Towards Ground, CH512-flip closed)**

1900 Body Toward Phantom High with Headset-flip closed

Date/Time: 2008-6-11 20:43:53

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1909.8 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Phantom High/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.042 mW/g

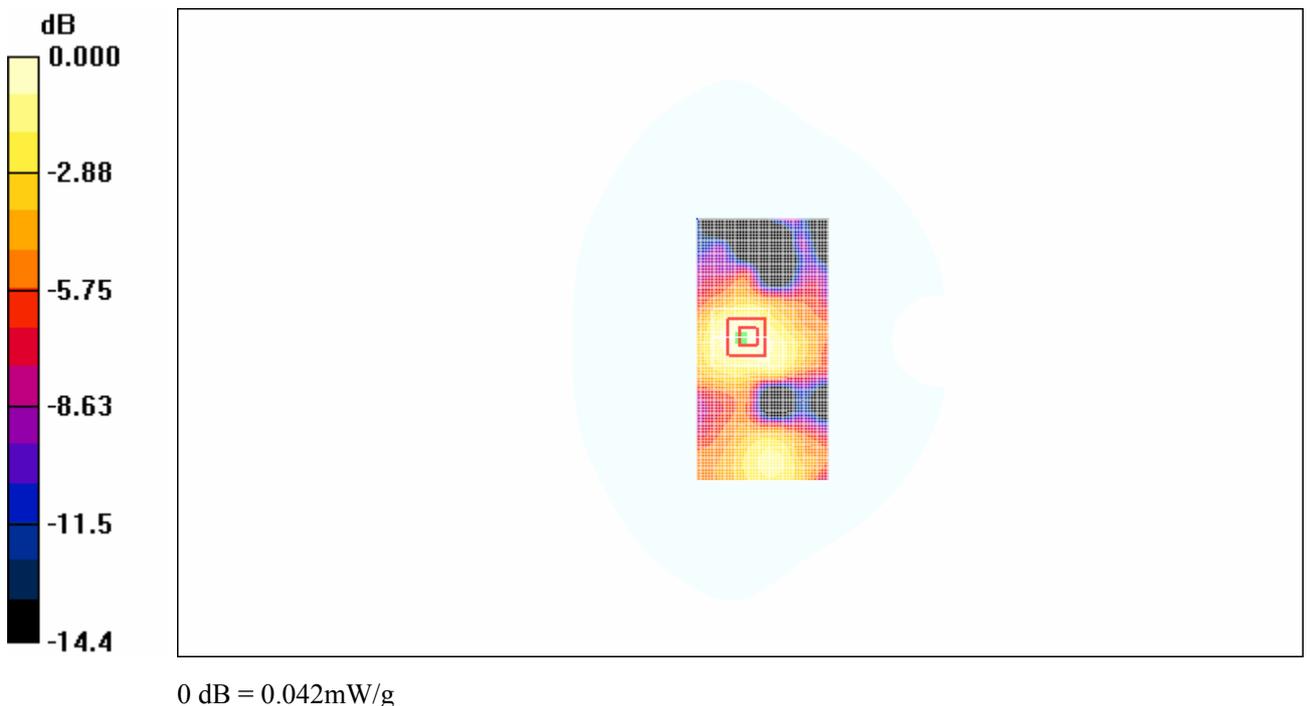
Toward Phantom High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

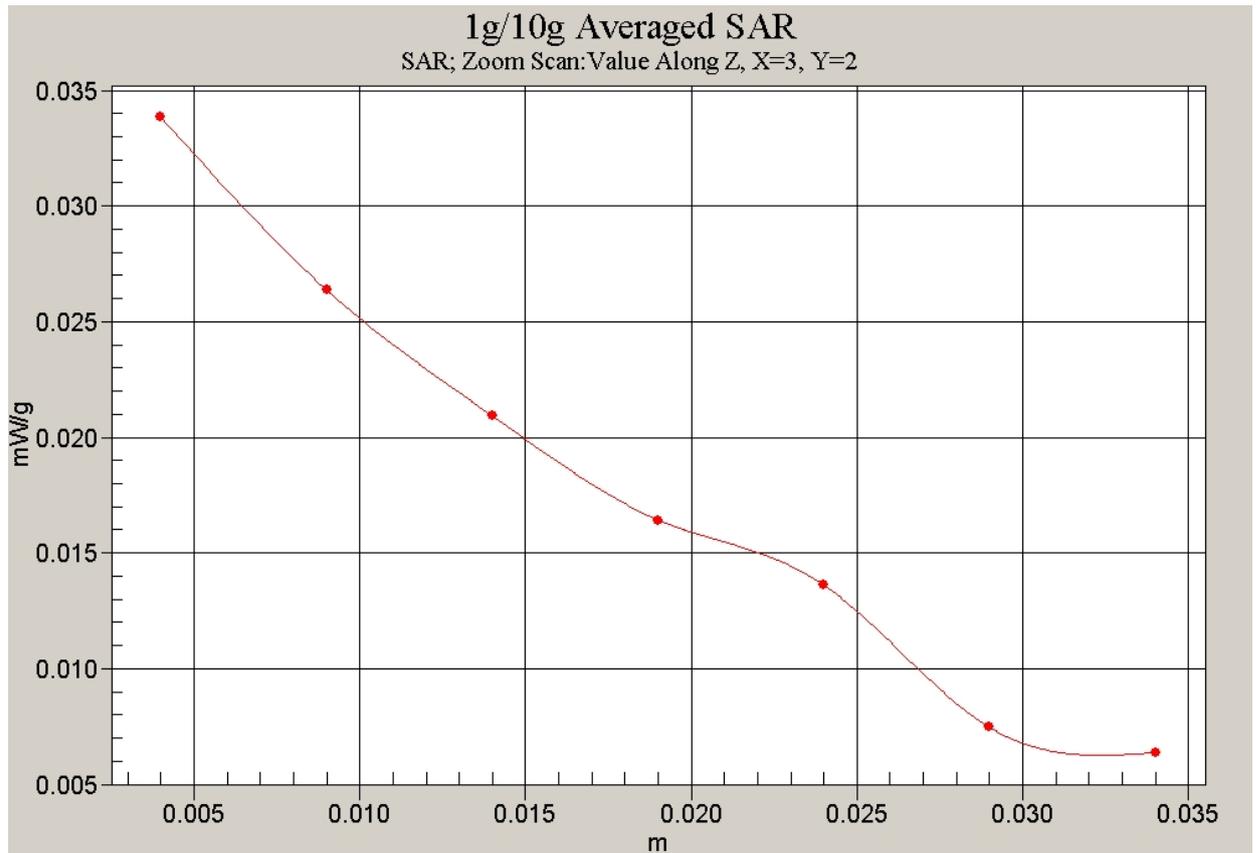
Reference Value = 5.23 V/m; Power Drift = -0.050 dB

Peak SAR (extrapolated) = 0.063 W/kg

SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.025 mW/g

Maximum value of SAR (measured) = 0.042 mW/g

**Fig. 175 1900MHz Body, Towards Phantom, CH810-flip closed**



**Fig. 176 Z-Scan at power reference point
(1900MHz Body, Towards Phantom, CH810-flip closed)**

1900 Body Toward Phantom Middle with Headset-flip closed

Date/Time: 2008-6-11 20:29:07

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1880 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Phantom Middle/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.043 mW/g

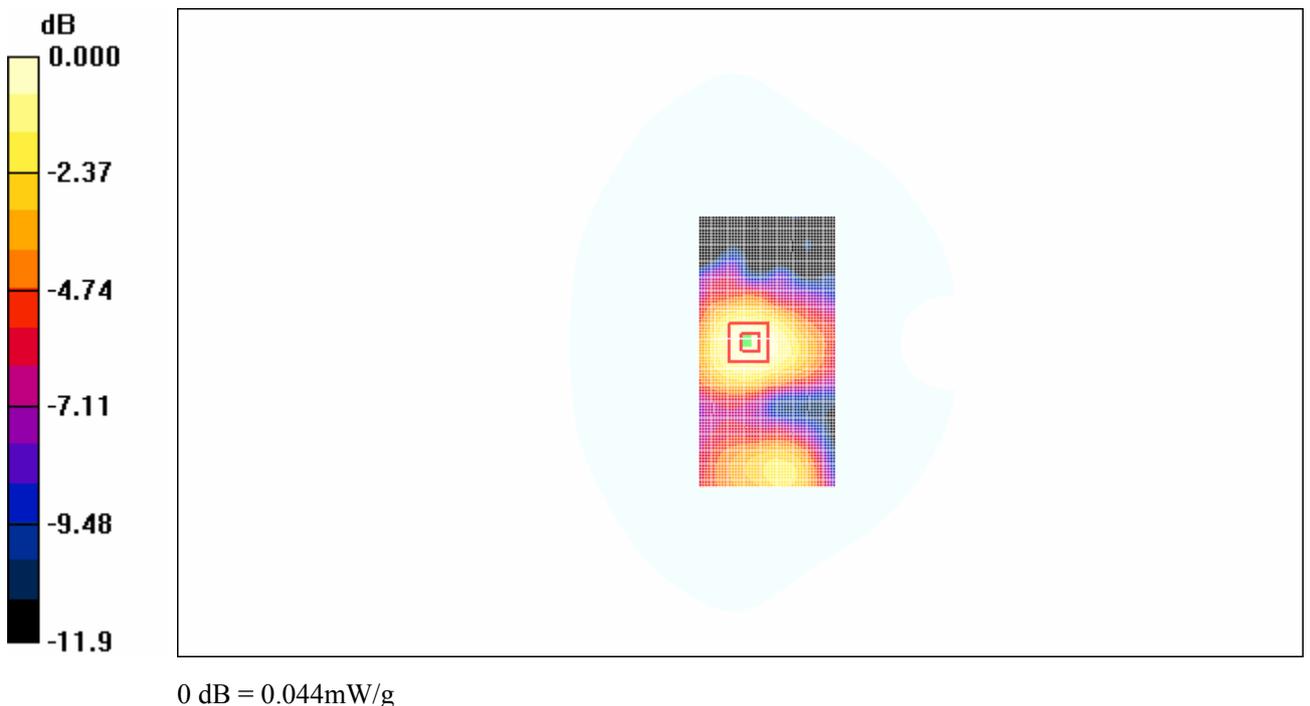
Toward Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

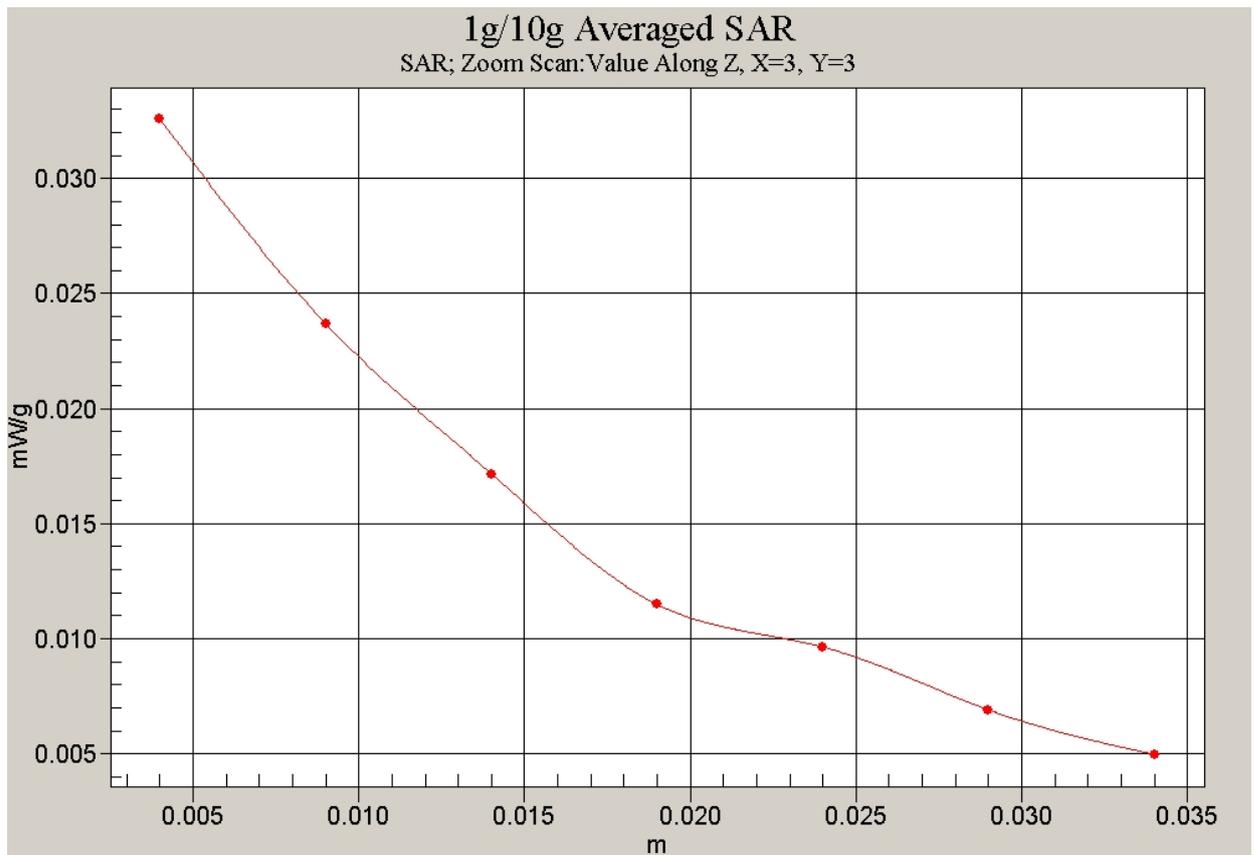
Reference Value = 5.53 V/m; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 0.059 W/kg

SAR(1 g) = 0.040 mW/g; SAR(10 g) = 0.027 mW/g

Maximum value of SAR (measured) = 0.044 mW/g

**Fig. 177 1900MHz Body, Towards Phantom, CH661-flip closed**



**Fig. 178 Z-Scan at power reference point
(1900MHz Body, Towards Phantom, CH661-flip closed)**

1900 Body Toward Phantom Low with Headset-flip closed

Date/Time: 2008-6-11 20:17:29

Electronics: DAE4 Sn777

Medium: Body 1900 MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: GSM 1900MHz new Frequency: 1850.2 MHz Duty Cycle: 1:8.3

Probe: ES3DV3 - SN3142 ConvF(4.61, 4.61, 4.61)

Toward Phantom Low/Area Scan (51x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.046 mW/g

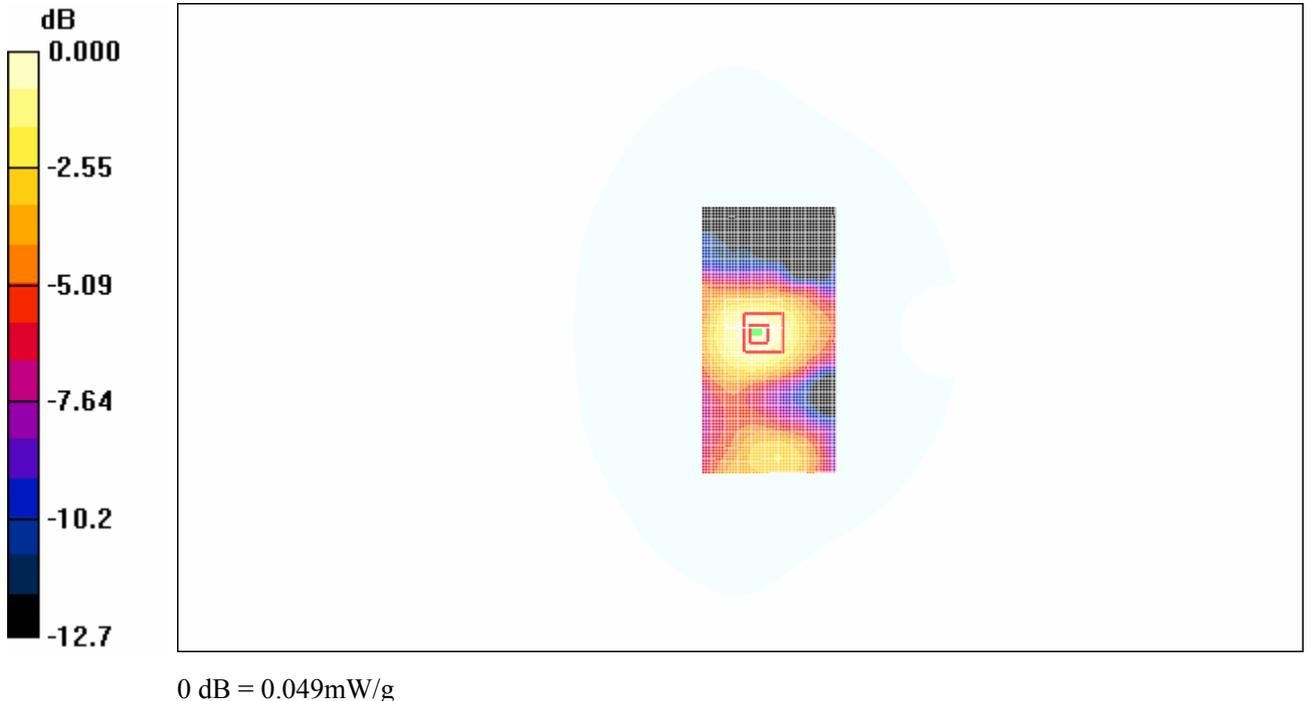
Toward Phantom Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

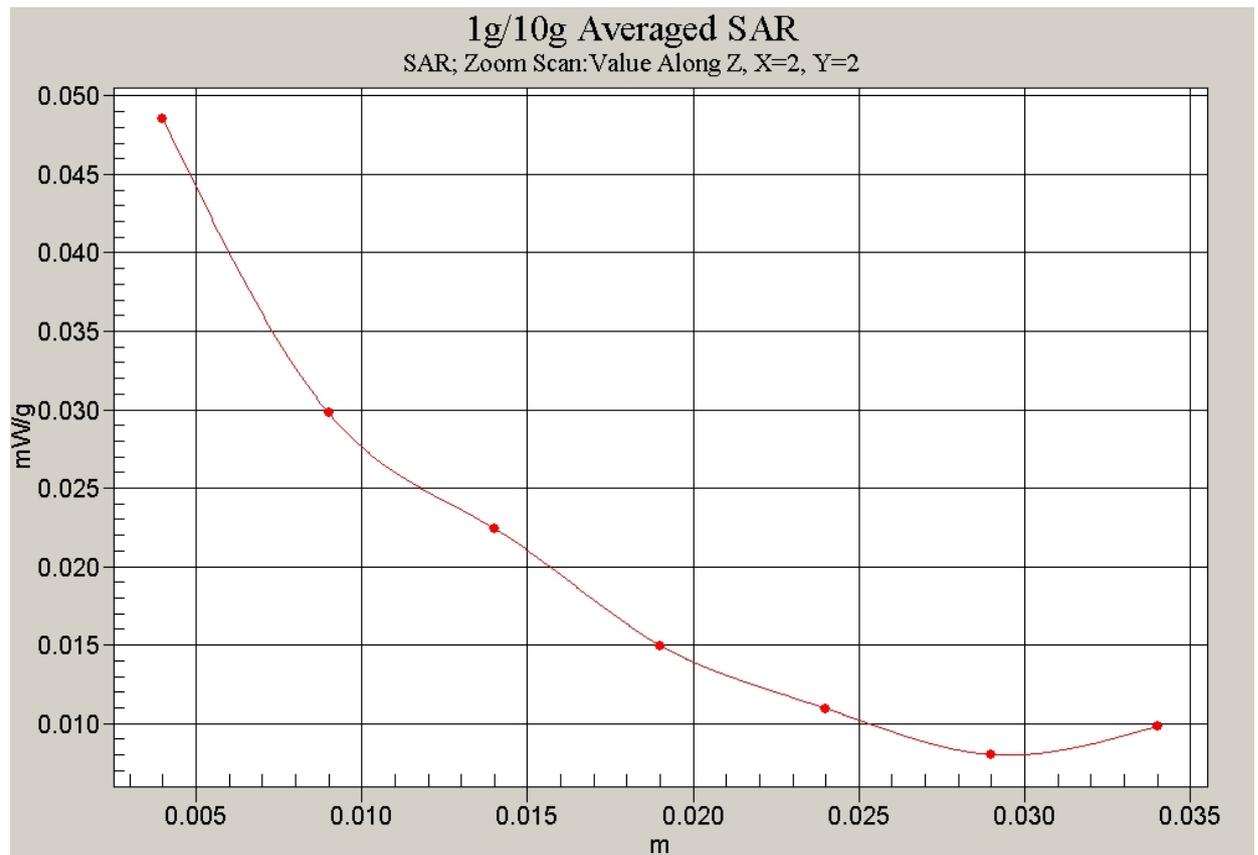
Reference Value = 5.80 V/m; Power Drift = -0.064 dB

Peak SAR (extrapolated) = 0.077 W/kg

SAR(1 g) = 0.042 mW/g; SAR(10 g) = 0.023 mW/g

Maximum value of SAR (measured) = 0.049 mW/g

**Fig. 179 1900MHz Body, Towards Phantom, CH512-flip closed**



**Fig. 180 Z-Scan at power reference point
(1900MHz Body, Towards Phantom, CH512-flip closed)**

ANNEX D SYSTEM VALIDATION RESULTS

835MHzDAE777Probe3142

Date/Time: 2008-6-10 7:45:35

Electronics: DAE4 Sn777

Medium: 835 Head

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 42.1$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 24.5°C Liquid Temperature: 24.0°C

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

Probe: ES3DV3 – SN3142 ConvF(5.97, 5.97, 5.97)

835MHz/Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 2.68 mW/g

835MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.8 V/m; Power Drift = -0.0 dB

Peak SAR (extrapolated) = 3.67 W/kg

SAR(1 g) = 2.50 mW/g; SAR(10 g) = 1.62 mW/g

Maximum value of SAR (measured) = 2.69 mW/g

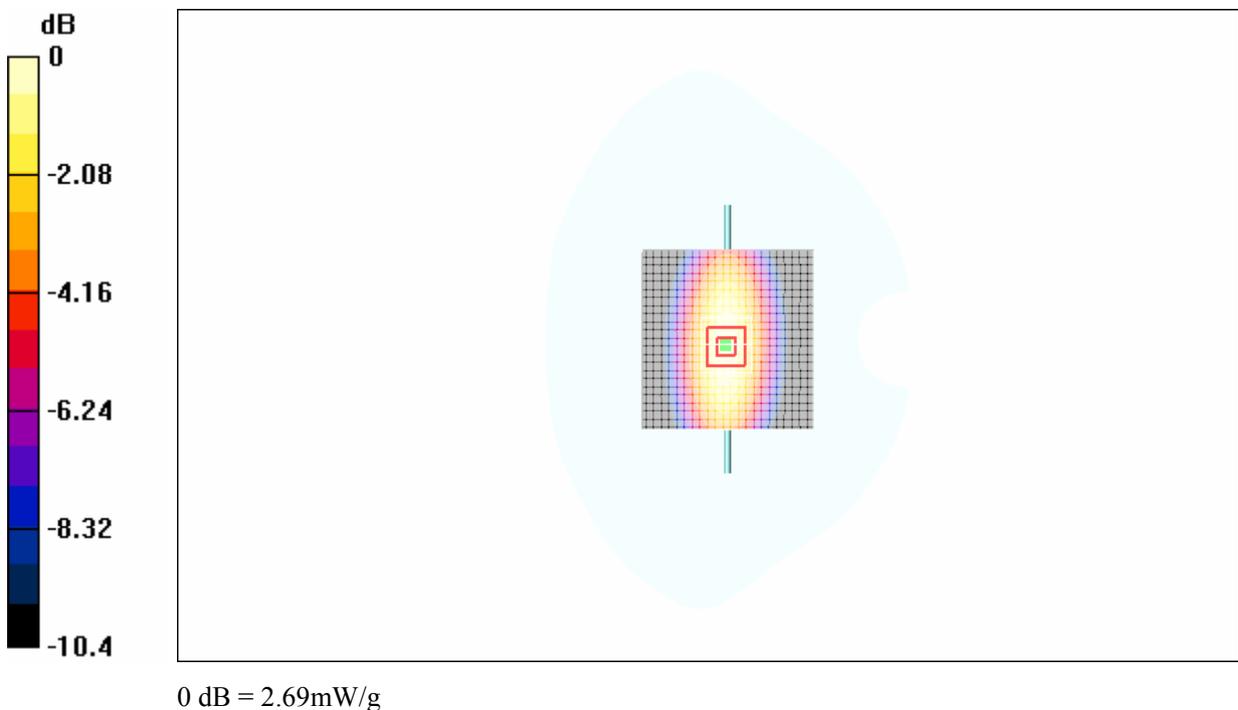


Fig.181 validation 835MHz 250mW

1900MHz DAE777Probe3142

Date/Time: 2008-6-11 7:53:26

Electronics: DAE4 Sn777

Medium: Head 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 39.3$; $\rho = 1000$ kg/m³

Ambient Temperature: 24.5°C Liquid Temperature: 24.0°C

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

Probe: ES3DV3 – SN3142 ConvF(5.66, 5.66, 5.66)

System Validation/Area Scan (101x101x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 11.2 mW/g

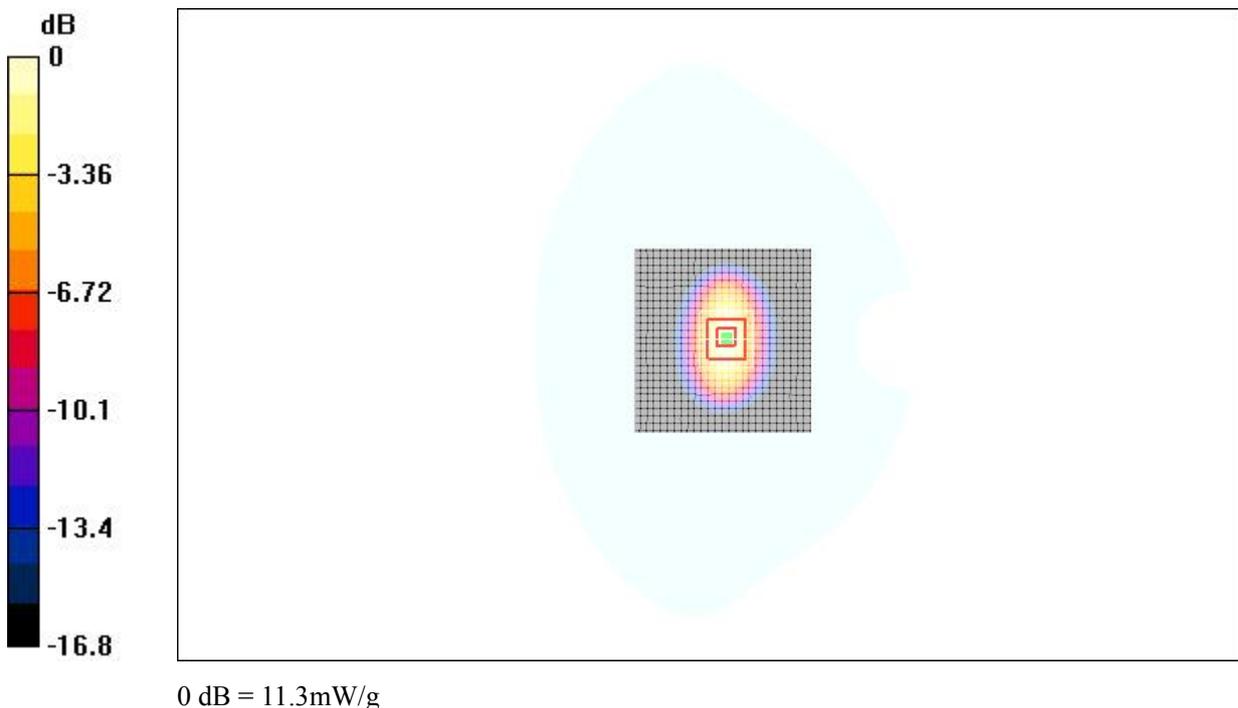
System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 92.1 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 16.9 W/kg

SAR(1 g) = 9.91 mW/g; SAR(10 g) = 5.27 mW/g

Maximum value of SAR (measured) = 11.3 mW/g

**Fig.182 validation 1900MHz 250mW**

ANNEX E PROBE CALIBRATION CERTIFICATE

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



S Schweizerischer Kalibrierdienst
S Service suisse d'étalonnage
C 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 Beijing**

Certificate No: **ES3-3142_Sep07**

CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3142**

Calibration procedure(s) **QA CAL-01.v6 and QA CAL-12.v5
Calibration procedure for dosimetric E-field probes**

Calibration date: **September 7, 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	29-Mar-07 (METAS, No. 217-00670)	Mar-08
Power sensor E4412A	MY41495277	29-Mar-07 (METAS, No. 217-00670)	Mar-08
Power sensor E4412A	MY41498087	29-Mar-07 (METAS, No. 217-00670)	Mar-08
Reference 3 dB Attenuator	SN: S5054 (3c)	8-Aug-07 (METAS, No. 217-00719)	Aug-08
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-07 (METAS, No. 217-00671)	Mar-08
Reference 30 dB Attenuator	SN: S5129 (30b)	8-Aug-07 (METAS, No. 217-00720)	Aug-08
Reference Probe ES3DV2	SN: 3013	4-Jan-07 (SPEAG, No. ES3-3013_Jan07)	Jan-08
DAE4	SN: 654	20-Apr-07 (SPEAG, No. DAE4-654_Apr07)	Apr-08

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

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

Issued: September 10, 2007

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

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



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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**

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
Polarization ϕ	ϕ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not effect the E²-field uncertainty inside TSL (see below *ConvF*).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * *frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * *ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.