

## **APPENDIX A: SAR TEST DATA**

SAR Data Report 06053013

Start : 30-May-06 01:03:50 pm  
End : 30-May-06 01:11:21 pm  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 1880 MHz  
Transmit Pwr : 0.931 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM-RIGHT  
Phantom Type : Right Ear  
Tissue Type : Brain  
Tissue Dielectric : 38.410  
Tissue Conductivity : 1.420  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 39.020  
Calibrated Conductivity : 1.370  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.400  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

PCS GSM Mode Ch. 661  
Right Cheek (Slide In)  
CF=8; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.030  
Reading @ End = 0.030  
Power at End = 100.3%

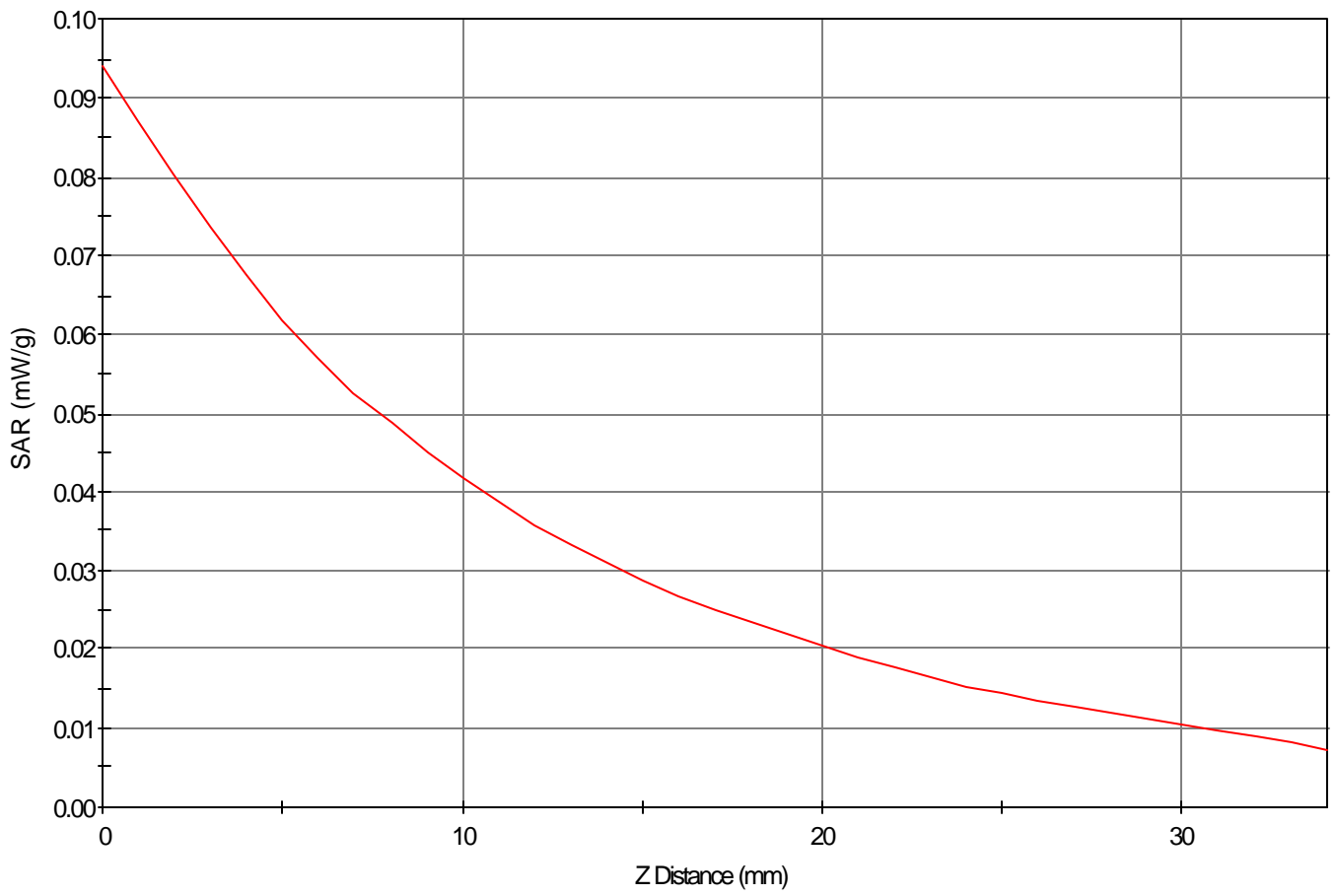
Area Scan - Max Peak SAR Value at x=40.0 y=-3.0 = 0.07 W/kg

Zoom Scan - Max Peak SAR Value at x=41.0 y=-3.0 z=0.0 = 0.09 W/kg

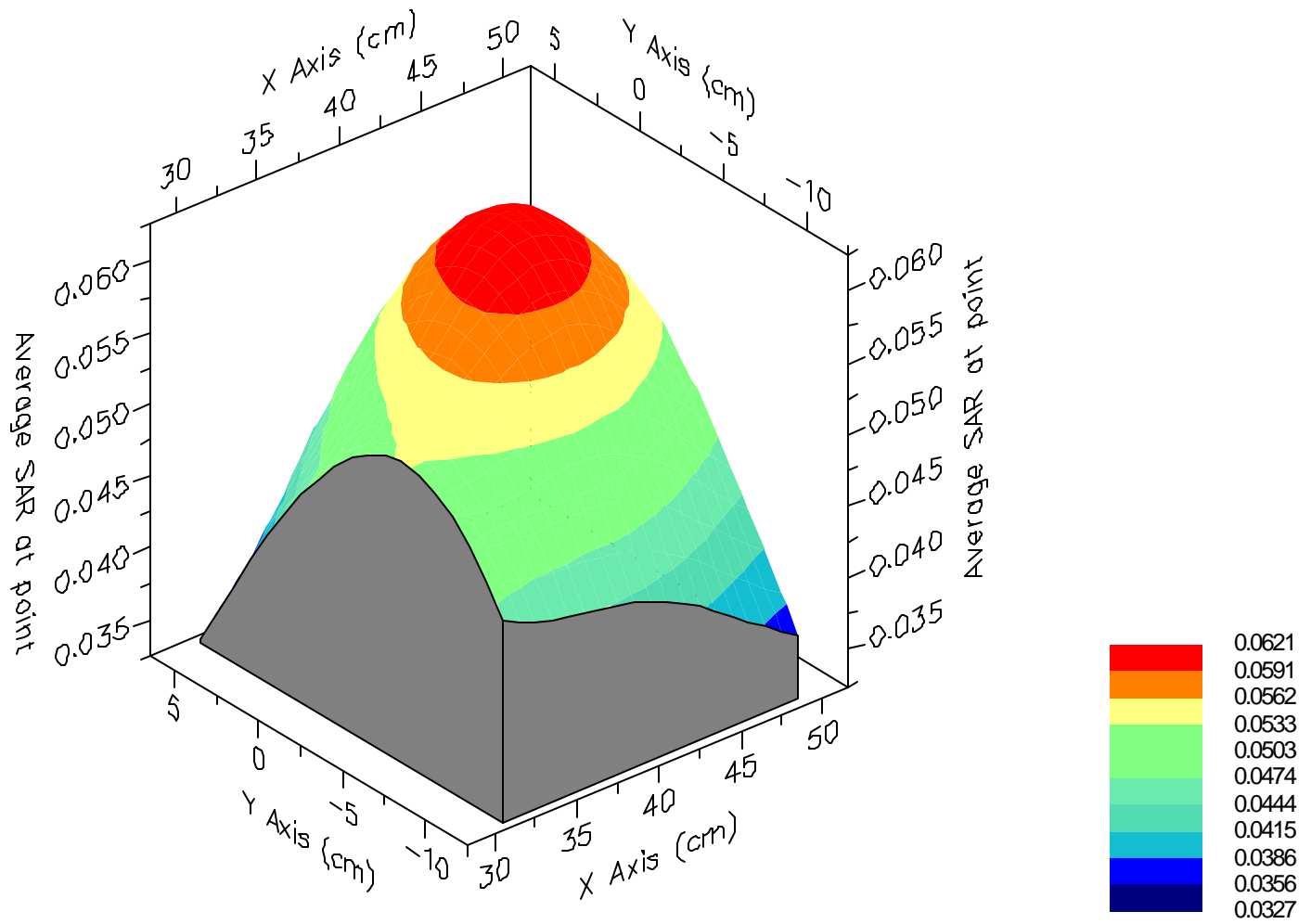
Max 1g SAR at x=42.0 y=-2.0 z=0.0 = 0.06 W/kg

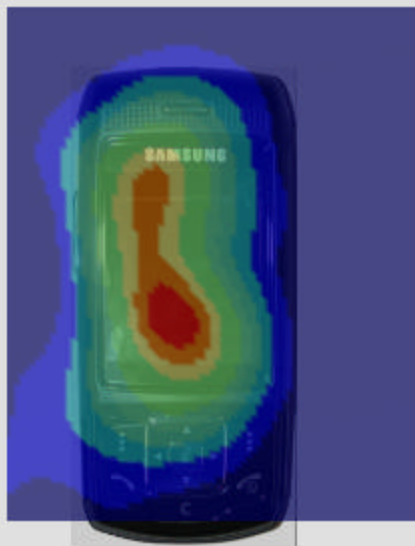
Max 10g SAR at x=41.0 y=-3.0 z=0.0 = 0.04 W/kg

SAR - Z Axis  
at Hotspot x:41.0 y:-3.0



### 1g SAR Values





SAR Data Report 06053014

Start : 30-May-06 01:13:01 pm  
End : 30-May-06 01:20:23 pm  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 1880 MHz  
Transmit Pwr : 0.931 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM-RIGHT  
Phantom Type : Right Ear  
Tissue Type : Brain  
Tissue Dielectric : 38.410  
Tissue Conductivity : 1.420  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 39.020  
Calibrated Conductivity : 1.370  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.400  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

PCS GSM Mode Ch. 661  
Right Cheek (Slide Out)  
CF=8; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.017  
Reading @ End = 0.018  
Power at End = 104.8%

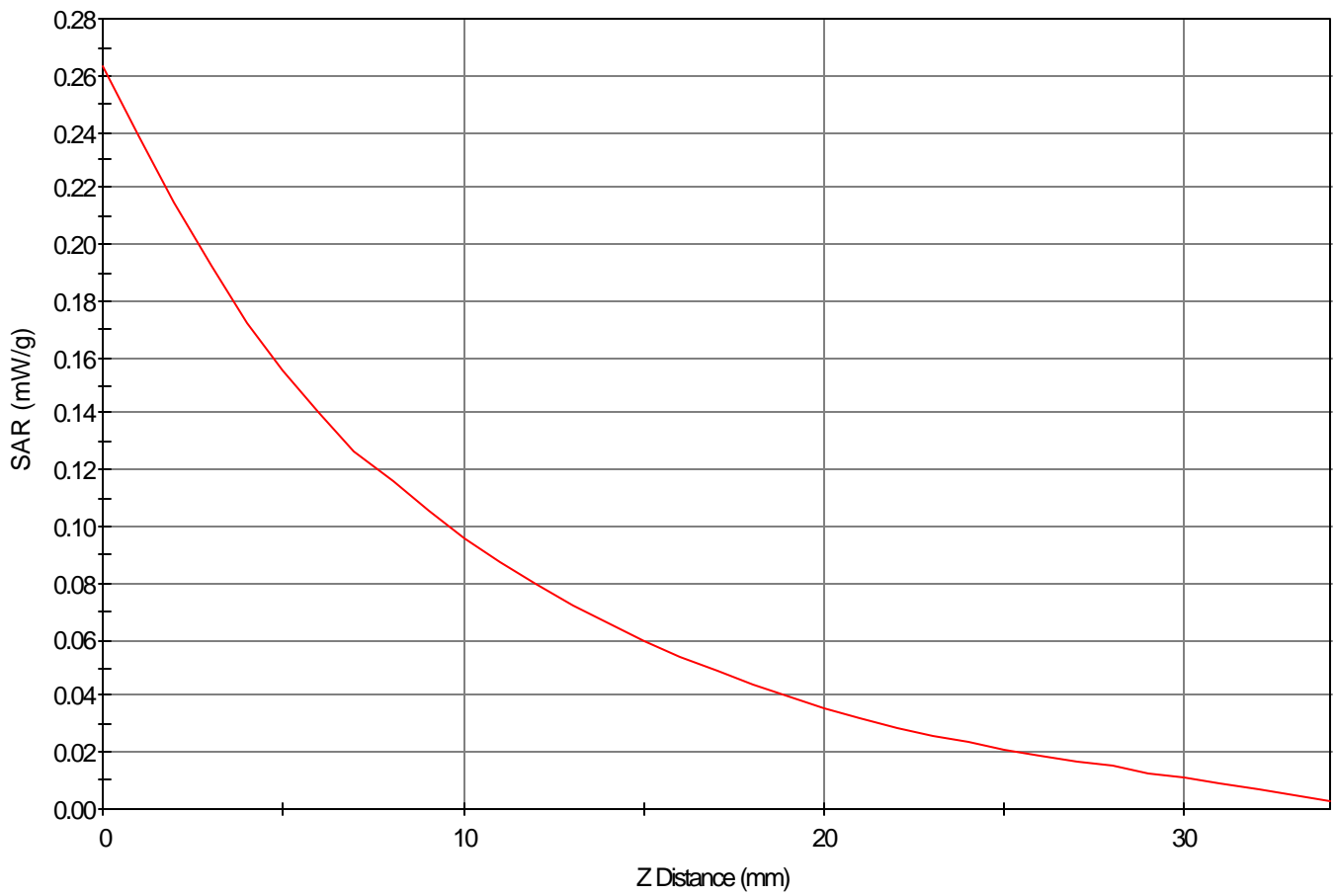
Area Scan - Max Peak SAR Value at x=32.0 y=-6.0 = 0.19 W/kg

Zoom Scan - Max Peak SAR Value at x=25.0 y=-10.0 z=0.0 = 0.26 W/kg

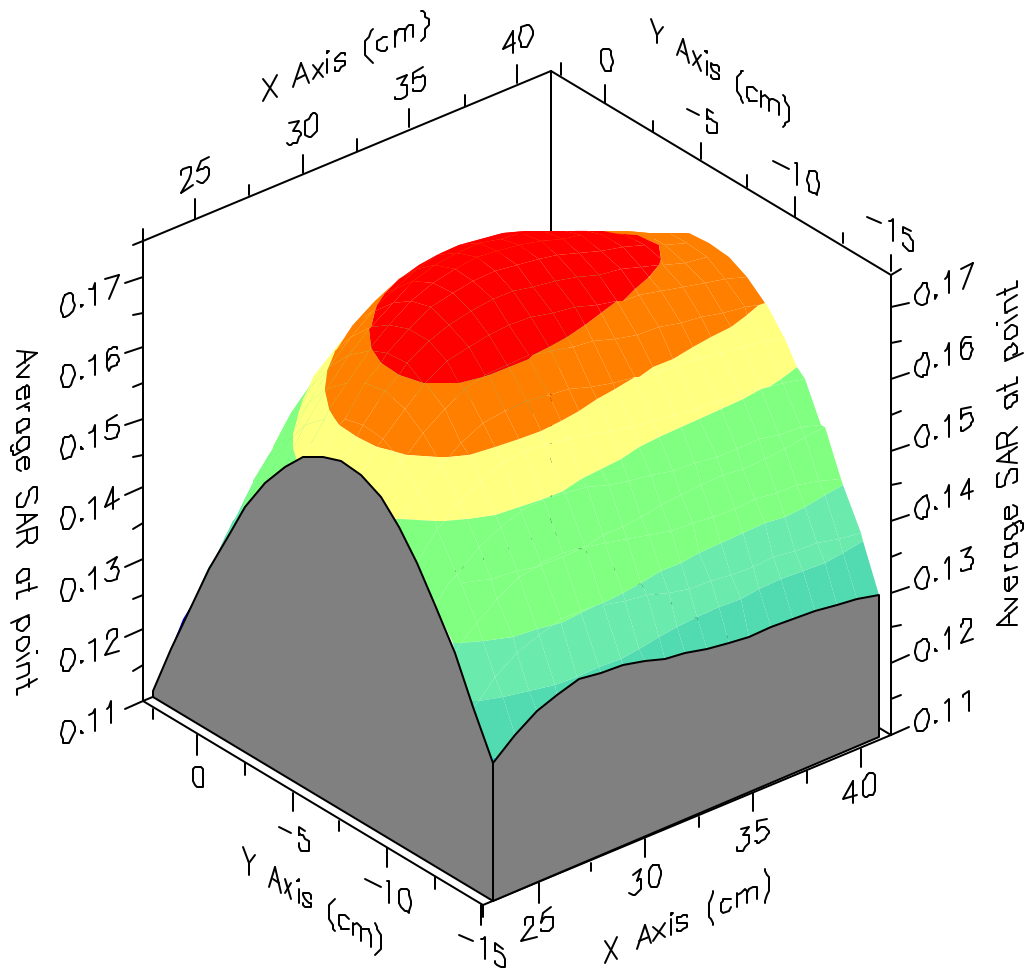
Max 1g SAR at x=31.0 y=-5.0 z=0.0 = 0.17 W/kg

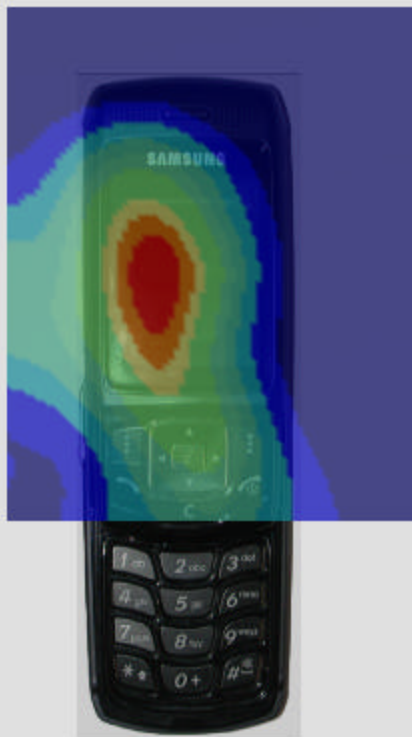
Max 10g SAR at x=34.0 y=-6.0 z=0.0 = 0.10 W/kg

SAR - Z Axis  
at Hotspot x:25.0 y:-10.0



### 1g SAR Values





SAR Data Report 06053017

Start : 30-May-06 01:32:45 pm  
End : 30-May-06 01:40:06 pm  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 1880 MHz  
Transmit Pwr : 0.931 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM-RIGHT  
Phantom Type : Right Ear  
Tissue Type : Brain  
Tissue Dielectric : 38.410  
Tissue Conductivity : 1.420  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 39.020  
Calibrated Conductivity : 1.370  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.400  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

PCS GSM Mode Ch. 661  
Right Tilt (Slide In)  
CF=8; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.103  
Reading @ End = 0.105  
Power at End = 102.0%

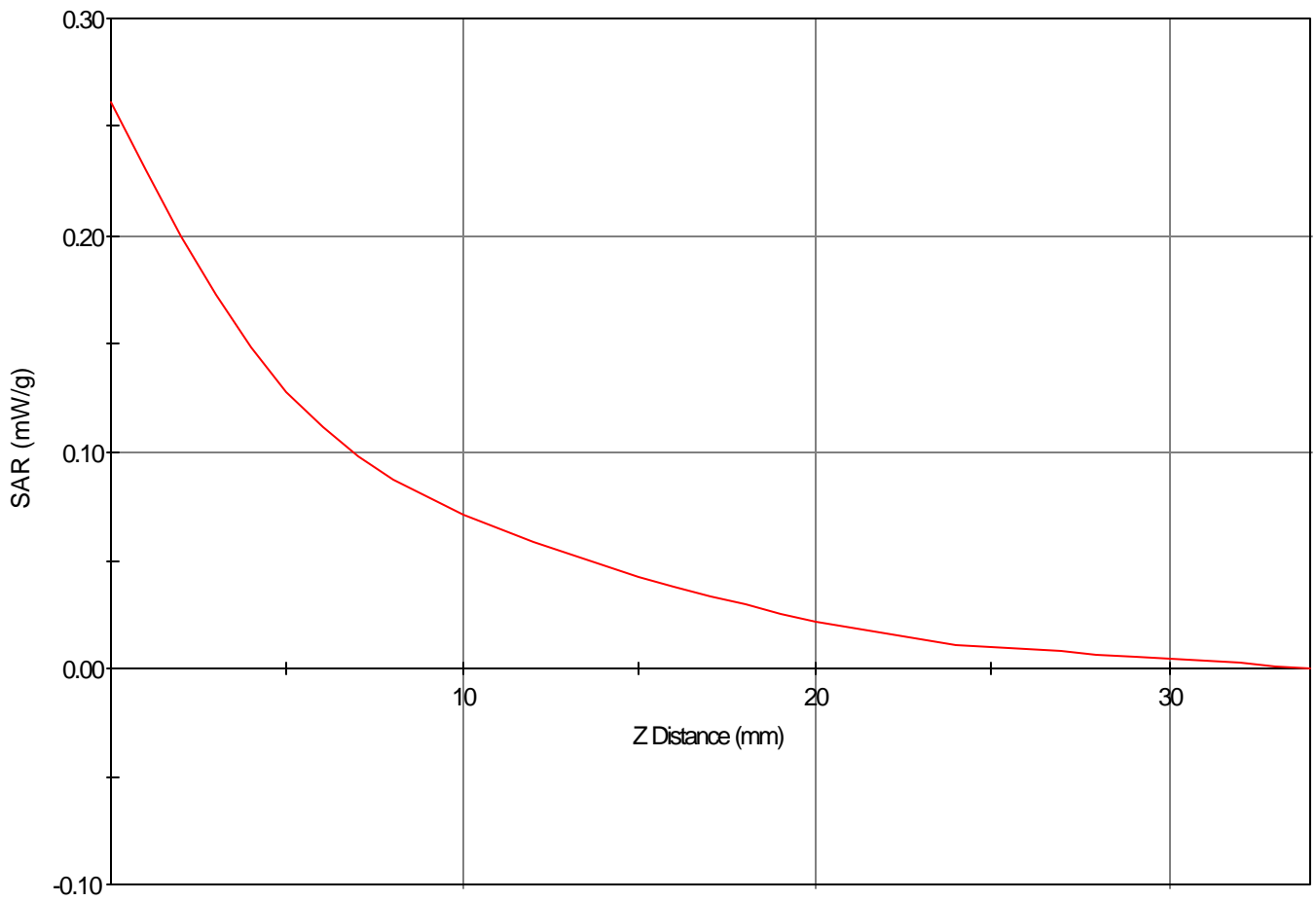
Area Scan - Max Peak SAR Value at x=12.0 y=-8.0 = 0.14 W/kg

Zoom Scan - Max Peak SAR Value at x=9.0 y=-9.0 z=0.0 = 0.26 W/kg

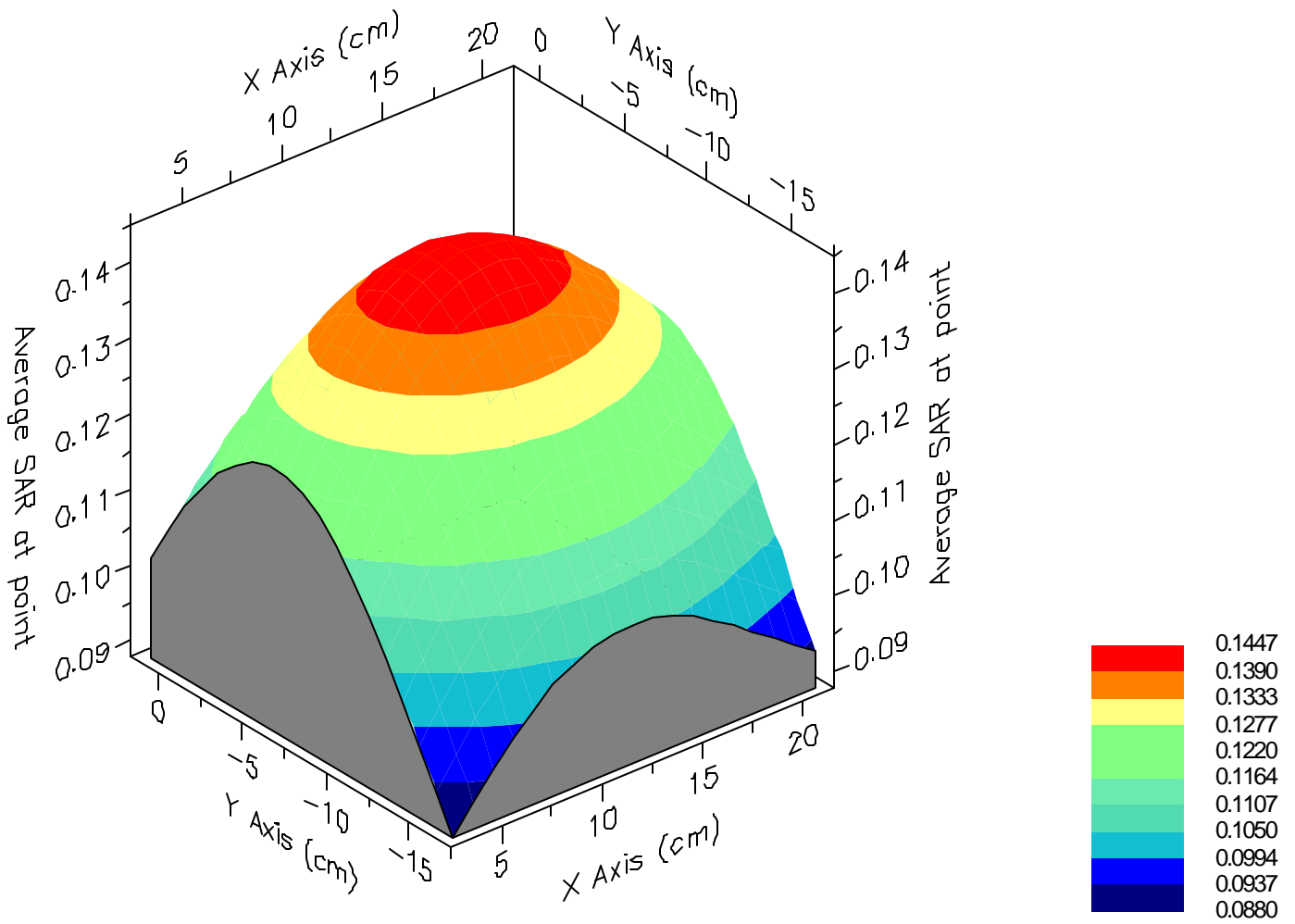
Max 1g SAR at x=11.0 y=-8.0 z=0.0 = 0.14 W/kg

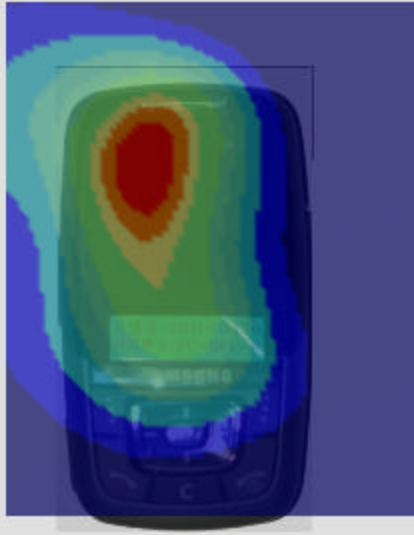
Max 10g SAR at x=14.0 y=-7.0 z=0.0 = 0.08 W/kg

SAR - Z Axis  
at Hotspot x:9.0 y:-9.0



### 1g SAR Values





SAR Data Report 06053016

Start : 30-May-06 01:22:31 pm  
End : 30-May-06 01:29:55 pm  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 1880 MHz  
Transmit Pwr : 0.931 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM-RIGHT  
Phantom Type : Right Ear  
Tissue Type : Brain  
Tissue Dielectric : 38.410  
Tissue Conductivity : 1.420  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 39.020  
Calibrated Conductivity : 1.370  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.400  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm<sup>2</sup>)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

PCS GSM Mode Ch. 661  
Right Tilt (Slide Out)  
CF=8; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.034  
Reading @ End = 0.033  
Power at End = 97.7%

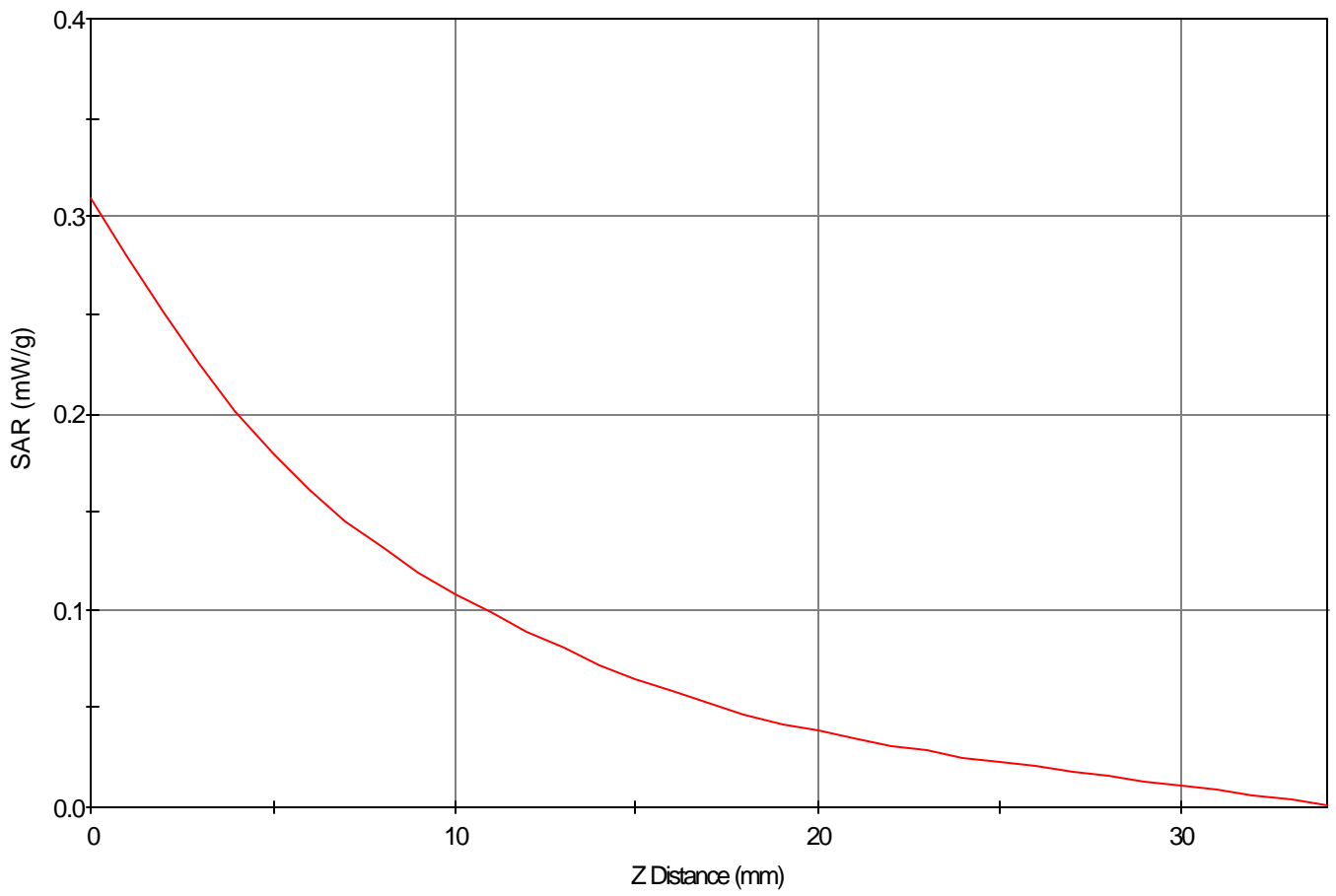
Area Scan - Max Peak SAR Value at x=26.0 y=-7.0 = 0.20 W/kg

Zoom Scan - Max Peak SAR Value at x=20.0 y=-8.0 z=0.0 = 0.31 W/kg

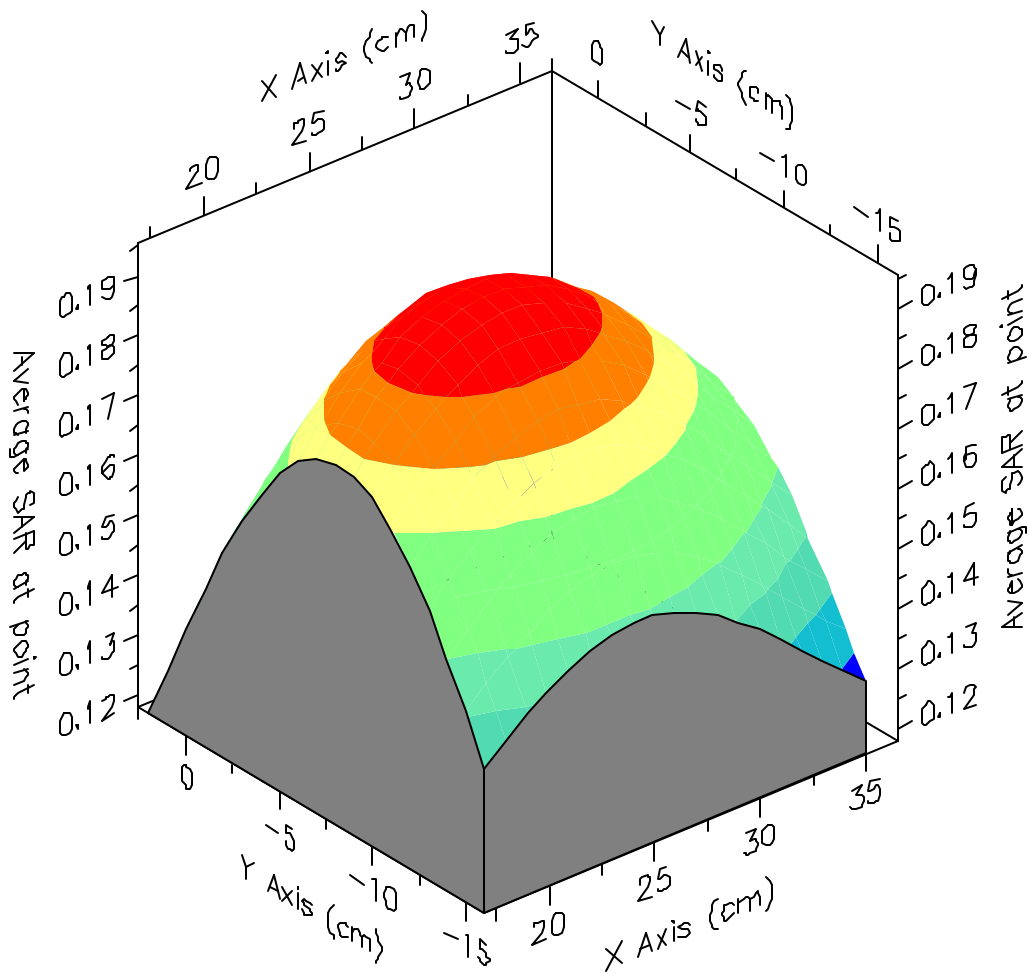
Max 1g SAR at x=24.0 y=-8.0 z=0.0 = 0.20 W/kg

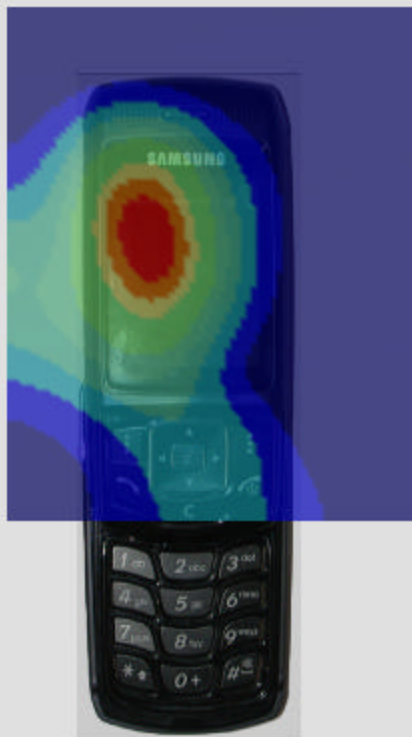
Max 10g SAR at x=26.0 y=-8.0 z=0.0 = 0.11 W/kg

SAR - Z Axis  
at Hotspot x:20.0 y:-8.0



### 1g SAR Values





SAR Data Report 06053019

Start : 30-May-06 01:51:50 pm  
End : 30-May-06 01:59:03 pm  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 1880 MHz  
Transmit Pwr : 0.931 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM-LEFT  
Phantom Type : Left Ear  
Tissue Type : Brain  
Tissue Dielectric : 38.410  
Tissue Conductivity : 1.420  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 39.020  
Calibrated Conductivity : 1.370  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.400  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

PCS GSM Mode Ch. 661  
Left Cheek (Slide In)  
CF=8; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.028  
Reading @ End = 0.027  
Power at End = 97.8%

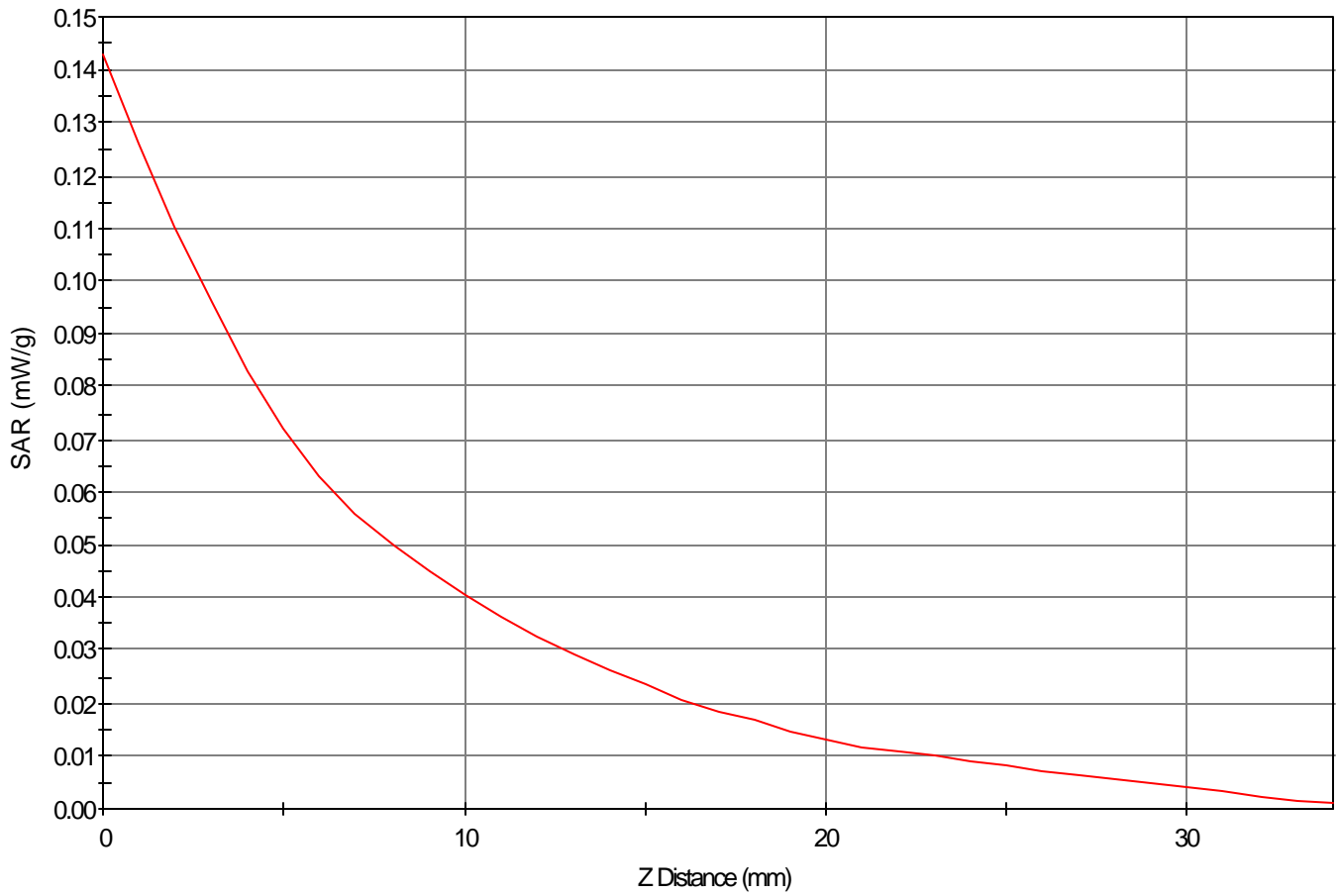
Area Scan - Max Peak SAR Value at x=41.0 y=0.0 = 0.08 W/kg

Zoom Scan - Max Peak SAR Value at x=42.0 y=0.0 z=0.0 = 0.14 W/kg

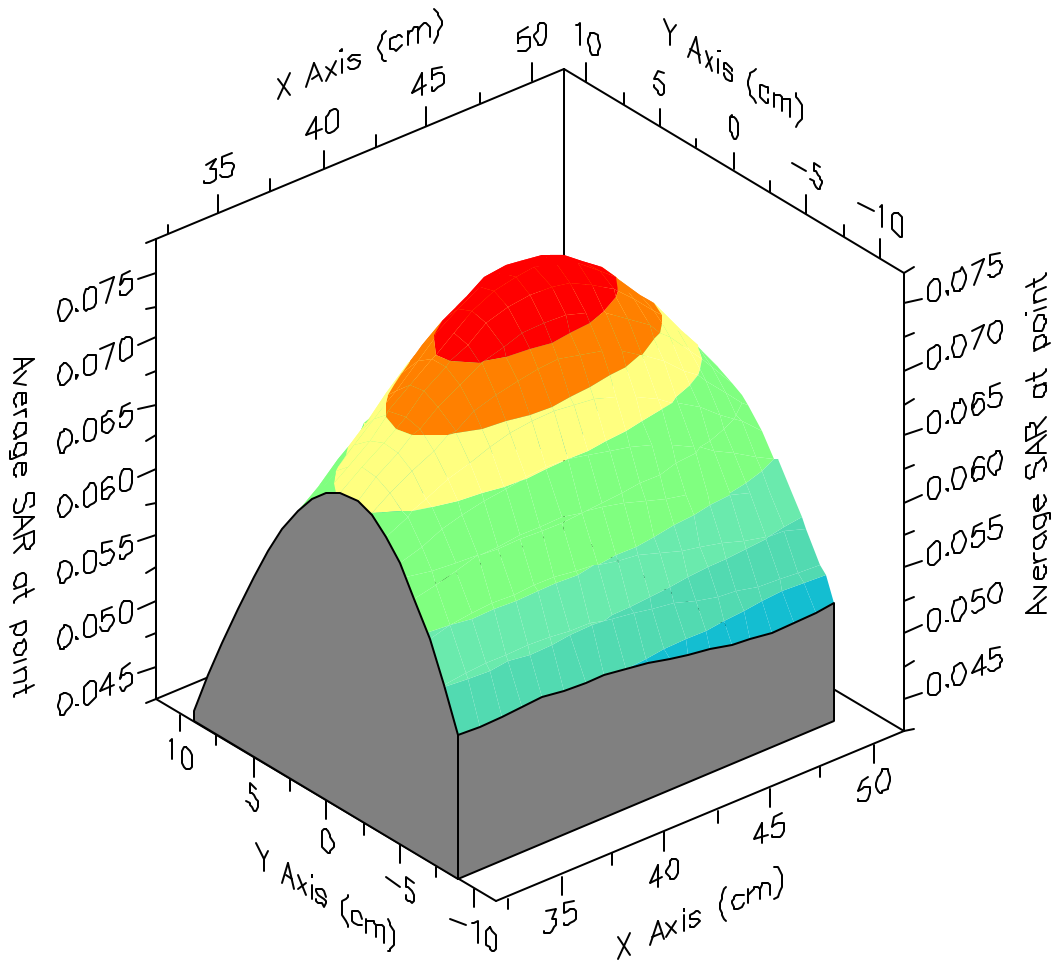
Max 1g SAR at x=42.0 y=0.0 z=0.0 = 0.08 W/kg

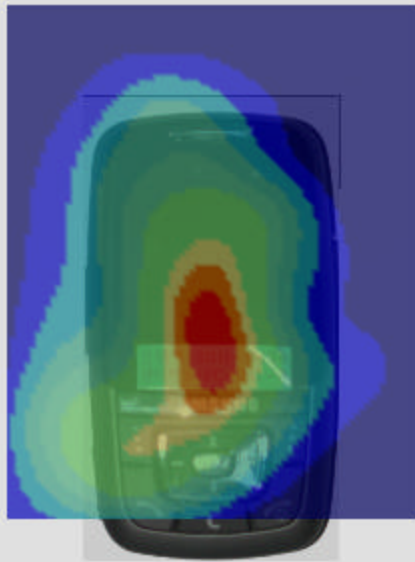
Max 10g SAR at x=40.0 y=-1.0 z=0.0 = 0.04 W/kg

SAR - Z Axis  
at Hotspot x:42.0 y:0.0



### 1g SAR Values





SAR Data Report 06053022

Start : 30-May-06 02:12:07 pm  
End : 30-May-06 02:19:05 pm  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 1880 MHz  
Transmit Pwr : 0.931 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM-LEFT  
Phantom Type : Left Ear  
Tissue Type : Brain  
Tissue Dielectric : 38.410  
Tissue Conductivity : 1.420  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 39.020  
Calibrated Conductivity : 1.370  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.400  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm<sup>2</sup>)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

PCS GSM Mode Ch. 661  
Left Cheek (Slide Out)  
CF=8; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.104  
Reading @ End = 0.103  
Power at End = 99.1%

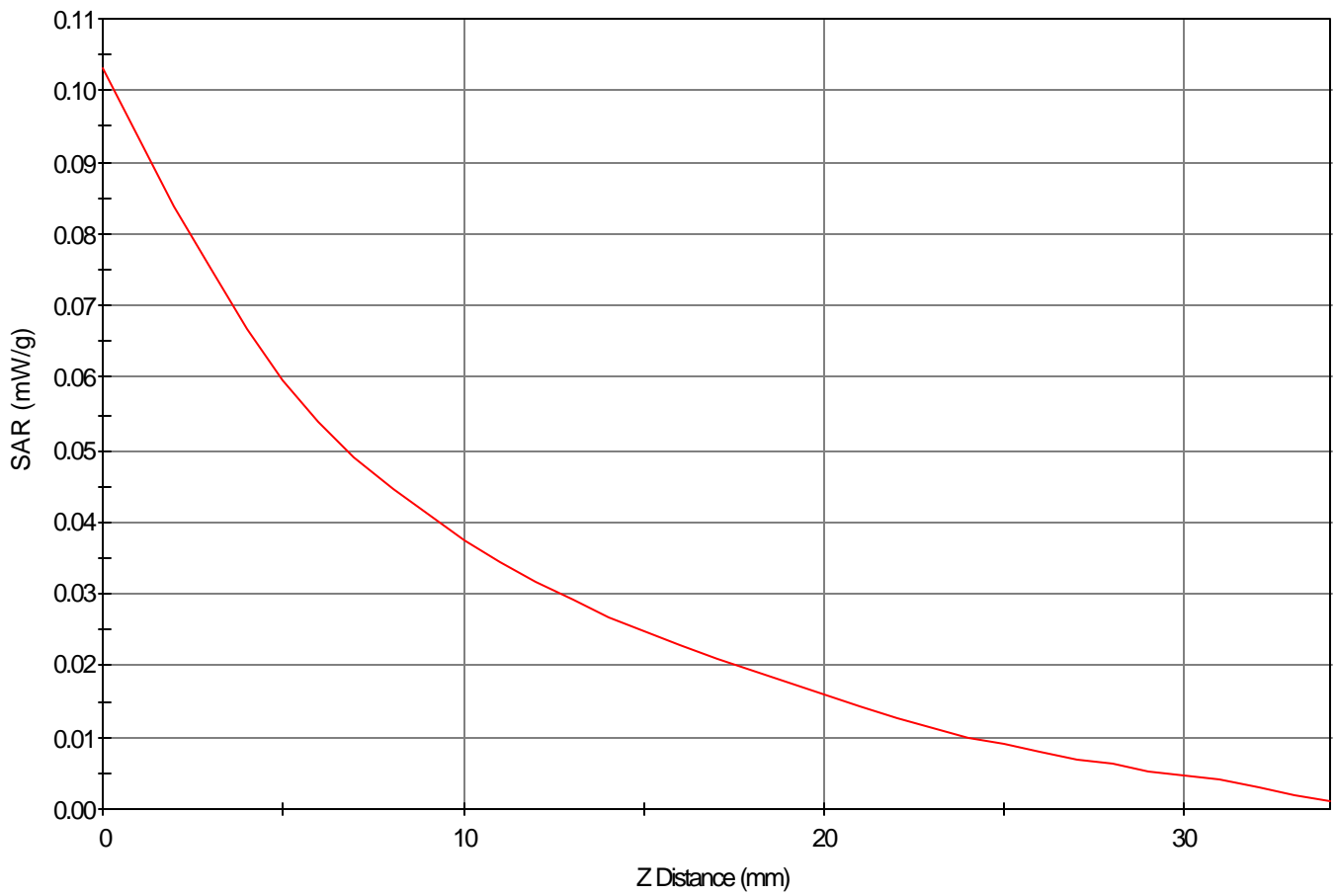
Area Scan - Max Peak SAR Value at x=65.0 y=-1.0 = 0.07 W/kg

Zoom Scan - Max Peak SAR Value at x=65.0 y=3.0 z=0.0 = 0.10 W/kg

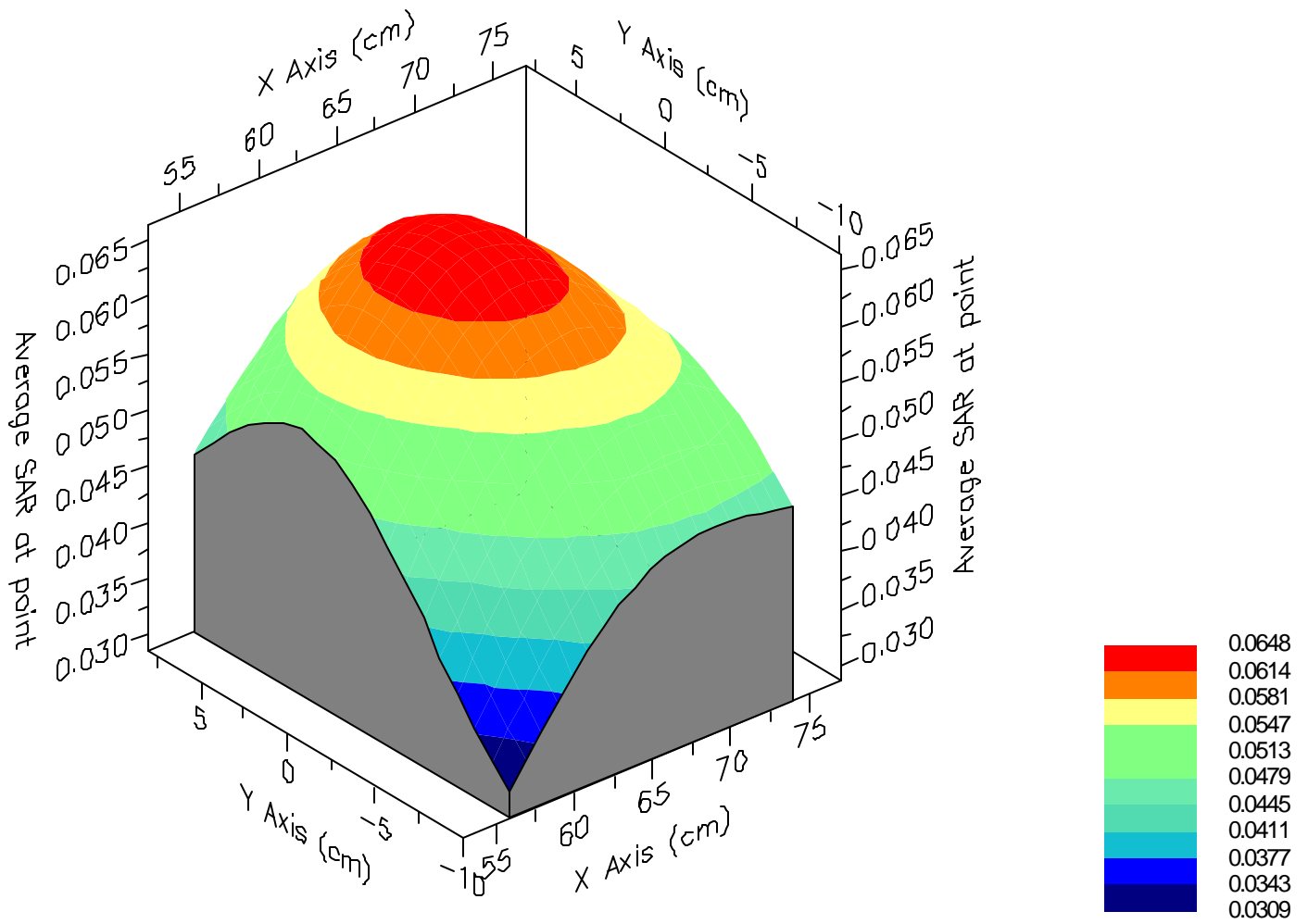
Max 1g SAR at x=65.0 y=1.0 z=0.0 = 0.06 W/kg

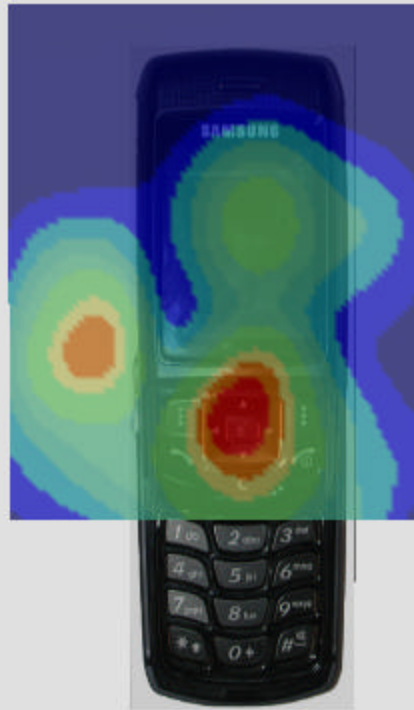
Max 10g SAR at x=67.0 y=1.0 z=0.0 = 0.04 W/kg

SAR - Z Axis  
at Hotspot x:65.0 y:3.0



### 1g SAR Values





SAR Data Report 06053024

Start : 30-May-06 02:36:31 pm  
End : 30-May-06 02:43:35 pm  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 1880 MHz  
Transmit Pwr : 0.931 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM-LEFT  
Phantom Type : Left Ear  
Tissue Type : Brain  
Tissue Dielectric : 38.410  
Tissue Conductivity : 1.420  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 39.020  
Calibrated Conductivity : 1.370  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.400  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

PCS GSM Mode Ch. 661  
Left Tilt (Slide In)  
CF=8; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.119  
Reading @ End = 0.116  
Power at End = 97.9%

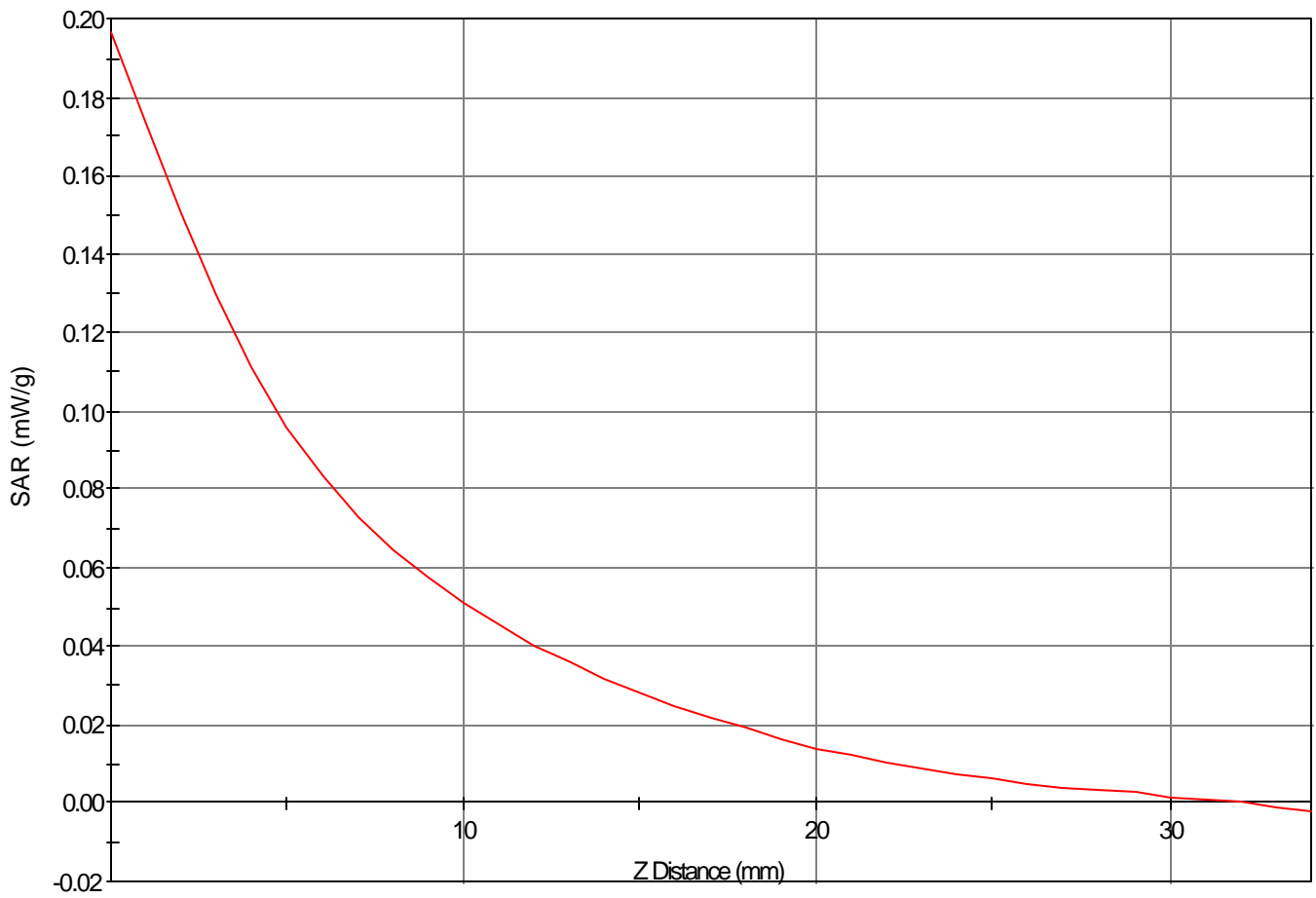
Area Scan - Max Peak SAR Value at x=7.0 y=1.0 = 0.11 W/kg

Zoom Scan - Max Peak SAR Value at x=1.0 y=-1.0 z=0.0 = 0.20 W/kg

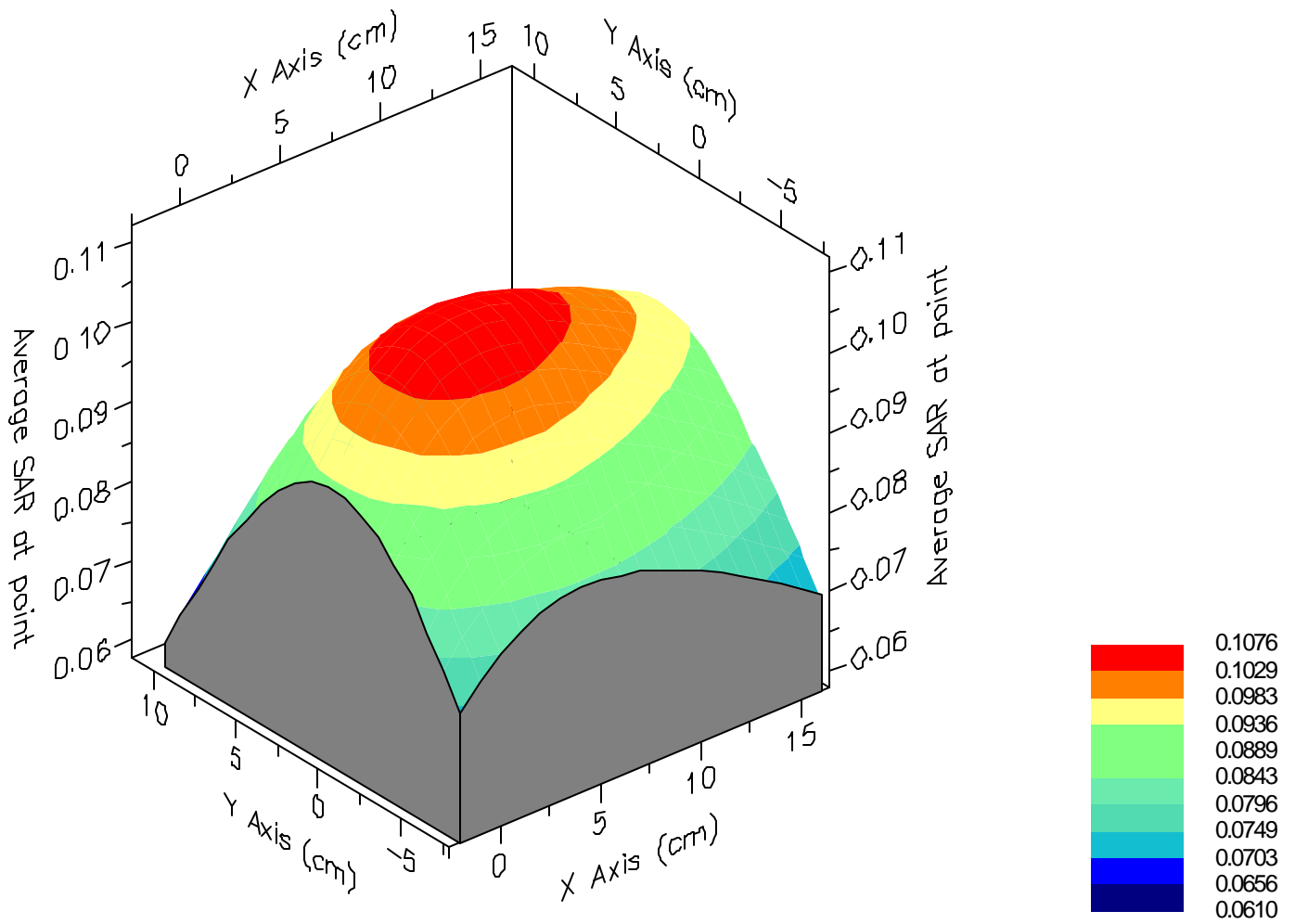
Max 1g SAR at x=5.0 y=0.0 z=0.0 = 0.11 W/kg

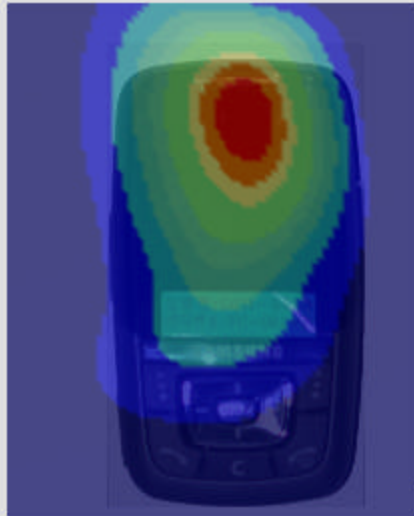
Max 10g SAR at x=9.0 y=1.0 z=0.0 = 0.06 W/kg

SAR - Z Axis  
at Hotspot x:1.0 y:-1.0



### 1g SAR Values





SAR Data Report 06053023

Start : 30-May-06 02:23:06 pm  
End : 30-May-06 02:30:44 pm  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 1880 MHz  
Transmit Pwr : 0.931 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM-LEFT  
Phantom Type : Left Ear  
Tissue Type : Brain  
Tissue Dielectric : 38.410  
Tissue Conductivity : 1.420  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 39.020  
Calibrated Conductivity : 1.370  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.400  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

PCS GSM Mode Ch. 661  
Left Tilt (Slide Out)  
CF=8; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.051  
Reading @ End = 0.051  
Power at End = 100.9%

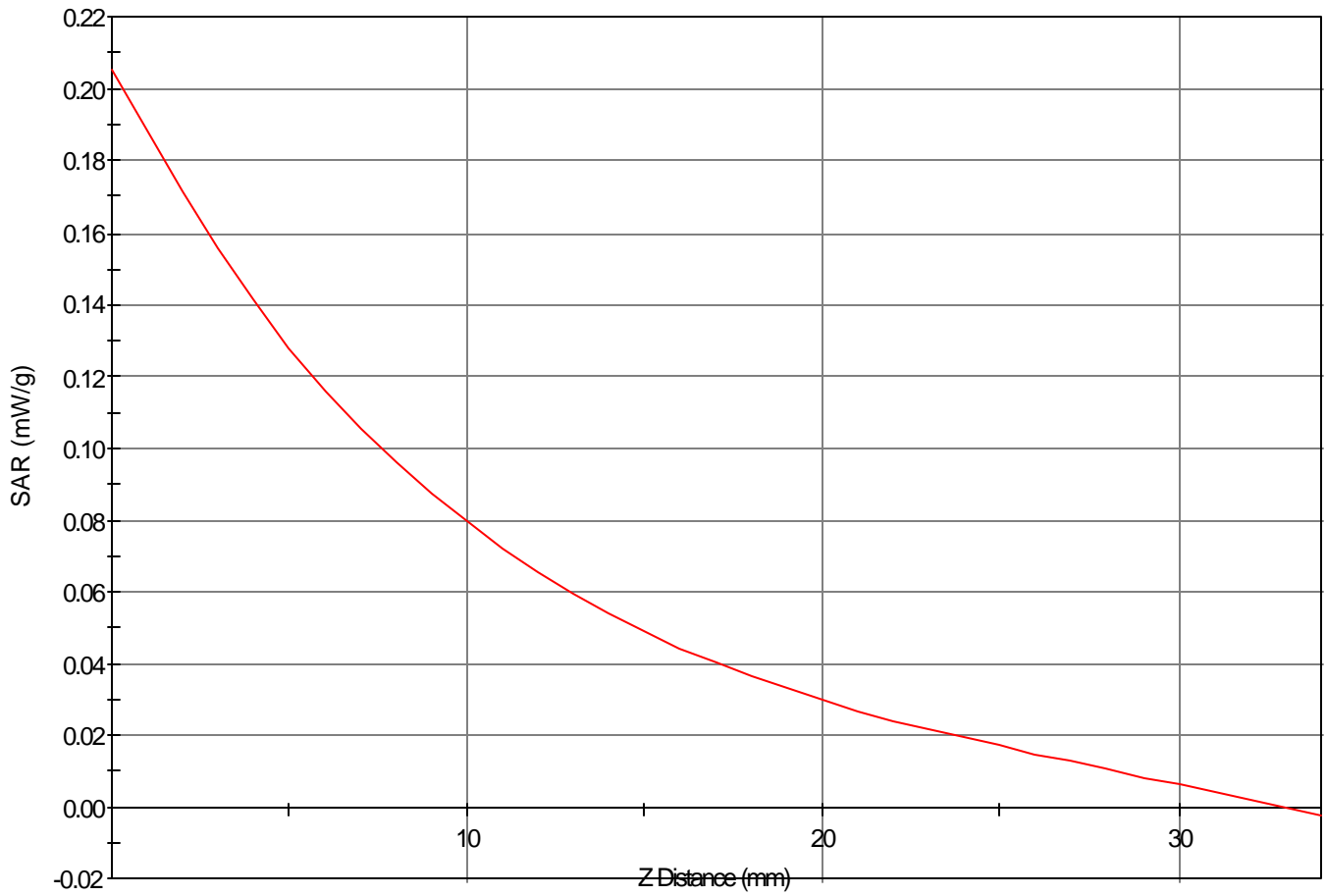
Area Scan - Max Peak SAR Value at x=25.0 y=1.0 = 0.13 W/kg

Zoom Scan - Max Peak SAR Value at x=21.0 y=2.0 z=0.0 = 0.21 W/kg

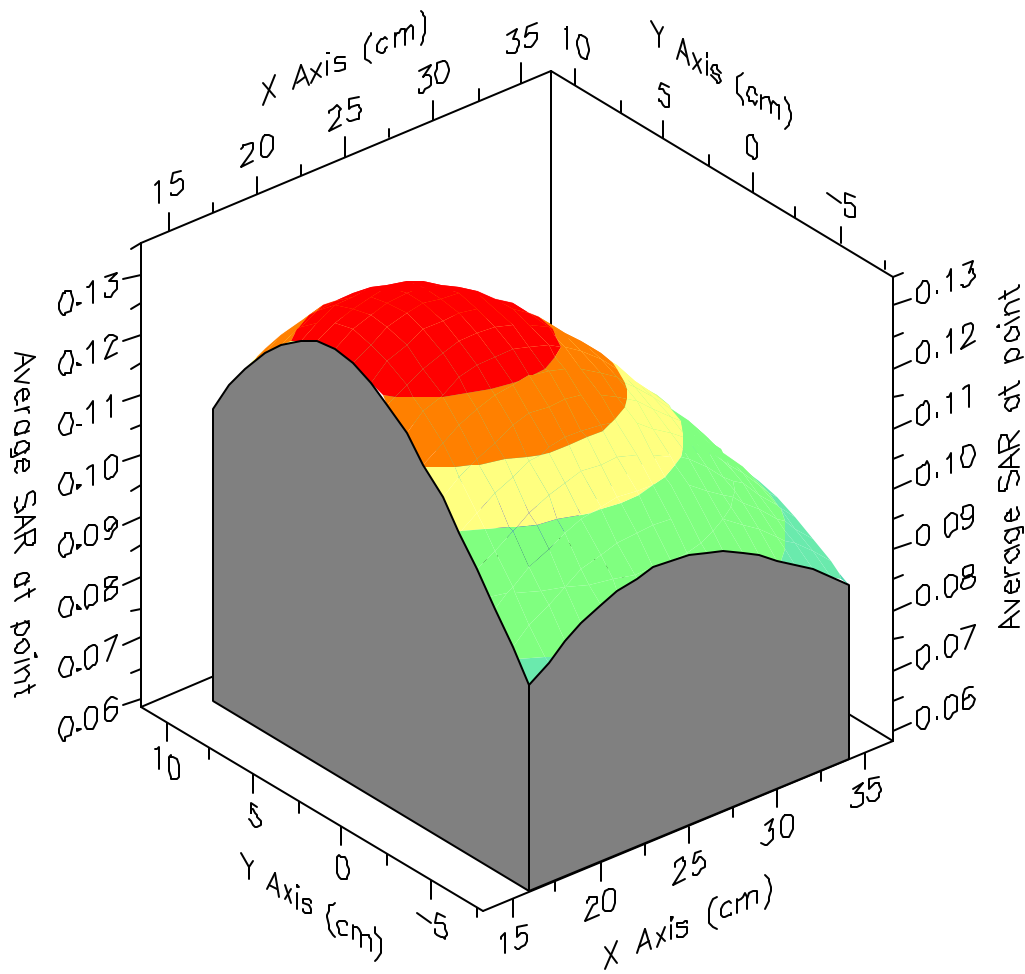
Max 1g SAR at x=20.0 y=3.0 z=0.0 = 0.13 W/kg

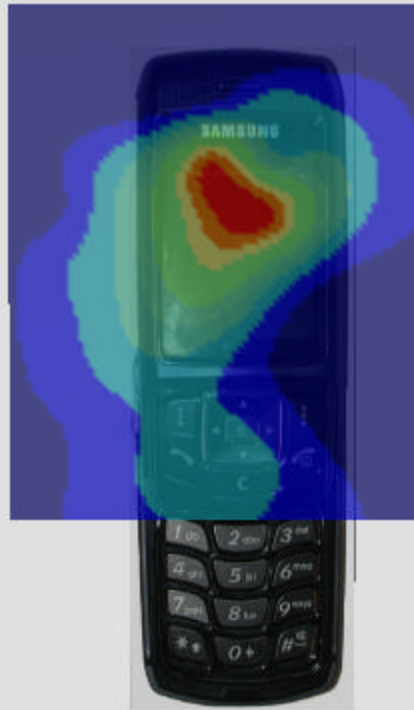
Max 10g SAR at x=22.0 y=1.0 z=0.0 = 0.07 W/kg

SAR - Z Axis  
at Hotspot x:21.0 y:2.0



### 1g SAR Values





SAR Data Report 06053026

Start : 30-May-06 03:41:16 pm  
End : 30-May-06 03:48:51 pm  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 1880 MHz  
Transmit Pwr : 0.931 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM FLAT  
Phantom Type : Uniphantom  
Tissue Type : Muscle  
Tissue Dielectric : 54.430  
Tissue Conductivity : 1.550  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Muscle  
Calibrated Dielectric : 51.810  
Calibrated Conductivity : 1.580  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.500  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

PCS GPRS Mode Ch. 661  
Body (Slide In w/ 1.5cm spacing)  
CF=4; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.340  
Reading @ End = 0.327  
Power at End = 95.9%

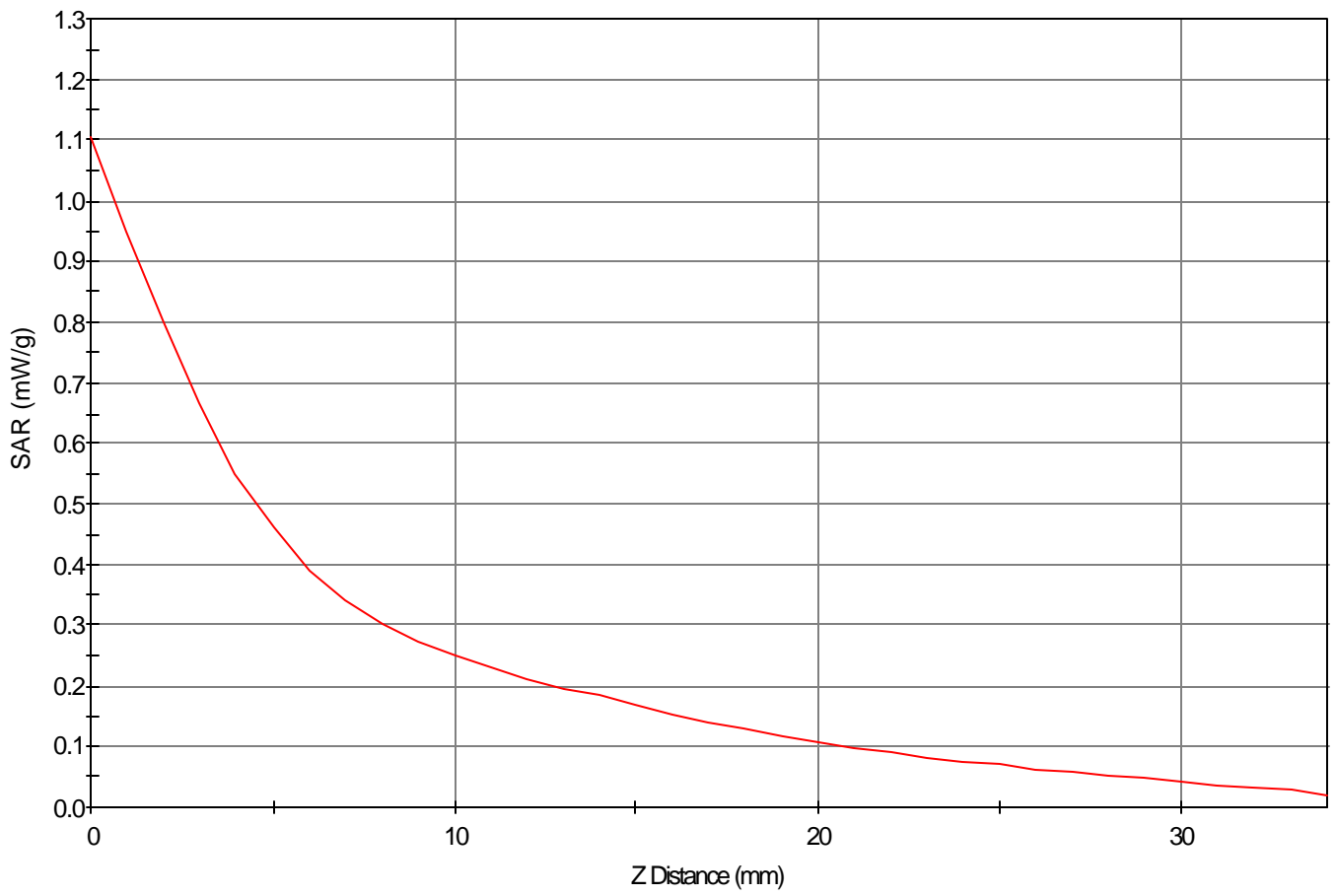
Area Scan - Max Peak SAR Value at x=1.0 y=-20.0 = 0.49 W/kg

Zoom Scan - Max Peak SAR Value at x=4.0 y=-20.0 z=0.0 = 1.10 W/kg

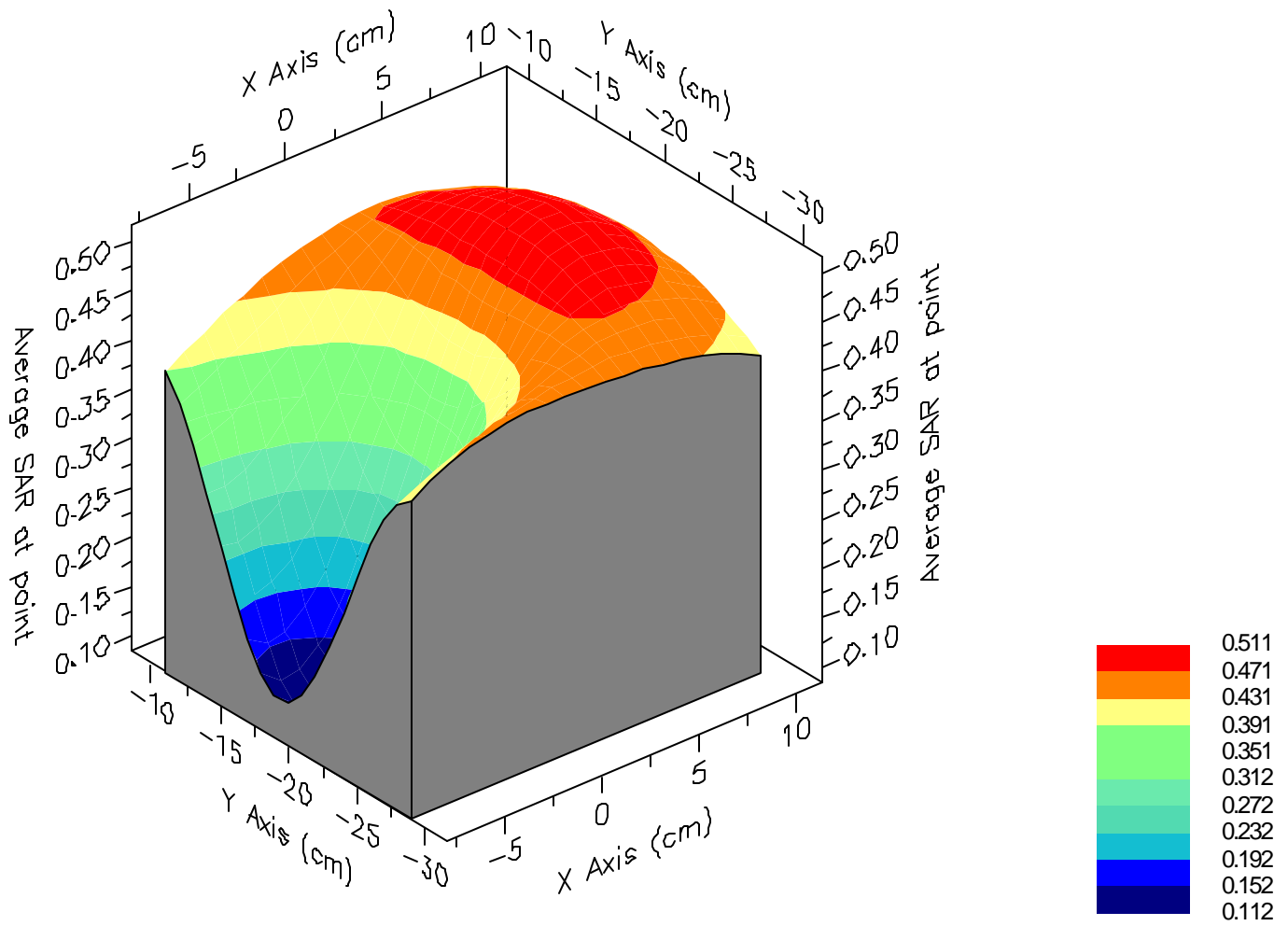
Max 1g SAR at x=5.0 y=-19.0 z=0.0 = 0.51 W/kg

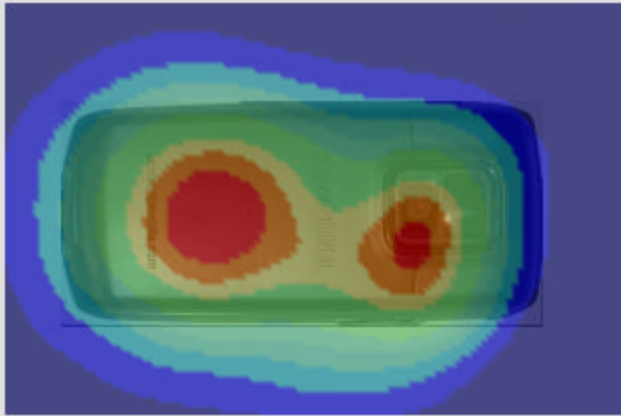
Max 10g SAR at x=4.0 y=-19.0 z=0.0 = 0.27 W/kg

SAR - Z Axis  
at Hotspot x:4.0 y:-20.0



### 1g SAR Values





SAR Data Report 06053032

Start : 30-May-06 05:18:09 pm  
End : 30-May-06 05:26:22 pm  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 1850.2 MHz  
Transmit Pwr : 0.830 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM FLAT  
Phantom Type : Uniphantom  
Tissue Type : Muscle  
Tissue Dielectric : 54.430  
Tissue Conductivity : 1.550  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Muscle  
Calibrated Dielectric : 51.810  
Calibrated Conductivity : 1.580  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.500  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

PCS GPRS Mode Ch. 512  
Body (Slide Out w/ 1.5cm spacing)  
CF=4; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.381  
Reading @ End = 0.378  
Power at End = 99.2%

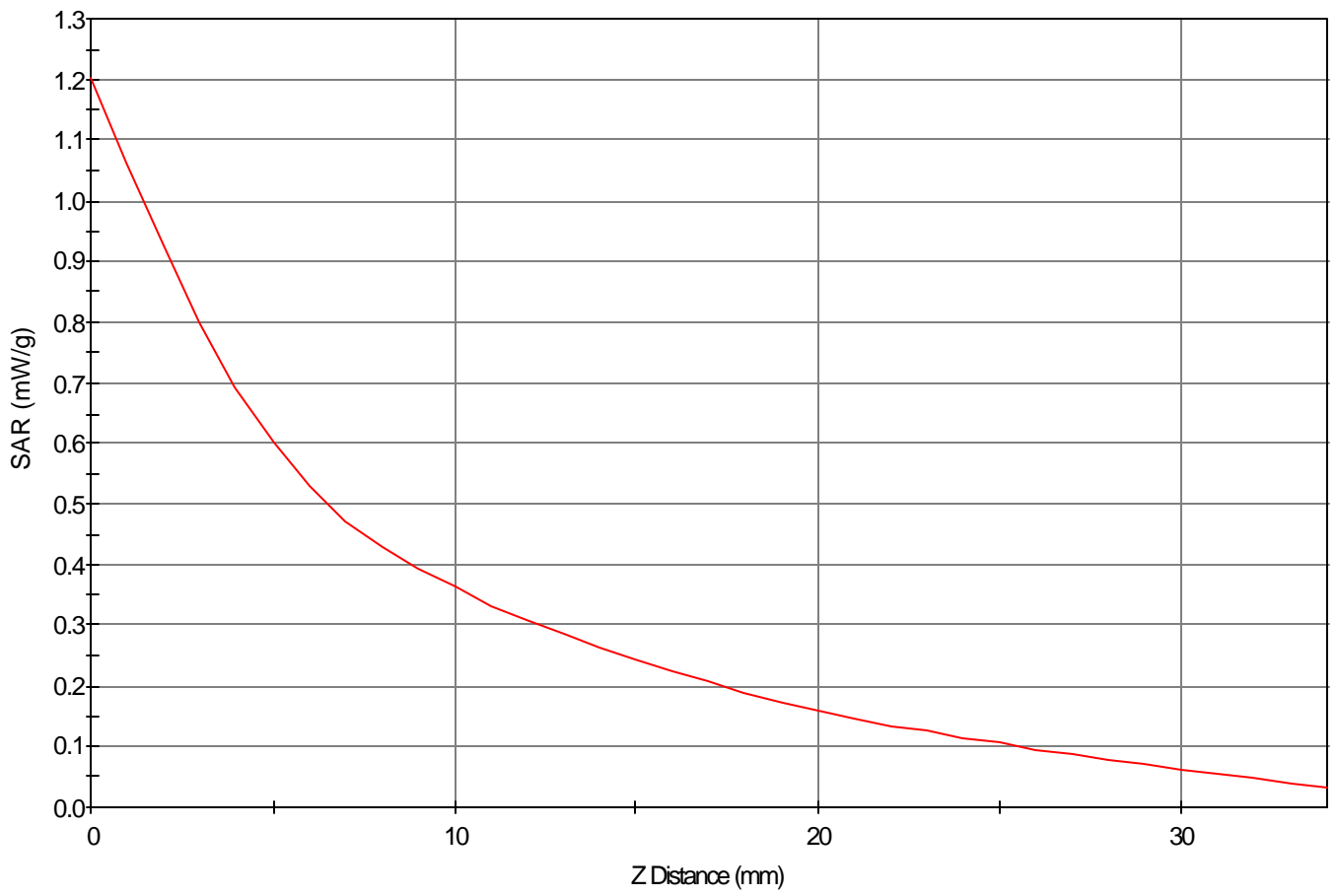
Area Scan - Max Peak SAR Value at x=2.0 y=-21.0 = 0.72 W/kg

Zoom Scan - Max Peak SAR Value at x=2.0 y=-18.0 z=0.0 = 1.20 W/kg

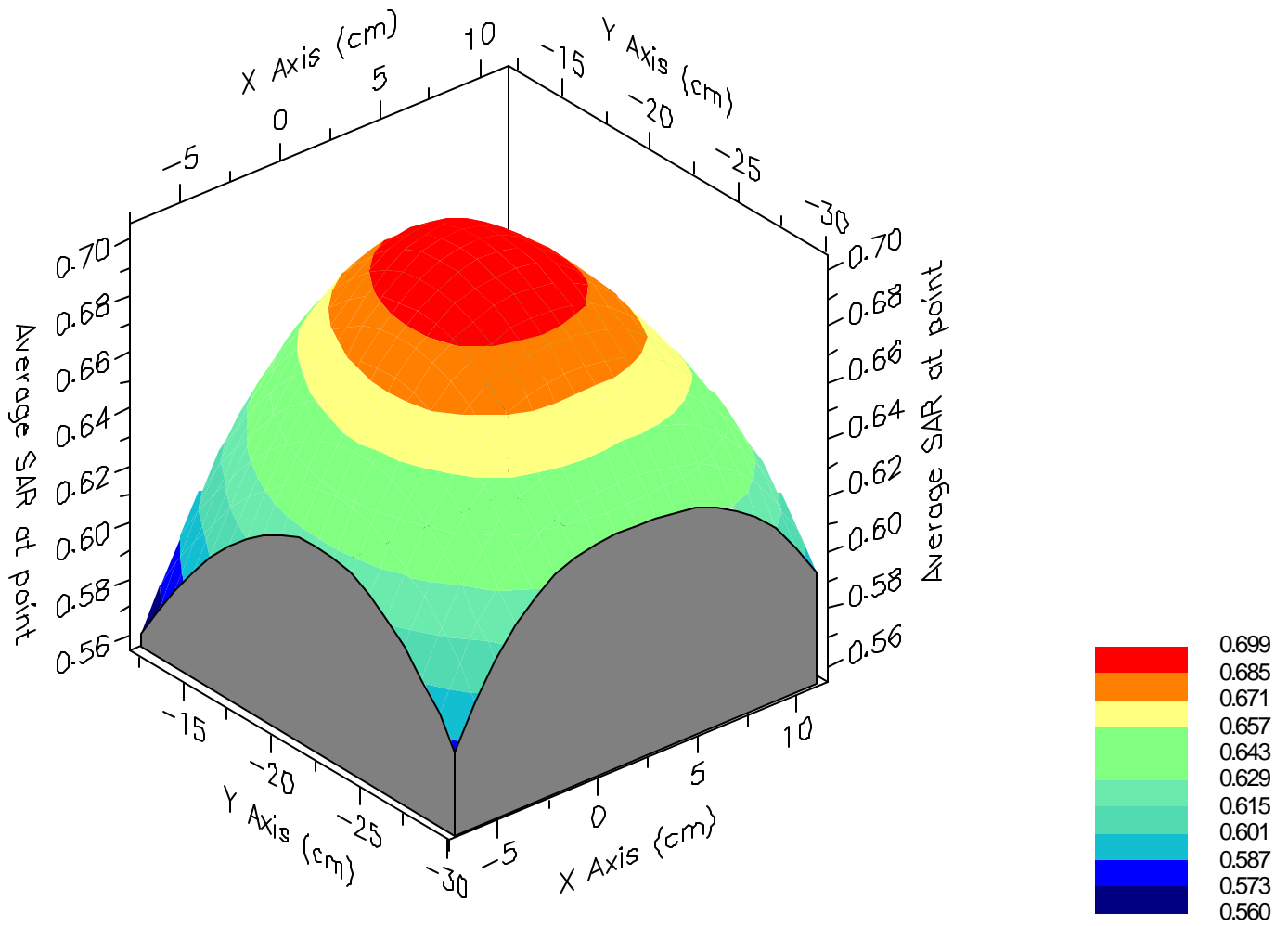
Max 1g SAR at x=3.0 y=-20.0 z=0.0 = 0.70 W/kg

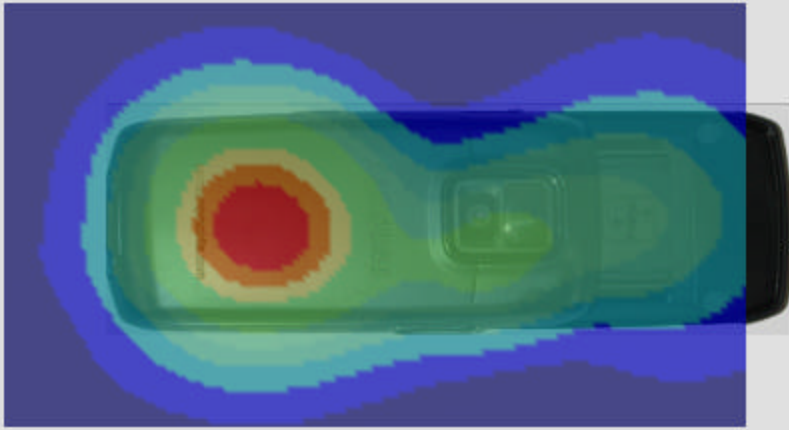
Max 10g SAR at x=2.0 y=-21.0 z=0.0 = 0.42 W/kg

SAR - Z Axis  
at Hotspot x:2.0 y:-18.0



### 1g SAR Values





SAR Data Report 06053101

Start : 31-May-06 12:58:03 pm  
End : 31-May-06 01:05:57 pm  
Code Version : 4.08  
Robot Version: 0.00

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 2437 MHz  
Transmit Pwr : 0.0429 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM FLAT  
Phantom Type : Uniphantom  
Tissue Type : Muscle  
Tissue Dielectric : 50.620  
Tissue Conductivity : 1.860  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 2450 MHz  
Tissue Type : Muscle  
Calibrated Dielectric : 52.230  
Calibrated Conductivity : 1.530  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.300  
Probe Sensitivity : 5.496 4.887 5.267 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

WLAN (802.11b) Mode Ch. 6 @ 1Mbps  
Body (Slide In w/ 1.5cm spacing)  
CF=1; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.062  
Reading @ End = 0.062  
Power at End = 100.1%

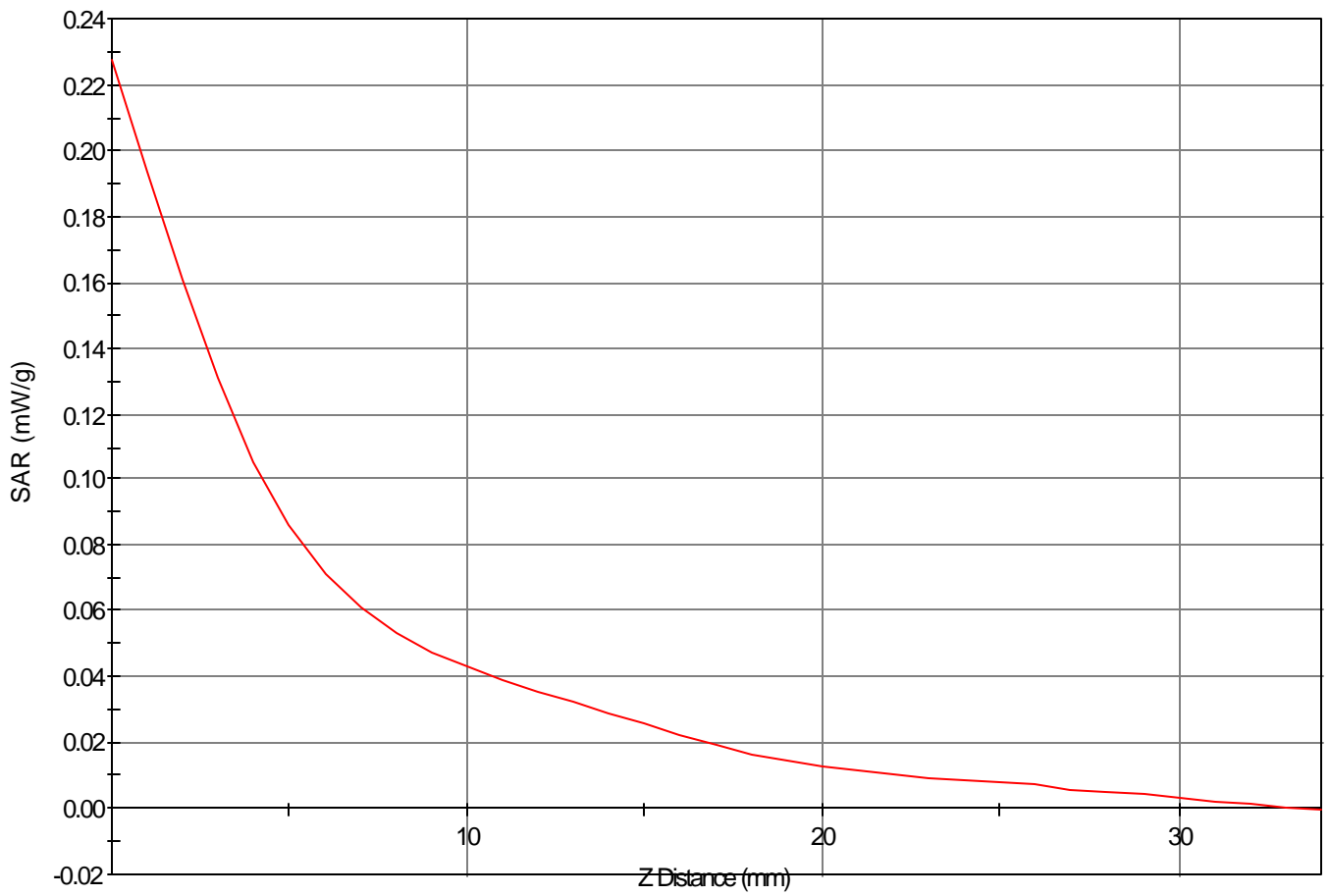
Area Scan - Max Peak SAR Value at x=-3.0 y=15.0 = 0.10 W/kg

Zoom Scan - Max Peak SAR Value at x=-1.0 y=11.0 z=0.0 = 0.23 W/kg

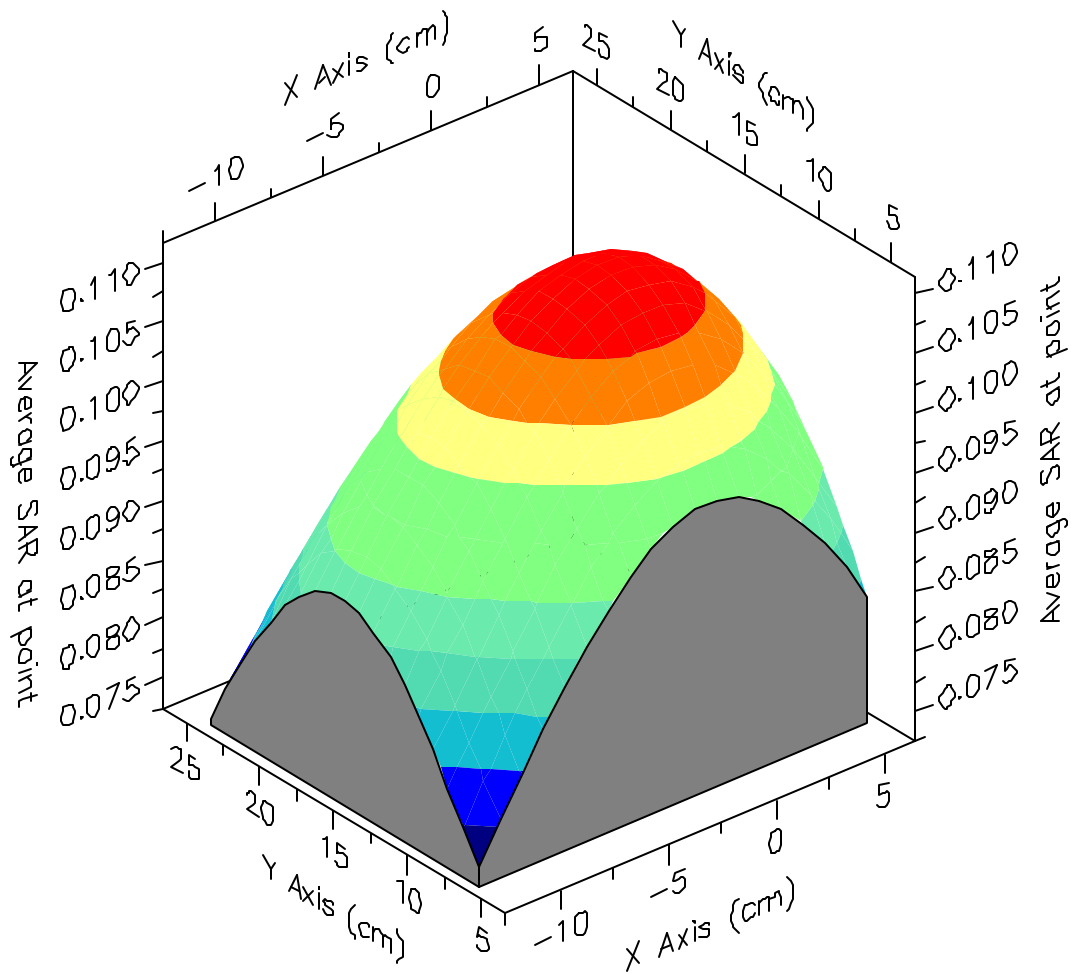
Max 1g SAR at x=-1.0 y=14.0 z=0.0 = 0.11 W/kg

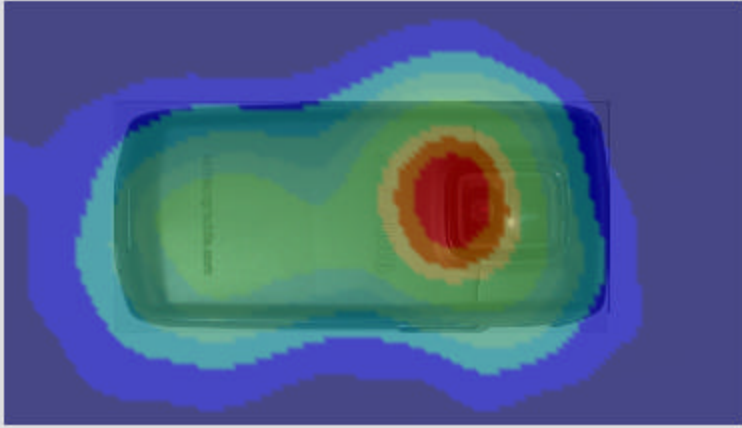
Max 10g SAR at x=-1.0 y=15.0 z=0.0 = 0.06 W/kg

SAR - Z Axis  
at Hotspot x:-1.0 y:11.0



### 1g SAR Values





SAR Data Report 06053111

Start : 31-May-06 02:32:27 pm  
End : 31-May-06 02:40:20 pm  
Code Version : 4.08  
Robot Version: 0.00

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 2437 MHz  
Transmit Pwr : 0.0440 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM FLAT  
Phantom Type : Uniphantom  
Tissue Type : Muscle  
Tissue Dielectric : 50.620  
Tissue Conductivity : 1.860  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 2450 MHz  
Tissue Type : Muscle  
Calibrated Dielectric : 52.230  
Calibrated Conductivity : 1.530  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.300  
Probe Sensitivity : 5.496 4.887 5.267 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

WLAN (802.11b) Mode Ch. 6 @ 11Mbps  
Body (Slide Out w/ 1.5cm spacing)  
CF=1; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.041  
Reading @ End = 0.041  
Power at End = 100.3%

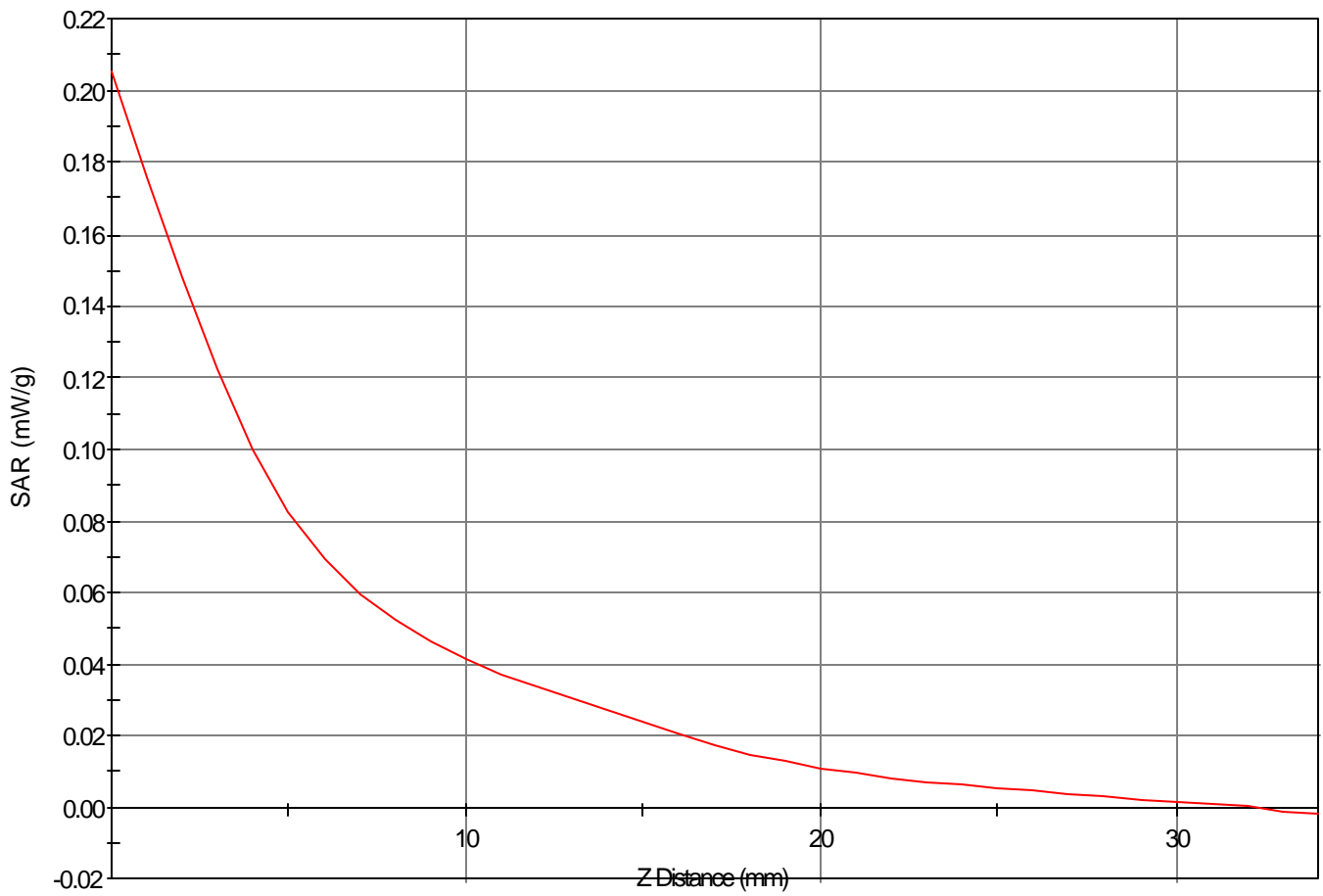
Area Scan - Max Peak SAR Value at x=-7.0 y=15.0 = 0.10 W/kg

Zoom Scan - Max Peak SAR Value at x=-12.0 y=14.0 z=0.0 = 0.21 W/kg

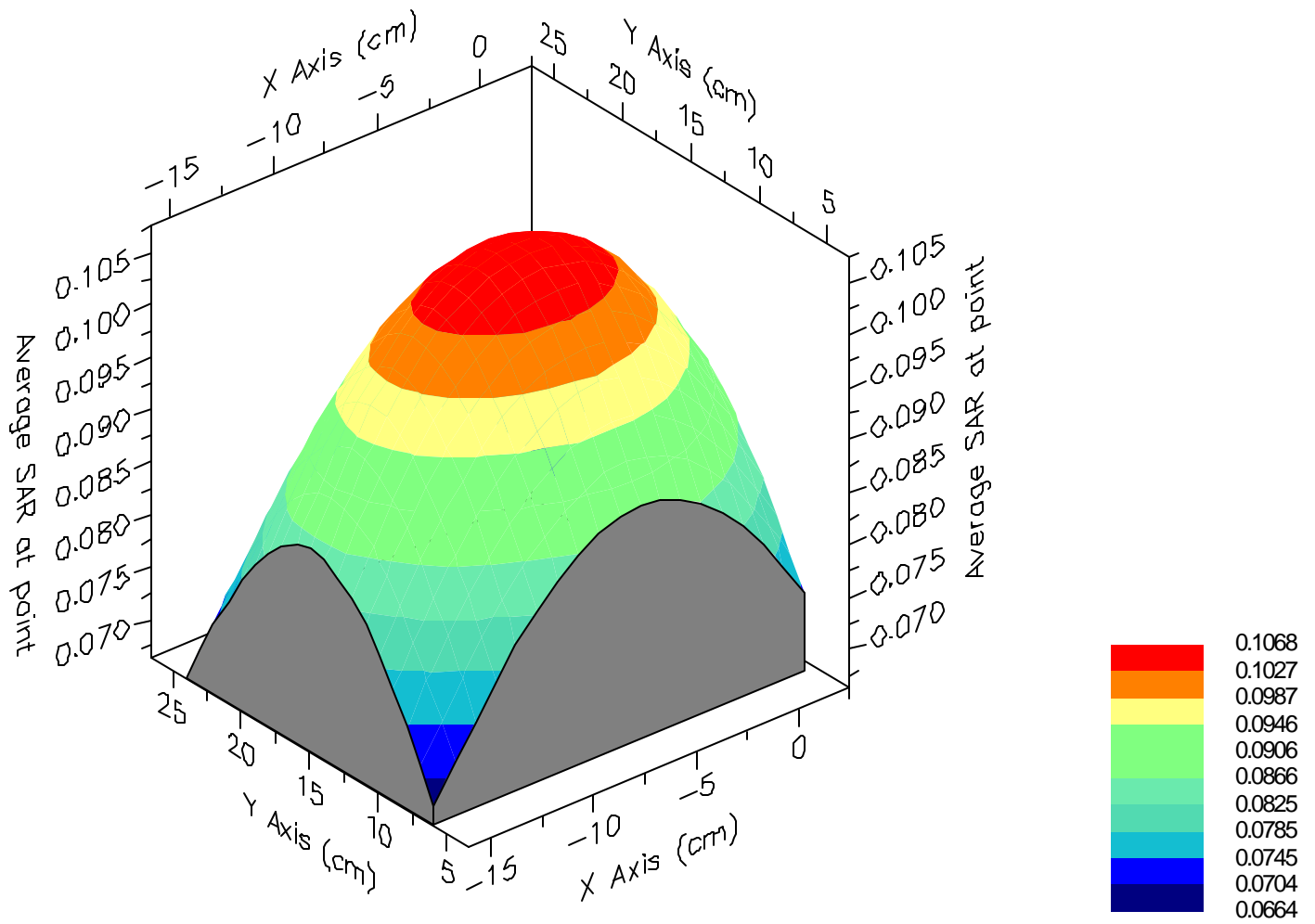
Max 1g SAR at x=-6.0 y=15.0 z=0.0 = 0.11 W/kg

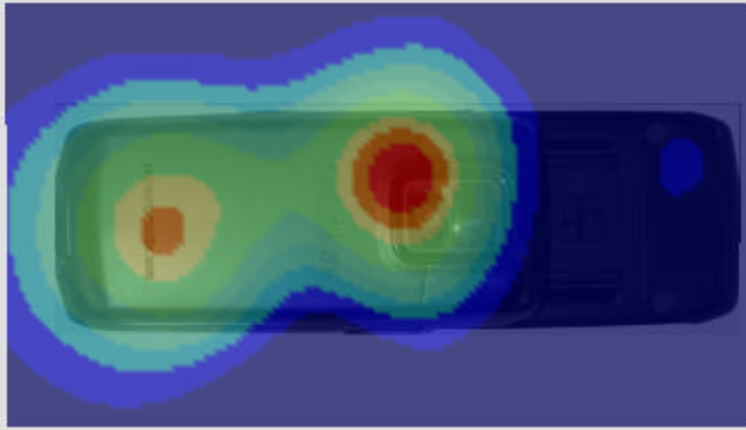
Max 10g SAR at x=-6.0 y=14.0 z=0.0 = 0.05 W/kg

SAR - Z Axis  
at Hotspot x:-12.0 y:14.0



### 1g SAR Values





SAR Data Report 06053112

Start : 31-May-06 02:46:54 pm  
End : 31-May-06 02:54:47 pm  
Code Version : 4.08  
Robot Version: 0.00

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 2437 MHz  
Transmit Pwr : 0.0277 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM FLAT  
Phantom Type : Uniphantom  
Tissue Type : Muscle  
Tissue Dielectric : 50.620  
Tissue Conductivity : 1.860  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 2450 MHz  
Tissue Type : Muscle  
Calibrated Dielectric : 52.230  
Calibrated Conductivity : 1.530  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.300  
Probe Sensitivity : 5.496 4.887 5.267 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

WLAN (802.11g) Mode Ch. 6 @ 6Mbps  
Body (Slide In w/ 1.5cm spacing)  
CF=1; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.044  
Reading @ End = 0.042  
Power at End = 96.9%

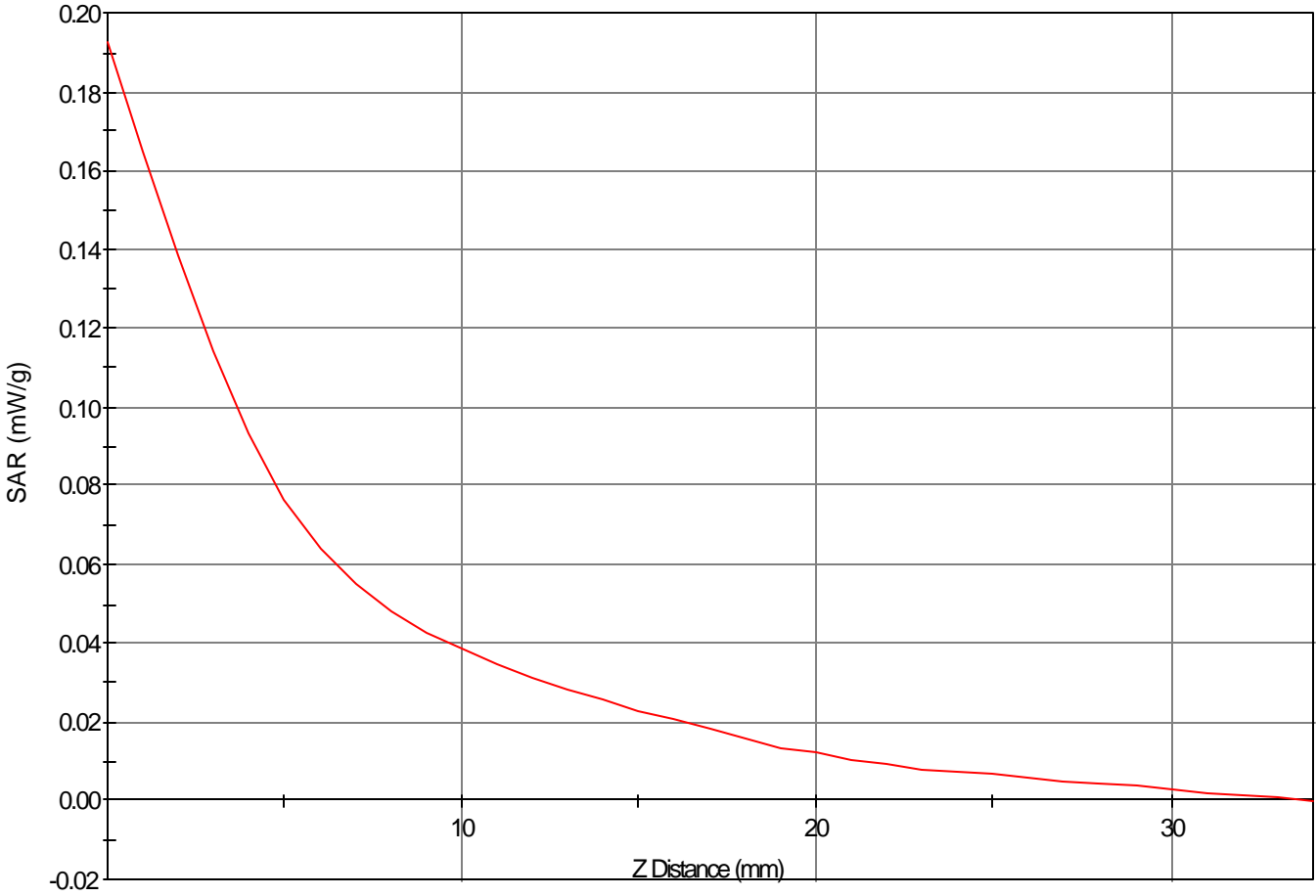
Area Scan - Max Peak SAR Value at x=-3.0 y=16.0 = 0.09 W/kg

Zoom Scan - Max Peak SAR Value at x=-5.0 y=15.0 z=0.0 = 0.19 W/kg

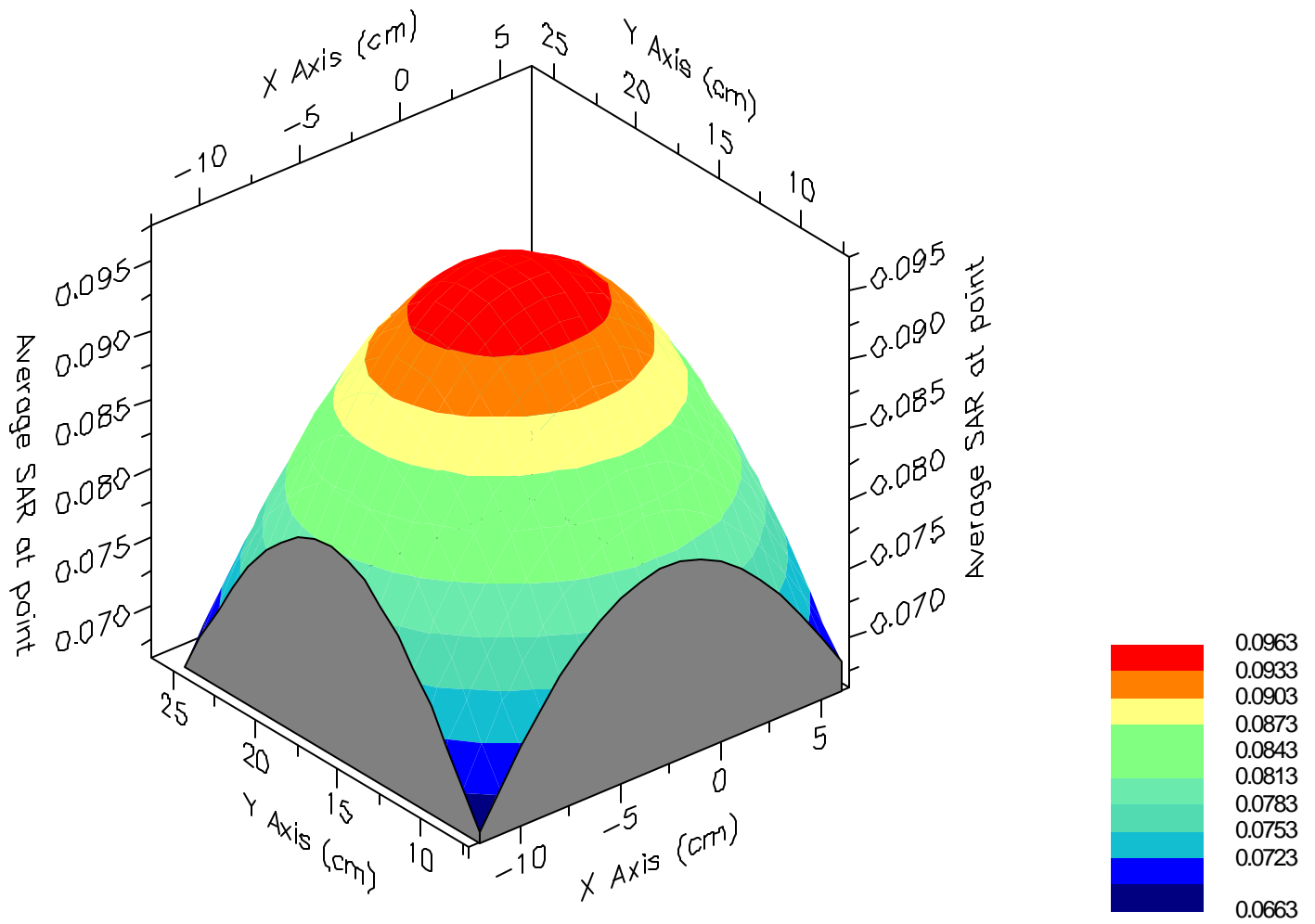
Max 1g SAR at x=-3.0 y=16.0 z=0.0 = 0.10 W/kg

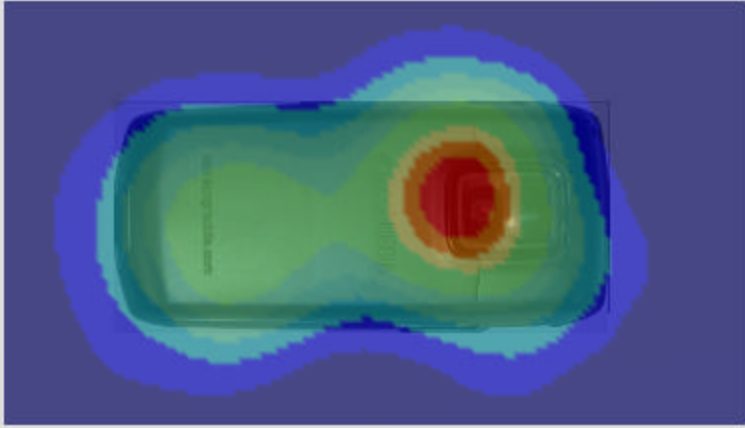
Max 10g SAR at x=-2.0 y=16.0 z=0.0 = 0.05 W/kg

SAR - Z Axis  
at Hotspot x:-5.0 y:15.0



### 1g SAR Values





SAR Data Report 06053119

Start : 31-May-06 04:34:15 pm  
End : 31-May-06 04:42:07 pm  
Code Version : 4.08  
Robot Version: 0.00

Product Data:

Type : Samsung Single-Band PCS GSM Phone w/ WLAN  
Model Number : SGH-P200  
Serial Number : FD-081-D  
Frequency : 2437 MHz  
Transmit Pwr : 0.0274 W  
Antenna Type : Helical  
Antenna Posn. : Internal

Measurement Data:

Phantom Name : SAM FLAT  
Phantom Type : Uniphantom  
Tissue Type : Muscle  
Tissue Dielectric : 50.620  
Tissue Conductivity : 1.860  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 2450 MHz  
Tissue Type : Muscle  
Calibrated Dielectric : 52.230  
Calibrated Conductivity : 1.530  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.300  
Probe Sensitivity : 5.496 4.887 5.267 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

WLAN (802.11g) Mode Ch. 6 @ 12Mbps  
Body (Slide Out w/ 1.5cm spacing)  
CF=1; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.031  
Reading @ End = 0.030  
Power at End = 97.4%

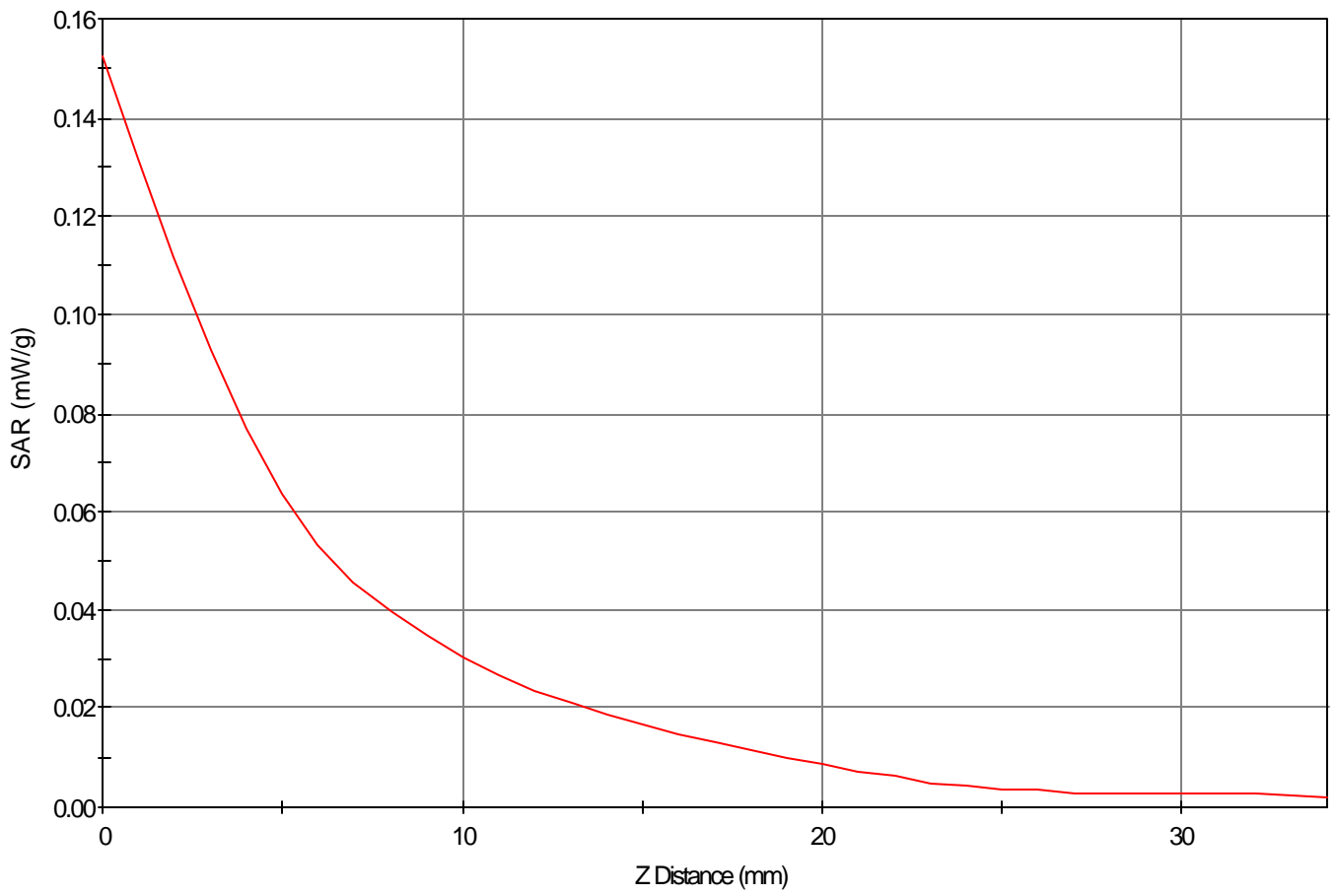
Area Scan - Max Peak SAR Value at x=-8.0 y=17.0 = 0.08 W/kg

Zoom Scan - Max Peak SAR Value at x=-7.0 y=18.0 z=0.0 = 0.15 W/kg

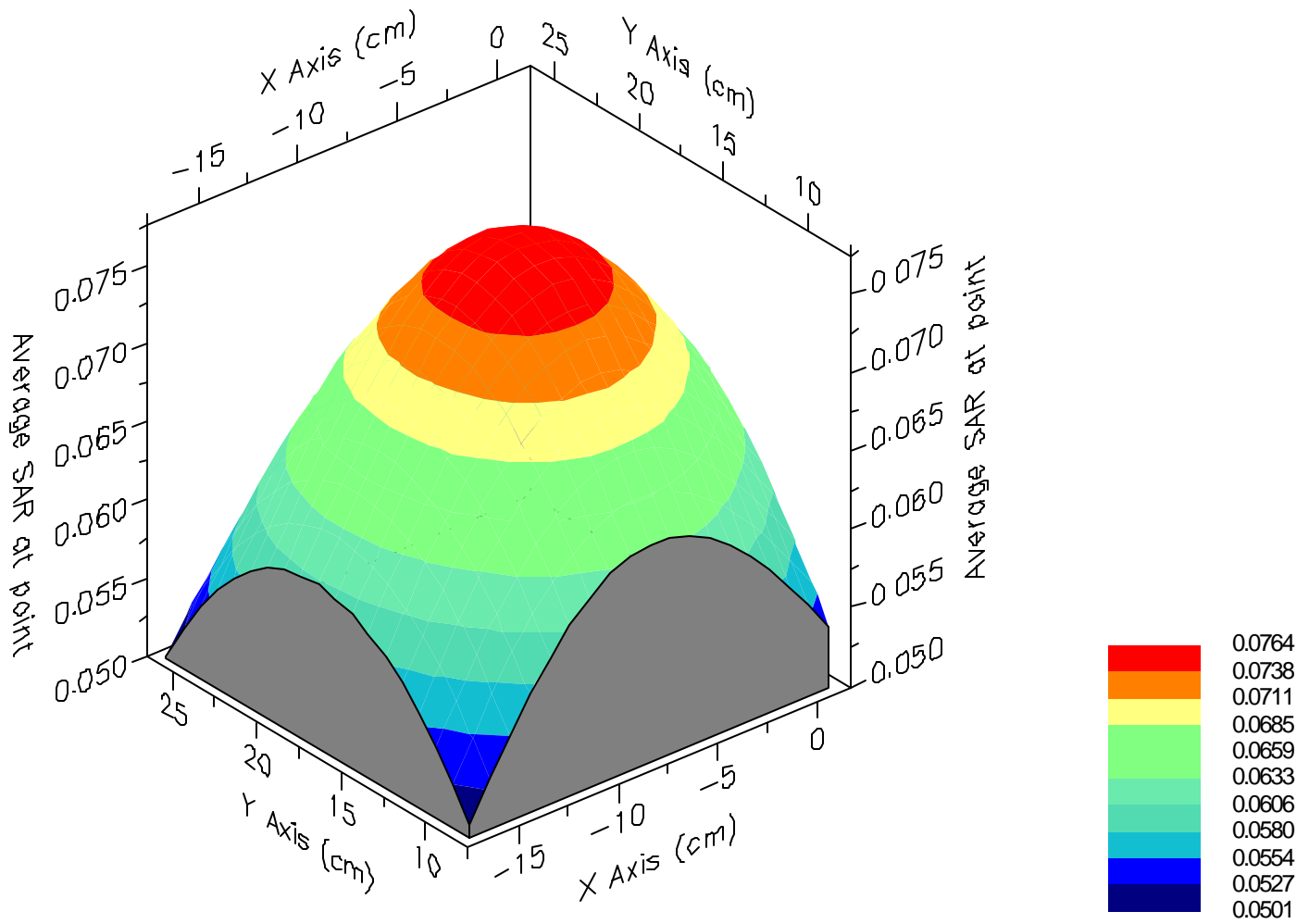
Max 1g SAR at x=-7.0 y=17.0 z=0.0 = 0.08 W/kg

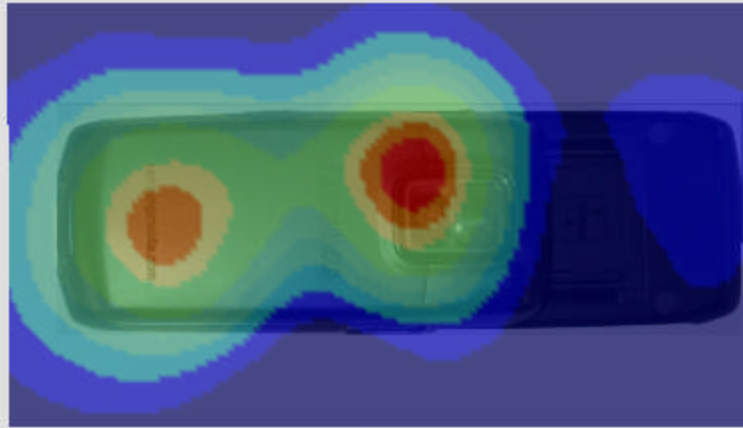
Max 10g SAR at x=-7.0 y=16.0 z=0.0 = 0.04 W/kg

SAR - Z Axis  
at Hotspot x:-7.0 y:18.0



### 1g SAR Values





## **APPENDIX B: DIPOLE VALIDATION**

SAR Data Report 06053005

Start : 30-May-06 10:35:33 am  
End : 30-May-06 10:41:19 am  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Verification  
Model Number : E-020  
Serial Number : PCT005  
Frequency : 1900 MHz  
Transmit Pwr : 0.040 W  
Antenna Type : Dipole  
Antenna Posn. : Verification

Measurement Data:

Phantom Name : FLATPHANTOM  
Phantom Type : Uniphantom  
Tissue Type : Brain  
Tissue Dielectric : 38.410  
Tissue Conductivity : 1.420  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 39.020  
Calibrated Conductivity : 1.370  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.400  
Probe Sensitivity : 5.115 4.969 4.453 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

1900MHz Dipole Validation  
  
CF=1; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 1.409  
Reading @ End = 1.437  
Power at End = 102.0%

Area Scan - Max Peak SAR Value at x=4.0 y=1.0 = 1.44 W/kg

Zoom Scan - Max Peak SAR Value at x=4.0 y=2.0 z=0.0 = 3.17 W/kg

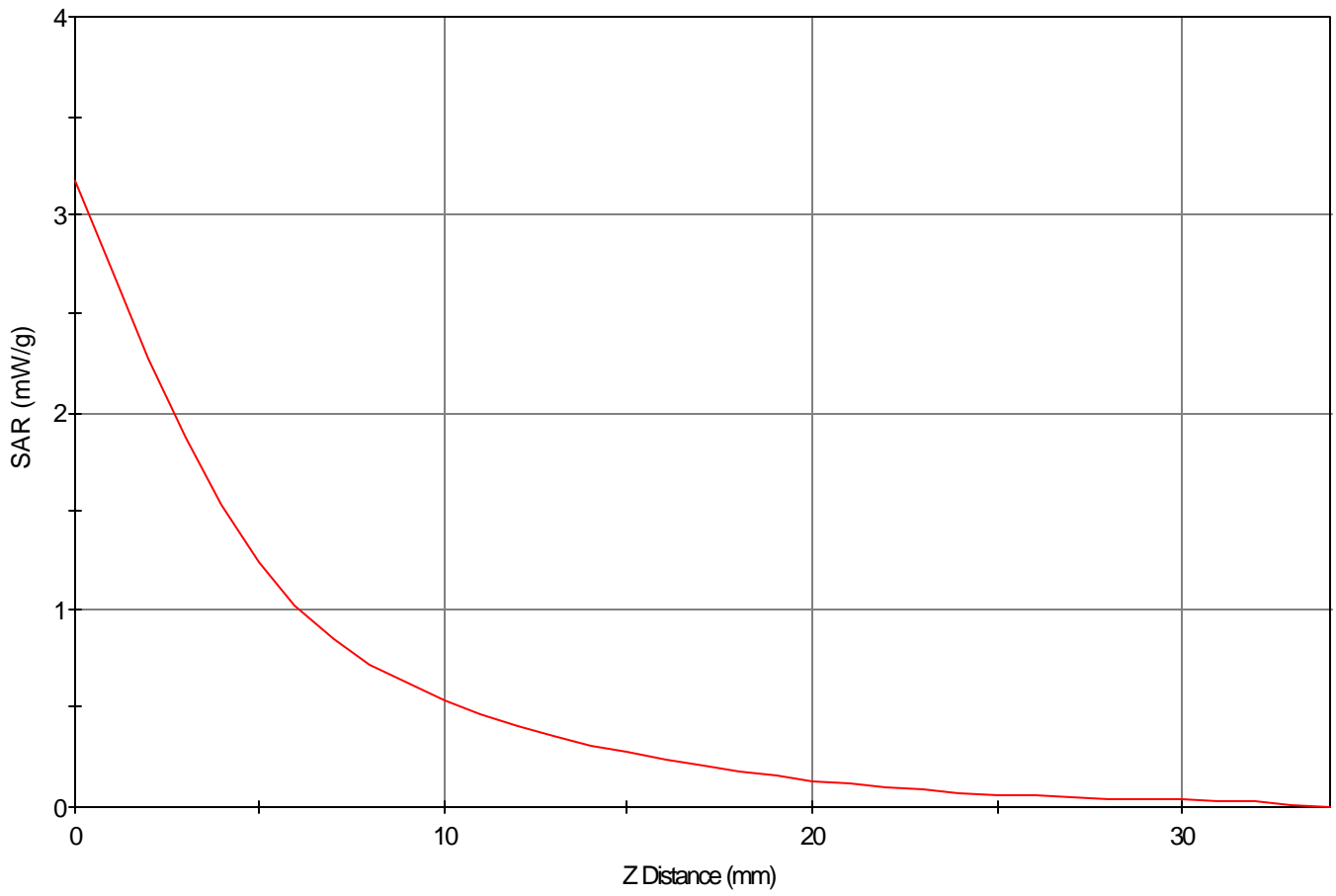
Max 1g SAR at x=5.0 y=2.0 z=0.0 = 1.46 W/kg

Max 10g SAR at x=4.0 y=2.0 z=0.0 = 0.74 W/kg

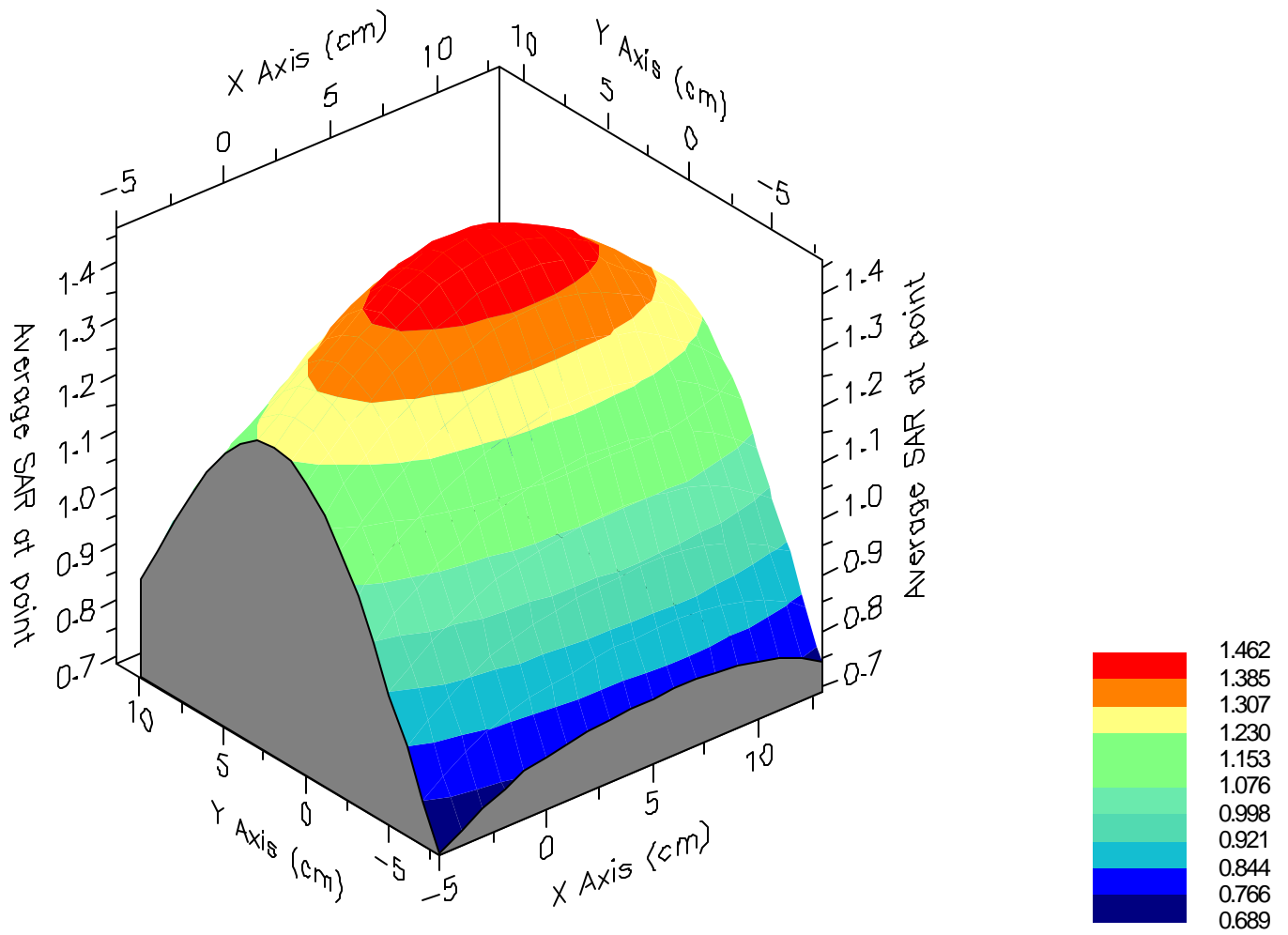
Validation Results at 0.04 W:

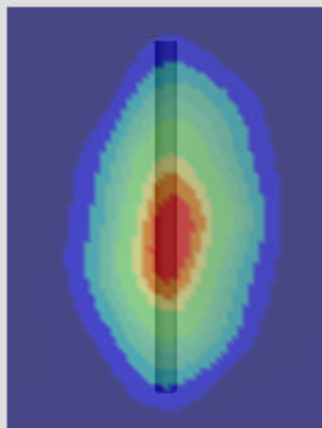
Peak Nominal = 2.9, Error: 9.92 %  
1g Nominal = 1.6, Error: -7.93 %  
10g Nominal = 0.8, Error: -7.44 %

SAR - Z Axis  
at Hotspot x:4.0 y:2.0



### 1g SAR Values





SAR Data Report 06053007

Start : 30-May-06 11:13:53 am  
End : 30-May-06 11:19:09 am  
Code Version : 4.08  
Robot Version: 4.08

Product Data:

Type : Verification  
Model Number : E-020  
Serial Number : PCT005  
Frequency : 2450 MHz  
Transmit Pwr : 0.030 W  
Antenna Type : Dipole  
Antenna Posn. : Verification

Measurement Data:

Phantom Name : FLATPHANTOM  
Phantom Type : Uniphantom  
Tissue Type : Brain  
Tissue Dielectric : 41.000  
Tissue Conductivity : 1.760  
Tissue Density : 1.000  
Robot Name : CRS

Probe Data:

Probe Name : PCT005  
Probe Type : E Fld Triangle  
Frequency : 2450 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 40.110  
Calibrated Conductivity : 1.390  
Calibrated Density : 1.000  
Probe Offset : 1.600 mm  
Conversion Factor : 5.250  
Probe Sensitivity : 5.496 4.887 5.267 mV/(mW/cm^2)  
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5

Comments:

2450 MHz Verification

CF=1; Amb. Temp= 22.8 'C; Liq. Temp=21.9 'C

Power Drop Test:

Reading @ start = 0.945  
Reading @ End = 0.955  
Power at End = 101.0%

Area Scan - Max Peak SAR Value at x=-1.0 y=-1.0 = 1.62 W/kg

Zoom Scan - Max Peak SAR Value at x=-2.0 y=-2.0 z=0.0 = 3.12 W/kg

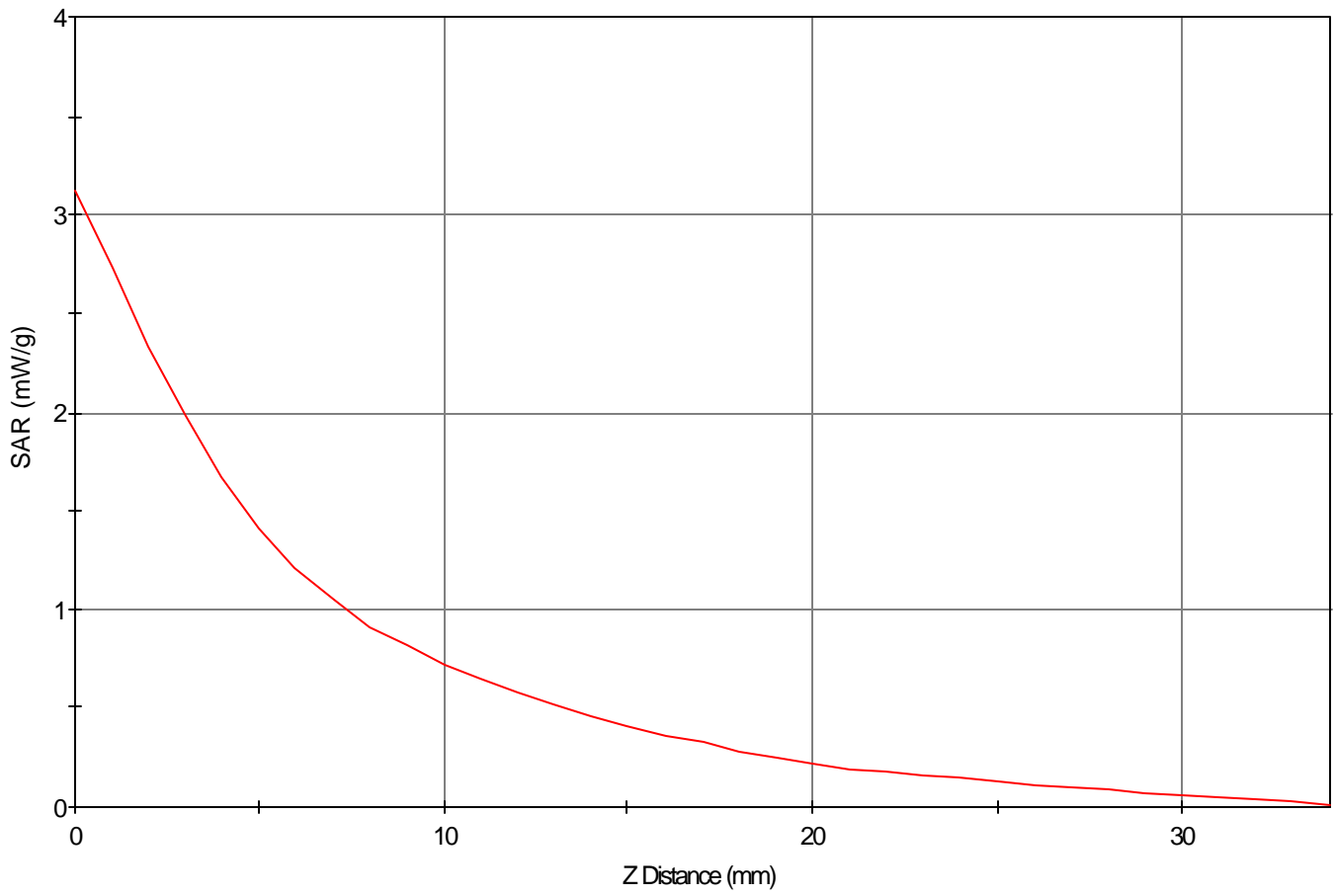
Max 1g SAR at x=0.0 y=-1.0 z=0.0 = 1.56 W/kg

Max 10g SAR at x=0.0 y=-1.0 z=0.0 = 0.71 W/kg

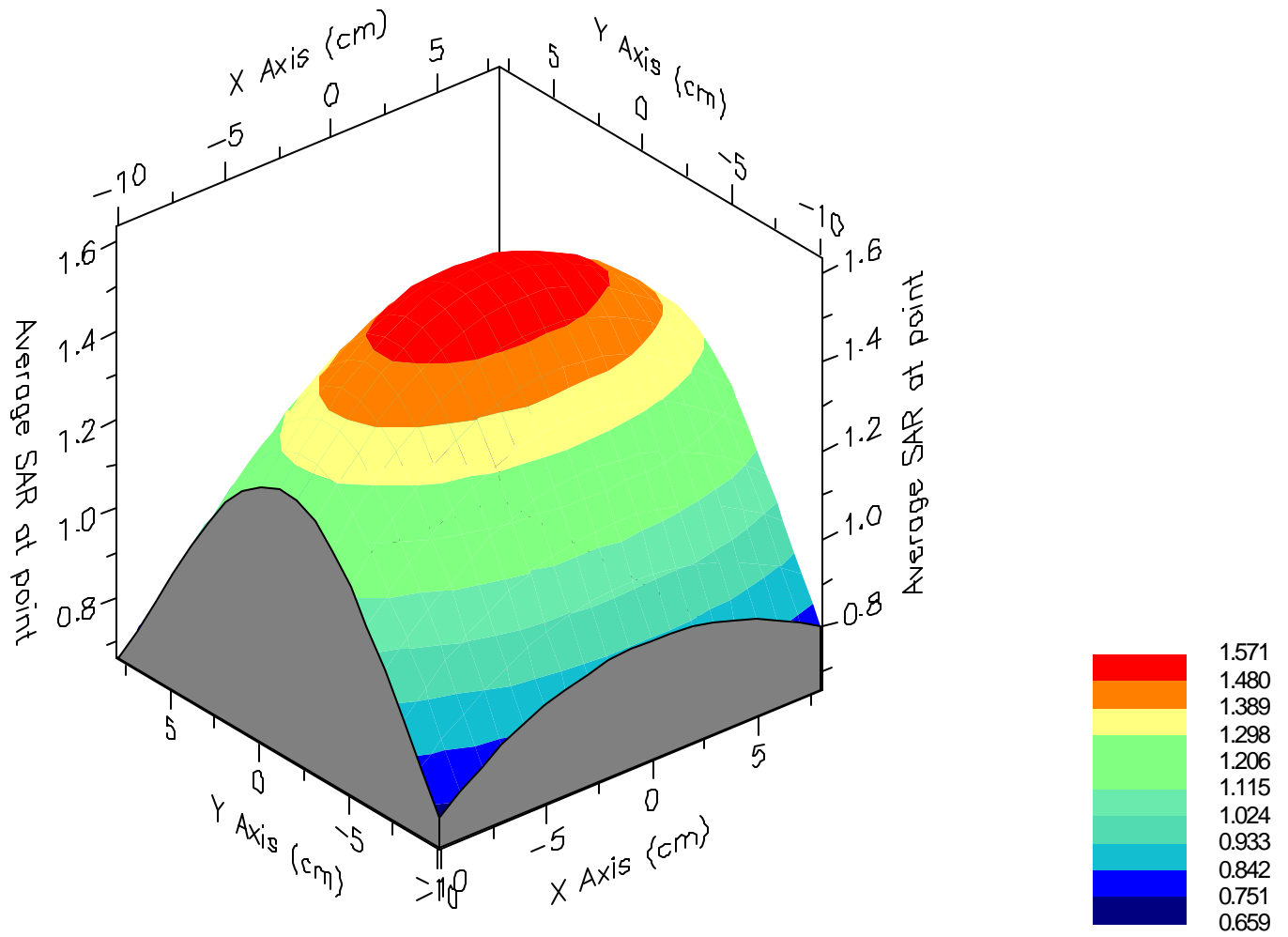
Validation Results at 0.03 W:

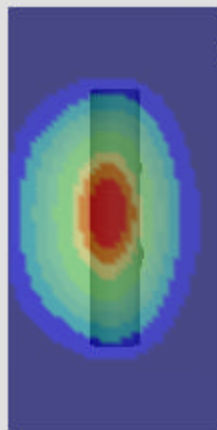
Peak Nominal = 3.1, Error: -0.13 %  
1g Nominal = 1.6, Error: -0.08 %  
10g Nominal = 0.7, Error: -2.37 %

SAR - Z Axis  
at Hotspot x:-2.0 y:-2.0



### 1g SAR Values





## **APPENDIX C: PROBE CALIBRATION**

# Probe E-020

SN: PCT005

Manufactured:

November 10, 2004

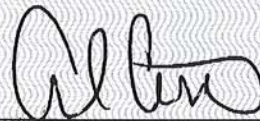
Calibrated:

January 5, 2006

Calibrated for the IDX System

PCTEST Calibration Laboratory

Approved By:



**Alfred Cirwithian**  
**Vice President Engineering**

Calibration is performed according to IEEE Std. 1528 - 2003  
and all test equipment used is traceable to U.S. NIST.

### Calibration Summary

Model: E-020

S/N: PCT005

Tissue Type	Frequency (MHz)	Dielectric Constant $\epsilon_r$	Conductivity (S/m) $S$	Conversion Factor $g_x, g_y, g_z$
Brain	450	44.41	0.88	8.8
Brain	835	40.81	0.87	5.5
Brain	1900	39.02	1.37	5.4
Brain	2450	40.11	1.39	5.25
Muscle	450	57.70	0.96	9.24
Muscle	835	53.66	0.98	5.85
Muscle	1900	51.81	1.58	5.5
Muscle	2450	52.23	1.53	5.3

Frequency (MHz)	Isotropy	
	%	dB
450	1.23	0.05
835	2.12	0.09
1900	6.61	0.28
2450	7.61	0.32

**Boundary Effect** < 2%, 2.5 mm from probe tip to phantom

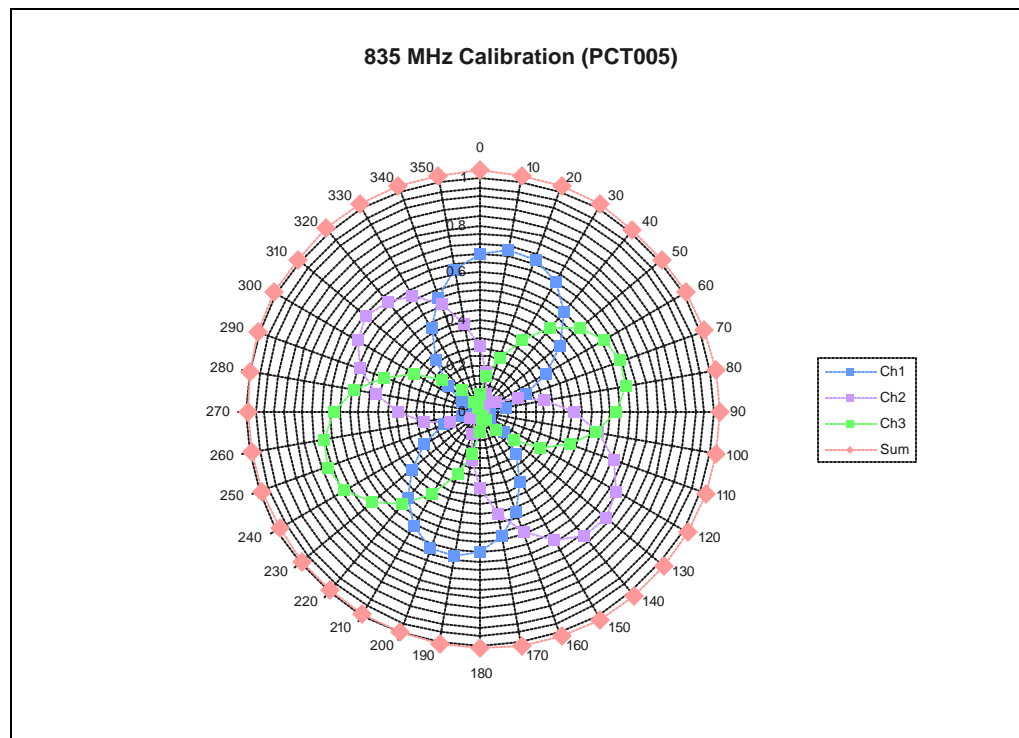
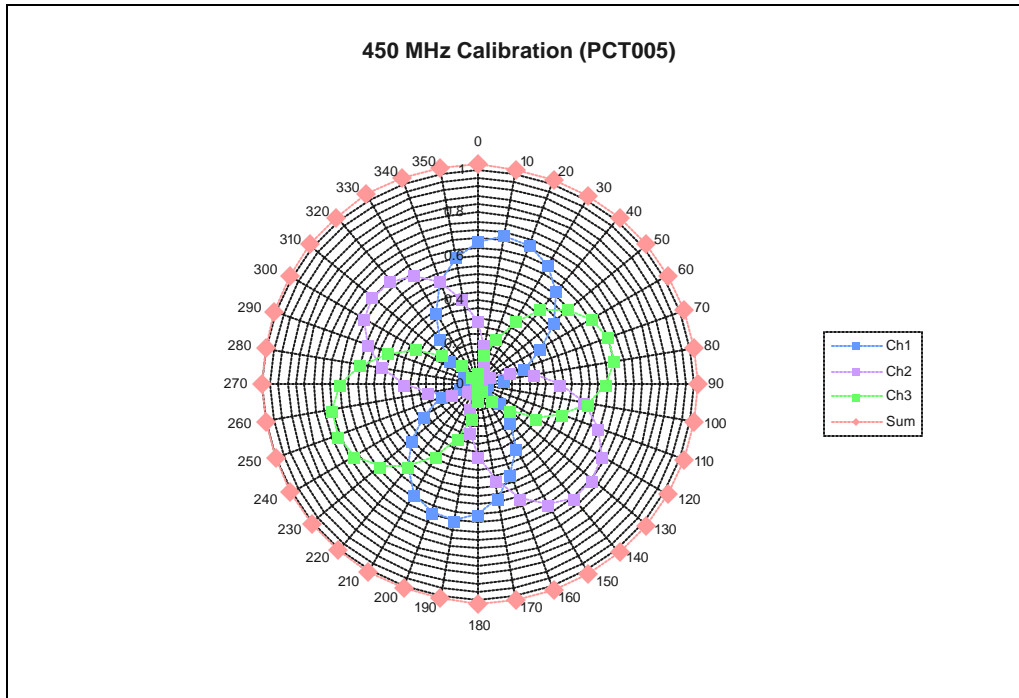
**Diode Compression Point:** 120 mV

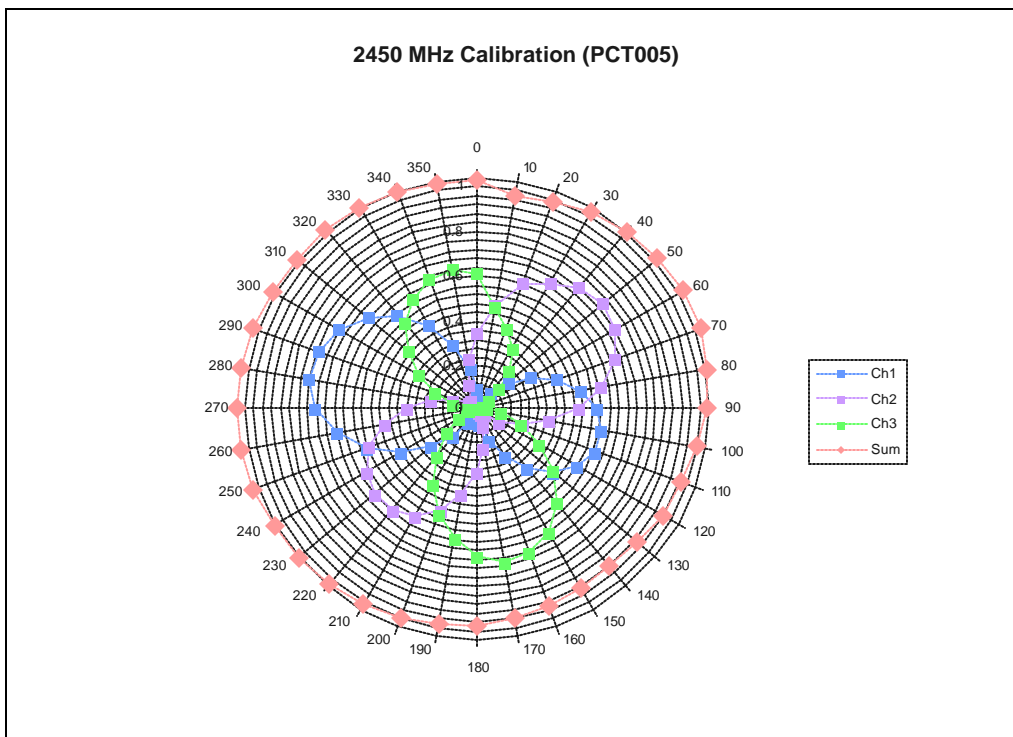
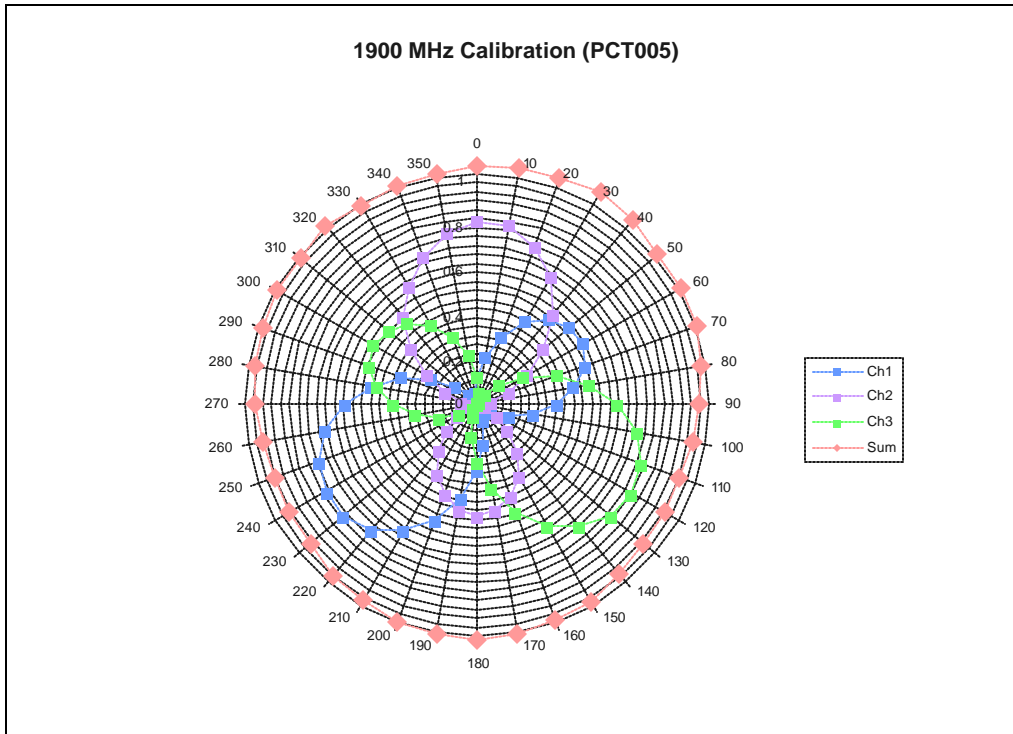
**Environmental Conditions:**

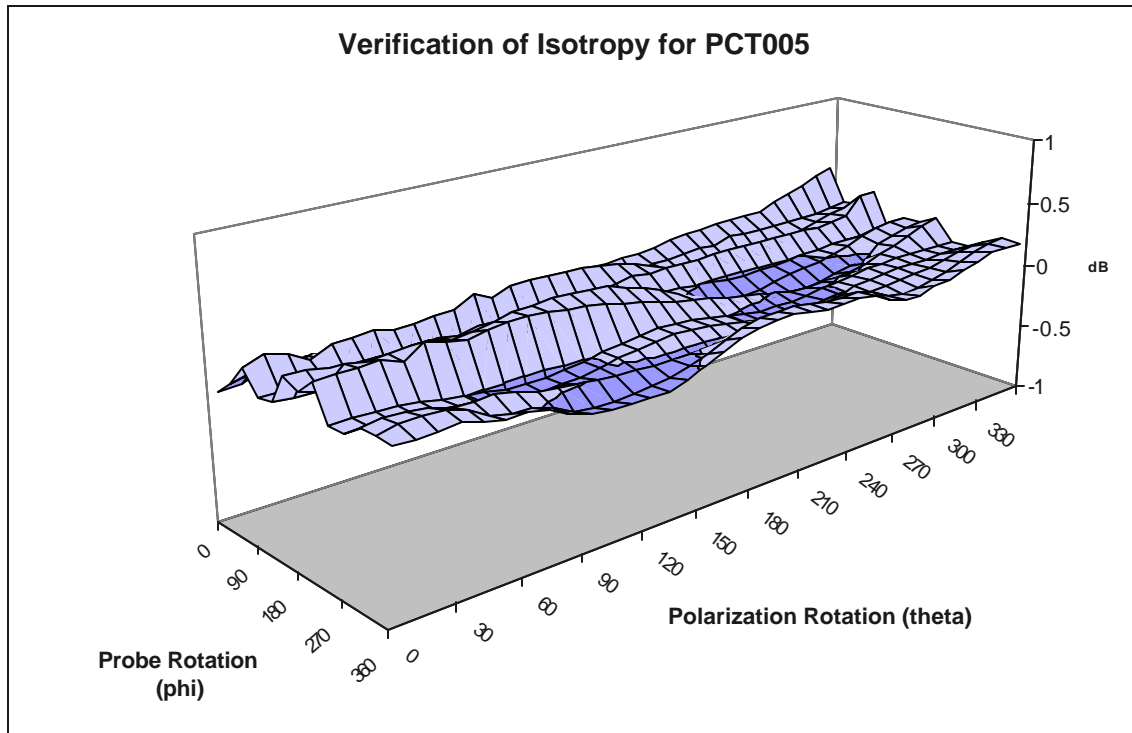
Temperature: 22.6 °C  
Relative Humidity: 41%  
Barometer: 101.2 kPa

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This probe was calibrated under the IEEE Std 1309-1966, *IEEE Standard for Calibration of Electromagnetic Field Sensors and Probes, Excluding Antennas, from 9 kHz to 40 GHz.*







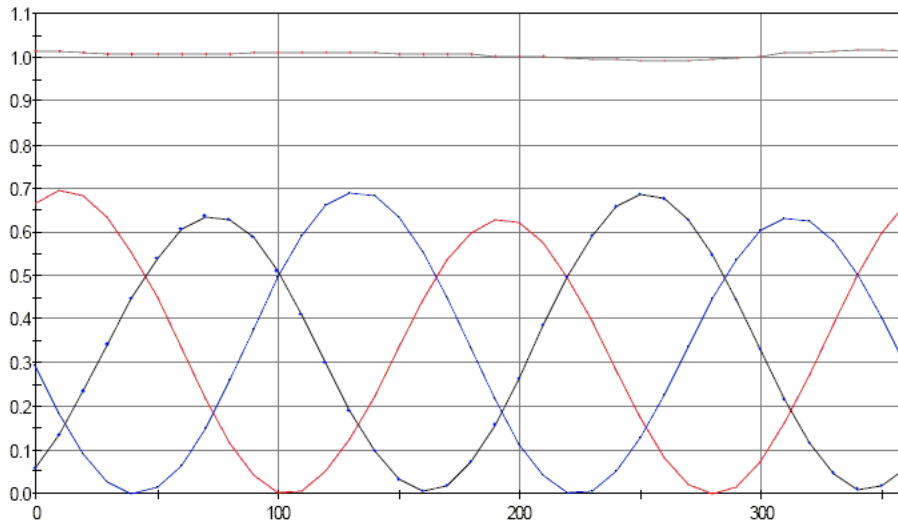


# PCTEST Calibration Laboratory

6660-B Dobbin Road  
Columbia, Maryland 21045 USA

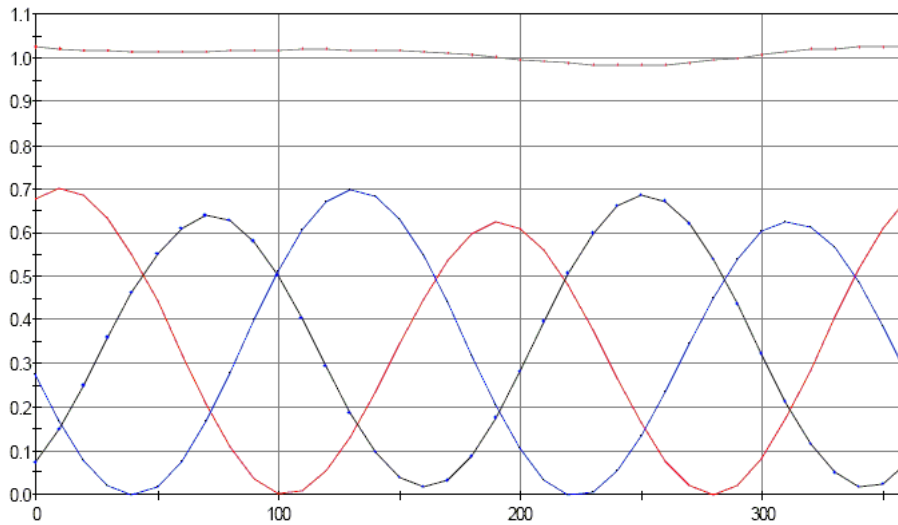
TEM Calibration Plot  
Date: 05-JAN-06 04:03:28 pm  
Probe Name: PCT005  
Frequency: 450

Sensitivity: Ch1: 3.320 Ch2: 3.289 Ch3: 3.267 mV/(mW/cm<sup>2</sup>)  
Isotropy: 1.23% 0.05 db Min=0.993 Max=1.019



TEM Calibration Plot  
Date: 05-JAN-06 03:41:45 pm  
Probe Name: PCT005  
Frequency: 835

Sensitivity: Ch1: 3.807 Ch2: 3.736 Ch3: 3.821 mV/(mW/cm<sup>2</sup>)  
Isotropy: 2.12% 0.09 db Min=0.985 Max=1.028



# PCTEST Calibration Laboratory

6660-B Dobbin Road  
Columbia, Maryland 21045 USA

## TEM Calibration Plot

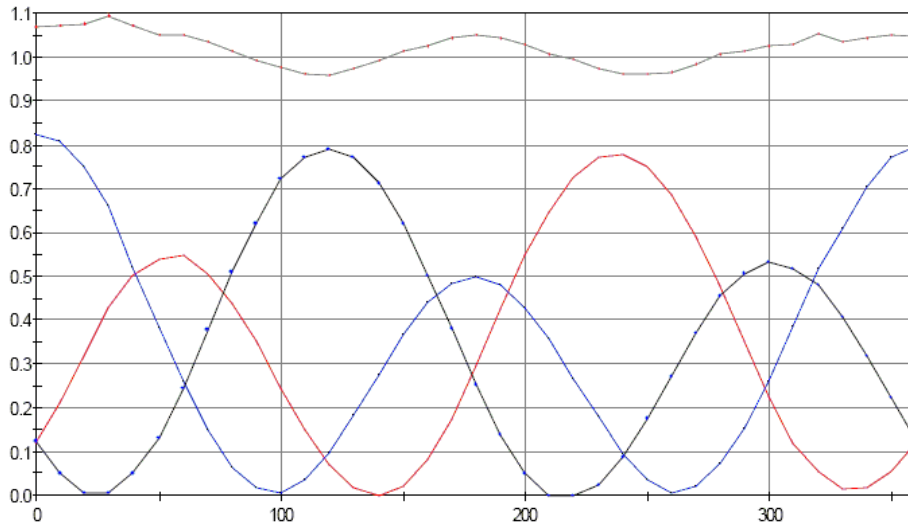
Date: 05-JAN-06 11:08:15 am

Probe Name: PCT005

Frequency: 1900

Sensitivity: Ch1: 5.115 Ch2: 4.969 Ch3: 4.453 mV/(mW/cm<sup>2</sup>)

Isotropy: 6.79% 0.29 db Min=0.961 Max=1.097



## TEM Calibration Plot

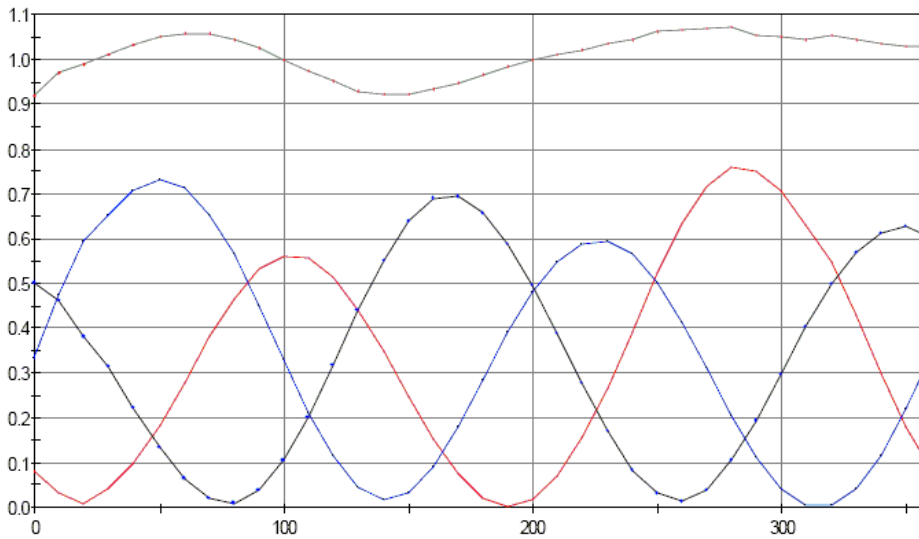
Date: 05-JAN-06 11:38:38 am

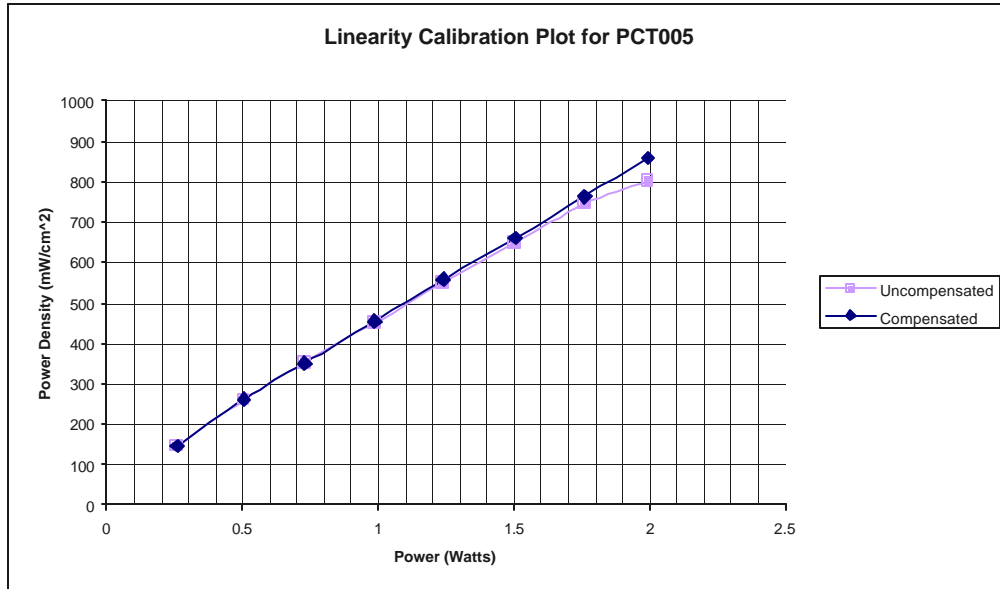
Probe Name: PCT005

Frequency: 2450

Sensitivity: Ch1: 5.496 Ch2: 4.887 Ch3: 5.267 mV/(mW/cm<sup>2</sup>)

Isotropy: 7.61% 0.32 db Min=0.921 Max=1.074





### Probe Physical Characteristics

Serial Number:	PCT005
Model:	E-020
Sensor Offset:	1.56 mm
Sensor Length:	2.5 mm
Tip Enclosure:	Ertalyte
Tip Diameter:	5 mm
Tip Length:	60 mm
Total Length:	290 mm



## PCTEST Calibration Laboratory

6660-B Dobbin Road  
Columbia, Maryland 21045 USA

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### Test Equipment

The test equipment used during the probe calibration are listed as follows:

EQUIPMENT SPECIFICATIONS		
Type	Calibration Due	Asset Number/ Serial Number
CRS Robot F3	February 2007	RAF0134133
CRS C500C Motion Controller	February 2007	RCB0003303
CRS Teach Pendant (Joystick)	February 2007	STP0132231
DELL Computer, Pentium 4 1.6 GHz, Windows 2000™	February 2007	4PJZ111
Flat SAM Phantom (P-SAM-FLAT)	February 2007	94X-097
IDX Robot End Effector (EE-103-C)	February 2007	07111223
IDX Probe Amplifier	February 2007	07111113
Validation Dipole D835V2	October 2006	PCT441
Validation Dipole D1900V2	February 2007	PCT512
Validation Dipole D2450V2	October 2006	PCT641
HP-778D Dual-Directional Coupler (0.1 ~ 2.0 GHz)	November 2006	PCT664
MicroCircuits Directional Coupler (4.0 ~ 8.0 GHz)	November 2006	PE2204-6
Amplifier Research 5S1G4 Power Amp	January 2007	PCT540
IFI T184-10 Power Amplifier (4.0 ~ 18.0 GHz)	December 2006	5957
HP-8241A (250kHz ~ 20 GHz) Signal Generator	December 2006	88934
HP-8753E (30kHz ~ 6GHz) Network Analyzer	January 2007	PCT552
Rohde & Schwarz Power Meter NRVS 1020.1809.02	January 2007	835360/079
Rohde & Schwarz Power Sensor NRV -Z53 858.0500.02	April 2006	846076/007
HP85070B Dielectric Probe Kit	January 2007	PCT501
IFI CC110EXX TEM Cell (DC to 2000 MHz)	January 2007	PCT498
EMCO 3115 Horn Antenna (2.0 ~ 18.0 GHz)	August 2006	PCT496
Guildline 5150 Precision Dual-Thermometer	November 2006	66145