

SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Brain

14.9 MEASUREMENT RESULTS (PCS CDMA Left Head SAR – Tilt)								
FREQUENCY		Modulation	Begin / End POWER [‡]			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		(dBm)		Battery			
1880.00	0600	PCS CDMA	24.5	24.5	Standard	Ear / 15° Tilt	In	0.20
1880.00	0600	PCS CDMA	24.5	24.5	Standard	Ear / 15° Tilt	Out	0.05
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

NOTES:



1. The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
 2. All modes of operation were investigated, and worst-case results are reported.
 3. Battery is fully charged for all readings. *Standard batteries are the only battery options.*
- | | | | | | | |
|---------------------------|-------------------------------------|------------------|-------------------------------------|------------------------|--------------------------|------------|
| ‡Power Measured | <input checked="" type="checkbox"/> | Conducted | <input type="checkbox"/> | ERP | <input type="checkbox"/> | EIRP |
| 4. SAR Measurement System | <input type="checkbox"/> | DASY3 | <input checked="" type="checkbox"/> | IDX | | |
| Phantom Configuration | <input checked="" type="checkbox"/> | Left Head | <input type="checkbox"/> | Flat Phantom | <input type="checkbox"/> | Right Head |
| 5. SAR Configuration | <input checked="" type="checkbox"/> | Head | <input type="checkbox"/> | Body | <input type="checkbox"/> | Hand |
| 6. Test Signal Call Mode | <input checked="" type="checkbox"/> | Manu. Test Codes | <input type="checkbox"/> | Base Station Simulator | | |
7. Tissue parameters and temperatures are listed on the SAR plots.
 8. Liquid tissue depth is 15.1 cm. ± 0.1
 9. Justification for reduced test configurations: Per FCC/OET Bulletin 65 Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (left, right, cheek/touch, tile/ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).



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**Figure 14.9 Left Head SAR Test Setup
-- Ear / Tilt Position --**

PCTEST SAR TEST REPORT	 FCC CERTIFICATION		Reviewed by: Quality Manager
SAR Filename: SAR.220322121.A3L	Test Dates: Mar. 21-22, 27-28, & Apr. 8, 2002	Phone Type: Tri-Mode Dual-Band	FCC ID: A3LSPHA500

SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Brain

14.10 MEASUREMENT RESULTS (PCS Right Head SAR – Tilt)								
FREQUENCY		Modulation	Begin / End POWER [‡]			Device Test Position	Antenna Position	SAR (W/kg)
MHz	Ch.		(dBm)		Battery			
1880.00	600	PCS CDMA	26.0	26.0	Standard	Ear / 15° Tilt	In	0.17
1880.00	600	PCS CDMA	26.0	26.0	Standard	Ear / 15° Tilt	Out	0.06
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Brain 1.6 W/kg (mW/g) averaged over 1 gram		

NOTES:



1. The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
 2. All modes of operation were investigated, and worst-case results are reported.
 3. Battery is fully charged for all readings. *Standard batteries are the only battery options.*
- | | | | |
|---------------------------|--|---|--|
| *Power Measured | <input checked="" type="checkbox"/> Conducted | <input type="checkbox"/> ERP | <input type="checkbox"/> EIRP |
| 4. SAR Measurement System | <input type="checkbox"/> DASY3 | <input checked="" type="checkbox"/> IDX | |
| Phantom Configuration | <input type="checkbox"/> Left Head | <input type="checkbox"/> Flat Phantom | <input checked="" type="checkbox"/> Right Head |
| 5. SAR Configuration | <input checked="" type="checkbox"/> Head | <input type="checkbox"/> Body | <input type="checkbox"/> Hand |
| 6. Test Signal Call Mode | <input checked="" type="checkbox"/> Manu. Test Codes | <input type="checkbox"/> Base Station Simulator | |
7. Tissue parameters and temperatures are listed on the SAR plots.
 8. Liquid tissue depth is 15.1 cm. ± 0.1
 9. Justification for reduced test configurations: Per FCC/OET Bulletin 65 Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (left, right, cheek/touch, tile/ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).



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**Figure 14.10 Right Head SAR Test Setup
-- Ear / 15° Tilt Position --**

PCTEST SAR TEST REPORT	 FCC CERTIFICATION		Reviewed by: Quality Manager
SAR Filename: SAR.220322121.A3L	Test Dates: Mar. 21-22, 27-28, & Apr. 8, 2002	Phone Type: Tri-Mode Dual-Band	FCC ID: A3LSPHA500

SAR DATA SUMMARY (Continued)

Mixture Type: 1900MHz Muscle

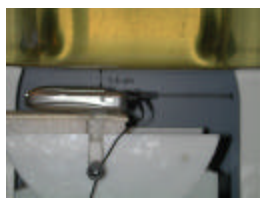
14.13 MEASUREMENT RESULTS (PCS CDMA Body SAR w/o Holster)								
FREQUENCY		Modulation	Begin / End POWER [†]			Separation Distance (cm) ^{††}	Antenna Position	SAR (W/kg)
MHz	Ch.		(dBm)		Battery			
1851.25	0025	PCS CDMA	24.5	24.5	Standard	1.5 [w/o Holster]	In	0.21
1851.25	0025	PCS CDMA	24.5	24.5	Standard	1.5 [w/o Holster]	Out	0.12
1880.00	0600	PCS CDMA	24.5	24.5	Standard	1.5 [w/o Holster]	In	0.32
1880.00	0600	PCS CDMA	24.5	24.5	Standard	1.5 [w/o Holster]	Out	0.05
1908.75	1175	PCS CDMA	24.5	24.5	Standard	1.5 [w/o Holster]	In	0.32
1908.75	1175	PCS CDMA	24.5	24.5	Standard	1.5 [w/o Holster]	Out	0.28
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						Muscle 1.6 W/kg (mW/g) averaged over 1 gram		

NOTES:

1. The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supp.C [July 2001].
 2. All modes of operation were investigated, and worst-case results are reported.
 3. Battery is fully charged for all readings. *Standard batteries are the only battery options.*
- | | | | |
|---------------------------|--|---|-------------------------------------|
| †Power Measured | <input checked="" type="checkbox"/> Conducted | <input type="checkbox"/> ERP | <input type="checkbox"/> EIRP |
| 4. SAR Measurement System | <input type="checkbox"/> DASY3 | <input checked="" type="checkbox"/> IDX | |
| Phantom Configuration | <input type="checkbox"/> Left Head | <input checked="" type="checkbox"/> Flat Phantom | <input type="checkbox"/> Right Head |
| 5. SAR Configuration | <input type="checkbox"/> Head | <input checked="" type="checkbox"/> Body | <input type="checkbox"/> Hand |
| 6. Test Signal Call Mode | <input checked="" type="checkbox"/> Manu. Test Codes | <input type="checkbox"/> Base Station Simulator | |
| 7. ††Test Configuration | <input type="checkbox"/> With Holster | <input checked="" type="checkbox"/> Without Holster | |
8. Tissue parameters and temperatures are listed on the SAR plots.
 9. Both sides of the phone were tested and the worst-case side is reported.
 10. Liquid tissue depth is 15.1 cm. ± 0.1

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**Figure 14.13 Body SAR Test Setup
-- w/o Holster --**

PCTEST SAR TEST REPORT		FCC CERTIFICATION		Reviewed by: Quality Manager
SAR Filename: SAR.220322121.A3L	Test Dates: Mar. 21-22, 27-28, & Apr. 8, 2002	Phone Type: Tri-Mode Dual-Band	FCC ID: A3LSPHA500	Page 30 of 33

SAR Data Report 02071727

Start : 17-Jul-02 05:29:25 pm
End : 17-Jul-02 05:35:30 pm
Code Version : 4.08
Robot Version: 4.08

Product Data:

Type : SAMSUNG
Model Number : SPH-A500
Serial Number : 2
Frequency : 1880.00 MHz
Transmit Pwr : 0.280 W
Antenna Type : Helical
Antenna Posn. : In

Measurement Data:

Phantom Name : SAM-R
Phantom Type : Right Ear
Tissue Type : Brain
Tissue Dielectric : 41.110
Tissue Conductivity : 1.420
Tissue Density : 1.000
Robot Name : CRS

Probe Data:

Probe Name : PCT002
Probe Type : E Fld Triangle
Frequency : 1900 MHz
Tissue Type : Brain
Calibrated Dielectric : 40.200
Calibrated Conductivity : 1.410
Calibrated Density : 1.000
Probe Offset : 2.400 mm
Conversion Factor : 4.700
Probe Sensitivity : 3.000 2.995 2.653 mV/(mW/cm^2)
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec
Count: 100 Samples
NIDAQ Gain: 5

Comments:

PCS CH-25
Tilt
CF=1; Amb. Temp= 22.2 'C; Liq. Temp=22.0 'C

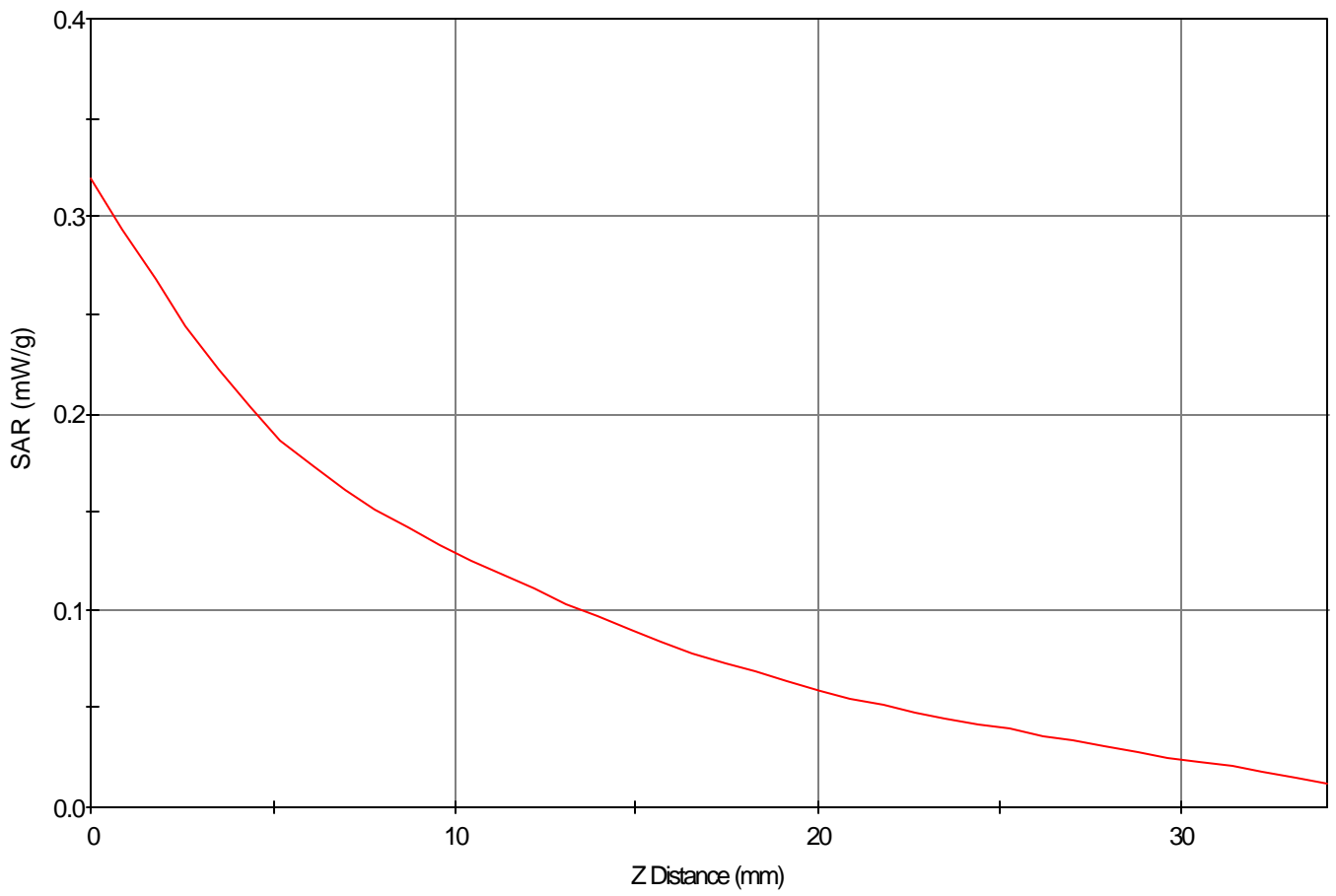
Area Scan - Max Peak SAR Value at x=76.0 y=8.0 = 0.14 W/kg

Zoom Scan - Max Peak SAR Value at x=84.0 y=5.0 z=0.0 = 0.32 W/kg

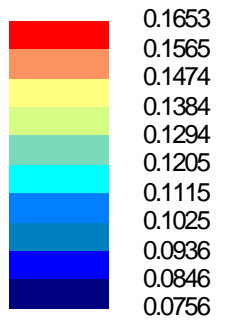
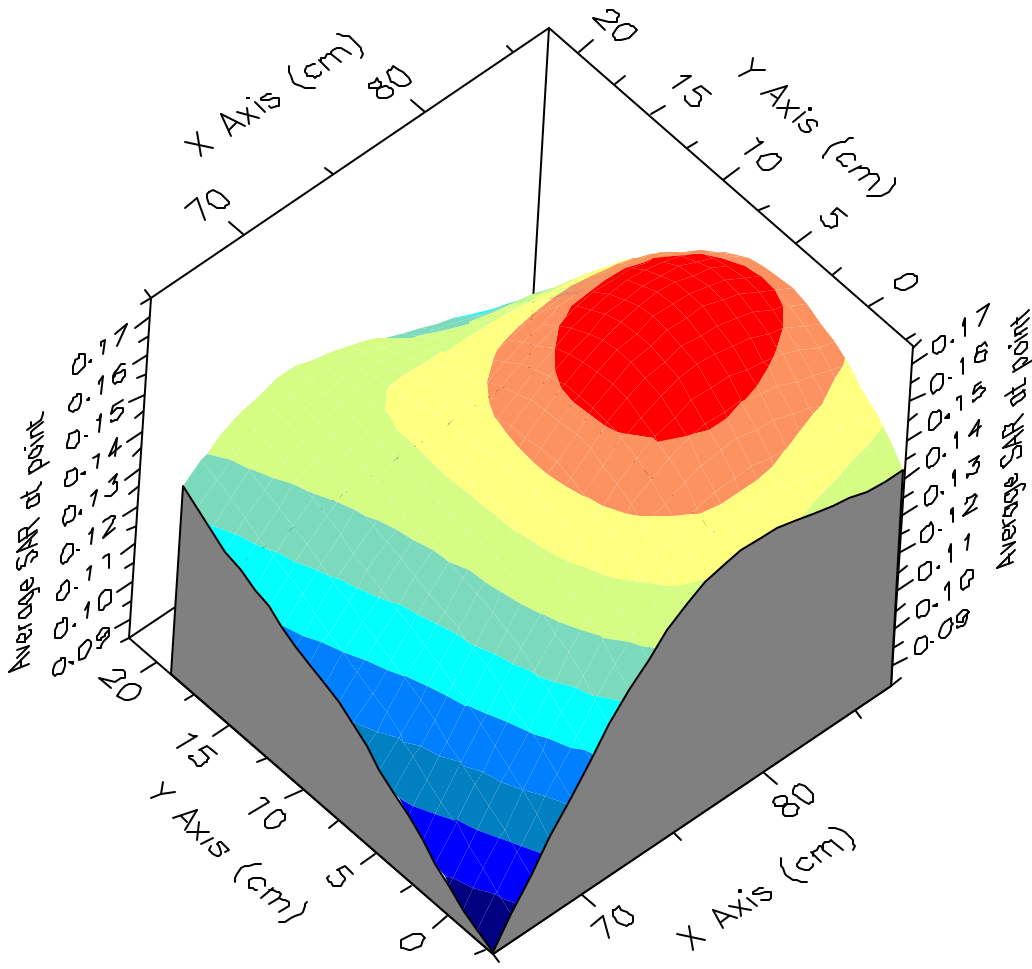
Max 1g SAR at x=81.0 y=5.0 z=0.0 = 0.17 W/kg

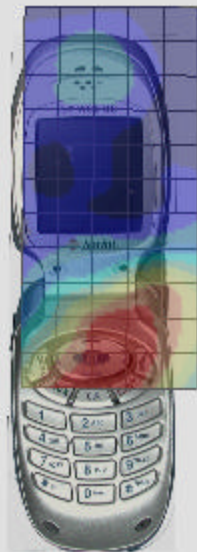
Max 10g SAR at x=81.0 y=5.0 z=0.0 = 0.11 W/kg

SAR - Z Axis
at Hotspot x:84.0 y:5.0



1g SAR Values





SAR Data Report 02071726

Start : 17-Jul-02 04:59:33 pm
End : 17-Jul-02 05:24:57 pm
Code Version : 4.08
Robot Version: 4.08

Product Data:

Type : SAMSUNG
Model Number : SPH-A500
Serial Number : 2
Frequency : 1880.00 MHz
Transmit Pwr : 0.280 W
Antenna Type : Helical
Antenna Posn. : In

Measurement Data:

Phantom Name : SAM-L
Phantom Type : Left Ear
Tissue Type : Brain
Tissue Dielectric : 41.110
Tissue Conductivity : 1.420
Tissue Density : 1.000
Robot Name : CRS

Probe Data:

Probe Name : PCT002
Probe Type : E Fld Triangle
Frequency : 1900 MHz
Tissue Type : Brain
Calibrated Dielectric : 40.200
Calibrated Conductivity : 1.410
Calibrated Density : 1.000
Probe Offset : 2.400 mm
Conversion Factor : 4.700
Probe Sensitivity : 3.000 2.995 2.653 mV/(mW/cm^2)
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec
Count: 100 Samples
NIDAQ Gain: 5

Comments:

PCS Mode CH-0600
Tilt
Amb. Temp= 22.2 'C; Liq. Temp=22.2 'C

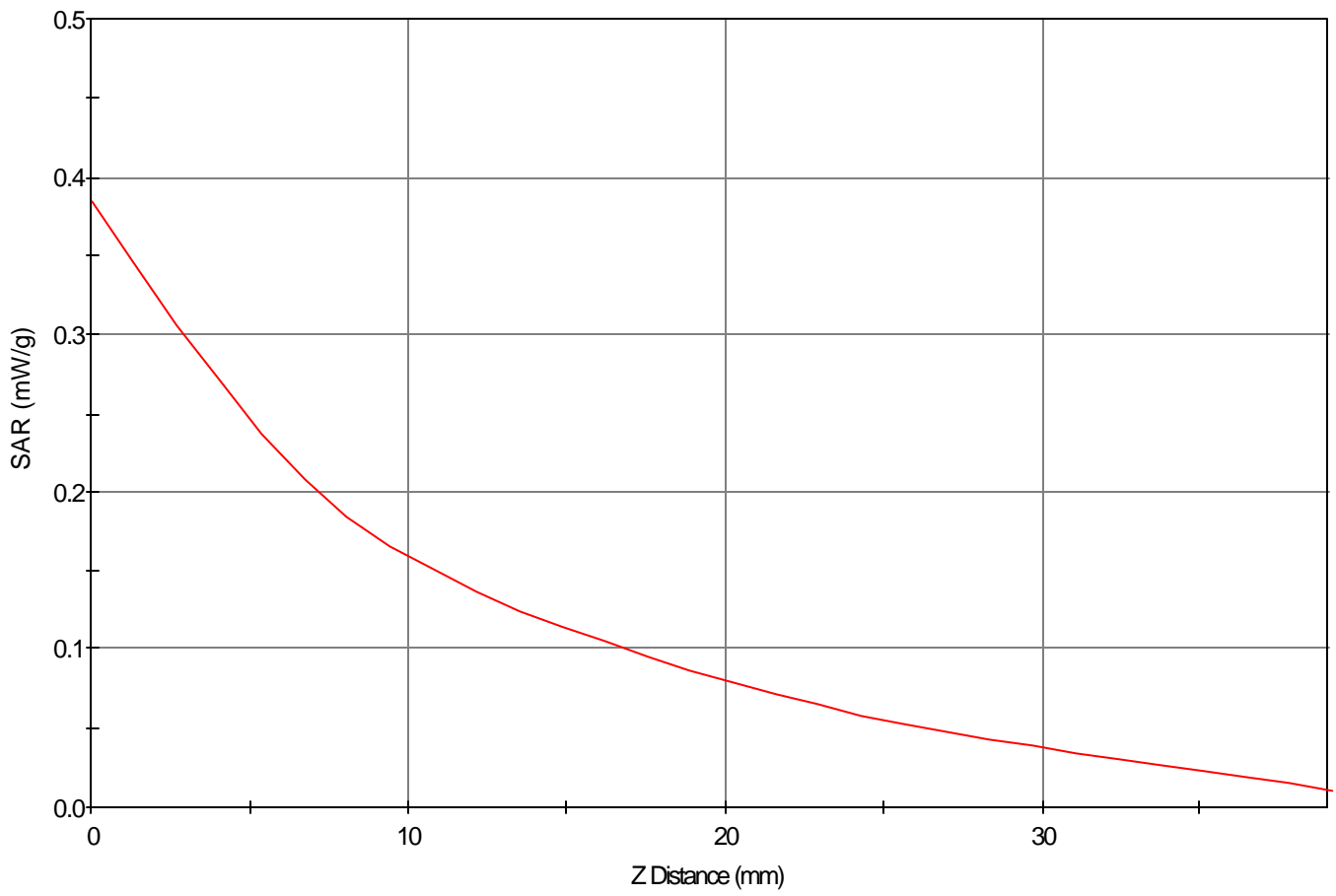
Area Scan - Max Peak SAR Value at x=80.0 y=-3.0 = 0.21 W/kg

Zoom Scan - Max Peak SAR Value at x=74.0 y=5.0 z=0.0 = 0.39 W/kg

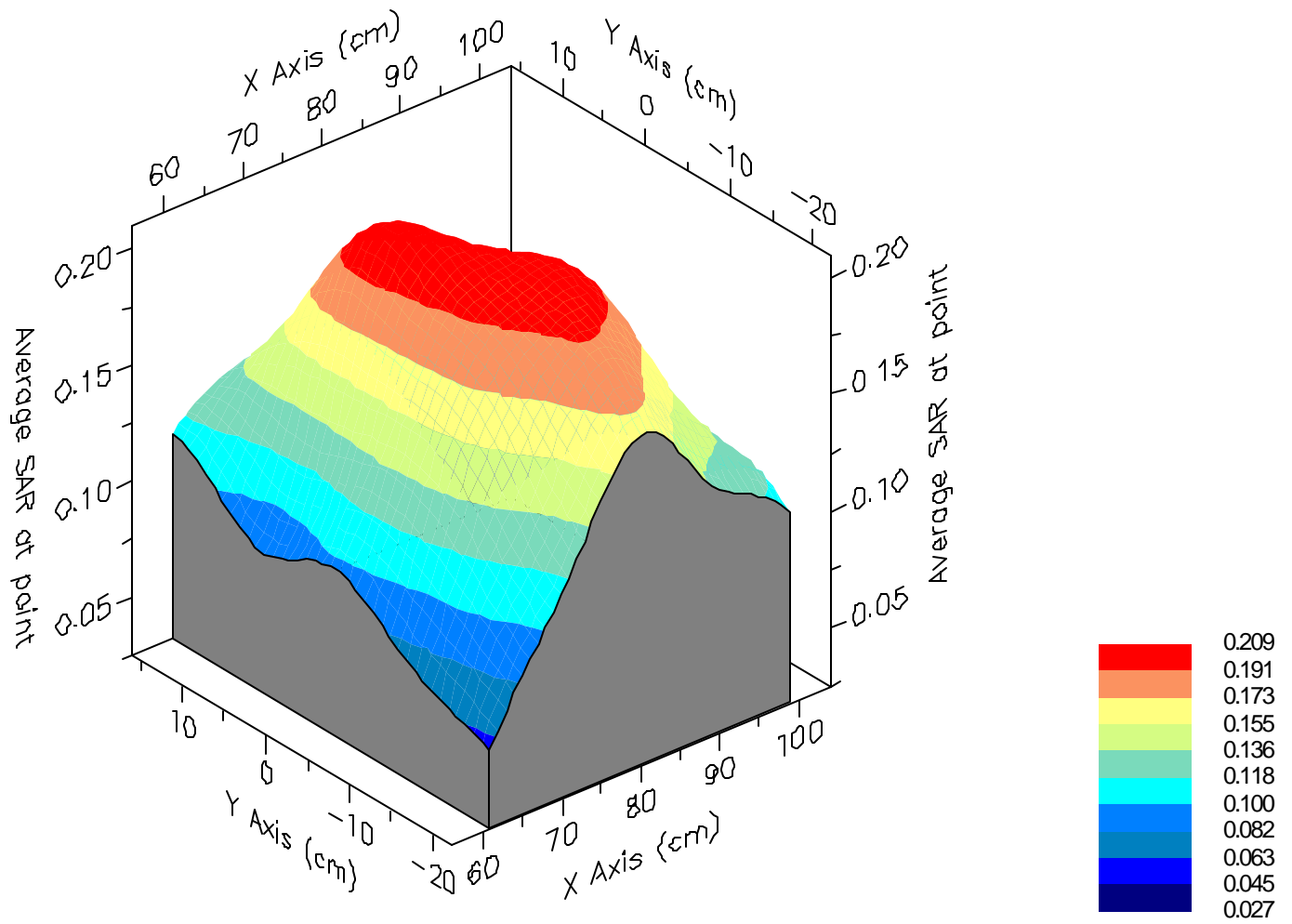
Max 1g SAR at x=76.0 y=3.0 z=0.0 = 0.20 W/kg

Max 10g SAR at x=80.0 y=-4.0 z=0.0 = 0.13 W/kg

SAR - Z Axis
at Hotspot x:74.0 y:5.0



1g SAR Values





SAR Data Report 02071725

Start : 17-Jul-02 04:10:32 pm
End : 17-Jul-02 04:23:03 pm
Code Version : 4.08
Robot Version: 4.08

Product Data:

Type : SAMSUNG
Model Number : SPH-A500
Serial Number : 2
Frequency : 1908.75 MHz
Transmit Pwr : 0.280 W
Antenna Type : Helical
Antenna Posn. : In

Measurement Data:

Phantom Name : SAM-FLAT
Phantom Type : Uniphantom
Tissue Type : Muscle
Tissue Dielectric : 54.000
Tissue Conductivity : 1.530
Tissue Density : 1.000
Robot Name : CRS

Probe Data:

Probe Name : PCT002
Probe Type : E Fld Triangle
Frequency : 1900 MHz
Tissue Type : Muscle
Calibrated Dielectric : 53.900
Calibrated Conductivity : 1.480
Calibrated Density : 1.000
Probe Offset : 2.400 mm
Conversion Factor : 4.500
Probe Sensitivity : 3.000 2.995 2.653 mV/(mW/cm^2)
Amplifier Gains : 20.00 20.00 20.00

Sample:

Rate: 6000 Samples/Sec
Count: 100 Samples
NIDAQ Gain: 5

Comments:

PCS CH-1175
Body
CF=1; Amb. Temp= 22.2 'C; Liq. Temp=21.8 'C

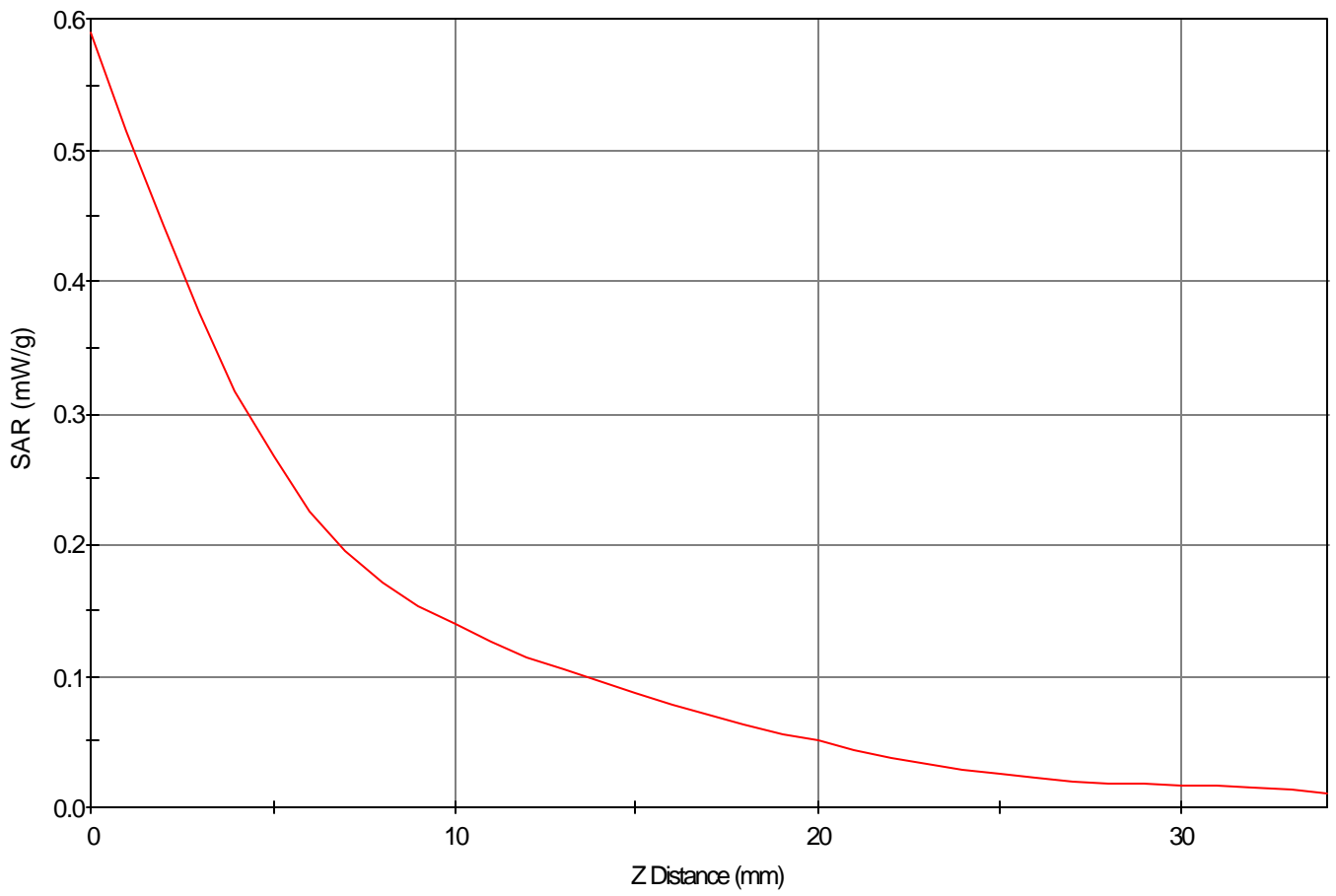
Area Scan - Max Peak SAR Value at x=-5.0 y=-9.0 = 0.29 W/kg

Zoom Scan - Max Peak SAR Value at x=-5.0 y=-17.0 z=0.0 = 0.59 W/kg

Max 1g SAR at x=-4.0 y=-16.0 z=0.0 = 0.32 W/kg

Max 10g SAR at x=-4.0 y=-10.0 z=0.0 = 0.18 W/kg

SAR - Z Axis
at Hotspot x:-5.0 y:-17.0



1g SAR Values

