

SAR TEST DATA SUMMARY

Ambient TEMPERATURE (°C)	22.0
Relative HUMIDITY (%)	41.1
Atmospheric PRESSURE (kPa)	101.2

Mixture Type: Brain

Dielectric Constant: 41.3

Conductivity: 1.65

Closest Distance (between E-Probe & Phone): 2.54 cm

Measurement Results (PCS Head SAR)

FREQUENCY		Modulation	POWER (dBm)	Phantom Position	Antenna Position	SAR (W/kg)
MHz	Ch.					
1851.25	25	CDMA	25.0	Face	Fixed	0.6361
1880.00	600	CDMA	25.0	Face	Fixed	0.4575
1908.75	1175	CDMA	25.0	Face	Fixed	0.4748
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:

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration.
- All modes of operation were investigated and the worst-case are reported.
- Power Measured ☒ Conducted ☐ EIRP ☐ ERP
- SAR Measurement System ☐ SPEAG ☒ IDX
- SAR Configuration ☒ Head ☐ Body ☐ Hand


Randy Ortanez
President



Fig. A
Head SAR Test Setup

SAMSUNG FCC ID: A3LSPHS100 (Model: SPH-S100)
PCS-Mode Watch Phone (PCS CDMA)

SAR TEST DATA SUMMARY

Ambient TEMPERATURE (°C)	22.0
Relative HUMIDITY (%)	41.1
Atmospheric PRESSURE (kPa)	101.2

Measured Constants:

Mixture Type:	Muscle
Dielectric Constant:	54.2
Conductivity:	1.45

Measurement Results (Wrist SAR w/ Earjack)

FREQUENCY		Modulation	POWER (dBm)	Phantom Position	Antenna Position	SAR (W/kg)
MHz	Ch.					
1851.25	25	CDMA	25.0	Forearm	Fixed	2.6365
ANSI / IEEE C95.1 1992 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				Wrist 4.0 W/kg (mW/g) averaged over 10 grams		

NOTES:

- The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration.
- All modes of operation were investigated and the worst-case are reported.
- Power Measured ☒ Conducted ☐ EIRP ☐ ERP
- SAR Measurement System ☐ SPEAG ☒ IDX
- SAR Configuration ☐ Head ☐ Body ☒ Forearm


 Randy Ortanez
 President



Fig. B
Wrist SAR Test Setup

SAMSUNG FCC ID: A3LSPHS100 (Model: SPH-S100)
PCS-Mode Watch Phone (PCS CDMA)

File : c:/idx3/SYSTEM/SARMEAS3/data/Normal/01110201_SAR.VLT
Start : 2-Nov-101 09:33:01 am End : 2-Nov-101 09:39:32 am

Radio Type : SAMSUNG
Model Number : SPH-S100
Serial Number : B01E1A7C
Frequency : 1851.25 MHz
Peak Trans. Pwr : 0.320 W
Start Trans. Pwr: 0.320 W
Antenna Type : Helical
Antenna Posn. : Internal
Phantom Type : Body
Phantom Posn. : Abdomen
Scan Type : SAR 10g
Probe Name : PCTEST
Field Type : E Field
Orientation : 0 Degrees

Mixture Type = Muscle
Mixture Dielectric Constant = 54.200
Mixture Conductivity = 1.450

Comment :
SAMSUNG PCS-MODE PHONE
CH 0025 Conducted 25.0 dBm
WRIST SAR

Robot : PCTEST

Probe Offset = 0.20 cm
Sensor Factor = 0.0108
Conversion Factor = 0.496

PCTEST Amplifier Channel Settings : 0.309 0.361 0.421

Max Location : X = 1.000, Y = -1.000, Z = 0.000 (cm) Value = 0.000

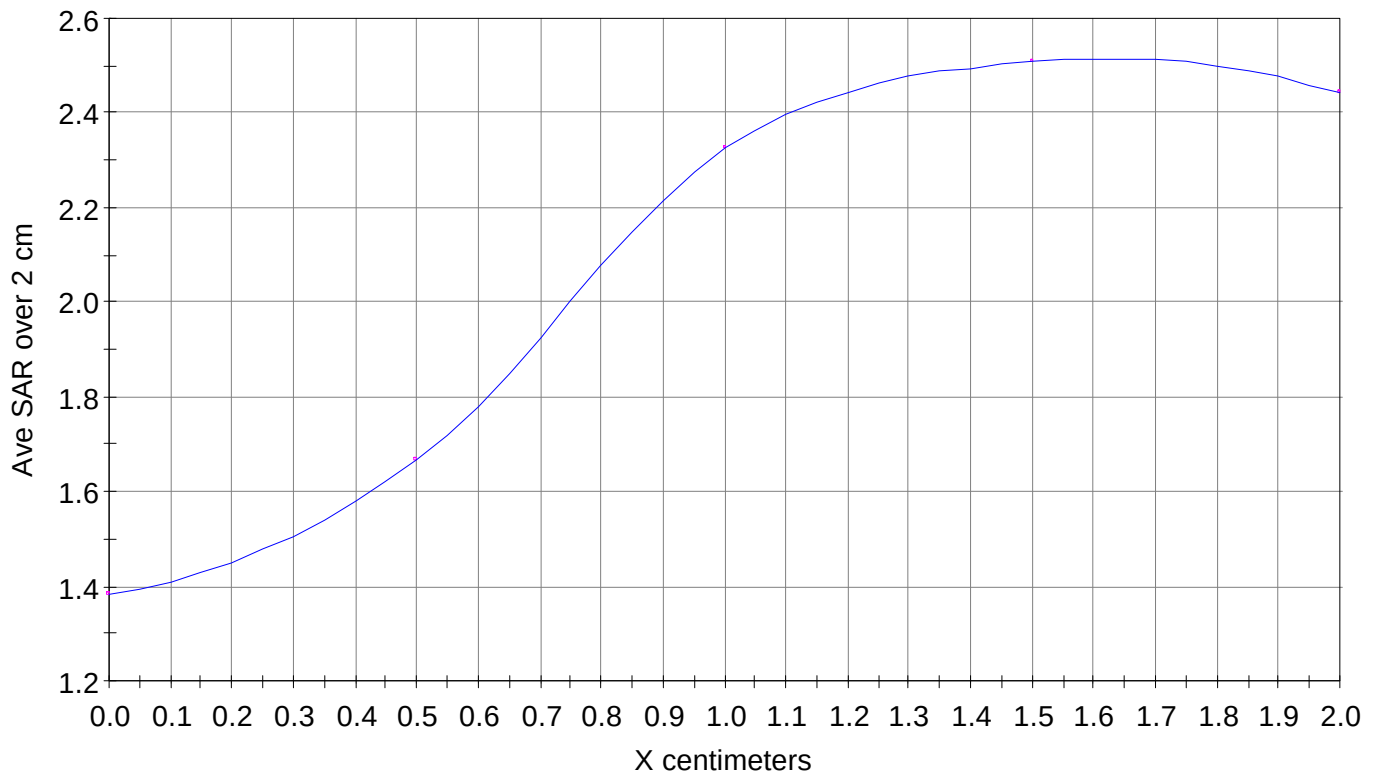
Ave. SAR over 10 g (mW/g) = 2.6365

X-Z Plane Slice Y=-1.000

File : 01110201_SAR

Start : 2-Nov-101 09:33:01 am End : 2-Nov-101 09:39:32 am

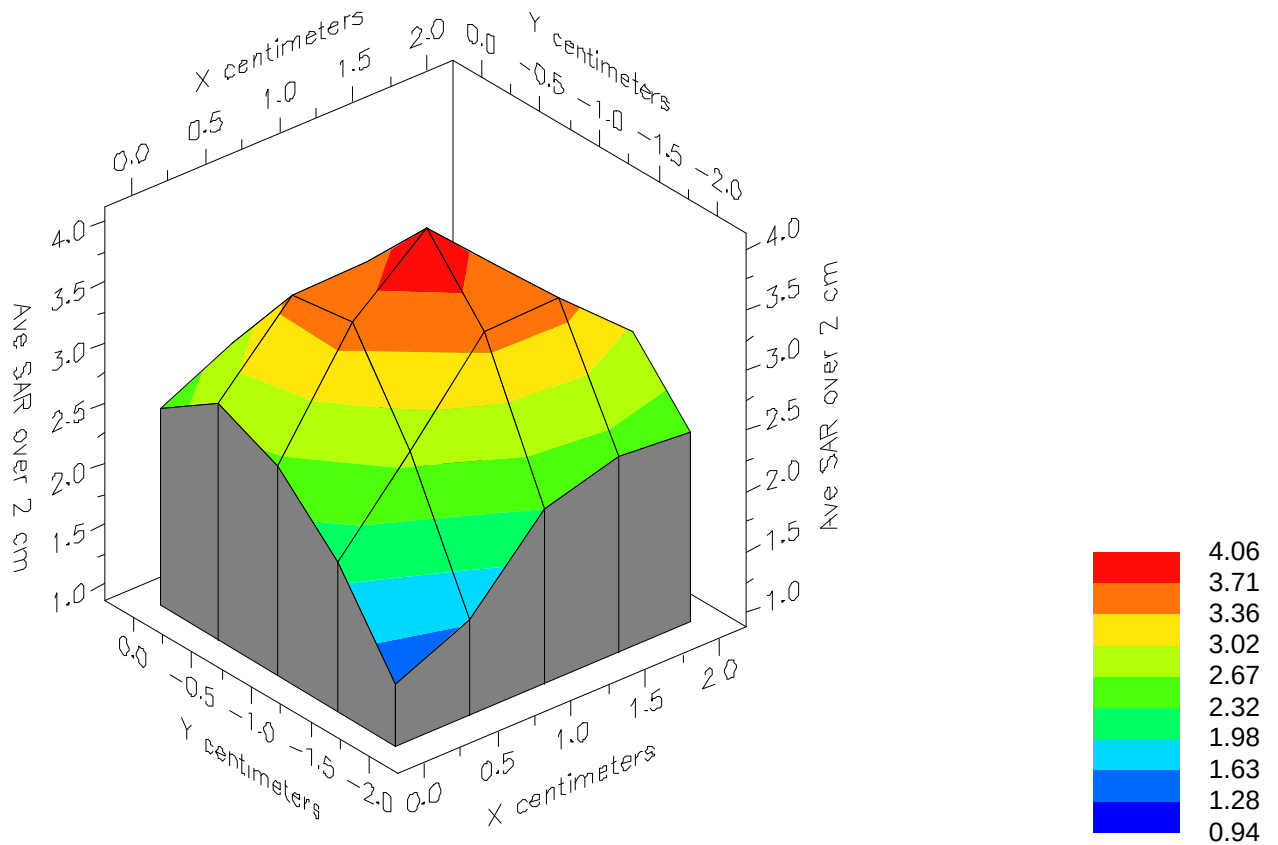
SAMSUNG/SPH-S100/B01E1A7C;1851.25MHz;W;Helical/Internal;
Body/Abdomen;SAR 10g;PCTEST/E Field/0 DegreesMuscle/54.200/1.450



File : 01110201_SAR

Start : 2-Nov-101 09:33:01 am End : 2-Nov-101 09:39:32 am

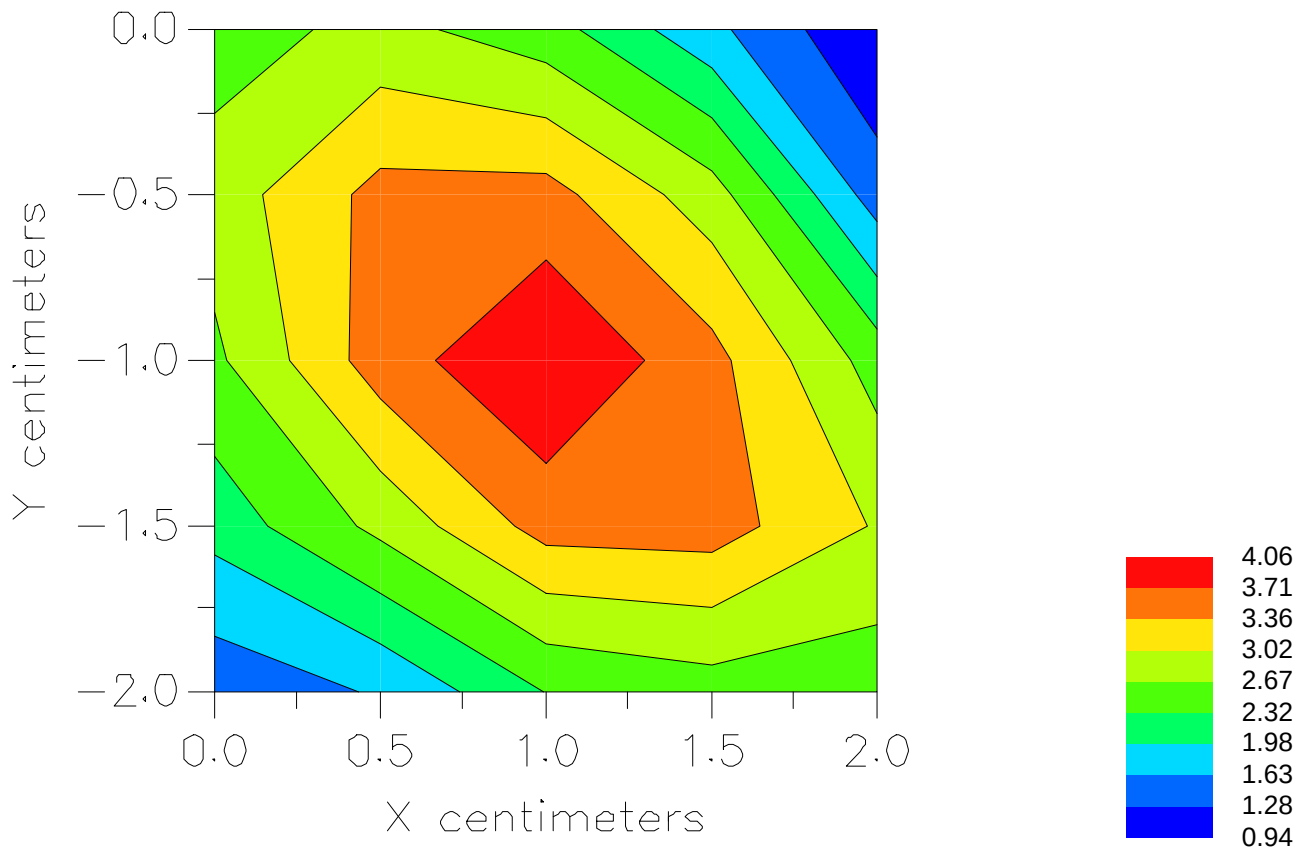
SAMSUNG/SPH-S100/B01E1A7C;1851.25MHz;W;Helical/Internal;
Body/Abdomen;SAR 10g;PCTEST/E Field/0 DegreesMuscle/54.200/1.450



File : 01110201_SAR

Start : 2-Nov-101 09:33:01 am End : 2-Nov-101 09:39:32 am

SAMSUNG/SPH-S100/B01E1A7C;1851.25MHz;W;Helical/Internal;
Body/Abdomen;SAR 10g;PCTEST/E Field/0 DegreesMuscle/54.200/1.450















File : c:/idx3/SYSTEM/SARMEAS3/data/Normal/00091104_ZOOM.VLT
Start : 11-Sep-100 02:54:54 pm End : 11-Sep-100 03:07:32 pm

Radio Type : SAMSUNG
Model Number : SPH-S100
Serial Number : B01E1A7C
Frequency : 1851.25 MHz
Peak Trans. Pwr : 0.320 W
Start Trans. Pwr: 0.320 W
Antenna Type : Helical
Antenna Posn. : Internal
Phantom Type : Head
Phantom Posn. : Face
Scan Type : ZOOM/SAR
Probe Name : PCTEST
Field Type : E Field
Orientation : 0 Degrees

Mixture Type = Brain
Mixture Dielectric Constant = 41.300
Mixture Conductivity = 1.650

Comment :
SAMSUNG PCS MODE WATCH PHONE
CHAN 0025 Conducted 25.0 dB
HEAD SAR

Robot : PCTEST

Probe Offset = 0.25 cm
Sensor Factor = 0.0108
Conversion Factor = 1.201

PCTEST Amplifier Channel Settings : 0.245 0.231 0.224

Max Location : X = -2.000, Y = -0.500, Z = 0.000 (cm) Value = 6.830

Measured Values (volts) =
6.426E-003 5.280E-003 4.375E-003 3.652E-003 3.127E-003 2.767E-003
2.551E-003 2.463E-003 2.330E-003 2.137E-003 1.886E-003 1.797E-003
1.729E-003 1.711E-003 1.688E-003 1.813E-003 1.936E-003 2.270E-003
2.963E-003 3.202E-003 2.139E-003

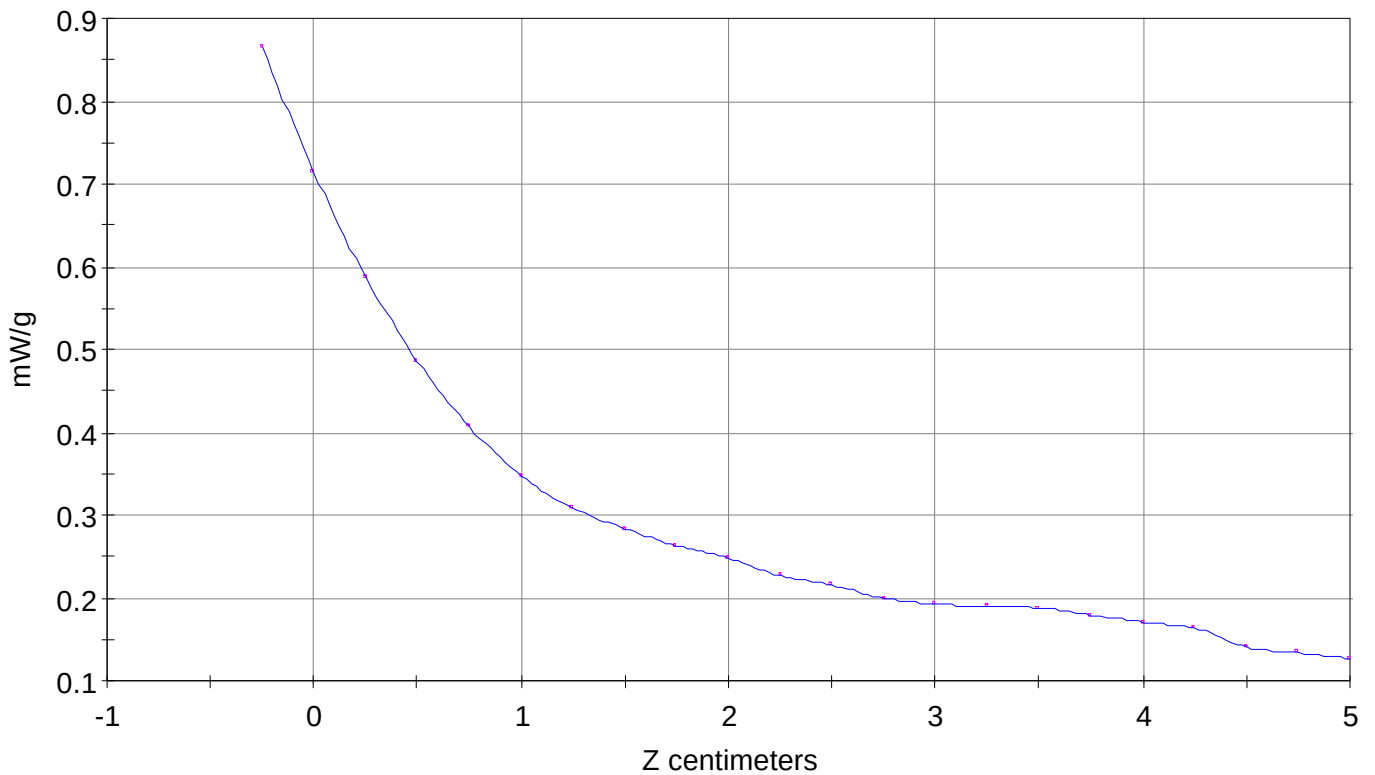
Calc. Voltage @ Surface (Vs) = 0.0078

Voltage @ 1.00 cm (Vt) = 0.0037

Ave. Voltage (Vs+Vt)/2 = 0.0057

Ave. SAR over 1 g (mW/g) = 0.6361

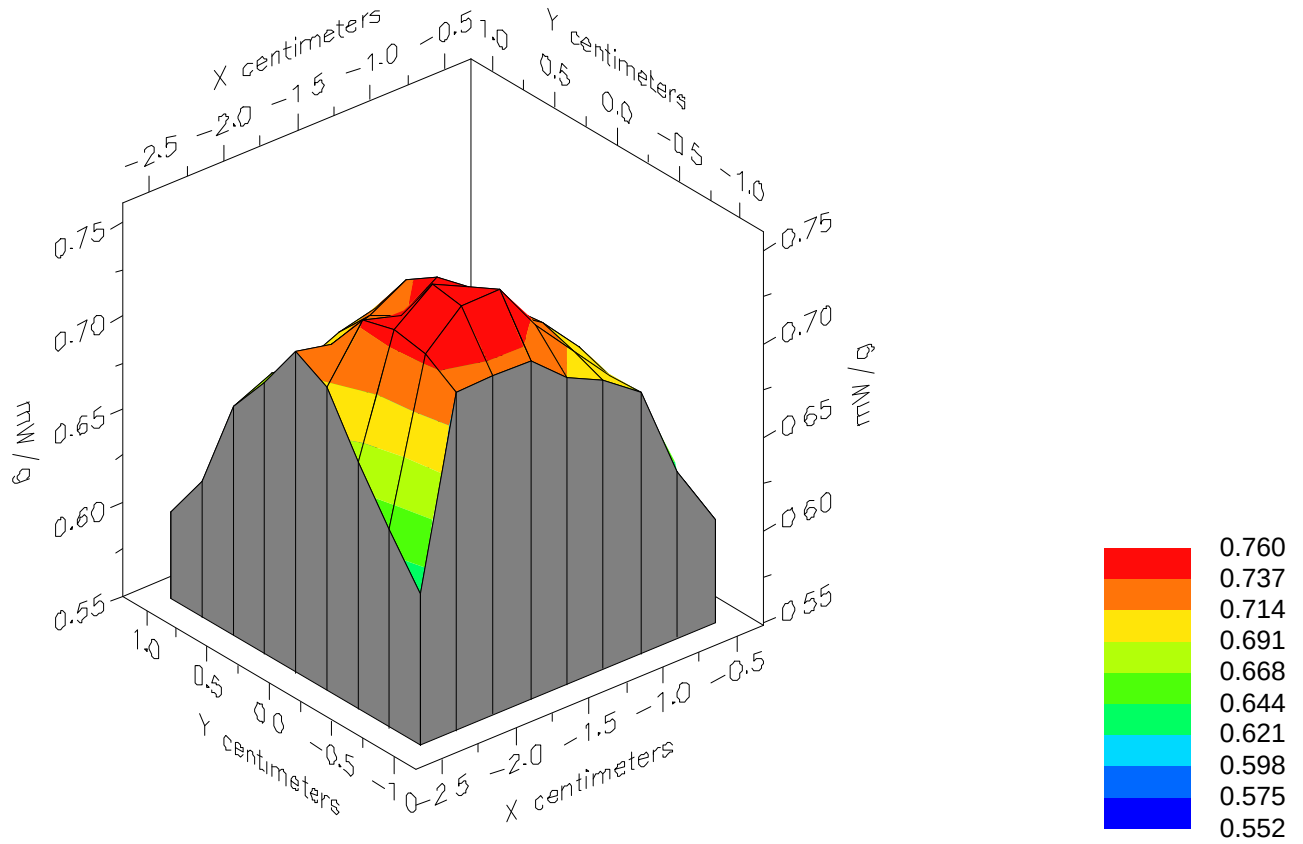
SAR Scan
File : 00091104_ZOOM
Start : 11-Sep-100 02:54:54 pm End : 11-Sep-100 03:07:32 pm
SAMSUNG/SPH-S100/B01E1A7C;1851.25MHz;W;Helical/Internal;
Head/Face;ZOOM/SAR;PCTEST/E Field/0 DegreesBrain/41.300/1.650



File : 00091104_ZOOM

Start : 11-Sep-100 02:54:54 pm End : 11-Sep-100 03:07:32 pm

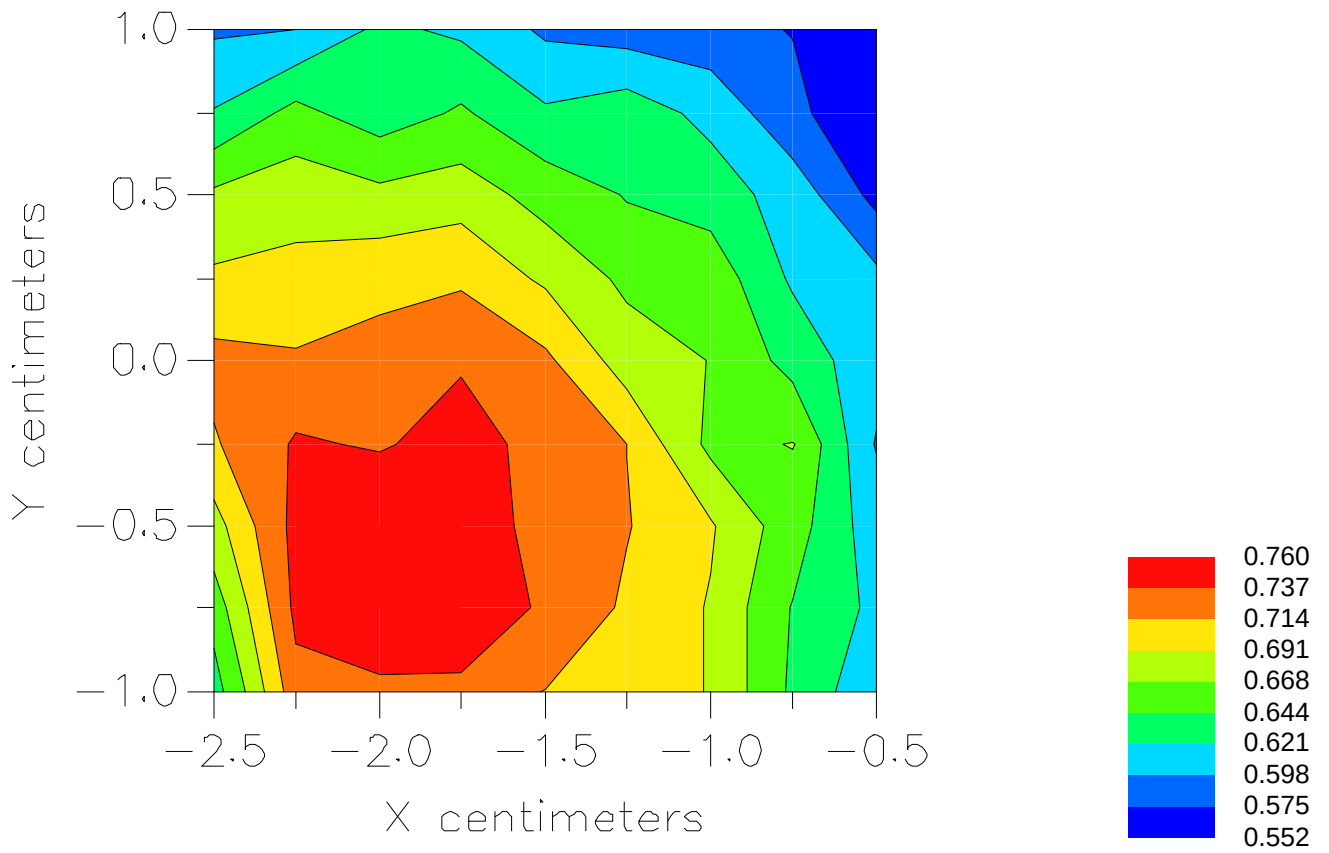
SAMSUNG/SPH-S100/B01E1A7C;1851.25MHz;W;Helical/Internal;
Head/Face;ZOOM/SAR;PCTEST/E Field/0 DegreesBrain/41.300/1.650



File : 00091104_ZOOM

Start : 11-Sep-100 02:54:54 pm End : 11-Sep-100 03:07:32 pm

SAMSUNG/SPH-S100/B01E1A7C;1851.25MHz;W;Helical/Internal;
Head/Face;ZOOM/SAR;PCTEST/E Field/0 DegreesBrain/41.300/1.650



File : c:/idx3/SYSTEM/SARMEAS3/data/Normal/00091105_ZOOM.VLT
Start : 11-Sep-100 03:27:34 pm End : 11-Sep-100 03:36:41 pm

Radio Type : SAMSUNG
Model Number : SPH-S100
Serial Number : B01E1A7C
Frequency : 1880.00 MHz
Peak Trans. Pwr : 0.320 W
Start Trans. Pwr: 0.320 W
Antenna Type : Helical
Antenna Posn. : Internal
Phantom Type : Head
Phantom Posn. : Face
Scan Type : ZOOM/SAR
Probe Name : PCTEST
Field Type : E Field
Orientation : 0 Degrees

Mixture Type = Brain
Mixture Dielectric Constant = 41.300
Mixture Conductivity = 1.650

Comment :
SAMSUNG PCS MODE WATCH PHONE
CHAN 0600 Conducted 25.0 dB
HEAD SAR

Robot : PCTEST

Probe Offset = 0.25 cm
Sensor Factor = 0.0108
Conversion Factor = 1.201

PCTEST Amplifier Channel Settings : 0.245 0.231 0.224

Max Location : X = -2.250, Y = -0.500, Z = 0.000 (cm) Value = 5.575

Measured Values (volts) =
4.569E-003 3.964E-003 3.244E-003 2.803E-003 2.473E-003 2.236E-003
2.082E-003 2.076E-003 1.961E-003 1.862E-003 1.732E-003 1.604E-003
1.547E-003 1.560E-003 1.682E-003 1.733E-003 1.788E-003 1.883E-003
2.084E-003 2.055E-003 1.725E-003

Calc. Voltage @ Surface (Vs) = 0.0054

Voltage @ 1.00 cm (Vt) = 0.0028

Ave. Voltage (Vs+Vt)/2 = 0.0041

Ave. SAR over 1 g (mW/g) = 0.4575

File : c:/idx3/SYSTEM/SARMEAS3/data/Normal/00091101_ZOOM.VLT
Start : 11-Sep-100 12:06:38 pm End : 11-Sep-100 12:18:01 pm

Radio Type : SAMSUNG
Model Number : SPH-S100
Serial Number : B01E1A7C
Frequency : 1908.75 MHz
Peak Trans. Pwr : 0.320 W
Start Trans. Pwr: 0.320 W
Antenna Type : Helical
Antenna Posn. : Internal
Phantom Type : Head
Phantom Posn. : Face
Scan Type : ZOOM/SAR
Probe Name : PCTEST
Field Type : E Field
Orientation : 0 Degrees

Mixture Type = Brain
Mixture Dielectric Constant = 41.300
Mixture Conductivity = 1.650

Comment :
SAMSUNG PCS MODE WATCH PHONE
CHAN 1175 Conducted 25.0 dB
HEAD SAR

Robot : PCTEST

Probe Offset = 0.25 cm
Sensor Factor = 0.0108
Conversion Factor = 1.201

PCTEST Amplifier Channel Settings : 0.245 0.231 0.224

Max Location : X = -2.500, Y = -0.750, Z = 0.000 (cm) Value = 5.065

Measured Values (volts) =
4.867E-003 3.562E-003 2.668E-003 1.964E-003 1.533E-003 1.170E-003
1.035E-003 9.184E-004 9.863E-004 8.204E-004 6.736E-004 4.904E-004
3.611E-004 3.407E-004 3.917E-004 5.276E-004 6.371E-004 9.245E-004
1.335E-003 8.973E-004 6.071E-004

Calc. Voltage @ Surface (Vs) = 0.0066

Voltage @ 1.00 cm (Vt) = 0.0020

Ave. Voltage (Vs+Vt)/2 = 0.0043

Ave. SAR over 1 g (mW/g) = 0.4748