## SAR Test Report (11b mode bottom low)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 09:19:34 AM End Time : 16-Nov-2010 09:34:42 AM Scanning Time : 908 secs

Product Data

Device Name : Computer

Serial No. : 123

: 123 : Std Form Cell Phone : 123 Type

Model

Frequency : 123
: 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm Width : 160 mm
Depth : 10 mm
Antenna Type : Internal
Orientation : Touch : 160 mm Width

Power Drift-Start: 0.392 W/kg Power Drift-Finish: 0.546 W/kg

Power Drift (%) : 3.279

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

Location : Center

Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

### APREL Laboratories

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Probe Data

: IAC-273 Name Model : E020
Type : E-Field Triangle
Serial No. : 273 Model Type

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

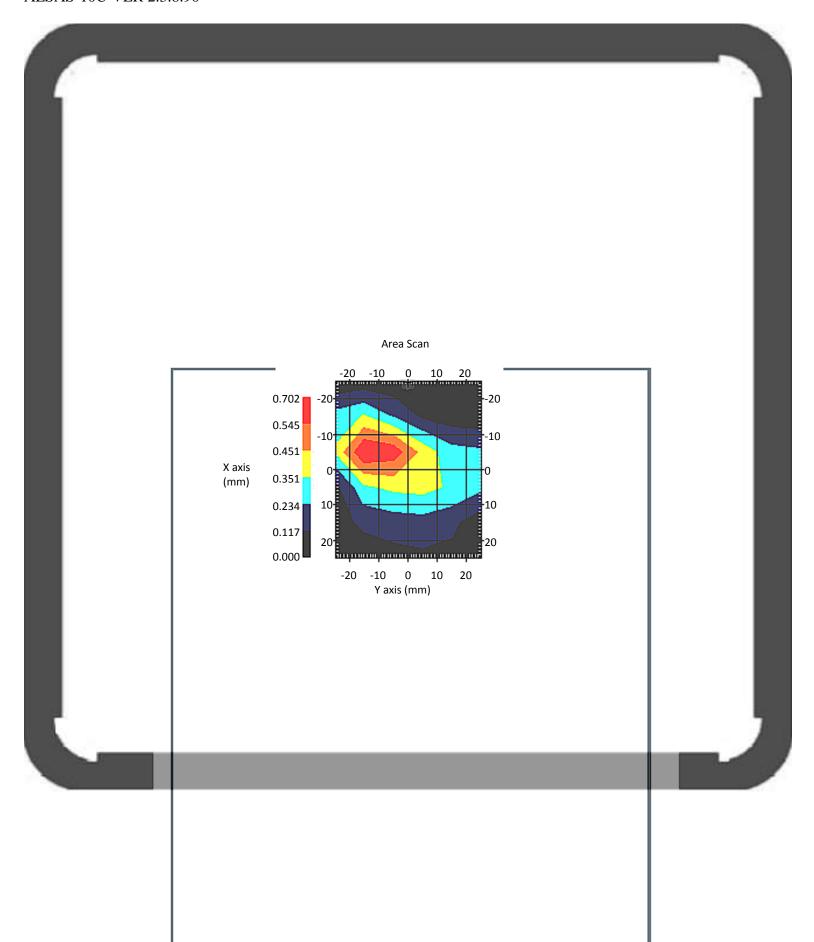
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 9:19:30 AM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

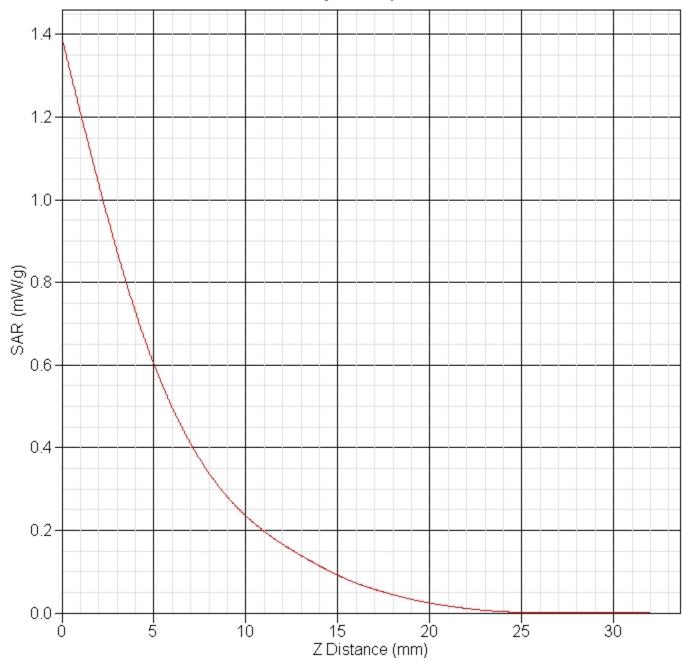
DUT Position : Touch Separation : 0 Channel : Low



1 gram SAR value : 0.602 W/kg
10 gram SAR value : 0.246 W/kg
Area Scan Peak SAR : 0.700 W/kg
Zoom Scan Peak SAR : 1.391 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) <sup>1/2</sup>	(1- cp) <sup>1/2</sup>	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction		_	1-				
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder	2.0	normal	1	1	1	2.0	2.0
Uncertainty			_		-		
Drift of Output Power	39.3	rectangular	√3	1	1	22.7	22.7
					<u> </u>		
Phantom and Setup					1		
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid Conductivity(target)	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity(meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS			1	25.2	24.9
Combined Uncertainty (coverage factor=2)		Normal(k=2)				50.3	49.8

SAR-Z Axis at Hotspot x:-5.02 y:-15.08



## SAR Test Report (11b mode bottom mid)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 09:43:25 AM End Time : 16-Nov-2010 09:59:06 AM Scanning Time : 941 secs

Product Data

Product Data

Device Name : Computer

Serial No. : 123

Serial No. : 123

Type : Std Form Cell Phone

Model : 123

Frequency : 123
: 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm : 160 mm Width : 160 mm
Depth : 10 mm
Antenna Type : Internal
Orientation : Touch Width

Power Drift-Start: 0.596 W/kg Power Drift-Finish: 0.634 W/kg

Power Drift (%) : 6.378

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

Location : Center Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name : E020 Model Type

Type : E-Field Triangle Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

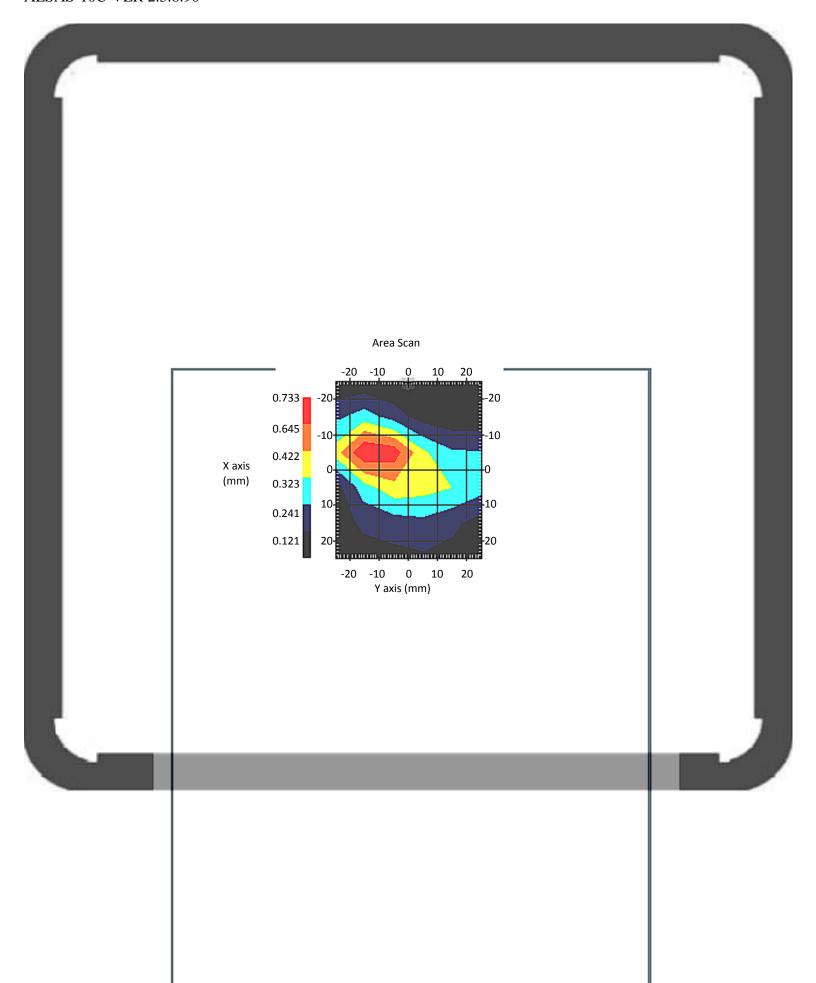
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 9:42:52 AM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

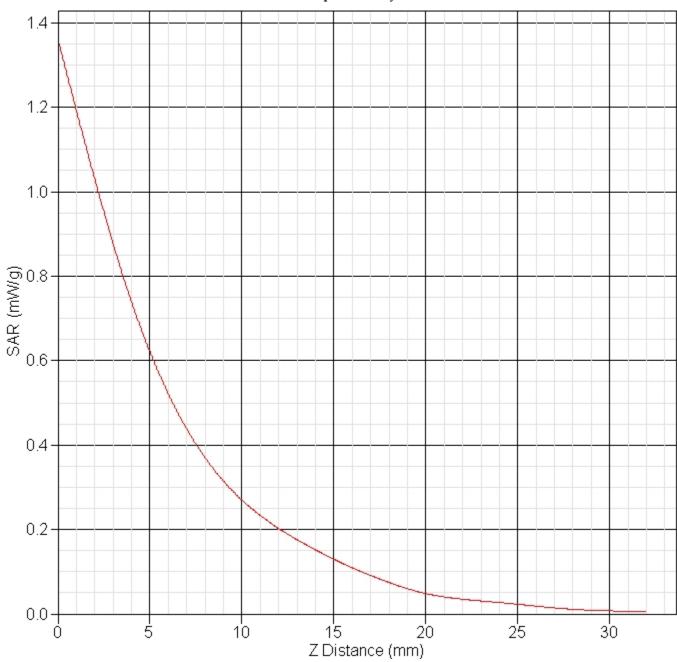
DUT Position : Touch Separation : 0 Channel : Mid



1 gram SAR value : 0.609 W/kg
10 gram SAR value : 0.249 W/kg
Area Scan Peak SAR : 0.737 W/kg
Zoom Scan Peak SAR : 1.361 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	(10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Tiedbaremente bybeem							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) 1/2	(1- cp) <sup>1/2</sup>	1.5	1.5
Hemispherical	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Isotropy				_	_		
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	6.4	rectangular	√3	1	1	3.7	3.7
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Conductivity(target)		_					
Liquid Conductivity (meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				11.5	10.8
Combined Uncertainty (coverage factor=2)		Normal(k=2)				23.0	21.7

SAR-Z Axis at Hotspot x:-4.92 y:-7.16



## SAR Test Report (11b mode bottom high)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 10:20:43 AM End Time : 16-Nov-2010 10:36:03 AM Scanning Time : 920 secs

Product Data

Device Name : Computer

Serial No. : 123

: 123 : Std Form Cell Phone : 123 Type

Model

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm Length : 160 mm Width Depth : 10 mm

Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.717 W/kg Power Drift-Finish: 0.741 W/kg

Power Drift (%) : 3.328

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

Location : Center

Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name : E020 Model Type

Type : E-Field Triangle Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

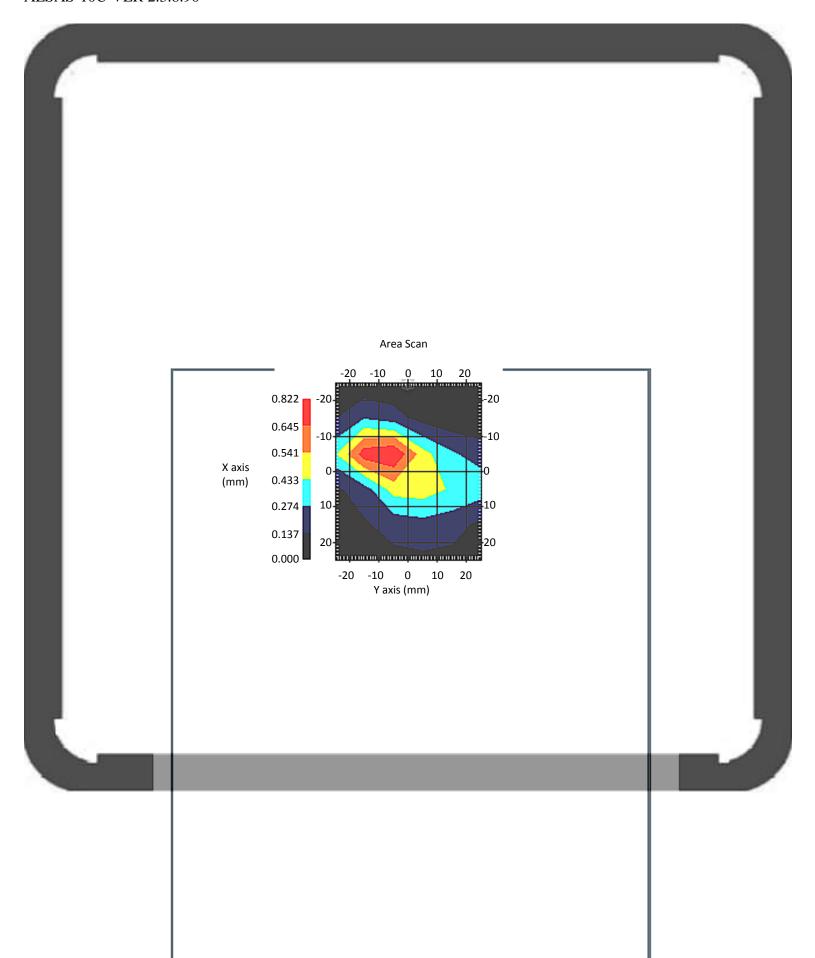
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 10:20:39 AM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

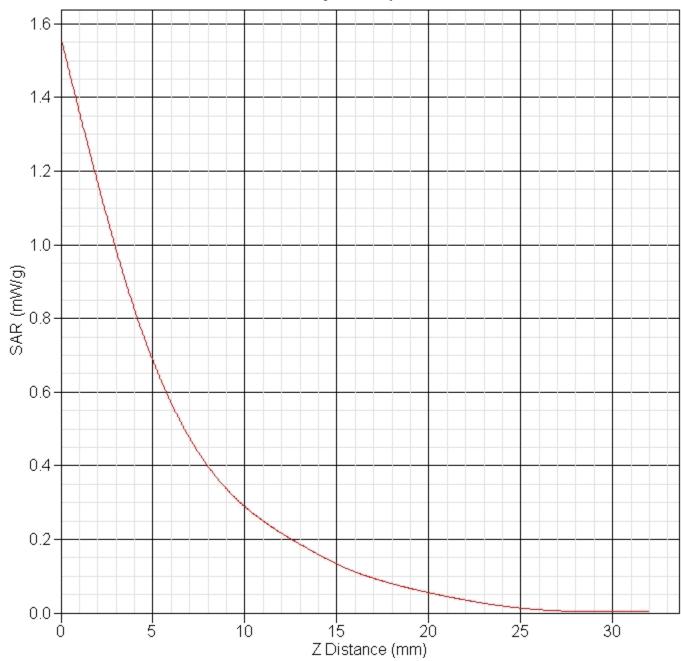
DUT Position : Touch Separation : 0 Channel : High



1 gram SAR value : 0.653 W/kg
10 gram SAR value : 0.255 W/kg
Area Scan Peak SAR : 0.819 W/kg
Zoom Scan Peak SAR : 1.561 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
-							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) <sup>1/2</sup>	(1- cp) 1/2	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	√3	√cp	√ср	4.4	4.4
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	3.3	rectangular	√3	1	1	1.9	1.9
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid Conductivity(target)	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity(meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				11.0	10.4
Combined Uncertainty (coverage factor=2)		Normal(k=2)				22.1	20.7

SAR-Z Axis at Hotspot x:-4.99 y:-13.08



## SAR Test Report (11b mode tip edge mid)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 04:59:51 PM End Time : 16-Nov-2010 05:15:21 PM Scanning Time : 930 secs

Product Data

Device Name : Computer

Serial No. : 123

Type : Std Form Cell Phone

Model : 123

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm Length : 160 mm Width Depth : 10 mm

Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.499 W/kg Power Drift-Finish: 0.495 W/kg Power Drift (%) : -0.803

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

: Center Location Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name : E020 Model Type

Type : E-Field Triangle Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

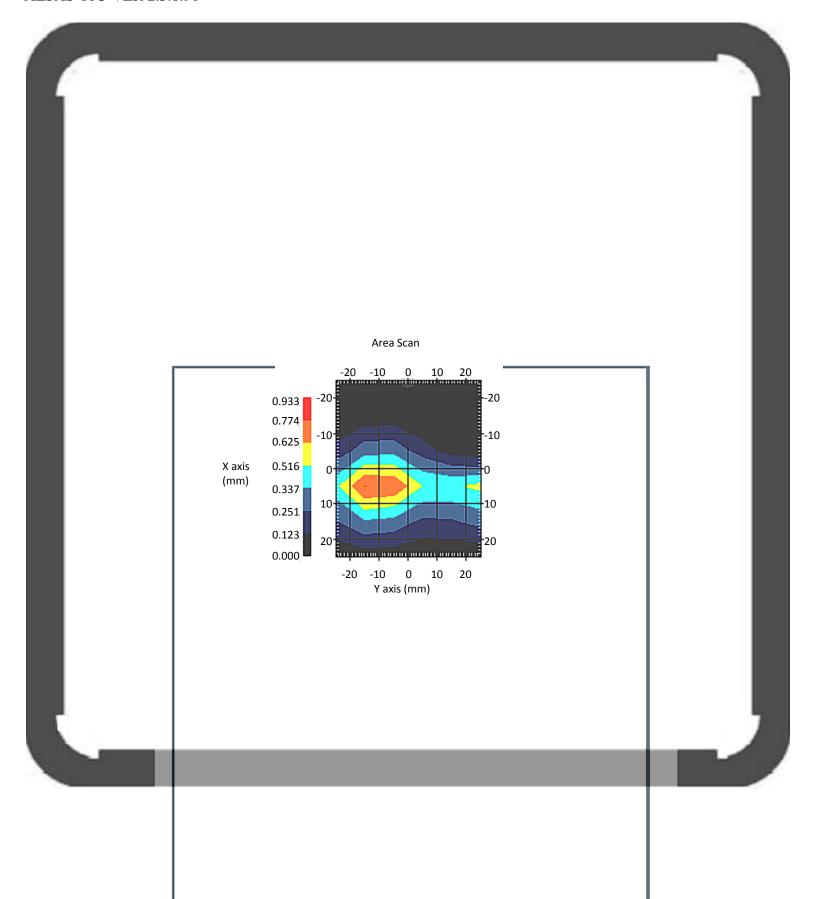
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 4:59:47 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

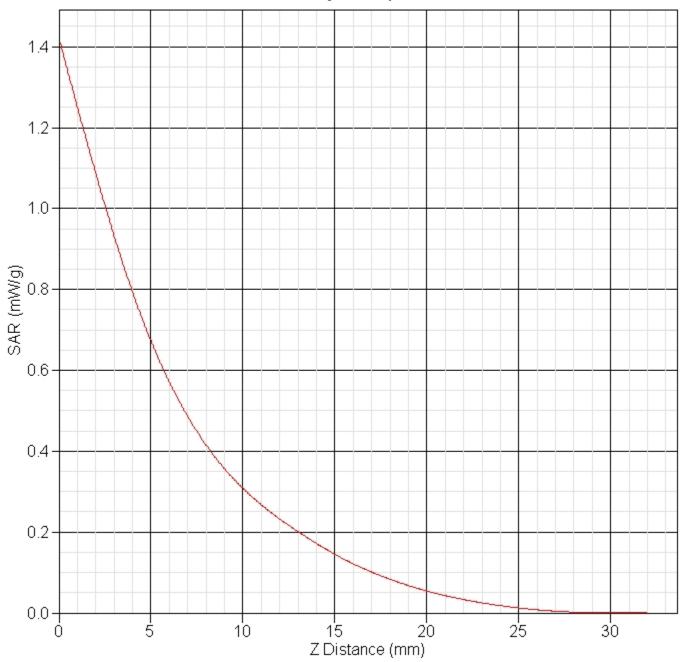
DUT Position : Touch Separation : 0 Channel : Low



1 gram SAR value : 0.661 W/kg
10 gram SAR value : 0.274 W/kg
Area Scan Peak SAR : 0.775 W/kg
Zoom Scan Peak SAR : 1.421 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
<u> </u>							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) <sup>1/2</sup>	(1- cp) 1/2	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	0.8	rectangular	√3	1	1	0.5	0.5
1							
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid Conductivity(target)	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity(meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				10.9	10.2
Combined Uncertainty (coverage factor=2)		Normal(k=2)				21.8	20.4

SAR-Z Axis at Hotspot x:5.06 y:-7.14



## SAR Test Report (11b mode tip edge mid)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 05:19:47 PM End Time : 16-Nov-2010 05:35:24 PM Scanning Time : 937 secs

Product Data

Device Name : Computer

Serial No. : 123

Type : Std Form Cell Phone

Model : 123

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm Length : 160 mm Width Depth : 10 mm

Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.543 W/kg Power Drift-Finish: 0.544 W/kg

Power Drift (%) : 0.059

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

: Center Location

Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name : E020 Model Type

Type : E-Field Triangle Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

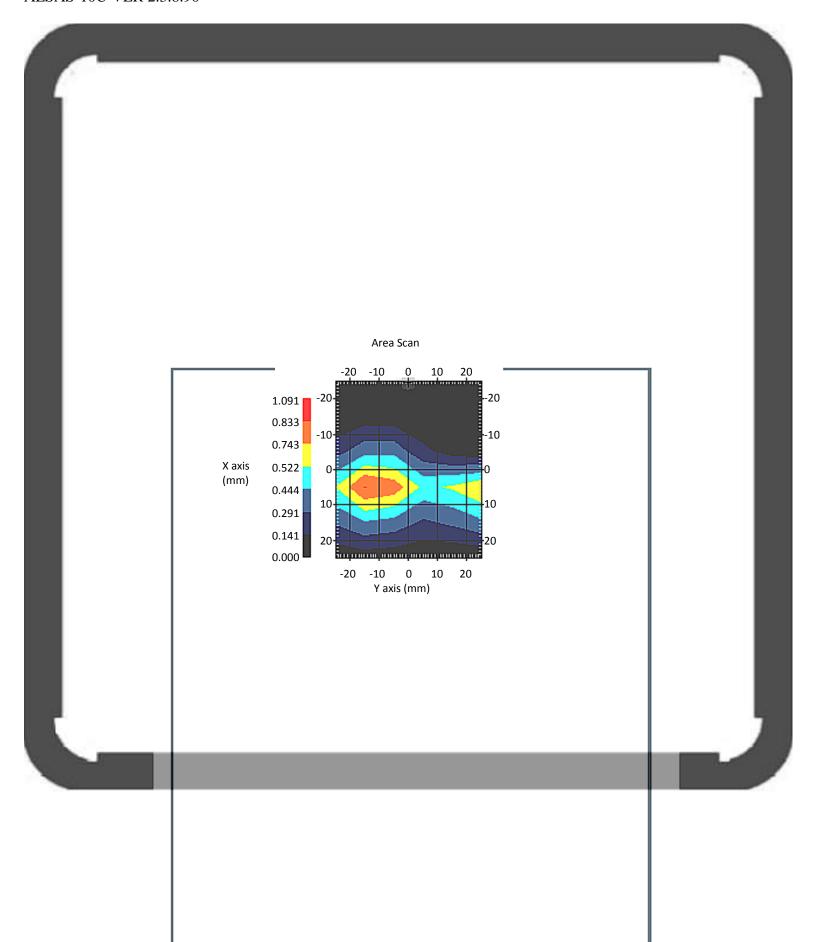
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 5:19:43 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

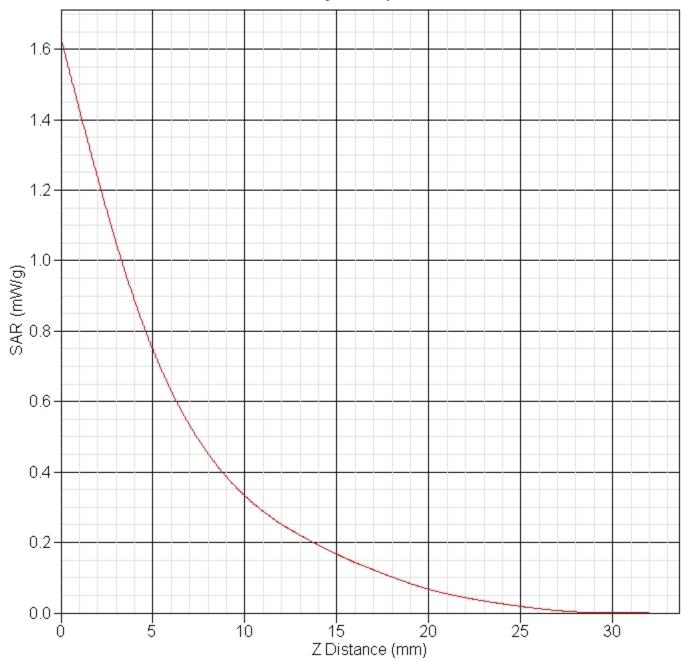
DUT Position : Touch Separation : 0 Channel : Mid



1 gram SAR value : 0.749 W/kg
10 gram SAR value : 0.322 W/kg
Area Scan Peak SAR : 0.891 W/kg
Zoom Scan Peak SAR : 1.631 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	(10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Tiedbaremente bybeem							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) 1/2	(1- cp) <sup>1/2</sup>	1.5	1.5
Hemispherical	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Isotropy				_			
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	0.1	rectangular	√3	1	1	0.0	0.0
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Conductivity(target)		_					
Liquid Conductivity (meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				10.9	10.2
Combined Uncertainty (coverage factor=2)		Normal(k=2)				21.7	20.4

SAR-Z Axis at Hotspot x:5.07 y:-15.14



## SAR Test Report (11b mode tip edge high)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 05:44:44 PM End Time : 16-Nov-2010 06:00:24 PM Scanning Time : 940 secs

Product Data

Device Name : Computer

Serial No. : 123

: Std Form Cell Phone : 123 Type

Model

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s) Length : 255 mm Length : 160 mm Width Depth : 10 mm
Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.514 W/kg Power Drift-Finish: 0.540 W/kg

Power Drift (%) : 4.977

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

: Center Location

Description : uni

Tissue Data

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name : E020 Model Type

Type : E-Field Triangle Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

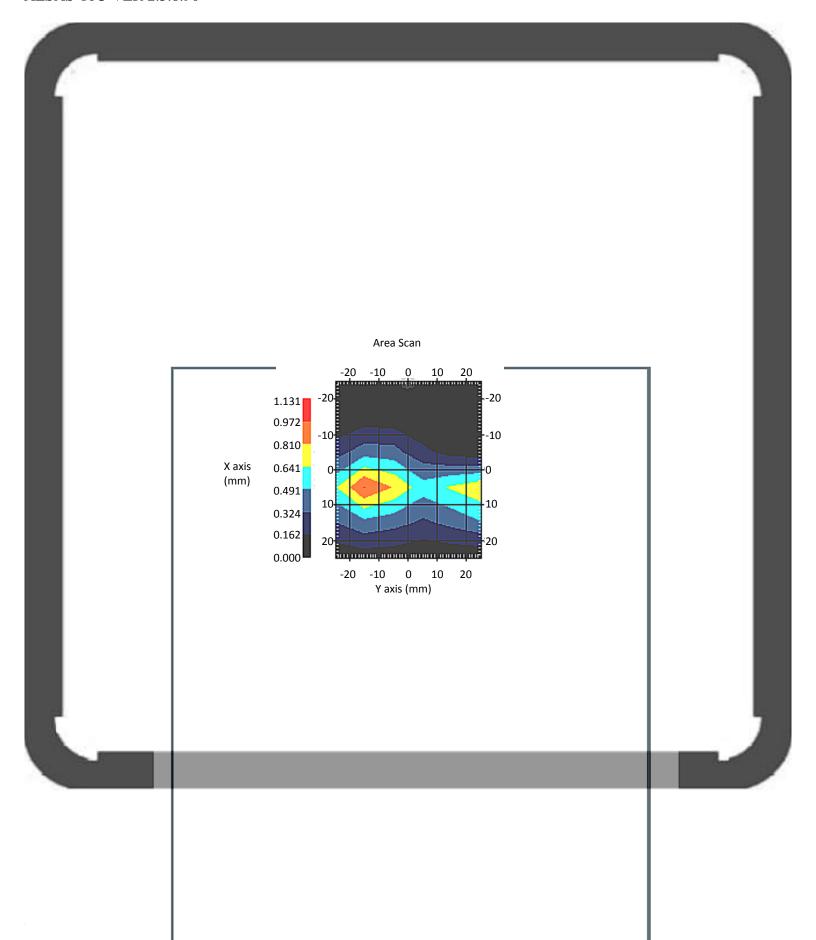
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 5:44:40 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

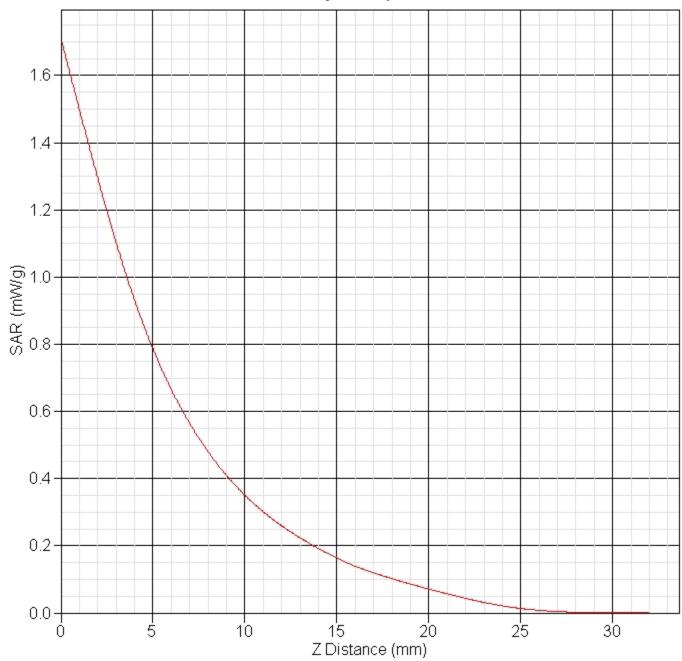
DUT Position : Touch Separation : 0 Channel : High



1 gram SAR value : 0.790 W/kg 10 gram SAR value : 0.340 W/kg Area Scan Peak SAR : 0.974 W/kg Zoom Scan Peak SAR : 1.711 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
-							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) <sup>1/2</sup>	(1- cp) 1/2	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	5.0	rectangular	√3	1	1	2.9	2.9
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid Conductivity(target)	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity(meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				11.3	10.6
Combined Uncertainty (coverage factor=2)		Normal(k=2)				22.5	21.2

SAR-Z Axis at Hotspot x:5.00 y:-15.08



## SAR Test Report (11g mode bottom low)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 10:44:52 AM End Time : 16-Nov-2010 11:00:28 AM Scanning Time : 936 secs

Product Data

Device Name : Computer

Serial No. : 123

Type : Std Form Cell Phone

Model : 123

Frequency : 123
: 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm : 160 mm Width : 160 mm
Depth : 10 mm
Antenna Type : Internal
Orientation : Touch Width

Power Drift-Start: 0.417 W/kg Power Drift-Finish: 0.396 W/kg Power Drift (%) : -5.029

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

Location : Center Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name : E020 Model Type

Type : E-Field Triangle Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

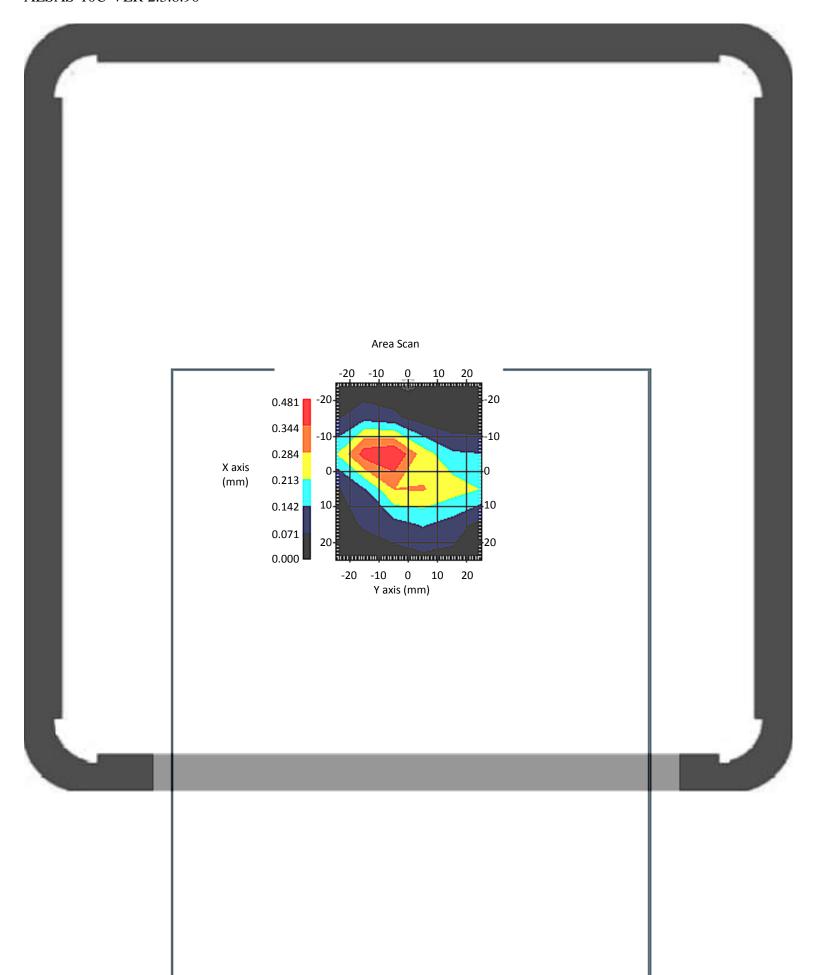
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 10:44:48 AM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

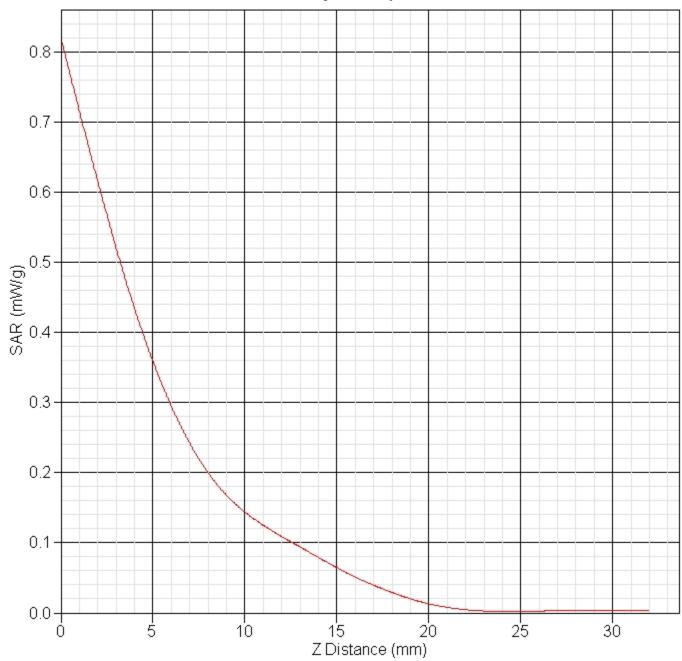
DUT Position : Touch Separation : 0 Channel : Low



1 gram SAR value : 0.346 W/kg
10 gram SAR value : 0.135 W/kg
Area Scan Peak SAR : 0.426 W/kg
Zoom Scan Peak SAR : 0.820 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
-							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) <sup>1/2</sup>	(1- cp) <sup>1/2</sup>	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	5.0	rectangular	√3	1	1	2.9	2.9
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid Conductivity(target)	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity(meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				11.3	10.6
Combined Uncertainty (coverage factor=2)		Normal(k=2)				22.5	21.2

SAR-Z Axis at Hotspot x:-4.99 y:-13.13



## SAR Test Report (11g mode bottom mid)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 11:11:25 AM End Time : 16-Nov-2010 11:27:27 AM Scanning Time : 962 secs

Product Data

Device Name : Computer

Serial No. : 123

Type : Std Form Cell Phone

Model : 123

Frequency : 123
: 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm : 160 mm Width : 160 mm
Depth : 10 mm
Antenna Type : Internal
Orientation : Touch Width

Power Drift-Start: 0.595 W/kg Power Drift-Finish: 0.603 W/kg

Power Drift (%) : 1.244

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

Location : Center

Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name : E020 Model Type

Type : E-Field Triangle Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

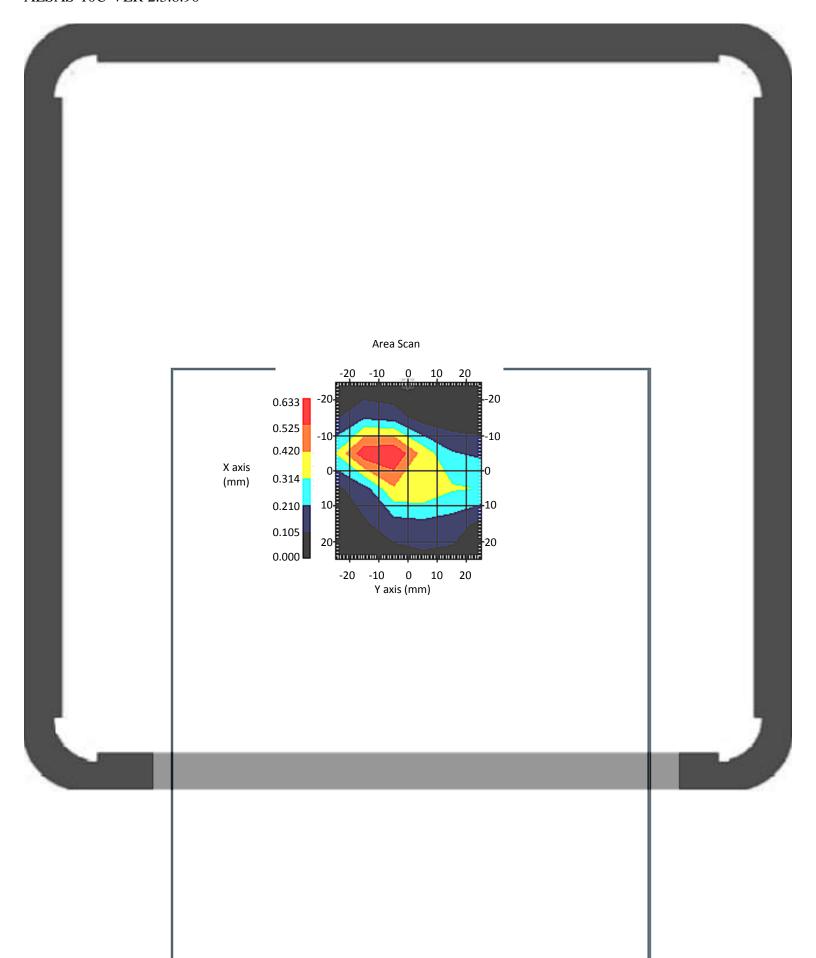
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 11:11:21 AM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

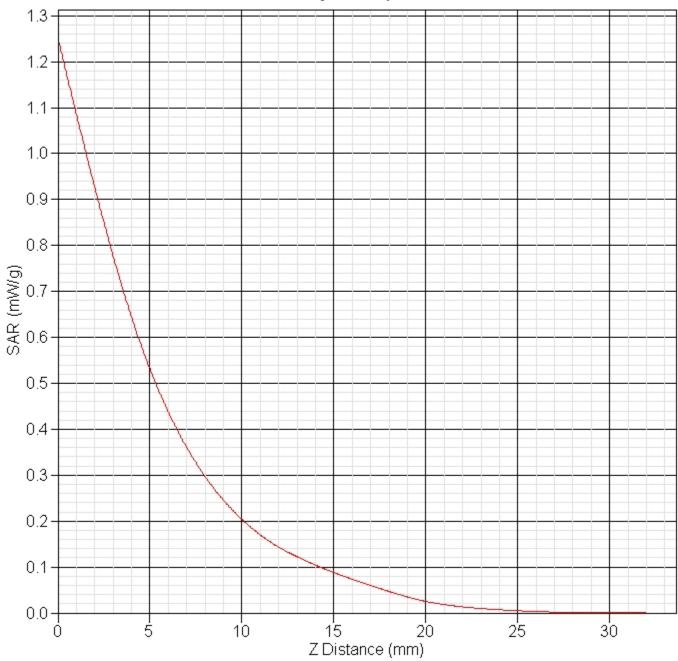
DUT Position : Touch Separation : 0 Channel : Mid



1 gram SAR value : 0.499 W/kg
10 gram SAR value : 0.189 W/kg
Area Scan Peak SAR : 0.629 W/kg
Zoom Scan Peak SAR : 1.251 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	(10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
ricasarement byseem							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) 1/2	(1- cp) 1/2	1.5	1.5
Hemispherical	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Isotropy				1			
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	1.2	rectangular	√3	1	1	0.7	0.7
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Conductivity(target)		_					
Liquid Conductivity (meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				10.9	10.2
Combined Uncertainty (coverage factor=2)		Normal(k=2)				21.8	20.4

SAR-Z Axis at Hotspot x:-4.93 y:-13.13



## SAR Test Report (11g mode bottom high)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 11:35:51 AM End Time : 16-Nov-2010 11:51:47 AM Scanning Time : 956 secs

Product Data

Device Name : Computer

Serial No. : 123

Type : Std Form Cell Phone

Model : 123

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm Length : 160 mm Width Depth : 10 mm

Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.580 W/kg Power Drift-Finish: 0.630 W/kg

Power Drift (%) : 8.708

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

: Center Location Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name : E020 Model Type

Type : E-Field Triangle Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

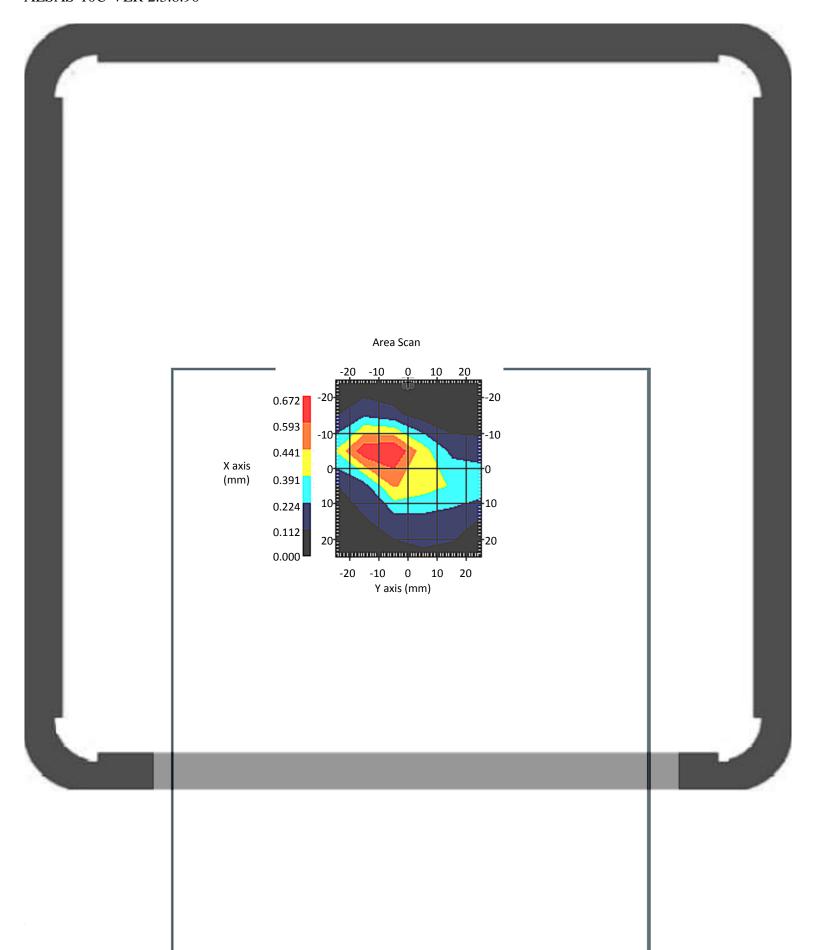
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 11:35:47 AM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

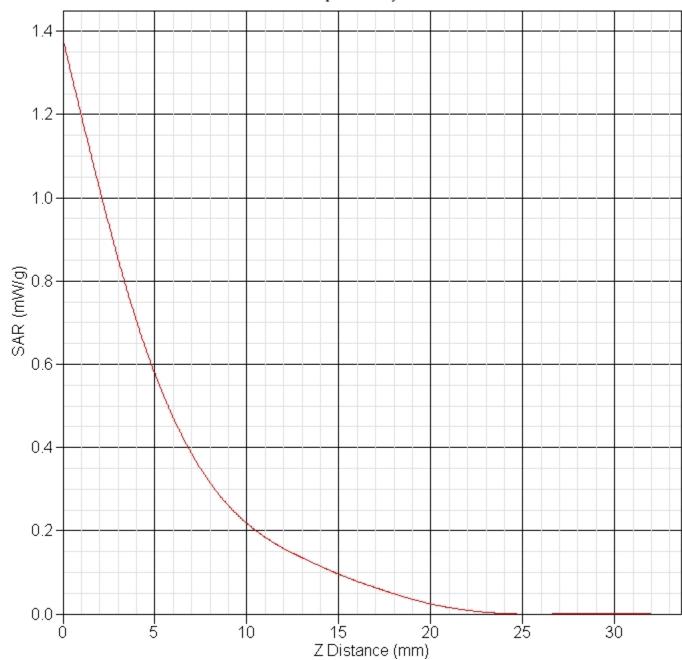
DUT Position : Touch Separation : 0 Channel : High



1 gram SAR value : 0.555 W/kg
10 gram SAR value : 0.211 W/kg
Area Scan Peak SAR : 0.672 W/kg
Zoom Scan Peak SAR : 1.381 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) <sup>1/2</sup>	(1- cp) <sup>1/2</sup>	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	8.7	rectangular	√3	1	1	5.0	5.0
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid Conductivity(target)	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity(meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				12.0	11.4
Combined Uncertainty (coverage factor=2)		Normal(k=2)				23.9	22.7

SAR-Z Axis at Hotspot x:-4.98 y:-13.10



## SAR Test Report (11g mode tip edge low)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 03:54:38 PM End Time : 16-Nov-2010 04:10:01 PM Scanning Time : 923 secs

Product Data

Device Name : Computer

Serial No. : 123

: Std Form Cell Phone : 123 Type

Model

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s) Length : 255 mm Length : 160 mm Width Depth : 10 mm
Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.441 W/kg Power Drift-Finish: 0.457 W/kg

Power Drift (%) : 3.638

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

: Center Location

Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name Model : E020
Type : E-Field Triangle
Serial No. : 273 Model Type

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

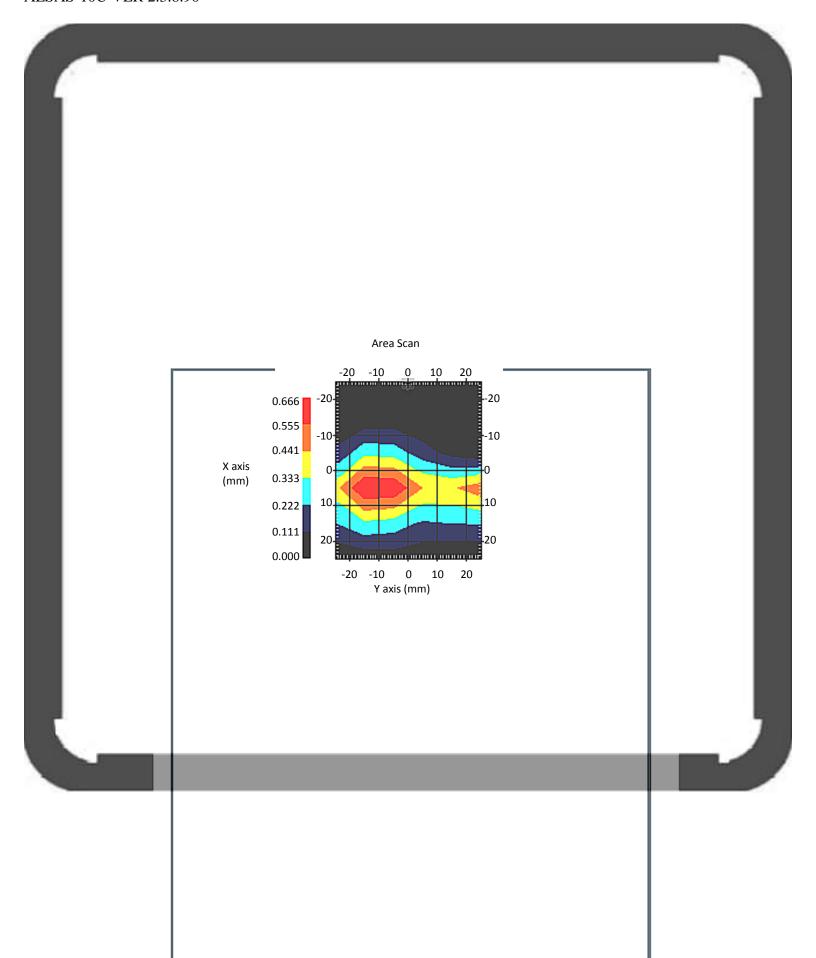
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 3:54:34 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

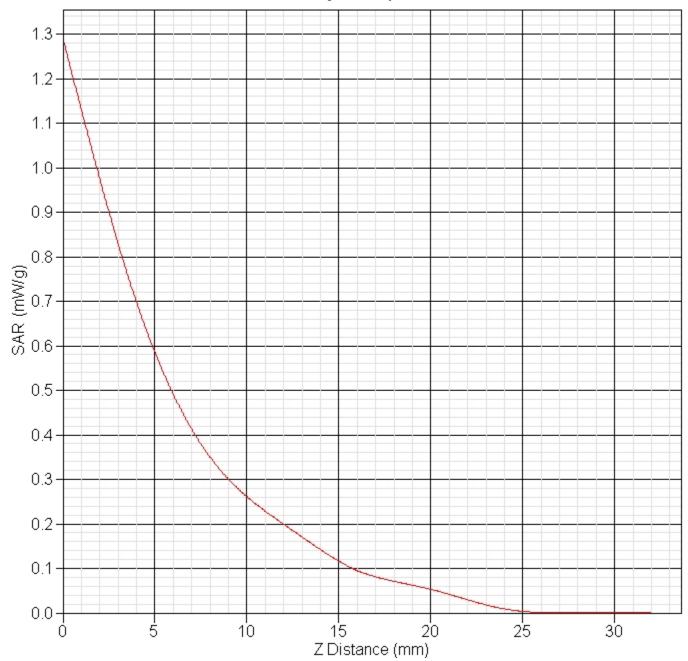
DUT Position : Touch Separation : 0 Channel : Low



1 gram SAR value : 0.585 W/kg
10 gram SAR value : 0.249 W/kg
Area Scan Peak SAR : 0.666 W/kg
Zoom Scan Peak SAR : 1.291 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Management Country							
Measurement System							
Probe Calibration	2 5		1	1	1	2 5	2 5
	3.5	normal	1 √3	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular		(1- cp) <sup>1/2</sup>	(1- cp) <sup>1/2</sup>	1.5	1.5
Hemispherical	10.9	rectangular	√3	√ср	√ср	4.4	4.4
Isotropy							
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning	2.9	rectangular	√3	1	1	1.7	1.7
with respect to							
Phantom Shell							
Extrapolation and	3.7	rectangular	√3	1	1	2.1	2.1
Integration							
Test Sample	4.0	normal	1	1	1	4.0	4.0
Positioning							
Device Holder	2.0	normal	1	1	1	2.0	2.0
Uncertainty							
Drift of Output	3.6	rectangular	√3	1	1	2.1	2.1
Power							
Phantom and Setup							
Phantom	3.4	rectangular	√3	1	1	2.0	2.0
Uncertainty(shape &	J • 1	recearigatar	'	_	_	2.0	2.0
thickness tolerance)							
Liquid	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Conductivity(target)		Loosangarar	, ,	" '			- • •
Liquid	3.1	normal	1	0.7	0.5	2.2	1.5
Conductivity (meas.)	J • 1	1101mai		" '	0.5	2.2	1.0
Liquid	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Permittivity(target)	J . 0	rectangular	10	0.0	0.5	±• ′	
Liquid	8.9	normal	1	0.6	0.5	5.3	4.4
Permittivity(meas.)		1101mai		0.0	0.5		1.1
Combined Uncertainty		RSS				11.1	10.4
Combined Uncertainty		Normal(k=2)				22.1	20.8
(coverage factor=2)		NOTIMAT (K-Z)				~~.1	20.0
(COVELAGE LACTOI-Z)	1		Ĩ	1	ĺ	1	I

SAR-Z Axis at Hotspot x:5.04 y:-15.10



## SAR Test Report (11g mode tip edge mid)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 04:14:54 PM End Time : 16-Nov-2010 04:30:35 PM Scanning Time : 941 secs

Product Data

Device Name : Computer

Serial No. : 123

Type : Std Form Cell Phone

Model : 123

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm Length : 160 mm Width Depth : 10 mm

Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.486 W/kg Power Drift-Finish: 0.460 W/kg Power Drift (%) : -5.331

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

: Center Location Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name Model : E020
Type : E-Field Triangle
Serial No. : 273 Model Type

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

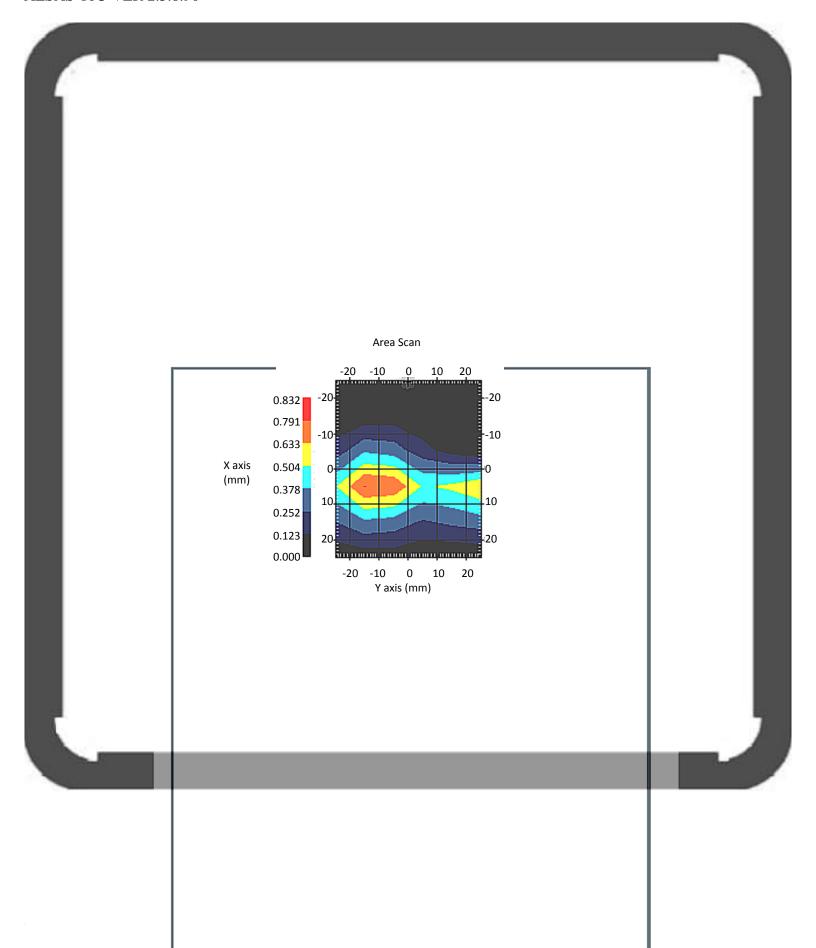
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 4:14:50 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

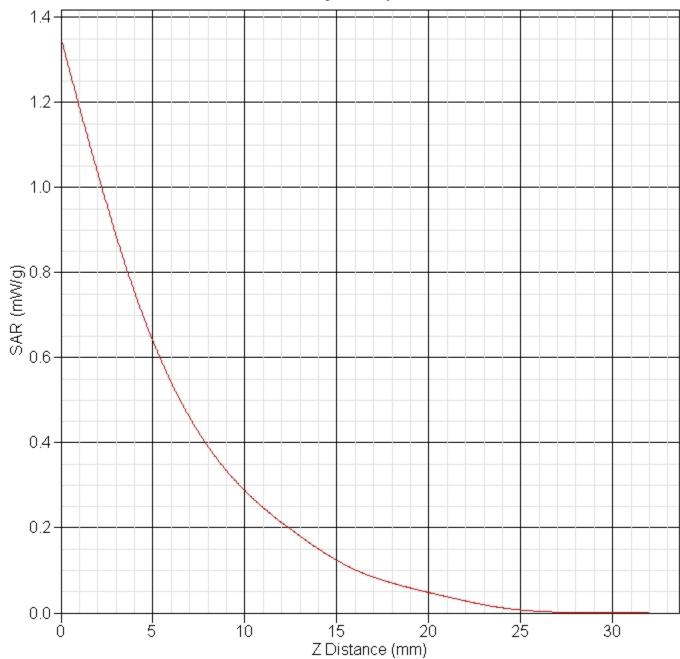
DUT Position : Touch Separation : 0 Channel : Mid



1 gram SAR value : 0.640 W/kg
10 gram SAR value : 0.275 W/kg
Area Scan Peak SAR : 0.757 W/kg
Zoom Scan Peak SAR : 1.351 W/kg

Hemispherical Isotropy			(1-g) %	Uncertainty (10-g) %
Probe Calibration 3.5 normal 1 1 1 Axial Isotropy 3.7 rectangular $\sqrt{3}$ (1 cp Hemispherical 10.9 rectangular $\sqrt{3}$ $\sqrt{c}$ Isotropy Boundary Effect 1.0 rectangular $\sqrt{3}$ 1 Linearity 4.7 rectangular $\sqrt{3}$ 1 Petection Limit 1.0 rectangular $\sqrt{3}$ 1 Readout Electronics 1.0 normal 1 1 Response Time 0.8 rectangular $\sqrt{3}$ 1 Integration Time 1.7 rectangular $\sqrt{3}$ 1 Probe Positioner 0.4 rectangular $\sqrt{3}$ 1 Probe Positioner 0.4 rectangular $\sqrt{3}$ 1 Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 Extrapolation and 3.7 rectangular $\sqrt{3}$ 1 Extrapolation and 3.7 rectangular $\sqrt{3}$ 1 Protectangular $\sqrt{3}$ 1 Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 Probe Positi				
Axial Isotropy  Beauthur and a section of the mispherical and a section				
Axial Isotropy  Beauthurical 10.9 rectangular 10.0 rectan		1	3.5	3.5
Hemispherical 10.9 rectangular $\sqrt{3}$ $\sqrt{c}$ Isotropy  Boundary Effect 1.0 rectangular $\sqrt{3}$ 1  Linearity 4.7 rectangular $\sqrt{3}$ 1  Detection Limit 1.0 rectangular $\sqrt{3}$ 1  Readout Electronics 1.0 normal 1  Response Time 0.8 rectangular $\sqrt{3}$ 1  Integration Time 1.7 rectangular $\sqrt{3}$ 1  RF Ambient Condition 3.0 rectangular $\sqrt{3}$ 1  Probe Positioner 0.4 rectangular $\sqrt{3}$ 1  Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1  Extrapolation and 3.7 rectangular $\sqrt{3}$ 1		(1-	1.5	1.5
Hemispherical 10.9 rectangular $\sqrt{3}$ $\sqrt{c}$ Isotropy  Boundary Effect 1.0 rectangular $\sqrt{3}$ 1  Linearity 4.7 rectangular $\sqrt{3}$ 1  Detection Limit 1.0 rectangular $\sqrt{3}$ 1  Readout Electronics 1.0 normal 1 1  Response Time 0.8 rectangular $\sqrt{3}$ 1  Integration Time 1.7 rectangular $\sqrt{3}$ 1  RF Ambient Condition 3.0 rectangular $\sqrt{3}$ 1  Probe Positioner 0.4 rectangular $\sqrt{3}$ 1  Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1  Extrapolation and 3.7 rectangular $\sqrt{3}$ 1	o) 1/2	cp) 1/2	1.5	1.5
Boundary Effect 1.0 rectangular $\sqrt{3}$ 1 Linearity 4.7 rectangular $\sqrt{3}$ 1 Detection Limit 1.0 rectangular $\sqrt{3}$ 1 Readout Electronics 1.0 normal 1 Response Time 0.8 rectangular $\sqrt{3}$ 1 Integration Time 1.7 rectangular $\sqrt{3}$ 1 RF Ambient Condition 3.0 rectangular $\sqrt{3}$ 1 Probe Positioner 0.4 rectangular $\sqrt{3}$ 1 Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1	cp ·	√ср	4.4	4.4
Linearity 4.7 rectangular $\sqrt{3}$ 1  Detection Limit 1.0 rectangular $\sqrt{3}$ 1  Readout Electronics 1.0 normal 1  Response Time 0.8 rectangular $\sqrt{3}$ 1  Integration Time 1.7 rectangular $\sqrt{3}$ 1  RF Ambient Condition 3.0 rectangular $\sqrt{3}$ 1  Probe Positioner 0.4 rectangular $\sqrt{3}$ 1  Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1  with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1				
Detection Limit 1.0 rectangular $\sqrt{3}$ 1 Readout Electronics 1.0 normal 1 1 1 Response Time 0.8 rectangular $\sqrt{3}$ 1 Integration Time 1.7 rectangular $\sqrt{3}$ 1 RF Ambient Condition 3.0 rectangular $\sqrt{3}$ 1 Probe Positioner 0.4 rectangular $\sqrt{3}$ 1 Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1		1	0.6	0.6
Readout Electronics 1.0 normal 1 Response Time 0.8 rectangular $\sqrt{3}$ 1 Integration Time 1.7 rectangular $\sqrt{3}$ 1 RF Ambient Condition 3.0 rectangular $\sqrt{3}$ 1 Probe Positioner 0.4 rectangular $\sqrt{3}$ 1 Mech.  Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1		1	2.7	2.7
Response Time 0.8 rectangular $\sqrt{3}$ 1 Integration Time 1.7 rectangular $\sqrt{3}$ 1 RF Ambient Condition 3.0 rectangular $\sqrt{3}$ 1 Probe Positioner 0.4 rectangular $\sqrt{3}$ 1 Mech. Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1		1	0.6	0.6
Integration Time 1.7 rectangular $\sqrt{3}$ 1 RF Ambient Condition 3.0 rectangular $\sqrt{3}$ 1 Probe Positioner 0.4 rectangular $\sqrt{3}$ 1 Mech.  Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1	1	1	1.0	1.0
Integration Time 1.7 rectangular $\sqrt{3}$ 1  RF Ambient Condition 3.0 rectangular $\sqrt{3}$ 1  Probe Positioner 0.4 rectangular $\sqrt{3}$ 1  Mech.  Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1  with respect to Phantom Shell  Extrapolation and 3.7 rectangular $\sqrt{3}$ 1		1	0.5	0.5
RF Ambient Condition 3.0 rectangular $\sqrt{3}$ 1 Probe Positioner 0.4 rectangular $\sqrt{3}$ 1 Mech.  Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1		1	1.0	1.0
Probe Positioner 0.4 rectangular $\sqrt{3}$ 1 Mech.  Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1		1	1.7	1.7
Restriction Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1		1	0.2	0.2
Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1				
Probe Positioning 2.9 rectangular $\sqrt{3}$ 1 with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1				
with respect to Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1	1.	1	1.7	1.7
Phantom Shell Extrapolation and 3.7 rectangular $\sqrt{3}$ 1		1	1./	1.7
Extrapolation and 3.7 rectangular $\sqrt{3}$ 1				
		1	2.1	2.1
Integration		1	2.1	2.1
Test Sample 4.0 normal 1 1	1.	1	4.0	4.0
Positioning 4.0 Horman		1	4.0	4.0
Device Holder 2.0 normal 1 1		1	2.0	2.0
Uncertainty 2.0 Horman		1	2.0	2.0
Drift of Output 5.3 rectangular $\sqrt{3}$ 1		1	3.1	3.1
Power   5.5   rectangular   v5   r	'	_	3.1	3.1
TOWCI				
Phantom and Setup				
Phantom 3.4 rectangular $\sqrt{3}$ 1		1	2.0	2.0
Uncertainty(shape &		-	2.0	2.0
thickness tolerance)				
Liquid 5.0 rectangular $\sqrt{3}$ 0.	7	0.5	2.0	1.4
Conductivity(target)	· ·     '	· • •		
Liquid 3.1 normal 1 0.	7	0.5	2.2	1.5
Conductivity (meas.)	· ·     '	· • •	_,_	
Liquid 5.0 rectangular $\sqrt{3}$ 0.	6	0.5	1.7	1.4
Permittivity(target)			±• /	±• ±
Liquid 8.9 normal 1 0.	6	0.5	5.3	4.4
Permittivity (meas.)				- * -
Combined Uncertainty RSS			11.3	10.7
Combined Uncertainty Normal(k=2)			22.6	21.3
(coverage factor=2)	1			

SAR-Z Axis at Hotspot x:5.01 y:-15.08



## SAR Test Report (11g mode tip edge high)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 04:41:45 PM End Time : 16-Nov-2010 04:57:13 PM Scanning Time : 928 secs

Product Data

Device Name : Computer

Serial No. : 123

: Std Form Cell Phone : 123 Type

Model

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s) Length : 255 mm Length : 160 mm Width Depth : 10 mm
Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.500 W/kg Power Drift-Finish: 0.503 W/kg

Power Drift (%) : 0.683

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

: Center Location

Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name Model Type

Model : E020
Type : E-Field Triangle
Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

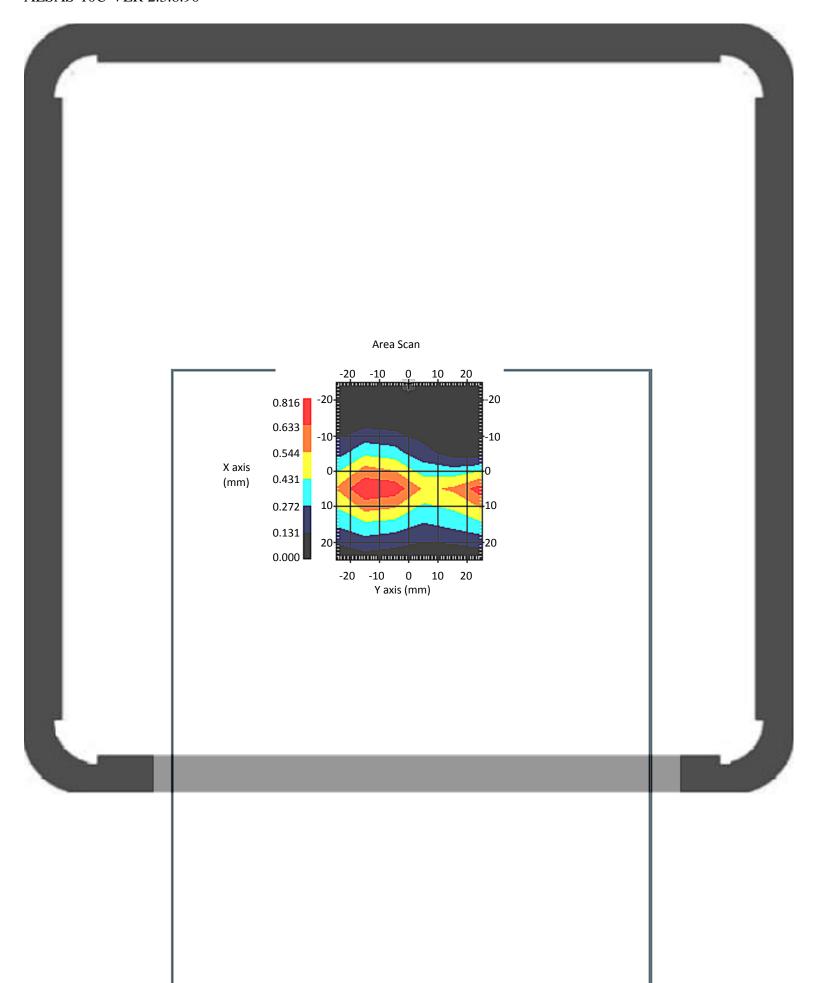
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 4:41:41 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

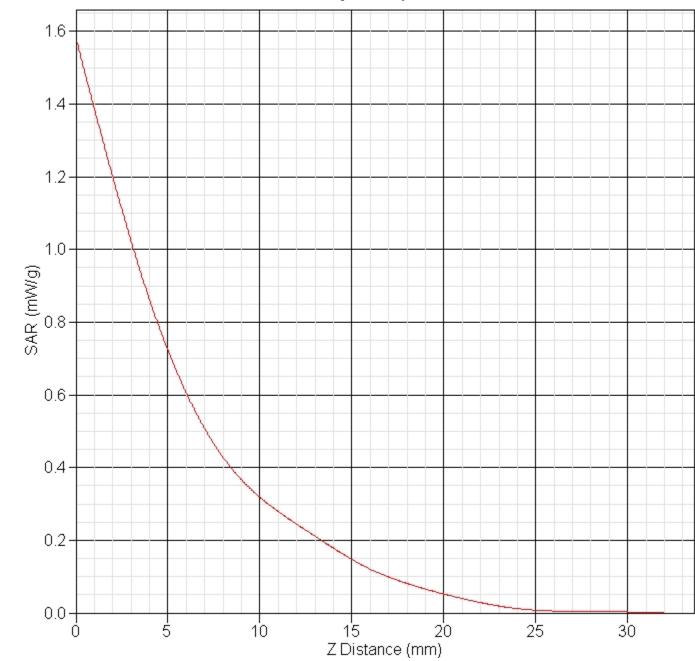
DUT Position : Touch Separation : 0 Channel : High



1 gram SAR value : 0.716 W/kg
10 gram SAR value : 0.303 W/kg
Area Scan Peak SAR : 0.814 W/kg
Zoom Scan Peak SAR : 1.581 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) <sup>1/2</sup>	(1- cp) 1/2	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	0.7	rectangular	√3	1	1	0.4	0.4
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid Conductivity(target)	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity(meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				10.9	10.2
Combined Uncertainty (coverage factor=2)		Normal(k=2)				21.8	20.4

SAR-Z Axis at Hotspot x:5.01 y:-15.10



## SAR Test Report (11n20 mode bottom low)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 12:07:18 PM End Time : 16-Nov-2010 12:23:13 PM Scanning Time : 955 secs

Product Data

Device Name : Computer

Serial No. : 123

Type : Std Form Cell Phone

Model : 123

Frequency : 123
: 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm : 160 mm Width : 160 mm
Depth : 10 mm
Antenna Type : Internal
Orientation : Touch Width

Power Drift-Start: 0.157 W/kg Power Drift-Finish: 0.146 W/kg Power Drift (%) : -7.101

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

Location : Center Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name : E020 Model Type

Type : E-Field Triangle Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

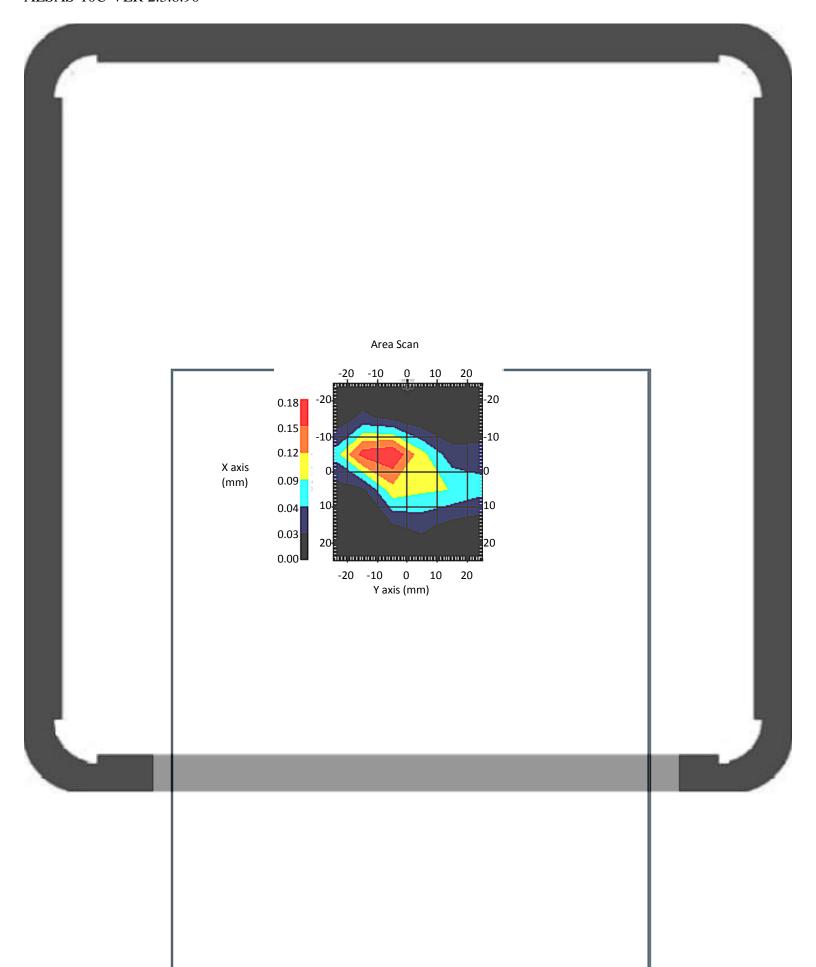
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 12:07:14 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

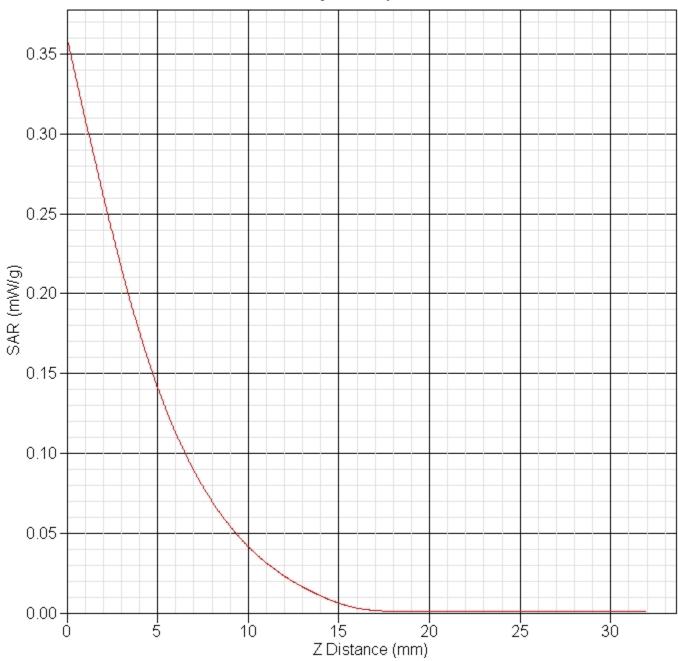
DUT Position : Touch Separation : 0 Channel : Low



1 gram SAR value : 0.140 W/kg 10 gram SAR value : 0.048 W/kg Area Scan Peak SAR : 0.179 W/kg Zoom Scan Peak SAR : 0.360 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Ticabatement bybeem							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) 1/2	(1- cp) <sup>1/2</sup>	1.5	1.5
Hemispherical	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Isotropy					_		
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and	3.7	rectangular	√3	1	1	2.1	2.1
Integration Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	7.1	rectangular	√3	1	1	4.1	4.1
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Conductivity(target)		_					
Liquid Conductivity(meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				11.6	11.0
Combined Uncertainty (coverage factor=2)		Normal(k=2)				23.2	22.0

SAR-Z Axis at Hotspot x:-5.00 y:-13.10



## SAR Test Report (11n20 mode bottom mid)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 12:32:54 PM End Time : 16-Nov-2010 12:48:40 PM Scanning Time : 946 secs

Product Data

Product Data

Device Name : Computer

Serial No. : 123

Serial No. : 123

Type : Std Form Cell Phone

Model : 123

Frequency : 123
: 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm : 160 mm Width : 160 mm
Depth : 10 mm
Antenna Type : Internal
Orientation : Touch Width

Power Drift-Start: 0.221 W/kg Power Drift-Finish: 0.224 W/kg

Power Drift (%) : 1.554

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

Location : Center Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name : E020 Model Type

Type : E-Field Triangle Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

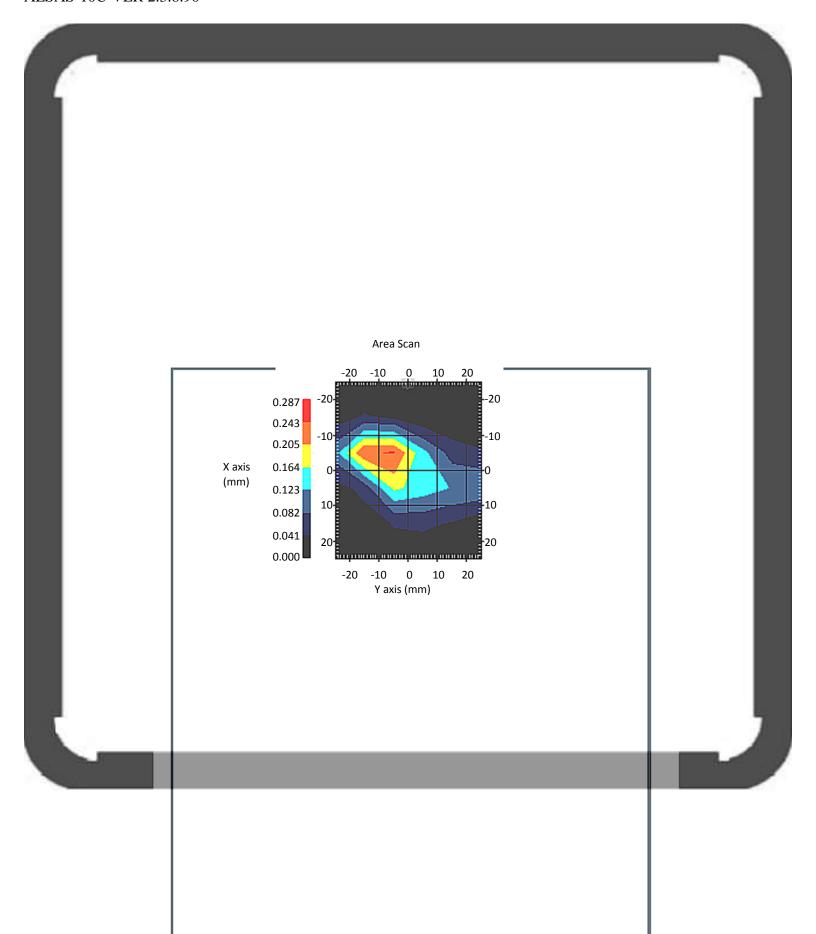
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 12:32:49 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

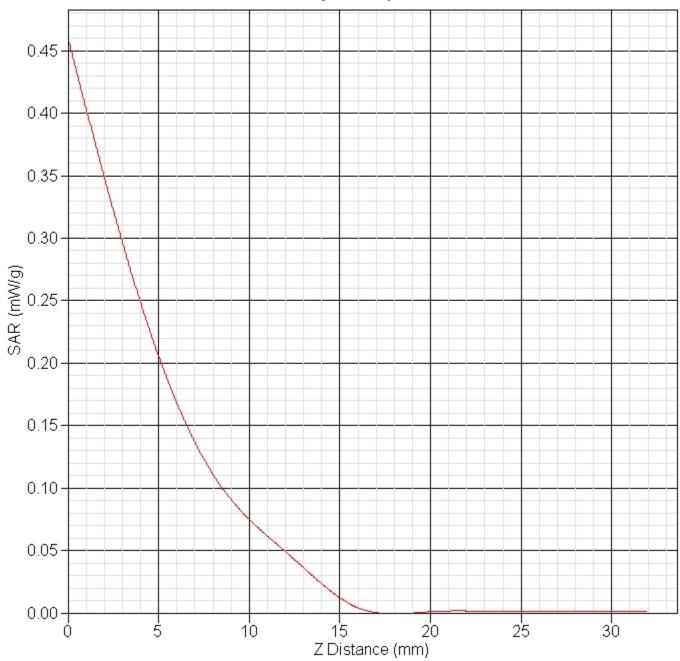
DUT Position : Touch Separation : 0 Channel : Mid



1 gram SAR value : 0.189 W/kg
10 gram SAR value : 0.067 W/kg
Area Scan Peak SAR : 0.248 W/kg
Zoom Scan Peak SAR : 0.460 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	(10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
ricasarement byseem							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) 1/2	(1- cp) 1/2	1.5	1.5
Hemispherical	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Isotropy				1			
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to	2.9	rectangular	√3	1	1	1.7	1.7
Phantom Shell Extrapolation and	3.7	rectangular	√3	1	1	2.1	2.1
Integration Test Sample	4.0	normal	1	1	1	4.0	4.0
Positioning Device Holder	2.0	normal	1	1	1	2.0	2.0
Uncertainty Drift of Output Power	1.6	rectangular	√3	1	1	0.9	0.9
TOWEL							
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Conductivity(target)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Conductivity (meas.)	J.⊥	HOLINAL	<u> </u>	0.7	0.5	۷.۷	1.0
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				10.9	10.2
Combined Uncertainty (coverage factor=2)		Normal(k=2)				21.8	20.5

SAR-Z Axis at Hotspot x:-4.95 y:-13.17



## SAR Test Report (11n20 mode bottom high)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 01:02:51 PM End Time : 16-Nov-2010 01:18:07 PM Scanning Time : 916 secs

Product Data

Device Name : Computer

Serial No. : 123

Type : Std Form Cell Phone

Model : 123

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm Length : 160 mm Width Depth : 10 mm

Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.230 W/kg Power Drift-Finish: 0.275 W/kg

Power Drift (%) : 1.546

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

Location : Center

Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name Model Type

Model : E020
Type : E-Field Triangle
Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

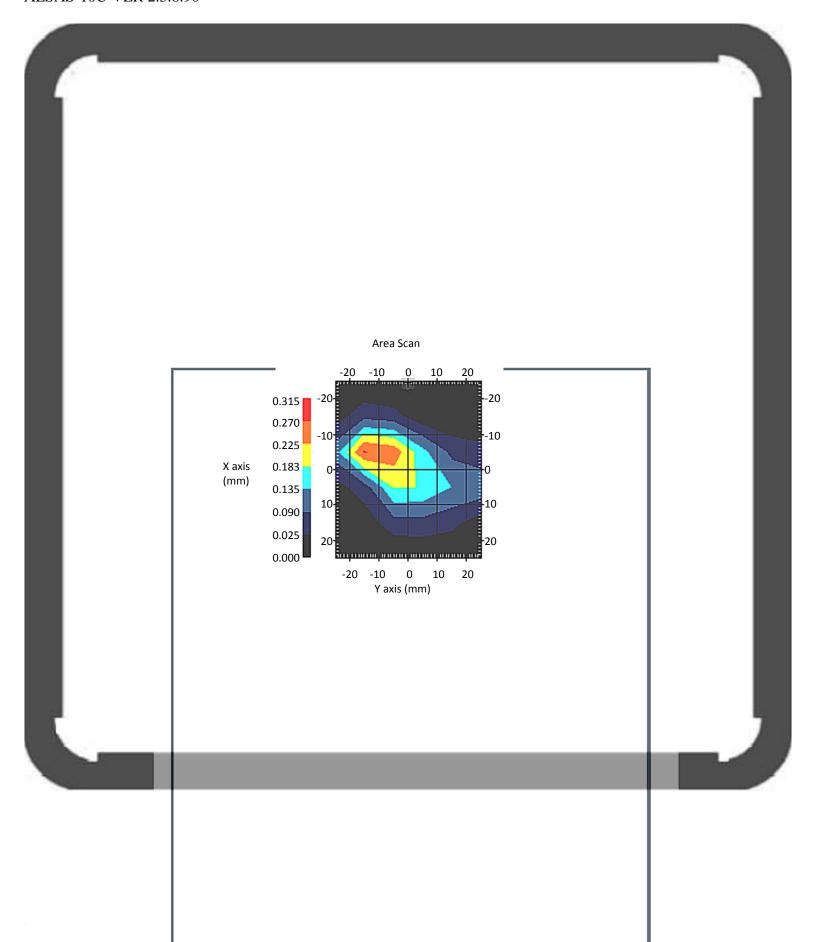
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 1:02:45 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

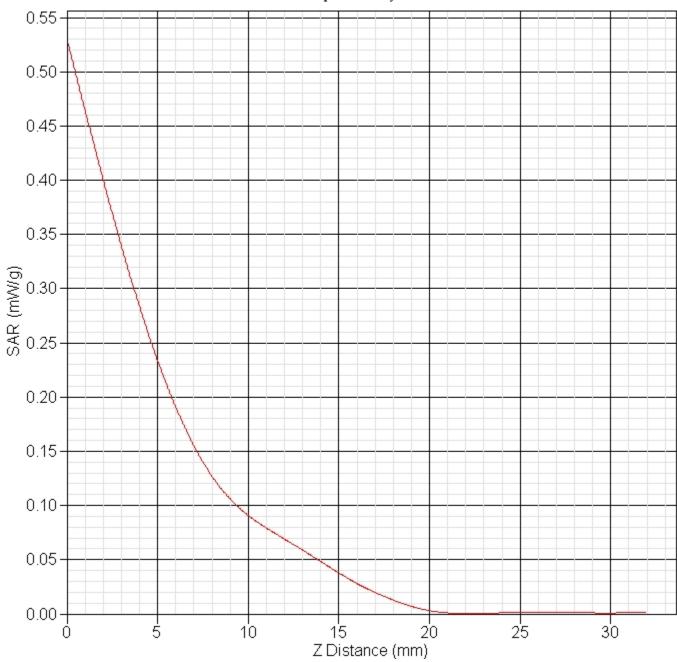
DUT Position : Touch Separation : 0 Channel : High



1 gram SAR value : 0.227 W/kg
10 gram SAR value : 0.084 W/kg
Area Scan Peak SAR : 0.272 W/kg
Zoom Scan Peak SAR : 0.530 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	(10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) <sup>1/2</sup>	(1- cp) 1/2	1.5	1.5
Hemispherical	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Isotropy				_			
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to	2.9	rectangular	√3	1	1	1.7	1.7
Phantom Shell Extrapolation and	3.7	rectangular	√3	1	1	2.1	2.1
Integration Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	19.5	rectangular	√3	1	1	11.3	11.3
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Conductivity(target)		_					
Liquid Conductivity (meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				15.7	15.2
Combined Uncertainty (coverage factor=2)		Normal(k=2)				31.4	30.4

SAR-Z Axis at Hotspot x:-4.99 y:-7.07



## SAR Test Report (11n20 mode tip edge low)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 03:35:11 PM End Time : 16-Nov-2010 03:51:23 PM Scanning Time : 972 secs

Product Data

Device Name : Computer

Serial No. : 123

: Std Form Cell Phone : 123 Type

Model

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm Length : 160 mm Width Depth : 10 mm

Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.162 W/kg Power Drift-Finish: 0.157 W/kg Power Drift (%) : -3.266

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

: Center Location

Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name Model Type

Model : E020
Type : E-Field Triangle
Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

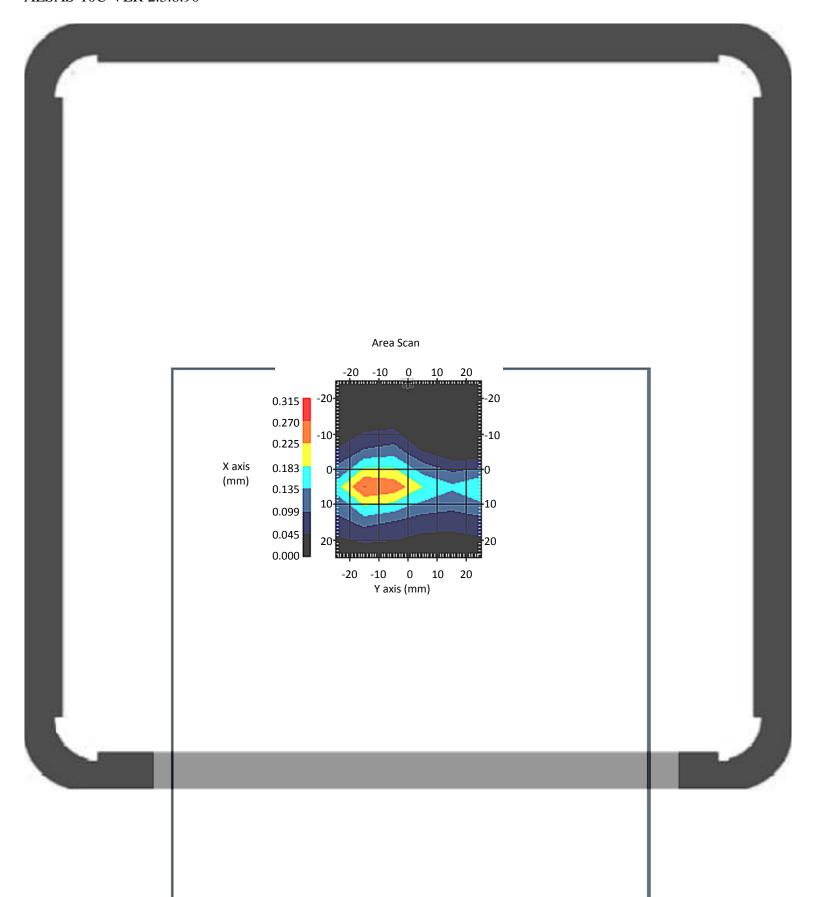
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 3:35:07 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

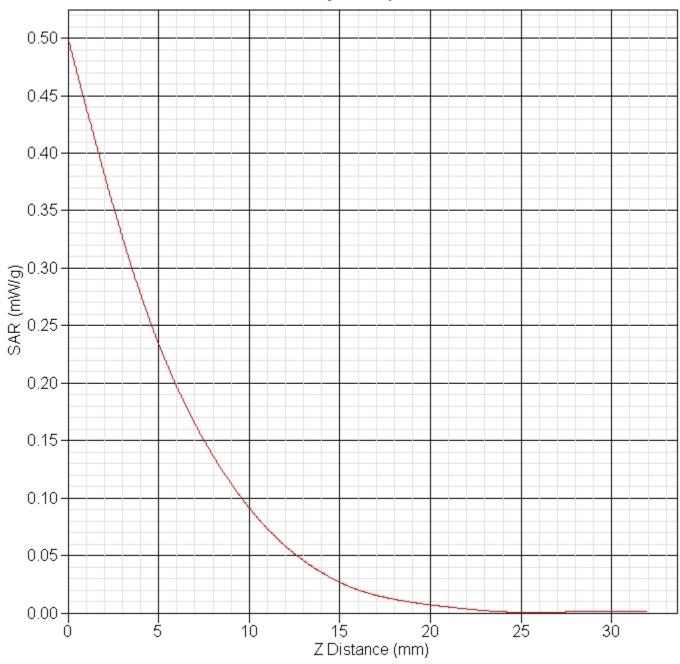
DUT Position : Touch Separation : 0 Channel : Low



1 gram SAR value : 0.229 W/kg
10 gram SAR value : 0.085 W/kg
Area Scan Peak SAR : 0.271 W/kg
Zoom Scan Peak SAR : 0.500 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
-							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) <sup>1/2</sup>	(1- cp) <sup>1/2</sup>	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	√3	√cp	√ср	4.4	4.4
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	3.3	rectangular	√3	1	1	1.9	1.9
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid Conductivity(target)	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity(meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				11.0	10.4
Combined Uncertainty (coverage factor=2)		Normal(k=2)				22.1	20.7

SAR-Z Axis at Hotspot x:5.01 y:-7.10



## SAR Test Report (11n20 mode tip edge mid)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 02:54:01 PM End Time : 16-Nov-2010 03:09:16 PM Scanning Time : 915 secs

Product Data

Device Name : Computer

Serial No. : 123

: Std Form Cell Phone : 123 Type

Model

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm Length : 160 mm Width Depth : 10 mm

Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.164 W/kg Power Drift-Finish: 0.173 W/kg

Power Drift (%) : 5.767

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

: Center Location

Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name Model Type

Model : E020
Type : E-Field Triangle
Serial No. : 273

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

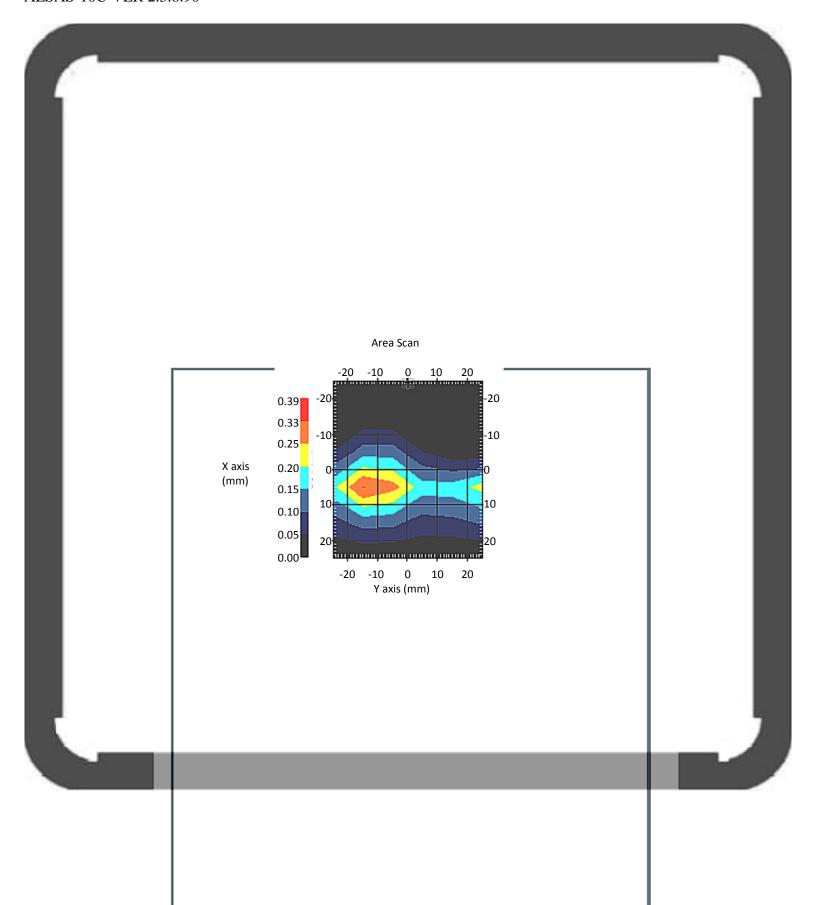
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 2:53:54 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

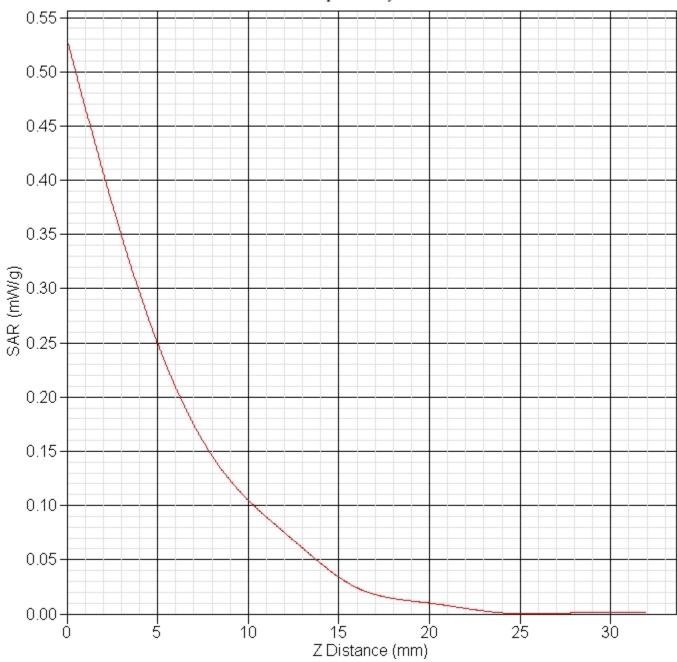
DUT Position : Touch Separation : 0 Channel : Mid



1 gram SAR value : 0.241 W/kg
10 gram SAR value : 0.094 W/kg
Area Scan Peak SAR : 0.302 W/kg
Zoom Scan Peak SAR : 0.530 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Measurement System							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1-	(1-	1.5	1.5
Marai Isocropy	J . /	rectangular	13	cp) 1/2	cp) 1/2	1.5	1.3
Hemispherical	10.9	rectangular	√3	√ср	√cp	4.4	4.4
Isotropy							
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning	2.9	rectangular	√3	1	1	1.7	1.7
with respect to							
Phantom Shell							
Extrapolation and	3.7	rectangular	√3	1	1	2.1	2.1
Integration							
Test Sample	4.0	normal	1	1	1	4.0	4.0
Positioning							
Device Holder	2.0	normal	1	1	1	2.0	2.0
Uncertainty			,				
Drift of Output	5.8	rectangular	√3	1	1	3.3	3.3
Power							
Phantom and Setup		_	10				
Phantom	3.4	rectangular	√3	1	1	2.0	2.0
Uncertainty(shape &							
thickness tolerance)			10	0.7			
Liquid	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Conductivity(target)	2 1		1	0 7	0 5		1 5
Liquid	3.1	normal	1	0.7	0.5	2.2	1.5
Conductivity (meas.)	E O		1/2	0.6	0 5	1 7	1 4
Liquid	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Permittivity(target)	8.9	norma1	1	0.6	0.5	5 2	4.4
Liquid Permittivity(meas.)	0.9	normal		0.0	0.5	5.3	4.4
<del>-</del>		RSS				11.4	10.7
Combined Uncertainty							
Combined Uncertainty		Normal(k=2)				22.7	21.4
(coverage factor=2)					<u> </u>	1	

SAR-Z Axis at Hotspot x:5.01 y:-7.07



## SAR Test Report (11n20 mode tip edge high)

Report Date : 16-Nov-2010

By Operator : 123

Measurement Date : 16-Nov-2010

Starting Time : 16-Nov-2010 03:14:05 PM End Time : 16-Nov-2010 03:29:41 PM Scanning Time : 936 secs

Product Data

Device Name : Computer

Serial No. : 123

: Std Form Cell Phone
: 123 Type

Model

Frequency : 2400.00 MHz

Max. Transmit Pwr : 1 W Drift Time : 0 min(s)
Length : 255 mm Length : 160 mm Width Depth : 10 mm
Antenna Type : Internal
Orientation : Touch

Power Drift-Start: 0.182 W/kg Power Drift-Finish: 0.170 W/kg Power Drift (%) : -6.539

Picture

Phantom Data

: APREL-Uni Name : Uni-Phantom : 280 x 280 x 200 : User Define Type Size (mm) Serial No.

: Center Location Description : uni

Tissue Data Type

Type : BODY
Serial No. : IAC Tissue - 2450
Frequency : 2450.00 MHz Last Calib. Date: 15-May-2008 Temperature : 20.00 °C Ambient Temp. : 20.00 °C

Humidity : 50.00 RH%

Epsilon : 48.01 F/m

Sigma : 1.89 S/m

Density : 1000.00 kg/cu. m

Probe Data

: IAC-273 Name Model : E020
Type : E-Field Triangle
Serial No. : 273 Model Type

Last Calib. Date: 13-Sep-2010 Frequency : 2450.00 MHz

Duty Cycle Factor: 1 Conversion Factor: 3.6

Probe Sensitivity: 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point: 95.00 mV Offset : 1.56 mm

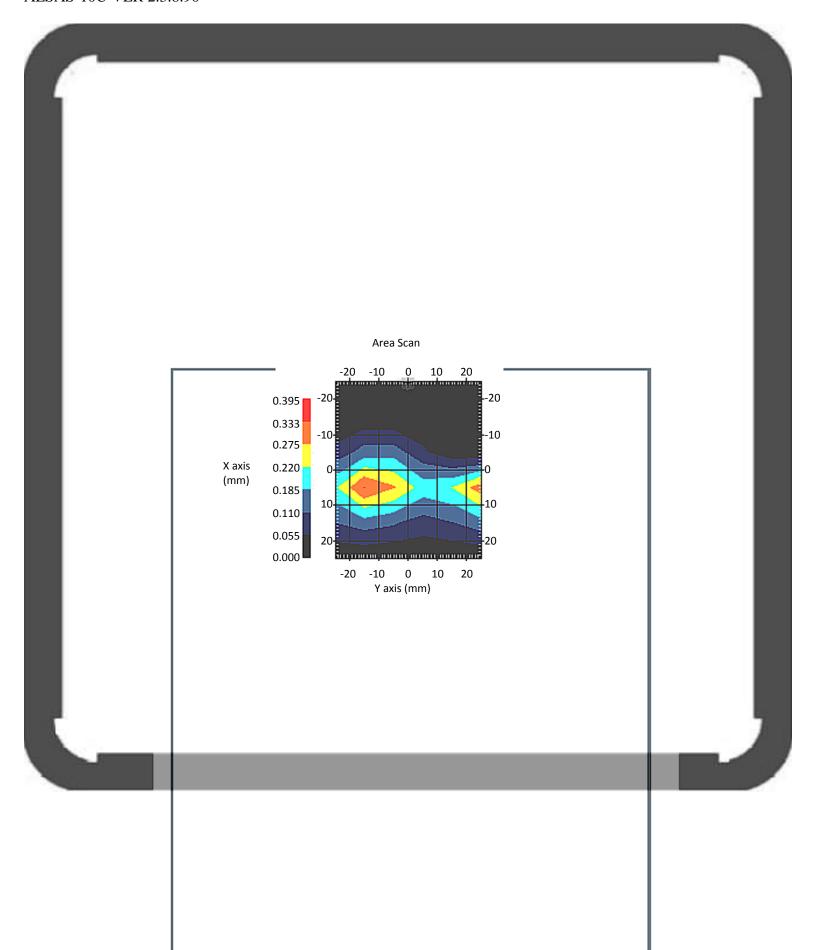
Measurement Data

Crest Factor : 1

Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C
Set-up Date : 16-Nov-2010
Set-up Time : 3:14:02 PM
Area Scan : 6x6x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

DUT Position : Touch Separation : 0 Channel : High



1 gram SAR value : 0.266 W/kg
10 gram SAR value : 0.106 W/kg
Area Scan Peak SAR : 0.332 W/kg
Zoom Scan Peak SAR : 0.600 W/kg

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c <sub>i</sub> <sup>1</sup> (1-g)	c <sub>i</sub> <sup>1</sup> (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1- cp) <sup>1/2</sup>	(1- cp) <sup>1/2</sup>	1.5	1.5
Hemispherical	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Isotropy							
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to	2.9	rectangular	√3	1	1	1.7	1.7
Phantom Shell Extrapolation and	3.7	rectangular	√3	1	1	2.1	2.1
Integration							
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	6.5	rectangular	√3	1	1	3.8	3.8
Phantom and Setup							
Phantom Uncertainty(shape &	3.4	rectangular	√3	1	1	2.0	2.0
<pre>thickness tolerance) Liquid Conductivity(target)</pre>	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity (meas.)	3.1	normal	1	0.7	0.5	2.2	1.5
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	8.9	normal	1	0.6	0.5	5.3	4.4
Combined Uncertainty		RSS				11.5	10.9
Combined Uncertainty (coverage factor=2)		Normal(k=2)				23.0	21.8

SAR-Z Axis at Hotspot x:5.08 y:-15.19

