
	SAR MEASUREMENT REPORT
	Project name :
	KS071012A02 FCCID: VFM-NSZMNS9000

I. RESULTS

<u>TYPE</u>	<u>BAND</u>	<u>PARAMETERS</u>
<u>Noise</u>	--	--
<u>Validation</u>	--	--
<u>Phone</u>	<u>GSM1900</u>	<u>Measurement 1:</u> Right Head with Cheek device position on Low Channel in GMSK mode <u>Measurement 2:</u> Right Head with Cheek device position on Middle Channel in GMSK mode <u>Measurement 3:</u> Right Head with Cheek device position on High Channel in GMSK mode <u>Measurement 4:</u> Right Head with Tilt device position on Low Channel in GMSK mode <u>Measurement 5:</u> Right Head with Tilt device position on Middle Channel in GMSK mode <u>Measurement 6:</u> Right Head with Tilt device position on High Channel in GMSK mode <u>Measurement 7:</u> Left Head with Cheek device position on Low Channel in GMSK mode <u>Measurement 8:</u> Left Head with Cheek device position on Middle Channel in GMSK mode <u>Measurement 9:</u> Left Head with Cheek device position on High Channel in GMSK mode <u>Measurement 10:</u> Left Head with Tilt device position on Low Channel in GMSK mode <u>Measurement 11:</u> Left Head with Tilt device position on Middle Channel in GMSK mode <u>Measurement 12:</u> Left Head with Tilt device position on High Channel in GMSK mode

MEASUREMENT 1

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 19 minutes 29 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	GMSK

B. Instrumentations.

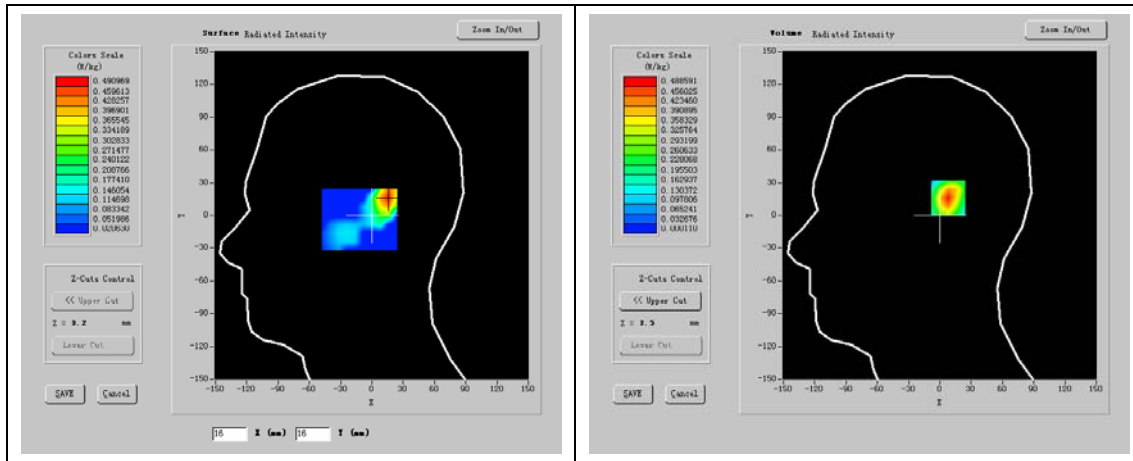
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Lower Band SAR (Channel 513):

Frequency (MHz)	1850.400024
Relative permittivity (real part)	40.313000
Relative permittivity (imaginary part)	13.584900
Conductivity (S/m)	1.396528
Variation (%)	-2.170000

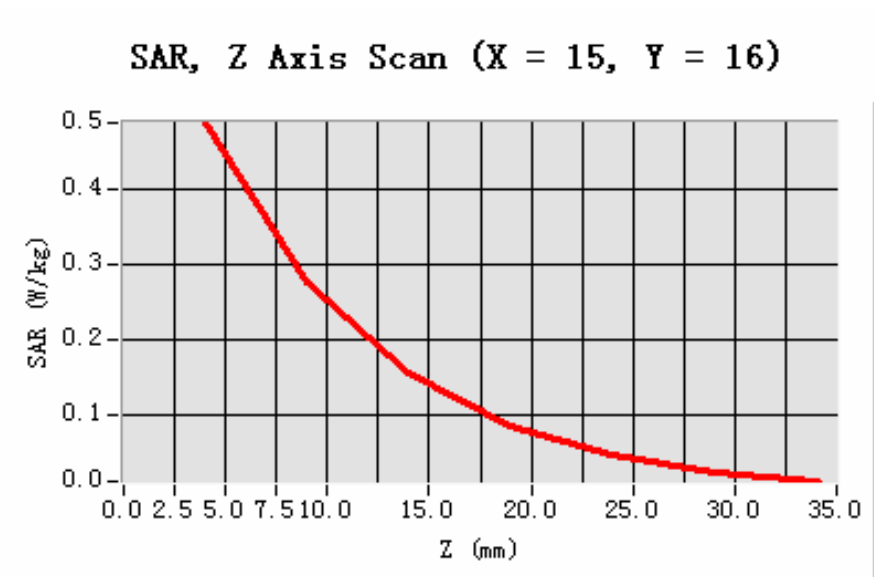
SURFACE SAR	VOLUME SAR
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Maximum location: X=15.00, Y=16.00

SAR 10g (W/Kg)	0.238193
SAR 1g (W/Kg)	0.452500

Z Axis Scan



MEASUREMENT 2

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 19 minutes 29 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	GMSK

B. Instrumentations.

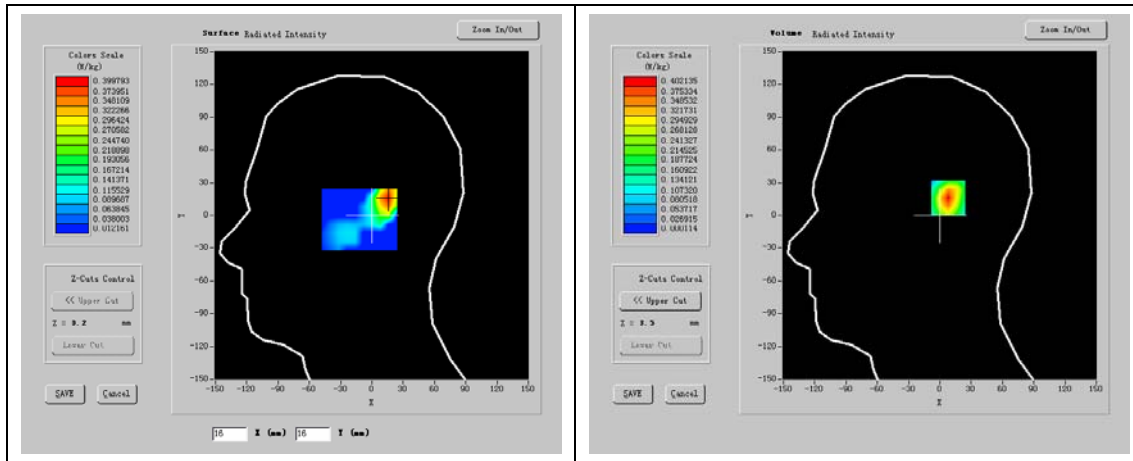
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.193001
Relative permittivity (imaginary part)	13.813800
Conductivity (S/m)	1.442775
Variation (%)	-2.170000

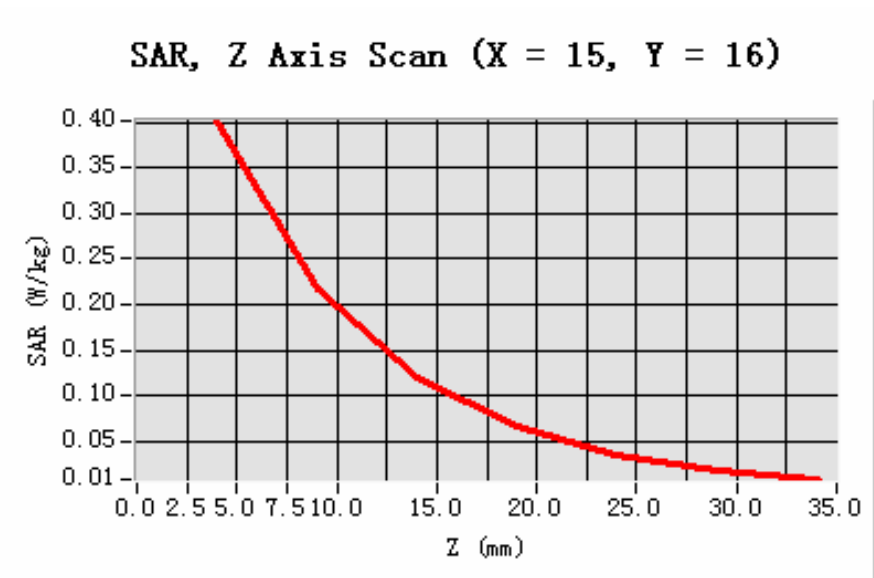
SURFACE SAR	VOLUME SAR
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Maximum location: X=15.00, Y=16.00

SAR 10g (W/Kg)	0.192258
SAR 1g (W/Kg)	0.371868

Z Axis Scan



MEASUREMENT 3

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 19 minutes 29 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	GMSK

B. Instrumentations.

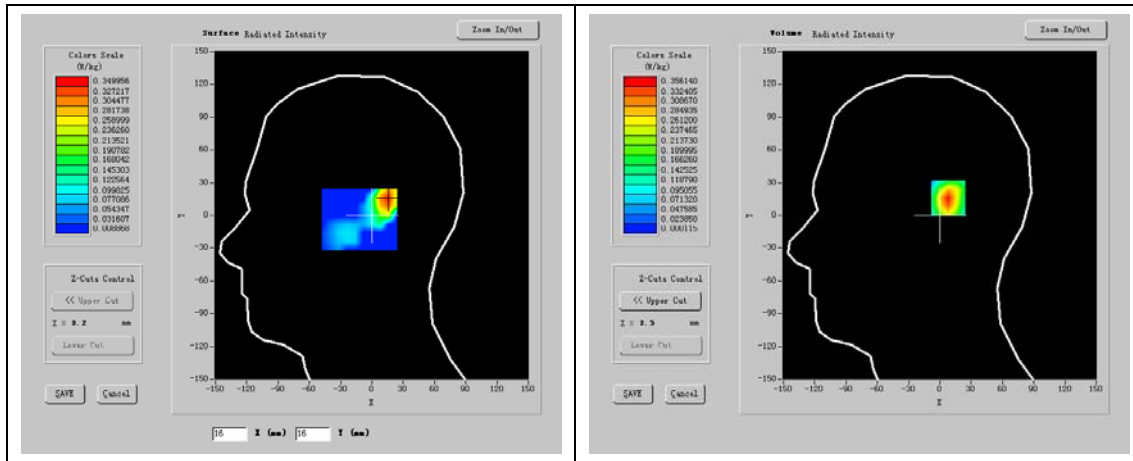
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Higher Band SAR (Channel 809):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	40.285999
Relative permittivity (imaginary part)	13.669900
Conductivity (S/m)	1.450225
Variation (%)	-2.170000

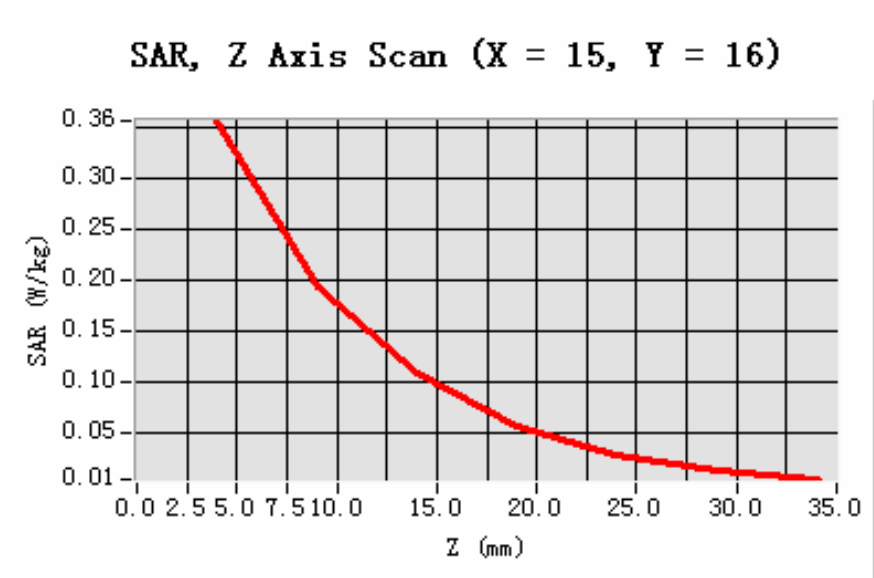
SURFACE SAR	VOLUME SAR
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Maximum location: X=15.00, Y=16.00

SAR 10g (W/Kg)	0.171861
SAR 1g (W/Kg)	0.331717

Z Axis Scan



MEASUREMENT 4

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 19 minutes 57 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right hand
Device Position	Tilt
Band	GSM1900
Channels	Low
Signal	GMSK

B. Instrumentations.

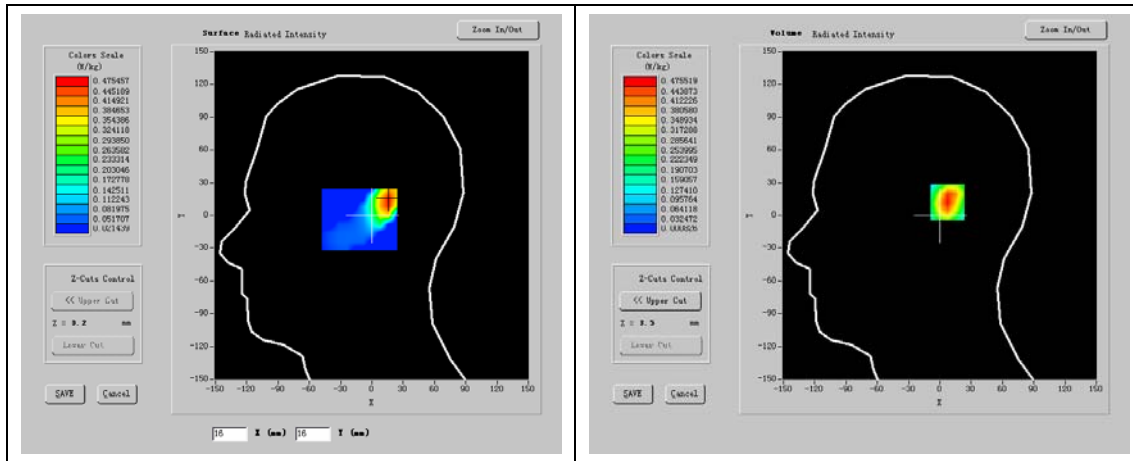
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Lower Band SAR (Channel 513):

Frequency (MHz)	1850.400024
Relative permittivity (real part)	40.313000
Relative permittivity (imaginary part)	13.584900
Conductivity (S/m)	1.396528
Variation (%)	-0.360000

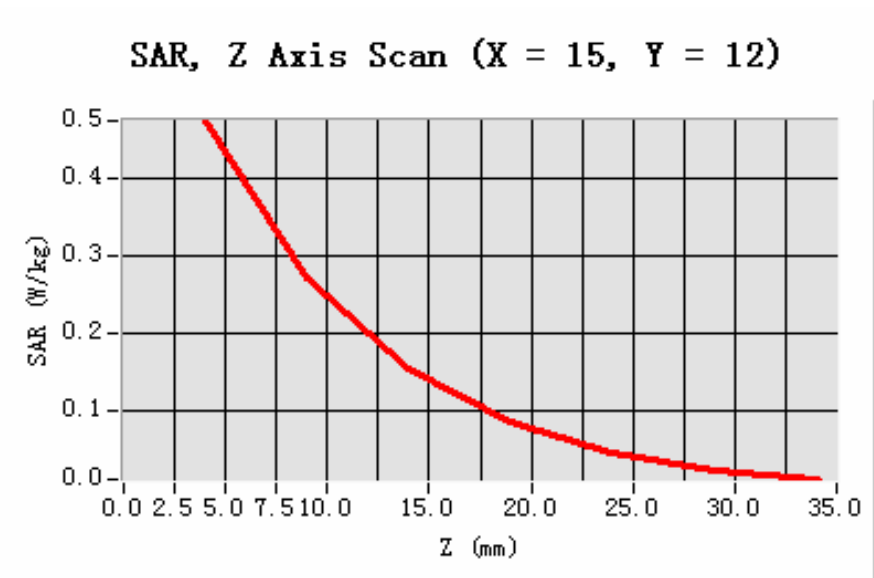
SURFACE SAR	VOLUME SAR
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Maximum location: X=15.00, Y=12.00

SAR 10g (W/Kg)	0.238565
SAR 1g (W/Kg)	0.447404

Z Axis Scan



MEASUREMENT 5

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 19 minutes 57 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right hand
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	GMSK

B. Instrumentations.

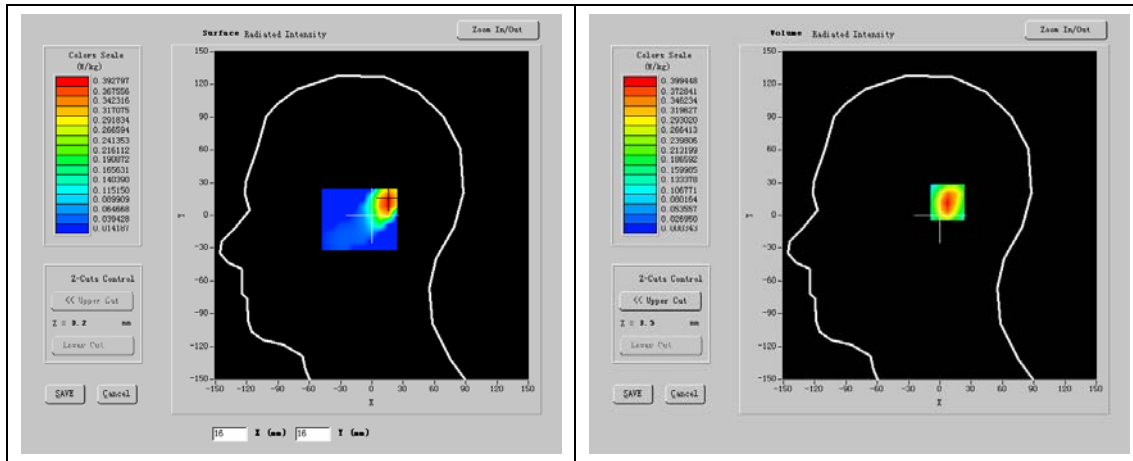
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.193001
Relative permittivity (imaginary part)	13.813800
Conductivity (S/m)	1.442775
Variation (%)	-0.360000

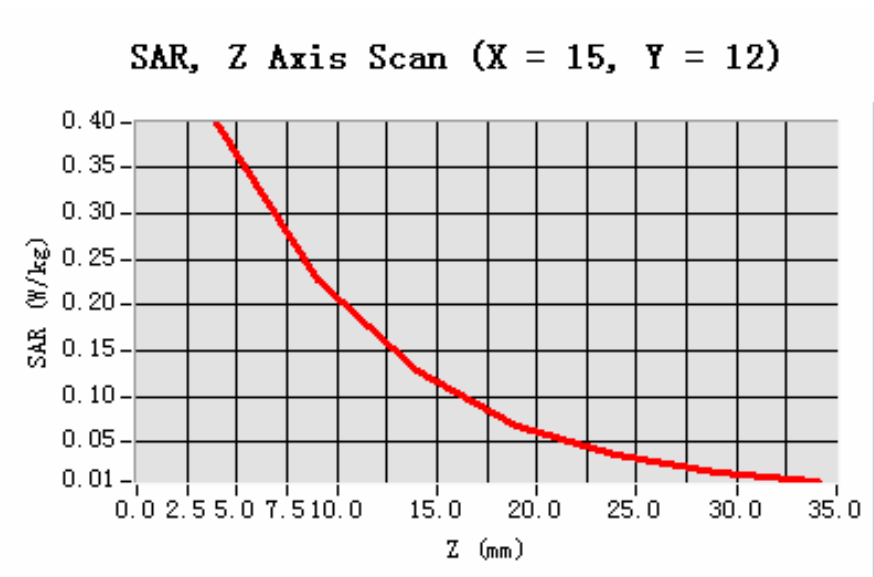
SURFACE SAR	VOLUME SAR
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Maximum location: X=15.00, Y=12.00

SAR 10g (W/Kg)	0.201111
SAR 1g (W/Kg)	0.374956

Z Axis Scan



MEASUREMENT 6

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 19 minutes 57 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	High
Signal	GMSK

B. Instrumentations.

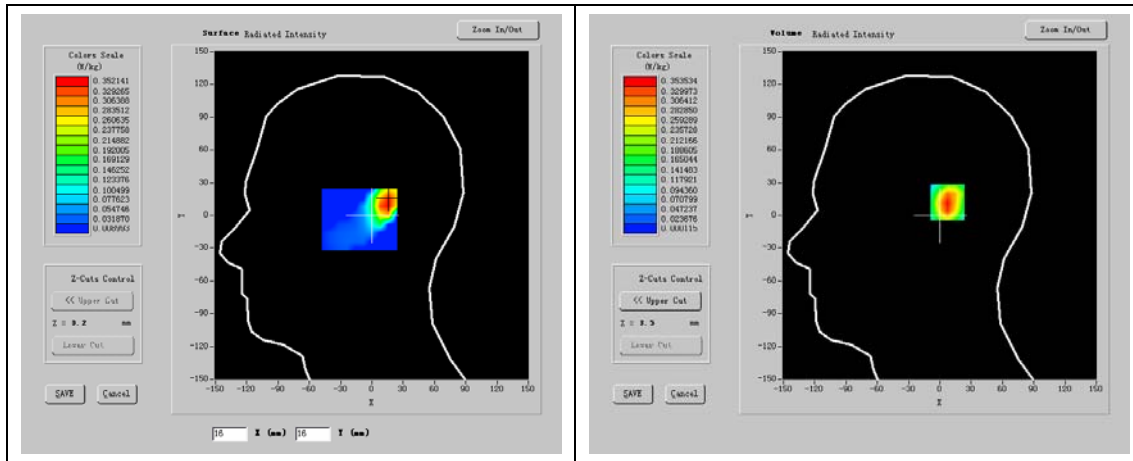
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Higher Band SAR (Channel 809):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	40.285999
Relative permittivity (imaginary part)	13.669900
Conductivity (S/m)	1.450225
Variation (%)	-0.360000

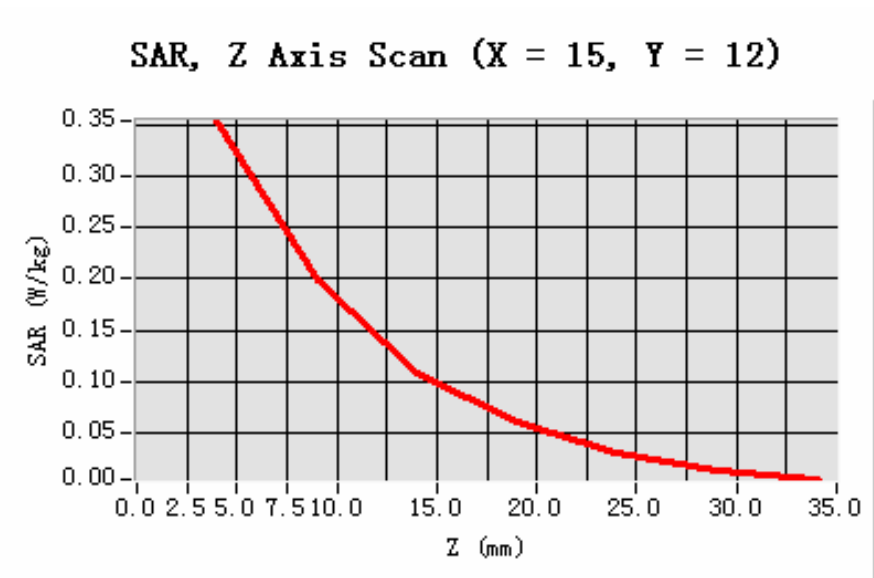
SURFACE SAR	VOLUME SAR
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Maximum location: X=15.00, Y=12.00

SAR 10g (W/Kg)	0.176557
SAR 1g (W/Kg)	0.333206

Z Axis Scan



MEASUREMENT 7

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 6 minutes 40 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	GMSK

B. Instrumentations.

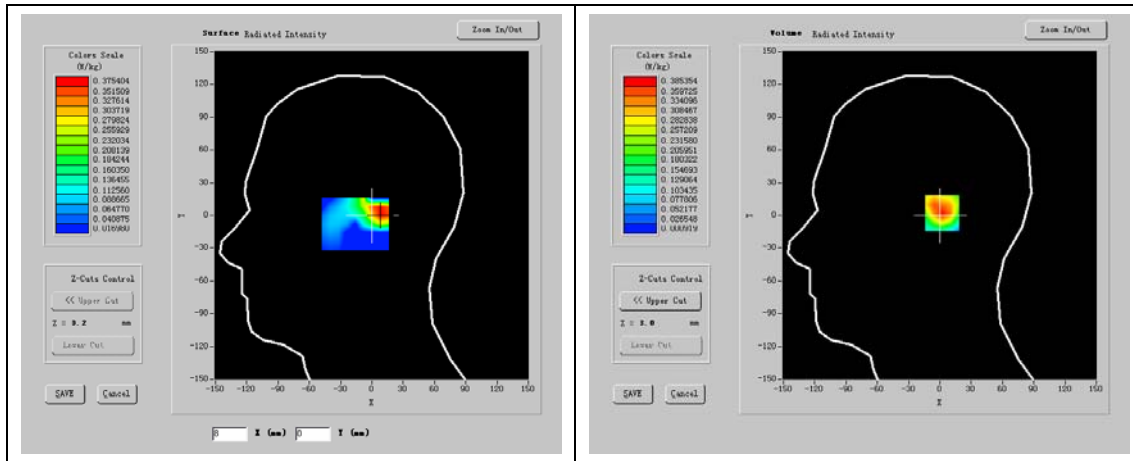
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Lower Band SAR (Channel 513):

Frequency (MHz)	1850.400024
Relative permittivity (real part)	40.313000
Relative permittivity (imaginary part)	13.584900
Conductivity (S/m)	1.396528
Variation (%)	-1.000000

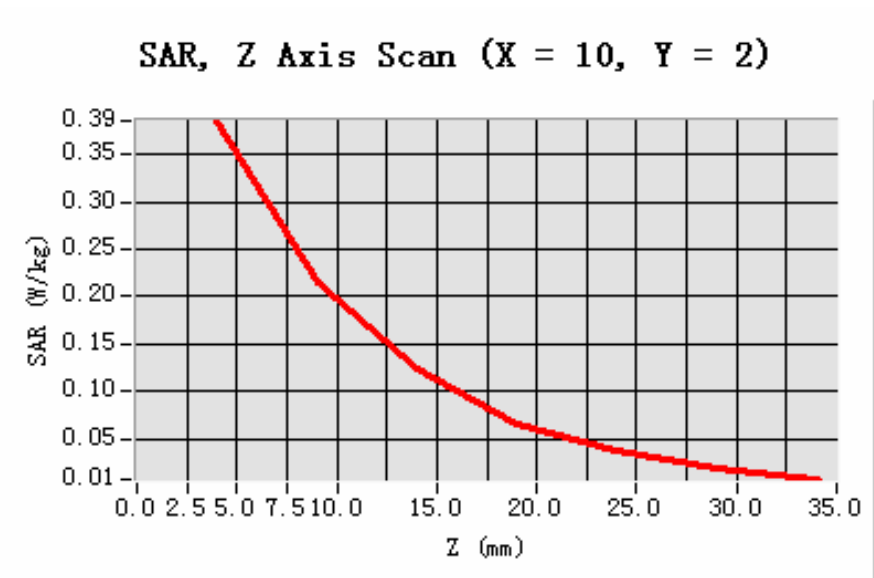
SURFACE SAR	VOLUME SAR
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Maximum location: X=10.00, Y=2.00

SAR 10g (W/Kg)	0.198777
SAR 1g (W/Kg)	0.363273

Z Axis Scan



MEASUREMENT 8

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 6 minutes 17 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	GMSK

B. Instrumentations.

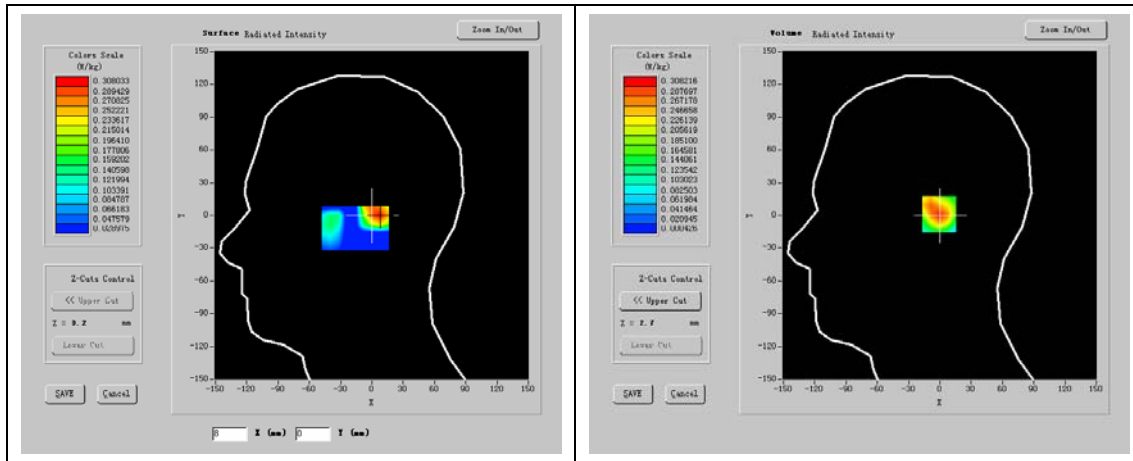
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.193001
Relative permittivity (imaginary part)	13.813800
Conductivity (S/m)	1.442775
Variation (%)	-1.730000

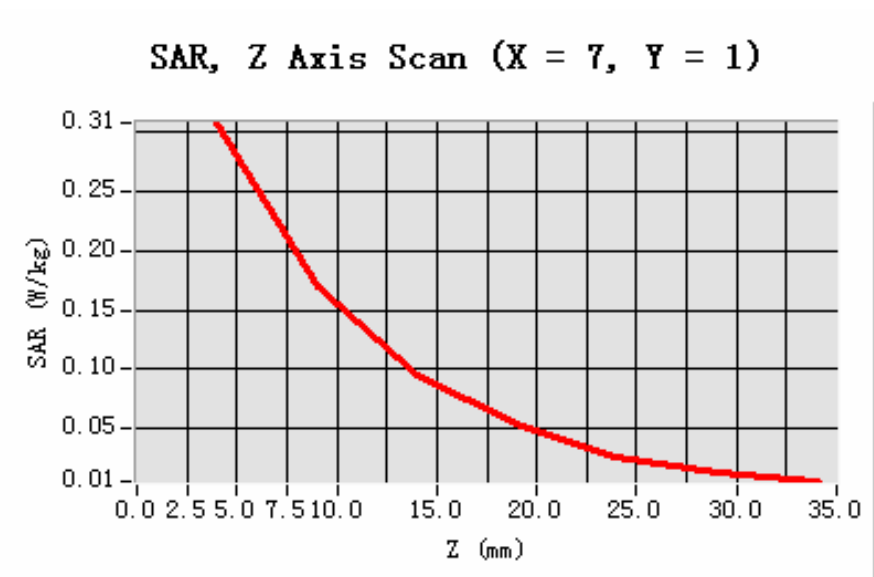
SURFACE SAR	VOLUME SAR
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Maximum location: X=7.00, Y=1.00

SAR 10g (W/Kg)	0.158475
SAR 1g (W/Kg)	0.289611

Z Axis Scan



MEASUREMENT 9

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 6 minutes 43 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	GMSK

B. Instrumentations.

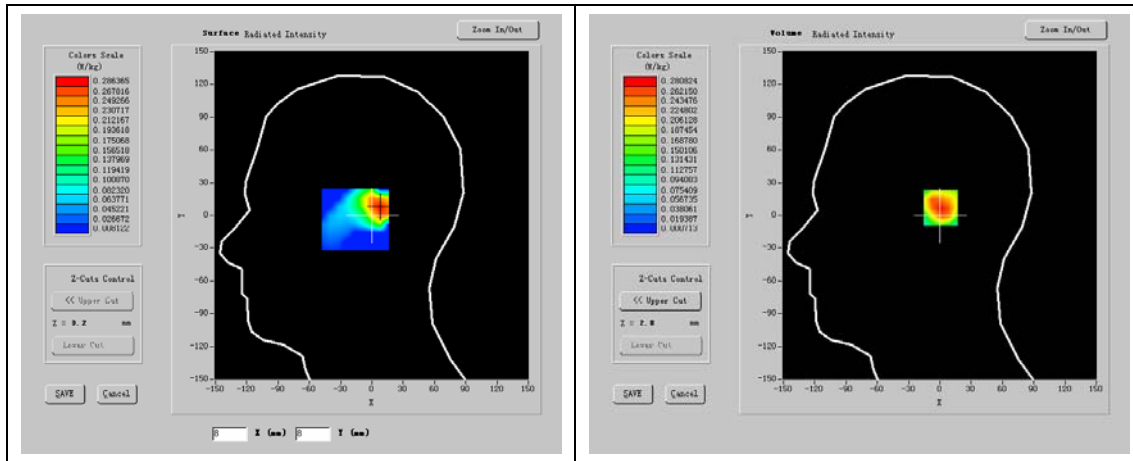
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Higher Band SAR (Channel 809):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	40.285999
Relative permittivity (imaginary part)	13.669900
Conductivity (S/m)	1.450225
Variation (%)	-2.100000

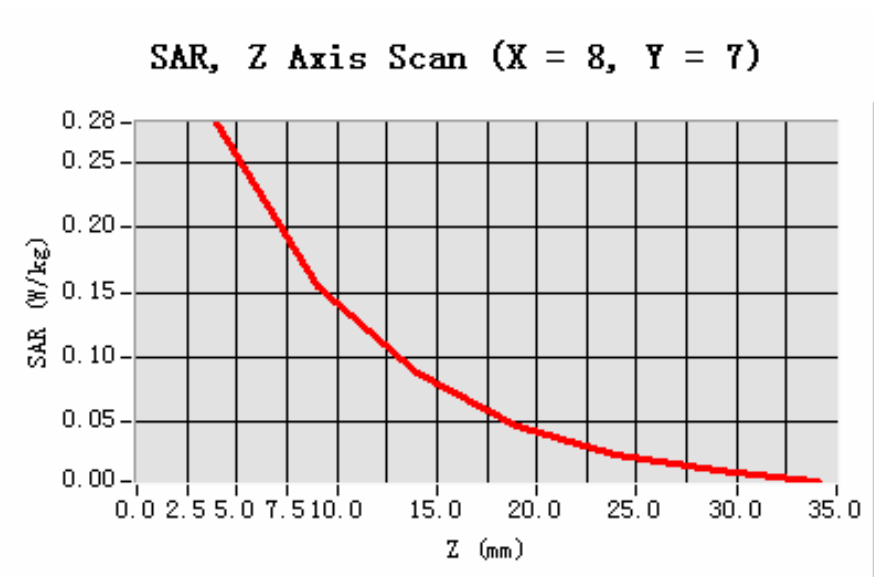
SURFACE SAR	VOLUME SAR
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Maximum location: X=8.00, Y=7.00

SAR 10g (W/Kg)	0.147418
SAR 1g (W/Kg)	0.268343

Z Axis Scan



MEASUREMENT 10

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 6 minutes 47 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Low
Signal	GMSK

B. Instrumentations.

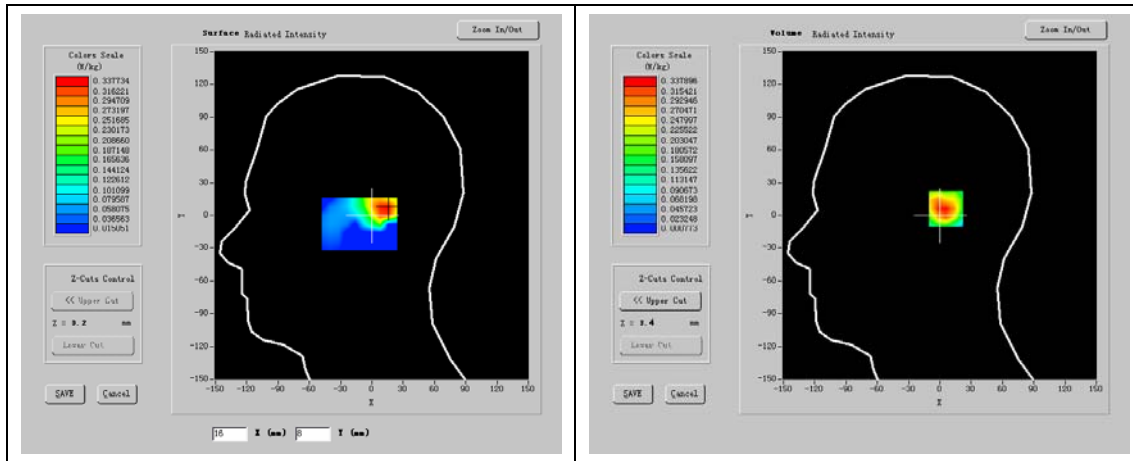
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Lower Band SAR (Channel 513):

Frequency (MHz)	1850.400024
Relative permittivity (real part)	40.313000
Relative permittivity (imaginary part)	13.584900
Conductivity (S/m)	1.396528
Variation (%)	-1.370000

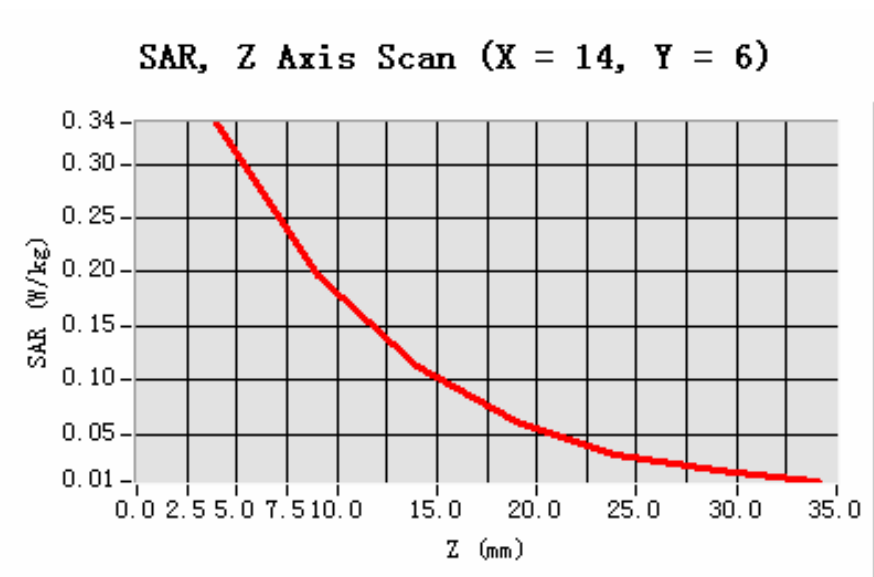
SURFACE SAR	VOLUME SAR
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Maximum location: X=14.00, Y=6.00

SAR 10g (W/Kg)	0.177329
SAR 1g (W/Kg)	0.323898

Z Axis Scan



MEASUREMENT 11

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 6 minutes 53 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptative 2 max
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	GMSK

B. Instrumentations.

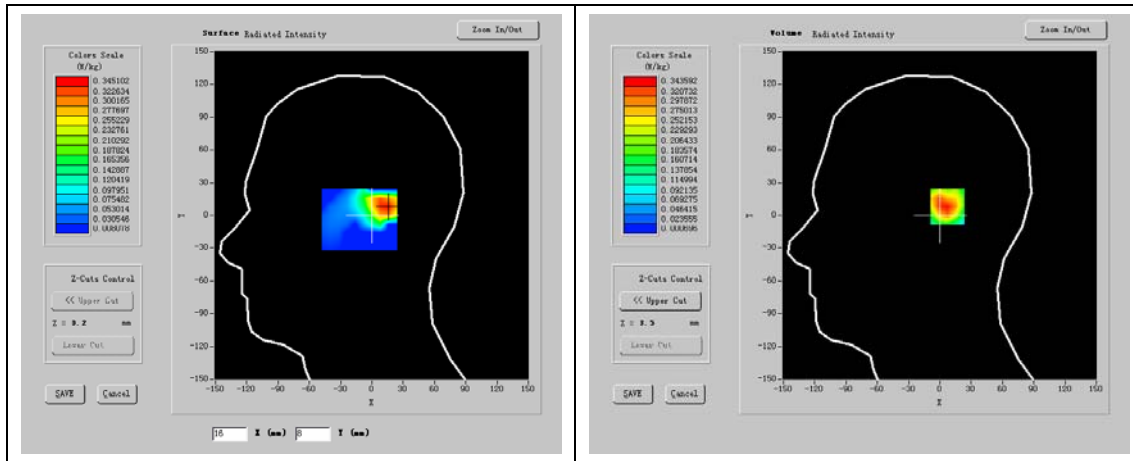
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.193001
Relative permittivity (imaginary part)	13.813800
Conductivity (S/m)	1.442775
Variation (%)	-0.900000

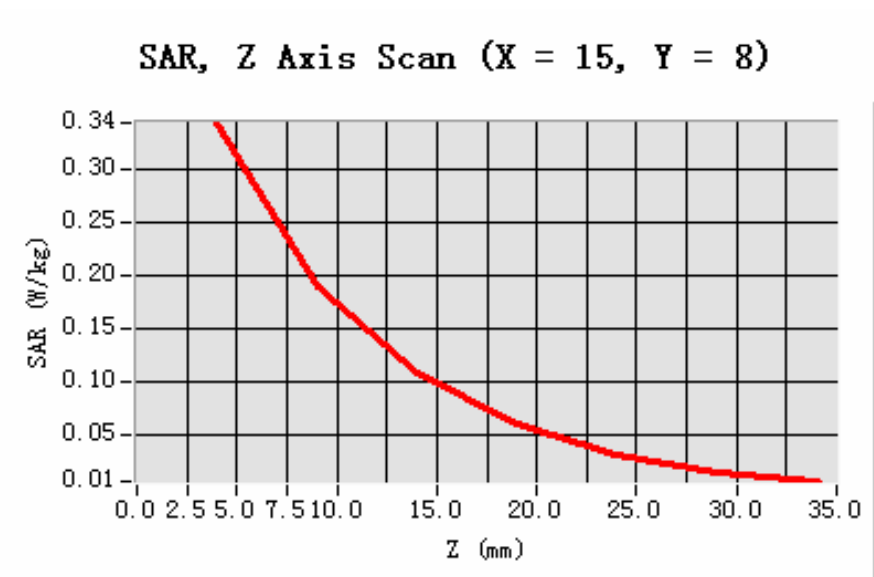
SURFACE SAR	VOLUME SAR
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Maximum location: X=15.00, Y=8.00

SAR 10g (W/Kg)	0.180033
SAR 1g (W/Kg)	0.329795

Z Axis Scan



MEASUREMENT 12

Ambient temperature:20c

Liquid temperature:21c

Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 6 minutes 46 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	High
Signal	GMSK

B. Instrumentations.

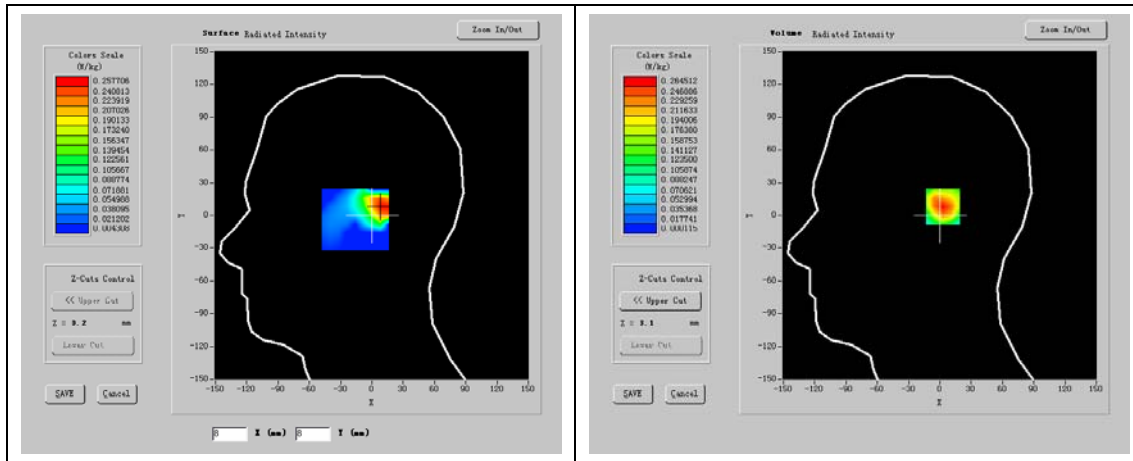
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom	Antennessa (SN:SN41_05_SAM29)
Liquid	Antennessa (Last Calibration:02/2006)

C. SAR Measurement Results

Higher Band SAR (Channel 809):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	40.285999
Relative permittivity (imaginary part)	13.669900
Conductivity (S/m)	1.450225
Variation (%)	-0.130000

SURFACE SAR	VOLUME SAR
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Maximum location: X=11.00, Y=8.00

SAR 10g (W/Kg)	0.135872
SAR 1g (W/Kg)	0.250035

Z Axis Scan

