
	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>GSM850</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 <u>Measurement 13:</u> Left Head with Cheek device position on High Channel in GMSK+BLUETOOTH 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 40 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	GMSK

B. Instrumentations.

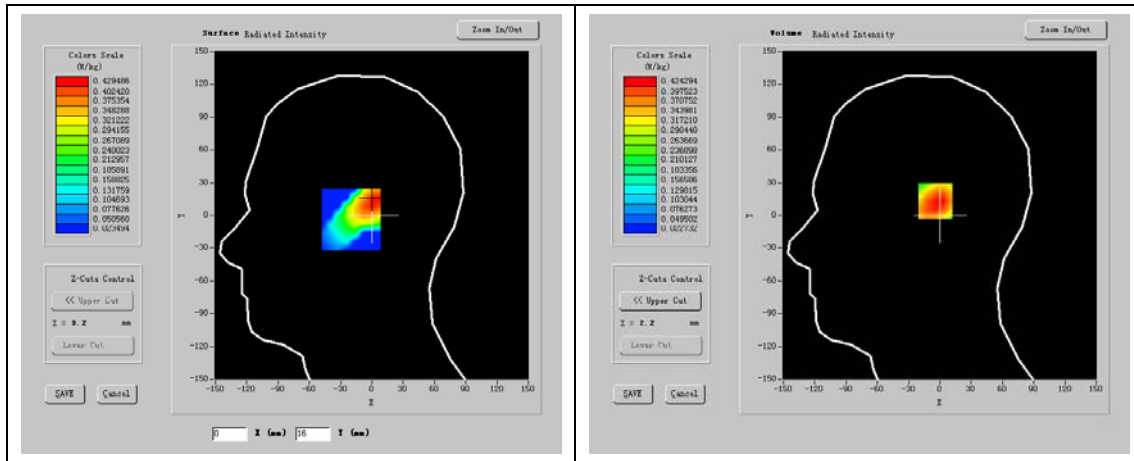
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Lower Band SAR (Channel 128):

Frequency (MHz)	824.200012
Relative permittivity (real part)	41.466999
Relative permittivity (imaginary part)	19.511101
Conductivity (S/m)	0.893392
Variation (%)	-0.730000

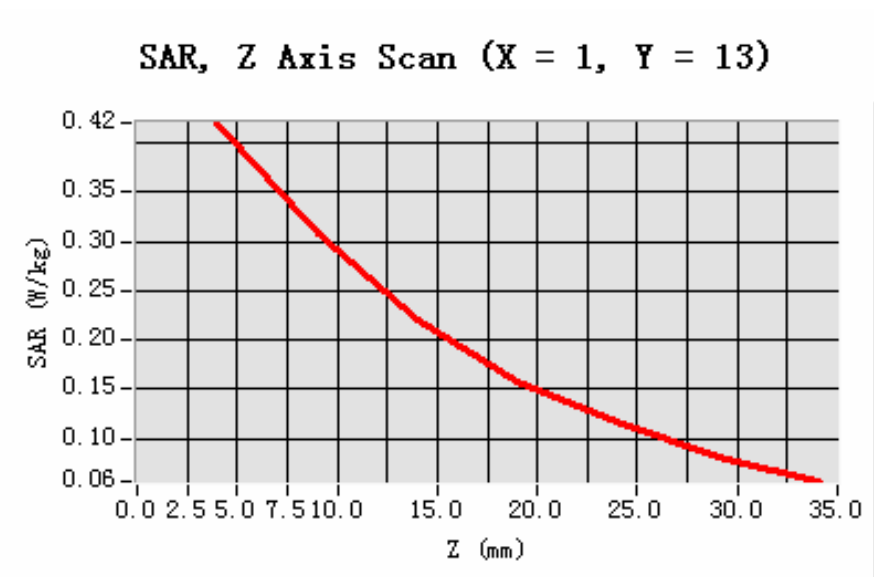
SURFACE SAR	VOLUME SAR
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Maximum location: X=1.00, Y=13.00

SAR 10g (W/Kg)	0.285234
SAR 1g (W/Kg)	0.414097

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 40 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	GMSK

B. Instrumentations.

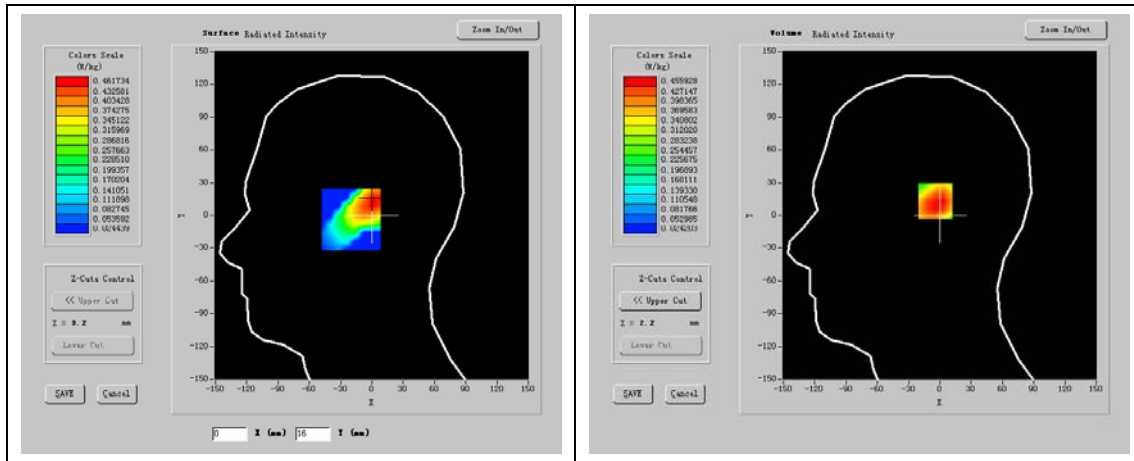
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Middle Band SAR (Channel 189):

Frequency (MHz)	836.400024
Relative permittivity (real part)	41.466999
Relative permittivity (imaginary part)	19.511101
Conductivity (S/m)	0.906616
Variation (%)	-0.730000

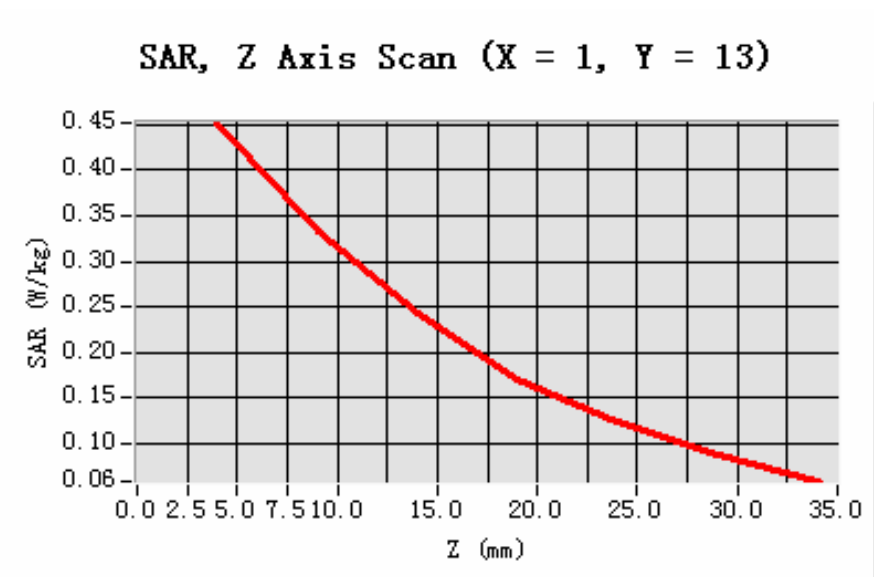
SURFACE SAR	VOLUME SAR
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Maximum location: X=1.00, Y=13.00

SAR 10g (W/Kg)	0.308569
SAR 1g (W/Kg)	0.444815

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 40 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GMSK

B. Instrumentations.

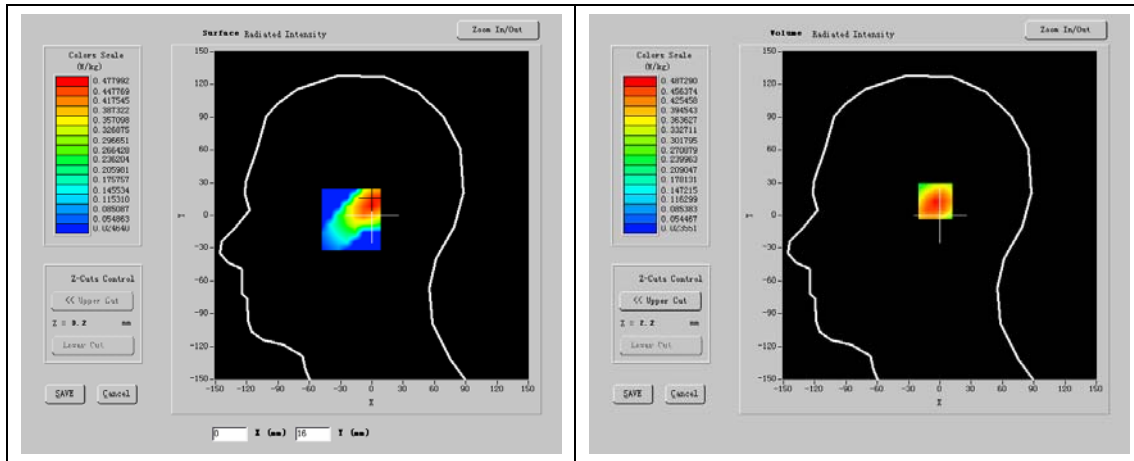
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Higher Band SAR (Channel 250):

Frequency (MHz)	848.599976
Relative permittivity (real part)	41.262001
Relative permittivity (imaginary part)	19.598200
Conductivity (S/m)	0.923946
Variation (%)	-0.730000

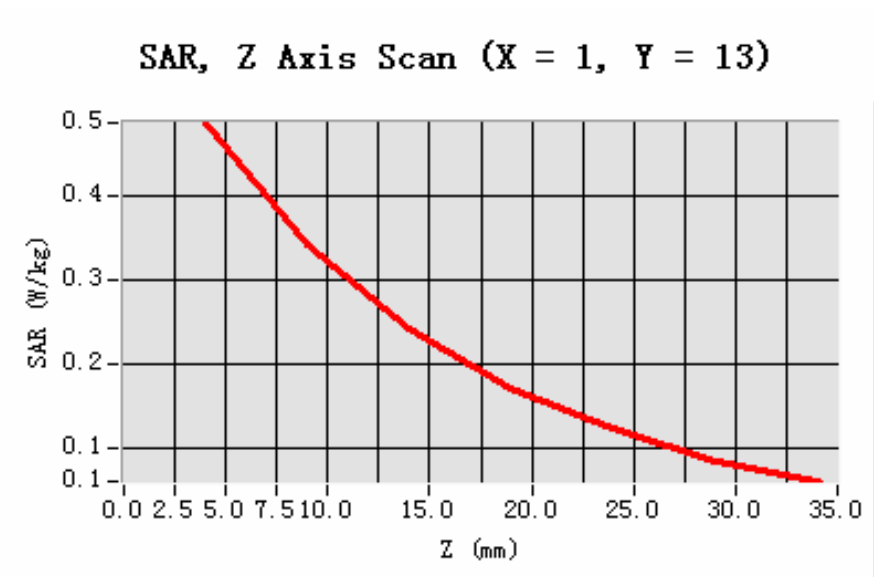
SURFACE SAR	VOLUME SAR
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Maximum location: X=1.00, Y=13.00

SAR 10g (W/Kg)	0.318054
SAR 1g (W/Kg)	0.465509

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: 20 minutes 2 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right hand
Device Position	Tilt
Band	GSM850
Channels	Low
Signal	GMSK

B. Instrumentations.

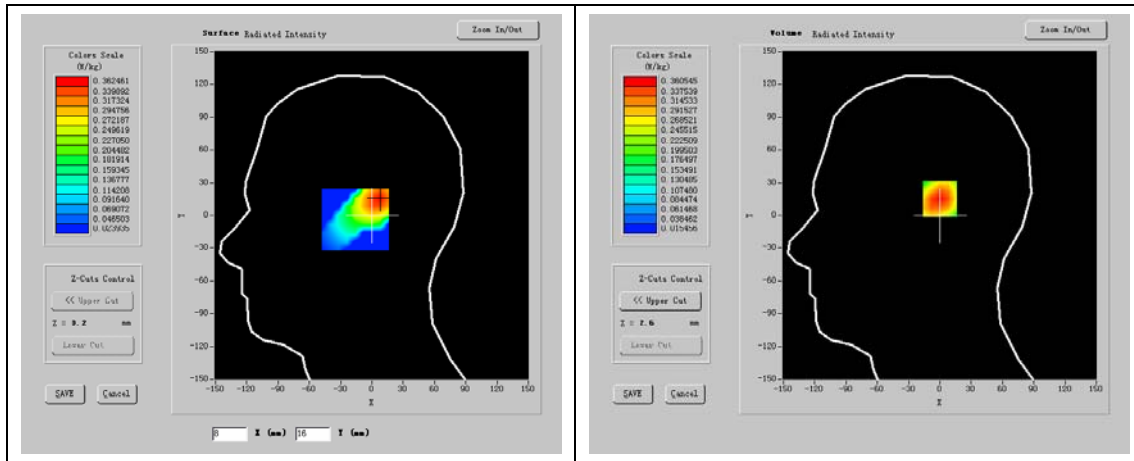
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Lower Band SAR (Channel 128):

Frequency (MHz)	824.200012
Relative permittivity (real part)	41.466999
Relative permittivity (imaginary part)	19.511101
Conductivity (S/m)	0.893392
Variation (%)	0.080000

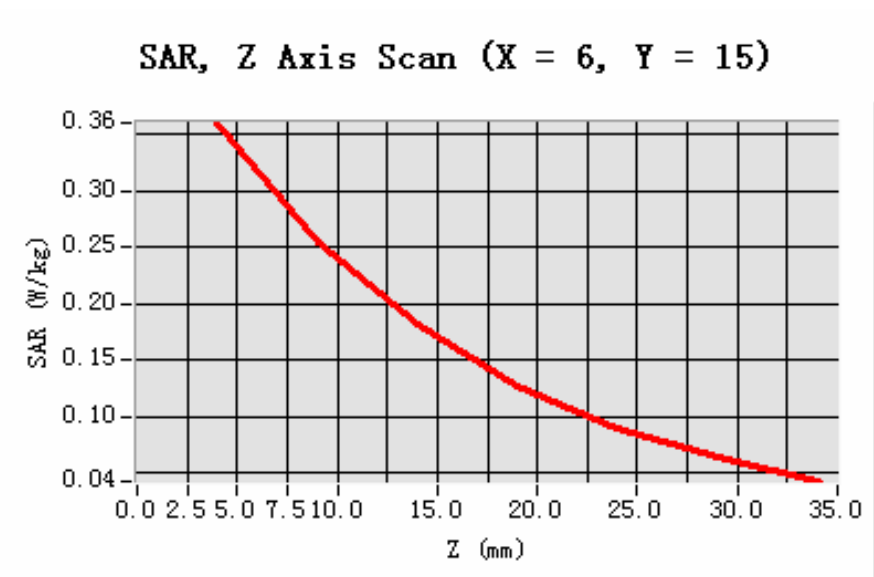
SURFACE SAR	VOLUME SAR
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Maximum location: X=6.00, Y=15.00

SAR 10g (W/Kg)	0.232522
SAR 1g (W/Kg)	0.346854

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: 20 minutes 2 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right hand
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	GMSK

B. Instrumentations.

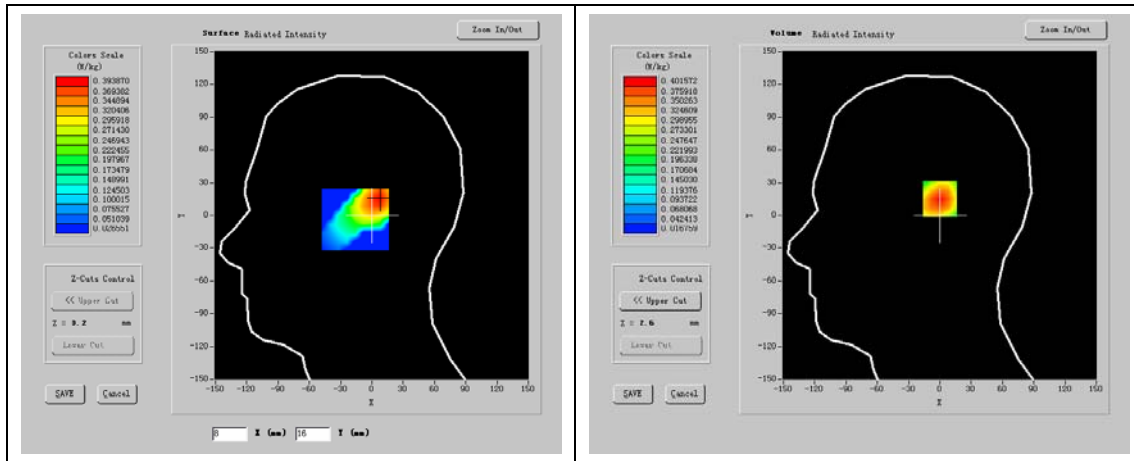
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Middle Band SAR (Channel 189):

Frequency (MHz)	836.400024
Relative permittivity (real part)	41.466999
Relative permittivity (imaginary part)	19.511101
Conductivity (S/m)	0.906616
Variation (%)	0.080000

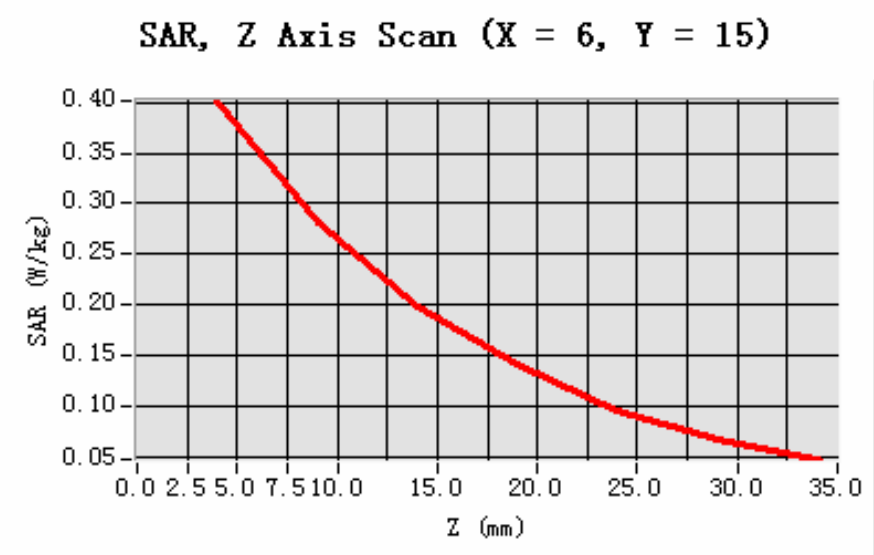
SURFACE SAR	VOLUME SAR
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Maximum location: X=6.00, Y=15.00

SAR 10g (W/Kg)	0.256761
SAR 1g (W/Kg)	0.383767

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: 20 minutes 2 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Right hand
Device Position	Tilt
Band	GSM850
Channels	High
Signal	GMSK

B. Instrumentations.

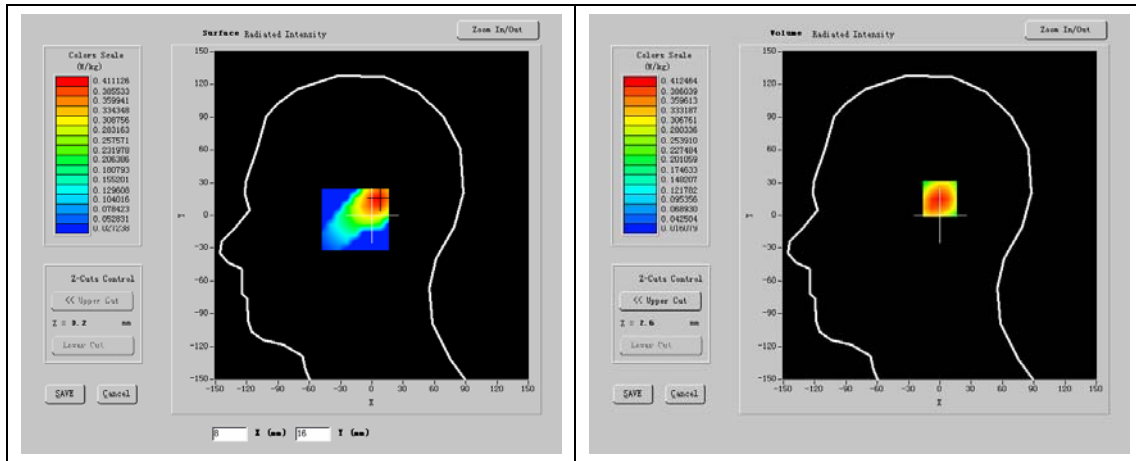
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Higher Band SAR (Channel 250):

Frequency (MHz)	848.599976
Relative permittivity (real part)	41.262001
Relative permittivity (imaginary part)	19.598200
Conductivity (S/m)	0.923946
Variation (%)	0.080000

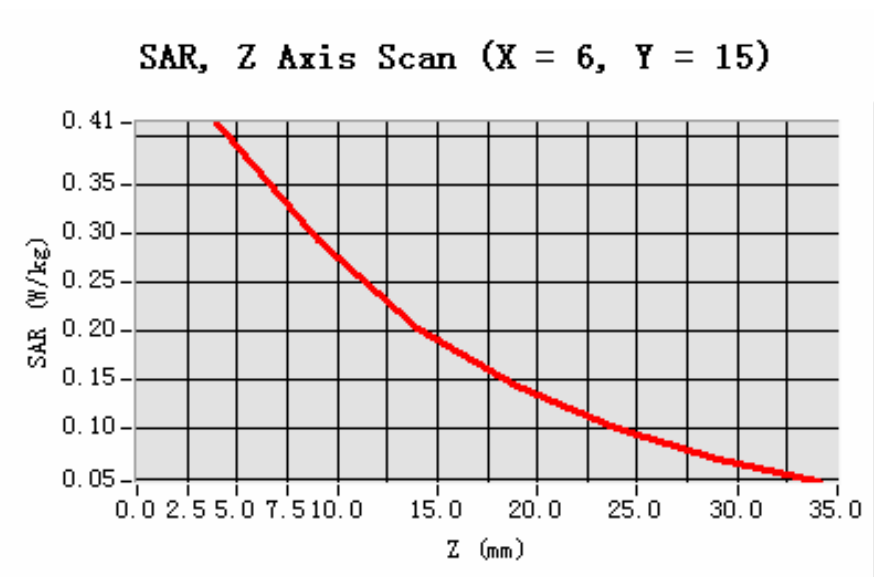
SURFACE SAR	VOLUME SAR
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Maximum location: X=6.00, Y=15.00

SAR 10g (W/Kg)	0.266662
SAR 1g (W/Kg)	0.398474

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: 19 minutes 22 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	GMSK

B. Instrumentations.

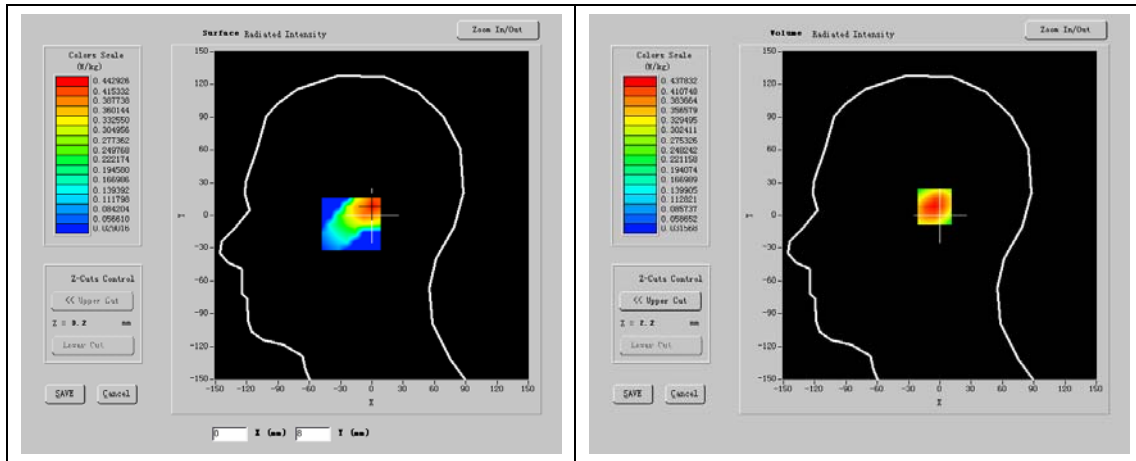
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Lower Band SAR (Channel 128):

Frequency (MHz)	824.200012
Relative permittivity (real part)	41.466999
Relative permittivity (imaginary part)	19.511101
Conductivity (S/m)	0.893392
Variation (%)	0.740000

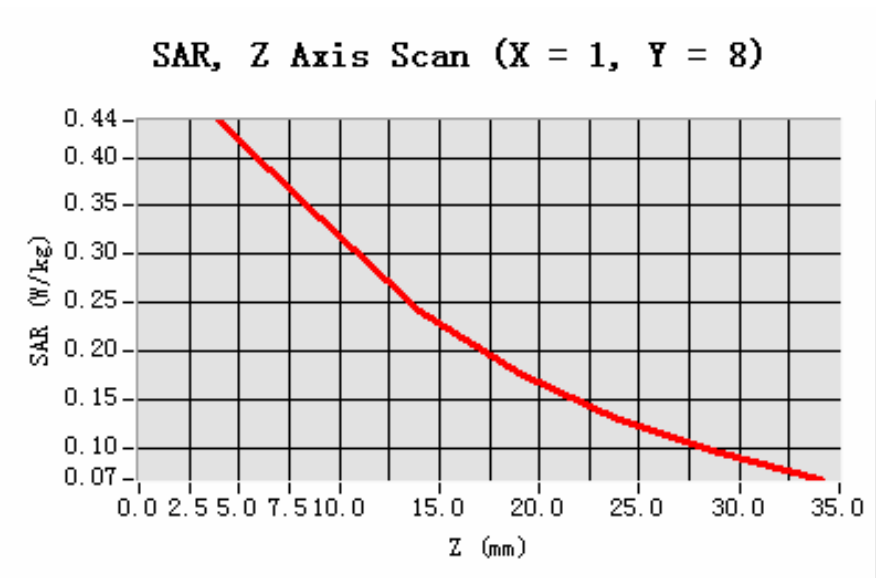
SURFACE SAR	VOLUME SAR
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Maximum location: X=1.00, Y=8.00

SAR 10g (W/Kg)	0.290587
SAR 1g (W/Kg)	0.420548

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: 19 minutes 22 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	GMSK

B. Instrumentations.

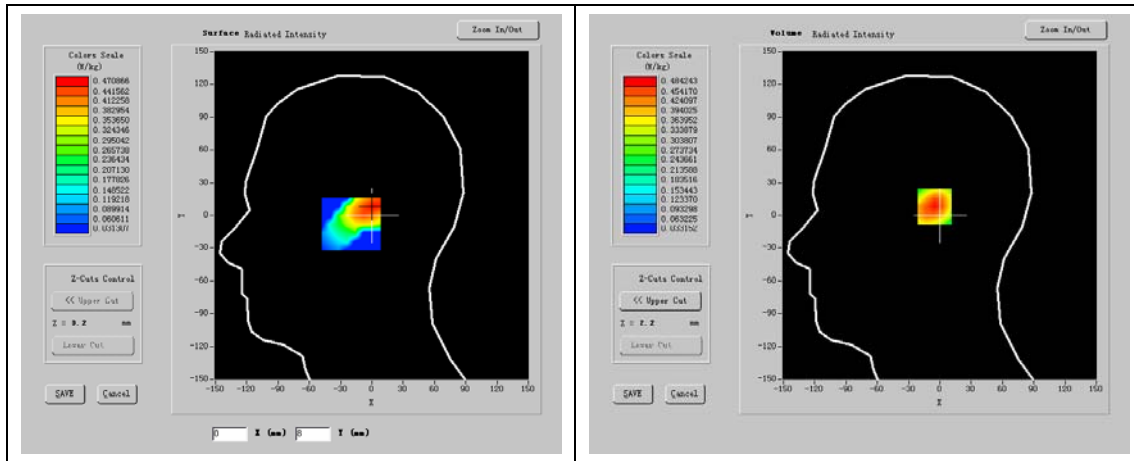
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Middle Band SAR (Channel 189):

Frequency (MHz)	836.400024
Relative permittivity (real part)	41.466999
Relative permittivity (imaginary part)	19.511101
Conductivity (S/m)	0.906616
Variation (%)	0.740000

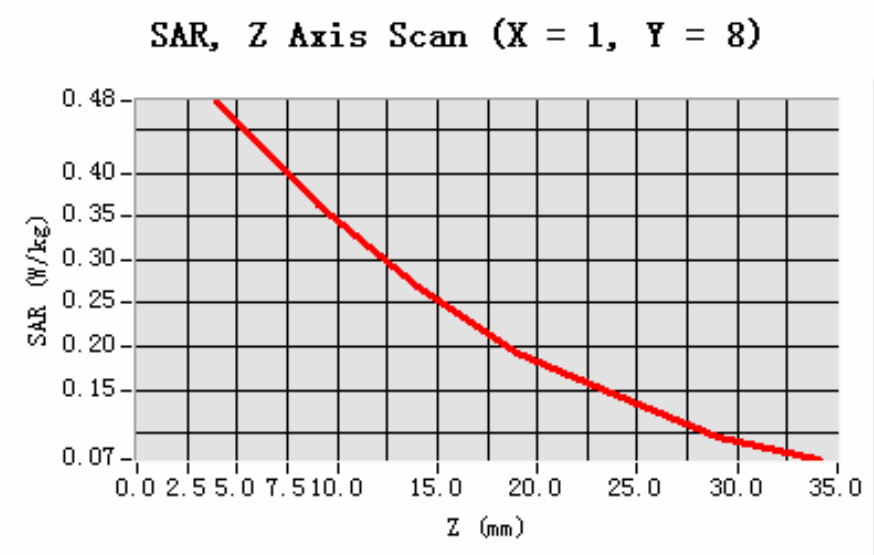
SURFACE SAR	VOLUME SAR
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Maximum location: X=1.00, Y=8.00

SAR 10g (W/Kg)	0.319361
SAR 1g (W/Kg)	0.462184

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: 19 minutes 22 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GMSK

B. Instrumentations.

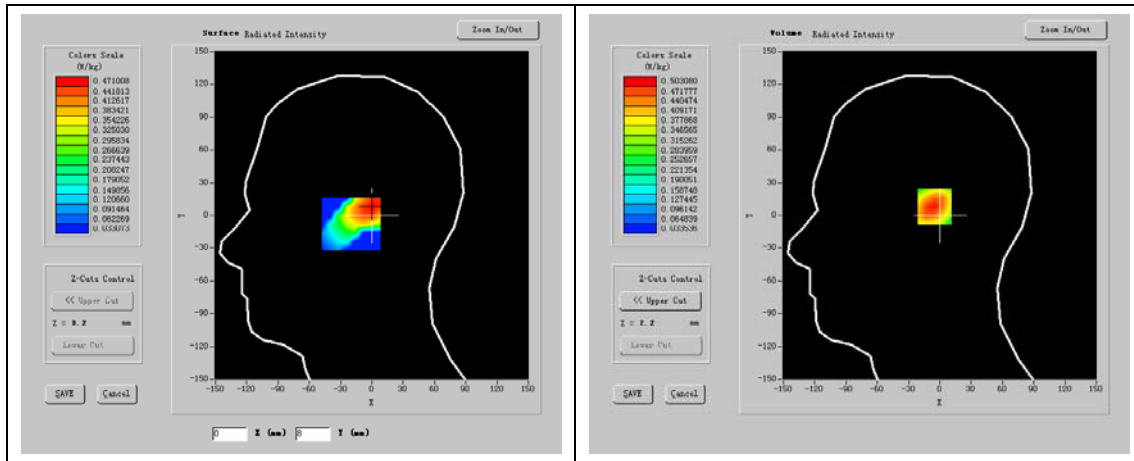
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Higher Band SAR (Channel 250):

Frequency (MHz)	848.599976
Relative permittivity (real part)	41.262001
Relative permittivity (imaginary part)	19.598200
Conductivity (S/m)	0.923946
Variation (%)	0.740000

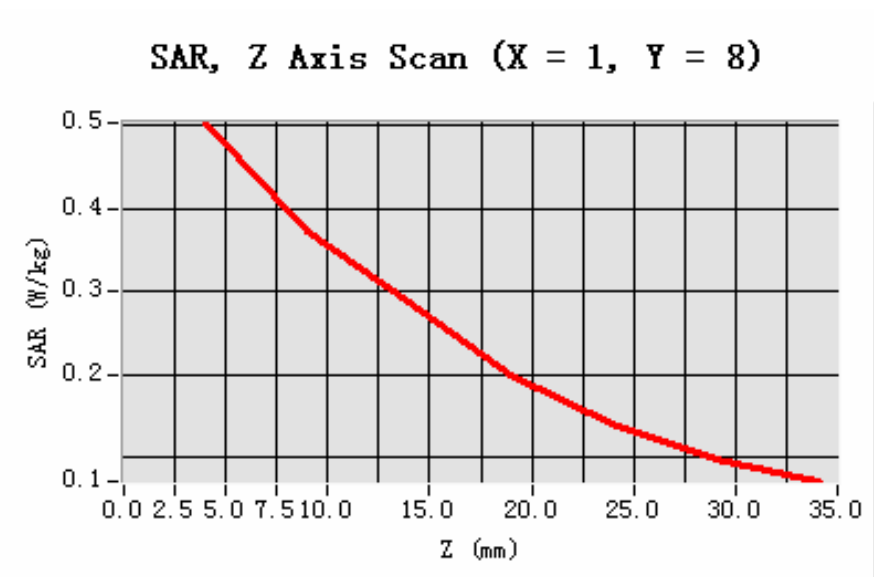
SURFACE SAR	VOLUME SAR
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Maximum location: X=1.00, Y=8.00

SAR 10g (W/Kg)	0.329467
SAR 1g (W/Kg)	0.484299

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: 19 minutes 34 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Low
Signal	GMSK

B. Instrumentations.

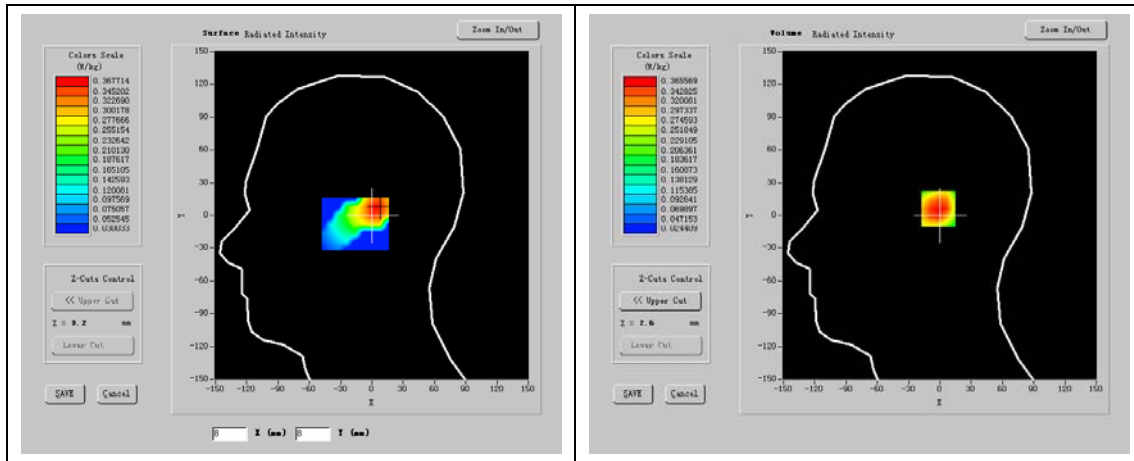
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Lower Band SAR (Channel 128):

Frequency (MHz)	824.200012
Relative permittivity (real part)	41.466999
Relative permittivity (imaginary part)	19.511101
Conductivity (S/m)	0.893392
Variation (%)	2.090000

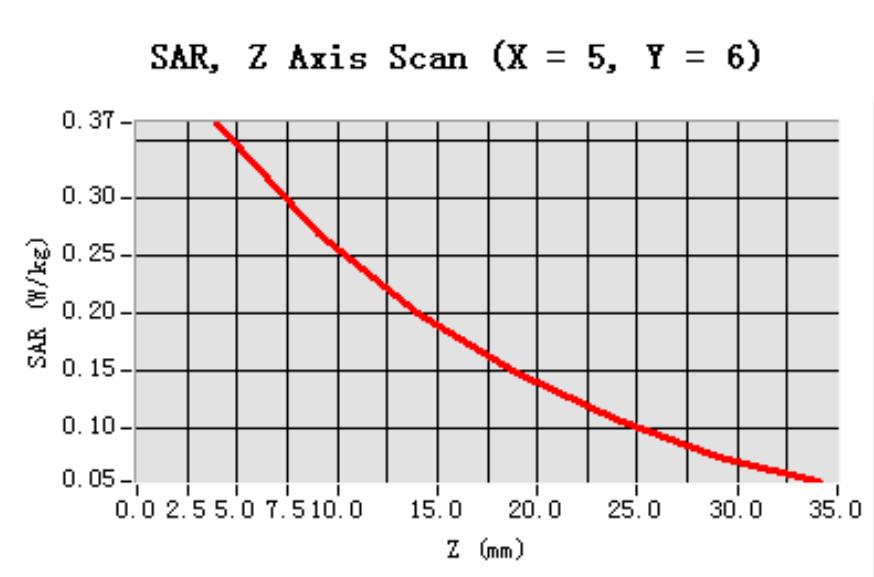
SURFACE SAR	VOLUME SAR
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Maximum location: X=5.00, Y=6.00

SAR 10g (W/Kg)	0.243607
SAR 1g (W/Kg)	0.354639

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: 19 minutes 34 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	GMSK

B. Instrumentations.

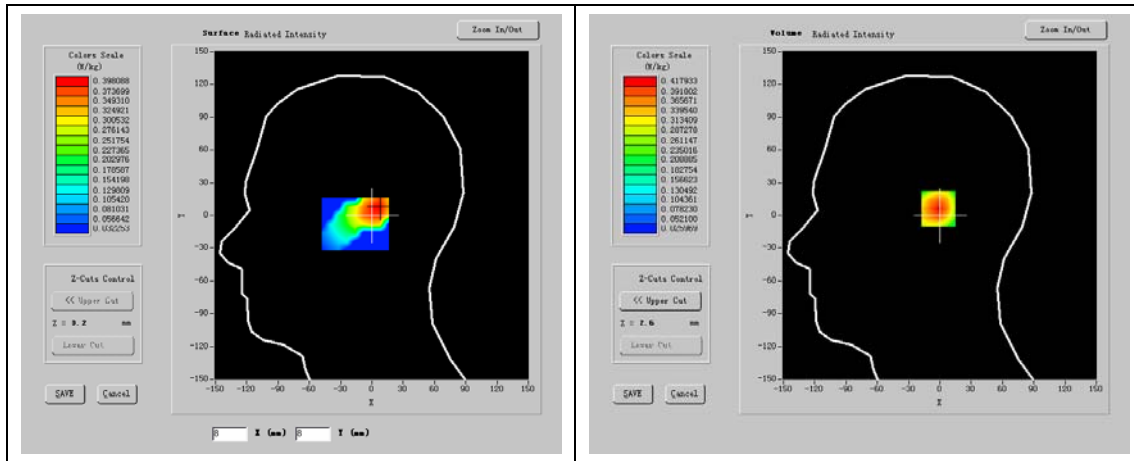
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Middle Band SAR (Channel 189):

Frequency (MHz)	836.400024
Relative permittivity (real part)	41.466999
Relative permittivity (imaginary part)	19.511101
Conductivity (S/m)	0.906616
Variation (%)	2.090000

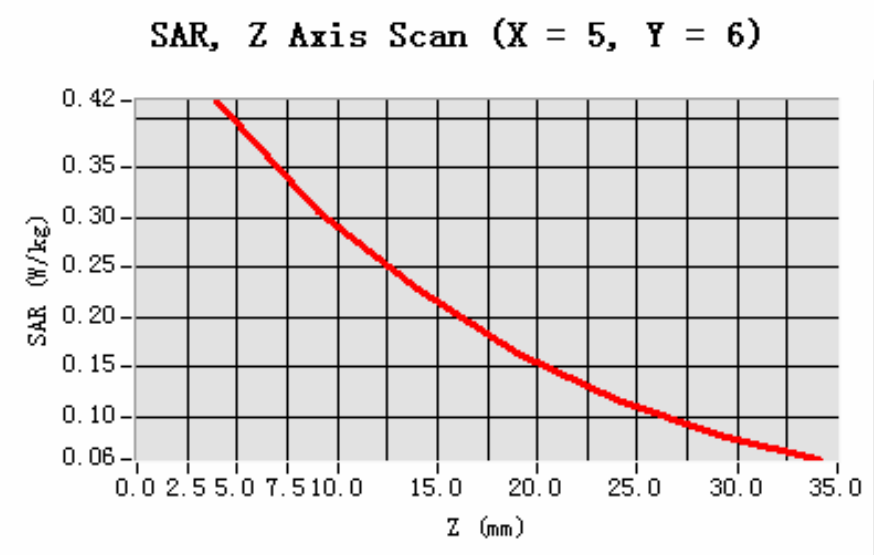
SURFACE SAR	VOLUME SAR
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Maximum location: X=5.00, Y=6.00

SAR 10g (W/Kg)	0.272444
SAR 1g (W/Kg)	0.397060

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: 19 minutes 34 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	High
Signal	GMSK

B. Instrumentations.

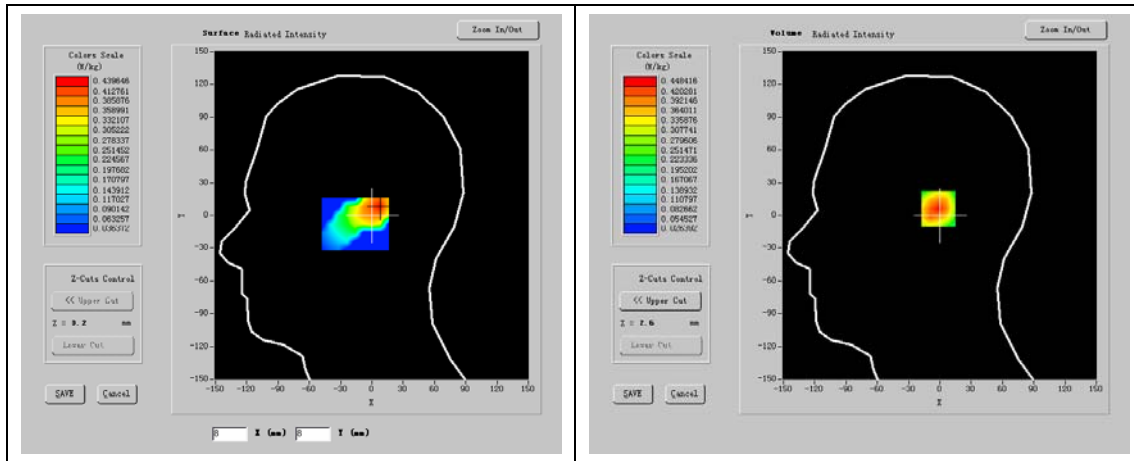
PC	HP (Pentium(R) V3.06GHz, SN:375052-AA1)
Network Emulator	R&S (CMU200, SN:B23-03291)
Voltmeter	Keithley (2000, SN:1015843)
Synthesizer	Agilent (E8257C, SN:MY43321570)
Amplifier	Mini-Circuits (ZHL-42, SN:110405)
Power Meter	Agilent (E4416A, SN:QB41292714)
Probe	Antennessa (SN:SN_0807_EP_74)
Phantom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

C. SAR Measurement Results

Higher Band SAR (Channel 250):

Frequency (MHz)	848.599976
Relative permittivity (real part)	41.262001
Relative permittivity (imaginary part)	19.598200
Conductivity (S/m)	0.923946
Variation (%)	2.090000

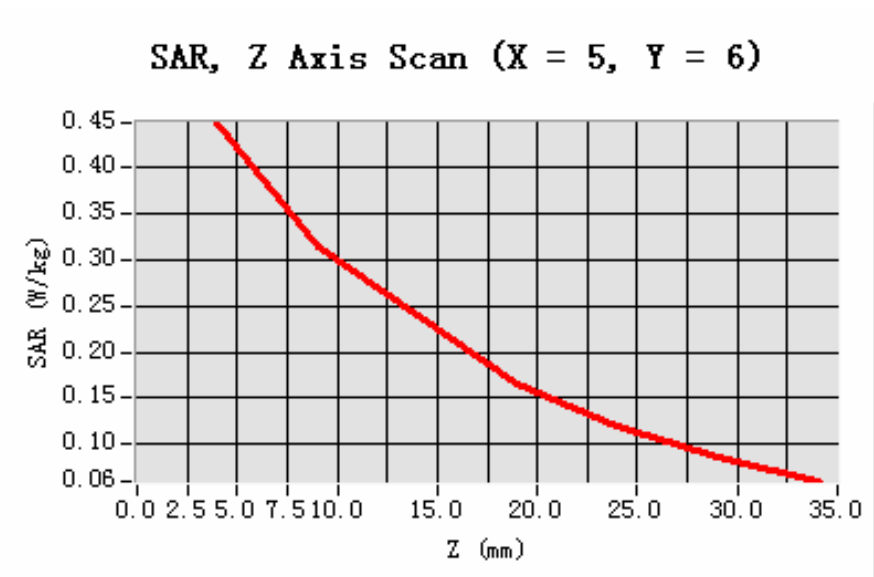
SURFACE SAR	VOLUME SAR
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Maximum location: X=5.00, Y=6.00

SAR 10g (W/Kg)	0.285509
SAR 1g (W/Kg)	0.421903

Z Axis Scan



MEASUREMENT 13

Ambient temperature:20c

Liquid temperature:21c

GMSK Crest Factor: 8 (Duty cycle:12.5%)

Type: Phone measurement (Complete)

Date of measurement: 12/10/2007

Measurement duration: 20 minutes 25 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

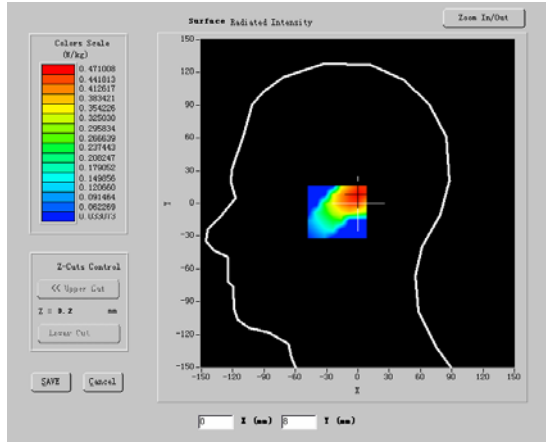
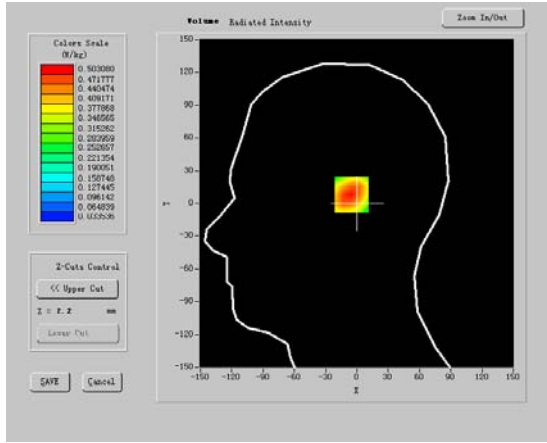
Phantom File	zinf15.txt, Adaptive 2 max
Phantom	Left head
Device Position	Cheek
Band	GSM850+BLUETOOTH
Channels	High
Signal	GMSK+FHSS

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 250):

Frequency (MHz)	848.599976
Relative permittivity (real part)	41.252231
Relative permittivity (imaginary part)	19.486221
Conductivity (S/m)	0.912643
Variation (%)	0.730000
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=8.00

SAR 10g (W/Kg)	0.324063
SAR 1g (W/Kg)	0.477232

Z Axis Scan

