

Test Laboratory: AGC Lab

Date: Aug.21, 2012

GSM 900 Mid- Body- Front (MS with earphone) <SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: Generic GSM; Communication System Band: GSM 900; Duty Cycle: 1:8.3;
Conv.F=6.79;Frequency: 836.6 MHz; Medium parameters used: $f = 835$ MHz; $\sigma = 1.03$ mho/m; $\epsilon_r = 54.75$;
 $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

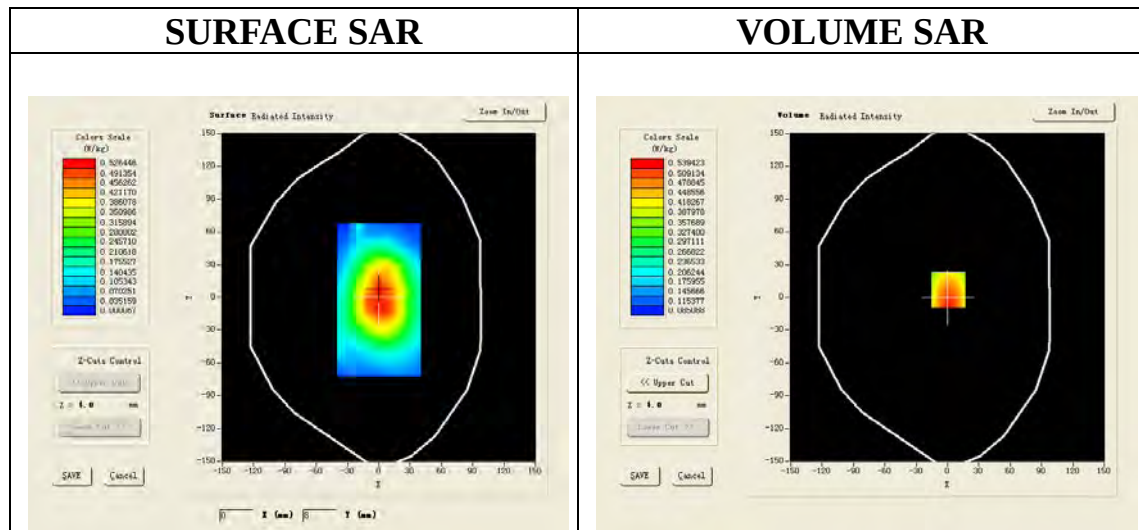
Probe:SSE5; Calibrated: 12/09/2011

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GSM900 Mid Body-Back/Area Scan (6x8x1): Measurement grid: dx=20mm, dy=20mm

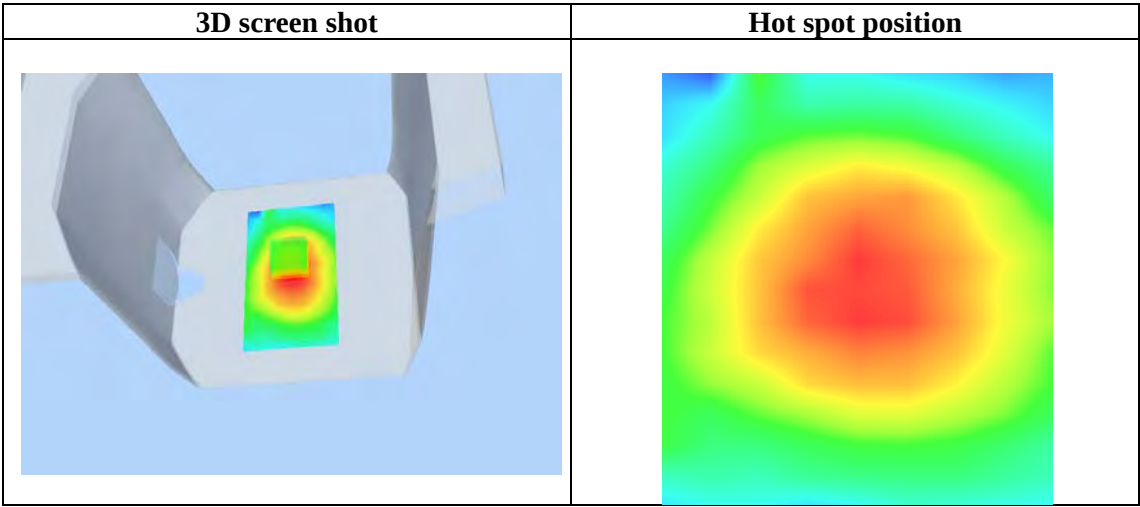
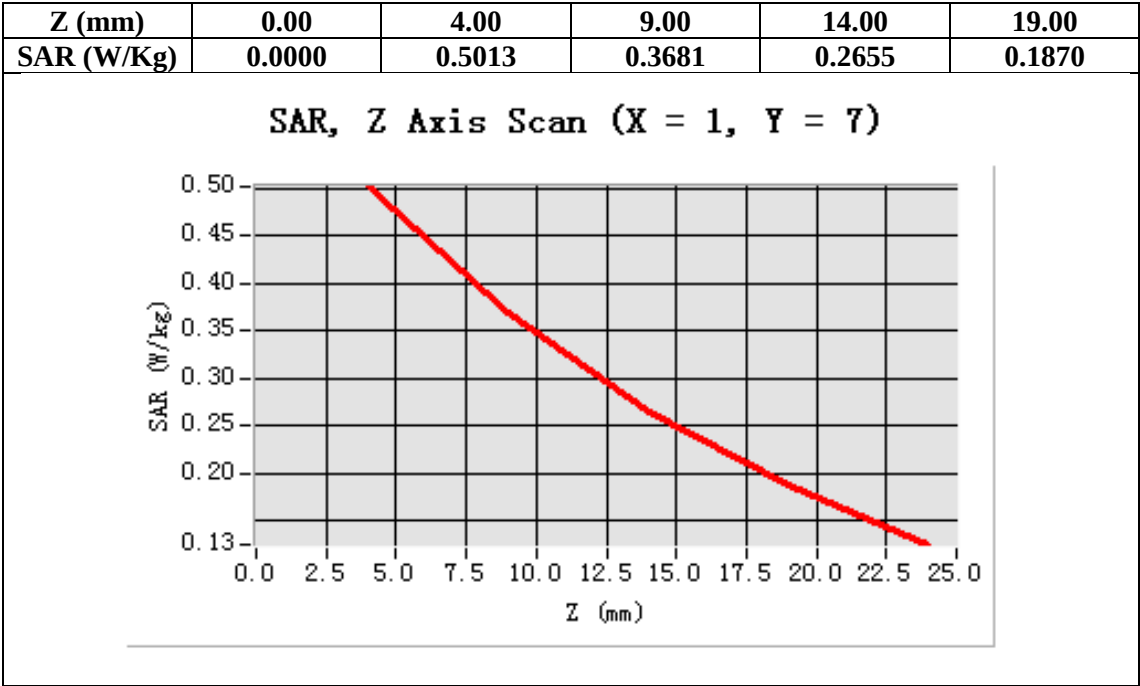
Configuration/GSM900 Mid Body-Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=1.00, Y=7.00

SAR 10g (W/Kg)	0.372375
SAR 1g (W/Kg)	0.548284



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid-Touch- Left<SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
Conv.F=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.88$;
 $\rho = 1000$ kg/m³ ;

Phantom section: Left Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

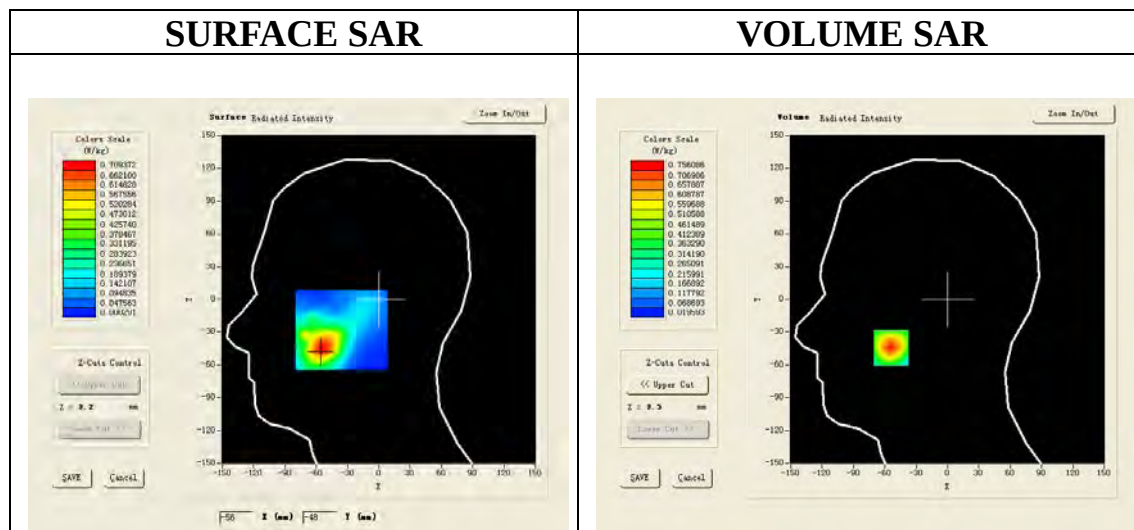
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Touch-Left/Area Scan: Measurement grid: dx=20mm, dy=20mm

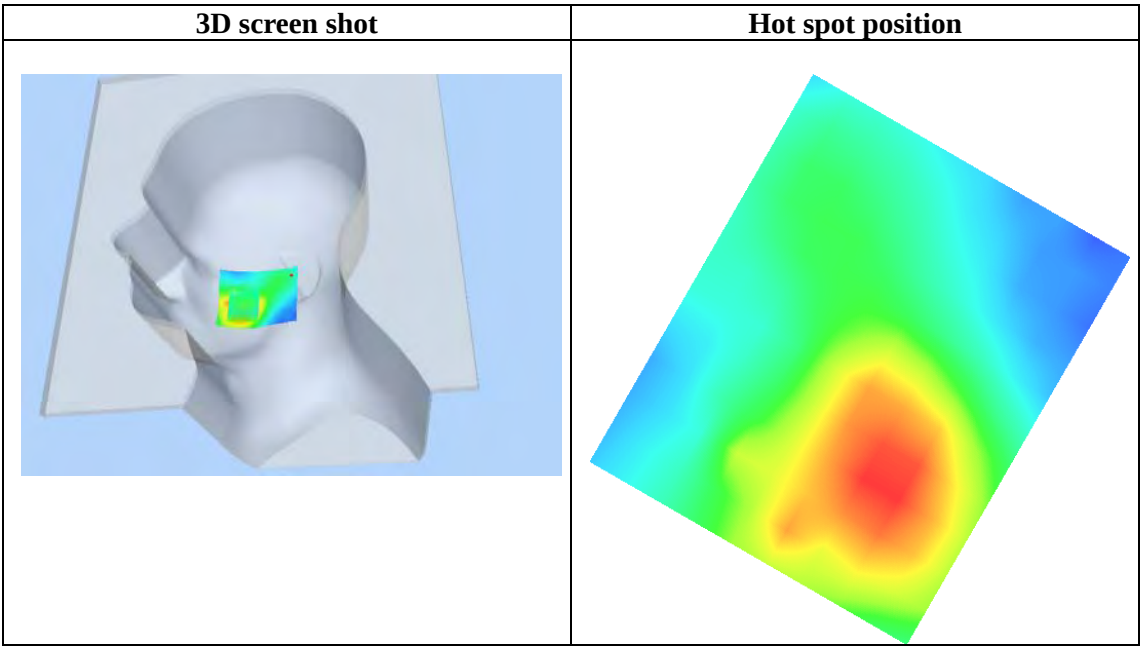
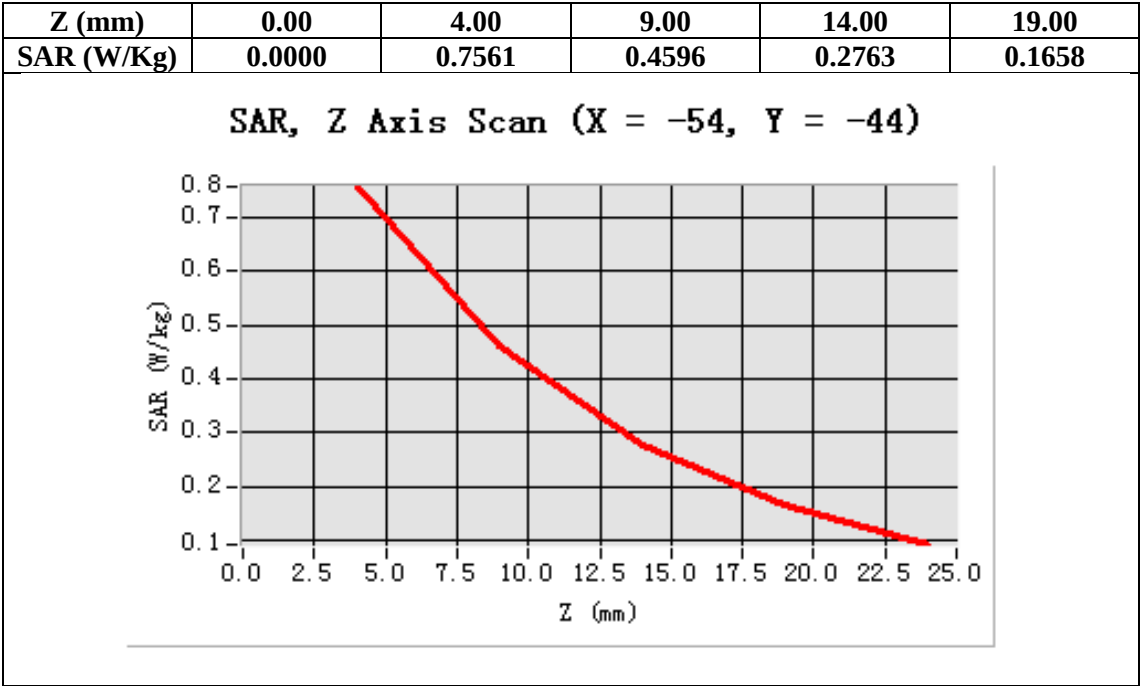
Configuration/PCS1900 Mid Touch-Left/Zoom Scan: Measurement grid: dx=8mm,
dy=8mm, dz=5mm;

Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=-54.00, Y=-44.00

SAR 10g (W/Kg)	0.385183
SAR 1g (W/Kg)	0.700289



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid-Tilt-Left<SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
Conv.F=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.88$;
 $\rho = 1000$ kg/m³ ;

Phantom section: Left Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

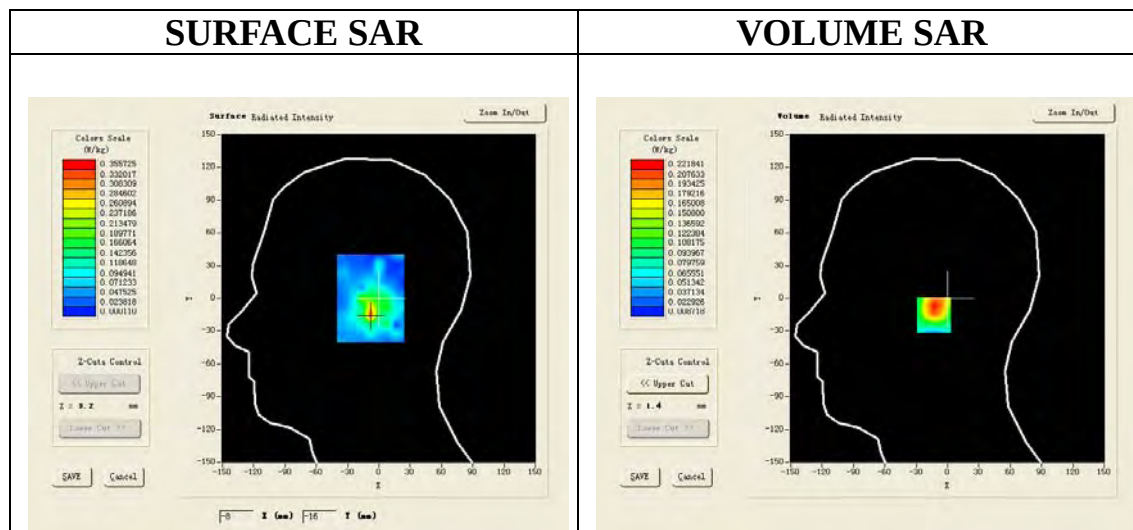
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Tilt-Left/Area Scan: Measurement grid: dx=20mm, dy=20mm

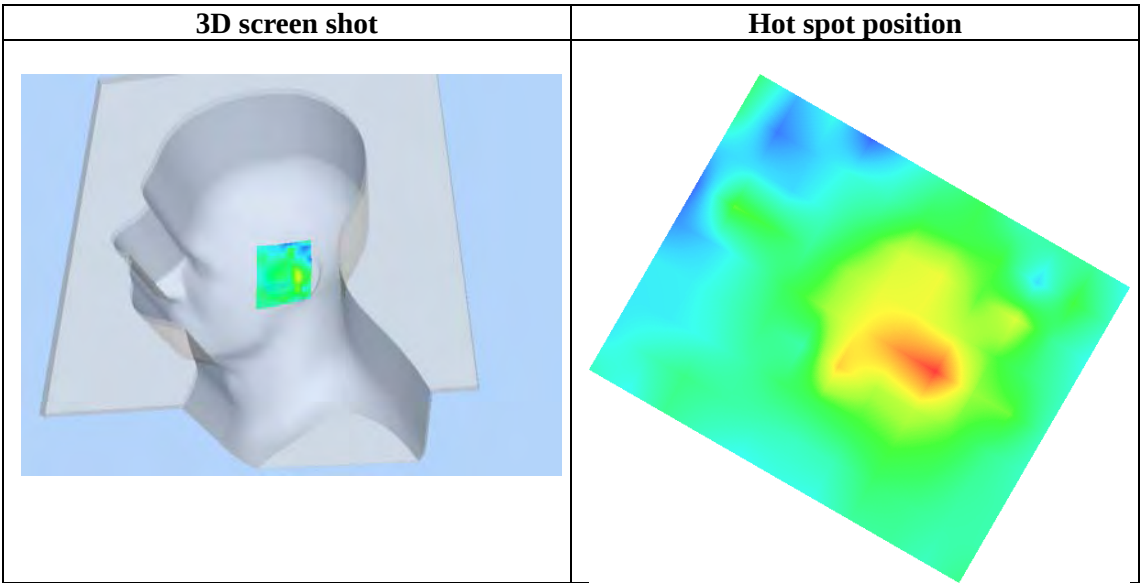
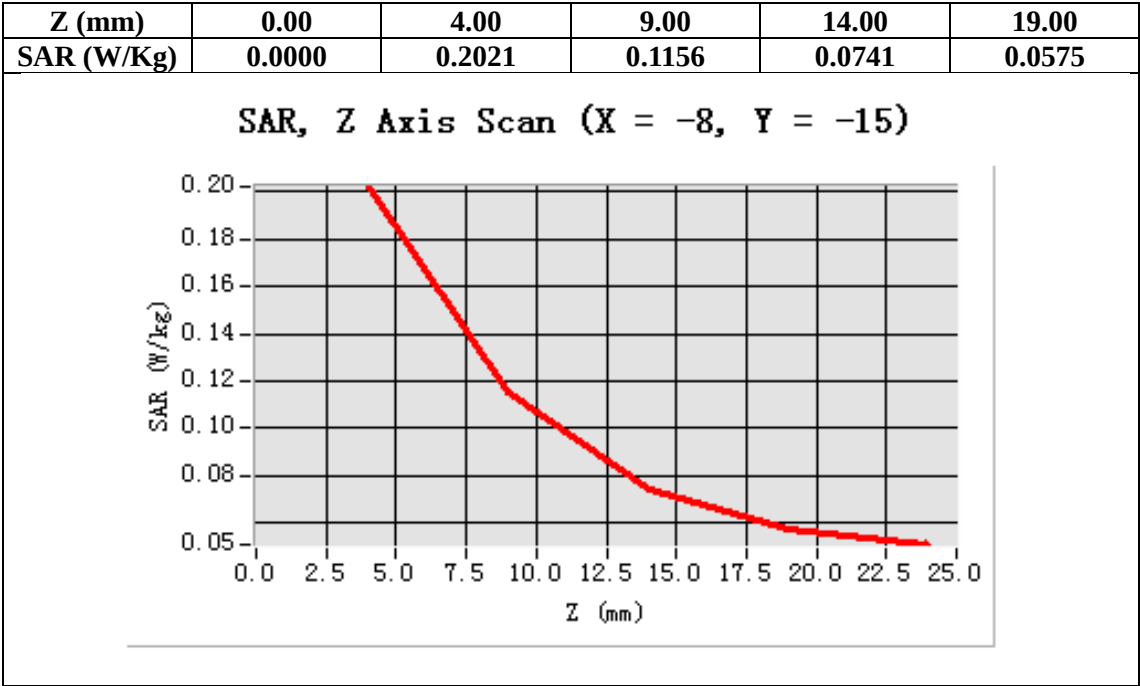
Configuration/PCS1900 Mid Tilt-Left/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=-8.00, Y=-15.00

SAR 10g (W/Kg)	0.124298
SAR 1g (W/Kg)	0.210388



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid-Touch- Right<SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
Conv.F=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.88$;
 $\rho = 1000$ kg/m³ ;

Phantom section: Right Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

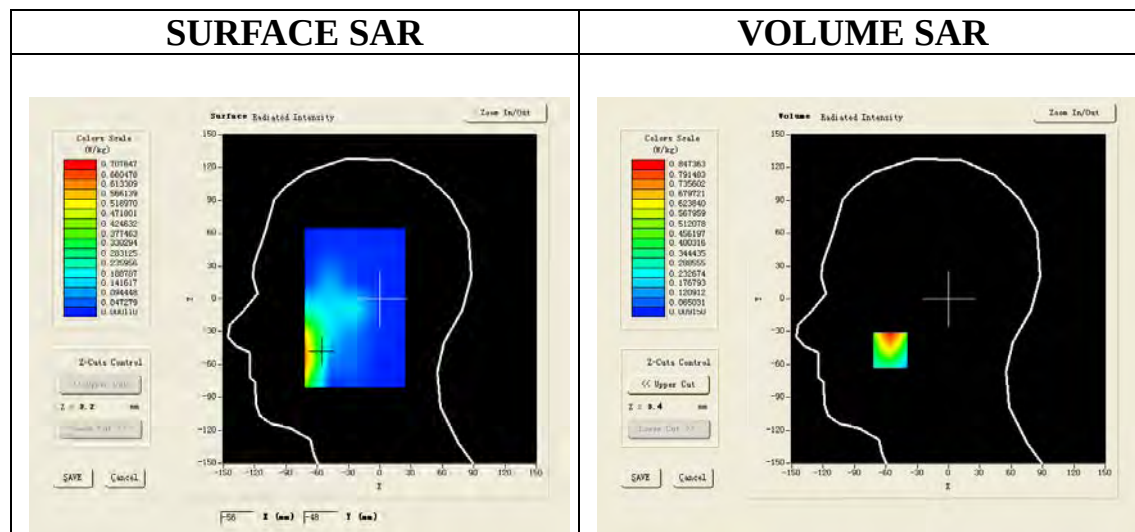
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Touch-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm

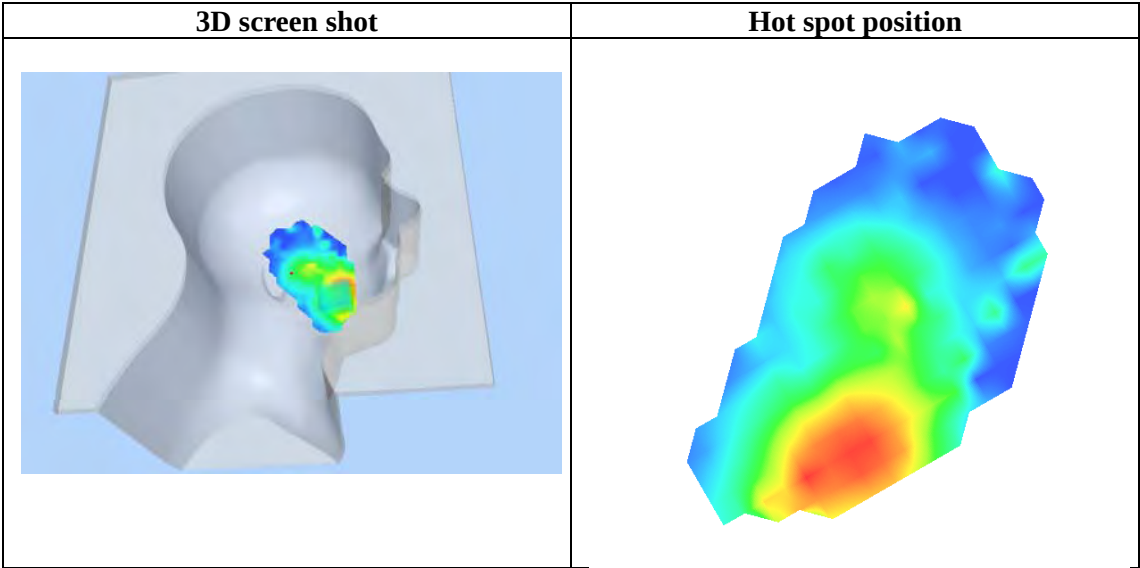
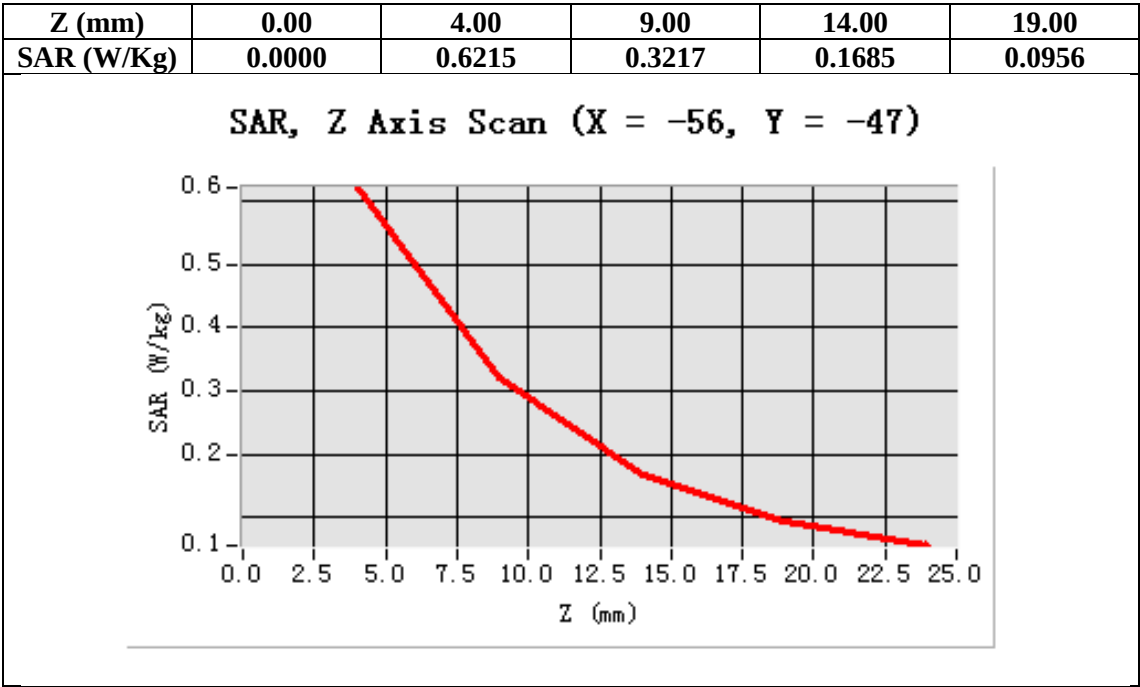
Configuration/PCS1900 Mid Touch-Right/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=-56.00, Y=-47.00

SAR 10g (W/Kg)	0.384327
SAR 1g (W/Kg)	0.769781



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid-Tilt- Right<SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=6.42;
Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.88$; $\rho = 1000$ kg/m³ ;

Phantom section: Right Section

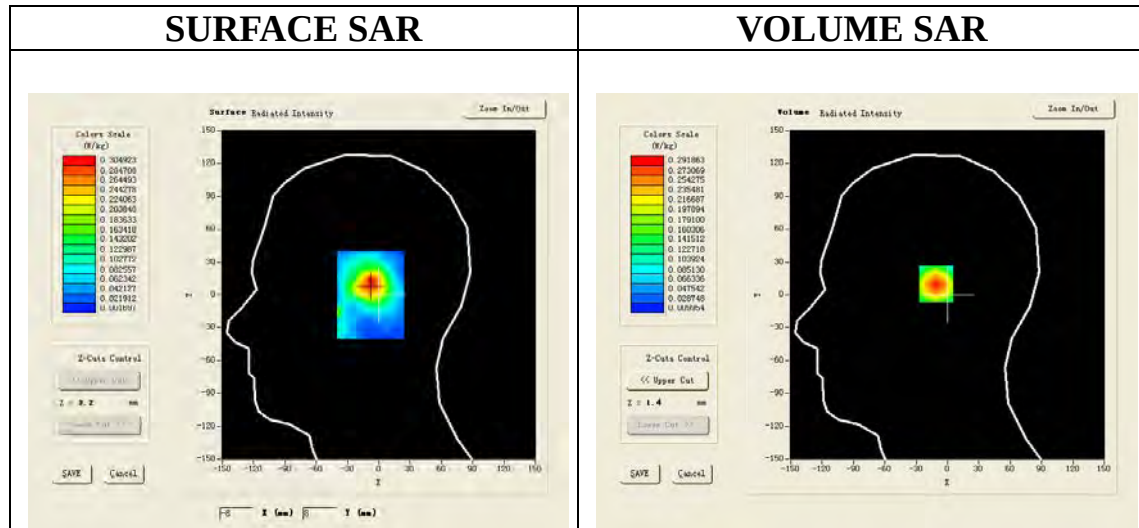
Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

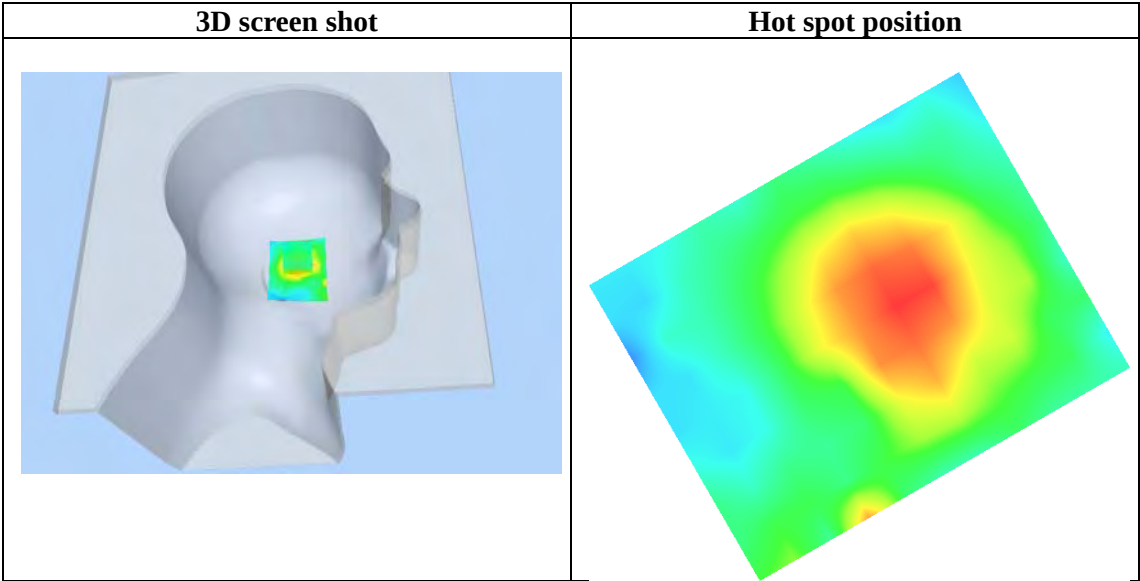
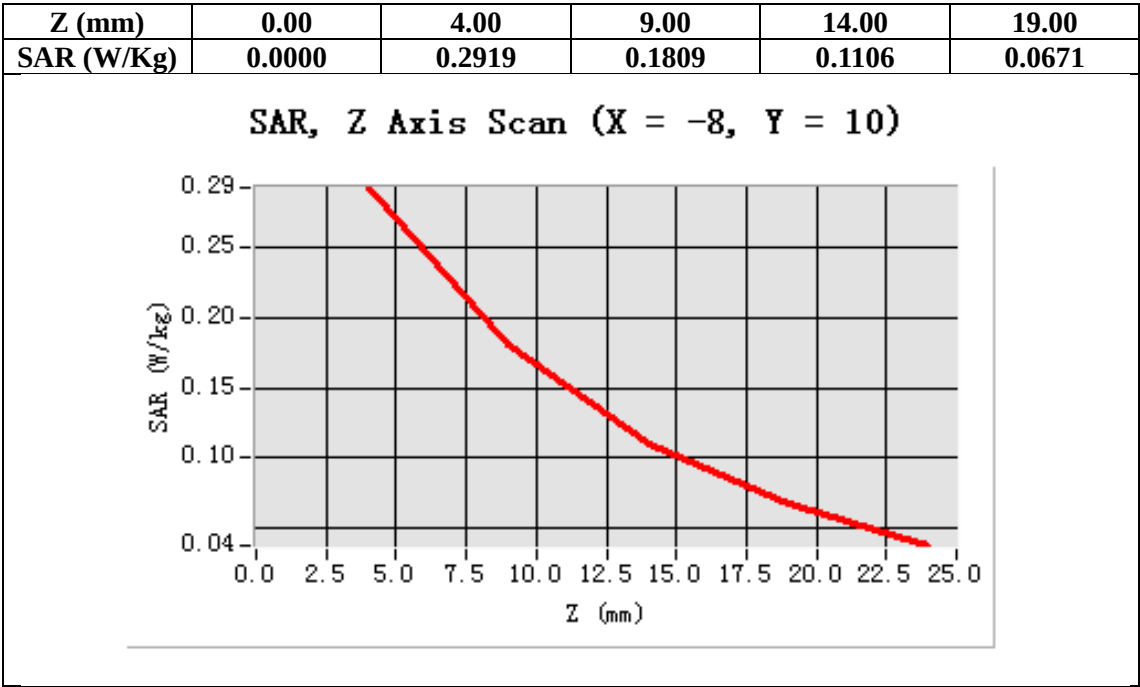
Configuration/PCS1900 Mid Tilt-Right/Area Scan: Measurement grid: dx=20mm, dy=20mm

Configuration/PCS1900 Mid Tilt-Right/Zoom Scan: Measurement grid: dx=8mm,
dy=8mm, dz=5mm;



Maximum location: X=-8.00, Y=10.00

SAR 10g (W/Kg)	0.154532
SAR 1g (W/Kg)	0.272766



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid- touch -Right<SIM 2>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3; Conv.F=6.42; Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.88$;

$\rho = 1000$ kg/m³ ;

Phantom section: Right Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

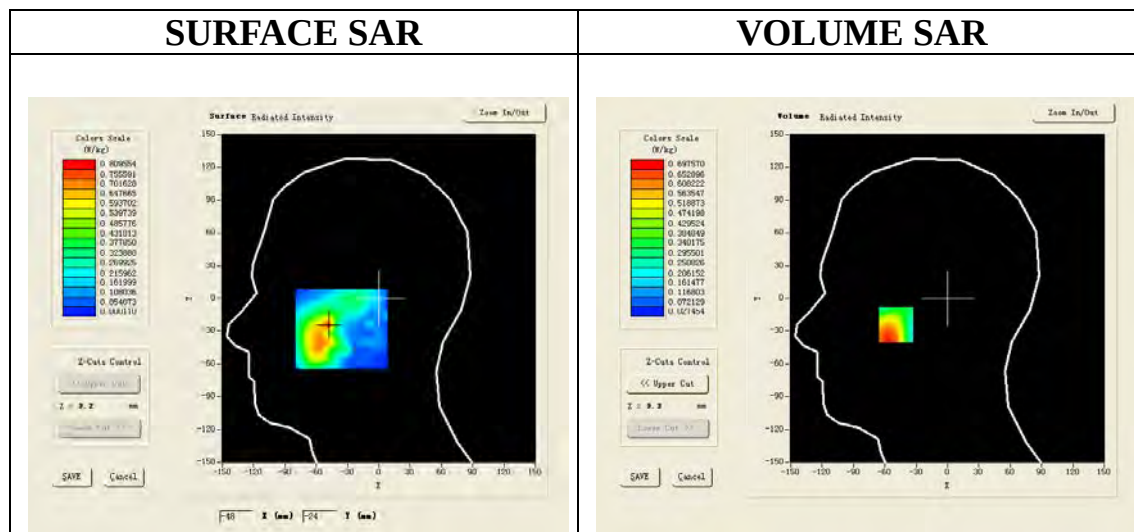
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid- touch - Right /Area Scan: Measurement grid: dx=20mm, dy=20mm

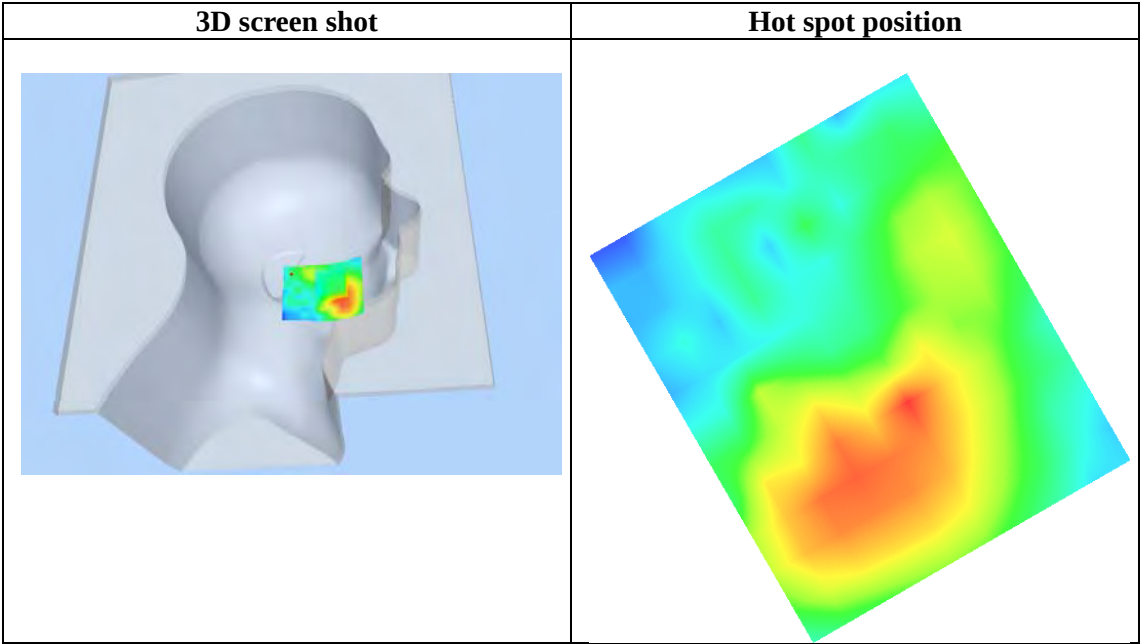
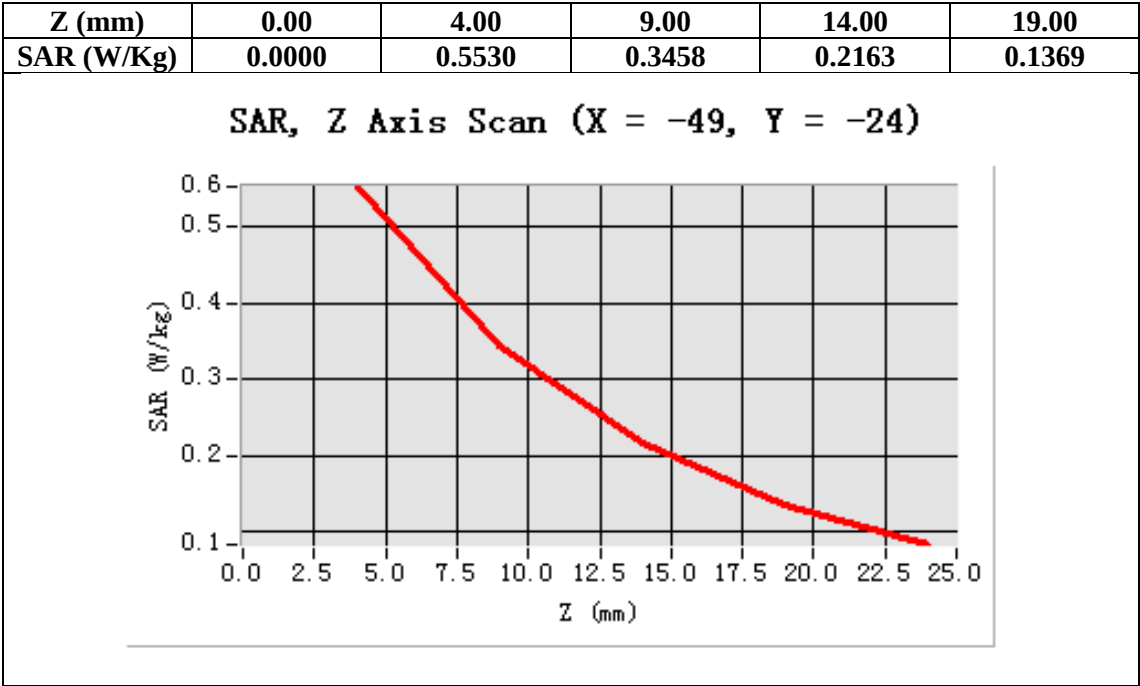
Configuration/PCS1900 Mid- touch - Right /Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	sam_direct_droit2_surf8mm.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Right head
Device Position	Touch
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=-49.00, Y=-24.00

SAR 10g (W/Kg)	0.382254
SAR 1g (W/Kg)	0.648614



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid-Body- Back(MS) <SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
Conv.F=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.20$;
 $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

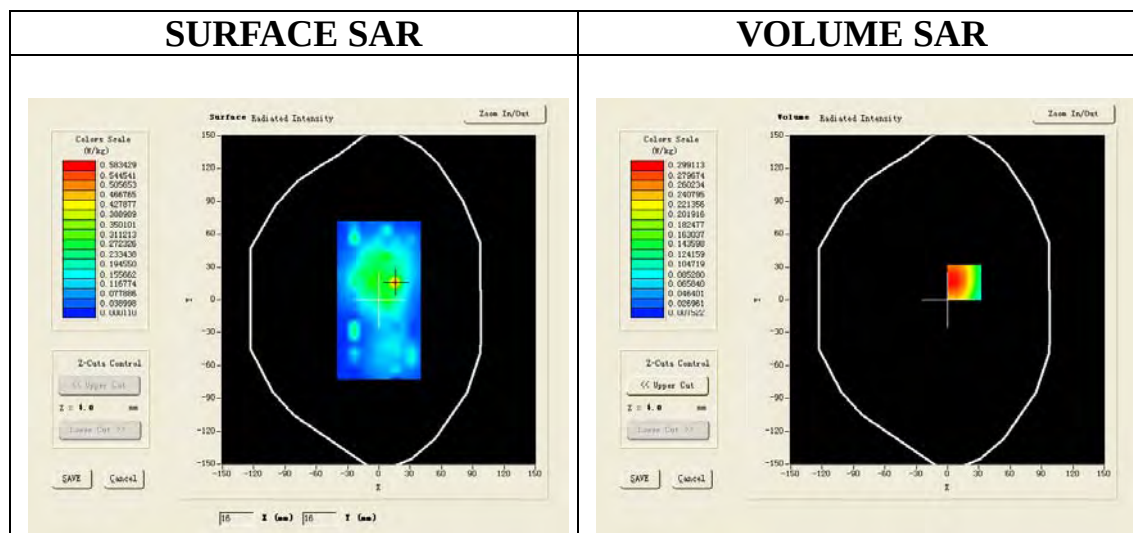
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm

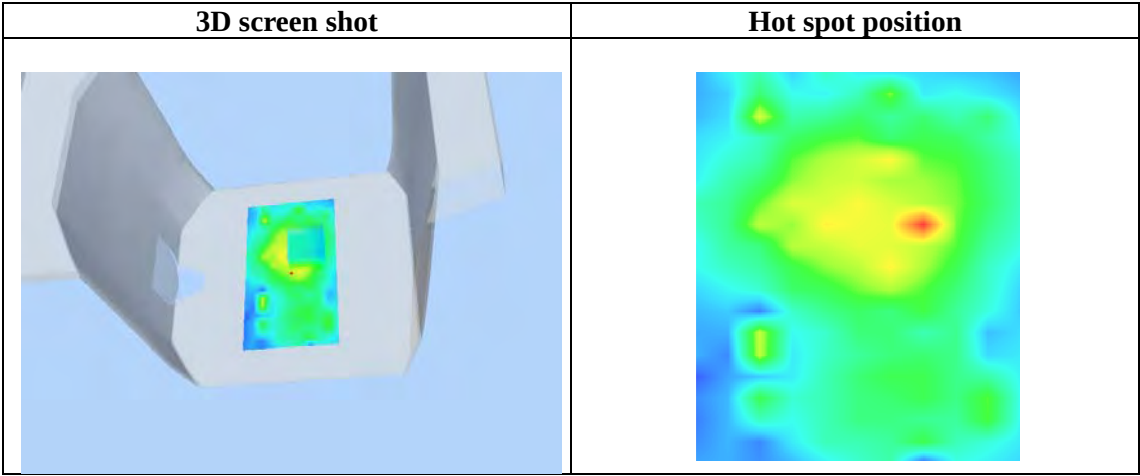
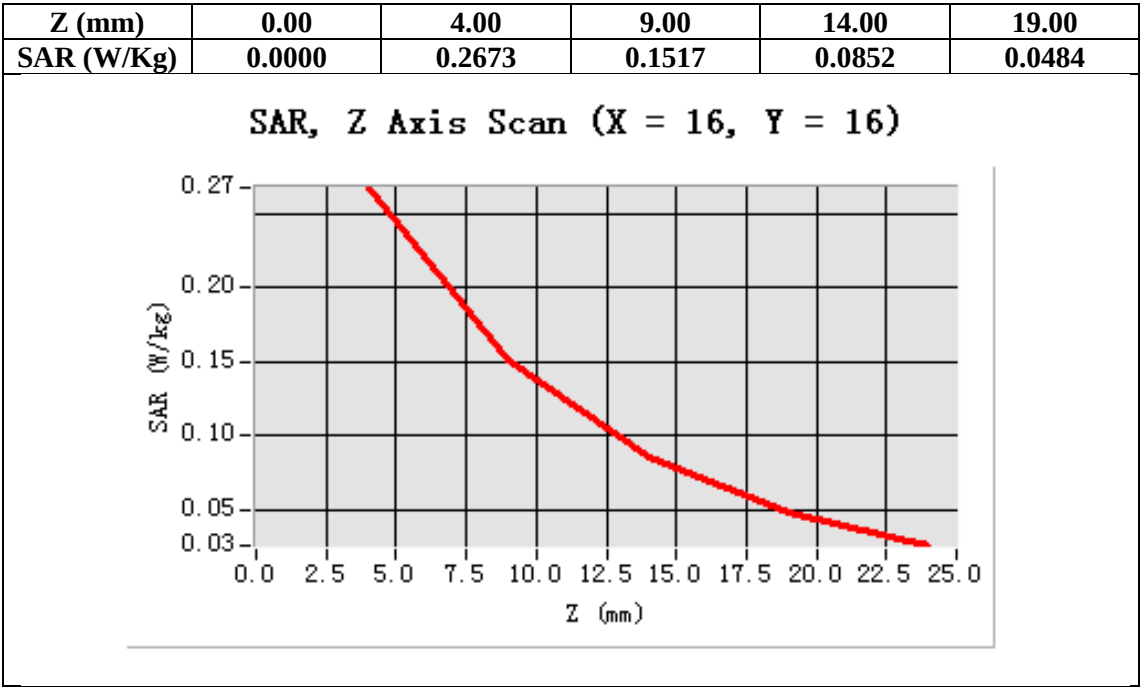
Configuration/PCS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=16.00, Y=16.00

SAR 10g (W/Kg)	0.177512
SAR 1g (W/Kg)	0.311422



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid-Body- Back (2up) <SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: GPRS-2 Slot; Communication System Band: PCS1900; Duty Cycle: 1:4.2 ; Conv.F=6.42;
Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.20$;

$\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

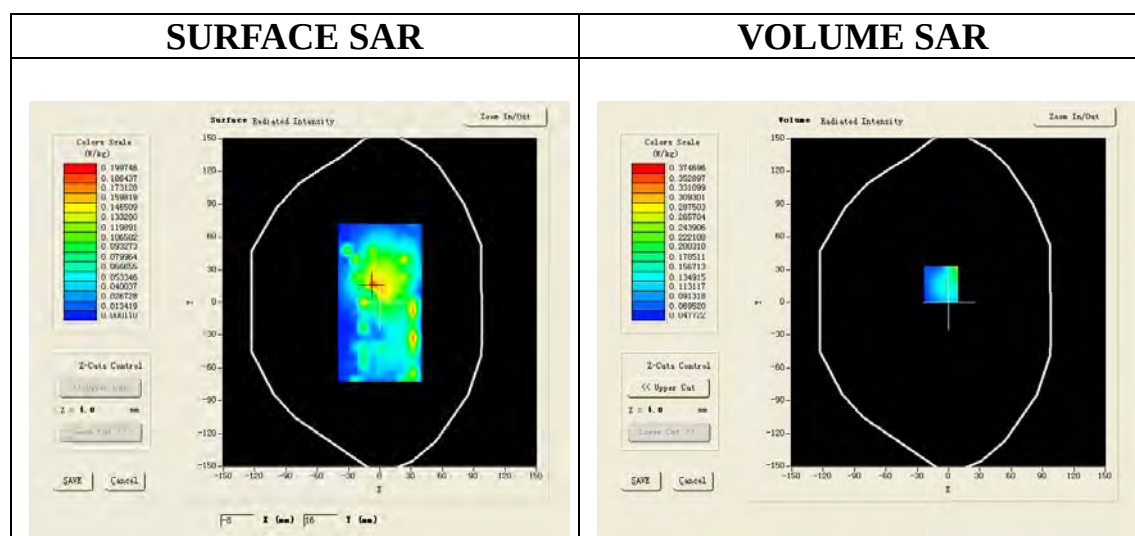
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm

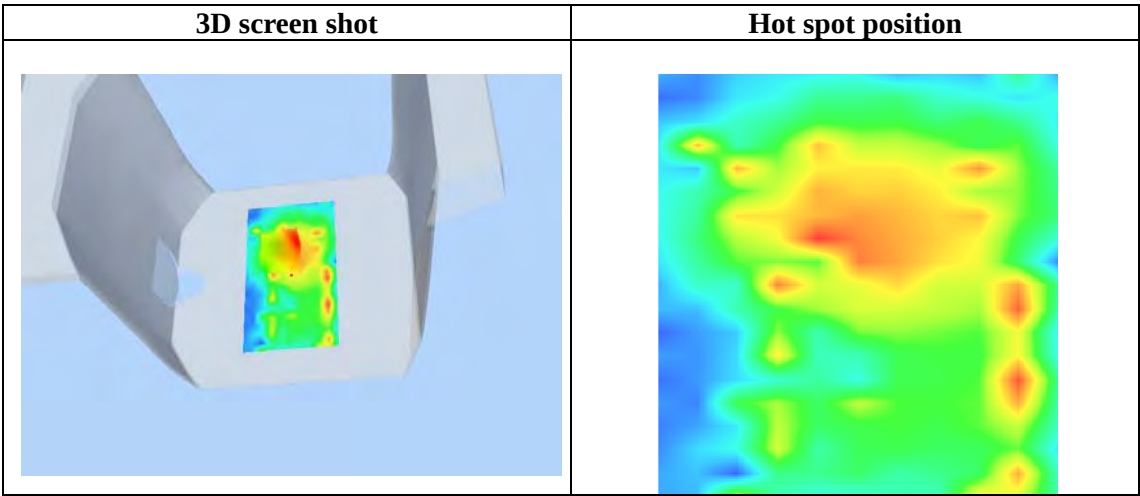
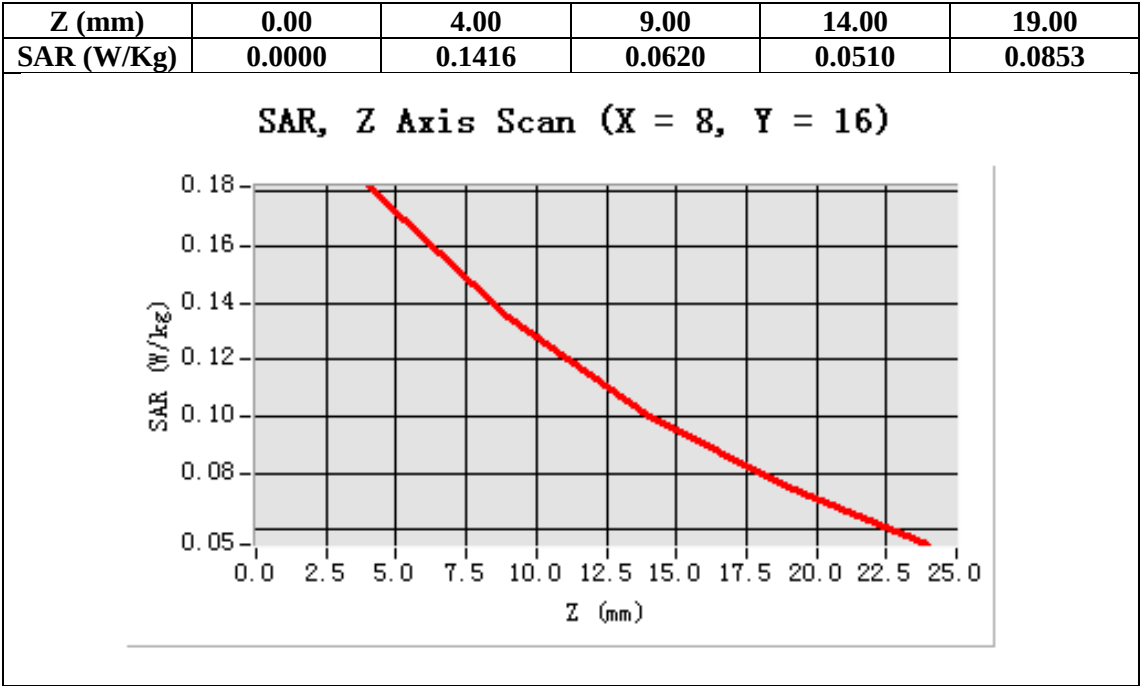
Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5m;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 4.0)



Maximum location: X=-7.00, Y=17.00

SAR 10g (W/Kg)	0.149715
SAR 1g (W/Kg)	0.220995



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid-Body Back (3up) <SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: GPRS-3 Slot; Communication System Band: PCS 1900; Duty Cycle:1:2.8 ; Conv.F=6.42;
Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.20$

$\rho = 1000\text{kg/m}^3$;

Phantom section: Flat Section

Ambient temperature ($^{\circ}\text{C}$): 21.0, Liquid temperature ($^{\circ}\text{C}$): 21.0

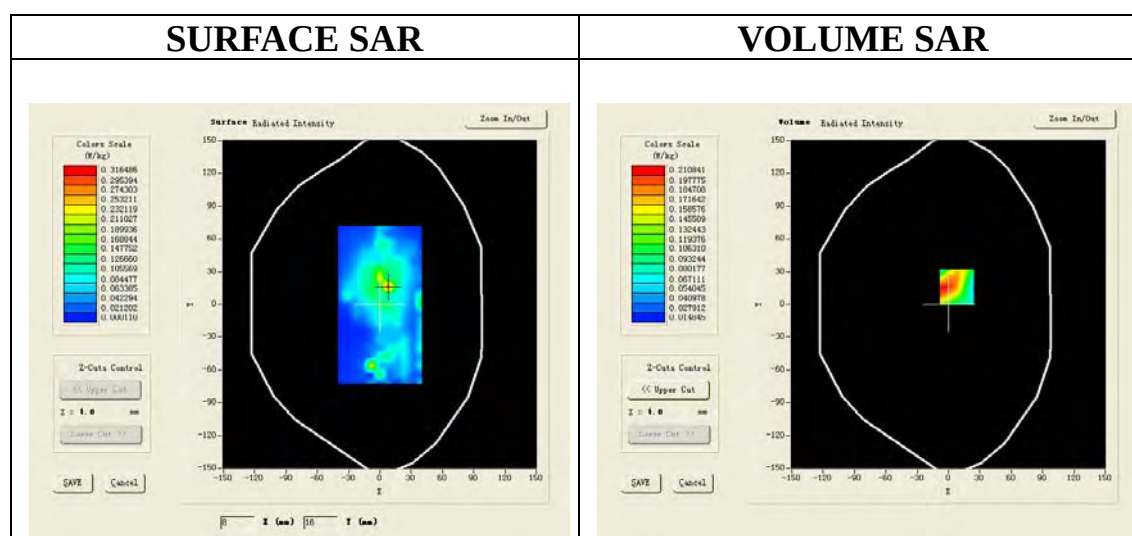
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

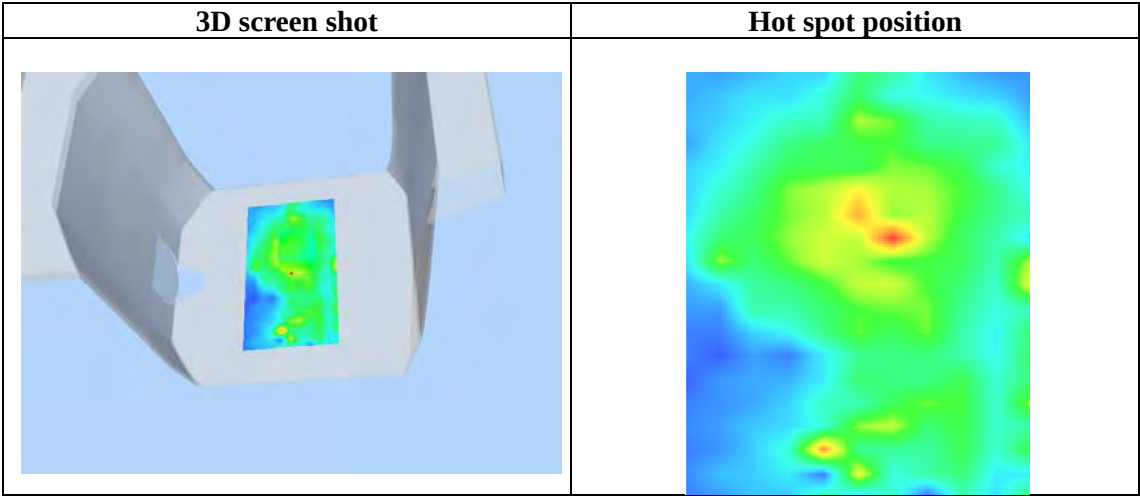
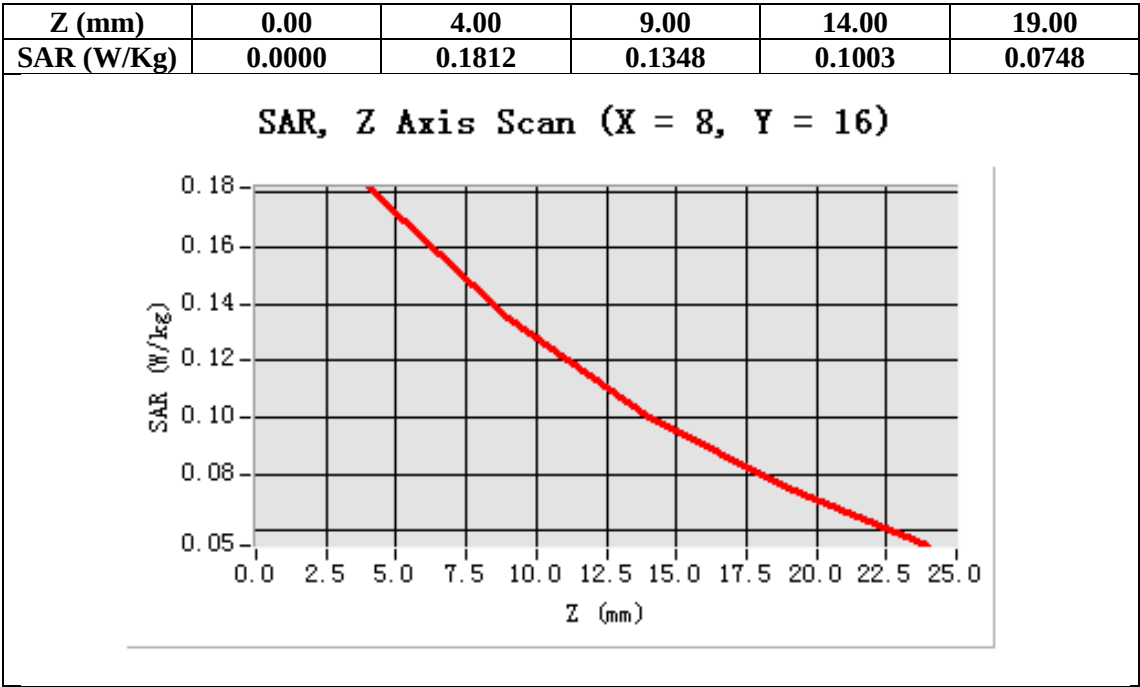
Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: $dx=8\text{mm}$,
 $dy=8\text{mm}$, $dz=5\text{mm}$;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 2.7)



Maximum location: X=8.00, Y=16.00

SAR 10g (W/Kg)	0.137101
SAR 1g (W/Kg)	0.215803



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid-Body Back (4up) <SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: GPRS-4 Slot; Communication System Band: PCS 1900; Duty Cycle:1:2.1 ;
Conv.F=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.20$;
 $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

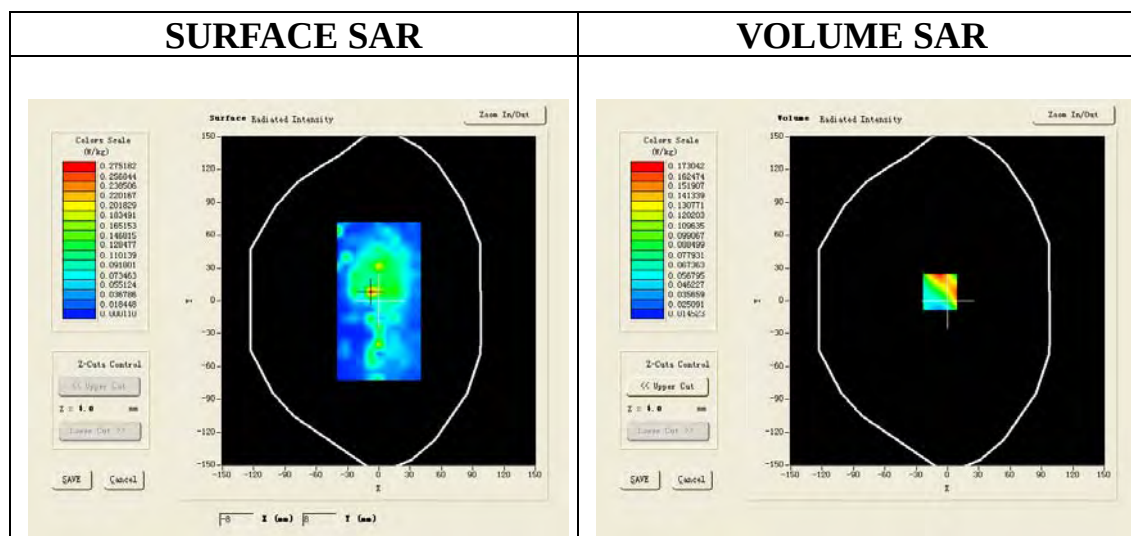
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/GPRS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm

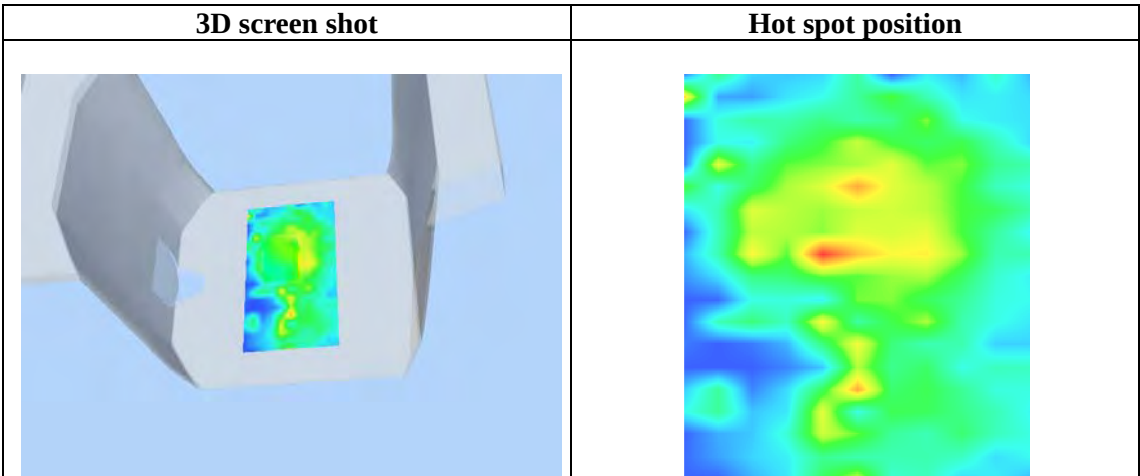
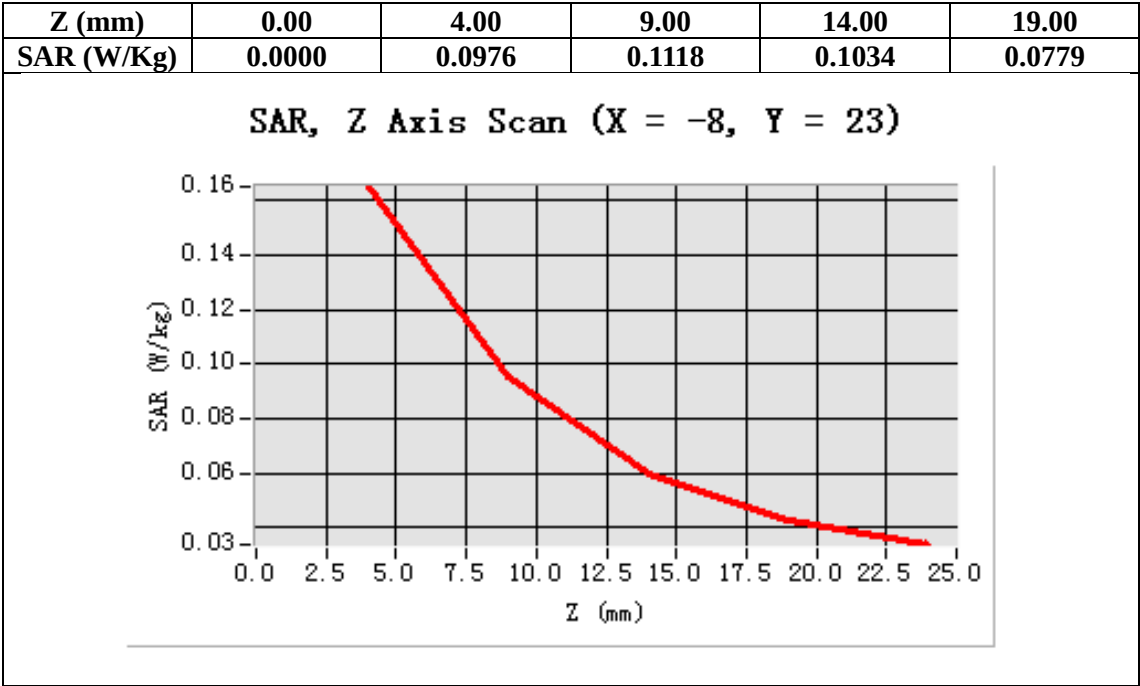
Configuration/GPRS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 2.0)



Maximum location: X=-7.00, Y=8.00

SAR 10g (W/Kg)	0.115991
SAR 1g (W/Kg)	0.162013



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid-Body -Front (MS) <SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
Conv.F=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.20$;
 $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

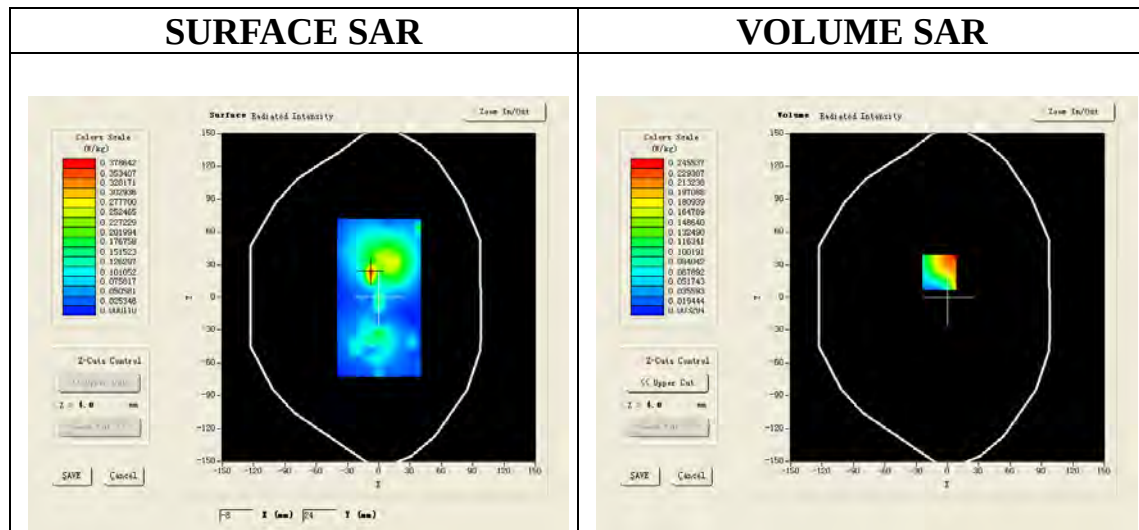
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Body- Front /Area Scan: Measurement grid: dx=20mm, dy=20mm

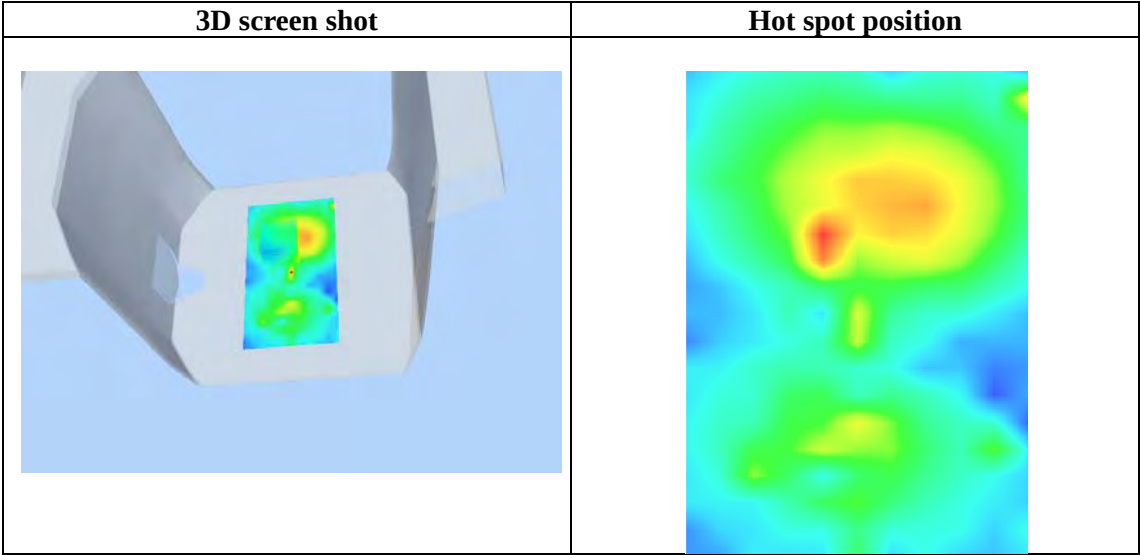
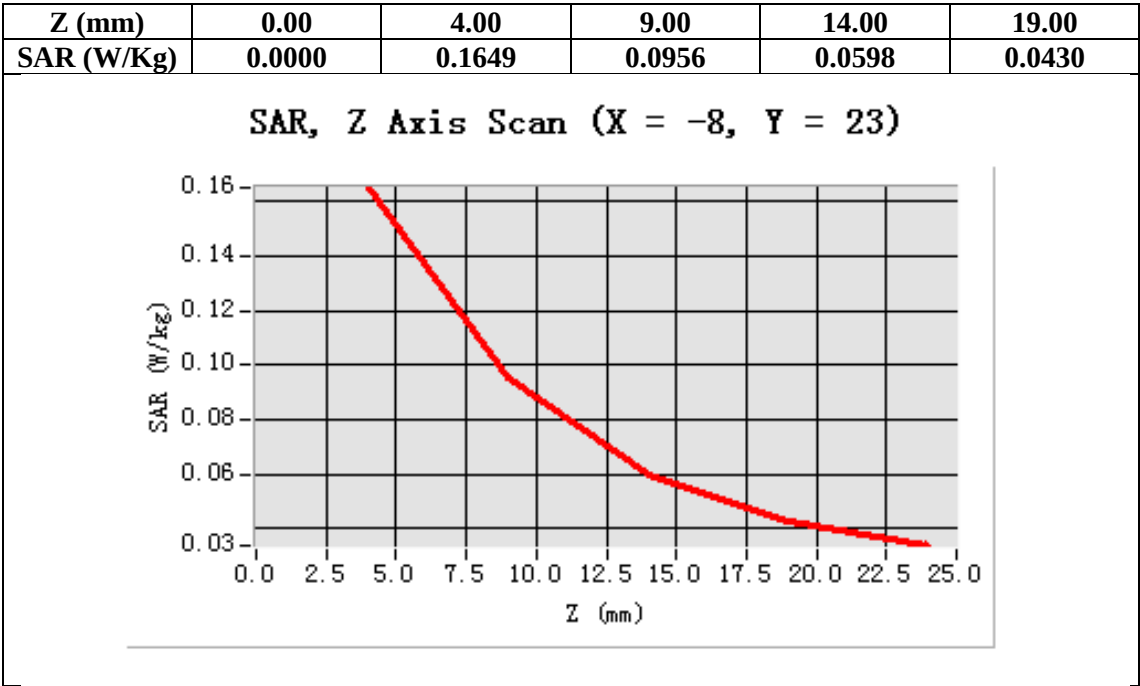
Configuration/PCS1900 Mid Body- Front /Zoom Scan: Measurement grid: dx=8mm,
dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=-8.00, Y=23.00

SAR 10g (W/Kg)	0.139057
SAR 1g (W/Kg)	0.239459



Test Laboratory: AGC Lab

Date: Aug.21, 2012

PCS 1900 Mid-Body-Back (MS with earphone) <SIM 1>

DUT: GSM Mobile Phone ; Type: SUBMARINE

Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;
Conv.F=6.42;Frequency: 1880 MHz; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.20$;
 $\rho = 1000$ kg/m³ ;

Phantom section: Flat Section

Ambient temperature (°C): 21.0, Liquid temperature (°C): 21.0

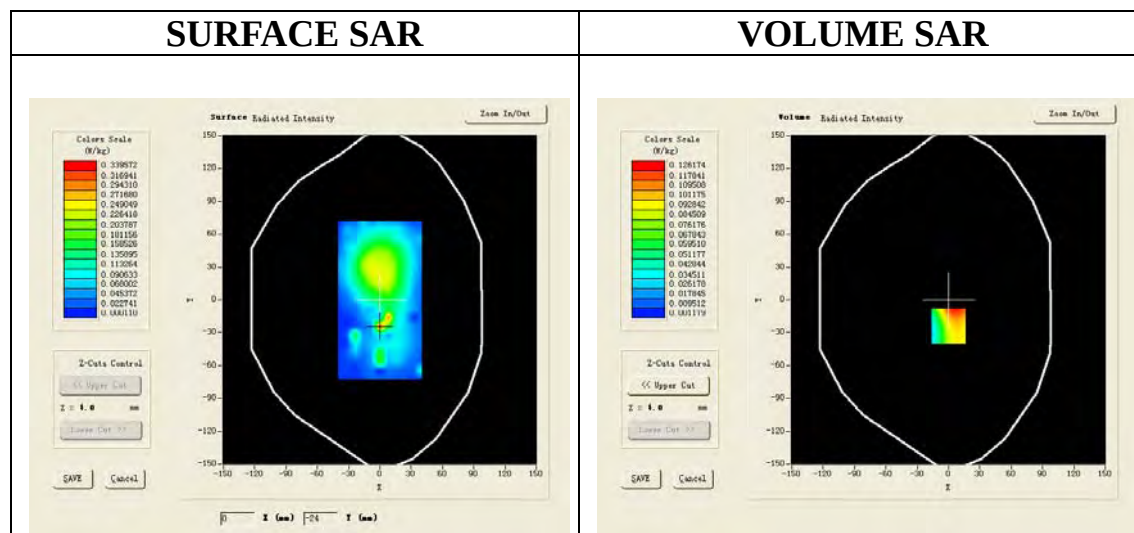
Satimo Configuration:

- Probe:SSE5; Calibrated: 12/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Phantom: SAM1; Type: SAM
- Measurement SW: OpenSAR V4_02_01

Configuration/PCS1900 Mid Body-Back/Area Scan: Measurement grid: dx=20mm, dy=20mm

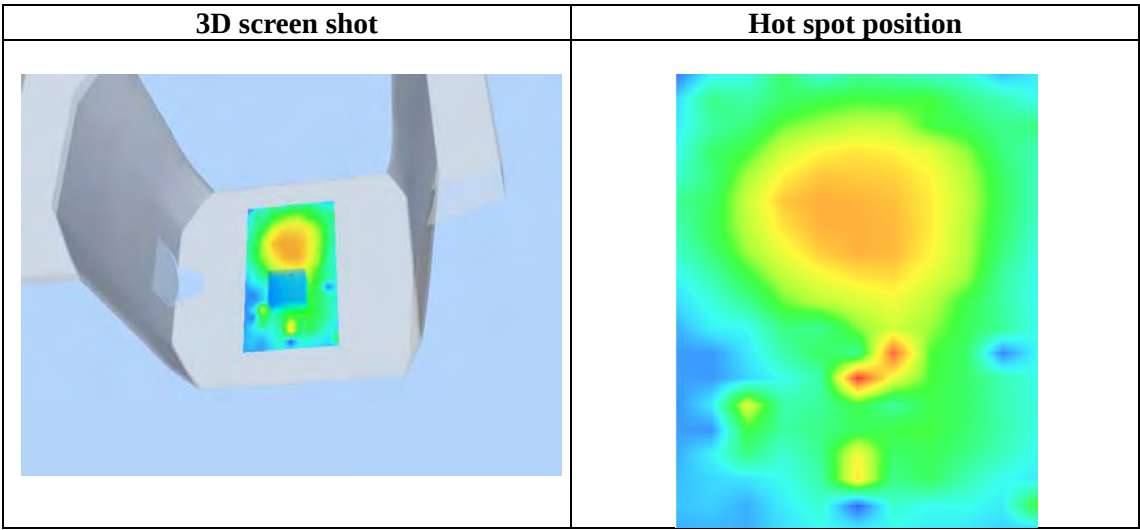
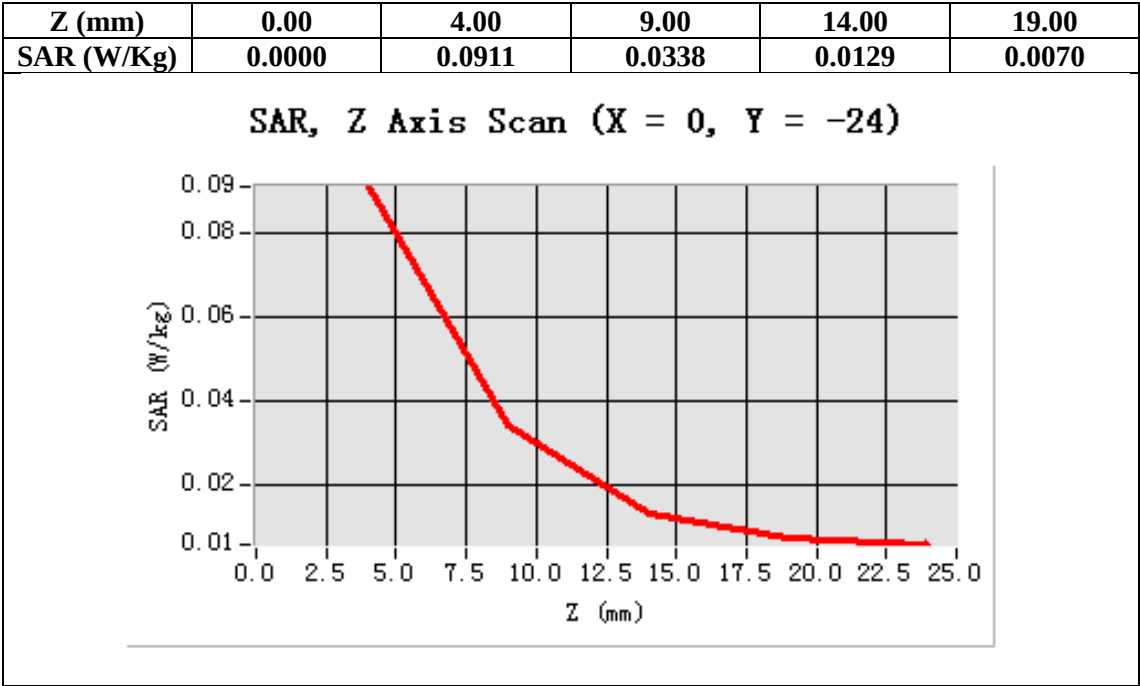
Configuration/PCS1900 Mid Body-Back/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Very fast
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)



Maximum location: X=0.00, Y=-24.00

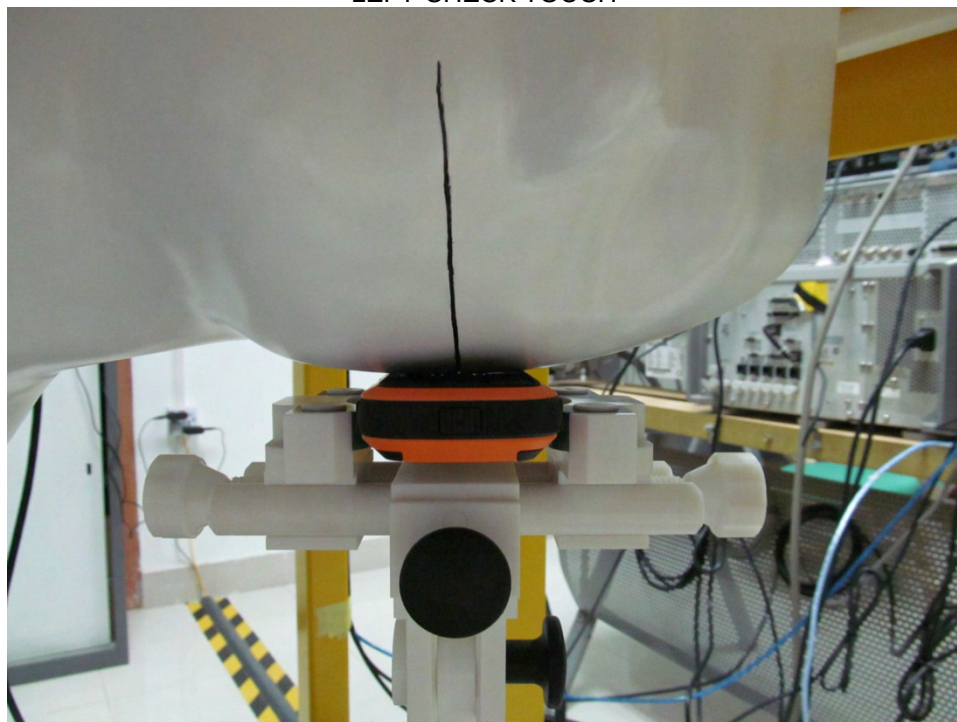
SAR 10g (W/Kg)	0.060274
SAR 1g (W/Kg)	0.124416



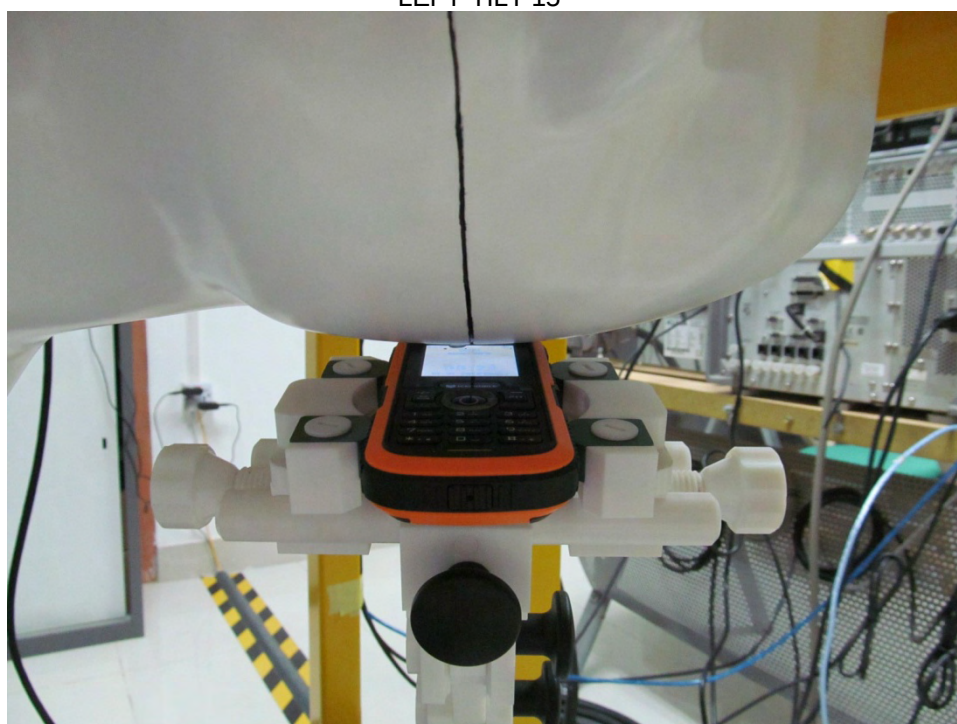
Appendix C. TEST SETUP PHOTOGRAPHS & EUT PHOTOGRAPHS

Test Setup Photographs

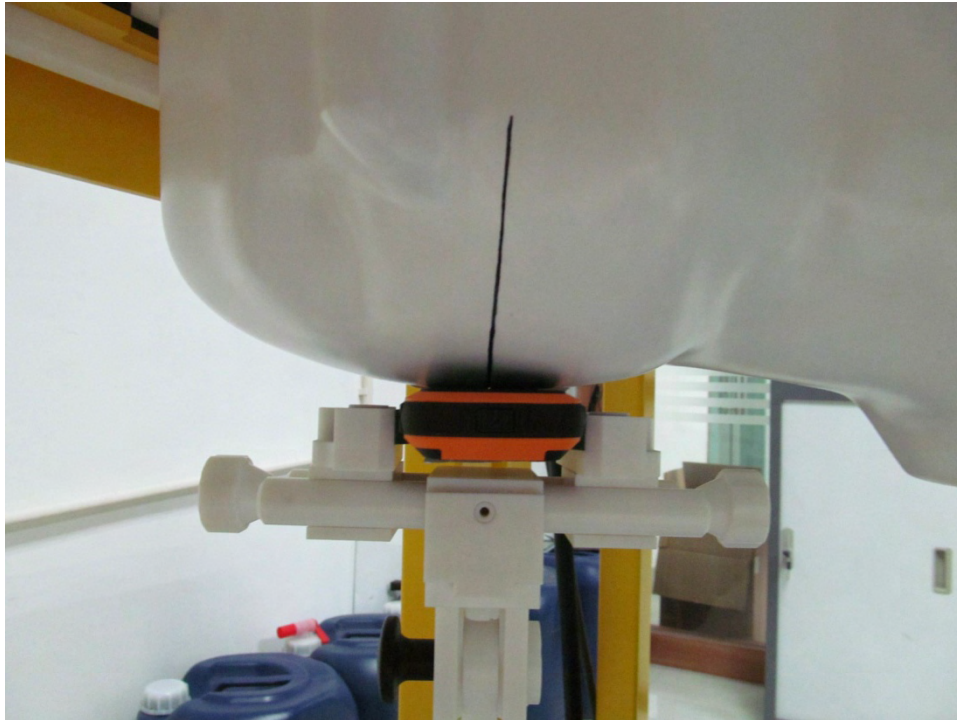
LEFT-CHECK TOUCH



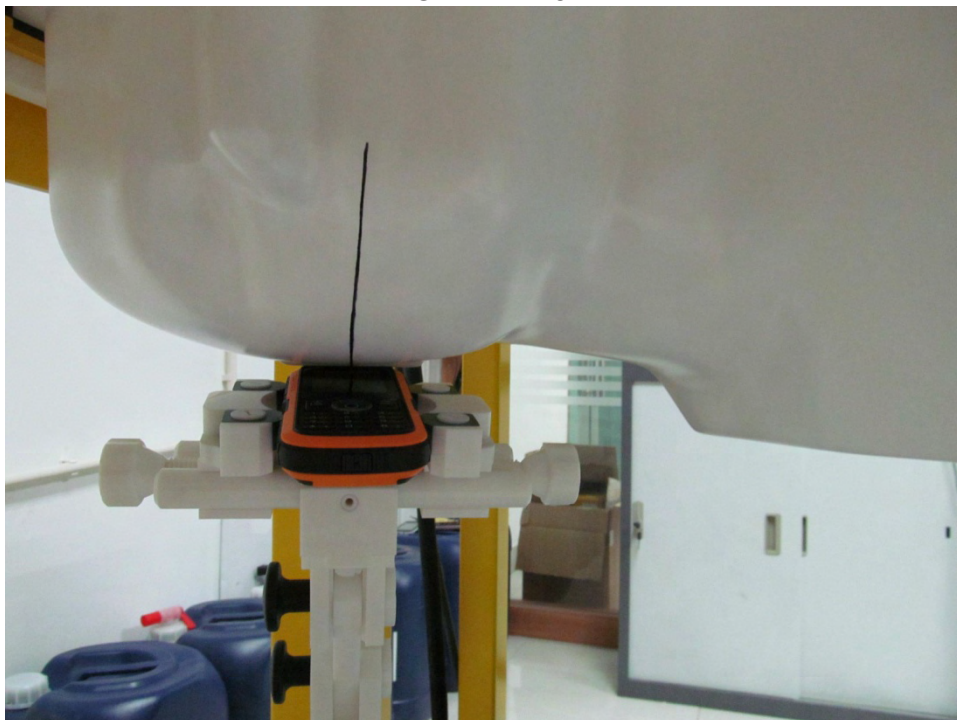
LEFT-TILT 15°



RIGHT-CHECK TOUCH



RIGHT-TILT 15°



Body Back15mm



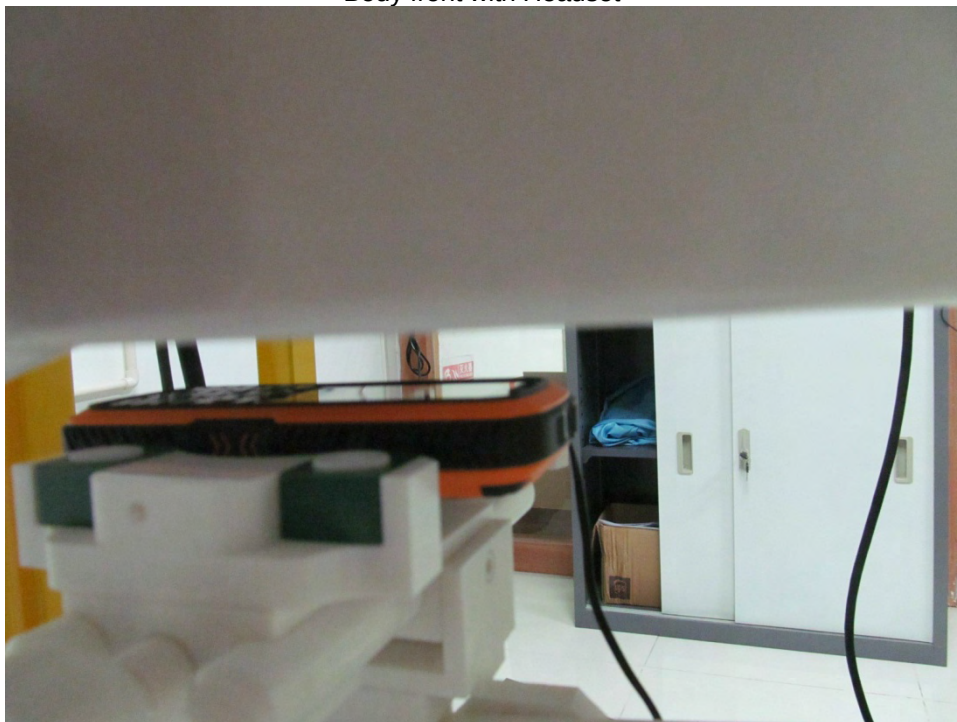
Body Front15mm



Body back with Headset



Body front with Headset



DEPTH OF THE LIQUID IN THE PHANTOM—ZOOM IN

Note : The position used in the measurement were according to IEEE 1528-2003



EUT PHOTOGRAPHS
TOTAL VIEW OF EUT



TOP VIEW OF EUT



BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



BACK VIEW OF EUT



LEFT VIEW OF EUT



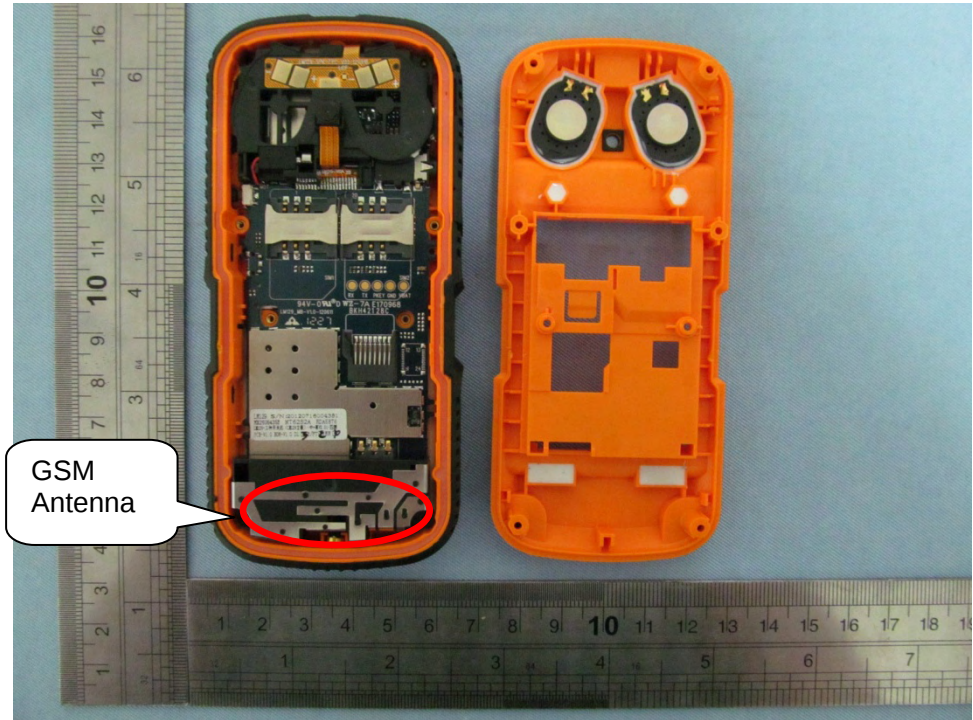
RIGHT VIEW OF EUT



OPEN VIEW OF EUT-1



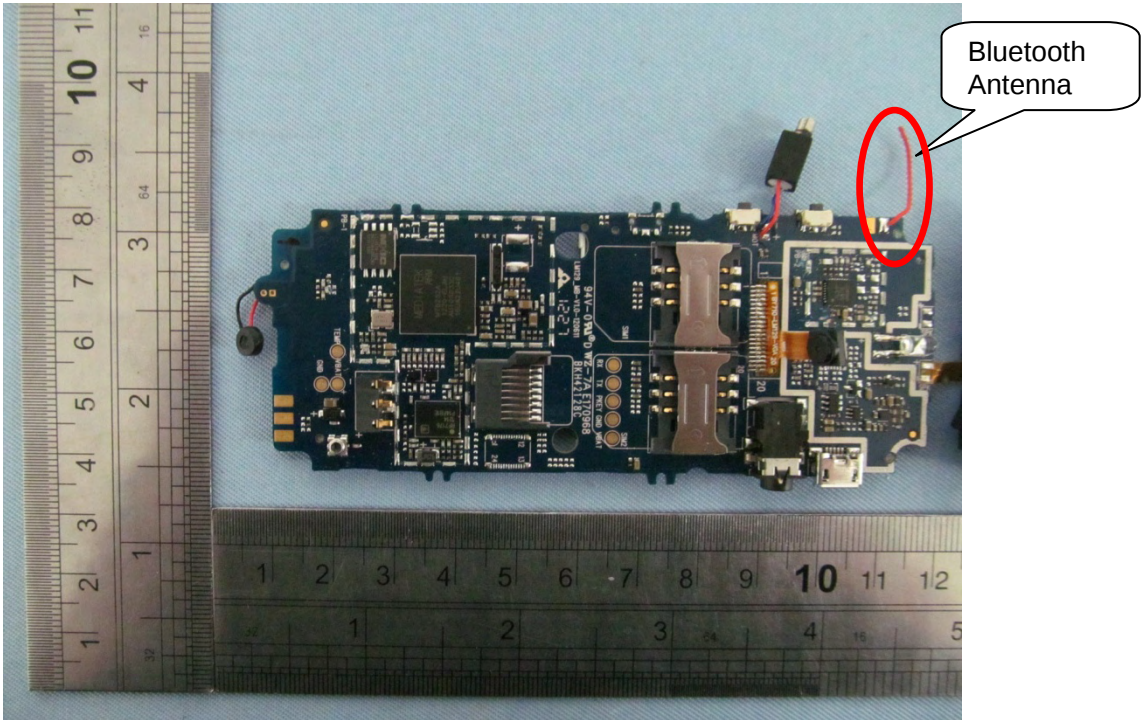
INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



INTERNAL VIEW OF EUT-3



INTERNAL VIEW OF EUT-4

