Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal Down 90_PUSC.da4

DUT: SWU-3400AN; Type: USB Dongle_90; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down 90_PUSC_5MHz_QPSK1/2_Mid_5mm/Area Scan (41x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.057 mW/g

Body_Horizontal Down 90_PUSC_5MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.61 V/m; Power Drift = 0.192 dB
Peak SAR (extrapolated) = 0.085 W/kg
SAR(1 g) = 0.043 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.046 mW/g

0 dB = 0.046mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Vertical Front_PUSC.da4

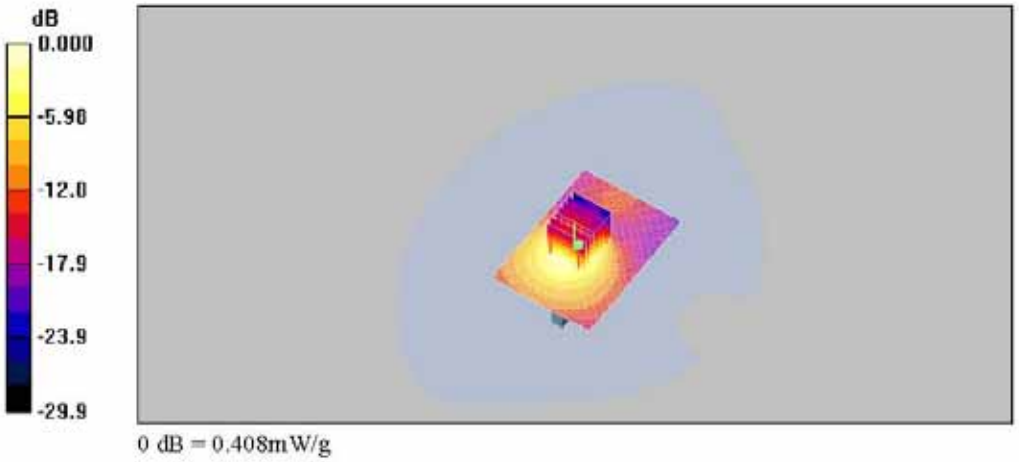
DUT: SWU-3400AN; Type: USB Dongle_Side; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Vertical Front_PUSC_5MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.447 mW/g

Body_Vertical Front_PUSC_5MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.8 V/m; Power Drift = -0.183 dB
Peak SAR (extrapolated) = 0.721 W/kg
SAR(1 g) = 0.361 mW/g; SAR(10 g) = 0.172 mW/g
Maximum value of SAR (measured) = 0.408 mW/g



0 dB = 0.408mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Vertical Back_PUSC.da4

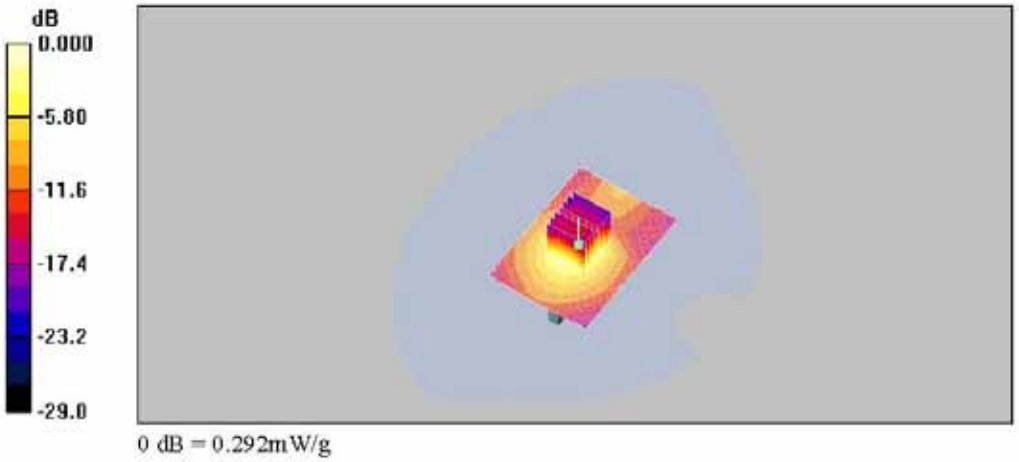
DUT: SWU-3400AN; Type: USB Dongle_Side; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Vertical Back_PUSC_5MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.323 mW/g

Body_Vertical Back_PUSC_5MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.3 V/m; Power Drift = -0.121 dB
Peak SAR (extrapolated) = 0.520 W/kg
SAR(1 g) = 0.260 mW/g; SAR(10 g) = 0.125 mW/g
Maximum value of SAR (measured) = 0.292 mW/g



0 dB = 0.292mW/g

2600 MHz Test_Body_PUSC_10 MHz

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Up_PUSC_10MHz.da4

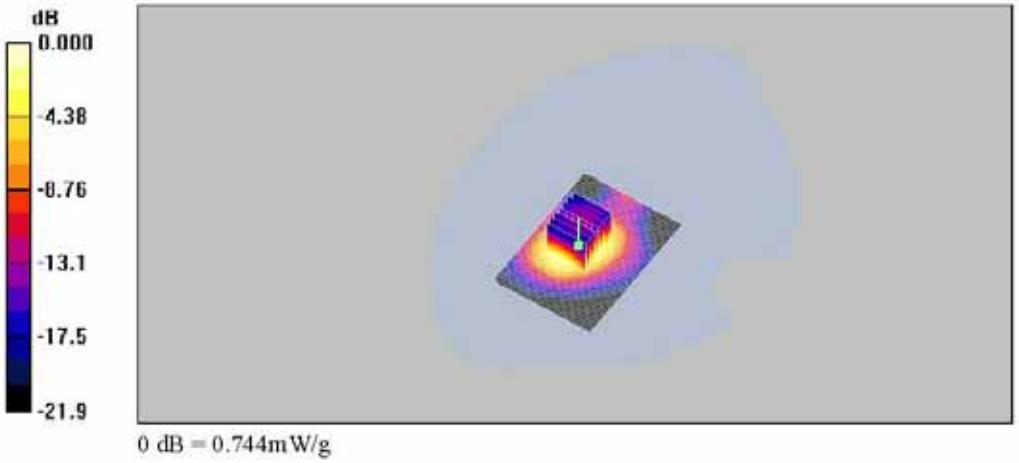
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_PUSC_10MHz_QPSK1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.779 mW/g

Body_Horizontal Up_PUSC_10MHz_QPSK1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.82 V/m; Power Drift = -0.188 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.679 mW/g; SAR(10 g) = 0.360 mW/g
Maximum value of SAR (measured) = 0.744 mW/g



0 dB = 0.744mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Up_PUSC_5MHz&10MHz.da4

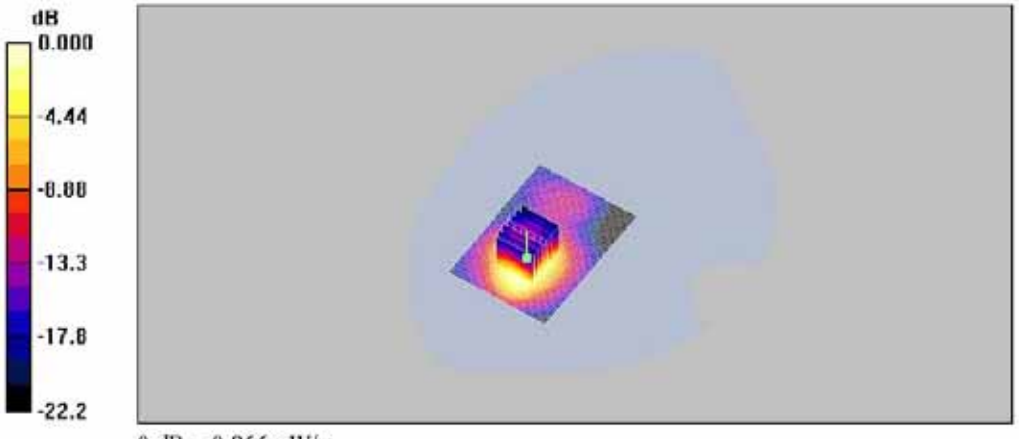
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_PUSC_10MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.11 mW/g

Body_Horizontal Up_PUSC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.95 V/m; Power Drift = -0.132 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.772 mW/g; SAR(10 g) = 0.396 mW/g
Maximum value of SAR (measured) = 0.866 mW/g



0 dB = 0.866mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Up_PUSC_10MHz.da4

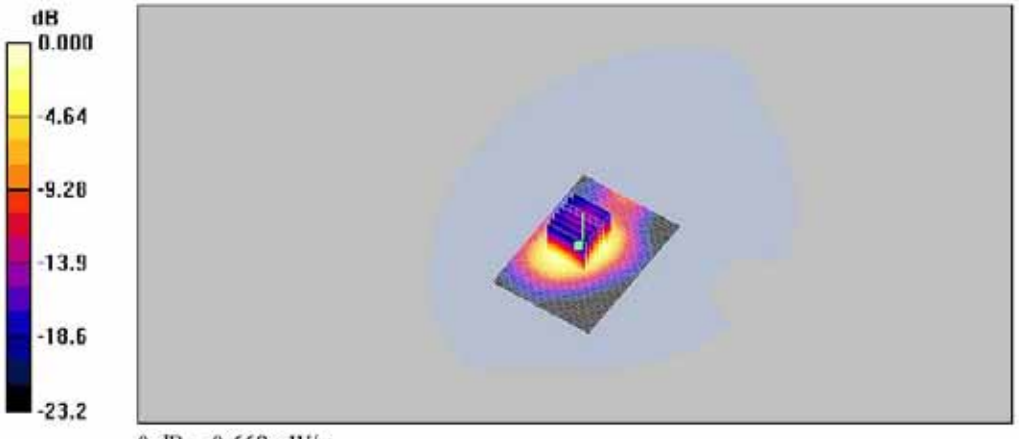
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_PUSC_10MHz_QPSK1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.718 mW/g

Body_Horizontal Up_PUSC_10MHz_QPSK1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.09 V/m; Power Drift = -0.150 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.607 mW/g; SAR(10 g) = 0.309 mW/g
Maximum value of SAR (measured) = 0.668 mW/g



0 dB = 0.668mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Up_PUSC_10MHz.da4

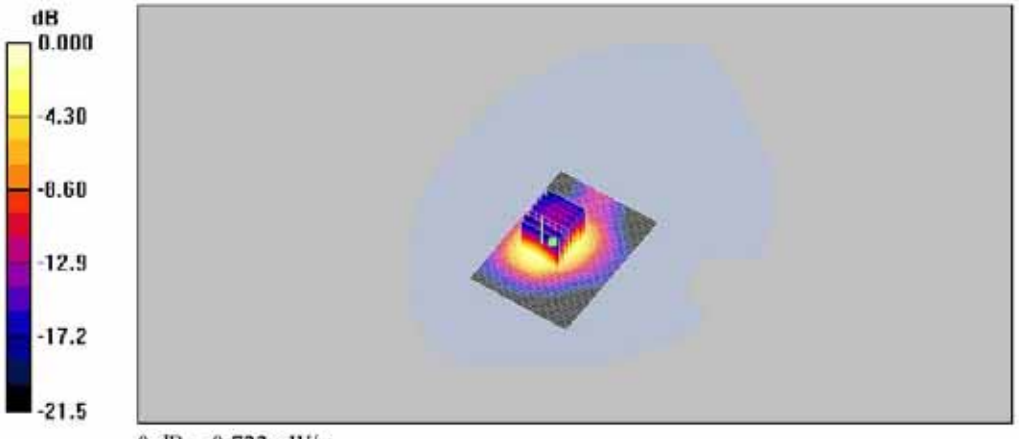
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_PUSC_10MHz_16QAM1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.774 mW/g

Body_Horizontal Up_PUSC_10MHz_16QAM1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.21 V/m; Power Drift = 0.134 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.669 mW/g; SAR(10 g) = 0.354 mW/g
Maximum value of SAR (measured) = 0.723 mW/g



0 dB = 0.723mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Up_PUSC_10MHz.da4

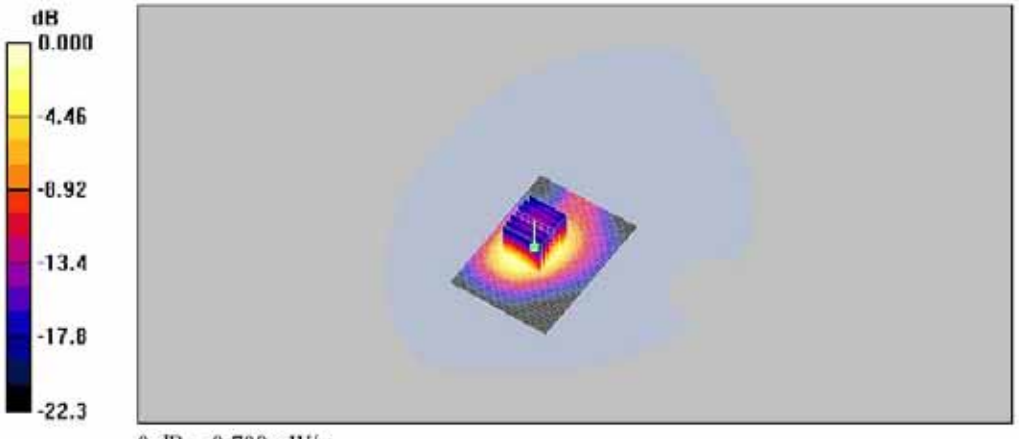
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_PUSC_10MHz_16QAM1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.780 mW/g

Body_Horizontal Up_PUSC_10MHz_16QAM1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.86 V/m; Power Drift = 0.143 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.647 mW/g; SAR(10 g) = 0.337 mW/g
Maximum value of SAR (measured) = 0.709 mW/g



0 dB = 0.709mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Up_PUSC_10MHz.da4

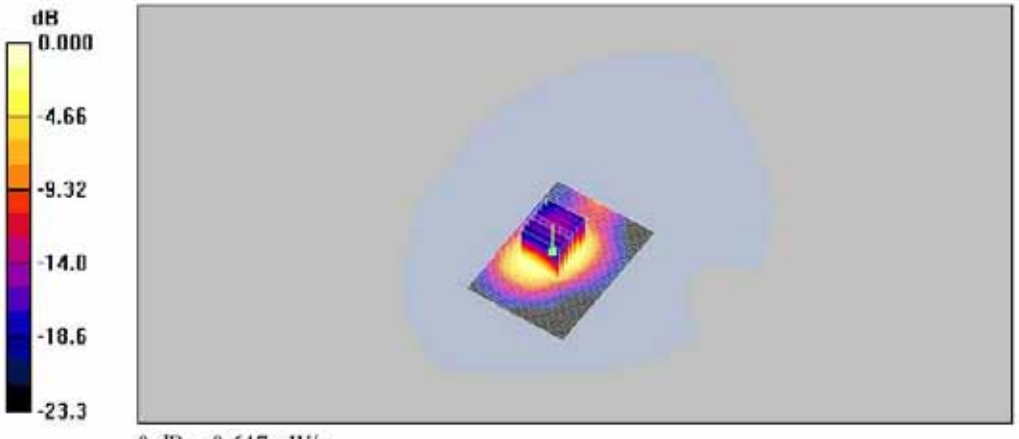
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_PUSC_10MHz_16QAM1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.700 mW/g

Body_Horizontal Up_PUSC_10MHz_16QAM1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.86 V/m; Power Drift = 0.157 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.594 mW/g; SAR(10 g) = 0.306 mW/g
Maximum value of SAR (measured) = 0.647 mW/g



0 dB = 0.647mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_PUSC_10MHz.da4

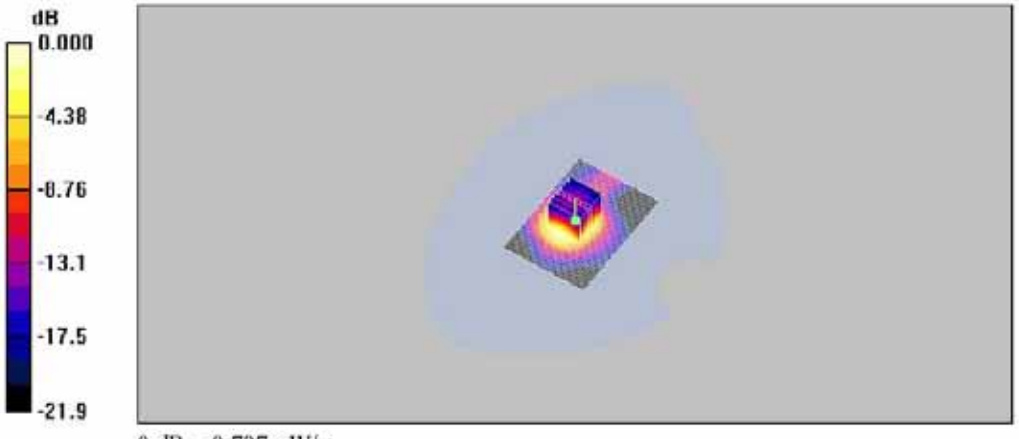
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_PUSC_10MHz_QPSK1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.899 mW/g

Body_Horizontal Down_PUSC_10MHz_QPSK1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.0 V/m; Power Drift = 0.035 dB
Peak SAR (extrapolated) = 1.29 W/kg
SAR(1 g) = 0.728 mW/g; SAR(10 g) = 0.380 mW/g
Maximum value of SAR (measured) = 0.797 mW/g



0 dB = 0.797mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_PUSC_10MHz.da4

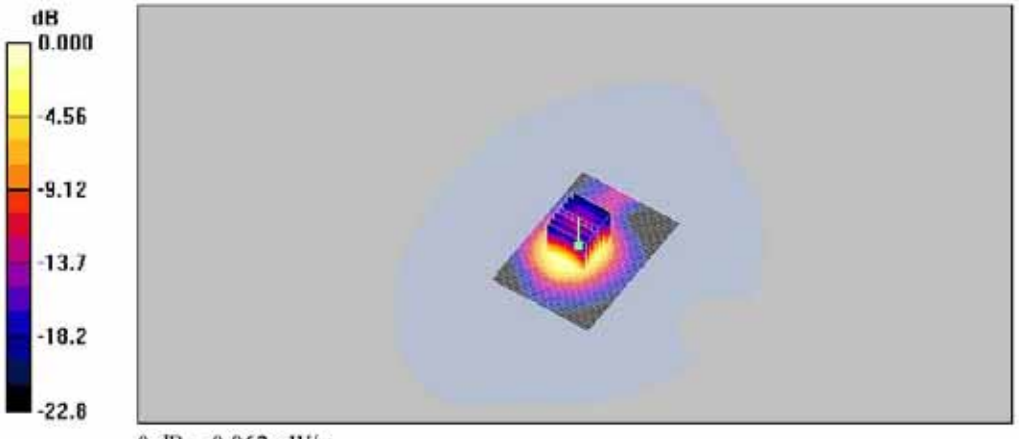
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_PUSC_10MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.17 mW/g

Body_Horizontal Down_PUSC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.2 V/m; Power Drift = 0.061 dB
Peak SAR (extrapolated) = 1.57 W/kg
SAR(1 g) = 0.868 mW/g; SAR(10 g) = 0.445 mW/g
Maximum value of SAR (measured) = 0.962 mW/g



0 dB = 0.962mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_PUSC_10MHz.da4

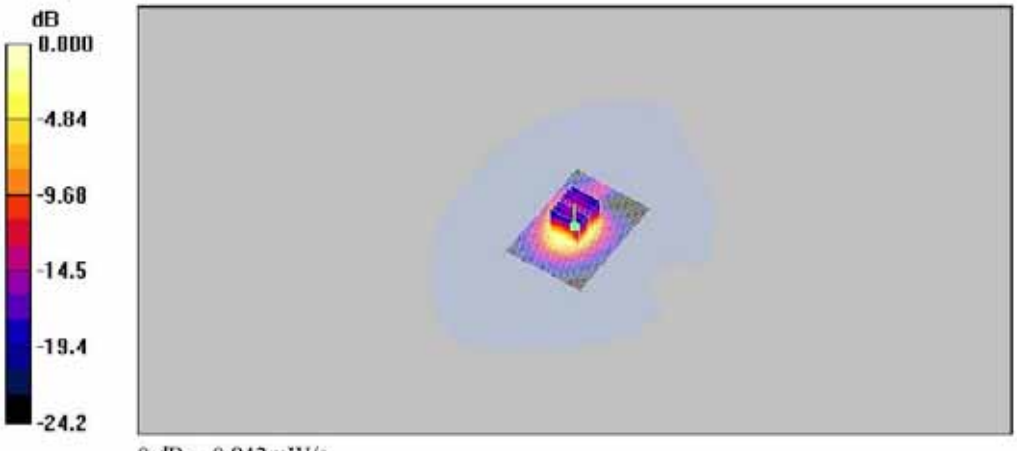
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_PUSC_10MHz_QPSK1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.966 mW/g

Body_Horizontal Down_PUSC_10MHz_QPSK1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.1 V/m; Power Drift = 0.034 dB
Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 0.766 mW/g; SAR(10 g) = 0.376 mW/g
Maximum value of SAR (measured) = 0.843 mW/g



0 dB = 0.843mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_PUSC_10MHz.da4

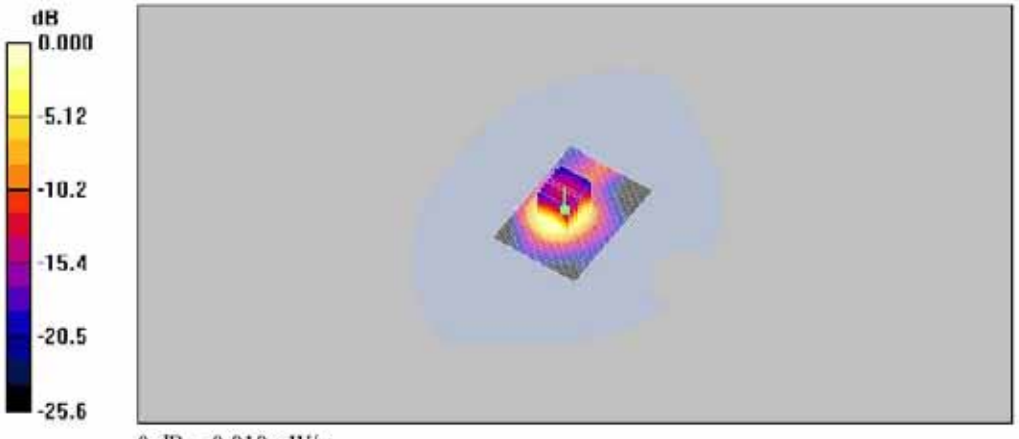
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_PUSC_10MHz_16QAM1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.01 mW/g

Body_Horizontal Down_PUSC_10MHz_16QAM1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.6 V/m; Power Drift = -0.139 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.827 mW/g; SAR(10 g) = 0.427 mW/g
Maximum value of SAR (measured) = 0.919 mW/g



0 dB = 0.919mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_PUSC_10MHz.da4

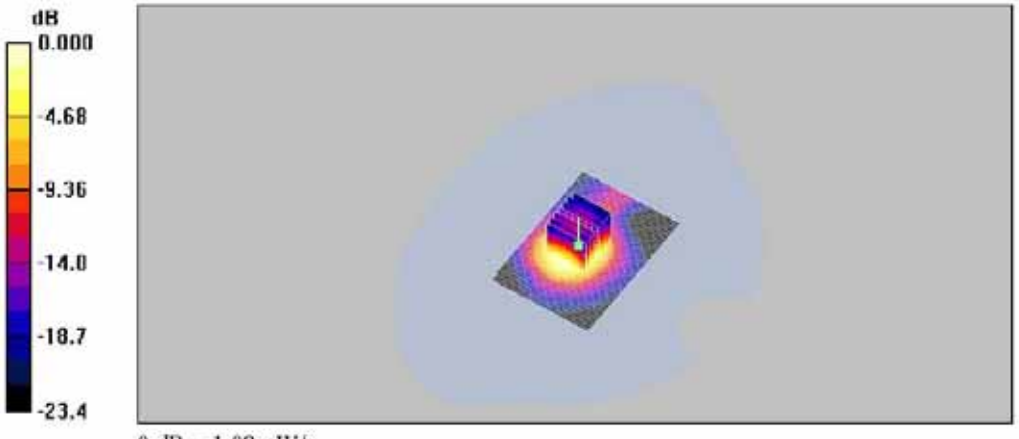
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

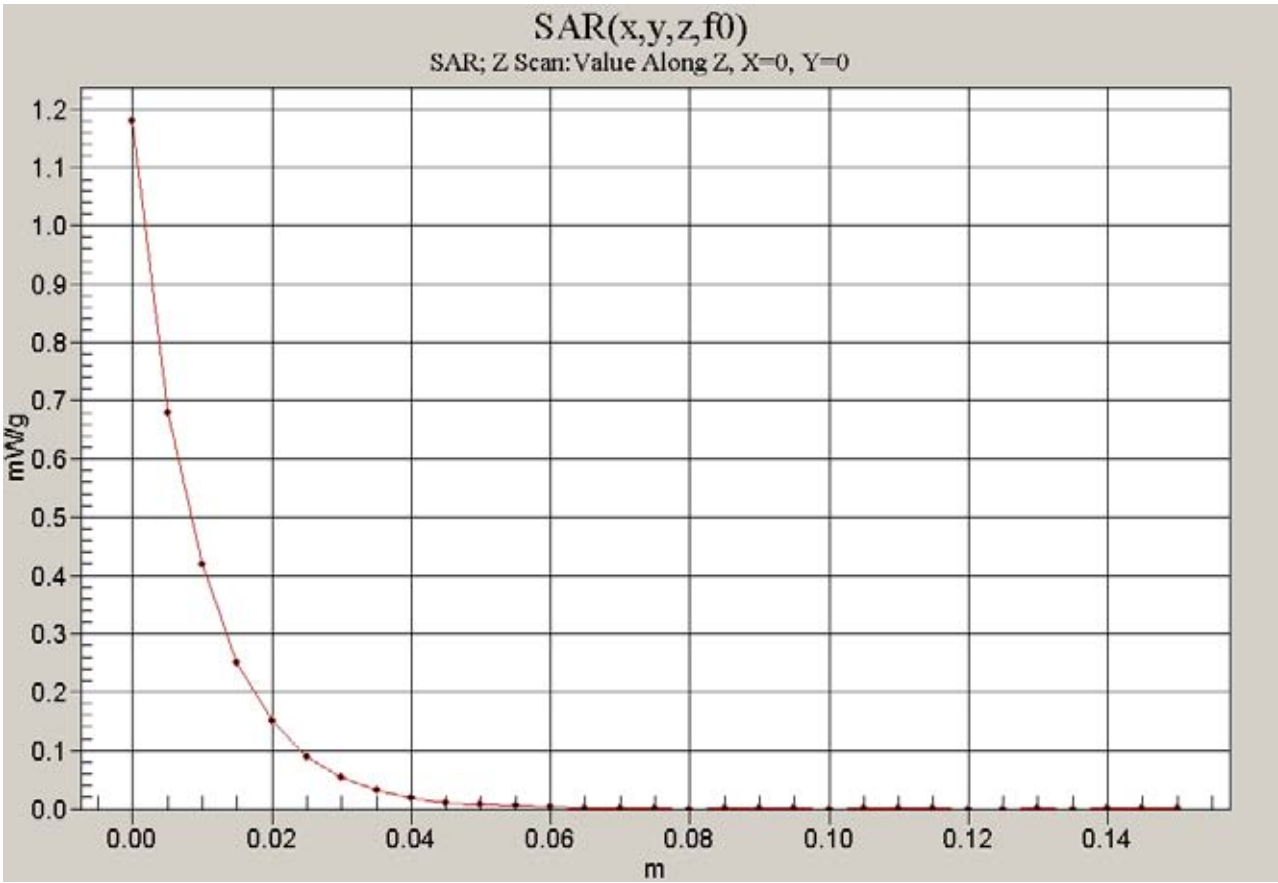
Body_Horizontal Down_PUSC_10MHz_16QAM1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.33 mW/g

Body_Horizontal Down_PUSC_10MHz_16QAM1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.6 V/m; Power Drift = -0.027 dB
Peak SAR (extrapolated) = 1.81 W/kg
SAR(1 g) = 0.986 mW/g; SAR(10 g) = 0.501 mW/g
Maximum value of SAR (measured) = 1.08 mW/g



0 dB = 1.08mW/g

Z Scan


SAR(x,y,z,f0)
SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
m

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_PUSC_10MHz.da4

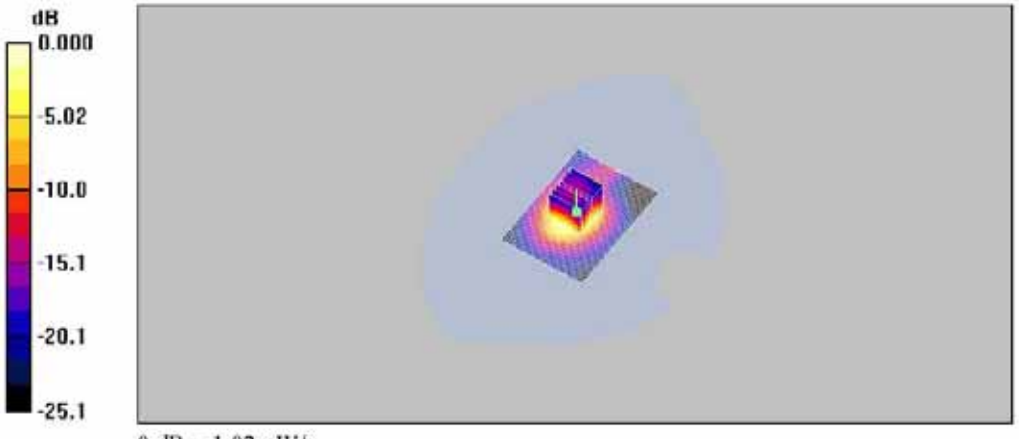
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_PUSC_10MHz_16QAM1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.19 mW/g

Body_Horizontal Down_PUSC_10MHz_16QAM1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.6 V/m; Power Drift = 0.078 dB
Peak SAR (extrapolated) = 1.71 W/kg
SAR(1 g) = 0.881 mW/g; SAR(10 g) = 0.437 mW/g
Maximum value of SAR (measured) = 1.02 mW/g



0 dB = 1.02mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal Up 90_PUSC.da4

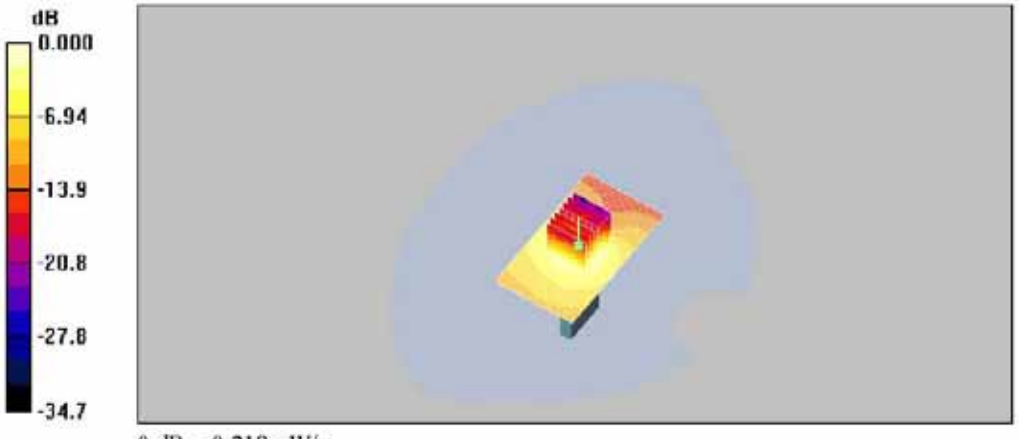
DUT: SWU-3400AN; Type: USB Dongle_90; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up 90_PUSC_10MHz_QPSK1/2_Mid_5mm/Area Scan (41x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.231 mW/g

Body_Horizontal Up 90_PUSC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.93 V/m; Power Drift = -0.124 dB
Peak SAR (extrapolated) = 0.396 W/kg
SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.091 mW/g
Maximum value of SAR (measured) = 0.218 mW/g



0 dB = 0.218mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal Down 90_PUSC.da4

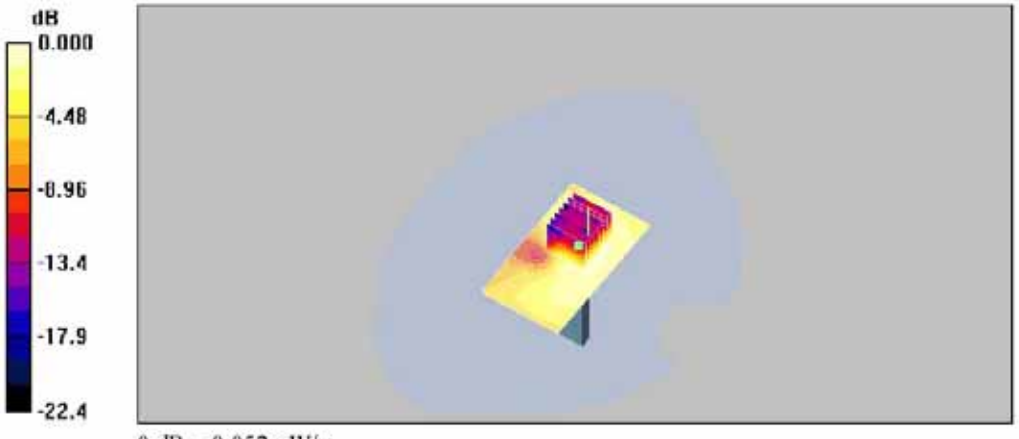
DUT: SWU-3400AN; Type: USB Dongle_90; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down 90_PUSC_10MHz_QPSK1/2_Mid_5mm/Area Scan (41x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.059 mW/g

Body_Horizontal Down 90_PUSC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.56 V/m; Power Drift = -0.103 dB
Peak SAR (extrapolated) = 0.096 W/kg
SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.027 mW/g
Maximum value of SAR (measured) = 0.052 mW/g



0 dB = 0.052mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Vertical Front_PUSC.da4

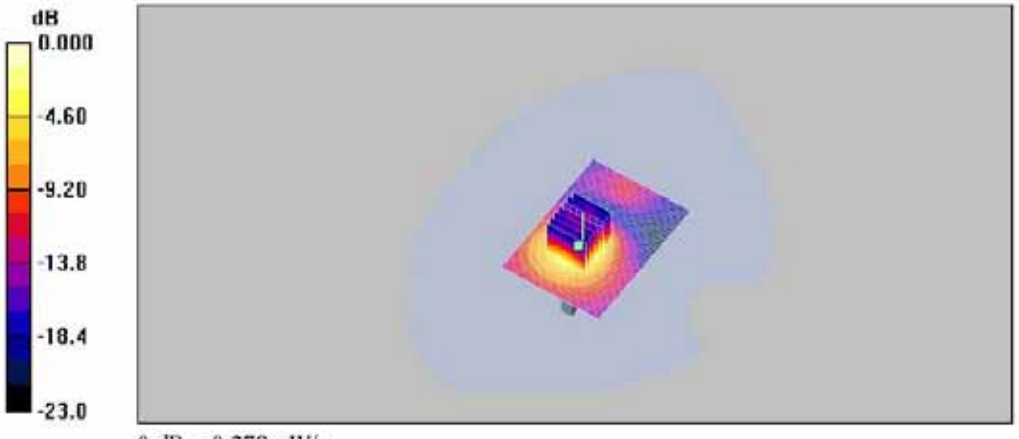
DUT: SWU-3400AN; Type: USB Dongle_Side; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Vertical Front_PUSC_10MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.396 mW/g

Body_Vertical Front_PUSC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.5 V/m; Power Drift = -0.154 dB
Peak SAR (extrapolated) = 0.680 W/kg
SAR(1 g) = 0.336 mW/g; SAR(10 g) = 0.158 mW/g
Maximum value of SAR (measured) = 0.378 mW/g



0 dB = 0.378mW/g

Date: 2011-11-08

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Vertical Back_PUSC.da4

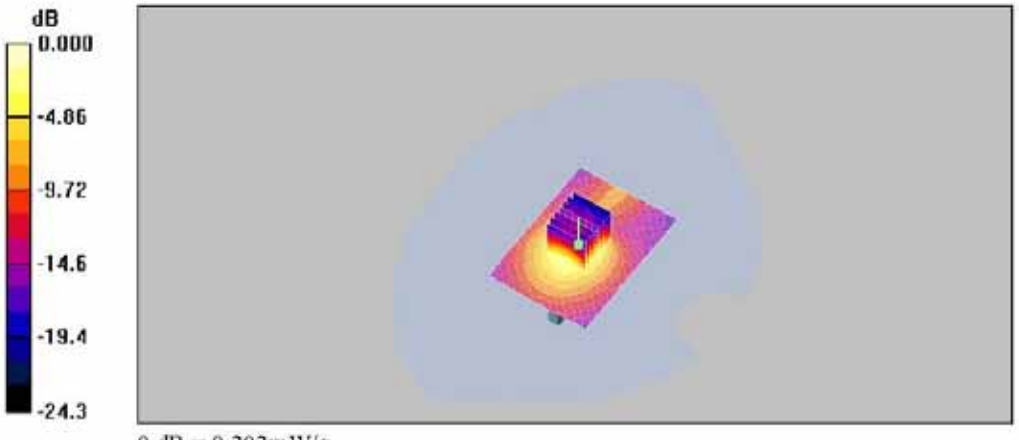
DUT: SWU-3400AN; Type: USB Dongle_Side; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.19 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Vertical Back_PUSC_10MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.339 mW/g

Body_Vertical Back_PUSC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = -0.039 dB
Peak SAR (extrapolated) = 0.544 W/kg
SAR(1 g) = 0.272 mW/g; SAR(10 g) = 0.131 mW/g
Maximum value of SAR (measured) = 0.303 mW/g



0 dB = 0.303mW/g

2600 MHz Test_Body_AMC_5 MHz

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_5MHz.da4

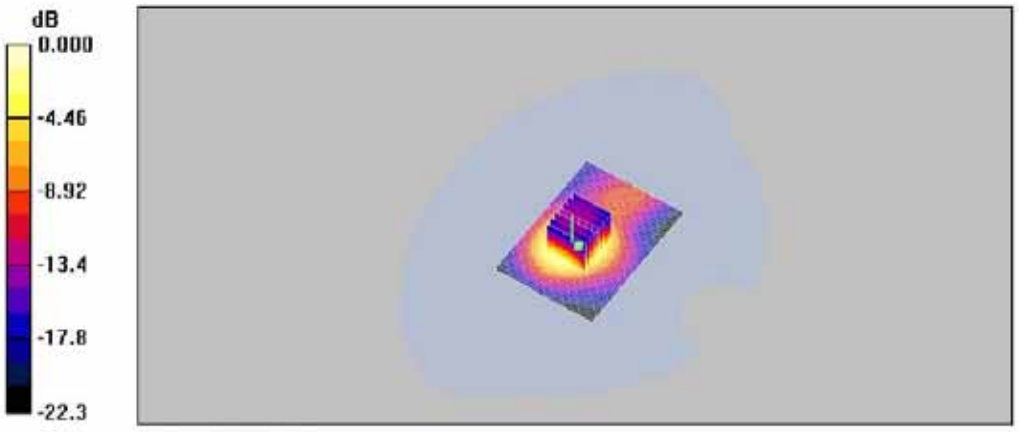
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_5MHz_QPSK1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.906 mW/g

Body_Horizontal Up_AMC_5MHz_QPSK1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.3 V/m; Power Drift = 0.140 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.813 mW/g; SAR(10 g) = 0.442 mW/g
Maximum value of SAR (measured) = 0.876 mW/g



0 dB = 0.876mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_5MHz.da4

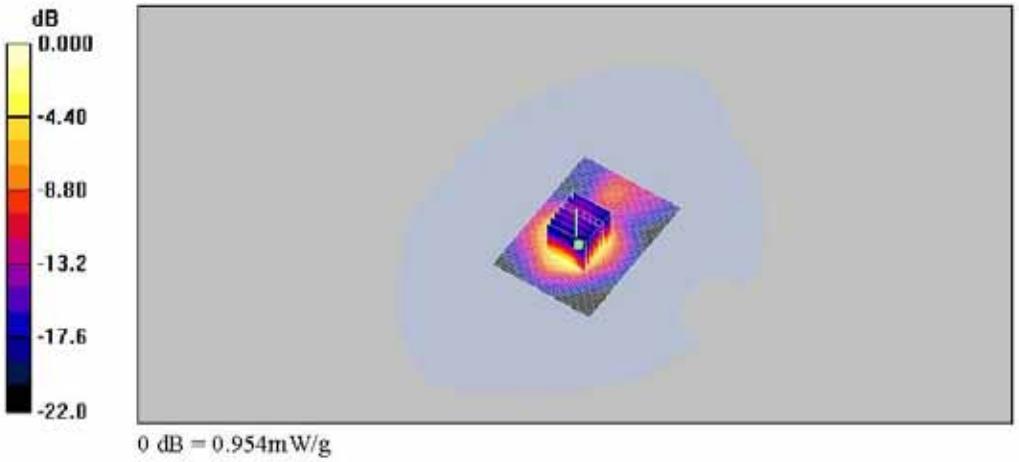
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_5MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.13 mW/g

Body_Horizontal Up_AMC_5MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.7 V/m; Power Drift = 0.139 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.872 mW/g; SAR(10 g) = 0.453 mW/g
Maximum value of SAR (measured) = 0.954 mW/g



0 dB = 0.954mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_5MHz.da4

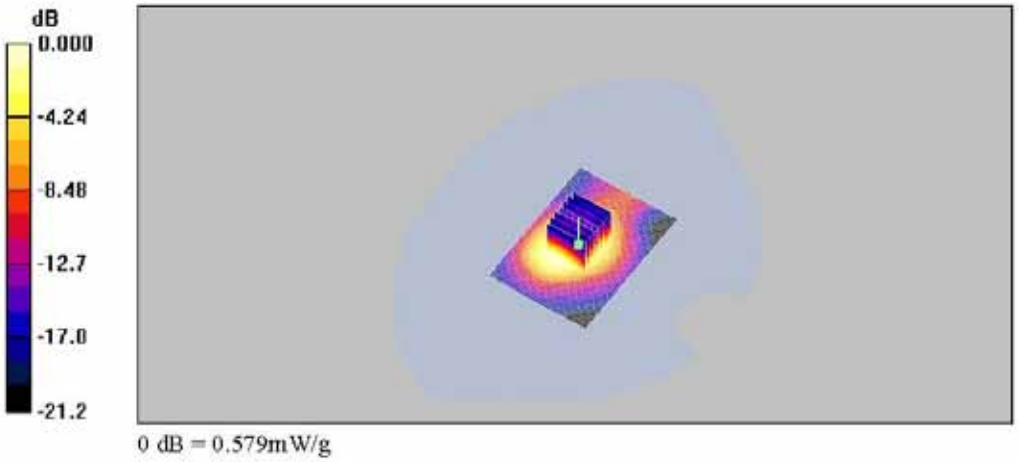
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_5MHz_QPSK1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.642 mW/g

Body_Horizontal Up_AMC_5MHz_QPSK1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.2 V/m; Power Drift = 0.174 dB
Peak SAR (extrapolated) = 0.978 W/kg
SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.285 mW/g
Maximum value of SAR (measured) = 0.579 mW/g



0 dB = 0.579mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_5MHz.da4

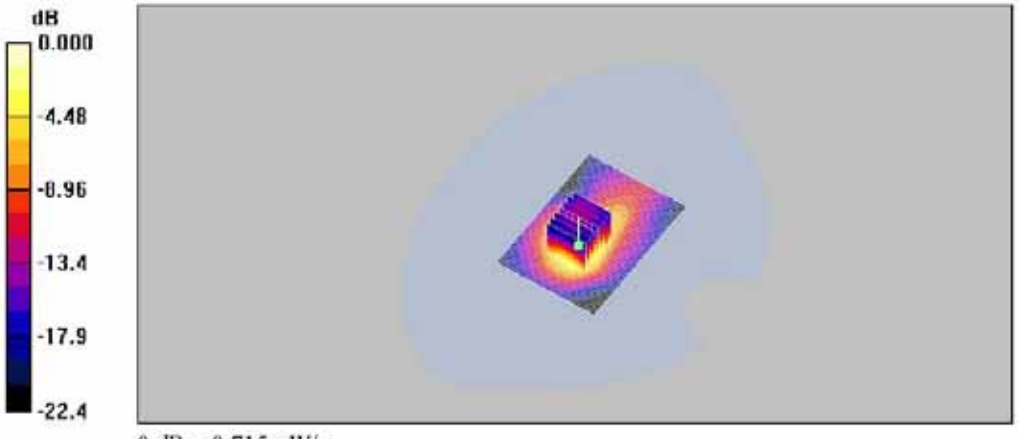
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_5MHz_16QAM1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.882 mW/g

Body_Horizontal Up_AMC_5MHz_16QAM1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.8 V/m; Power Drift = 0.128 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.624 mW/g; SAR(10 g) = 0.320 mW/g
Maximum value of SAR (measured) = 0.715 mW/g



0 dB = 0.715mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_5MHz.da4

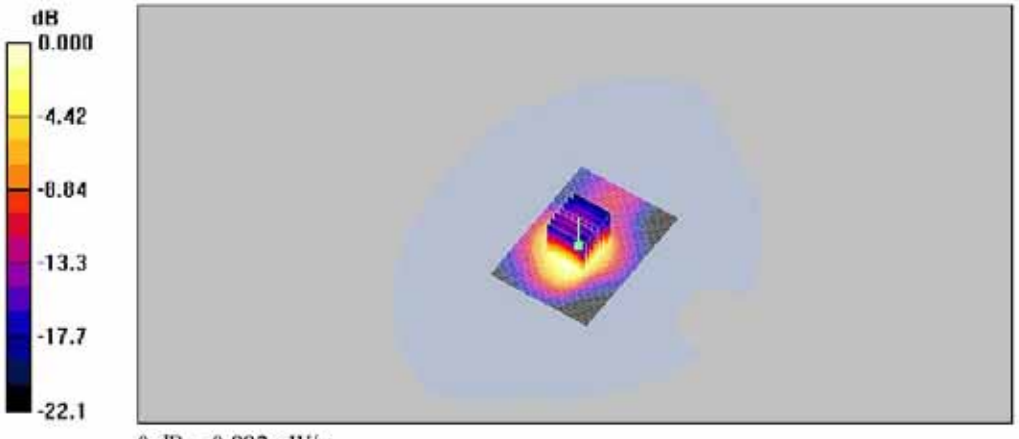
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_5MHz_16QAM1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.998 mW/g

Body_Horizontal Up_AMC_5MHz_16QAM1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.8 V/m; Power Drift = 0.015 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.808 mW/g; SAR(10 g) = 0.418 mW/g
Maximum value of SAR (measured) = 0.882 mW/g



0 dB = 0.882mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_5MHz.da4

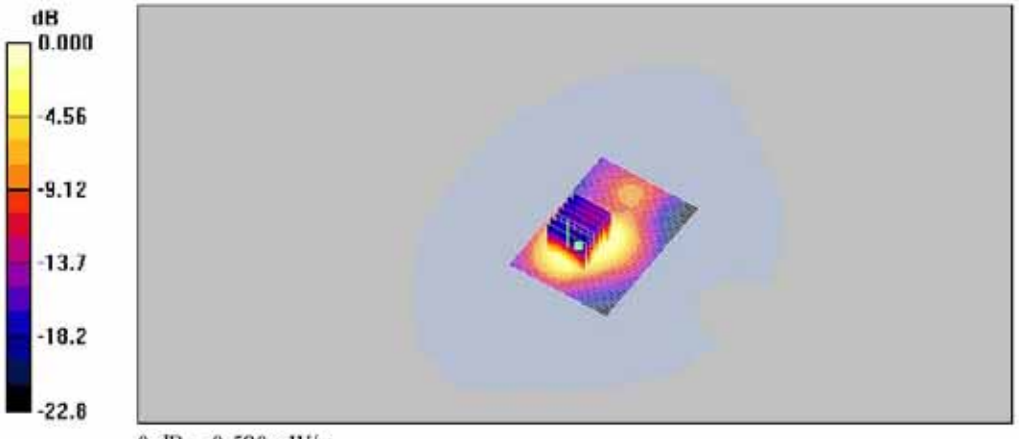
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_5MHz_16QAM1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.669 mW/g

Body_Horizontal Up_AMC_5MHz_16QAM1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.6 V/m; Power Drift = -0.070 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.537 mW/g; SAR(10 g) = 0.288 mW/g
Maximum value of SAR (measured) = 0.580 mW/g



0 dB = 0.580mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Down_AMC_5MHz.da4

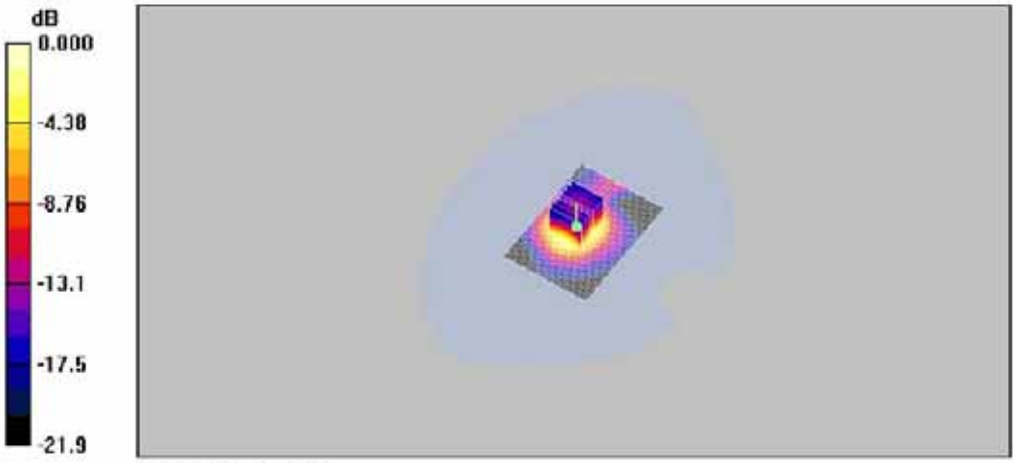
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_AMC_5MHz_QPSK1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.870 mW/g

Body_Horizontal Down_AMC_5MHz_QPSK1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.3 V/m; Power Drift = -0.006 dB
Peak SAR (extrapolated) = 1.32 W/kg
SAR(1 g) = 0.733 mW/g; SAR(10 g) = 0.382 mW/g
Maximum value of SAR (measured) = 0.807 mW/g



0 dB = 0.807mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Down_AMC_5MHz.da4

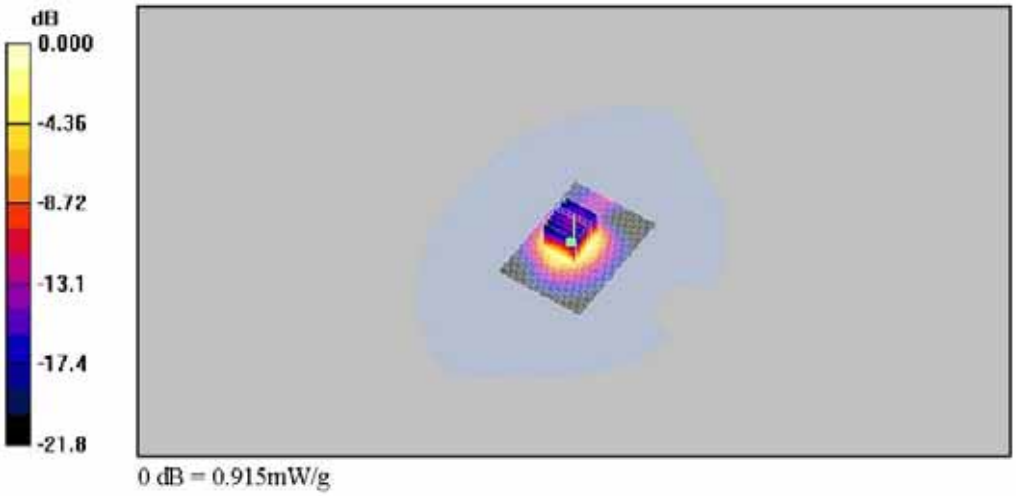
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_AMC_5MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.08 mW/g

Body_Horizontal Down_AMC_5MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.7 V/m; Power Drift = -0.087 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.837 mW/g; SAR(10 g) = 0.432 mW/g
Maximum value of SAR (measured) = 0.915 mW/g



0 dB = 0.915mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Down_AMC_5MHz.da4

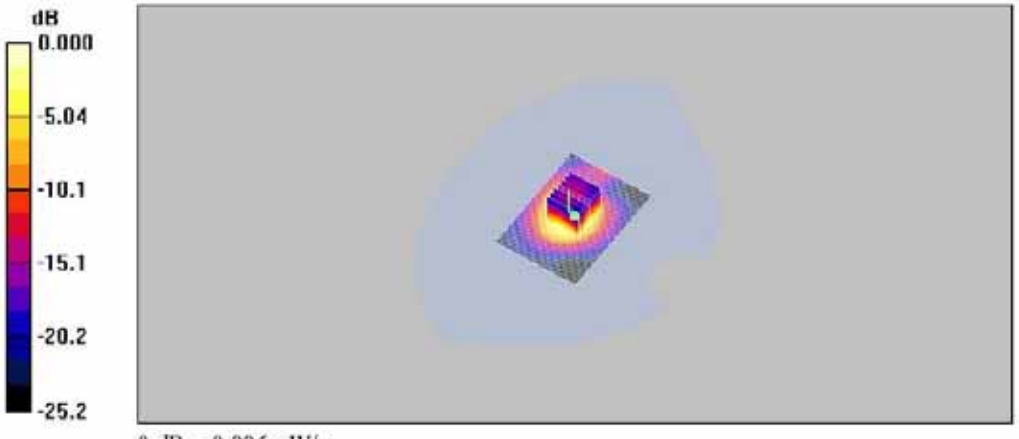
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_AMC_5MHz_QPSK1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.08 mW/g

Body_Horizontal Down_AMC_5MHz_QPSK1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.3 V/m; Power Drift = -0.154 dB
Peak SAR (extrapolated) = 1.73 W/kg
SAR(1 g) = 0.907 mW/g; SAR(10 g) = 0.450 mW/g
Maximum value of SAR (measured) = 0.996 mW/g



0 dB = 0.996mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Down_AMC_5MHz.da4

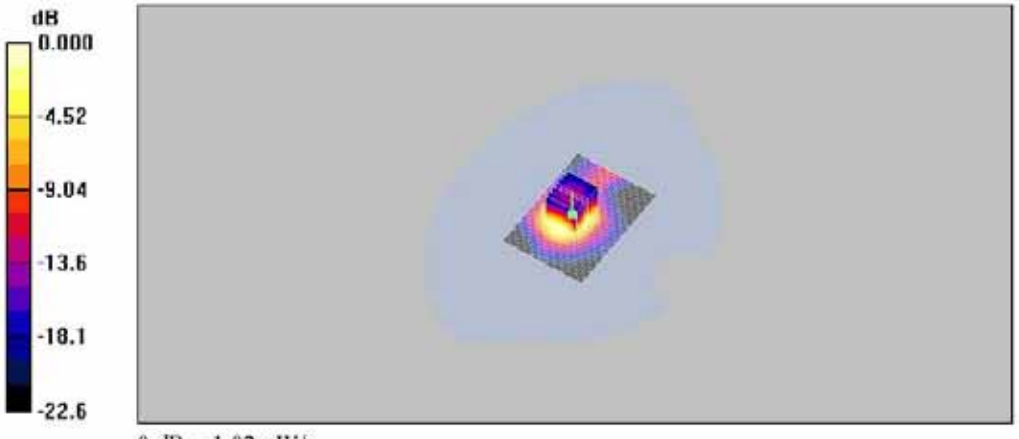
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_AMC_5MHz_16QAM1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.08 mW/g

Body_Horizontal Down_AMC_5MHz_16QAM1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.1 V/m; Power Drift = -0.127 dB
Peak SAR (extrapolated) = 1.65 W/kg
SAR(1 g) = 0.927 mW/g; SAR(10 g) = 0.480 mW/g
Maximum value of SAR (measured) = 1.02 mW/g



0 dB = 1.02mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Down_AMC_5MHz.da4

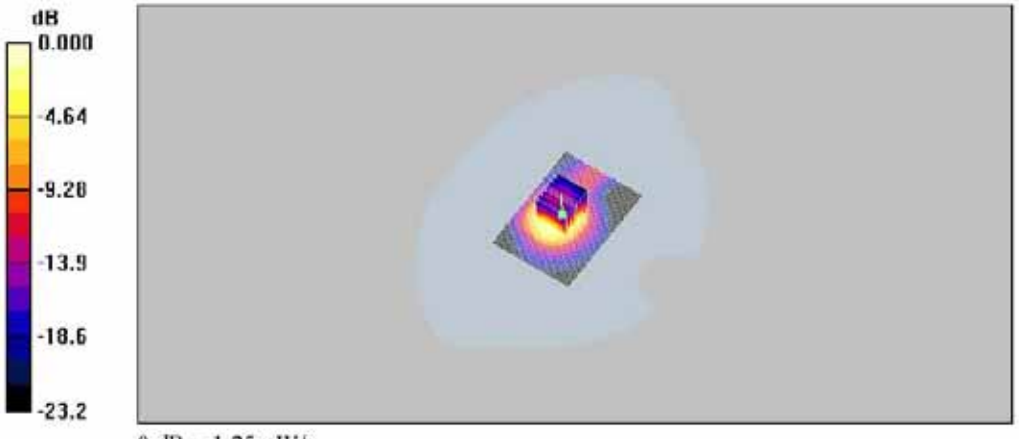
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

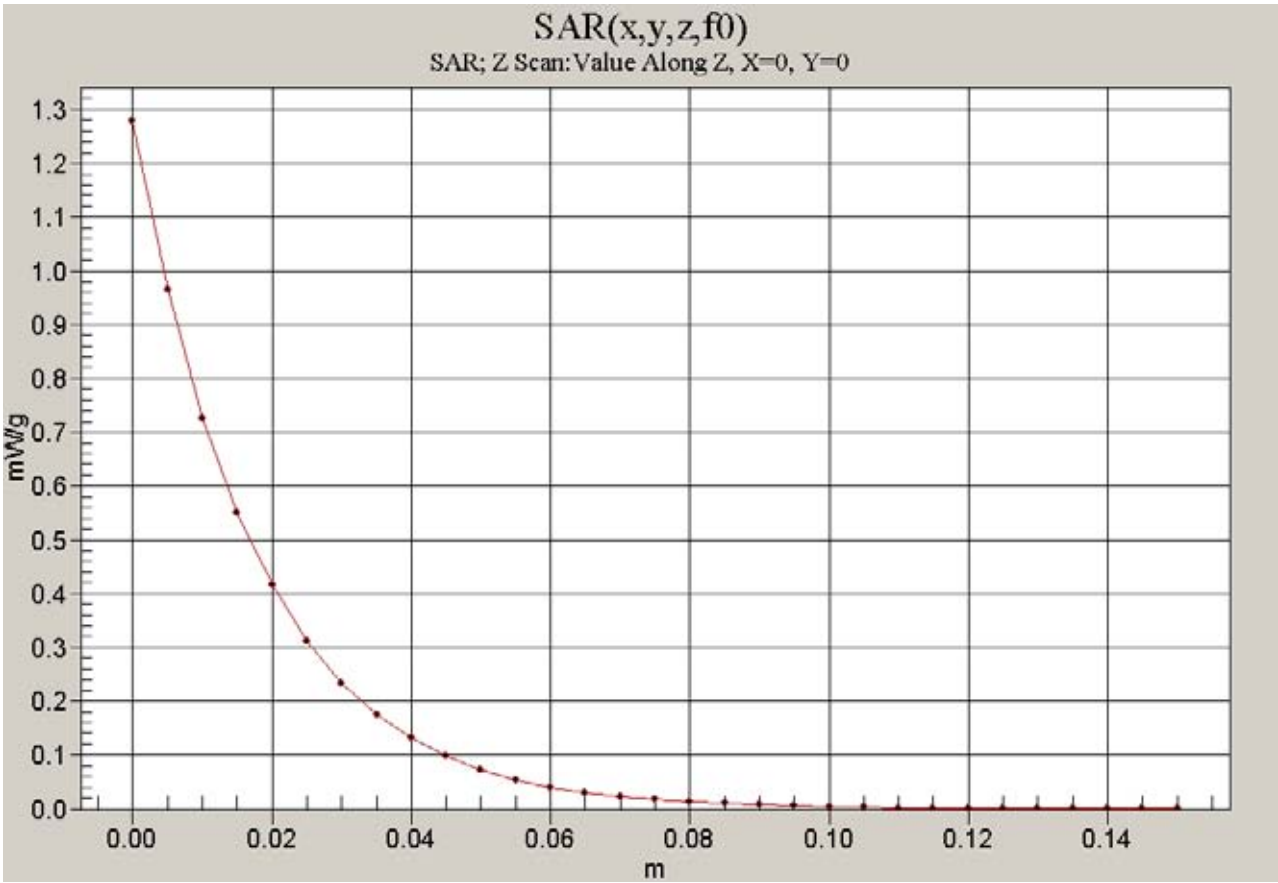
Body_Horizontal Down_AMC_5MHz_16QAM1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.46 mW/g

Body_Horizontal Down_AMC_5MHz_16QAM1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.6 V/m; Power Drift = 0.023 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.577 mW/g
Maximum value of SAR (measured) = 1.25 mW/g



0 dB = 1.25mW/g

Z Scan


SAR(x,y,z,f0)
SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
m

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal-Down_AMC_5MHz.da4

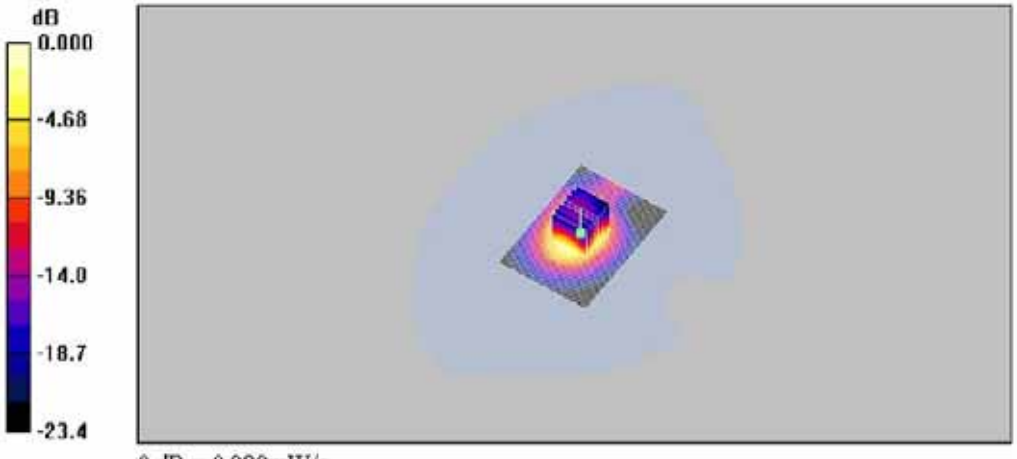
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_AMC_5MHz_16QAM1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.15 mW/g

Body_Horizontal Down_AMC_5MHz_16QAM1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.7 V/m; Power Drift = -0.002 dB
Peak SAR (extrapolated) = 1.70 W/kg
SAR(1 g) = 0.889 mW/g; SAR(10 g) = 0.428 mW/g
Maximum value of SAR (measured) = 0.989 mW/g



0 dB = 0.989mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal Up 90_AMC.da4

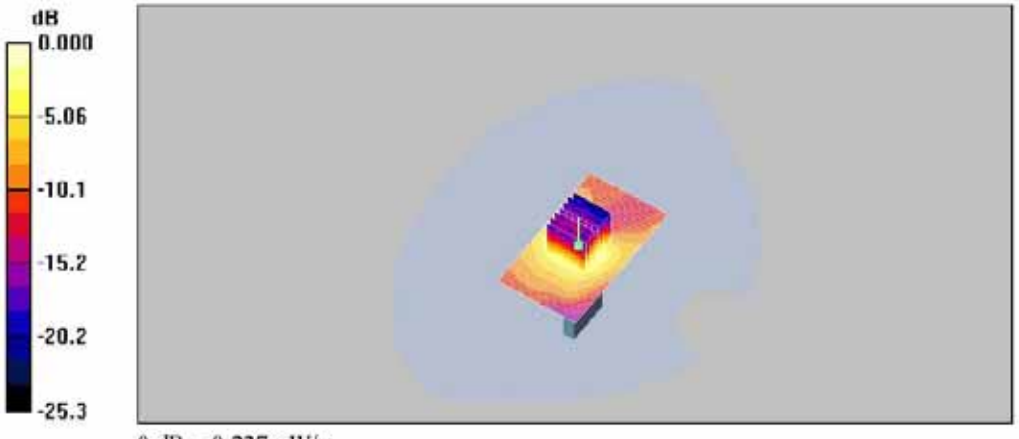
DUT: SWU-3400AN; Type: USB Dongle_90; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up 90_AMC_5MHz_QPSK1/2_Mid_5mm/Area Scan (41x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.237 mW/g

Body_Horizontal Up 90_AMC_5MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.3 V/m; Power Drift = -0.074 dB
Peak SAR (extrapolated) = 0.436 W/kg
SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.102 mW/g
Maximum value of SAR (measured) = 0.237 mW/g



0 dB = 0.237mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal Down 90_AMC.da4

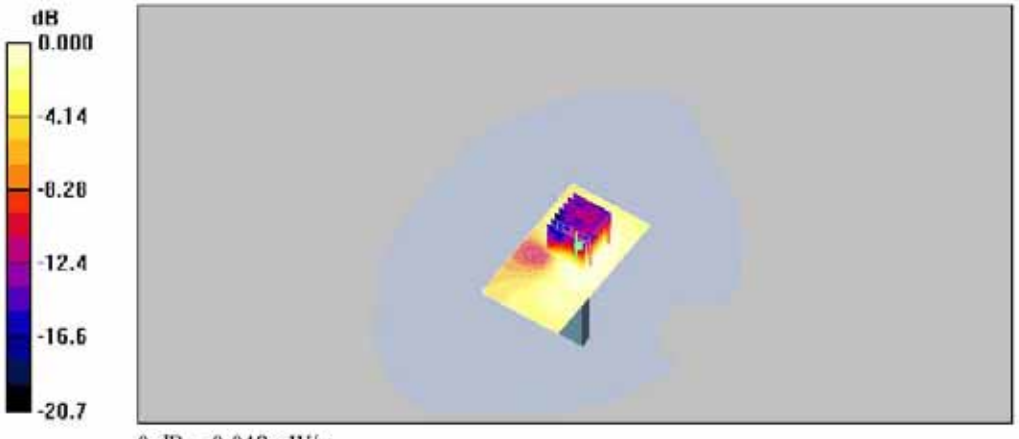
DUT: SWU-3400AN; Type: USB Dongle_90; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down 90_AMC_5MHz_QPSK1/2_Mid_5mm/Area Scan (41x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.059 mW/g

Body_Horizontal Down 90_AMC_5MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.61 V/m; Power Drift = -0.086 dB
Peak SAR (extrapolated) = 0.089 W/kg
SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.026 mW/g
Maximum value of SAR (measured) = 0.048 mW/g



0 dB = 0.048mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Vertical Front_AMC.da4

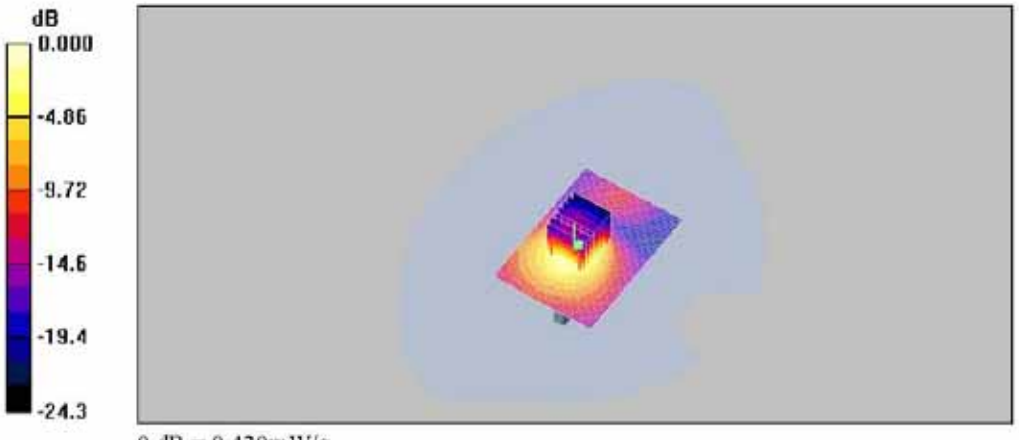
DUT: SWU-3400AN; Type: USB Dongle_Side; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Vertical Front_AMC_5MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.477 mW/g

Body_Vertical Front_AMC_5MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.5 V/m; Power Drift = 0.092 dB
Peak SAR (extrapolated) = 0.763 W/kg
SAR(1 g) = 0.381 mW/g; SAR(10 g) = 0.182 mW/g
Maximum value of SAR (measured) = 0.430 mW/g



0 dB = 0.430mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Vertical Back_AMC.da4

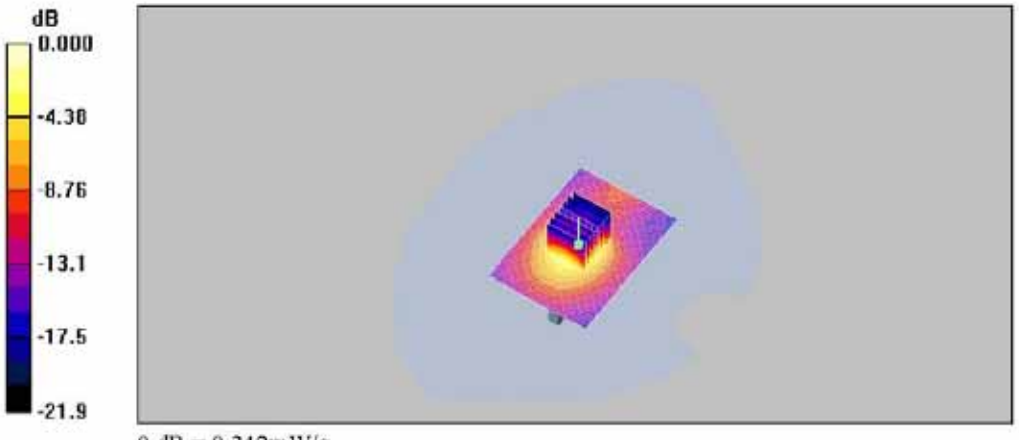
DUT: SWU-3400AN; Type: USB Dongle_Side; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Vertical Back_AMC_5MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.371 mW/g

Body_Vertical Back_AMC_5MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.0 V/m; Power Drift = -0.049 dB
Peak SAR (extrapolated) = 0.607 W/kg
SAR(1 g) = 0.304 mW/g; SAR(10 g) = 0.146 mW/g
Maximum value of SAR (measured) = 0.342 mW/g



0 dB = 0.342mW/g

2600 MHz Test_Body_AMC_10 MHz

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_10MHz.da4

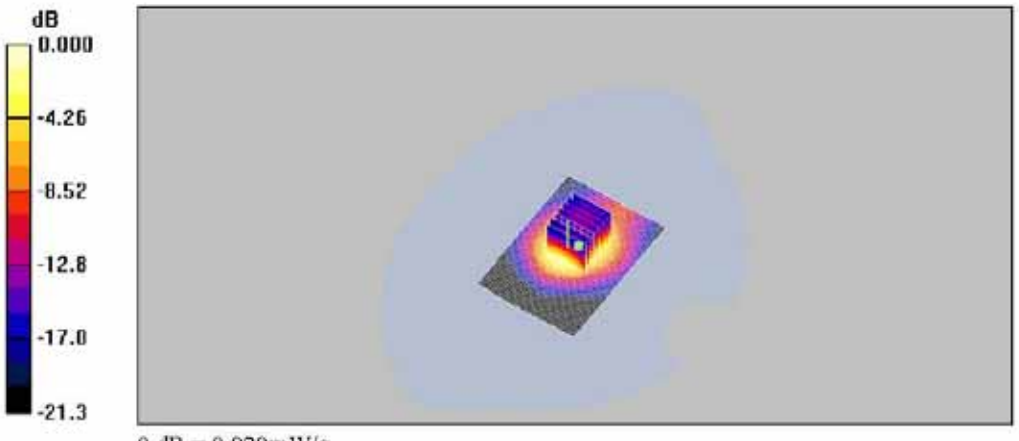
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_10MHz_QPSK1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.07 mW/g

Body_Horizontal Up_AMC_10MHz_QPSK1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.6 V/m; Power Drift = -0.005 dB
Peak SAR (extrapolated) = 1.59 W/kg
SAR(1 g) = 0.862 mW/g; SAR(10 g) = 0.461 mW/g
Maximum value of SAR (measured) = 0.929 mW/g



0 dB = 0.929mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_10MHz.da4

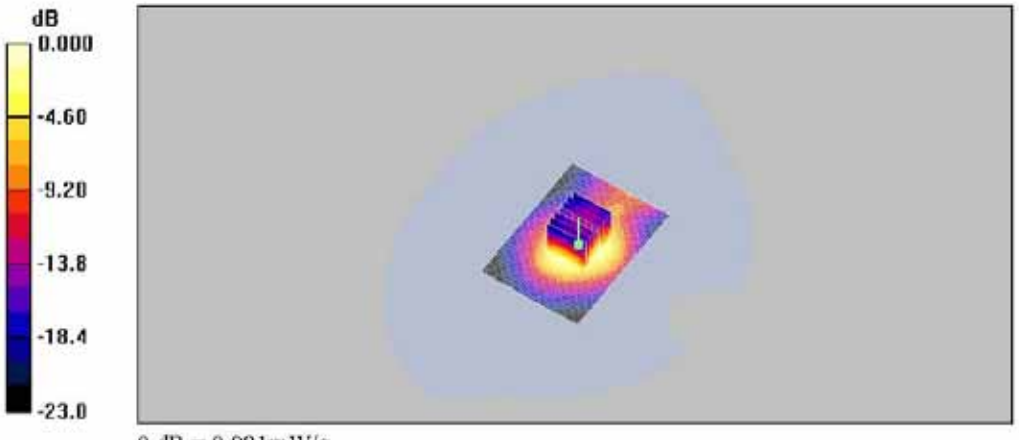
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_10MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.10 mW/g

Body_Horizontal Up_AMC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.7 V/m; Power Drift = -0.098 dB
Peak SAR (extrapolated) = 1.64 W/kg
SAR(1 g) = 0.900 mW/g; SAR(10 g) = 0.469 mW/g
Maximum value of SAR (measured) = 0.981 mW/g



0 dB = 0.981mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_10MHz.da4

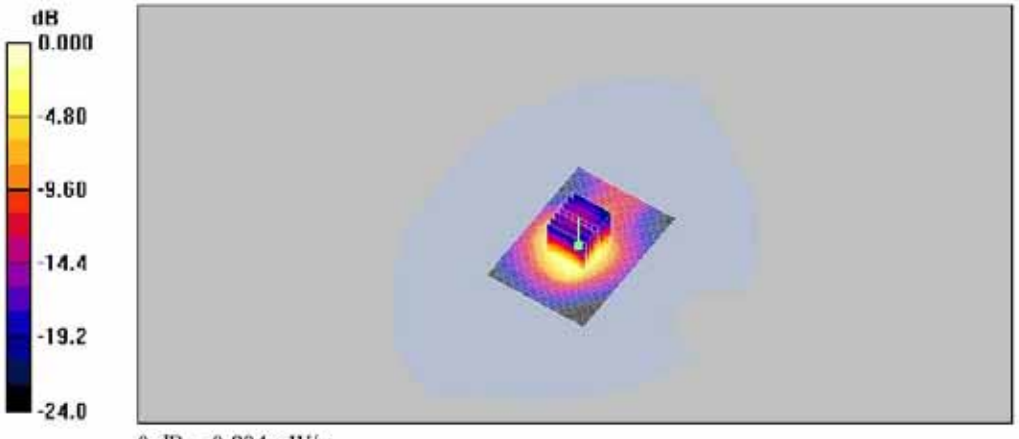
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_10MHz_QPSK1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.10 mW/g

Body_Horizontal Up_AMC_10MHz_QPSK1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.2 V/m; Power Drift = 0.072 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.818 mW/g; SAR(10 g) = 0.415 mW/g
Maximum value of SAR (measured) = 0.894 mW/g



0 dB = 0.894mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_10MHz.da4

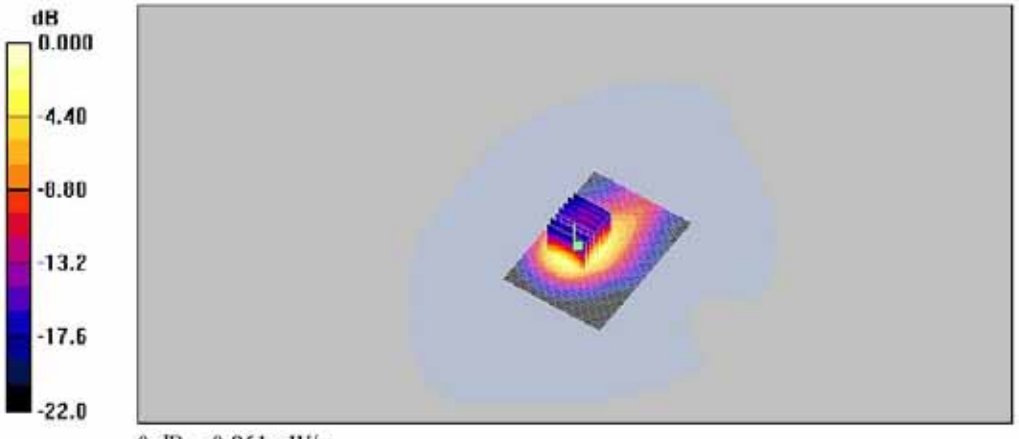
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_10MHz_16QAM1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.928 mW/g

Body_Horizontal Up_AMC_10MHz_16QAM1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.2 V/m; Power Drift = 0.092 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 0.777 mW/g; SAR(10 g) = 0.391 mW/g
Maximum value of SAR (measured) = 0.861 mW/g



0 dB = 0.861mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_10MHz.da4

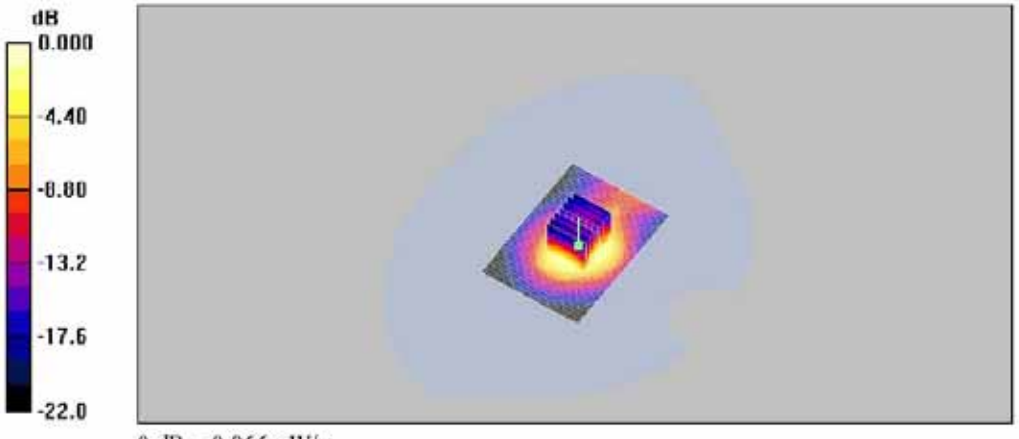
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_10MHz_16QAM1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.13 mW/g

Body_Horizontal Up_AMC_10MHz_16QAM1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.5 V/m; Power Drift = -0.009 dB
Peak SAR (extrapolated) = 1.60 W/kg
SAR(1 g) = 0.883 mW/g; SAR(10 g) = 0.462 mW/g
Maximum value of SAR (measured) = 0.966 mW/g



0 dB = 0.966mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Up_AMC_10MHz.da4

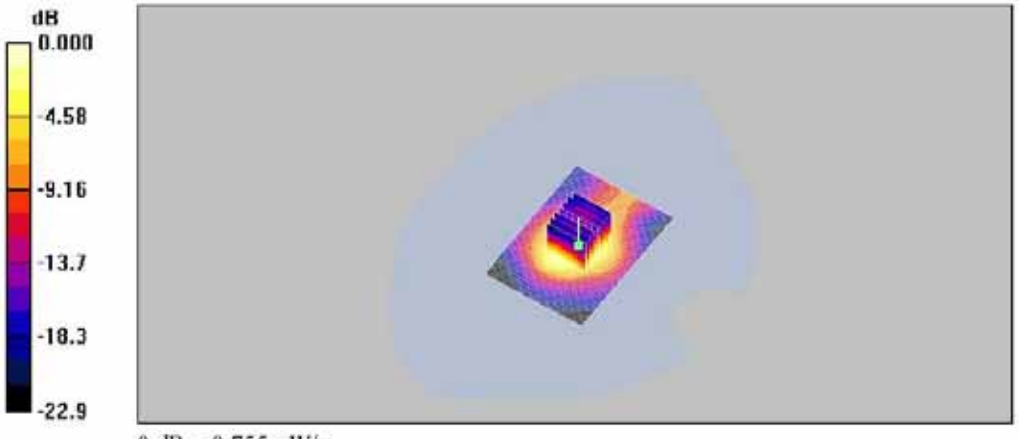
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up_AMC_10MHz_16QAM1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.892 mW/g

Body_Horizontal Up_AMC_10MHz_16QAM1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.6 V/m; Power Drift = 0.143 dB
Peak SAR (extrapolated) = 1.29 W/kg
SAR(1 g) = 0.693 mW/g; SAR(10 g) = 0.358 mW/g
Maximum value of SAR (measured) = 0.755 mW/g



0 dB = 0.755mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_AMC_10MHz.da4

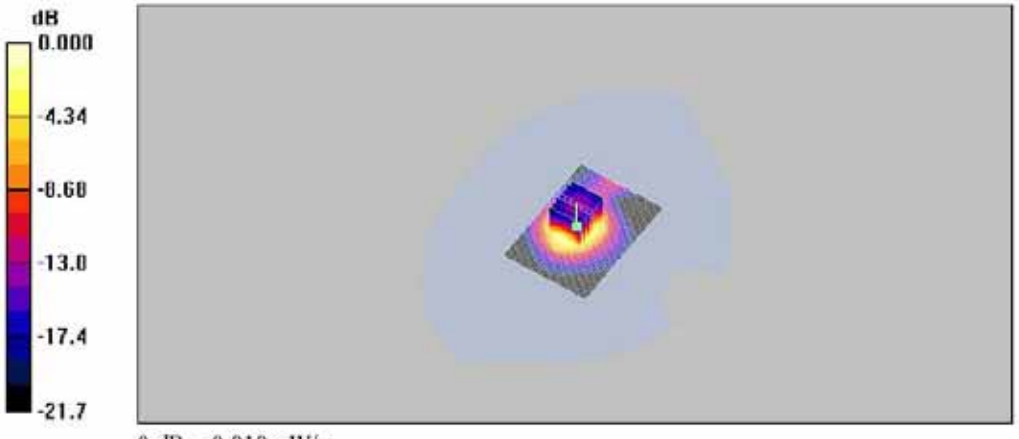
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_AMC_10MHz_QPSK1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.05 mW/g

Body_Horizontal Down_AMC_10MHz_QPSK1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.6 V/m; Power Drift = -0.159 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 0.829 mW/g; SAR(10 g) = 0.428 mW/g
Maximum value of SAR (measured) = 0.919 mW/g



0 dB = 0.919mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_AMC_10MHz.da4

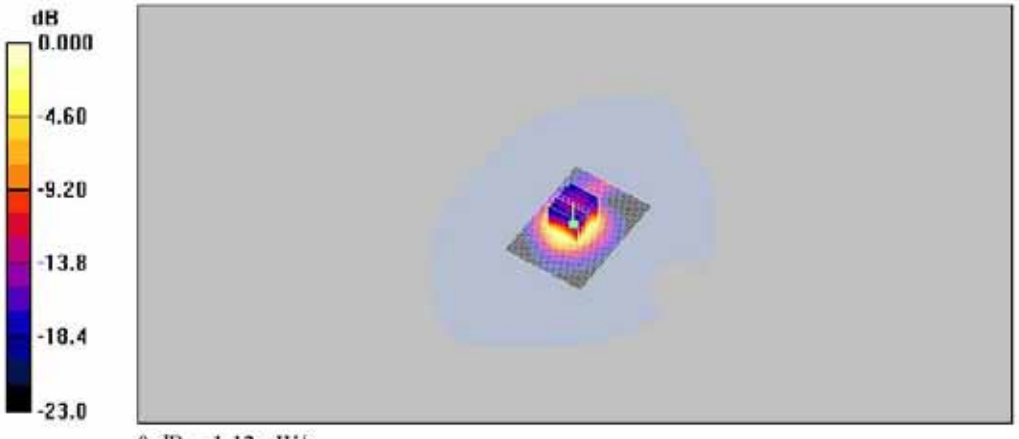
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_AMC_10MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.36 mW/g

Body_Horizontal Down_AMC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.6 V/m; Power Drift = -0.058 dB
Peak SAR (extrapolated) = 1.88 W/kg
SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.528 mW/g
Maximum value of SAR (measured) = 1.13 mW/g



0 dB = 1.13mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_AMC_10MHz.da4

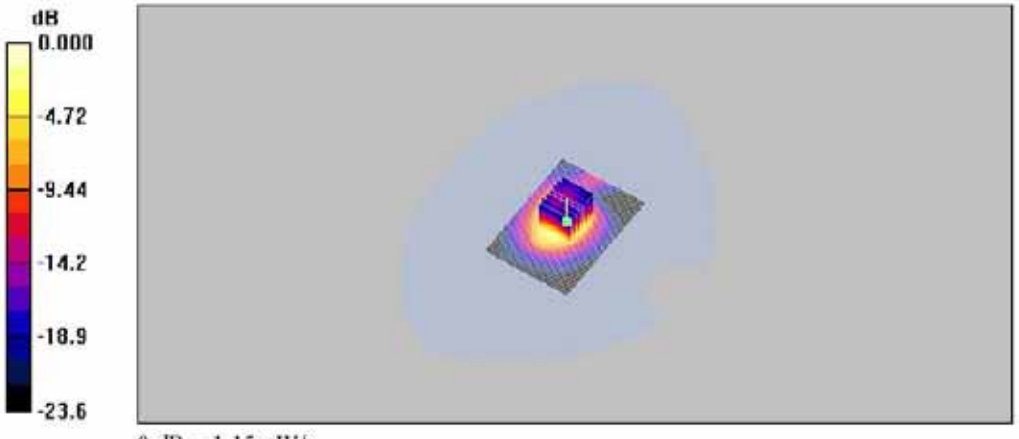
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_AMC_10MHz_QPSK1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.35 mW/g

Body_Horizontal Down_AMC_10MHz_QPSK1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.3 V/m; Power Drift = 0.180 dB
Peak SAR (extrapolated) = 1.96 W/kg
SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.525 mW/g
Maximum value of SAR (measured) = 1.15 mW/g



0 dB = 1.15mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_AMC_10MHz.da4

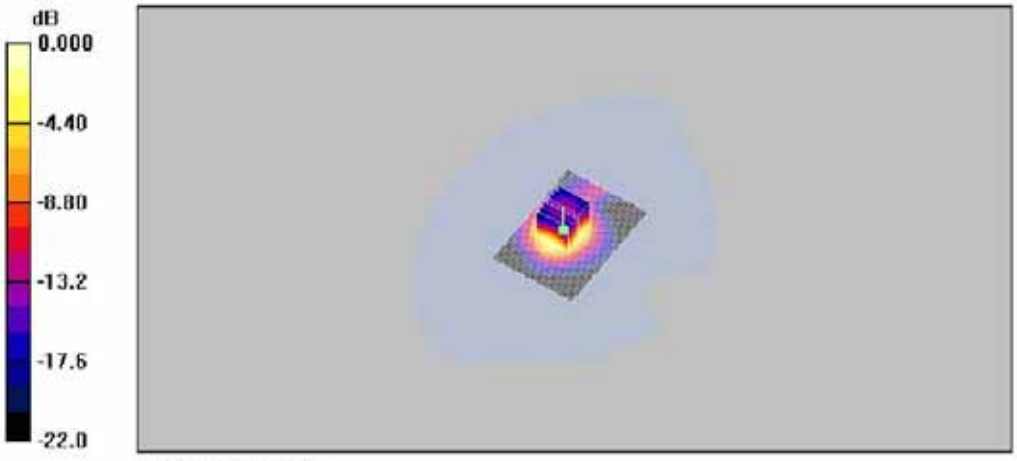
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2506 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2506 MHz; σ = 2.06 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_AMC_10MHz_16QAM1/2_Low_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.14 mW/g

Body_Horizontal Down_AMC_10MHz_16QAM1/2_Low_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.2 V/m; Power Drift = 0.024 dB
Peak SAR (extrapolated) = 1.66 W/kg
SAR(1 g) = 0.934 mW/g; SAR(10 g) = 0.482 mW/g
Maximum value of SAR (measured) = 1.03 mW/g



0 dB = 1.03mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_AMC_10MHz.da4

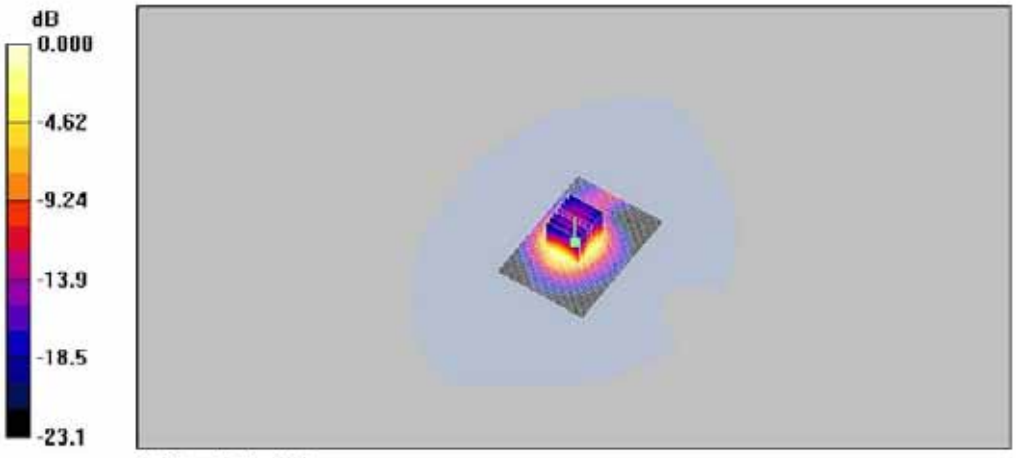
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

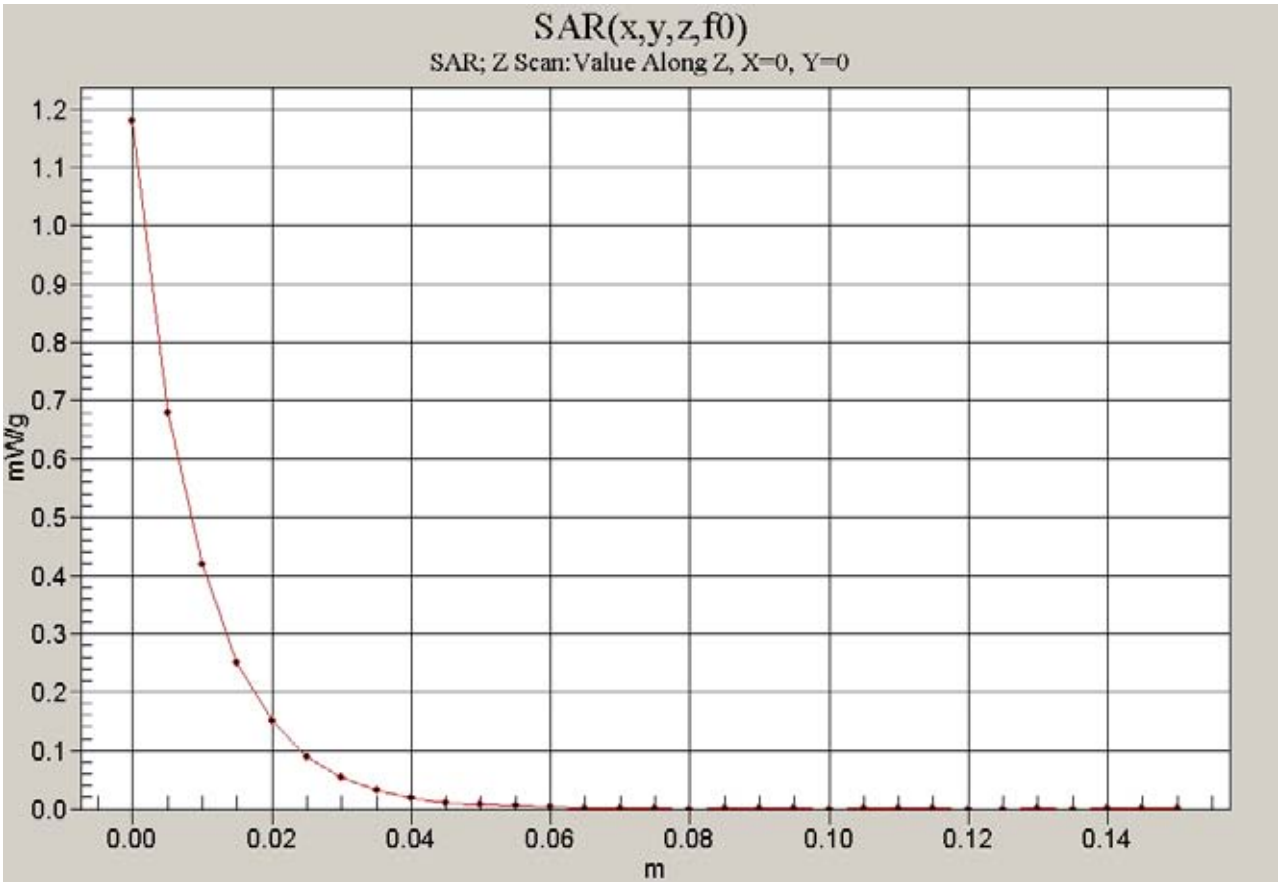
Body_Horizontal Down_AMC_10MHz_16QAM1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.46 mW/g

Body_Horizontal Down_AMC_10MHz_16QAM1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.1 V/m; Power Drift = 0.141 dB
Peak SAR (extrapolated) = 2.04 W/kg
SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.567 mW/g
Maximum value of SAR (measured) = 1.21 mW/g



0 dB = 1.21mW/g

Z Scan


SAR(x,y,z,f0)
SAR; Z Scan:Value Along Z, X=0, Y=0
mW/g
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
m

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horzontal-Down_AMC_10MHz.da4

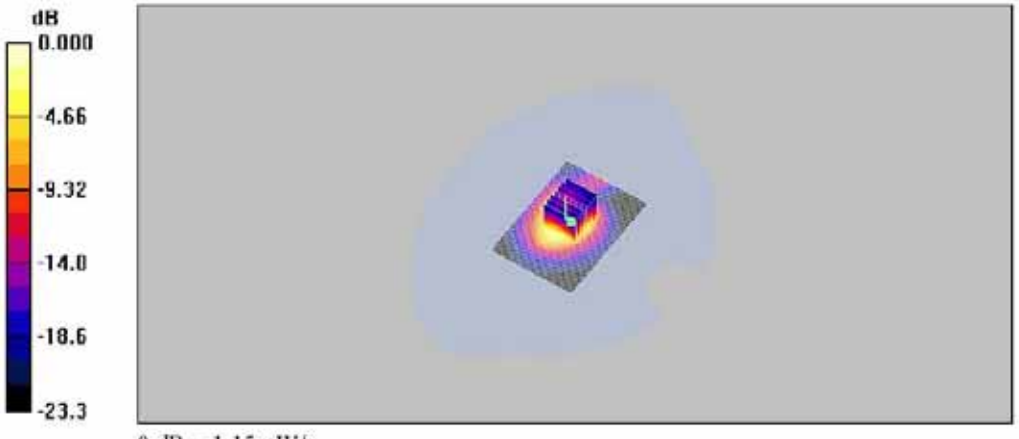
DUT: SWU-3400AN; Type: USB Dongle; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2685 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2685 MHz; σ = 2.28 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down_AMC_10MHz_16QAM1/2_High_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.36 mW/g

Body_Horizontal Down_AMC_10MHz_16QAM1/2_High_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.2 V/m; Power Drift = 0.010 dB
Peak SAR (extrapolated) = 1.96 W/kg
SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.526 mW/g
Maximum value of SAR (measured) = 1.15 mW/g



0 dB = 1.15mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal Up 90_AMC.da4

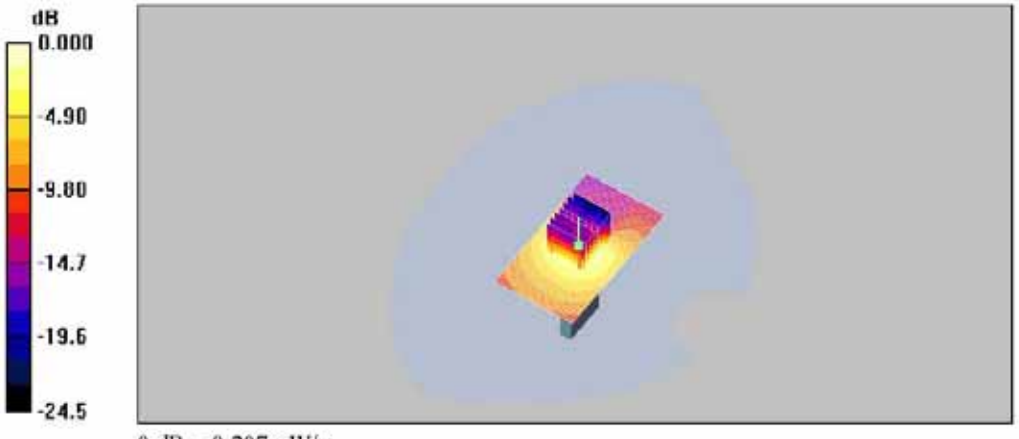
DUT: SWU-3400AN; Type: USB Dongle_90; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Up 90_AMC_10MHz_QPSK1/2_Mid_5mm/Area Scan (41x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.231 mW/g

Body_Horizontal Up 90_AMC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.91 V/m; Power Drift = 0.065 dB
Peak SAR (extrapolated) = 0.376 W/kg
SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.092 mW/g
Maximum value of SAR (measured) = 0.207 mW/g



0 dB = 0.207mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Horizontal Down 90_AMC.da4

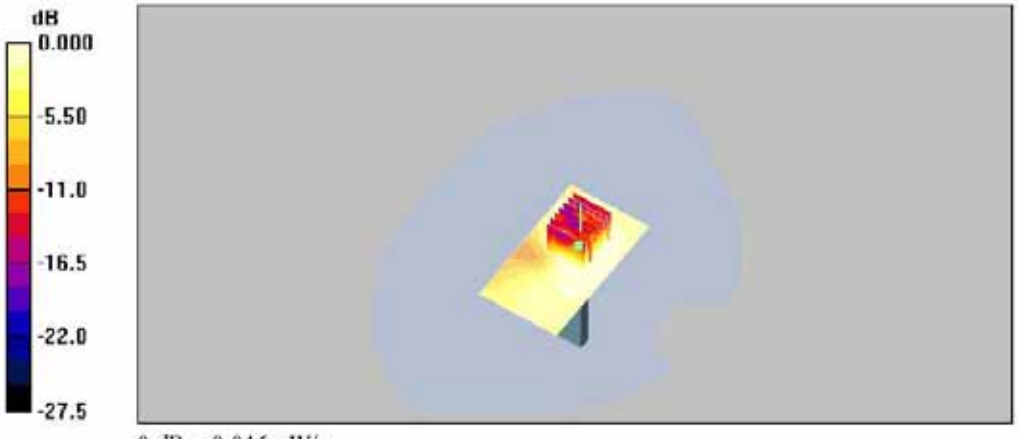
DUT: SWU-3400AN; Type: USB Dongle_90; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Horizontal Down 90_AMC_10MHz_QPSK1/2_Mid_5mm/Area Scan (41x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.055 mW/g

Body_Horizontal Down 90_AMC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.37 V/m; Power Drift = -0.061 dB
Peak SAR (extrapolated) = 0.078 W/kg
SAR(1 g) = 0.042 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.046 mW/g



0 dB = 0.046mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Vertical Front_AMC.da4

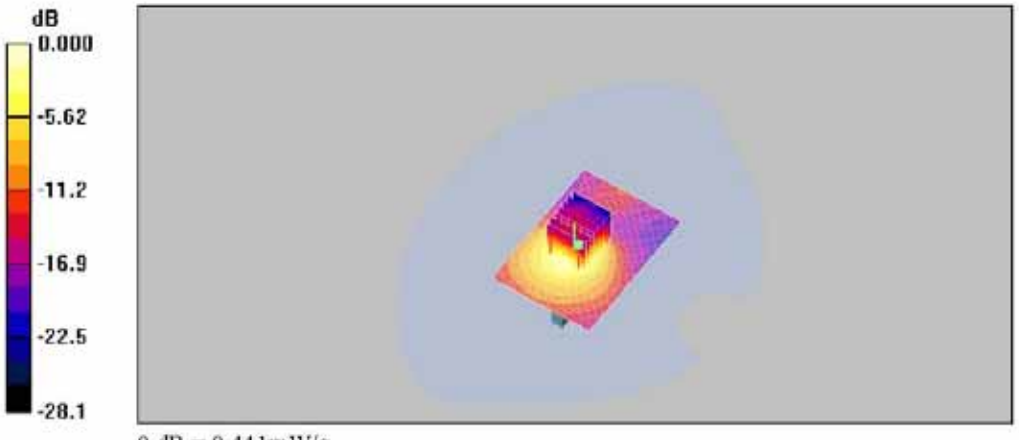
DUT: SWU-3400AN; Type: USB Dongle_Side; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Vertical Front_AMC_10MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.474 mW/g

Body_Vertical Front_AMC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.1 V/m; Power Drift = -0.053 dB
Peak SAR (extrapolated) = 0.789 W/kg
SAR(1 g) = 0.393 mW/g; SAR(10 g) = 0.188 mW/g
Maximum value of SAR (measured) = 0.441 mW/g



0 dB = 0.441mW/g

Date: 2011-11-09

Test Laboratory: SGS Korea (Gunpo Laboratory)
File Name: Wimax_Vertical Back_AMC.da4

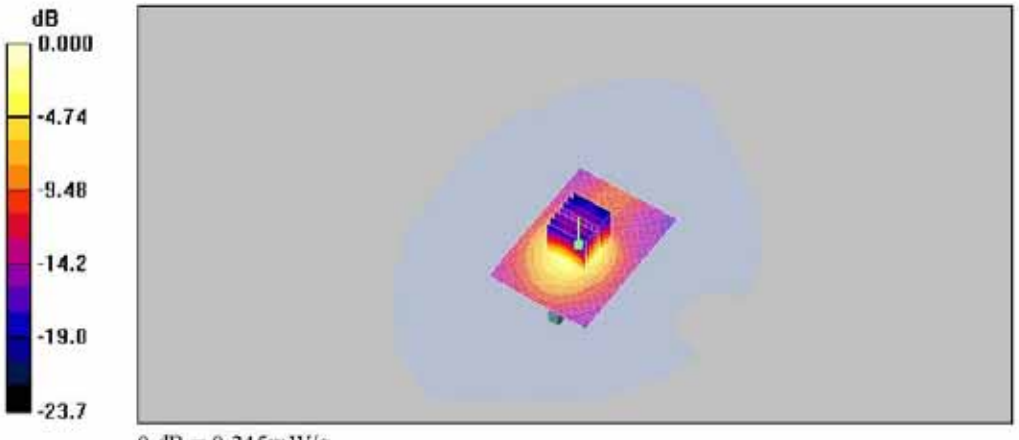
DUT: SWU-3400AN; Type: USB Dongle_Side; Serial: KRSD0630UU3400AN-00097
Program Name: Wimax_Body

Communication System: Wimax; Frequency: 2593 MHz;Duty Cycle: 1:3.24
Medium parameters used: f = 2593 MHz; σ = 2.18 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3791; ConvF(6.32, 6.32, 6.32); Calibrated: 2011-06-21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn567; Calibrated: 2011-01-27
- Phantom: SAM with CRP_2011(left); Type: SAM; Serial: TP-1645
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body_Vertical Back_AMC_10MHz_QPSK1/2_Mid_5mm/Area Scan (51x71x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.380 mW/g

Body_Vertical Back_AMC_10MHz_QPSK1/2_Mid_5mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.3 V/m; Power Drift = 0.150 dB
Peak SAR (extrapolated) = 0.610 W/kg
SAR(1 g) = 0.308 mW/g; SAR(10 g) = 0.149 mW/g
Maximum value of SAR (measured) = 0.345 mW/g



0 dB = 0.345mW/g

Appendix B

Uncertainty Analysis

a	b	c	d	e = f(d,k)	g	I = cxg/e	k
Uncertainty Component	Section in P1528	Tol (%)	Prob . Dist.	Div.	Ci (1g)	1g ui (%)	Vi (Veff)
Probe calibration	E.2.1	6.0	N	1	1	6.00	∞
Axial isotropy	E.2.2	0.5	R	1.73	0.71	0.20	∞
hemispherical isotropy	E.2.2	2.6	R	1.73	0.71	1.06	∞
Boundary effect	E.2.3	0.8	R	1.73	1	0.46	∞
Linearity	E.2.4	0.6	R	1.73	1	0.35	∞
System detection limit	E.2.5	0.25	R	1.73	1	0.14	∞
Readout electronics	E.2.6	0.3	N	1	1	0.30	∞
Response time	E.2.7	0	R	1.73	1	0.00	∞
Integration time	E.2.8	2.6	R	1.73	1	1.50	∞
RF ambient Condition -Noise	E.6.1	3	R	1.73	1	1.73	∞
RF ambient Condition - reflections	E.6.1	3	R	1.73	1	1.73	∞
Probe positioning- mechanical tolerance	E.6.2	1.5	R	1.73	1	0.87	∞
Probe positioning- with respect to phantom	E.6.3	2.9	R	1.73	1	1.67	∞
Max. SAR evaluation	E.5.2	1	R	1.73	1	0.58	∞
Test sample positioning	E.4.2	4.75	N	1	1	4.75	9
Device holder uncertainty	E.4.1	3.6	N	1	1	3.60	∞
Output power variation -SAR drift measurement	6.62	5	R	1.73	1	2.89	∞
Phantom uncertainty (shape and thickness tolerances)	E.3.1	4	R	1.73	1	2.31	∞
Liquid conductivity - deviation from target values	E.3.2	5	R	1.73	0.64	1.85	∞
Liquid conductivity - measurement uncertainty	E.3.2	1.58	N	1	0.64	1.01	5
Liquid permittivity - deviation from target values	E.3.3	5	R	1.73	0.6	1.73	∞
Liquid permittivity - measurement uncertainty	E.3.3	1.54	N	1	0.6	0.92	5
Combined standard uncertainty				RSS		10.36	216
Expanded uncertainty (95% CONFIDENCE INTERVAL)				K=2		20.71	

Appendix C

Calibration Certificate

- **PROBE**
- **DAE**
- **2600 MHz DIPOLE**

- PROBE Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
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Accreditation No.: SCS 108

Client SGS (Dymstec)

Certificate No: EX3-3791_Jun11

CALIBRATION CERTIFICATE

Object: EX3DV4 - SN:3791

Calibration procedure(s): QA CAL-01.v8, QA CAL-14.v3, QA CAL-23.v4, QA CAL-25.v4
Calibration procedure for dosimetric E-field probes

Calibration date: June 21, 2011

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	31-Mar-11 (No. 217-01372)	Apr-12
Power sensor E4412A	MY41498087	31-Mar-11 (No. 217-01372)	Apr-12
Reference 3 dB Attenuator	SN: S5054 (3c)	29-Mar-11 (No. 217-01369)	Apr-12
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Reference 30 dB Attenuator	SN: S5129 (30b)	29-Mar-11 (No. 217-01370)	Apr-12
Reference Probe ES3DV2	SN: 3013	29-Dec-10 (No. ES3-3013_Dec10)	Dec-11
DAE4	SN: 654	3-May-11 (No. DAE4-654_May11)	May-12
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

Issued: June 21, 2011

Calibration Laboratory of
Schmid & Partner
Engineering AG
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Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization $\vartheta = 0$ ($f \le 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z: A, B, C* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \le 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe EX3DV4

SN:3791

Manufactured: February 18, 2011
Calibrated: June 21, 2011

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3791

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.51	0.56	0.55	± 10.1 %
DCP (mV)[B]	103.5	101.7	100.4	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dB	C dB	VR mV	Unc[E] (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	120.9	±1.9 %
			Y	0.00	0.00	1.00	121.4	
			Z	0.00	0.00	1.00	126.5	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3791

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
2600	39.0	1.96	6.41	6.41	6.41	0.63	0.72	± 12.0 %
3700	37.7	3.12	5.88	5.88	5.88	0.35	1.09	± 13.1 %
5200	36.0	4.66	4.61	4.61	4.61	0.40	1.80	± 13.1 %
5300	35.9	4.76	4.43	4.43	4.43	0.40	1.80	± 13.1 %
5500	35.6	4.96	4.39	4.39	4.39	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.07	4.07	4.07	0.45	1.80	± 13.1 %
5800	35.3	5.27	4.13	4.13	4.13	0.45	1.80	± 13.1 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

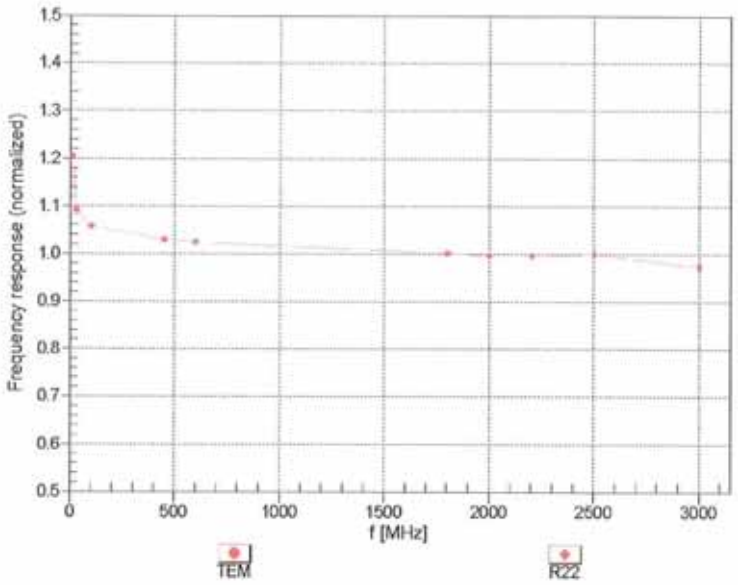
DASY/EASY - Parameters of Probe: EX3DV4- SN:3791

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz)[C]	Relative Permittivity[F]	Conductivity (S/m)[F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
2600	52.5	2.16	6.32	6.32	6.32	0.79	0.60	± 12.0 %
3700	51.0	3.55	5.76	5.76	5.76	0.31	1.43	± 13.1 %
5200	49.0	5.30	3.96	3.96	3.96	0.55	1.90	± 13.1 %
5300	48.9	5.42	3.79	3.79	3.79	0.55	1.90	± 13.1 %
5500	48.6	5.65	3.48	3.48	3.48	0.60	1.90	± 13.1 %
5600	48.5	5.77	3.26	3.26	3.26	0.60	1.90	± 13.1 %
5800	48.2	6.00	3.66	3.66	3.66	0.60	1.90	± 13.1 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

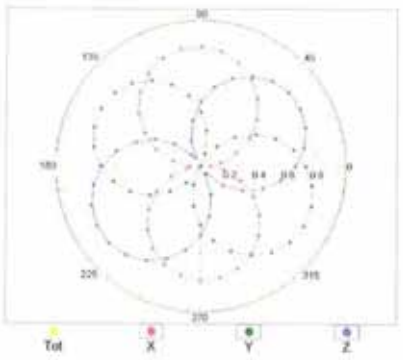
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



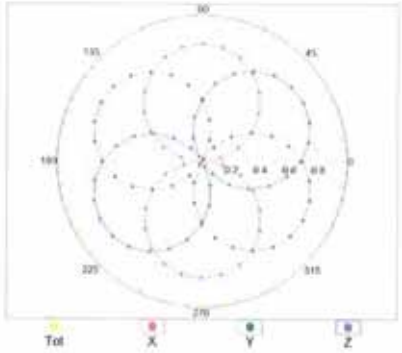
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

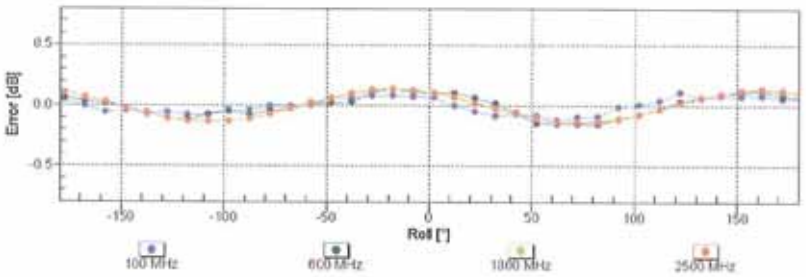
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



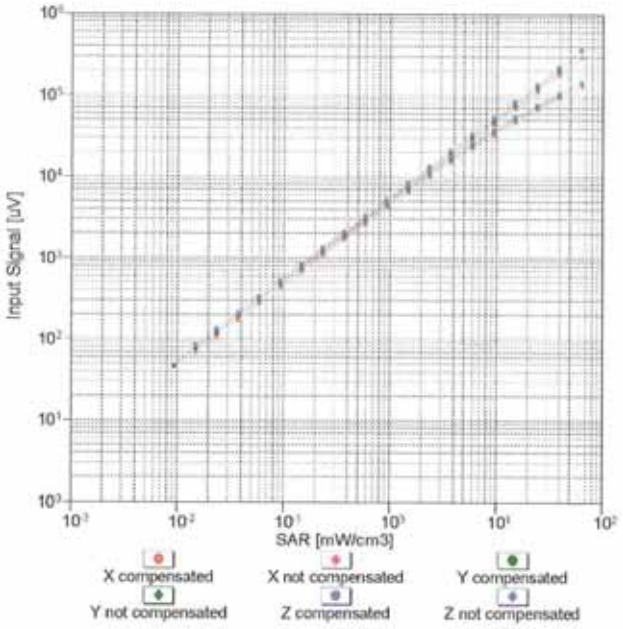
f=1800 MHz,R22

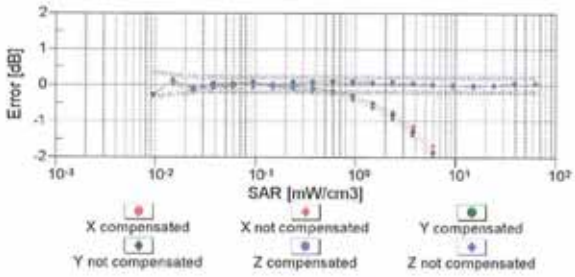




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head})
(TEM cell , f = 900 MHz)



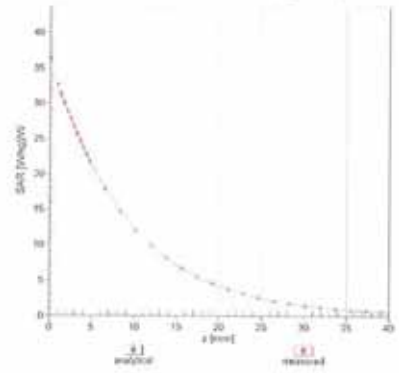


Uncertainty of Linearity Assessment: ± 0.6% (k=2)

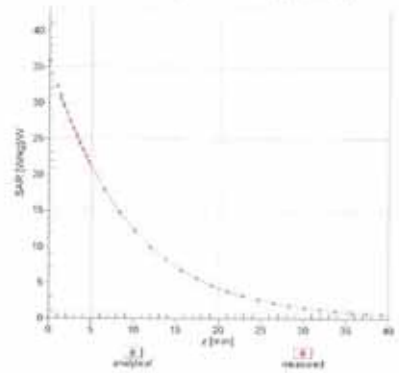
EX3DV4– SN:3791 June 21, 2011

Conversion Factor Assessment

f = 2600 MHz,WGLS R22 (H_convF)

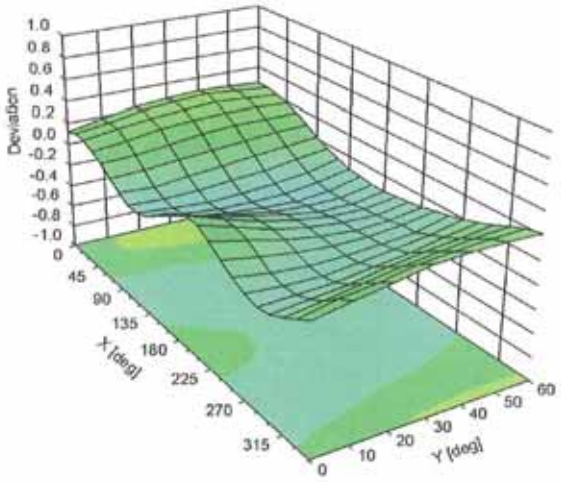


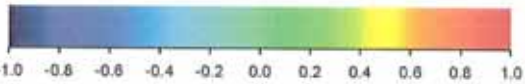
f = 2600 MHz,WGLS R22 (M_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3791

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	2 mm

-DAE Calibration Certificate

Calibration Laboratory of
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Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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Accreditation No.: SCS 108

Client SGS (Dymstec)

Certificate No: DAE3-567_Jan11

CALIBRATION CERTIFICATE

Object	DAE3 - SD 000 D03 AA - SN: 567
Calibration procedure(s)	QA CAL-06.v22 Calibration procedure for the data acquisition electronics (DAE)
Calibration date:	January 27, 2011

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Keithley Multimeter Type 2001	SN: 0810278	28-Sep-10 (No:10376)	Sep-11
Secondary Standards	**ID #**	**Check Date (in house)**	**Scheduled Check**
Calibrator Box V1.1	SE UMS 006 AB 1004	07-Jun-10 (in house check)	In house check: Jun-11

	Name	Function	Signature
Calibrated by:	Andrea Guntli	Technician	
Approved by:	Fin Bomholt	R&D Director	

Issued: January 27, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

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Accreditation No.: SCS 108

Glossary

DAE	data acquisition electronics
Connector angle	information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle*: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The following parameters as documented in the Appendix contain technical information as a result from the performance test and require no uncertainty.
  - *DC Voltage Measurement Linearity:* Verification of the Linearity at +10% and -10% of the nominal calibration voltage. Influence of offset voltage is included in this measurement.
  - *Common mode sensitivity:* Influence of a positive or negative common mode voltage on the differential measurement.
  - *Channel separation:* Influence of a voltage on the neighbor channels not subject to an input voltage.
  - *AD Converter Values with inputs shorted:* Values on the internal AD converter corresponding to zero input voltage
  - *Input Offset Measurement*: Output voltage and statistical results over a large number of zero voltage measurements.
  - *Input Offset Current:* Typical value for information; Maximum channel input offset current, not considering the input resistance.
  - *Input resistance:* Typical value for information: DAE input resistance at the connector, during internal auto-zeroing and during measurement.
  - *Low Battery Alarm Voltage:* Typical value for information. Below this voltage, a battery alarm signal is generated.
  - *Power consumption:* Typical value for information. Supply currents in various operating modes.

DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1μV , full range = -100...+300 mV
Low Range: 1LSB = 61nV , full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	404.644 ± 0.1% (k=2)	404.400 ± 0.1% (k=2)	404.475 ± 0.1% (k=2)
Low Range	3.94940 ± 0.7% (k=2)	3.96974 ± 0.7% (k=2)	3.94828 ± 0.7% (k=2)

Connector Angle

Connector Angle to be used in DASY system	5.5 ° ± 1 °

Appendix

1. DC Voltage Linearity

High Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	200011.1	0.86	0.00
Channel X	+ Input	20005.53	5.63	0.03
Channel X	- Input	-19994.55	6.05	-0.03
Channel Y	+ Input	200012.0	3.19	0.00
Channel Y	+ Input	19998.16	-0.94	-0.00
Channel Y	- Input	-19999.31	0.89	-0.00
Channel Z	+ Input	200007.6	-0.57	-0.00
Channel Z	+ Input	20000.62	1.02	0.01
Channel Z	- Input	-19997.10	3.20	-0.02

Low Range		Reading (μV)	Difference (μV)	Error (%)
Channel X	+ Input	1999.6	-0.43	-0.02
Channel X	+ Input	200.86	0.86	0.43
Channel X	- Input	-198.93	1.07	-0.54
Channel Y	+ Input	2000.2	0.40	0.02
Channel Y	+ Input	200.07	0.07	0.03
Channel Y	- Input	-199.81	0.09	-0.05
Channel Z	+ Input	1999.8	-0.29	-0.01
Channel Z	+ Input	199.45	-0.75	-0.38
Channel Z	- Input	-200.35	-0.25	0.12

2. Common mode sensitivity

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Common mode Input Voltage (mV)	High Range Average Reading (μV)	Low Range Average Reading (μV)
Channel X	200	3.83	1.88
	- 200	0.20	-2.32
Channel Y	200	0.69	-0.01
	- 200	-1.13	-1.19
Channel Z	200	4.39	4.66
	- 200	-6.15	-6.31

3. Channel separation

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	Input Voltage (mV)	Channel X (μV)	Channel Y (μV)	Channel Z (μV)
Channel X	200	-	2.13	-0.21
Channel Y	200	3.01	-	3.24
Channel Z	200	1.69	-1.11	-

4. AD-Converter Values with inputs shorted

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

	High Range (LSB)	Low Range (LSB)
Channel X	16333	16454
Channel Y	16169	16436
Channel Z	15951	16115

5. Input Offset Measurement

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec
Input 10MΩ

	Average (μV)	min. Offset (μV)	max. Offset (μV)	Std. Deviation (μV)
Channel X	-0.23	-1.40	0.68	0.42
Channel Y	-0.84	-2.05	0.49	0.41
Channel Z	-0.76	-1.62	0.54	0.38

6. Input Offset Current

Nominal Input circuitry offset current on all channels: <25fA

7. Input Resistance (Typical values for information)

	Zeroing (kOhm)	Measuring (MOhm)
Channel X	200	200
Channel Y	200	200
Channel Z	200	200

8. Low Battery Alarm Voltage (Typical values for information)

Typical values	Alarm Level (VDC)
Supply (+ Vcc)	+7.9
Supply (- Vcc)	-7.6

9. Power Consumption (Typical values for information)

Typical values	Switched off (mA)	Stand by (mA)	Transmitting (mA)
Supply (+ Vcc)	+0.01	+6	+14
Supply (- Vcc)	-0.01	-8	-9

- 2600 MHz Dipole Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client SGS (Dymstec)

Certificate No: D2600V2-1038_Jun11

CALIBRATION CERTIFICATE

Object	D2600V2 - SN:1038
Calibration procedure(s)	QA CAL-05.v8 Calibration procedure for dipole validation kits above 700 MHz
Calibration date:	June 08, 2011

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	29-Apr-11 (No. ES3-3205_Apr11)	Apr-12
DAE4	SN: 904	01-Feb-11 (No. DAE4-904_Feb11)	Feb-12

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: June 8, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.6.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2600 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.0	1.96 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.6 ± 6 %	2.01 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	15.1 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**59.3 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.70 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**26.5 mW /g ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.5	2.16 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.2 ± 6 %	2.20 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	14.3 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**56.4 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.36 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**25.3 mW / g ± 16.5 % (k=2)**

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	48.0 Ω - 6.3 jΩ
Return Loss	- 23.5 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	45.8 Ω - 5.3 jΩ
Return Loss	- 23.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.149 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	March 03, 2009

DASY5 Validation Report for Head TSL

Date: 08.06.2011

Test Laboratory: The name of your organization

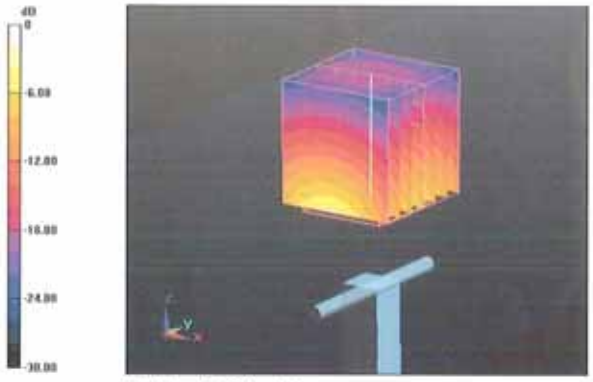
DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1038

Communication System: CW; Frequency: 2600 MHz
Medium: HSL BB1.9
Medium parameters used: f = 2600 MHz; σ = 2.01 mho/m; ε_r = 37.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

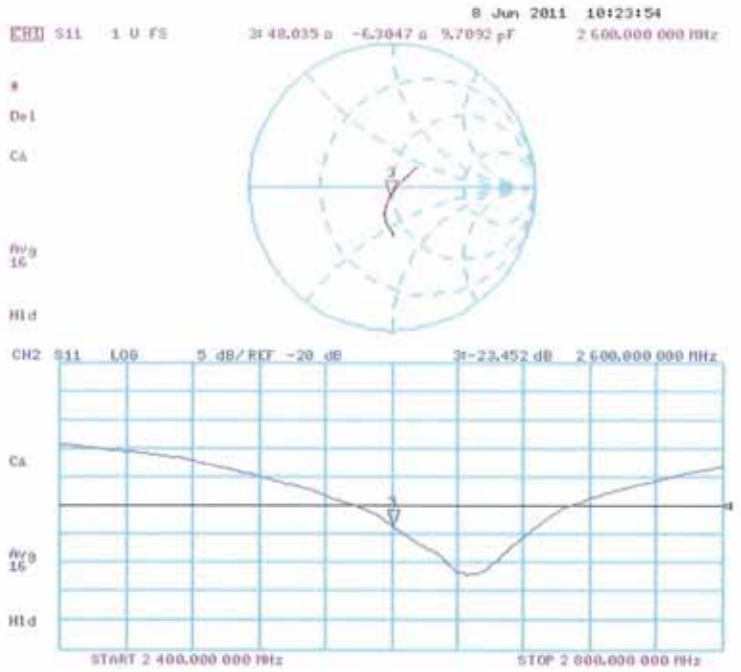
- Probe: ES3DV3 - SN3205; ConvF(4.39, 4.39, 4.39); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn904; Calibrated: 01.02.2011
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 103.1 V/m; Power Drift = -0.0078 dB
Peak SAR (extrapolated) = 32.756 W/kg
SAR(1 g) = 15.1 mW/g; SAR(10 g) = 6.7 mW/g
Maximum value of SAR (measured) = 19.616 mW/g



0 dB = 19.620mW/g

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 08.06.2011

Test Laboratory: SPEAG, Zurich, Switzerland

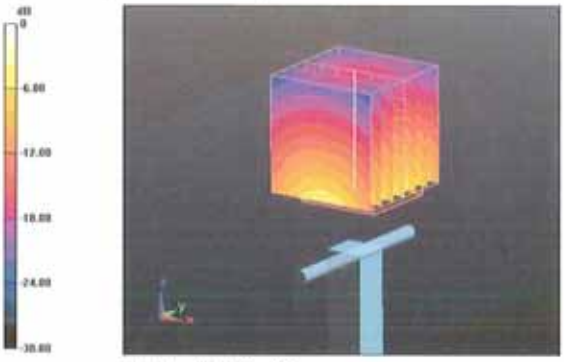
DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1038

Communication System: CW; Frequency: 2600 MHz
Medium: MSL BB1.9
Medium parameters used: f = 2600 MHz; σ = 2.2 mho/m; εr = 51.2; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

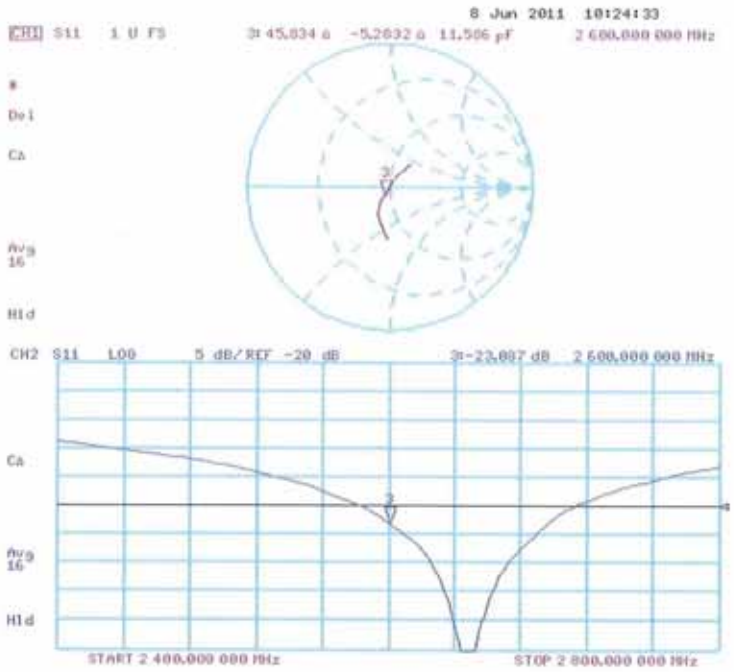
- Probe: ES3DV3 - SN3205; ConvF(4.16, 4.16, 4.16); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn904; Calibrated: 01.02.2011
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 97.340 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 30.269 W/kg
SAR(1 g) = 14.3 mW/g; SAR(10 g) = 6.36 mW/g
Maximum value of SAR (measured) = 18.913 mW/g



0 dB = 18.910mW/g

Impedance Measurement Plot for Body TSL



- END OF REPORT -