APPENDIX 2 : SAR Measurement data

PCG-5A1L/ Body / Right Bottom (Main antenna) / DSSS / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

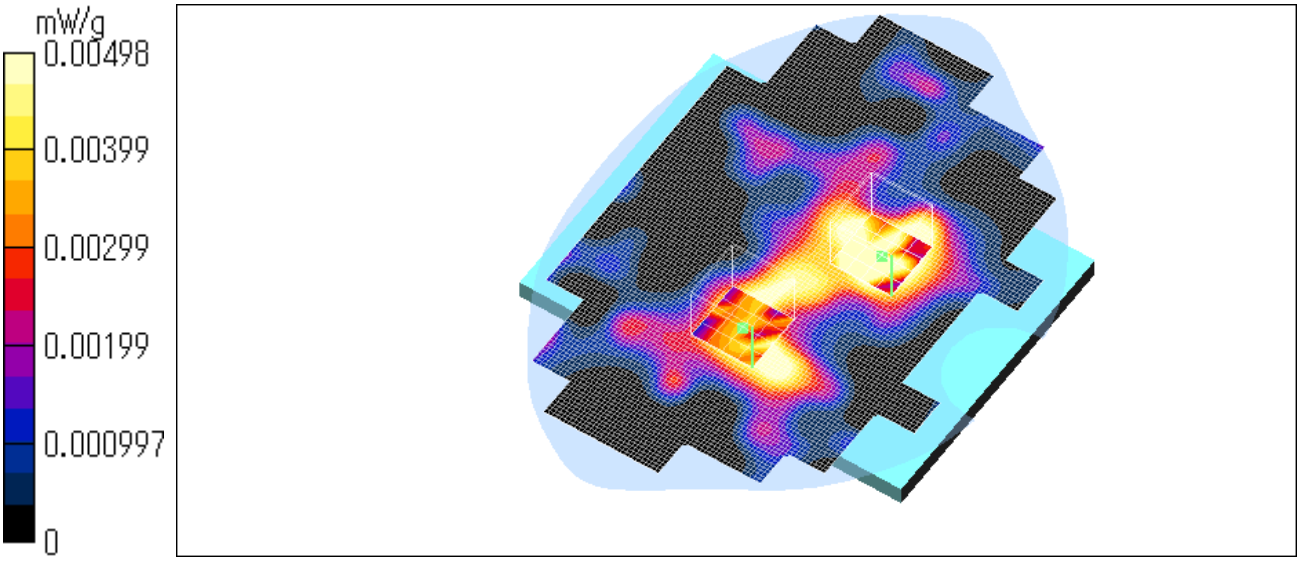
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00715 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00709 W/kg
SAR(1 g) = 0.00324 mW/g; SAR(10 g) = 0.00145 mW/g
Maximum value of SAR = 0.00709 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00503 W/kg
SAR(1 g) = 0.00298 mW/g; SAR(10 g) = 0.0013 mW/g
Maximum value of SAR = 0.00498 mW/g

Test date = 12 / 10 / 03
Reference Value = 1.17 V/m
Power Drift = -0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.8 degree.C , After 22.8 degree.C



PCG-5A1L/ Body / Right Back of display (Main antenna) / DSSS / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

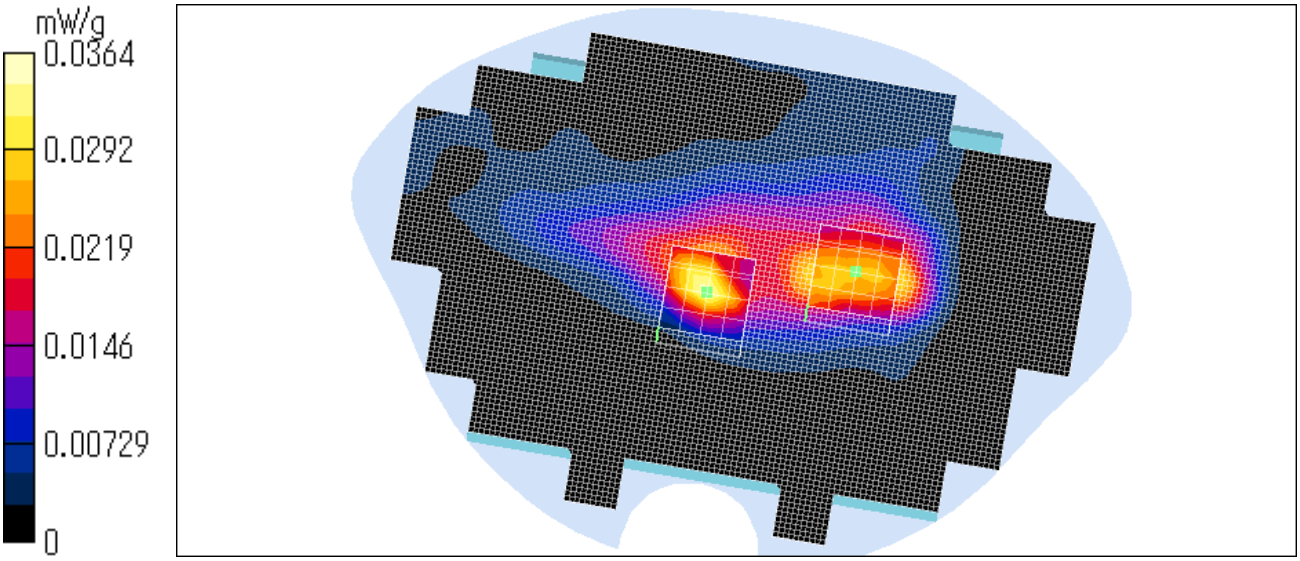
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0308 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0565 W/kg
SAR(1 g) = 0.0276 mW/g; SAR(10 g) = 0.0156 mW/g
Maximum value of SAR = 0.0287 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0769 W/kg
SAR(1 g) = 0.0341 mW/g; SAR(10 g) = 0.0161 mW/g
Maximum value of SAR = 0.0364 mW/g

Test date = 12 / 10 / 03
Reference Value = 3.97 V/m
Power Drift = -0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.5 degree.C , After 23.5 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / DSSS / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

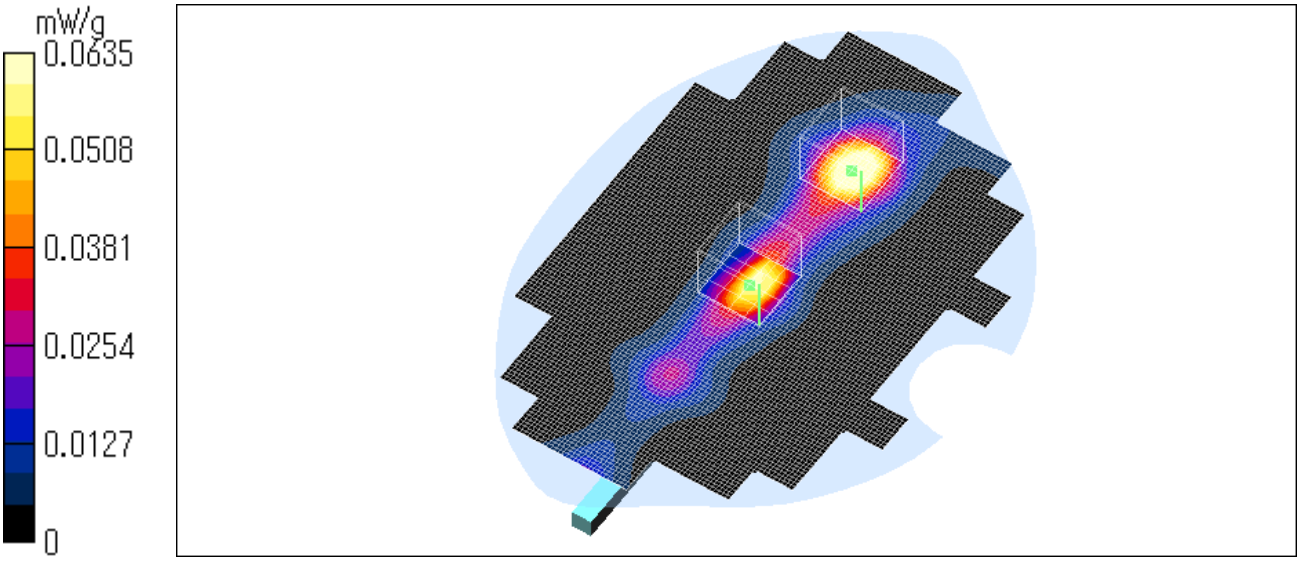
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 5.45 V/m
Power Drift = -0.0004 dB
Maximum value of SAR = 0.0772 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.156 W/kg
SAR(1 g) = 0.0767 mW/g; SAR(10 g) = 0.0391 mW/g
Maximum value of SAR = 0.0822 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.14 W/kg
SAR(1 g) = 0.0637 mW/g; SAR(10 g) = 0.0303 mW/g
Maximum value of SAR = 0.0635 mW/g

Test date = 12 / 10 / 03
Reference Value = 5.45 V/m
Power Drift = -0.0004 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.5 degree.C , After 23.4 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / DSSS / 2412MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

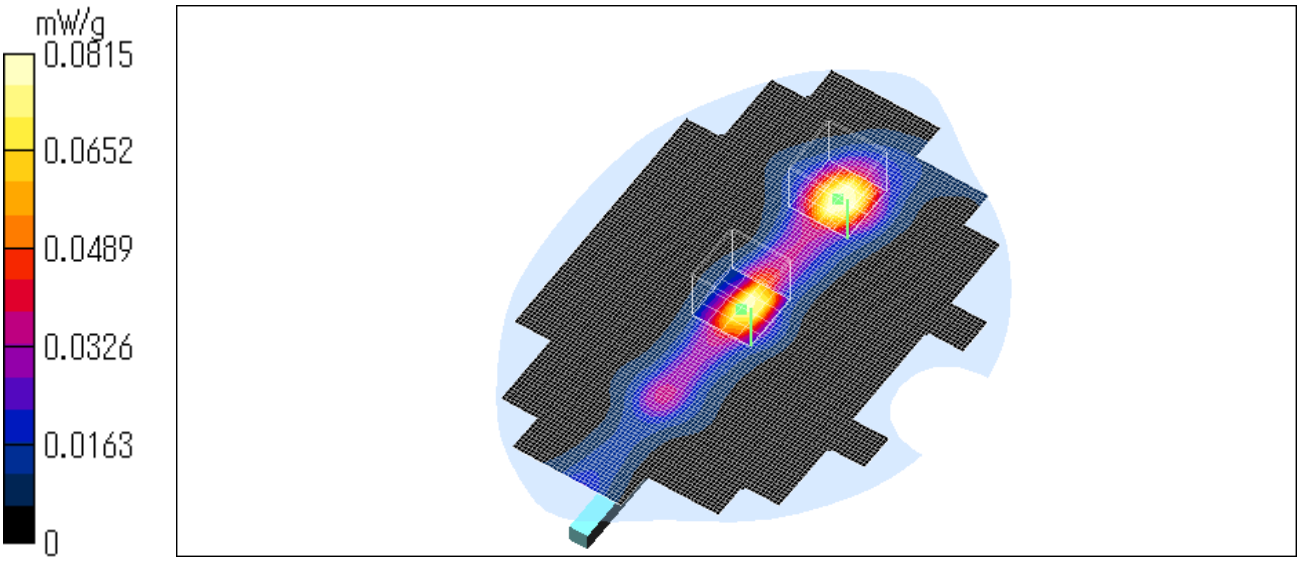
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.088 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.178 W/kg
SAR(1 g) = 0.0873 mW/g; SAR(10 g) = 0.0448 mW/g
Maximum value of SAR = 0.0922 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.171 W/kg
SAR(1 g) = 0.081 mW/g; SAR(10 g) = 0.0387 mW/g
Maximum value of SAR = 0.0815 mW/g

Test date = 12 / 10 / 03
Reference Value = 6.56 V/m
Power Drift = -0.2 dB

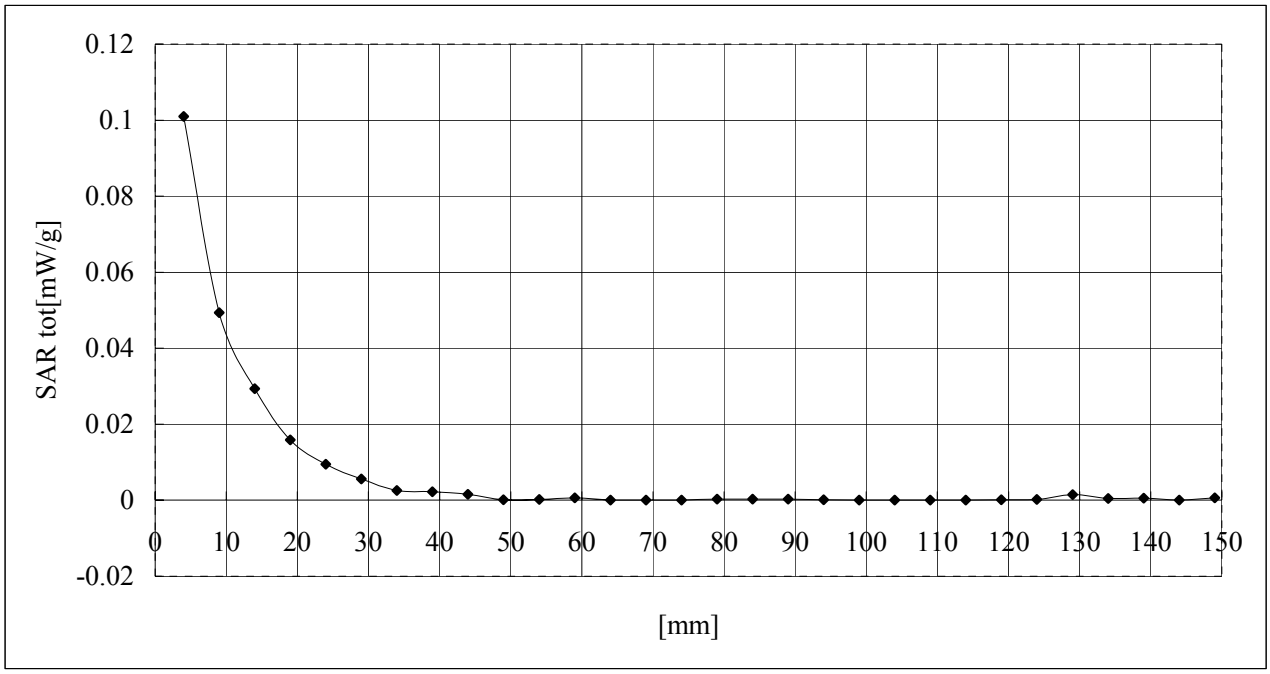
Ambient Temperature : 24.8degree.c
Liquid Temperature : Before 23.4 degree.C , After 23.4 degree.C



Z-axis scan at max SAR location

PCG-5A1L/ Body / Right Side of display (Main antenna) / DSSS / 2412MHz
Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115



PCG-5A1L/ Body / Right Side of display (Main antenna) / DSSS / 2462MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

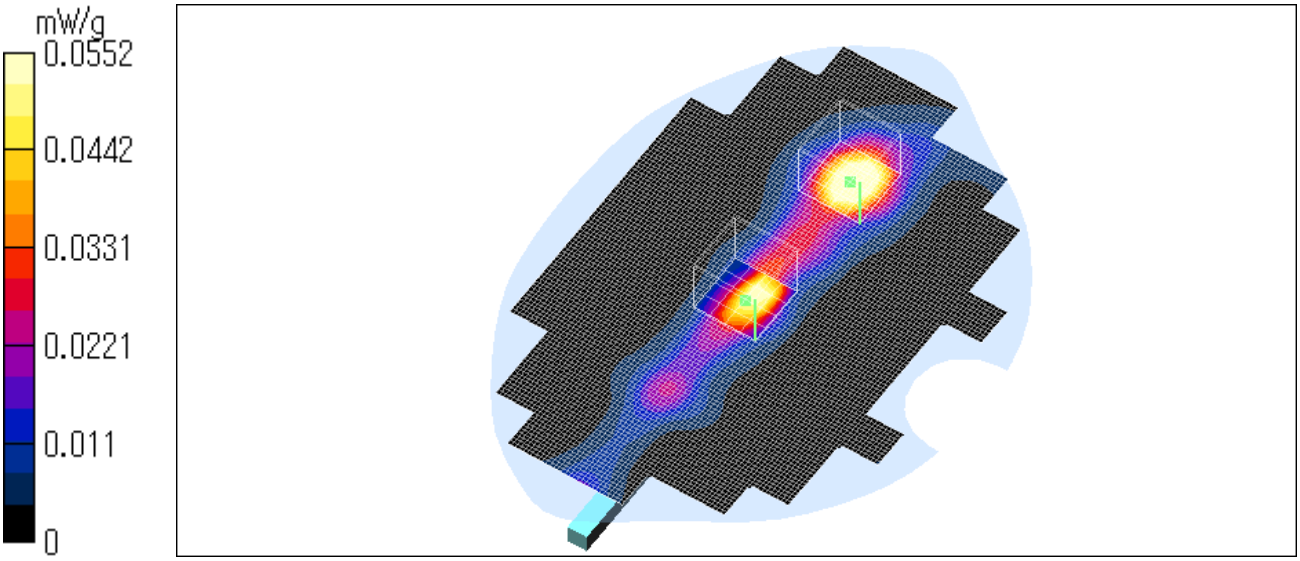
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0686 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.149 W/kg
SAR(1 g) = 0.071 mW/g; SAR(10 g) = 0.0358 mW/g
Maximum value of SAR = 0.0745 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.13 W/kg
SAR(1 g) = 0.0573 mW/g; SAR(10 g) = 0.0265 mW/g
Maximum value of SAR = 0.0552 mW/g

Test date = 12 / 10 / 03
Reference Value = 5.39 V/m
Power Drift = -0.02 dB

Ambient Temperature : 24.8degree.c
Liquid Temperature : Before 23.4 degree.C , After 23.3 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / DSSS (BT OFF)/ 2412MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

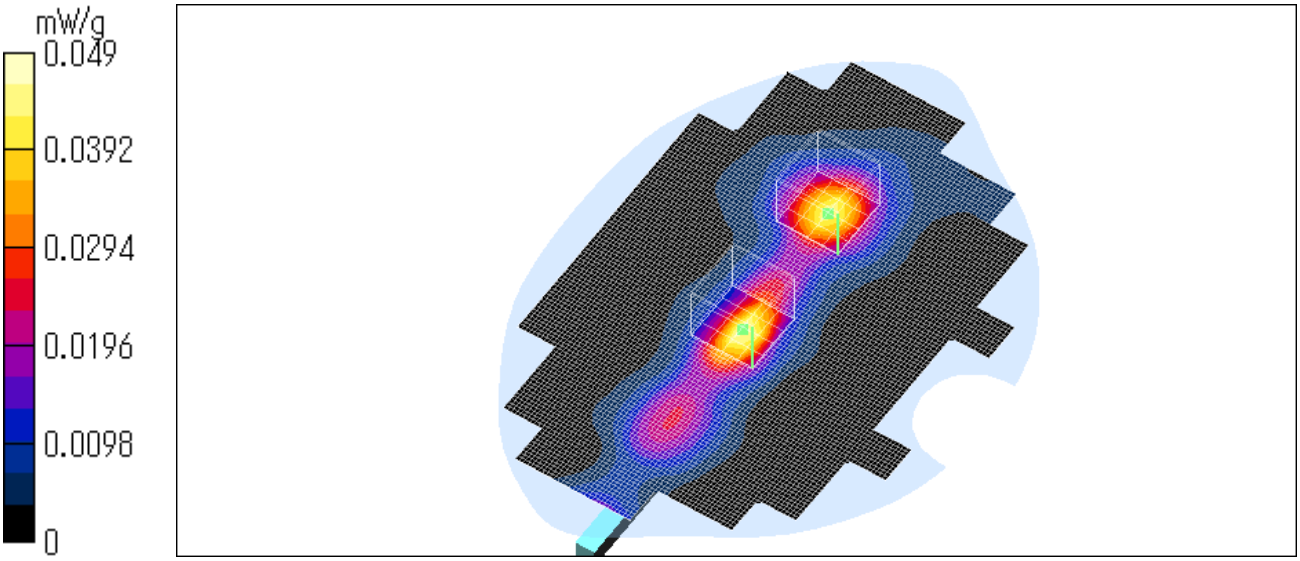
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0465 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.084 W/kg
SAR(1 g) = 0.0436 mW/g; SAR(10 g) = 0.0234 mW/g
Maximum value of SAR = 0.0467 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.102 W/kg
SAR(1 g) = 0.0473 mW/g; SAR(10 g) = 0.0233 mW/g
Maximum value of SAR = 0.049 mW/g

Test date = 12 / 10 / 03
Reference Value = 3.92 V/m
Power Drift = -0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.8 degree.C , After 22.8 degree.C



PCG-5A1L/ Body / Right Bottom (Main antenna) / OFDM QPSK / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00302 mW/g

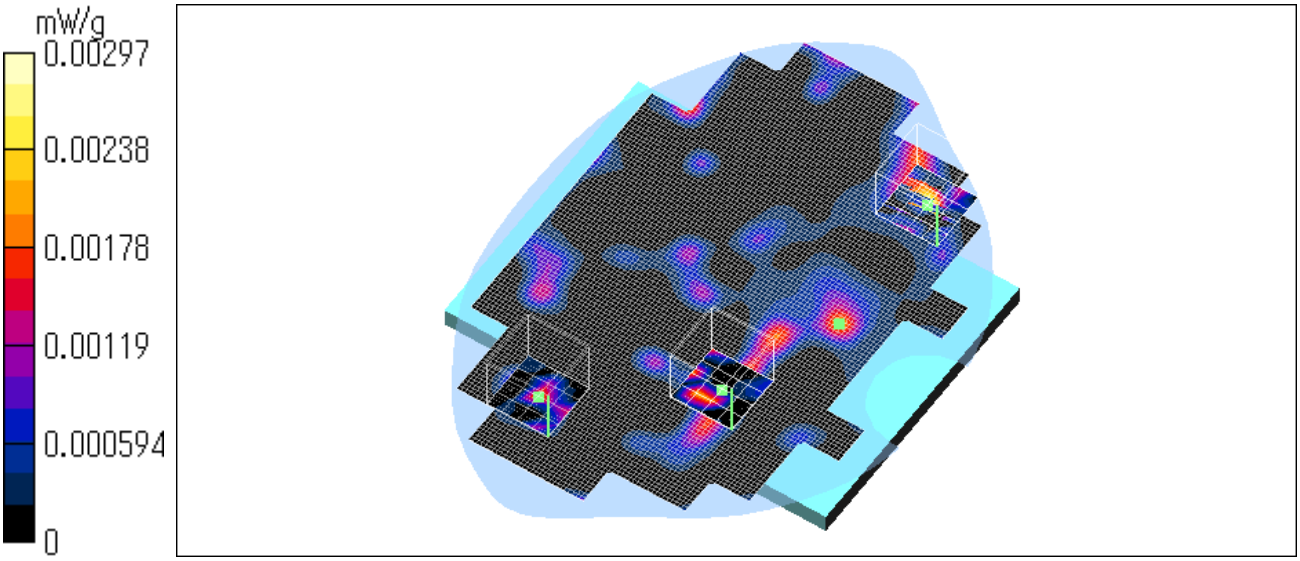
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00232 W/kg
SAR(1 g) = 0.000491 mW/g; SAR(10 g) = 0.000207 mW/g
Maximum value of SAR = 0.00163 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.067 W/kg
SAR(1 g) = 0.00107 mW/g; SAR(10 g) = 0.000438 mW/g
Maximum value of SAR = 0.00225 mW/g

Zoom Scan (5x5x7)/Cube 2: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00298 W/kg
SAR(1 g) = 0.000885 mW/g; SAR(10 g) = 0.000366 mW/g
Maximum value of SAR = 0.00297 mW/g

Test date = 12 / 10 / 03
Reference Value = 1.05 V/m
Power Drift = 0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.8 degree.C , After 22.8 degree.C



PCG-5A1L/ Body / Right Back of display (Main antenna) / OFDM QPSK / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

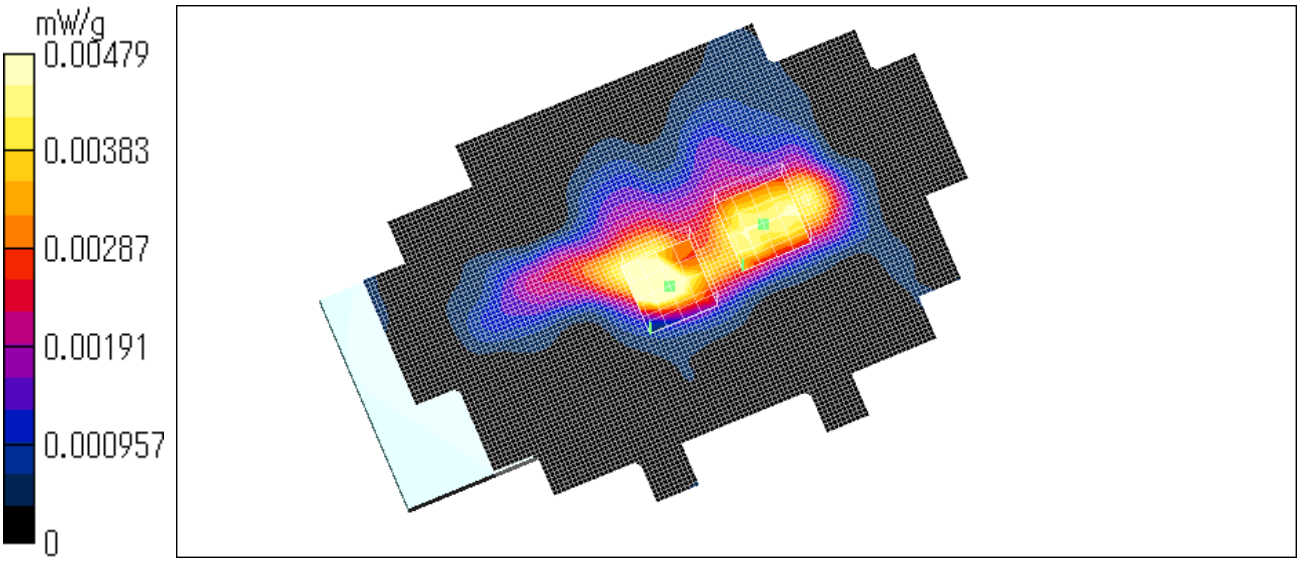
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00596 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00746 W/kg
SAR(1 g) = 0.00339 mW/g; SAR(10 g) = 0.00144 mW/g
Maximum value of SAR = 0.00669 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00483 W/kg
SAR(1 g) = 0.00247 mW/g; SAR(10 g) = 0.00125 mW/g
Maximum value of SAR = 0.00479 mW/g

Test date = 12 / 10 / 03
Reference Value = 1.6 V/m
Power Drift = -0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.5 degree.C , After 23.5 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / OFDM QPSK / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

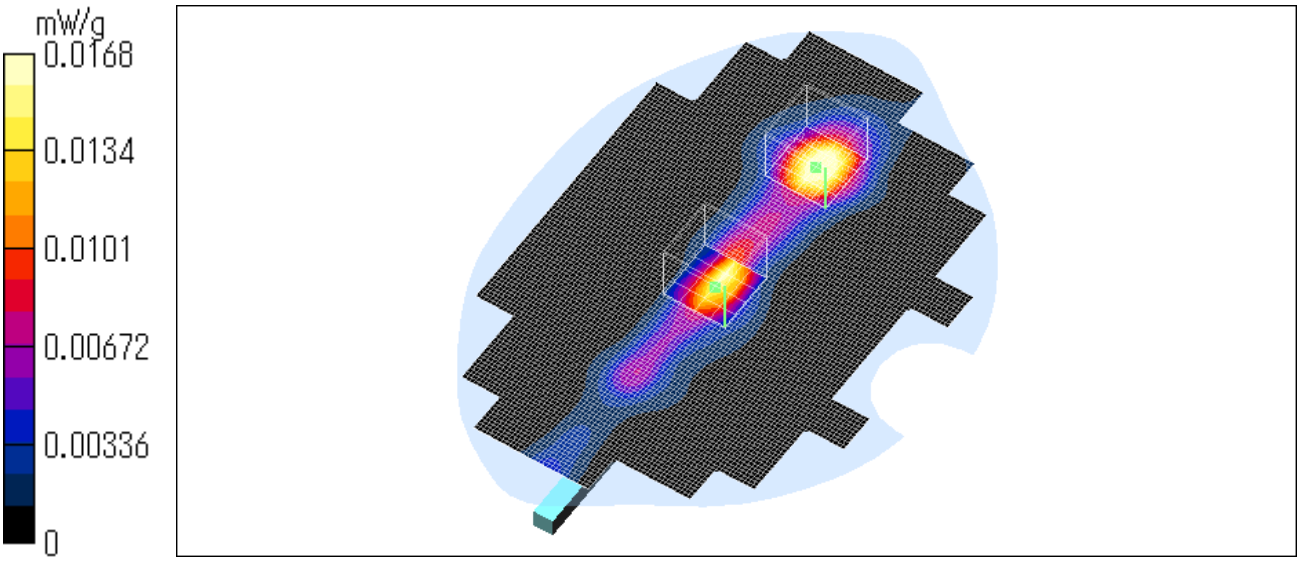
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0192 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0423 W/kg
SAR(1 g) = 0.0187 mW/g; SAR(10 g) = 0.00943 mW/g
Maximum value of SAR = 0.0192 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0473 W/kg
SAR(1 g) = 0.0162 mW/g; SAR(10 g) = 0.00748 mW/g
Maximum value of SAR = 0.0168 mW/g

Test date = 12 / 10 / 03
Reference Value = 2.97 V/m
Power Drift = -0.04 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.4 degree.C , After 23.4 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / OFDM QPSK / 2412MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

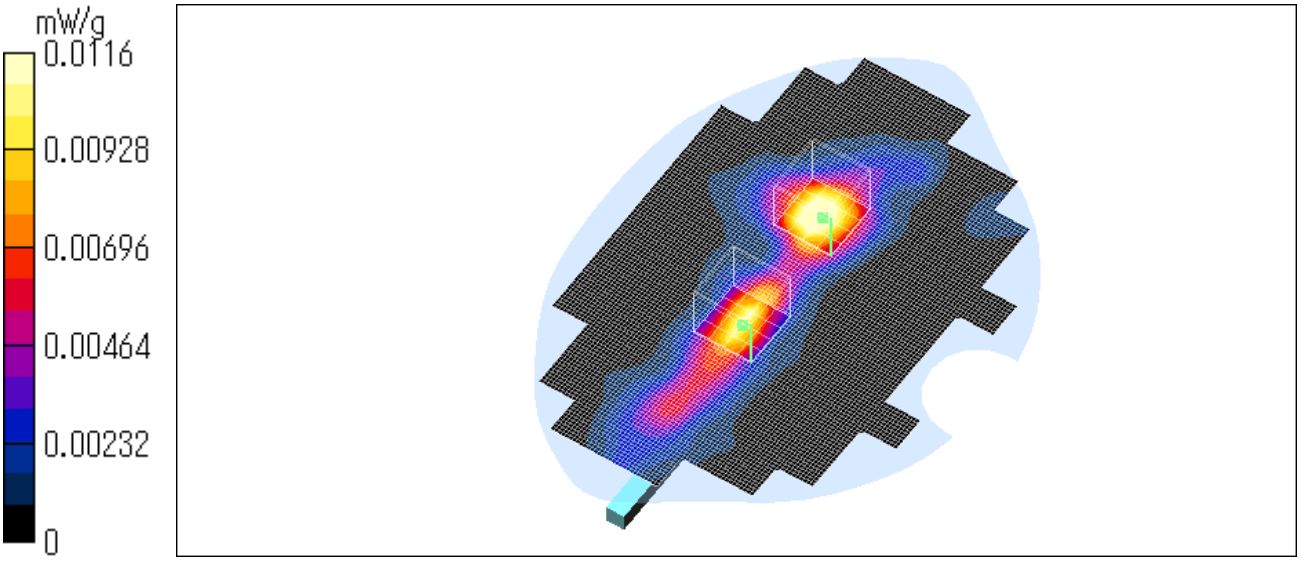
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0131 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0291 W/kg
SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00678 mW/g
Maximum value of SAR = 0.0134 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0259 W/kg
SAR(1 g) = 0.0111 mW/g; SAR(10 g) = 0.00548 mW/g
Maximum value of SAR = 0.0116 mW/g

Test date = 12 / 10 / 03
Reference Value = 1.52 V/m
Power Drift = -0.03 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.0 degree.C , After 23.0 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / OFDM QPSK / 2462MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

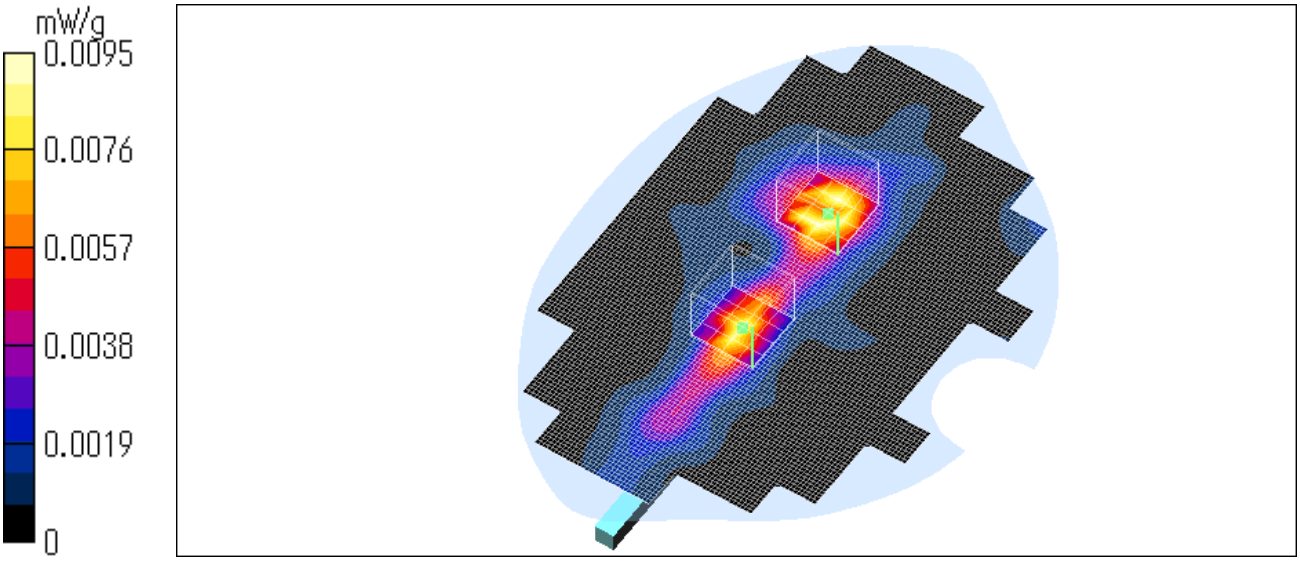
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0104 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0369 W/kg
SAR(1 g) = 0.00982 mW/g; SAR(10 g) = 0.00469 mW/g
Maximum value of SAR = 0.0094 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.326 W/kg
SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00475 mW/g
Maximum value of SAR = 0.0095 mW/g

Test date = 12 / 10 / 03
Reference Value = 1.34 V/m
Power Drift = 0.1 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.9 degree.C , After 22.9 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / OFDM QPSK (BTOFF) / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

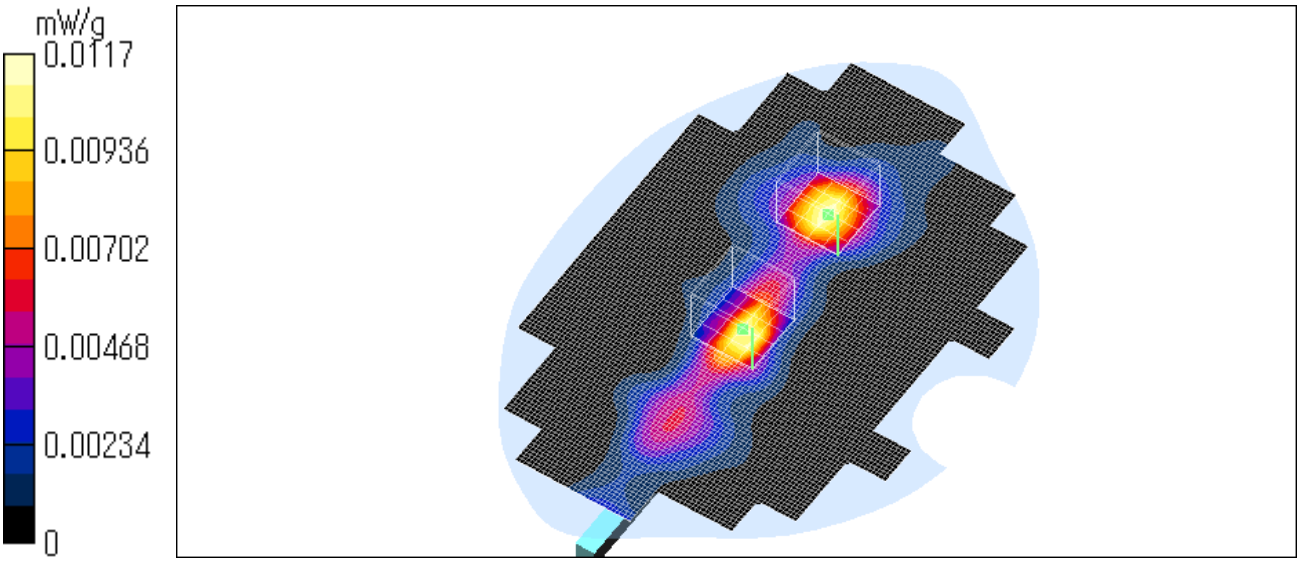
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0123 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0262 W/kg
SAR(1 g) = 0.0116 mW/g; SAR(10 g) = 0.00589 mW/g
Maximum value of SAR = 0.0121 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.021 W/kg
SAR(1 g) = 0.0114 mW/g; SAR(10 g) = 0.00529 mW/g
Maximum value of SAR = 0.0117 mW/g

Test date = 12 / 10 / 03
Reference Value = 1.89 V/m
Power Drift = -0.1 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.8 degree.C , After 22.8 degree.C



PCG-5A1L/ Body / Right Bottom (Main antenna) / OFDM 64QAM / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00236 mW/g

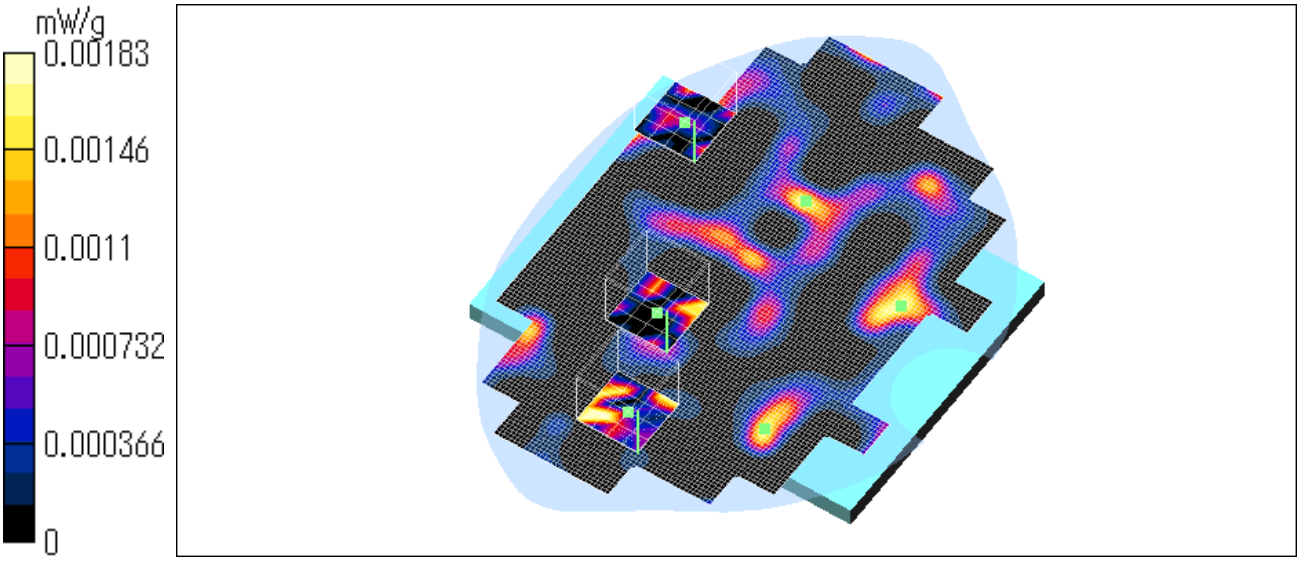
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00269 W/kg
SAR(1 g) = 0.000769 mW/g; SAR(10 g) = 0.000239 mW/g
Maximum value of SAR = 0.00189 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00233 W/kg
SAR(1 g) = 0.000978 mW/g; SAR(10 g) = 0.000439 mW/g
Maximum value of SAR = 0.00223 mW/g

Zoom Scan (5x5x7)/Cube 2: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00261 W/kg
SAR(1 g) = 0.000819 mW/g; SAR(10 g) = 0.000463 mW/g
Maximum value of SAR = 0.00183 mW/g

Test date = 12 / 10 / 03
Reference Value = 0 V/m
Power Drift = 0 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.8 degree.C , After 22.8 degree.C



PCG-5A1L/ Body / Right Back of display (Main antenna) / OFDM 64QAM / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00424 mW/g

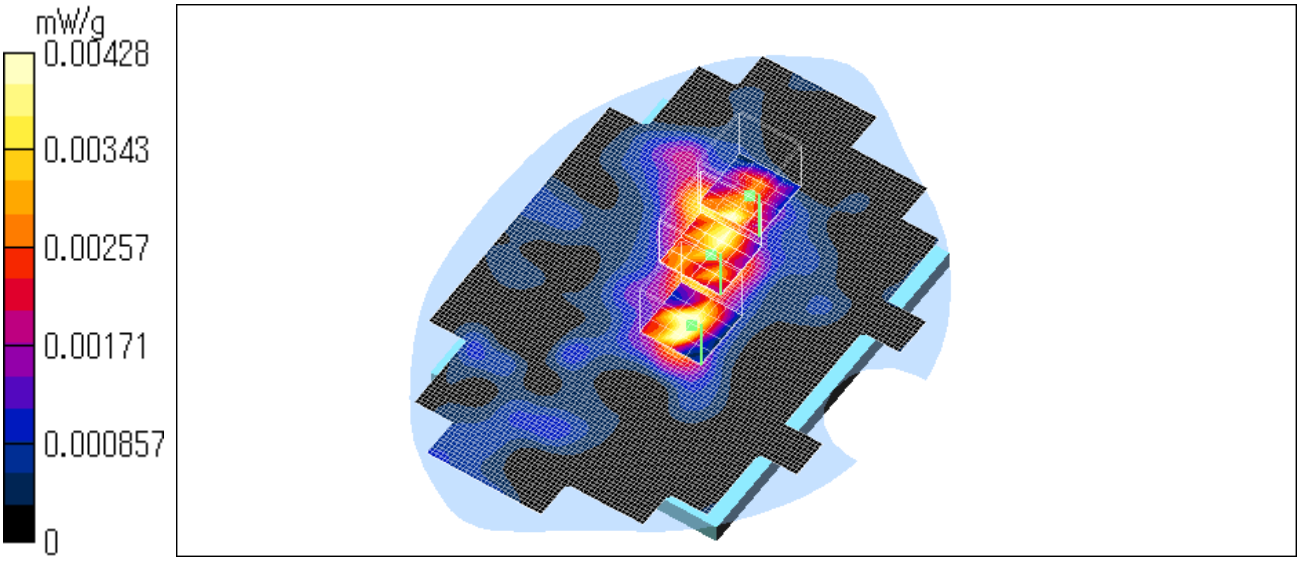
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0046 W/kg
SAR(1 g) = 0.00246 mW/g; SAR(10 g) = 0.00111 mW/g
Maximum value of SAR = 0.00428 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00538 W/kg
SAR(1 g) = 0.00177 mW/g; SAR(10 g) = 0.000675 mW/g
Maximum value of SAR = 0.00483 mW/g

Unnamed procedure/Zoom Scan (5x5x7)/Cube 2: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00475 W/kg
SAR(1 g) = 0.00159 mW/g; SAR(10 g) = 0.000834 mW/g
Maximum value of SAR = 0.00475 mW/g

Test date = 12 / 10 / 03
Reference Value = 1.05 V/m
Power Drift = -0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.9 degree.C , After 22.8 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / OFDM 64QAM / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

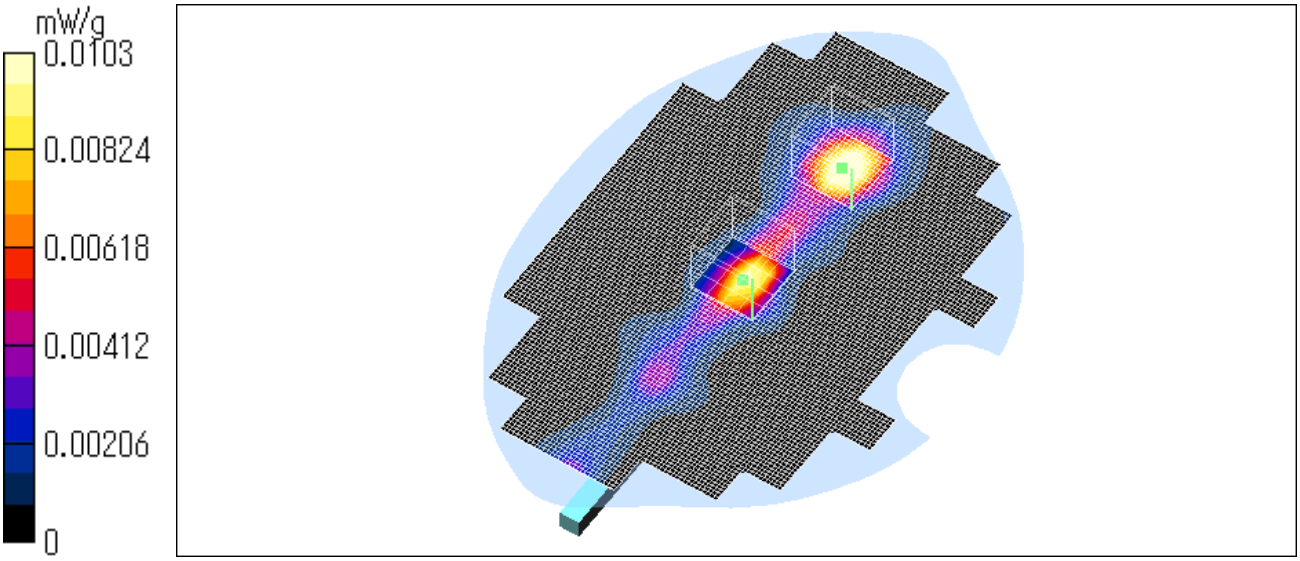
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.011 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0316 W/kg
SAR(1 g) = 0.0123 mW/g; SAR(10 g) = 0.0059 mW/g
Maximum value of SAR = 0.0124 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0437 W/kg
SAR(1 g) = 0.0115 mW/g; SAR(10 g) = 0.00493 mW/g
Maximum value of SAR = 0.0103 mW/g

Test date = 12 / 10 / 03
Reference Value = 2.2 V/m
Power Drift = 0.1 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.8 degree.C , After 22.8 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / OFDM 64QAM / 2412MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

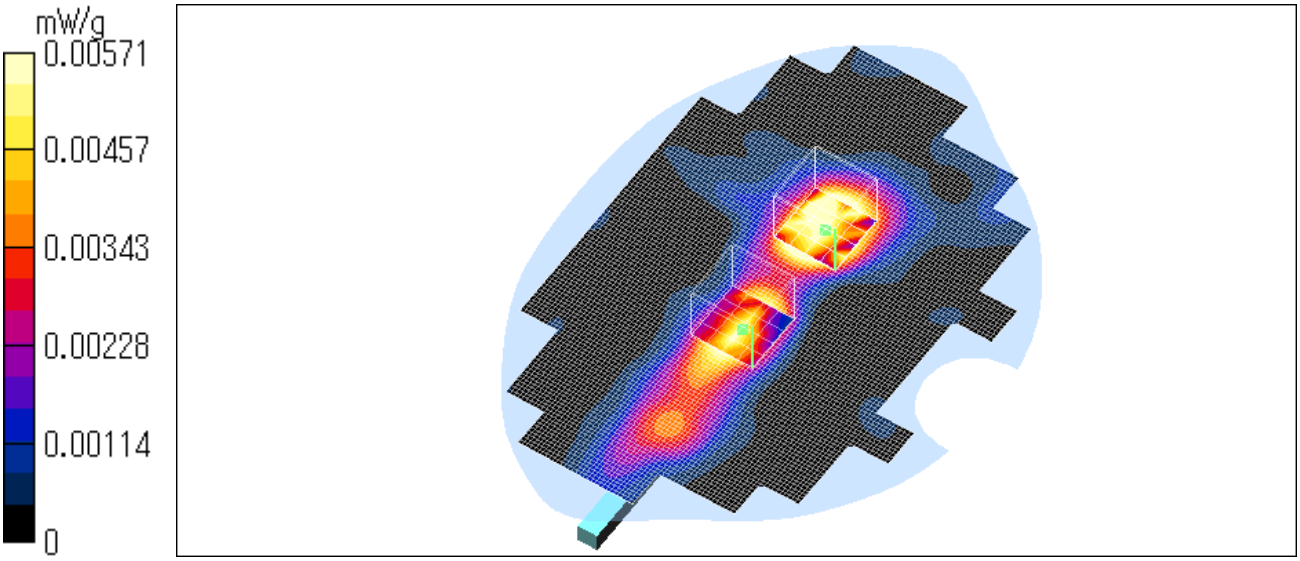
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0113 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0716 W/kg
SAR(1 g) = 0.00865 mW/g; SAR(10 g) = 0.0037 mW/g
Maximum value of SAR = 0.00935 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0105 W/kg
SAR(1 g) = 0.00478 mW/g; SAR(10 g) = 0.00246 mW/g
Maximum value of SAR = 0.00571 mW/g

Test date = 12 / 10 / 03
Reference Value = 1.72 V/m
Power Drift = -0.06 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.8 degree.C , After 22.8 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / OFDM 64QAM / 2462MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

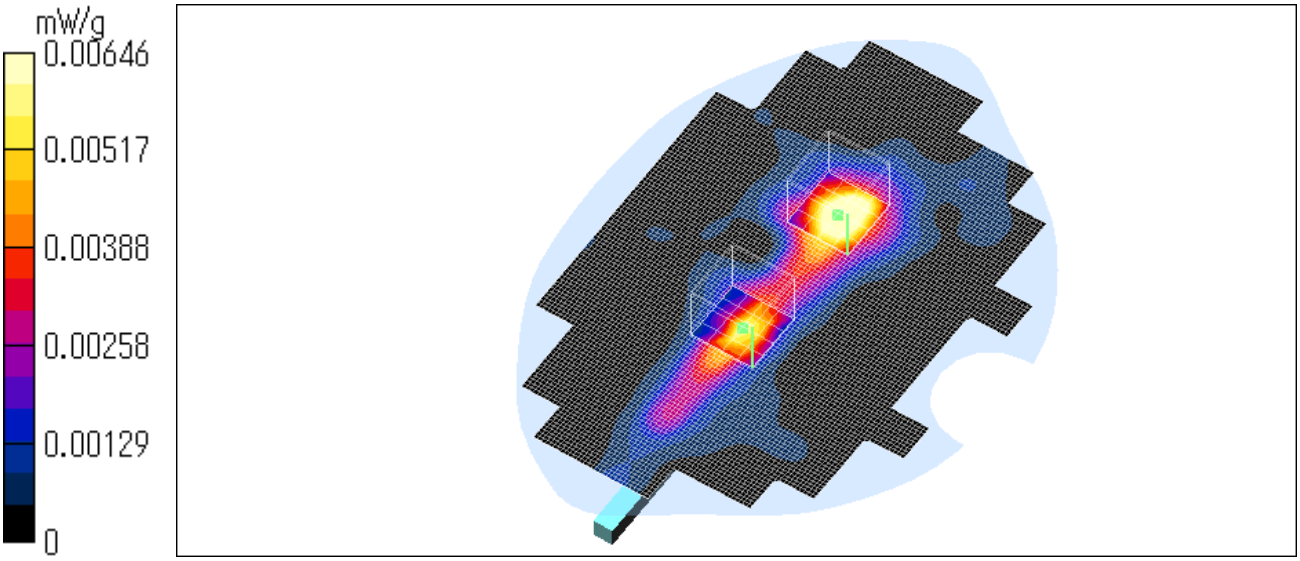
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00759 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0191 W/kg
SAR(1 g) = 0.00823 mW/g; SAR(10 g) = 0.00396 mW/g
Maximum value of SAR = 0.00882 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00665 W/kg
SAR(1 g) = 0.00331 mW/g; SAR(10 g) = 0.00149 mW/g
Maximum value of SAR = 0.00646 mW/g

Test date = 12 / 10 / 03
Reference Value = 1.51 V/m
Power Drift = -0.007 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.8 degree.C , After 22.8 degree.C



PCG-5A1L/ Body / Right Side of display (Main antenna) / OFDM 64QAM (BT OFF)/ 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.96 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

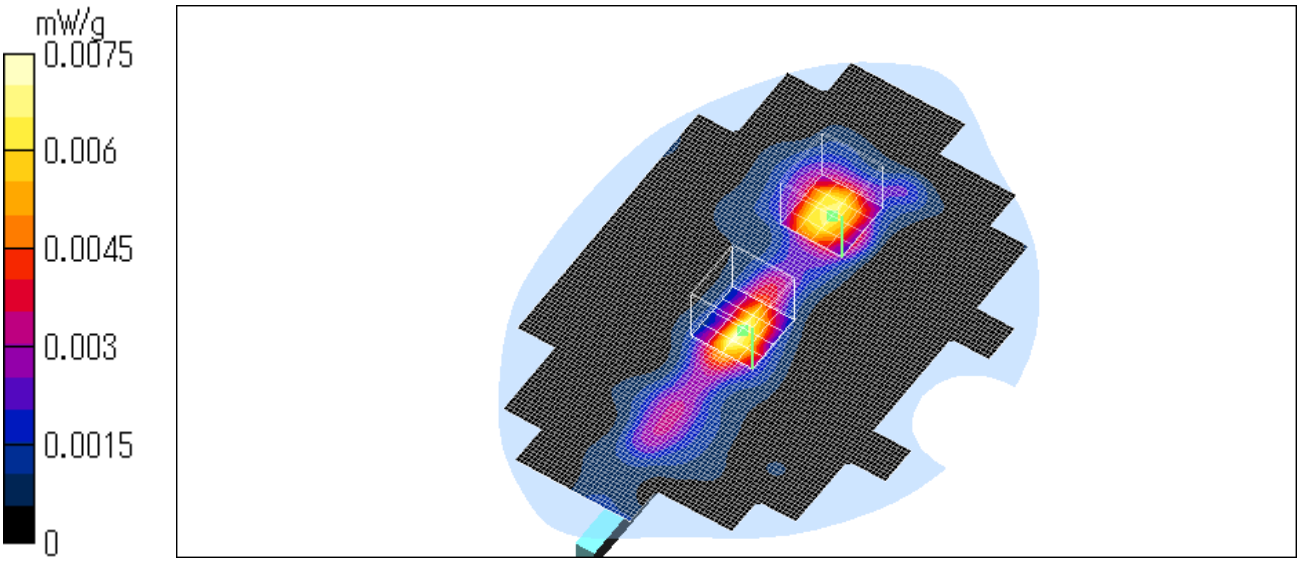
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00696 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0414 W/kg
SAR(1 g) = 0.00717 mW/g; SAR(10 g) = 0.00372 mW/g
Maximum value of SAR = 0.007 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00819 W/kg
SAR(1 g) = 0.0038 mW/g; SAR(10 g) = 0.00166 mW/g
Maximum value of SAR = 0.0075 mW/g

Test date = 12 / 10 / 03
Reference Value = 1.37 V/m
Power Drift = -0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 22.8 degree.C , After 22.8 degree.C



PCG-5A1L/ Body / Left Bottom (Sub antenna) / DSSS / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

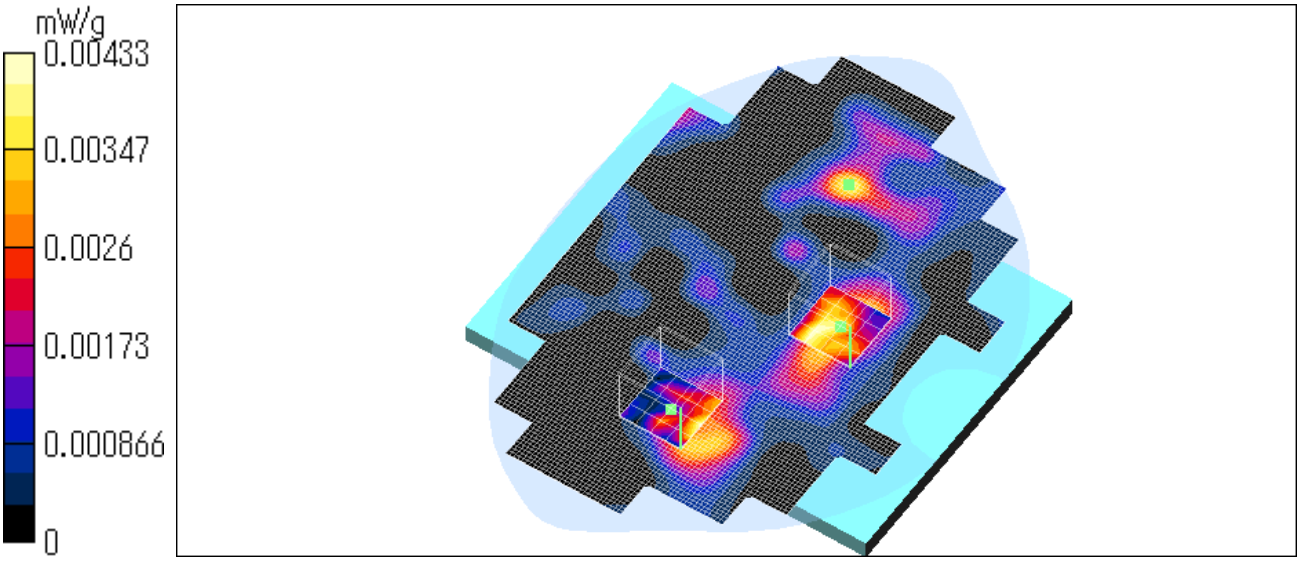
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00456 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00447 W/kg
SAR(1 g) = 0.00234 mW/g; SAR(10 g) = 0.00108 mW/g
Maximum value of SAR = 0.00434 mW/

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00432 W/kg
SAR(1 g) = 0.0015 mW/g; SAR(10 g) = 0.000751 mW/g
Maximum value of SAR = 0.00433 mW/g

Test date = 12 / 11 / 03
Reference Value = 0 V/m
Power Drift = 0 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6 degree.C , After 23.6 degree.C



PCG-5A1L/ Body / Left Back of display (Sub antenna) / DSSS / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0201 mW/g

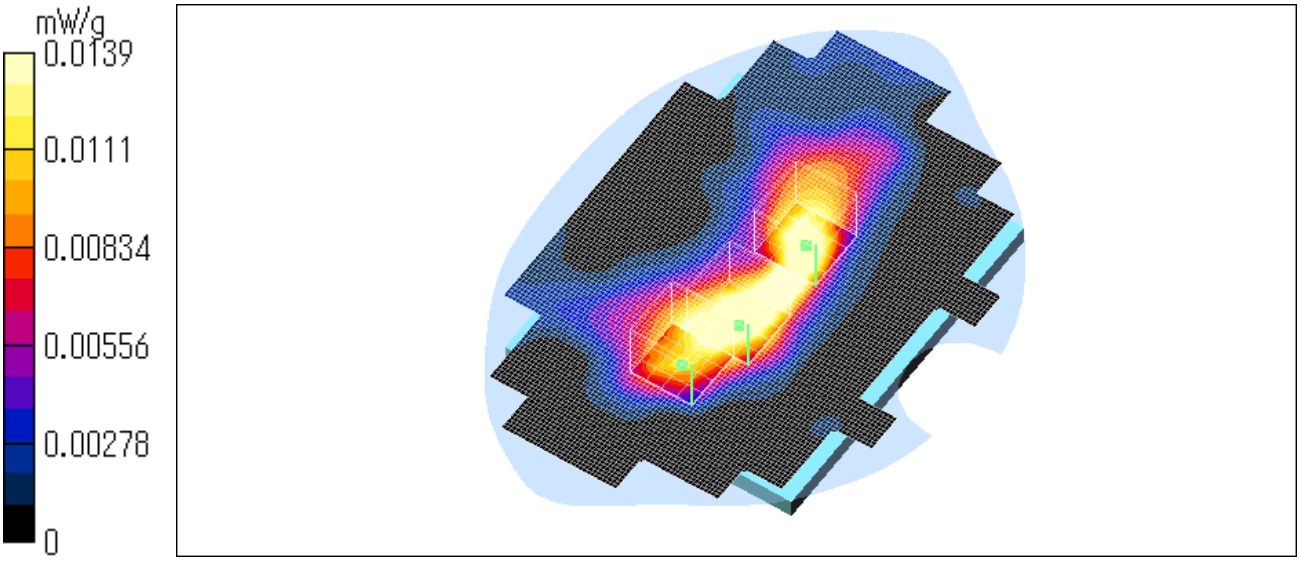
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0459 W/kg
SAR(1 g) = 0.0187 mW/g; SAR(10 g) = 0.00954 mW/g
Maximum value of SAR = 0.0184 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0405 W/kg
SAR(1 g) = 0.0173 mW/g; SAR(10 g) = 0.00845 mW/g
Maximum value of SAR = 0.019 mW/g

Zoom Scan (5x5x7)/Cube 2: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0304 W/kg
SAR(1 g) = 0.0123 mW/g; SAR(10 g) = 0.00642 mW/g
Maximum value of SAR = 0.0139 mW/g

Test date = 12 / 11 / 03
Reference Value = 2.31 V/m
Power Drift = -0.1 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.5 degree.C , After 23.5 degree.C



PCG-5A1L/ Body / Left side of display (Sub antenna) / DSSS / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

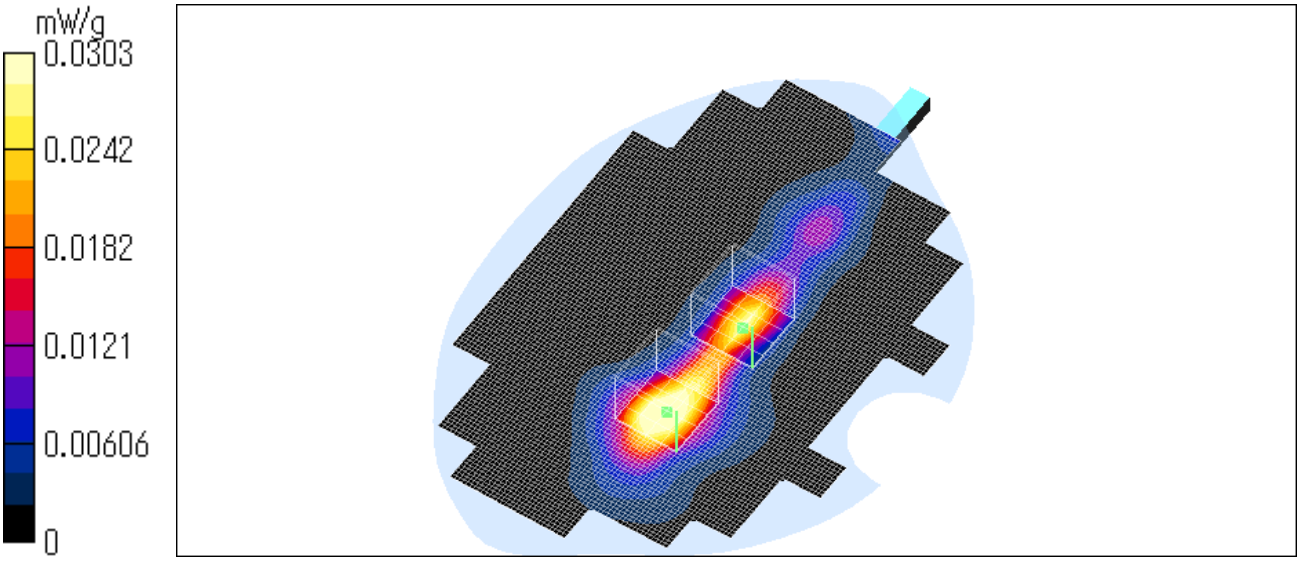
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0366 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0688 W/kg
SAR(1 g) = 0.0345 mW/g; SAR(10 g) = 0.0185 mW/g
Maximum value of SAR = 0.0364 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0593 W/kg
SAR(1 g) = 0.0281 mW/g; SAR(10 g) = 0.0137 mW/g
Maximum value of SAR = 0.0303 mW/g

Test date = 12 / 11 / 03
Reference Value = 2.94 V/m
Power Drift = -0.08 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.5 degree.C , After 23.5 degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / DSSS / 2412MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

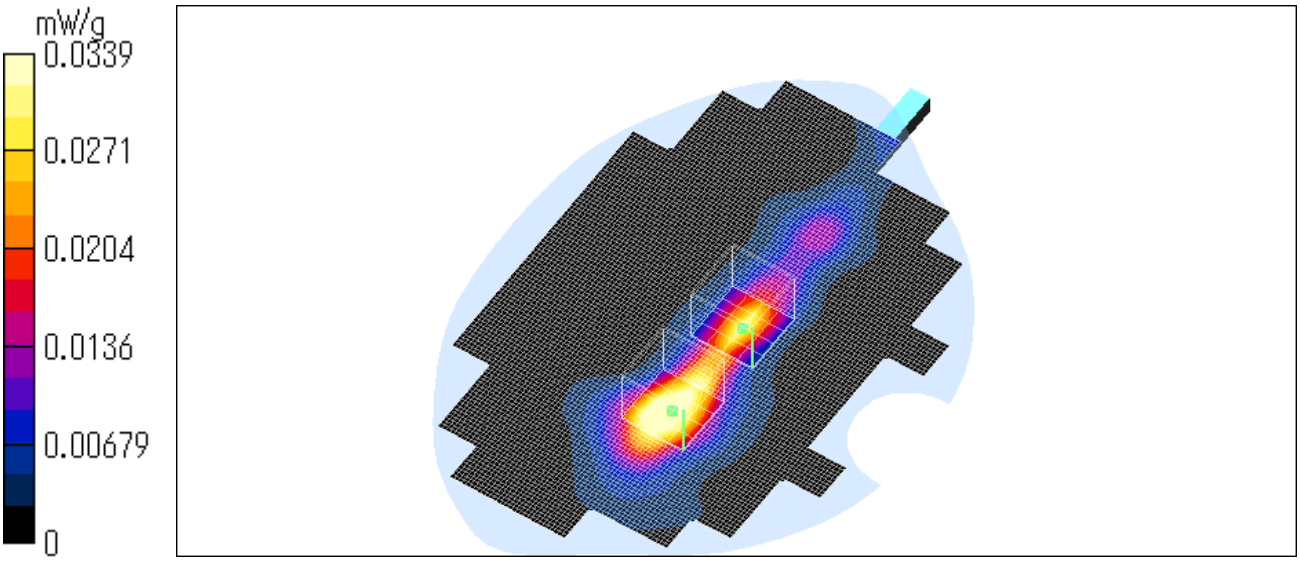
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0406 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0737 W/kg
SAR(1 g) = 0.0389 mW/g; SAR(10 g) = 0.0211 mW/g
Maximum value of SAR = 0.0401 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.071 W/kg
SAR(1 g) = 0.0308 mW/g; SAR(10 g) = 0.0147 mW/g
Maximum value of SAR = 0.0339 mW/g

Test date = 12 / 11 / 03
Reference Value = 2.76 V/m
Power Drift = 0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.5 degree.C , After 23.5 degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / DSSS / 2462MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

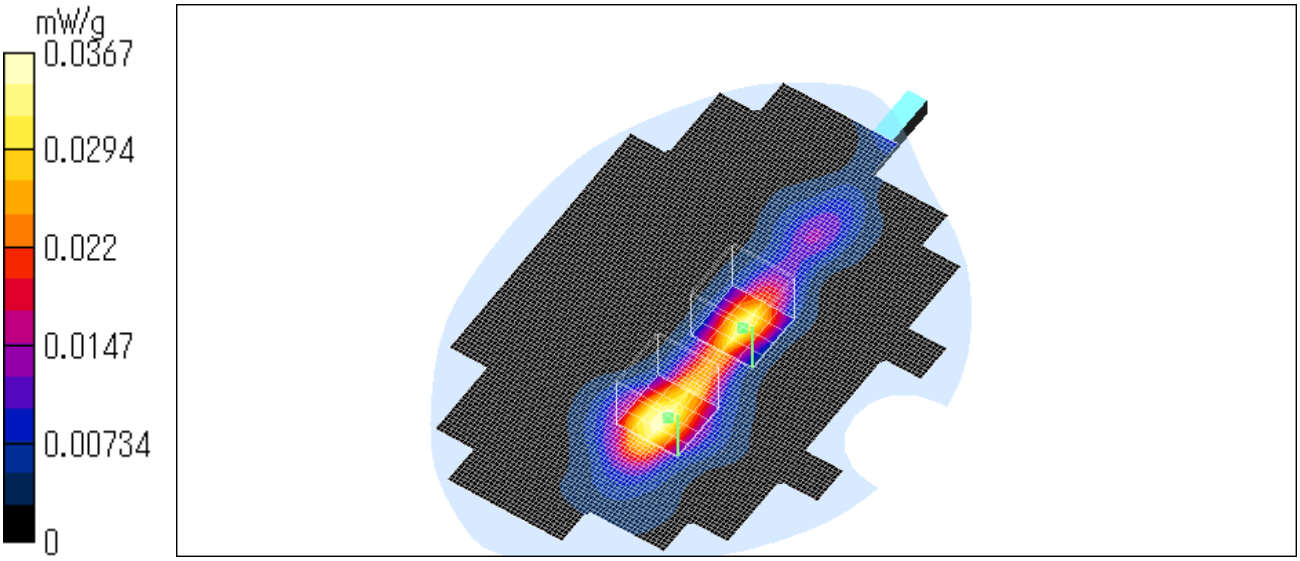
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0365 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0658 W/kg
SAR(1 g) = 0.0352 mW/g; SAR(10 g) = 0.0187 mW/g
Maximum value of SAR = 0.0373 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0728 W/kg
SAR(1 g) = 0.0337 mW/g; SAR(10 g) = 0.0163 mW/g
Maximum value of SAR = 0.0367 mW/g

Test date = 12 / 11 / 03
Reference Value = 2.86 V/m
Power Drift = 0.03 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.4 degree.C , After 23.4 degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / DSSS (BT OFF) / 2412MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

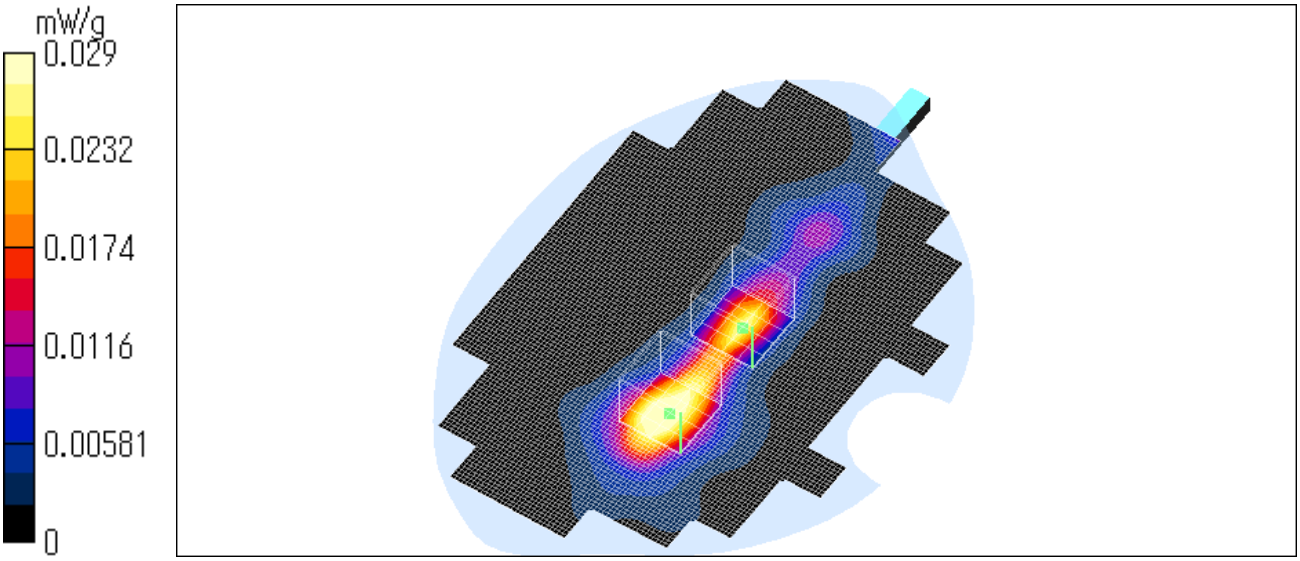
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0344 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0606 W/kg
SAR(1 g) = 0.0325 mW/g; SAR(10 g) = 0.0174 mW/g
Maximum value of SAR = 0.0342 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0644 W/kg
SAR(1 g) = 0.0269 mW/g; SAR(10 g) = 0.0129 mW/g
Maximum value of SAR = 0.029 mW/g

Test date = 12 / 11 / 03
Reference Value = 2.73 V/m
Power Drift = 0.07 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6 degree.C , After 23.6 degree.C



PCG-5A1L/ Body / Left Bottom (Sub antenna) / OFDM QPSK / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

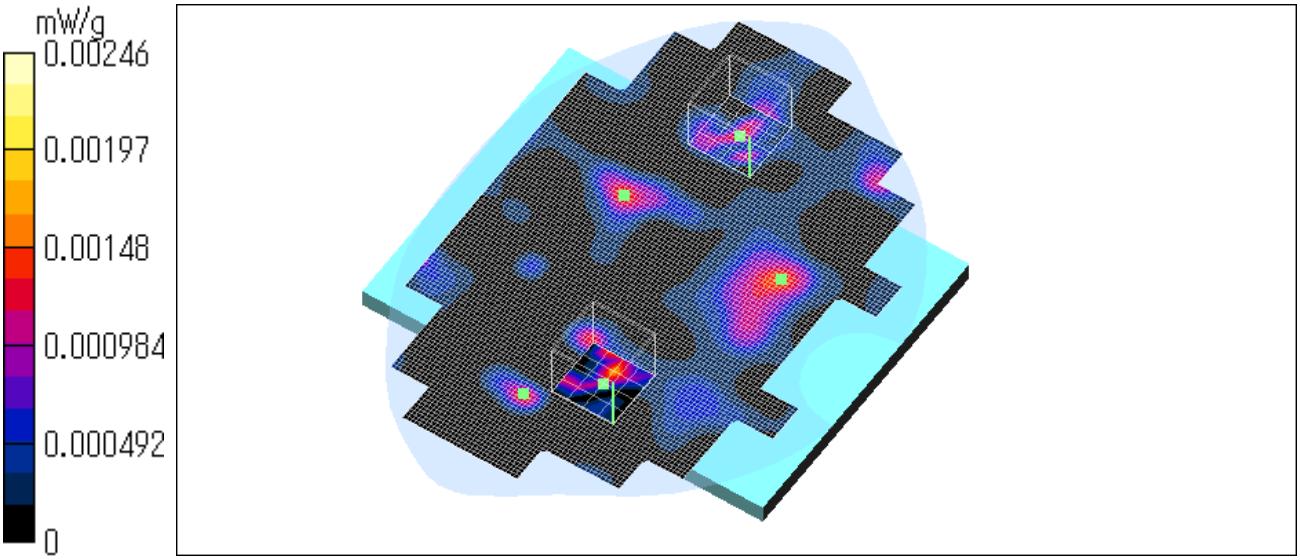
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00192 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00311 W/kg
SAR(1 g) = 0.000877 mW/g; SAR(10 g) = 0.000283 mW/g
Maximum value of SAR = 0.00178 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00247 W/kg
SAR(1 g) = 0.000787 mW/g; SAR(10 g) = 0.000305 mW/g
Maximum value of SAR = 0.00246 mW/g

Test date = 12 / 11 / 03
Reference Value = 0 V/m
Power Drift = 0 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6 degree.C , After 23.6 degree.C



PCG-5A1L/ Body / Left Back of display (Sub antenna) / OFDM QPSK / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00591 mW/g

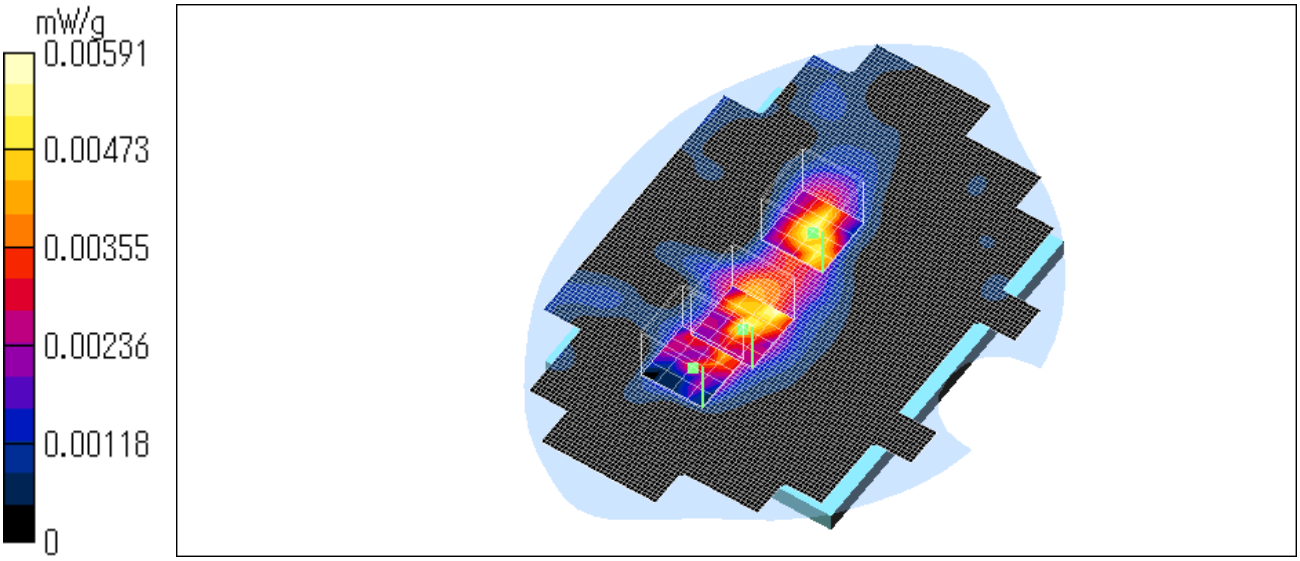
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0427 W/kg
SAR(1 g) = 0.00697 mW/g; SAR(10 g) = 0.00273 mW/g
Maximum value of SAR = 0.00579 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0198 W/kg
SAR(1 g) = 0.00379 mW/g; SAR(10 g) = 0.00157 mW/g
Maximum value of SAR = 0.00453 mW/g

Zoom Scan (5x5x7)/Cube 2: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.644 W/kg
SAR(1 g) = 0.00692 mW/g; SAR(10 g) = 0.00253 mW/g
Maximum value of SAR = 0.00591 mW/g

Test date = 12 / 11 / 03
Reference Value = 1.4 V/m
Power Drift = -0.04 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.5 degree.C , After 23.5 degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / OFDM QPSK / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

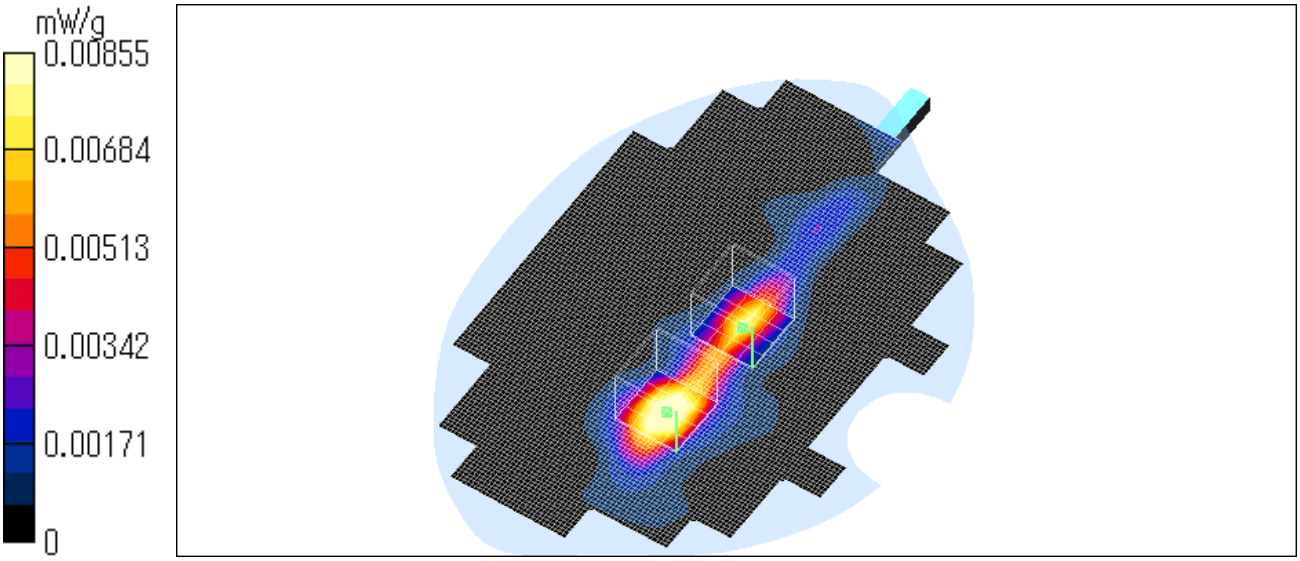
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00979 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0263 W/kg
SAR(1 g) = 0.01 mW/g; SAR(10 g) = 0.00496 mW/g
Maximum value of SAR = 0.00999 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.196 W/kg
SAR(1 g) = 0.0096 mW/g; SAR(10 g) = 0.00403 mW/g
Maximum value of SAR = 0.00855 mW/g

Test date = 12 / 11 / 03
Reference Value = 1.28 V/m
Power Drift = -0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6 degree.C , After 23.6 degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / OFDM QPSK / 2412MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

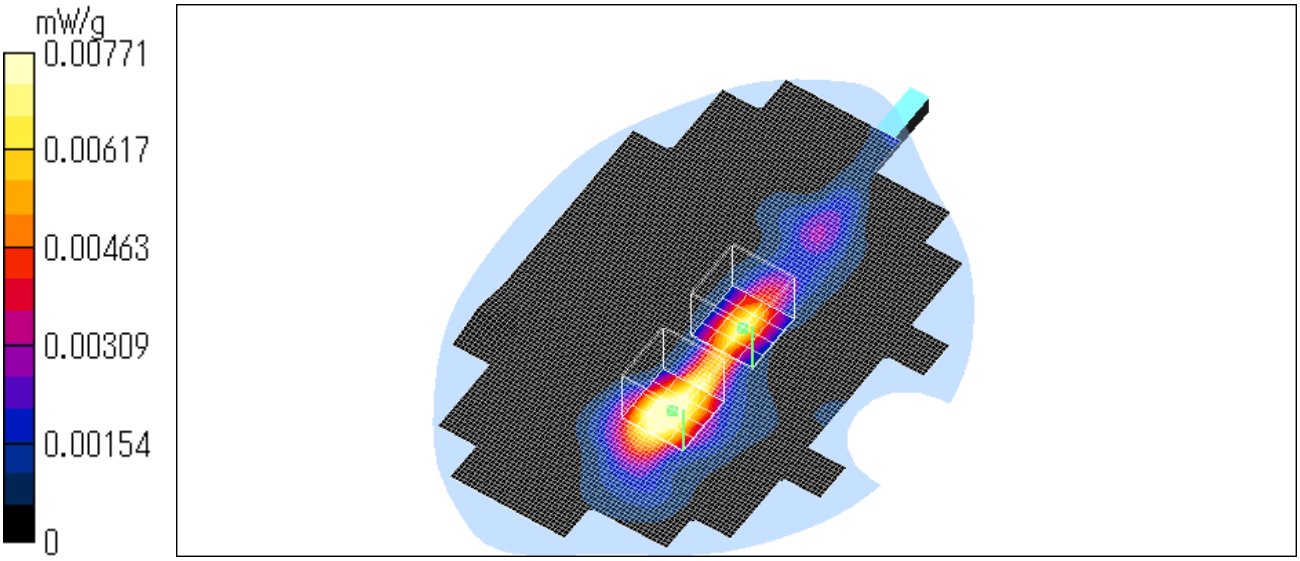
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00903 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00952 W/kg
SAR(1 g) = 0.0055 mW/g; SAR(10 g) = 0.00263 mW/g
Maximum value of SAR = 0.00935 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0197 W/kg
SAR(1 g) = 0.00724 mW/g; SAR(10 g) = 0.00335 mW/g
Maximum value of SAR = 0.00771 mW/g

Test date = 12 / 11 / 03
Reference Value = 1.22 V/m
Power Drift = -0.005 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6 degree.C , After 23.6 degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / OFDM QPSK / 2462MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

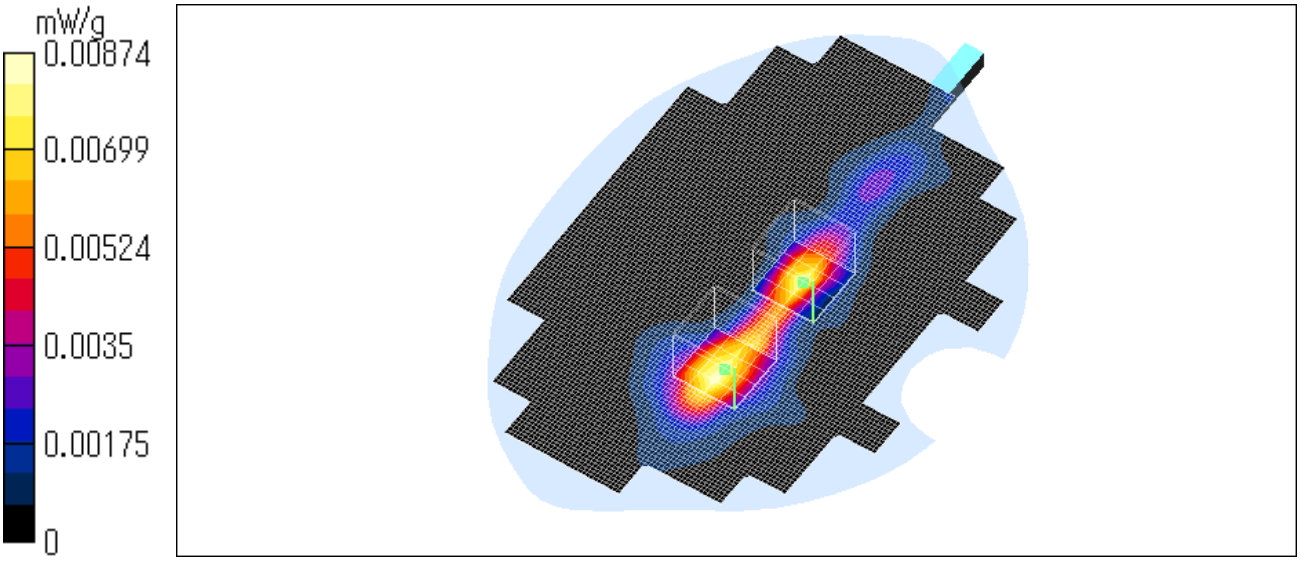
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00831 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0189 W/kg
SAR(1 g) = 0.00781 mW/g; SAR(10 g) = 0.00353 mW/g
Maximum value of SAR = 0.00892 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0156 W/kg
SAR(1 g) = 0.008 mW/g; SAR(10 g) = 0.00403 mW/g
Maximum value of SAR = 0.00874 mW/g

Test date = 12 / 11 / 03
Reference Value = 1.34 V/m
Power Drift = -0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6 degree.C , After 23.6degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / OFDM QPSK (BT OFF) / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

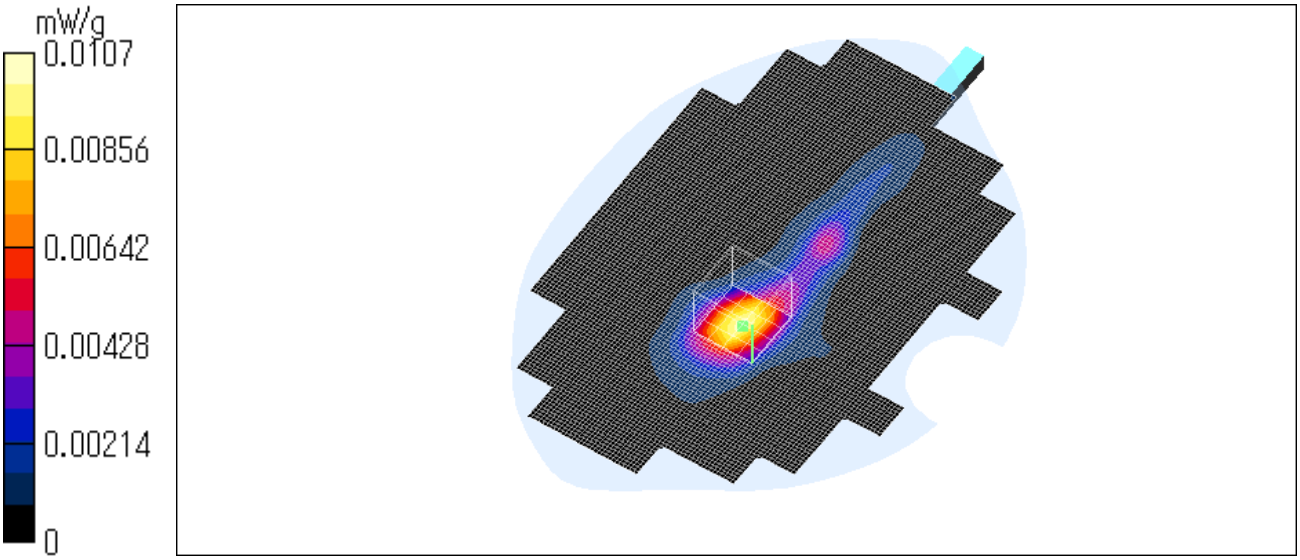
DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.0106 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0199 W/kg
SAR(1 g) = 0.00948 mW/g; SAR(10 g) = 0.0049 mW/g
Maximum value of SAR = 0.0107 mW/g

Test date = 12 / 11 / 03
Reference Value = 1.67 V/m
Power Drift = -0.09 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6 degree.C , After 23.6 degree.C



PCG-5A1L/ Body / Left Bottom (Sub antenna) / OFDM 64QAM / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

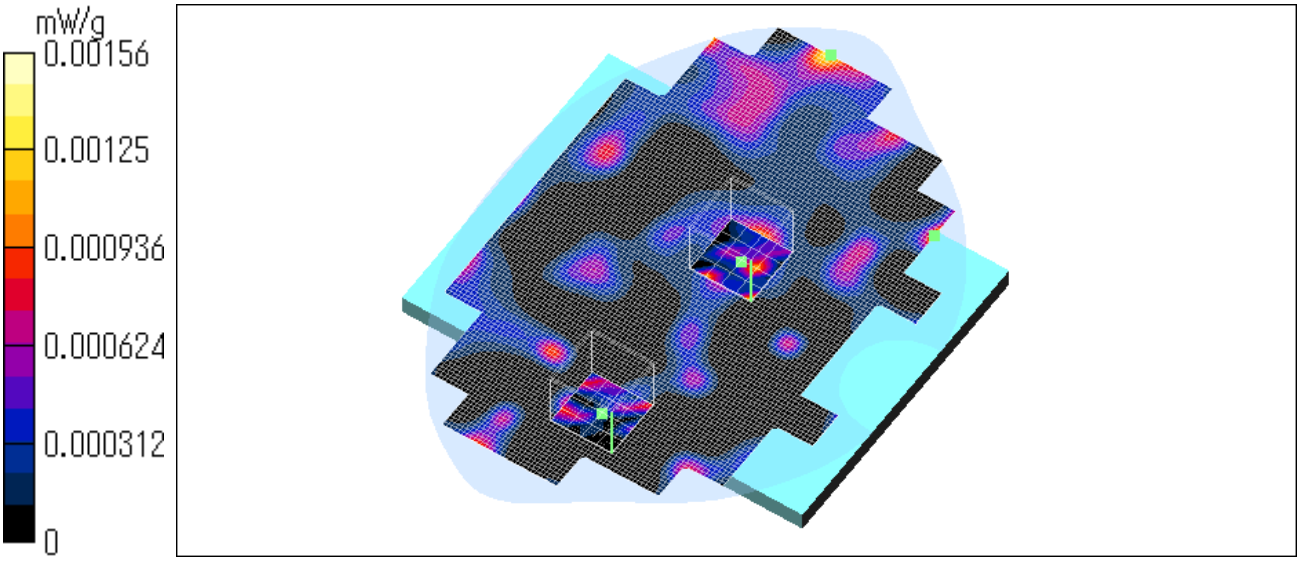
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00177 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00169 W/kg
SAR(1 g) = 0.000733 mW/g; SAR(10 g) = 0.000219 mW/g
Maximum value of SAR = 0.00174 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00277 W/kg
SAR(1 g) = 0.000609 mW/g; SAR(10 g) = 0.000274 mW/g
Maximum value of SAR = 0.00156 mW/g

Test date = 12 / 11 / 03
Reference Value = 0.171 V/m
Power Drift = -0.1 dB

Ambient Temperature : 24.8degree.c
Liquid Temperature : Before 23.6degree.C , After 23.6 degree.C



PCG-5A1L/ Body / Left Back of display (Sub antenna) / OFDM 64QAM / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00261 mW/g

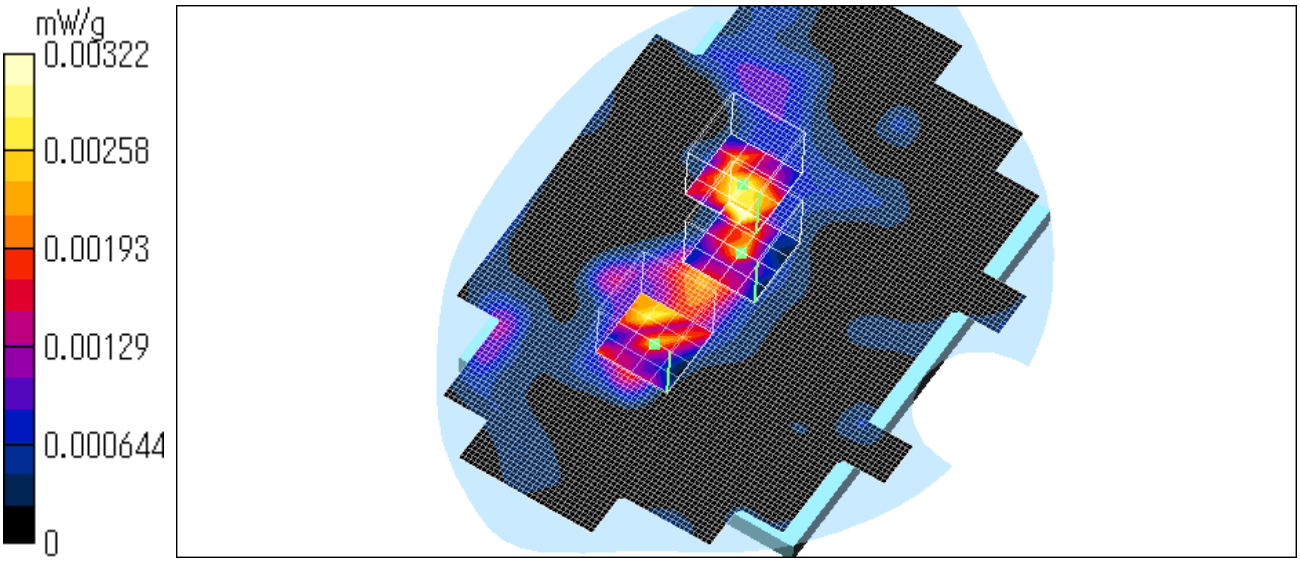
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00382 W/kg
SAR(1 g) = 0.00133 mW/g; SAR(10 g) = 0.000554 mW/g
Maximum value of SAR = 0.00382 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00283 W/kg
SAR(1 g) = 0.00141 mW/g; SAR(10 g) = 0.000498 mW/g
Maximum value of SAR = 0.00284 mW/g

Zoom Scan (5x5x7)/Cube 2: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00333 W/kg
SAR(1 g) = 0.00148 mW/g; SAR(10 g) = 0.000738 mW/g
Maximum value of SAR = 0.00322 mW/g

Test date = 12 / 11 / 03
Reference Value = 0.6 V/m
Power Drift = -0.1 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.5 degree.C , After 23.5 degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / OFDM 64QAM / 2437MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

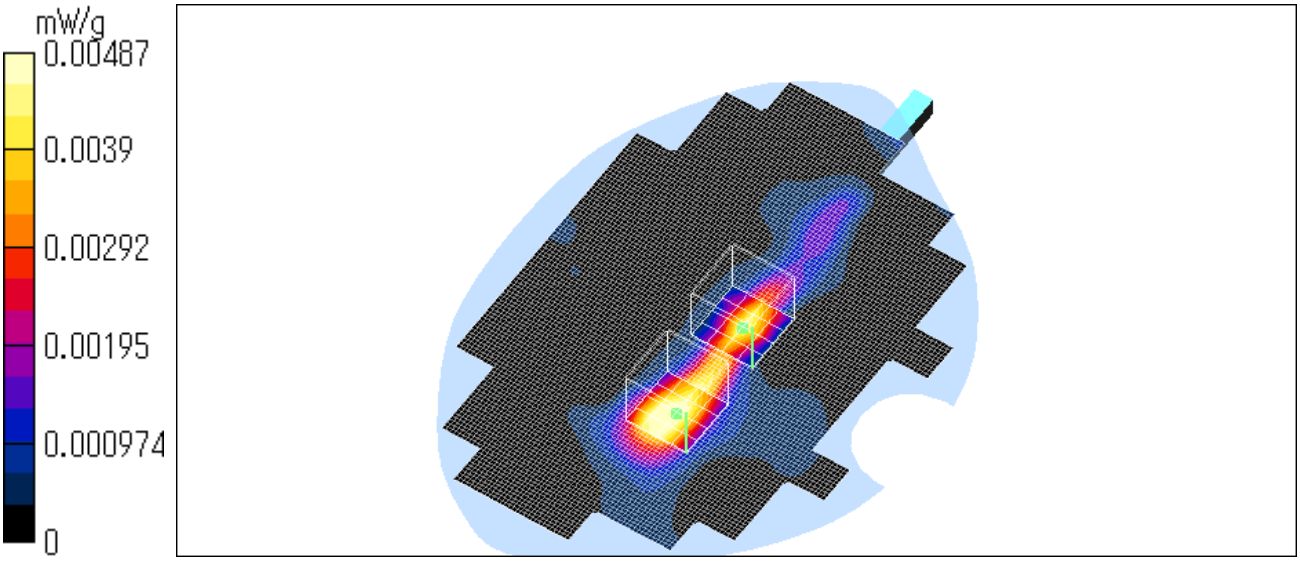
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00592 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00559 W/kg
SAR(1 g) = 0.00314 mW/g; SAR(10 g) = 0.00136 mW/g
Maximum value of SAR = 0.0055 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.0049 W/kg
SAR(1 g) = 0.00205 mW/g; SAR(10 g) = 0.000877 mW/g
Maximum value of SAR = 0.00487 mW/g

Test date = 12 / 11 / 03
Reference Value = 1.11 V/m
Power Drift = -0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6 degree.C , After 23.6 degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / OFDM 64QAM / 2412MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

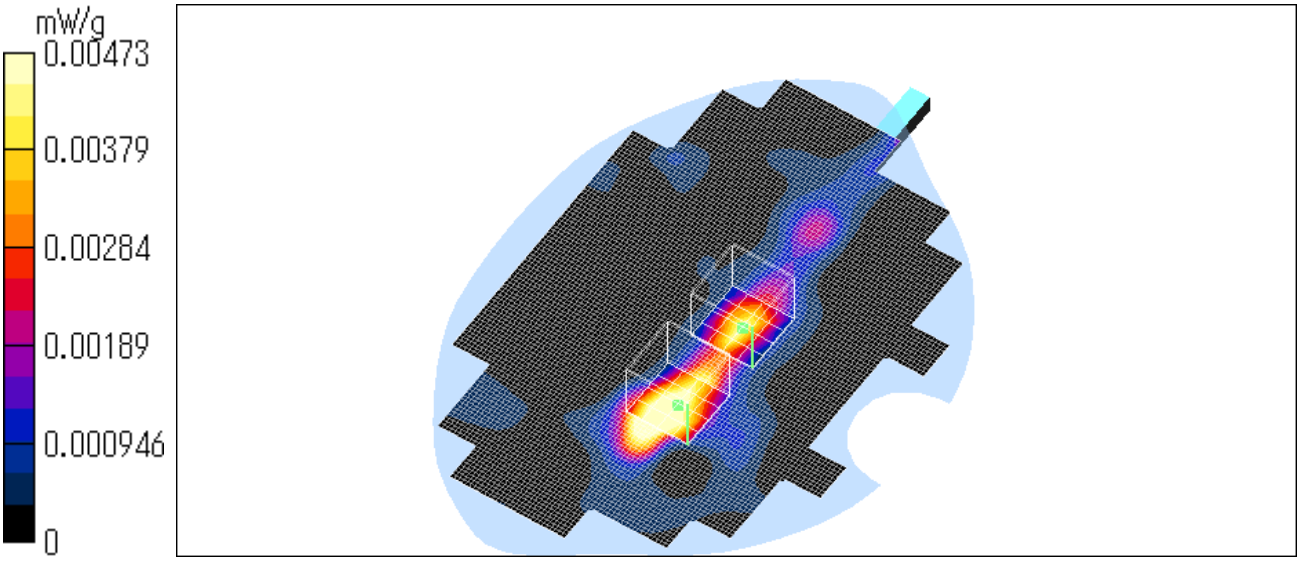
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00611 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00597 W/kg
SAR(1 g) = 0.00318 mW/g; SAR(10 g) = 0.00137 mW/g
Maximum value of SAR = 0.00565 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00487 W/kg
SAR(1 g) = 0.00221 mW/g; SAR(10 g) = 0.00108 mW/g
Maximum value of SAR = 0.00473 mW/g

Test date = 12 / 11 / 03
Reference Value = 0.95 V/m
Power Drift = 0.03 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6 degree.C , After 23.6 degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / OFDM 64QAM / 2462MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

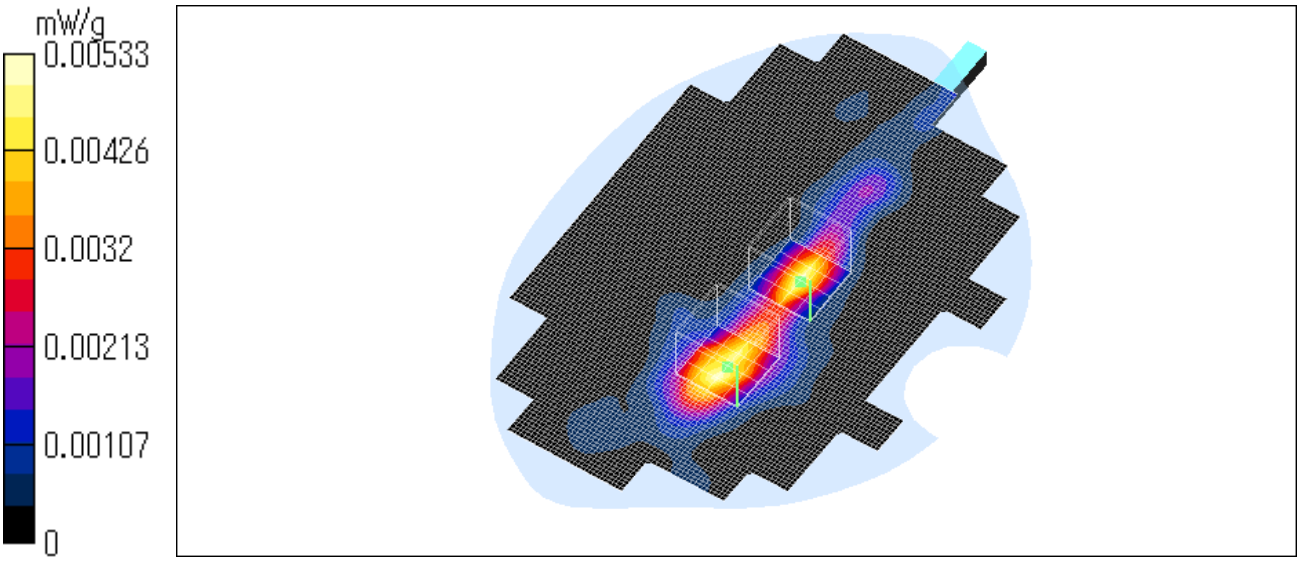
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00507 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00538 W/kg
SAR(1 g) = 0.00291 mW/g; SAR(10 g) = 0.00126 mW/g
Maximum value of SAR = 0.00531 mW/g

Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00556 W/kg
SAR(1 g) = 0.00293 mW/g; SAR(10 g) = 0.00138 mW/g
Maximum value of SAR = 0.00533 mW/g

Test date = 12 / 11 / 03
Reference Value = 1.09 V/m
Power Drift = 0.05 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6degree.C , After 23.6 degree.C



PCG-5A1L/ Body / Left Side of display (Sub antenna) / OFDM 64QAM (BT OFF) / 2412MHz

Crest factor: 1
Medium: M2450 (σ = 1.94 mho/m, ε_r = 50.2, ρ = 1000 kg/m^3)
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.3, 4.3, 4.3); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

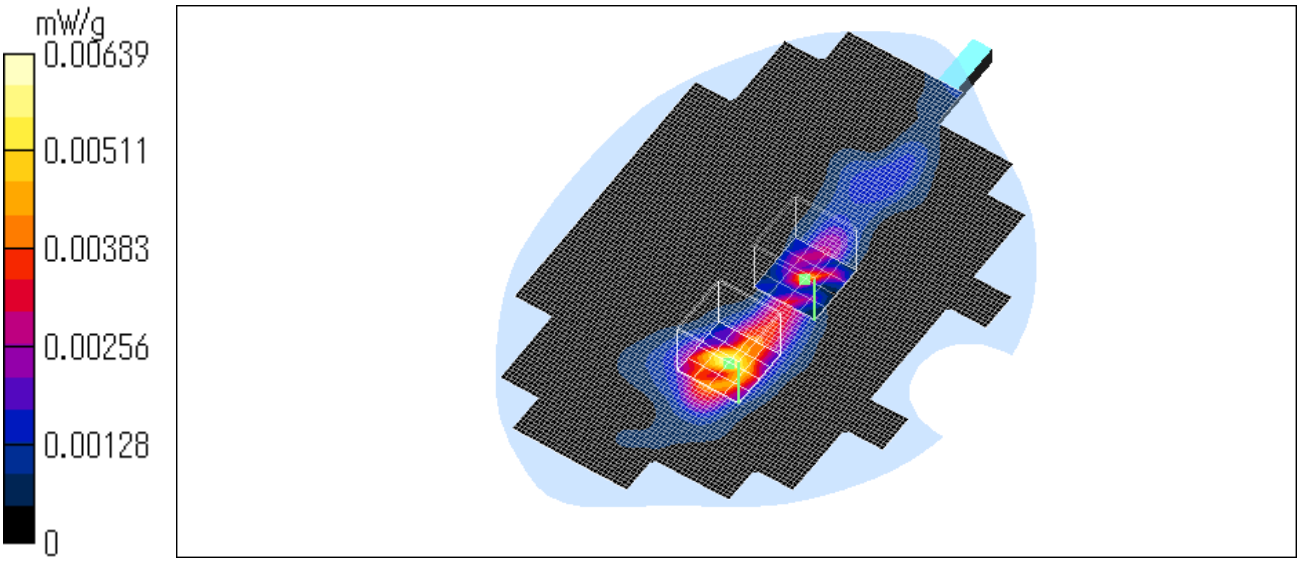
Area Scan (91x131x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 0.00587 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00639 W/kg
SAR(1 g) = 0.0028 mW/g; SAR(10 g) = 0.00133 mW/g
Maximum value of SAR = 0.00639 mW/g

Unnamed procedure/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 0.00507 W/kg
SAR(1 g) = 0.00167 mW/g; SAR(10 g) = 0.000785 mW/g
Maximum value of SAR = 0.00502 mW/g

Test date = 12 / 11 / 03
Reference Value = 1.08 V/m
Power Drift = -0.2 dB

Ambient Temperature : 24.8 degree.c
Liquid Temperature : Before 23.6 degree.C , After 23.6 degree.C



APPENDIX 3 : Validation Measurement data

System Validation / Dipole 2450 MHz / Forward Conducted Power : 250mW

Crest factor: 1
Medium: HSL2450 (σ = 1.87 mho/m, ε_r = 37.9, ρ = 1000 kg/m^3)
Phantom section: Flat Section

Dipole 2450 MHz;
- Type: D2450V2; SN:713

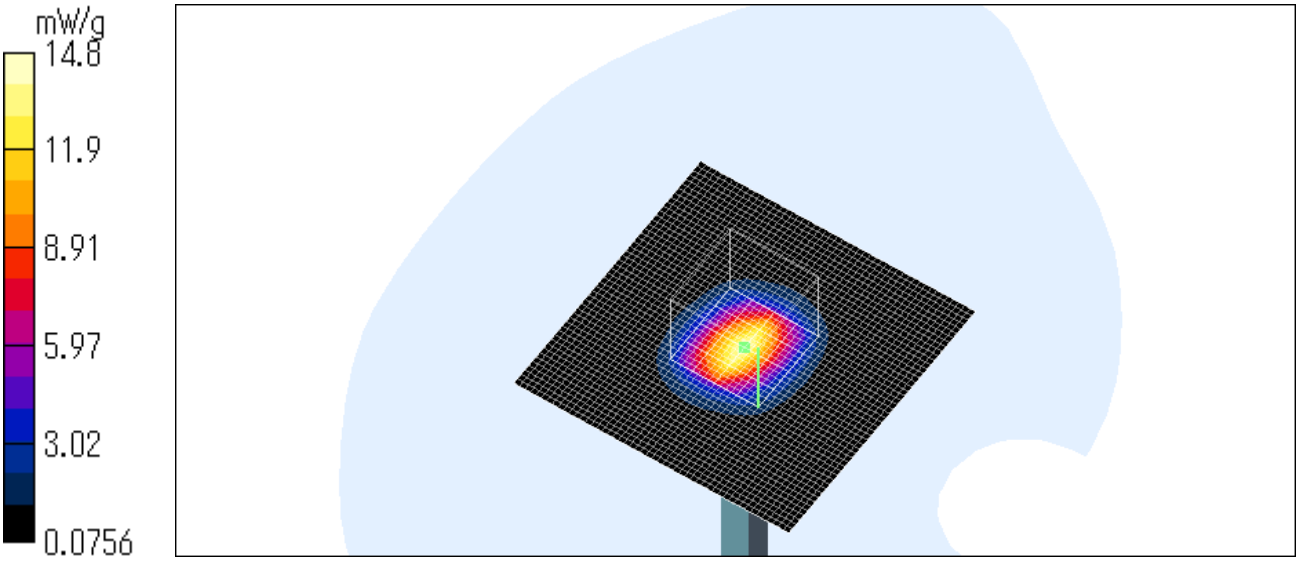
DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.7, 4.7, 4.7); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 16.1 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 28.2 W/kg
SAR(1 g) = 13.4 mW/g; SAR(10 g) = 6.09 mW/g
Maximum value of SAR = 14.8 mW/g

Test date = 12 / 10 / 03
Reference Value = 94.4 V/m
Power Drift = -0.02 dB

Ambient Temperature = 24.0 degree.c
Liquid Temperature = Before 23.2 degree.C , After 23.2 degree.C



System Validation / Dipole 2450 MHz / Forward Conducted Power : 250mW

Crest factor: 1
Medium: HSL2450 (σ = 1.87 mho/m, ε_r = 38.1, ρ = 1000 kg/m^3)
Phantom section: Flat Section

Dipole 2450 MHz;
- Type: D2450V2; SN:713

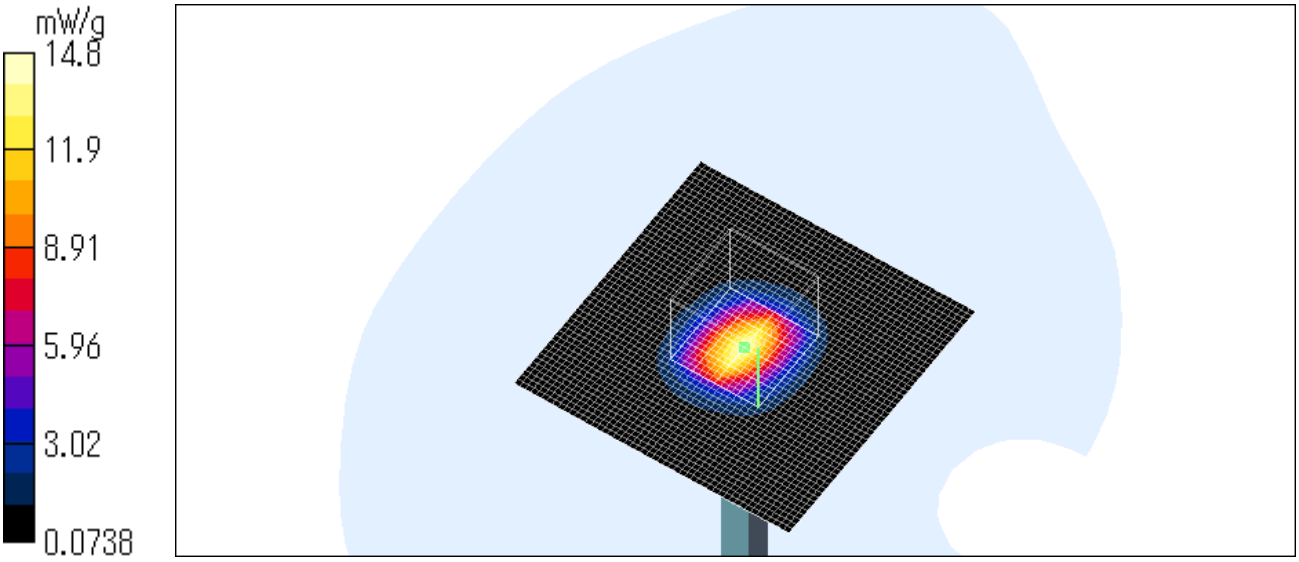
DASY4 Configuration:
- Probe: ET3DV6 - SN1685; ConvF(4.7, 4.7, 4.7); Calibrated: 2003/10/10
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Phantom: SAM 1196
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR = 15.9 mW/g

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 28.2 W/kg
SAR(1 g) = 13.4 mW/g; SAR(10 g) = 6.09 mW/g
Maximum value of SAR = 14.8 mW/g

Test date = 12 / 11 / 03
Reference Value = 94.5 V/m
Power Drift = -0.008 dB

Ambient Temperature = 24.2 degree.c
Liquid Temperature = Before 23.2 degree.C , After 23.2 degree.C



APPENDIX 4 : System Validation Dipole (D2450V2,S/N: 713)

Schmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Calibration Certificate

2450 MHz System Validation Dipole

Type:	D2450V2
Serial Number:	713
Place of Calibration:	Zurich
Date of Calibration:	November 15, 2002
Calibration Interval:	24 months

Schmid & Partner Engineering AG hereby certifies, that this device has been calibrated on the date indicated above. The calibration was performed in accordance with specifications and procedures of Schmid & Partner Engineering AG.

Wherever applicable, the standards used in the calibration process are traceable to international standards. In all other cases the standards of the Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland have been applied.

Calibrated by:	D. Velleu
Approved by:	[illegible]

Schmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

DASY

Dipole Validation Kit

Type: D2450V2

Serial: 713

Manufactured: July 5, 2002
Calibrated: November 15, 2002

1. Measurement Conditions

The measurements were performed in the flat section of the SAM twin phantom filled with head simulating solution of the following electrical parameters at 2450 MHz:

Relative permitivity	**38.0**	± 5%
Conductivity	**1.87 mho/m**	± 10%

The DASY4 System with a dosimetric E-field probe ET3DV6 (SN:1507, conversion factor 5.0 at 2450 MHz) was used for the measurements.

The dipole feedpoint was positioned below the center marking and oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10mm from dipole center to the solution surface. The included distance holder was used during measurements for accurate distance positioning.

The coarse grid with a grid spacing of 15mm was aligned with the dipole. The 7x7x7 fine cube was chosen for cube integration.
The dipole input power (forward power) was 250mW ± 3 %. The results are normalized to 1W input power.

2. SAR Measurement with DASY4 System

Standard SAR-measurements were performed according to the measurement conditions described in section 1. The results (see figure supplied) have been normalized to a dipole input power of 1W (forward power). The resulting averaged SAR-values measured with the dosimetric probe ET3DV6 SN:1507 and applying the advanced extrapolation are:

averaged over 1 cm^3 (1 g) of tissue:	**54.4 mW/g**
averaged over 10 cm^3 (10 g) of tissue:	**24.2 mW/g**

3. Dipole impedance and return loss

The impedance was measured at the SMA-connector with a network analyzer and numerically transformed to the dipole feedpoint. The transformation parameters from the SMA-connector to the dipole feedpoint are:

Electrical delay:	**1.158 ns**	(one direction)
Transmission factor:	**0.997**	(voltage transmission, one direction)

The dipole was positioned at the flat phantom sections according to section 1 and the distance holder was in place during impedance measurements.

Feedpoint impedance at 2450 MHz:	Re{Z} = **51.3 Ω**
	Im {Z} = **2.4 Ω**
Return Loss at 2450 MHz	**- 31.4 dB**

4. Measurement Conditions

The measurements were performed in the flat section of the SAM twin phantom filled with body simulating solution of the following electrical parameters at 2450 MHz:

Relative permitivity	**51.2**	± 5%
Conductivity	**1.96 mho/m**	± 10%

The DASY4 System with a dosimetric E-field probe ET3DV6 (SN:1507, conversion factor 4.5 at 2450 MHz) was used for the measurements.

The dipole feedpoint was positioned below the center marking and oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10mm from dipole center to the solution surface. The included distance holder was used during measurements for accurate distance positioning.

The coarse grid with a grid spacing of 15mm was aligned with the dipole. The 7x7x7 fine cube was chosen for cube integration.
The dipole input power (forward power) was 250mW ± 3 %. The results are normalized to 1W input power.

Date/Time: 11/13/02 21:52:22

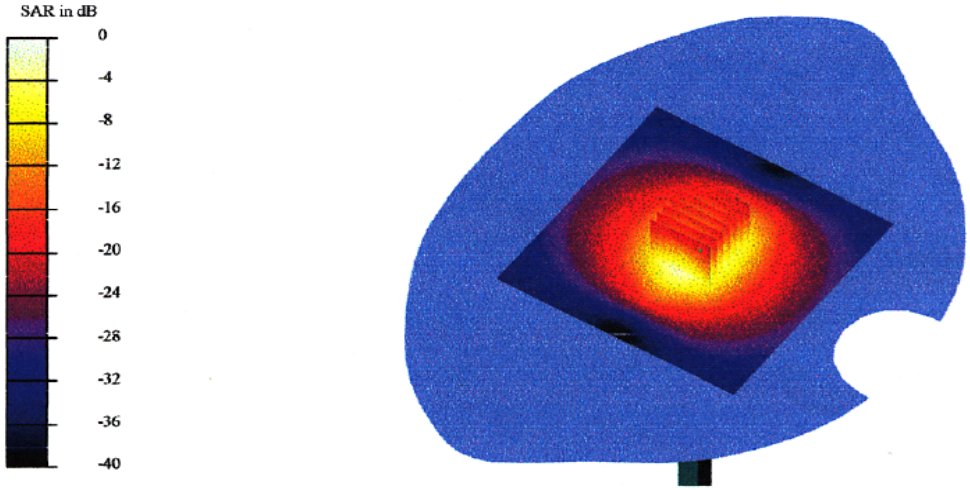
Test Laboratory: SPEAG, Zurich, Switzerland
File Name: SN713_SN1507_HSL2450_131102.da4

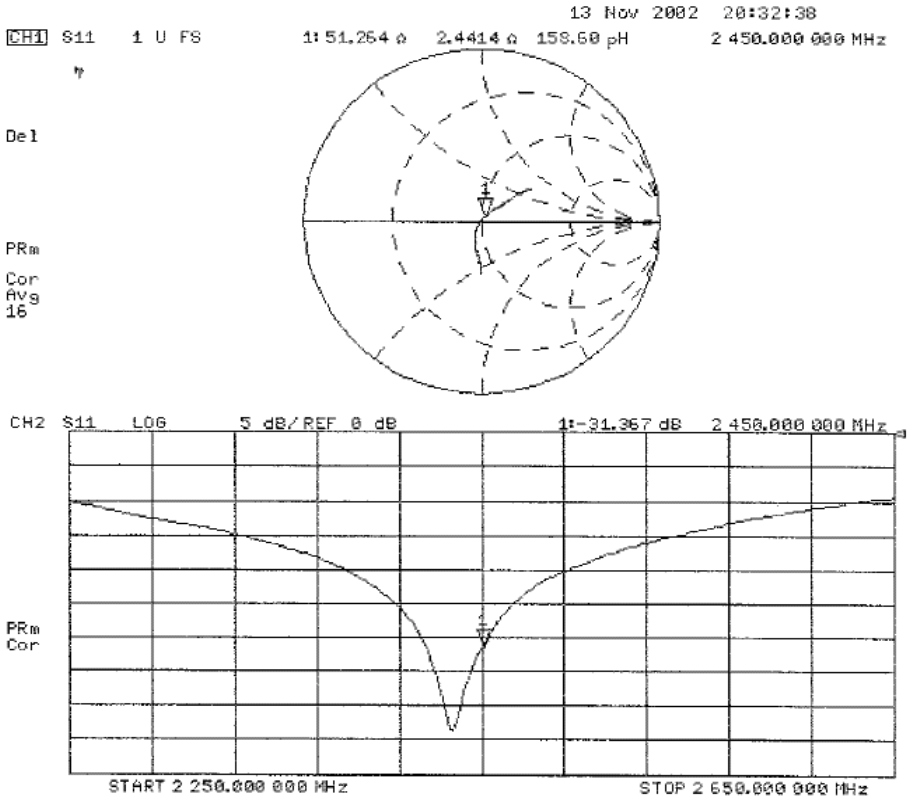
DUT: Dipole 2450 MHz Type & Serial Number: D2450V2 - SN713
Program: Dipole Calibration; Pin = 250 mW; d = 10 mm

Communication System: CW-2450; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: HSL 2450 MHz (σ = 1.87 mho/m, ε = 38.03, ρ = 1000 kg/m3)
Phantom section: FlatSection

DASY4 Configuration:
- Probe: ET3DV6 - SN1507; ConvF(5, 5, 5); Calibrated: 1/24/2002
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 - SN410; Calibrated: 7/18/2002
- Phantom: SAM 4.0 - TP:1006
- Software: DASY4, V4.0 Build 35

Area Scan (81x81x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm
Reference Value = 94.4 V/m
Peak SAR = 29.6 mW/g
SAR(1 g) = 13.6 mW/g; SAR(10 g) = 6.04 mW/g
Power Drift = 0.01 dB




13 Nov 2002 20:32:38
CH1 S11 1 U FS
1: 51.264 Ω 2.4414 Ω 158.60 pH 2 450.000 000 MHz
Del
PRm
Cor
Avg
16
CH2 S11 LOG 5 dB/ REF 0 dB
1:-31.367 dB 2 450.000 000 MHz
PRm
Cor
START 2 250.000 000 MHz
STOP 2 650.000 000 MHz

Date/Time: 11/15/02 14:25:17

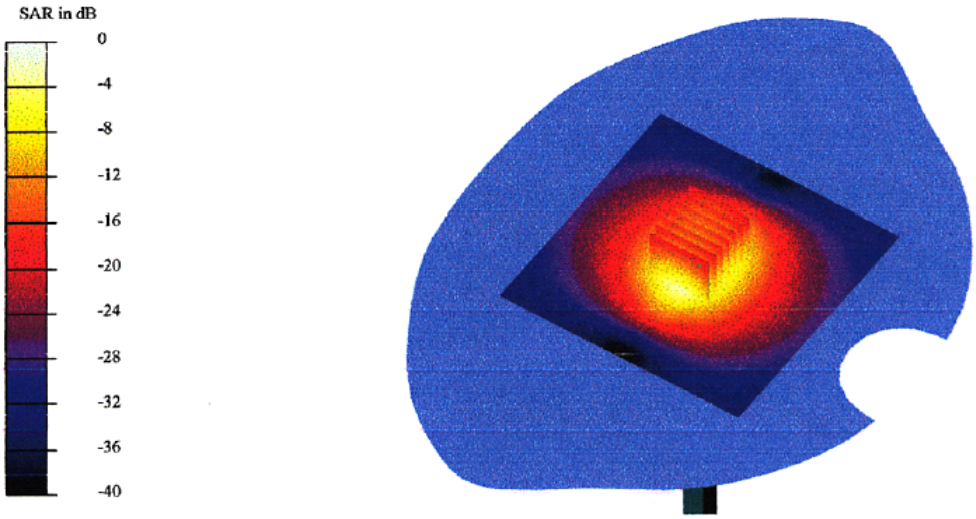
Test Laboratory: SPEAG, Zurich, Switzerland
File Name: SN713_SN1507_M2450_141102.da4

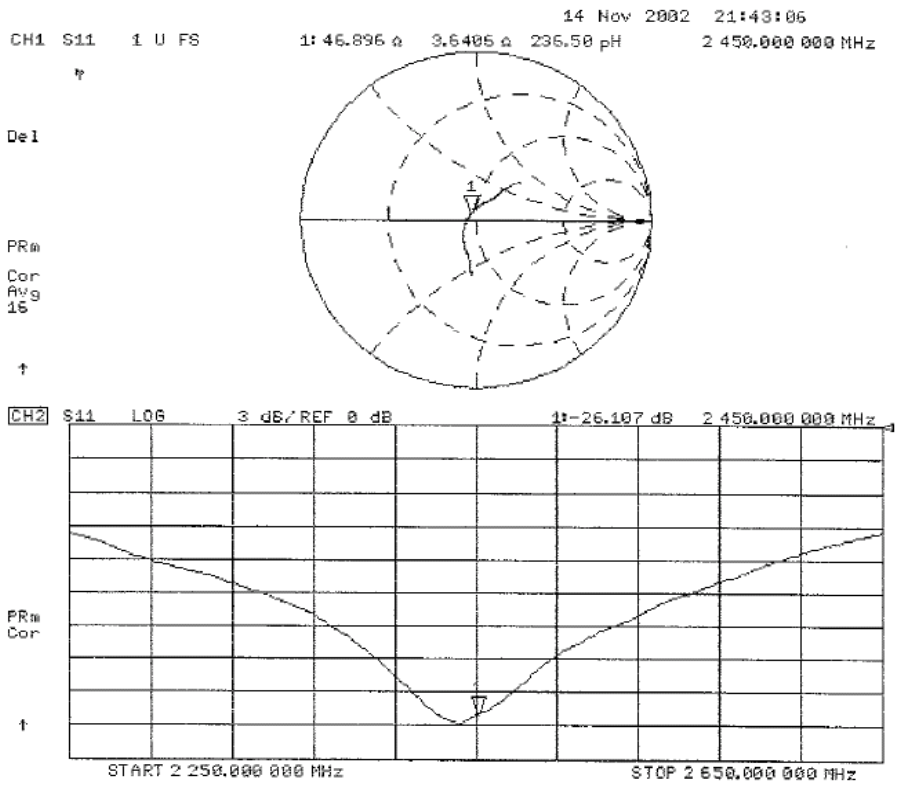
DUT: Dipole 2450 MHz Type & Serial Number: D2450V2 - SN713
Program: Dipole Calibration; Pin = 250 mW; d = 10 mm

Communication System: CW-2450; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: Muscle 2450 MHz (σ = 1.96 mho/m, ε = 51.15, ρ = 1000 kg/m3)
Phantom section: FlatSection

DASY4 Configuration:
- Probe: ET3DV6 - SN1507; ConvF(4.5, 4.5, 4.5); Calibrated: 1/24/2002
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 - SN410; Calibrated: 7/18/2002
- Phantom: SAM 4.0 - TP:1006
- Software: DASY4, V4.0 Build 35

Area Scan (81x81x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm
Reference Value = 95.2 V/m
Peak SAR = 25 mW/g
SAR(1 g) = 12.9 mW/g; SAR(10 g) = 5.99 mW/g
Power Drift = 0.02 dB




14 Nov 2002 21:43:06
CH1 S11 1 U FS
1: 46.896 Ω 3.6405 Ω 236.50 pH 2 450.000 000 MHz
Del
PRm
Cor
Avg
16
CH2 S11 LOG 3 dB/ REF 0 dB 1:-26.107 dB 2 450.000 000 MHz
PRm
Cor
START 2 250.000 000 MHz
STOP 2 650.000 000 MHz

APPENDIX 5 : Dosimetric E-Field Probe Calibration (ET3DV6,S/N: 1685)

Schmid & Partner Engineering AG

s p e a g

Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 1 245 9700, Fax +41 1 245 9779
info@speag.com, http://www.speag.com

IMPORTANT NOTICE

USAGE OF PROBES IN ORGANIC SOLVENTS

Diethylene Gycol Monobuthy Ether (the basis for liquids above 1 GHz), as many other organic solvents, is a very effective softener for synthetic materials. These solvents can cause irreparable damage to certain SPEAG products, except those which are explicitly declared as compliant with organic solvents.

Compatible Probes:
- ET3DV6
- ET3DV6R
- ES3DV2
- ER3DV6
- H3DV6

Important Note for ET3DV6 Probes:
The ET3DV6 probes shall not be exposed to solvents longer than necessary for the measurements and shall be cleaned daily after use with warm water and stored dry.

s p e a g

Schmid & Partner Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 1 245 9700, Fax +41 1 245 9779
info@speag.com, http://www.speag.com

Schmid & Partner Engineering AG

Technical Note 01.06.15-1 June 2002

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

Client UL Apex (MTT)

CALIBRATION CERTIFICATE

Object(s)	ET3DV6 - SN:1685
Calibration procedure(s)	QA CAL-01.v2 Calibration procedure for dosimetric E-field probes
Calibration date:	October 10, 2003
Condition of the calibrated item	In Tolerance (according to the specific calibration document)

This calibration statement documents traceability of M&TE used in the calibration procedures and conformity of the procedures with the ISO/IEC 17025 international standard.

All calibrations have been conducted in the closed laboratory facility: environment temperature 22 +/- 2 degrees Celsius and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM E4419B	GB41293874	2-Apr-03 (METAS, No 252-0250)	Apr-04
Power sensor E4412A	MY41495277	2-Apr-03 (METAS, No 252-0250)	Apr-04
Reference 20 dB Attenuator	SN: 5086 (20b)	3-Apr-03 (METAS No. 251-0340	Apr-04
Fluke Process Calibrator Type 702	SN: 6295803	8-Sep-03 (Sintrel SCS No. E-030020)	Sep-04
Power sensor HP 8481A	MY41092180	18-Sep-02 (Agilent, No. 20020918)	In house check: Oct 03
RF generator HP 8684C	US3642U01700	4-Aug-99 (SPEAG, in house check Aug-02)	In house check: Aug-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (Agilent, No. 24BR1033101)	In house check: Oct 03

	Name	Function	Signature
Calibrated by:	Nico Vetterli	Technician	
Approved by:	Katja Pokovic	Laboratory Director	

Date issued: October 23, 2003

This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 International Standard) for Calibration Laboratory of Schmid & Partner Engineering AG is completed.

880-KP0301061-A

Page 1 (1)

Schmid & Partner Engineering AG

s p e a g

Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 1 245 9700, Fax +41 1 245 9779
info@speag.com, http://www.speag.com

Probe ET3DV6

SN:1685

Manufactured:	April 3, 2002
Last calibration:	May 10, 2002
Recalibrated:	October 10, 2003

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

Head Office EMC Lab.
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone: +81 596 24 8116
Facsimile: +81 596 24 8124

ET3DV6 SN:1685 **October 10, 2003**

DASY - Parameters of Probe: ET3DV6 SN:1685

Sensitivity in Free Space

NormX	**1.60**	$\mu V/(V/m)^2$	DCP X	**95**	mV
NormY	**1.65**	$\mu V/(V/m)^2$	DCP Y	**95**	mV
NormZ	**1.56**	$\mu V/(V/m)^2$	DCP Z	**95**	mV

Sensitivity in Tissue Simulating Liquid

Head **900 MHz** ε_r **= 41.5 ± 5%** σ **= 0.97 ± 5% mho/m**

Valid for f=800-1000 MHz with Head Tissue Simulating Liquid according to EN 50361, P1528-200X

ConvF X	**6.6**	± 9.5% (k=2)	Boundary effect:	
ConvF Y	**6.6**	± 9.5% (k=2)	Alpha	**0.26**
ConvF Z	**6.6**	± 9.5% (k=2)	Depth	**3.07**

Head **1800 MHz** ε_r **= 40.0 ± 5%** σ **= 1.40 ± 5% mho/m**

Valid for f=1710-1910 MHz with Head Tissue Simulating Liquid according to EN 50361, P1528-200X

ConvF X	**5.2**	± 9.5% (k=2)	Boundary effect:	
ConvF Y	**5.2**	± 9.5% (k=2)	Alpha	**0.41**
ConvF Z	**5.2**	± 9.5% (k=2)	Depth	**2.77**

Boundary Effect

Head **900 MHz** **Typical SAR gradient: 5 % per mm**

Probe Tip to Boundary		**1 mm**	**2 mm**
SAR_{be} [%]	Without Correction Algorithm	8.9	5.4
SAR_{be} [%]	With Correction Algorithm	0.4	0.5

Head **1800 MHz** **Typical SAR gradient: 10 % per mm**

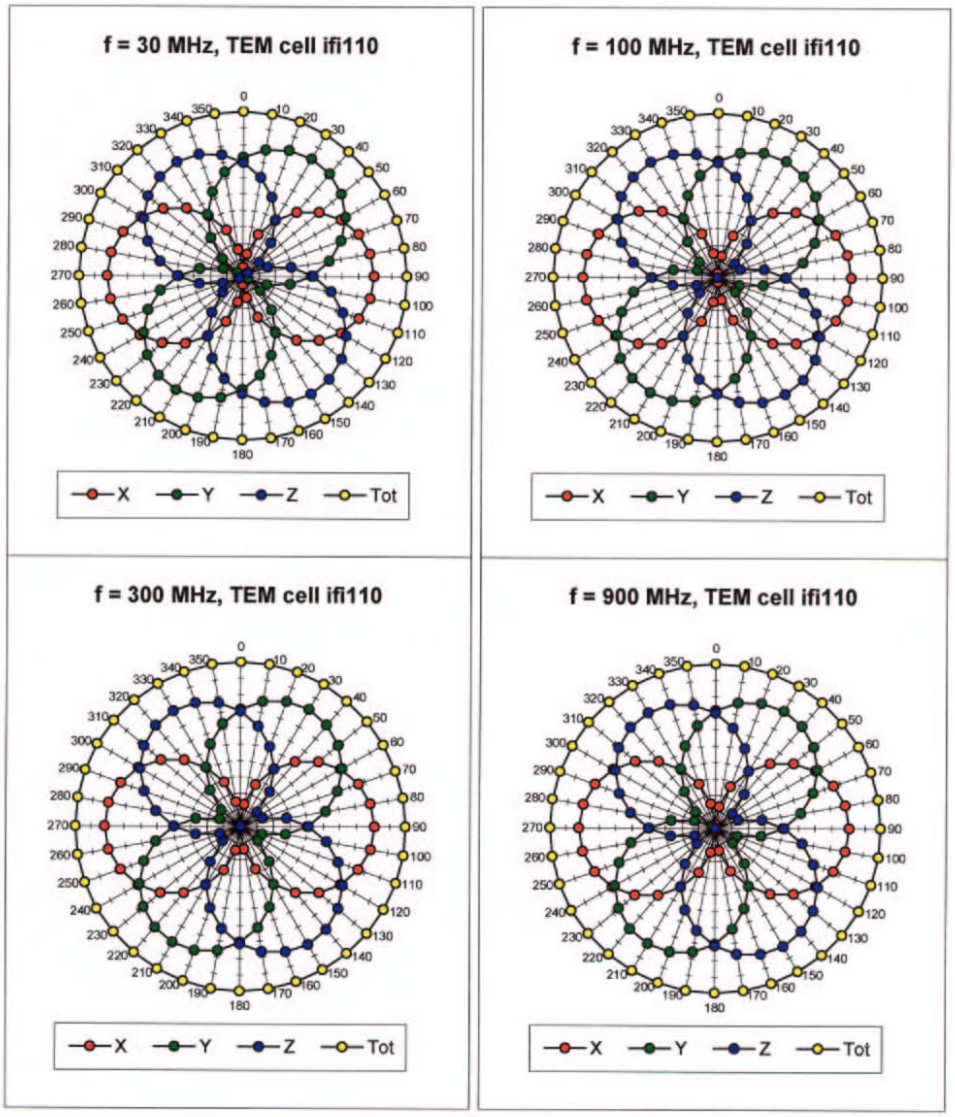
Probe Tip to Boundary		**1 mm**	**2 mm**
SAR_{be} [%]	Without Correction Algorithm	11.8	8.4
SAR_{be} [%]	With Correction Algorithm	0.4	0.2

Sensor Offset

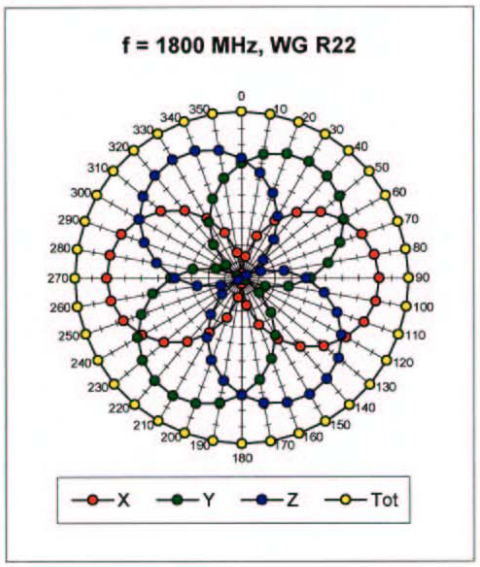
Probe Tip to Sensor Center	**2.7**	mm
Optical Surface Detection	**1.6 ± 0.2**	mm

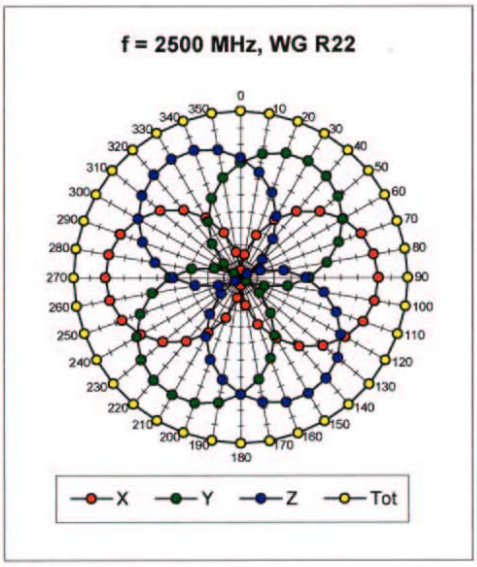
ET3DV6 SN:1685 October 10, 2003

Receiving Pattern (ϕ , θ = 0°

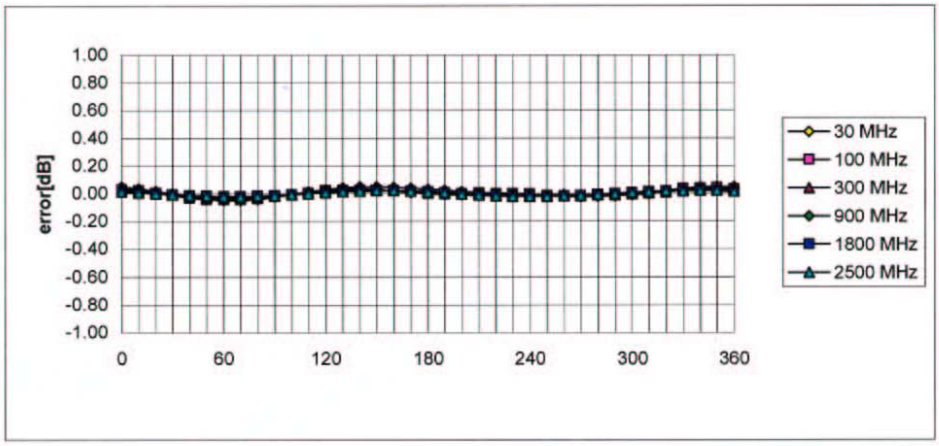


ET3DV6 SN:1685 October 10, 2003





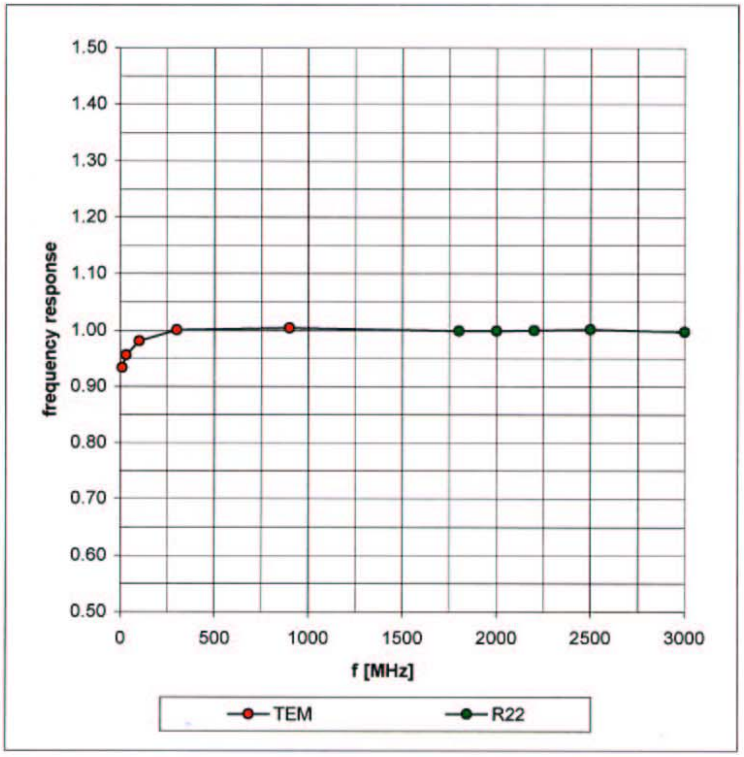
Isotropy Error (ϕ), θ = 0°



ET3DV6 SN:1685 October 10, 2003

Frequency Response of E-Field

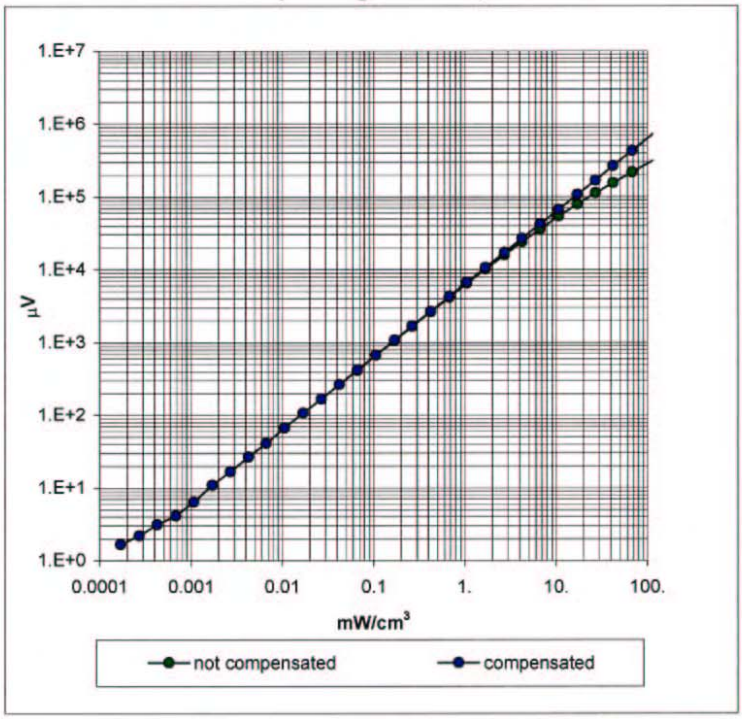
(TEM-Cell:ifi110, Waveguide R22)

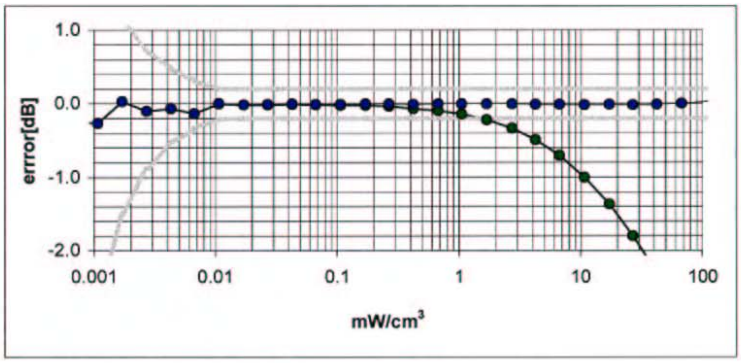


ET3DV6 SN:1685 October 10, 2003

Dynamic Range f(SAR_{brain})

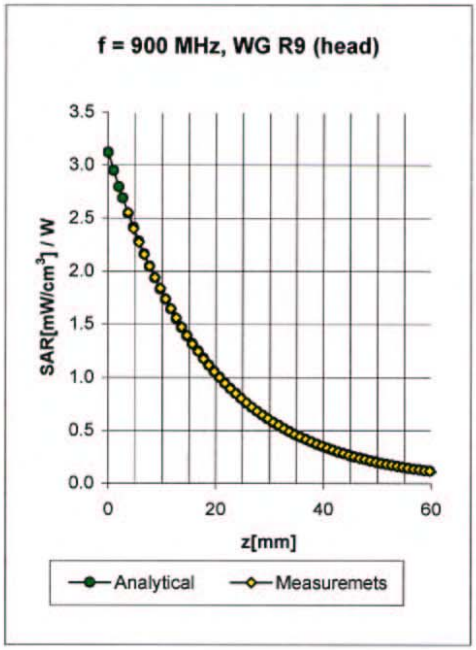
(Waveguide R22)

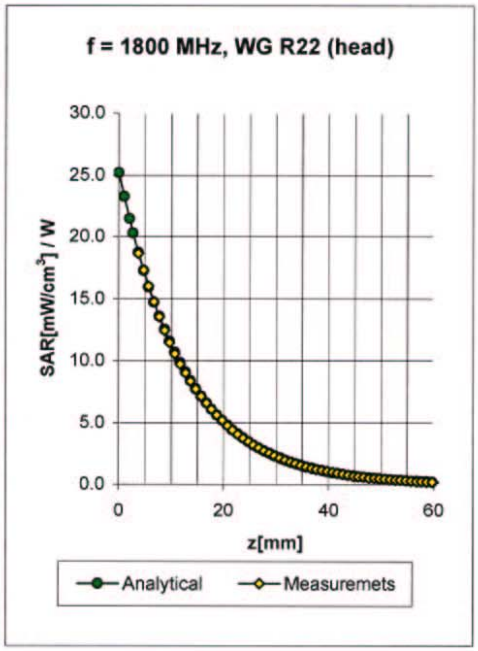




ET3DV6 SN:1685 October 10, 2003

Conversion Factor Assessment





Head	900 MHz	ε_r = 41.5 ± 5%	σ = 0.97 ± 5% mho/m

Valid for f=800-1000 MHz with Head Tissue Simulating Liquid according to EN 50361, P1528-200X

ConvF X	**6.6**	± 9.5% (k=2)	Boundary effect:	
ConvF Y	**6.6**	± 9.5% (k=2)	Alpha	**0.26**
ConvF Z	**6.6**	± 9.5% (k=2)	Depth	**3.07**

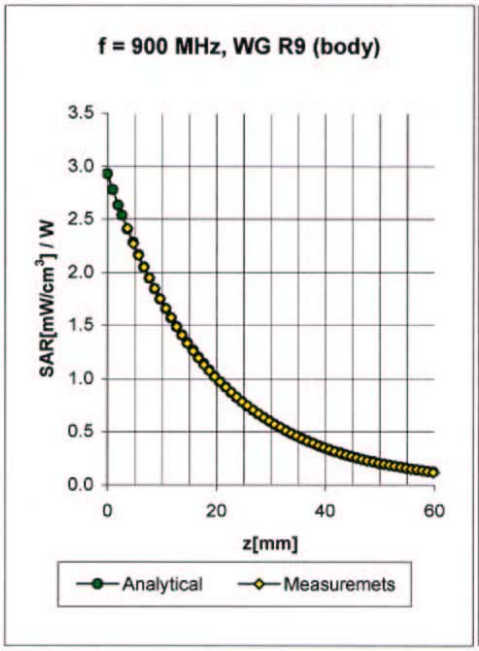
Head	1800 MHz	ε_r = 40.0 ± 5%	σ = 1.40 ± 5% mho/m

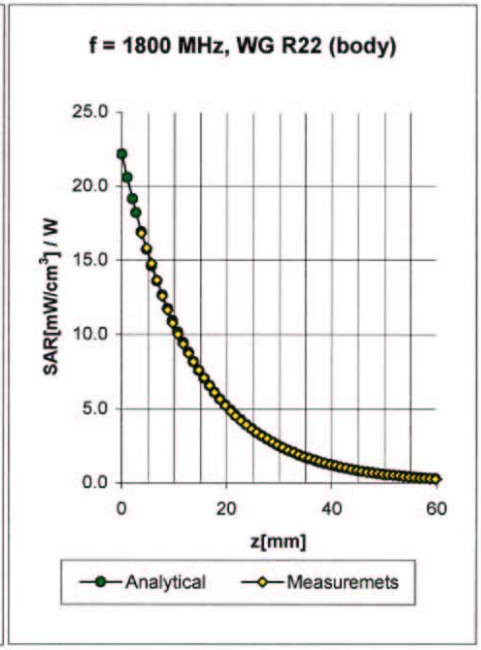
Valid for f=1710-1910 MHz with Head Tissue Simulating Liquid according to EN 50361, P1528-200X

ConvF X	**5.2**	± 9.5% (k=2)	Boundary effect:	
ConvF Y	**5.2**	± 9.5% (k=2)	Alpha	**0.41**
ConvF Z	**5.2**	± 9.5% (k=2)	Depth	**2.77**

ET3DV6 SN:1685 **October 10, 2003**

Conversion Factor Assessment





Body **900 MHz** ε_r **= 55.0 ± 5%** σ **= 1.05 ± 5% mho/m**

Valid for f=800-1000 MHz with Body Tissue Simulating Liquid according to OET 65 Suppl. C

ConvF X	**6.4** ± 9.5% (k=2)	Boundary effect:	
ConvF Y	**6.4** ± 9.5% (k=2)	Alpha	**0.27**
ConvF Z	**6.4** ± 9.5% (k=2)	Depth	**3.22**

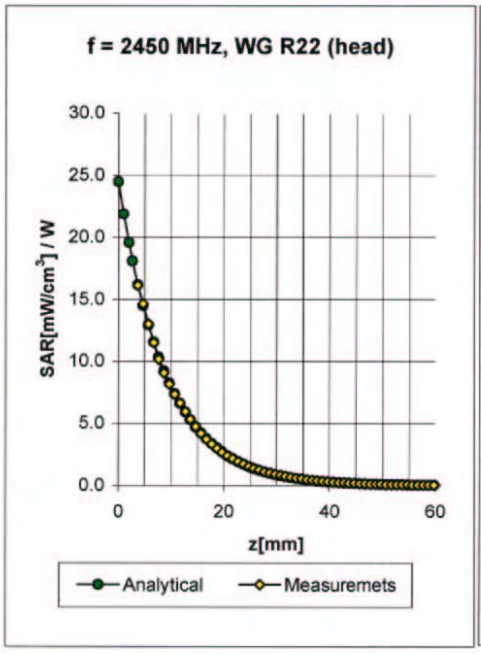
Body **1800 MHz** ε_r **= 53.3 ± 5%** σ **= 1.52 ± 5% mho/m**

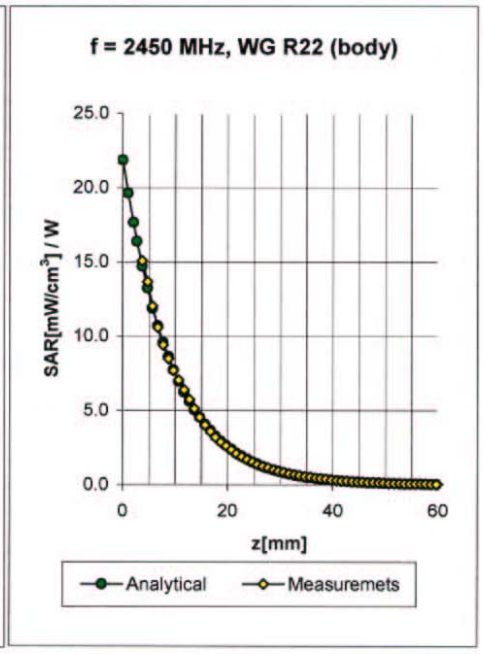
Valid for f=1710-1910 MHz with Body Tissue Simulating Liquid according to OET 65 Suppl. C

ConvF X	**4.7** ± 9.5% (k=2)	Boundary effect:	
ConvF Y	**4.7** ± 9.5% (k=2)	Alpha	**0.48**
ConvF Z	**4.7** ± 9.5% (k=2)	Depth	**2.94**

ET3DV6 SN:1685 **October 10, 2003**

Conversion Factor Assessment





Head **2450 MHz** ε_r **= 39.2 ± 5%** σ **= 1.80 ± 5% mho/m**

Valid for f=2400-2500 MHz with Head Tissue Simulating Liquid according to EN 50361, P1528-200X

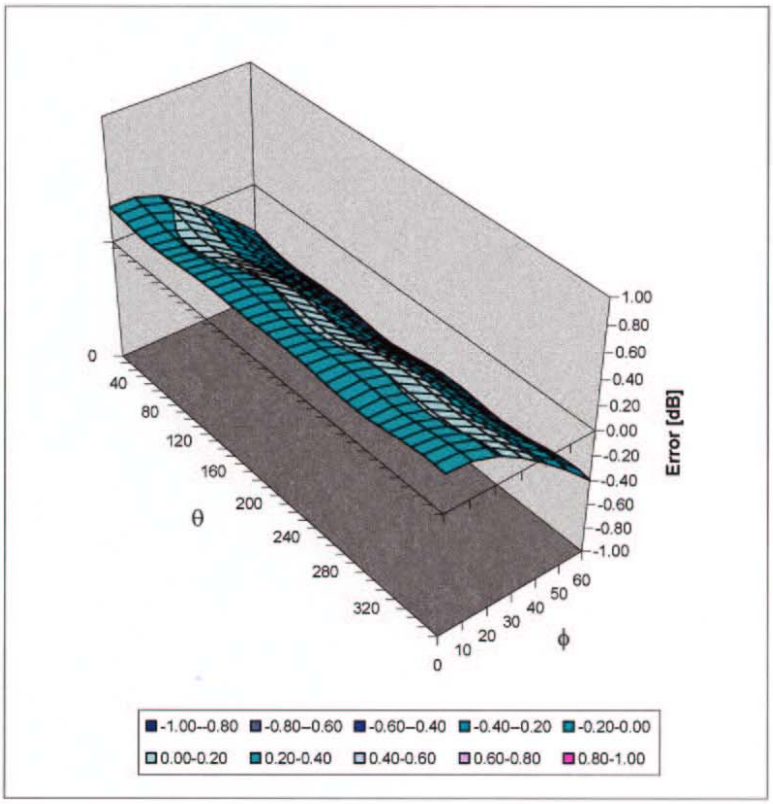
ConvF X	**4.7** ± 9.5% (k=2)	Boundary effect:	
ConvF Y	**4.7** ± 9.5% (k=2)	Alpha	**0.78**
ConvF Z	**4.7** ± 9.5% (k=2)	Depth	**2.04**

Body **2450 MHz** ε_r **= 52.7 ± 5%** σ **= 1.95 ± 5% mho/m**

Valid for f=2400-2500 MHz with Body Tissue Simulating Liquid according to OET 65 Suppl. C

ConvF X	**4.3** ± 9.5% (k=2)	Boundary effect:	
ConvF Y	**4.3** ± 9.5% (k=2)	Alpha	**0.80**
ConvF Z	**4.3** ± 9.5% (k=2)	Depth	**1.89**

ET3DV6 SN:1685 October 10, 2003

Deviation from Isotropy in HSL

Error (θϕ), f = 900 MHz