Validation for HEAD

Date: 8/11/2010

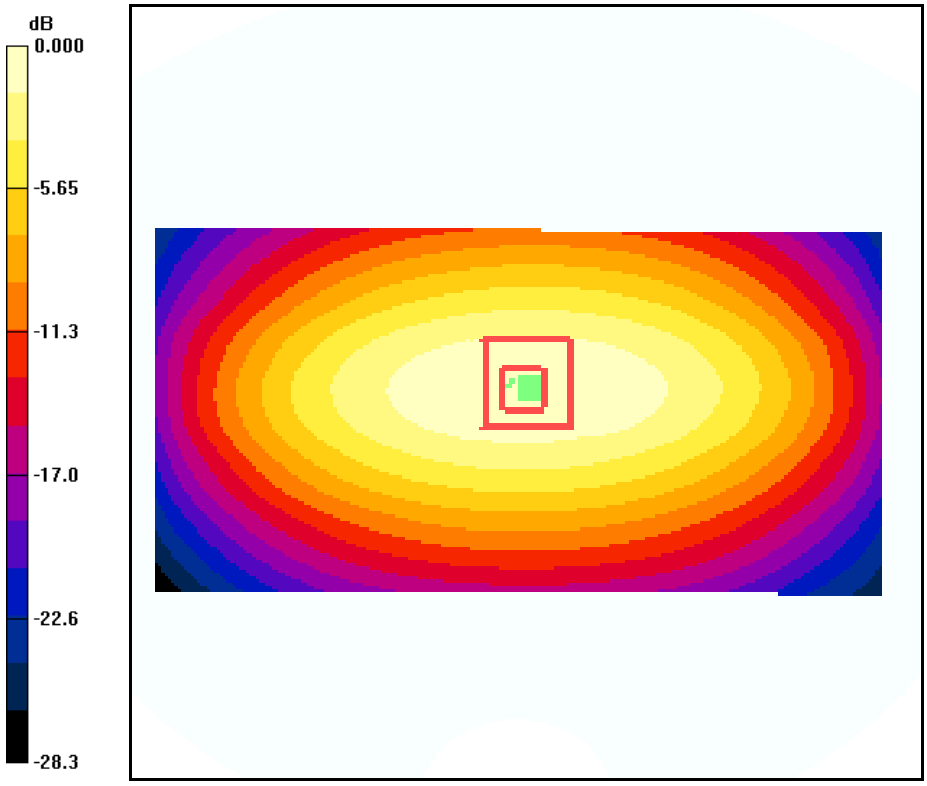
Test Laboratory: Comptest/Kyocera

835MHz Validation @ 20dbm, Probe #1663, DAE#675, Dipole #019, 081110

Communication System: CDMA, Frequency: 835 MHz, Duty Cycle: 1:1
Medium: Head 835 MHz,Medium parameters used (interpolated): f = 835 MHz; σ = 0.9 mho/m; ε_r = 41.1; ρ = 1000 kg/m^3
Phantom: SAM 12,Phantom section: Flat Section
DASY4 Configuration:
Probe: ET3DV6 - SN1663, ConvF(6.44, 6.44, 6.44), Calibrated: 9/10/2009
Sensor-Surface: 4mm (Mechanical Surface Detection),
Electronics: DAE4 Sn675,Calibrated: 4/21/2010
Measurement SW: DASY4, V4.7 Build 80
Postprocessing SW: SEMCAD, V1.8 Build 186
Temperature: Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

835MHz Validation/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.07 mW/g

835MHz Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.3 V/m; Power Drift = 0.012 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.981 mW/g; SAR(10 g) = 0.644 mW/g
Maximum value of SAR (measured) = 1.06 mW/g



0 dB = 1.07mW/g

Date: 8/12/2010

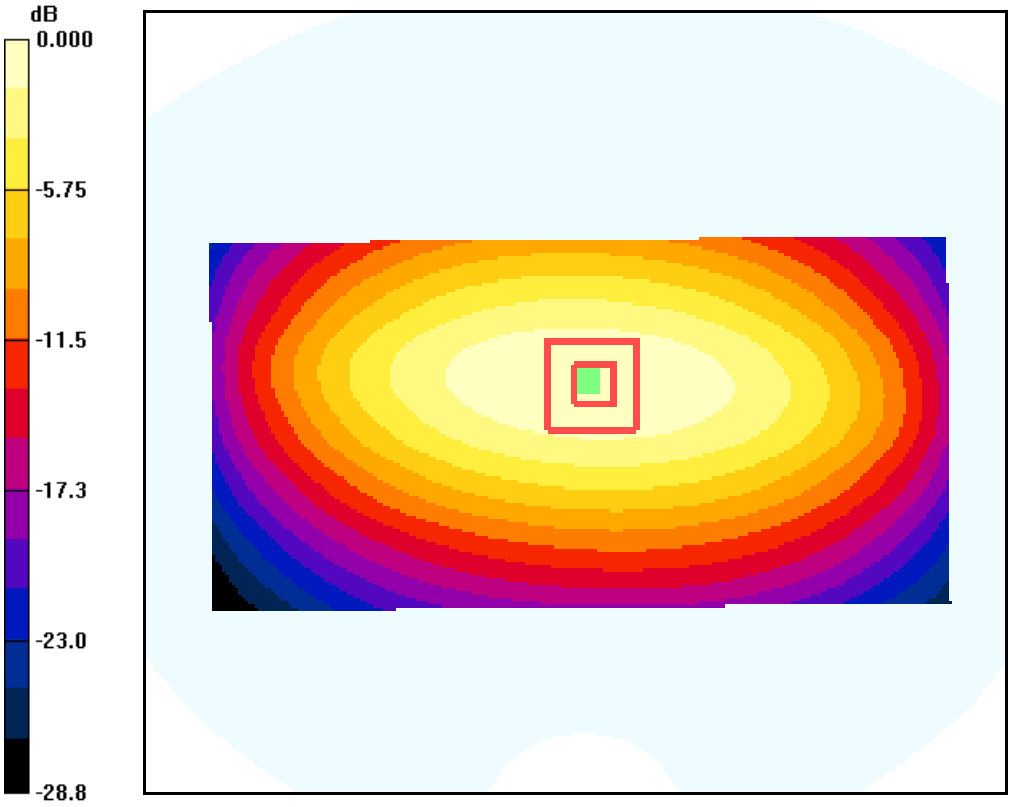
Test Laboratory: Comptest/Kyocera

835MHz Validation @ 20dbm, Probe #1663, DAE#675, Dipole #019, 081210

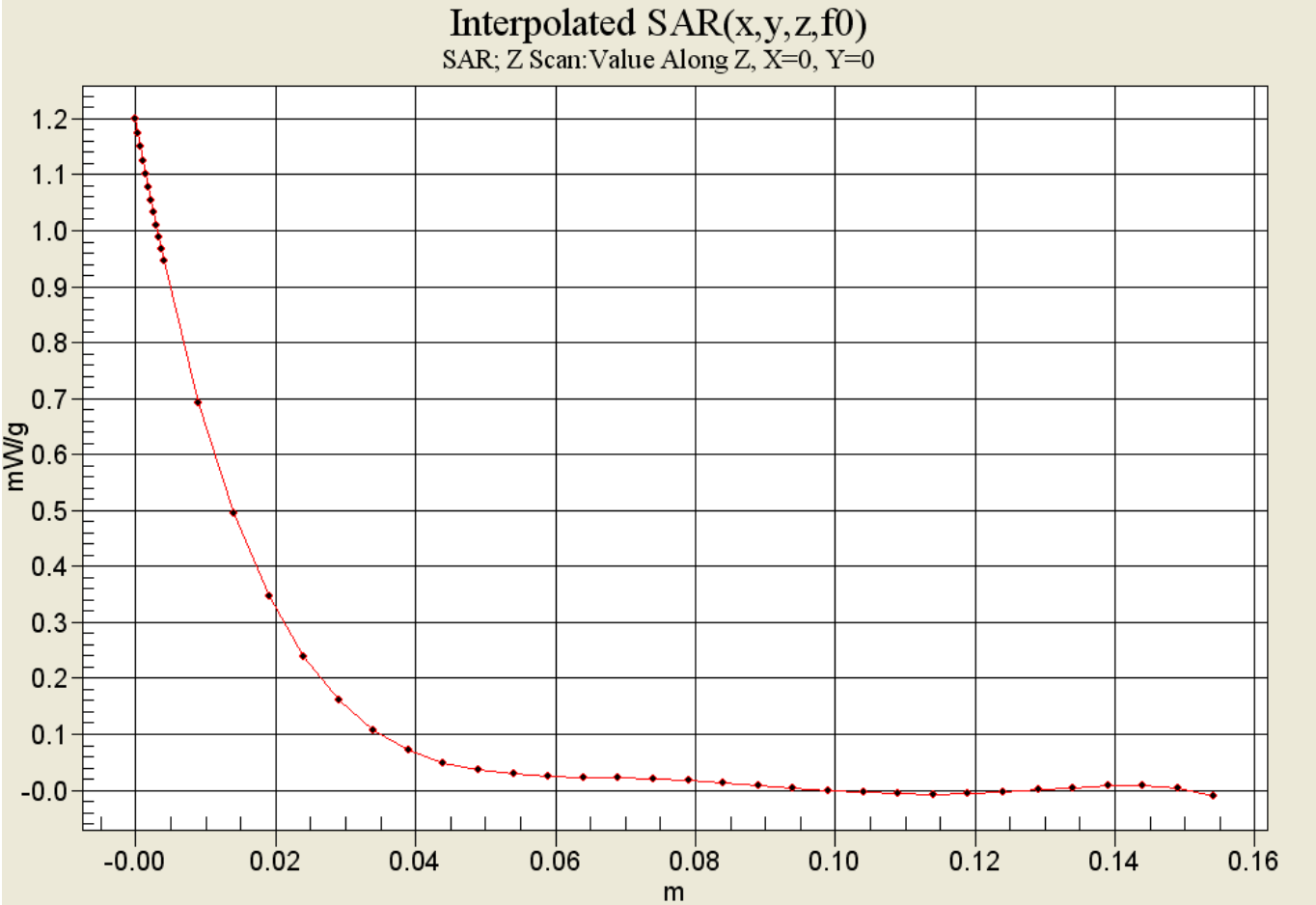
Communication System: CDMA, Frequency: 835 MHz, Duty Cycle: 1:1
Medium: Head 835 MHz,Medium parameters used (interpolated): f = 835 MHz; σ = 0.9 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom: SAM 12,Phantom section: Flat Section
DASY4 Configuration:
Probe: ET3DV6 - SN1663, ConvF(6.44, 6.44, 6.44), Calibrated: 9/10/2009
Sensor-Surface: 4mm (Mechanical Surface Detection),
Electronics: DAE4 Sn675,Calibrated: 4/21/2010
Measurement SW: DASY4, V4.7 Build 80
Postprocessing SW: SEMCAD, V1.8 Build 186
Temperature: Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

835MHz Validation/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.05 mW/g

835MHz Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.4 V/m; Power Drift = 0.096 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.976 mW/g; SAR(10 g) = 0.638 mW/g
Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.05mW/g



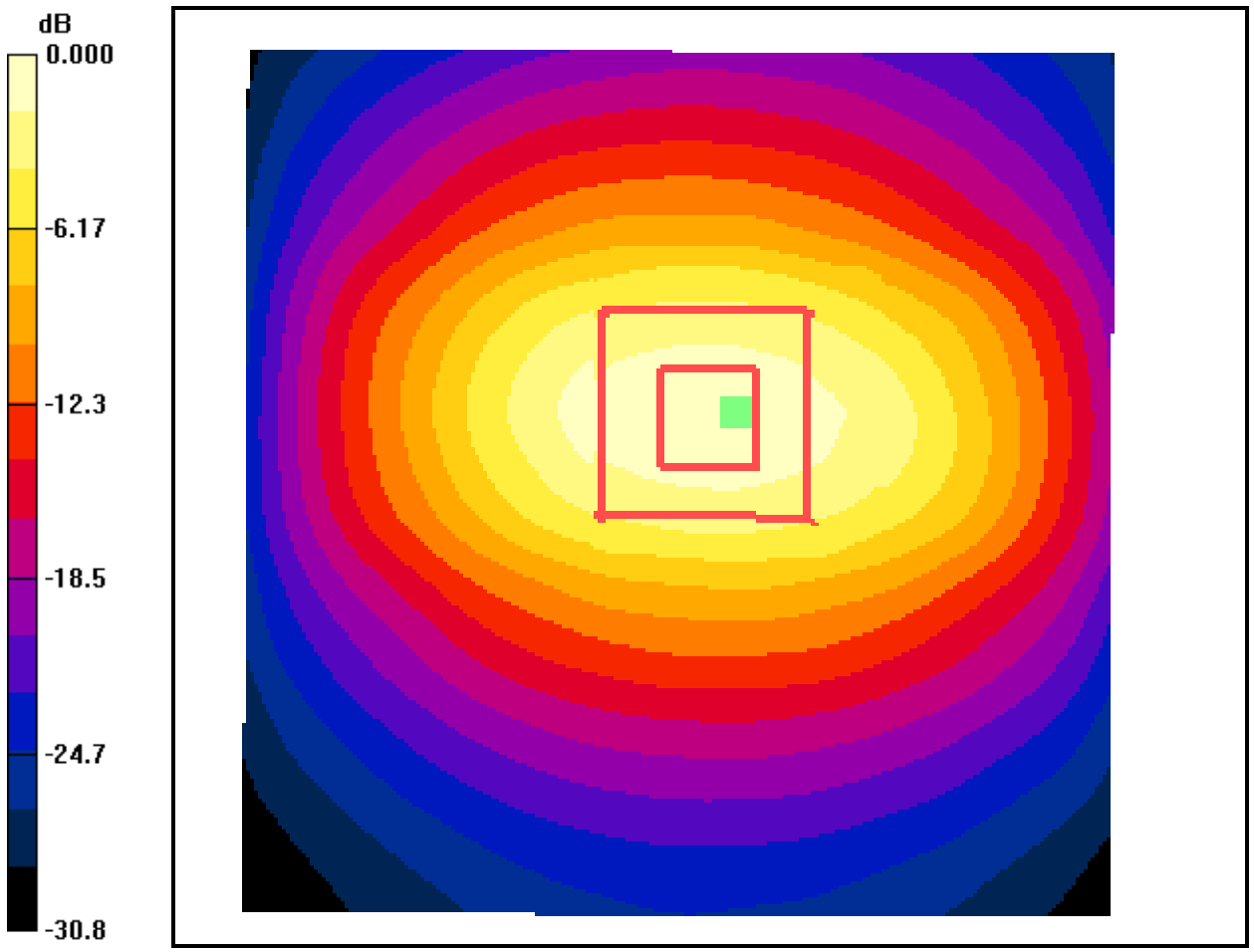
Test Laboratory: Comptest/Kyocera

1900Mhz Validation @ 20dBm Probe 1663, DAE 675 and Dipole 5d016, 081610

Communication System: CW, Frequency: 1900 MHz, Duty Cycle: 1:1
Medium: HSL1900,Medium parameters used (interpolated): f = 1900 MHz; σ = 1.38 mho/m; ε_r = 39.6; ρ = 1000 kg/m^3
Phantom: SAM 12,Phantom section: Flat Section
DASY4 Configuration:
Probe: ES3DV3 - SN3036, ConvF(4.92, 4.92, 4.92), Calibrated: 8/20/2009
Sensor-Surface: 4mm (Mechanical Surface Detection),
Electronics: DAE4 Sn675,Calibrated: 4/21/2010
Measurement SW: DASY4, V4.7 Build 80
Postprocessing SW: SEMCAD, V1.8 Build 186
Temperature: Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

1900MHz Validation @20dBm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 5.01 mW/g

1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.1 V/m; Power Drift = -0.082 dB
Peak SAR (extrapolated) = 7.14 W/kg
SAR(1 g) = 3.99 mW/g; SAR(10 g) = 2.11 mW/g
Maximum value of SAR (measured) = 4.43 mW/g



0 dB = 5.01mW/g

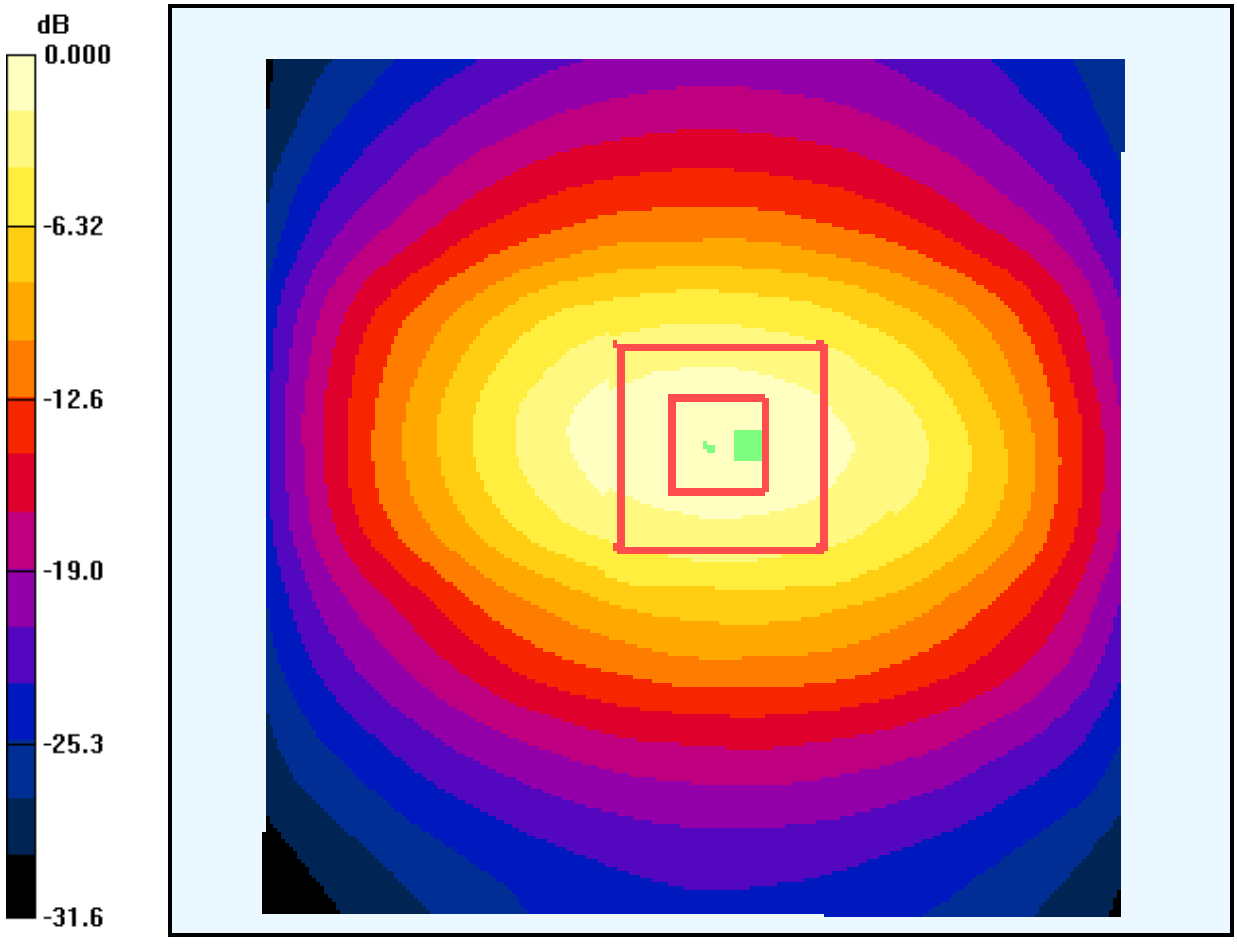
Test Laboratory: Comptest/Kyocera

1900Mhz Validation @ 20dBm Probe 1663, DAE 675 and Dipole 5d016, 081710

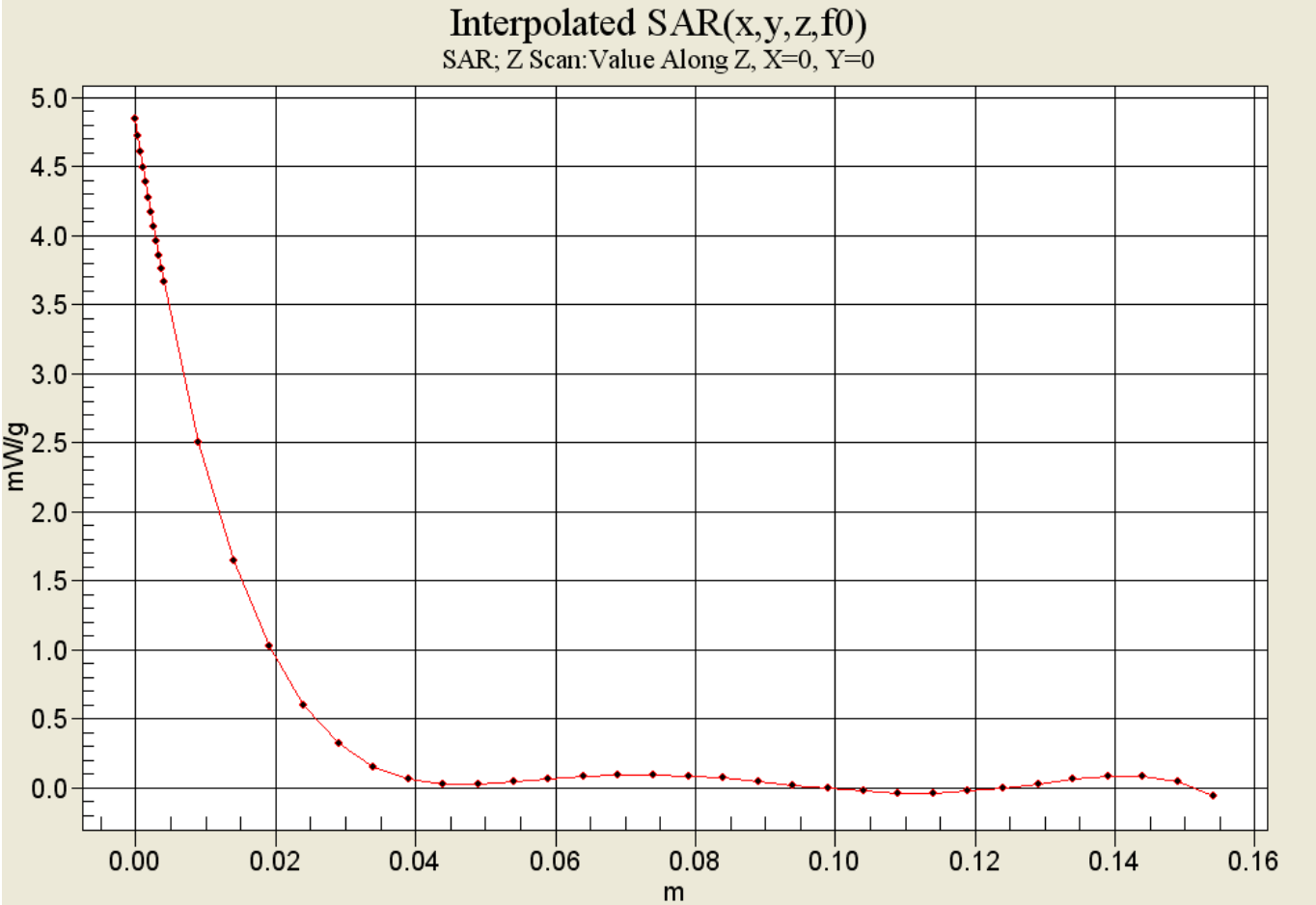
Communication System: CW, Frequency: 1900 MHz, Duty Cycle: 1:1
Medium: HSL1900,Medium parameters used (interpolated): f = 1900 MHz; σ = 1.39 mho/m; ε_r = 41.3; ρ = 1000 kg/m^3
Phantom: SAM 12,Phantom section: Flat Section
DASY4 Configuration:
Probe: ET3DV6 - SN1663, ConvF(5.12, 5.12, 5.12), Calibrated: 9/10/2009
Sensor-Surface: 4mm (Mechanical Surface Detection),
Electronics: DAE4 Sn675,Calibrated: 4/21/2010
Measurement SW: DASY4, V4.7 Build 80
Postprocessing SW: SEMCAD, V1.8 Build 186
Temperature: Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

1900MHz Validation @20dBm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.81 mW/g

1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.6 V/m; Power Drift = 0.081 dB
Peak SAR (extrapolated) = 6.43 W/kg
SAR(1 g) = 3.88 mW/g; SAR(10 g) = 2.09 mW/g
Maximum value of SAR (measured) = 4.41 mW/g



0 dB = 4.81mW/g



Validation for BODY

Date: 8/19/2010

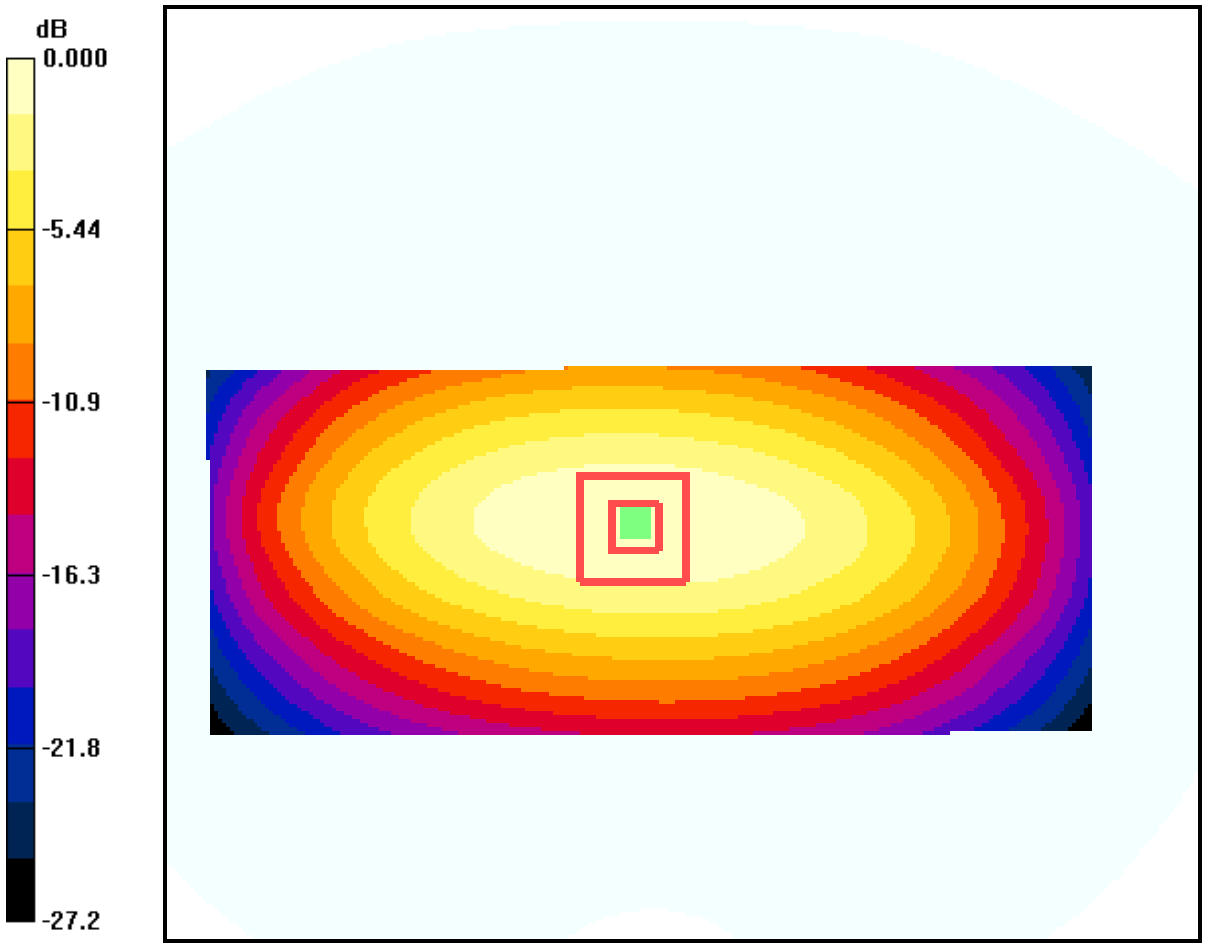
Test Laboratory: Comptest/Kyocera

E4100 835MHz Validation (in Muscle), Probe #3078, DAE #602, Dipole #4d019_081910

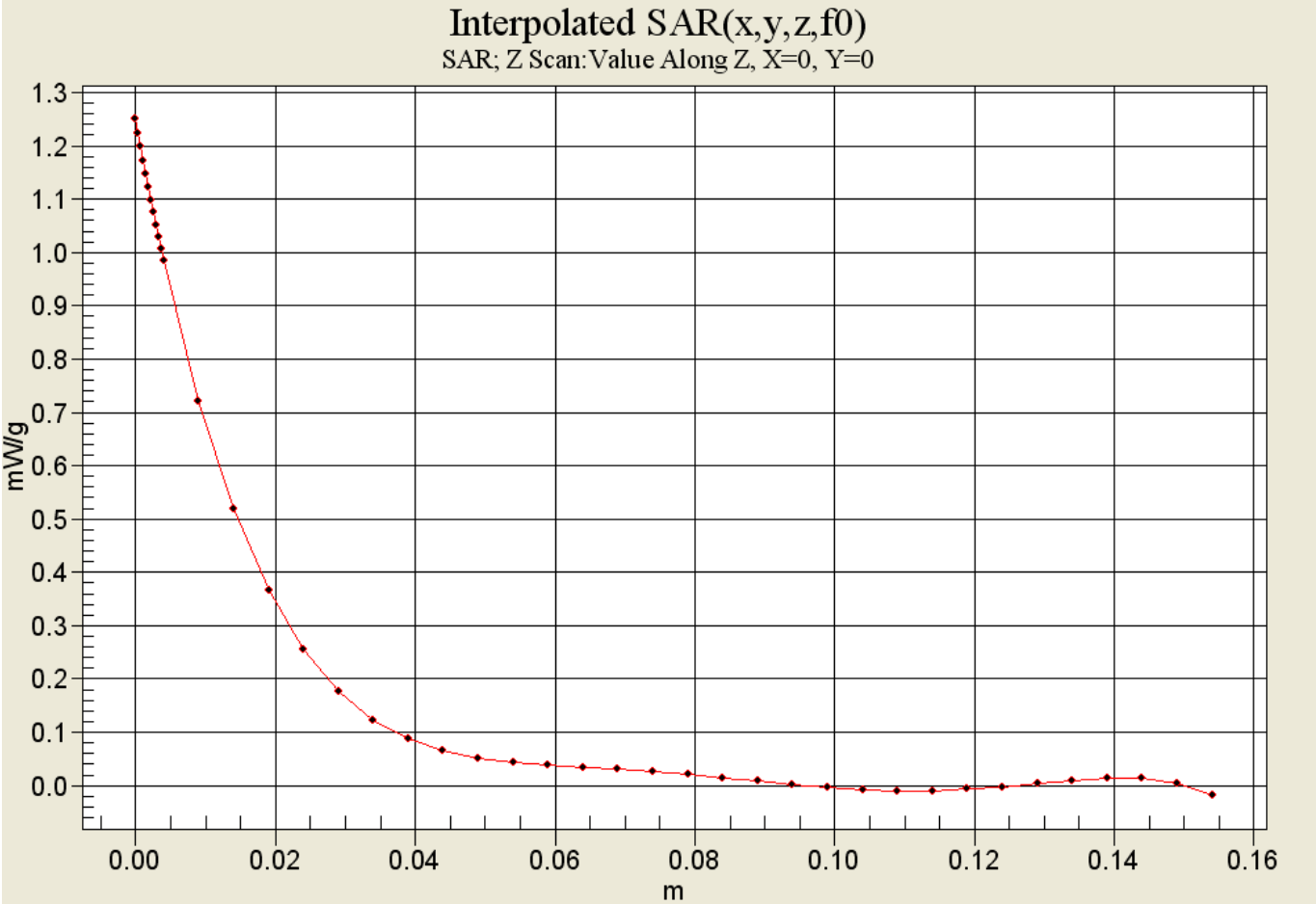
Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1
Medium: M900,Medium parameters used: f = 835 MHz; σ = 0.95 mho/m; ε_r = 55.2; ρ = 1000 kg/m^3
Phantom: SAM 12,Phantom section: Flat Section
DASY4 Configuration:
Probe: ES3DV3 - SN3078, ConvF(5.82, 5.82, 5.82), Calibrated: 7/14/2010
Sensor-Surface: 4mm (Mechanical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 7/14/2010
Measurement SW: DASY4, V4.7 Build 80
Postprocessing SW: SEMCAD, V1.8 Build 186
Temperature: Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

835MHz/Area Scan (51x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.03 mW/g

835MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.0 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.953 mW/g; SAR(10 g) = 0.631 mW/g
Maximum value of SAR (measured) = 1.03 mW/g



0 dB = 1.03mW/g



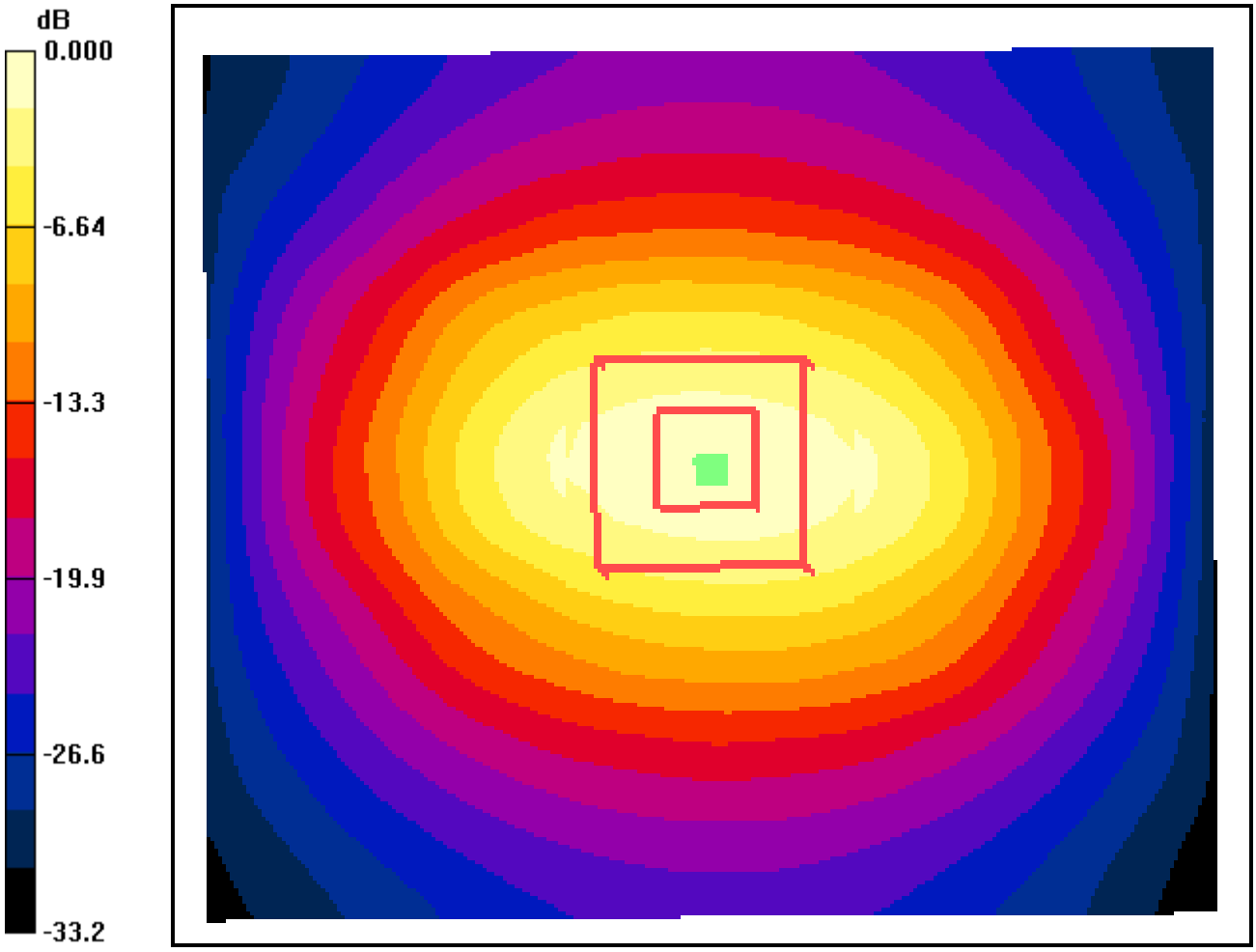
Test Laboratory: Comptest/Kyocera

E4100 1900MHz Validation (in Muscle), Probe #1663, DAE #675, Dipole #5d016_081810

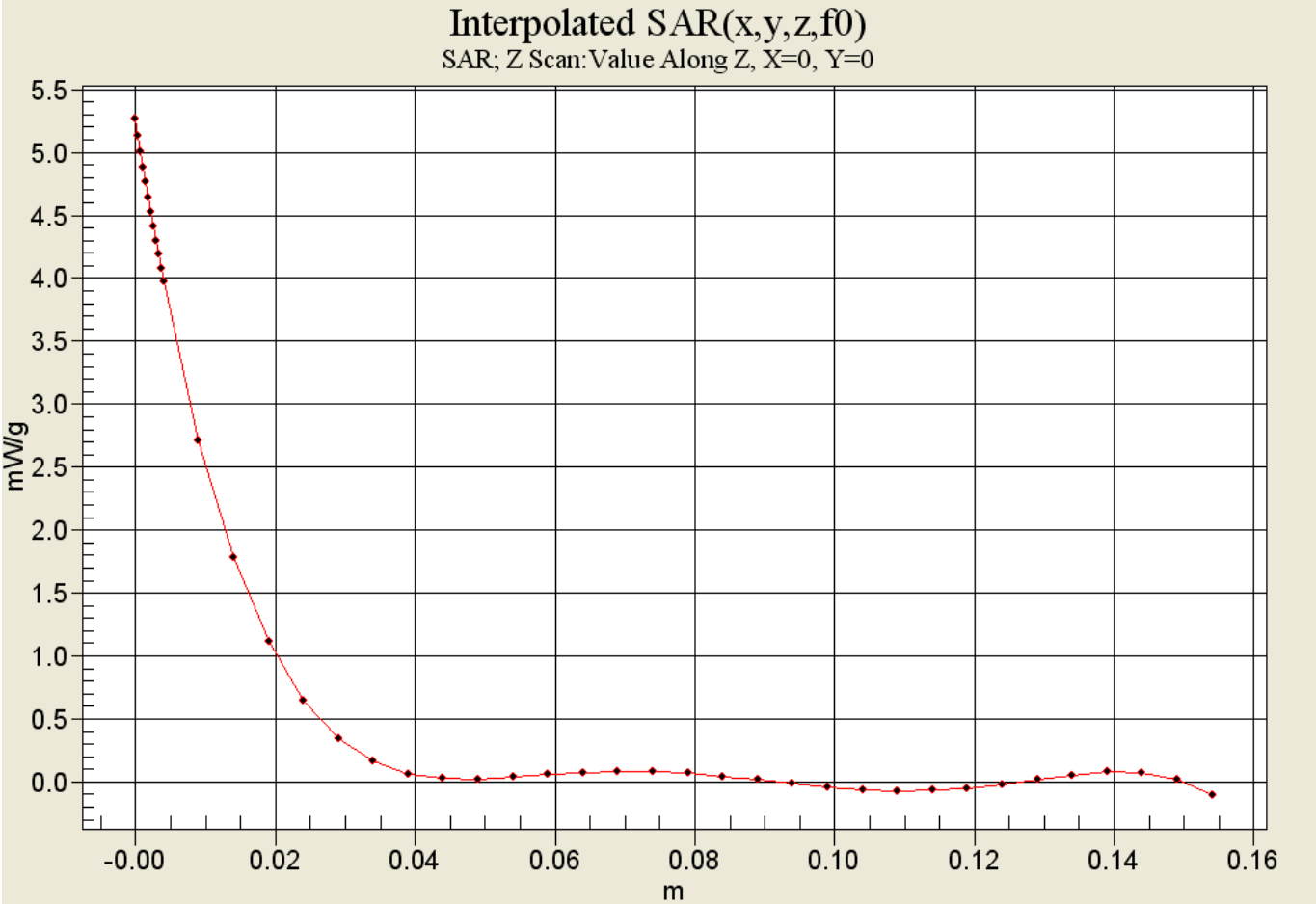
Communication System: CW, Frequency: 1900 MHz, Duty Cycle: 1:1
Medium: M1900,Medium parameters used (interpolated): f = 1900 MHz; σ = 1.51 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom: SAM 12,Phantom section: Flat Section
DASY4 Configuration:
Probe: ET3DV6 - SN1663, ConvF(4.55, 4.55, 4.55), Calibrated: 9/10/2009
Sensor-Surface: 4mm (Mechanical Surface Detection),
Electronics: DAE4 Sn675,Calibrated: 4/21/2010
Measurement SW: DASY4, V4.7 Build 80
Postprocessing SW: SEMCAD, V1.8 Build 186
Temperature: Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

1900MHz Validation @20dBm/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 4.94 mW/g

1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 60.6 V/m; Power Drift = 0.051 dB
Peak SAR (extrapolated) = 5.57 W/kg
SAR(1 g) = 3.92 mW/g; SAR(10 g) = 2.19 mW/g
Maximum value of SAR (measured) = 4.48 mW/g



0 dB = 4.94mW/g



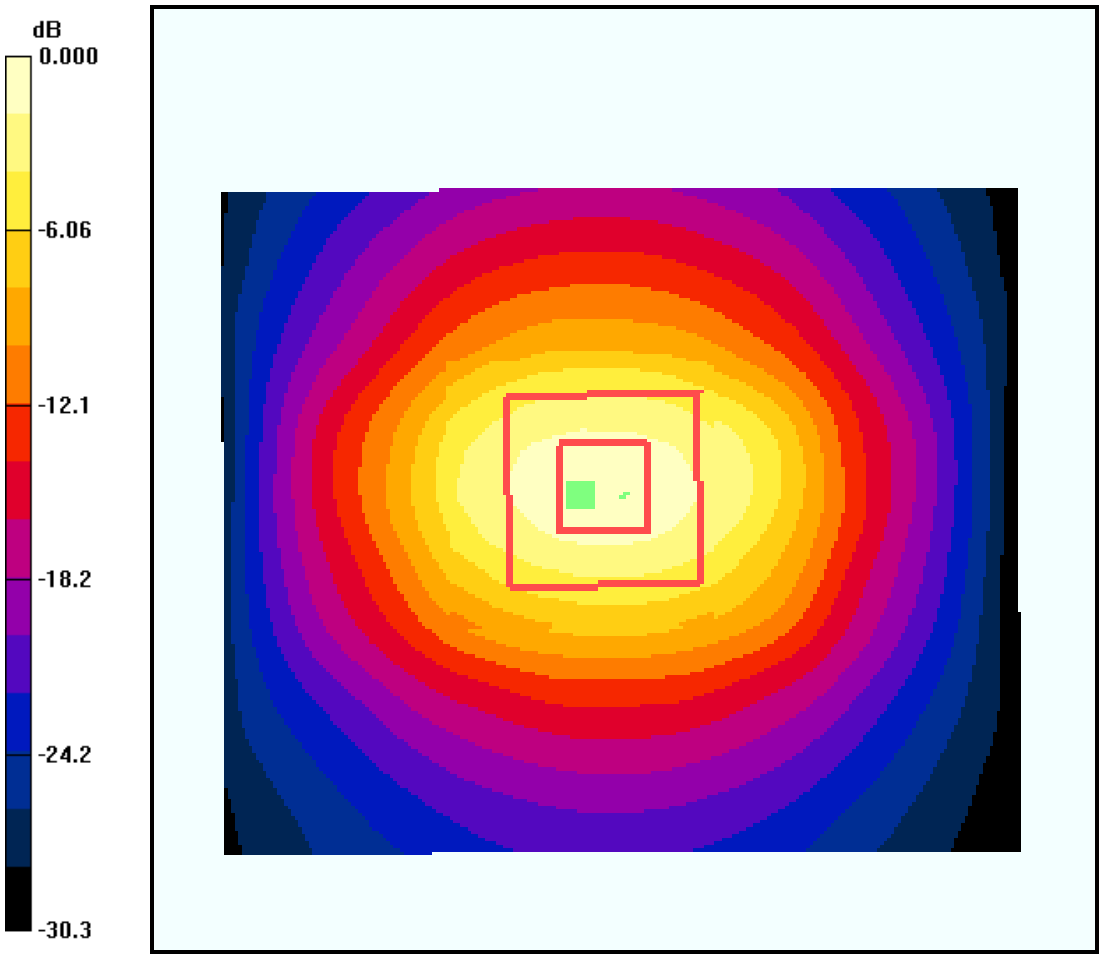
Test Laboratory: Comptest/Kyocera

E4100 2450MHz Validation (Muscle), Probe 3078, DAE 602 and Dipole 776, 090210

Communication System: CW, Frequency: 2450 MHz, Duty Cycle: 1:1
Medium: M2450,Medium parameters used: f = 2450 MHz; σ = 2.02 mho/m; ε_r = 50.3; ρ = 1000 kg/m^3
Phantom: SAM 12,Phantom section: Flat Section
DASY4 Configuration:
Probe: ES3DV3 - SN3078, ConvF(4.18, 4.18, 4.18), Calibrated: 7/14/2010
Sensor-Surface: 4mm (Mechanical Surface Detection),
Electronics: DAE4 Sn602,Calibrated: 7/14/2010
Measurement SW: DASY4, V4.7 Build 80
Postprocessing SW: SEMCAD, V1.8 Build 186
Temperature: Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

2450MHz Validation @20dBm/Area Scan (51x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 6.49 mW/g

2450MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.3 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 11.0 W/kg
SAR(1 g) = 5.18 mW/g; SAR(10 g) = 2.35 mW/g
Maximum value of SAR (measured) = 5.83 mW/g



0 dB = 6.49mW/g