

Applicant:	Kyocera
FCC ID:	OVF-K5502
IC#:	3572A-S2100
Report #:	CT-K5502-9A-1210-R0

EXHIBIT 9 APPENDIX A: SAR VALIDATION PLOTS

Validation for HEAD



Applicant:	Kyocera
FCC ID:	OVF-K5502
IC#:	3572A-S2100
Report #:	CT-K5502-9A-1210-R0

Test Laboratory: Comptest/Kyocera Date: 12/14/2010

835MHz Validation @ 20dbm, Probe #1618, DAE#530, Dipole #4d019

Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1

Medium: Head 835 MHz, Medium parameters used: f = 835 MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1618, ConvF(6.52, 6.52, 6.52), Calibrated: 8/11/2010

Sensor-Surface: 4mm (Mechanical Surface Detection),

Electronics: DAE4 Sn530, Calibrated: 4/23/2010 Measurement SW: DASY4, V4.7 Build 80 Postprocessing SW: SEMCAD, V1.8 Build 176

Temperature:

Room T = $21.\tilde{8}$ 1 deg C, Liquid T = $22.\tilde{0}$ 1 deg C

835MHz Validation/Area Scan (61x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.05 mW/g

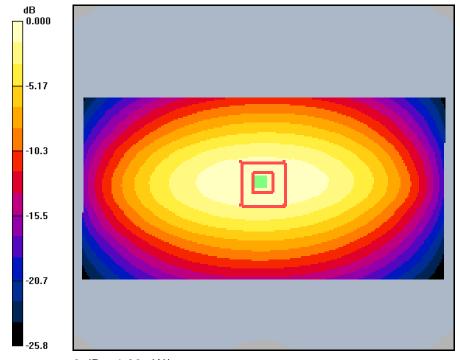
835MHz Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 35.3 V/m; Power Drift = -0.100 dB

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.977 mW/g; SAR(10 g) = 0.637 mW/g

Maximum value of SAR (measured) = 1.06 mW/g



0 dB = 1.06 mW/g



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Test Laboratory: Comptest/Kyocera Date: 12/15/2010

835MHz Validation @ 20dbm, Probe #1618, DAE#530, Dipole #4d019

Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1

Medium: Head 835 MHz, Medium parameters used: f = 835 MHz; $\sigma = 0.91$ mho/m; $\varepsilon_r = 41.7$; $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1618, ConvF(6.52, 6.52, 6.52), Calibrated: 8/11/2010

Sensor-Surface: 4mm (Mechanical Surface Detection),

Electronics: DAE4 Sn530, Calibrated: 4/23/2010 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

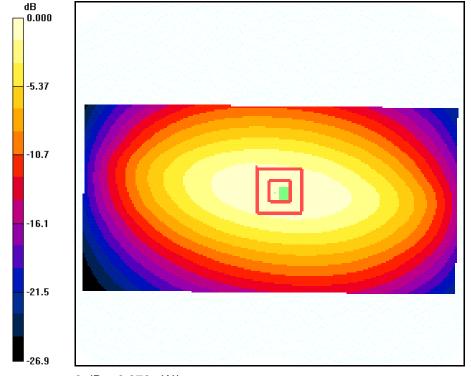
Maximum value of SAR (interpolated) = 0.986 mW/g

835MHz Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 33.4 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 1.33 W/kg

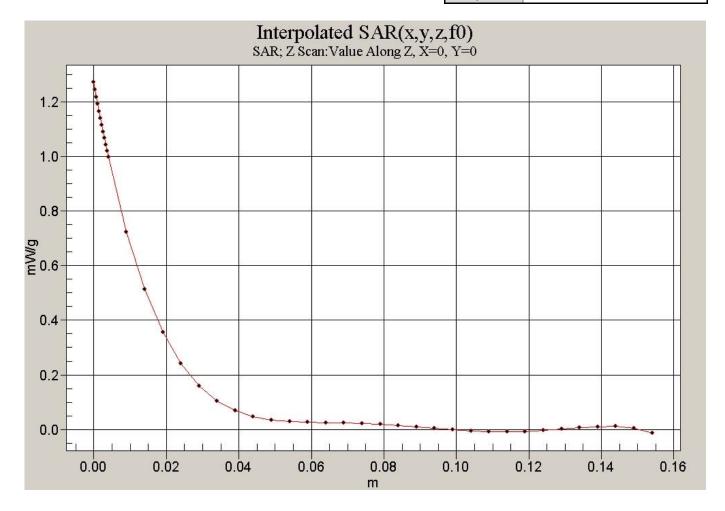
SAR(1 g) = 0.901 mW/g; SAR(10 g) = 0.586 mW/g Maximum value of SAR (measured) = 0.976 mW/g



0 dB = 0.976 mW/g



A months and to	Vyocoro
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Test Laboratory: Comptest/Kyocera Date: 01/04/2011

1800MHz Validation, Probe #3078 DAE #602, Dipole #220

Communication System: CW 1800Mhz, Frequency: 1800 MHz, Duty Cycle: 1:1

Medium: H1800, Medium parameters used: f = 1800 MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3078, ConvF(4.97, 4.97, 4.97), 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 = $21.\tilde{8}$ 1 deg C, Liquid T = $22.\tilde{0}$ 1 deg C

1800Mhz/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 4.79 mW/g

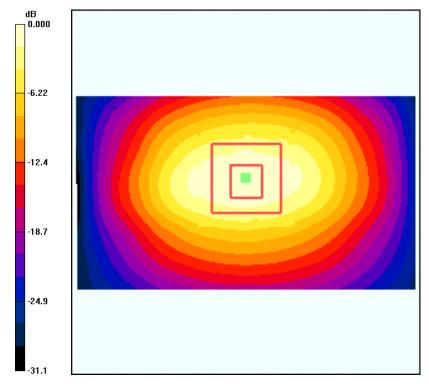
1800Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.5 V/m; Power Drift = -0.116 dB

Peak SAR (extrapolated) = 7.65 W/kg

SAR(1 g) = 3.99 mW/g; SAR(10 g) = 2.03 mW/g

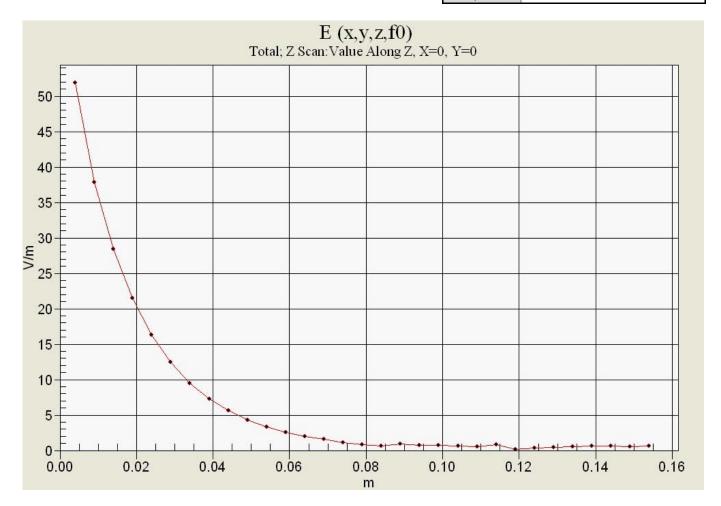
Maximum value of SAR (measured) = 4.52 mW/g



0 dB = 4.52 mW/g



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Test Laboratory: Comptest/Kyocera Date: 12/15/2010

1900Mhz Validation @ 20dBm Probe 3035, DAE 675 and Dipole 5d016

Communication System: CW, Frequency: 1900 MHz, Duty Cycle: 1:1

Medium: HSL1900, Medium parameters used (interpolated): f = 1900 MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.7$; $\rho = 1000$

kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3035, ConvF(5, 5, 5), Calibrated: 9/9/2010

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 176

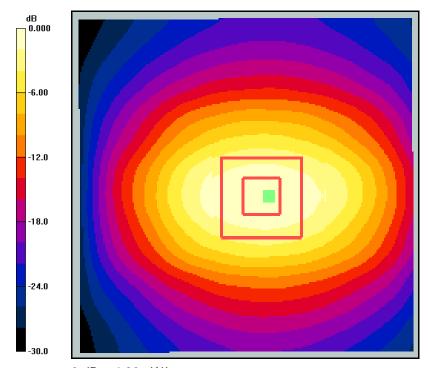
Temperature:

Room T = $21.\tilde{8}$ 1 deg C, Liquid T = $22.\tilde{0}$ 1 deg C

1900MHz Validation @20dBm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 4.80 mW/g

1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 53.9 V/m; Power Drift = -0.136 dB Peak SAR (extrapolated) = 7.09 W/kg

SAR(1 g) = 3.87 mW/g; SAR(10 g) = 2.01 mW/g Maximum value of SAR (measured) = 4.29 mW/g



0 dB = 4.29 mW/g



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Report #:	CT-K5502-9A-1210-R0

Test Laboratory: Comptest/Kyocera Date: 12/20/2010

1900Mhz Validation @ 20dBm Probe 3035, DAE 675 and Dipole 5d016

Communication System: CW, Frequency: 1900 MHz, Duty Cycle: 1:1

Medium: HSL1900, Medium parameters used (interpolated): f = 1900 MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 38.2$; $\rho = 1000$

kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3035, ConvF(5, 5, 5), Calibrated: 9/9/2010

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 = $21.\tilde{8}$ 1 deg C, Liquid T = $22.\tilde{0}$ 1 deg C

1900MHz Validation @20dBm/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 5.06 mW/g

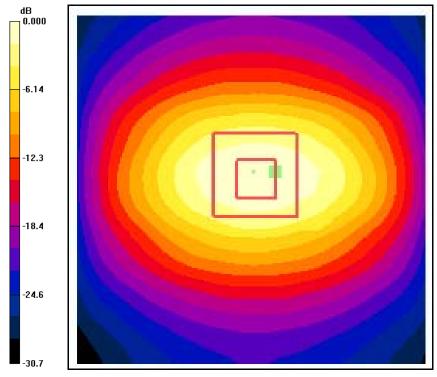
1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.0 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 7.64 W/kg

SAR(1 g) = 4.17 mW/g; SAR(10 g) = 2.17 mW/g

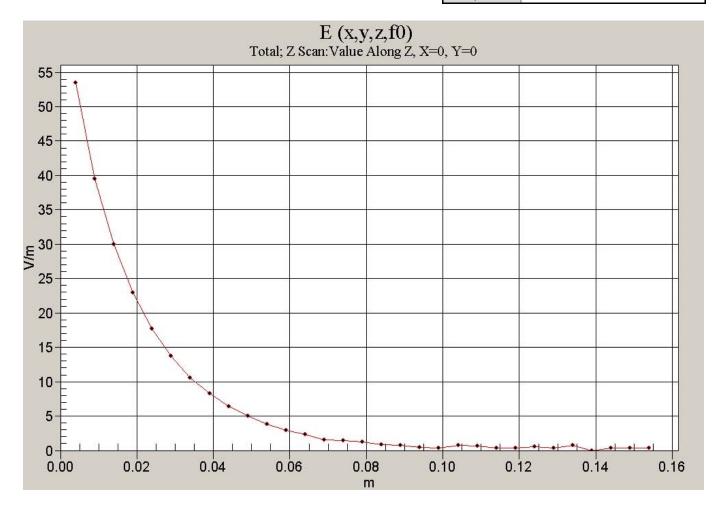
Maximum value of SAR (measured) = 4.68 mW/g



0 dB = 4.68 mW/g



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Validation for BODY



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Test Laboratory: Comptest/Kyocera Date: 12/15/2010

835MHz Validation (in Muscle), Probe #3078, DAE #602, Dipole #4d019

Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1

Medium: M800, Medium parameters used: f = 835 MHz; $\sigma = 0.95$ mho/m; $\varepsilon_r = 54.9$; $\rho = 1000$ kg/m³

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 = $21.\tilde{8}$ 1 deg C, Liquid T = $22.\tilde{0}$ 1 deg C

835MHz/Area Scan (51x121x1): Measurement grid: dx=15mm, dy=15mm

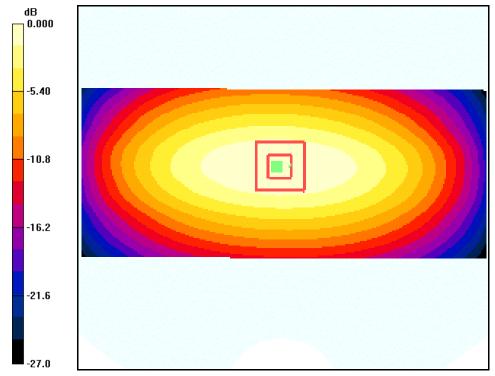
Maximum value of SAR (interpolated) = 1.02 mW/g

835MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 33.3 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 0.955 mW/g; SAR(10 g) = 0.632 mW/g Maximum value of SAR (measured) = 1.03 mW/g



0 dB = 1.03 mW/g



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Test Laboratory: Comptest/Kyocera Date: 12/16/2010

835MHz Validation (in Muscle), Probe #3078, DAE #602, Dipole #4d019

Communication System: CW, Frequency: 835 MHz, Duty Cycle: 1:1

Medium: M800, Medium parameters used: f = 835 MHz; σ = 0.95 mho/m; ϵ_r = 55; ρ = 1000 kg/m³

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 176

Temperature:

Room T = $21.\tilde{8}$ 1 deg C, Liquid T = $22.\tilde{0}$ 1 deg C

835MHz/Area Scan (51x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.04 mW/g

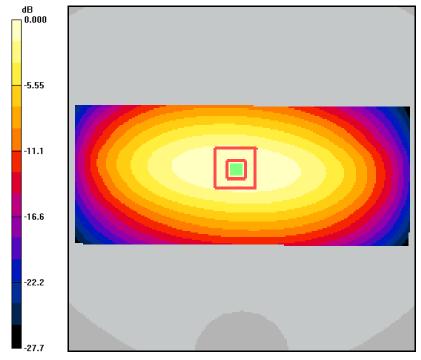
835MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 33.5 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.969 mW/g; SAR(10 g) = 0.641 mW/g

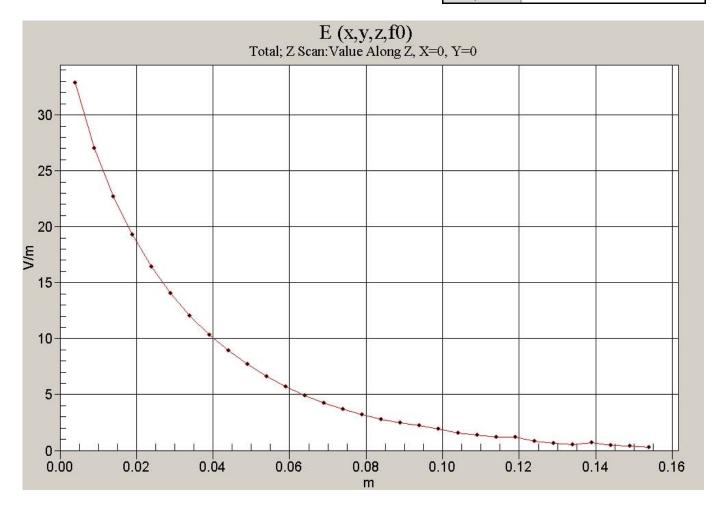
Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.05 mW/g



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Test Laboratory: Comptest/Kyocera Date: 01/05/2011

1800MHz Validation (in Muscle), Probe #3078, DAE #602, Dipole #220

Communication System: CW, Frequency: 1800 MHz, Duty Cycle: 1:1

Medium: M1800, Medium parameters used: f = 1800 MHz; $\sigma = 1.58 \text{ mho/m}$; $\varepsilon_r = 52.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3078, ConvF(4.73, 4.73, 4.73), 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 = $21.\tilde{8}$ 1 deg C, Liquid T = $22.\tilde{0}$ 1 deg C

1800Mhz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

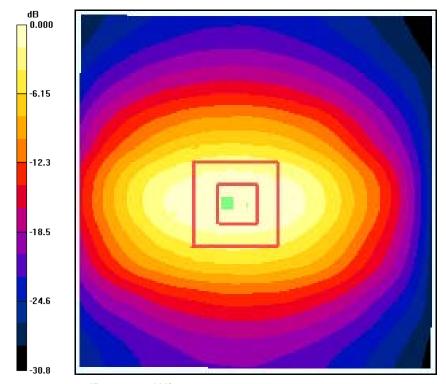
Maximum value of SAR (interpolated) = 4.93 mW/g

1800Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 51.5 V/m; Power Drift = -0.095 dB

Peak SAR (extrapolated) = 7.19 W/kg

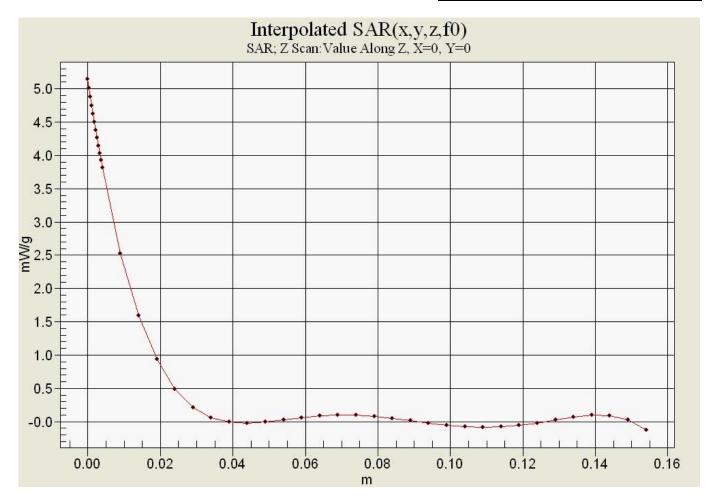
SAR(1 g) = 3.95 mW/g; SAR(10 g) = 2.05 mW/g Maximum value of SAR (measured) = 4.45 mW/g



0 dB = 4.45 mW/g



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Test Laboratory: Comptest/Kyocera Date: 12/17/2010

1900MHz Validation (in Muscle), Probe #3078, DAE #602, Dipole #5d016

Communication System: CW, Frequency: 1900 MHz, Duty Cycle: 1:1

Medium: M1900, Medium parameters used (interpolated): f = 1900 MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3078, ConvF(4.5, 4.5, 4.5), 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 176

Temperature:

Room T = $21.\tilde{8}$ 1 deg C, Liquid T = $22.\tilde{0}$ 1 deg C

1900MHz Validation @20dBm/Area Scan (61x71x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 5.15 mW/g

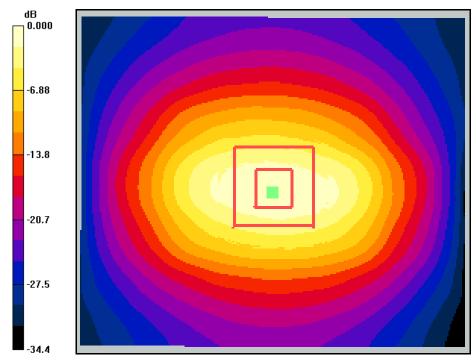
1900MHz Validation @20dBm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 55.8 V/m; Power Drift = -0.015 dB



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Peak SAR (extrapolated) = 7.27 W/kg

SAR(1 g) = 4.15 mW/g; SAR(10 g) = 2.16 mW/gMaximum value of SAR (measured) = 4.76 mW/g



0 dB = 5.15 mW/g



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