

APPENDIX B.2: BODY-WORN MEASUREMENT SCANS

Date/Time: 2012-06-24 10:41:27

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.4 C

Medium parameters used: f = 710 MHz; σ = 0.939 mho/m; ϵ_r = 54.718; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0532 mW/g

LTE/Body - Middle - QPSK - 10MHz –100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (6x8x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.815 V/m

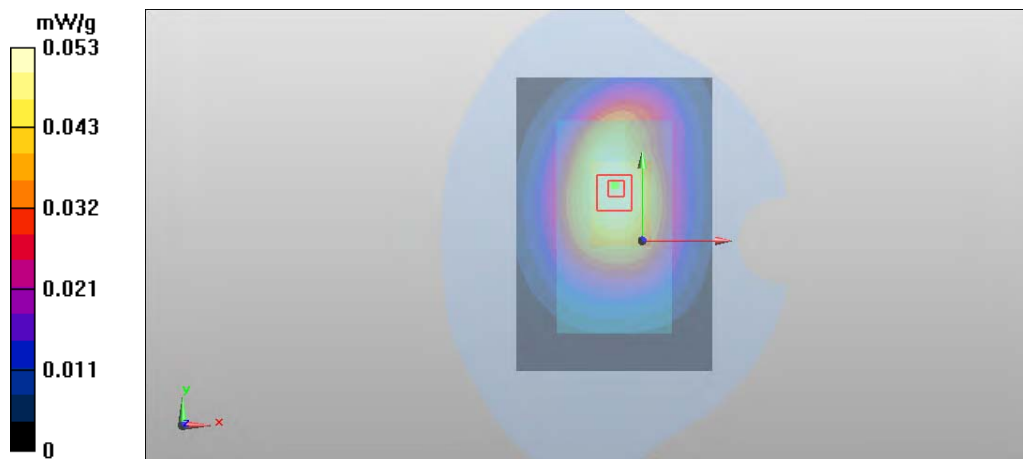
Peak SAR (extrapolated) = 0.062 mW/g

SAR(1 g) = 0.050 mW/g

SAR(10 g) = 0.039 mW/g

Power Drift = 0.12 dB

Maximum value of SAR (measured) = 0.0524 mW/g



Date/Time: 2012-06-24 15:18:54

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.4 C

Medium parameters used: f = 710 MHz; σ = 0.939 mho/m; ϵ_r = 54.718; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz - 25 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0544 mW/g

LTE/Body - Middle - QPSK - 10MHz - 25 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.705 V/m

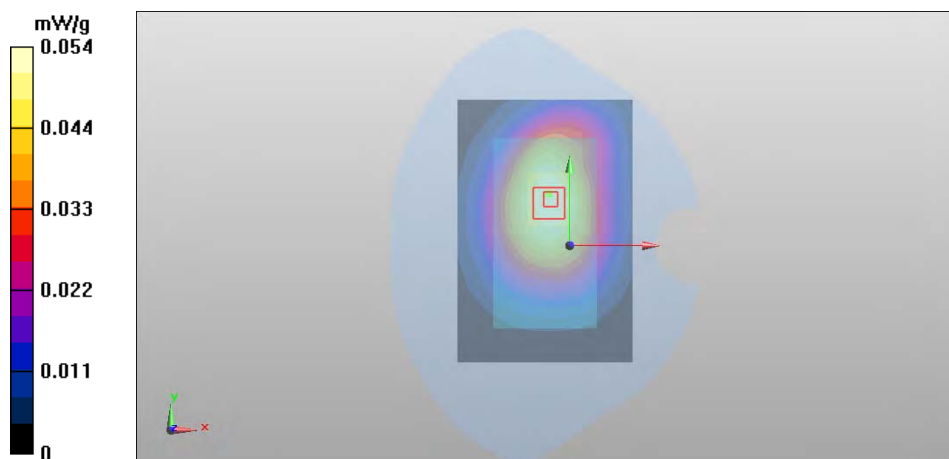
Peak SAR (extrapolated) = 0.064 mW/g

SAR(1 g) = 0.051 mW/g

SAR(10 g) = 0.039 mW/g

Power Drift = -0.05 dB

Maximum value of SAR (measured) = 0.0531 mW/g



Date/Time: 2012-06-24 19:12:20

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.4 C

Medium parameters used: f = 710 MHz; σ = 0.939 mho/m; ϵ_r = 54.718; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASYS2, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz - 1 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0673 mW/g

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.506 V/m

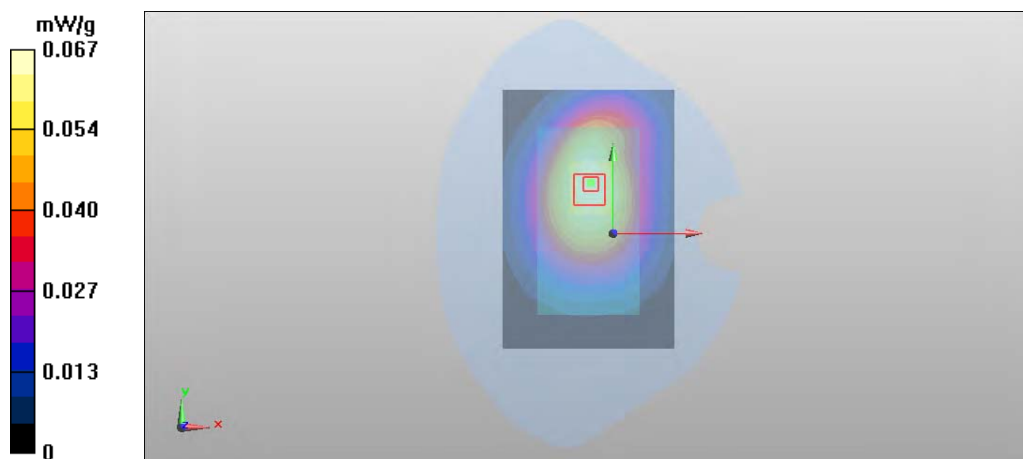
Peak SAR (extrapolated) = 0.078 mW/g

SAR(1 g) = 0.062 mW/g

SAR(10 g) = 0.048 mW/g

Power Drift = -0.11 dB

Maximum value of SAR (measured) = 0.0654 mW/g



Date/Time: 2012-06-24 19:31:17

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.4 C

Medium parameters used: f = 710 MHz; σ = 0.939 mho/m; ϵ_r = 54.718; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 15mm - No Accessory - Back Facing Phantom
/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0868 mW/g

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 15mm - No Accessory - Back Facing Phantom
/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.753 V/m

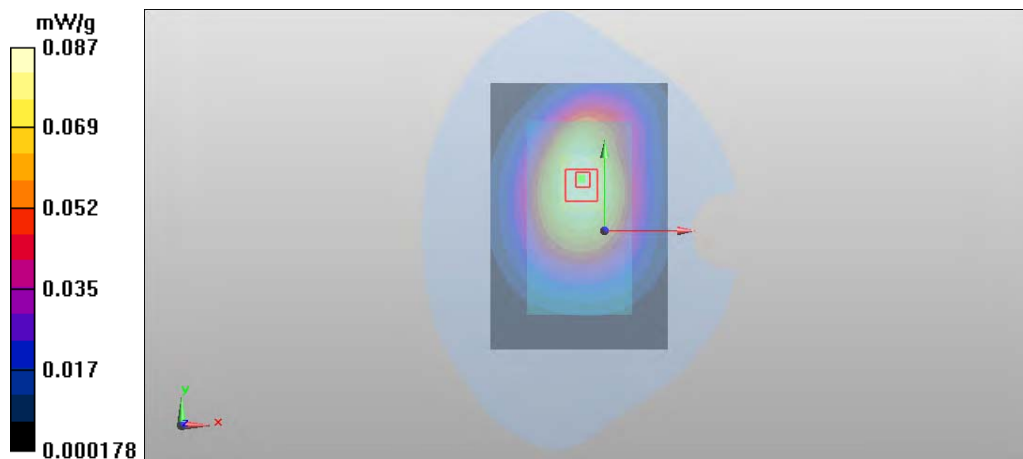
Peak SAR (extrapolated) = 0.101 mW/g

SAR(1 g) = 0.082 mW/g

SAR(10 g) = 0.063 mW/g

Power Drift = -0.02 dB

Maximum value of SAR (measured) = 0.0860 mW/g



Date/Time: 2012-06-25 15:19:44

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; σ = 0.972 mho/m; ϵ_r = 54.424; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz - 1 RB - 100% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Area

Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0713 mW/g

LTE/Body - Middle - QPSK - 10MHz - 1 RB - 100% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom

Scan (6x8x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.696 V/m

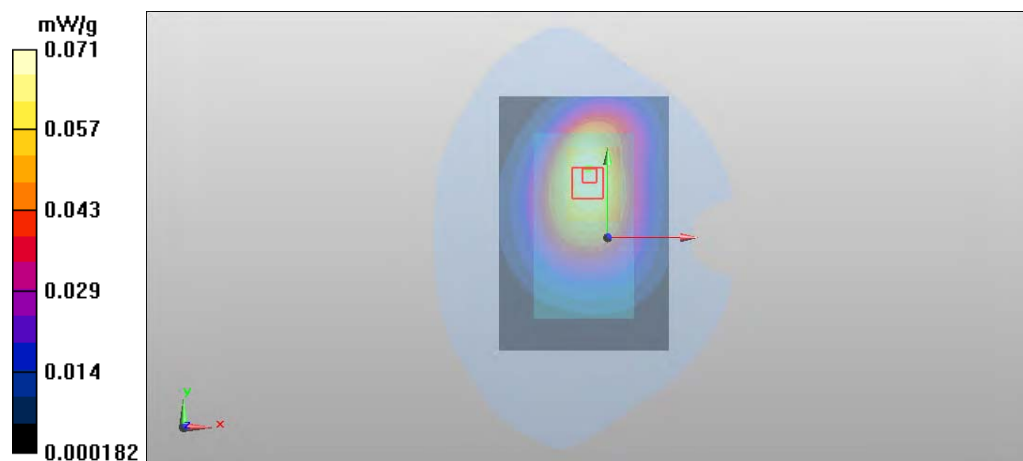
Peak SAR (extrapolated) = 0.088 mW/g

SAR(1 g) = 0.067 mW/g

SAR(10 g) = 0.051 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.0707 mW/g



Date/Time: 2012-06-25 14:58:37

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 711 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 711 MHz; $\sigma = 0.972$ mho/m; $\epsilon_r = 54.417$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE/Body - High - QPSK - 10MHz - 1 RB - 100% offset - Spacer 15mm - No Accessory - Display Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.236 mW/g

LTE/Body - High - QPSK - 10MHz - 1 RB - 100% offset - Spacer 15mm - No Accessory - Display Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.685 V/m

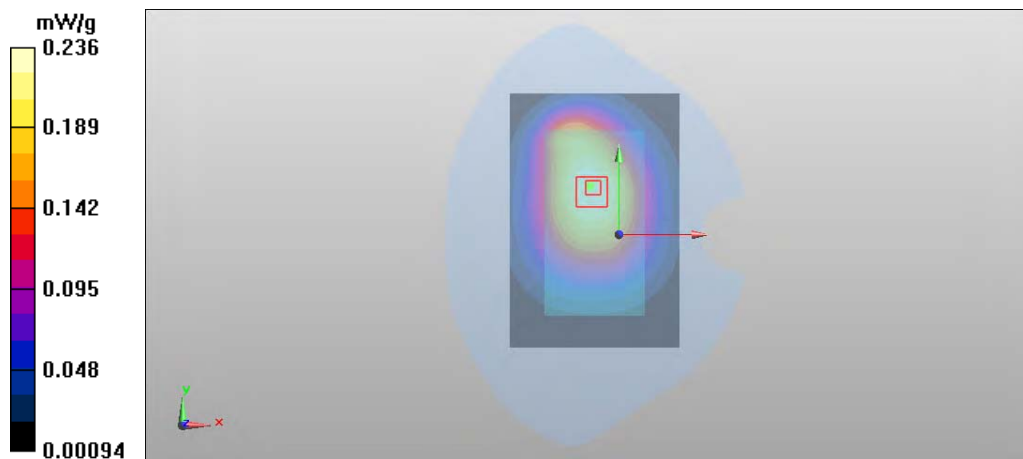
Peak SAR (extrapolated) = 0.292 mW/g

SAR(1 g) = 0.228 mW/g

SAR(10 g) = 0.174 mW/g

Power Drift = 0.08 dB

Maximum value of SAR (measured) = 0.241 mW/g



Date/Time: 2012-06-25 14:16:46

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; σ = 0.972 mho/m; ϵ_r = 54.424; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.127 mW/g

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (6x8x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.333 V/m

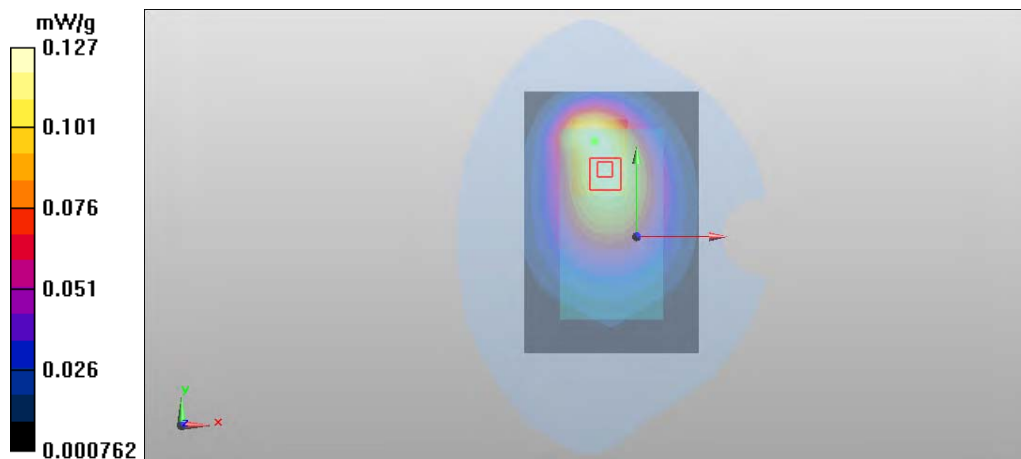
Peak SAR (extrapolated) = 0.170 mW/g

SAR(1 g) = 0.116 mW/g

SAR(10 g) = 0.087 mW/g

Power Drift = -0.13 dB

Maximum value of SAR (measured) = 0.122 mW/g



Date/Time: 2012-06-24 19:50:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.4 C

Medium parameters used: f = 710 MHz; σ = 0.939 mho/m; ϵ_r = 54.718; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 0% offset - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0408 mW/g

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 0% offset - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.690 V/m

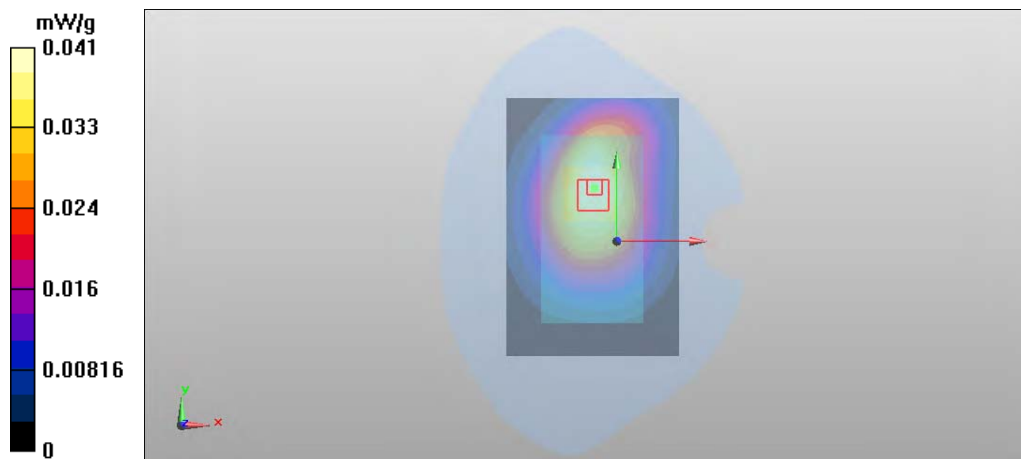
Peak SAR (extrapolated) = 0.049 mW/g

SAR(1 g) = 0.039 mW/g

SAR(10 g) = 0.030 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.0407 mW/g



Date/Time: 2012-06-24 20:10:58

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.4 C

Medium parameters used: f = 710 MHz; σ = 0.939 mho/m; ϵ_r = 54.718; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 10MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Area

Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0387 mW/g

LTE/Body - Middle - 16QAM - 10MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom

Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.429 V/m

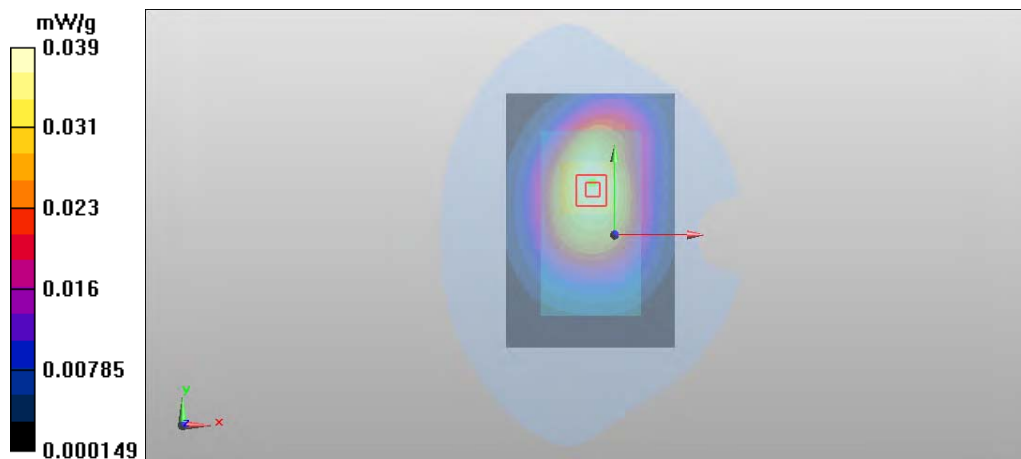
Peak SAR (extrapolated) = 0.046 mW/g

SAR(1 g) = 0.036 mW/g

SAR(10 g) = 0.028 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.0377 mW/g



Date/Time: 2012-06-25 09:32:02

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; σ = 0.972 mho/m; ϵ_r = 54.424; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 10MHz - 25 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0500 mW/g

LTE/Body - Middle - 16QAM - 10MHz - 25 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.217 V/m

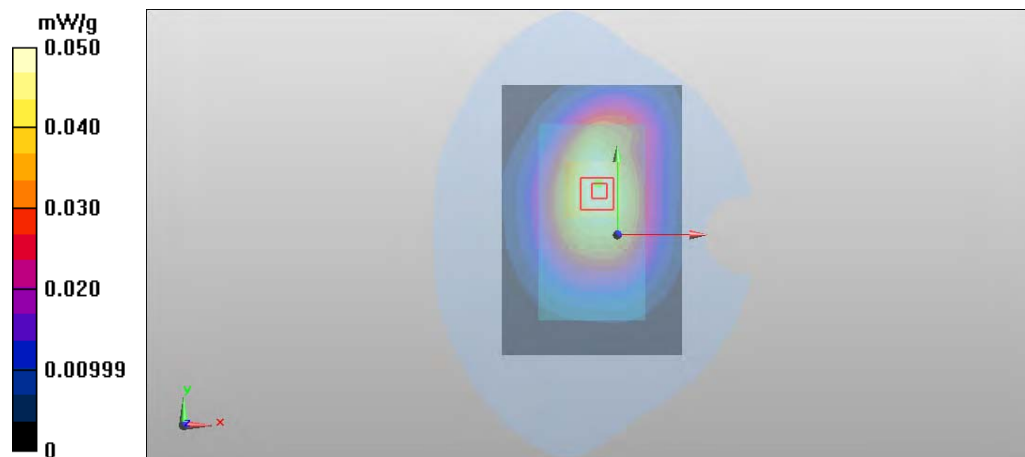
Peak SAR (extrapolated) = 0.058 mW/g

SAR(1 g) = 0.046 mW/g

SAR(10 g) = 0.035 mW/g

Power Drift = -0.10 dB

Maximum value of SAR (measured) = 0.0486 mW/g



Date/Time: 2012-06-25 09:58:44

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; σ = 0.972 mho/m; ϵ_r = 54.424; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0627 mW/g

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.112 V/m

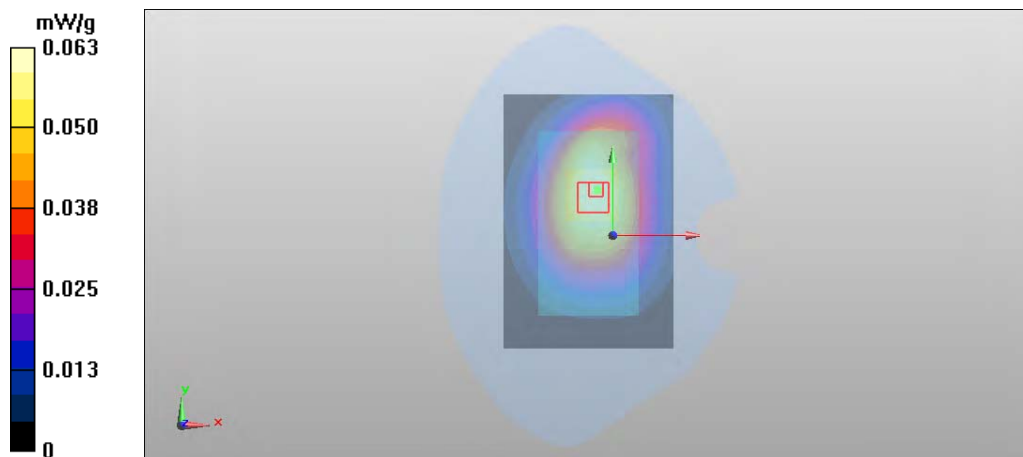
Peak SAR (extrapolated) = 0.073 mW/g

SAR(1 g) = 0.059 mW/g

SAR(10 g) = 0.045 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.0619 mW/g



Date/Time: 2012-06-25 10:20:34

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; σ = 0.972 mho/m; ϵ_r = 54.424; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0833 mW/g

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.431 V/m

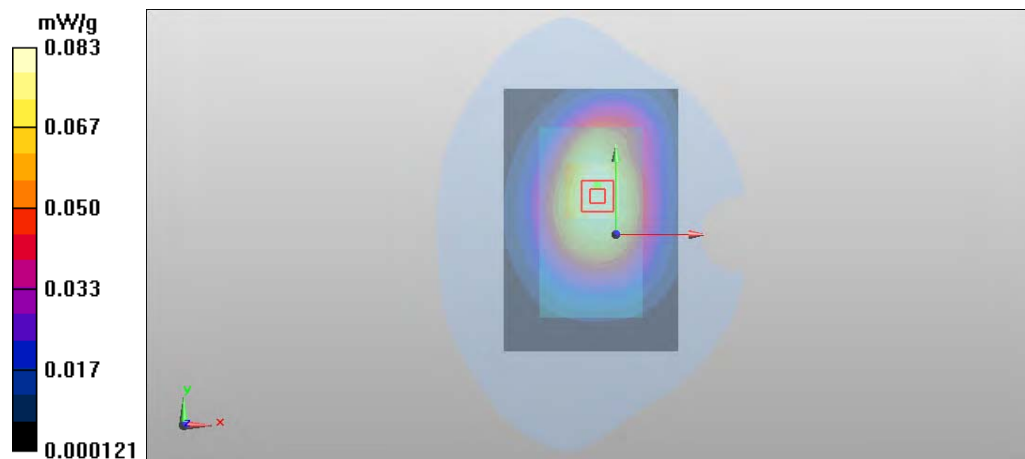
Peak SAR (extrapolated) = 0.098 mW/g

SAR(1 g) = 0.079 mW/g

SAR(10 g) = 0.061 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 0.0827 mW/g



Date/Time: 2012-06-25 10:40:26

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; σ = 0.972 mho/m; ϵ_r = 54.424; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 0% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0388 mW/g

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 0% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.424 V/m

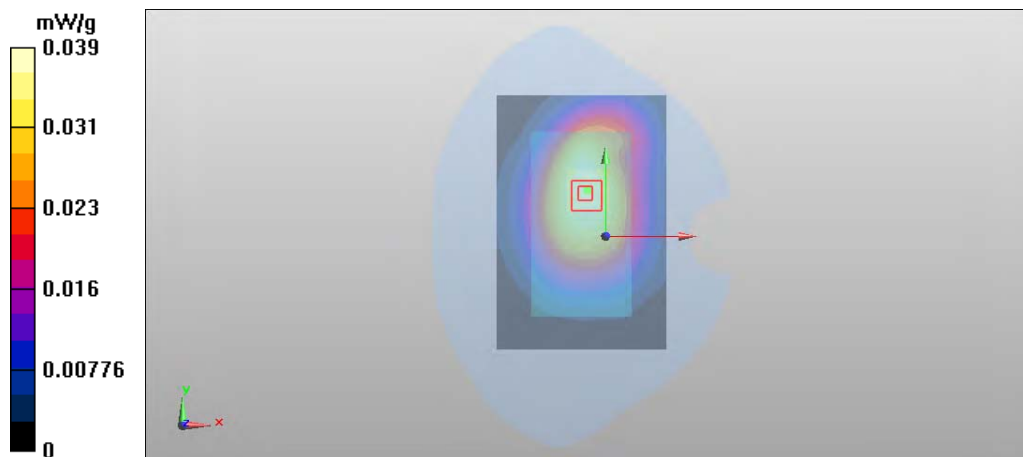
Peak SAR (extrapolated) = 0.045 mW/g

SAR(1 g) = 0.037 mW/g

SAR(10 g) = 0.028 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.0383 mW/g



Date/Time: 2012-06-14 20:37:03

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 837 MHz; σ = 0.999 mho/m; ϵ_r = 53.769; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (1); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.660 mW/g

2-slot GPRS/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 25.020 V/m

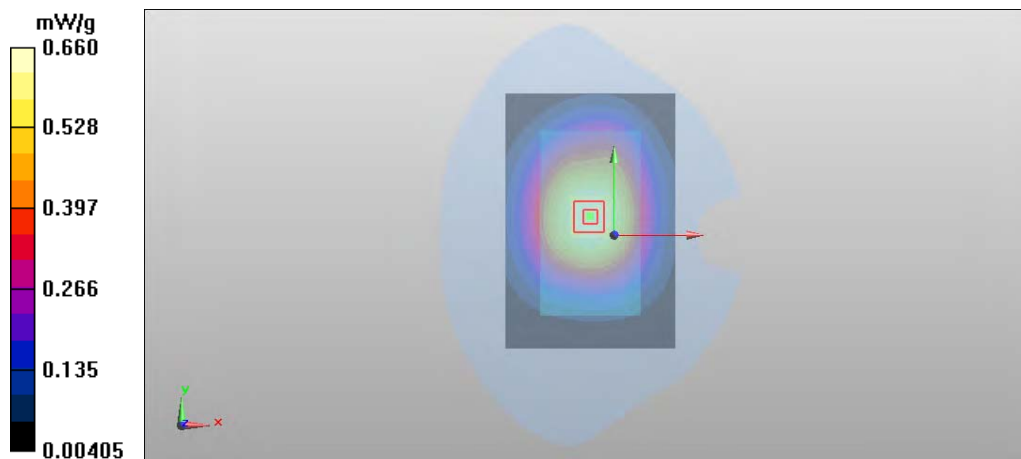
Peak SAR (extrapolated) = 0.739 mW/g

SAR(1 g) = 0.602 mW/g

SAR(10 g) = 0.462 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.635 mW/g



Date/Time: 2012-06-14 20:57:11

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 837 MHz; σ = 0.999 mho/m; ϵ_r = 53.769; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (1); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.428 mW/g

2-slot GPRS/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 20.062 V/m

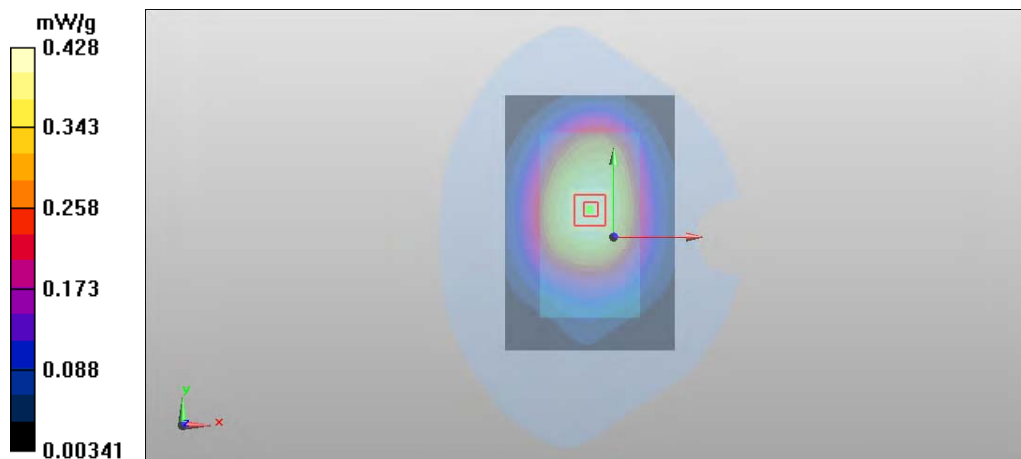
Peak SAR (extrapolated) = 0.489 mW/g

SAR(1 g) = 0.401 mW/g

SAR(10 g) = 0.309 mW/g

Power Drift = -0.11 dB

Maximum value of SAR (measured) = 0.418 mW/g



Date/Time: 2012-06-15 08:52:39

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.19952

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 849 MHz; σ = 1.007 mho/m; ϵ_r = 53.672; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (1); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - High - Spacer 15mm - No accessory - Display Facing Phantom/Area Scan (81x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.808 mW/g

2-slot GPRS/Body - High - Spacer 15mm - No accessory - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 28.406 V/m

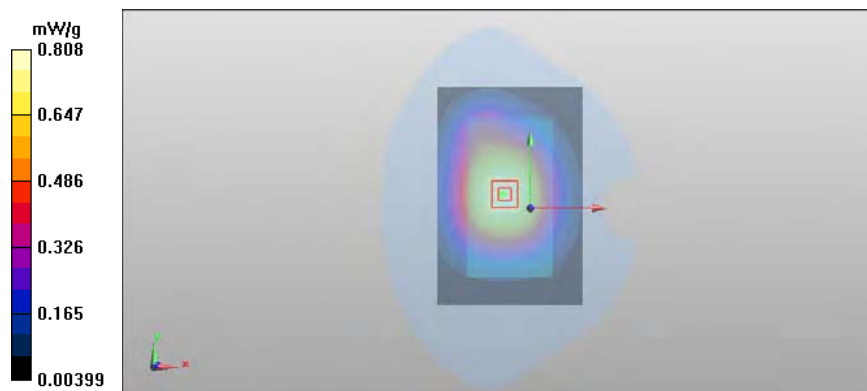
Peak SAR (extrapolated) = 0.924 mW/g

SAR(1 g) = 0.754 mW/g

SAR(10 g) = 0.580 mW/g

Power Drift = -0.23 dB

Maximum value of SAR (measured) = 0.793 mW/g



Date/Time: 2012-06-14 21:19:27

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 837 MHz; σ = 0.999 mho/m; ϵ_r = 53.769; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (1); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.452 mW/g

2-slot GPRS/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 19.771 V/m

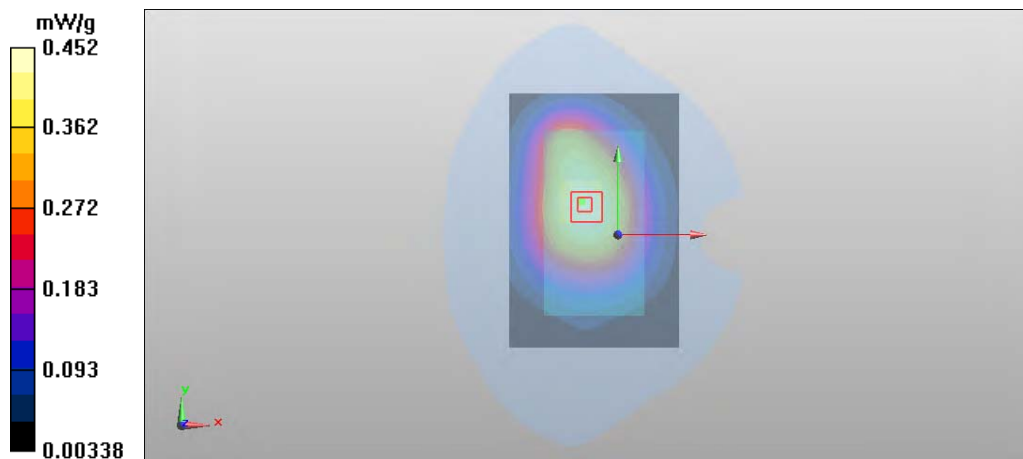
Peak SAR (extrapolated) = 0.515 mW/g

SAR(1 g) = 0.421 mW/g

SAR(10 g) = 0.324 mW/g

Power Drift = 0.10 dB

Maximum value of SAR (measured) = 0.440 mW/g



Date/Time: 2012-06-22 08:15:41

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.992 mho/m; ϵ_r = 54.154; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.334 mW/g

WCDMA/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 18.091 V/m

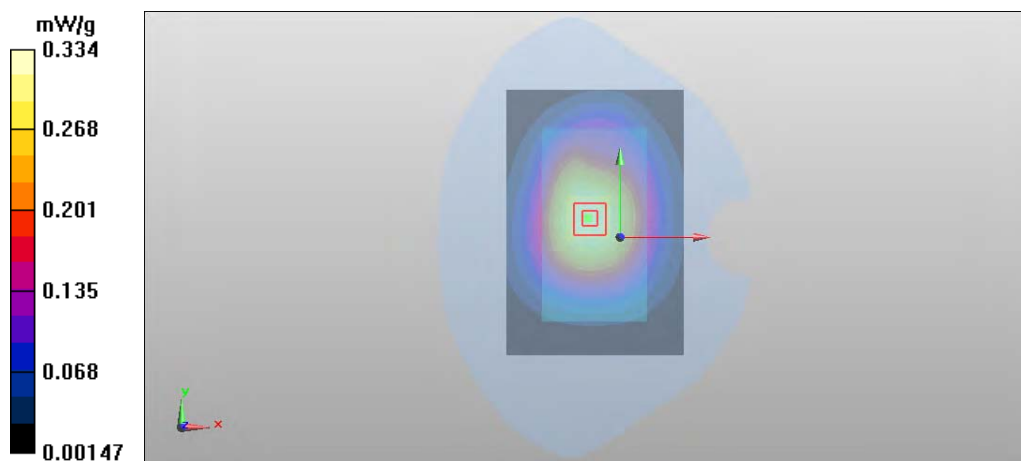
Peak SAR (extrapolated) = 0.385 mW/g

SAR(1 g) = 0.317 mW/g

SAR(10 g) = 0.243 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.332 mW/g



Date/Time: 2012-06-22 08:54:23

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.992 mho/m; ϵ_r = 54.154; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.234 mW/g

WCDMA/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.750 V/m

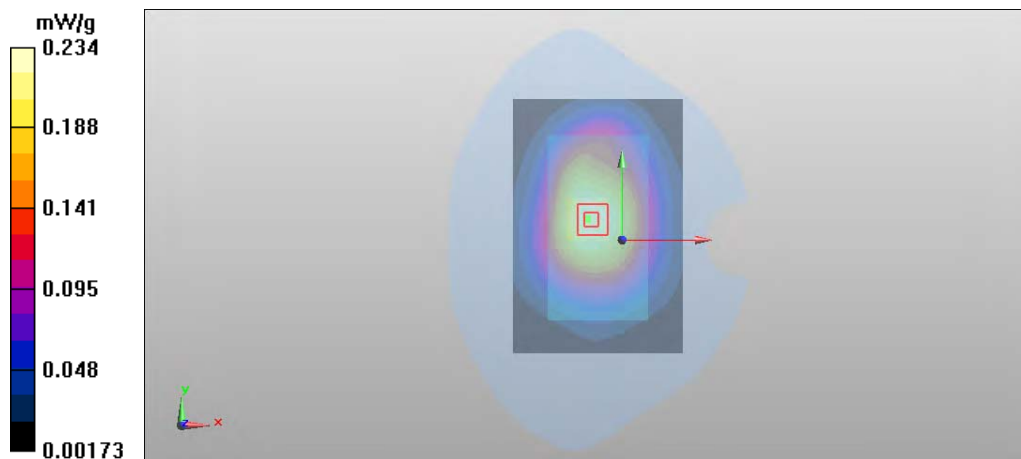
Peak SAR (extrapolated) = 0.273 mW/g

SAR(1 g) = 0.222 mW/g

SAR(10 g) = 0.171 mW/g

Power Drift = 0.18 dB

Maximum value of SAR (measured) = 0.233 mW/g



Date/Time: 2012-06-22 10:07:46

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.987 mho/m; ϵ_r = 54.201; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Low - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan (81x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.488 mW/g

WCDMA/Body - Low - Spacer 15mm - No Accessory - Display Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.912 V/m

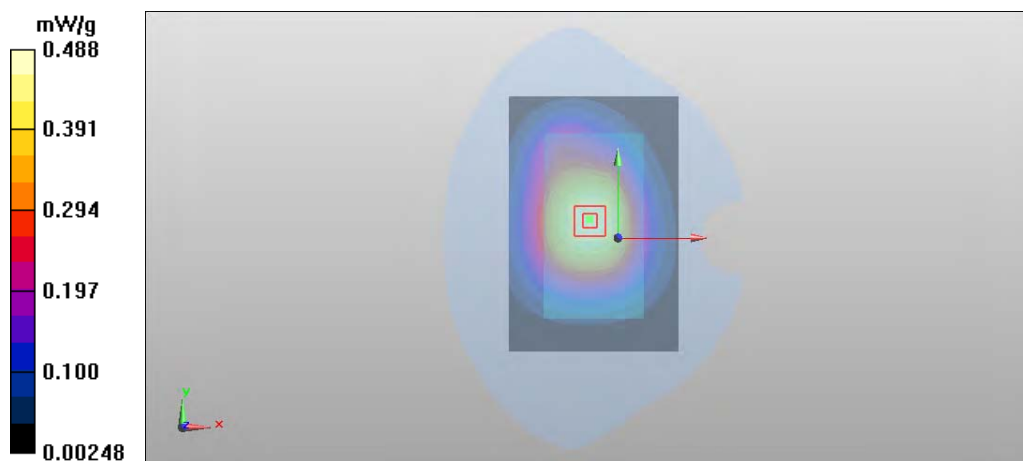
Peak SAR (extrapolated) = 0.563 mW/g

SAR(1 g) = 0.465 mW/g

SAR(10 g) = 0.358 mW/g

Power Drift = 0.05 dB

Maximum value of SAR (measured) = 0.487 mW/g



Date/Time: 2012-06-22 09:46:31

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.992 mho/m; ϵ_r = 54.154; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.306 mW/g

WCDMA/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.165 V/m

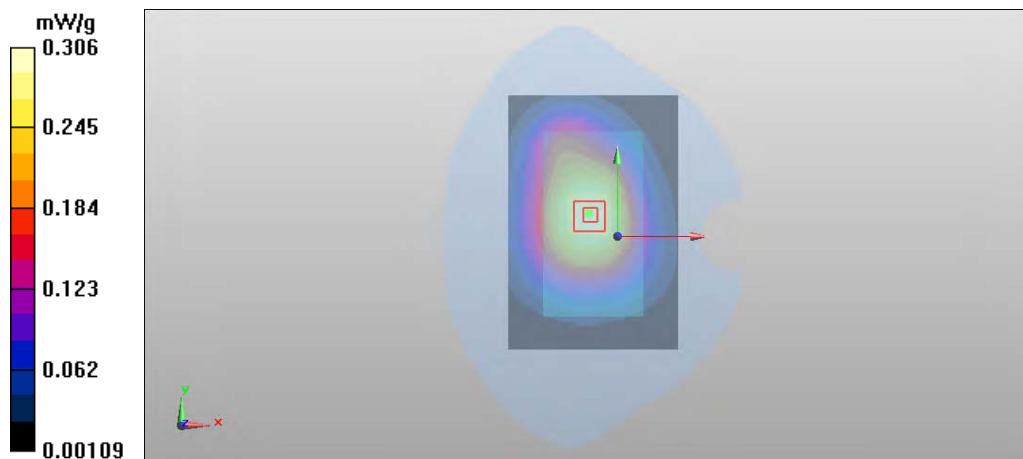
Peak SAR (extrapolated) = 0.355 mW/g

SAR(1 g) = 0.291 mW/g

SAR(10 g) = 0.224 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.305 mW/g



Date/Time: 2012-06-22 10:46:53

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.993 mho/m; ϵ_r = 54.146; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10 MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.202 W/kg

LTE/Body - Middle - QPSK - 10 MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.184 V/m

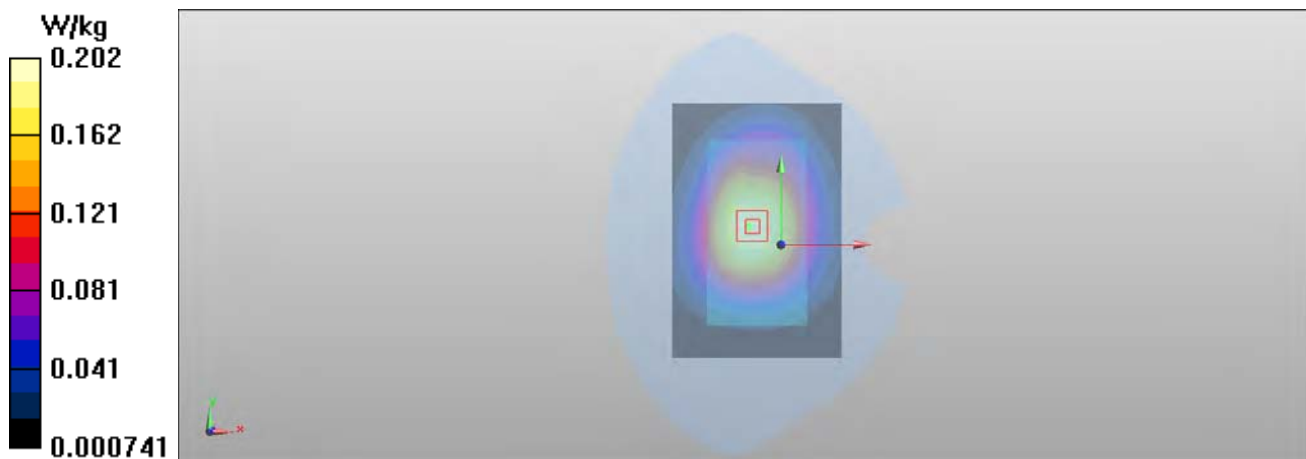
Peak SAR (extrapolated) = 0.238 mW/g

SAR(1 g) = 0.195 mW/g

SAR(10 g) = 0.150 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.205 W/kg



Date/Time: 2012-06-22 11:16:37

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10 MHz - 50% RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.202 W/kg

LTE/Body - Middle - QPSK - 10 MHz - 50% RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

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

Reference Value = 13.989 V/m

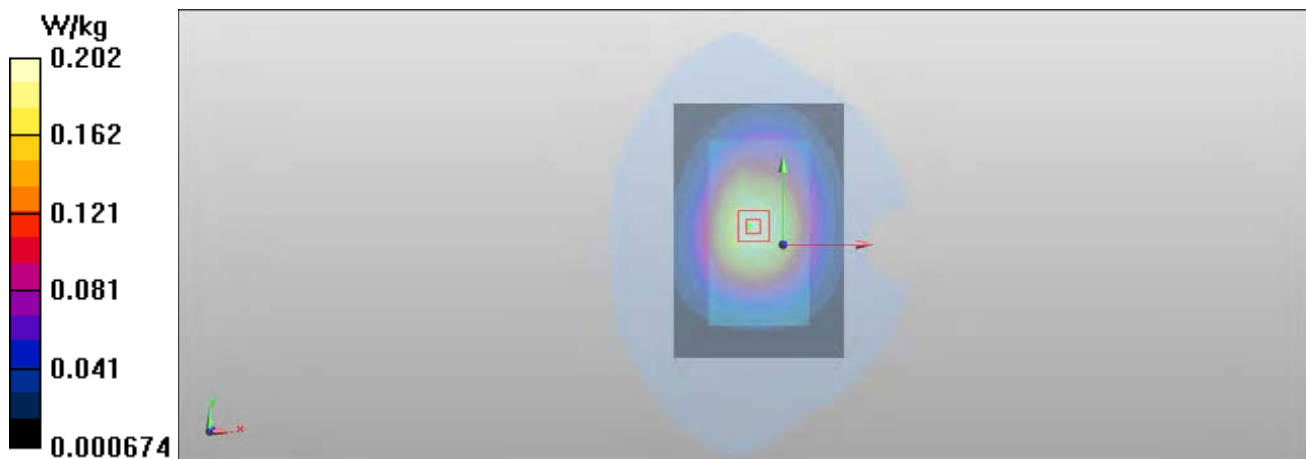
Peak SAR (extrapolated) = 0.233 mW/g

SAR(1 g) = 0.192 mW/g

SAR(10 g) = 0.147 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.200 W/kg



Date/Time: 2012-06-22 11:41:52

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.258 W/kg

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

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

Reference Value = 15.767 V/m

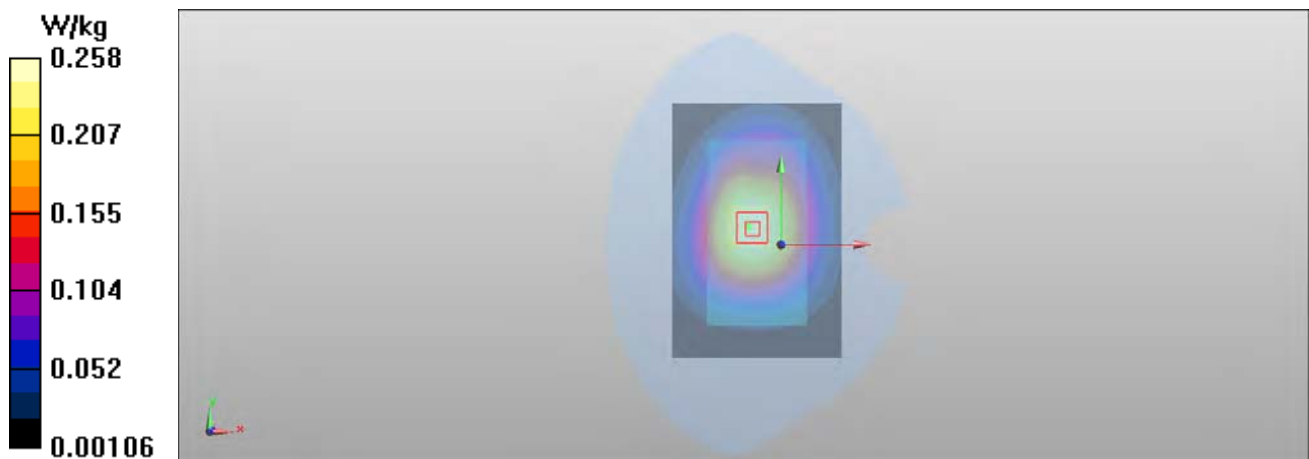
Peak SAR (extrapolated) = 0.306 mW/g

SAR(1 g) = 0.251 mW/g

SAR(10 g) = 0.193 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.263 W/kg



Date/Time: 2012-06-22 12:13:37

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.308 W/kg

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

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

Reference Value = 17.277 V/m

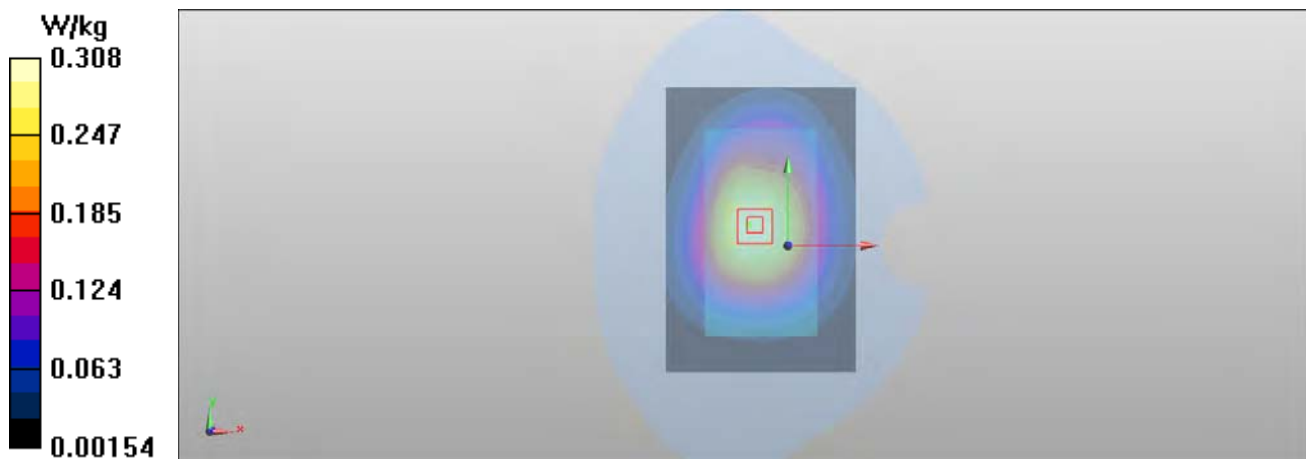
Peak SAR (extrapolated) = 0.365 mW/g

SAR(1 g) = 0.300 mW/g

SAR(10 g) = 0.231 mW/g

Power Drift = 0.20 dB

Maximum value of SAR (measured) = 0.315 W/kg



Date/Time: 2012-06-22 19:55:39

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 100% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.216 W/kg

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 100% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 13.725 V/m

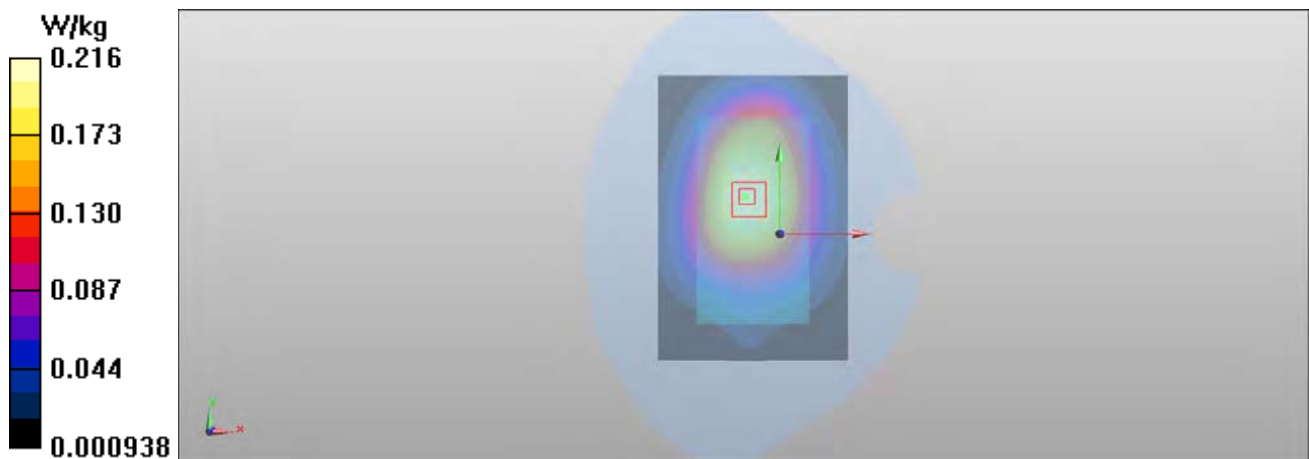
Peak SAR (extrapolated) = 0.255 mW/g

SAR(1 g) = 0.202 mW/g

SAR(10 g) = 0.158 mW/g

Power Drift = 0.23 dB

Maximum value of SAR (measured) = 0.212 W/kg



Date/Time: 2012-06-22 19:23:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Display Facing

Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.327 W/kg

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Display Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 18.001 V/m

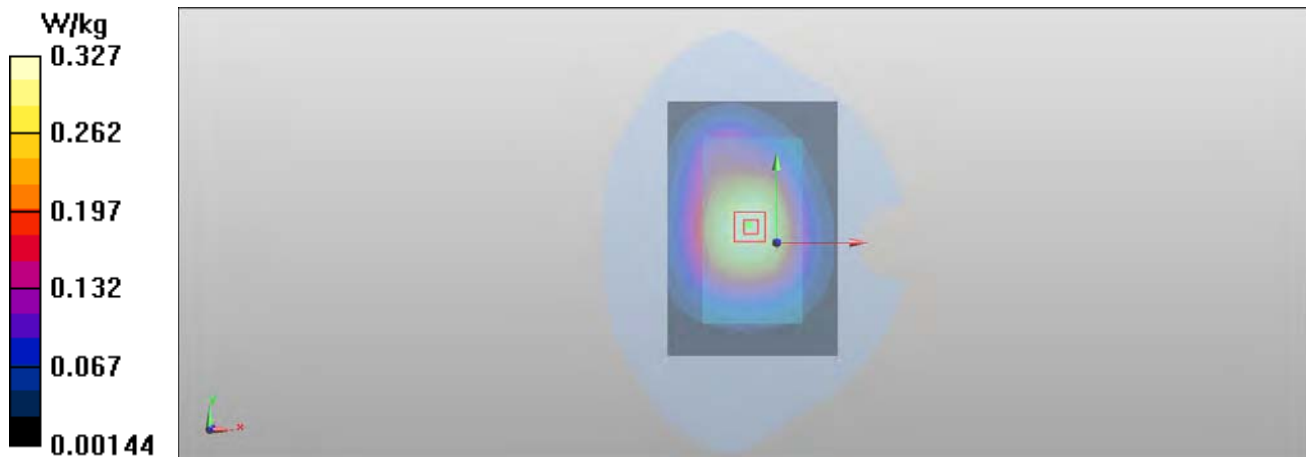
Peak SAR (extrapolated) = 0.385 mW/g

SAR(1 g) = 0.316 mW/g

SAR(10 g) = 0.244 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.330 W/kg



SAR Report

Appendix B.2 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

Copyright © 2012 TCC Nokia

Date/Time: 2012-06-22 19:37:01

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 100% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.207 W/kg

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 100% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 13.310 V/m

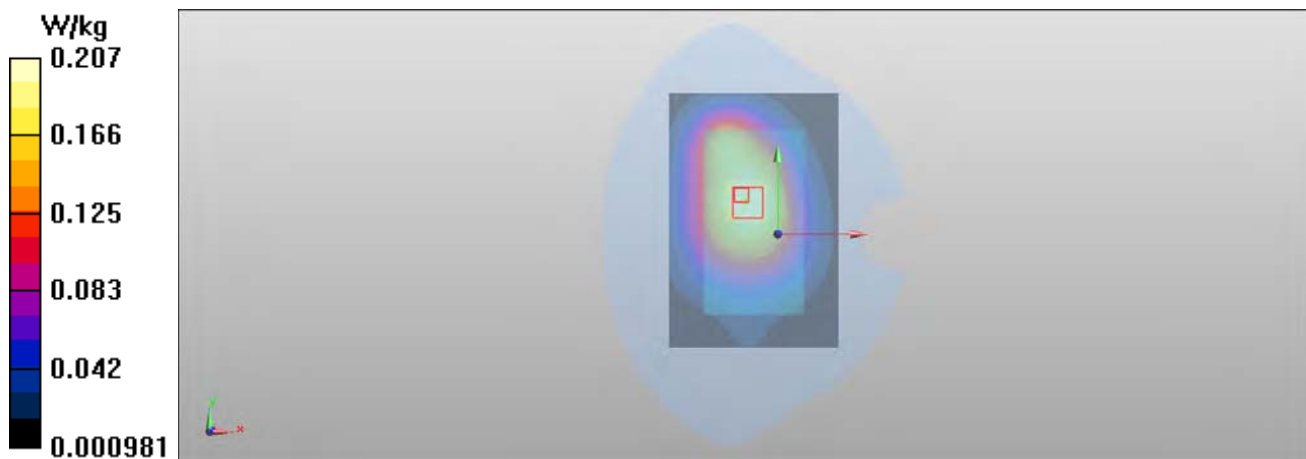
Peak SAR (extrapolated) = 0.273 mW/g

SAR(1 g) = 0.195 mW/g

SAR(10 g) = 0.151 mW/g

Power Drift = 0.28 dB

Maximum value of SAR (measured) = 0.205 W/kg



Date/Time: 2012-06-22 12:32:08

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 0% offset - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.216 W/kg

LTE/Body - Middle - QPSK - 10 MHz - 1RB - 0% offset - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.584 V/m

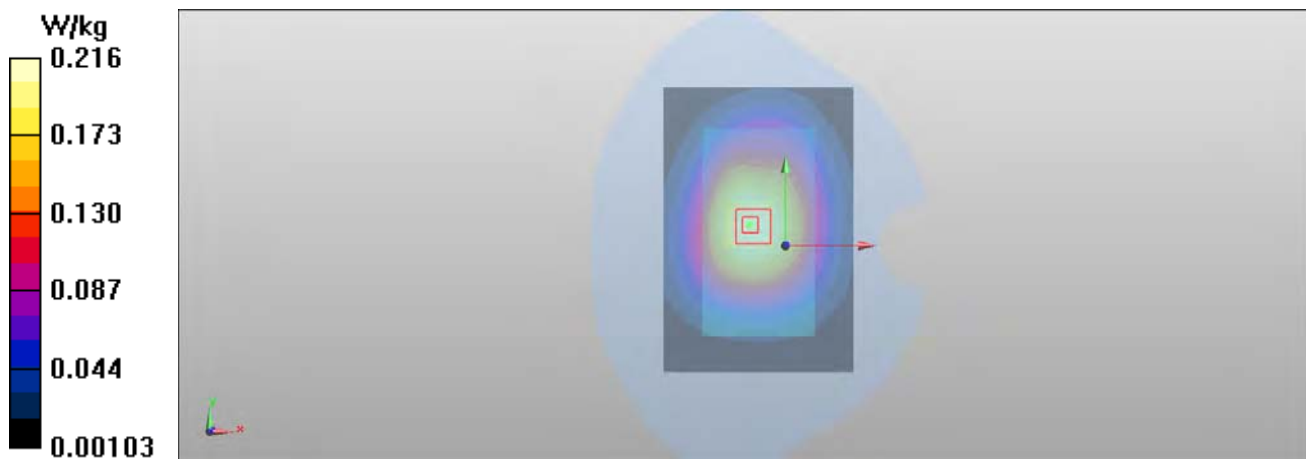
Peak SAR (extrapolated) = 0.254 mW/g

SAR(1 g) = 0.206 mW/g

SAR(10 g) = 0.158 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.218 W/kg



Date/Time: 2012-06-22 16:07:10

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 10 MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Area

Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.172 W/kg

LTE/Body - Middle - 16QAM - 10 MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom

Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.005 V/m

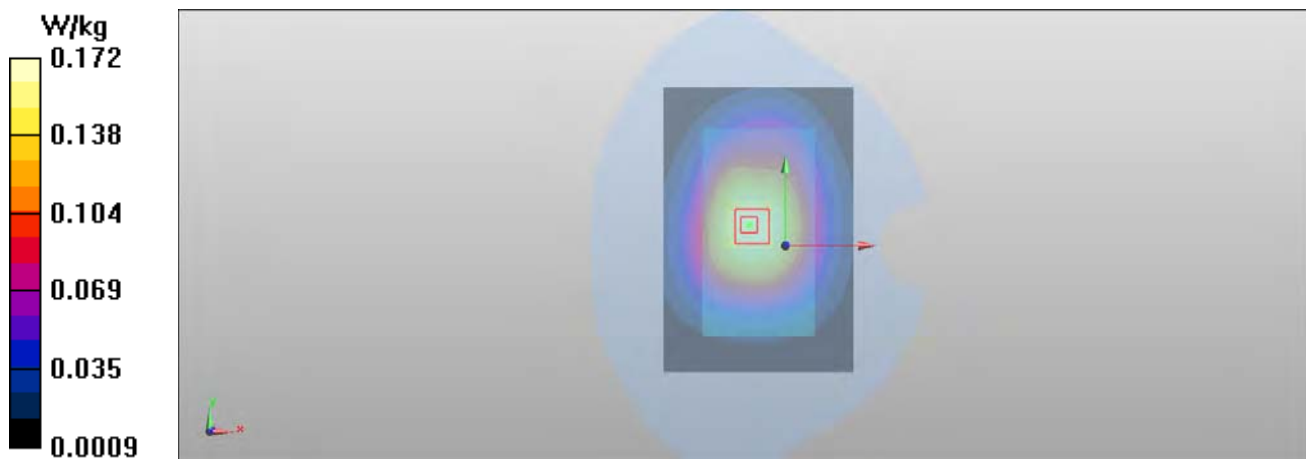
Peak SAR (extrapolated) = 0.204 mW/g

SAR(1 g) = 0.167 mW/g

SAR(10 g) = 0.128 mW/g

Power Drift = 0.10 dB

Maximum value of SAR (measured) = 0.177 W/kg



SAR Report

Appendix B.2 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

Copyright © 2012 TCC Nokia

Date/Time: 2012-06-22 16:20:54

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 10 MHz - 50% RB - 50% offset - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.174 W/kg

LTE/Body - Middle - 16QAM - 10 MHz - 50% RB - 50% offset - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 13.176 V/m

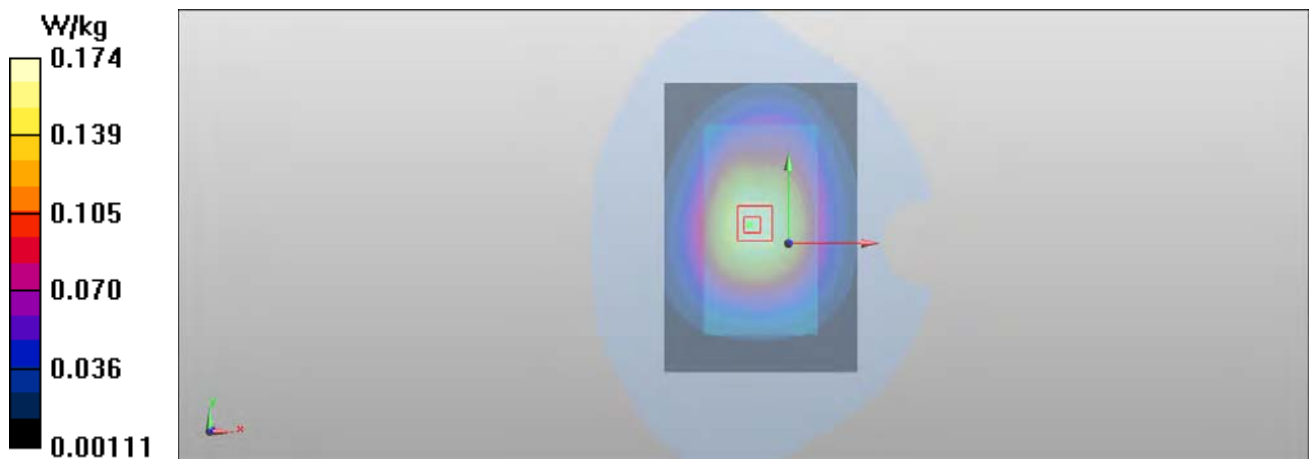
Peak SAR (extrapolated) = 0.201 mW/g

SAR(1 g) = 0.166 mW/g

SAR(10 g) = 0.127 mW/g

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 0.175 W/kg



Date/Time: 2012-06-22 16:39:40

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 10 MHz - 1RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.206 W/kg

LTE/Body - Middle - 16QAM - 10 MHz - 1RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 14.285 V/m

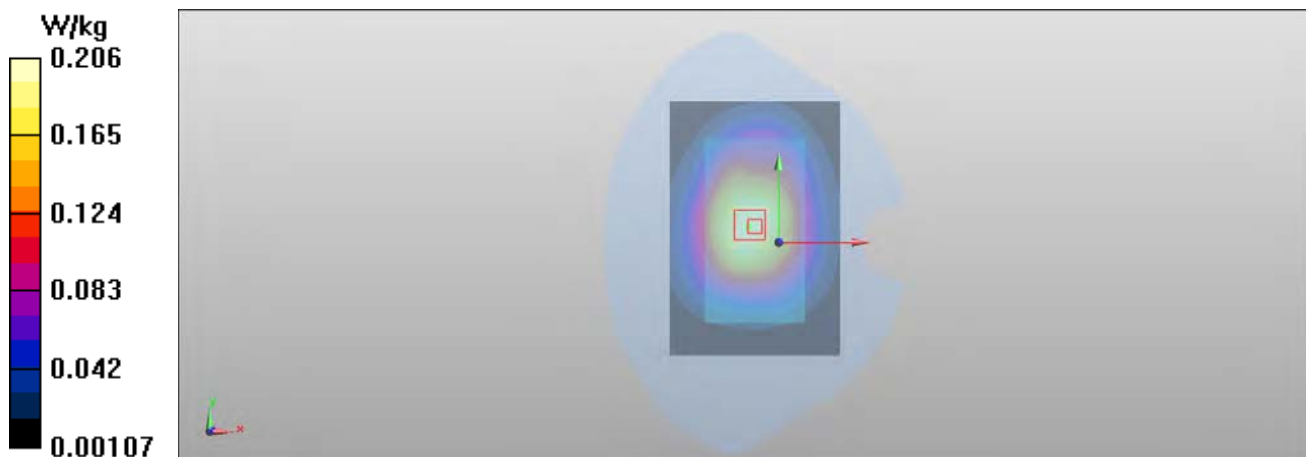
Peak SAR (extrapolated) = 0.246 mW/g

SAR(1 g) = 0.194 mW/g

SAR(10 g) = 0.150 mW/g

Power Drift = -0.24 dB

Maximum value of SAR (measured) = 0.205 W/kg



Date/Time: 2012-06-22 16:52:56

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: $t = 21.0$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 10 MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.242 W/kg

LTE/Body - Middle - 16QAM - 10 MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 15.217 V/m

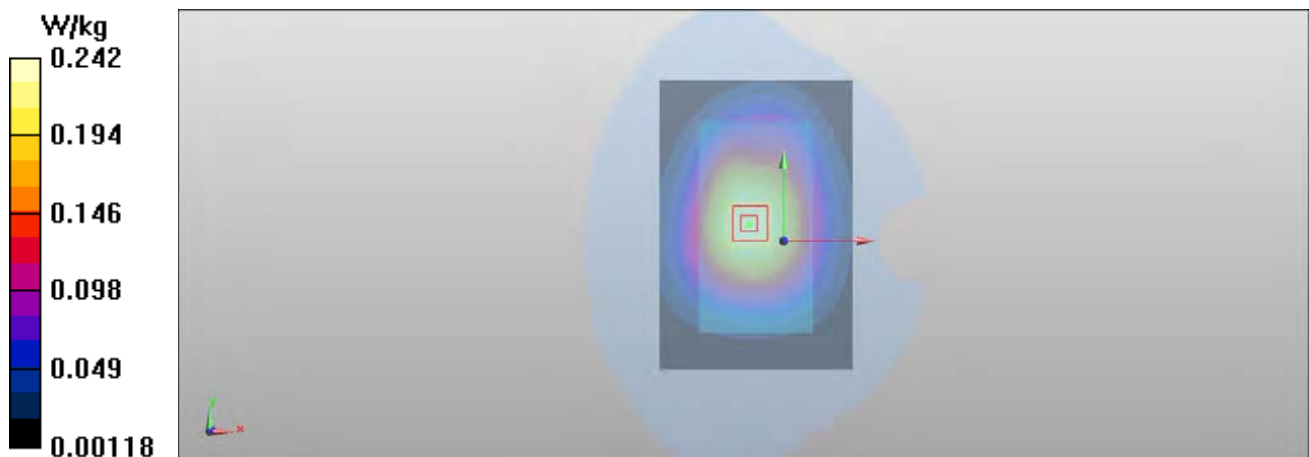
Peak SAR (extrapolated) = 0.296 mW/g

SAR(1 g) = 0.234 mW/g

SAR(10 g) = 0.178 mW/g

Power Drift = 0.20 dB

Maximum value of SAR (measured) = 0.245 W/kg



Date/Time: 2012-06-22 17:06:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.993 mho/m; ϵ_r = 54.146; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 10 MHz - 1RB - 0% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.175 W/kg

LTE/Body - Middle - 16QAM - 10 MHz - 1RB - 0% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.160 V/m

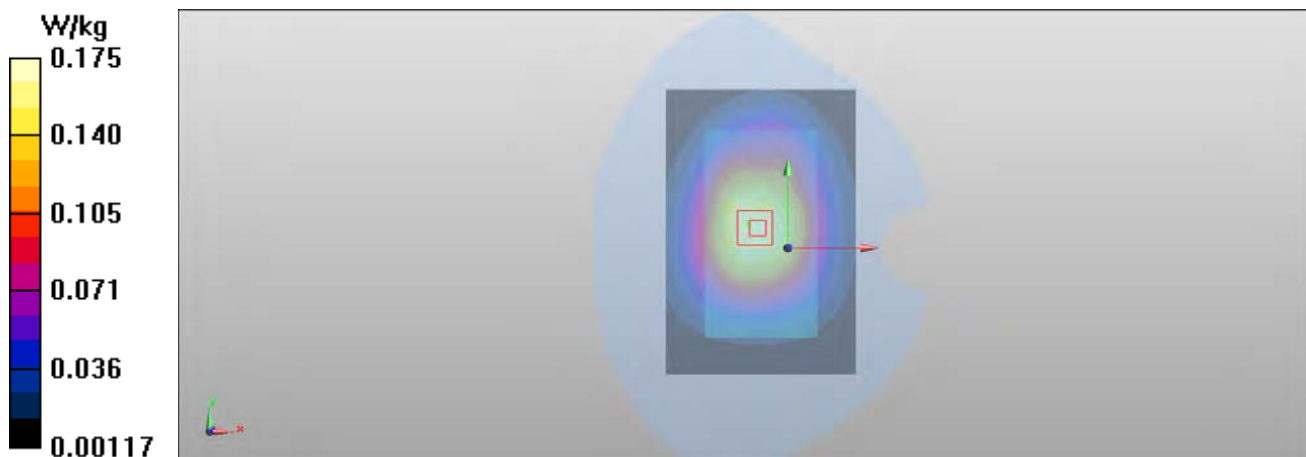
Peak SAR (extrapolated) = 0.199 mW/g

SAR(1 g) = 0.164 mW/g

SAR(10 g) = 0.126 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.176 W/kg



Date/Time: 2012-08-16 16:16:34

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.9$ C

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.442$ mho/m; $\epsilon_r = 52.538$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.6 (6824)

WCDMA/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.778 W/kg

WCDMA/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.567 V/m

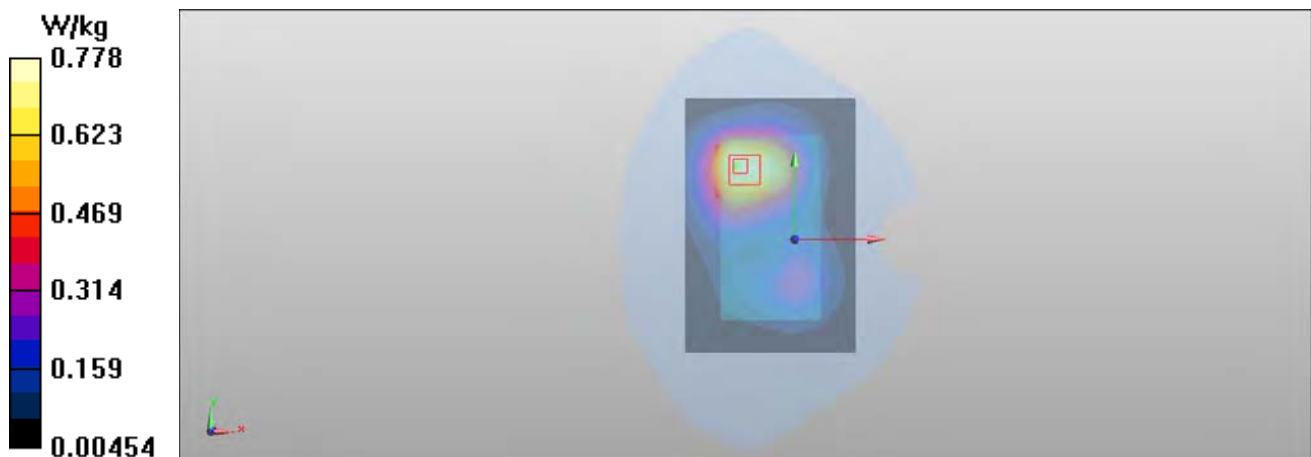
Peak SAR (extrapolated) = 1.050 mW/g

SAR(1 g) = 0.707 mW/g

SAR(10 g) = 0.473 mW/g

Power Drift = -0.00 dB

Maximum value of SAR (measured) = 0.748 W/kg



Date/Time: 2012-08-16 16:56:15

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.9$ C

Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.425$ mho/m; $\epsilon_r = 52.655$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.6 (6824)

WCDMA/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid:
 $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.875 W/kg

WCDMA/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement
grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.747 V/m

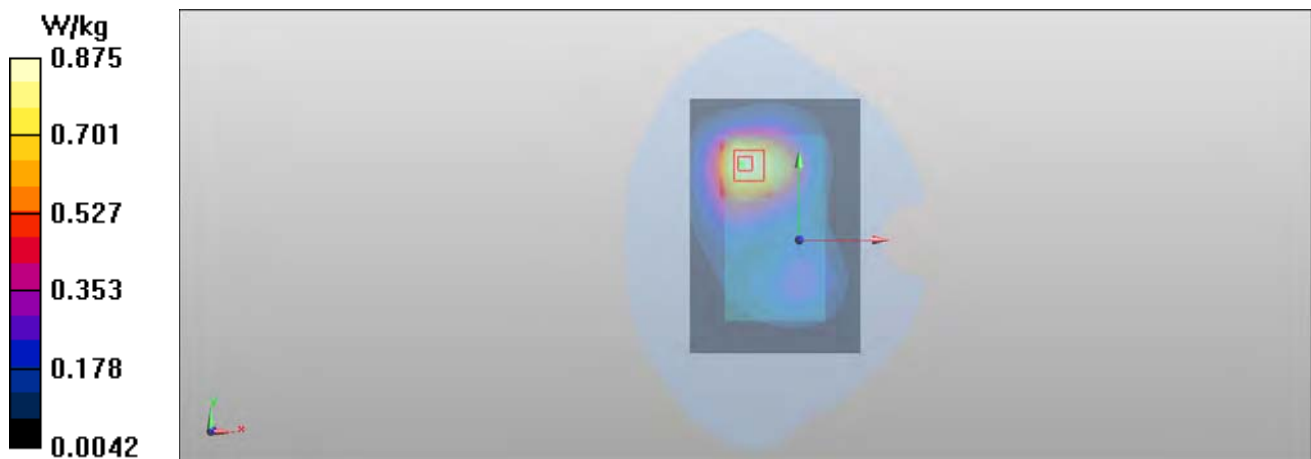
Peak SAR (extrapolated) = 1.181 mW/g

SAR(1 g) = 0.788 mW/g

SAR(10 g) = 0.519 mW/g

Power Drift = -0.02 dB

Maximum value of SAR (measured) = 0.839 W/kg



Date/Time: 2012-08-16 15:35:06

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.9$ C

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.442$ mho/m; $\epsilon_r = 52.538$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.6 (6824)

WCDMA/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan (81x121x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.751 W/kg

WCDMA/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.995 V/m

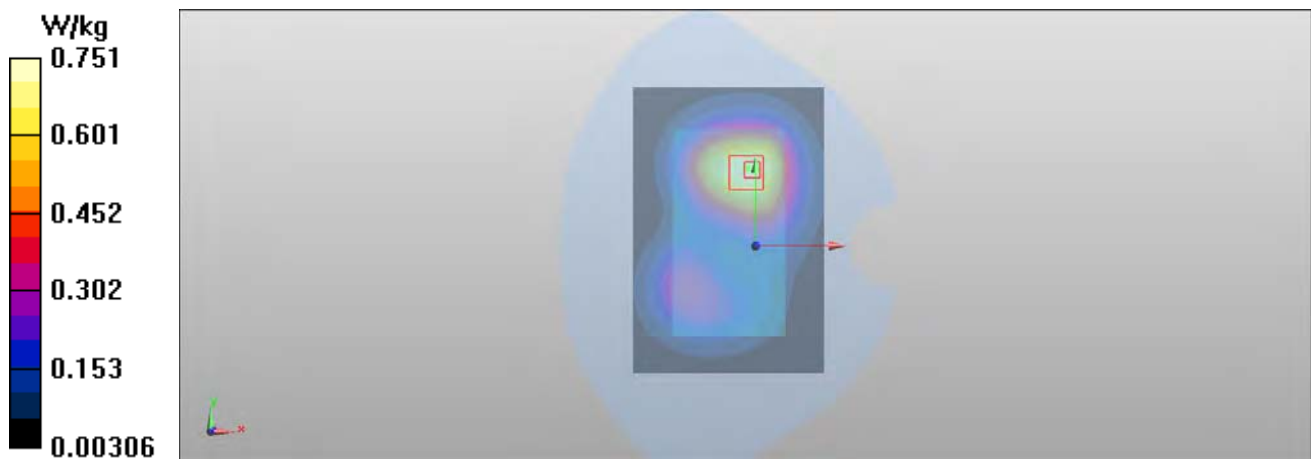
Peak SAR (extrapolated) = 1.004 mW/g

SAR(1 g) = 0.684 mW/g

SAR(10 g) = 0.457 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.723 W/kg



Date/Time: 2012-08-16 15:58:49

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.9$ C

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.442$ mho/m; $\epsilon_r = 52.538$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.6 (6824)

WCDMA/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x121x1): Interpolated
grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.768 W/kg

WCDMA/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.191 V/m

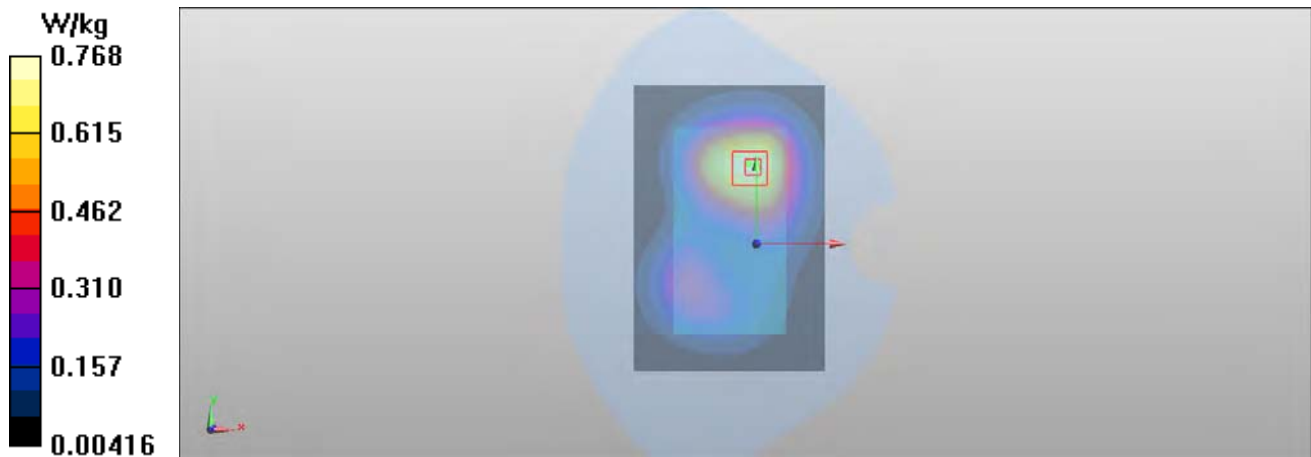
Peak SAR (extrapolated) = 1.040 mW/g

SAR(1 g) = 0.701 mW/g

SAR(10 g) = 0.465 mW/g

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 0.742 W/kg



SAR Report

Appendix B.2 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-06-16 07:49:09

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.424$ mho/m; $\epsilon_r = 52.79$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.459 mW/g

LTE/Body - Middle - QPSK - 20MHz – 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.646 V/m

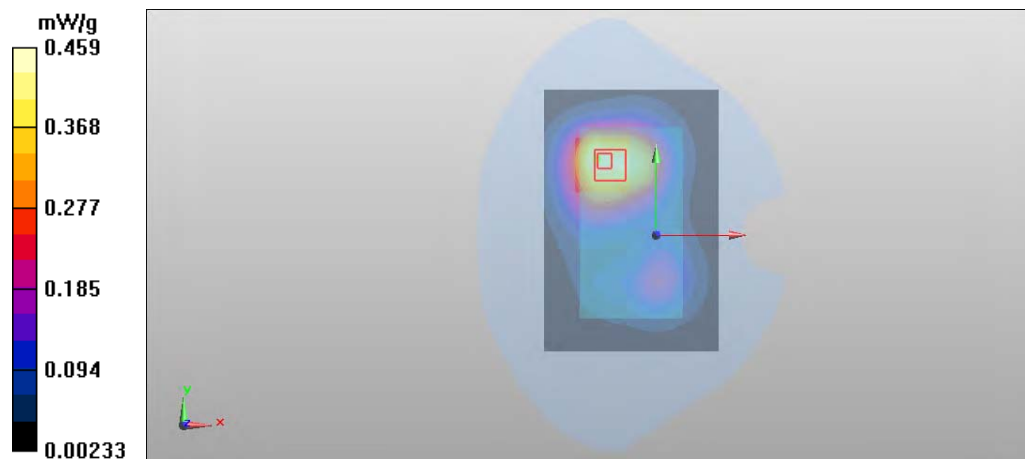
Peak SAR (extrapolated) = 0.602 mW/g

SAR(1 g) = 0.406 mW/g

SAR(10 g) = 0.274 mW/g

Power Drift = -0.16 dB

Maximum value of SAR (measured) = 0.433 mW/g



Date/Time: 2012-06-16 08:24:00

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.424 mho/m; ϵ_r = 52.79; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 50 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.449 mW/g

LTE/Body - Middle - QPSK - 20MHz – 50 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.496 V/m

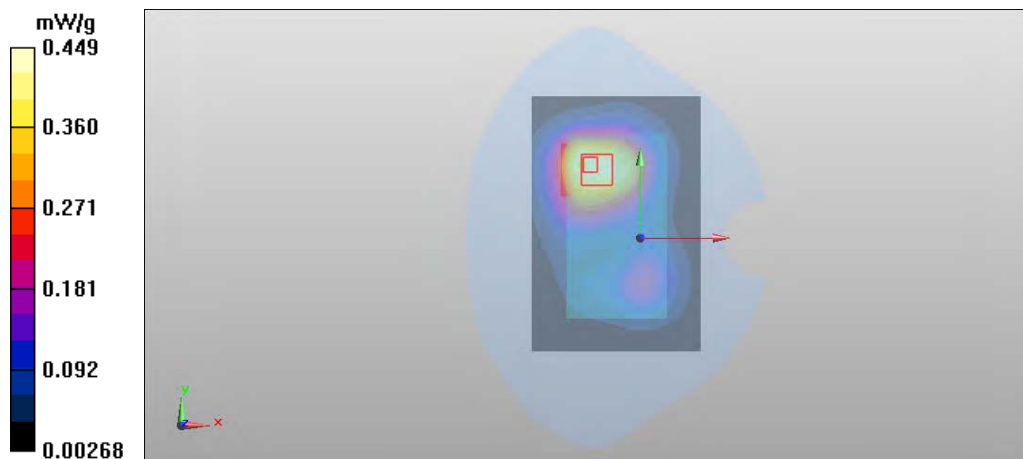
Peak SAR (extrapolated) = 0.608 mW/g

SAR(1 g) = 0.405 mW/g

SAR(10 g) = 0.275 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.430 mW/g



Date/Time: 2012-06-16 08:44:17

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.424$ mho/m; $\epsilon_r = 52.79$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.546 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.161 V/m

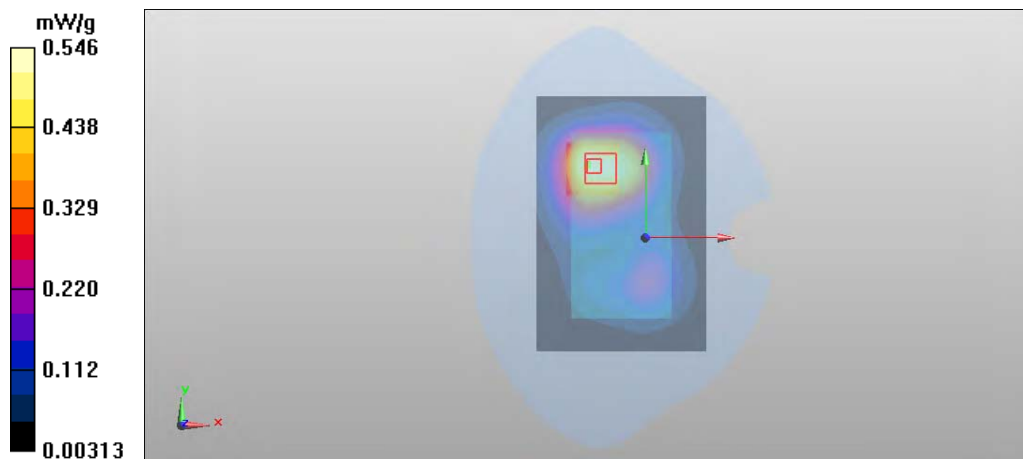
Peak SAR (extrapolated) = 0.732 mW/g

SAR(1 g) = 0.491 mW/g

SAR(10 g) = 0.330 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.519 mW/g



Date/Time: 2012-06-17 10:32:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1720 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.4\text{ C}$

Medium parameters used: $f = 1720\text{ MHz}$; $\sigma = 1.403\text{ mho/m}$; $\epsilon_r = 52.411$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Low - QPSK - 20MHz - 1 RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.574 mW/g

LTE/Body - Low - QPSK - 20MHz - 1 RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (6x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.825 V/m

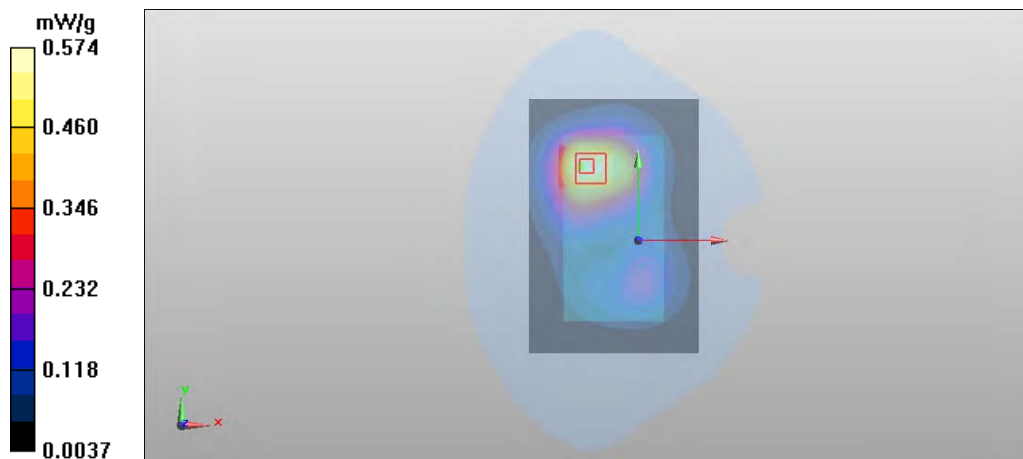
Peak SAR (extrapolated) = 0.784 mW/g

SAR(1 g) = 0.524 mW/g

SAR(10 g) = 0.346 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.555 mW/g



Date/Time: 2012-06-17 09:52:51

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.417 mho/m; ϵ_r = 52.4; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 50% offset - Spacer 15mm - No Accessory - Display Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.502 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 50% offset - Spacer 15mm - No Accessory - Display Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.648 V/m

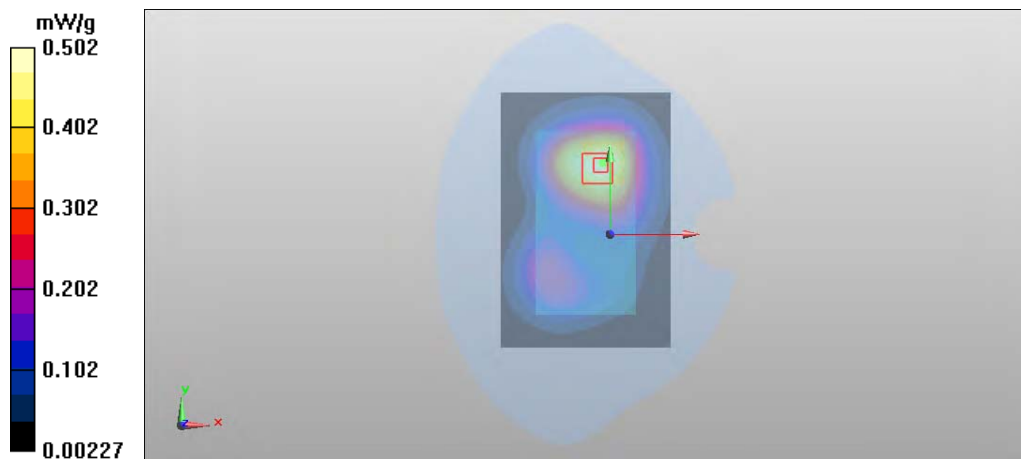
Peak SAR (extrapolated) = 0.665 mW/g

SAR(1 g) = 0.453 mW/g

SAR(10 g) = 0.306 mW/g

Power Drift = -0.14 dB

Maximum value of SAR (measured) = 0.480 mW/g



Date/Time: 2012-06-17 10:10:13

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.417 mho/m; ϵ_r = 52.4; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 50% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.537 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 50% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.627 V/m

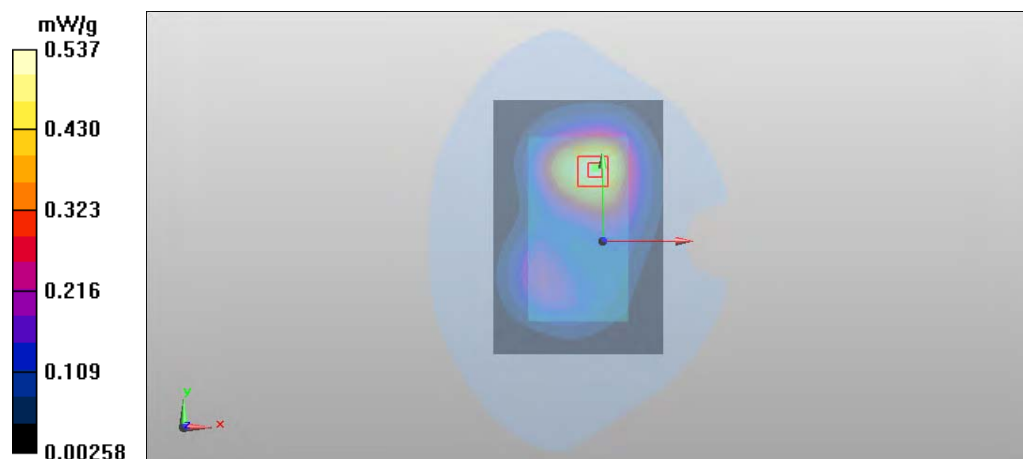
Peak SAR (extrapolated) = 0.713 mW/g

SAR(1 g) = 0.489 mW/g

SAR(10 g) = 0.326 mW/g

Power Drift = -0.07 dB

Maximum value of SAR (measured) = 0.522 mW/g



Date/Time: 2012-06-16 09:04:36

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.424$ mho/m; $\epsilon_r = 52.79$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.498 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.176 V/m

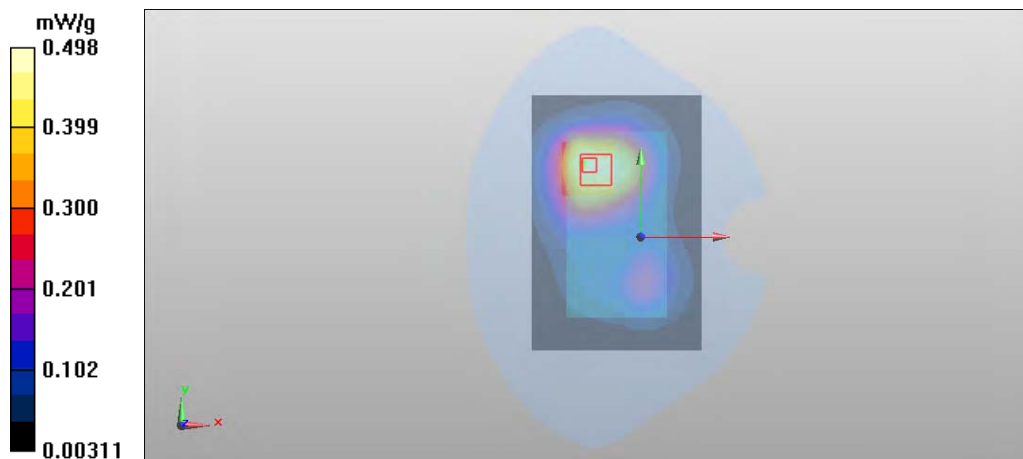
Peak SAR (extrapolated) = 0.666 mW/g

SAR(1 g) = 0.448 mW/g

SAR(10 g) = 0.303 mW/g

Power Drift = 0.21 dB

Maximum value of SAR (measured) = 0.482 mW/g



Date/Time: 2012-06-16 13:21:51

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.424$ mho/m; $\epsilon_r = 52.79$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0% offset - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.535 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0% offset - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.886 V/m

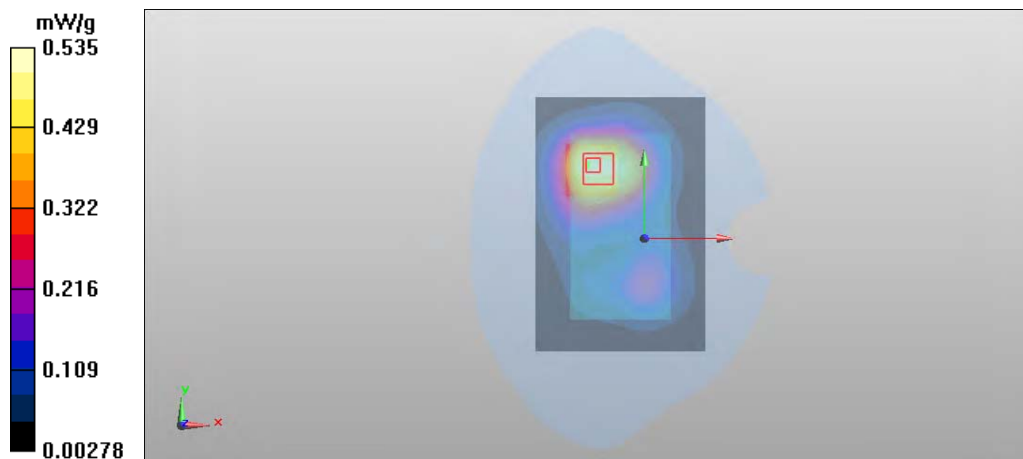
Peak SAR (extrapolated) = 0.723 mW/g

SAR(1 g) = 0.485 mW/g

SAR(10 g) = 0.325 mW/g

Power Drift = 0.00 dB

Maximum value of SAR (measured) = 0.513 mW/g



Date/Time: 2012-06-16 13:43:41

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.424 mho/m; ϵ_r = 52.79; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 20MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Area

Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.359 mW/g

LTE/Body - Middle - 16QAM - 20MHz - 100% RB- Spacer 15mm - No Accessory - Back Facing Phantom/Zoom

Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.673 V/m

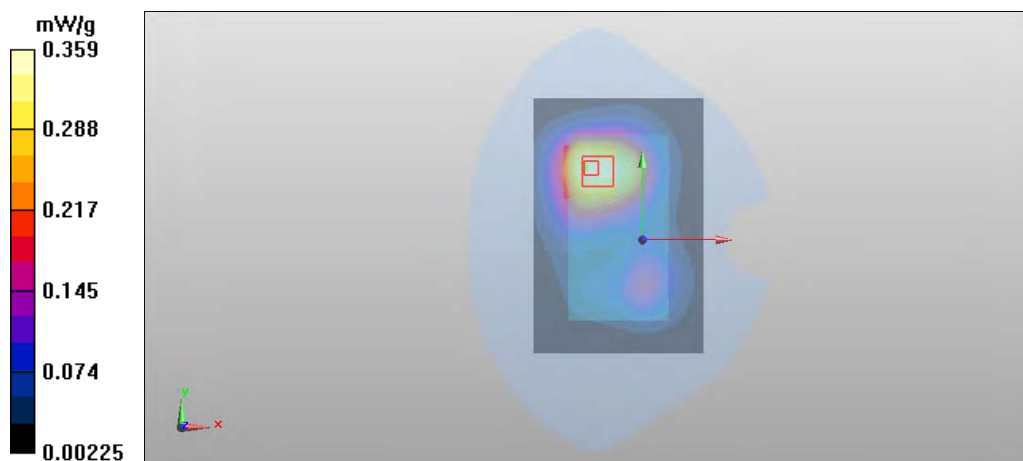
Peak SAR (extrapolated) = 0.487 mW/g

SAR(1 g) = 0.324 mW/g

SAR(10 g) = 0.218 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.343 mW/g



Date/Time: 2012-06-16 14:03:44

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.424$ mho/m; $\epsilon_r = 52.79$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 20MHz - 50 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.365 mW/g

LTE/Body - Middle - 16QAM - 20MHz - 50 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.724 V/m

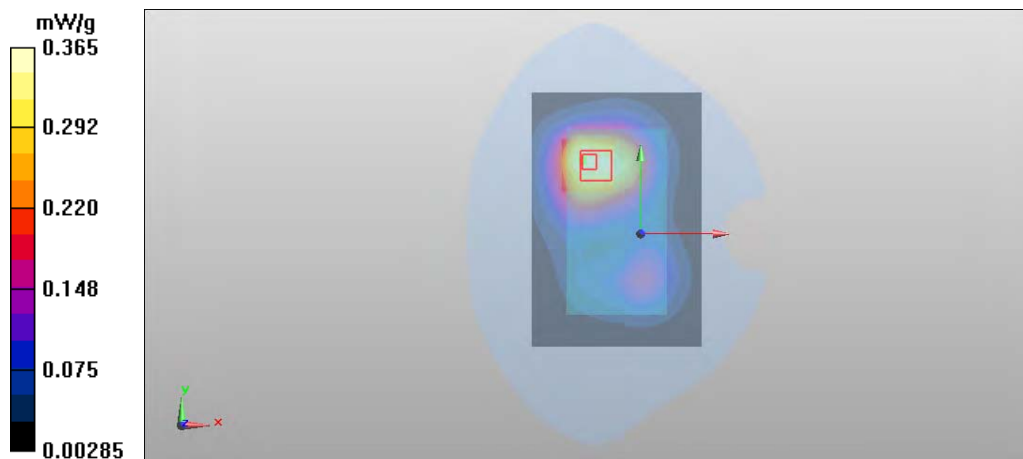
Peak SAR (extrapolated) = 0.484 mW/g

SAR(1 g) = 0.324 mW/g

SAR(10 g) = 0.218 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.343 mW/g



Date/Time: 2012-06-16 14:23:47

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.424$ mho/m; $\epsilon_r = 52.79$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.396 mW/g

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.187 V/m

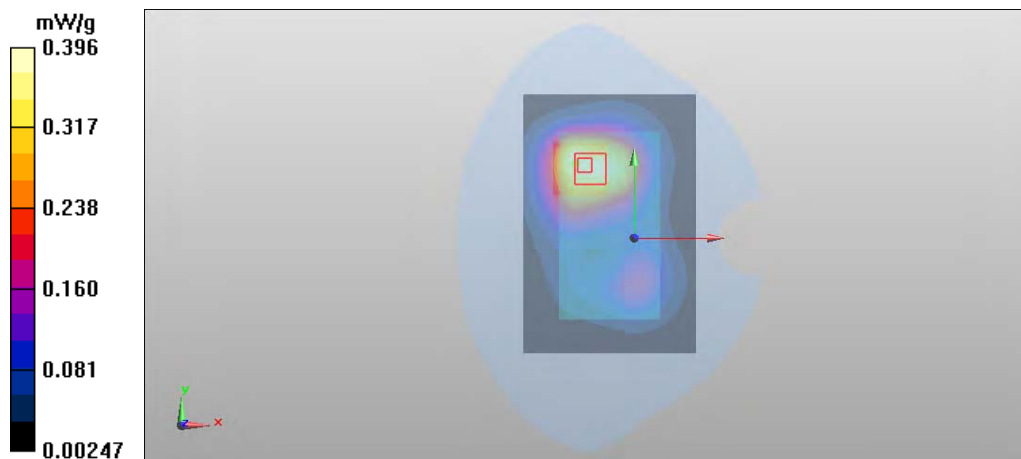
Peak SAR (extrapolated) = 0.548 mW/g

SAR(1 g) = 0.363 mW/g

SAR(10 g) = 0.245 mW/g

Power Drift = -0.15 dB

Maximum value of SAR (measured) = 0.388 mW/g



Date/Time: 2012-06-17 07:02:35

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.417 mho/m; ϵ_r = 52.4; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.388 mW/g

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (7x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.347 V/m

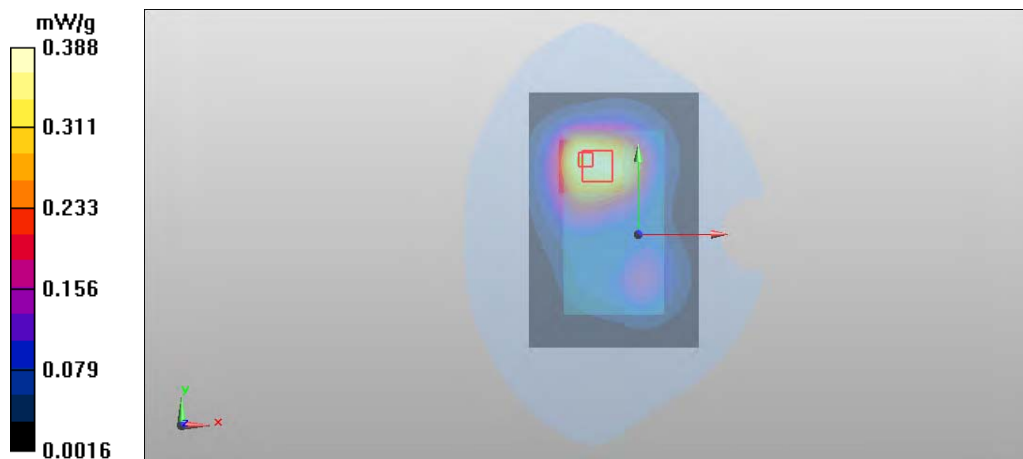
Peak SAR (extrapolated) = 0.557 mW/g

SAR(1 g) = 0.352 mW/g

SAR(10 g) = 0.237 mW/g

Power Drift = -0.07 dB

Maximum value of SAR (measured) = 0.371 mW/g



Date/Time: 2012-06-17 07:28:49

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.417 mho/m; ϵ_r = 52.4; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 0% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.447 mW/g

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 0% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.225 V/m

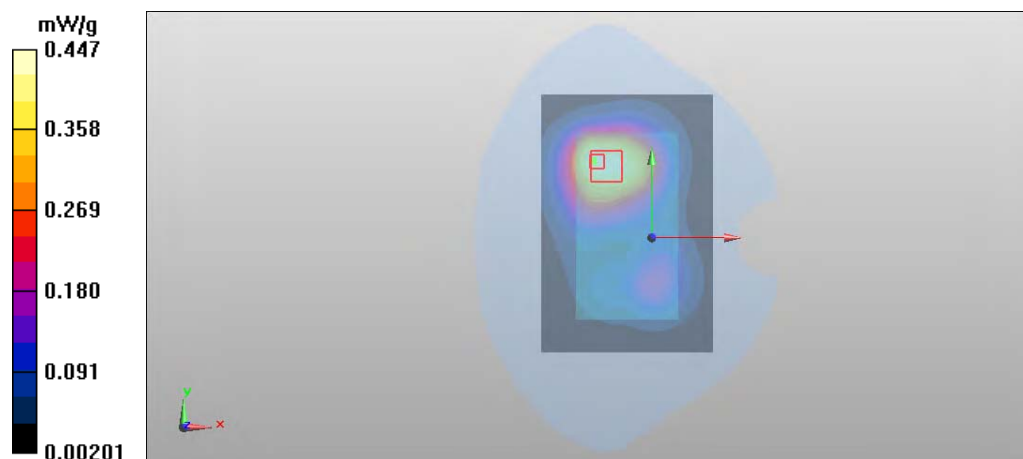
Peak SAR (extrapolated) = 0.619 mW/g

SAR(1 g) = 0.408 mW/g

SAR(10 g) = 0.271 mW/g

Power Drift = 0.08 dB

Maximum value of SAR (measured) = 0.447 mW/g



Date/Time: 2012-06-14 07:32:00, Date/Time: 2012-06-14 07:42:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: BSL1900; Medium Notes: $t = 21.7$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 52.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- ; SEMCAD X Version 14.0 Build 61

2-slot GPRS/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.512 mW/g

2-slot GPRS/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.9 V/m

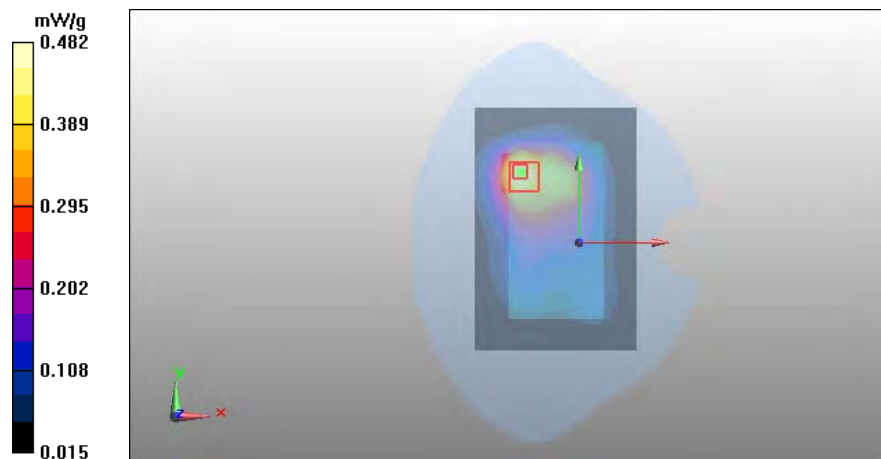
Peak SAR (extrapolated) = 0.717 W/kg

SAR(1 g) = 0.443 mW/g

SAR(10 g) = 0.271 mW/g

Power Drift = -0.057 dB

Maximum value of SAR (measured) = 0.482 mW/g



Date/Time: 2012-06-14 08:25:22, Date/Time: 2012-06-14 08:42:38

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1909.8 MHz; Duty Cycle: 1:4.2

Medium: BSL1900; Medium Notes: $t = 21.7$ C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3573

- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn793; Calibrated: 2011-09-16

- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177

- ; SEMCAD X Version 14.0 Build 61

2-slot GPRS/Body - High - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.585 mW/g

2-slot GPRS/Body - High - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan 3 (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.6 V/m

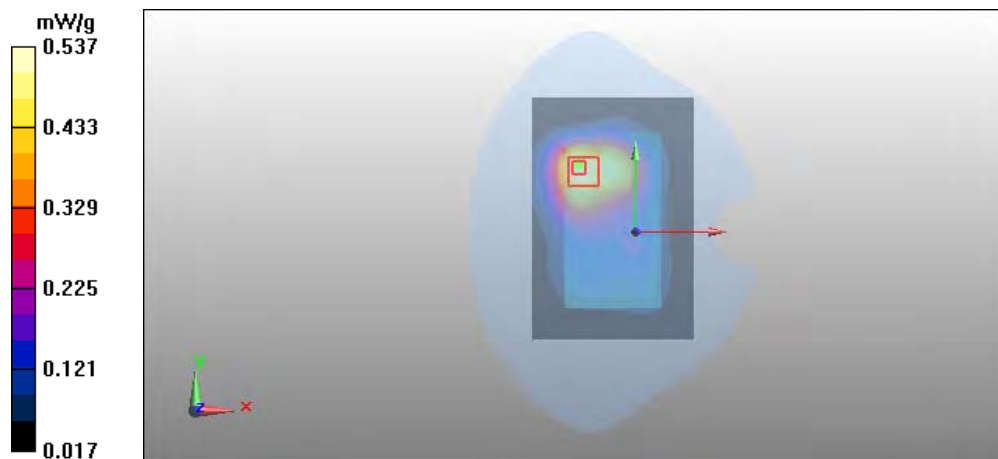
Peak SAR (extrapolated) = 0.818 W/kg

SAR(1 g) = 0.506 mW/g

SAR(10 g) = 0.319 mW/g

Power Drift = -0.015 dB

Maximum value of SAR (measured) = 0.537 mW/g



Date/Time: 2012-06-13 13:59:23

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: BSL1900; Medium Notes: $t = 21.7$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.492$ mho/m; $\epsilon_r = 52.524$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan (81x121x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.438 mW/g

2-slot GPRS/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 11.232 V/m

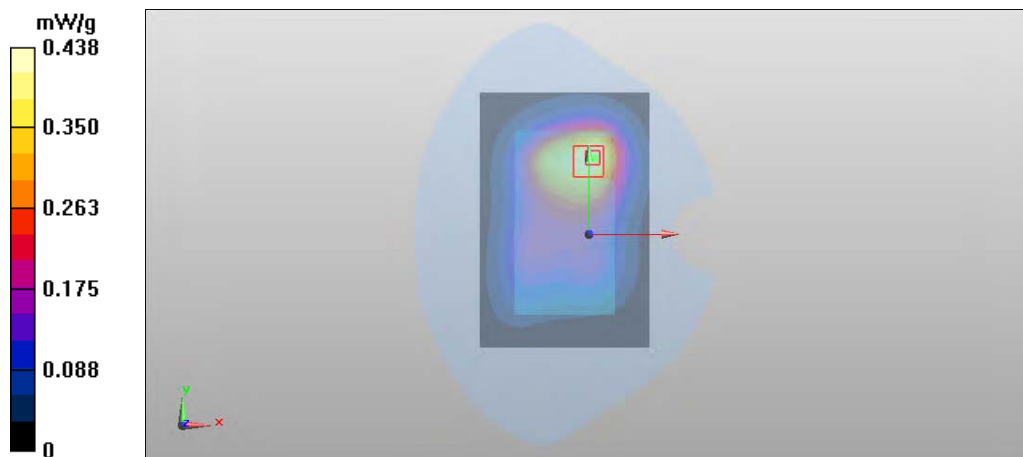
Peak SAR (extrapolated) = 0.691 mW/g

SAR(1 g) = 0.433 mW/g

SAR(10 g) = 0.273 mW/g

Power Drift = 0.28 dB

Maximum value of SAR (measured) = 0.467 mW/g



Date/Time: 2012-06-13 14:38:45

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: BSL1900; Medium Notes: $t = 21.7\text{ }^{\circ}\text{C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.492\text{ mho/m}$; $\epsilon_r = 52.524$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x121x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.466 mW/g

2-slot GPRS/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.592 V/m

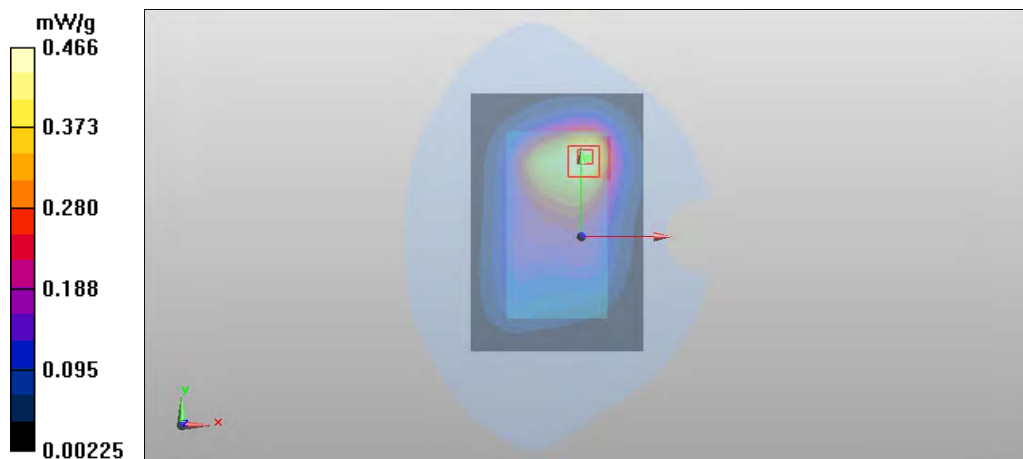
Peak SAR (extrapolated) = 0.699 mW/g

SAR(1 g) = 0.434 mW/g

SAR(10 g) = 0.271 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 0.463 mW/g



Date/Time: 2012-06-20 07:45:45

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.579 mW/g

WCDMA/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.572 V/m

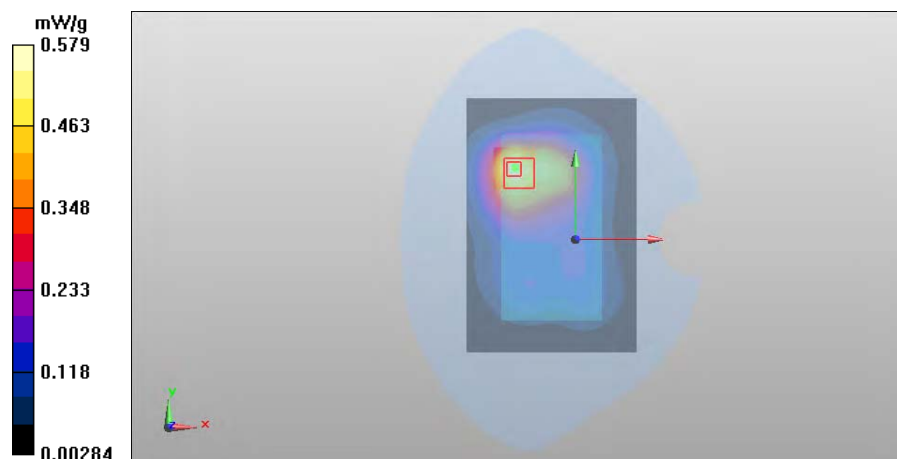
Peak SAR (extrapolated) = 0.784 mW/g

SAR(1 g) = 0.496 mW/g

SAR(10 g) = 0.316 mW/g

Power Drift = 0.02 dB

Maximum value of SAR (measured) = 0.535 mW/g



Date/Time: 2012-06-20 12:00:23

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.482$ mho/m; $\epsilon_r = 52.616$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (81x121x1): Measurement

grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.609 mW/g

WCDMA/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement

grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.388 V/m

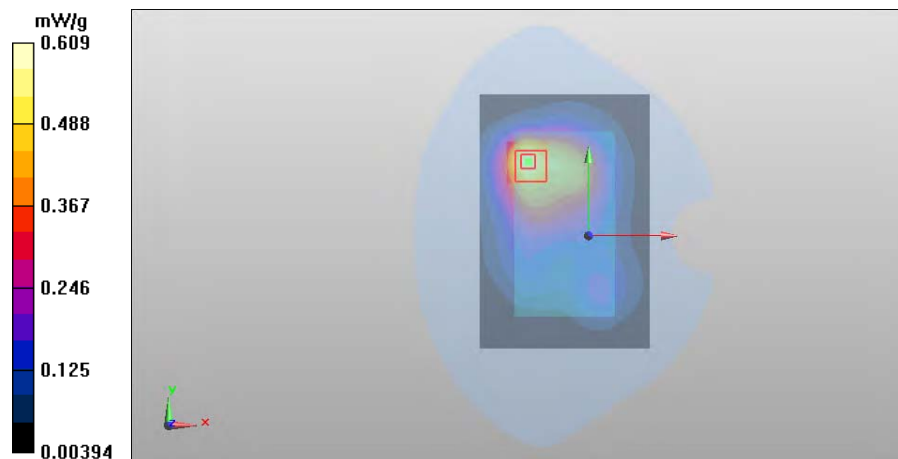
Peak SAR (extrapolated) = 0.843 mW/g

SAR(1 g) = 0.533 mW/g

SAR(10 g) = 0.335 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.573 mW/g



Date/Time: 2012-06-20 07:06:06

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan (81x121x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.521 mW/g

WCDMA/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.623 V/m

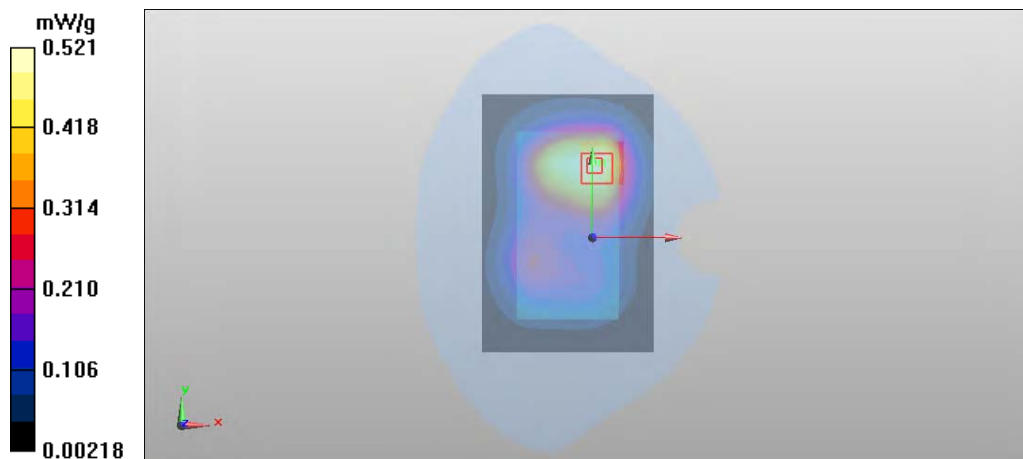
Peak SAR (extrapolated) = 0.727 mW/g

SAR(1 g) = 0.466 mW/g

SAR(10 g) = 0.299 mW/g

Power Drift = -0.15 dB

Maximum value of SAR (measured) = 0.492 mW/g



Date/Time: 2012-06-20 07:25:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.544 mW/g

WCDMA/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.826 V/m

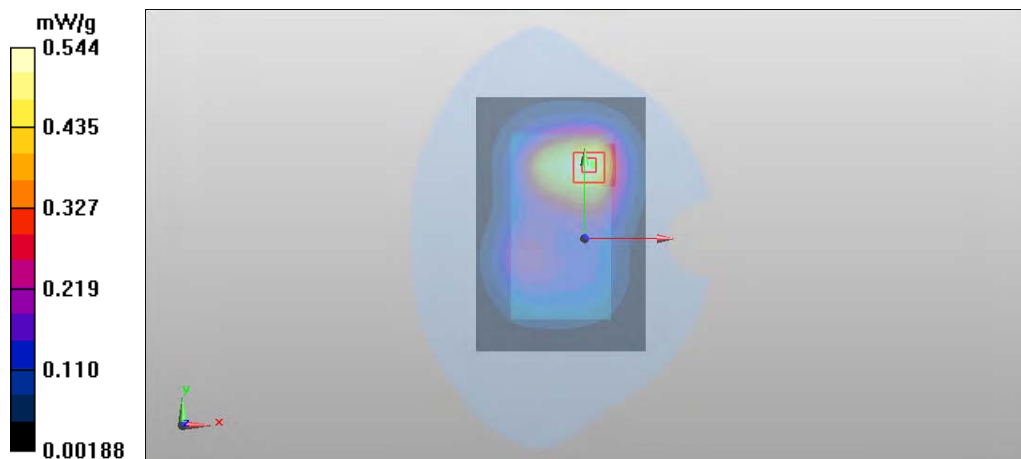
Peak SAR (extrapolated) = 0.775 mW/g

SAR(1 g) = 0.489 mW/g

SAR(10 g) = 0.310 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.520 mW/g



Date/Time: 2012-06-17 13:09:57

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.407 W/kg

LTE/Body - Middle - QPSK - 20MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.380 V/m

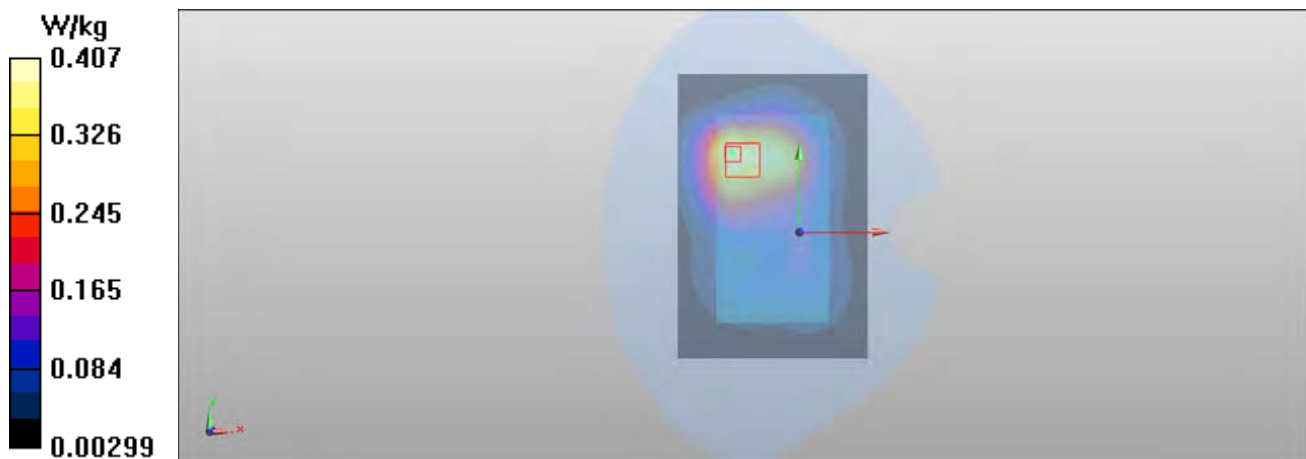
Peak SAR (extrapolated) = 0.546 mW/g

SAR(1 g) = 0.343 mW/g

SAR(10 g) = 0.224 mW/g

Power Drift = 0.12 dB

Maximum value of SAR (measured) = 0.361 W/kg



Date/Time: 2012-06-17 13:38:31

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 50% RB - 50%offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.399 W/kg

LTE/Body - Middle - QPSK - 20MHz - 50% RB - 50%offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.307 V/m

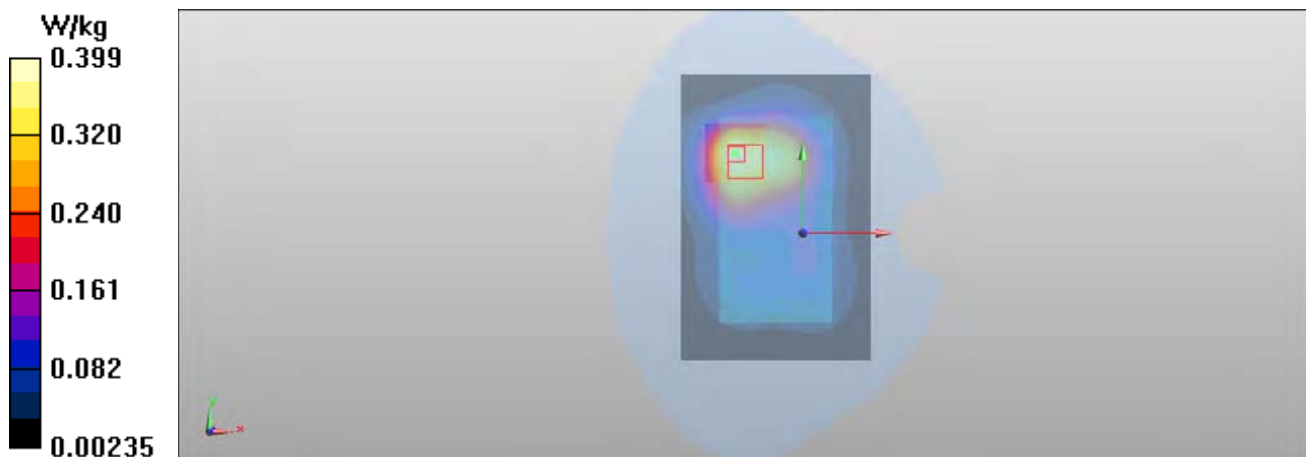
Peak SAR (extrapolated) = 0.537 mW/g

SAR(1 g) = 0.336 mW/g

SAR(10 g) = 0.219 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.352 W/kg



SAR Report

Appendix B.2 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-06-17 13:56:48

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.459 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.917 V/m

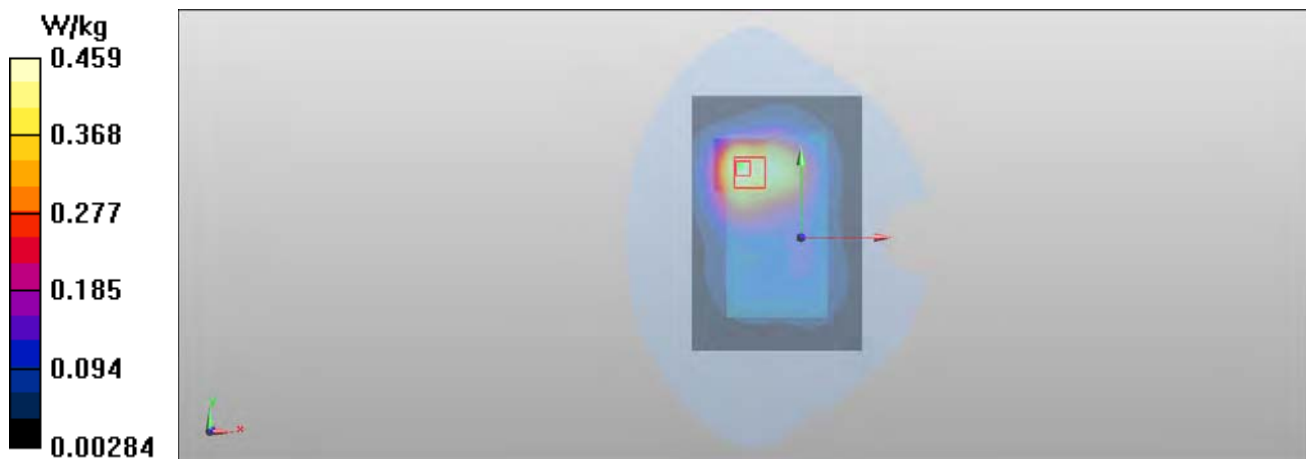
Peak SAR (extrapolated) = 0.619 mW/g

SAR(1 g) = 0.395 mW/g

SAR(10 g) = 0.255 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.422 W/kg



SAR Report

Appendix B.2 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

Copyright © 2012 TCC Nokia

Date/Time: 2012-06-17 14:16:17

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Back Facing Phantom
/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.518 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Back Facing Phantom
/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.272 V/m

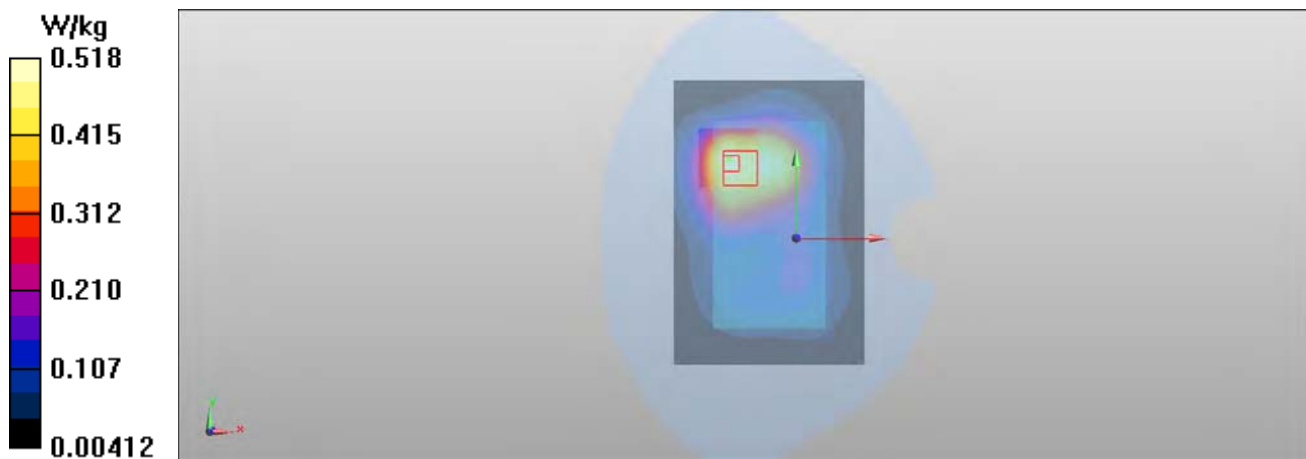
Peak SAR (extrapolated) = 0.701 mW/g

SAR(1 g) = 0.448 mW/g

SAR(10 g) = 0.293 mW/g

Power Drift = 0.09 dB

Maximum value of SAR (measured) = 0.477 W/kg



Date/Time: 2012-06-20 09:40:54

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 100% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Area

Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.512 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 100% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom

Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.899 V/m

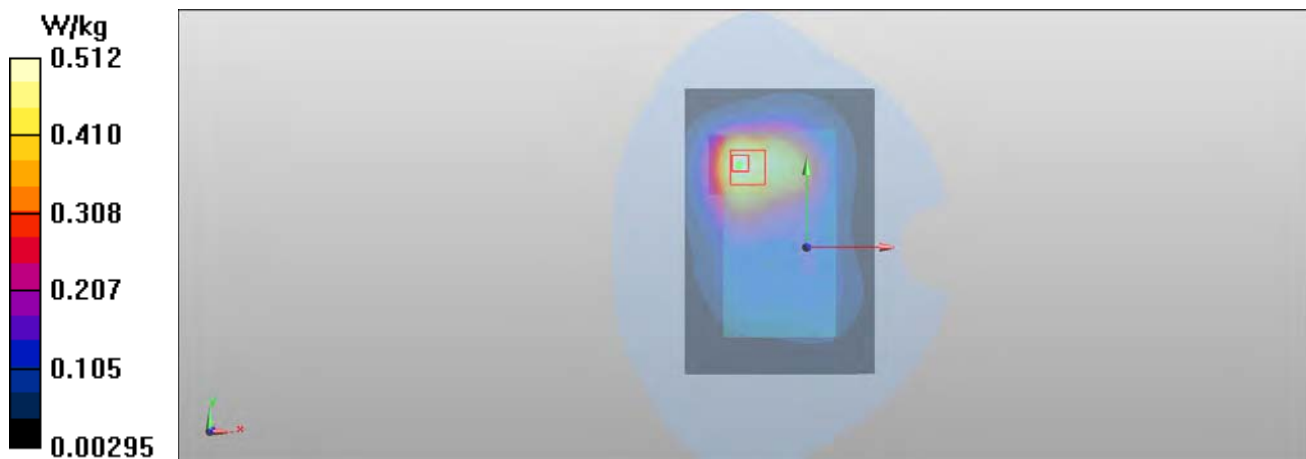
Peak SAR (extrapolated) = 0.716 mW/g

SAR(1 g) = 0.450 mW/g

SAR(10 g) = 0.288 mW/g

Power Drift = 0.08 dB

Maximum value of SAR (measured) = 0.477 W/kg



SAR Report

Appendix B.2 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

Copyright © 2012 TCC Nokia

Date/Time: 2012-06-20 10:00:55

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Display Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.493 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Display Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.306 V/m

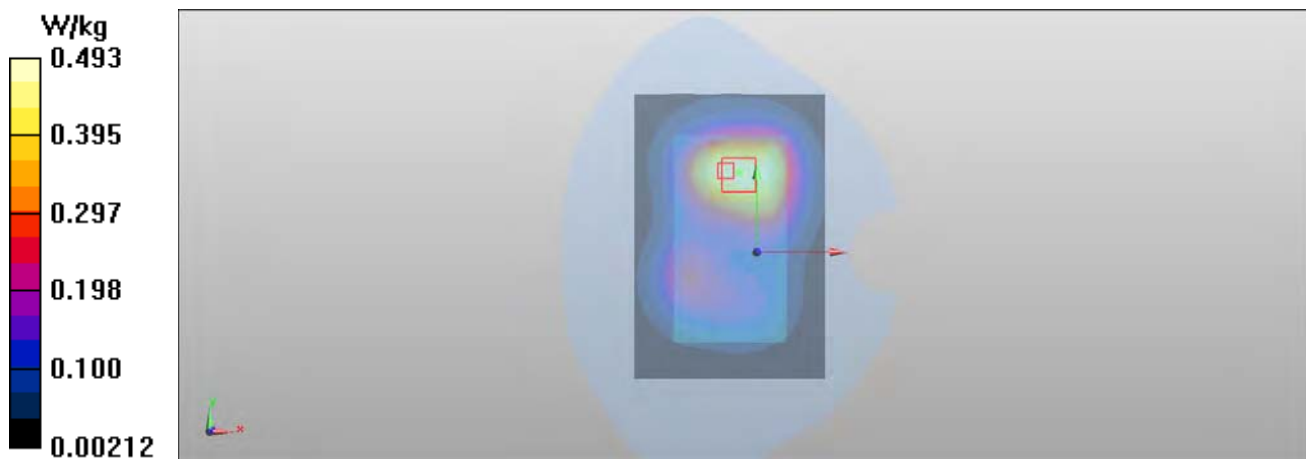
Peak SAR (extrapolated) = 0.674 mW/g

SAR(1 g) = 0.443 mW/g

SAR(10 g) = 0.292 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.472 W/kg



SAR Report

Appendix B.2 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

Copyright © 2012 TCC Nokia

Date/Time: 2012-06-20 15:51:23

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 100% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.548 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 100% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.365 V/m

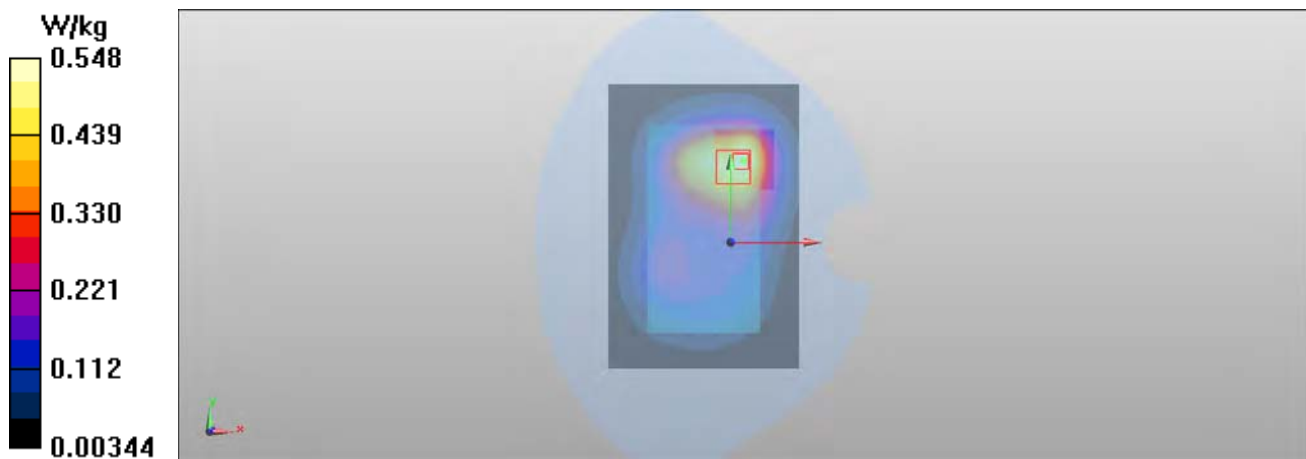
Peak SAR (extrapolated) = 0.787 mW/g

SAR(1 g) = 0.486 mW/g

SAR(10 g) = 0.308 mW/g

Power Drift = -0.00 dB

Maximum value of SAR (measured) = 0.518 W/kg



Date/Time: 2012-06-17 14:31:51

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0%offset - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.513 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0%offset - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.875 V/m

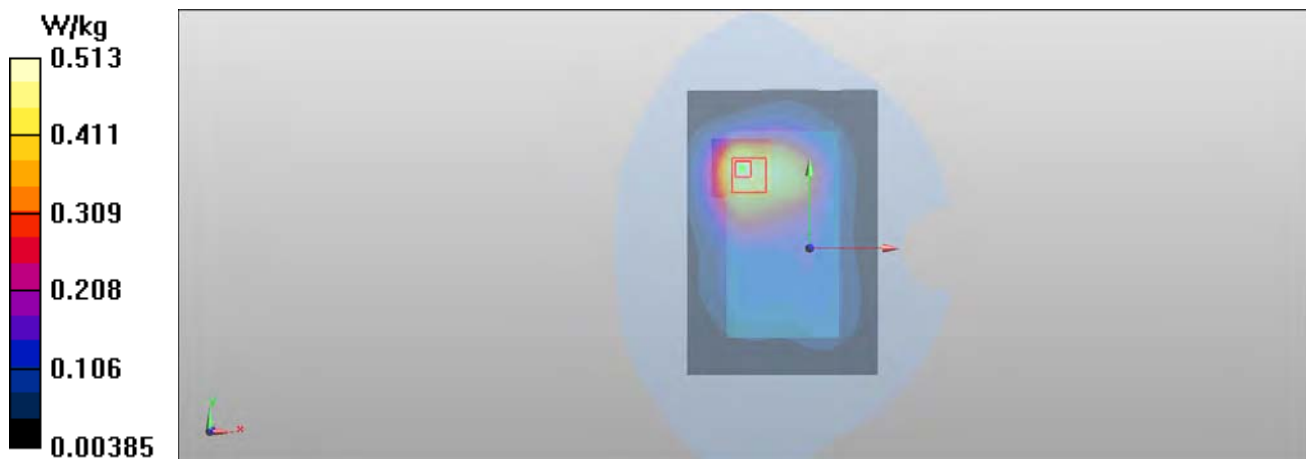
Peak SAR (extrapolated) = 0.712 mW/g

SAR(1 g) = 0.443 mW/g

SAR(10 g) = 0.282 mW/g

Power Drift = -0.02 dB

Maximum value of SAR (measured) = 0.464 W/kg



Date/Time: 2012-06-17 18:32:10

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 20MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.290 W/kg

LTE/Body - Middle - 16QAM - 20MHz - 100% RB - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan(6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.716 V/m

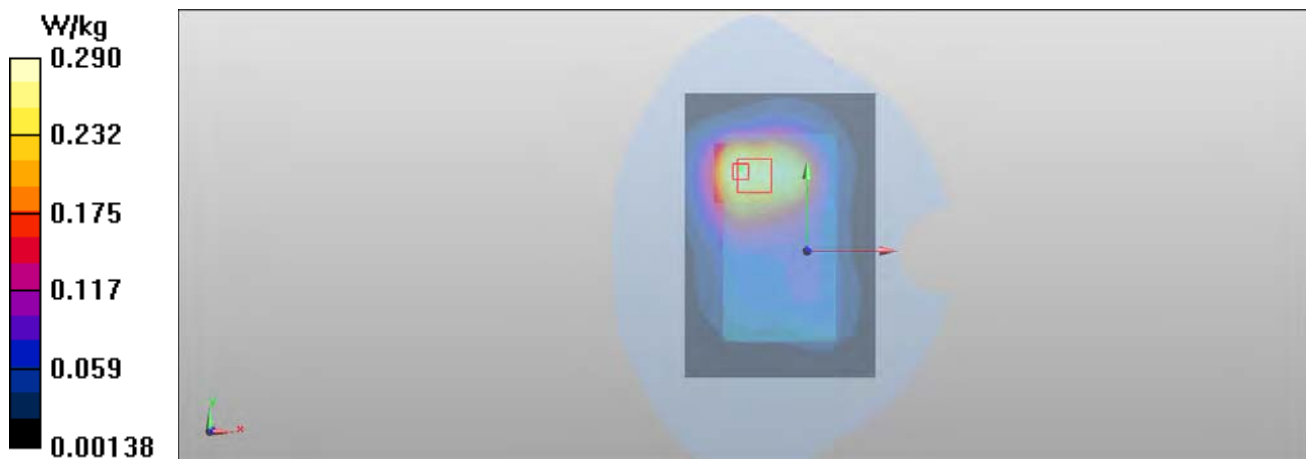
Peak SAR (extrapolated) = 0.388 mW/g

SAR(1 g) = 0.247 mW/g

SAR(10 g) = 0.162 mW/g

Power Drift = -0.27 dB

Maximum value of SAR (measured) = 0.266 W/kg



Date/Time: 2012-06-17 18:55:51

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 20MHz - 50% RB - 50%offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.285 W/kg

LTE/Body - Middle - 16QAM - 20MHz - 50% RB - 50%offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.575 V/m

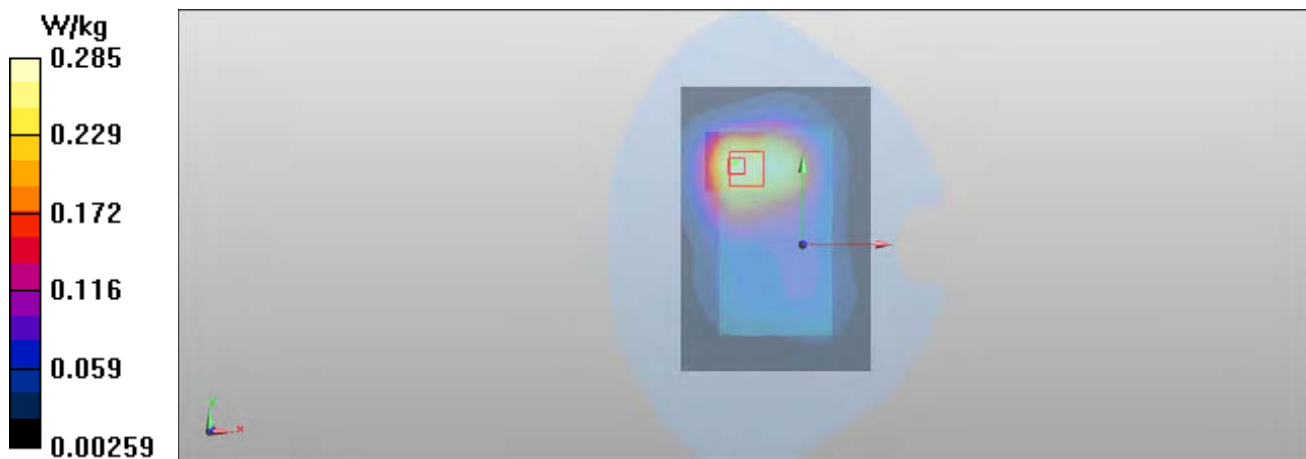
Peak SAR (extrapolated) = 0.384 mW/g

SAR(1 g) = 0.246 mW/g

SAR(10 g) = 0.160 mW/g

Power Drift = -0.27 dB

Maximum value of SAR (measured) = 0.259 W/kg



Date/Time: 2012-06-17 19:28:11

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.320 W/kg

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 50% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.994 V/m

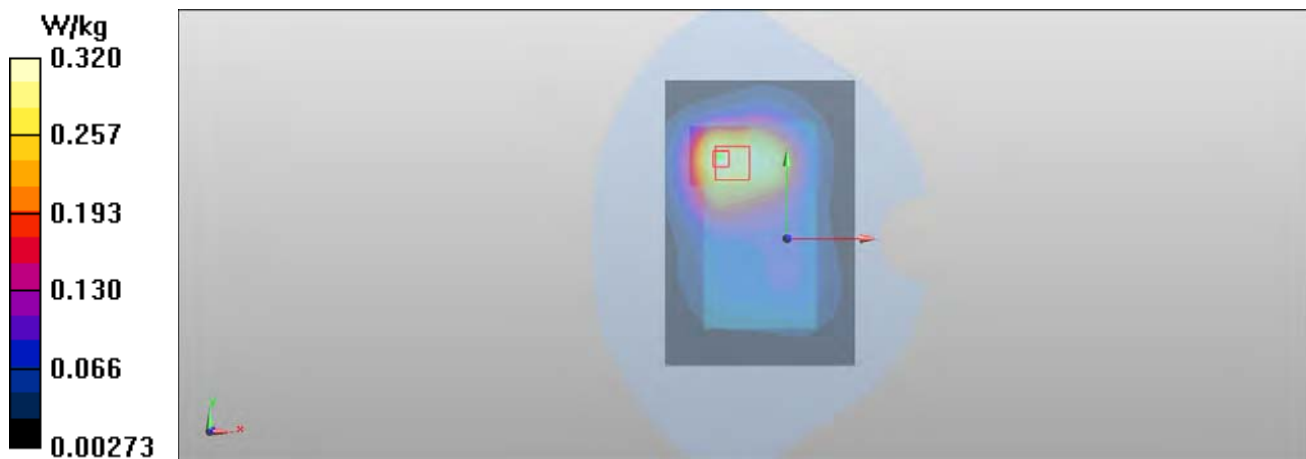
Peak SAR (extrapolated) = 0.440 mW/g

SAR(1 g) = 0.279 mW/g

SAR(10 g) = 0.182 mW/g

Power Drift = -0.09 dB

Maximum value of SAR (measured) = 0.294 W/kg



Date/Time: 2012-06-20 08:57:59

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.387 W/kg

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 7.485 V/m

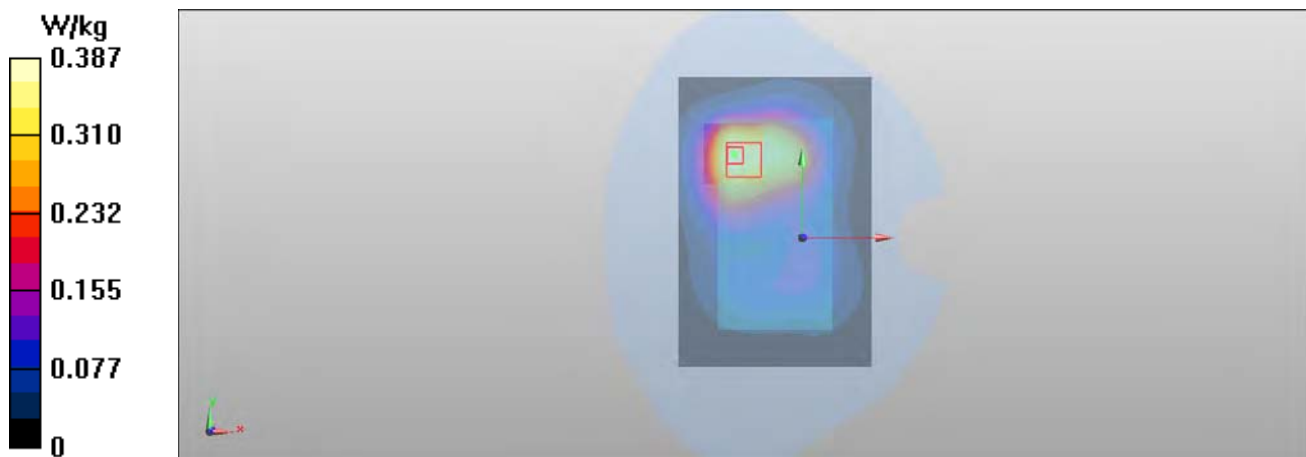
Peak SAR (extrapolated) = 0.534 mW/g

SAR(1 g) = 0.339 mW/g

SAR(10 g) = 0.219 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.355 W/kg



Date/Time: 2012-06-20 09:23:30

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 0% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.382 W/kg

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 0% offset - Spacer 15mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.132 V/m

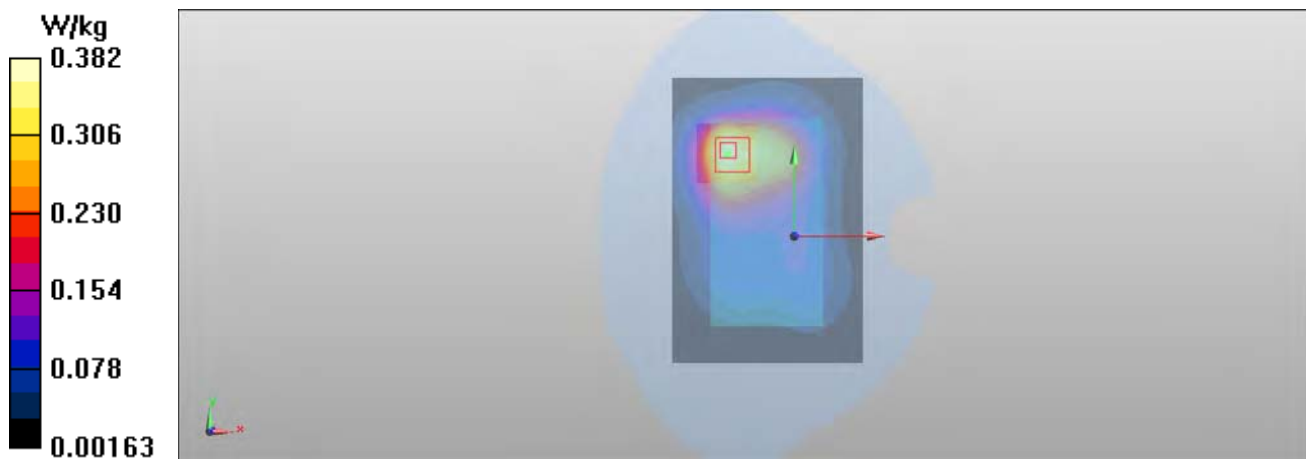
Peak SAR (extrapolated) = 0.535 mW/g

SAR(1 g) = 0.339 mW/g

SAR(10 g) = 0.214 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.360 W/kg



Date/Time: 2012-06-23 18:10:16

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode 5.5 Mbps

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 20.6^\circ\text{C}$

Medium parameters used: $f = 2437\text{ MHz}$; $\sigma = 1.953\text{ mho/m}$; $\epsilon_r = 50.372$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (121x181x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.0249 mW/g

WLAN/Body - Middle - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.470 V/m

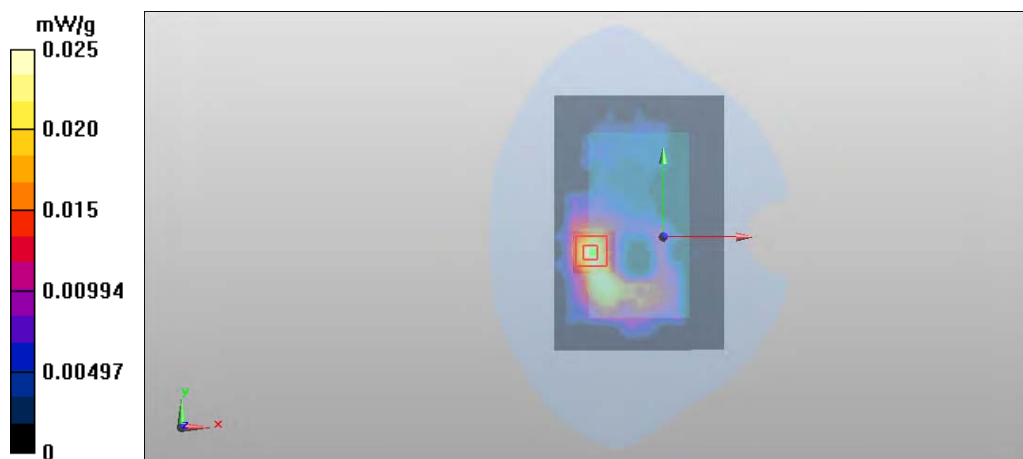
Peak SAR (extrapolated) = 0.034 mW/g

SAR(1 g) = 0.019 mW/g

SAR(10 g) = 0.00977 mW/g

Power Drift = -0.29 dB

Maximum value of SAR (measured) = 0.0225 mW/g



Date/Time: 2012-06-23 18:37:10

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode 5.5 Mbps

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 20.6^\circ\text{C}$

Medium parameters used: $f = 2437\text{ MHz}$; $\sigma = 1.953\text{ mho/m}$; $\epsilon_r = 50.372$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (121x181x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.0224 mW/g

WLAN/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.181 V/m

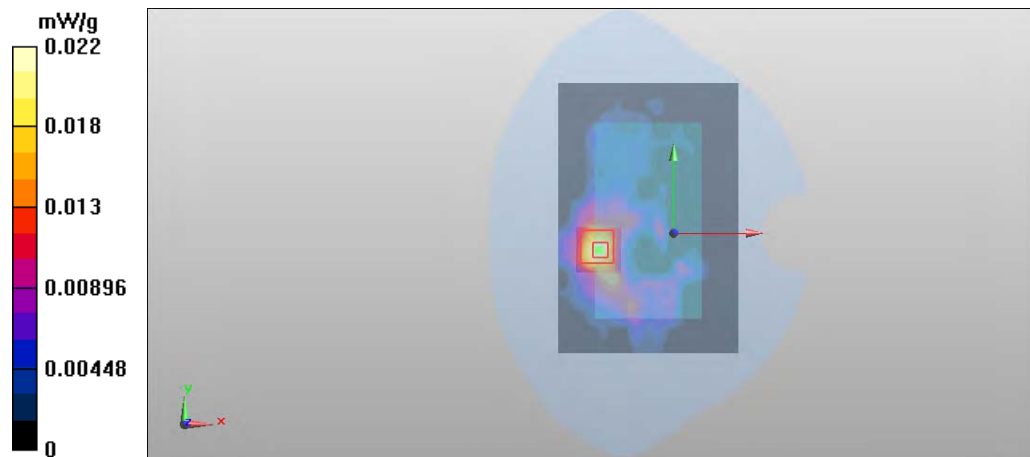
Peak SAR (extrapolated) = 0.046 mW/g

SAR(1 g) = 0.019 mW/g

SAR(10 g) = 0.00898 mW/g

Power Drift = 0.33 dB

Maximum value of SAR (measured) = 0.0215 mW/g



Date/Time: 2012-06-23 12:11:01

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 20.6^\circ\text{C}$

Medium parameters used: $f = 2437\text{ MHz}$; $\sigma = 1.953\text{ mho/m}$; $\epsilon_r = 50.372$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan (121x181x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.0193 mW/g

WLAN/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 0.589 V/m

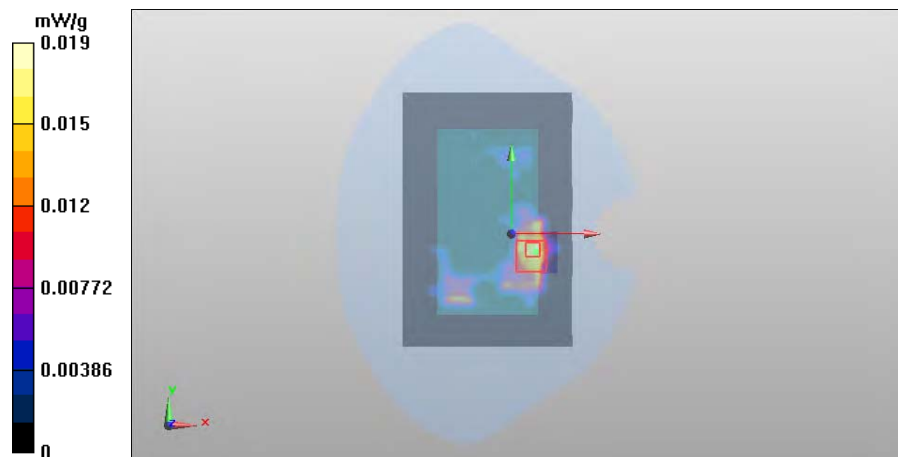
Peak SAR (extrapolated) = 0.029 mW/g

SAR(1 g) = 0.011 mW/g

SAR(10 g) = 0.00462 mW/g

Power Drift = -0.38 dB

Maximum value of SAR (measured) = 0.0135 mW/g



Date/Time: 2012-06-23 15:58:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 20.6^\circ\text{C}$

Medium parameters used: $f = 2437\text{ MHz}$; $\sigma = 1.953\text{ mho/m}$; $\epsilon_r = 50.372$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (121x181x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.0167 mW/g

WLAN/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 1.546 V/m

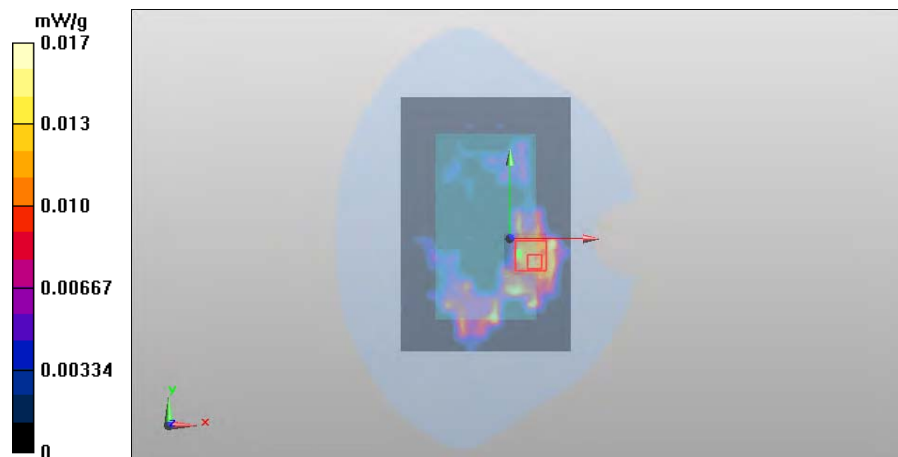
Peak SAR (extrapolated) = 0.022 mW/g

SAR(1 g) = 0.0082 mW/g

SAR(10 g) = 0.00334 mW/g

Power Drift = -0.09 dB

Maximum value of SAR (measured) = 0.00969 mW/g



Date/Time: 2012-06-29 05:27:17

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode

Frequency: 5660 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: 21.0 C

Medium parameters used: $f = 5660$ MHz; $\sigma = 6.035$ mho/m; $\epsilon_r = 47.922$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.28, 3.28, 3.28); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Channel 132 - Spacer 15mm - No Accessory - Back Facing Phantom/Area Scan (121x181x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0773 mW/g

WLAN/Body - Channel 132 - Spacer 15mm - No Accessory - Back Facing Phantom/Zoom Scan (8x8x12)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.233 V/m

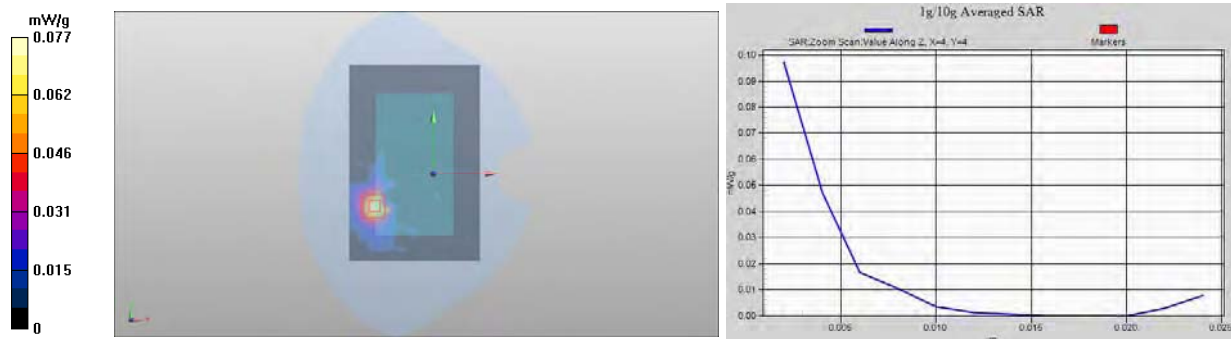
Peak SAR (extrapolated) = 0.189 mW/g

SAR(1 g) = 0.048 mW/g

SAR(10 g) = 0.018 mW/g

Power Drift = -0.18 dB.

Maximum value of SAR (measured) = 0.0973 mW/g



Date/Time: 2012-06-28 14:30:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode

Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: temp = 21.0 C

Medium parameters used: $f = 5320$ MHz; $\sigma = 5.502$ mho/m; $\epsilon_r = 48.918$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.75, 3.75, 3.75); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Channel 64 - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (121x181x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0733 mW/g

WLAN/Body - Channel 64 - Spacer 15mm - WH-208 - Back Facing Phantom/Zoom Scan (8x8x12)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.082 V/m

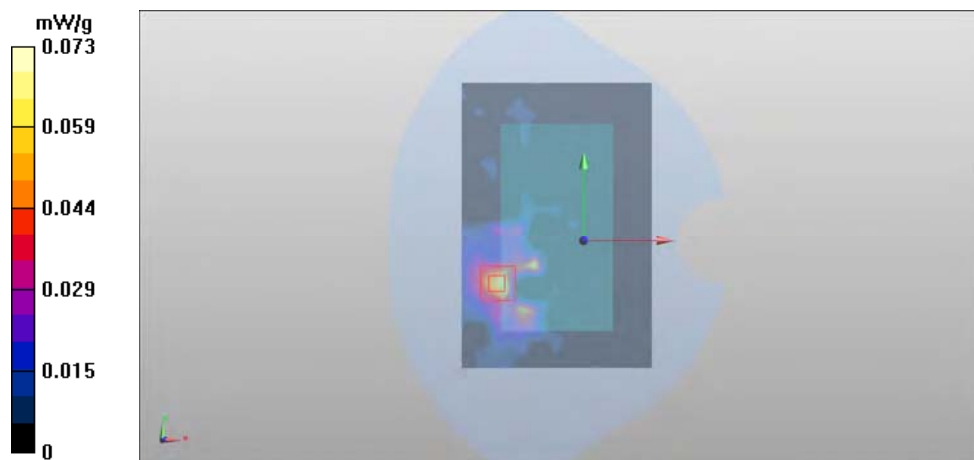
Peak SAR (extrapolated) = 0.175 mW/g

SAR(1 g) = 0.042 mW/g

SAR(10 g) = 0.016 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.0874 mW/g



Date/Time: 2012-06-26 06:11:15, Date/Time: 2012-06-26 07:04:54

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode

Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: temp = 21.0 C

Medium parameters used: $f = 5240$ MHz; $\sigma = 5.5$ mho/m; $\epsilon_r = 48.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.99, 3.99, 3.99); Calibrated: 2012-02-07
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- ; SEMCAD X Version 14.0 Build 61

WLAN/Body - Channel 48 - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan (121x181x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.088 mW/g

WLAN/Body - Channel 48 - Spacer 15mm - No Accessory - Display Facing Phantom/Zoom Scan (8x8x12)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.89 V/m

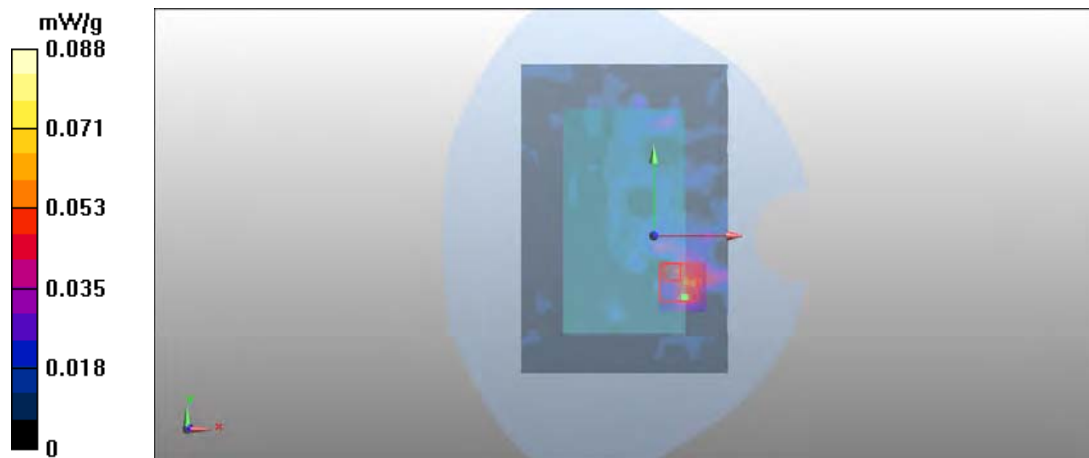
Peak SAR (extrapolated) = 0.335 W/kg

SAR(1 g) = 0.032 mW/g

SAR(10 g) = 0.012 mW/g

Power Drift = -0.11 dB

Maximum value of SAR (measured) = 0.057 mW/g



Date/Time: 2012-06-26 12:57:34

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode

Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: BSL5000; Medium Notes: temp = 21.0 C

Medium parameters used: $f = 5240$ MHz; $\sigma = 5.411$ mho/m; $\epsilon_r = 48.855$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3834
- ConvF(3.99, 3.99, 3.99); Calibrated: 2012-02-07;
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
- Phantom: SAM2; Type: SAM; Serial: TP-1570
- Measurement SW: DASYS2, Version 52.8 (1); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Channel 48 - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan (121x181x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0631 mW/g

WLAN/Body - Channel 48 - Spacer 15mm - WH-208 - Display Facing Phantom/Zoom Scan (9x9x12)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.967 V/m

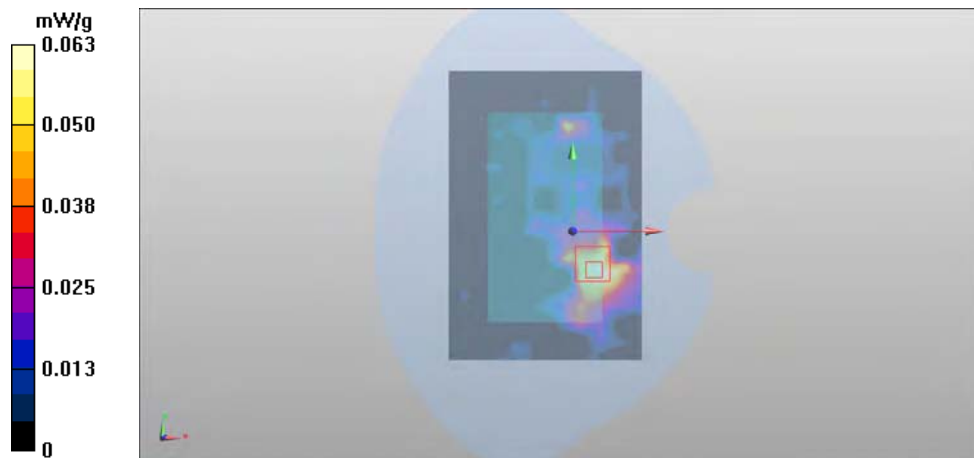
Peak SAR (extrapolated) = 0.421 mW/g

SAR(1 g) = 0.035 mW/g

SAR(10 g) = 0.012 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.0551 mW/g



Date/Time: 2012-06-23 12:11:01

DASY Configuration for WLAN/Body – Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated:2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn793; Calibrated: 2011-09-16

Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177

Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-25 14:58:37

DASY Configuration for LTE/Body - High - QPSK - 10MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700; Frequency: 711 MHz; Duty Cycle: 1:1; PMF: 1.12202e-005

Medium: BSL750 Medium parameters used: $f = 711$ MHz; $\sigma = 0.972$ mho/m; $\epsilon_r = 54.417$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3165; ConvF(6.06, 6.06, 6.06); Calibrated: 21-Feb-12;

Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))

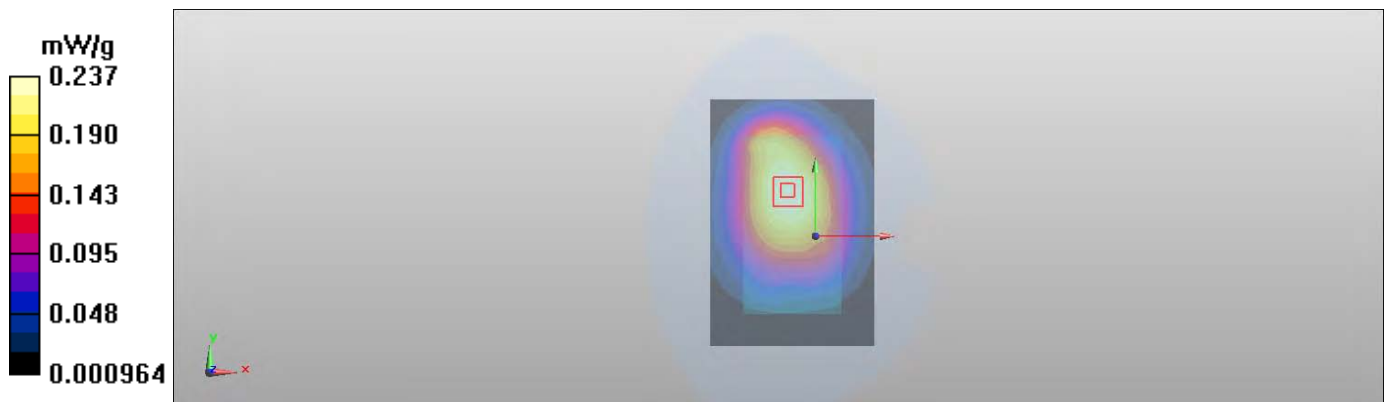
Electronics: DAE4 Sn1309; Calibrated: 11-Jan-12

Phantom: SAM #3 CRP; Type: SAM; Serial:

Measurement SW: DASY52, Version 52.8 (1)

Fast SAR of Combined Scans: SAR(1 g) = 0.225 mW/g; SAR(10 g) = 0.163 mW/g

Maximum value of SAR (interpolated) = 0.237 mW/g



Date/Time: 2012-06-23 12:11:01

DASY Configuration for WLAN/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Area

Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn793; Calibrated: 2011-09-16

Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177

Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-15 08:52:39

DASY Configuration for 2-slot GPRS/Body - High - Spacer 15mm - No accessory - Display Facing Phantom/Area

Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: BSL835 Medium parameters used: $f = 849$ MHz; $\sigma = 1.007$ mho/m; $\epsilon_r = 53.672$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3131; ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;

Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))

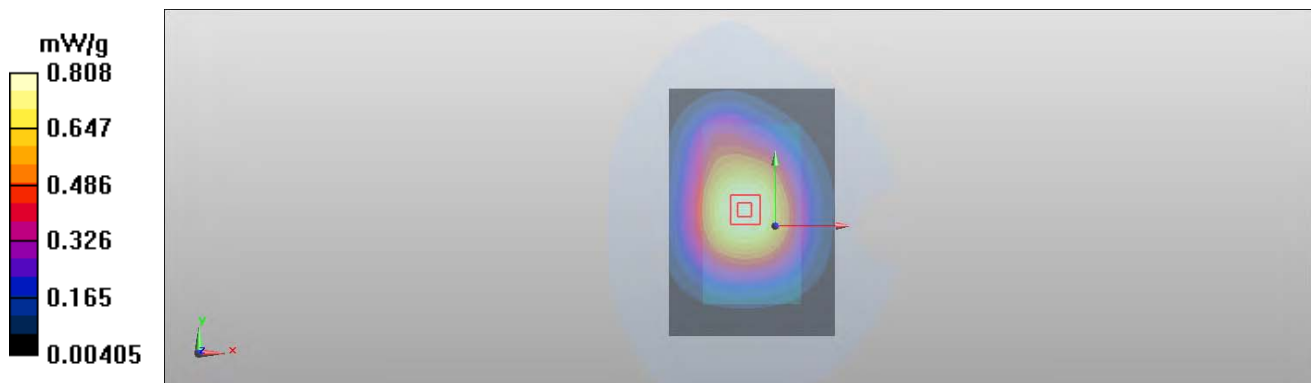
Electronics: DAE4 Sn538; Calibrated: 2011-09-15

Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179

Measurement SW: DASY52, Version 52.6 (1)

Fast SAR of Combined Scans: SAR(1 g) = 0.766 mW/g; SAR(10 g) = 0.551 mW/g

Maximum value of SAR (interpolated) = 0.808 mW/g



Date/Time: 2012-06-23 12:11:01

DASY Configuration for WLAN/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn793; Calibrated: 2011-09-16

Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177

Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-22 10:07:46

DASY Configuration for WCDMA/Body - Low - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850; Frequency: 826.4 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL835 Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.987$ mho/m; $\epsilon_r = 54.201$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3131; ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;

Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))

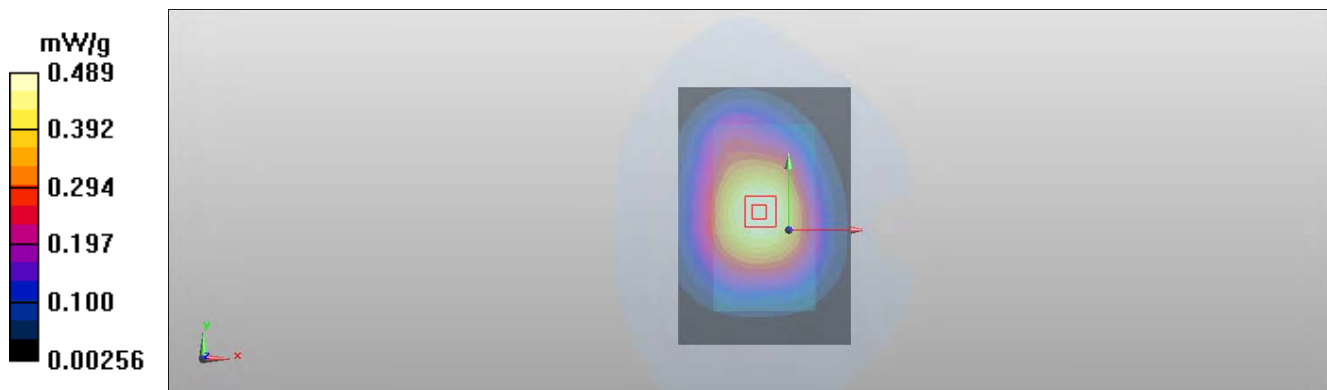
Electronics: DAE4 Sn538; Calibrated: 2011-09-15

Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179

Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.463 mW/g; SAR(10 g) = 0.333 mW/g

Maximum value of SAR (interpolated) = 0.489 mW/g



Date/Time: 2012-06-23 12:11:01

DASY Configuration for WLAN/Body - Middle - Spacer 15mm - No Accessory - Display Facing Phantom/Area

Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn793; Calibrated: 2011-09-16

Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177

Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-22 19:23:33

DASY Configuration for LTE/Body - Middle - QPSK - 10MHz - 1RB - 100% offset - Spacer 15mm - No Accessory -

Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850; Frequency: 836.5 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL835 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3131; ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;

Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))

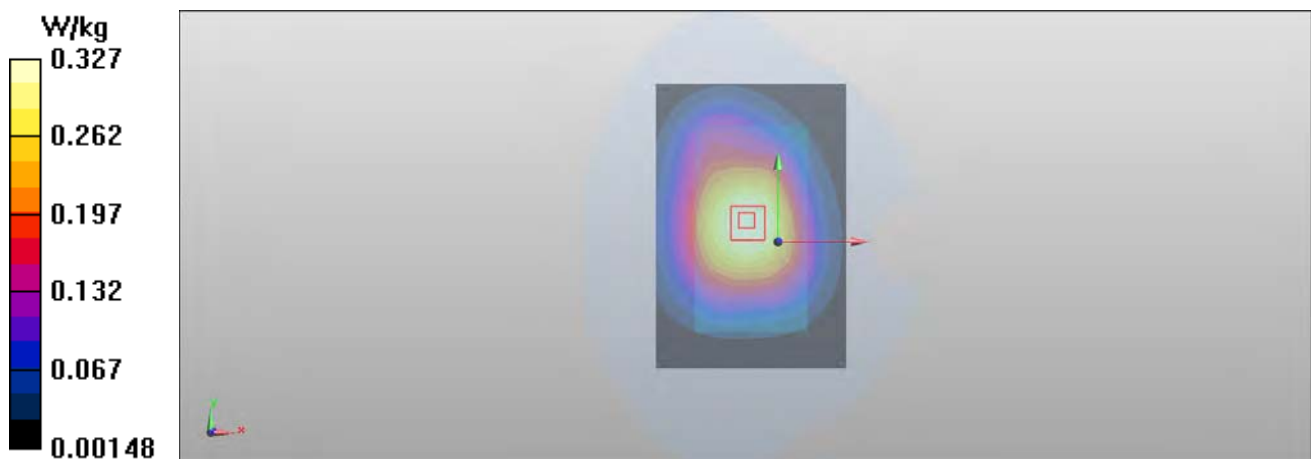
Electronics: DAE4 Sn538; Calibrated: 2011-09-15

Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179

Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.224 mW/g

Maximum value of SAR (interpolated) = 0.327 W/kg



Date/Time: 2012-06-23 18:37:10

DASY Configuration for WLAN/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-08-16 16:56:15

DASY Configuration for WCDMA/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100; Frequency: 1712.4 MHz; Duty Cycle: 1:1; PMF: 1

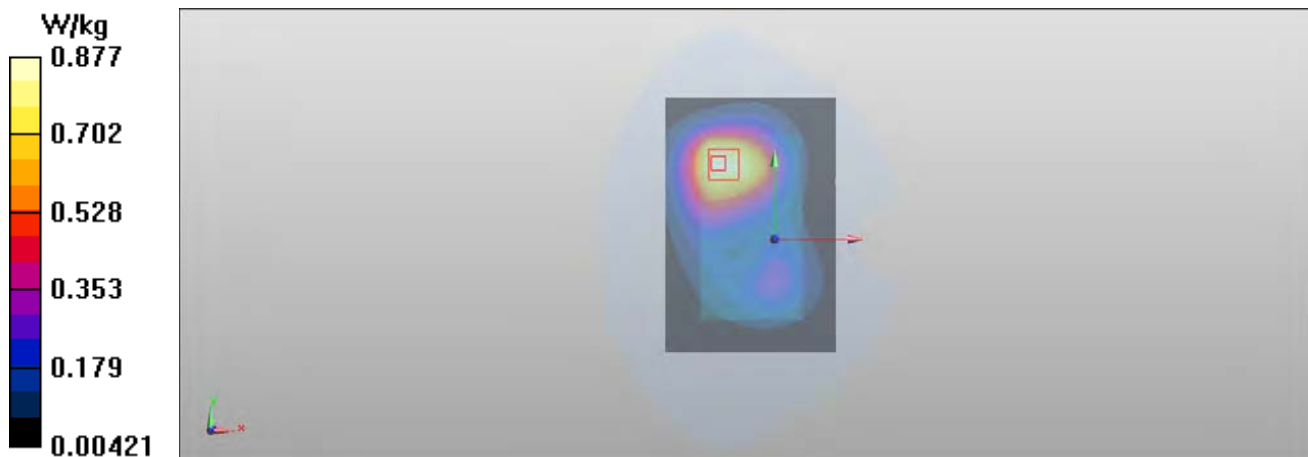
Medium: BSL1800 Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.425$ mho/m; $\epsilon_r = 52.655$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3165; ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
Phantom: SAM #2 CRP ; Type: QD000P40CD;
Measurement SW: DASY52, Version 52.8 (1)

Fast SAR of Combined Scans: SAR(1 g) = 0.806 mW/g; SAR(10 g) = 0.509 mW/g

Maximum value of SAR (interpolated) = 0.877 W/kg



Date/Time: 2012-06-23 18:37:10

DASY Configuration for WLAN/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-17 10:32:28

DASY Configuration for LTE/Body - Low - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100; Frequency: 1720 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL1800 Medium parameters used: $f = 1720$ MHz; $\sigma = 1.403$ mho/m; $\epsilon_r = 52.411$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3165; ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.337 mW/g

Maximum value of SAR (interpolated) = 0.572 mW/g



Date/Time: 2012-06-23 18:37:10

DASY Configuration for WLAN/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-14 08:25:22

DASY Configuration for 2-slot GPRS/Body - High - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4.2; PMF: 2.04939

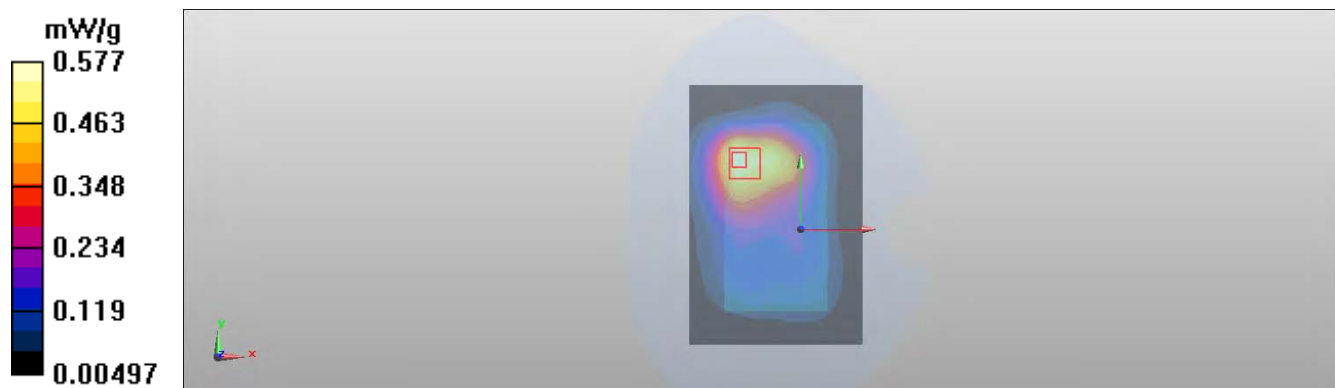
Medium: BSL1900 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.527$ mho/m; $\epsilon_r = 52.53$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.521 mW/g; SAR(10 g) = 0.313 mW/g

Maximum value of SAR (interpolated) = 0.577 mW/g



Date/Time: 2012-06-23 18:37:10

DASY Configuration for WLAN/Body - Middle - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated:2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-20 12:00:23

DASY Configuration for WCDMA/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900; Frequency: 1852.4 MHz; Duty Cycle: 1:1; PMF: 1

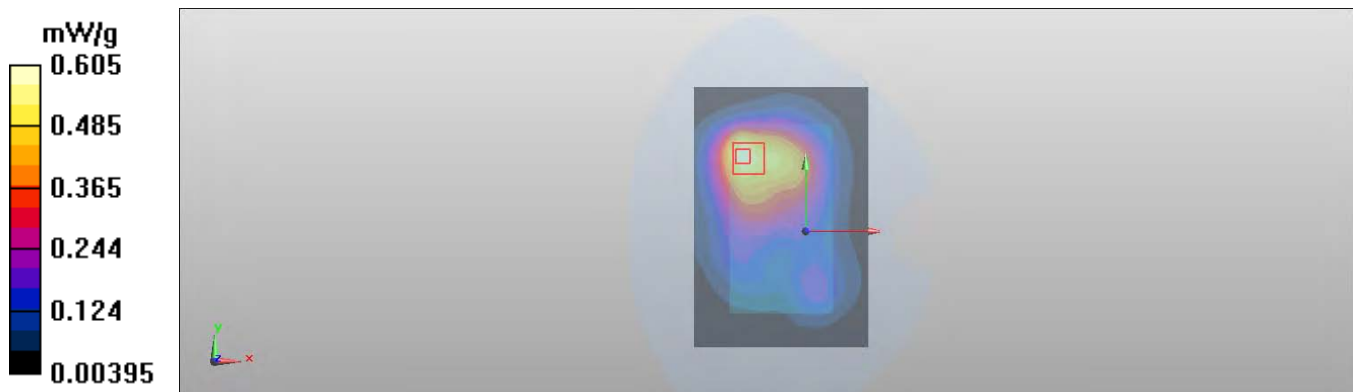
Medium: BSL1900 Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.482$ mho/m; $\epsilon_r = 52.616$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.543 mW/g; SAR(10 g) = 0.324 mW/g

Maximum value of SAR (interpolated) = 0.605 mW/g



Date/Time: 2012-06-23 15:58:07

DASY Configuration for WLAN/Body - Middle - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-20 15:51:23

DASY Configuration for LTE/Body - Middle - QPSK - 20MHz - 1RB - 100% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900; Frequency: 1880 MHz; Duty Cycle: 1:1; PMF: 1

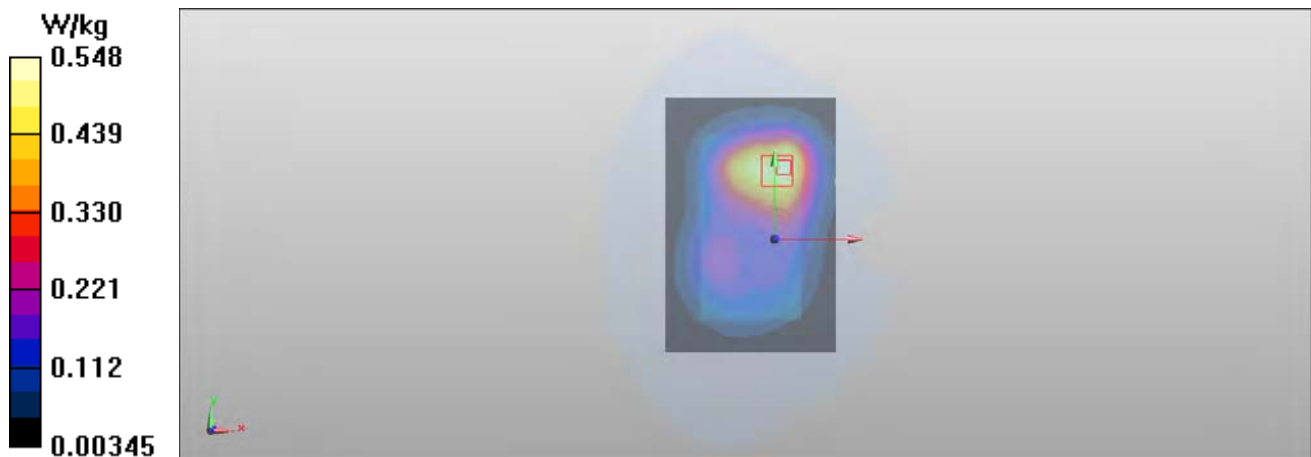
Medium: BSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.302 mW/g

Maximum value of SAR (interpolated) = 0.548 W/kg



Date/Time: 2012-06-25 14:58:37, Date/Time: 2012-06-26 06:11:15

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3, Serial: 004402/13/870740/5

Communication System: LTE700, Communication System: WLAN5000 n-mode

Frequency: 711 MHz, Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: BSL750, Medium: BSL5000; Medium Notes: $t = 20.7$, Medium Notes: $temp = 21.0$ C

Medium parameters used: $f = 711$ MHz; $\sigma = 0.972$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³, Medium parameters used:
 $f = 5240$ MHz; $\sigma = 5.5$ mho/m; $\epsilon_r = 48.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165, Probe: EX3DV4 - SN3834
- ConvF(6.06, 6.06, 6.06), ConvF(3.99, 3.99, 3.99); Calibrated: 2012-02-21, Calibrated: 2012-02-07
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309, Electronics: DAE4 Sn1213; Calibrated: 2012-01-11, Calibrated: 2012-02-14
- Phantom: SAM #3 CRP, Phantom: SAM2; Type: SAM; Serial:, Serial: TP-1570
- ; SEMCAD X Version 14.0 Build 61

LTE/Body - High - QPSK - 10MHz - 1RB - 100% offset - Spacer 15mm - No Accessory - Display Facing

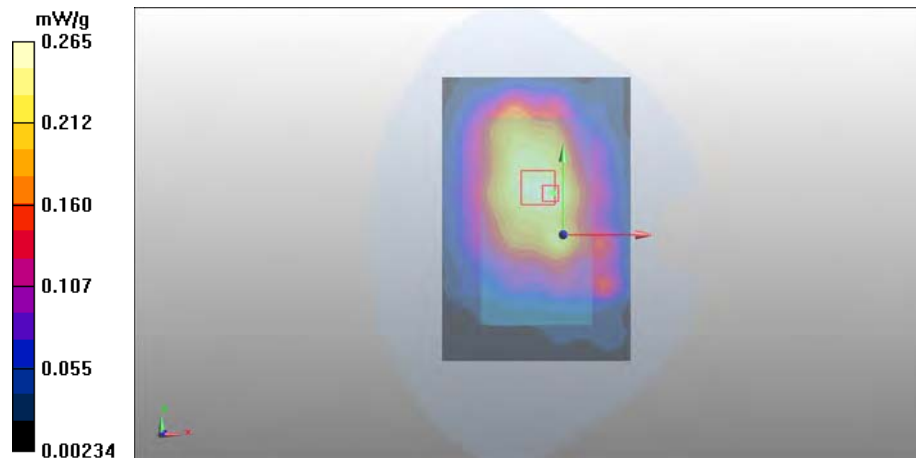
Phantom/Area Scan (9x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

WLAN/Body - Channel 48 - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan (13x19x1):

Measurement grid: $dx=10$ mm, $dy=10$ mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.173 mW/g

Maximum value of SAR (measured) = 0.265 mW/g



Date/Time: 2012-06-15 08:52:39, Date/Time: 2012-06-26 06:11:15

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0, Serial: 004402/13/870740/5

Communication System: 2-slot GPRS850, Communication System: WLAN5000 n-mode

Frequency: 848.8 MHz, Frequency: 5240 MHz; Duty Cycle: 1:4.19952, Duty Cycle: 1:1

Medium: BSL835, Medium: BSL5000; Medium Notes: $t = 20.9$ C, Medium Notes: $temp = 21.0$ C

Medium parameters used: $f = 849$ MHz; $\sigma = 1.01$ mho/m; $\epsilon_r = 53.7$; $\rho = 1000$ kg/m³, Medium parameters used:
 $f = 5240$ MHz; $\sigma = 5.5$ mho/m; $\epsilon_r = 48.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3131, Probe: EX3DV4 - SN3834
- ConvF(5.92, 5.92, 5.92), ConvF(3.99, 3.99, 3.99); Calibrated: 2011-09-14, Calibrated: 2012-02-07
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538, Electronics: DAE4 Sn1213; Calibrated: 2011-09-15, Calibrated: 2012-02-14
- Phantom: SAM 3, Phantom: SAM2; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1179, Serial: TP-1570
- ; SEMCAD X Version 14.0 Build 61

2-slot GPRS/Body - High - Spacer 15mm - No accessory - Display Facing Phantom/Area Scan (9x13x1):

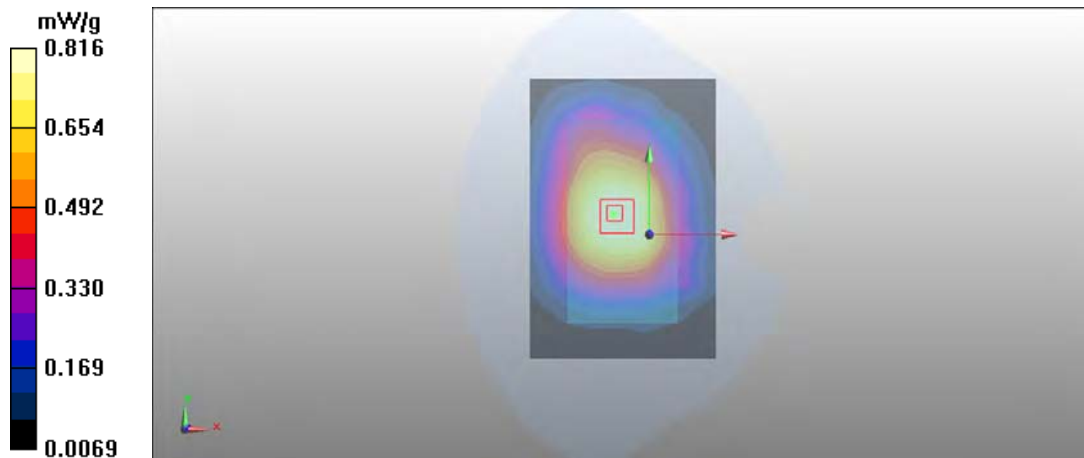
Measurement grid: $dx=15$ mm, $dy=15$ mm

WLAN/Body - Channel 48 - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan (13x19x1):

Measurement grid: $dx=10$ mm, $dy=10$ mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.778 mW/g; SAR(10 g) = 0.558 mW/g

Maximum value of SAR (measured) = 0.816 mW/g



Date/Time: 2012-06-22 10:07:46, Date/Time: 2012-06-26 06:11:15

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8, Serial: 004402/13/870740/5

Communication System: WCDMA850, Communication System: WLAN5000 n-mode

Frequency: 826.4 MHz, Frequency: 5240 MHz; Duty Cycle: 1:1

Medium: BSL835, Medium: BSL5000; Medium Notes: $t = 21.0$ C, Medium Notes: temp = 21.0 C

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.987$ mho/m; $\epsilon_r = 54.2$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 5240$ MHz; $\sigma = 5.5$ mho/m; $\epsilon_r = 48.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

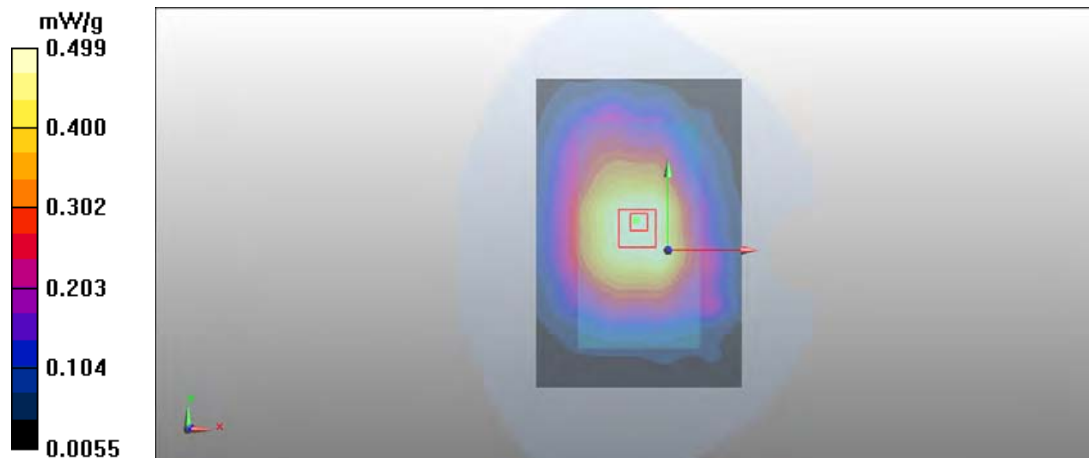
- Probe: ES3DV3 - SN3131, Probe: EX3DV4 - SN3834
- ConvF(5.92, 5.92, 5.92), ConvF(3.99, 3.99, 3.99); Calibrated: 2011-09-14, Calibrated: 2012-02-07
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538, Electronics: DAE4 Sn1213; Calibrated: 2011-09-15, Calibrated: 2012-02-14
- Phantom: SAM 3, Phantom: SAM2; Type: Twin SAM 040 CA, Type: SAM; Serial: TP-1179, Serial: TP-1570
- ; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Low - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

WLAN/Body - Channel 48 - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan (13x19x1): Measurement grid: dx=10mm, dy=10mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.477 mW/g; SAR(10 g) = 0.342 mW/g

Maximum value of SAR (measured) = 0.499 mW/g



Date/Time: 2012-06-26 06:11:15

DASY Configuration for WLAN/Body - Channel 48 - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode; Frequency: 5240 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL5000 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.504$ mho/m; $\epsilon_r = 48.913$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3834; ConvF(3.99, 3.99, 3.99); Calibrated: 2012-02-07;

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 2012-02-14

Phantom: SAM2; Type: SAM; Serial: TP-1570

Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-06-22 19:23:33

DASY Configuration for LTE/Body - Middle - QPSK - 1RB - 100% offset - Spacer 15mm - No Accessory - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850; Frequency: 836.5 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL835 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.993$ mho/m; $\epsilon_r = 54.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3131; ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;

Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))

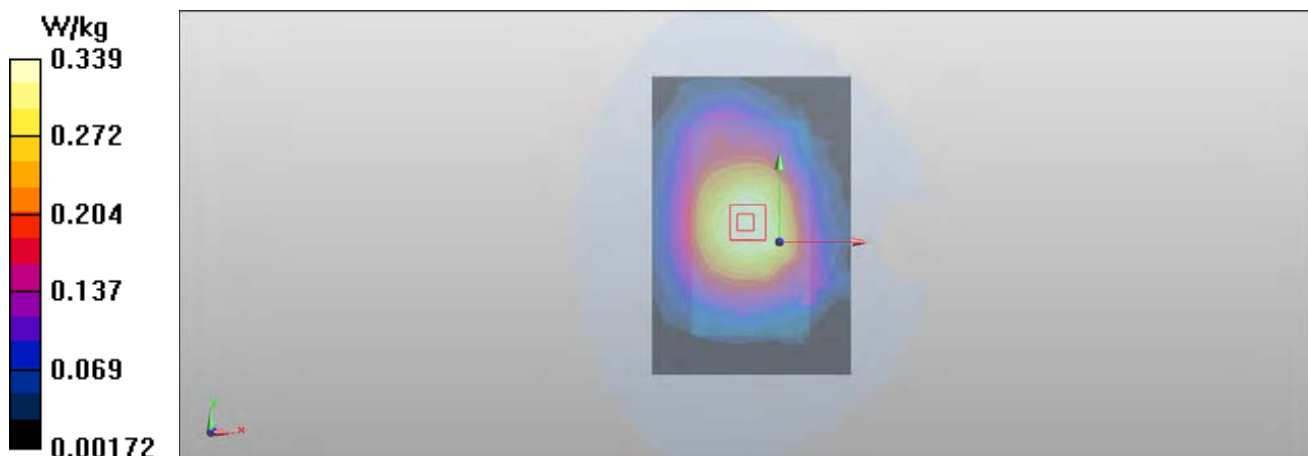
Electronics: DAE4 Sn538; Calibrated: 2011-09-15

Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179

Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.321 mW/g; SAR(10 g) = 0.228 mW/g

Maximum value of SAR (interpolated) = 0.339 W/kg



Date/Time: 2012-06-28 14:30:33

DASY Configuration for WLAN/Body - Channel 64 - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode; Frequency: 5320 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL5000 Medium parameters used: $f = 5320$ MHz; $\sigma = 5.502$ mho/m; $\epsilon_r = 48.918$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3834; ConvF(3.75, 3.75, 3.75); Calibrated: 2012-02-07;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
Phantom: SAM2; Type: SAM; Serial: TP-1570
Measurement SW: DASY52, Version 52.8 (1)

Date/Time: 2012-08-16 16:56:15

DASY Configuration for WCDMA/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100; Frequency: 1712.4 MHz; Duty Cycle: 1:1; PMF: 1

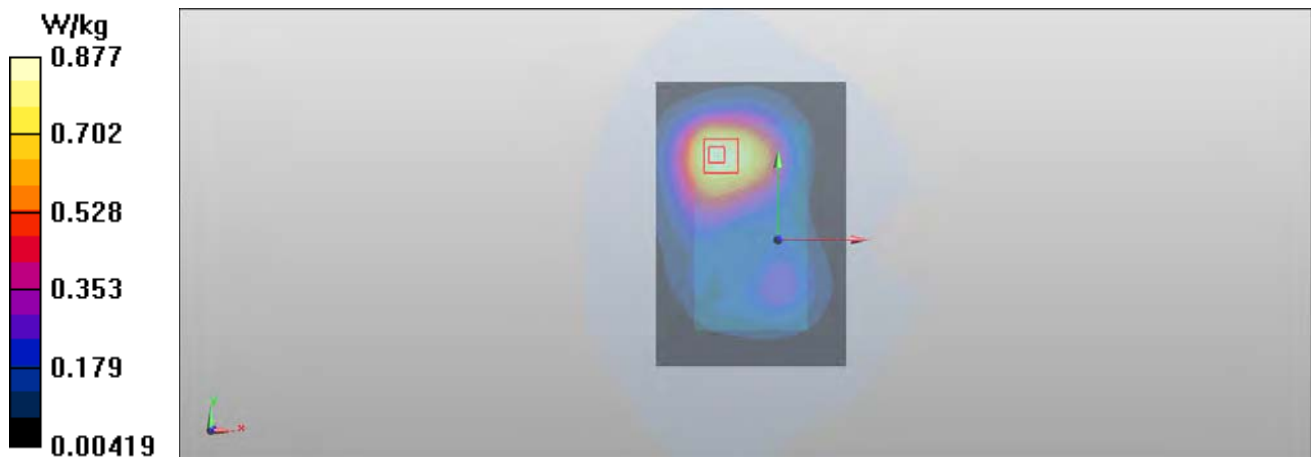
Medium: BSL1800 Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.425$ mho/m; $\epsilon_r = 52.655$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3165; ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial: TP:xxxx
Measurement SW: DASY52, Version 52.8 (1)

Fast SAR of Combined Scans: SAR(1 g) = 0.809 mW/g; SAR(10 g) = 0.512 mW/g

Maximum value of SAR (interpolated) = 0.877 W/kg



Date/Time: 2012-06-17 10:32:28, Date/Time: 2012-06-28 14:30:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0, Serial: 004402/13/870740/5

Communication System: LTE1700/2100, Communication System: WLAN5000 n-mode

Frequency: 1720 MHz, Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: BSL1800, Medium: BSL5000; Medium Notes: $t = 20.4$ C, Medium Notes: temp = 21.0 C

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³, Medium parameters used:
 $f = 5320$ MHz; $\sigma = 5.5$ mho/m; $\epsilon_r = 48.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3165, Probe: EX3DV4 - SN3834

- ConvF(4.84, 4.84, 4.84), ConvF(3.75, 3.75, 3.75); Calibrated: 2012-02-21, Calibrated: 2012-02-07

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))

- Electronics: DAE4 Sn1309, Electronics: DAE4 Sn1213; Calibrated: 2012-01-11, Calibrated: 2012-02-14

- Phantom: SAM #2 CRP, Phantom: SAM2; Type: QD000P40CD, Type: SAM; Serial: TP:xxxx, Serial: TP-1570

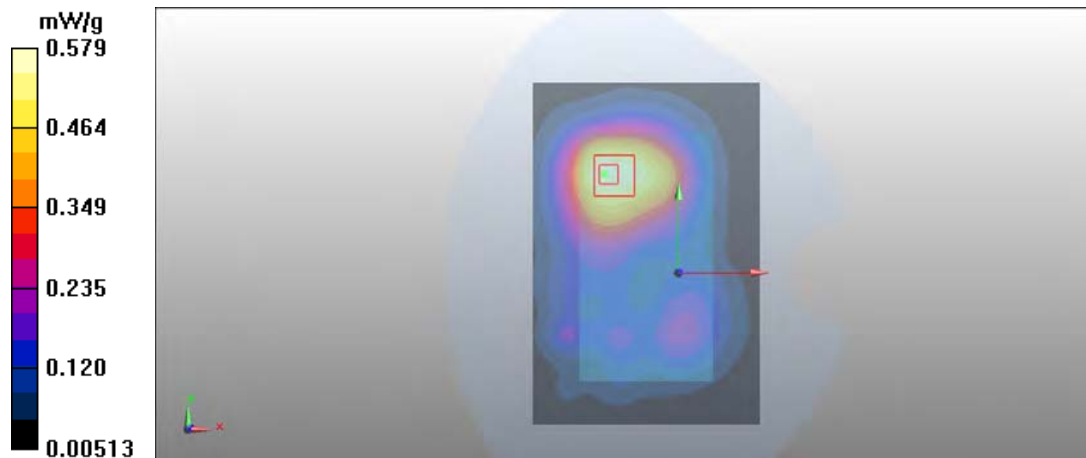
- ; SEMCAD X Version 14.0 Build 61

LTE/Body - Low - QPSK - 20MHz - 1RB - 50% offset - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

WLAN/Body - Channel 64 - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (13x19x1): Measurement grid: dx=10mm, dy=10mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.533 mW/g; SAR(10 g) = 0.338 mW/g

Maximum value of SAR (measured) = 0.579 mW/g



Date/Time: 2012-06-14 08:25:22, Date/Time: 2012-06-28 14:30:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0, Serial: 004402/13/870740/5

Communication System: 2-slot GPRS1900, Communication System: WLAN5000 n-mode

Frequency: 1909.8 MHz, Frequency: 5320 MHz; Duty Cycle: 1:4.2, Duty Cycle: 1:1

Medium: BSL1900, Medium: BSL5000; Medium Notes: $t = 21.7$ C, Medium Notes: temp = 21.0 C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.53$ mho/m; $\epsilon_r = 52.5$; $\rho = 1000$ kg/m³, Medium parameters used:
 $f = 5320$ MHz; $\sigma = 5.5$ mho/m; $\epsilon_r = 48.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3573, Probe: EX3DV4 - SN3834

- ConvF(6.69, 6.69, 6.69), ConvF(3.75, 3.75, 3.75); Calibrated: 2012-02-23, Calibrated: 2012-02-07

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))

- Electronics: DAE4 Sn793, Electronics: DAE4 Sn1213; Calibrated: 2011-09-16, Calibrated: 2012-02-14

- Phantom: SAM 2, Phantom: SAM2; Type: Twin SAM 040 CA, Type: SAM; Serial: TP - 1177, Serial: TP-1570

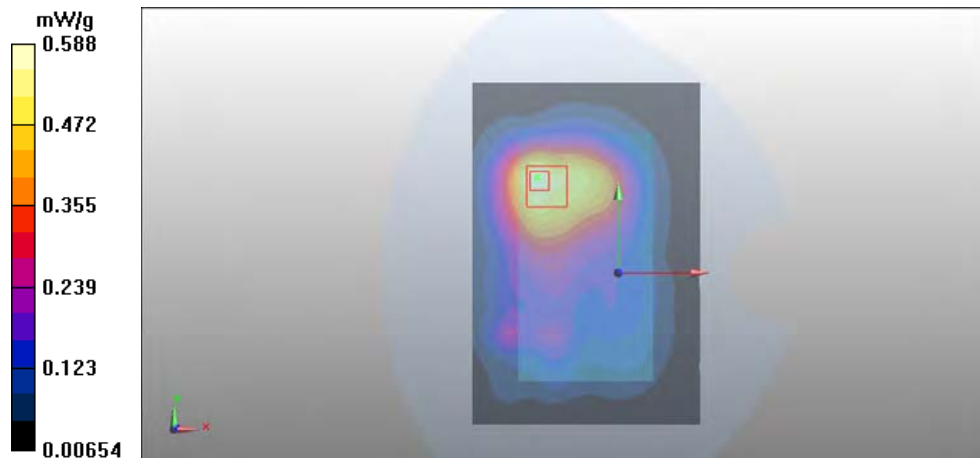
- ; SEMCAD X Version 14.0 Build 61

2-slot GPRS/Body - High - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

WLAN/Body - Channel 64 - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (13x19x1): Measurement grid: dx=10mm, dy=10mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.523 mW/g; SAR(10 g) = 0.315 mW/g

Maximum value of SAR (measured) = 0.588 mW/g



Date/Time: 2012-06-20 12:00:23, Date/Time: 2012-06-28 14:30:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8, Serial: 004402/13/870740/5

Communication System: WCDMA1900, Communication System: WLAN5000 n-mode

Frequency: 1852.4 MHz, Frequency: 5320 MHz; Duty Cycle: 1:1

Medium: BSL1900, Medium: BSL5000; Medium Notes: $t = 21.4$ C, Medium Notes: temp = 21.0 C

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 52.6$; $\rho = 1000$ kg/m³, Medium parameters used: $f = 5320$ MHz; $\sigma = 5.5$ mho/m; $\epsilon_r = 48.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3573, Probe: EX3DV4 - SN3834

- ConvF(6.69, 6.69, 6.69), ConvF(3.75, 3.75, 3.75); Calibrated: 2012-02-23, Calibrated: 2012-02-07

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))

- Electronics: DAE4 Sn793, Electronics: DAE4 Sn1213; Calibrated: 2011-09-16, Calibrated: 2012-02-14

- Phantom: SAM 2, Phantom: SAM2; Type: Twin SAM 040 CA, Type: SAM; Serial: TP - 1177, Serial: TP-1570

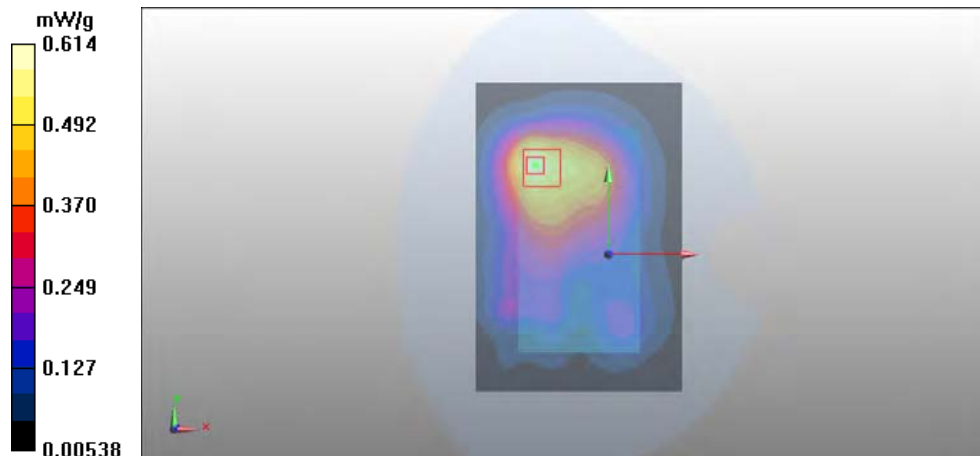
- ; SEMCAD X Version 14.0 Build 61

WCDMA/Body - Low - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

WLAN/Body - Channel 64 - Spacer 15mm - WH-208 - Back Facing Phantom/Area Scan (13x19x1): Measurement grid: dx=10mm, dy=10mm

Motorola Fast SAR of Combined Scans: SAR(1 g) = 0.545 mW/g; SAR(10 g) = 0.325 mW/g

Maximum value of SAR (measured) = 0.614 mW/g



Date/Time: 2012-06-26 12:57:34

DASY Configuration for WLAN/Body - Channel 48 - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870740/5

Communication System: WLAN5000 n-mode; Frequency: 5240 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL5000 Medium parameters used: $f = 5240$ MHz; $\sigma = 5.411$ mho/m; $\epsilon_r = 48.855$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3834; ConvF(3.99, 3.99, 3.99); Calibrated: 2012-02-07;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1213; Calibrated: 2012-02-14
Phantom: SAM2; Type: SAM; Serial: TP-1570
Measurement SW: DASY52, Version 52.8 (2)

Date/Time: 2012-06-20 15:51:23

DASY Configuration for LTE/Body - Middle - QPSK - 20MHz - 1RB - 100% offset - Spacer 15mm - WH-208 - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900; Frequency: 1880 MHz; Duty Cycle: 1:1; PMF: 1

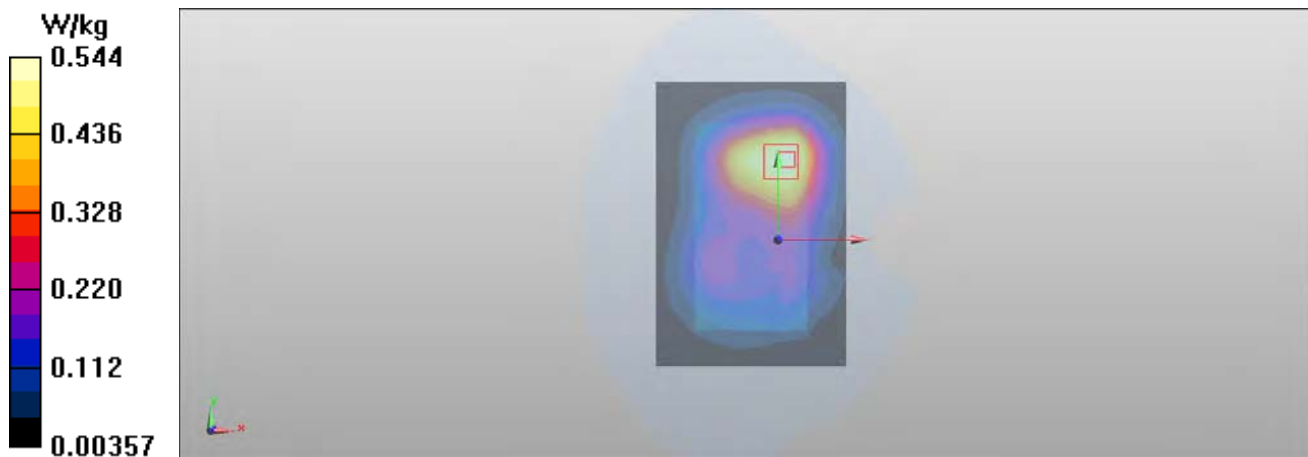
Medium: BSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.496 mW/g; SAR(10 g) = 0.305 mW/g

Maximum value of SAR (interpolated) = 0.544 W/kg



APPENDIX B.3: WIRELESS ROUTER MEASUREMENT SCANS

Date/Time: 2012-06-25 21:17:50

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; σ = 0.972 mho/m; ϵ_r = 54.424; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0544 mW/g

LTE/Body - Middle - QPSK - 10MHz – 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (5x8x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.623 V/m

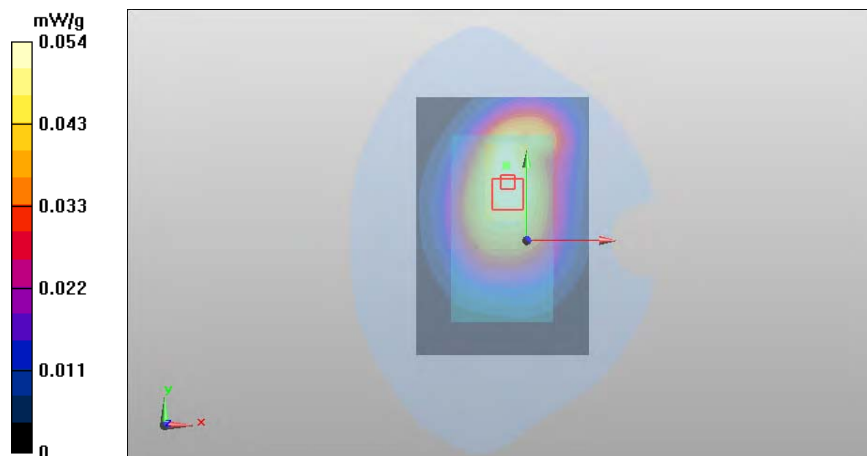
Peak SAR (extrapolated) = 0.077 mW/g

SAR(1 g) = 0.052 mW/g

SAR(10 g) = 0.040 mW/g

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 0.0544 mW/g



Date/Time: 2012-06-25 21:43:55

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; σ = 0.972 mho/m; ϵ_r = 54.424; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz - 25 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0595 mW/g

LTE/Body - Middle - QPSK - 10MHz - 25 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.844 V/m

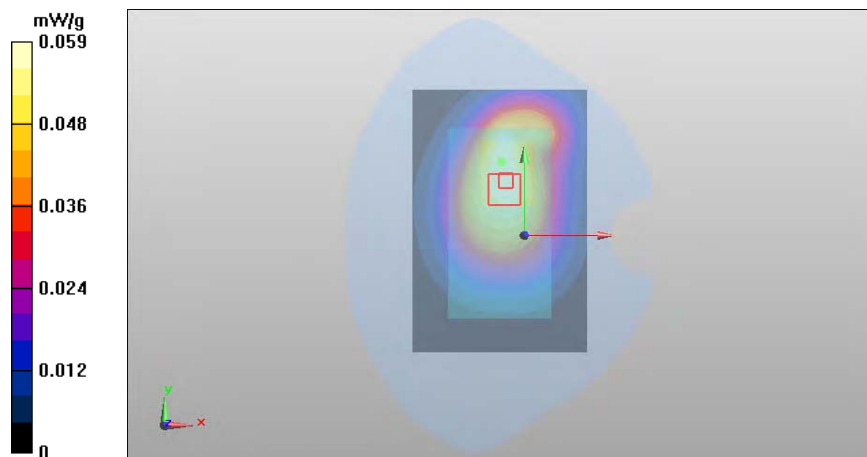
Peak SAR (extrapolated) = 0.084 mW/g

SAR(1 g) = 0.055 mW/g

SAR(10 g) = 0.043 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.0582 mW/g



Date/Time: 2012-06-25 22:06:24

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; $\sigma = 0.972$ mho/m; $\epsilon_r = 54.424$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0721 mW/g

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.715 V/m

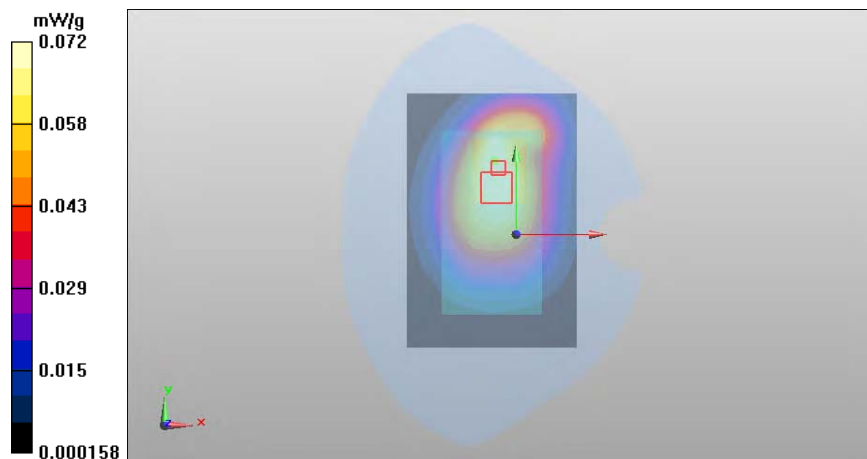
Peak SAR (extrapolated) = 0.103 mW/g

SAR(1 g) = 0.068 mW/g

SAR(10 g) = 0.053 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.0713 mW/g



Date/Time: 2012-06-25 22:27:52

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; σ = 0.972 mho/m; ϵ_r = 54.424; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0969 mW/g

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.085 V/m

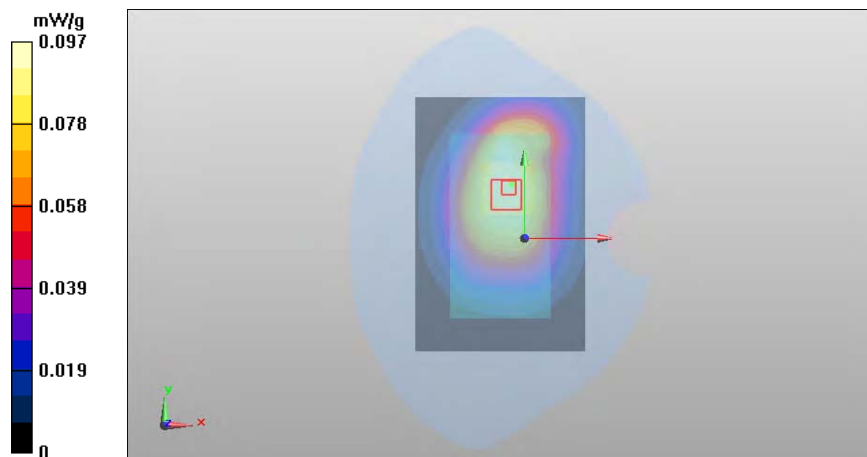
Peak SAR (extrapolated) = 0.121 mW/g

SAR(1 g) = 0.092 mW/g

SAR(10 g) = 0.072 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.0961 mW/g



Date/Time: 2012-06-26 19:42:42

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 711 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: $f = 711$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.196$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: E53DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - High - QPSK - 10MHz - 1 RB - 100% offset - Spacer 10mm - No Accessory - Display Facing Phantom
/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.323 mW/g

LTE/Body - High - QPSK - 10MHz - 1 RB - 100% offset - Spacer 10mm - No Accessory - Display Facing Phantom
/Zoom Scan (7x10x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 17.427 V/m

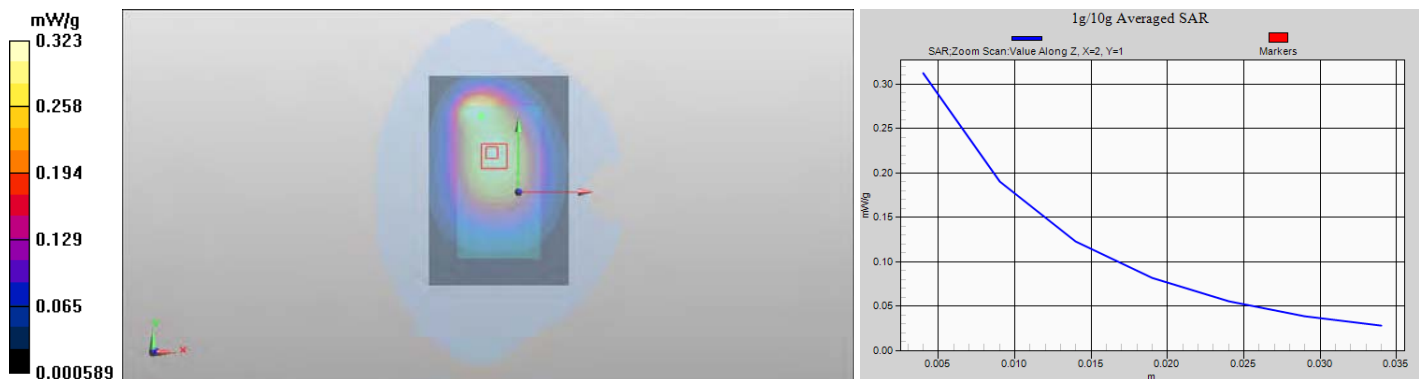
Peak SAR (extrapolated) = 0.480 mW/g

SAR(1 g) = 0.293 mW/g

SAR(10 g) = 0.225 mW/g

Power Drift = 0.00 dB

Maximum value of SAR (measured) = 0.312 mW/g



Date/Time: 2012-06-26 13:46:20

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: f = 710 MHz; σ = 0.976 mho/m; ϵ_r = 54.203; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 10mm - No Accessory - Top Edge Facing

Phantom/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0240 mW/g

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 10mm - No Accessory - Top Edge Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.044 V/m

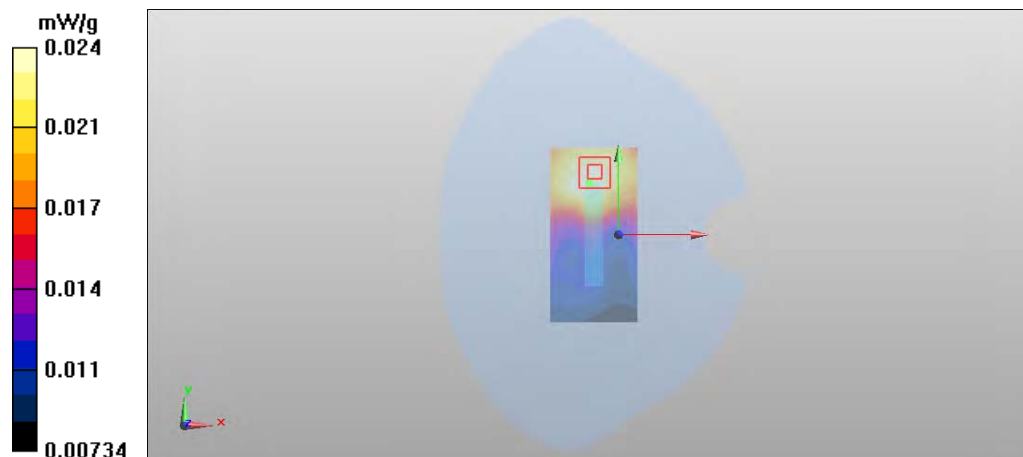
Peak SAR (extrapolated) = 0.031 mW/g

SAR(1 g) = 0.024 mW/g

SAR(10 g) = 0.017 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.0251 mW/g



Date/Time: 2012-06-26 14:10:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: f = 710 MHz; σ = 0.976 mho/m; ϵ_r = 54.203; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 10mm - No Accessory - Bottom Edge Facing

Phantom/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.103 mW/g

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 10mm - No Accessory - Bottom Edge Facing

Phantom/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.544 V/m

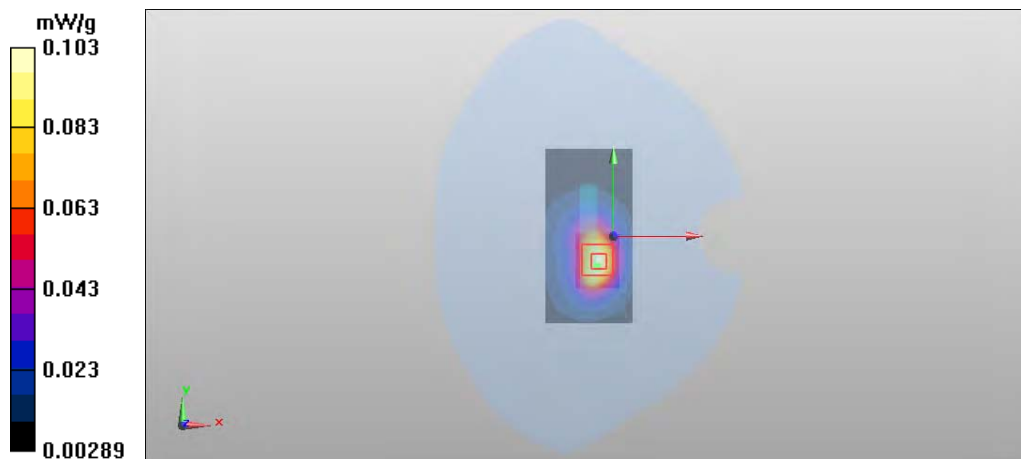
Peak SAR (extrapolated) = 0.179 mW/g

SAR(1 g) = 0.096 mW/g

SAR(10 g) = 0.053 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.105 mW/g



Date/Time: 2012-06-26 15:01:34

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: f = 710 MHz; σ = 0.976 mho/m; ϵ_r = 54.203; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz - 1R B - 100% offset - Spacer 10mm - No Accessory - Left Edge Facing

Phantom/Area Scan (41x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0812 mW/g

LTE/Body - Middle - QPSK - 10MHz - 1 RB - 100% offset - Spacer 10mm - No Accessory - Left Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.236 V/m

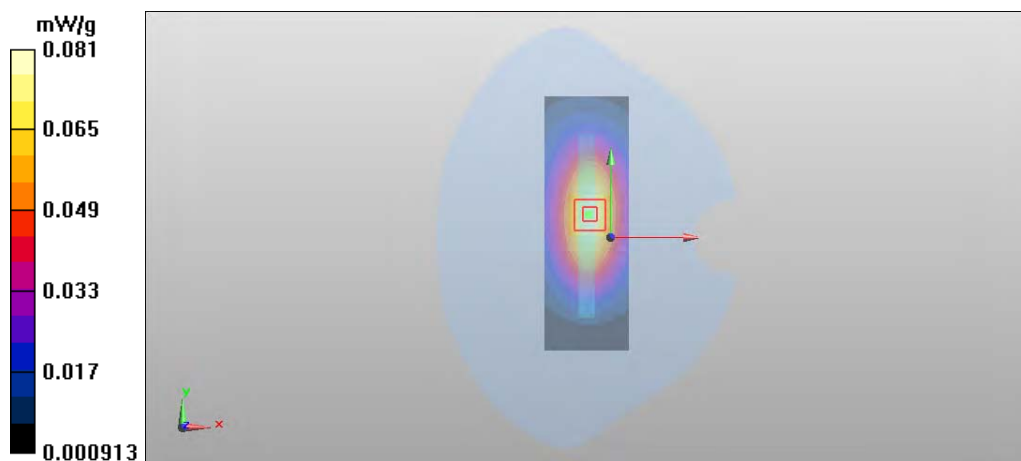
Peak SAR (extrapolated) = 0.103 mW/g

SAR(1 g) = 0.075 mW/g

SAR(10 g) = 0.053 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 0.0803 mW/g



Date/Time: 2012-06-26 14:39:06

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: f = 710 MHz; σ = 0.976 mho/m; ϵ_r = 54.203; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 10mm - No Accessory - Right Edge Facing

Phantom/Area Scan (41x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.219 mW/g

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 100% offset - Spacer 10mm - No Accessory - Right Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.180 V/m

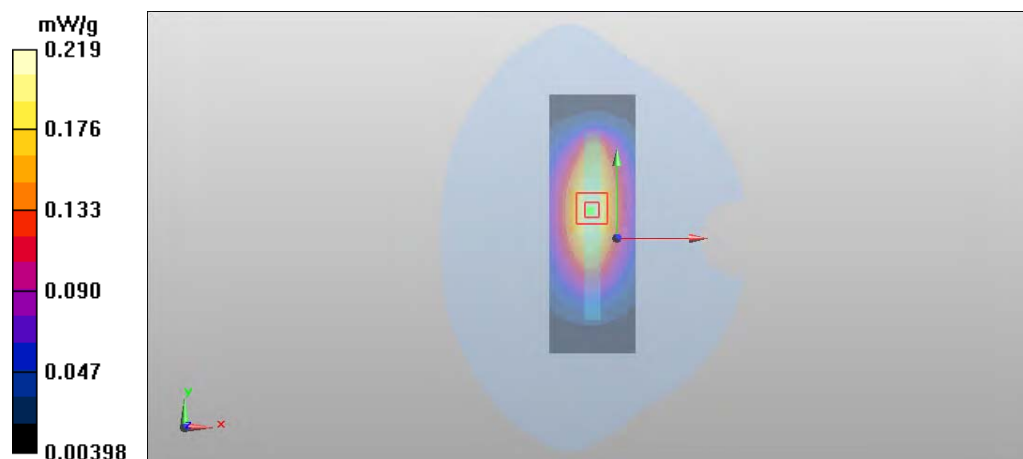
Peak SAR (extrapolated) = 0.279 mW/g

SAR(1 g) = 0.205 mW/g

SAR(10 g) = 0.145 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.219 mW/g



Date/Time: 2012-06-25 22:47:31

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.7

Medium parameters used: f = 710 MHz; σ = 0.972 mho/m; ϵ_r = 54.424; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 0% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0456 mW/g

LTE/Body - Middle - QPSK - 10MHz – 1 RB - 0% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x9x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.995 V/m

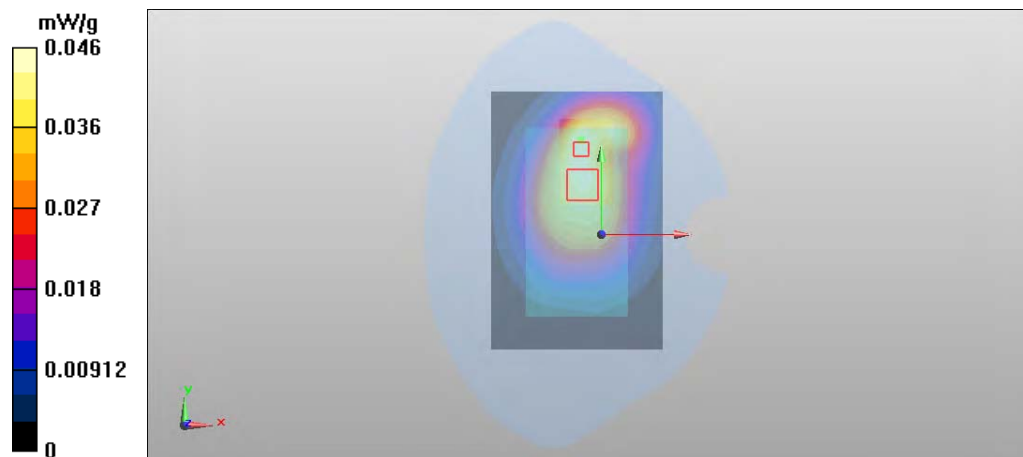
Peak SAR (extrapolated) = 0.068 mW/g

SAR(1 g) = 0.043 mW/g

SAR(10 g) = 0.033 mW/g

Power Drift = -0.09 dB

Maximum value of SAR (measured) = 0.0462 mW/g



Date/Time: 2012-06-26 08:46:12

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: $f = 710 \text{ MHz}$; $\sigma = 0.976 \text{ mho/m}$; $\epsilon_r = 54.203$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 10MHz - 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Area

Scan (81x121x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.0474 mW/g

LTE/Body - Middle - 16QAM - 10MHz - 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom

Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.065 V/m

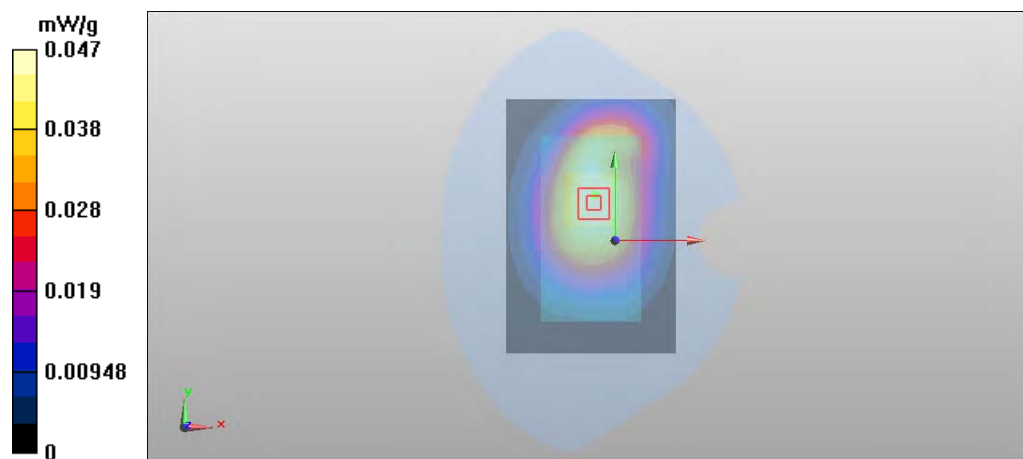
Peak SAR (extrapolated) = 0.056 mW/g

SAR(1 g) = 0.045 mW/g

SAR(10 g) = 0.035 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.0468 mW/g



Date/Time: 2012-06-26 09:13:06

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: f = 710 MHz; σ = 0.976 mho/m; ϵ_r = 54.203; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 10MHz - 25 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0527 mW/g

LTE/Body - Middle - 16QAM - 10MHz - 25 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 7.422 V/m

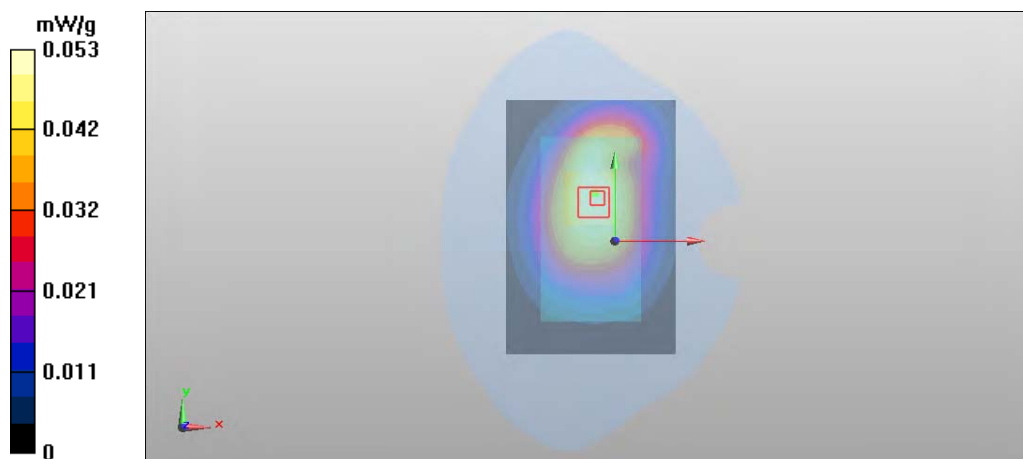
Peak SAR (extrapolated) = 0.063 mW/g

SAR(1 g) = 0.050 mW/g

SAR(10 g) = 0.038 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 0.0520 mW/g



Date/Time: 2012-06-26 09:33:32

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: f = 710 MHz; σ = 0.976 mho/m; ϵ_r = 54.203; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0620 mW/g

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.029 V/m

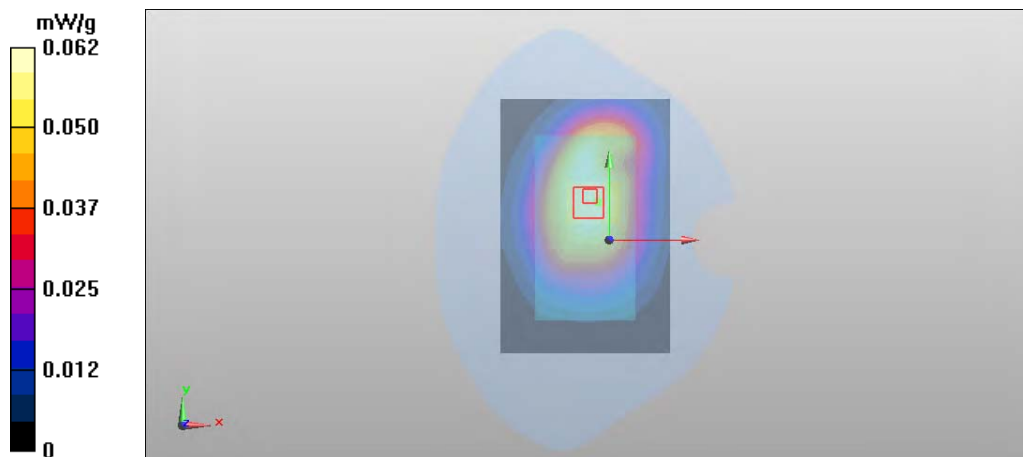
Peak SAR (extrapolated) = 0.075 mW/g

SAR(1 g) = 0.060 mW/g

SAR(10 g) = 0.046 mW/g

Power Drift = 0.12 dB

Maximum value of SAR (measured) = 0.0627 mW/g



Date/Time: 2012-06-26 09:52:13

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: f = 710 MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.203$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASYS2, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0835 mW/g

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.317 V/m

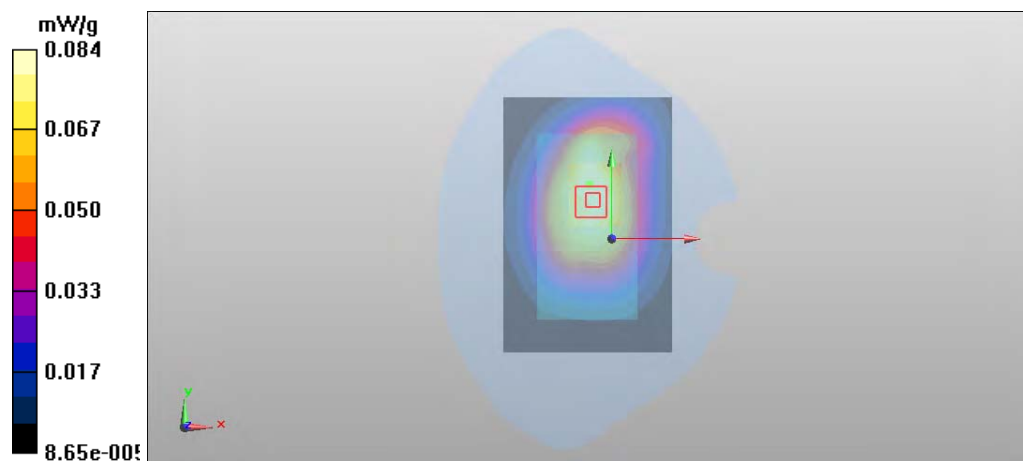
Peak SAR (extrapolated) = 0.103 mW/g

SAR(1 g) = 0.080 mW/g

SAR(10 g) = 0.061 mW/g

Power Drift = -0.00 dB

Maximum value of SAR (measured) = 0.0844 mW/g



Date/Time: 2012-06-26 10:15:00

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700

Frequency: 710 MHz; Duty Cycle: 1:1

Medium: BSL750; Medium Notes: t= 20.8

Medium parameters used: f = 710 MHz; σ = 0.976 mho/m; ϵ_r = 54.203; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #3 CRP; Type: SAM; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 0% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0386 mW/g

LTE/Body - Middle - 16QAM - 10MHz - 1 RB - 0% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x8x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.409 V/m

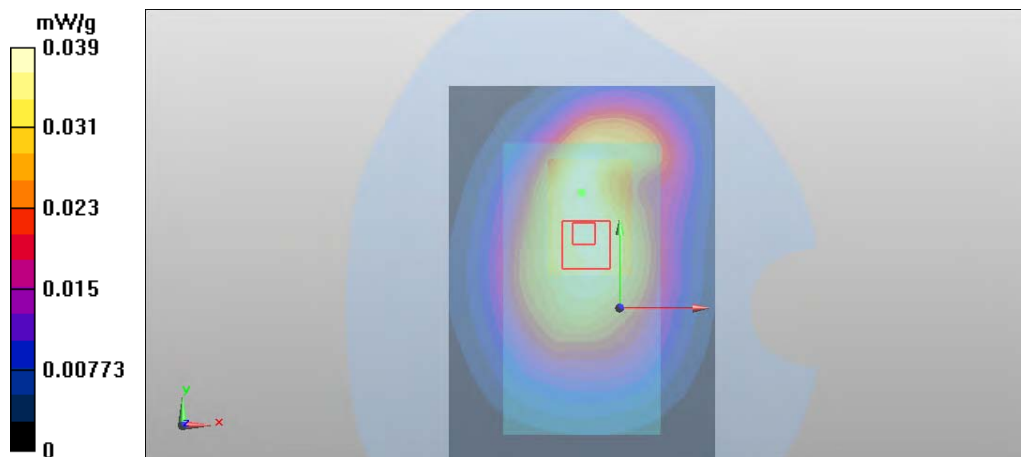
Peak SAR (extrapolated) = 0.057 mW/g

SAR(1 g) = 0.036 mW/g

SAR(10 g) = 0.028 mW/g

Power Drift = -0.13 dB

Maximum value of SAR (measured) = 0.0391 mW/g



Date/Time: 2012-06-16 17:16:08

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 848.8 MHz; Duty Cycle: 1:4.19952

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 849 MHz; σ = 0.996 mho/m; ϵ_r = 53.512; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - High - Spacer 10mm - No Accessory - Back Facing Phantom /Area Scan (81x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.797 mW/g

2-slot GPRS/Body - High - Spacer 10mm - No Accessory - Back Facing Phantom /Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 28.541 V/m

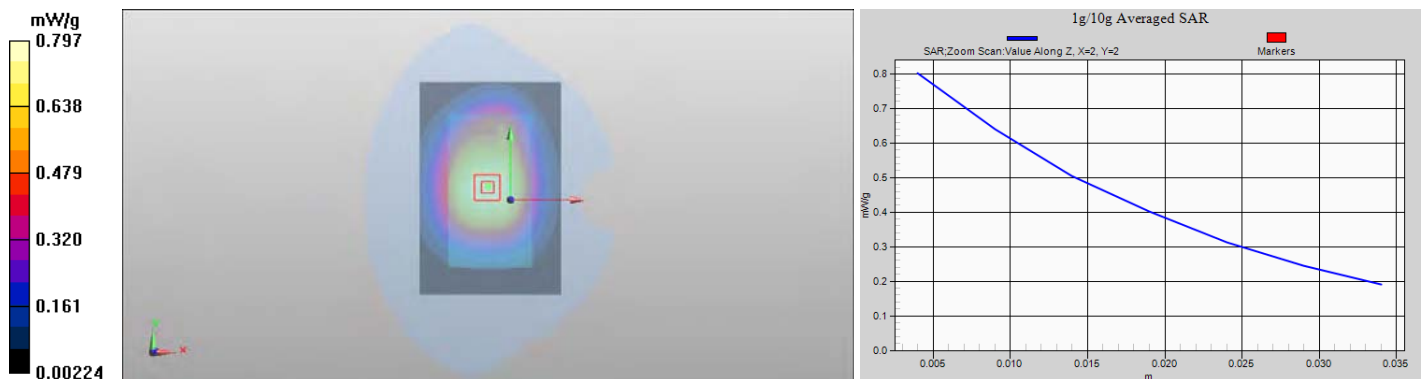
Peak SAR (extrapolated) = 0.923 mW/g

SAR(1 g) = 0.762 mW/g

SAR(10 g) = 0.588 mW/g

Power Drift = -0.11 dB

Maximum value of SAR (measured) = 0.802 mW/g



Date/Time: 2012-06-16 12:03:46

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 837 MHz; σ = 0.988 mho/m; ϵ_r = 53.542; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No accessory - Display Facing Phantom /Area Scan (81x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.733 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No accessory - Display Facing Phantom /Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 26.578 V/m

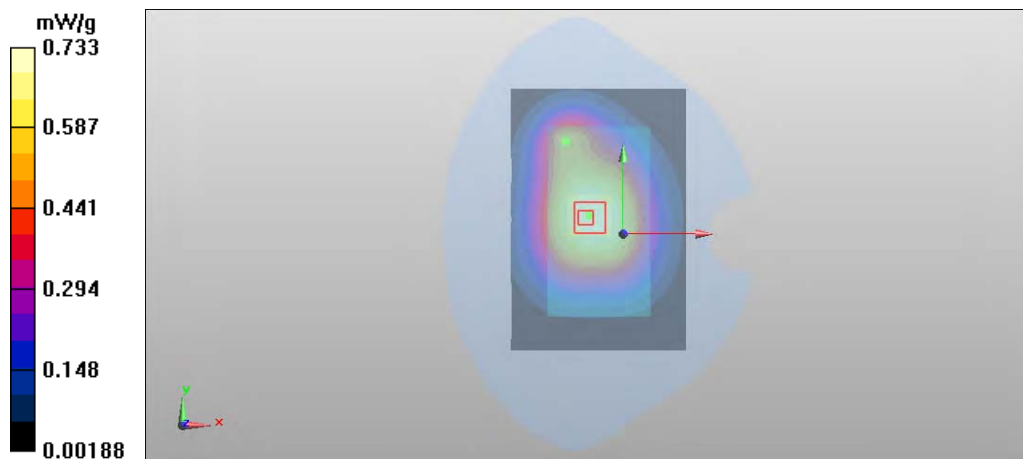
Peak SAR (extrapolated) = 0.844 mW/g

SAR(1 g) = 0.694 mW/g

SAR(10 g) = 0.539 mW/g

Power Drift = 0.08 dB

Maximum value of SAR (measured) = 0.722 mW/g



Date/Time: 2012-06-16 15:33:02

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 837 MHz; σ = 0.988 mho/m; ϵ_r = 53.542; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Area Scan (41x81x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0498 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Zoom Scan (5x5x7)/Cube

0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.802 V/m

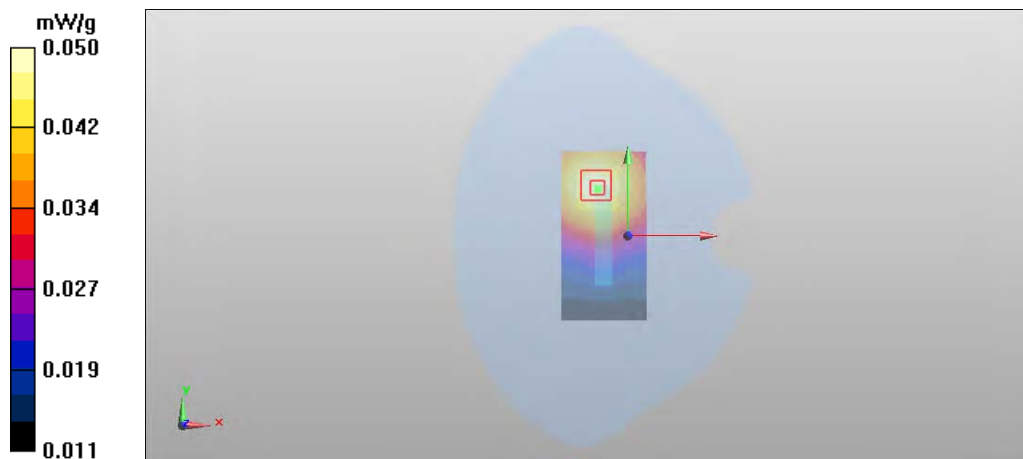
Peak SAR (extrapolated) = 0.059 mW/g

SAR(1 g) = 0.046 mW/g

SAR(10 g) = 0.034 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.0483 mW/g



Date/Time: 2012-06-16 15:58:26

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 837 MHz; σ = 0.988 mho/m; ϵ_r = 53.542; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Area Scan (41x81x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.482 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 20.447 V/m

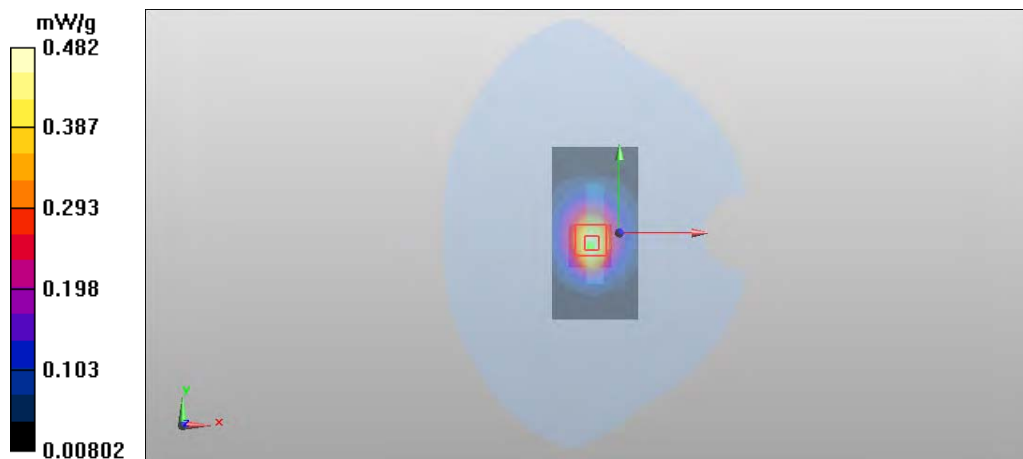
Peak SAR (extrapolated) = 0.650 mW/g

SAR(1 g) = 0.401 mW/g

SAR(10 g) = 0.247 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.440 mW/g



Date/Time: 2012-06-16 13:04:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 837 MHz; σ = 0.988 mho/m; ϵ_r = 53.542; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Area Scan (41x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.449 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Zoom Scan (6x6x7)/Cube

0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 20.964 V/m

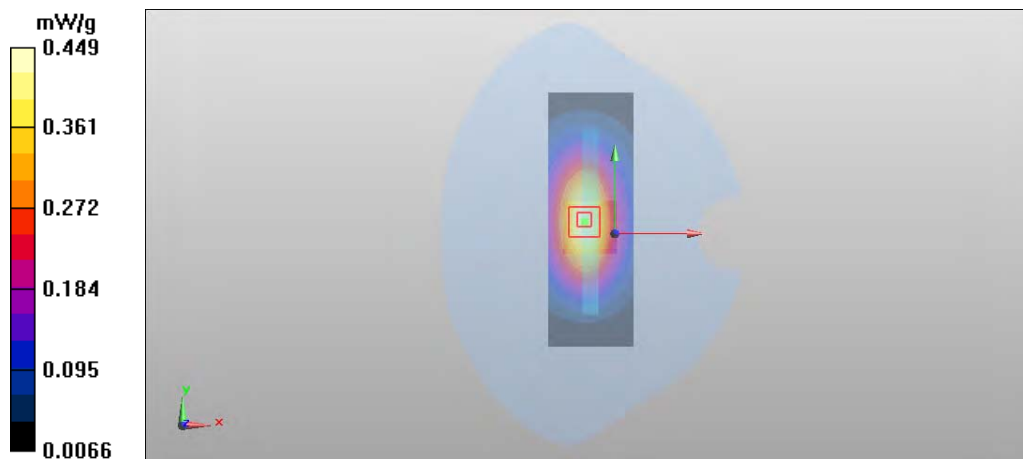
Peak SAR (extrapolated) = 0.546 mW/g

SAR(1 g) = 0.407 mW/g

SAR(10 g) = 0.286 mW/g

Power Drift = -0.05 dB

Maximum value of SAR (measured) = 0.433 mW/g



Date/Time: 2012-06-16 12:43:46

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850

Frequency: 836.6 MHz; Duty Cycle: 1:4.19952

Medium: BSL835; Medium Notes: t= 20.9 C

Medium parameters used: f = 837 MHz; σ = 0.988 mho/m; ϵ_r = 53.542; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Area Scan (41x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.748 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Zoom Scan

(6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 27.447 V/m

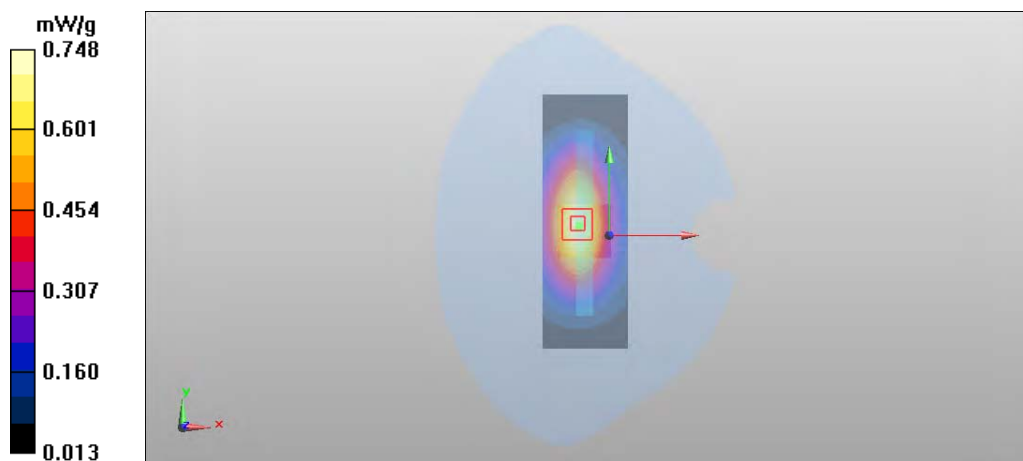
Peak SAR (extrapolated) = 0.940 mW/g

SAR(1 g) = 0.697 mW/g

SAR(10 g) = 0.487 mW/g

Power Drift = -0.12 dB

Maximum value of SAR (measured) = 0.748 mW/g



Date/Time: 2012-06-22 14:45:50

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.992 mho/m; ϵ_r = 54.154; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.389 mW/g

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (6x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 19.217 V/m

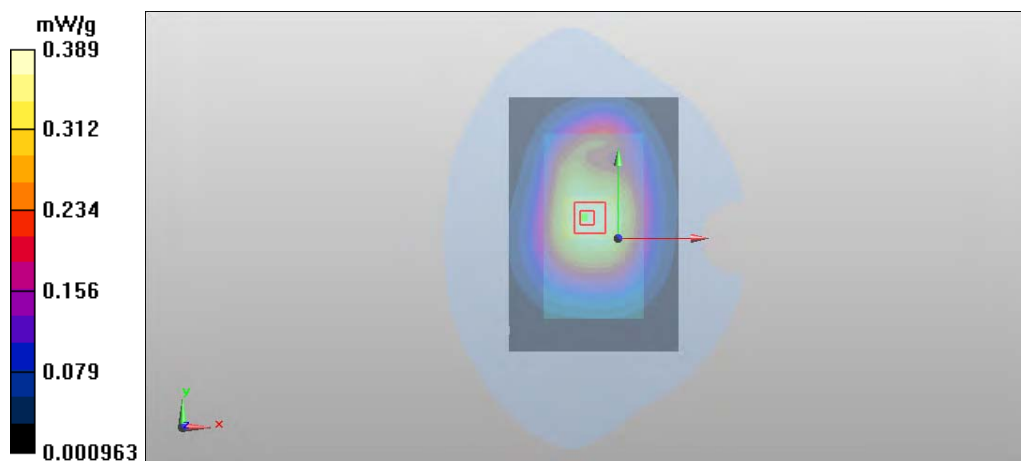
Peak SAR (extrapolated) = 0.440 mW/g

SAR(1 g) = 0.368 mW/g

SAR(10 g) = 0.285 mW/g

Power Drift = 0.02 dB

Maximum value of SAR (measured) = 0.385 mW/g



Date/Time: 2012-06-22 18:13:31

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.987 mho/m; ϵ_r = 54.201; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Low - Spacer 10mm - No Accessory - Display Facing Phantom/Area Scan (81x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.516 mW/g

WCDMA/Body - Low - Spacer 10mm - No Accessory - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 22.497 V/m

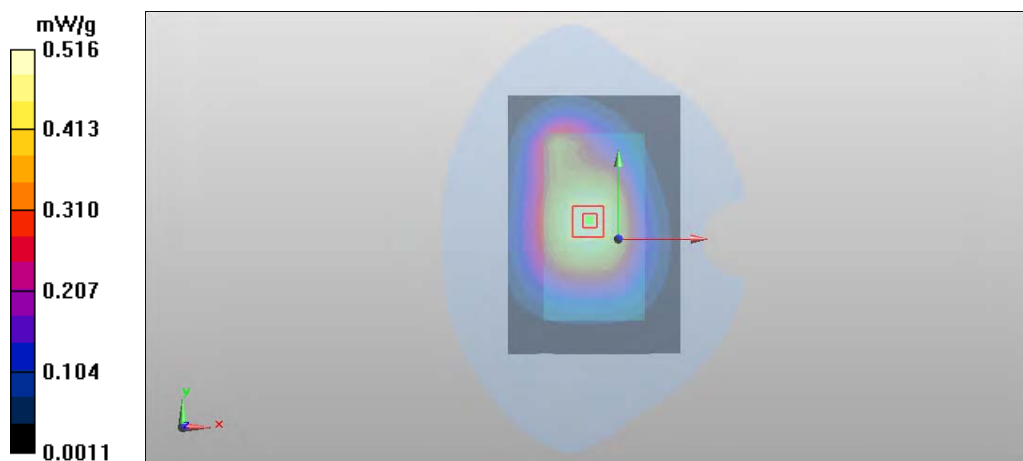
Peak SAR (extrapolated) = 0.592 mW/g

SAR(1 g) = 0.497 mW/g

SAR(10 g) = 0.386 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.521 mW/g



Date/Time: 2012-06-22 15:08:14

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.992 mho/m; ϵ_r = 54.154; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Area Scan (41x81x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0263 mW/g

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 4.751 V/m

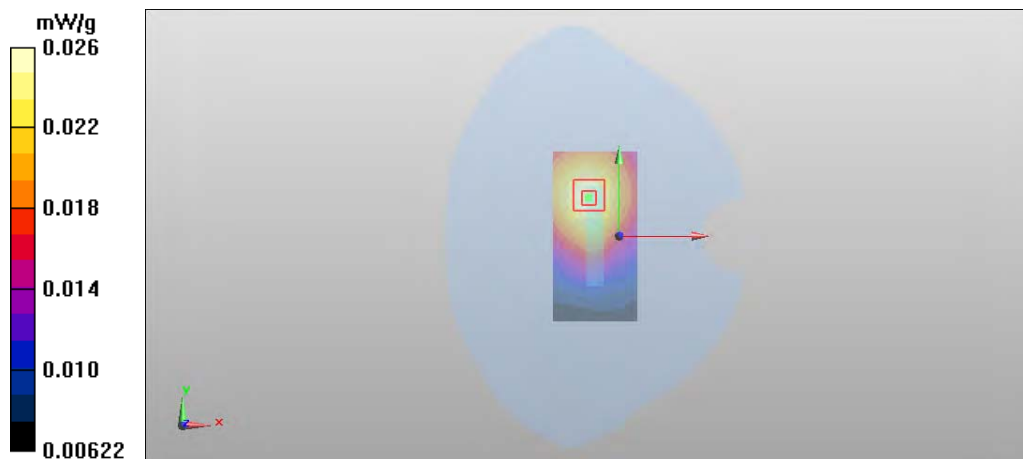
Peak SAR (extrapolated) = 0.033 mW/g

SAR(1 g) = 0.025 mW/g

SAR(10 g) = 0.019 mW/g

Power Drift = 0.12 dB

Maximum value of SAR (measured) = 0.0267 mW/g



Date/Time: 2012-06-22 15:21:16

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.992 mho/m; ϵ_r = 54.154; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Area Scan (41x81x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.271 mW/g

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Zoom Scan (5x5x7)/Cube

0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.544 V/m

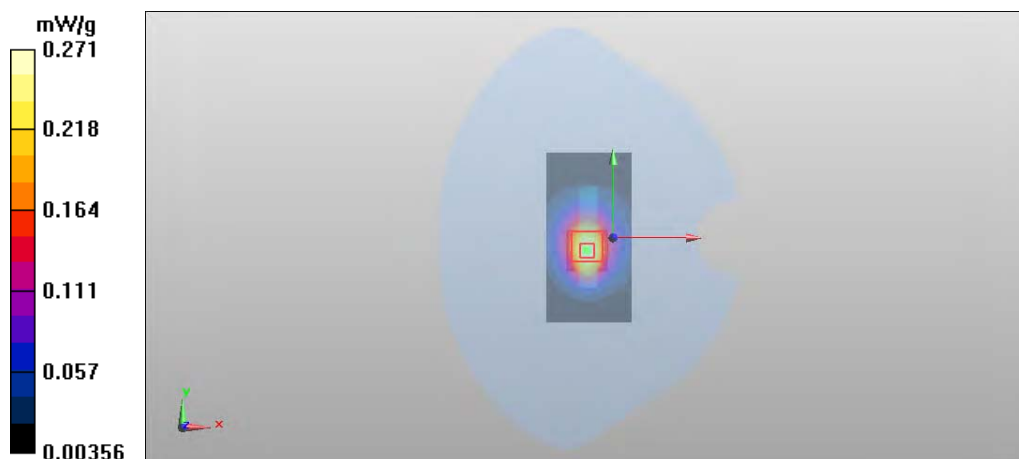
Peak SAR (extrapolated) = 0.373 mW/g

SAR(1 g) = 0.233 mW/g

SAR(10 g) = 0.144 mW/g

Power Drift = 0.11 dB

Maximum value of SAR (measured) = 0.256 mW/g



Date/Time: 2012-06-22 17:37:03

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.992 mho/m; ϵ_r = 54.154; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Area Scan (41x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.166 mW/g

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.058 V/m

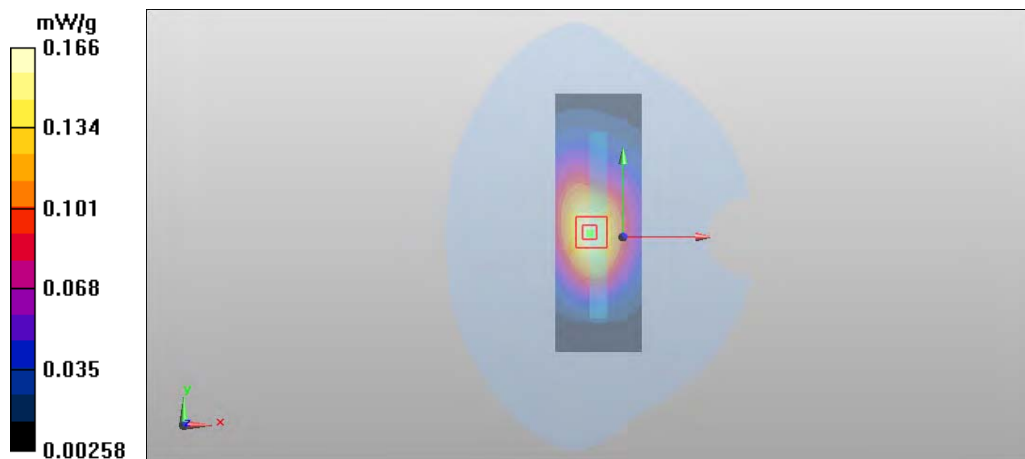
Peak SAR (extrapolated) = 0.206 mW/g

SAR(1 g) = 0.156 mW/g

SAR(10 g) = 0.112 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.166 mW/g



Date/Time: 2012-06-22 17:54:37

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850

Frequency: 835 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 21.0 C

Medium parameters used: f = 835 MHz; σ = 0.992 mho/m; ϵ_r = 54.154; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Area Scan (41x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.341 mW/g

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 18.298 V/m

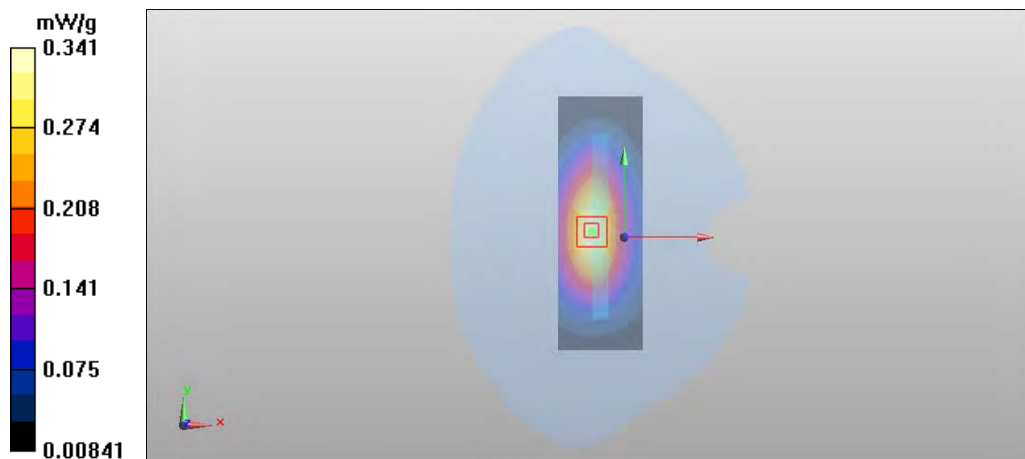
Peak SAR (extrapolated) = 0.421 mW/g

SAR(1 g) = 0.314 mW/g

SAR(10 g) = 0.221 mW/g

Power Drift = -0.05 dB

Maximum value of SAR (measured) = 0.336 mW/g



Date/Time: 2012-06-24 14:51:13

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.992 mho/m; ϵ_r = 54.123; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10MHz - 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.240 W/kg

LTE/Body - Middle - QPSK - 10MHz - 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.289 V/m

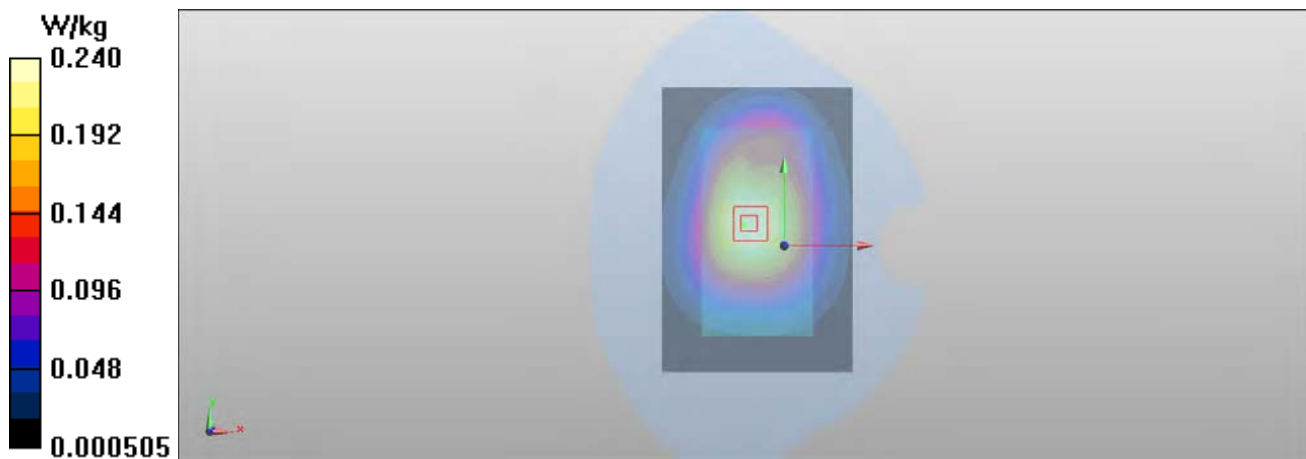
Peak SAR (extrapolated) = 0.276 mW/g

SAR(1 g) = 0.229 mW/g

SAR(10 g) = 0.178 mW/g

Power Drift = -0.00 dB

Maximum value of SAR (measured) = 0.239 W/kg



Date/Time: 2012-06-24 15:25:13

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.992$ mho/m; $\epsilon_r = 54.123$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10MHz - 50% RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.237 W/kg

LTE/Body - Middle - QPSK - 10MHz - 50% RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 14.988 V/m

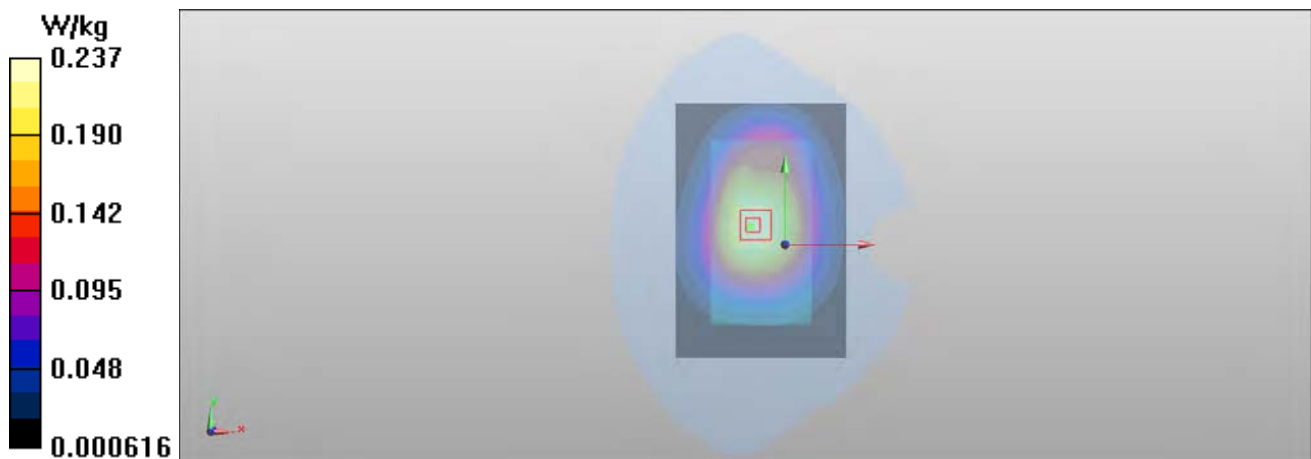
Peak SAR (extrapolated) = 0.270 mW/g

SAR(1 g) = 0.224 mW/g

SAR(10 g) = 0.173 mW/g

Power Drift = 0.08 dB

Maximum value of SAR (measured) = 0.235 W/kg



Date/Time: 2012-06-24 10:45:05

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.992 mho/m; ϵ_r = 54.123; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 10MHz - QPSK - 1RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.422 W/kg

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.158 V/m

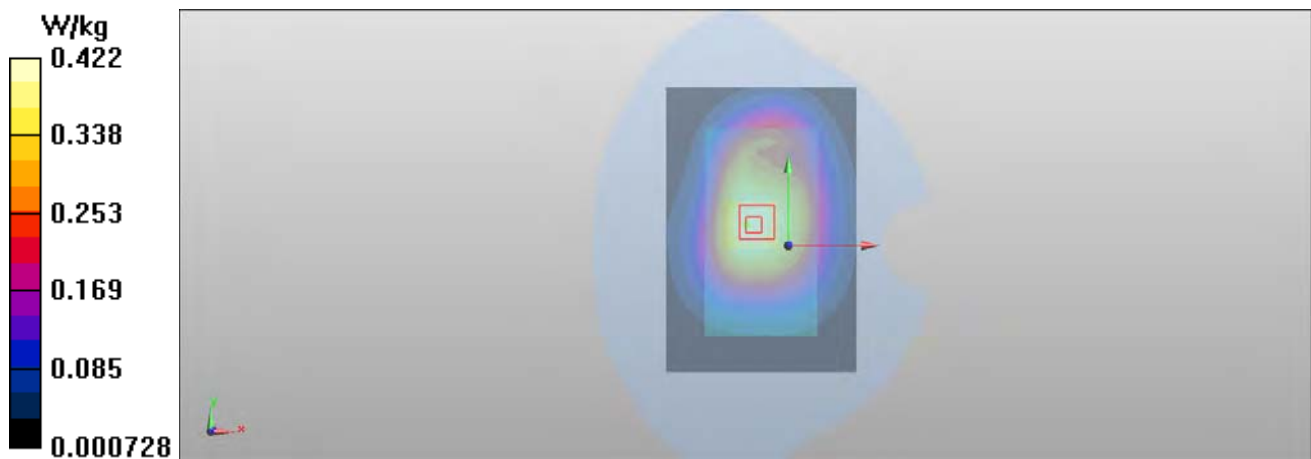
Peak SAR (extrapolated) = 0.536 mW/g

SAR(1 g) = 0.441 mW/g

SAR(10 g) = 0.340 mW/g

Power Drift = 0.36 dB

Maximum value of SAR (measured) = 0.465 W/kg



Date/Time: 2012-06-24 19:32:51

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.992$ mho/m; $\epsilon_r = 54.123$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Display Facing

Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.311 W/kg

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Display Facing

Phantom/Zoom Scan (5x7x7)/Cube 0: Measurement grid: dx=7.5mm, dy=5mm, dz=5mm

Reference Value = 17.404 V/m

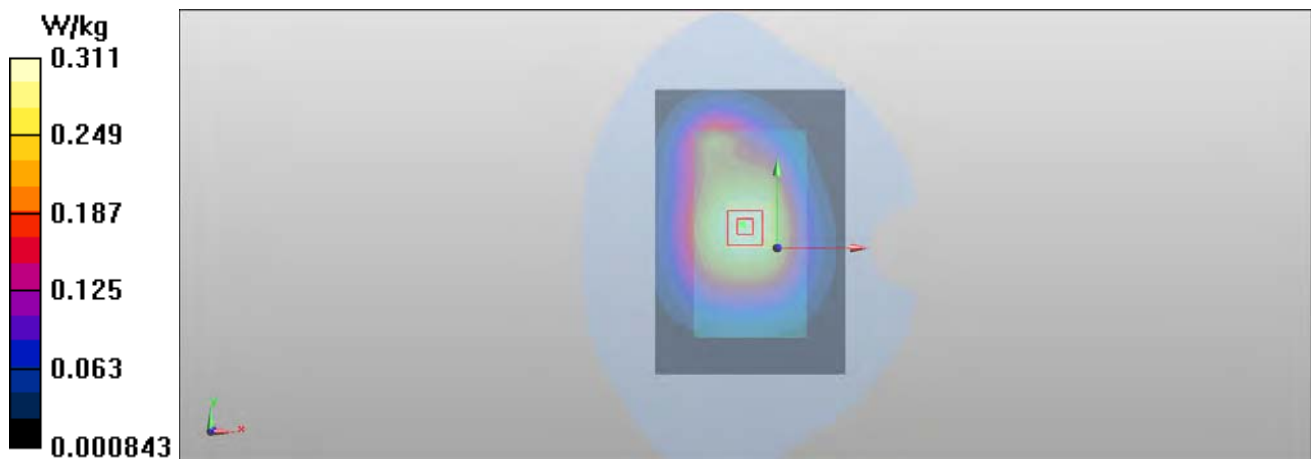
Peak SAR (extrapolated) = 0.359 mW/g

SAR(1 g) = 0.299 mW/g

SAR(10 g) = 0.233 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.312 W/kg



SAR Report

Appendix B.3 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-06-25 11:36:15

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: $t = 20.6$ C

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 1$ mho/m; $\epsilon_r = 53.327$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Top Edge Facing

Phantom/Area Scan (41x81x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.0227 W/kg

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Top Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 4.205 V/m

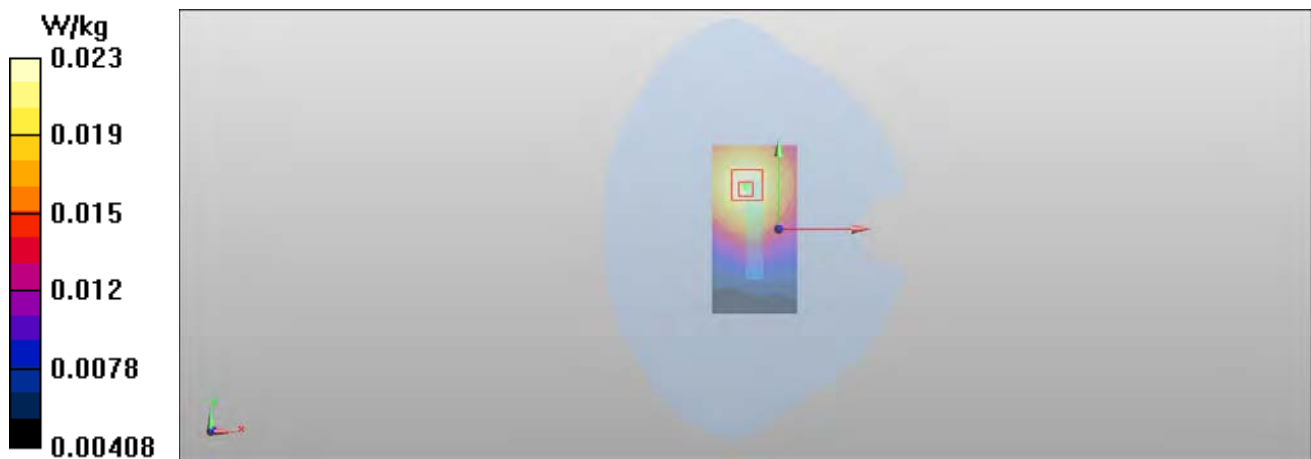
Peak SAR (extrapolated) = 0.029 mW/g

SAR(1 g) = 0.022 mW/g

SAR(10 g) = 0.016 mW/g

Power Drift = 0.09 dB

Maximum value of SAR (measured) = 0.0226 W/kg



Date/Time: 2012-06-25 11:49:59

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.6 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 1$ mho/m; $\epsilon_r = 53.327$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Bottom Edge Facing

Phantom/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.184 W/kg

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Bottom Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.712 V/m

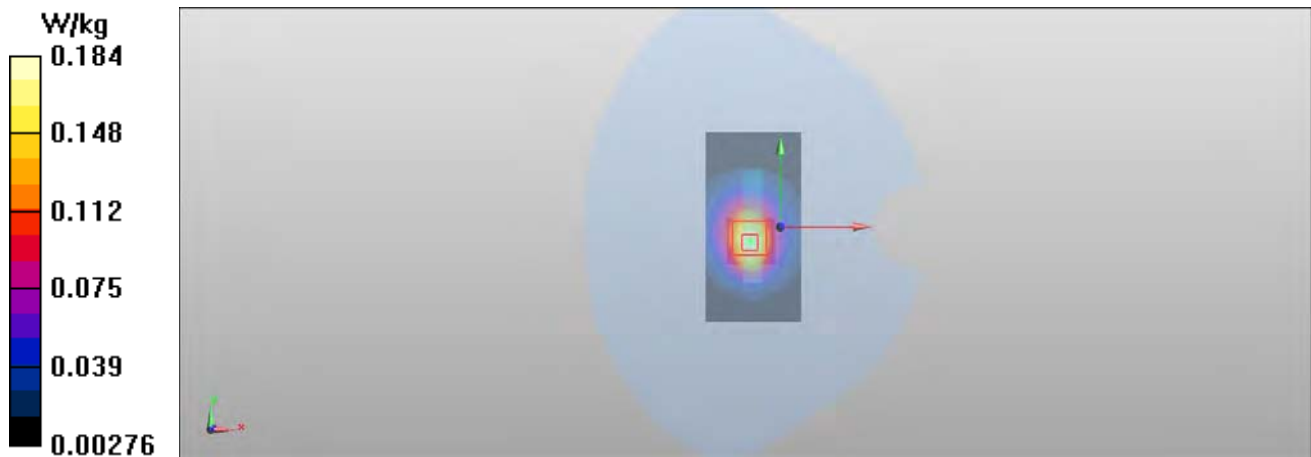
Peak SAR (extrapolated) = 0.251 mW/g

SAR(1 g) = 0.159 mW/g

SAR(10 g) = 0.098 mW/g

Power Drift = -0.00 dB

Maximum value of SAR (measured) = 0.173 W/kg



Date/Time: 2012-06-25 12:34:13

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.6 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 1$ mho/m; $\epsilon_r = 53.327$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Left Edge Facing

Phantom/Area Scan (41x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.128 W/kg

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Left Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 11.163 V/m

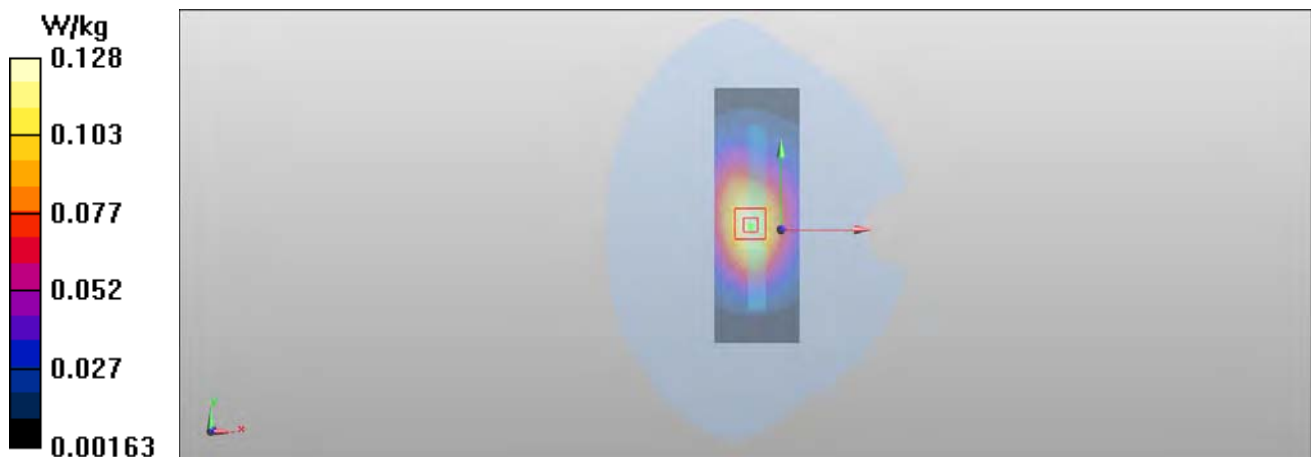
Peak SAR (extrapolated) = 0.158 mW/g

SAR(1 g) = 0.120 mW/g

SAR(10 g) = 0.086 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.128 W/kg



Date/Time: 2012-06-25 12:09:17

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.6 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 1$ mho/m; $\epsilon_r = 53.327$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Right Edge Facing

Phantom/Area Scan (41x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.235 W/kg

LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Right Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.330 V/m

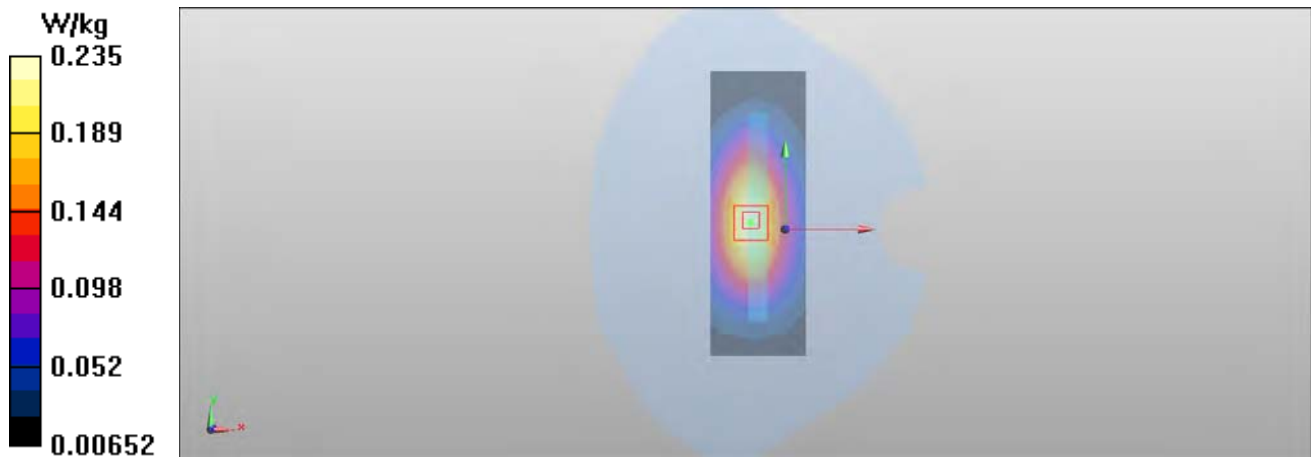
Peak SAR (extrapolated) = 0.303 mW/g

SAR(1 g) = 0.223 mW/g

SAR(10 g) = 0.156 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.236 W/kg



Date/Time: 2012-06-24 11:06:18

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.992 mho/m; ϵ_r = 54.123; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10MHz - 1RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.456 W/kg

LTE/Body - Middle - QPSK - 10MHz - 1RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 20.977 V/m

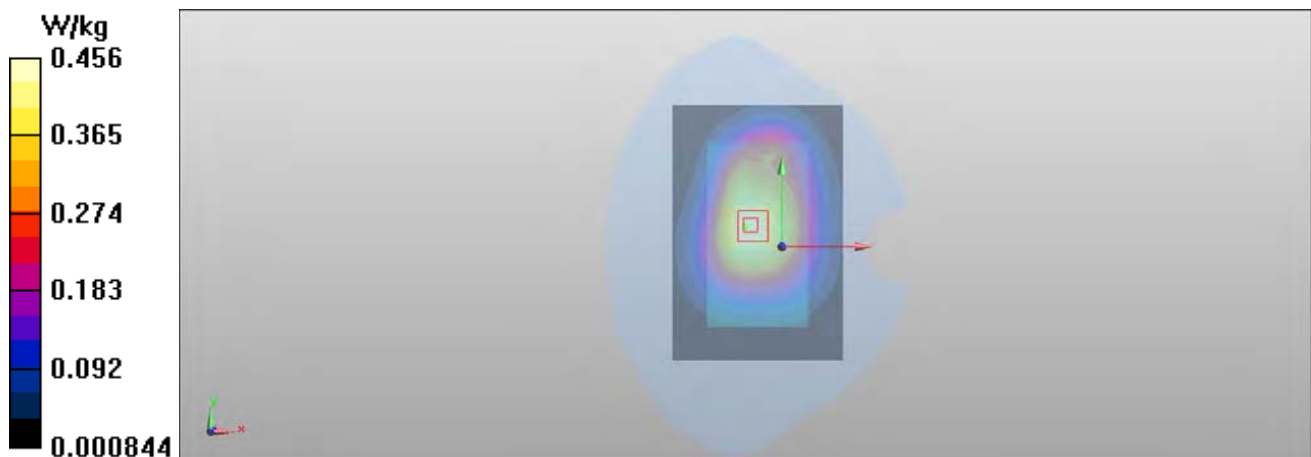
Peak SAR (extrapolated) = 0.522 mW/g

SAR(1 g) = 0.433 mW/g

SAR(10 g) = 0.334 mW/g

Power Drift = -0.13 dB

Maximum value of SAR (measured) = 0.452 W/kg



SAR Report

Appendix B.3 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-06-24 15:38:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.992 mho/m; ϵ_r = 54.123; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 10MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.253 W/kg

LTE/Body - Middle - QPSK - 10MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.619 V/m

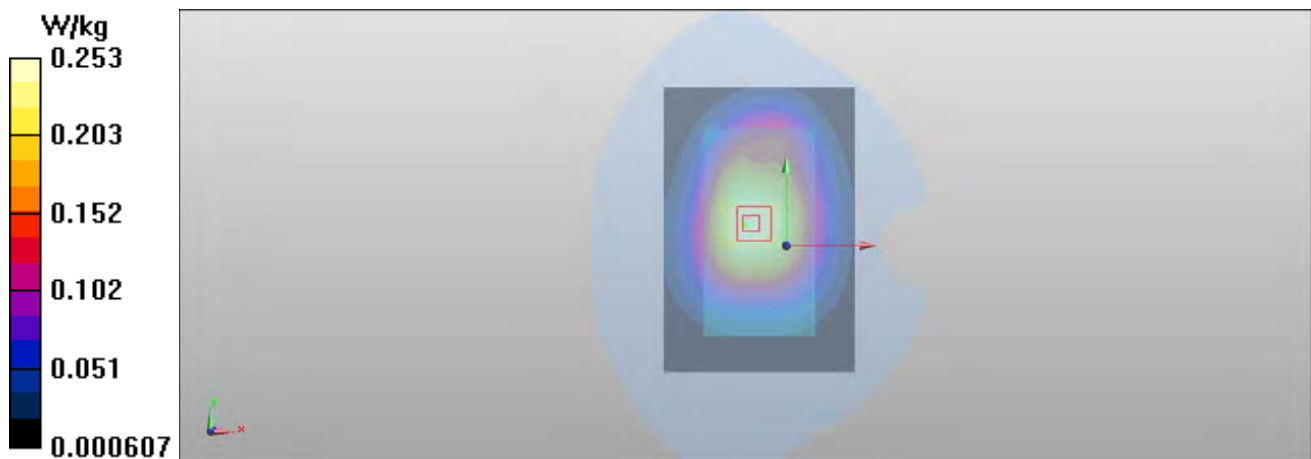
Peak SAR (extrapolated) = 0.288 mW/g

SAR(1 g) = 0.239 mW/g

SAR(10 g) = 0.185 mW/g

Power Drift = 0.05 dB

Maximum value of SAR (measured) = 0.249 W/kg



Date/Time: 2012-06-24 15:52:02

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.992 mho/m; ϵ_r = 54.123; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 10MHz - 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.199 W/kg

LTE/Body - Middle - 16QAM - 10MHz - 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.825 V/m

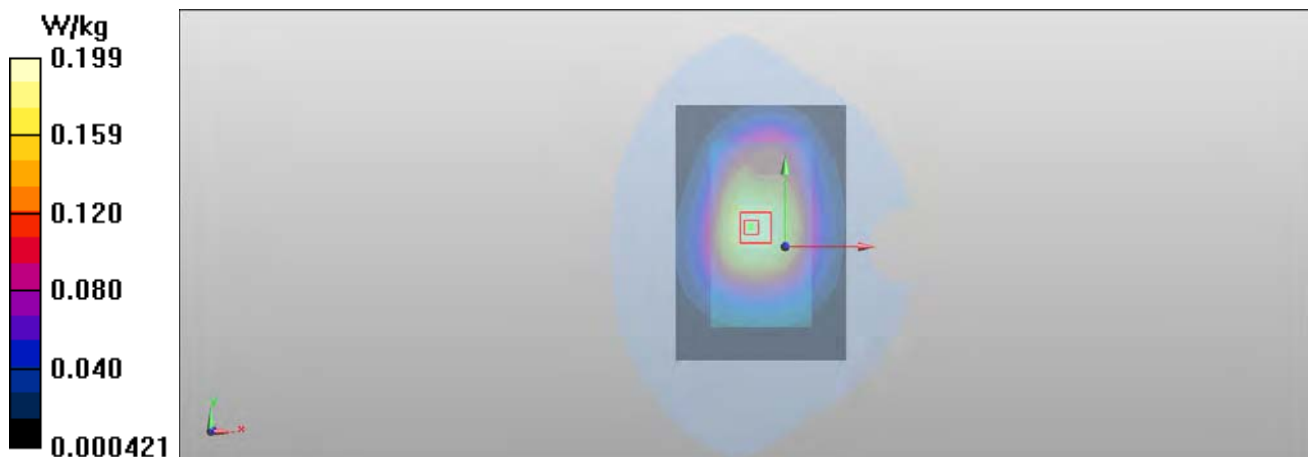
Peak SAR (extrapolated) = 0.227 mW/g

SAR(1 g) = 0.187 mW/g

SAR(10 g) = 0.146 mW/g

Power Drift = -0.02 dB

Maximum value of SAR (measured) = 0.194 W/kg



Date/Time: 2012-06-24 16:05:57

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.992$ mho/m; $\epsilon_r = 54.123$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 10MHz - 50% RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.197 W/kg

LTE/Body - Middle - 16QAM - 10MHz - 50% RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.710 V/m

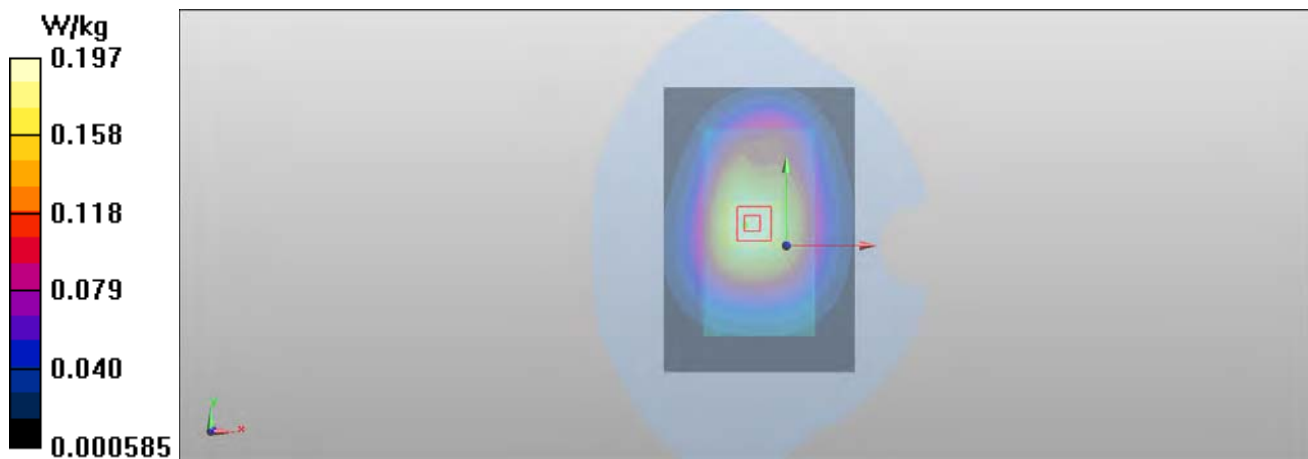
Peak SAR (extrapolated) = 0.221 mW/g

SAR(1 g) = 0.185 mW/g

SAR(10 g) = 0.144 mW/g

Power Drift = 0.02 dB

Maximum value of SAR (measured) = 0.194 W/kg



Date/Time: 2012-06-24 18:43:04

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.992$ mho/m; $\epsilon_r = 54.123$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.239 W/kg

LTE/Body - Middle - 16QAM - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 15.174 V/m

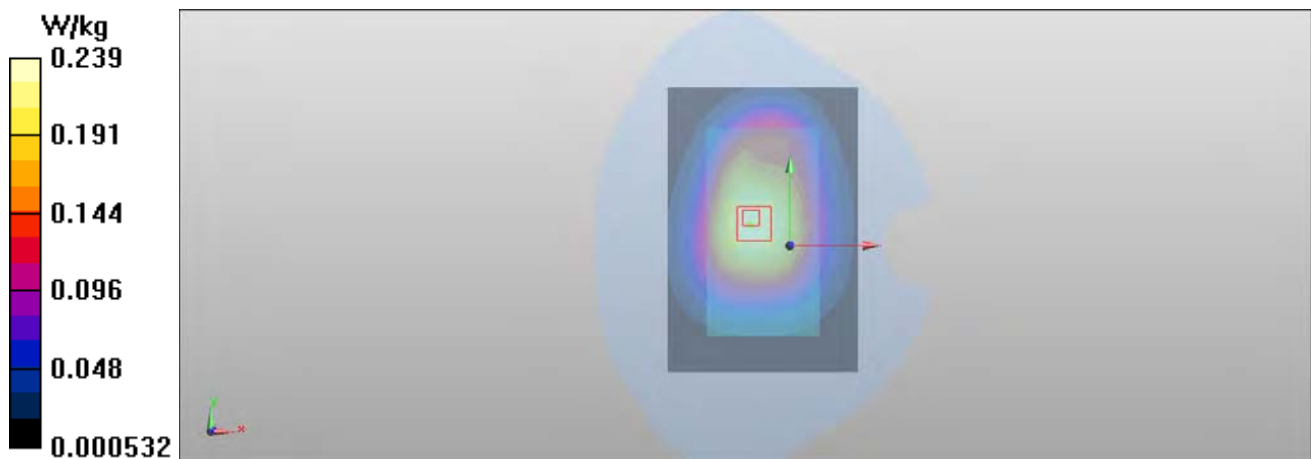
Peak SAR (extrapolated) = 0.284 mW/g

SAR(1 g) = 0.227 mW/g

SAR(10 g) = 0.175 mW/g

Power Drift = -0.11 dB

Maximum value of SAR (measured) = 0.241 W/kg



Date/Time: 2012-06-24 18:55:59

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.992 mho/m; ϵ_r = 54.123; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 10MHz - 1RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.287 W/kg

LTE/Body - Middle - 16QAM - 10MHz - 1RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 16.470 V/m

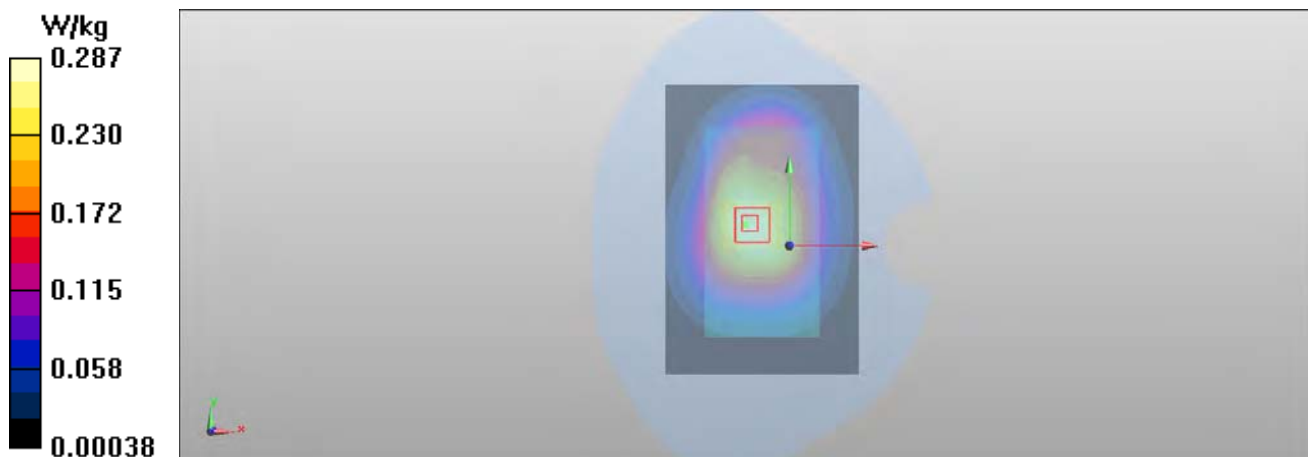
Peak SAR (extrapolated) = 0.338 mW/g

SAR(1 g) = 0.269 mW/g

SAR(10 g) = 0.206 mW/g

Power Drift = -0.08 dB

Maximum value of SAR (measured) = 0.280 W/kg



Date/Time: 2012-06-24 19:10:56

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850

Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: BSL835; Medium Notes: t= 20.5 C

Medium parameters used (interpolated): f = 836.5 MHz; $\sigma = 0.992$ mho/m; $\epsilon_r = 54.123$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3131
- ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn538; Calibrated: 2011-09-15
- Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 10MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.206 W/kg

LTE/Body - Middle - 16QAM - 10MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.955 V/m

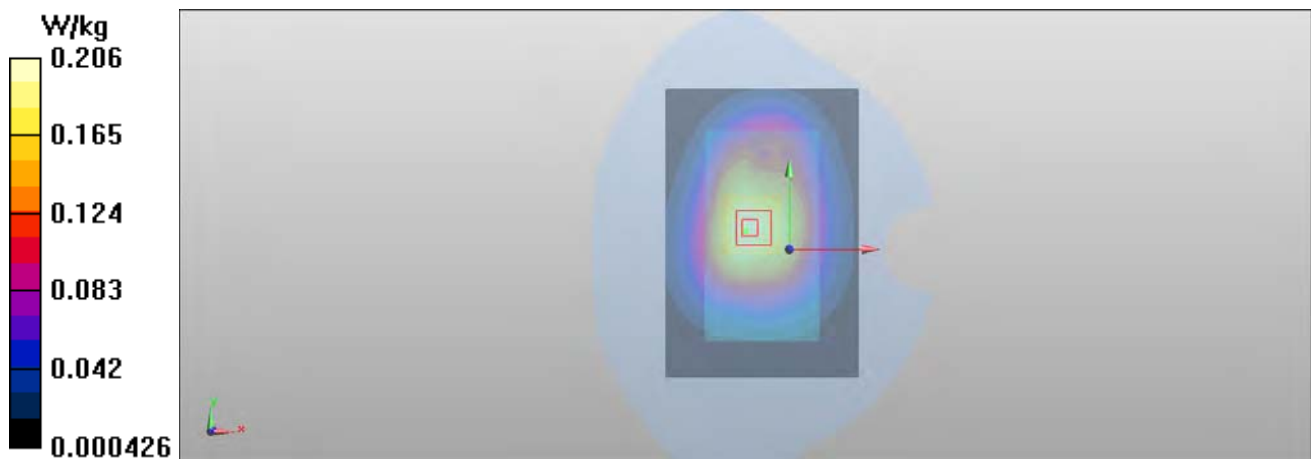
Peak SAR (extrapolated) = 0.231 mW/g

SAR(1 g) = 0.189 mW/g

SAR(10 g) = 0.146 mW/g

Power Drift = -0.33 dB

Maximum value of SAR (measured) = 0.203 W/kg



SAR Report

Appendix B.3 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-08-16 20:08:16

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1712.4 MHz; $\sigma = 1.425$ mho/m; $\epsilon_r = 52.655$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #2 CRP ; Type: QD000P40CD;

- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.6 (6824)

WCDMA/Body - Low - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated
grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.50 W/kg

WCDMA/Body - Low - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.157 V/m

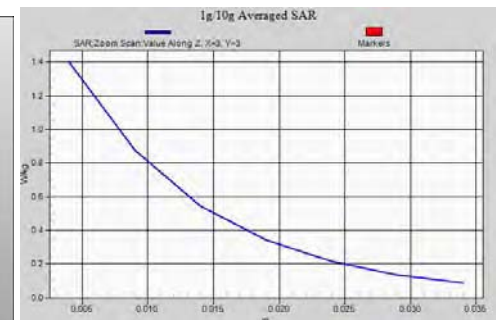
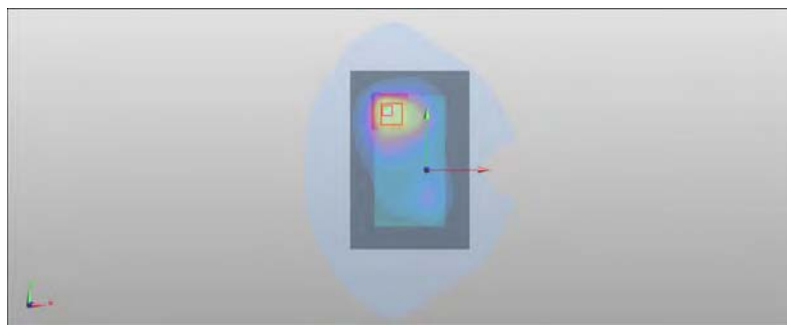
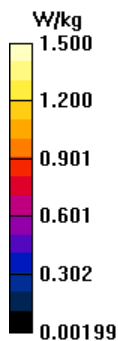
Peak SAR (extrapolated) = 2.064 mW/g

SAR(1 g) = 1.3 mW/g

SAR(10 g) = 0.822 mW/g

Power Drift = -0.10 dB

Maximum value of SAR (measured) = 1.40 W/kg



SAR Report

Appendix B.3 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-08-16 21:02:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.9$ C

Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.425$ mho/m; $\epsilon_r = 52.655$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (1); SEMCAD X Version 14.6.6 (6824)

WCDMA/Body - Low - Spacer 10mm - No Accessory - Display Facing Phantom/Area Scan (81x121x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 1.33 W/kg

WCDMA/Body - Low - Spacer 10mm - No Accessory - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 12.000 V/m

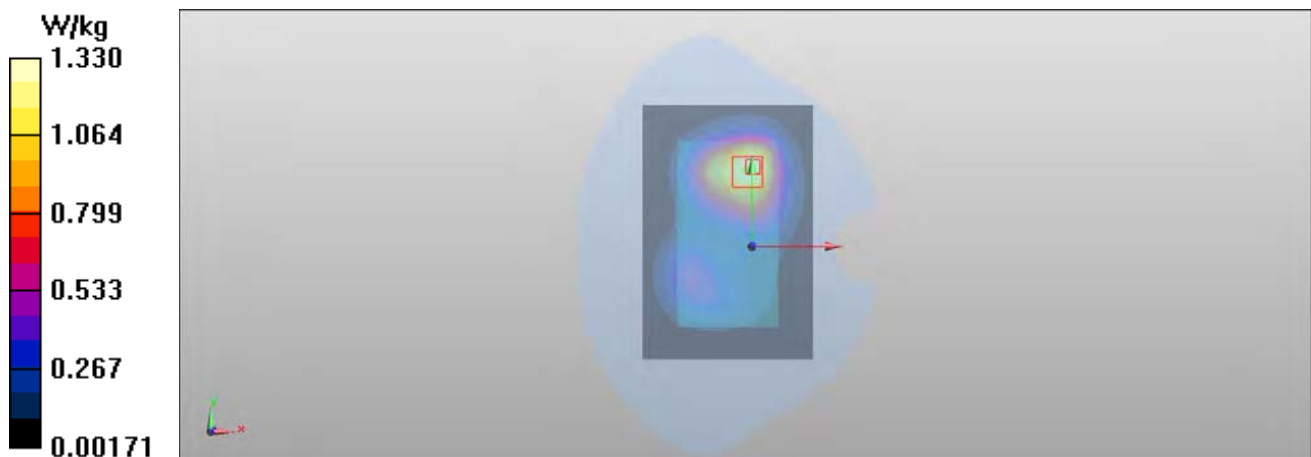
Peak SAR (extrapolated) = 1.938 mW/g

SAR(1 g) = 1.22 mW/g

SAR(10 g) = 0.777 mW/g

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 1.30 W/kg



Date/Time: 2012-08-17 09:18:00

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.9 C

Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.442 mho/m; ϵ_r = 52.538; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Area Scan (41x81x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0776 W/kg

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 6.769 V/m

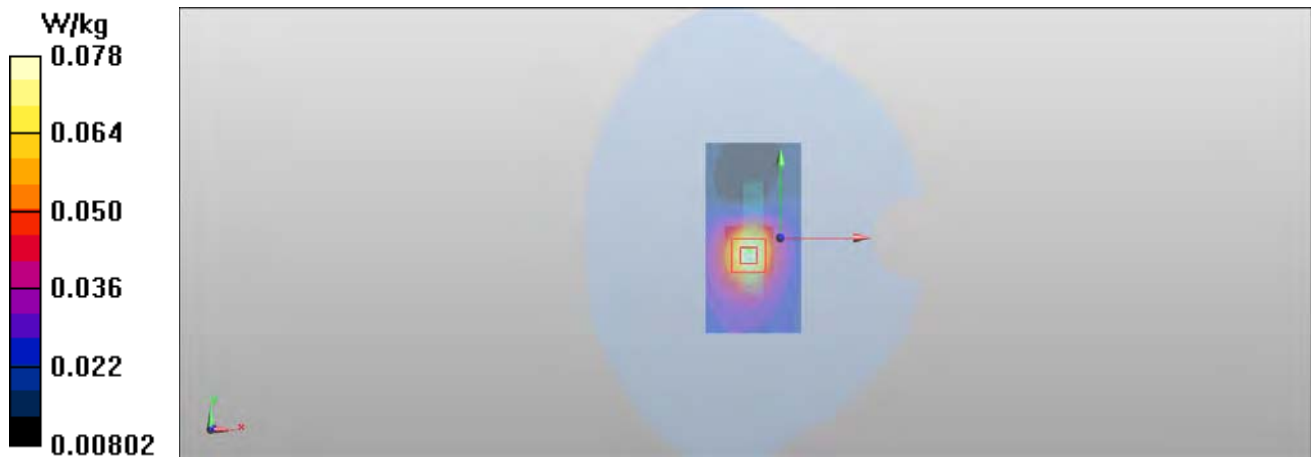
Peak SAR (extrapolated) = 0.104 mW/g

SAR(1 g) = 0.068 mW/g

SAR(10 g) = 0.043 mW/g

Power Drift = 0.09 dB

Maximum value of SAR (measured) = 0.0731 W/kg



Date/Time: 2012-08-17 09:31:43

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.9$ C

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.442$ mho/m; $\epsilon_r = 52.538$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Area Scan (41x81x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.411 W/kg

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Zoom Scan (5x5x7)/Cube

0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 17.130 V/m

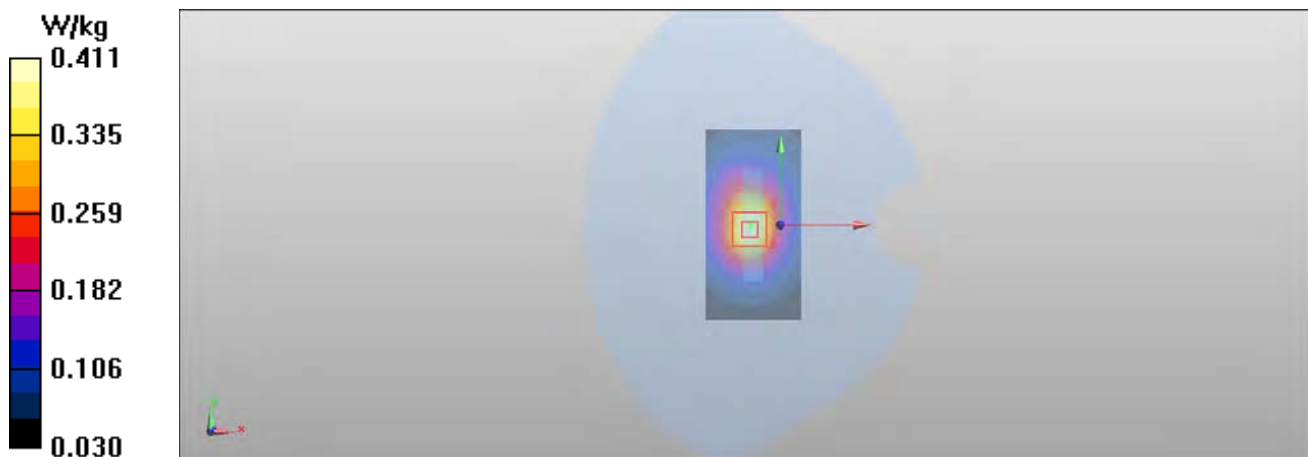
Peak SAR (extrapolated) = 0.587 mW/g

SAR(1 g) = 0.372 mW/g

SAR(10 g) = 0.231 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.394 W/kg



Date/Time: 2012-08-17 08:58:25

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.9$ C

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.442$ mho/m; $\epsilon_r = 52.538$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Area Scan (41x121x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.632 W/kg

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 15.130 V/m

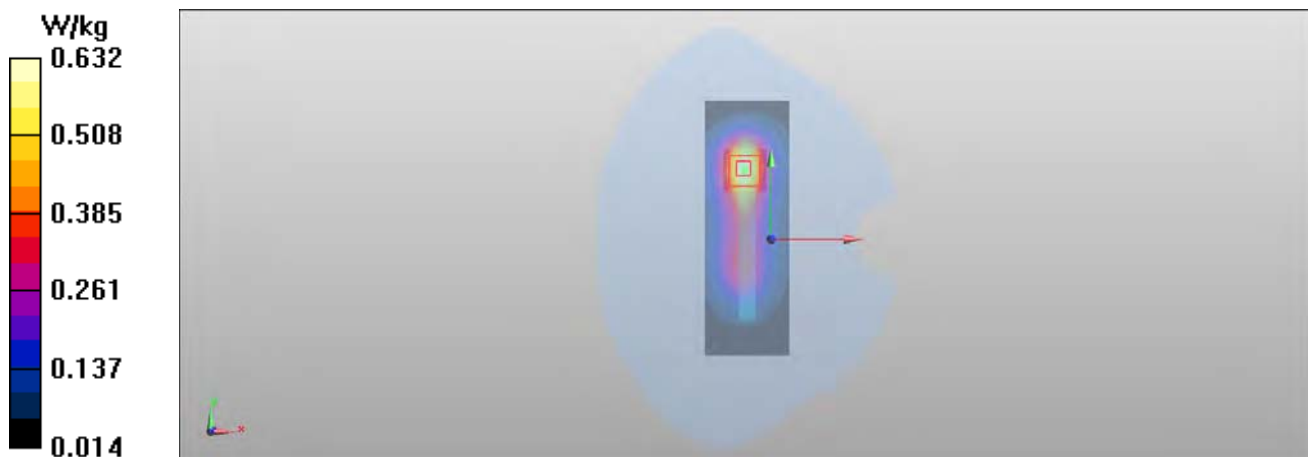
Peak SAR (extrapolated) = 0.866 mW/g

SAR(1 g) = 0.559 mW/g

SAR(10 g) = 0.339 mW/g

Power Drift = 0.08 dB

Maximum value of SAR (measured) = 0.603 W/kg



SAR Report

Appendix B.3 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-08-17 08:40:42

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100

Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.9$ C

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.442$ mho/m; $\epsilon_r = 52.538$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.6 (6824)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Area Scan (41x121x1):

Interpolated grid: $dx = 1.500$ mm, $dy = 1.500$ mm

Maximum value of SAR (interpolated) = 0.210 W/kg

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx = 7.5$ mm, $dy = 7.5$ mm, $dz = 5$ mm

Reference Value = 9.306 V/m

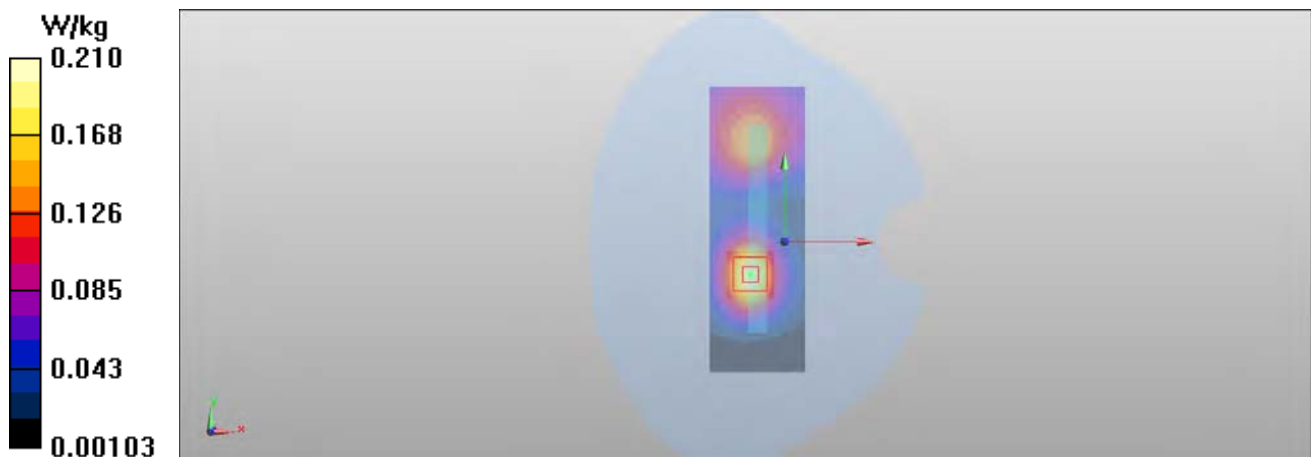
Peak SAR (extrapolated) = 0.283 mW/g

SAR(1 g) = 0.189 mW/g

SAR(10 g) = 0.117 mW/g

Power Drift = 0.05 dB

Maximum value of SAR (measured) = 0.206 W/kg



Date/Time: 2012-06-17 14:17:32

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.417 mho/m; ϵ_r = 52.4; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.768 mW/g

LTE/Body - Middle - QPSK - 20MHz – 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.848 V/m

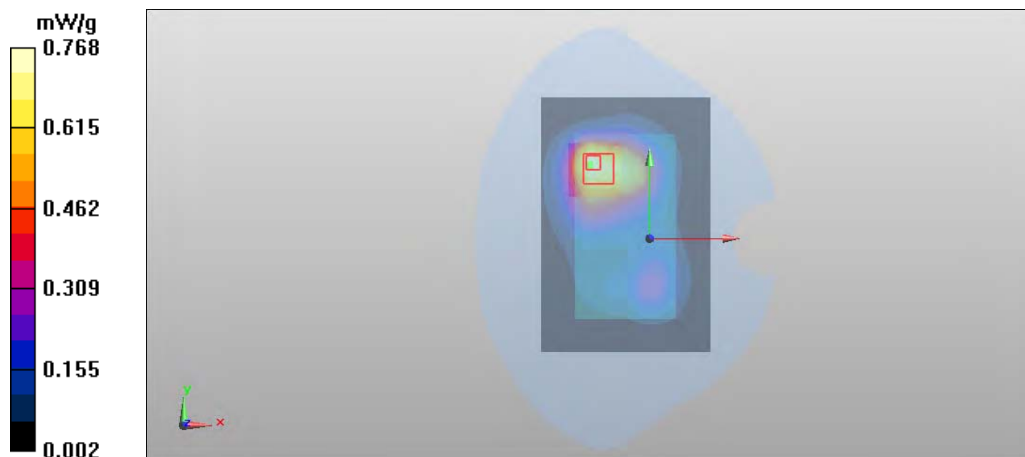
Peak SAR (extrapolated) = 1.039 mW/g

SAR(1 g) = 0.658 mW/g

SAR(10 g) = 0.422 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.691 mW/g



Date/Time: 2012-06-17 14:41:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.417 mho/m; ϵ_r = 52.4; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 50 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.773 mW/g

LTE/Body - Middle - QPSK - 20MHz – 50 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.974 V/m

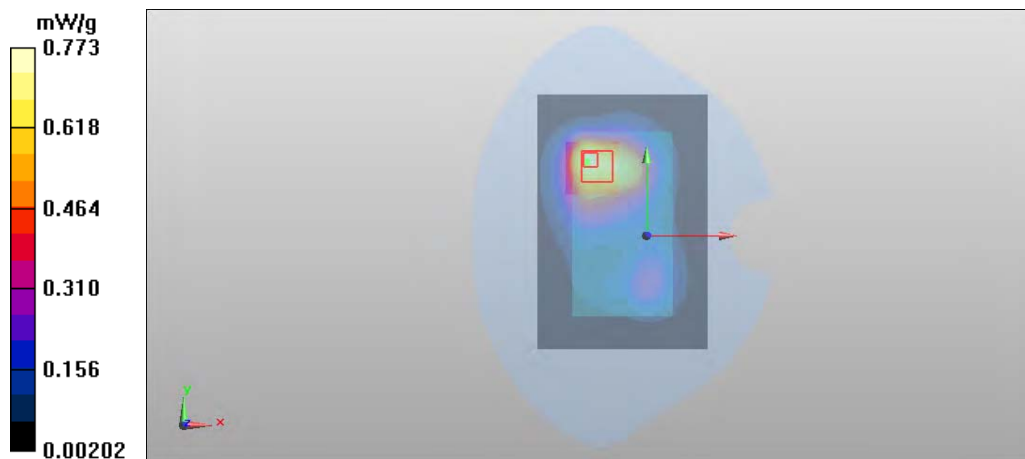
Peak SAR (extrapolated) = 1.065 mW/g

SAR(1 g) = 0.670 mW/g

SAR(10 g) = 0.425 mW/g

Power Drift = -0.14 dB

Maximum value of SAR (measured) = 0.719 mW/g



Date/Time: 2012-06-17 15:01:24

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.4 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.417 mho/m; ϵ_r = 52.4; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.875 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.466 V/m

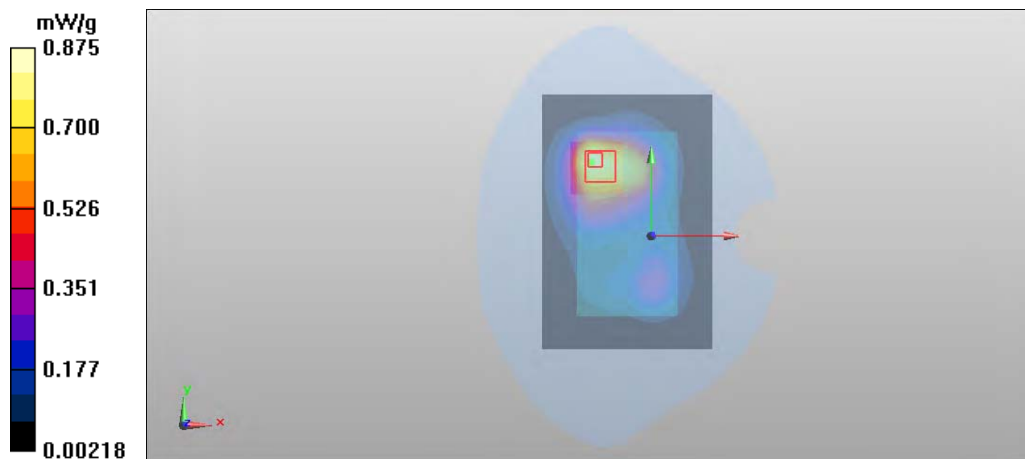
Peak SAR (extrapolated) = 1.196 mW/g

SAR(1 g) = 0.754 mW/g

SAR(10 g) = 0.481 mW/g

Power Drift = 0.05 dB

Maximum value of SAR (measured) = 0.804 mW/g



Date/Time: 2012-06-18 09:52:05

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.416$ mho/m; $\epsilon_r = 52.587$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.915 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 11.275 V/m

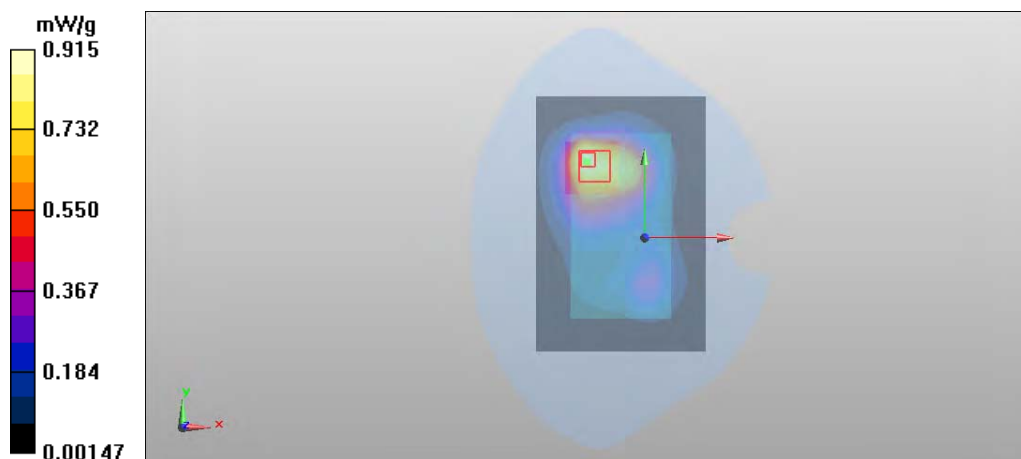
Peak SAR (extrapolated) = 1.258 mW/g

SAR(1 g) = 0.787 mW/g

SAR(10 g) = 0.498 mW/g

Power Drift = -0.24 dB

Maximum value of SAR (measured) = 0.847 mW/g



Date/Time: 2012-06-18 10:11:44

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.416 mho/m; ϵ_r = 52.587; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0 offset - Spacer 10mm - No Accessory - Back Facing Phantom/Area

Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

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

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0 offset - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom

Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 10.774 V/m

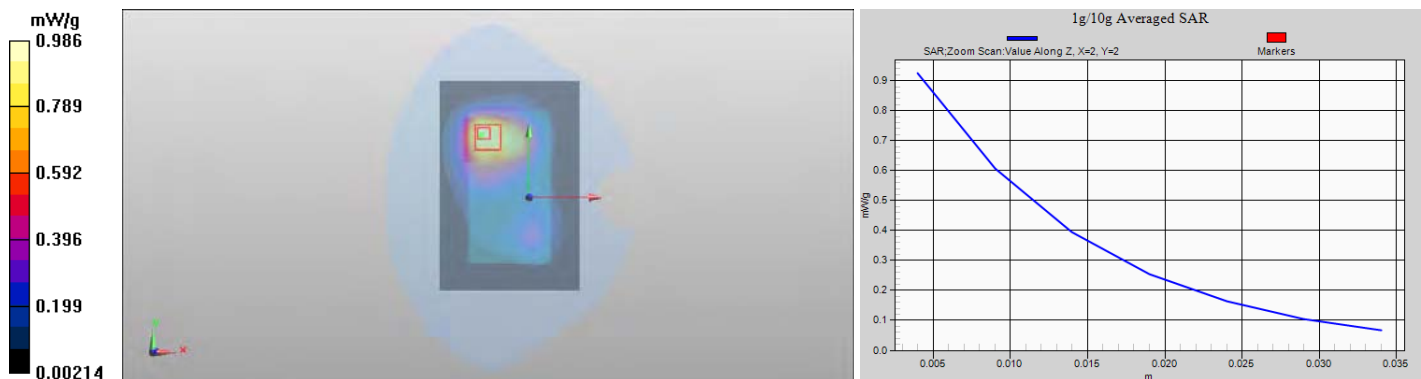
Peak SAR (extrapolated) = 1.370 mW/g

SAR(1 g) = 0.865 mW/g

SAR(10 g) = 0.550 mW/g

Power Drift = 0.01 dB

Maximum value of SAR (measured) = 0.925 mW/g



SAR Report

Appendix B.3 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-06-18 21:19:18

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.416$ mho/m; $\epsilon_r = 52.587$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0% offset - Spacer 10mm - No Accessory - Display Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.785 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0% offset - Spacer 10mm - No Accessory - Display Facing

Phantom/Zoom Scan (7x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.988 V/m

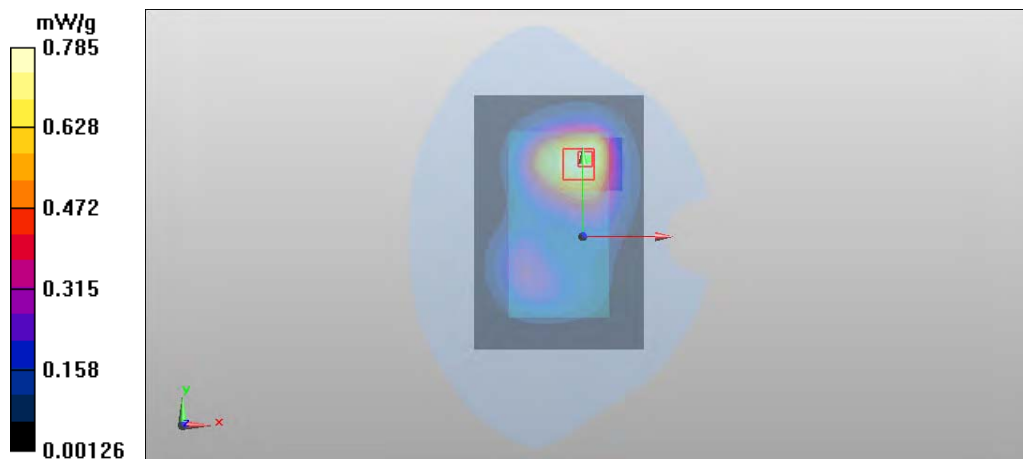
Peak SAR (extrapolated) = 1.135 mW/g

SAR(1 g) = 0.731 mW/g

SAR(10 g) = 0.477 mW/g

Power Drift = -0.17 dB

Maximum value of SAR (measured) = 0.778 mW/g



Date/Time: 2012-06-18 22:33:19

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.416 mho/m; ϵ_r = 52.587; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0% offset - Spacer 10mm - No Accessory - Top Edge Facing

Phantom/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0473 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0% offset - Spacer 10mm - No Accessory - Top Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 5.411 V/m

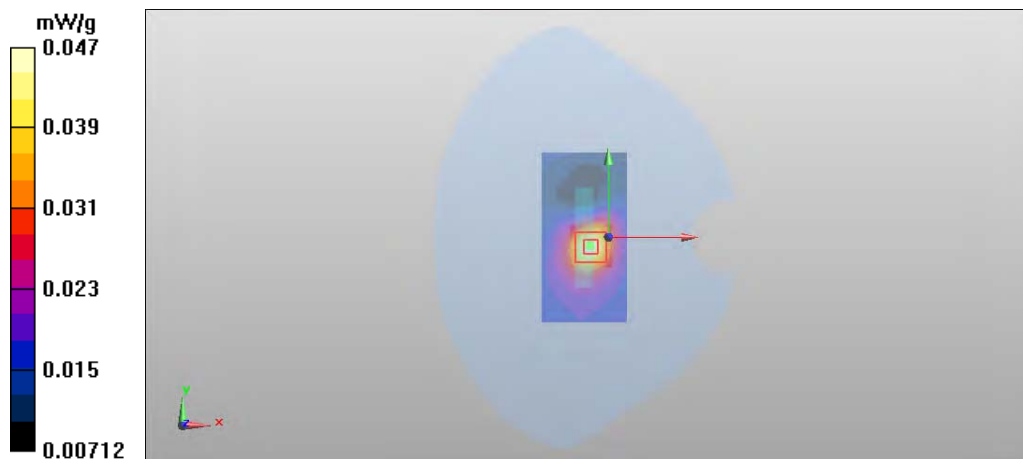
Peak SAR (extrapolated) = 0.065 mW/g

SAR(1 g) = 0.043 mW/g

SAR(10 g) = 0.027 mW/g

Power Drift = 0.17 dB

Maximum value of SAR (measured) = 0.0468 mW/g



Date/Time: 2012-06-18 22:48:04

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.416$ mho/m; $\epsilon_r = 52.587$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0% offset - Spacer 10mm - No Accessory - Bottom Edge Facing

Phantom/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.297 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0% offset - Spacer 10mm - No Accessory - Bottom Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 14.778 V/m

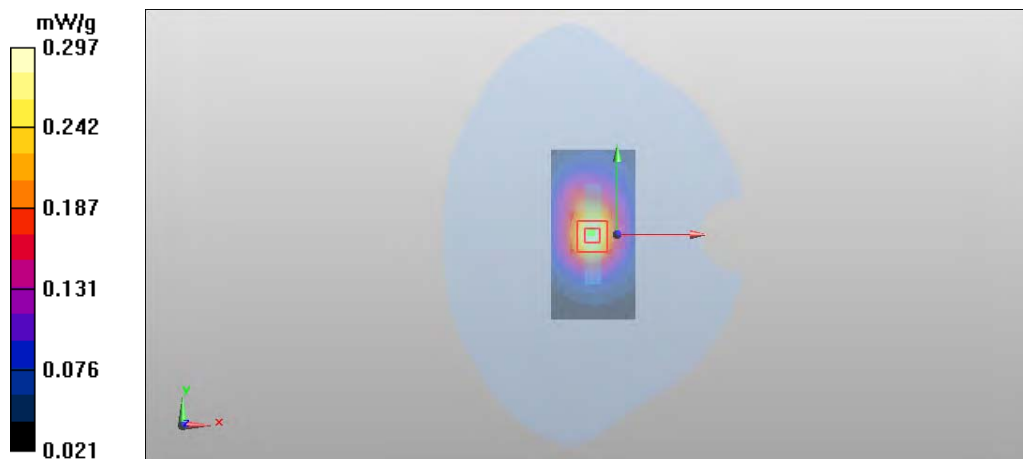
Peak SAR (extrapolated) = 0.413 mW/g

SAR(1 g) = 0.270 mW/g

SAR(10 g) = 0.167 mW/g

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 0.292 mW/g



Date/Time: 2012-06-18 22:12:27

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.416 mho/m; ϵ_r = 52.587; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165

- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;

- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11

- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:

- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz - 1 RB - 0% offset - Spacer 10mm - No Accessory - Left Edge Facing

Phantom/Area Scan (41x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.455 mW/g

LTE/Body - Middle - QPSK - 20MHz - 1 RB - 0% offset - Spacer 10mm - No Accessory - Left Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.151 V/m

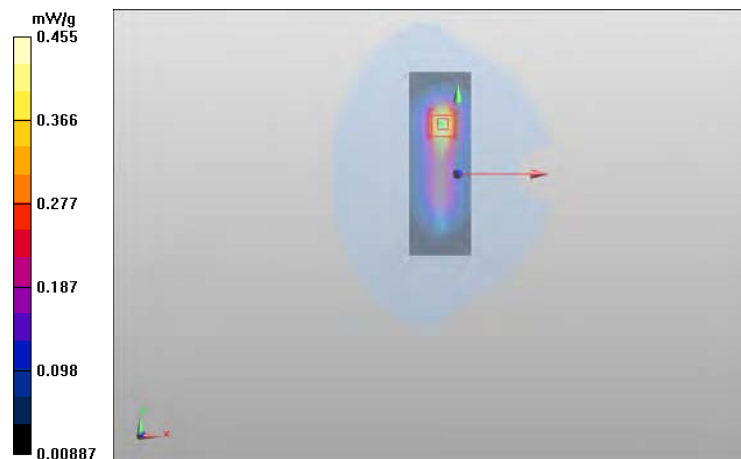
Peak SAR (extrapolated) = 0.625 mW/g

SAR(1 g) = 0.400 mW/g

SAR(10 g) = 0.243 mW/g

Power Drift = 0.09 dB

Maximum value of SAR (measured) = 0.439 mW/g



Date/Time: 2012-06-18 21:53:16

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.416 mho/m; ϵ_r = 52.587; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0% offset - Spacer 10mm - No Accessory - Right Edge Facing

Phantom/Area Scan (41x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.167 mW/g

LTE/Body - Middle - QPSK - 20MHz – 1 RB - 0% offset - Spacer 10mm - No Accessory - Right Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.666 V/m

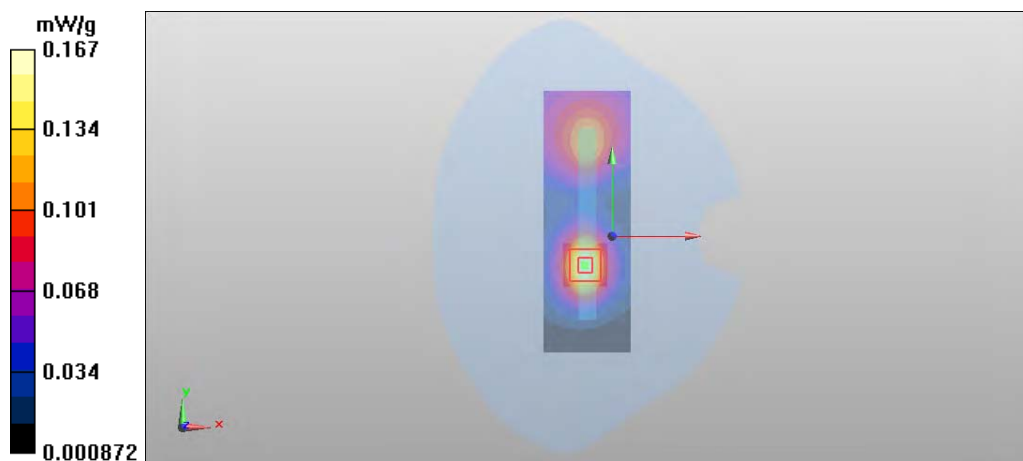
Peak SAR (extrapolated) = 0.231 mW/g

SAR(1 g) = 0.151 mW/g

SAR(10 g) = 0.093 mW/g

Power Drift = 0.03 dB

Maximum value of SAR (measured) = 0.165 mW/g



Date/Time: 2012-06-18 10:34:22

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.416 mho/m; ϵ_r = 52.587; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 20MHz – 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Area

Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.648 mW/g

LTE/Body - Middle - 16QAM - 20MHz – 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom

Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 8.991 V/m

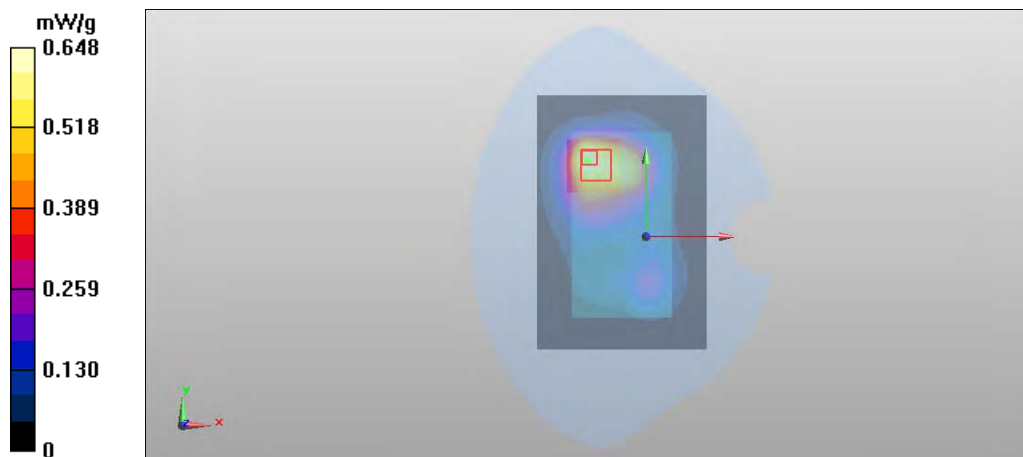
Peak SAR (extrapolated) = 0.915 mW/g

SAR(1 g) = 0.568 mW/g

SAR(10 g) = 0.359 mW/g

Power Drift = 0.06 dB

Maximum value of SAR (measured) = 0.607 mW/g



Date/Time: 2012-06-18 11:03:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.416$ mho/m; $\epsilon_r = 52.587$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 20MHz - 50 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.654 mW/g

LTE/Body - Middle - 16QAM - 20MHz - 50 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.130 V/m

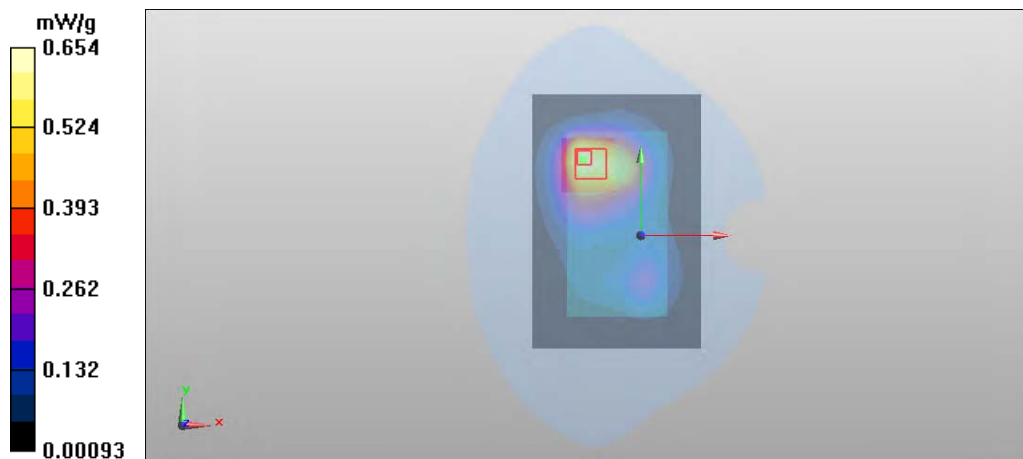
Peak SAR (extrapolated) = 0.915 mW/g

SAR(1 g) = 0.573 mW/g

SAR(10 g) = 0.363 mW/g

Power Drift = -0.09 dB

Maximum value of SAR (measured) = 0.616 mW/g



Date/Time: 2012-06-18 13:13:39

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.416$ mho/m; $\epsilon_r = 52.587$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.740 mW/g

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.764 V/m

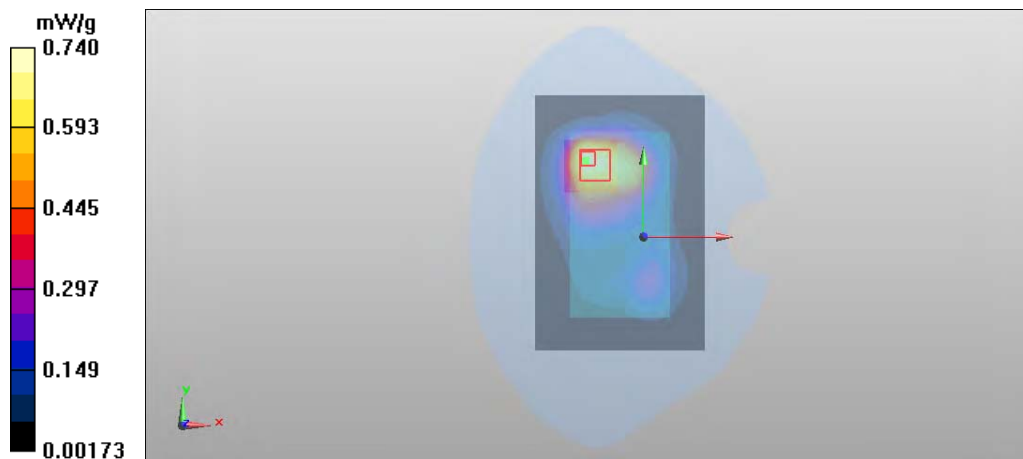
Peak SAR (extrapolated) = 1.064 mW/g

SAR(1 g) = 0.664 mW/g

SAR(10 g) = 0.419 mW/g

Power Drift = -0.17 dB

Maximum value of SAR (measured) = 0.710 mW/g



Date/Time: 2012-06-18 13:33:53

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: t= 20.3 C

Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.416 mho/m; ϵ_r = 52.587; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.697 mW/g

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.760 V/m

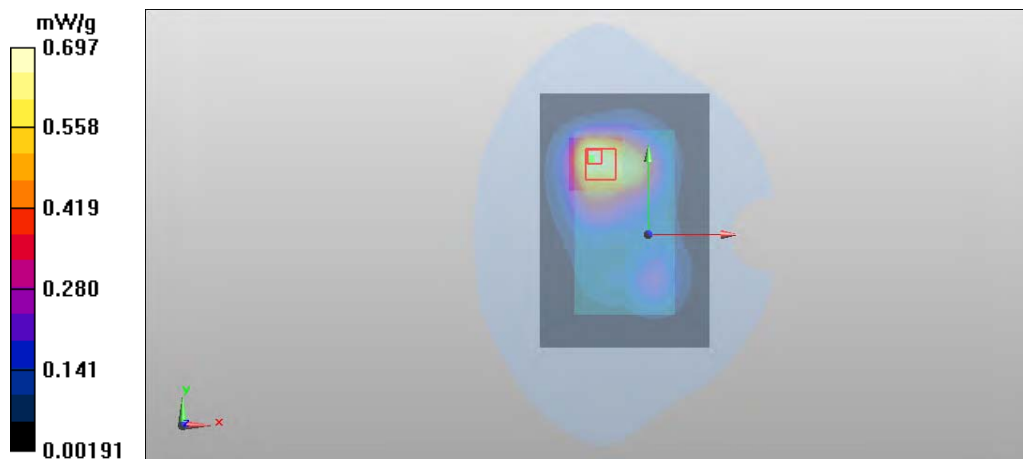
Peak SAR (extrapolated) = 0.914 mW/g

SAR(1 g) = 0.611 mW/g

SAR(10 g) = 0.392 mW/g

Power Drift = -0.22 dB

Maximum value of SAR (measured) = 0.654 mW/g



Date/Time: 2012-06-18 13:53:54

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100

Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium: BSL1800; Medium Notes: $t = 20.3$ C

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.416$ mho/m; $\epsilon_r = 52.587$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3165
- ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
- Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
- Measurement SW: DASY52, Version 52.8 (0); SEMCAD X Version 14.6.5 (6469)

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 0% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.770 mW/g

LTE/Body - Middle - 16QAM - 20MHz - 1 RB - 0% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.500 V/m

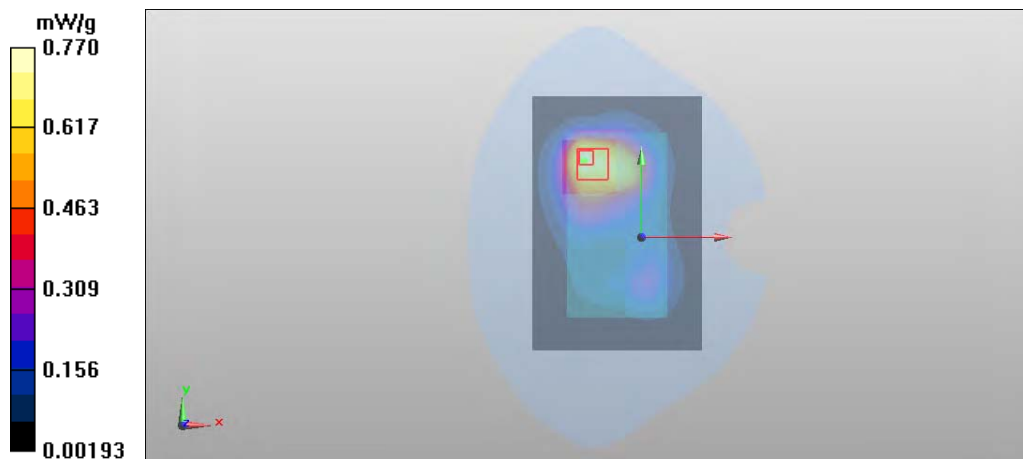
Peak SAR (extrapolated) = 1.117 mW/g

SAR(1 g) = 0.689 mW/g

SAR(10 g) = 0.433 mW/g

Power Drift = 0.16 dB

Maximum value of SAR (measured) = 0.744 mW/g



Date/Time: 2012-06-17 08:49:51

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 1.10 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 13.391 V/m

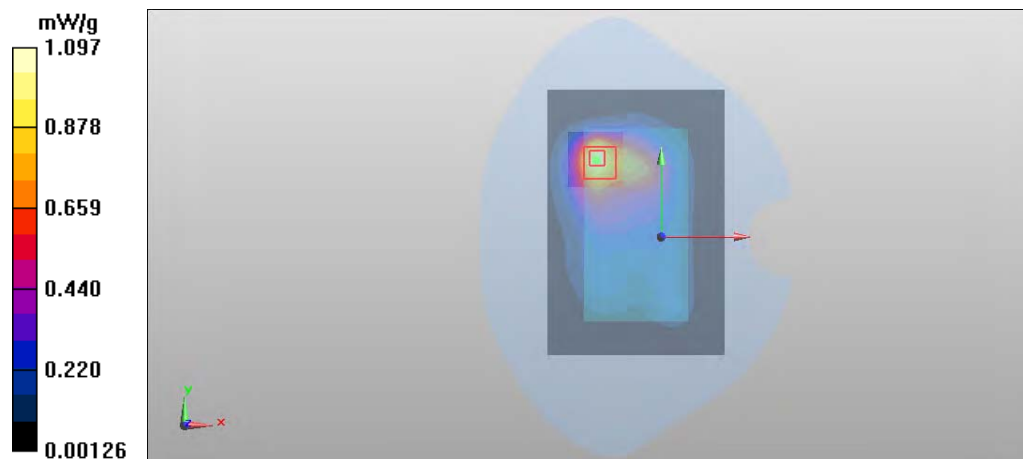
Peak SAR (extrapolated) = 1.554 mW/g

SAR(1 g) = 0.908 mW/g

SAR(10 g) = 0.532 mW/g

Power Drift = -0.06 dB

Maximum value of SAR (measured) = 0.964 mW/g



Date/Time: 2012-06-17 08:02:25

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Display Facing Phantom/Area Scan (81x121x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.802 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Display Facing Phantom/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 13.305 V/m

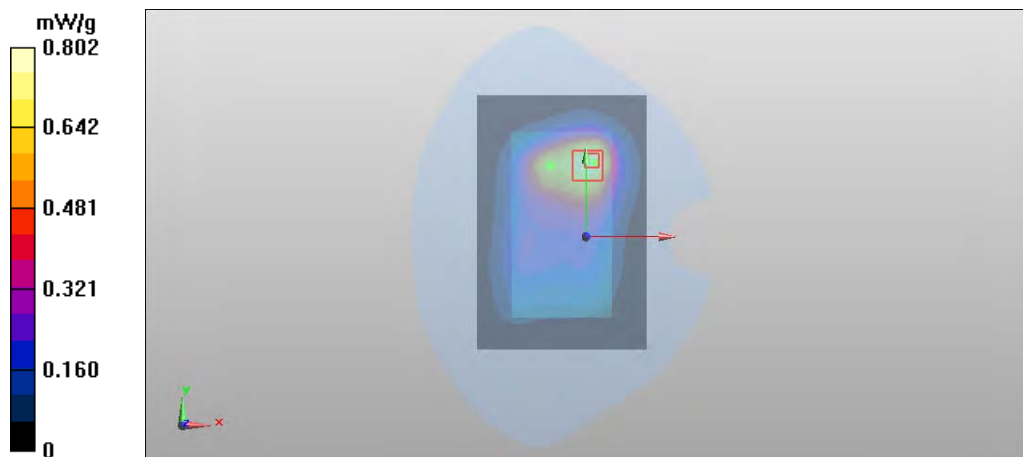
Peak SAR (extrapolated) = 1.343 mW/g

SAR(1 g) = 0.792 mW/g

SAR(10 g) = 0.472 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 0.864 mW/g



Date/Time: 2012-06-17 10:42:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Area Scan (41x81x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.0356 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Zoom Scan (5x5x7)/Cube

0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 2.979 V/m

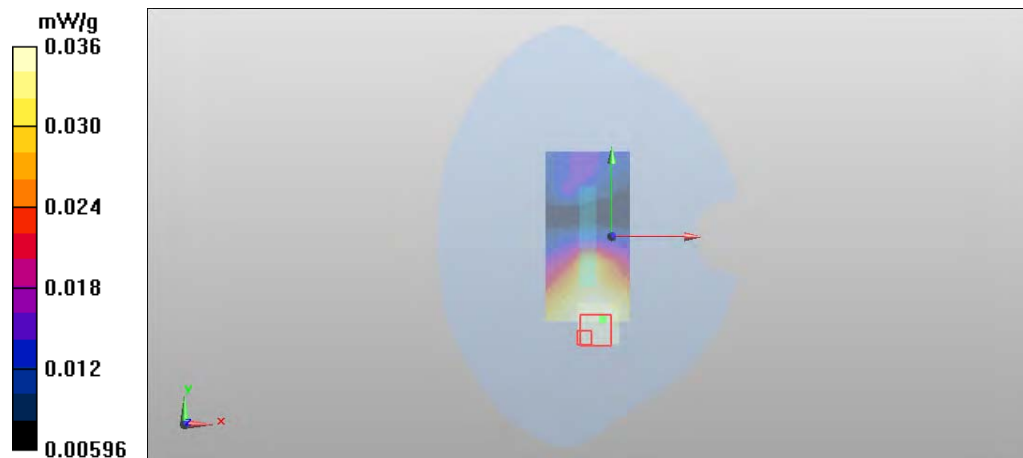
Peak SAR (extrapolated) = 0.049 mW/g

SAR(1 g) = 0.033 mW/g

SAR(10 g) = 0.022 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.0354 mW/g



Date/Time: 2012-06-17 11:10:22

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Area Scan (41x81x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.275 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 13.394 V/m

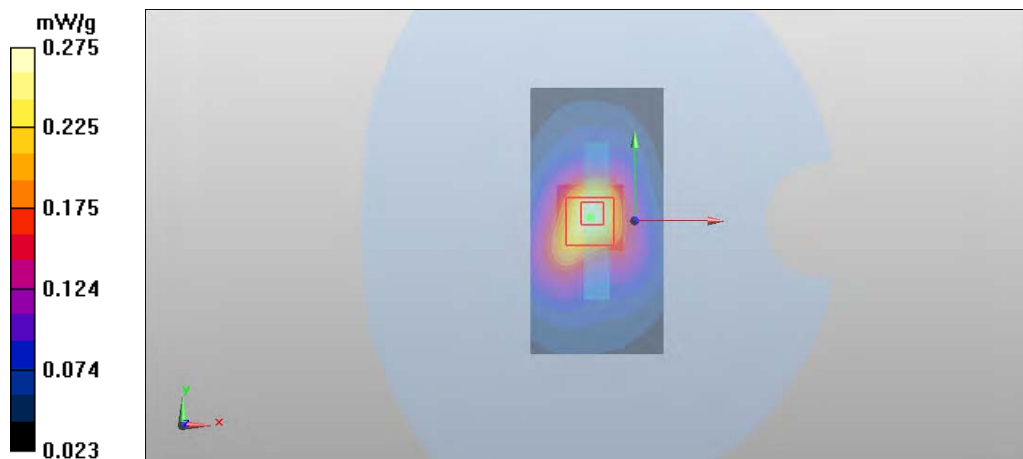
Peak SAR (extrapolated) = 0.440 mW/g

SAR(1 g) = 0.257 mW/g

SAR(10 g) = 0.151 mW/g

Power Drift = 0.21 dB

Maximum value of SAR (measured) = 0.282 mW/g



Date/Time: 2012-06-17 09:24:42

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Area Scan (41x121x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.765 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Zoom Scan (5x5x7)/Cube

0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 11.074 V/m

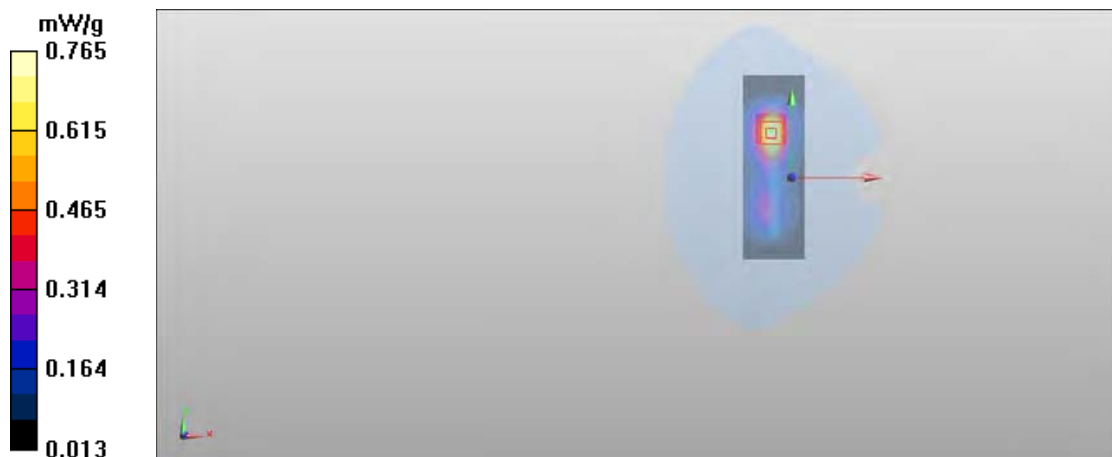
Peak SAR (extrapolated) = 1.143 mW/g

SAR(1 g) = 0.713 mW/g

SAR(10 g) = 0.424 mW/g

Power Drift = 0.34 dB

Maximum value of SAR (measured) = 0.777 mW/g



Date/Time: 2012-06-17 09:42:39

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900

Frequency: 1880 MHz; Duty Cycle: 1:4.2

Medium: BSL1900; Medium Notes: $t = 21.1$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Area Scan (41x121x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.168 mW/g

2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.632 V/m

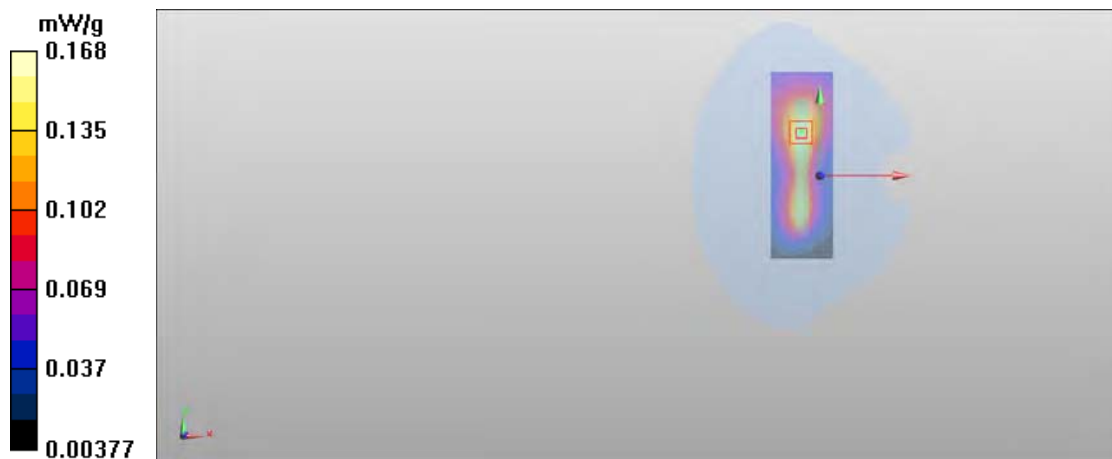
Peak SAR (extrapolated) = 0.238 mW/g

SAR(1 g) = 0.155 mW/g

SAR(10 g) = 0.097 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.168 mW/g



Date/Time: 2012-06-20 13:14:39

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.482$ mho/m; $\epsilon_r = 52.616$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Low - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Measurement
grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.26 mW/g

WCDMA/Body - Low - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.914 V/m

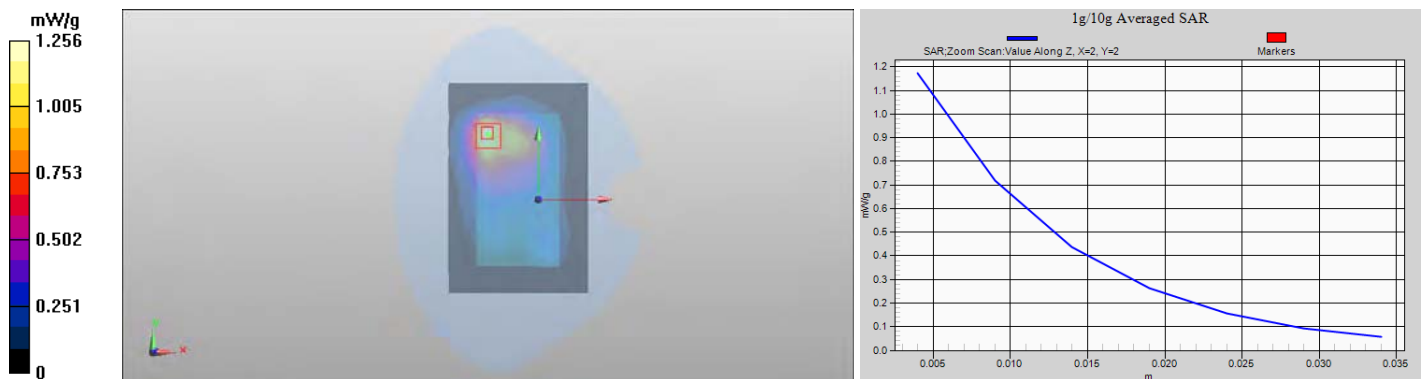
Peak SAR (extrapolated) = 1.857 mW/g

SAR(1 g) = 1.09 mW/g

SAR(10 g) = 0.634 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 1.17 mW/g



Date/Time: 2012-06-20 23:09:50

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.482$ mho/m; $\epsilon_r = 52.616$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Low - Spacer 10mm - No Accessory - Display Facing Phantom/Area Scan (81x121x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm

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

WCDMA/Body - Low - Spacer 10mm - No Accessory - Display Facing Phantom/Zoom Scan (6x6x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 14.866 V/m

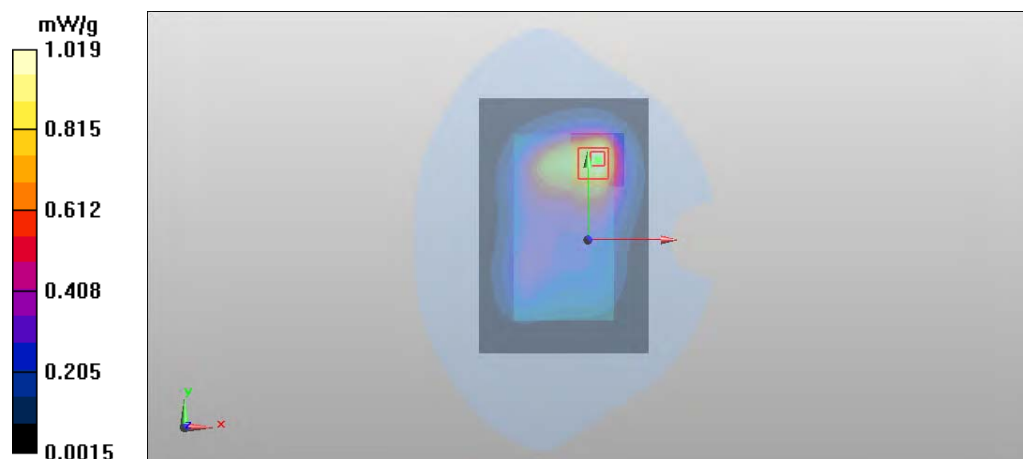
Peak SAR (extrapolated) = 1.561 mW/g

SAR(1 g) = 0.922 mW/g

SAR(10 g) = 0.550 mW/g

Power Drift = -0.34 dB

Maximum value of SAR (measured) = 0.977 mW/g



Date/Time: 2012-06-21 08:05:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: t= 20.9 C

Medium parameters used: f = 1880 MHz; σ = 1.505 mho/m; ϵ_r = 52.33; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Area Scan (41x81x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.0502 mW/g

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Zoom Scan (6x6x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 4.221 V/m

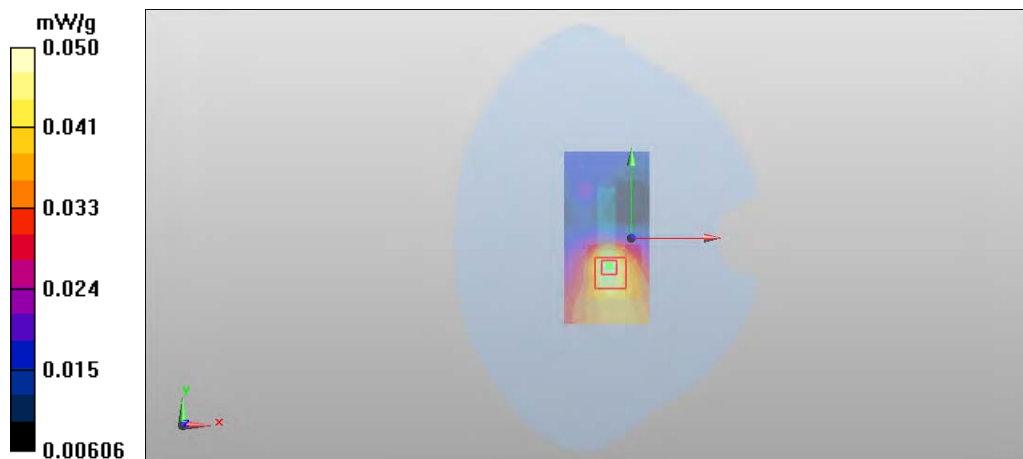
Peak SAR (extrapolated) = 0.070 mW/g

SAR(1 g) = 0.044 mW/g

SAR(10 g) = 0.028 mW/g

Power Drift = -0.47 dB

Maximum value of SAR (measured) = 0.0476 mW/g



Date/Time: 2012-06-21 08:26:11

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: t= 20.9 C

Medium parameters used: f = 1880 MHz; σ = 1.505 mho/m; ϵ_r = 52.33; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Area Scan (41x81x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.324 mW/g

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Zoom Scan (6x6x7)/Cube

0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 14.547 V/m

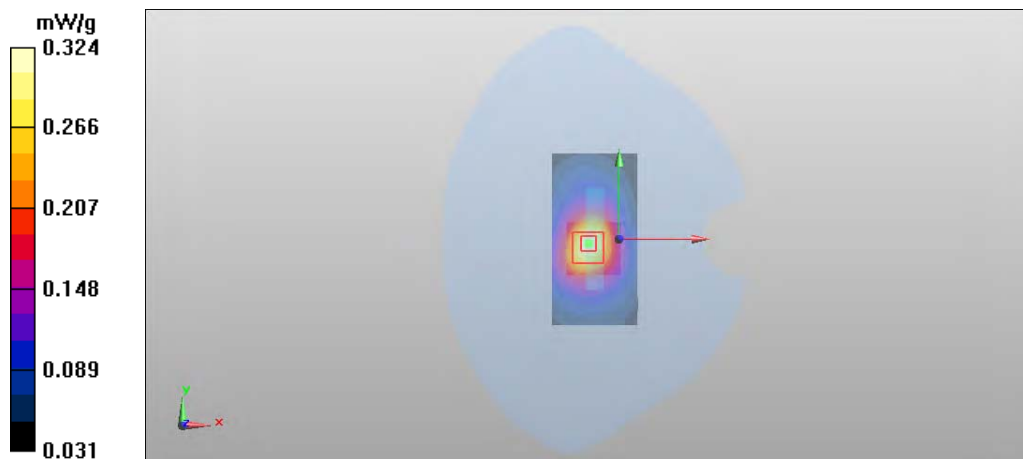
Peak SAR (extrapolated) = 0.485 mW/g

SAR(1 g) = 0.300 mW/g

SAR(10 g) = 0.184 mW/g

Power Drift = -0.14 dB

Maximum value of SAR (measured) = 0.324 mW/g



Date/Time: 2012-06-21 08:50:51

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: t= 20.9 C

Medium parameters used: f = 1880 MHz; σ = 1.505 mho/m; ϵ_r = 52.33; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Area Scan (41x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.897 mW/g

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Zoom Scan (6x6x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 12.625 V/m

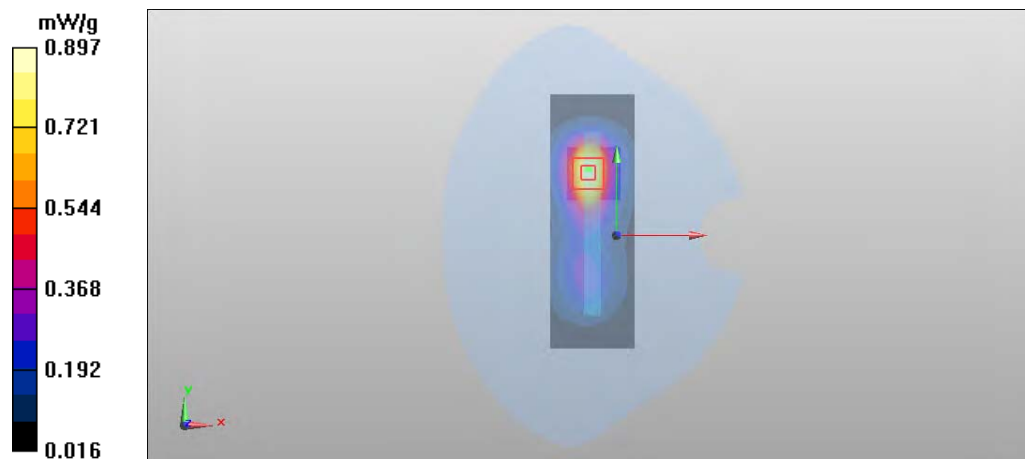
Peak SAR (extrapolated) = 1.221 mW/g

SAR(1 g) = 0.771 mW/g

SAR(10 g) = 0.462 mW/g

Power Drift = -0.11 dB

Maximum value of SAR (measured) = 0.837 mW/g



Date/Time: 2012-06-21 09:20:18

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: t= 20.9 C

Medium parameters used: f = 1880 MHz; σ = 1.505 mho/m; ϵ_r = 52.33; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Area Scan (41x121x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.188 mW/g

WCDMA/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Zoom Scan (6x6x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.258 V/m

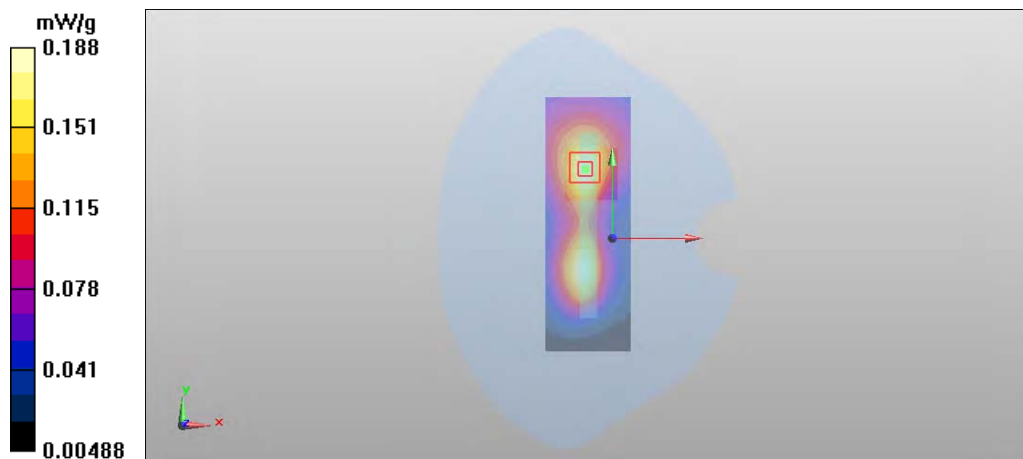
Peak SAR (extrapolated) = 0.273 mW/g

SAR(1 g) = 0.173 mW/g

SAR(10 g) = 0.108 mW/g

Power Drift = -0.02 dB

Maximum value of SAR (measured) = 0.188 mW/g



Date/Time: 2012-06-20 21:11:03

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.760 W/kg

LTE/Body - Middle - QPSK - 20MHz - 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.919 V/m

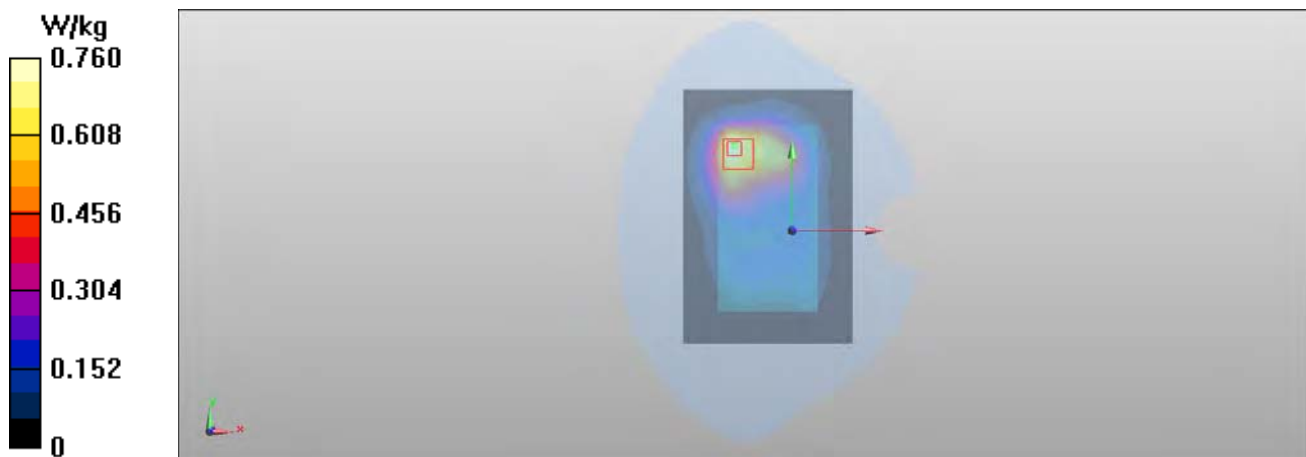
Peak SAR (extrapolated) = 1.109 mW/g

SAR(1 g) = 0.658 mW/g

SAR(10 g) = 0.396 mW/g

Power Drift = 0.04 dB

Maximum value of SAR (measured) = 0.701 W/kg



Date/Time: 2012-06-20 21:38:07

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.4$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.497$ mho/m; $\epsilon_r = 52.547$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 50% RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.744 W/kg

LTE/Body - Middle - QPSK - 20MHz - 50% RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.897 V/m

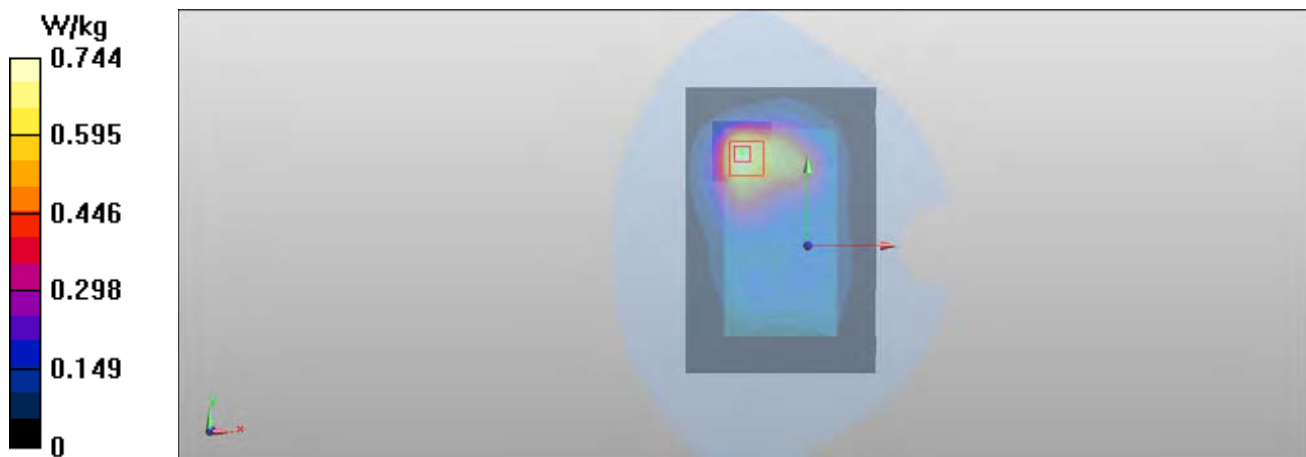
Peak SAR (extrapolated) = 1.103 mW/g

SAR(1 g) = 0.659 mW/g

SAR(10 g) = 0.395 mW/g

Power Drift = 0.07 dB

Maximum value of SAR (measured) = 0.686 W/kg



Date/Time: 2012-06-21 09:59:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 20.9\text{ C}$

Medium parameters used: $f = 1880\text{ MHz}$; $\sigma = 1.505\text{ mho/m}$; $\epsilon_r = 52.33$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500\text{ mm}$, $dy=1.500\text{ mm}$

Maximum value of SAR (interpolated) = 0.854 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.329 V/m

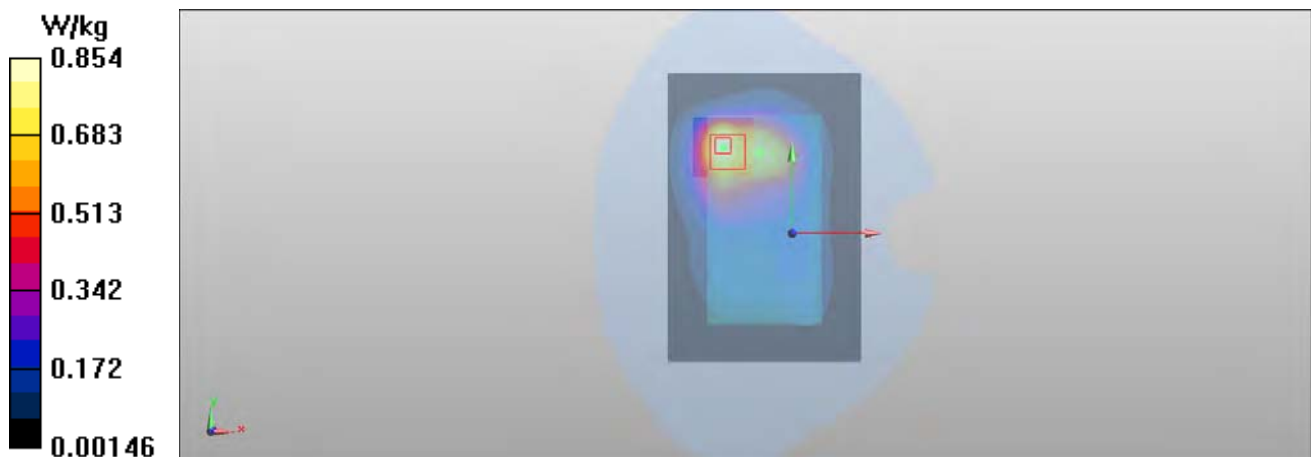
Peak SAR (extrapolated) = 1.207 mW/g

SAR(1 g) = 0.714 mW/g

SAR(10 g) = 0.432 mW/g

Power Drift = -0.14 dB

Maximum value of SAR (measured) = 0.760 W/kg



Date/Time: 2012-06-21 11:36:47

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1860 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 20.9\text{ C}$

Medium parameters used: $f = 1860\text{ MHz}$; $\sigma = 1.484\text{ mho/m}$; $\epsilon_r = 52.392$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Low - QPSK - 20MHz - 1RB - 100% offset - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500\text{ mm}$, $dy=1.500\text{ mm}$

Maximum value of SAR (interpolated) = 0.991 W/kg

LTE/Body - Low - QPSK - 20MHz - 1RB - 100% offset - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.795 V/m

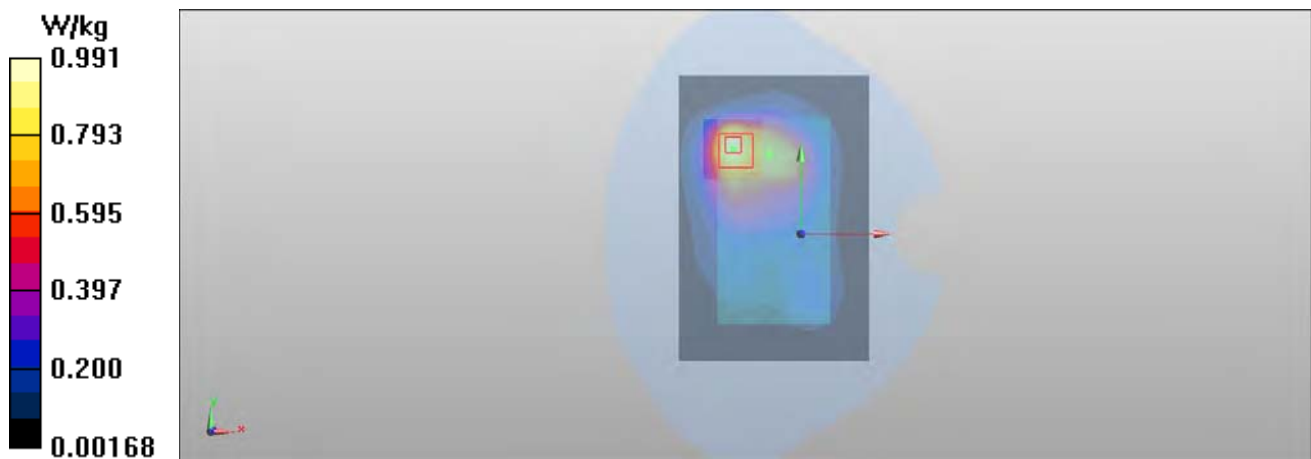
Peak SAR (extrapolated) = 1.428 mW/g

SAR(1 g) = 0.844 mW/g

SAR(10 g) = 0.504 mW/g

Power Drift = -0.01 dB

Maximum value of SAR (measured) = 0.893 W/kg



Date/Time: 2012-06-22 09:27:12

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1860 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.493$ mho/m; $\epsilon_r = 52.606$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Low - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Back Facing Phantom/Area

Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 1.06 W/kg

LTE/Body - Low - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom

Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 12.538 V/m

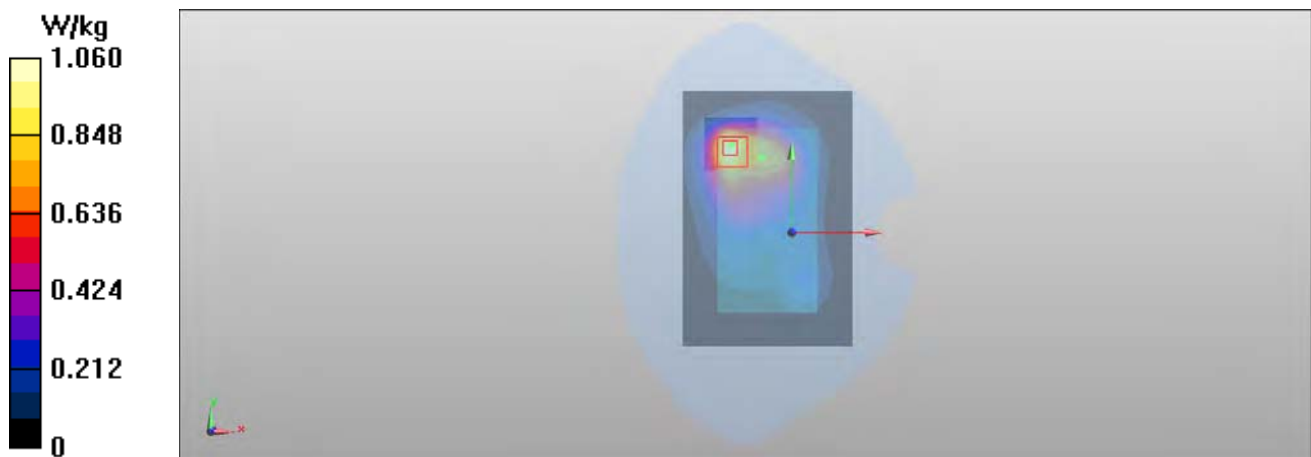
Peak SAR (extrapolated) = 1.543 mW/g

SAR(1 g) = 0.908 mW/g

SAR(10 g) = 0.532 mW/g

Power Drift = -0.29 dB

Maximum value of SAR (measured) = 0.976 W/kg



Date/Time: 2012-06-22 15:31:01

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 52.563$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Display Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.843 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Display Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 12.977 V/m

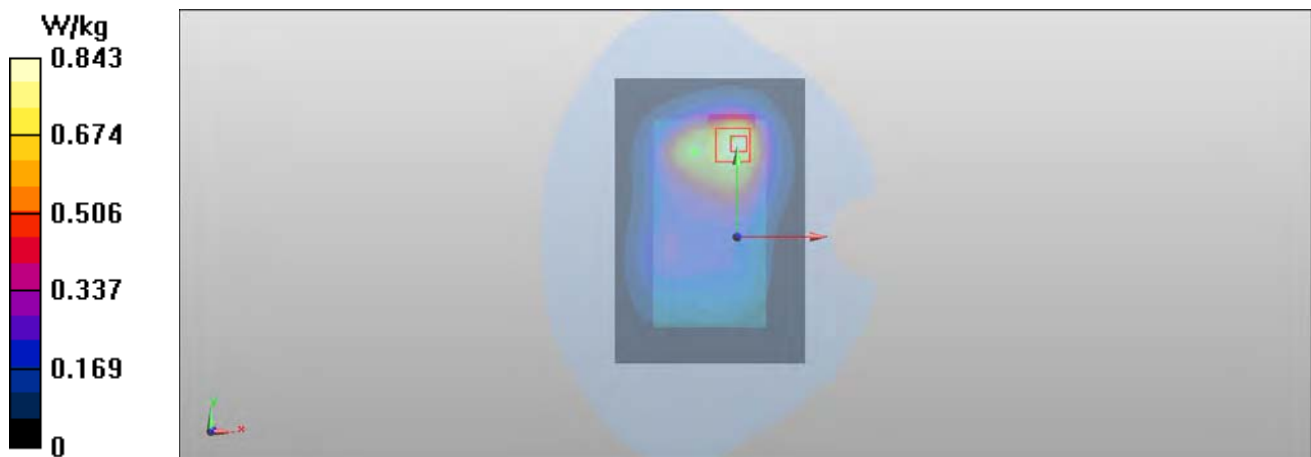
Peak SAR (extrapolated) = 1.325 mW/g

SAR(1 g) = 0.786 mW/g

SAR(10 g) = 0.472 mW/g

Power Drift = -0.04 dB

Maximum value of SAR (measured) = 0.833 W/kg



Date/Time: 2012-06-22 15:58:59

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 52.563$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Top Edge Facing

Phantom/Area Scan (41x81x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.0320 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Top Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 3.686 V/m

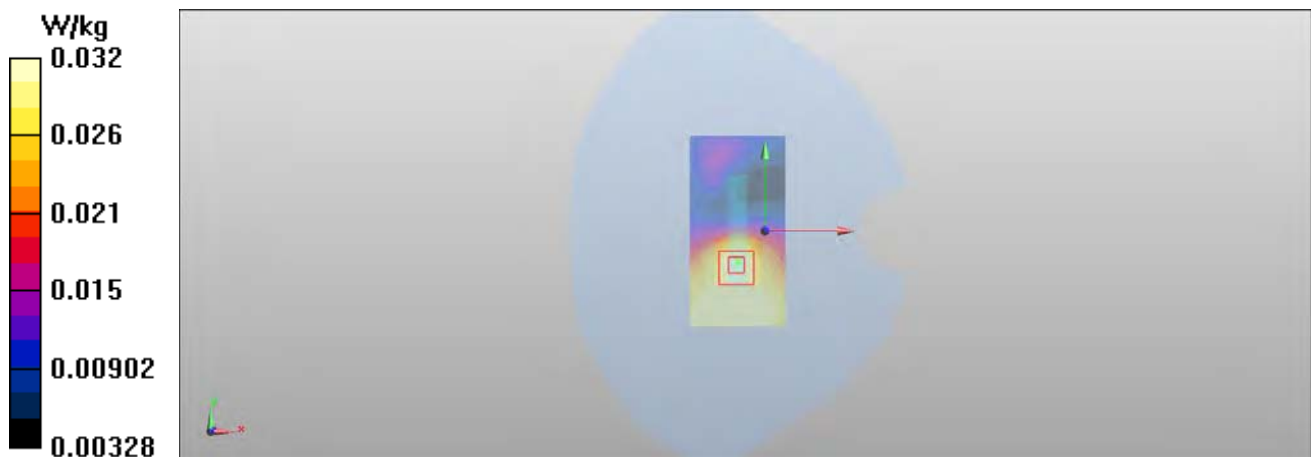
Peak SAR (extrapolated) = 0.047 mW/g

SAR(1 g) = 0.030 mW/g

SAR(10 g) = 0.020 mW/g

Power Drift = 0.20 dB

Maximum value of SAR (measured) = 0.0323 W/kg



Date/Time: 2012-06-22 16:11:28

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 52.563$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Bottom Edge Facing

Phantom/Area Scan (41x81x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.308 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Bottom Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 13.813 V/m

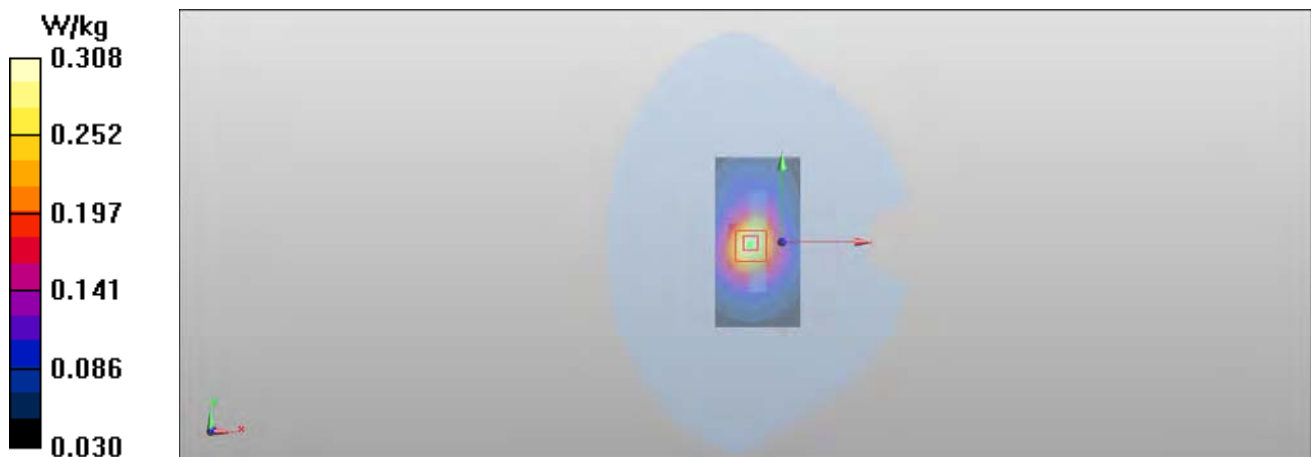
Peak SAR (extrapolated) = 0.444 mW/g

SAR(1 g) = 0.285 mW/g

SAR(10 g) = 0.176 mW/g

Power Drift = -0.03 dB

Maximum value of SAR (measured) = 0.309 W/kg



Date/Time: 2012-06-22 16:29:41

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 52.563$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Left Edge Facing

Phantom/Area Scan (41x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.757 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Left Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.615 V/m

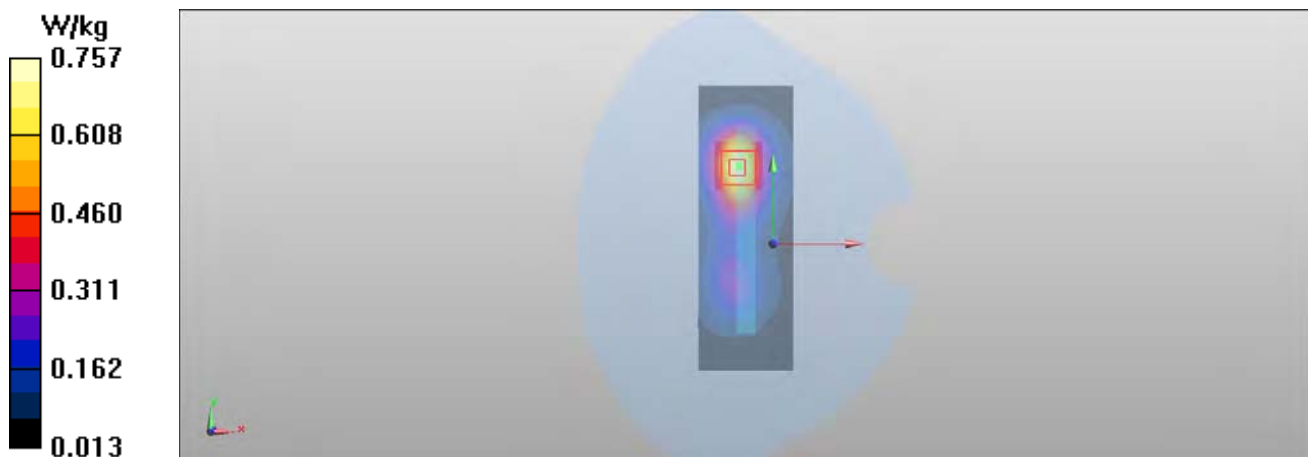
Peak SAR (extrapolated) = 1.063 mW/g

SAR(1 g) = 0.670 mW/g

SAR(10 g) = 0.399 mW/g

Power Drift = -0.05 dB

Maximum value of SAR (measured) = 0.739 W/kg



SAR Report

Appendix B.3 for FCC_RM-820_05

Applicant: Nokia Corporation

Type: RM-820

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Date/Time: 2012-06-22 16:47:16

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 52.563$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Right Edge Facing

Phantom/Area Scan (41x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.152 W/kg

LTE/Body - Middle - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Right Edge Facing

Phantom/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.606 V/m

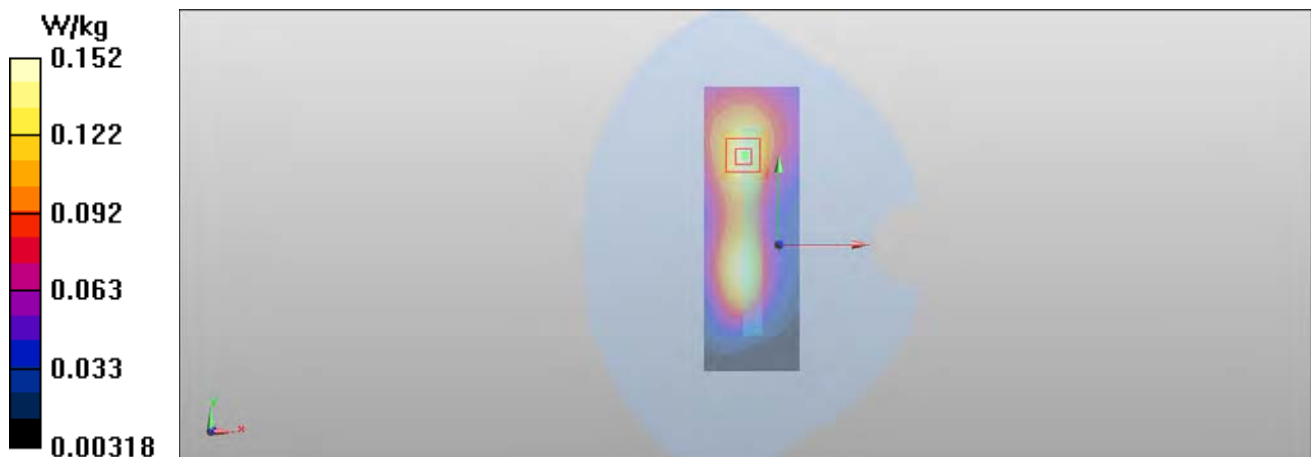
Peak SAR (extrapolated) = 0.218 mW/g

SAR(1 g) = 0.141 mW/g

SAR(10 g) = 0.089 mW/g

Power Drift = 0.10 dB

Maximum value of SAR (measured) = 0.153 W/kg



Date/Time: 2012-06-22 10:04:56

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 52.563$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 20MHz - 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.615 W/kg

LTE/Body - Middle - 16QAM - 20MHz - 100% RB - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.723 V/m

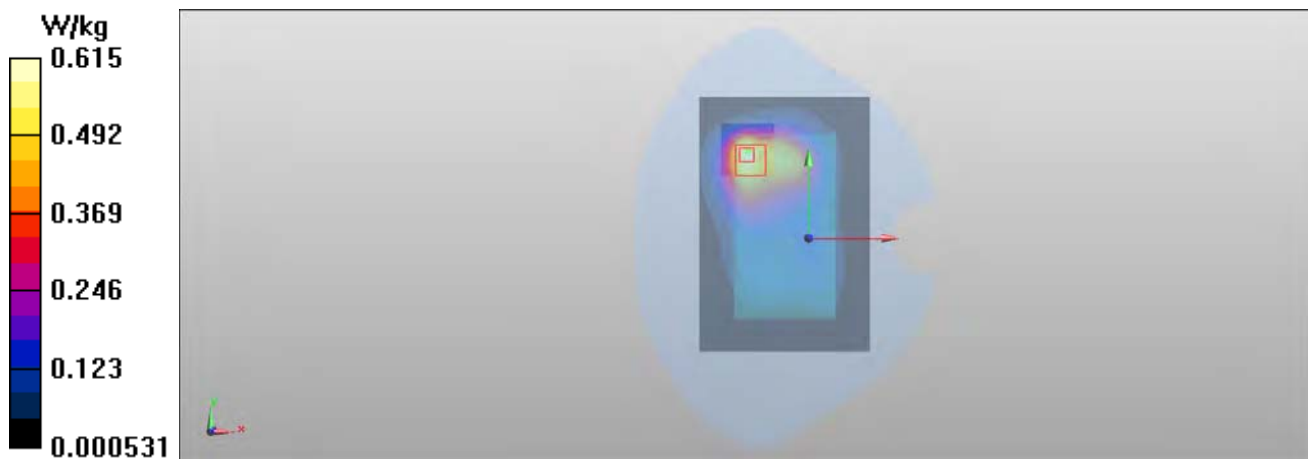
Peak SAR (extrapolated) = 0.899 mW/g

SAR(1 g) = 0.532 mW/g

SAR(10 g) = 0.319 mW/g

Power Drift = 0.19 dB

Maximum value of SAR (measured) = 0.574 W/kg



Date/Time: 2012-06-22 10:21:03

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 52.563$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 20MHz - 50% RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.619 W/kg

LTE/Body - Middle - 16QAM - 20MHz - 50% RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 8.752 V/m

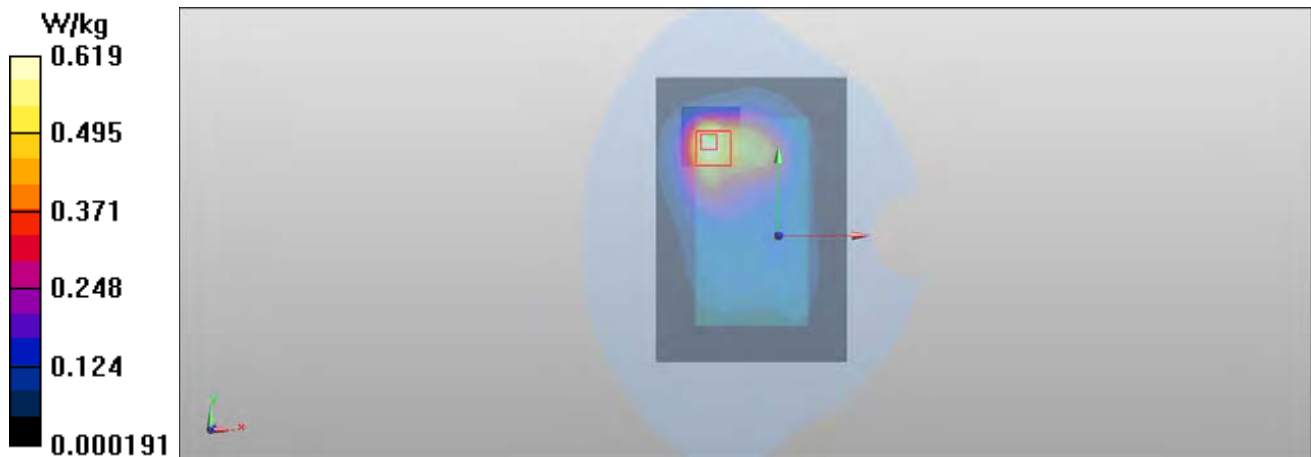
Peak SAR (extrapolated) = 0.876 mW/g

SAR(1 g) = 0.522 mW/g

SAR(10 g) = 0.314 mW/g

Power Drift = 0.18 dB

Maximum value of SAR (measured) = 0.562 W/kg



Date/Time: 2012-06-22 10:38:05

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 52.563$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.768 W/kg

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 9.953 V/m

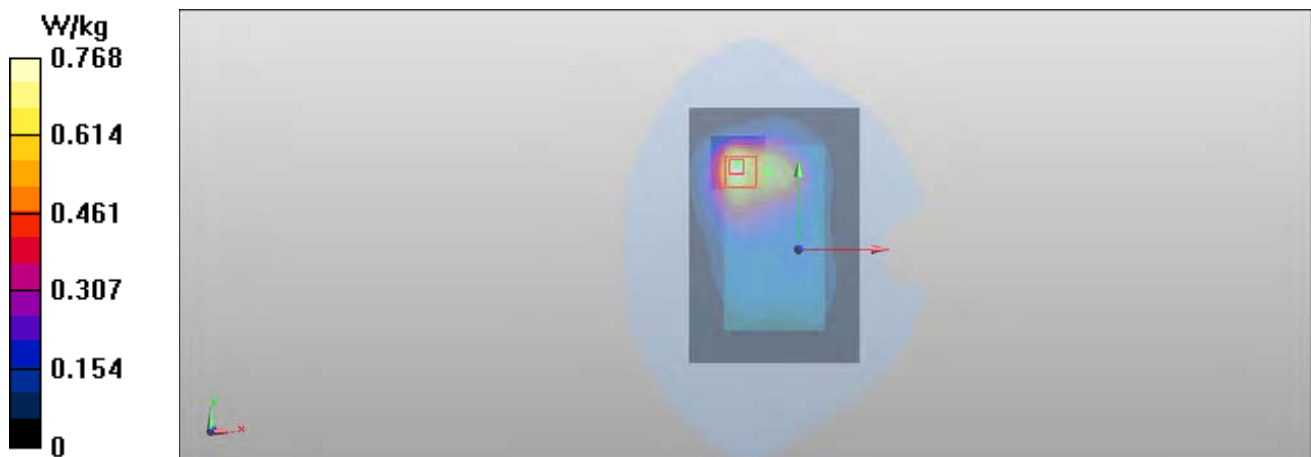
Peak SAR (extrapolated) = 1.118 mW/g

SAR(1 g) = 0.665 mW/g

SAR(10 g) = 0.399 mW/g

Power Drift = 0.12 dB

Maximum value of SAR (measured) = 0.718 W/kg



Date/Time: 2012-06-22 11:07:12

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 52.563$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.843 W/kg

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 100% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 10.290 V/m

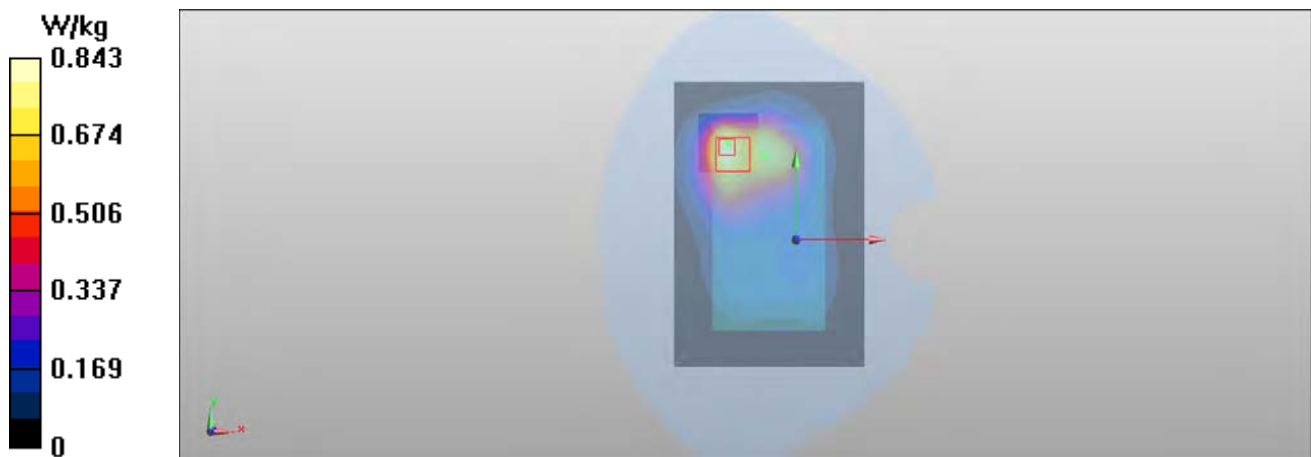
Peak SAR (extrapolated) = 1.235 mW/g

SAR(1 g) = 0.737 mW/g

SAR(10 g) = 0.446 mW/g

Power Drift = -0.10 dB

Maximum value of SAR (measured) = 0.801 W/kg



Date/Time: 2012-06-22 14:56:33

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900

Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: BSL1900; Medium Notes: $t = 21.2$ C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ mho/m; $\epsilon_r = 52.563$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.6 (6824)

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Area Scan (81x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.888 W/kg

LTE/Body - Middle - 16QAM - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Back Facing

Phantom/Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 12.269 V/m

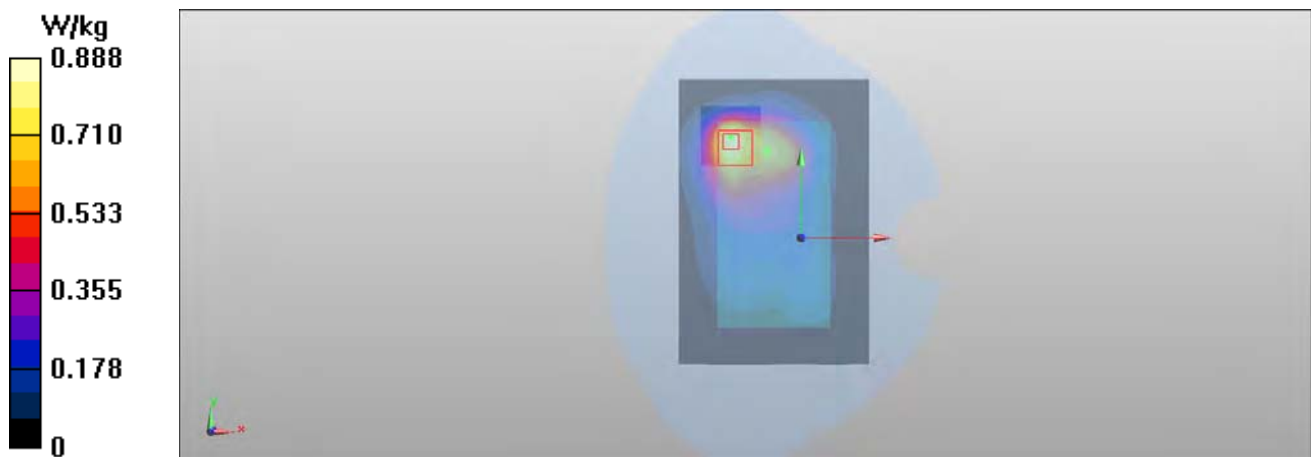
Peak SAR (extrapolated) = 1.268 mW/g

SAR(1 g) = 0.756 mW/g

SAR(10 g) = 0.451 mW/g

Power Drift = -0.17 dB

Maximum value of SAR (measured) = 0.797 W/kg



Date/Time: 2012-06-24 02:52:24

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode 5.5 Mbps

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 20.6^\circ\text{C}$

Medium parameters used: $f = 2437\text{ MHz}$; $\sigma = 1.953\text{ mho/m}$; $\epsilon_r = 50.372$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan (121x181x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.0459 mW/g

WLAN/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 1.700 V/m

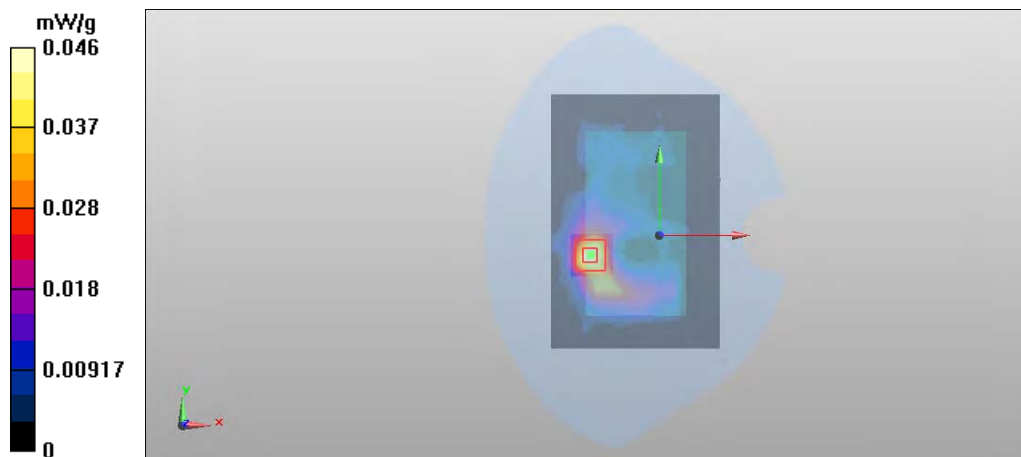
Peak SAR (extrapolated) = 0.080 mW/g

SAR(1 g) = 0.040 mW/g

SAR(10 g) = 0.020 mW/g

Power Drift = -0.17 dB

Maximum value of SAR (measured) = 0.0440 mW/g



Date/Time: 2012-06-24 06:12:40

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode 5.5 Mbps

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 20.6^\circ\text{C}$

Medium parameters used: $f = 2437\text{ MHz}$; $\sigma = 1.953\text{ mho/m}$; $\epsilon_r = 50.372$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Middle - Spacer 10mm - No Accessory - Display Facing Phantom/Area Scan (121x181x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.0289 mW/g

WLAN/Body - Middle - Spacer 10mm - No Accessory - Display Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.661 V/m

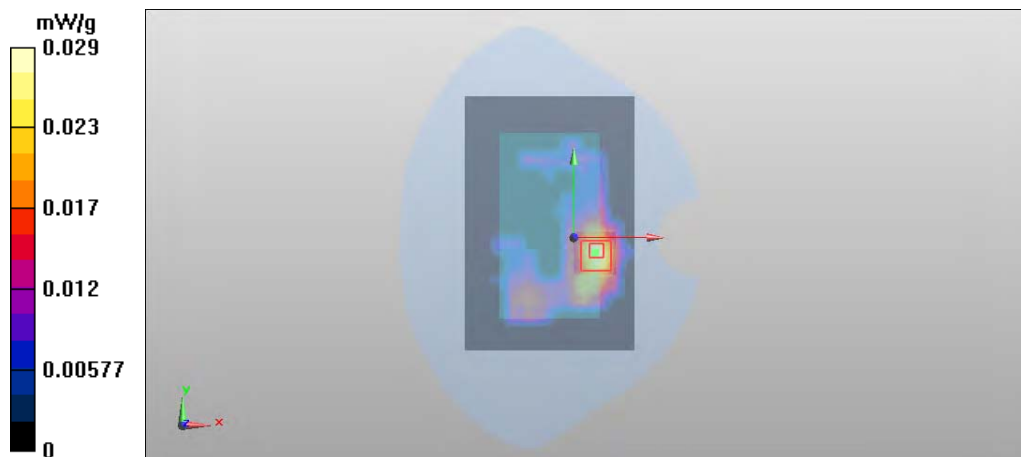
Peak SAR (extrapolated) = 0.045 mW/g

SAR(1 g) = 0.022 mW/g

SAR(10 g) = 0.011 mW/g

Power Drift = 0.21 dB

Maximum value of SAR (measured) = 0.0248 mW/g



Date/Time: 2012-06-24 11:37:42

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: $t = 20.6^\circ\text{C}$

Medium parameters used: $f = 2437\text{ MHz}$; $\sigma = 1.953\text{ mho/m}$; $\epsilon_r = 50.216$; $\rho = 1000\text{ kg/m}^3$

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Area Scan (61x121x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.0188 mW/g

WLAN/Body - Middle - Spacer 10mm - No Accessory - Top Edge Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.125 V/m

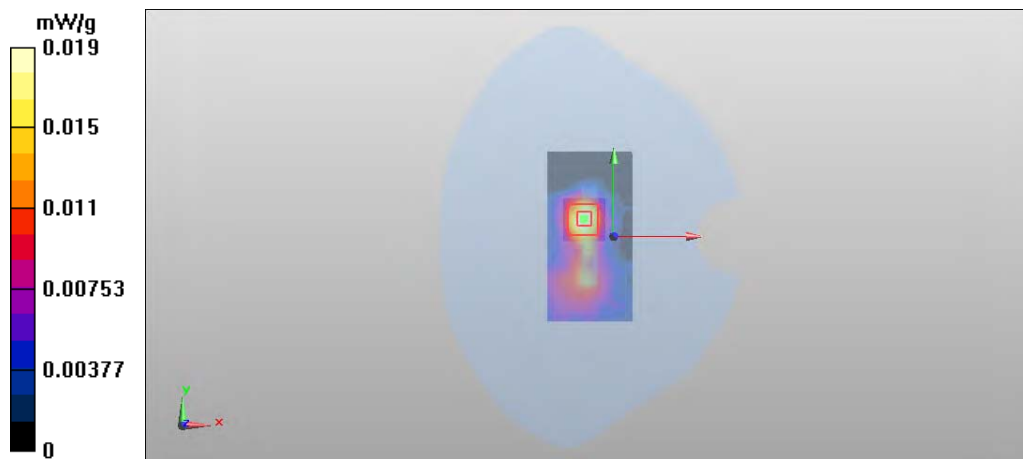
Peak SAR (extrapolated) = 0.025 mW/g

SAR(1 g) = 0.015 mW/g

SAR(10 g) = 0.00744 mW/g

Power Drift = 0.22 dB

Maximum value of SAR (measured) = 0.0162 mW/g



Date/Time: 2012-06-24 20:48:19

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: t= 20.6C

Medium parameters used: f = 2437 MHz; σ = 1.953 mho/m; ϵ_r = 50.216; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Area Scan (61x121x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.00575 mW/g

WLAN/Body - Middle - Spacer 10mm - No Accessory - Bottom Edge Facing Phantom/Zoom Scan (9x9x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.108 V/m

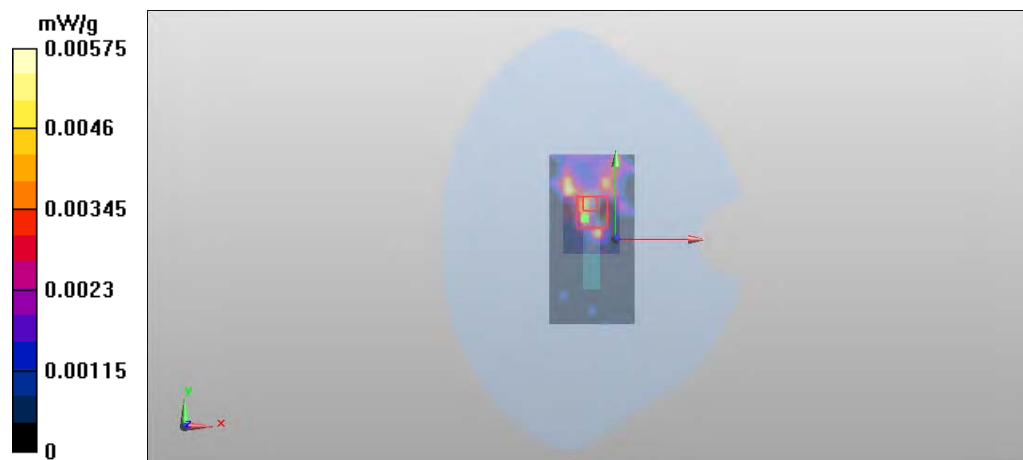
Peak SAR (extrapolated) = 0.015 mW/g

SAR(1 g) = 0.00321 mW/g

SAR(10 g) = 0.00109 mW/g

Power Drift = -0.05 dB

Maximum value of SAR (measured) = 0.00385 mW/g



Date/Time: 2012-06-24 21:27:44

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: t= 20.6C

Medium parameters used: f = 2437 MHz; σ = 1.953 mho/m; ϵ_r = 50.216; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Area Scan (61x181x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0937 mW/g

WLAN/Body - Middle - Spacer 10mm - No Accessory - Left Edge Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.847 V/m

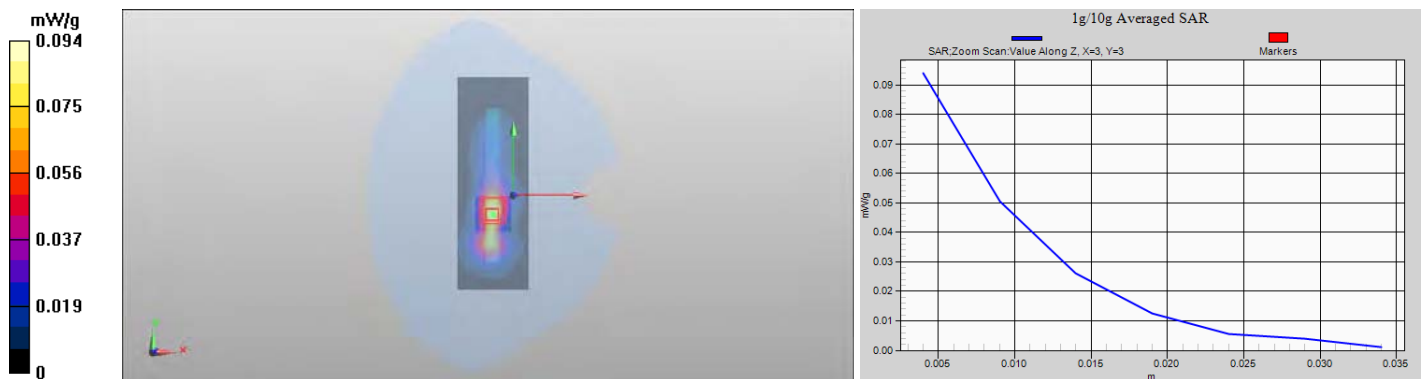
Peak SAR (extrapolated) = 0.165 mW/g

SAR(1 g) = 0.080 mW/g

SAR(10 g) = 0.037 mW/g

Power Drift = 0.14 dB

Maximum value of SAR (measured) = 0.0939 mW/g



Date/Time: 2012-06-25 09:25:27

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: BSL2450; Medium Notes: t= 20.8 C

Medium parameters used: f = 2437 MHz; σ = 1.928 mho/m; ϵ_r = 50.681; ρ = 1000 kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3573
- ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn793; Calibrated: 2011-09-16
- Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
- Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.5 (6469)

WLAN/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Area Scan (61x181x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.00260 mW/g

WLAN/Body - Middle - Spacer 10mm - No Accessory - Right Edge Facing Phantom/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.587 V/m

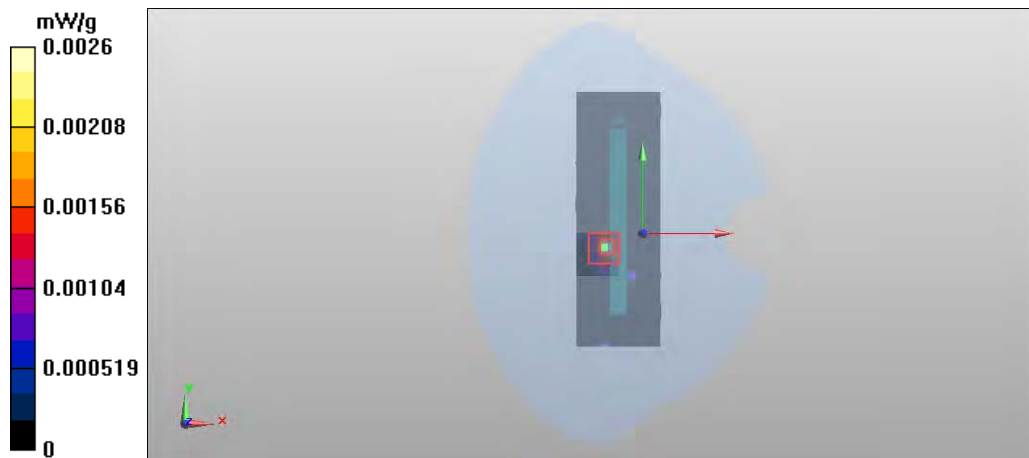
Peak SAR (extrapolated) = 0.029 mW/g

SAR(1 g) = 0.00476 mW/g

SAR(10 g) = 0.000799 mW/g

Power Drift = -9.06 dB

Maximum value of SAR (measured) = 0.00557 mW/g



Date/Time: 2012-06-24 06:12:40

DASY Configuration for WLAN/Body - Middle - Spacer 10mm - No Accessory - Display Facing Phantom/Area

Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-26 19:42:42

DASY Configuration for LTE/Body - High - QPSK - 10MHz - 1RB - 100% offset - Spacer 10mm - No Accessory -

Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870722/3

Communication System: LTE700; Frequency: 711 MHz; Duty Cycle: 1:1; PMF: 1.12202e-005

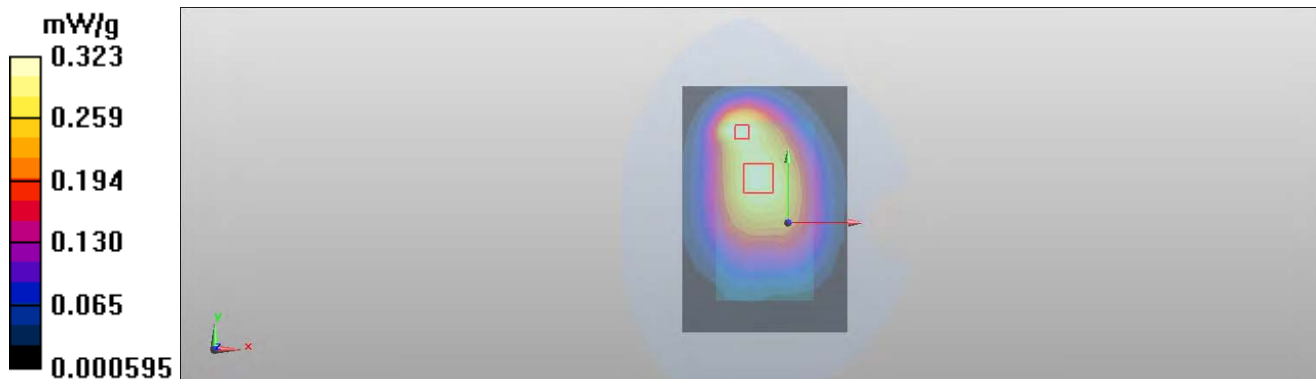
Medium: BSL750 Medium parameters used: $f = 711$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.196$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3165; ConvF(6.06, 6.06, 6.06); Calibrated: 2012-02-21;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
Phantom: SAM #3 CRP; Type: SAM; Serial:
Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.213 mW/g

Maximum value of SAR (interpolated) = 0.323 mW/g



Date/Time: 2012-06-24 02:52:24

DASY Configuration for WLAN/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))

Electronics: DAE4 Sn793; Calibrated: 2011-09-16

Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177

Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-16 17:16:08

DASY Configuration for 2-slot GPRS/Body - High - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS850; Frequency: 848.8 MHz; Duty Cycle: 1:4.19952; PMF: 2.04927

Medium: BSL835 Medium parameters used: $f = 849$ MHz; $\sigma = 0.996$ mho/m; $\epsilon_r = 53.512$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3131; ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;

Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))

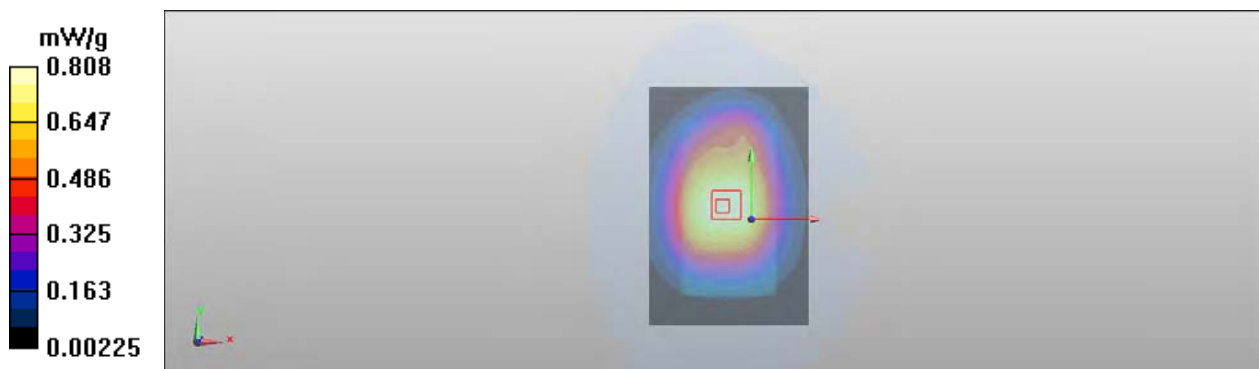
Electronics: DAE4 Sn538; Calibrated: 2011-09-15

Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179

Measurement SW: DASY52, Version 52.6 (2)

Fast SAR of Combined Scans: SAR(1 g) = 0.767 mW/g; SAR(10 g) = 0.552 mW/g

Maximum value of SAR (interpolated) = 0.808 mW/g



Date/Time: 2012-06-24 06:12:40

DASY Configuration for WLAN/Body - Middle - Spacer 10mm - No Accessory - Display Facing Phantom/Area

Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-22 18:13:31

DASY Configuration for WCDMA/Body - Low - Spacer 10mm - No Accessory - Display Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA850; Frequency: 826.4 MHz; Duty Cycle: 1:1; PMF: 1

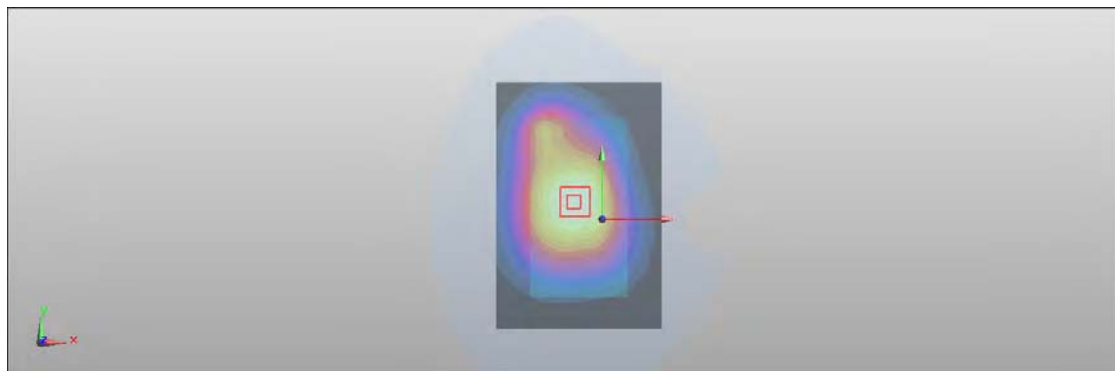
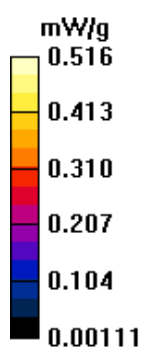
Medium: BSL835 Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.987$ mho/m; $\epsilon_r = 54.201$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3131; ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2011-09-15
Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.489 mW/g; SAR(10 g) = 0.352 mW/g

Maximum value of SAR (interpolated) = 0.516 mW/g



Date/Time: 2012-06-24 02:52:24

DASY Configuration for WLAN/Body – Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-24 10:45:05

DASY Configuration for LTE/Body - Middle - QPSK - 10MHz - 1RB - 50% offset - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870751/2

Communication System: LTE850; Frequency: 836.5 MHz; Duty Cycle: 1:1; PMF: 1

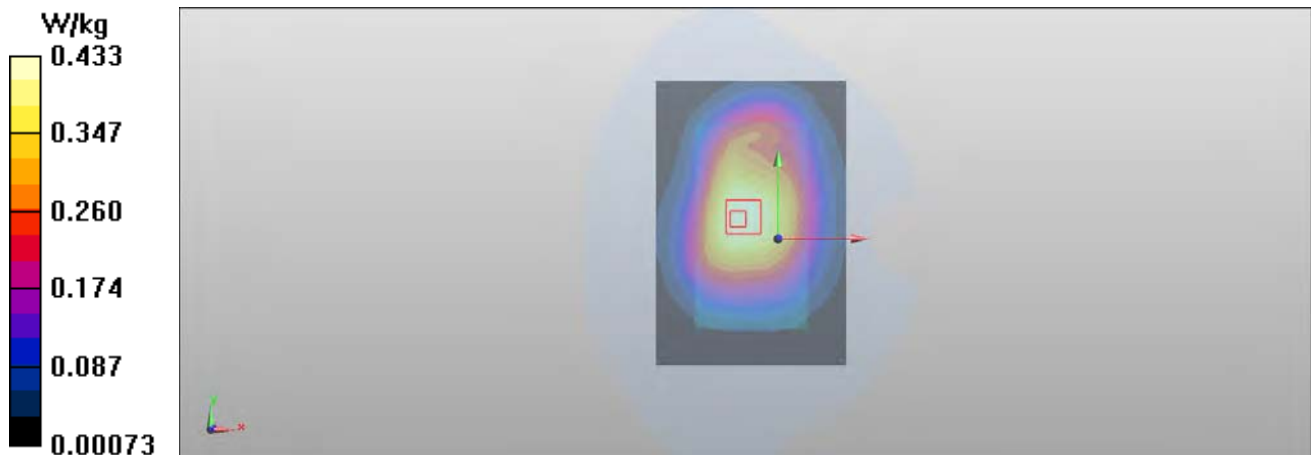
Medium: BSL835 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.992$ mho/m; $\epsilon_r = 54.123$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3131; ConvF(5.92, 5.92, 5.92); Calibrated: 2011-09-14;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn538; Calibrated: 2011-09-15
Phantom: SAM 3; Type: Twin SAM 040 CA; Serial: TP-1179
Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.408 mW/g; SAR(10 g) = 0.290 mW/g

Maximum value of SAR (interpolated) = 0.433 W/kg



Date/Time: 2012-06-24 02:52:24

DASY Configuration for WLAN/Body – Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-08-16 20:08:16

DASY Configuration for WCDMA/Body - Low - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870738/9

Communication System: WCDMA1700/2100; Frequency: 1712.4 MHz; Duty Cycle: 1:1; PMF: 1

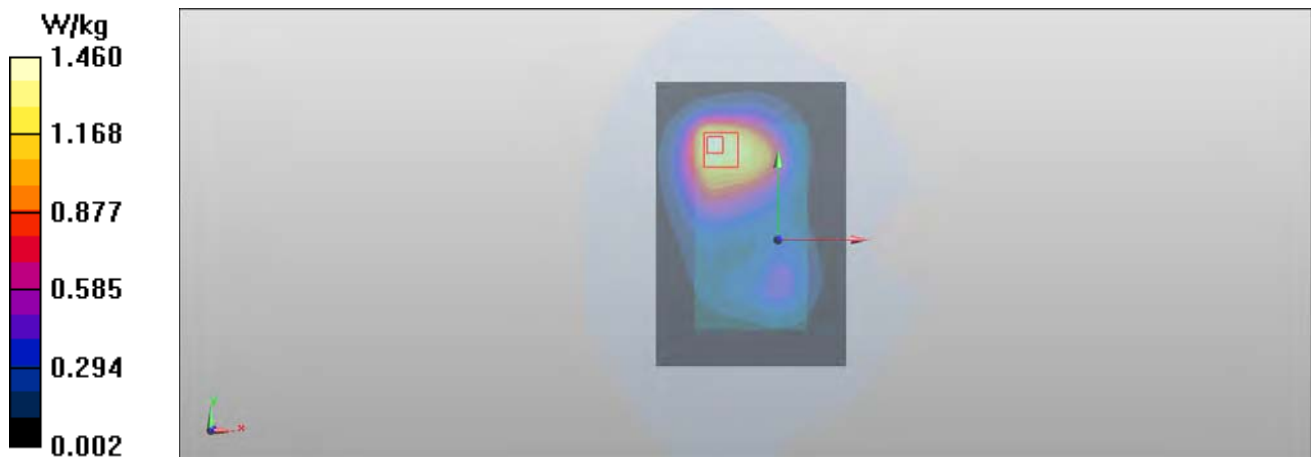
Medium: BSL1800 Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.425$ mho/m; $\epsilon_r = 52.655$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3165; ConvF(4.84, 4.84, 4.84); Calibrated: 2012-02-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial: TP:xxxx
Measurement SW: DASY52, Version 52.8 (1)

Fast SAR of Combined Scans: SAR(1 g) = 1.33 mW/g; SAR(10 g) = 0.827 mW/g

Maximum value of SAR (interpolated) = 1.46 W/kg



Date/Time: 2012-06-24 02:52:24

DASY Configuration for WLAN/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated:2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-18 10:11:44

DASY Configuration for LTE/Body - Middle - QPSK - 20MHz - 1RB - 0 offset - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870728/0

Communication System: LTE1700/2100; Frequency: 1732.5 MHz; Duty Cycle: 1:1; PMF: 1

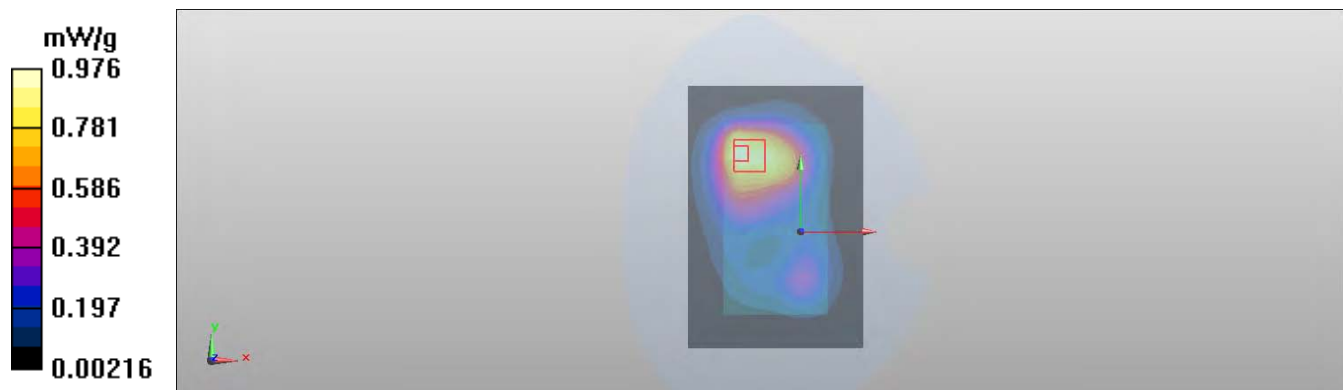
Medium: BSL1800 Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.416$ mho/m; $\epsilon_r = 52.587$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: ES3DV3 - SN3165; ConvF(4.84, 4.84, 4.84); Calibrated:2012-02-21;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn1309; Calibrated: 2012-01-11
Phantom: SAM #2 CRP ; Type: QD000P40CD; Serial:
Measurement SW: DASY52, Version 52.8 (0)

Fast SAR of Combined Scans: SAR(1 g) = 0.878 mW/g; SAR(10 g) = 0.544 mW/g

Maximum value of SAR (interpolated) = 0.976 mW/g



Date/Time: 2012-06-24 02:52:24

DASY Configuration for WLAN/Body - Middle- Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))

Electronics: DAE4 Sn793; Calibrated: 2011-09-16

Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177

Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-17 08:49:51

DASY Configuration for 2-slot GPRS/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870752/0

Communication System: 2-slot GPRS1900; Frequency: 1880 MHz; Duty Cycle: 1:4.2; PMF: 2.04939

Medium: BSL1900 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.491$ mho/m; $\epsilon_r = 51.904$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;

Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))

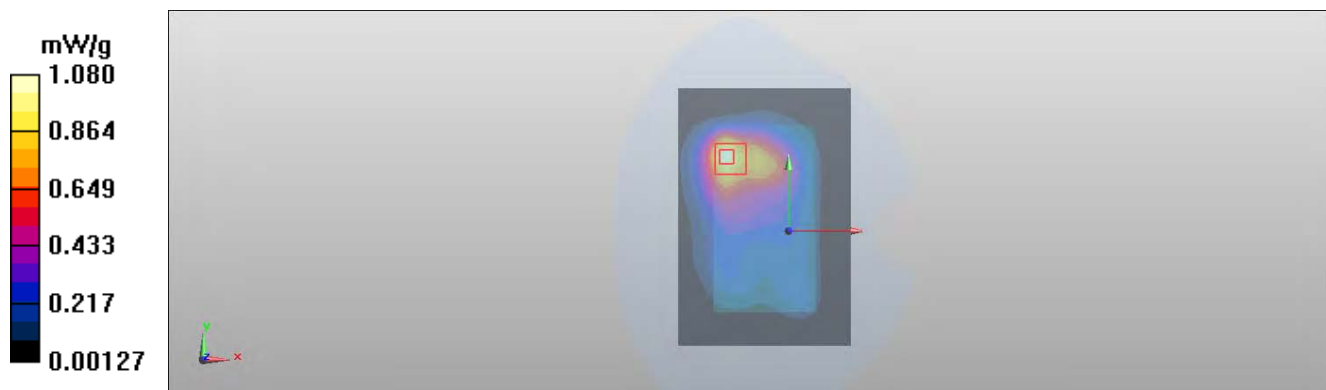
Electronics: DAE4 Sn793; Calibrated: 2011-09-16

Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177

Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.947 mW/g; SAR(10 g) = 0.528 mW/g

Maximum value of SAR (interpolated) = 1.08 mW/g



Date/Time: 2012-06-24 02:52:24

DASY Configuration for WLAN/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-20 13:14:39

DASY Configuration for WCDMA/Body - Low - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870734/8

Communication System: WCDMA1900; Frequency: 1852.4 MHz; Duty Cycle: 1:1; PMF: 1

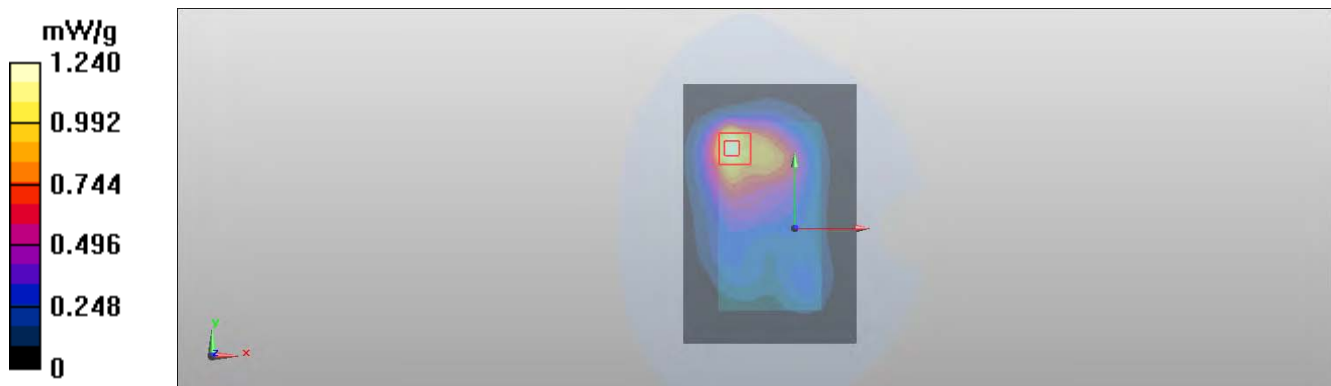
Medium: BSL1900 Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.482$ mho/m; $\epsilon_r = 52.616$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 1.1 mW/g; SAR(10 g) = 0.627 mW/g

Maximum value of SAR (interpolated) = 1.24 mW/g



Date/Time: 2012-06-24 02:52:24

DASY Configuration for WLAN/Body - Middle - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870750/4

Communication System: WLAN2450 b-mode; Frequency: 2437 MHz; Duty Cycle: 1:1; PMF: 1

Medium: BSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.953$ mho/m; $\epsilon_r = 50.372$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.45, 6.45, 6.45); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Date/Time: 2012-06-22 09:27:12

DASY Configuration for LTE/Body - Low - QPSK - 20MHz - 1RB - 0% offset - Spacer 10mm - No Accessory - Back Facing Phantom/Area Scan:

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870748/8

Communication System: LTE1900; Frequency: 1860 MHz; Duty Cycle: 1:1; PMF: 1

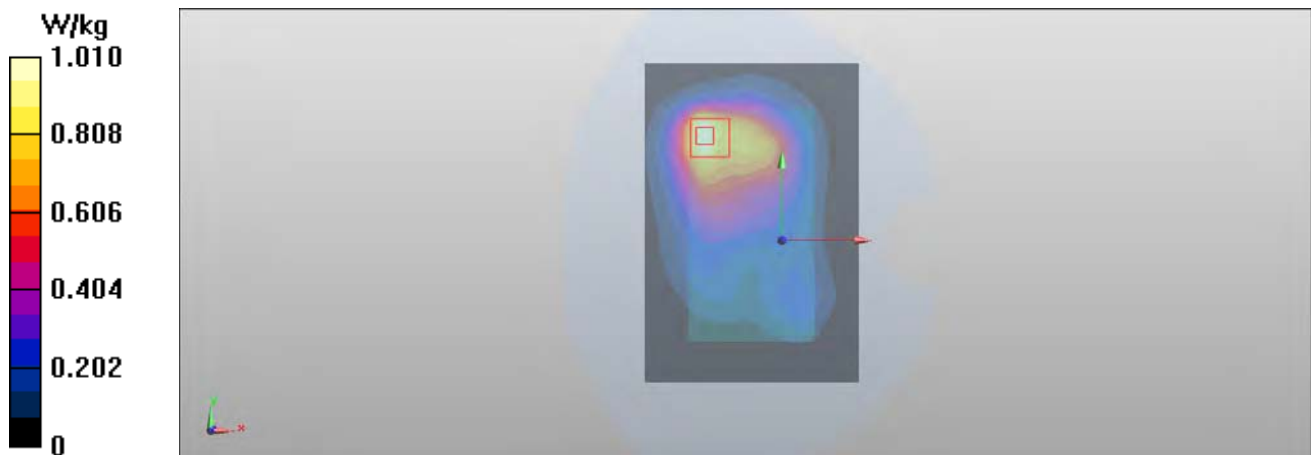
Medium: BSL1900 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.493$ mho/m; $\epsilon_r = 52.606$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV4 - SN3573; ConvF(6.69, 6.69, 6.69); Calibrated: 2012-02-23;
Sensor-Surface: 4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn793; Calibrated: 2011-09-16
Phantom: SAM 2; Type: Twin SAM 040 CA; Serial: TP - 1177
Measurement SW: DASY4, Version 4.7 (80)

Fast SAR of Combined Scans: SAR(1 g) = 0.912 mW/g; SAR(10 g) = 0.528 mW/g

Maximum value of SAR (interpolated) = 1.01 W/kg



APPENDIX C: DIELECTRIC PARAMETERS OF THE TISSUE SIMULANTS

Head tissue simulant dielectric parameters used in the measurements 709 – 2462 MHz:

f (MHz)	Date	Dielectric Parameters					
		Ch 23780 709.0 MHz		Ch 23790 710.0 MHz		Ch 23800 711.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
710	2012-06-21	41.2	0.89	41.2	0.89	41.1	0.89
	2012-06-22	40.9	0.88	40.9	0.88	40.9	0.88
	2012-06-26	40.7	0.89	40.6	0.89	40.6	0.89
	2012-06-28	41.9	0.88	41.9	0.88	41.9	0.88
f (MHz)	Date	Dielectric Parameters					
		Ch 4132 826.4 MHz		Ch 4175 835.0 MHz		Ch 4233 846.6 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
835	2012-06-21	40.1	0.89	40.1	0.90	40.0	0.90
f (MHz)	Date	Dielectric Parameters					
		Ch 128 824.2 MHz		Ch 190 836.6 MHz		Ch 251 848.8 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
836	2012-06-14	40.5	0.91	40.5	0.92	40.4	0.92
f (MHz)	Date	Dielectric Parameters					
		Ch 20450 829.0 MHz		Ch 20525 836.5 MHz		Ch 20600 844.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
836	2012-06-19	40.6	0.91	40.6	0.91	40.6	0.92
	2012-06-20	40.7	0.91	40.7	0.92	40.7	0.92
	2012-06-21	40.1	0.89	40.1	0.90	40.0	0.90
	2012-06-23	40.5	0.92	40.4	0.93	40.4	0.93
f (MHz)	Date	Dielectric Parameters					
		Ch 20050 1720.0 MHz		Ch 20175 1732.5 MHz		Ch 20300 1745.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
1732	2012-06-13	39.3	1.31	39.3	1.32	39.2	1.33
	2012-06-14	39.2	1.31	39.1	1.32	39.1	1.33
	2012-06-15	38.8	1.30	38.7	1.31	38.7	1.32

(Head tissue simulant 709 – 2462 MHz Table continues)

(Head tissue simulant 709 – 2462 MHz Table continues)

f (MHz)	Date	Dielectric Parameters					
		Ch 1312 1712.4 MHz		Ch 1412 1732.4 MHz		Ch 1513 1752.6 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
1732	2012-08-15	39.2	1.30	39.1	1.32	39.0	1.34
f (MHz)	Date	Dielectric Parameters					
		Ch 512 1850.2 MHz		Ch 661 1880.0 MHz		Ch 810 1909.8 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
1880	2012-06-12	39.5	1.38	39.4	1.41	39.3	1.43
	2012-06-13	39.7	1.35	39.6	1.38	39.6	1.41
f (MHz)	Date	Dielectric Parameters					
		Ch 9262 1852.4 MHz		Ch 9400 1880.0 MHz		Ch 9538 1907.6 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
1880	2012-06-19	39.3	1.36	39.3	1.38	39.2	1.40
f (MHz)	Date	Dielectric Parameters					
		Ch 18700 1860.0 MHz		Ch 18900 1880.0 MHz		Ch 19100 1900.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
1880	2012-06-15	39.1	1.37	39.0	1.38	38.9	1.40
	2012-06-16	39.2	1.35	39.1	1.37	39.0	1.38
	2012-06-18	39.4	1.37	39.3	1.38	39.3	1.40
	2012-06-19	39.3	1.36	39.3	1.38	39.2	1.40
f (MHz)	Date	Dielectric Parameters					
		Ch 1 2412.0 MHz		Ch 6 2437.0 MHz		Ch 11 2462.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
2437	2012-06-21	38.3	1.73	38.2	1.76	38.1	1.78
	2012-06-22	38.8	1.80	38.8	1.83	38.6	1.86

Head tissue simulant dielectric parameters used in the measurements 5180 – 5805 MHz:

f (MHz)	Date	Dielectric Parameters							
		Ch 36 5180.0 MHz		5210.0 MHz		Ch 48 5240.0 MHz		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5210	2012-06-21	34.6	4.44	34.5	4.48	34.5	4.51	-	-
	2012-06-22	35.3	4.53	35.3	4.56	35.2	4.59	-	-
f (MHz)	Date	Dielectric Parameters							
		Ch 52 5260.0 MHz		5290.0 MHz		Ch 64 5320.0 MHz		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5290	2012-06-21	34.5	4.53	34.4	4.55	34.4	4.58	-	-
	2012-06-22	35.2	4.61	35.2	4.64	35.1	4.67	-	-
f (MHz)	Date	Dielectric Parameters							
		Ch 100 5500.0 MHz		Ch 112 5560.0 MHz		Ch 120 5600.0 MHz		Ch 132 5660.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5600	2012-06-22	36.2	5.00	36.1	5.06	36.0	5.12	35.9	5.18
	2012-06-23	34.2	4.79	34.1	4.85	34.0	4.90	33.9	4.95
f (MHz)	Date	Dielectric Parameters							
		Ch 149 5745.0 MHz		Ch 157 5785.0 MHz		Ch 161 5805.0 MHz		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5785	2012-06-24	33.8	5.04	33.8	5.08	33.7	5.09	-	-
	2012-06-25	35.4	5.22	35.3	5.26	35.3	5.29	-	-

Body tissue simulant dielectric parameters used in the measurements 709 – 2462 MHz:

f (MHz)	Date	Dielectric Parameters					
		Ch 23780 709.0 MHz		Ch 23790 710.0 MHz		Ch 23800 711.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
710	2012-06-24	54.7	0.94	54.7	0.94	54.7	0.94
	2012-06-25	54.4	0.97	54.4	0.97	54.4	0.97
	2012-06-26	54.2	0.97	54.2	0.98	54.2	0.98
f (MHz)	Date	Dielectric Parameters					
		Ch 4132 826.4 MHz		Ch 4175 835.0 MHz		Ch 4233 846.6 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
835	2012-06-22	54.2	0.99	54.2	0.99	54.1	1.00
f (MHz)	Date	Dielectric Parameters					
		Ch 128 824.2 MHz		Ch 190 836.6 MHz		Ch 251 848.8 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
836	2012-06-14	53.9	0.99	53.8	1.00	53.7	1.01
	2012-06-16	53.6	0.98	53.5	0.99	53.5	0.99
f (MHz)	Date	Dielectric Parameters					
		Ch 20450 829.0 MHz		Ch 20525 836.5 MHz		Ch 20600 844.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
836	2012-06-22	54.2	0.99	54.1	0.99	54.1	1.00
	2012-06-25	53.4	0.99	53.3	1.00	53.3	1.00
	2012-06-24	54.2	0.99	54.1	0.99	54.1	1.00
f (MHz)	Date	Dielectric Parameters					
		Ch 20050 1720.0 MHz		Ch 20175 1732.5 MHz		Ch 20300 1745.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
1732	2012-06-16	52.8	1.41	52.8	1.42	52.8	1.43
	2012-06-17	52.4	1.40	52.4	1.42	52.4	1.43
	2012-06-18	52.6	1.40	52.6	1.42	52.6	1.43

(Body tissue simulant 709 – 2462 MHz table continues)

(Body tissue simulant 709 – 2462 MHz table continues)

f (MHz)	Date	Dielectric Parameters					
		Ch 1312 1712.4 MHz		Ch 1412 1732.4 MHz		Ch 1513 1752.6 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
1732	2012-08-16	52.7	1.42	52.5	1.44	52.4	1.46
f (MHz)	Date	Dielectric Parameters					
		Ch 512 1850.2 MHz		Ch 661 1880.0 MHz		Ch 810 1909.8 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
1880	2012-06-13	52.6	1.45	52.5	1.49	52.5	1.53
	2012-06-17	52.0	1.47	51.9	1.49	51.8	1.51
f (MHz)	Date	Dielectric Parameters					
		Ch 9262 1852.4 MHz		Ch 9400 1880.0 MHz		Ch 9538 1907.6 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
1880	2012-06-20	52.6	1.48	52.5	1.49	52.4	1.52
	2012-06-21	52.4	1.47	52.3	1.50	52.2	1.53
f (MHz)	Date	Dielectric Parameters					
		Ch 18700 1860.0 MHz		Ch 18900 1880.0 MHz		Ch 19100 1900.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
1880	2012-06-20	52.6	1.49	52.5	1.49	52.4	1.51
	2012-06-21	52.4	1.48	52.3	1.50	52.3	1.53
	2012-06-22	52.6	1.49	52.6	1.51	52.5	1.53
f (MHz)	Date	Dielectric Parameters					
		Ch 1 2412.0 MHz		Ch 6 2437.0 MHz		Ch 11 2462.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
2437	2012-06-23	50.5	1.92	50.4	1.95	50.3	1.98
	2012-06-24	50.3	1.92	50.2	1.95	50.1	1.98
	2012-06-25	50.8	1.90	50.7	1.93	50.6	1.96

Body tissue simulant dielectric parameters used in the measurements 5180 – 5805 MHz:

f (MHz)	Date	Dielectric Parameters							
		Ch 36 5180.0 MHz		5210.0 MHz		Ch 48 5240.0 MHz		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5210	2012-06-25	49.0	5.42	49.0	5.46	48.9	5.50	-	-
	2012-06-26	48.9	5.32	48.9	5.37	48.9	5.40	-	-
	2012-06-27	49.1	5.41	49.0	5.46	49.0	5.50	-	-
	2012-06-28	49.1	5.33	49.1	5.37	49.0	5.40	-	-
f (MHz)	Date	Dielectric Parameters							
		Ch 52 5260.0 MHz		5290.0 MHz		Ch 64 5320.0 MHz		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5290	2012-06-25	48.9	5.53	48.8	5.56	48.8	5.60	-	-
	2012-06-26	48.8	5.43	48.8	5.47	48.7	5.51	-	-
	2012-06-28	49.0	5.43	49.0	5.46	48.9	5.50	-	-
f (MHz)	Date	Dielectric Parameters							
		Ch 100 5500.0 MHz		Ch 112 5560.0 MHz		Ch 120 5600.0 MHz		Ch 132 5660.0 MHz	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5600	2012-06-28	48.2	5.80	48.1	5.89	48.0	5.95	47.9	6.04
f (MHz)	Date	Dielectric Parameters							
		Ch 149 5745.0 MHz		Ch 157 5785.0 MHz		Ch 161 5805.0 MHz		-	
		ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]	ϵ_r	σ [S/m]
5785	2012-06-28	47.8	6.14	47.7	6.20	47.7	6.23	-	-
	2012-06-30	47.4	6.11	47.3	6.17	47.3	6.20	-	-
	2012-07-02	47.6	6.15	47.4	6.20	47.3	6.26	-	-

APPENDIX D: CONDUCTED AVERAGE POWER MEASUREMENTS FOR WCDMA AND HSUPA

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/978057/5, HW: 2100, SW: 1125.0001.8422.9704

D.1. WCDMA850 Test results

Average power

Ch)	P [dBm]
4133	23.24
4175	23.01
4232	23.51

D.2. HSUPA850 Test results

Average power

Ch / f (MHz)	P [dBm]				
	Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
4133	22.07	19.44	21.28	21.83	22.36
4175	22.48	19.60	20.78	21.37	22.42
4232	22.64	19.38	21.06	21.66	22.58

Note: In HSUPA operation, the output power is reduced relative to the tuning target power for WCDMA. This device runs two separate HSUPA power control routines: MPR and E-TFC MPR. In each Subtest mode, the routine with the higher power reduction dominates. As a result, the MPR for each of the Subtest modes is as follows:

Maximum Power Reduction (MPR)				
Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
1.5dB	2.0dB	1.0dB	2.0dB	0.0dB

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/870807/2, HW: 2003, SW: 1230.0035.9754.12312

D.3. WCDMA1700/2100 Test results

Average power

Ch)	P [dBm]
1313	23.24
1450	23.04
1512	23.04

D.4. HSUPA1700/2100 Test results

Average power

Ch / f (MHz)	P [dBm]				
	Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
1313	22.10	19.36	21.26	21.39	22.33
1450	21.55	19.30	21.17	21.07	22.09
1512	21.92	19.37	20.85	21.04	22.19

Note: In HSUPA operation, the output power is reduced relative to the tuning target power for WCDMA. This device runs two separate HSUPA power control routines: MPR and E-TFC MPR. In each Subtest mode, the routine with the higher power reduction dominates. As a result, the MPR for each of the Subtest modes is as follows:

Maximum Power Reduction (MPR)				
Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
1.5dB	2.0dB	1.0dB	2.0dB	0.0dB

Test Laboratory: TCC Nokia

Type: RM-820; Serial: 004402/13/978057/5, HW: 2100, SW: 1125.0001.8422.9704

D.5. WCDMA1900 Test results

Average power

Ch)	P [dBm]
9263	22.79
9400	22.48
9537	23.17

D.6. HSUPA1900 Test results

Average power

Ch / f (MHz)	P [dBm]				
	Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
9263	21.82	18.93	20.64	21.39	21.92
9400	21.53	18.71	20.69	21.24	21.68
9537	21.82	18.85	20.58	21.45	22.19

Note: In HSUPA operation, the output power is reduced relative to the tuning target power for WCDMA. This device runs two separate HSUPA power control routines: MPR and E-TFC MPR. In each Subtest mode, the routine with the higher power reduction dominates. As a result, the MPR for each of the Subtest modes is as follows:

Maximum Power Reduction (MPR)				
Subtest mode 1	Subtest mode 2	Subtest mode 3	Subtest mode 4	Subtest mode 5
1.5dB	2.0dB	1.0dB	2.0dB	0.0dB