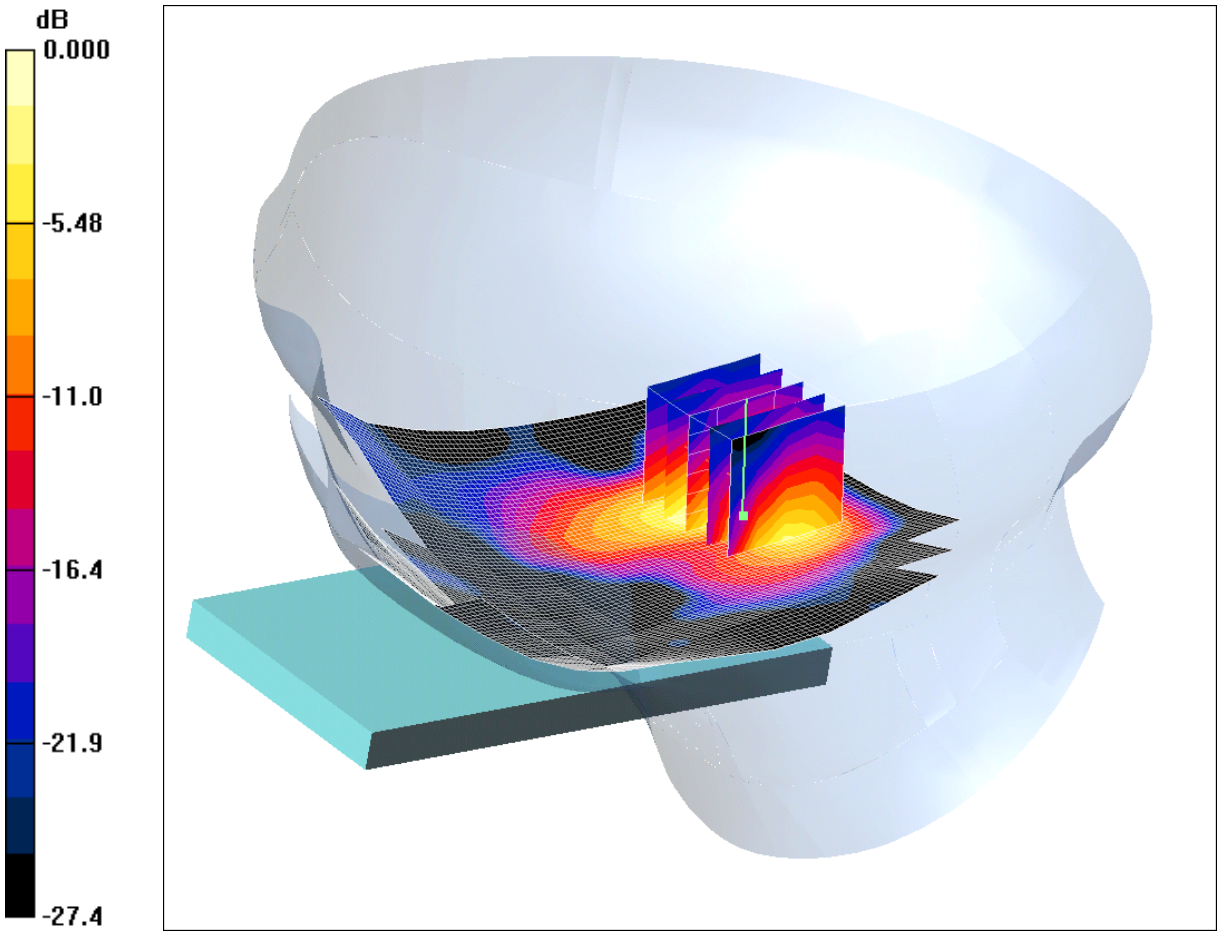
SCN/86599JD02/060: Touch Right WLAN802.11b 1Mbps CH6
Date: 05/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1

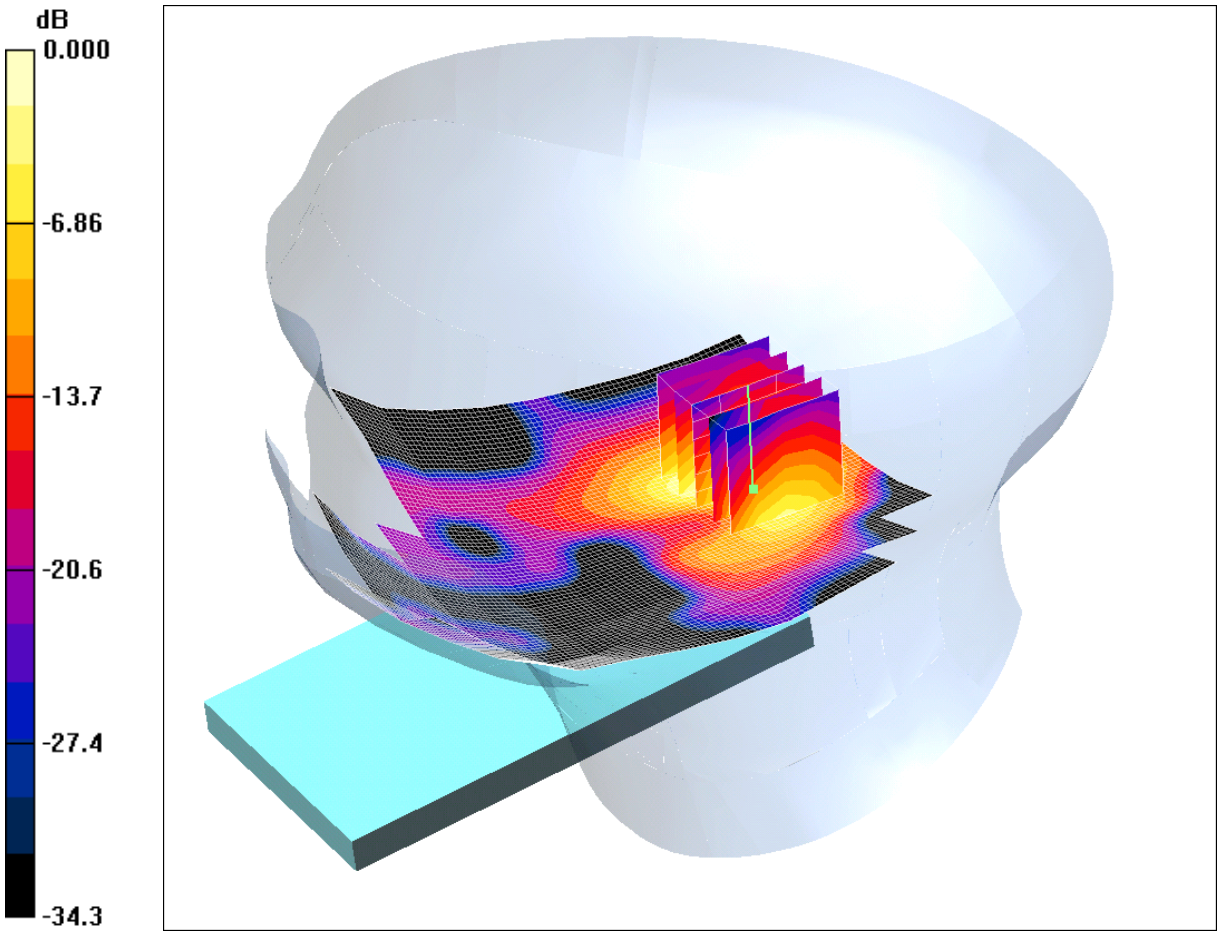


0 dB = 0.379mW/g

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 MHz HSL Medium parameters used (interpolated): f = 2437 MHz; σ = 1.84 mho/m; ε_r = 38.6; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.02, 7.02, 7.02); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Touch Right - Middle/Area Scan (81x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.373 mW/g
Touch Right - Middle/Zoom Scan (5x5x7) 2 2 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.44 V/m; Power Drift = 0.111 dB
Peak SAR (extrapolated) = 0.744 W/kg
SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.142 mW/g
Maximum value of SAR (measured) = 0.379 mW/g

SCN/86599JD02/061: Tilt Right WLAN802.11b 1Mbps CH6
Date: 05/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1

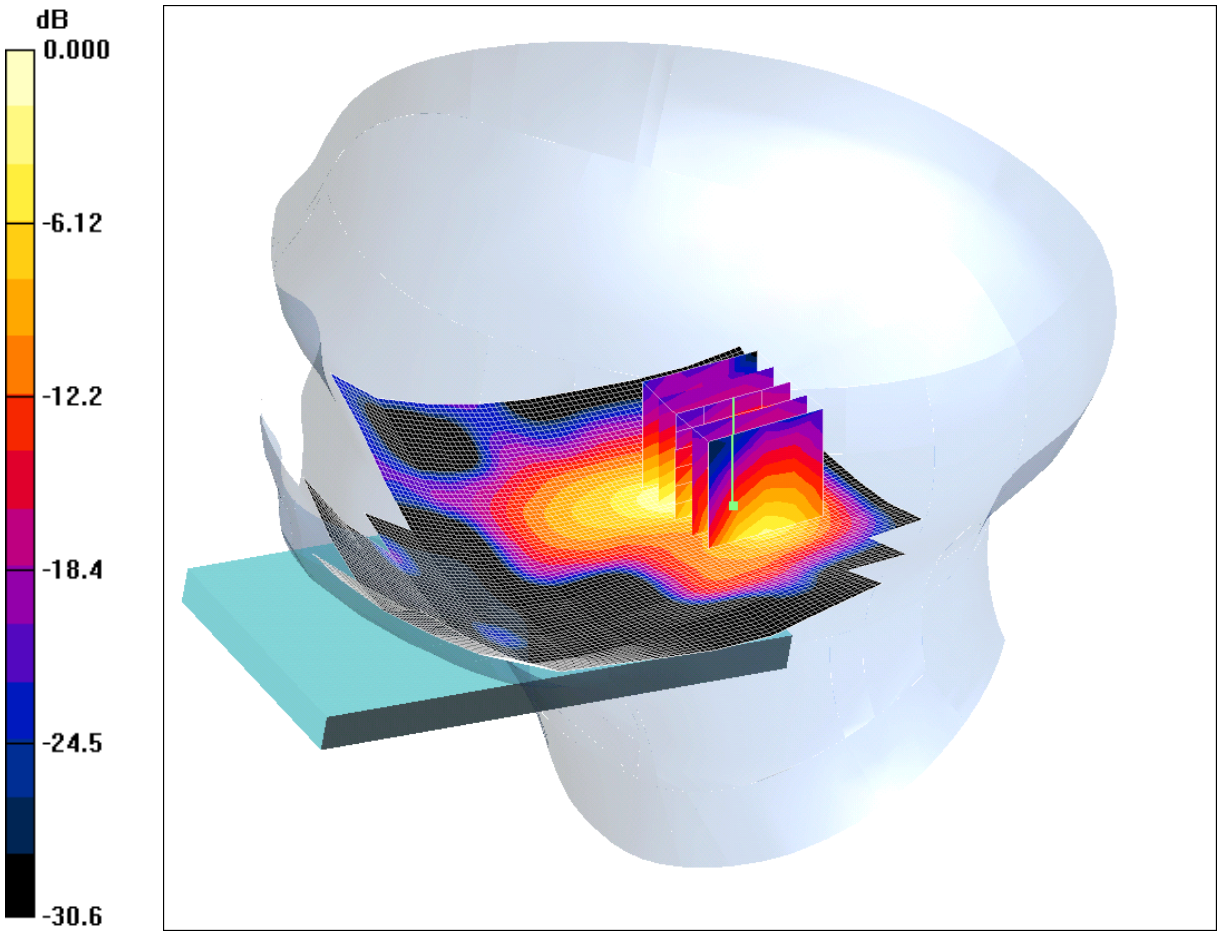


0 dB = 0.355mW/g

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 MHz HSL Medium parameters used (interpolated): f = 2437 MHz; σ = 1.84 mho/m; ε_r = 38.6; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.02, 7.02, 7.02); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Tilt Right - Middle/Area Scan (81x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.371 mW/g
Tilt Right - Middle/Zoom Scan (5x5x7) 2 2 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.67 V/m; Power Drift = 0.167 dB
Peak SAR (extrapolated) = 0.686 W/kg
SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.135 mW/g
Maximum value of SAR (measured) = 0.355 mW/g

SCN/86599JD02/062: Touch Right WLAN802.11b 1Mbps CH1
Date: 05/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1

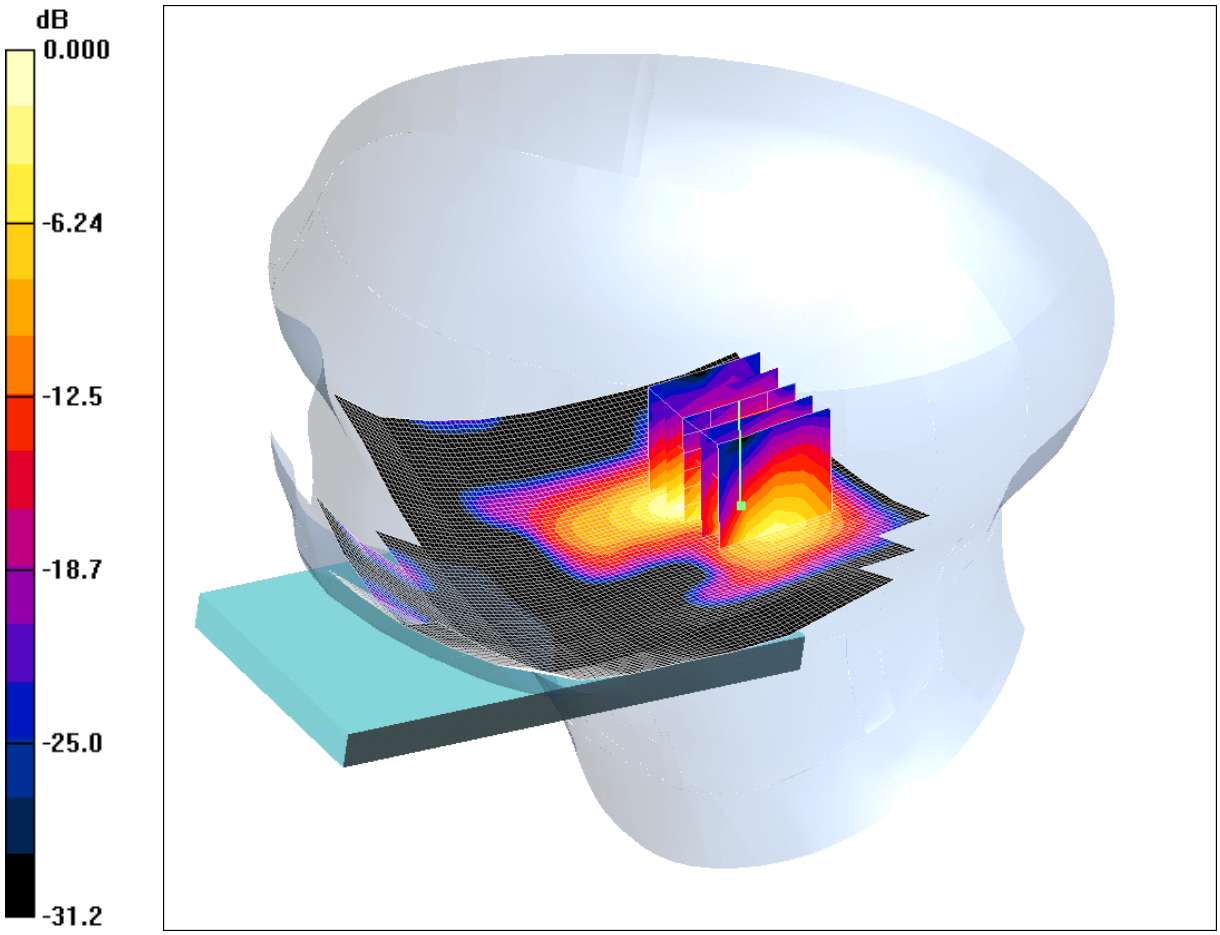


0 dB = 0.301mW/g

Communication System: WLAN; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium: 2450 MHz HSL Medium parameters used (interpolated): f = 2412 MHz; σ = 1.81 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.02, 7.02, 7.02); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Touch Right - Low/Area Scan (81x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.298 mW/g
Touch Right - Low/Zoom Scan (5x5x7) 2 2 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.34 V/m; Power Drift = 0.177 dB
Peak SAR (extrapolated) = 0.575 W/kg
SAR(1 g) = 0.259 mW/g; SAR(10 g) = 0.114 mW/g
Maximum value of SAR (measured) = 0.301 mW/g

SCN/86599JD02/063: Touch Right WLAN802.11b 1Mbps CH11
Date: 05/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1

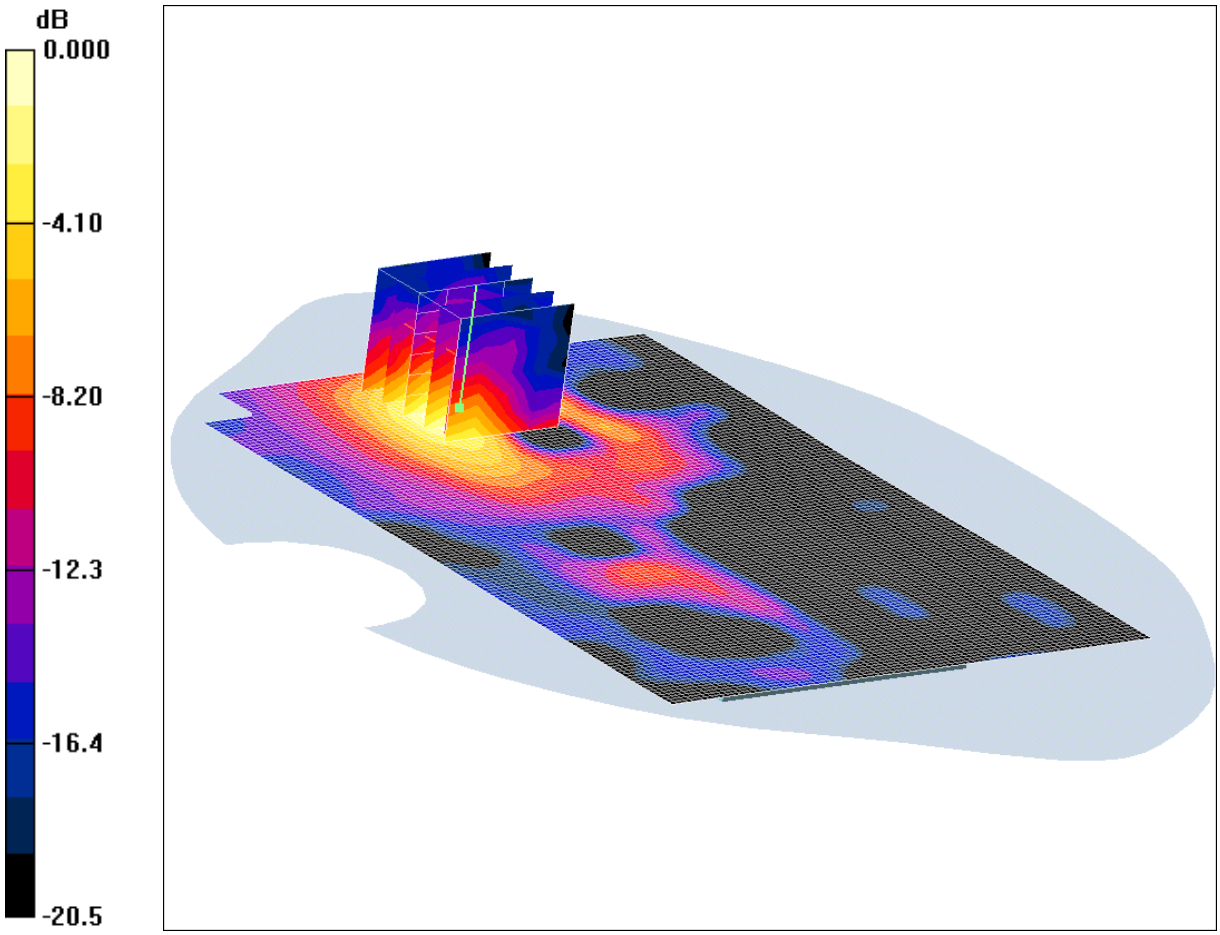


0 dB = 0.289mW/g

Communication System: WLAN; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: 2450 MHz HSL Medium parameters used (interpolated): f = 2462 MHz; σ = 1.87 mho/m; ε_r = 38.5; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.02, 7.02, 7.02); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Touch Right - High/Area Scan (81x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.332 mW/g
Touch Right - High/Zoom Scan (5x5x7) 2 2 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.36 V/m; Power Drift = 0.184 dB
Peak SAR (extrapolated) = 0.611 W/kg
SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.113 mW/g
Maximum value of SAR (measured) = 0.289 mW/g

SCN/86599JD02/064: Front of EUT Facing Phantom WLAN802.11b 1Mbps CH6
Date: 06/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1

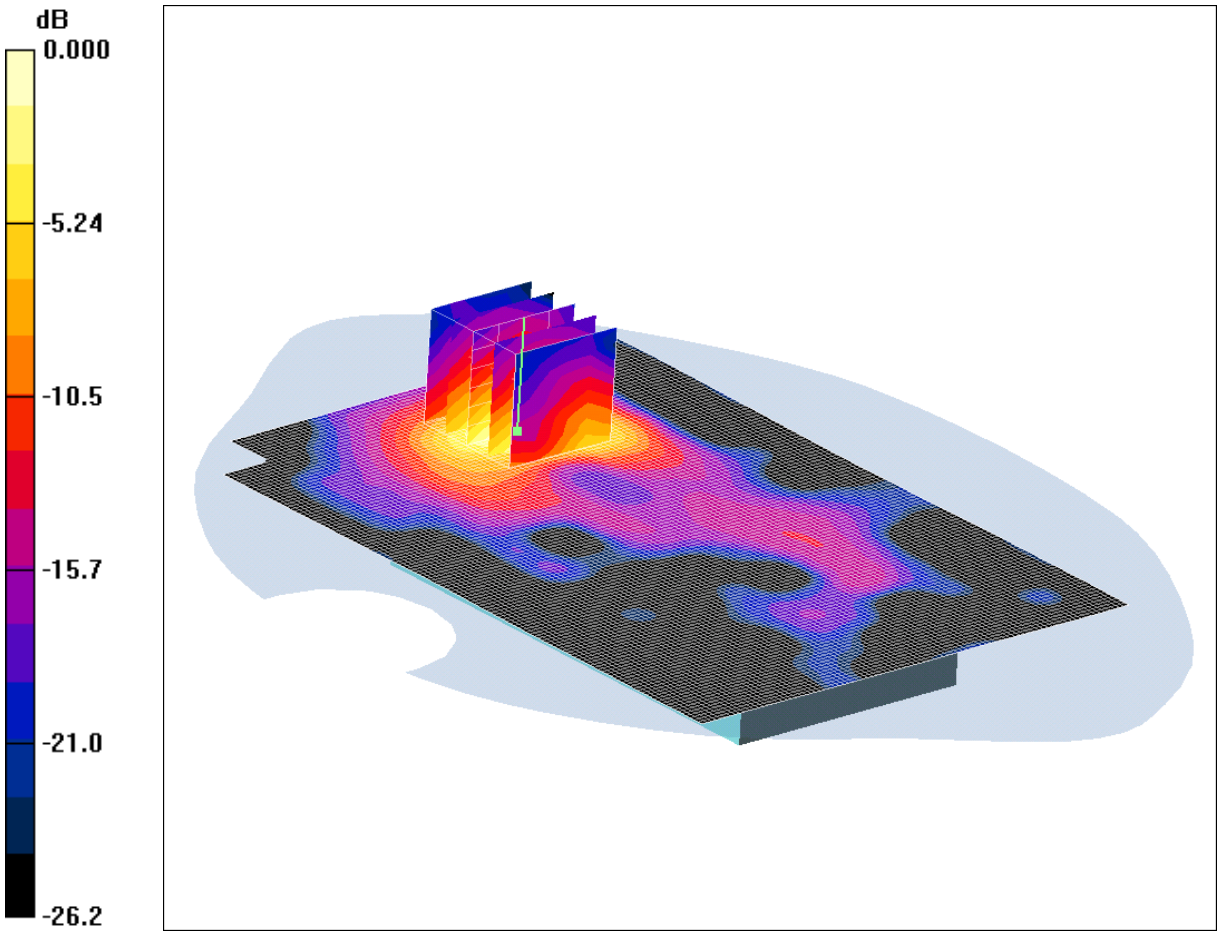


0 dB = 0.067mW/g

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2437 MHz; σ = 1.98 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.15, 7.15, 7.15); Calibrated: 22/09/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Front of EUT Facing Phantom - Middle/Area Scan (91x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.080 mW/g
Front of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) 2 2 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.09 V/m; Power Drift = -0.028 dB
Peak SAR (extrapolated) = 0.098 W/kg
SAR(1 g) = 0.050 mW/g; SAR(10 g) = 0.025 mW/g
Maximum value of SAR (measured) = 0.067 mW/g

SCN/86599JD02/065: Back of EUT Facing Phantom WLAN802.11b 1Mbps CH6
Date: 06/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1

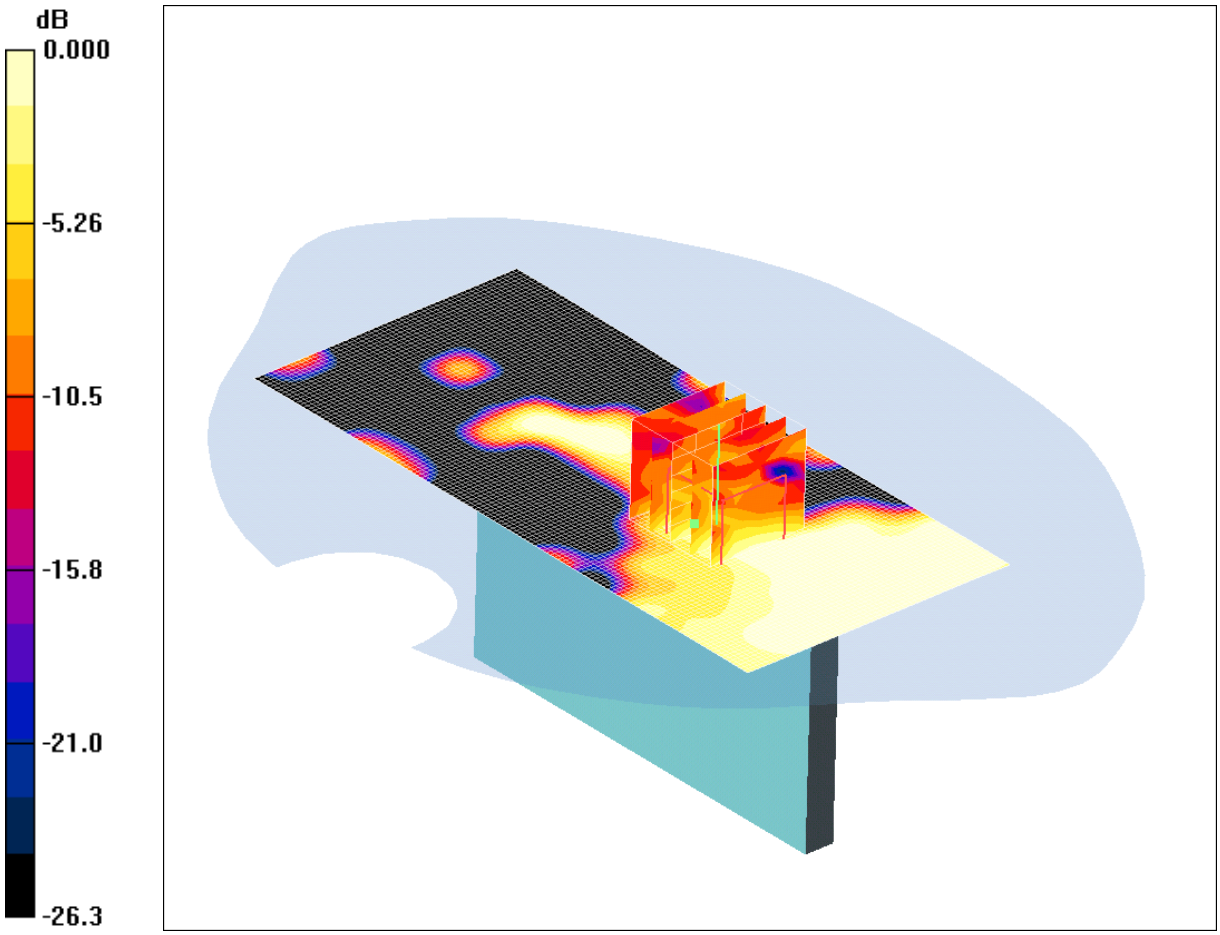


0 dB = 0.192mW/g

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2437 MHz; σ = 1.98 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.15, 7.15, 7.15); Calibrated: 22/09/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Back of EUT Facing Phantom - Middle/Area Scan (91x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.179 mW/g
Back of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) 2 2 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.43 V/m; Power Drift = 0.034 dB
Peak SAR (extrapolated) = 0.311 W/kg
SAR(1 g) = 0.146 mW/g; SAR(10 g) = 0.064 mW/g
Maximum value of SAR (measured) = 0.192 mW/g

SCN/86599JD02/066: Left Hand Side of EUT Facing Phantom WLAN802.11b 1Mbps CH6
Date: 06/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1



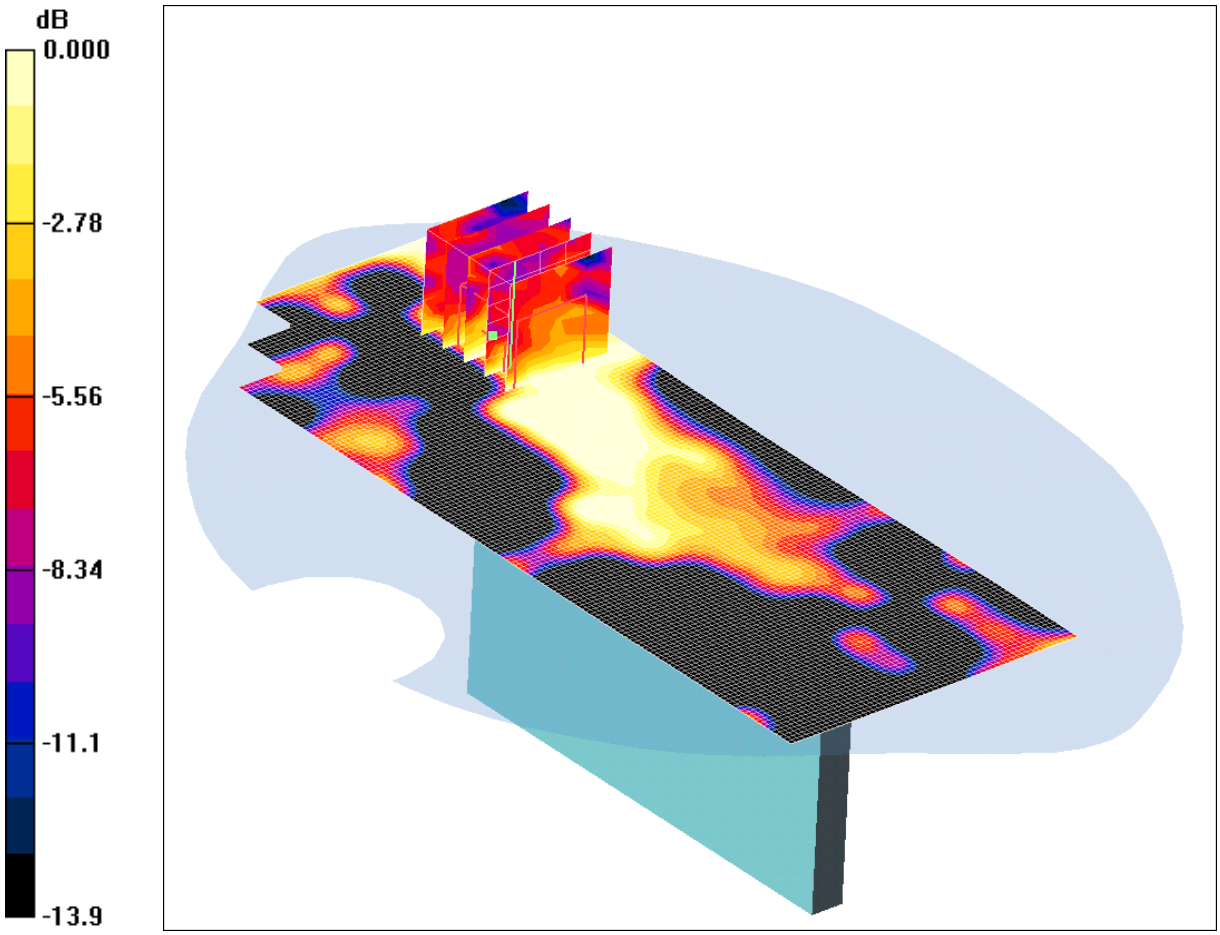
0 dB = 0.009mW/g

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2437 MHz; σ = 1.98 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.15, 7.15, 7.15); Calibrated: 22/09/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Left hand side of EUT Facing Phantom - Middle/Area Scan (61x131x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.014 mW/g
Left hand side of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) 2 2 2 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.06 V/m; Power Drift = 0.167 dB
Peak SAR (extrapolated) = 0.017 W/kg
SAR(1 g) = 0.00659 mW/g; SAR(10 g) = 0.00269 mW/g
Maximum value of SAR (measured) = 0.009 mW/g

Note: SAR level measured is very low as equivalent to noise flow.

SCN/86599JD02/067: Right Hand Side of EUT Facing Phantom WLAN802.11b 1Mbps CH6
Date: 06/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1



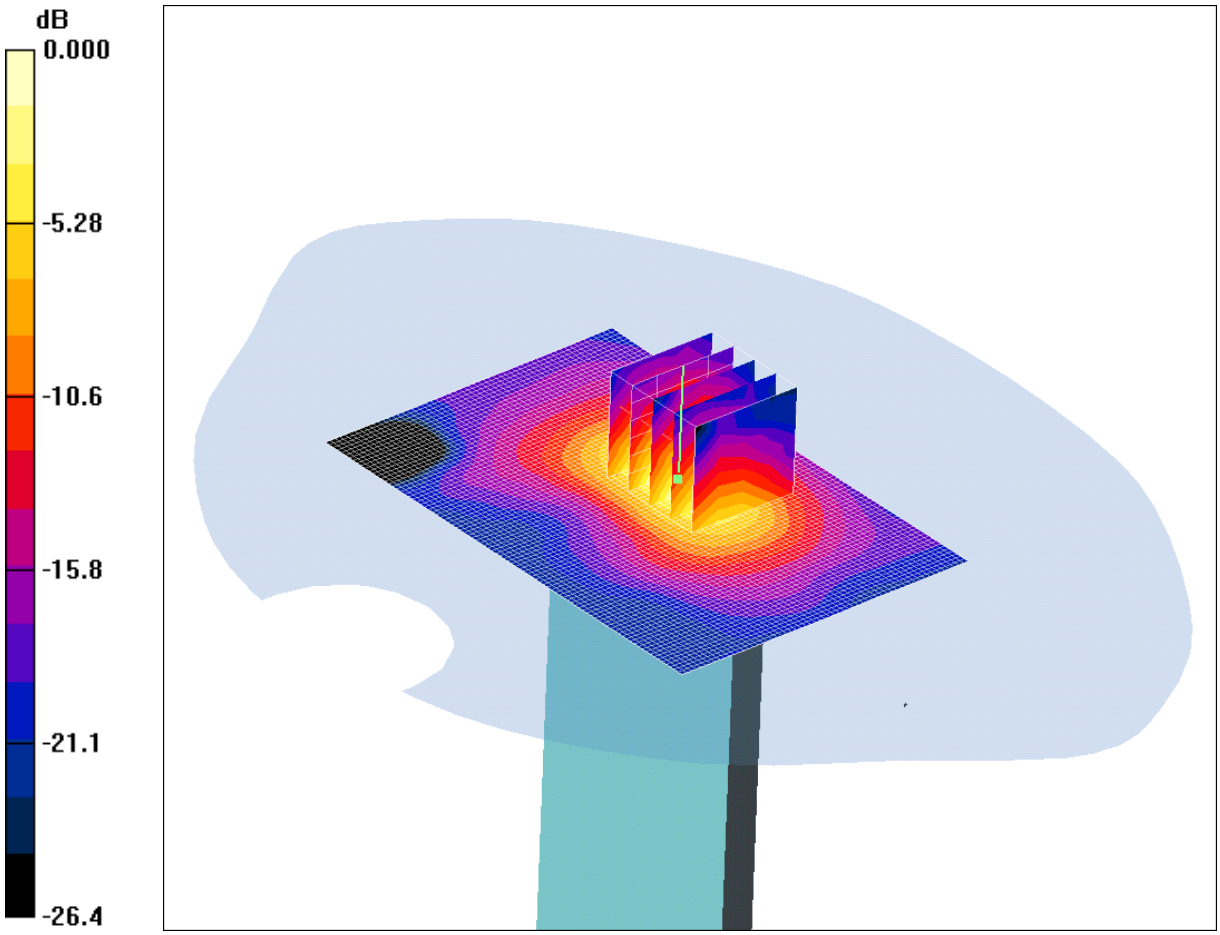
0 dB = 0.005mW/g

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2437 MHz; σ = 1.98 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.15, 7.15, 7.15); Calibrated: 22/09/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Right hand side of EUT Facing Phantom - Middle/Area Scan 3 (61x161x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.010 mW/g
Right hand side of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) 2 2 2 2 2 2 2 (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.42 V/m; Power Drift = -0.093 dB
Peak SAR (extrapolated) = 0.013 W/kg
SAR(1 g) = 0.00402 mW/g; SAR(10 g) = 0.00214 mW/g
Maximum value of SAR (measured) = 0.005 mW/g

Note: SAR level measured is very low as equivalent to noise flow.

SCN/86599JD02/068: Top of EUT Facing Phantom WLAN802.11b 1Mbps CH6
Date: 06/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1

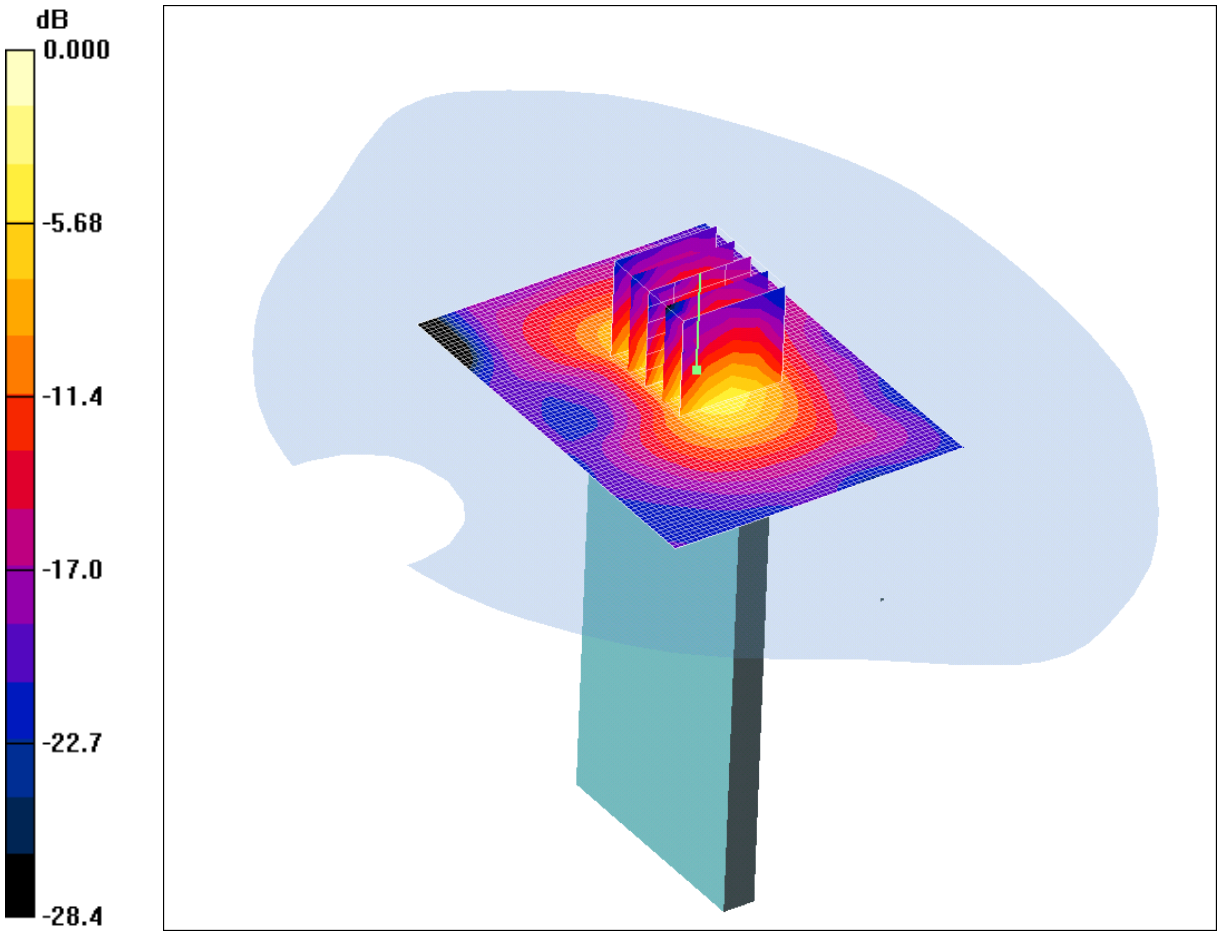


0 dB = 0.233mW/g

Communication System: WLAN; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2437 MHz; σ = 1.98 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.15, 7.15, 7.15); Calibrated: 22/09/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Top of EUT Facing Phantom - Middle/Area Scan 3 (61x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.242 mW/g
Top of EUT Facing Phantom - Middle/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.25 V/m; Power Drift = 0.008 dB
Peak SAR (extrapolated) = 0.365 W/kg
SAR(1 g) = 0.177 mW/g; SAR(10 g) = 0.079 mW/g
Maximum value of SAR (measured) = 0.233 mW/g

SCN/86599JD02/069: Top of EUT Facing Phantom WLAN802.11b 1Mbps CH1
Date 07/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1

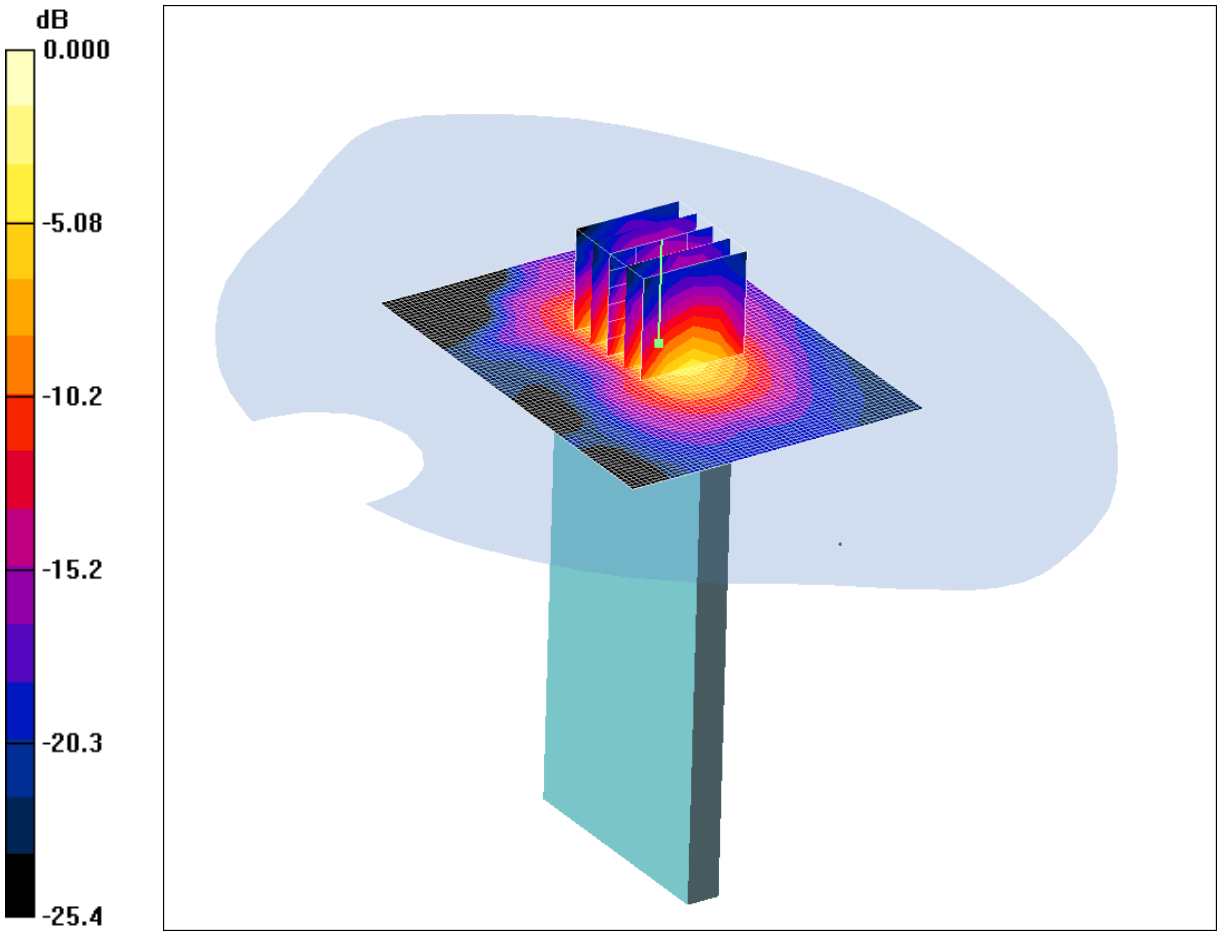


0 dB = 0.207mW/g

Communication System: WLAN; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2412 MHz; σ = 1.94 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.15, 7.15, 7.15); Calibrated: 22/09/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Top of EUT Facing Phantom - Low/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.183 mW/g
Top of EUT Facing Phantom - Low/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.10 V/m; Power Drift = 0.063 dB
Peak SAR (extrapolated) = 0.290 W/kg
SAR(1 g) = 0.141 mW/g; SAR(10 g) = 0.063 mW/g
Maximum value of SAR (measured) = 0.207 mW/g

SCN/86599JD02/070: Top of EUT Facing Phantom WLAN802.11b 1Mbps CH11
Date 07/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1

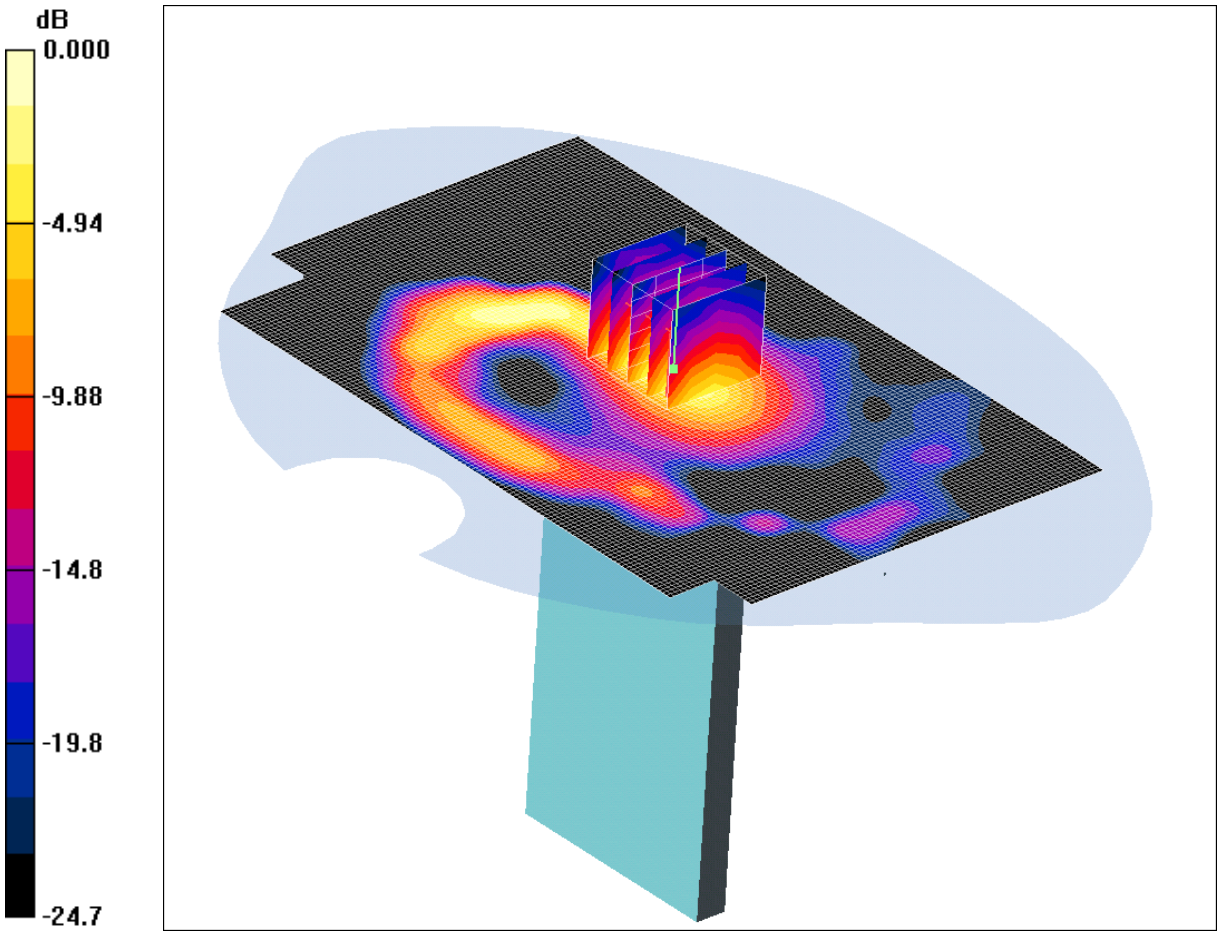


0 dB = 0.272mW/g

Communication System: WLAN; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2462 MHz; σ = 2.01 mho/m; ε_r = 51.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.15, 7.15, 7.15); Calibrated: 22/09/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

Top of EUT Facing Phantom - High/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.256 mW/g
Top of EUT Facing Phantom - High/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.06 V/m; Power Drift = -0.110 dB
Peak SAR (extrapolated) = 0.393 W/kg
SAR(1 g) = 0.186 mW/g; SAR(10 g) = 0.082 mW/g
Maximum value of SAR (measured) = 0.272 mW/g

SCN/86599JD02/071: Top of EUT Facing Phantom with PHF WLAN802.11b 1Mbps CH11
Date 07/05/2012
DUT: Sony Hayabusa DCM; Type: PM-0000-BV; Serial: CB5A1JYNF1

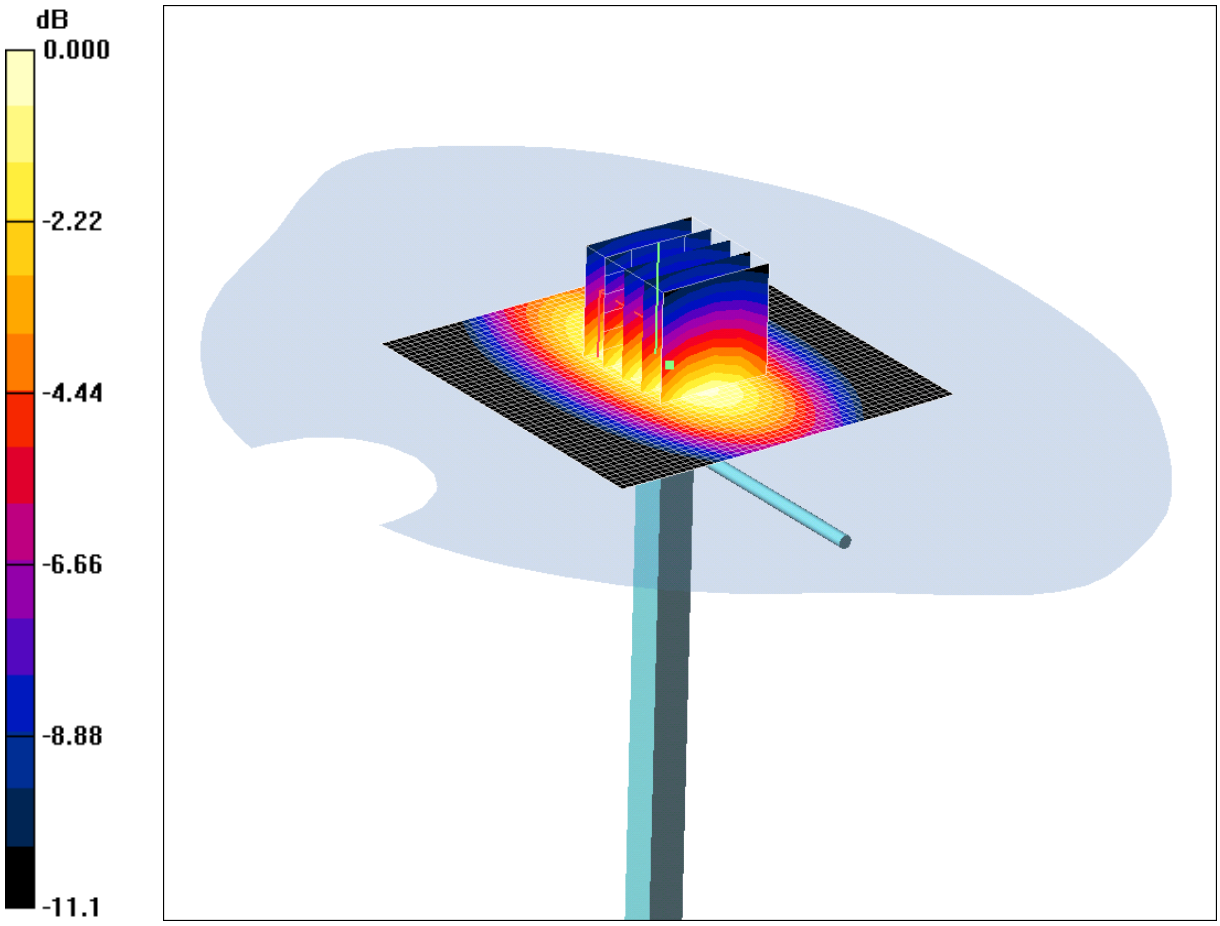


0 dB = 0.307mW/g

Communication System: WLAN; Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2462 MHz; σ = 2.01 mho/m; ε_r = 51.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.15, 7.15, 7.15); Calibrated: 22/09/2011
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

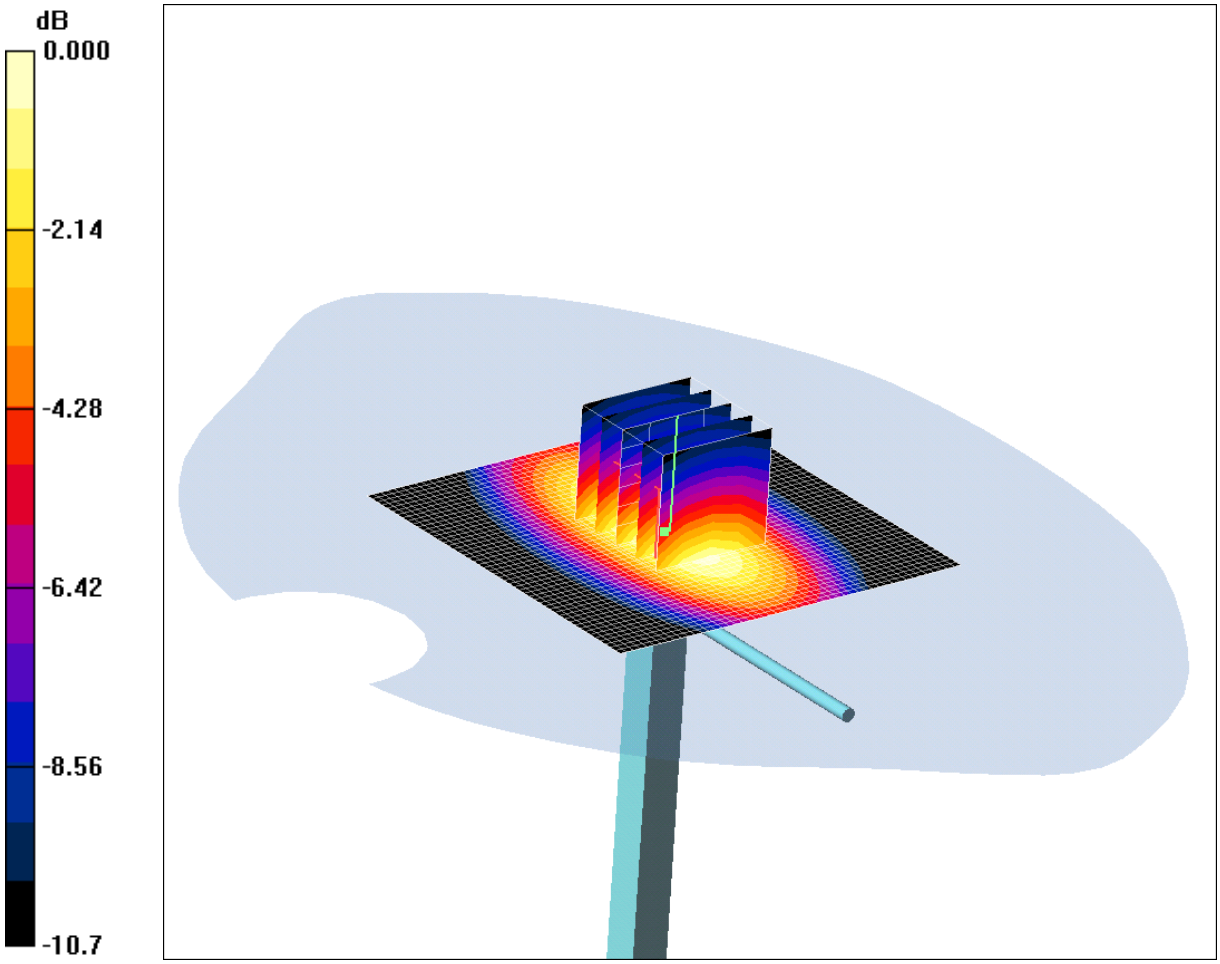
Top of EUT Facing Phantom with PHF - High/Area Scan (91x141x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.312 mW/g
Top of EUT Facing Phantom with PHF - High/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.67 V/m; Power Drift = 0.100 dB
Peak SAR (extrapolated) = 0.465 W/kg
SAR(1 g) = 0.218 mW/g; SAR(10 g) = 0.098 mW/g
Maximum value of SAR (measured) = 0.307 mW/g

SCN/86599JD02/072: System Performance Check 900MHz Head 10 04 12
Date: 10/04/2012
DUT: Dipole 900 MHz; SN: 124; Type: D900V2; Serial: SN124



0 dB = 2.90mW/g
Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: 900 MHz HSL Medium parameters used: f = 900 MHz; σ = 0.947 mho/m; ε_r = 43; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(8.75, 8.75, 8.75); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 2.98 mW/g
d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 55.7 V/m; Power Drift = -0.024 dB
Peak SAR (extrapolated) = 4.15 W/kg
SAR(1 g) = 2.73 mW/g; SAR(10 g) = 1.76 mW/g
Maximum value of SAR (measured) = 2.90 mW/g

SCN/86599JD02/073: System Performance Check 900MHz Head 20 04 12
Date: 20/04/2012
DUT: Dipole 900 MHz; SN: 124; Type: D900V2; Serial: SN124

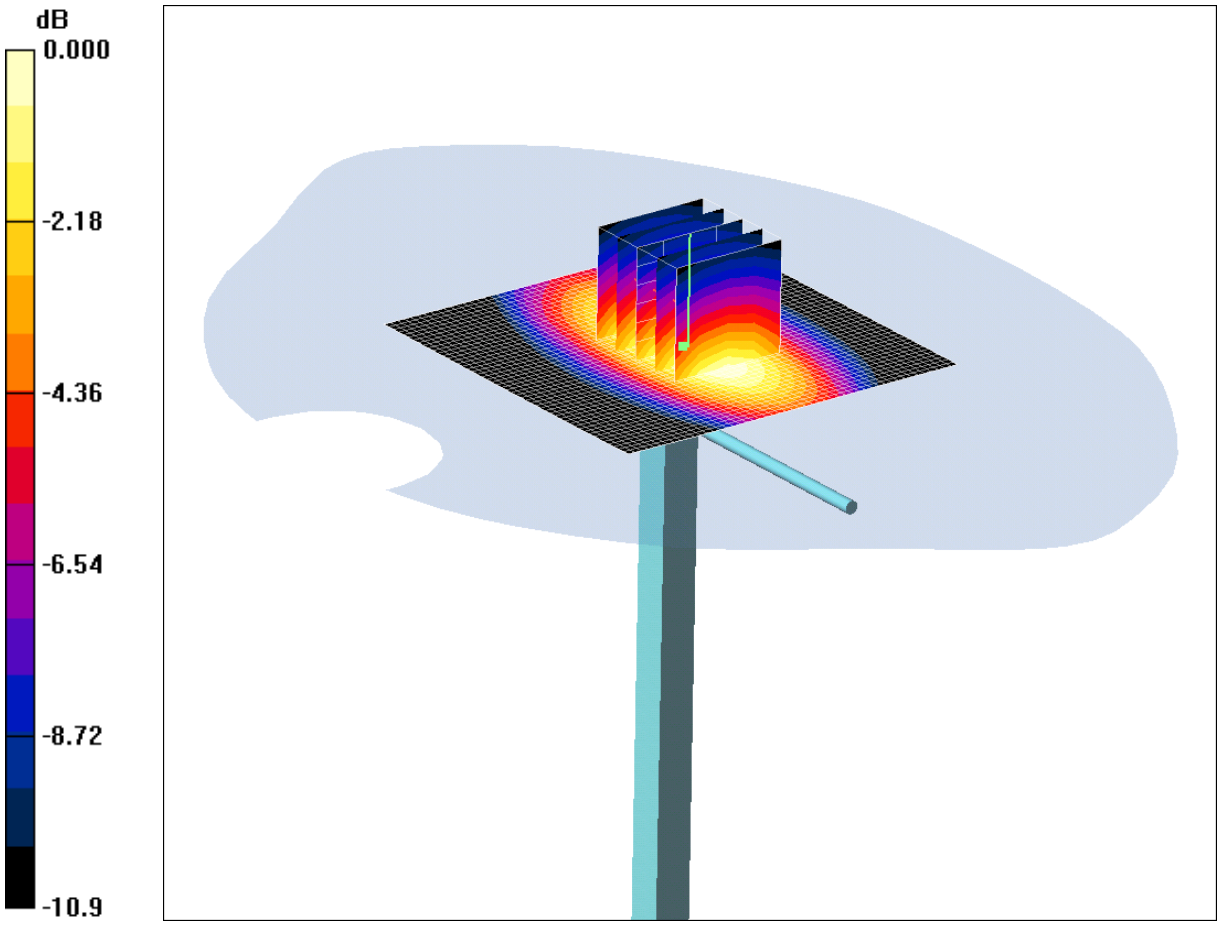


0 dB = 2.94mW/g

Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: 900 MHz HSL Medium parameters used: f = 900 MHz; σ = 0.927 mho/m; ε_r = 42.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(8.75, 8.75, 8.75); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

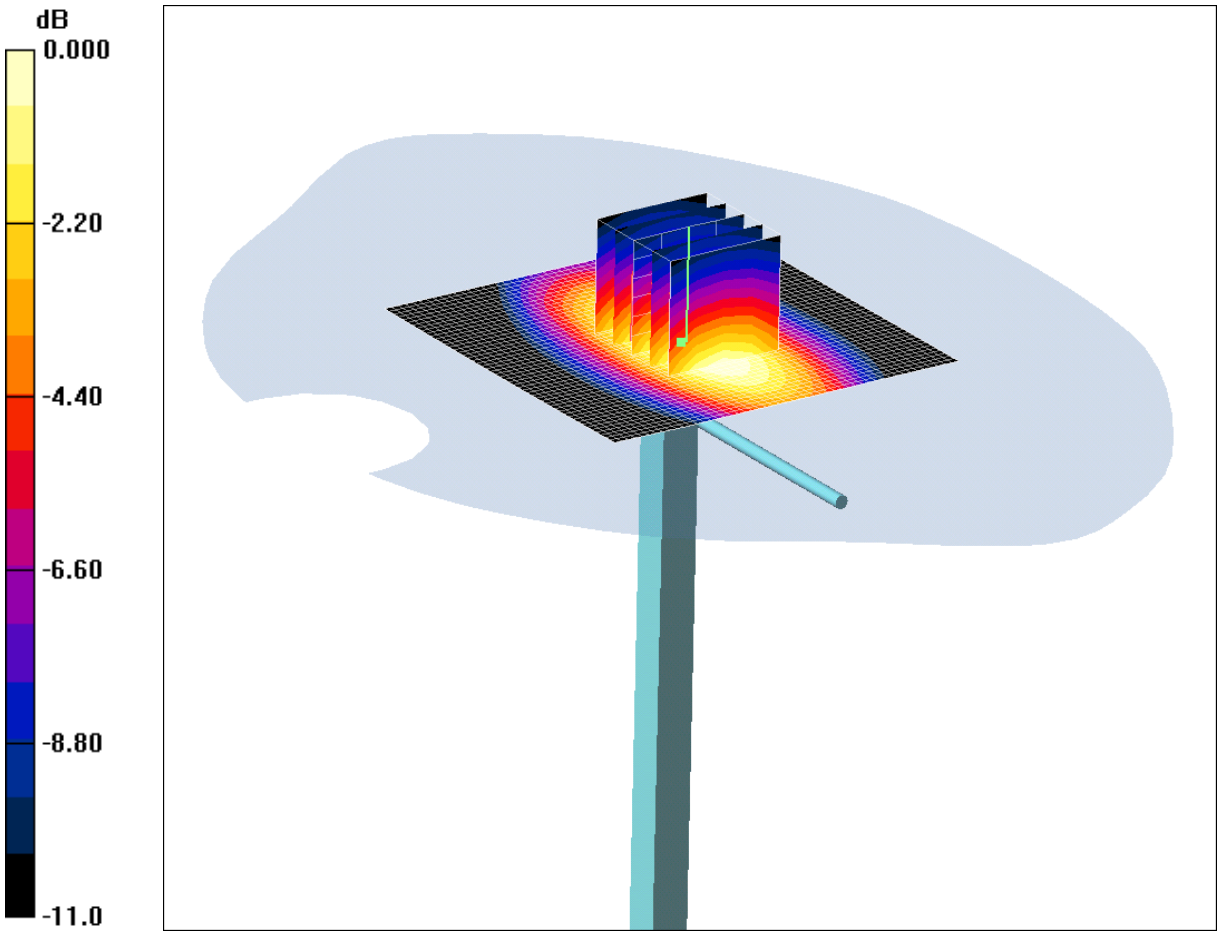
d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 2.95 mW/g
d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 56.3 V/m; Power Drift = 0.001 dB
Peak SAR (extrapolated) = 4.11 W/kg
SAR(1 g) = 2.72 mW/g; SAR(10 g) = 1.77 mW/g
Maximum value of SAR (measured) = 2.94 mW/g

SCN/86599JD02/074: System Performance Check 900MHz Body 11 04 12
Date: 11/04/2012
DUT: Dipole 900 MHz; SN: 124; Type: D900V2; Serial: SN124



0 dB = 2.95mW/g
Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: 900 MHz MSL Medium parameters used: f = 900 MHz; σ = 1.06 mho/m; ε_r = 53.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(8.92, 8.92, 8.92); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 3.10 mW/g
d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 52.4 V/m; Power Drift = -0.058 dB
Peak SAR (extrapolated) = 4.11 W/kg
SAR(1 g) = 2.72 mW/g; SAR(10 g) = 1.76 mW/g
Maximum value of SAR (measured) = 2.95 mW/g

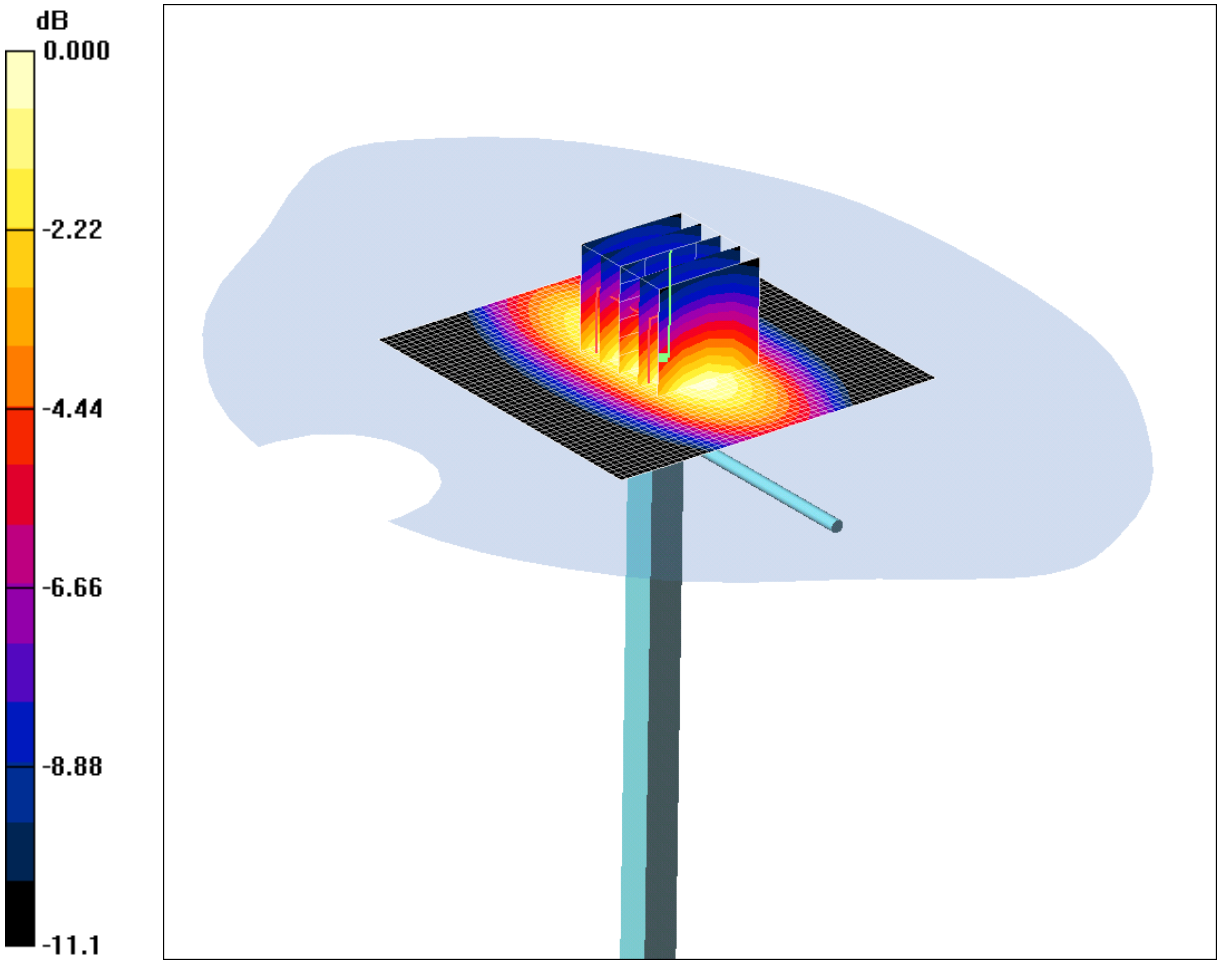
SCN/86599JD02/075: System Performance Check 900MHz Body 12 04 12
Date: 12/04/2012
DUT: Dipole 900 MHz; SN: 124; Type: D900V2; Serial: SN124



0 dB = 3.08mW/g

Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: 900 MHz MSL Medium parameters used: f = 900 MHz; σ = 1.06 mho/m; ε_r = 53.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(8.92, 8.92, 8.92); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 3.27 mW/g
d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.8 V/m; Power Drift = -0.042 dB
Peak SAR (extrapolated) = 4.36 W/kg
SAR(1 g) = 2.87 mW/g; SAR(10 g) = 1.85 mW/g
Maximum value of SAR (measured) = 3.08 mW/g

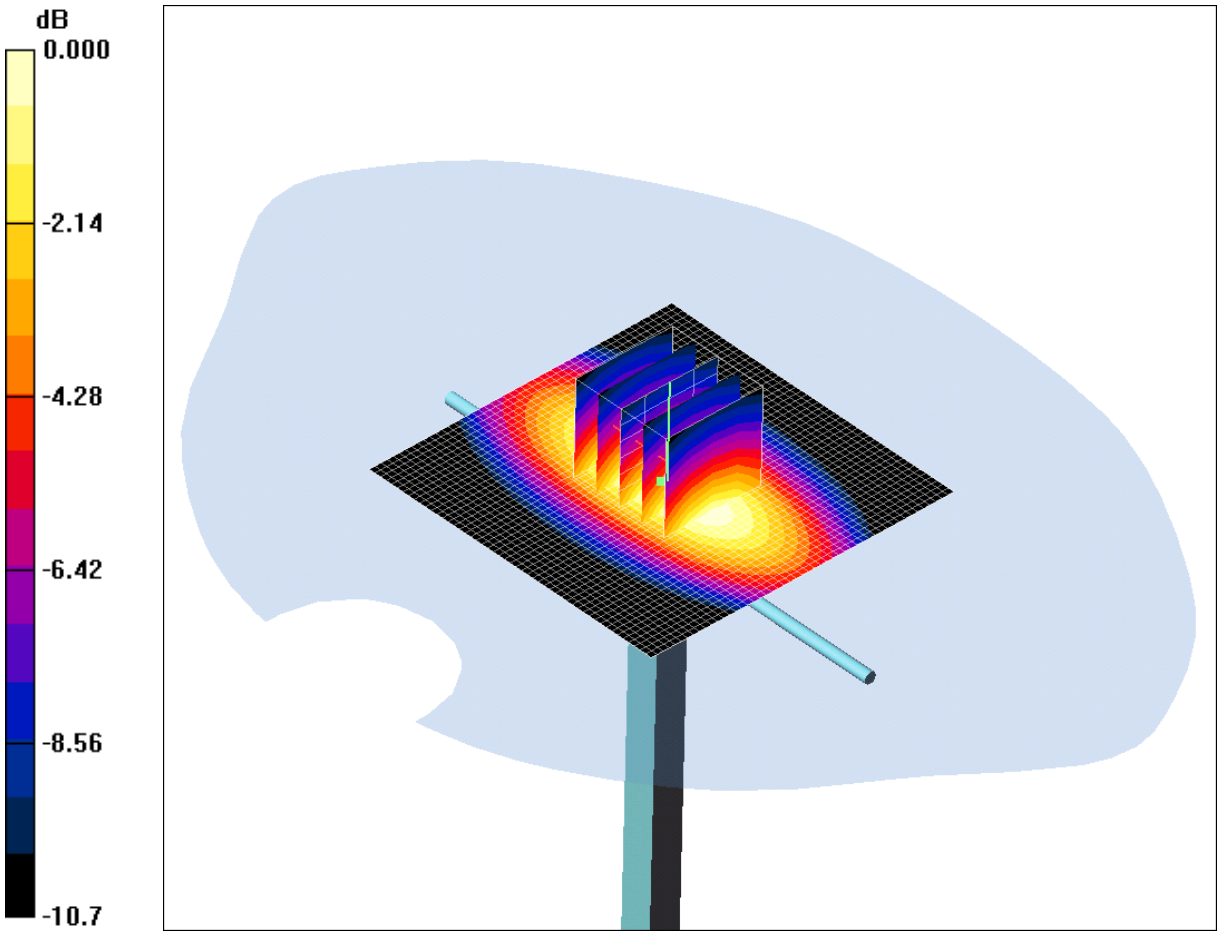
SCN/86599JD02/076: System Performance Check 900MHz Body 20 04 12
Date: 20/04/2012
DUT: Dipole 900 MHz; SN: 124; Type: D900V2; Serial: SN124



0 dB = 2.94mW/g

Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: 900 MHz MSL Medium parameters used: f = 900 MHz; σ = 1.04 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(8.92, 8.92, 8.92); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 3.07 mW/g
d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.4 V/m; Power Drift = 0.032 dB
Peak SAR (extrapolated) = 4.20 W/kg
SAR(1 g) = 2.76 mW/g; SAR(10 g) = 1.78 mW/g
Maximum value of SAR (measured) = 2.94 mW/g

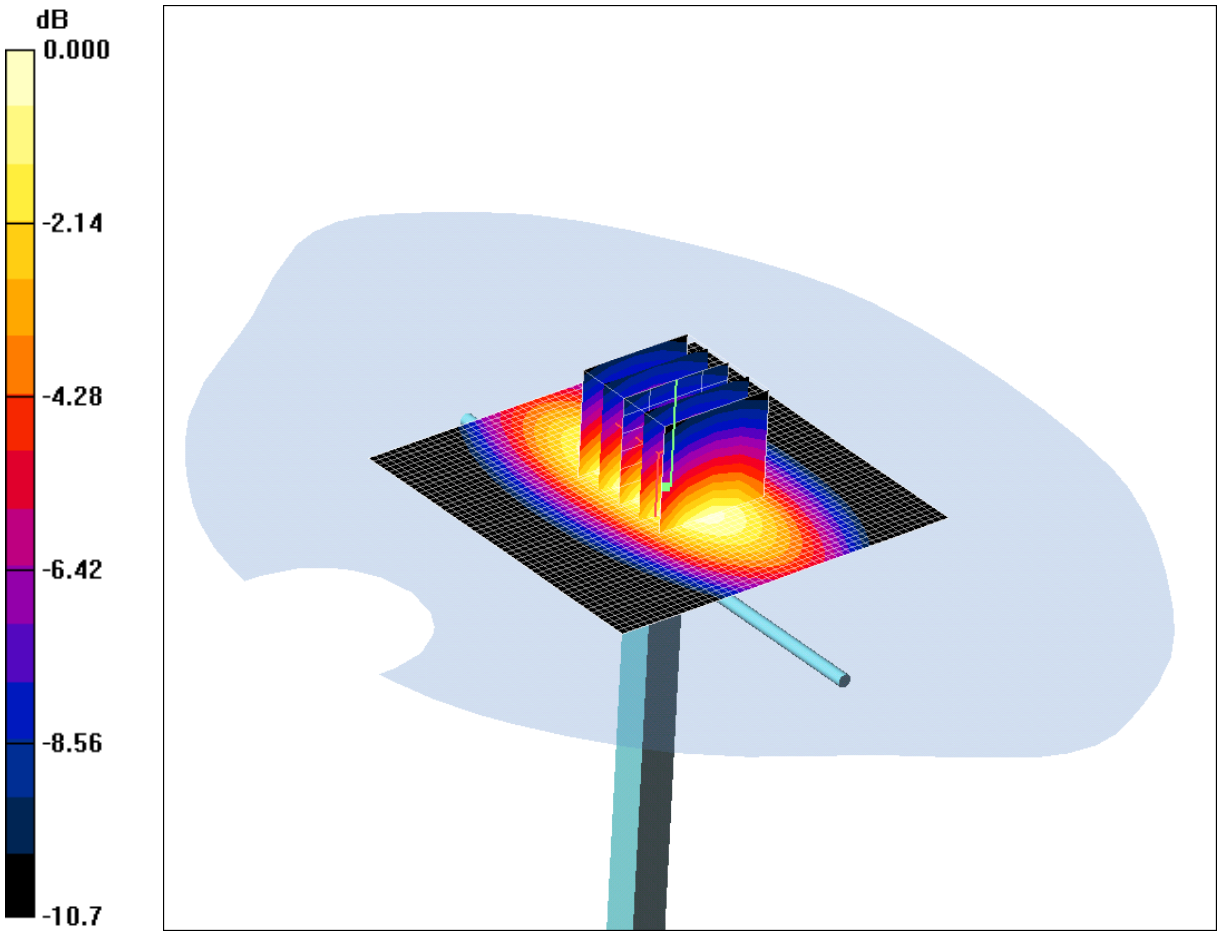
SCN/86599JD02/077: System Performance Check 900MHz Body 30 04 12
Date: 30/04/2012
DUT: Dipole 900 MHz; SN: 124; Type: D900V2; Serial: SN124



0 dB = 2.95mW/g

Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: 900 MHz MSL Medium parameters used: f = 900 MHz; σ = 1.02 mho/m; ε_r = 53.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(8.92, 8.92, 8.92); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 3.05 mW/g
d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.3 V/m; Power Drift = 0.055 dB
Peak SAR (extrapolated) = 4.13 W/kg
SAR(1 g) = 2.73 mW/g; SAR(10 g) = 1.78 mW/g
Maximum value of SAR (measured) = 2.95 mW/g

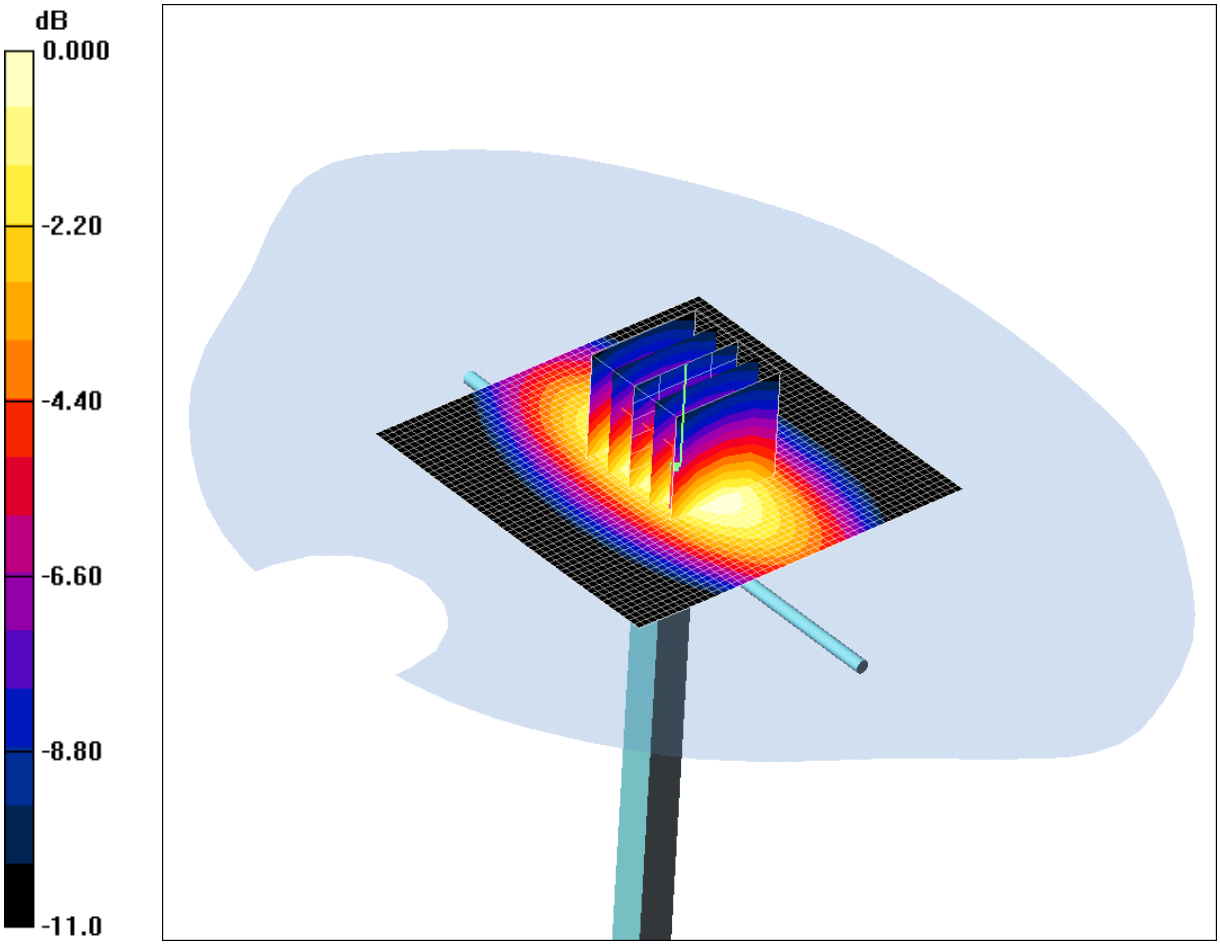
SCN/86599JD02/078: System Performance Check 900MHz Body 01 05 12
Date: 01/05/2012
DUT: Dipole 900 MHz; SN: 124; Type: D900V2; Serial: SN124



0 dB = 2.88mW/g

Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: 900 MHz MSL Medium parameters used: f = 900 MHz; σ = 1.02 mho/m; ε_r = 53.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(8.92, 8.92, 8.92); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 2.98 mW/g
d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 52.9 V/m; Power Drift = 0.052 dB
Peak SAR (extrapolated) = 4.06 W/kg
SAR(1 g) = 2.69 mW/g; SAR(10 g) = 1.74 mW/g
Maximum value of SAR (measured) = 2.88 mW/g

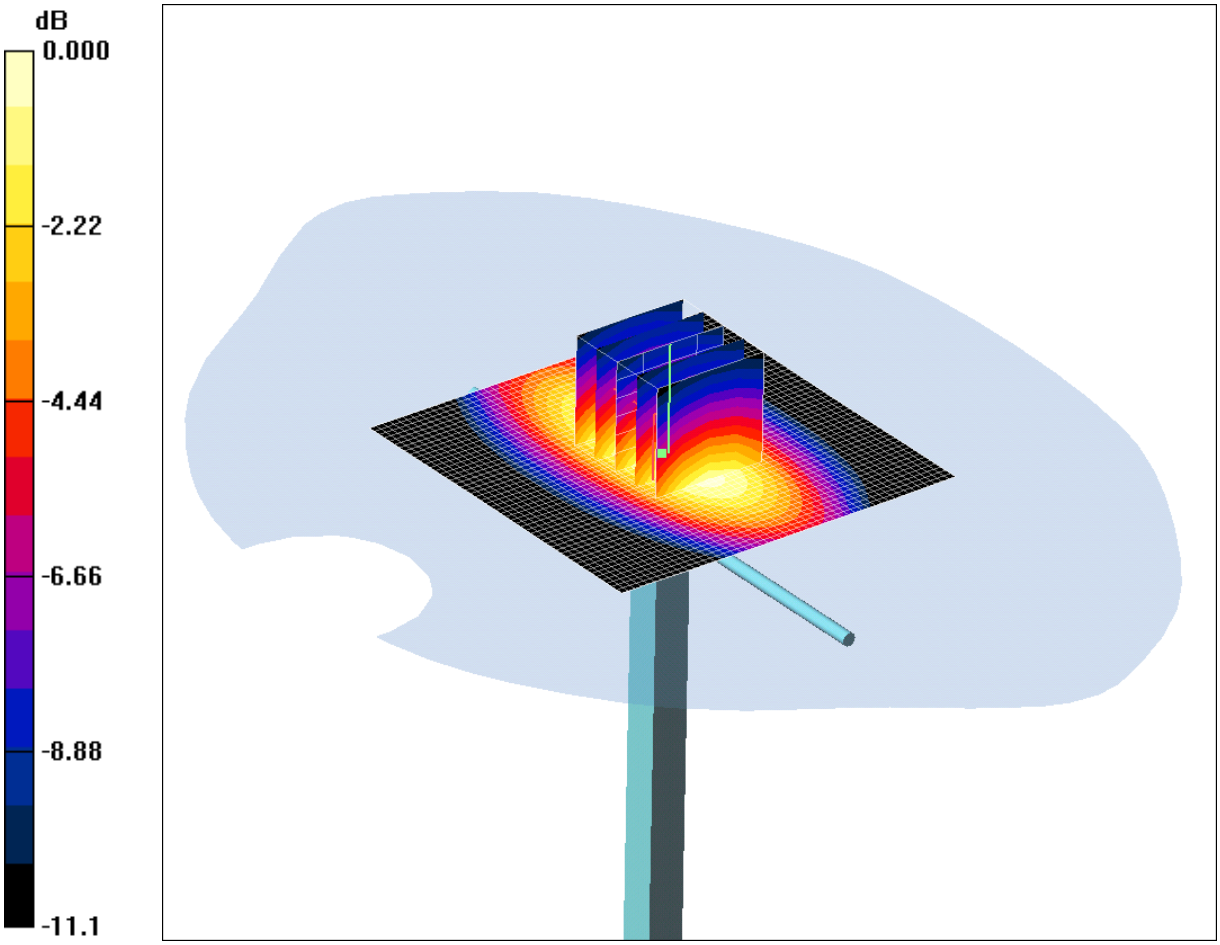
SCN/86599JD02/079: System Performance Check 900MHz Body 16 05 12
Date 16/05/2012
DUT: Dipole 900 MHz; SN: 124; Type: D900V2; Serial: SN124



0 dB = 2.96mW/g

Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: 900 MHz MSL Medium parameters used: f = 900 MHz; σ = 1.03 mho/m; ε_r = 52.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(8.92, 8.92, 8.92); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 3.11 mW/g
d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.3 V/m; Power Drift = 0.067 dB
Peak SAR (extrapolated) = 4.16 W/kg
SAR(1 g) = 2.75 mW/g; SAR(10 g) = 1.78 mW/g
Maximum value of SAR (measured) = 2.96 mW/g

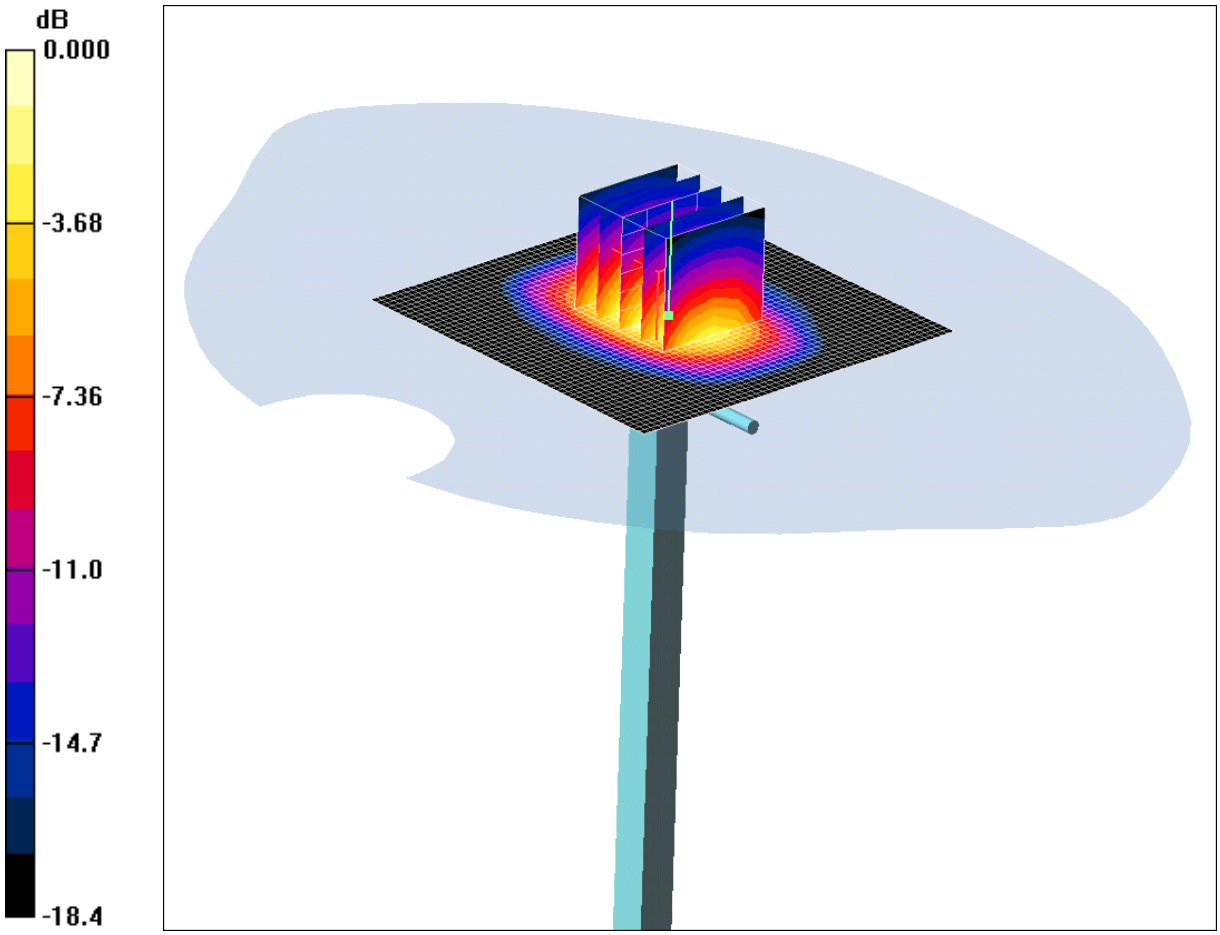
SCN/86599JD02/080: System Performance Check 900MHz Body 18 05 12
Date: 18/05/2012
DUT: Dipole 900 MHz; SN: 124; Type: D900V2; Serial: SN124



0 dB = 2.88mW/g

Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: 900 MHz MSL Medium parameters used: f = 900 MHz; σ = 1.03 mho/m; ε_r = 52.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(8.92, 8.92, 8.92); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=15mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 2.98 mW/g
d=15mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.5 V/m; Power Drift = 0.010 dB
Peak SAR (extrapolated) = 4.06 W/kg
SAR(1 g) = 2.68 mW/g; SAR(10 g) = 1.73 mW/g
Maximum value of SAR (measured) = 2.88 mW/g

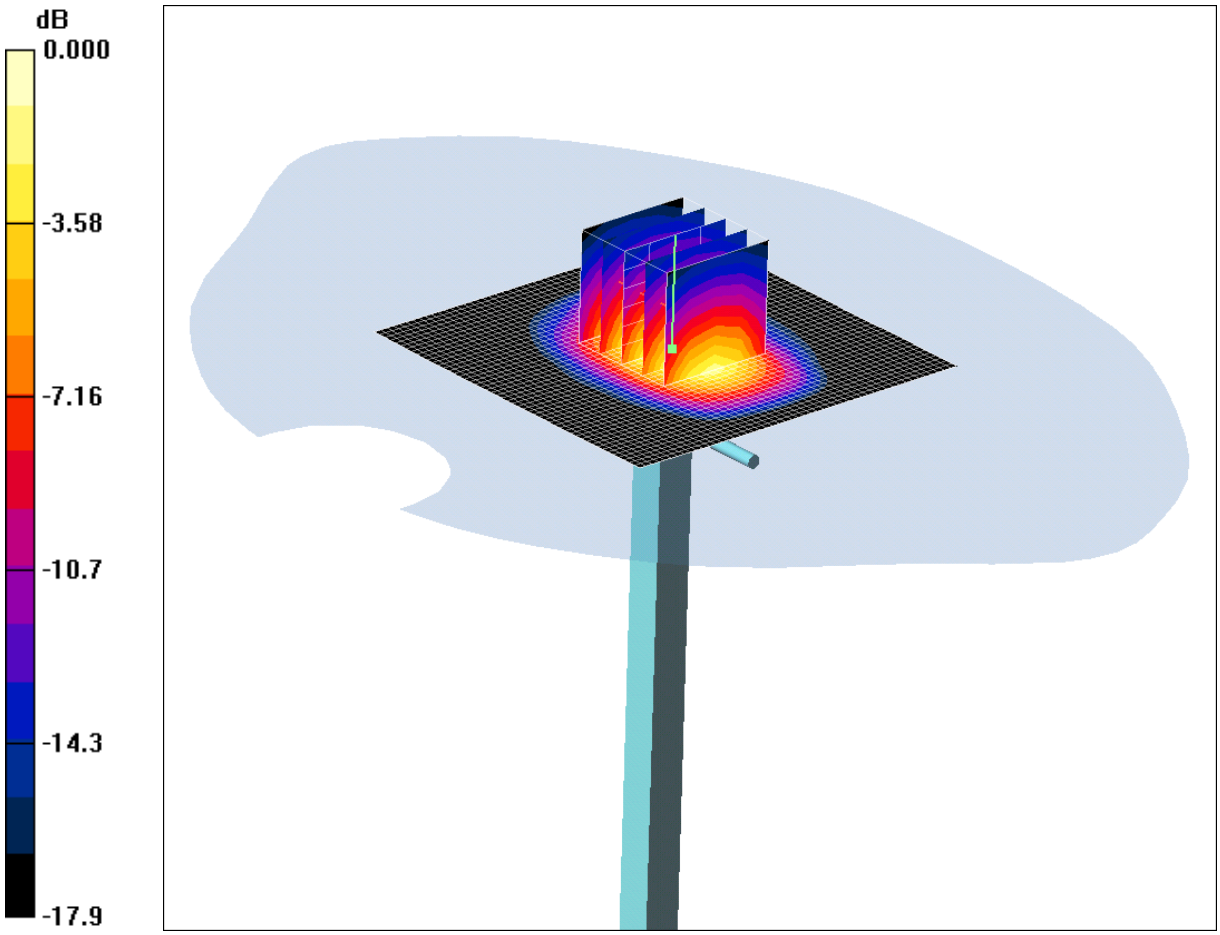
SCN/86599JD02/081: System Performance Check 1900MHz Head 13 04 12
Date: 13/04/2012
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: SN540



0 dB = 11.1mW/g

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 MHz HSL Medium parameters used: f = 1900 MHz; σ = 1.45 mho/m; ε_r = 39.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.78, 7.78, 7.78); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 15.4 mW/g
d=10mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 87.5 V/m; Power Drift = 0.055 dB
Peak SAR (extrapolated) = 18.8 W/kg
SAR(1 g) = 10 mW/g; SAR(10 g) = 5.14 mW/g
Maximum value of SAR (measured) = 11.1 mW/g

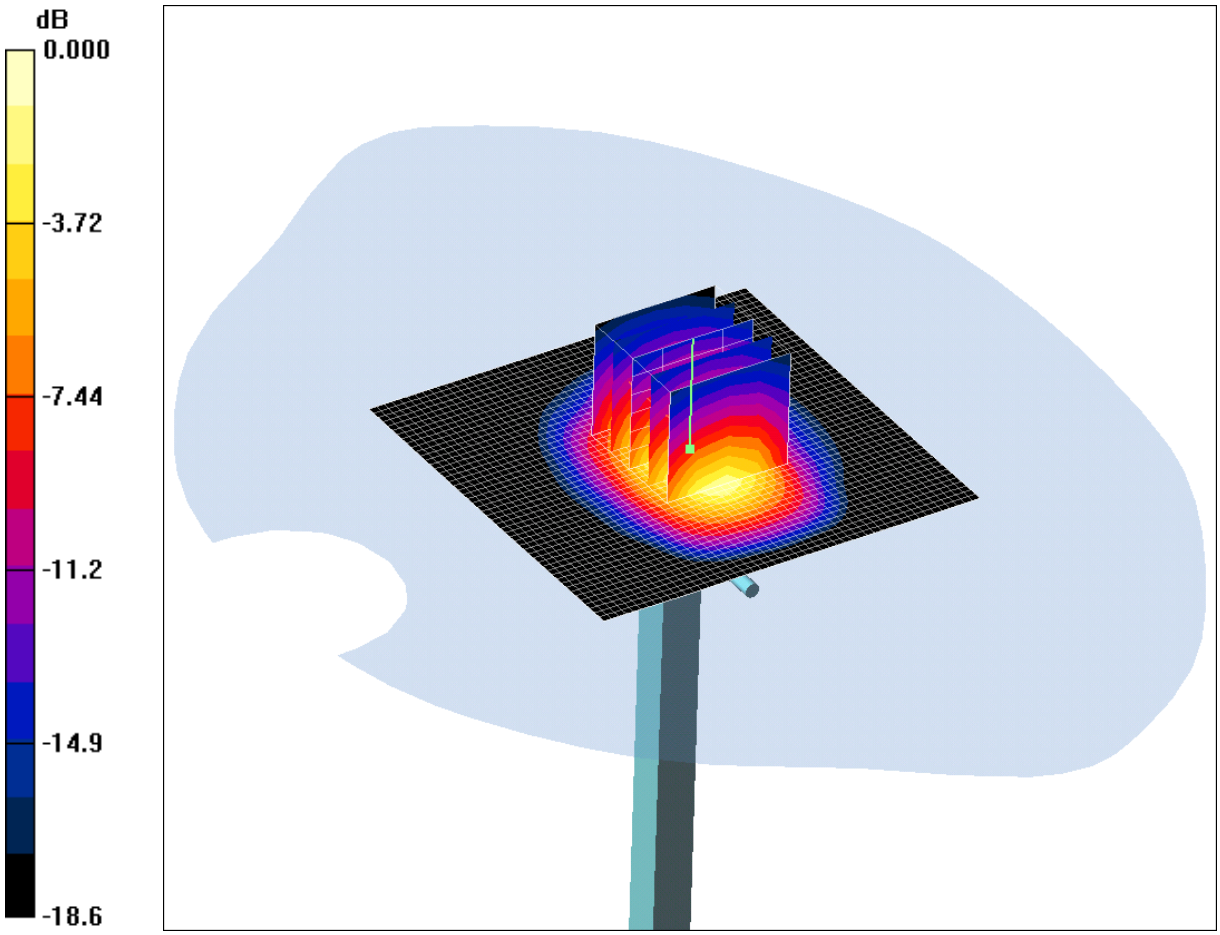
SCN/86599JD02/082: System Performance Check 1900MHz Body 13 04 12
Date: 13/04/2012
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: SN540



0 dB = 11.9mW/g

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 MHz MSL Medium parameters used: f = 1900 MHz; σ = 1.58 mho/m; ε_r = 51.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.31, 7.31, 7.31); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 15.2 mW/g
d=10mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 85.2 V/m; Power Drift = -0.028 dB
Peak SAR (extrapolated) = 19.3 W/kg
SAR(1 g) = 10.6 mW/g; SAR(10 g) = 5.47 mW/g
Maximum value of SAR (measured) = 11.9 mW/g

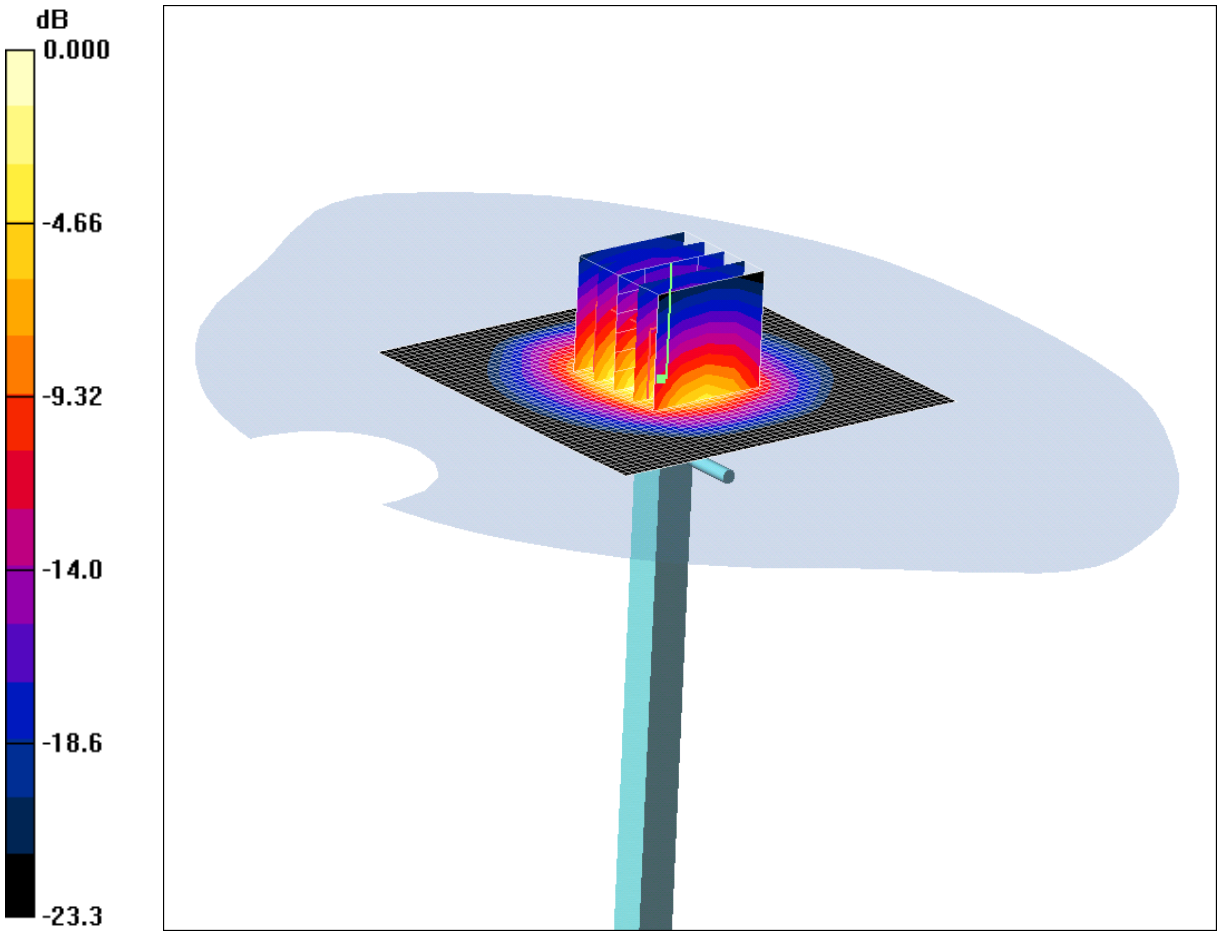
SCN/86599JD02/083: System Performance Check 1900MHz Body 14 04 12
Date 14/04/2012
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: SN540



0 dB = 11.4mW/g

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: 1900 MHz MSL Medium parameters used: f = 1900 MHz; σ = 1.56 mho/m; ε_r = 51.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.31, 7.31, 7.31); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 14.4 mW/g
d=10mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 80.8 V/m; Power Drift = 0.124 dB
Peak SAR (extrapolated) = 18.9 W/kg
SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.27 mW/g
Maximum value of SAR (measured) = 11.4 mW/g

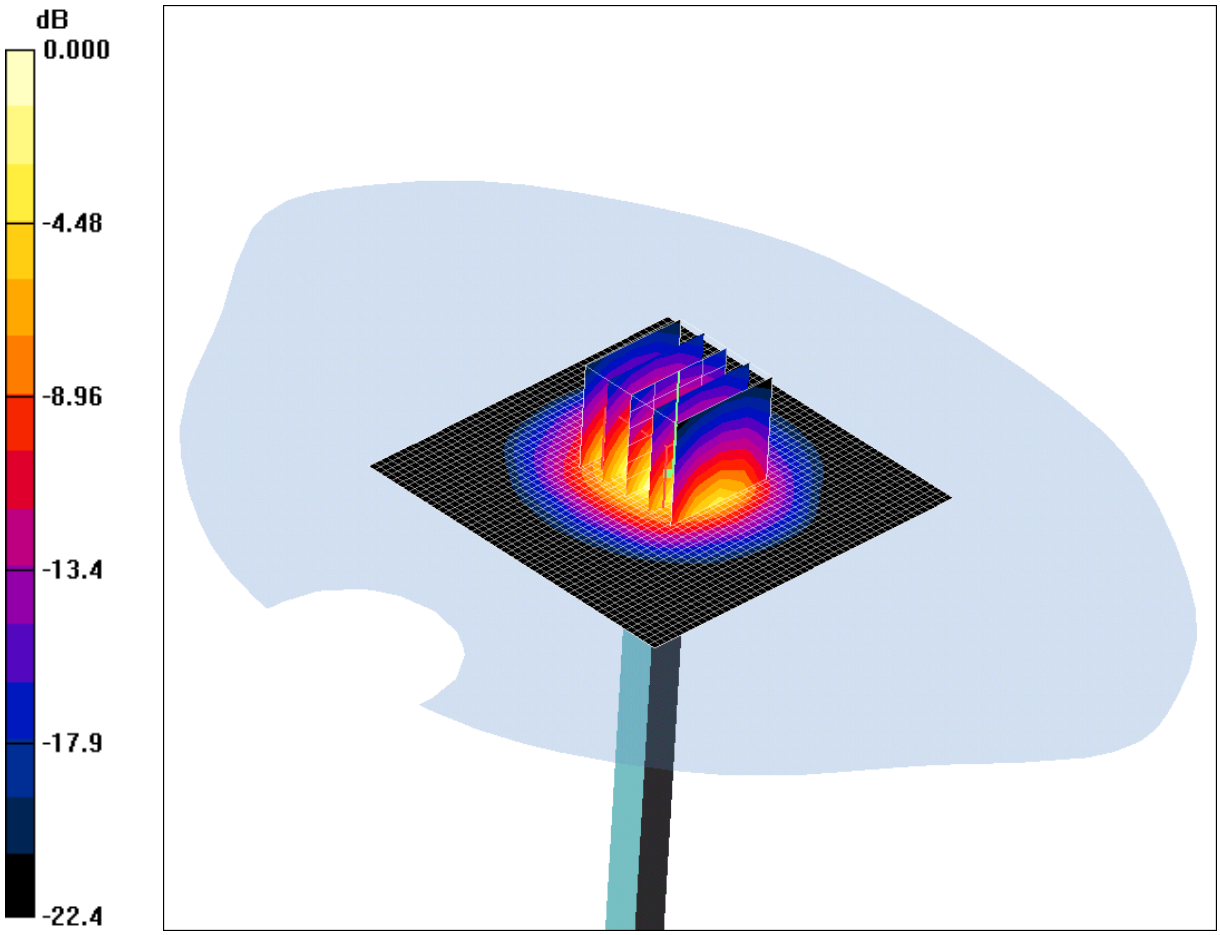
SCN/86599JD02/084: System Performance Check 2450MHz Head 05 05 12
Date: 05/05/2012
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:725



0 dB = 14.4mW/g

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 MHz HSL Medium parameters used: f = 2450 MHz; σ = 1.85 mho/m; ε_r = 38.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.02, 7.02, 7.02); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12a; Type: SAM 4.0; Serial: TP:1193
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 19.9 mW/g
d=10mm, Pin=250mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 87.4 V/m; Power Drift = 0.050 dB
Peak SAR (extrapolated) = 27.4 W/kg
SAR(1 g) = 12.9 mW/g; SAR(10 g) = 5.97 mW/g
Maximum value of SAR (measured) = 14.4 mW/g

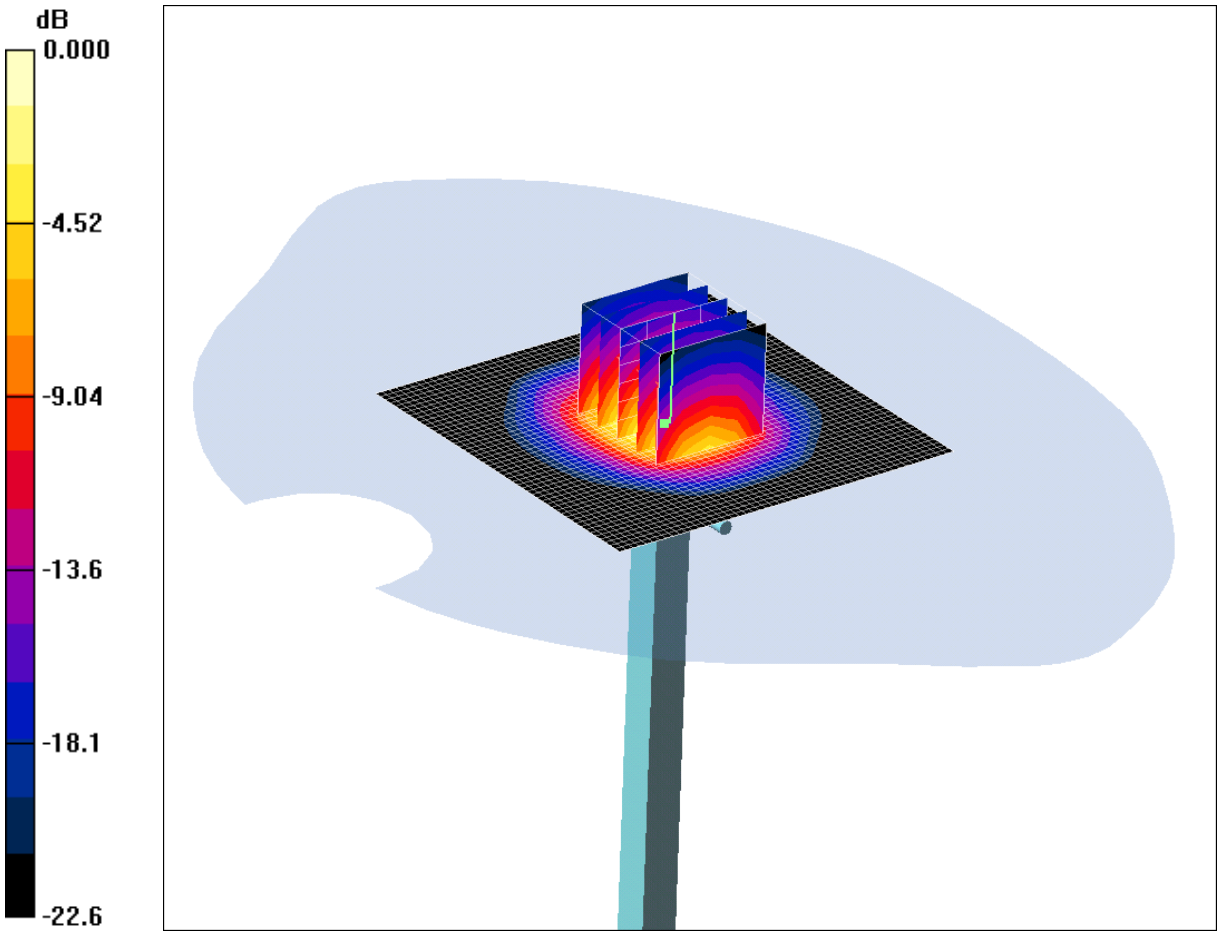
SCN/86599JD02/085: System Performance Check 2450MHz Body 06 05 12
Date: 06/05/2012
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:725



0 dB = 14.6mW/g

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 51.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.15, 7.15, 7.15); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176
d=10mm, Pin=250mW 2/Area Scan 2 (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 16.8 mW/g
d=10mm, Pin=250mW 2/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 81.0 V/m; Power Drift = 0.002 dB
Peak SAR (extrapolated) = 26.6 W/kg
SAR(1 g) = 13 mW/g; SAR(10 g) = 6 mW/g
Maximum value of SAR (measured) = 14.6 mW/g

SCN/86599JD02/086: System Performance Check 2450MHz Body 07 05 12
Date 07/05/2012
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:725



0 dB = 14.4mW/g

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used: f = 2450 MHz; σ = 1.99 mho/m; ε_r = 51.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.15, 7.15, 7.15); Calibrated: 22/09/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn394; Calibrated: 26/01/2012
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1207
- Measurement SW: DASY4, V4.7 Build 55; Postprocessing SW: SEMCAD, V1.8 Build 176

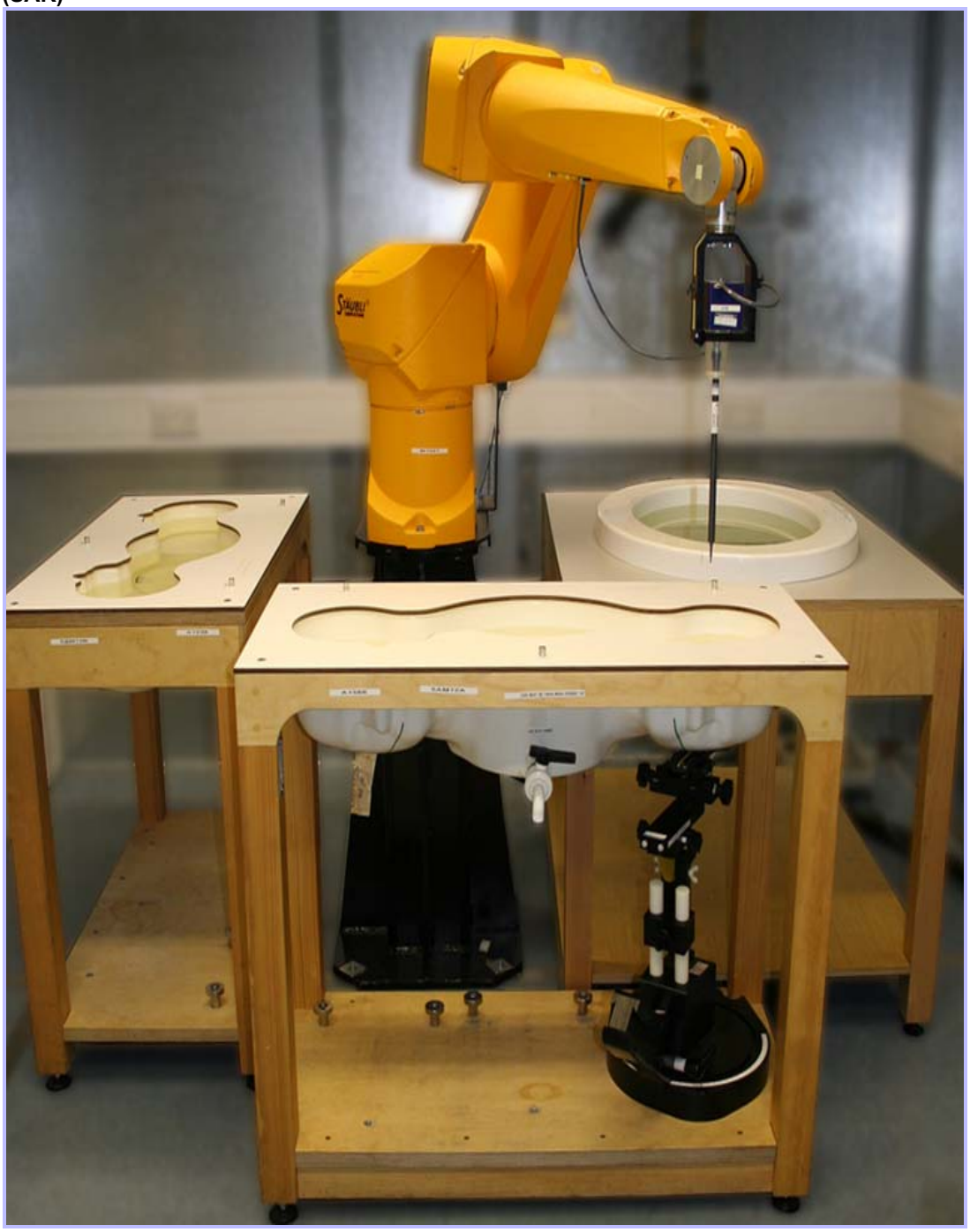
d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm
Maximum value of SAR (interpolated) = 18.5 mW/g
d=10mm, Pin=250mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 84.7 V/m; Power Drift = 0.008 dB
Peak SAR (extrapolated) = 26.0 W/kg
SAR(1 g) = 12.7 mW/g; SAR(10 g) = 5.83 mW/g
Maximum value of SAR (measured) = 14.4 mW/g

Appendix 4. Photographs

This appendix contains the following photographs:

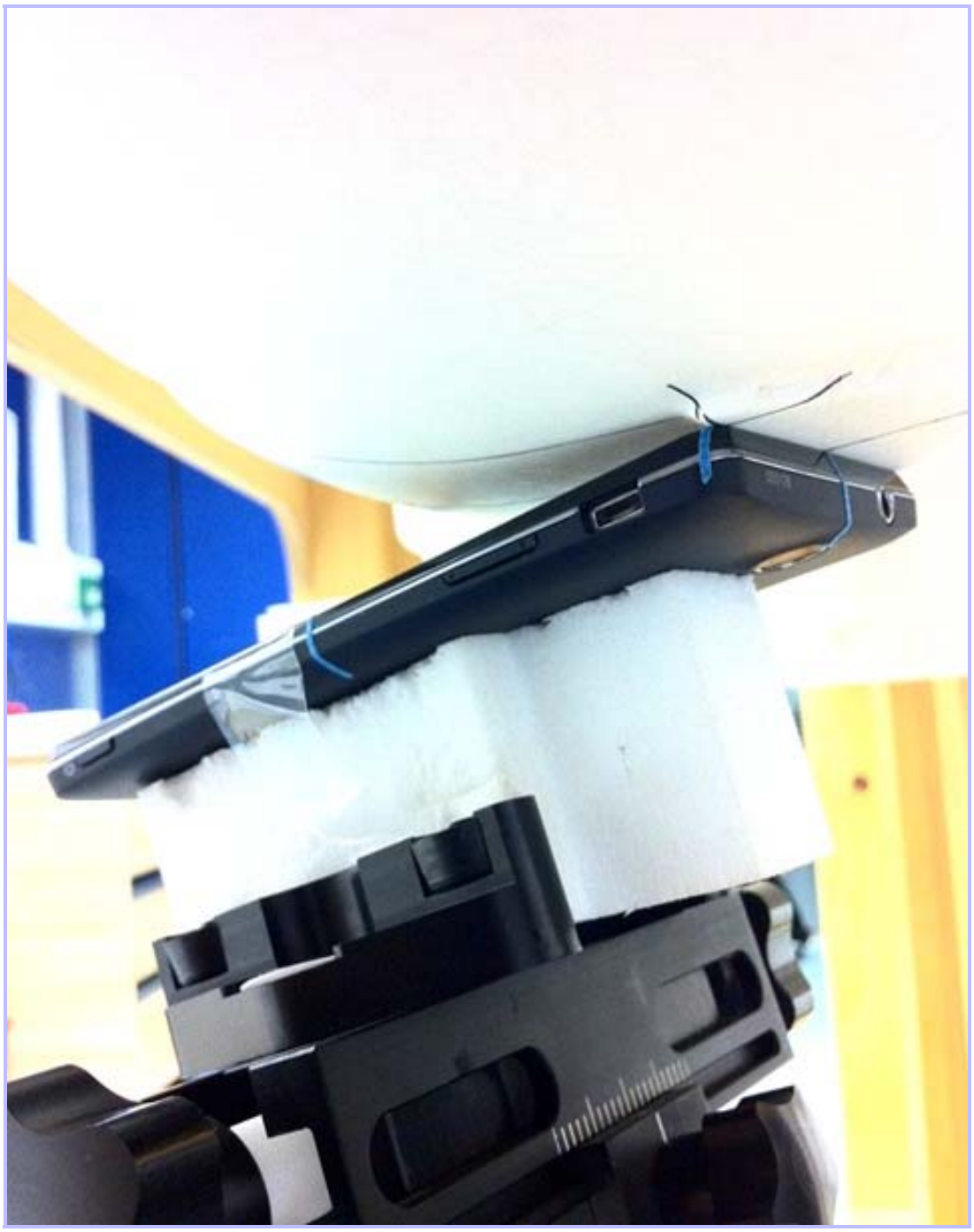
Photo Reference Number	Title
PHT/86599JD02/001	Test configuration for the measurement of Specific Absorption Rate (SAR)
PHT/86599JD02/002	Touch Left
PHT/86599JD02/003	Tilt Left
PHT/86599JD02/004	Touch Right
PHT/86599JD02/005	Tilt Right
PHT/86599JD02/006	Front of EUT Facing Phantom at 10mm separation
PHT/86599JD02/007	Front of EUT Facing Phantom at 15mm separation
PHT/86599JD02/008	Back of EUT Facing Phantom at 10mm separation
PHT/86599JD02/009	Back of EUT Facing Phantom at 15mm separation
PHT/86599JD02/010	Left Hand Side of EUT Facing Phantom
PHT/86599JD02/011	Right Hand Side of EUT Facing Phantom
PHT/86599JD02/012	Top of EUT Facing Phantom
PHT/86599JD02/013	Bottom of EUT Facing Phantom
PHT/86599JD02/014	General Set up of EUT with PHF
PHT/86599JD02/015	Front View of EUT
PHT/86599JD02/016	Back View of EUT
PHT/86599JD02/017	Left Hand Side View of EUT
PHT/86599JD02/018	Right Hand Side View of EUT
PHT/86599JD02/019	Top View of EUT
PHT/86599JD02/020	Bottom View of EUT
PHT/86599JD02/021	Internal View of WWAN Sample
PHT/86599JD02/022	Internal View of WLAN Sample
PHT/86599JD02/023	Front View of Battery
PHT/86599JD02/024	Back View of Battery
PHT/86599JD02/025	PHF View
PHT/86599JD02/026	900 MHz Head Fluid Level
PHT/86599JD02/027	900 MHz Body Fluid Level
PHT/86599JD02/028	1900 MHz Head Fluid Level
PHT/86599JD02/029	1900 MHz Body Fluid Level
PHT/86599JD02/030	2450 MHz Head Fluid Level
PHT/86599JD02/031	2450 MHz Body Fluid Level

PHT/86599JD02/001: Test configuration for the measurement of Specific Absorption Rate (SAR)



PHT/86599JD02/002: Touch Left

PHT/86599JD02/003: Tilt Left



PHT/86599JD02/004: Touch Right

PHT/86599JD02/005: Tilt Right

PHT/86599JD02/006: Front of EUT Facing Phantom at 10mm separation

PHT/86599JD02/007: Front of EUT Facing Phantom at 15mm separation

PHT/86599JD02/008: Back of EUT Facing Phantom at 10mm separation

PHT/86599JD02/009: Back of EUT Facing Phantom at 15mm separation

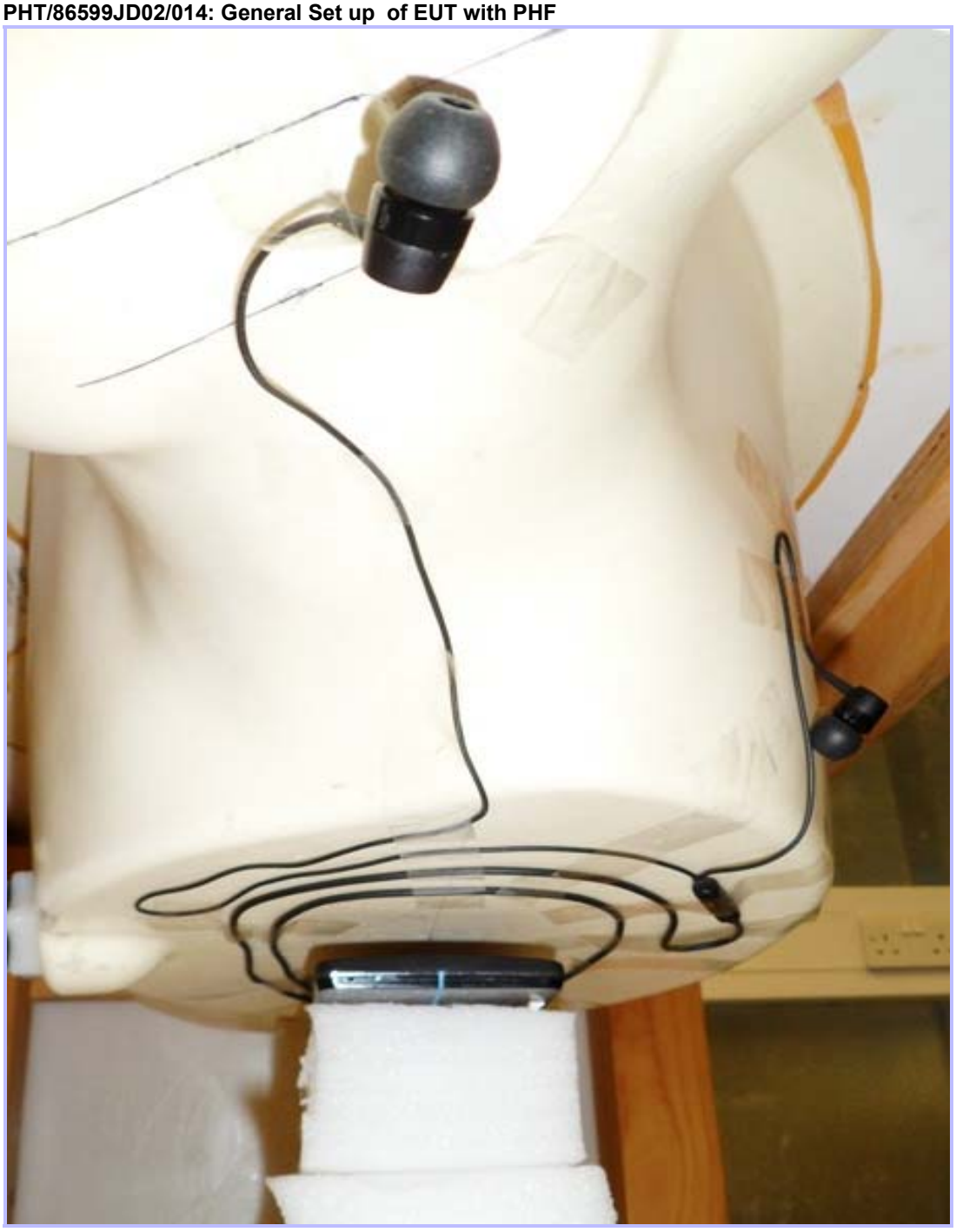
PHT/86599JD02/010: Left Hand Side of EUT Facing Phantom

PHT/86599JD02/011: Right Hand Side of EUT Facing Phantom

PHT/86599JD02/012: Top of EUT Facing Phantom

PHT/86599JD02/013: Bottom of EUT Facing Phantom

PHT/86599JD02/014: General Set up of EUT with PHF



PHT/86599JD02/015: Front View of EUT

PHT/86599JD02/016: Back View of EUT

PHT/86599JD02/017: Left Hand Side View of EUT

PHT/86599JD02/018: Right Hand Side View of EUT

PHT/86599JD02/019: Top View of EUT

PHT/86599JD02/020: Bottom View of EUT

PHT/86599JD02/021: Internal View of WWAN Sample

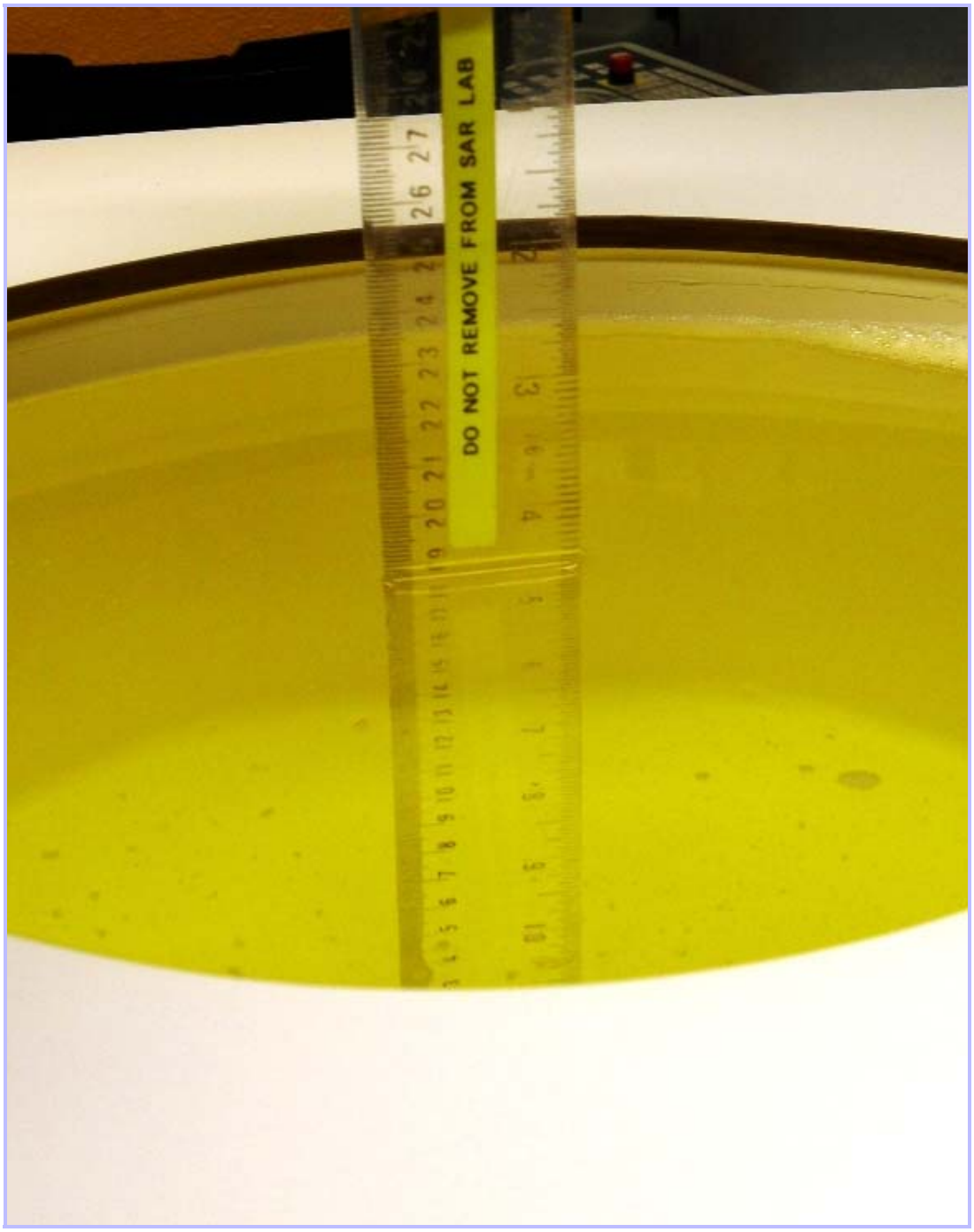
PHT/86599JD02/022: Internal View of WLAN Sample

PHT/86599JD02/023: Front View of Battery

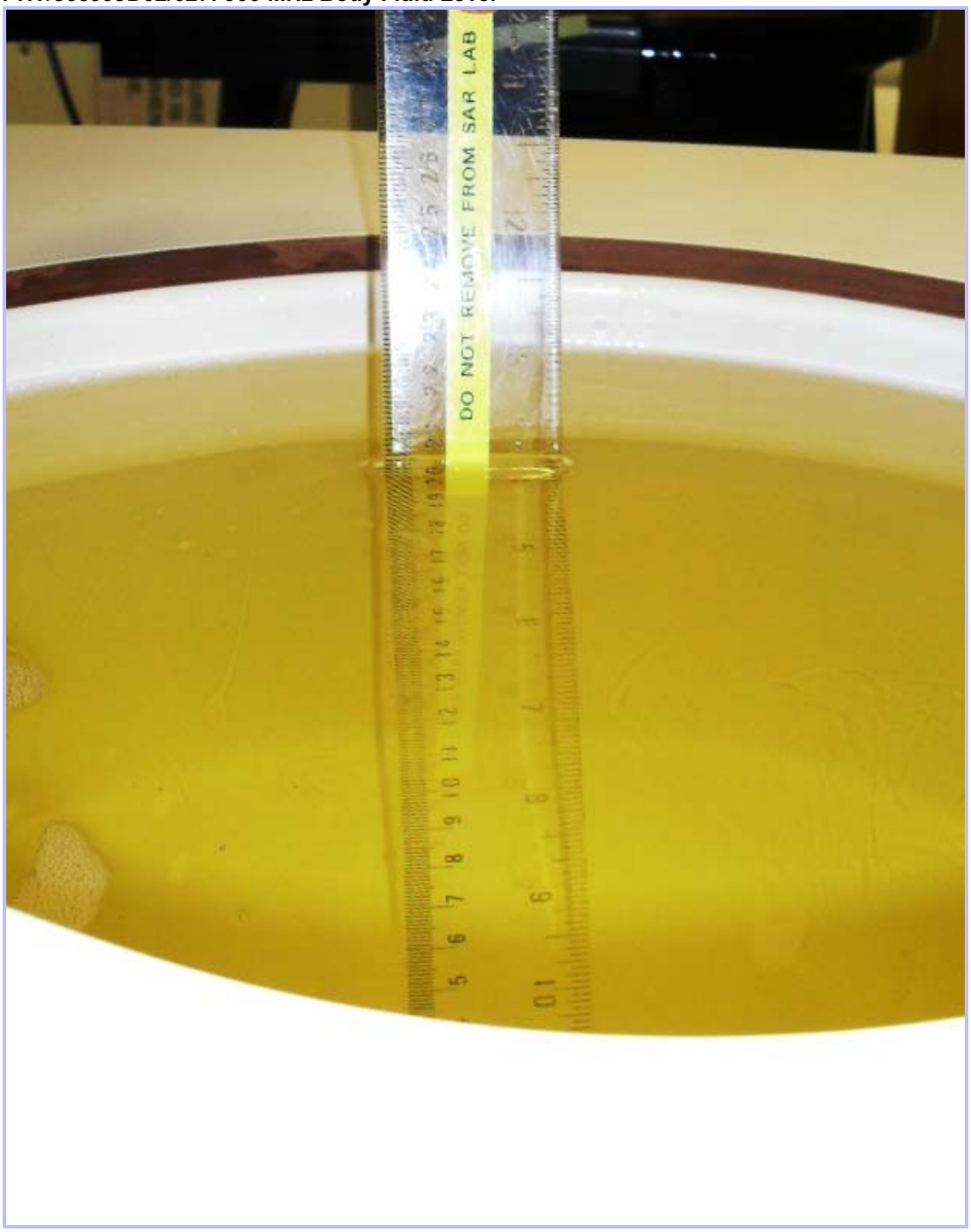
PHT/86599JD02/024: Back View of Battery

PHT/86599JD02/025: PHF View

PHT/86599JD02/026: 900 MHz Head Fluid Level

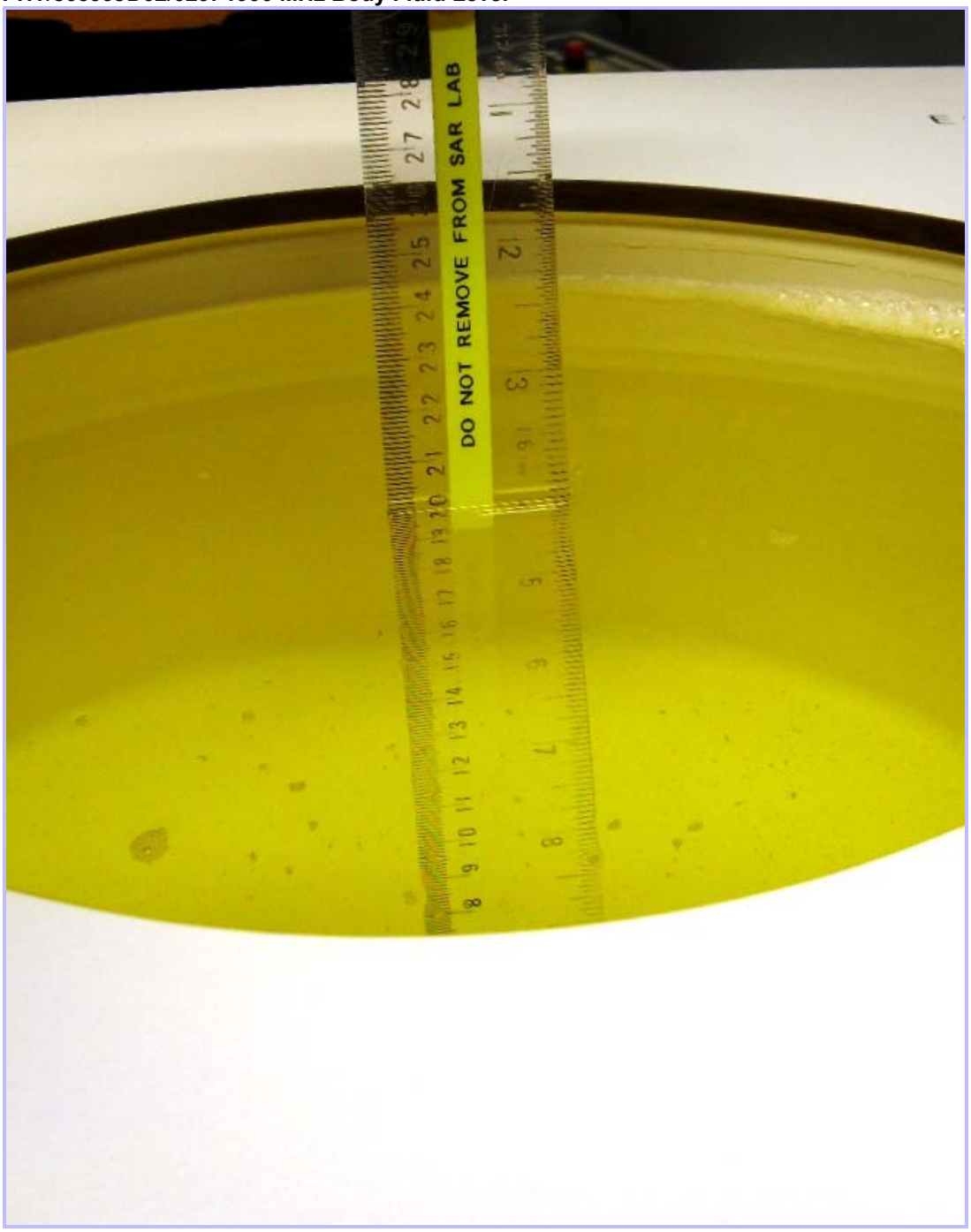


PHT/86599JD02/027: 900 MHz Body Fluid Level



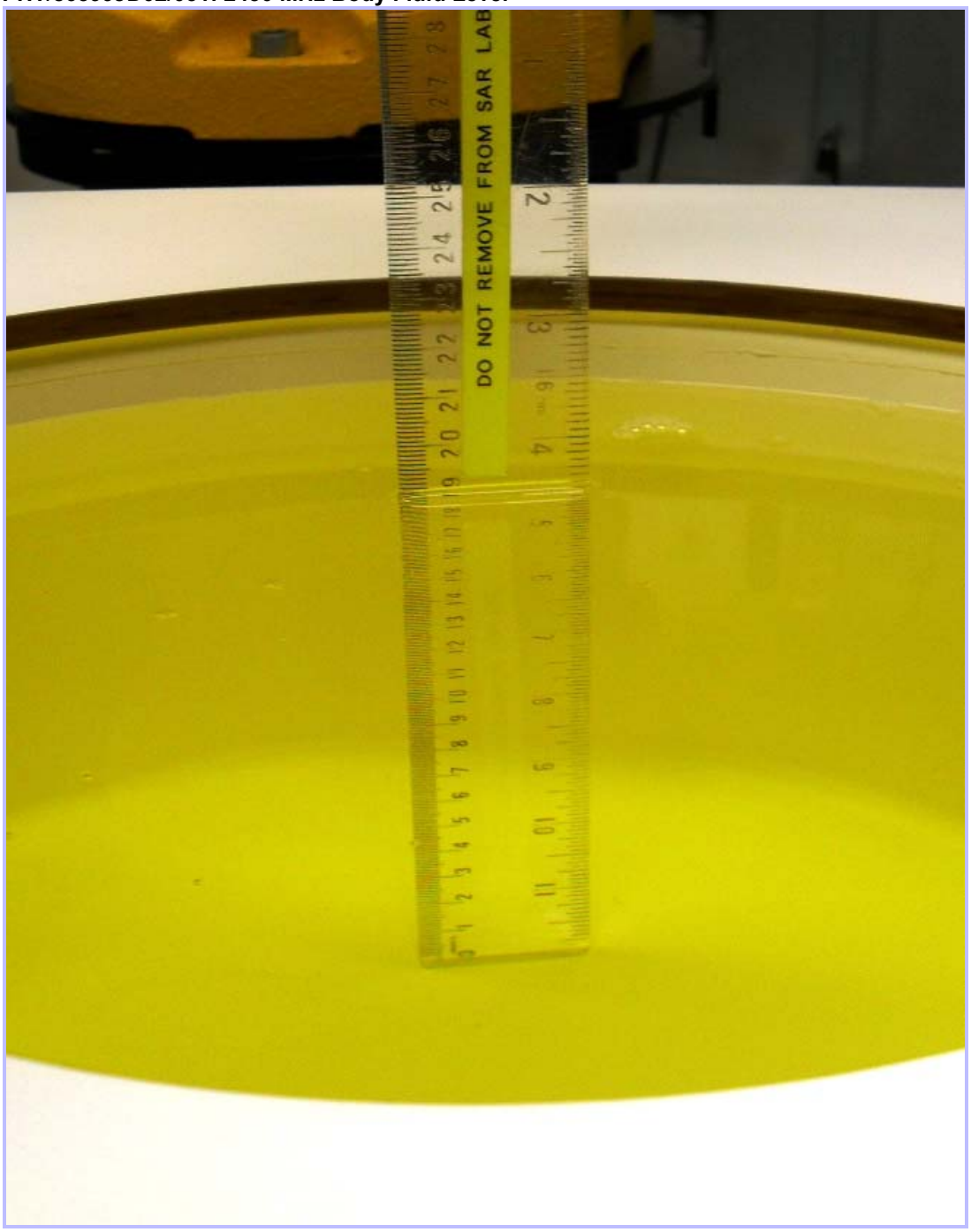
PHT/86599JD02/028: 1900 MHz Head Fluid Level

PHT/86599JD02/029: 1900 MHz Body Fluid Level



PHT/86599JD02/030: 2450 MHz Head Fluid Level

PHT/86599JD02/031: 2450 MHz Body Fluid Level



Appendix 5. System Check

Prior to the assessment, the system was verified in the flat region of the phantom. A 900MHz, 1900MHz and 2450MHz dipole's was used. A forward power of 250 mW was applied to the dipoles and the system was verified to a tolerance of ±5% for the 900MHz, 1900MHz and 2450MHz dipoles. The applicable verification normalised to 1 Watt.

System Check 850/900 Head

Date: 10/04/2012
Validation Dipole and Serial Number: D900V2; SN: 124

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	900	23.0ºC	23.2ºC	ε_r	41.50	42.98	3.56	5.00
				σ	0.97	0.95	-2.46	5.00
				1g SAR	11.00	10.92	-0.73	5.00
				10g SAR	7.01	7.04	0.43	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
128	Low	824.2	ε_r	43.40
			σ	0.90
190	Middle	836.6	ε_r	43.30
			σ	0.91
251	High	848.8	ε_r	43.30
			σ	0.91

Date:20/04/2012
Validation Dipole and Serial Number: D900V2; SN: 124

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	900	23.0ºC	21.3ºC	ε_r	41.50	42.94	3.46	5.00
				σ	0.97	0.93	-4.60	5.00
				1g SAR	11.00	10.88	-1.09	5.00
				10g SAR	7.01	7.08	1.00	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
4132	Low	826.4	ε_r	43.40
			σ	0.88
4183	Middle	836.6	ε_r	43.30
			σ	0.88
4233	High	846.6	ε_r	43.30
			σ	0.89

System Check (Continued) 850/900 Body

Date: 11/04/2012
Validation Dipole and Serial Number: D900V2; SN: 124

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	23.0ºC	22.3ºC	ε_r	55.00	53.49	-2.74	5.00
				σ	1.05	1.06	0.48	5.00
				1g SAR	11.10	10.88	-1.98	5.00
				10g SAR	7.14	7.04	-1.40	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
128	Low	824.2	ε_r	53.80
			σ	1.01
190	Middle	836.6	ε_r	53.80
			σ	1.02
251	High	848.8	ε_r	53.70
			σ	1.03

Date: 12/04/2012
Validation Dipole and Serial Number: D900V2; SN: 124

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	23.0ºC	22.3ºC	ε_r	55.00	53.49	-2.74	5.00
				σ	1.05	1.06	0.48	5.00
				1g SAR	11.10	11.48	3.42	5.00
				10g SAR	7.14	7.40	3.64	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
128	Low	824.2	ε_r	53.80
			σ	1.01
190	Middle	836.6	ε_r	53.80
			σ	1.02
251	High	848.8	ε_r	53.70
			σ	1.03

System Check (Continued) 850/900 Body

Date: 20/04/2012
Validation Dipole and Serial Number: D900V2; SN: 124

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	23.0ºC	21.8ºC	ε_r	55.00	52.68	-4.22	5.00
				σ	1.05	1.04	-1.29	5.00
				1g SAR	11.10	11.04	-0.54	5.00
				10g SAR	7.14	7.12	-0.28	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
4132	Low	826.4	ε_r	53.00
			σ	0.99
4183	Middle	836.6	ε_r	53.70
			σ	0.99
4233	High	846.6	ε_r	52.90
			σ	1.01

Date: 30/04/2012
Validation Dipole and Serial Number: D900V2; SN: 124

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	23.0ºC	20.8ºC	ε_r	55.00	53.49	-2.74	5.00
				σ	1.05	1.02	-2.52	5.00
				1g SAR	11.10	10.92	-1.62	5.00
				10g SAR	7.14	7.12	-0.28	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
4132	Low	826.4	ε_r	53.80
			σ	0.98
4183	Middle	836.6	ε_r	53.70
			σ	0.99
4233	High	846.6	ε_r	53.70
			σ	0.99

System Check (Continued) 850/900 Body

Date: 01/05/2012
Validation Dipole and Serial Number: D900V2; SN: 124

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	23.0ºC	20.8ºC	ε_r	55.00	53.49	-2.74	5.00
				σ	1.05	1.02	-2.52	5.00
				1g SAR	11.10	10.76	-3.06	5.00
				10g SAR	7.14	6.96	-2.52	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
4132	Low	826.4	ε_r	53.80
			σ	0.98
4183	Middle	836.6	ε_r	53.70
			σ	0.99
4233	High	846.6	ε_r	53.70
			σ	0.99

Date: 16/05/2012
Validation Dipole and Serial Number: D900V2; SN: 124

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	24.0 ºC	21.0 ºC	ε_r	55.00	52.88	-3.86	5.00
				σ	1.05	1.03	-1.96	5.00
				1g SAR	11.10	11.00	-0.90	5.00
				10g SAR	7.14	7.12	-0.28	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
4132	Low	826.4	ε_r	53.20
			σ	0.98
4183	Middle	836.6	ε_r	53.20
			σ	0.99
4233	High	846.6	ε_r	53.10
			σ	1.00

System Check (Continued) 850/900 Body

Date: 18/05/2012
Validation Dipole and Serial Number: D900V2; SN: 124

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	900	24.00ºC	22.8ºC	ε_r	55.00	53.93	-3.96	5.00
				σ	1.05	1.03	-2.06	5.00
				1g SAR	11.10	10.72	-3.42	5.00
				10g SAR	7.14	6.92	-3.08	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
4132	Low	826.4	ε_r	53.30
			σ	0.98
4183	Middle	836.6	ε_r	53.20
			σ	0.99
4233	High	846.6	ε_r	53.10
			σ	1.00

System Check (Continued) 1900 Head

Date: 13/04/2012
Validation Dipole and Serial Number: D1900V2; SN: 540

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	1900	23.0ºC	22.9ºC	ε_r	40.00	39.42	-1.45	5.00
				σ	1.40	1.45	3.64	5.00
				1g SAR	40.30	40.00	-0.74	5.00
				10g SAR	21.00	20.56	-2.10	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
512	Low	1850.2	ε_r	39.60
			σ	1.40
661	Middle	1880	ε_r	39.50
			σ	1.43
810	High	1909.8	ε_r	39.40
			σ	1.46

System Check (Continued) 1900 Body

Date: 13/04/2012
Validation Dipole and Serial Number: D1900V2; SN: 540

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	23.0ºC	22.1ºC	ε_r	53.30	51.37	-3.63	5.00
				σ	1.52	1.58	4.01	5.00
				1g SAR	40.70	42.40	4.18	5.00
				10g SAR	21.60	21.88	1.30	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
512	Low	1850.2	ε_r	51.50
			σ	1.53
661	Middle	1880	ε_r	51.40
			σ	1.56
810	High	1909.8	ε_r	51.30
			σ	1.59

Date: 14/04/2012
Validation Dipole and Serial Number: D1900V2; SN: 540

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	1900	23.0ºC	23.5ºC	ε_r	53.30	51.40	-3.57	5.00
				σ	1.52	1.56	2.41	5.00
				1g SAR	40.70	40.80	0.25	5.00
				10g SAR	21.60	21.08	-2.41	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
512	Low	1850.2	ε_r	51.50
			σ	1.51
661	Middle	1880	ε_r	51.40
			σ	1.54
810	High	1909.8	ε_r	51.40
			σ	1.57

System Check (Continued) 2450 Head

Date: 05/05/2012
Validation Dipole and Serial Number: D2450V2; SN: 725

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Head	2450	23.0 ºC	21.7 ºC	ε_r	39.20	38.57	-1.60	5.00
				σ	1.80	1.85	2.74	5.00
				1g SAR	52.90	51.60	-2.46	5.00
				10g SAR	24.70	23.88	-3.32	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
1	Low	2412	ε_r	38.70
			σ	1.81
6	Middle	2437	ε_r	38.60
			σ	1.84
11	High	2462	ε_r	38.50
			σ	1.87

System Check (Continued) 2450 Body

Date: 06/05/2012
Validation Dipole and Serial Number: D2450V2; SN: 725

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2450	23.0 ºC	23.0 ºC	ε_r	52.70	51.91	-1.50	5.00
				σ	1.95	1.99	2.11	5.00
				1g SAR	51.90	52.00	0.19	5.00
				10g SAR	24.10	24.00	-0.41	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
1	Low	2412	ε_r	52.00
			σ	1.94
6	Middle	2437	ε_r	52.00
			σ	1.98
11	High	2462	ε_r	51.90
			σ	2.01

Date: 07/05/2012
Validation Dipole and Serial Number: D2450V2; SN: 725

Simulant	Frequency (MHz)	Room Temp	Liquid Temp	Parameters	Target Value	Measured Value	Deviation (%)	Limit (%)
Body	2450	23.0 ºC	23.0 ºC	ε_r	52.70	51.91	-1.50	5.00
				σ	1.95	1.99	2.11	5.00
				1g SAR	51.90	50.80	-2.12	5.00
				10g SAR	24.10	23.32	-3.24	5.00

Dielectrics for Frequencies Tested

Channel Number	Channel Description	Frequency (MHz)	Parameters	
1	Low	2412	ε_r	52.00
			σ	1.94
6	Middle	2437	ε_r	52.00
			σ	1.98
11	High	2462	ε_r	51.90
			σ	2.01

Appendix 6. Simulated Tissues

The body mixture consists of water, Polysorbate 20 and salt. Visual inspection is made to ensure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the tissue.

ingredient	Frequency
	835/850/900 MHz Head
De-Ionized Water	52.87
Polysorbate 20 (Tween 20)	46.10
Salt	1.03

Ingredient	Frequency
	835/850/900 MHz Body
De-Ionized Water	71.30
Polysorbate 20 (Tween 20)	28.00
Salt	0.70

Ingredient	Frequency
	1800/1900 MHz Head
De-Ionized Water	55.40
Polysorbate 20 (Tween 20)	44.22
Salt	0.38

Ingredient	Frequency
	1800/1900 MHz Body
De-Ionized Water	71.50
Polysorbate 20 (Tween 20)	28.00
Salt	0.50

Ingredient	Frequency
	2450 MHz Head
De-Ionized Water	55.75
Polysorbate 20 (Tween 20)	45.25

Ingredient	Frequency
	2450 MHz Body
De-Ionized Water	71.70
Polysorbate 20 (Tween 20)	28.00
Salt	0.30

Appendix 7. DASY4 System Details

A.7.1. DASY4 SAR Measurement System

RFI Global Services Ltd, SAR measurement facility utilises the Dosimetric Assessment System (DASY™) manufactured by Schmid & Partner Engineering AG (SPEAG™) of Zurich, Switzerland. The DASY4 system is comprised of the robot controller, computer, near-field probe, probe alignment sensor, and the SAM phantom containing brain or muscle equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF). A cell controller system contains the power supply, robot controller; teach pendant (Joystick), and remote control. This is used to drive the robot motors. The Staubli robot is connected to the cell controller to allow software manipulation of the robot. The data acquisition electronics (DAE) performs signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection etc. The DAE is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card. The DAE3 utilises a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching mulitplexer, a fast 16-bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe-mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

A.7.2. DASY4 SAR System Specifications

Robot System	
Positioner:	Stäubli Unimation Corp. Robot Model: RX90L
Repeatability:	0.025 mm
No. of Axis:	6
Serial Number:	F00/SD89A1/A/01
Reach:	1185 mm
Payload:	3.5 kg
Control Unit:	CS7
Programming Language:	V+
Data Acquisition Electronic (DAE) System	
Serial Number:	DAE3 SN:394
PC Controller	
PC:	Dell Precision 340
Operating System:	Windows 2000
Data Card:	DASY4 Measurement Server
Serial Number:	1080
Data Converter	
Features:	Signal Amplifier, multiplexer, A/D converted and control logic.
Software:	DASY4 Software
Connecting Lines:	Optical downlink for data and status info. Optical uplink for commands and clock.
PC Interface Card	
Function:	24 bit (64 MHz) DSP for real time processing Link to DAE3 16 nit A/D converter for surface detection system serial link to robot direct emergency stop output for robot.

DASY4 SAR System Specifications (Continued)	
E-Field Probe	
Model:	EX3DV3
Serial No:	3814
Construction:	Triangular core
Frequency:	10 MHz to >6 GHz
Linearity:	±0.2 dB (30 MHz to 6 GHz)
Probe Length (mm):	330
Probe Diameter (mm):	12
Tip Length (mm):	20
Tip Diameter (mm):	2.5
Sensor X Offset (mm):	1
Sensor Y Offset (mm):	1
Sensor Z Offset (mm):	1
E-Field Probe	
Model:	ET3DV6
Serial No:	1528
Construction:	Triangular core
Frequency:	735 MHz to >3.00 GHz
Linearity:	±0.2 dB (735 MHz to 3.00 GHz)
Probe Length (mm):	337
Probe Diameter (mm):	10
Tip Length (mm):	10
Tip Diameter (mm):	6.8
Sensor X Offset (mm):	2.7
Sensor Y Offset (mm):	2.7
Sensor Z Offset (mm):	2.7
Phantom	
Phantom:	SAM Phantom
Shell Material:	Fibreglass
Thickness:	2.0 ±0.1 mm