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Test Laboratory: Compliance Certification Services Inc.

Date: 6/1/2017

WiFi 802.11 b-Body Bottom CH1 Chain0 Southstar Antenna**DUT: Notebockt Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11b (0); Communication System Band: ISM 2.4GHz Band;

Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.847$ S/m; $\epsilon_r = 51.743$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(7.07, 7.07, 7.07); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Chain0 Southstar Antenna/Area Scan (10x13x1):

Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.784 W/kg

WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Chain0 Southstar Antenna/Zoom Scan (7x7x5)/Cube

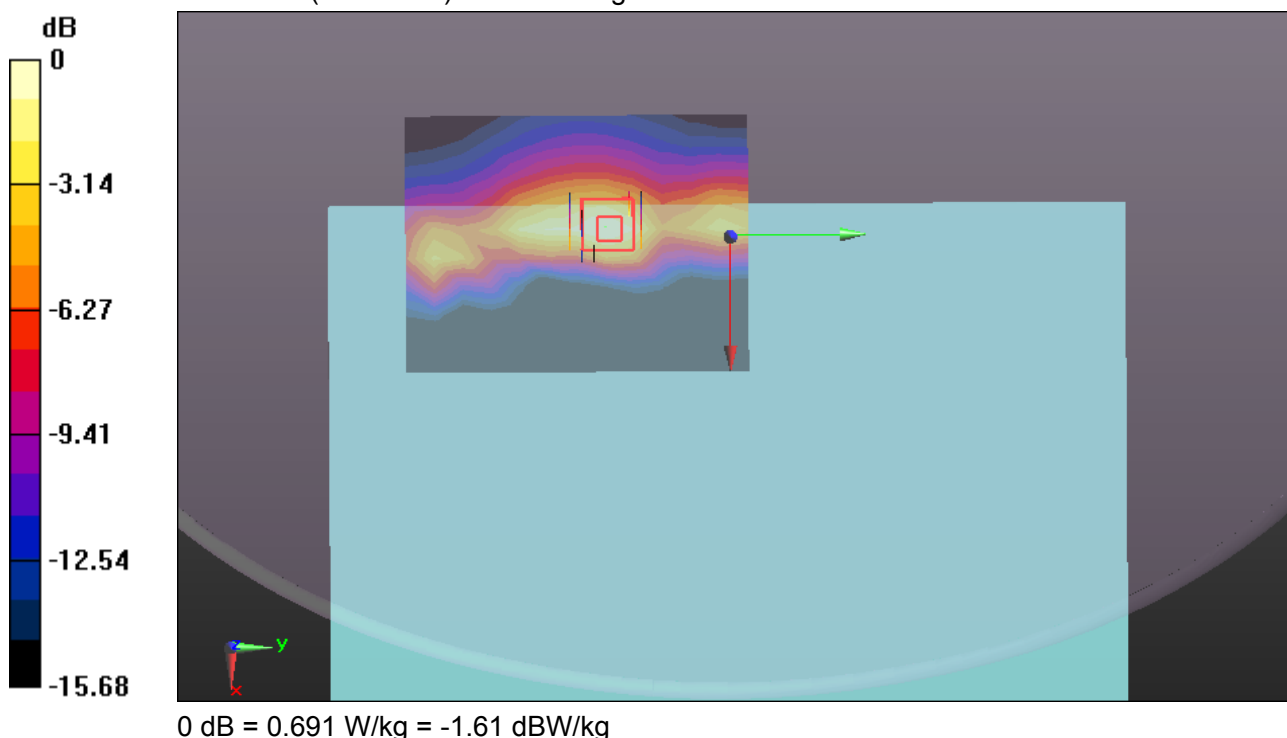
0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.80 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.941 W/kg

SAR(1 g) = 0.504 W/kg; SAR(10 g) = 0.249 W/kg

Maximum value of SAR (measured) = 0.691 W/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 6/1/2017

WiFi 802.11 b-Body Bottom CH6 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11b (0); Communication System Band: ISM 2.4GHz Band;

Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.88$ S/m; $\epsilon_r = 51.688$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(7.07, 7.07, 7.07); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH6 Chain0 Southstar Antenna/Area Scan (10x13x1):

Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.862 W/kg

WiFi 2.4GHz/IEEE802.11b Body Bottom CH6 Chain0 Southstar Antenna/Zoom Scan (7x7x5)/Cube

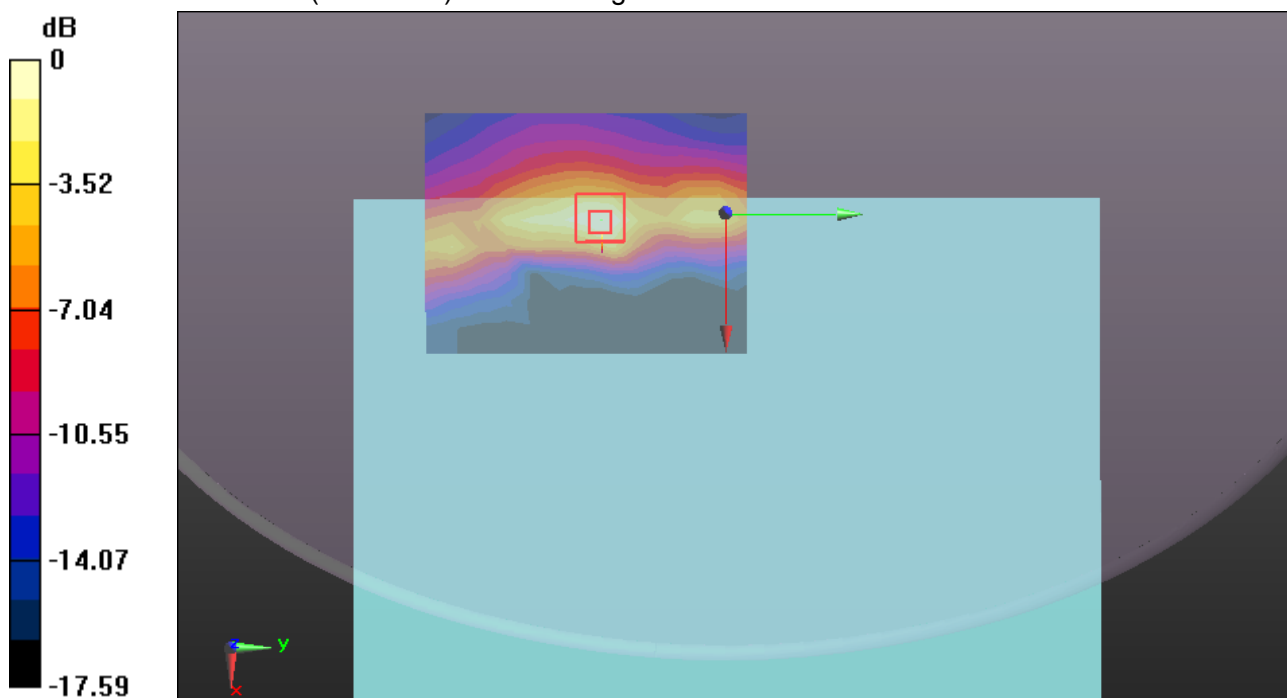
0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.59 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.524 W/kg; SAR(10 g) = 0.208 W/kg

Maximum value of SAR (measured) = 0.879 W/kg



0 dB = 0.879 W/kg = -0.56 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/1/2017

WiFi 802.11 b-Body Bottom CH11 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11b (0); Communication System Band: ISM 2.4GHz Band;

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.908$ S/m; $\epsilon_r = 51.614$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(7.07, 7.07, 7.07); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Chain0 Southstar Antenna/Area Scan (10x13x1):

Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.942 W/kg

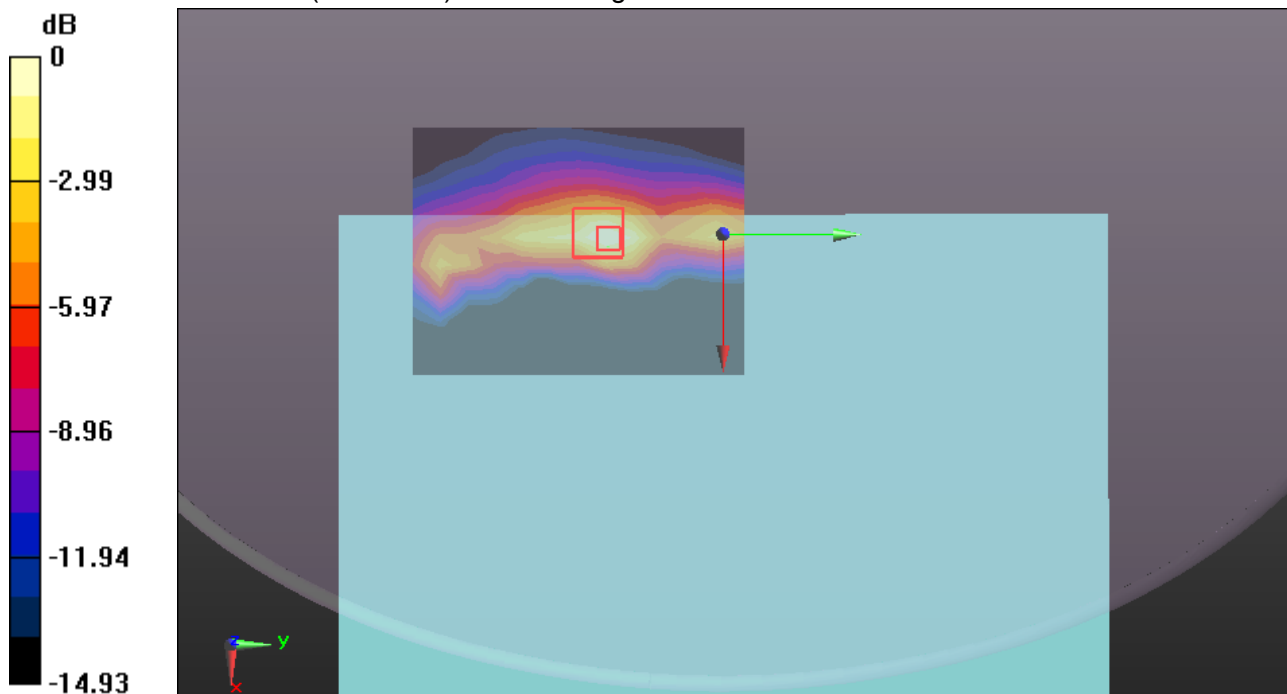
WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Chain0 Southstar Antenna/Zoom Scan**(7x7x5)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.68 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 2.21 W/kg

SAR(1 g) = 0.607 W/kg; SAR(10 g) = 0.287 W/kg

Maximum value of SAR (measured) = 0.859 W/kg



0 dB = 0.859 W/kg = -0.66 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH52 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band II; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 5.265$ S/m; $\epsilon_r = 48.26$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.6, 4.6, 4.6); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH52 Chain0 Southstar Antenna/Area Scan (11x15x1):

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

Maximum value of SAR (measured) = 2.16 W/kg

WIFI/IEEE802.11a Body Bottom CH52 Chain0 Southstar Antenna/Zoom Scan (7x7x7)/Cube 0:

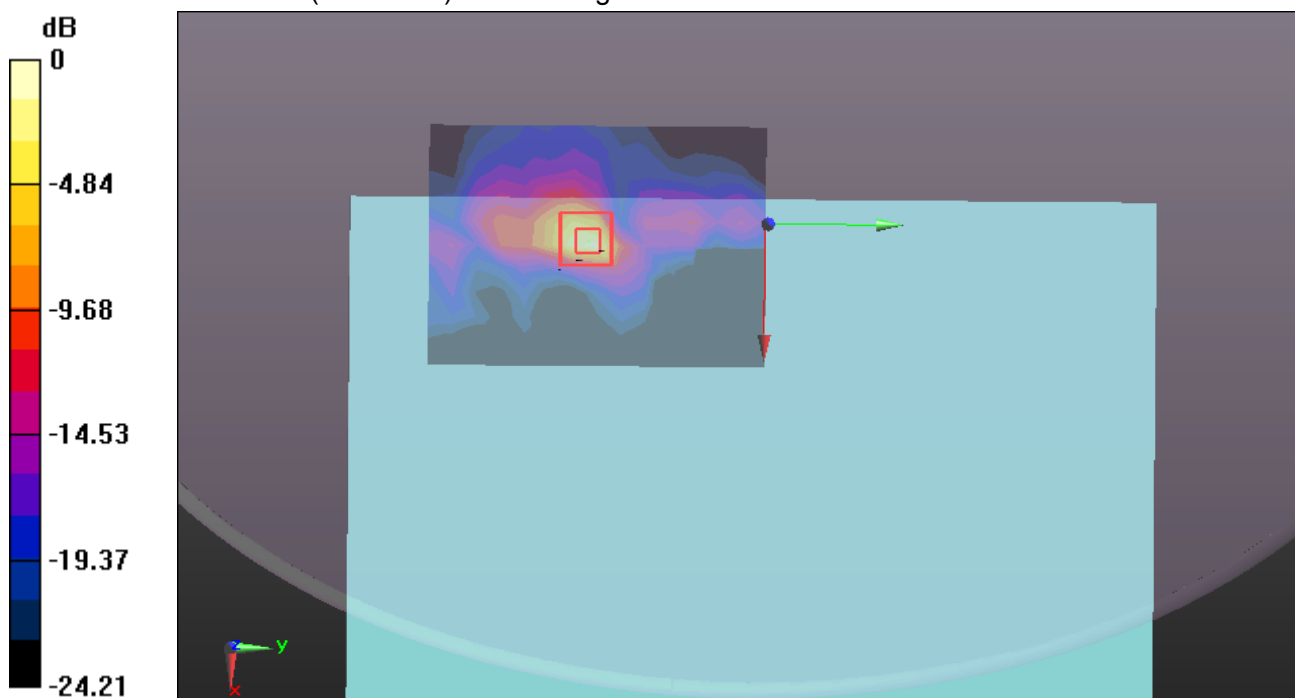
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 3.779 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 4.40 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.269 W/kg

Maximum value of SAR (measured) = 2.68 W/kg



0 dB = 2.68 W/kg = 4.28 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH56 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band II; Frequency: 5280 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5280 \text{ MHz}$; $\sigma = 5.342 \text{ S/m}$; $\epsilon_r = 48.389$; $\rho = 1000 \text{ kg/m}^3$

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.6, 4.6, 4.6); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH56 Chain0 Southstar Antenna/Area Scan (11x15x1):Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.61 W/kg

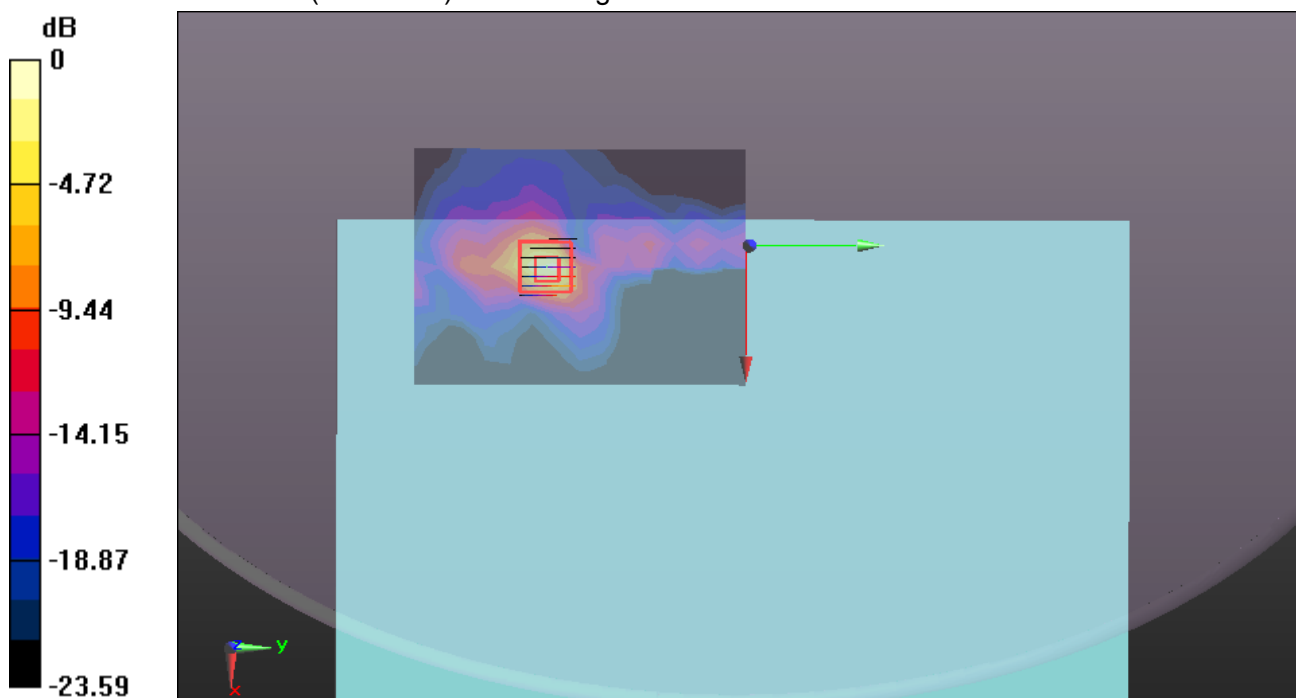
WIFI/IEEE802.11a Body Bottom CH56 Chain0 Southstar Antenna/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 2.788 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 5.06 W/kg

SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.322 W/kg

Maximum value of SAR (measured) = 2.96 W/kg



0 dB = 2.96 W/kg = 4.71 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH64 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band II; Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5320$ MHz; $\sigma = 5.401$ S/m; $\epsilon_r = 48.42$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.6, 4.6, 4.6); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH64 Chain0 Southstar Antenna/Area Scan (11x15x1):

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

Maximum value of SAR (measured) = 2.07 W/kg

WIFI/IEEE802.11a Body Bottom CH64 Chain0 Southstar Antenna/Zoom Scan (7x7x7)/Cube 0:

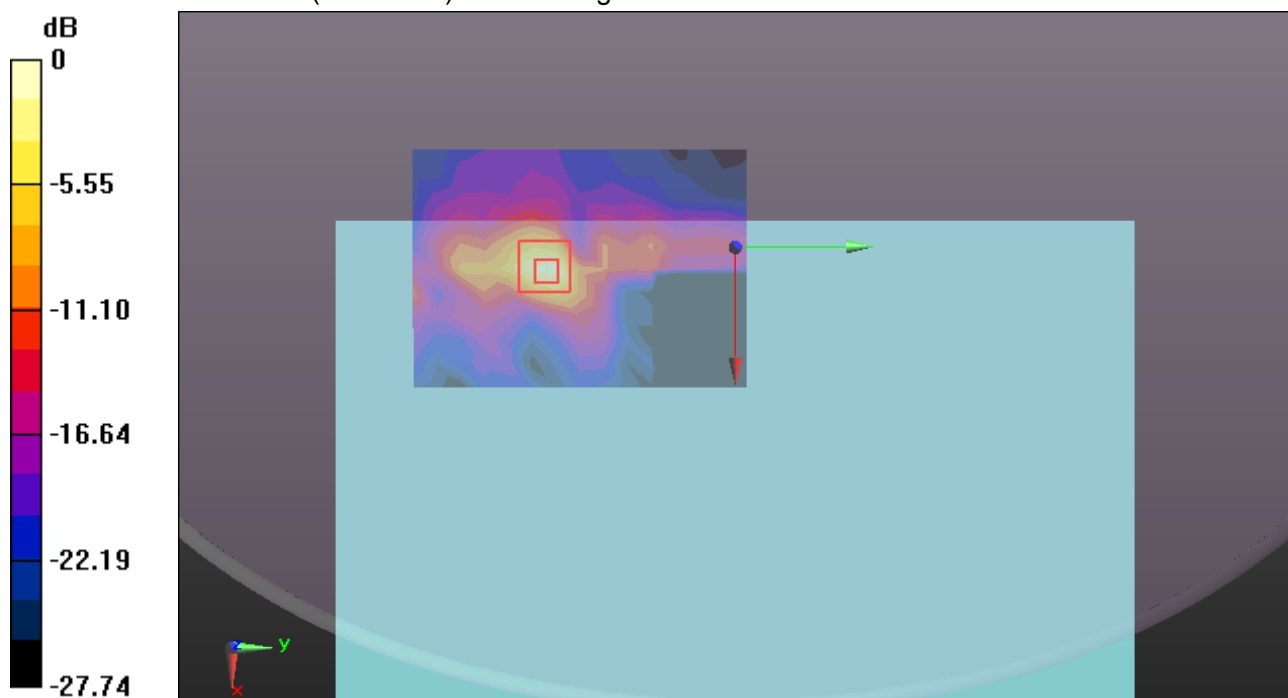
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.420 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 4.03 W/kg

SAR(1 g) = 0.945 W/kg; SAR(10 g) = 0.265 W/kg

Maximum value of SAR (measured) = 2.36 W/kg



0 dB = 2.36 W/kg = 3.73 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH100 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band III;

Frequency: 5500 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.501$ S/m; $\epsilon_r = 48.292$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.23, 4.23, 4.23); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH100 Chain0 Southstar Antenna/Area Scan (11x15x1):

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

Maximum value of SAR (measured) = 2.12 W/kg

WIFI/IEEE802.11a Body Bottom CH100 Chain0 Southstar Antenna/Zoom Scan (7x7x7)/Cube 0:

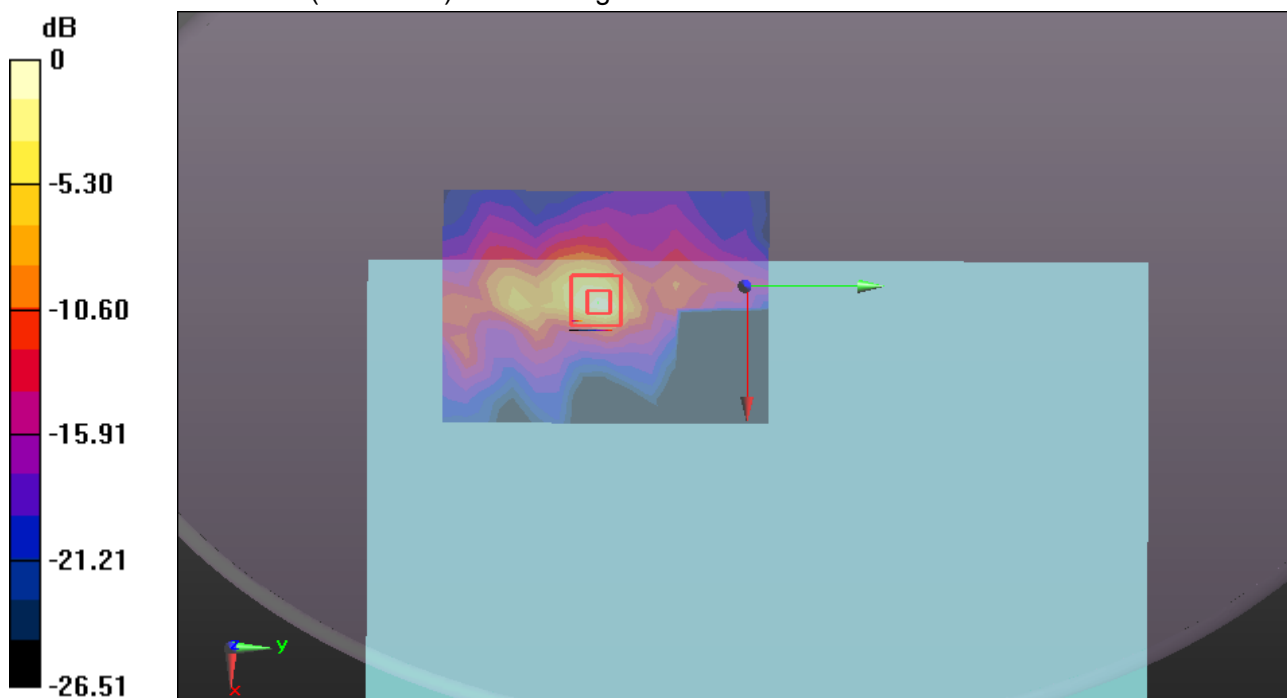
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.902 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 4.00 W/kg

SAR(1 g) = 0.898 W/kg; SAR(10 g) = 0.264 W/kg

Maximum value of SAR (measured) = 2.34 W/kg



0 dB = 2.34 W/kg = 3.69 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH116 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band III;

Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.829$ S/m; $\epsilon_r = 48.001$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.18, 4.18, 4.18); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH116 Chain0 Southstar Antenna/Area Scan (11x15x1):

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

Maximum value of SAR (measured) = 1.77 W/kg

WIFI/IEEE802.11a Body Bottom CH116 Chain0 Southstar Antenna/Zoom Scan (7x7x7)/Cube 0:

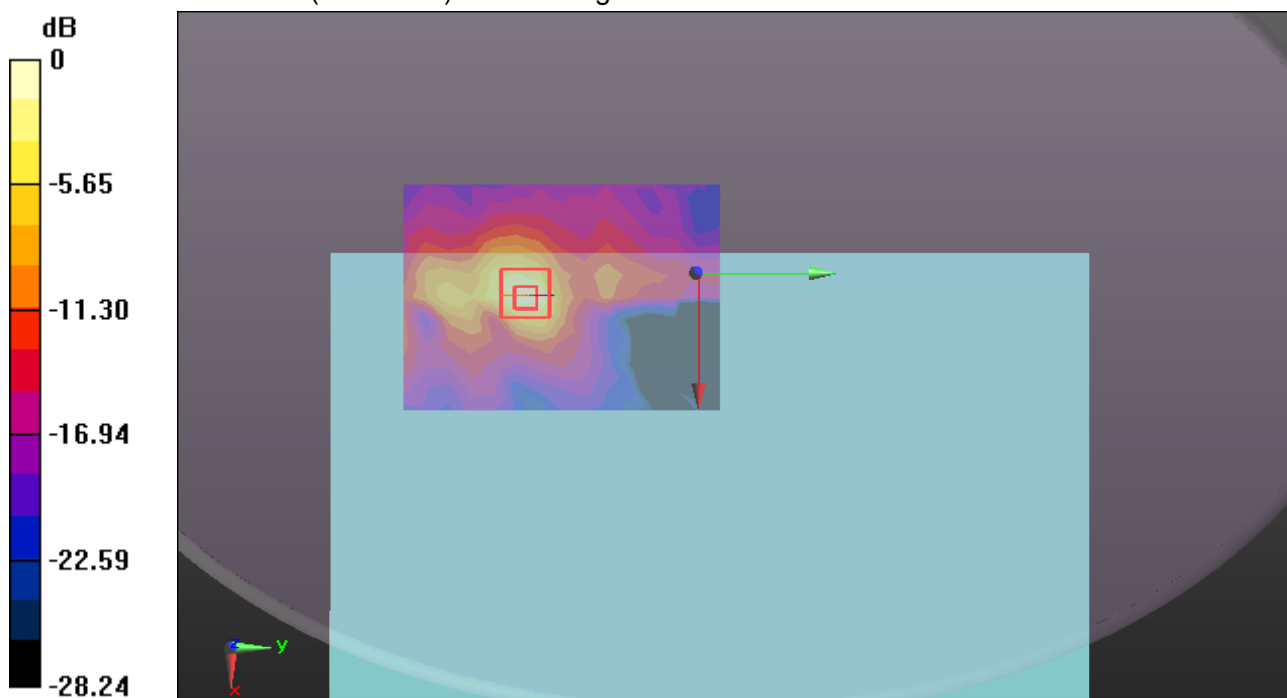
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.247 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 3.36 W/kg

SAR(1 g) = 0.800 W/kg; SAR(10 g) = 0.252 W/kg

Maximum value of SAR (measured) = 1.94 W/kg



0 dB = 1.94 W/kg = 2.88 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH128 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band III;

Frequency: 5640 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5640$ MHz; $\sigma = 5.658$ S/m; $\epsilon_r = 47.724$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.18, 4.18, 4.18); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH128 Chain0 Southstar Antenna/Area Scan (11x15x1):

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

Maximum value of SAR (measured) = 2.04 W/kg

WIFI/IEEE802.11a Body Bottom CH128 Chain0 Southstar Antenna/Zoom Scan (7x7x7)/Cube 0:

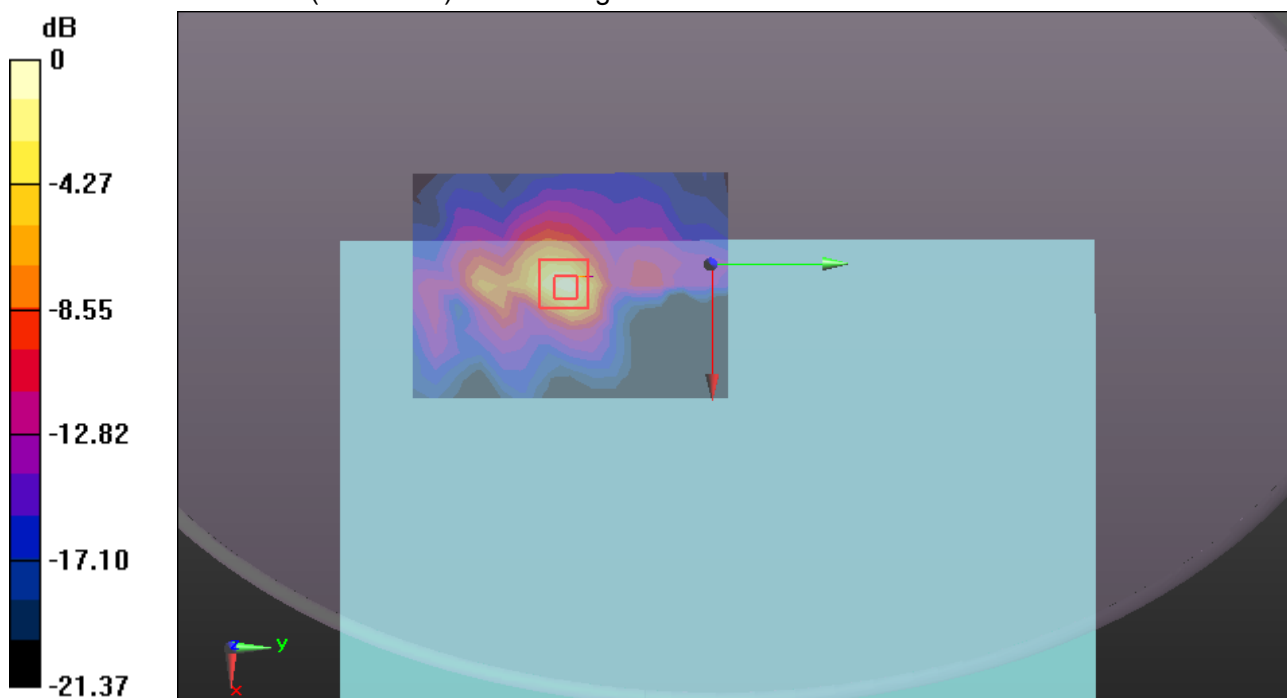
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 3.347 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 3.71 W/kg

SAR(1 g) = 0.841 W/kg; SAR(10 g) = 0.265 W/kg

Maximum value of SAR (measured) = 2.08 W/kg



0 dB = 2.08 W/kg = 3.18 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH149 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band IV;

Frequency: 5745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 5.756$ S/m; $\epsilon_r = 47.464$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.34, 4.34, 4.34); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH149 Chain0 Southstar Antenna/Area Scan (11x15x1):

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

Maximum value of SAR (measured) = 1.69 W/kg

WIFI/IEEE802.11a Body Bottom CH149 Chain0 Southstar Antenna/Zoom Scan (7x7x7)/Cube 0:

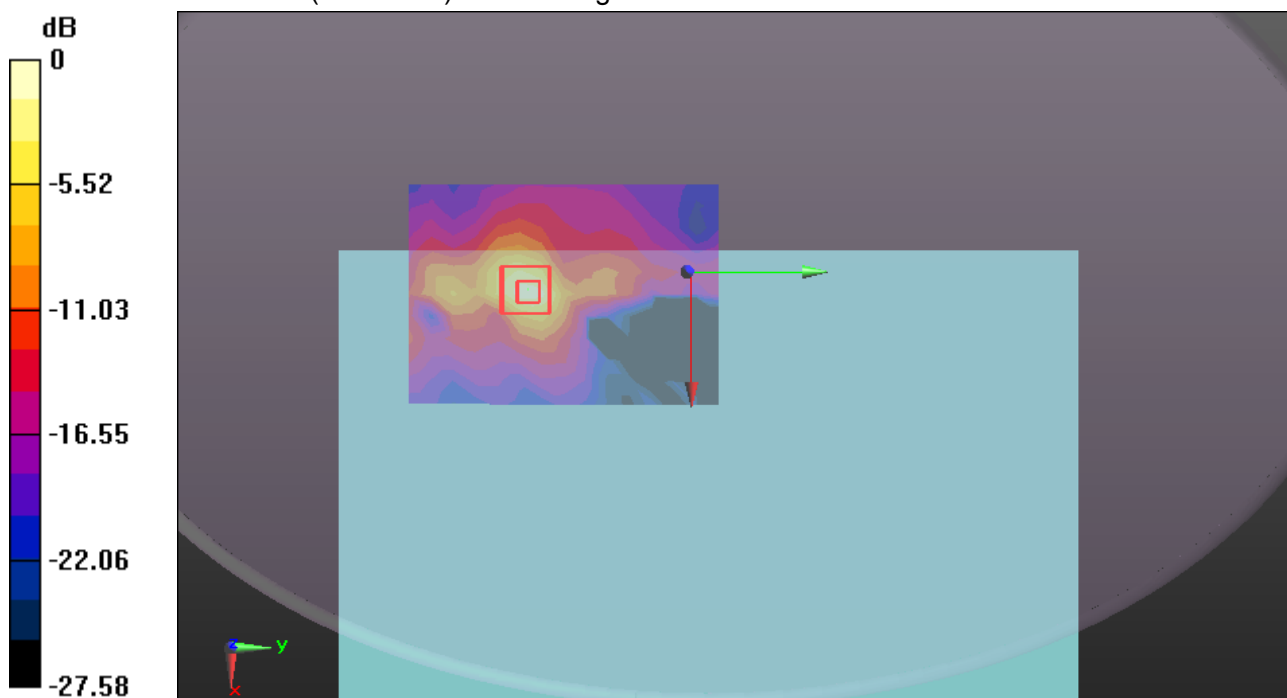
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.728 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.38 W/kg

SAR(1 g) = 0.809 W/kg; SAR(10 g) = 0.239 W/kg

Maximum value of SAR (measured) = 1.92 W/kg



0 dB = 1.92 W/kg = 2.83 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH157 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band IV;

Frequency: 5785 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5785$ MHz; $\sigma = 6.06$ S/m; $\epsilon_r = 47.553$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.34, 4.34, 4.34); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH157 Chain0 Southstar Antenna/Area Scan (11x15x1):

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

Maximum value of SAR (measured) = 1.30 W/kg

WIFI/IEEE802.11a Body Bottom CH157 Chain0 Southstar Antenna/Zoom Scan (7x7x7)/Cube 0:

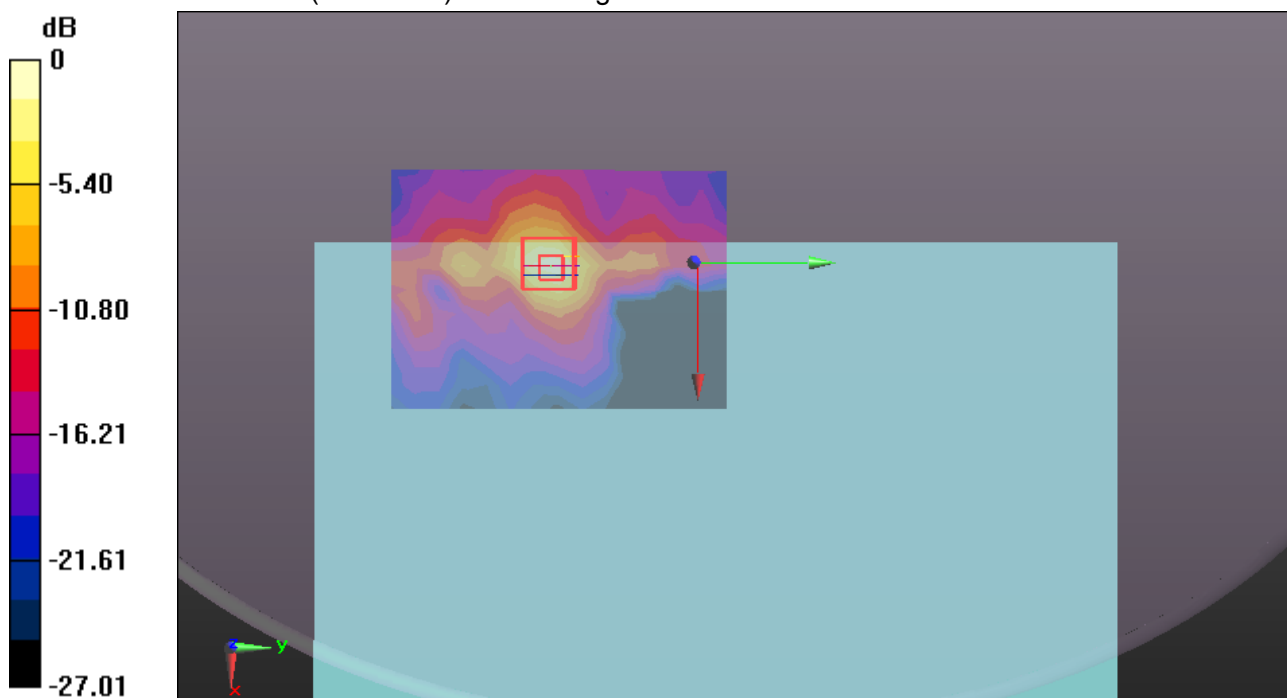
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.616 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.47 W/kg

SAR(1 g) = 0.749 W/kg; SAR(10 g) = 0.227 W/kg

Maximum value of SAR (measured) = 1.39 W/kg



0 dB = 1.39 W/kg = 1.43 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH165 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band IV;

Frequency: 5825 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5825 \text{ MHz}$; $\sigma = 6.005 \text{ S/m}$; $\epsilon_r = 48.054$; $\rho = 1000 \text{ kg/m}^3$

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.34, 4.34, 4.34); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH165 Chain0 Southstar Antenna/Area Scan (11x15x1):Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.31 W/kg

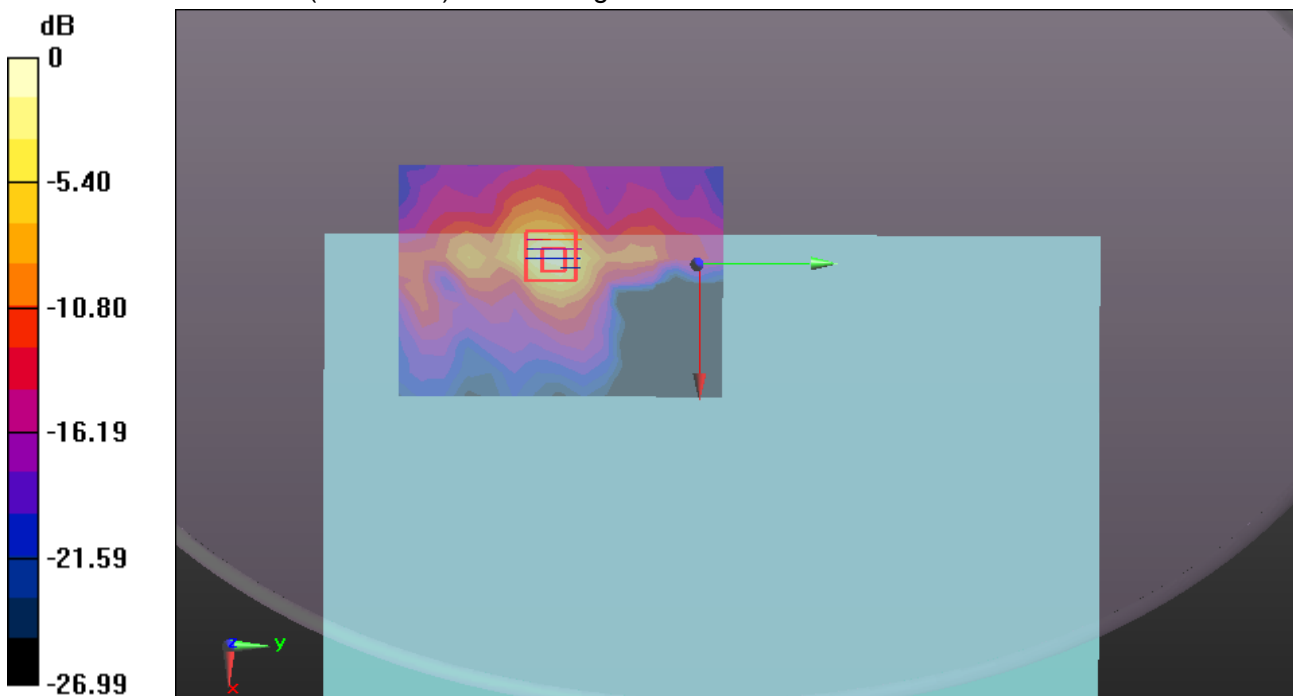
WIFI/IEEE802.11a Body Bottom CH165 Chain0 Southstar Antenna/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 2.634 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 2.72 W/kg

SAR(1 g) = 0.691 W/kg; SAR(10 g) = 0.208 W/kg

Maximum value of SAR (measured) = 1.39 W/kg



0 dB = 1.39 W/kg = 1.43 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH56 Chain0 Southstar Antenna repeat**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band II; Frequency: 5280 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5280$ MHz; $\sigma = 5.342$ S/m; $\epsilon_r = 48.389$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.6, 4.6, 4.6); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH56 Chain0 Southstar Antenna repeat/Area Scan (11x15x1):

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

Maximum value of SAR (measured) = 2.13 W/kg

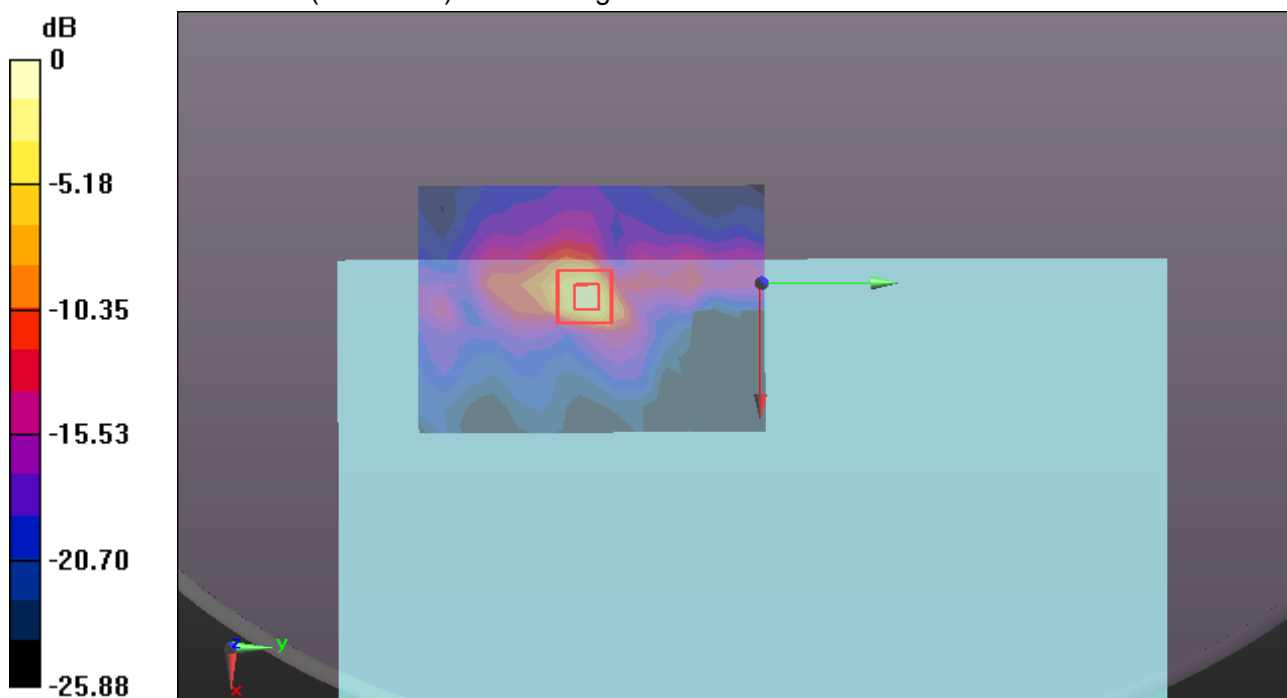
WIFI/IEEE802.11a Body Bottom CH56 Chain0 Southstar Antenna repeat/Zoom Scan (7x7x7)/Cube**0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 4.390 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 5.18 W/kg

SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.317 W/kg

Maximum value of SAR (measured) = 3.06 W/kg



0 dB = 3.06 W/kg = 4.86 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH100 Chain0 Southstar Antenna repeat

DUT: Notebookt Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band III;

Frequency: 5500 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.501$ S/m; $\epsilon_r = 48.292$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.23, 4.23, 4.23); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH100 Chain0 Southstar Antenna repeat/Area Scan (11x15x1):

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

Maximum value of SAR (measured) = 1.41 W/kg

WIFI/IEEE802.11a Body Bottom CH100 Chain0 Southstar Antenna repeat/Zoom Scan

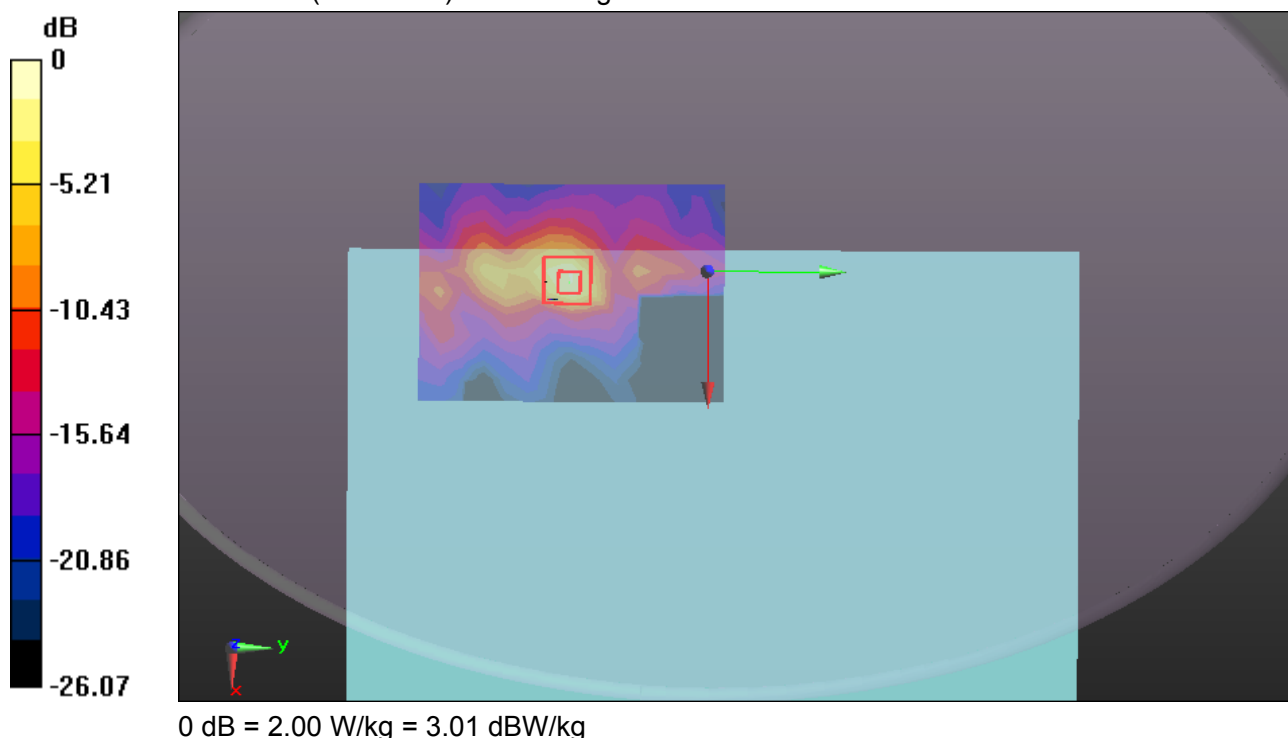
(7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 3.450 V/m: Power Drift = 0.10 dB

Peak SAR (extrapolated) = 3.42 W/kg

SAR(1 g) = 0.839 W/kg; SAR(10 g) = 0.237 W/kg

Maximum value of SAR (measured) = 2.00 W/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH149 Chain0 Southstar Antenna repeat**DUT: Notebookt Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band IV;

Frequency: 5745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 5.756$ S/m; $\epsilon_r = 47.464$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.34, 4.34, 4.34); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH149 Chain0 Southstar Antenna repeat/Area Scan (11x15x1):

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

Maximum value of SAR (measured) = 1.71 W/kg

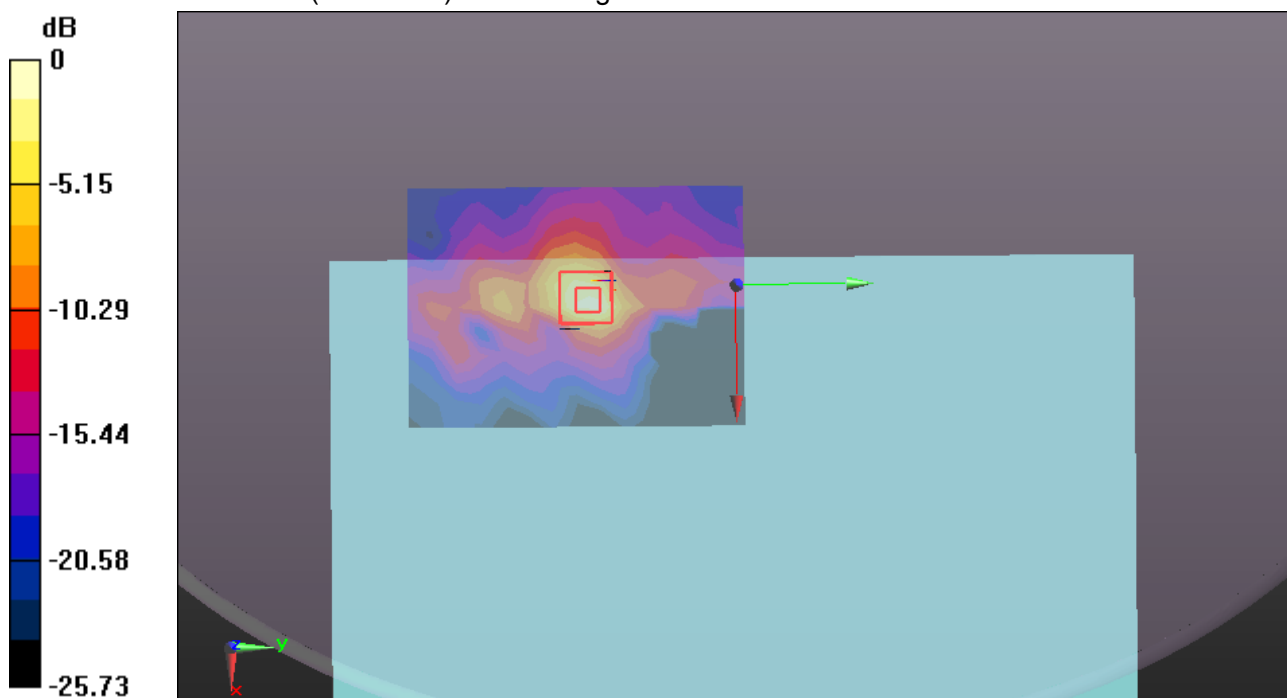
WIFI/IEEE802.11a Body Bottom CH149 Chain0 Southstar Antenna repeat/Zoom Scan**(7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 3.345 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 3.60 W/kg

SAR(1 g) = 0.799 W/kg; SAR(10 g) = 0.247 W/kg

Maximum value of SAR (measured) = 2.07 W/kg



0 dB = 2.07 W/kg = 3.16 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

2.4GHz -Body Bottom CH0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, Bluetooth (0); Communication System Band: ISM 2.4Ghz Band;

Frequency: 2402 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2402 \text{ MHz}$; $\sigma = 1.835 \text{ S/m}$; $\epsilon_r = 51.785$; $\rho = 1000 \text{ kg/m}^3$

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(7.07, 7.07, 7.07); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

Bluetooth/Body Bottom CH0/Area Scan (10x13x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.121 W/kg

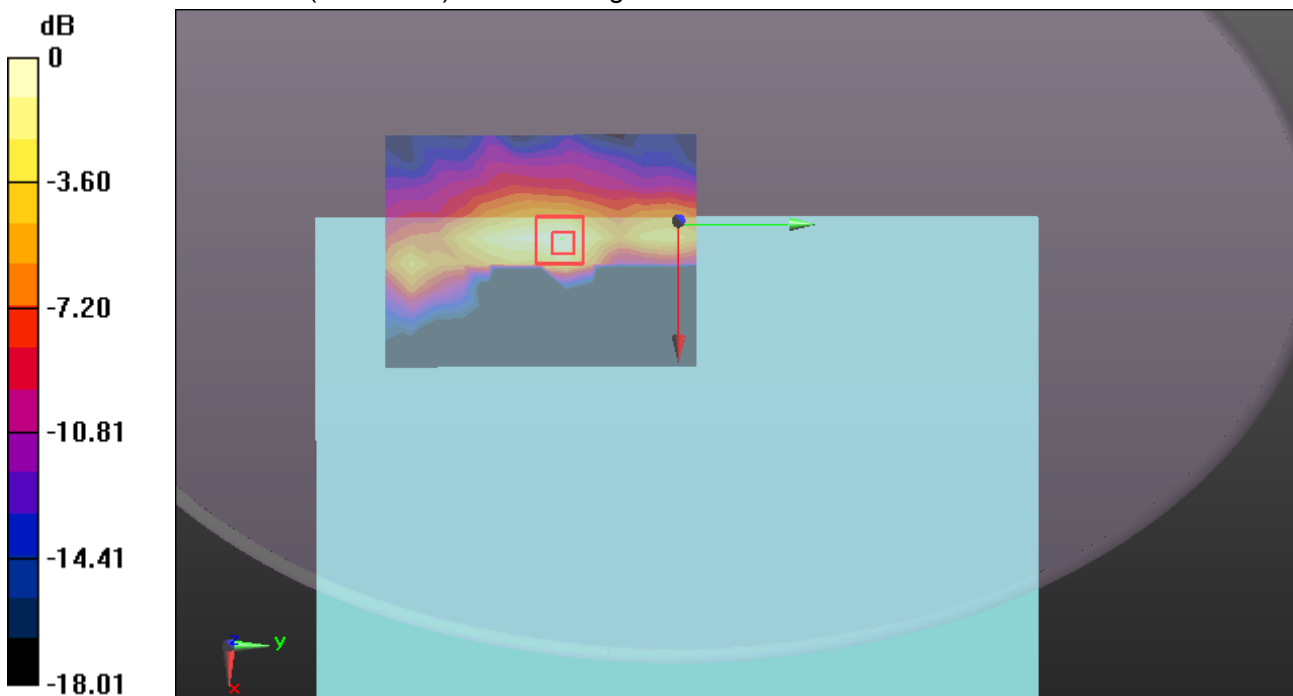
Bluetooth/Body Bottom CH0/Zoom Scan (7x7x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.353 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.202 W/kg

SAR(1 g) = 0.084 W/kg; SAR(10 g) = 0.022 W/kg

Maximum value of SAR (measured) = 0.119 W/kg



0 dB = 0.119 W/kg = -9.24 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/1/2017

2.4GHz -Body Bottom CH39 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, Bluetooth (0); Communication System Band: ISM 2.4Ghz Band;

Frequency: 2441 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2441 \text{ MHz}$; $\sigma = 1.885 \text{ S/m}$; $\epsilon_r = 51.687$; $\rho = 1000 \text{ kg/m}^3$

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(7.07, 7.07, 7.07); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

Bluetooth/Body Bottom CH39/Area Scan (10x13x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.166 W/kg

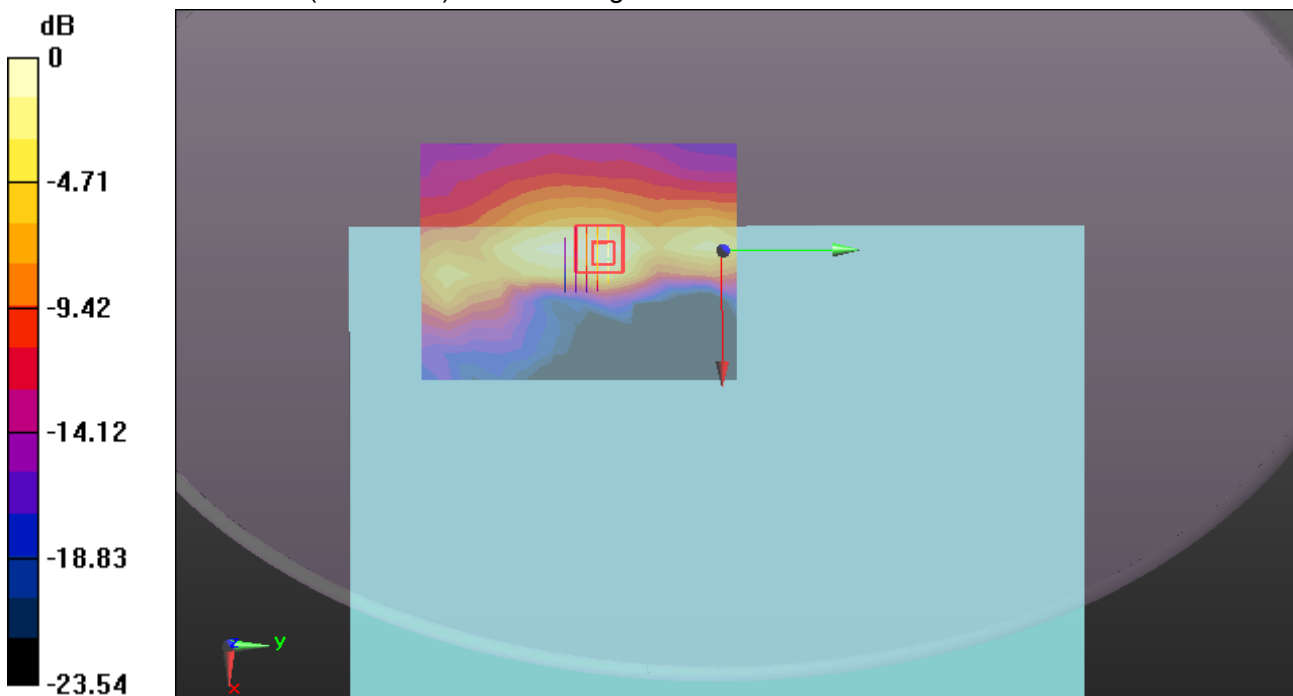
Bluetooth/Body Bottom CH39/Zoom Scan (7x7x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.083 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.209 W/kg

SAR(1 g) = 0.112 W/kg; SAR(10 g) = 0.056 W/kg

Maximum value of SAR (measured) = 0.157 W/kg



0 dB = 0.157 W/kg = -8.04 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/1/2017

2.4GHz -Body Bottom CH78 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, Bluetooth (0); Communication System Band: ISM 2.4Ghz Band;

Frequency: 2480 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2480$ MHz; $\sigma = 1.926$ S/m; $\epsilon_r = 51.557$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(7.07, 7.07, 7.07); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

Bluetooth/Body Bottom CH78/Area Scan (10x13x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.167 W/kg

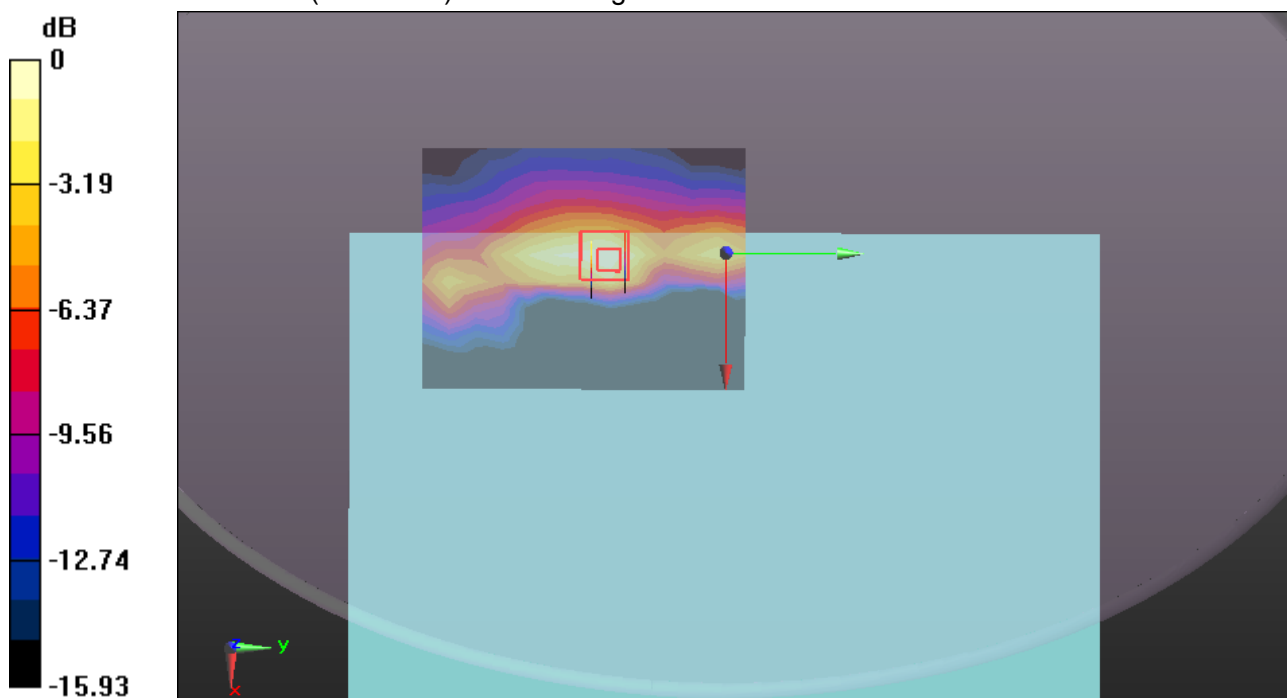
Bluetooth/Body Bottom CH78/Zoom Scan (7x7x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.158 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.101 W/kg; SAR(10 g) = 0.051 W/kg

Maximum value of SAR (measured) = 0.161 W/kg



0 dB = 0.161 W/kg = -7.93 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/1/2017

WiFi 802.11 b-Body Bottom CH11 Chain0 INPAQ Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11b (0); Communication System Band: ISM 2.4GHz Band;

Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462 \text{ MHz}$; $\sigma = 1.908 \text{ S/m}$; $\epsilon_r = 51.614$; $\rho = 1000 \text{ kg/m}^3$

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(7.07, 7.07, 7.07); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Chain0 INPAQ Antenna/Area Scan (10x13x1):Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.816 W/kg

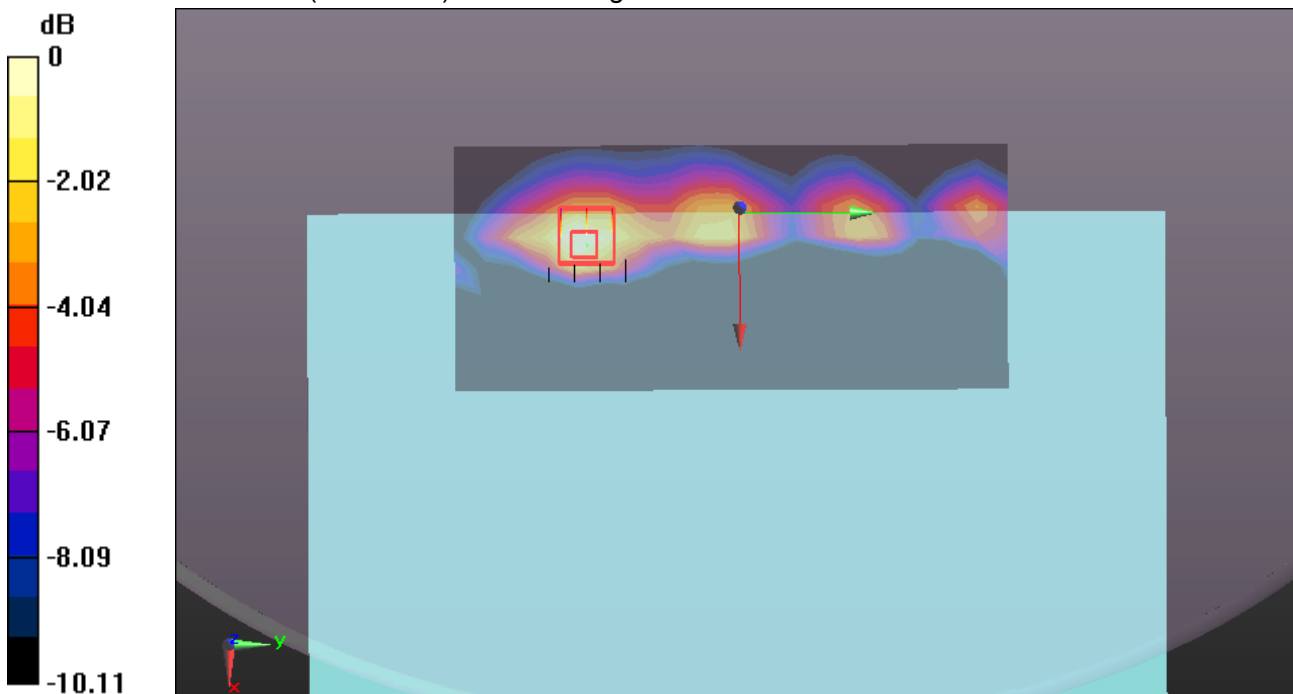
WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Chain0 INPAQ Antenna/Zoom Scan (7x7x5)/Cube 0:Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.58 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.93 W/kg

SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.168 W/kg

Maximum value of SAR (measured) = 0.791 W/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 6/22/2017

2.4GHz -Body Bottom CH39 INPAQ Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, Bluetooth (0); Communication System Band: ISM 2.4Ghz Band;

Frequency: 2441 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.929$ S/m; $\epsilon_r = 51.992$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(7.07, 7.07, 7.07); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

Bluetooth/Body Bottom CH39/Area Scan (10x13x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.143 W/kg

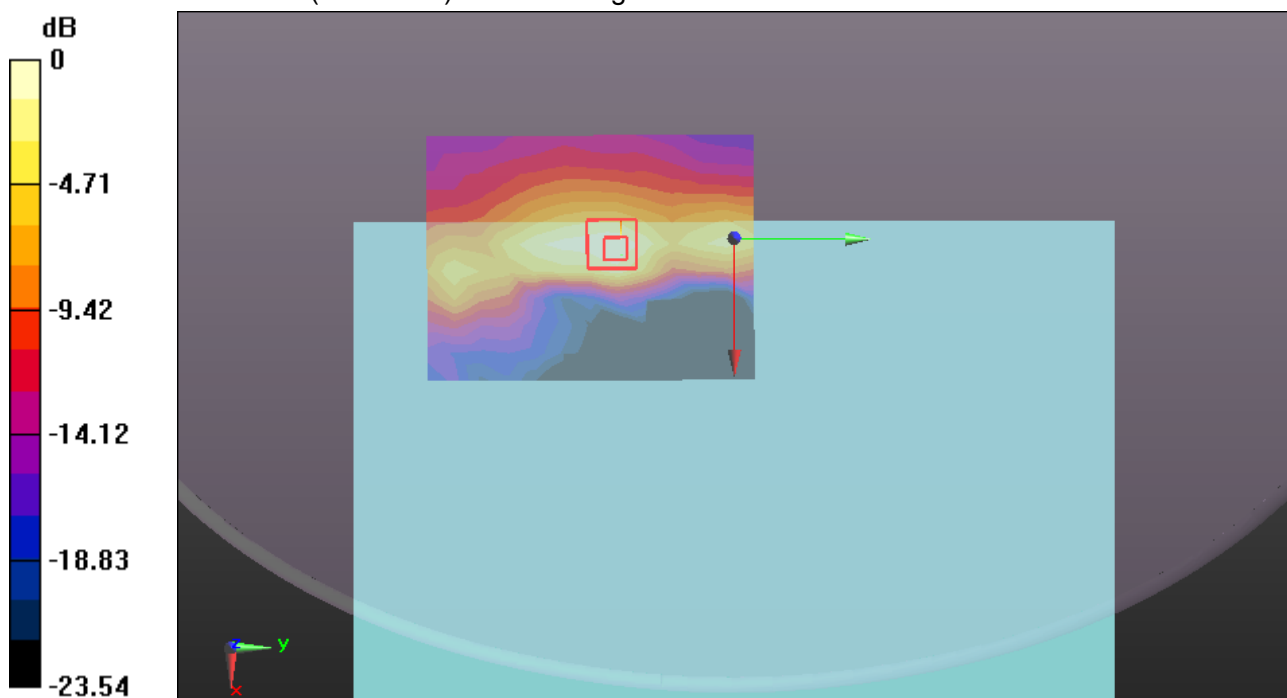
Bluetooth/Body Bottom CH39/Zoom Scan (7x7x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.9614 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.223 W/kg

SAR(1 g) = 0.099 W/kg; SAR(10 g) = 0.052 W/kg

Maximum value of SAR (measured) = 0.149 W/kg



0 dB = 0.149 W/kg = -8.27 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/2/2017

WIFI 802.11 a-Body Bottom CH56 Chain0 INPAQ Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-14IAP; Serial: N/A**

Communication System: UID 0, IEEE 802.11 a (0); Communication System Band: 5G Band II; Frequency: 5280 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5280$ MHz; $\sigma = 5.342$ S/m; $\epsilon_r = 48.389$; $\rho = 1000$ kg/m³

Room Ambient Temperature: 22°C; Liquid Temperature: 21.5°C

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3798; ConvF(4.6, 4.6, 4.6); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH56 Chain0 INPAQ Antenna/Area Scan (11x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 2.26 W/kg

WIFI/IEEE802.11a Body Bottom CH56 Chain0 INPAQ Antenna/Zoom Scan (7x7x7)/Cube 0:

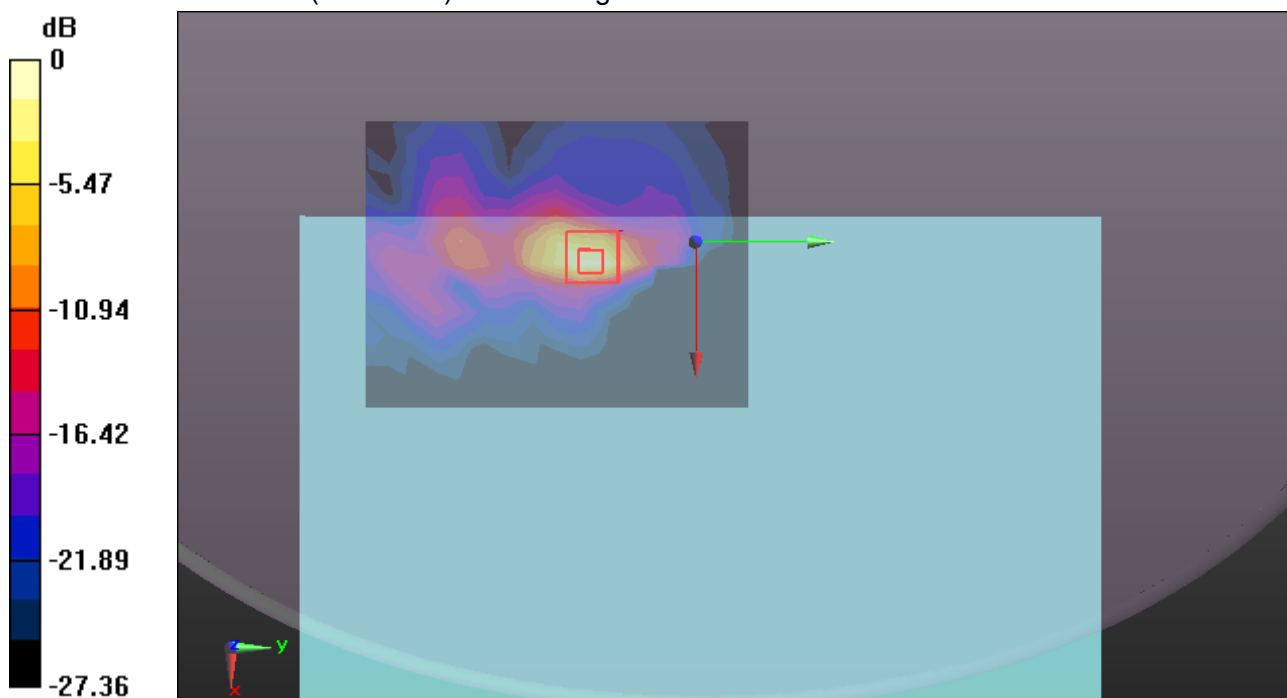
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.461 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 4.27 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.269 W/kg

Maximum value of SAR (measured) = 2.14 W/kg



0 dB = 2.14 W/kg = 3.30 dBW/kg