



Appendix E

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Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

WIFI 802.11 b-Body Bottom CH1 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2412 \text{ MHz}$; $\sigma = 1.864 \text{ S/m}$; $\epsilon_r = 51.76$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Main Antenna/Area Scan (11x18x1): Measurement
 grid: $dx=10\text{mm}$, $dy=10\text{mm}$
 Maximum value of SAR (measured) = 0.339 W/kg

WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Main Antenna/Zoom Scan (7x7x7)/Cube 0:

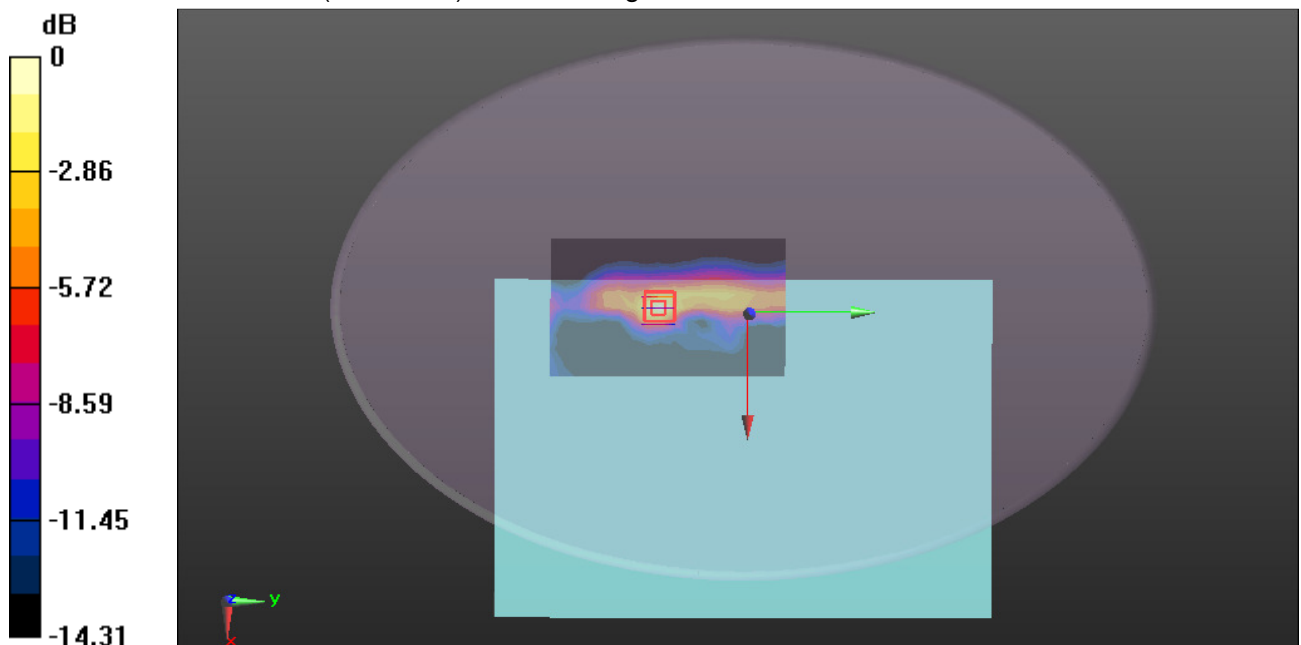
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 8.010 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.437 W/kg

SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.100 W/kg

Maximum value of SAR (measured) = 0.351 W/kg



0 dB = 0.351 W/kg = -4.55 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

WIFI 802.11 b-Body Bottom CH6 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2437 \text{ MHz}$; $\sigma = 1.895 \text{ S/m}$; $\epsilon_r = 51.697$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH6 Main Antenna/Area Scan (11x18x1): Measurement
 grid: $dx=10\text{mm}$, $dy=10\text{mm}$
 Maximum value of SAR (measured) = 0.371 W/kg

WiFi 2.4GHz/IEEE802.11b Body Bottom CH6 Main Antenna/Zoom Scan (7x7x7)/Cube 0:

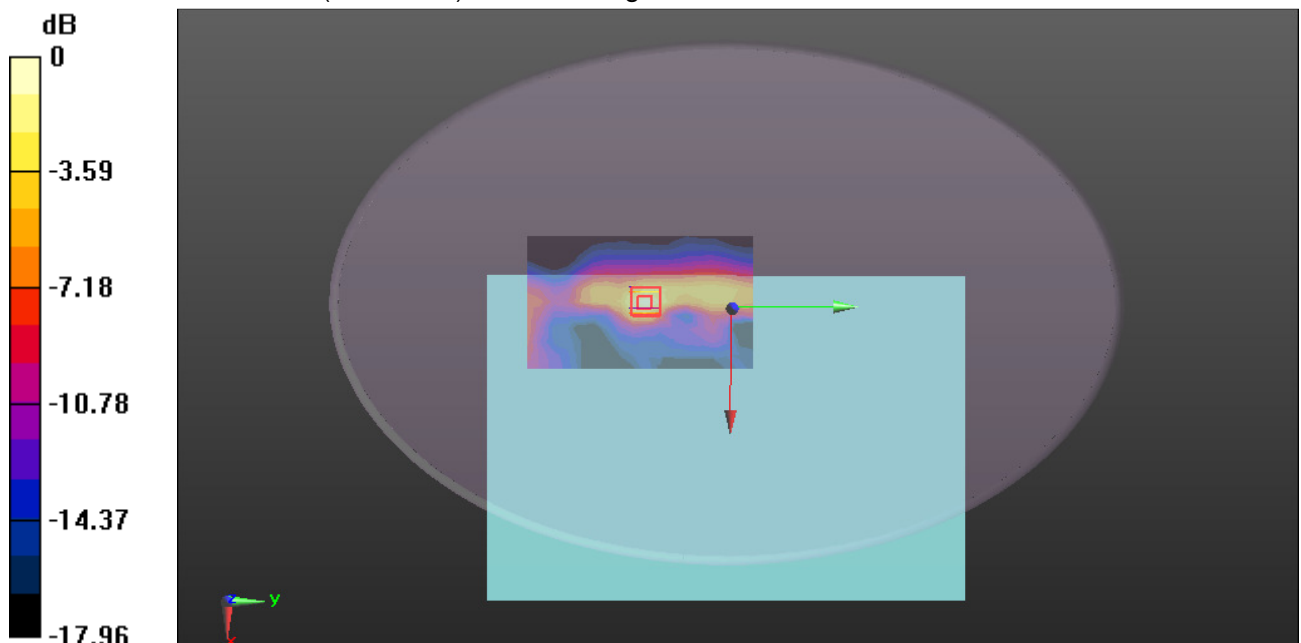
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 8.315 V/m ; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.481 W/kg

SAR(1 g) = 0.231 W/kg ; SAR(10 g) = 0.108 W/kg

Maximum value of SAR (measured) = 0.381 W/kg



$0 \text{ dB} = 0.381 \text{ W/kg} = -4.19 \text{ dBW/kg}$

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

WIFI 802.11 b-Body Bottom CH11 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2462 \text{ MHz}$; $\sigma = 1.923 \text{ S/m}$; $\epsilon_r = 51.615$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Main Antenna/Area Scan (11x18x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.393 W/kg

WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Main Antenna/Zoom Scan (7x7x7)/Cube 0:

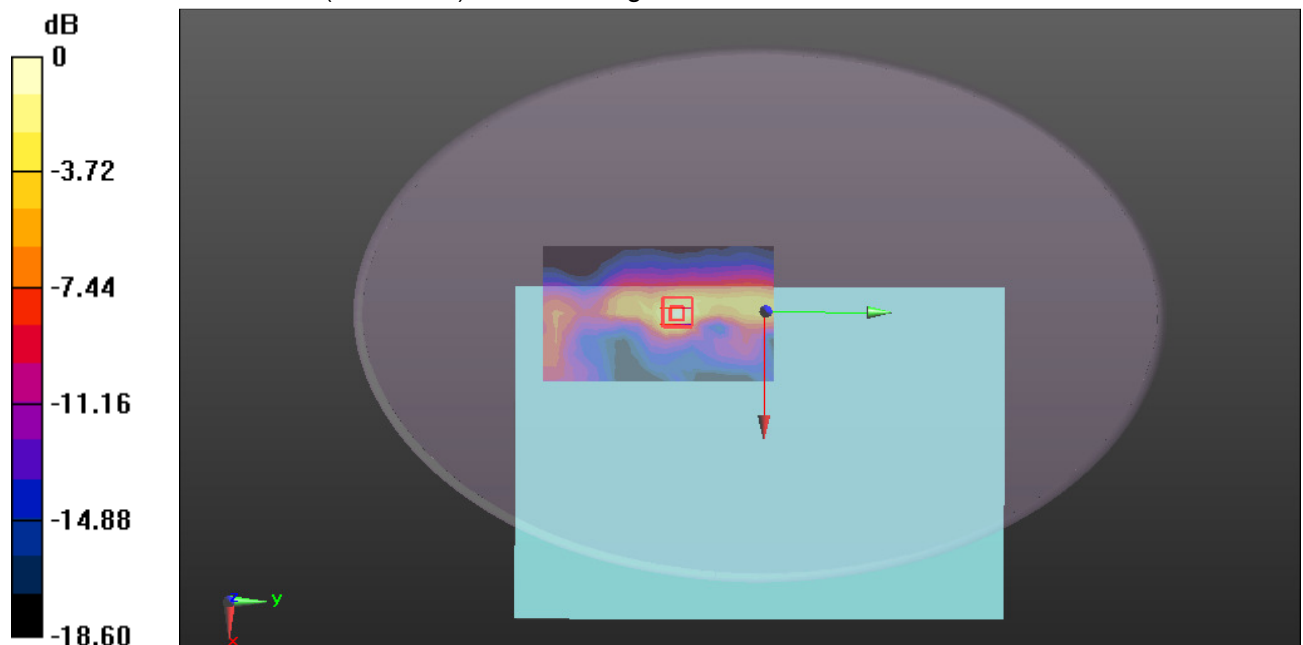
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 8.570 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.500 W/kg

SAR(1 g) = 0.241 W/kg; SAR(10 g) = 0.112 W/kg

Maximum value of SAR (measured) = 0.398 W/kg



0 dB = 0.398 W/kg = -4.00 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

WIFI 802.11 b-Body Bottom CH1 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2412 \text{ MHz}$; $\sigma = 1.864 \text{ S/m}$; $\epsilon_r = 51.76$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Aux Antenna/Area Scan (11x15x1): Measurement
 grid: $dx=10\text{mm}$, $dy=10\text{mm}$
 Maximum value of SAR (measured) = 0.262 W/kg

WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Aux Antenna/Zoom Scan (7x7x7)/Cube 0:

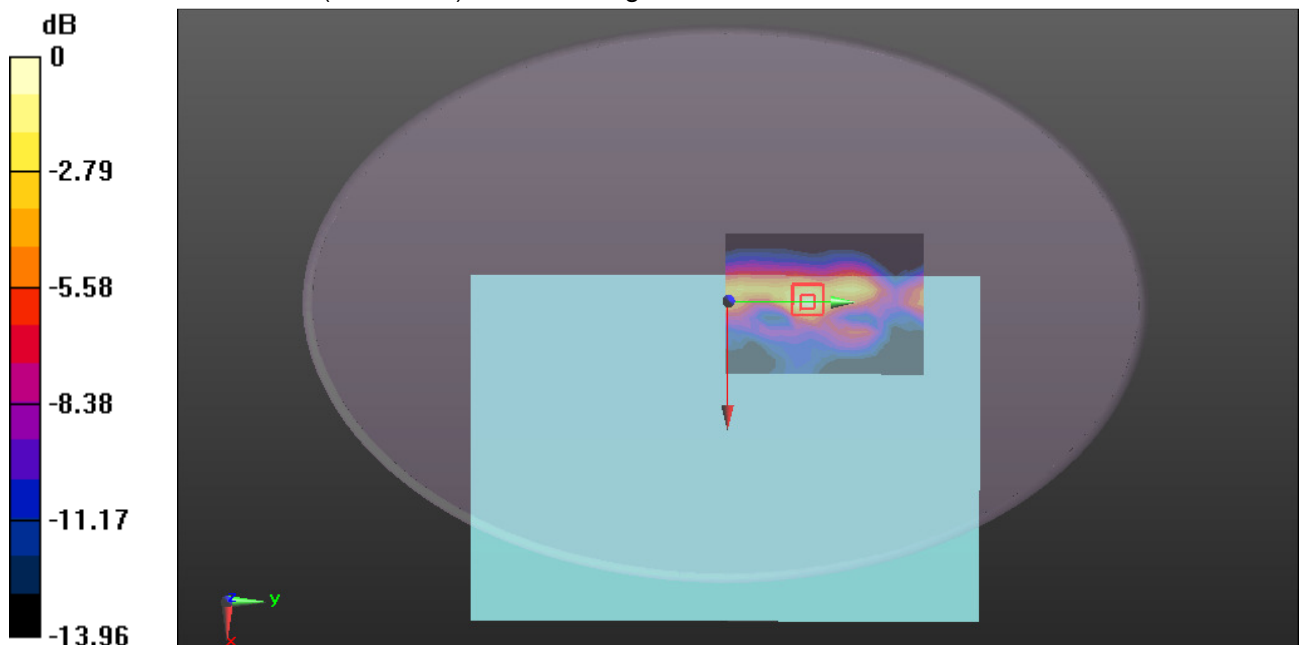
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 7.656 V/m ; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.351 W/kg

SAR(1 g) = 0.165 W/kg ; SAR(10 g) = 0.077 W/kg

Maximum value of SAR (measured) = 0.272 W/kg



0 dB = 0.272 W/kg = -5.65 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

WIFI 802.11 b-Body Bottom CH6 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2437 \text{ MHz}$; $\sigma = 1.895 \text{ S/m}$; $\epsilon_r = 51.697$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH6 Aux Antenna/Area Scan (11x15x1): Measurement
 grid: $dx=10\text{mm}$, $dy=10\text{mm}$
 Maximum value of SAR (measured) = 0.270 W/kg

WiFi 2.4GHz/IEEE802.11b Body Bottom CH6 Aux Antenna/Zoom Scan (7x7x7)/Cube 0:

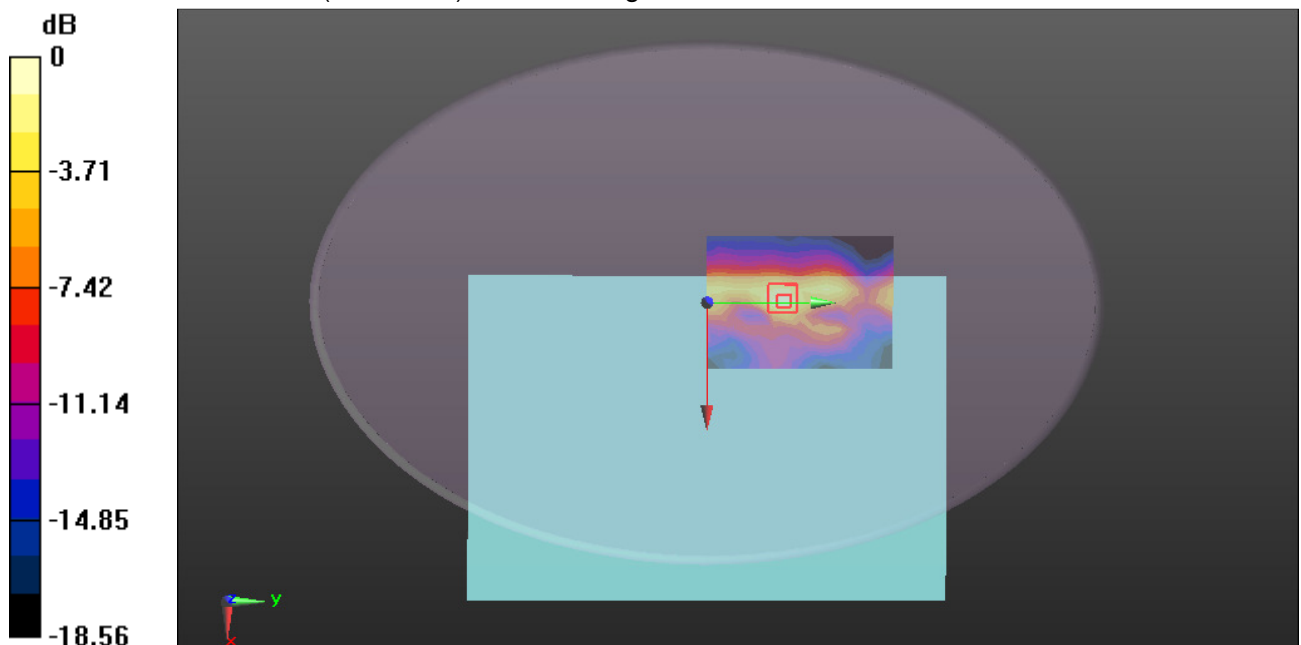
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 7.592 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.366 W/kg

SAR(1 g) = 0.170 W/kg; SAR(10 g) = 0.078 W/kg

Maximum value of SAR (measured) = 0.277 W/kg



0 dB = 0.277 W/kg = -5.58 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

WIFI 802.11 b-Body Bottom CH11 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2462 \text{ MHz}$; $\sigma = 1.923 \text{ S/m}$; $\epsilon_r = 51.615$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Aux Antenna/Area Scan (11x15x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.291 W/kg

WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Aux Antenna/Zoom Scan (7x7x7)/Cube 0:

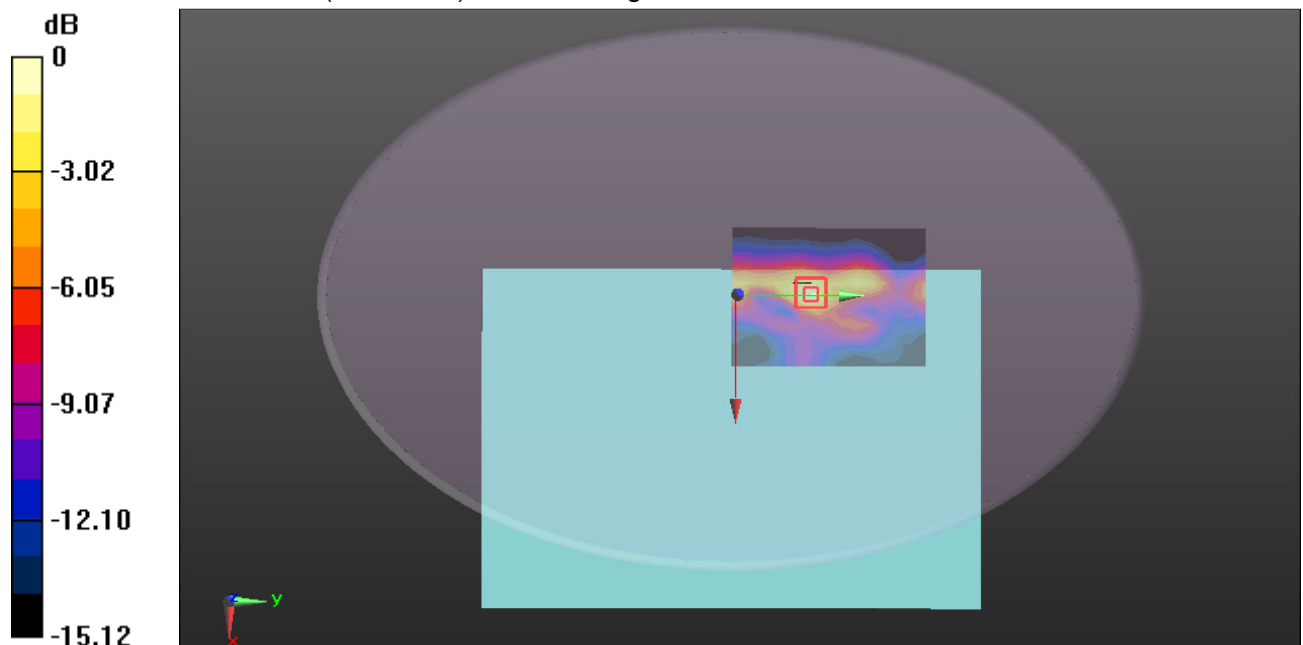
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 8.002 V/m ; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.387 W/kg

SAR(1 g) = 0.184 W/kg ; SAR(10 g) = 0.085 W/kg

Maximum value of SAR (measured) = 0.306 W/kg



0 dB = 0.306 W/kg = -5.14 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

WIFI 802.11 b-Body Bottom CH11 Main Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2462 \text{ MHz}$; $\sigma = 1.923 \text{ S/m}$; $\epsilon_r = 51.615$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Main Antenna/Area Scan (11x15x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.187 W/kg

WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Main Antenna/Zoom Scan (7x7x7)/Cube 0:

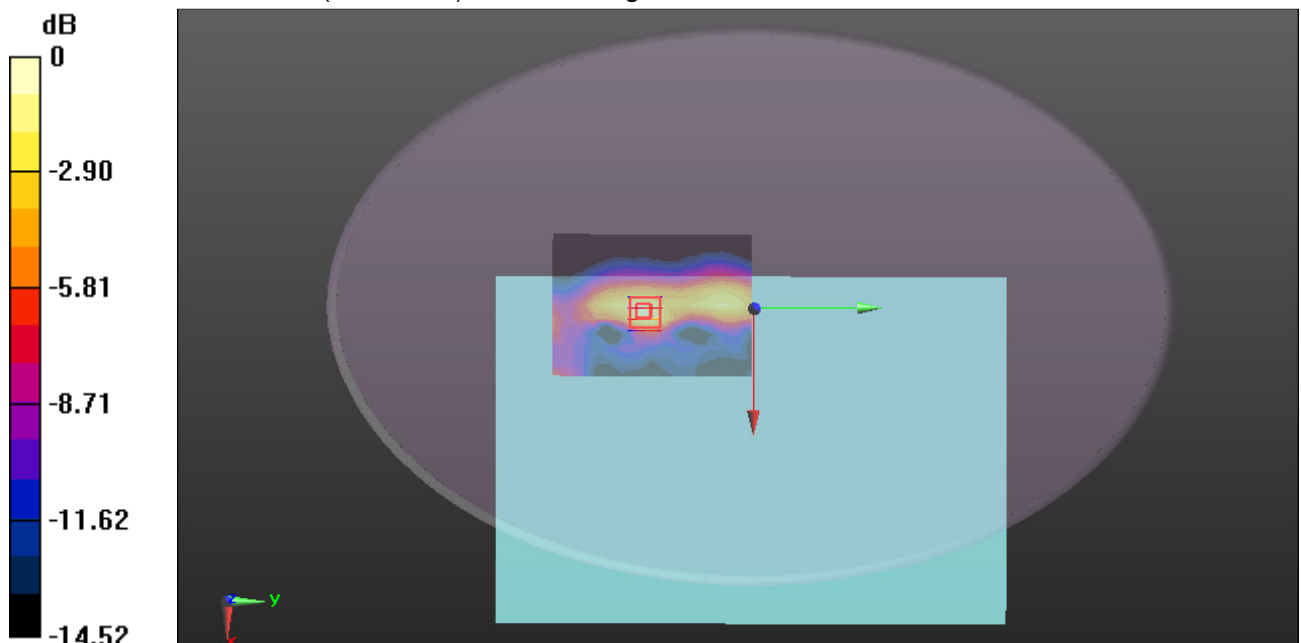
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 7.056 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.285 W/kg

SAR(1 g) = 0.132 W/kg; SAR(10 g) = 0.064 W/kg

Maximum value of SAR (measured) = 0.220 W/kg



0 dB = 0.220 W/kg = -6.58 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

WIFI 802.11 b-Body Bottom CH11 Aux Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2462 \text{ MHz}$; $\sigma = 1.923 \text{ S/m}$; $\epsilon_r = 51.615$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Aux Antenna/Area Scan (11x15x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.277 W/kg

WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Aux Antenna/Zoom Scan (7x7x7)/Cube 0:

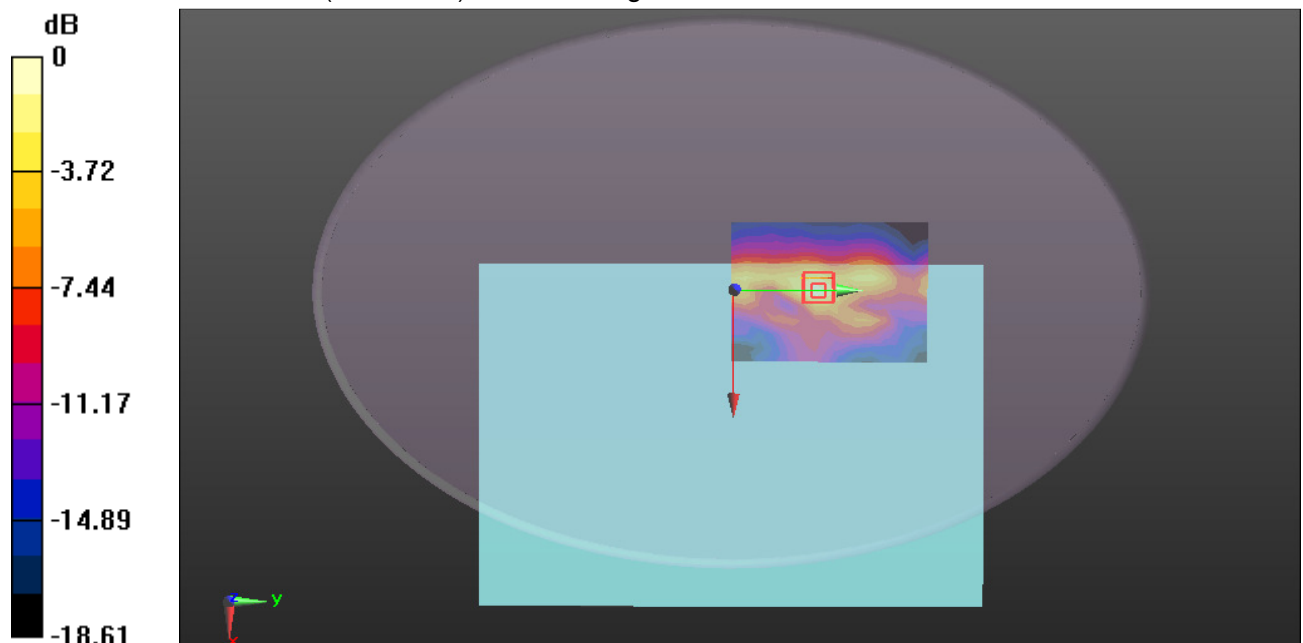
Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 7.153 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.351 W/kg

SAR(1 g) = 0.167 W/kg; SAR(10 g) = 0.078 W/kg

Maximum value of SAR (measured) = 0.276 W/kg



0 dB = 0.276 W/kg = -5.59 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

2.4G-Body Bottom CH00 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2402$ MHz; $\sigma = 1.852$ S/m; $\epsilon_r = 51.795$; $\rho = 1000$ 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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/2.4G Body Bottom CH00 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.0638 W/kg

WiFi 2.4GHz/2.4G Body Bottom CH00 Main Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

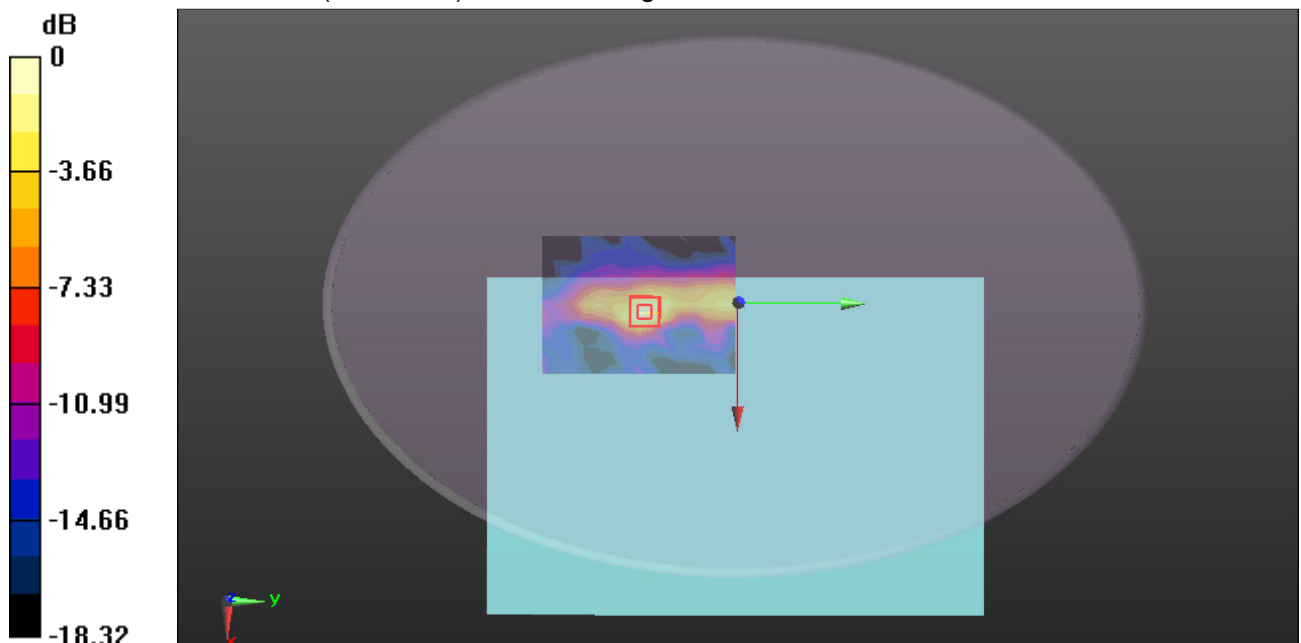
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 3.323 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.0920 W/kg

SAR(1 g) = 0.051 W/kg; SAR(10 g) = 0.023 W/kg

Maximum value of SAR (measured) = 0.0697 W/kg



0 dB = 0.0697 W/kg = -11.57 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

2.4G-Body Bottom CH39 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2441 \text{ MHz}$; $\sigma = 1.899 \text{ S/m}$; $\epsilon_r = 51.694$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/2.4G Body Bottom CH39 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.0570 W/kg

WiFi 2.4GHz/2.4G Body Bottom CH39 Main Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

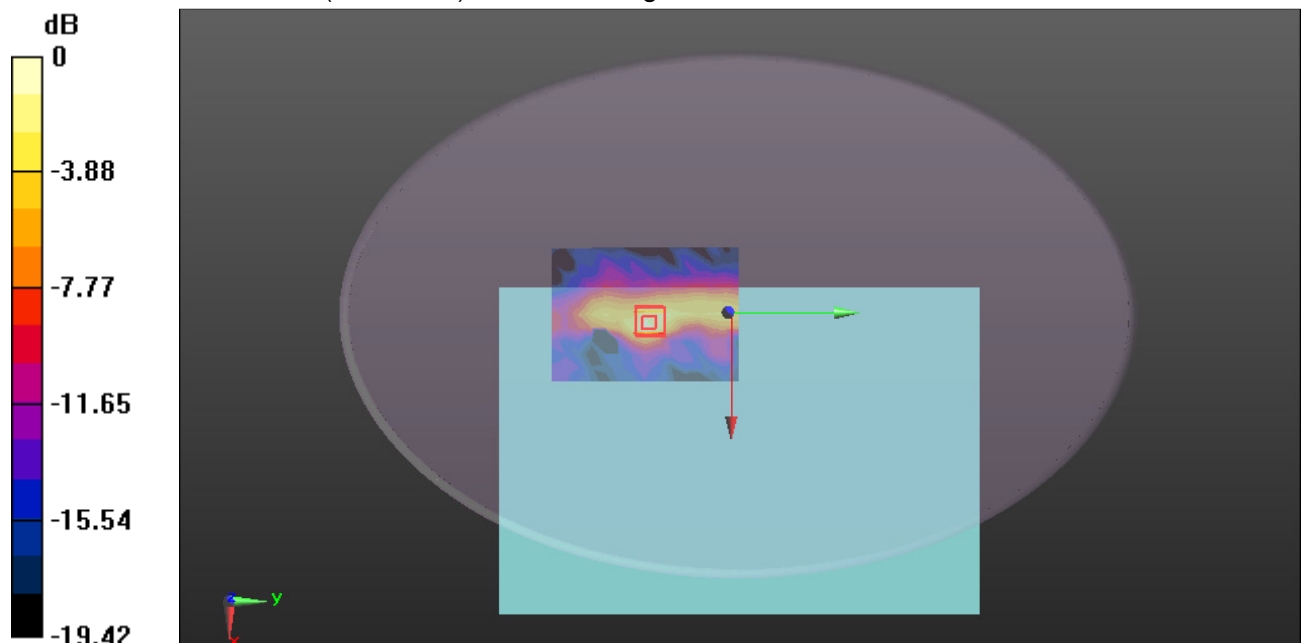
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 2.984 V/m ; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.0800 W/kg

SAR(1 g) = 0.039 W/kg ; SAR(10 g) = 0.019 W/kg

Maximum value of SAR (measured) = 0.0637 W/kg



0 dB = 0.0637 W/kg = -11.96 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

2.4G-Body Bottom CH78 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2480 \text{ MHz}$; $\sigma = 1.942 \text{ S/m}$; $\epsilon_r = 51.537$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/2.4G Body Bottom CH78 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.0668 W/kg

WiFi 2.4GHz/2.4G Body Bottom CH78 Main Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

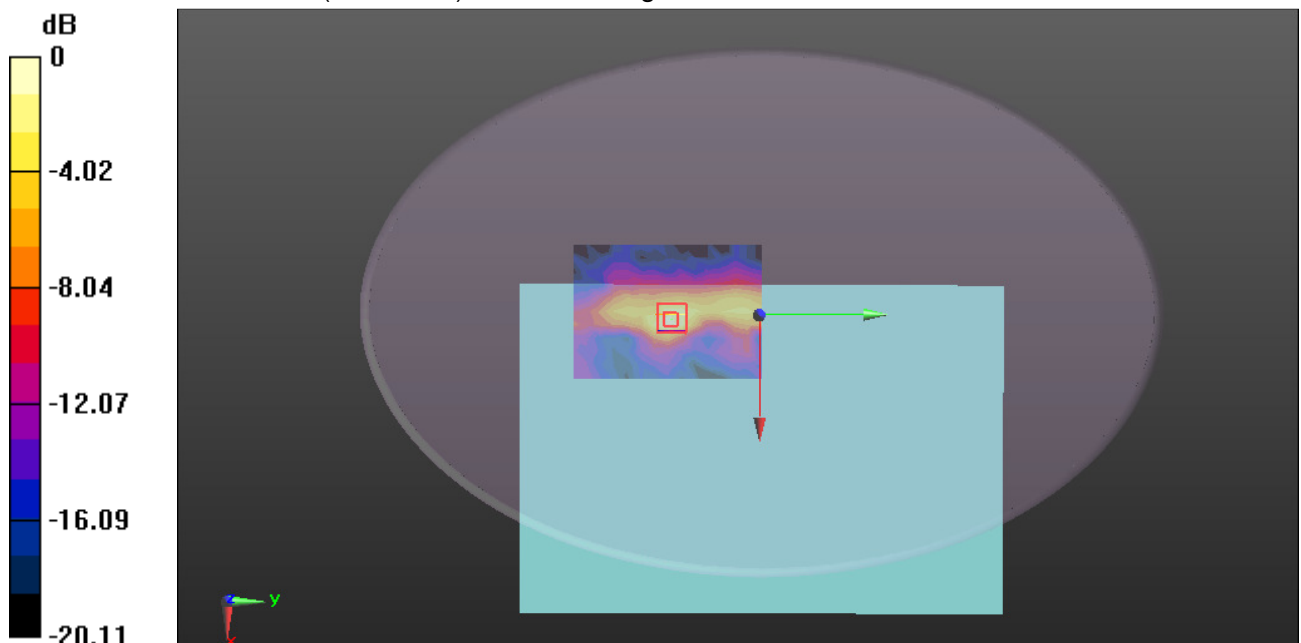
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 3.434 V/m ; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.0910 W/kg

SAR(1 g) = 0.044 W/kg ; SAR(10 g) = 0.021 W/kg

Maximum value of SAR (measured) = 0.0713 W/kg



0 dB = 0.0713 W/kg = -11.47 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

2.4G-Body Bottom CH00 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2402 \text{ MHz}$; $\sigma = 1.852 \text{ S/m}$; $\epsilon_r = 51.795$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/2.4G Body Bottom CH00 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.0776 W/kg

WiFi 2.4GHz/2.4G Body Bottom CH00 Aux Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

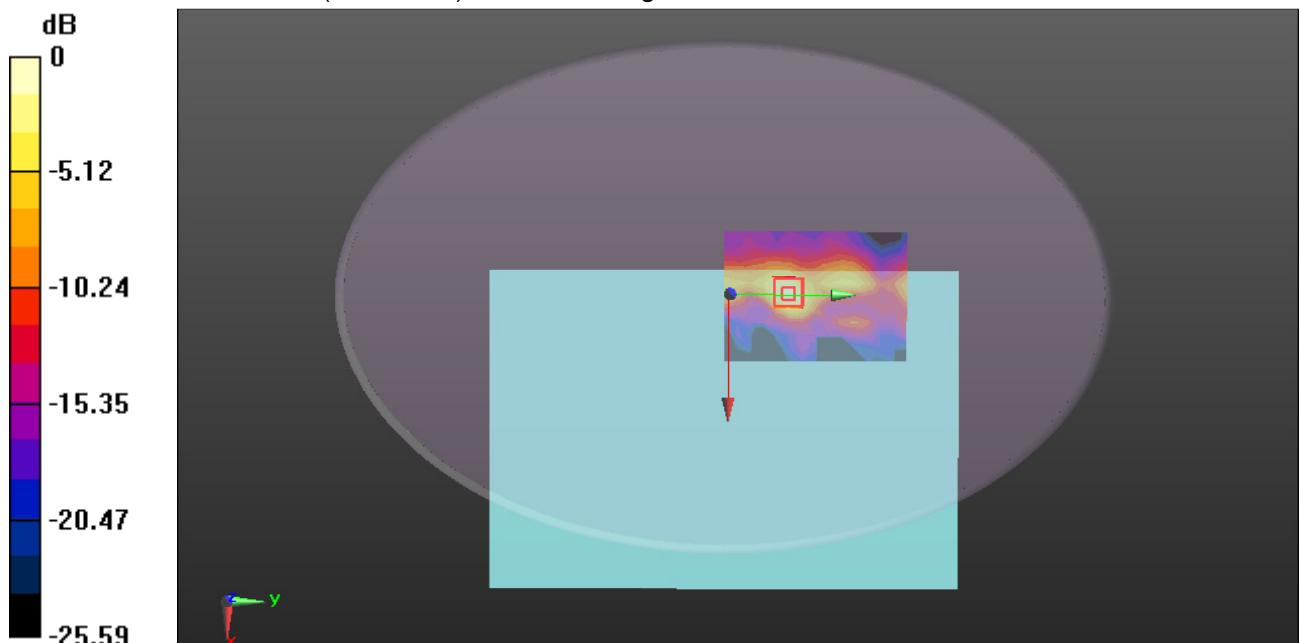
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 2.876 V/m ; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.0950 W/kg

SAR(1 g) = 0.047 W/kg ; SAR(10 g) = 0.022 W/kg

Maximum value of SAR (measured) = 0.0754 W/kg



0 dB = 0.0754 W/kg = -11.23 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

2.4G-Body Bottom CH39 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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; $\sigma = 1.899$ S/m; $\epsilon_r = 51.694$; $\rho = 1000$ 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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/2.4G Body Bottom CH39 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.0366 W/kg

WiFi 2.4GHz/2.4G Body Bottom CH39 Aux Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

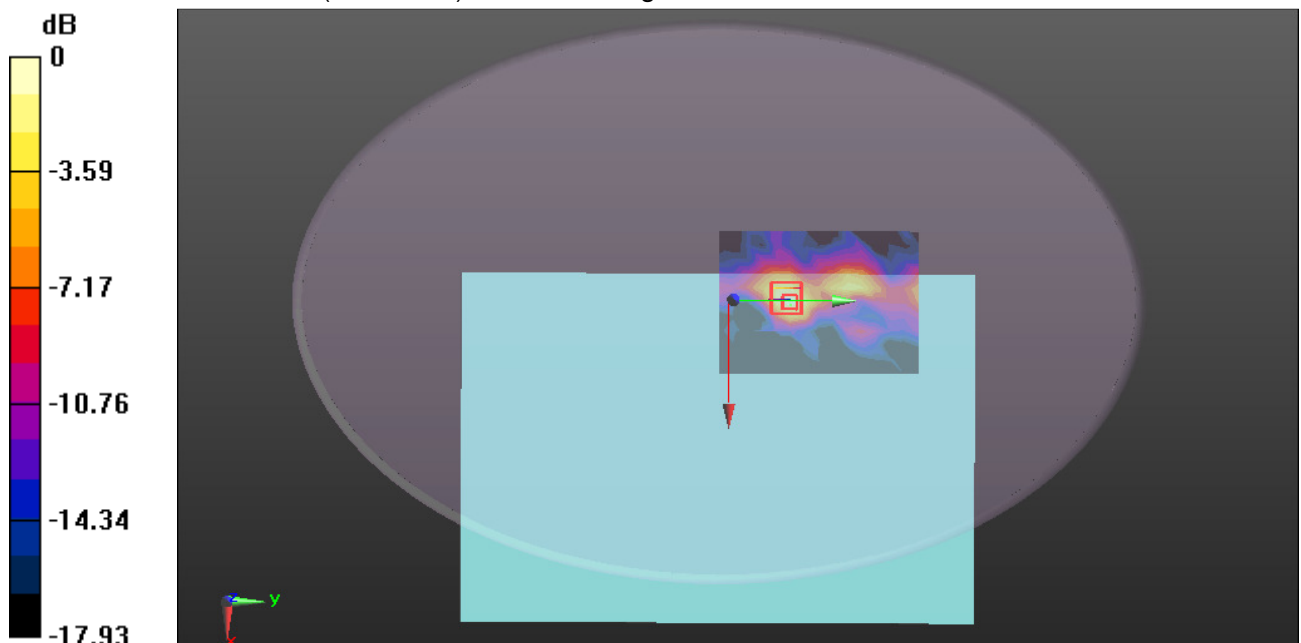
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 1.212 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.0470 W/kg

SAR(1 g) = 0.023 W/kg; SAR(10 g) = 0.011 W/kg

Maximum value of SAR (measured) = 0.0377 W/kg



0 dB = 0.0377 W/kg = -14.24 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

2.4G-Body Bottom CH78 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2480 \text{ MHz}$; $\sigma = 1.942 \text{ S/m}$; $\epsilon_r = 51.537$; $\rho = 1000 \text{ kg/m}^3$

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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/2.4G Body Bottom CH78 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.0288 W/kg

WiFi 2.4GHz/2.4G Body Bottom CH78 Aux Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

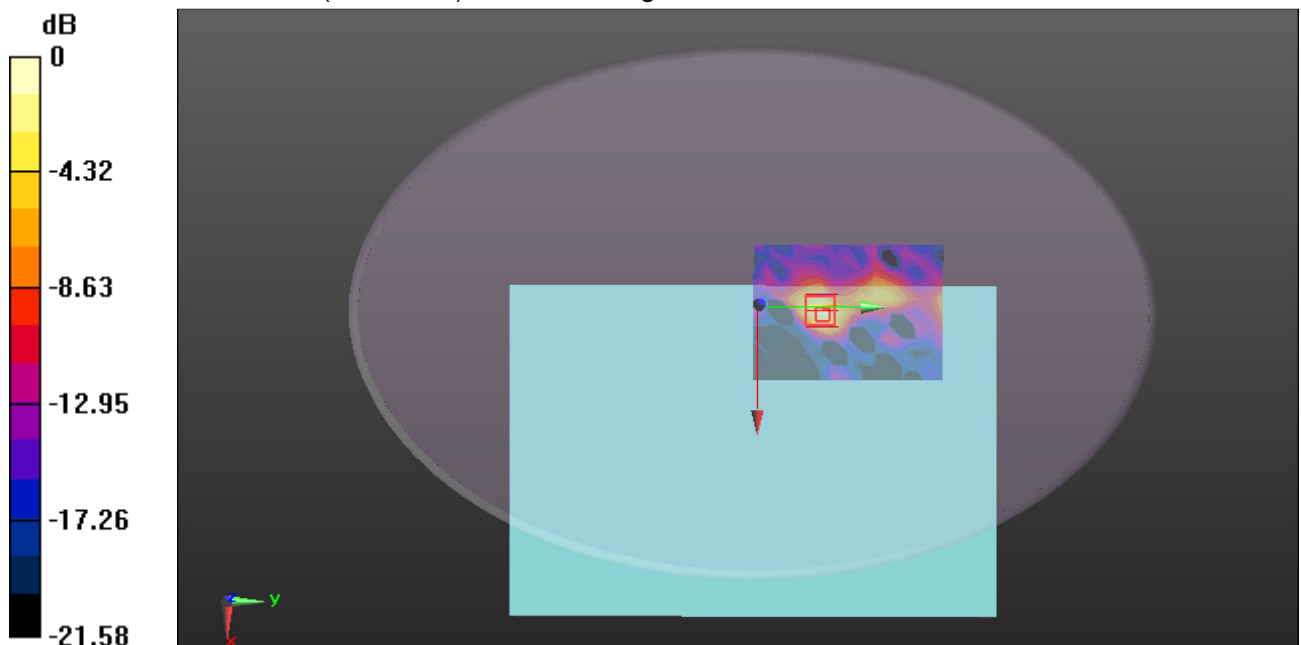
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 0.4840 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.0370 W/kg

SAR(1 g) = 0.017 W/kg; SAR(10 g) = 0.0074 W/kg

Maximum value of SAR (measured) = 0.0290 W/kg



0 dB = 0.0290 W/kg = -15.38 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

2.4G-Body Bottom CH00 Main Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2402$ MHz; $\sigma = 1.852$ S/m; $\epsilon_r = 51.795$; $\rho = 1000$ 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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/2.4G Body Bottom CH00 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.0426 W/kg

WiFi 2.4GHz/2.4G Body Bottom CH00 Main Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

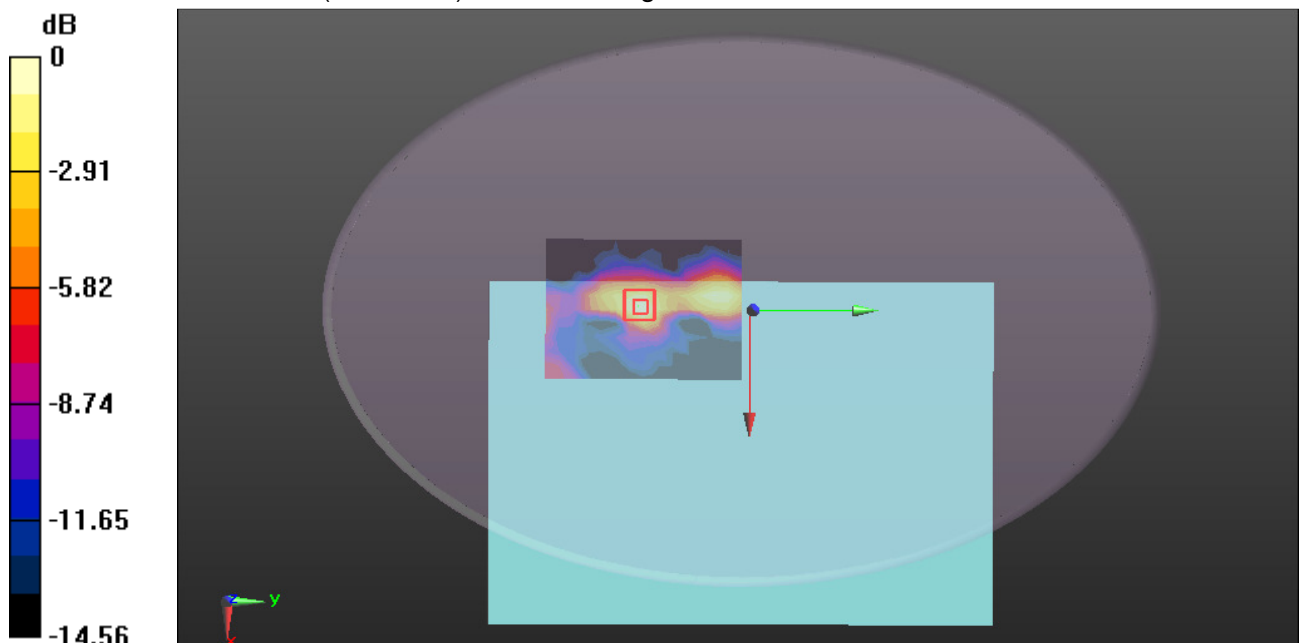
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 2.297 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.0540 W/kg

SAR(1 g) = 0.027 W/kg; SAR(10 g) = 0.013 W/kg

Maximum value of SAR (measured) = 0.0419 W/kg



0 dB = 0.0419 W/kg = -13.78 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 3/30/2018

2.4G-Body Bottom CH00 Aux Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 2402$ MHz; $\sigma = 1.852$ S/m; $\epsilon_r = 51.795$; $\rho = 1000$ 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(7.32, 7.32, 7.32); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/2.4G Body Bottom CH00 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.0408 W/kg

WiFi 2.4GHz/2.4G Body Bottom CH00 Aux Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

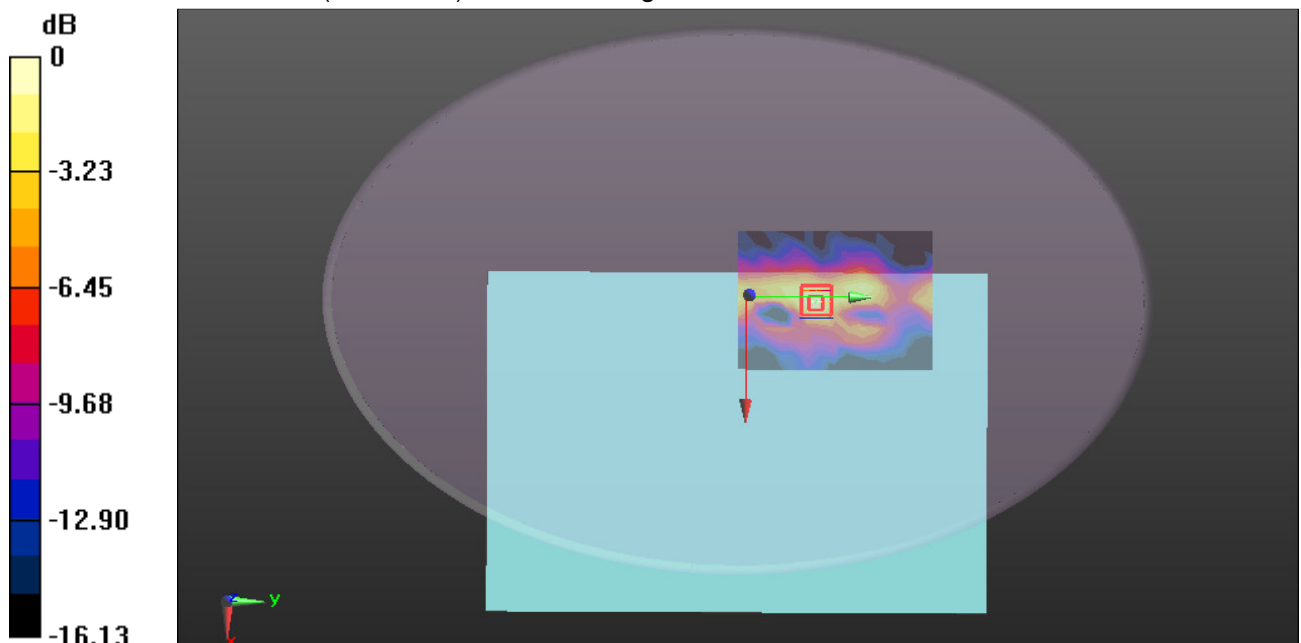
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 2.970 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.0570 W/kg

SAR(1 g) = 0.028 W/kg; SAR(10 g) = 0.014 W/kg

Maximum value of SAR (measured) = 0.0455 W/kg



0 dB = 0.0455 W/kg = -13.42 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH52 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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; $\sigma = 5.402$ S/m; $\epsilon_r = 49.152$; $\rho = 1000$ 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(4.67, 4.67, 4.67); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH52 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.460 W/kg

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

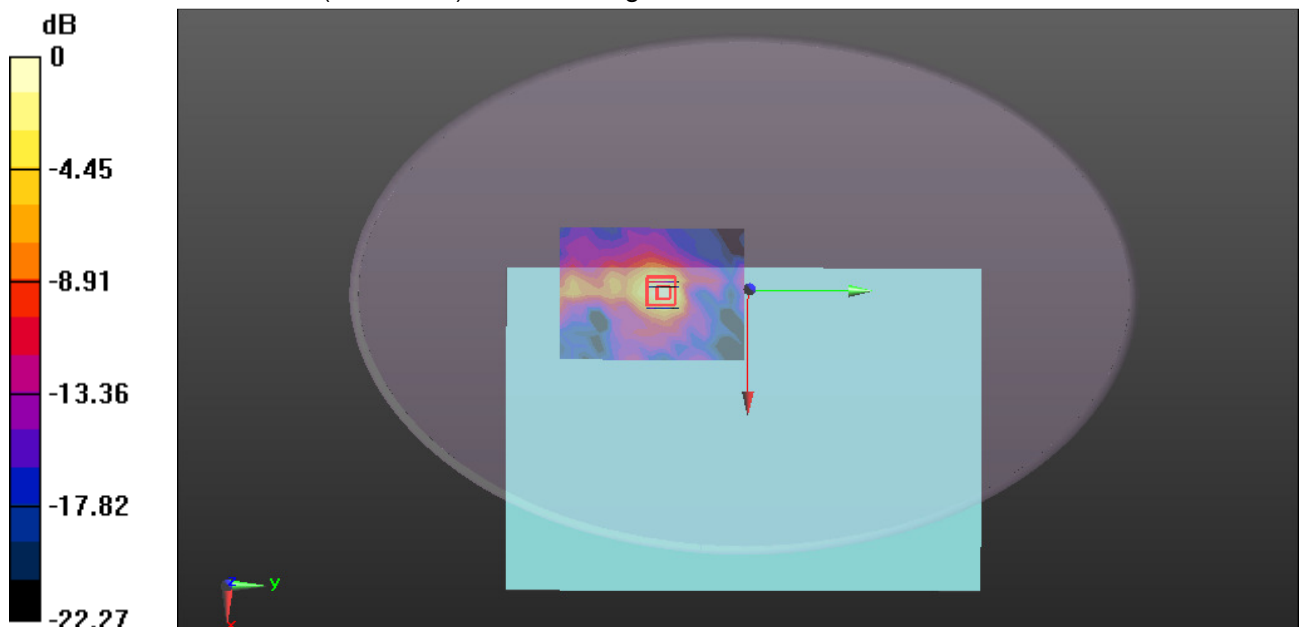
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 2.069 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.783 W/kg

SAR(1 g) = 0.189 W/kg; SAR(10 g) = 0.066 W/kg

Maximum value of SAR (measured) = 0.445 W/kg



0 dB = 0.445 W/kg = -3.52 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH60 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; Serial: N/A

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

Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.46$ S/m; $\epsilon_r = 48.905$; $\rho = 1000$ 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(4.67, 4.67, 4.67); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH60 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.455 W/kg

WIFI/IEEE802.11a Body Bottom CH60 Main Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

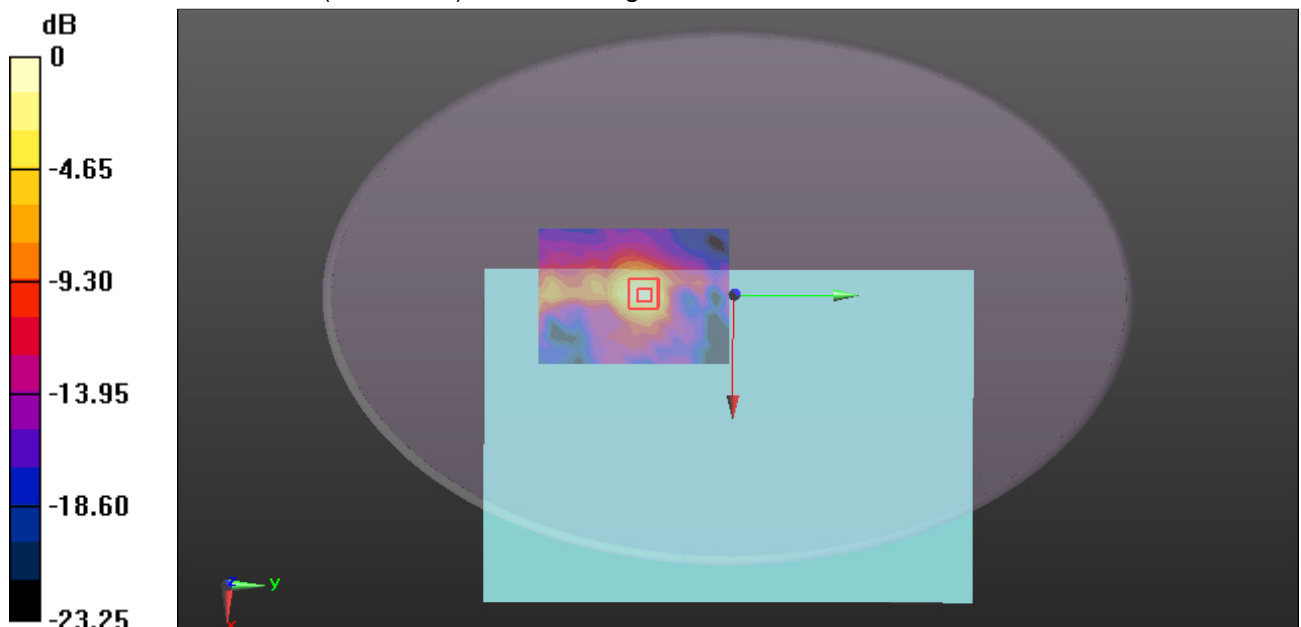
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 1.593 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.828 W/kg

SAR(1 g) = 0.194 W/kg; SAR(10 g) = 0.070 W/kg

Maximum value of SAR (measured) = 0.460 W/kg



0 dB = 0.460 W/kg = -3.37 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH64 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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; $\sigma = 5.513$ S/m; $\epsilon_r = 48.885$; $\rho = 1000$ 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(4.67, 4.67, 4.67); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH64 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.465 W/kg

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

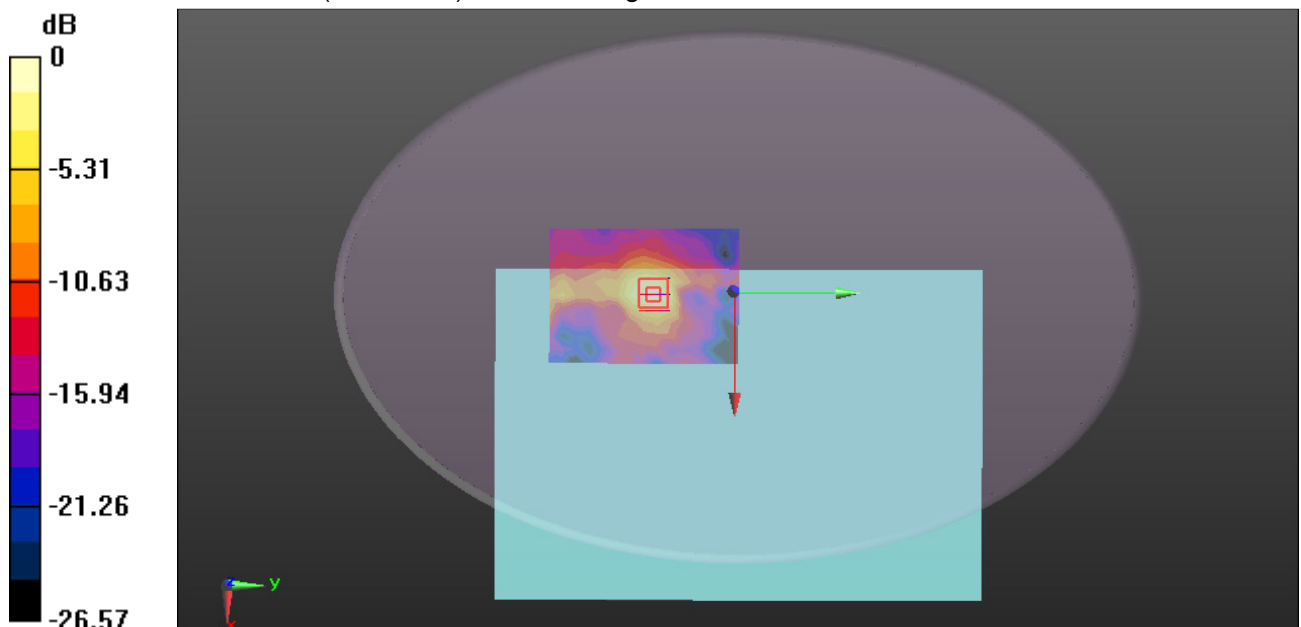
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 1.410 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.860 W/kg

SAR(1 g) = 0.198 W/kg; SAR(10 g) = 0.070 W/kg

Maximum value of SAR (measured) = 0.478 W/kg



0 dB = 0.478 W/kg = -3.21 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH100 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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; $\sigma = 5.743$ S/m; $\epsilon_r = 48.791$; $\rho = 1000$ 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(4.26, 4.26, 4.26); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH100 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.301 W/kg

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

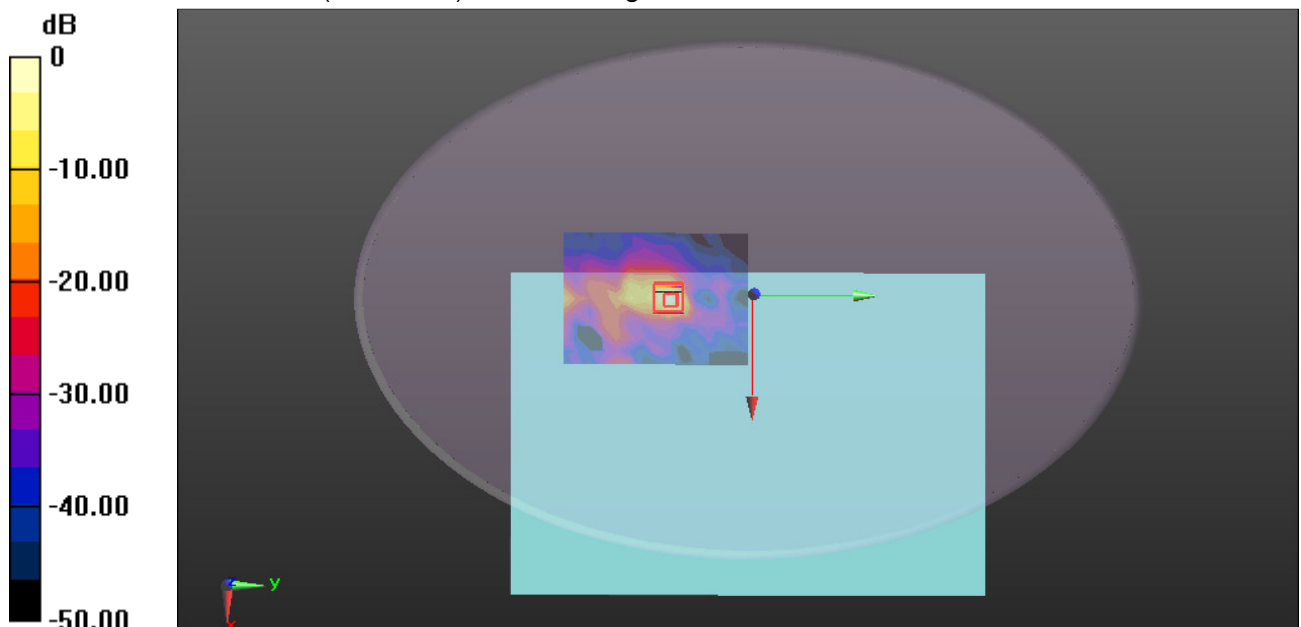
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 0.6810 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.530 W/kg

SAR(1 g) = 0.120 W/kg; SAR(10 g) = 0.040 W/kg

Maximum value of SAR (measured) = 0.307 W/kg



0 dB = 0.307 W/kg = -5.13 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH128 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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; $\sigma = 5.916$ S/m; $\epsilon_r = 48.451$; $\rho = 1000$ 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: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH128 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.645 W/kg

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

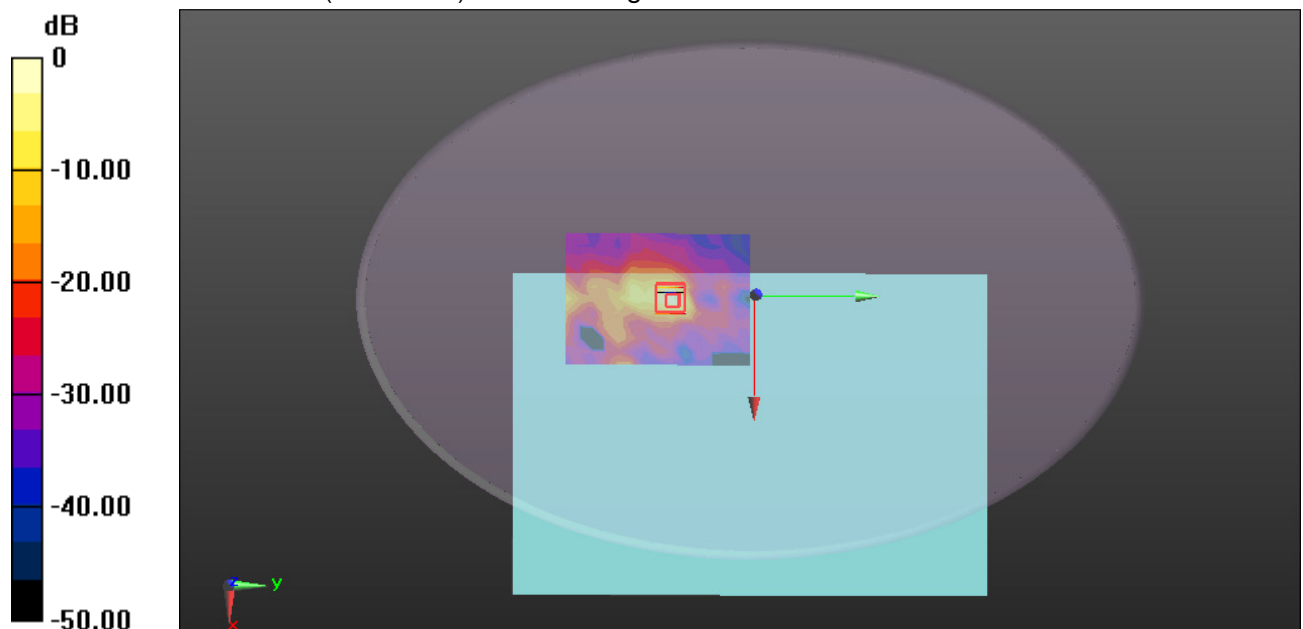
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 0.9546 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.253 W/kg; SAR(10 g) = 0.076 W/kg

Maximum value of SAR (measured) = 0.615 W/kg



0 dB = 0.615 W/kg = -2.11 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH144 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; Serial: N/A

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

Frequency: 5720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5720$ MHz; $\sigma = 6.051$ S/m; $\epsilon_r = 48.078$; $\rho = 1000$ 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(4.45, 4.45, 4.45); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH144 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.709 W/kg

WIFI/IEEE802.11a Body Bottom CH144 Main Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

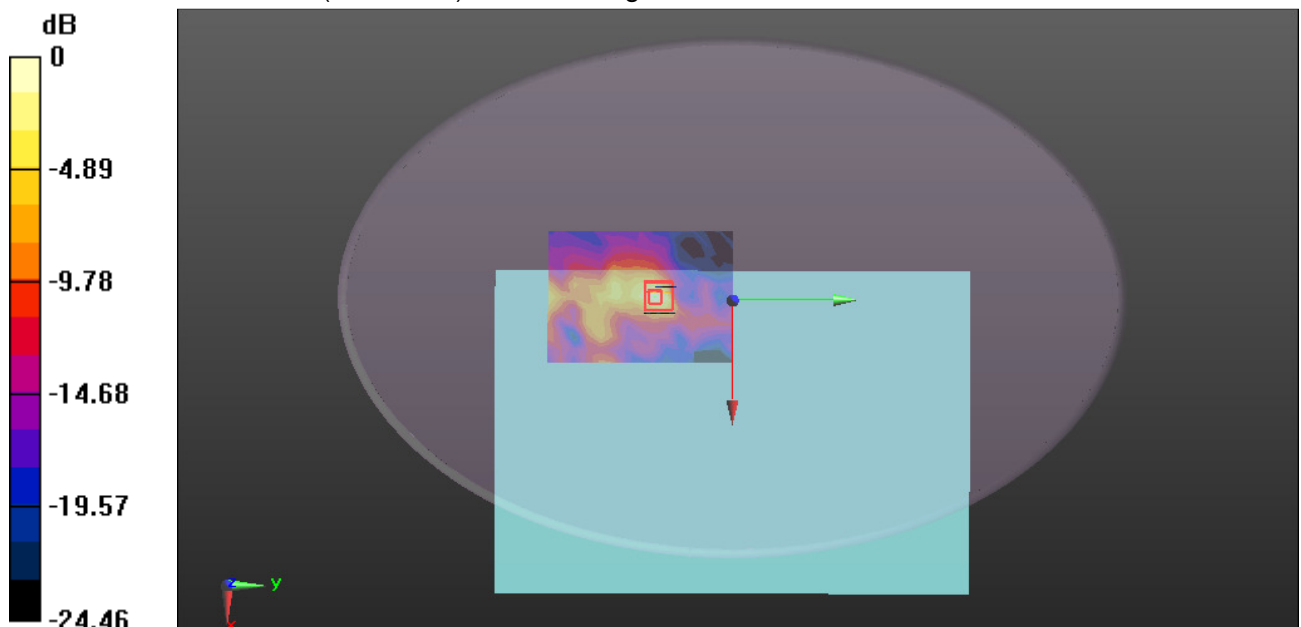
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 0.5200 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.277 W/kg; SAR(10 g) = 0.079 W/kg

Maximum value of SAR (measured) = 0.721 W/kg



0 dB = 0.721 W/kg = -1.42 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH149 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 5745 \text{ MHz}$; $\sigma = 6.107 \text{ S/m}$; $\epsilon_r = 48.078$; $\rho = 1000 \text{ kg/m}^3$

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(4.45, 4.45, 4.45); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH149 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.442 W/kg

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

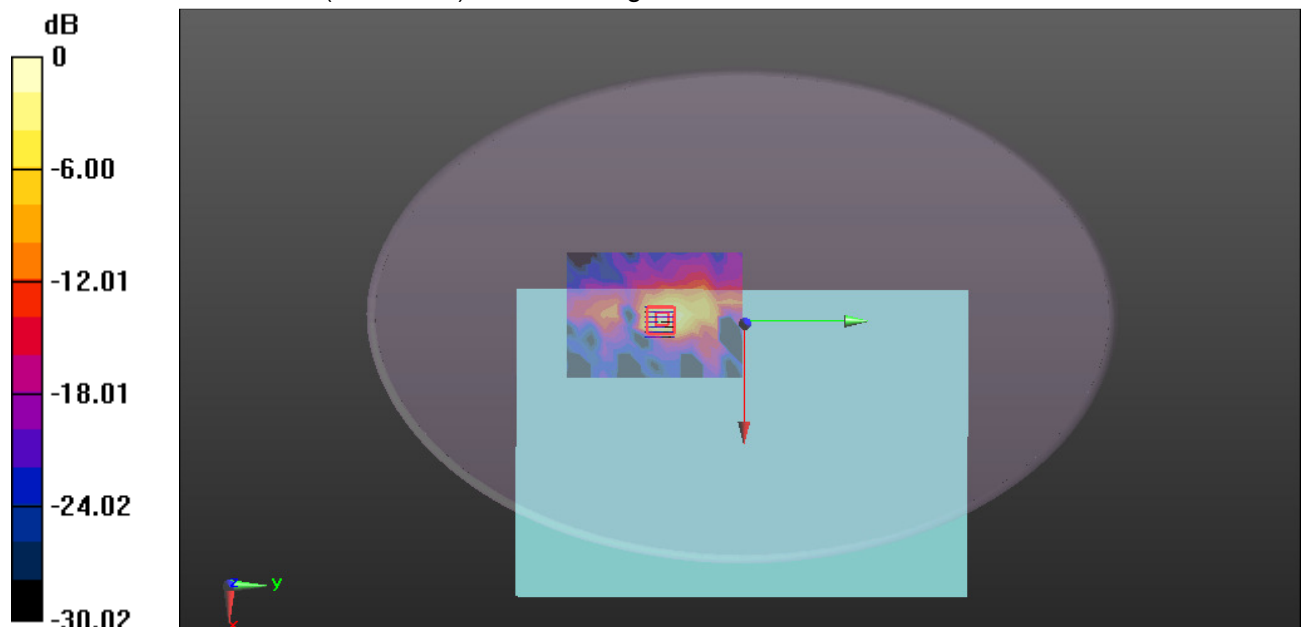
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 1.146 V/m ; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.218 W/kg ; SAR(10 g) = 0.068 W/kg

Maximum value of SAR (measured) = 0.544 W/kg



$0 \text{ dB} = 0.544 \text{ W/kg} = -2.64 \text{ dBW/kg}$

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH157 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 5785 \text{ MHz}$; $\sigma = 6.149 \text{ S/m}$; $\epsilon_r = 47.985$; $\rho = 1000 \text{ kg/m}^3$

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(4.45, 4.45, 4.45); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH157 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.687 W/kg

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

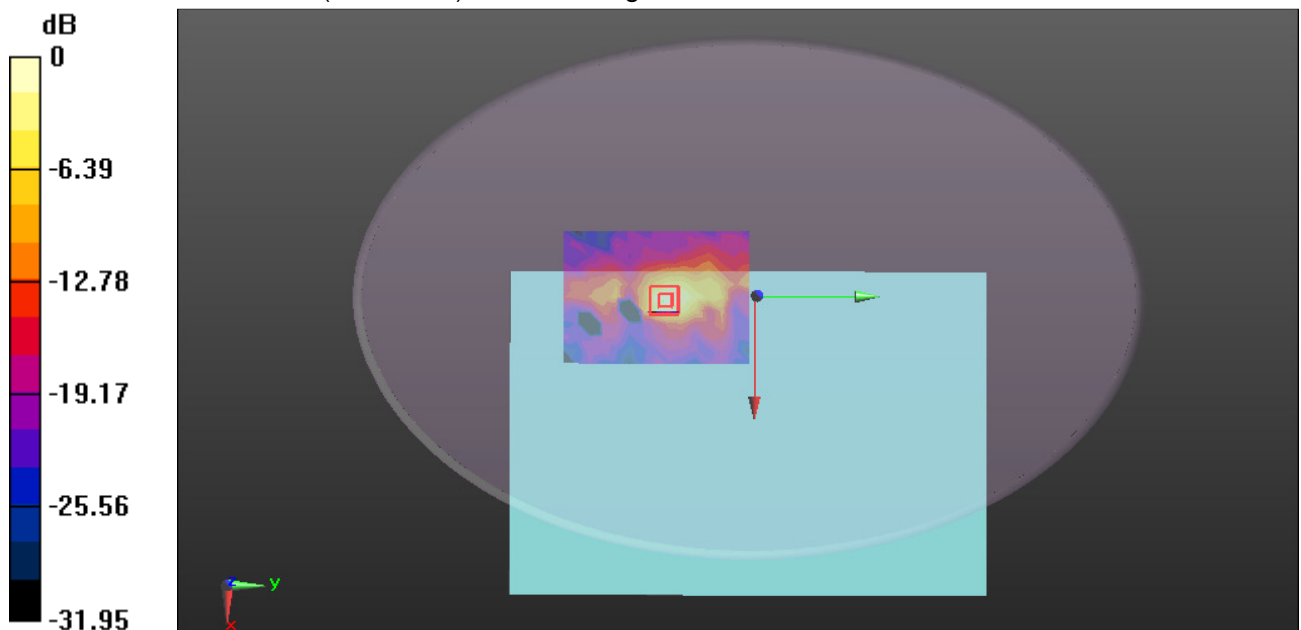
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 1.288 V/m ; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.283 W/kg ; SAR(10 g) = 0.088 W/kg

Maximum value of SAR (measured) = 0.714 W/kg



$0 \text{ dB} = 0.714 \text{ W/kg} = -1.46 \text{ dBW/kg}$

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH165 Main Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 5825$ MHz; $\sigma = 6.211$ S/m; $\epsilon_r = 47.746$; $\rho = 1000$ 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(4.45, 4.45, 4.45); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH165 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.683 W/kg

WIFI/IEEE802.11a Body Bottom CH165 Main Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

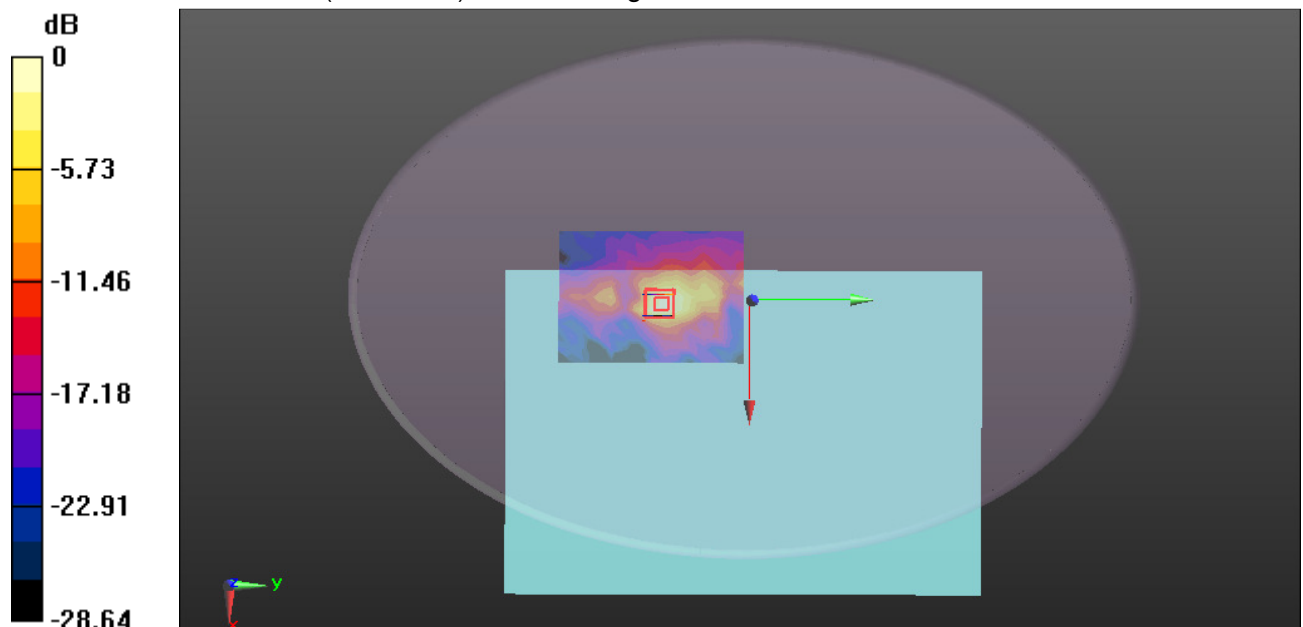
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 2.190 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.72 W/kg

SAR(1 g) = 0.341 W/kg; SAR(10 g) = 0.108 W/kg

Maximum value of SAR (measured) = 0.852 W/kg



0 dB = 0.852 W/kg = -0.70 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH52 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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; $\sigma = 5.402$ S/m; $\epsilon_r = 49.152$; $\rho = 1000$ 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(4.67, 4.67, 4.67); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH52 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.356 W/kg

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

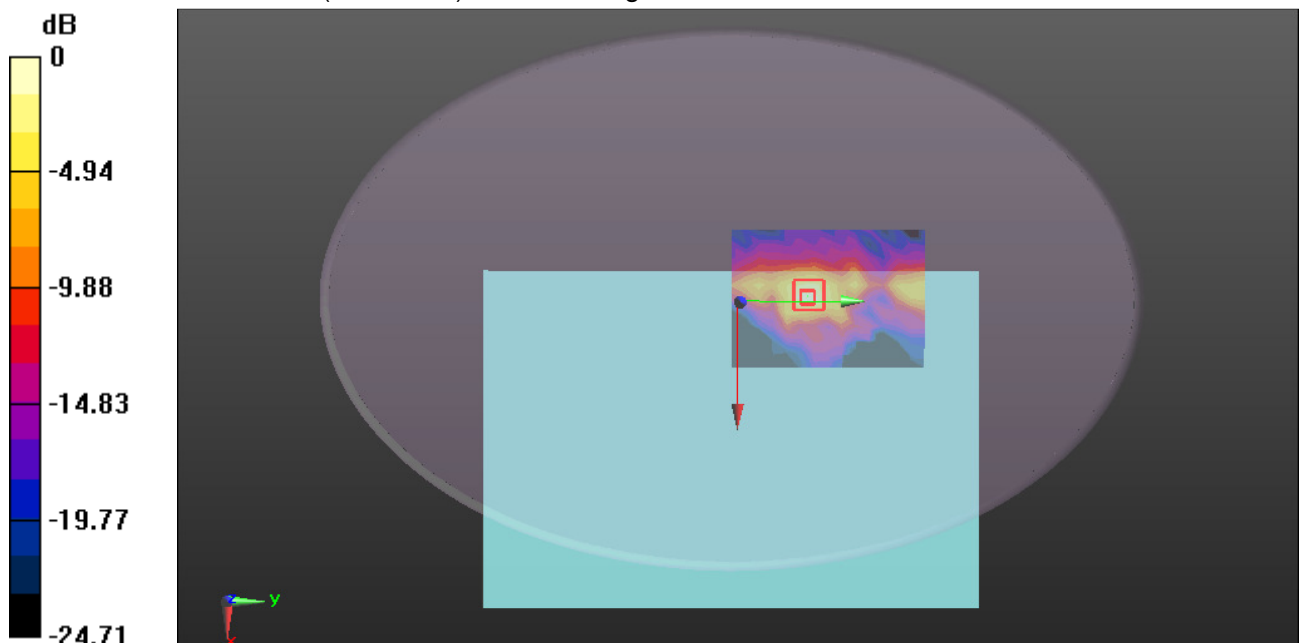
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 1.860 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.745 W/kg

SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.057 W/kg

Maximum value of SAR (measured) = 0.402 W/kg



0 dB = 0.402 W/kg = -3.96 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH60 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; Serial: N/A

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

Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.46$ S/m; $\epsilon_r = 48.905$; $\rho = 1000$ 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(4.67, 4.67, 4.67); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH60 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

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

WIFI/IEEE802.11a Body Bottom CH60 Aux Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

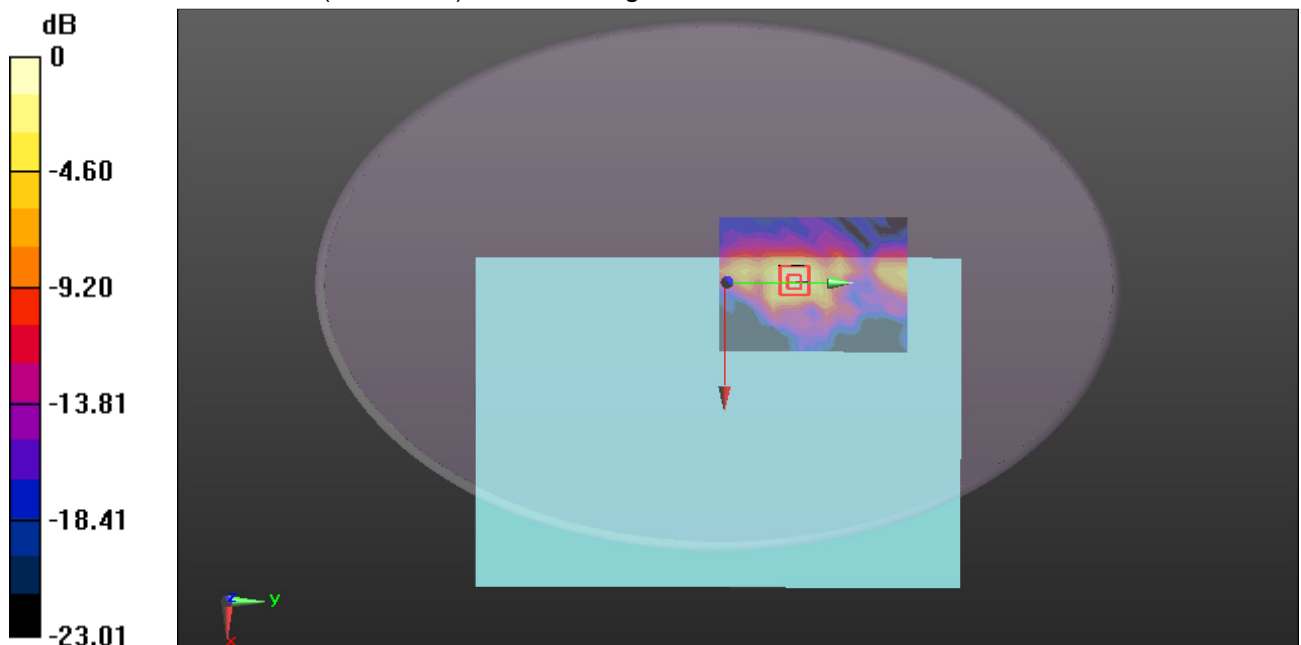
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 1.862 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.784 W/kg

SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.061 W/kg

Maximum value of SAR (measured) = 0.430 W/kg



0 dB = 0.430 W/kg = -3.67 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH64 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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; $\sigma = 5.513$ S/m; $\epsilon_r = 48.885$; $\rho = 1000$ 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(4.67, 4.67, 4.67); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH64 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.428 W/kg

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

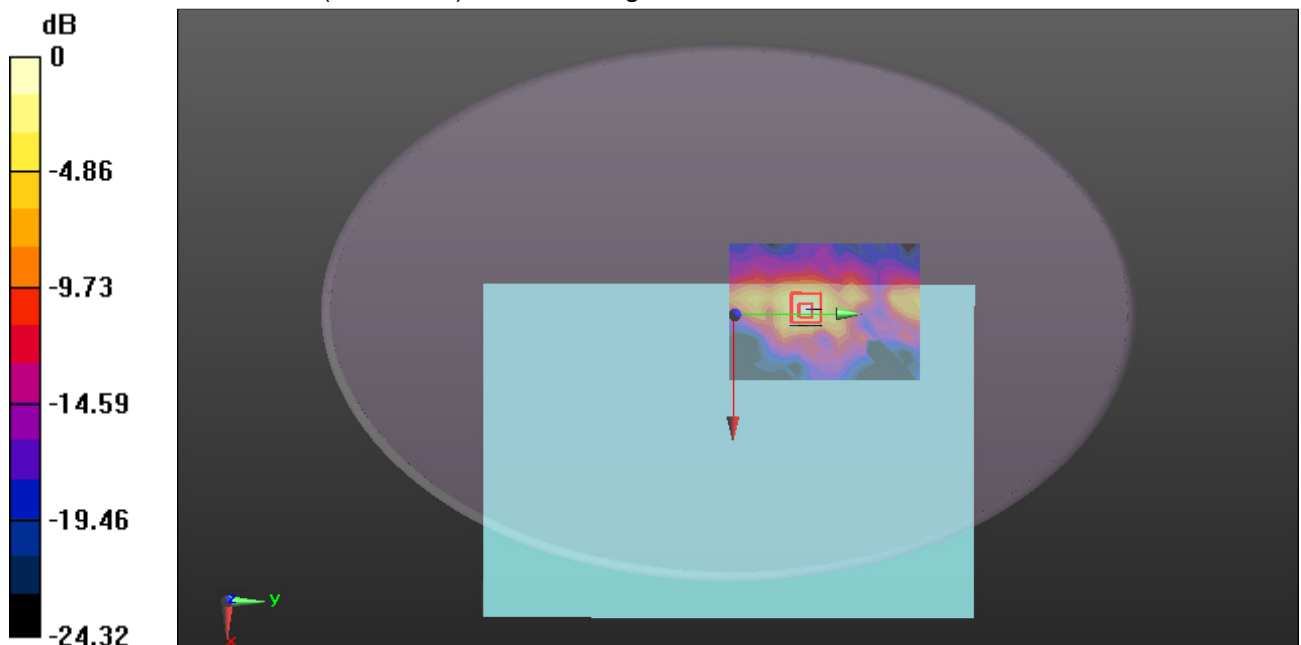
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 2.005 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.939 W/kg

SAR(1 g) = 0.204 W/kg; SAR(10 g) = 0.071 W/kg

Maximum value of SAR (measured) = 0.495 W/kg



0 dB = 0.495 W/kg = -3.05 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH100 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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; $\sigma = 5.743$ S/m; $\epsilon_r = 48.791$; $\rho = 1000$ 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(4.26, 4.26, 4.26); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH100 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.384 W/kg

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

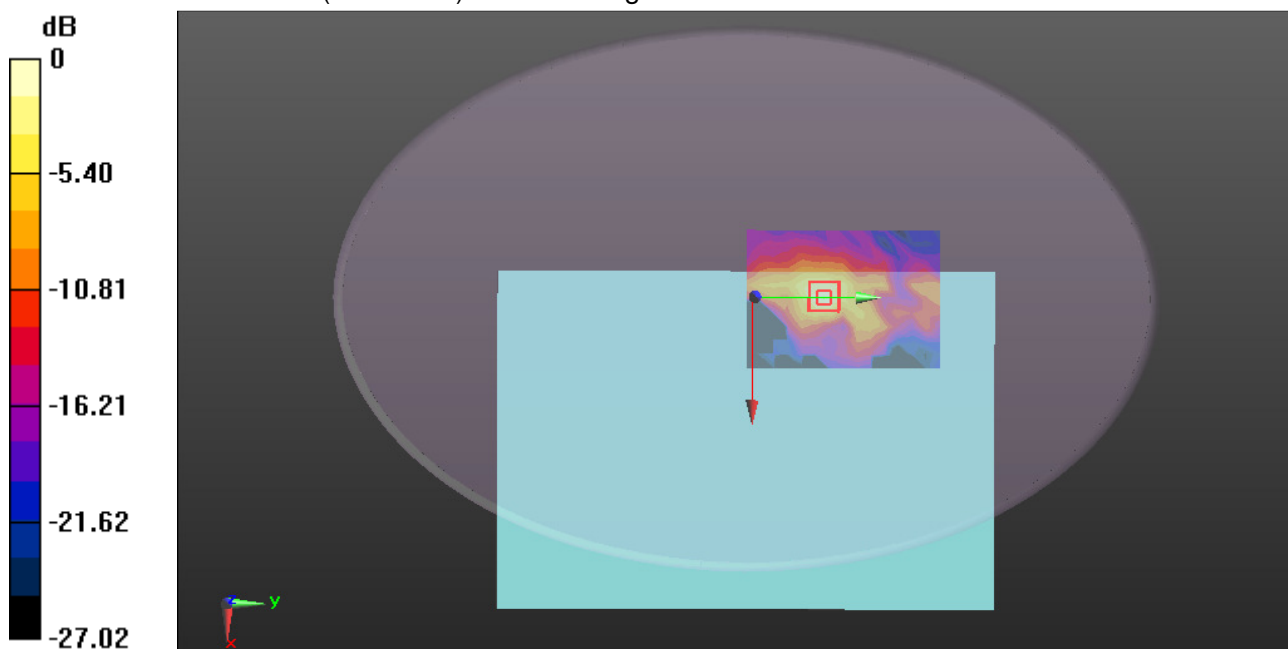
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 1.918 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.844 W/kg

SAR(1 g) = 0.183 W/kg; SAR(10 g) = 0.063 W/kg

Maximum value of SAR (measured) = 0.449 W/kg



0 dB = 0.449 W/kg = -3.48 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH136 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; Serial: N/A

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

Frequency: 5680 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5680$ MHz; $\sigma = 5.951$ S/m; $\epsilon_r = 48.238$; $\rho = 1000$ 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(4.18, 4.18, 4.18); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH136 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.622 W/kg

WIFI/IEEE802.11a Body Bottom CH136 Aux Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

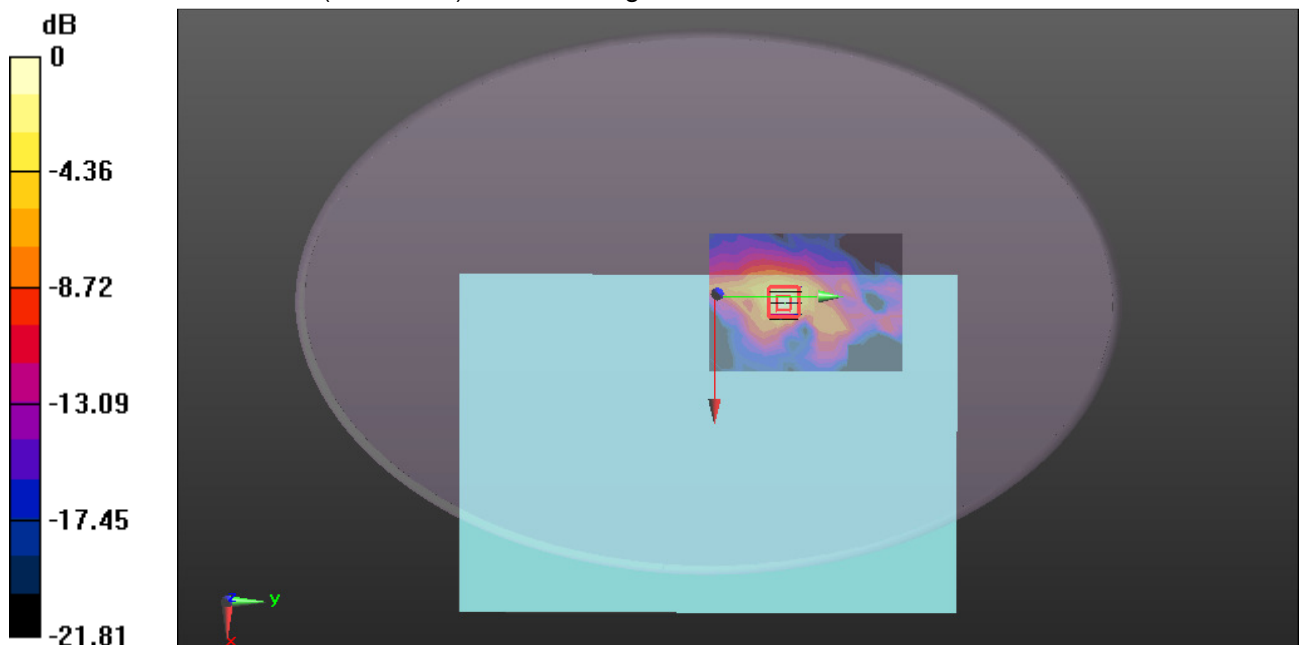
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 1.599 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.278 W/kg; SAR(10 g) = 0.095 W/kg

Maximum value of SAR (measured) = 0.693 W/kg



0 dB = 0.693 W/kg = -1.59 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH144 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; Serial: N/A

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

Frequency: 5720 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5720$ MHz; $\sigma = 6.051$ S/m; $\epsilon_r = 48.078$; $\rho = 1000$ 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(4.45, 4.45, 4.45); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH144 Aux Antenna/Area Scan (11x15x1): Measurement grid:
dx=10mm, dy=10mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.544 W/kg

WIFI/IEEE802.11a Body Bottom CH144 Aux Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement
grid: dx=4mm, dy=4mm, dz=1.4mm

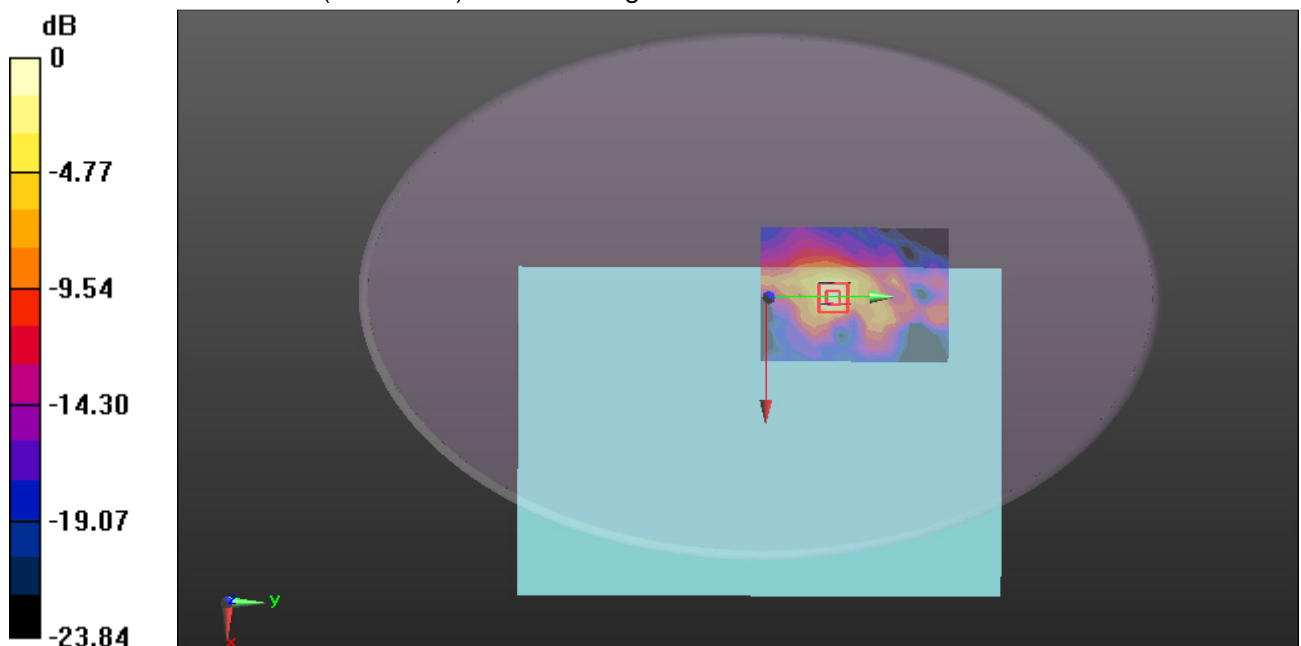
Reference Value = 1.794 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.248 W/kg; SAR(10 g) = 0.083 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.619 W/kg



0 dB = 0.619 W/kg = -2.08 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH149 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 5745 \text{ MHz}$; $\sigma = 6.107 \text{ S/m}$; $\epsilon_r = 48.078$; $\rho = 1000 \text{ kg/m}^3$

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(4.45, 4.45, 4.45); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH149 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.545 W/kg

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

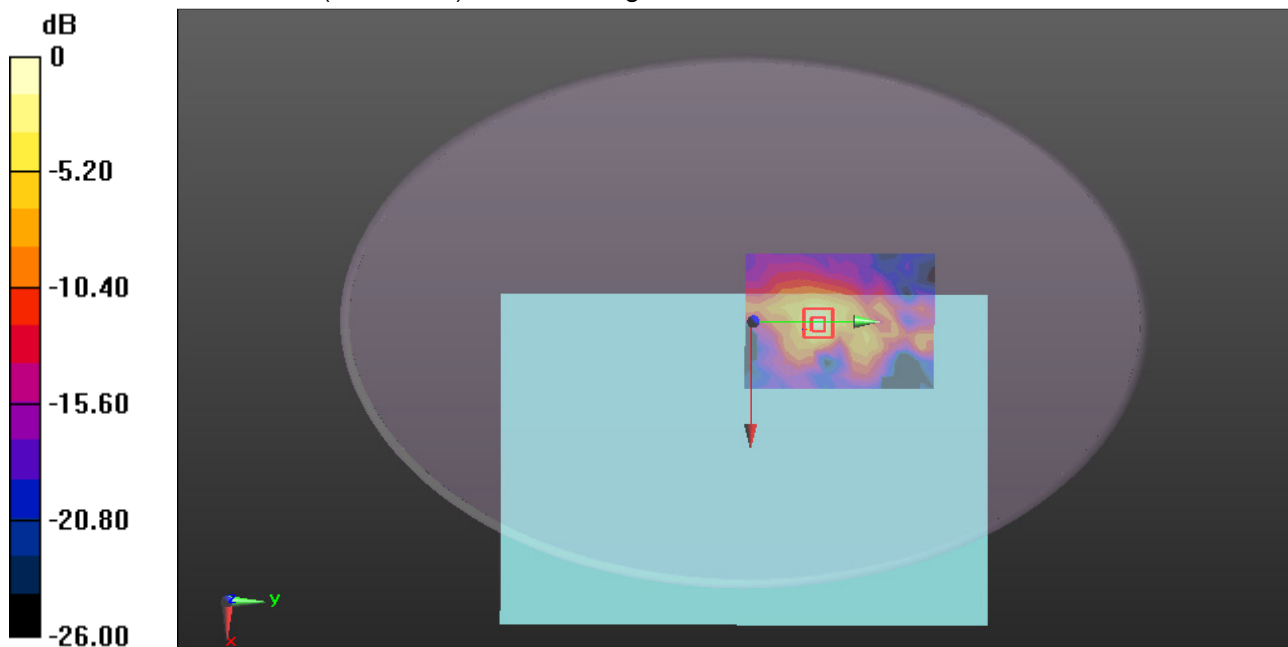
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 1.671 V/m ; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.248 W/kg ; SAR(10 g) = 0.083 W/kg

Maximum value of SAR (measured) = 0.629 W/kg



0 dB = 0.629 W/kg = -2.01 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH157 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 5785 \text{ MHz}$; $\sigma = 6.149 \text{ S/m}$; $\epsilon_r = 47.985$; $\rho = 1000 \text{ kg/m}^3$

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(4.45, 4.45, 4.45); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH157 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.530 W/kg

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

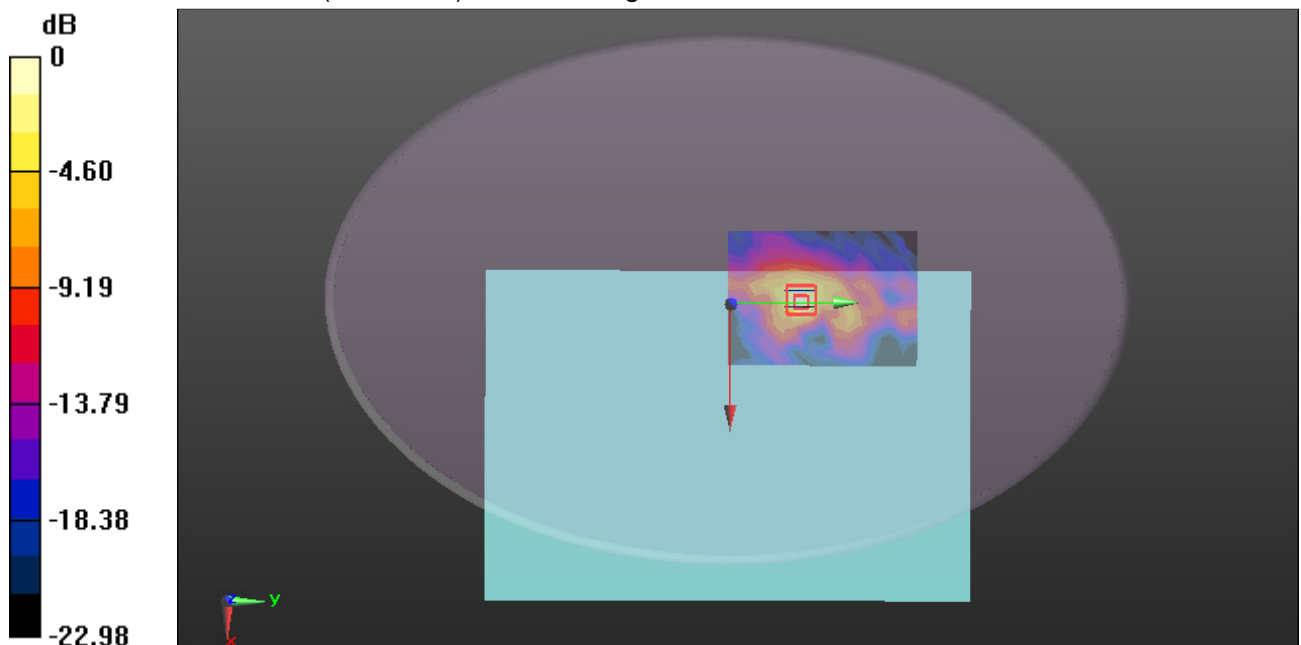
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 1.474 V/m ; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.238 W/kg ; SAR(10 g) = 0.078 W/kg

Maximum value of SAR (measured) = 0.607 W/kg



0 dB = 0.607 W/kg = -2.17 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH165 Aux Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 5825 \text{ MHz}$; $\sigma = 6.211 \text{ S/m}$; $\epsilon_r = 47.746$; $\rho = 1000 \text{ kg/m}^3$

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(4.45, 4.45, 4.45); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH165 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.553 W/kg

WIFI/IEEE802.11a Body Bottom CH165 Aux Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

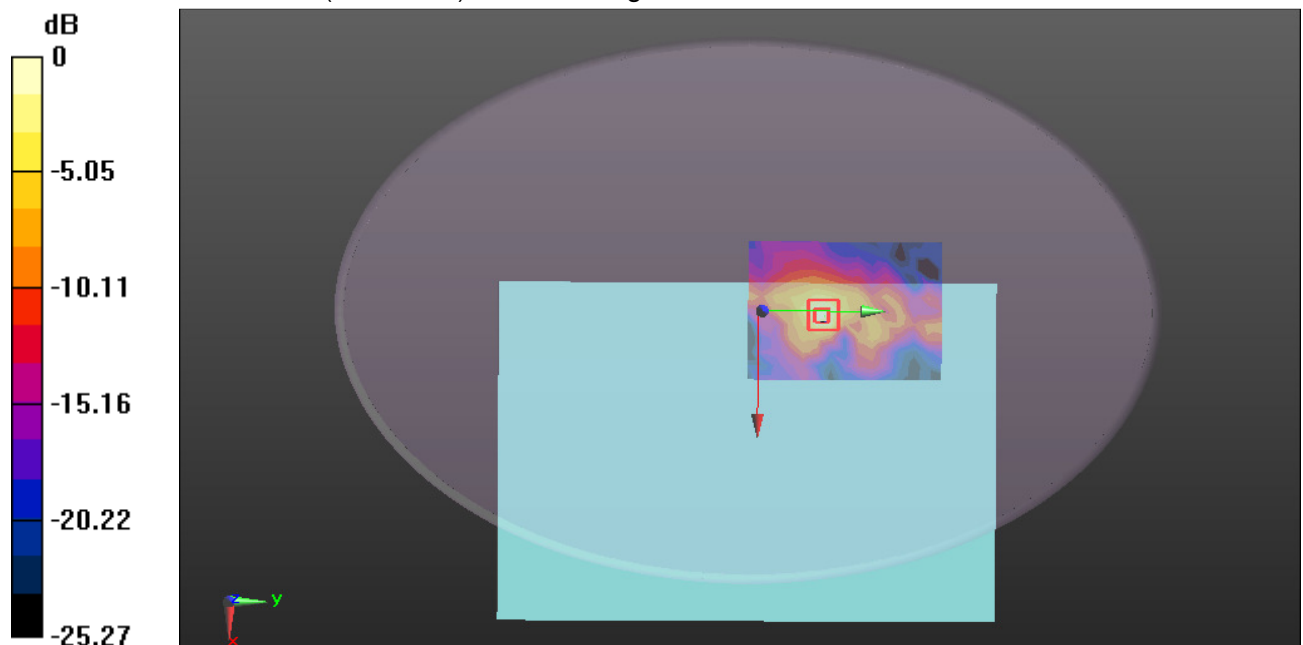
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 2.041 V/m ; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.247 W/kg ; SAR(10 g) = 0.080 W/kg

Maximum value of SAR (measured) = 0.612 W/kg



0 dB = 0.612 W/kg = -2.13 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH165 Main Antenna INPAQ ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; 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: $f = 5825 \text{ MHz}$; $\sigma = 6.211 \text{ S/m}$; $\epsilon_r = 47.746$; $\rho = 1000 \text{ kg/m}^3$

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(4.45, 4.45, 4.45); Calibrated: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH165 Main Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.291 W/kg

WIFI/IEEE802.11a Body Bottom CH165 Main Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

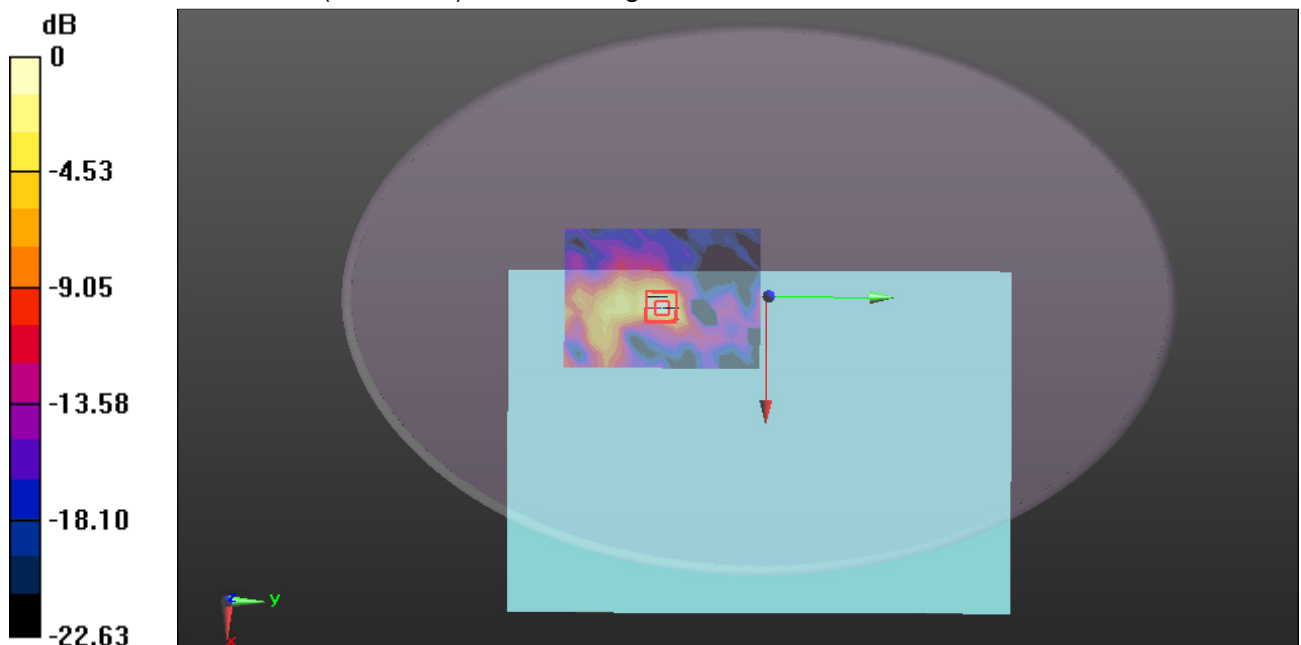
grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 2.313 V/m ; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.617 W/kg

SAR(1 g) = 0.124 W/kg ; SAR(10 g) = 0.040 W/kg

Maximum value of SAR (measured) = 0.318 W/kg



$0 \text{ dB} = 0.318 \text{ W/kg} = -4.98 \text{ dBW/kg}$

Test Laboratory: Compliance Certification Services Inc.

Date: 4/2/2018

WIFI 802.11 a-Body Bottom CH136 Aux Antenna South Star ANT

DUT: Notebook Computer; Type: Lenovo ideapad 330S-15IKB; Serial: N/A

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

Frequency: 5680 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5680$ MHz; $\sigma = 5.951$ S/m; $\epsilon_r = 48.238$; $\rho = 1000$ 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: 7/26/2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/20/2017
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1102
- DASY52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WIFI/IEEE802.11a Body Bottom CH136 Aux Antenna/Area Scan (11x15x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.570 W/kg

WIFI/IEEE802.11a Body Bottom CH136 Aux Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement

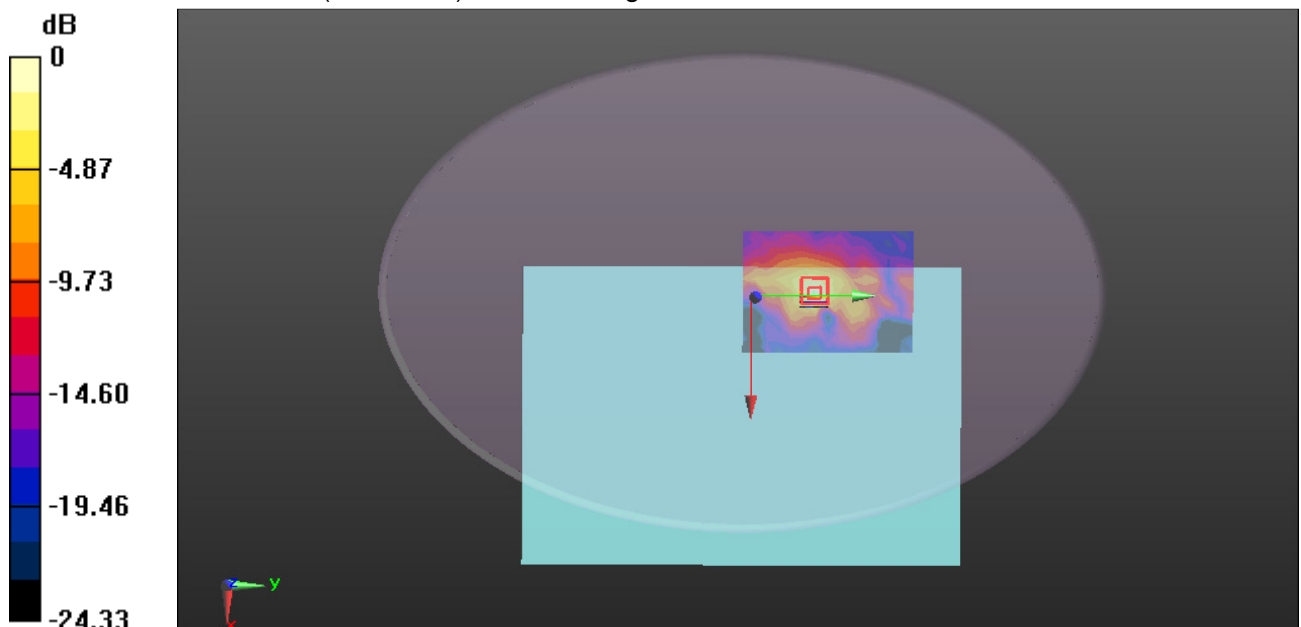
grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 1.742 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.242 W/kg; SAR(10 g) = 0.085 W/kg

Maximum value of SAR (measured) = 0.588 W/kg



0 dB = 0.588 W/kg = -2.31 dBW/kg