



# Appendix D

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Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**WiFi 802.11 b-Body Bottom CH1 Main Antenna LUXSHARE 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:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.942 \text{ S/m}$ ;  $\epsilon_r = 51.548$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

**WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Main Antenna/Area Scan (11x15x1): Measurement**

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

Maximum value of SAR (measured) = 0.346 W/kg

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

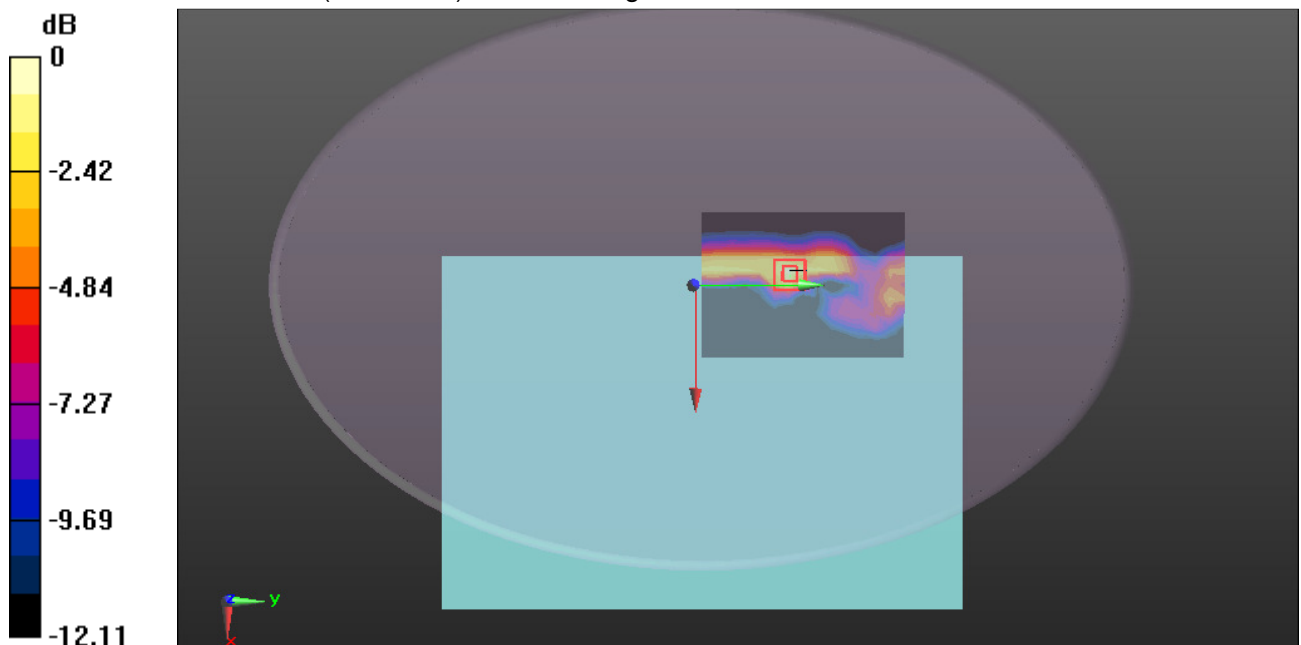
Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 4.794 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.492 W/kg

**SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.098 W/kg**

Maximum value of SAR (measured) = 0.372 W/kg



0 dB = 0.372 W/kg = -4.29 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**WiFi 802.11 b-Body Bottom CH6 Main Antenna LUXSHARE 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:  $f = 2437 \text{ MHz}$ ;  $\sigma = 1.945 \text{ S/m}$ ;  $\epsilon_r = 51.672$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

**WiFi 2.4GHz/IEEE802.11b Body Bottom CH6 Main Antenna/Area Scan (11x15x1): Measurement**

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

Maximum value of SAR (measured) = 0.362 W/kg

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

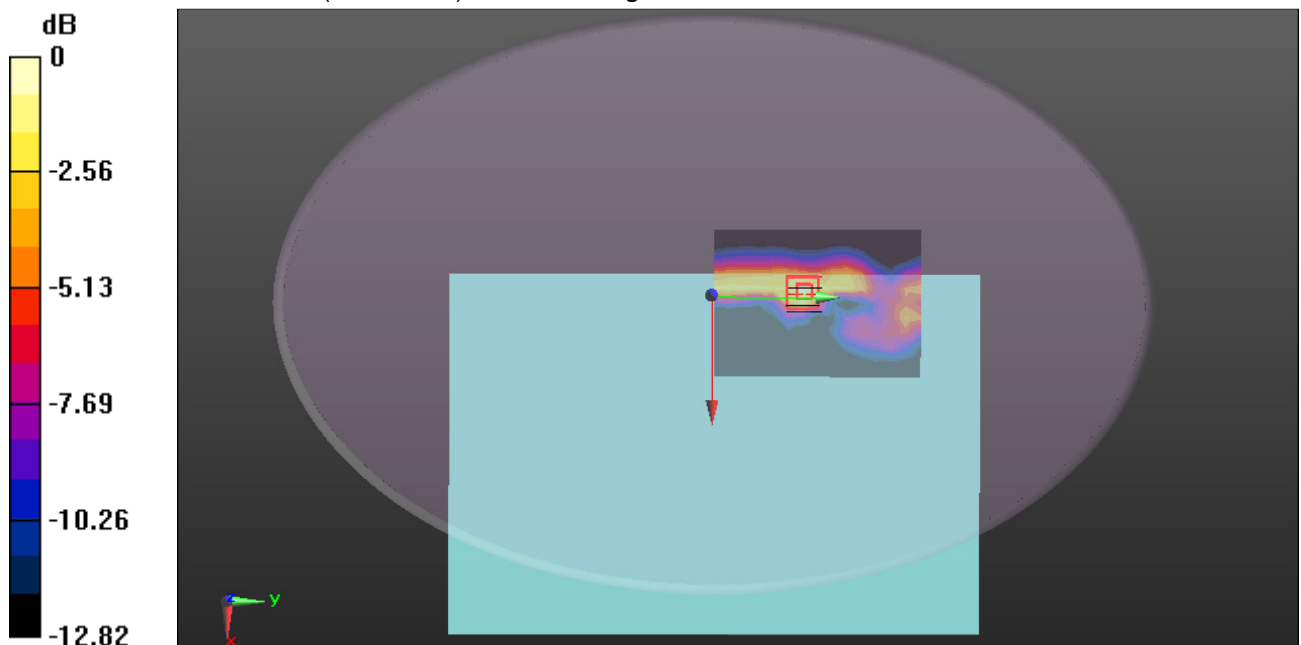
Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 4.783 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.518 W/kg

**SAR(1 g) = 0.226 W/kg; SAR(10 g) = 0.103 W/kg**

Maximum value of SAR (measured) = 0.392 W/kg



0 dB = 0.392 W/kg = -4.07 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**WiFi 802.11 b-Body Bottom CH11 Main Antenna LUXSHARE 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:  $f = 2462 \text{ MHz}$ ;  $\sigma = 1.953 \text{ S/m}$ ;  $\epsilon_r = 51.601$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASY52 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=10mm, dy=10mm

Maximum value of SAR (measured) = 0.366 W/kg

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

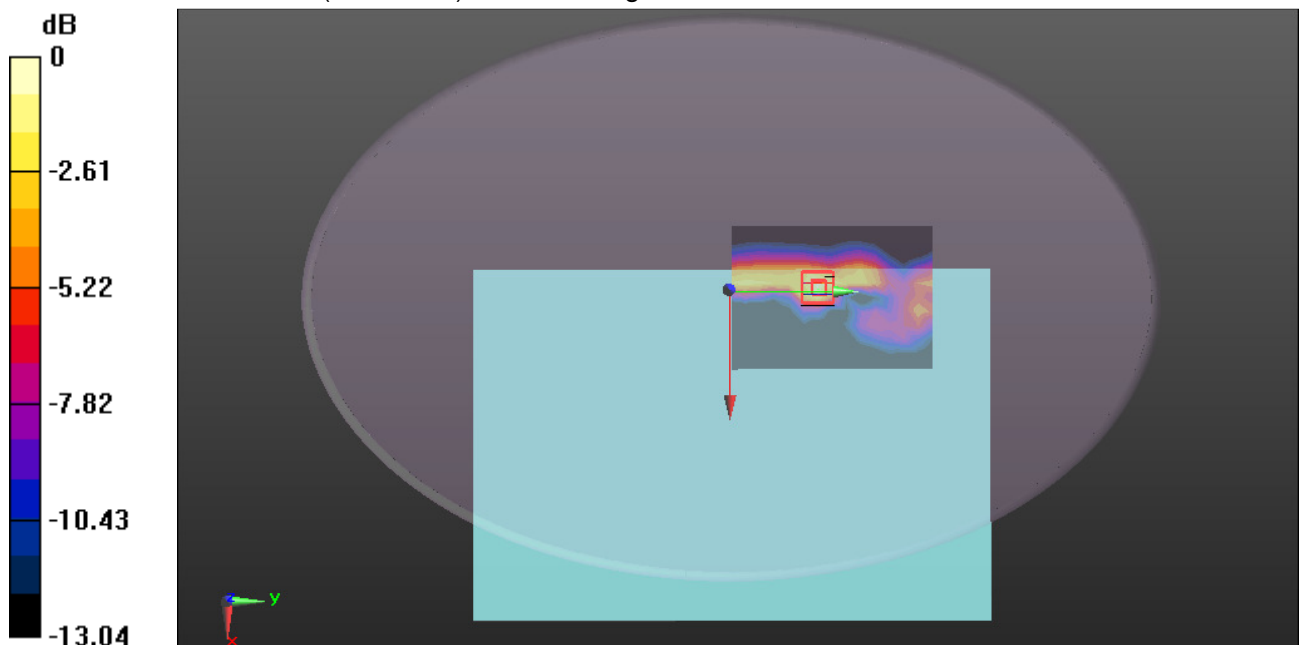
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 4.614 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.527 W/kg

**SAR(1 g) = 0.249 W/kg; SAR(10 g) = 0.103 W/kg**

Maximum value of SAR (measured) = 0.401 W/kg



0 dB = 0.401 W/kg = -3.97 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**WiFi 802.11 b-Body Bottom CH1 Aux Antenna LUXSHARE 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:  $f = 2412$  MHz;  $\sigma = 1.942$  S/m;  $\epsilon_r = 51.548$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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:xxxx
- 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=10mm, dy=10mm

Maximum value of SAR (measured) = 0.592 W/kg

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

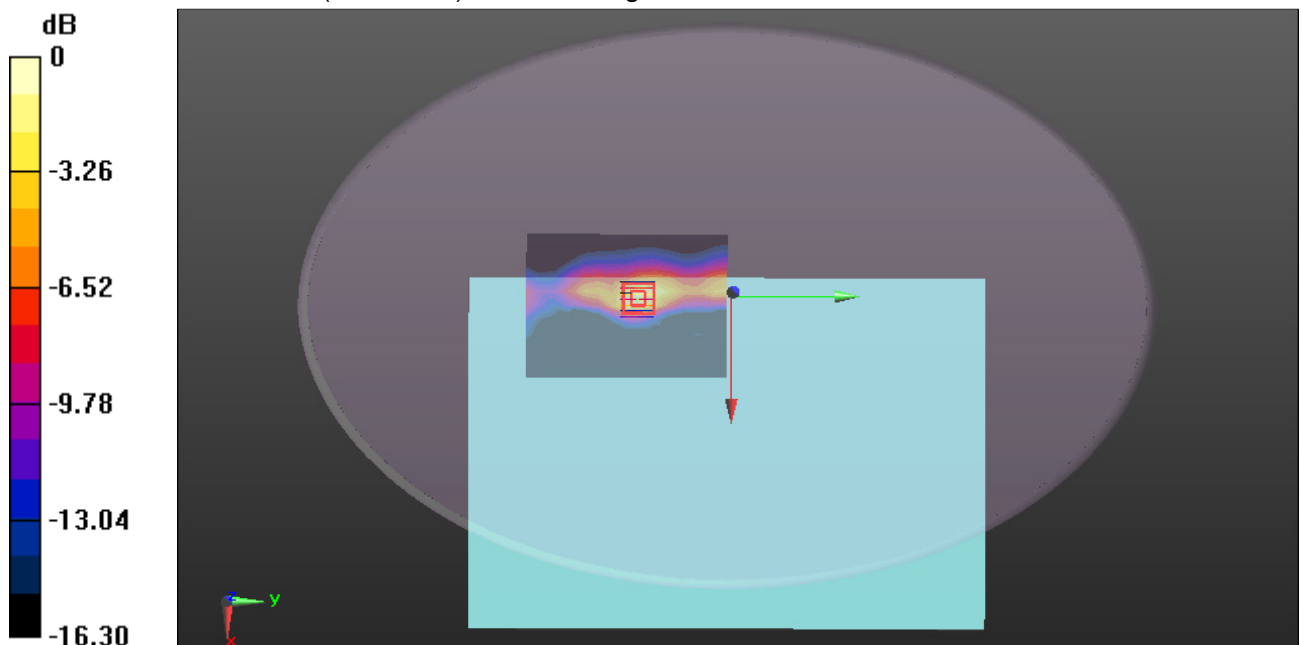
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 5.372 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.928 W/kg

**SAR(1 g) = 0.433 W/kg; SAR(10 g) = 0.197 W/kg**

Maximum value of SAR (measured) = 0.725 W/kg



0 dB = 0.725 W/kg = -1.40 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**WiFi 802.11 b-Body Bottom CH6 Aux Antenna LUXSHARE 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:  $f = 2437$  MHz;  $\sigma = 1.945$  S/m;  $\epsilon_r = 51.672$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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:xxxx
- DASY52 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=10mm, dy=10mm

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

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

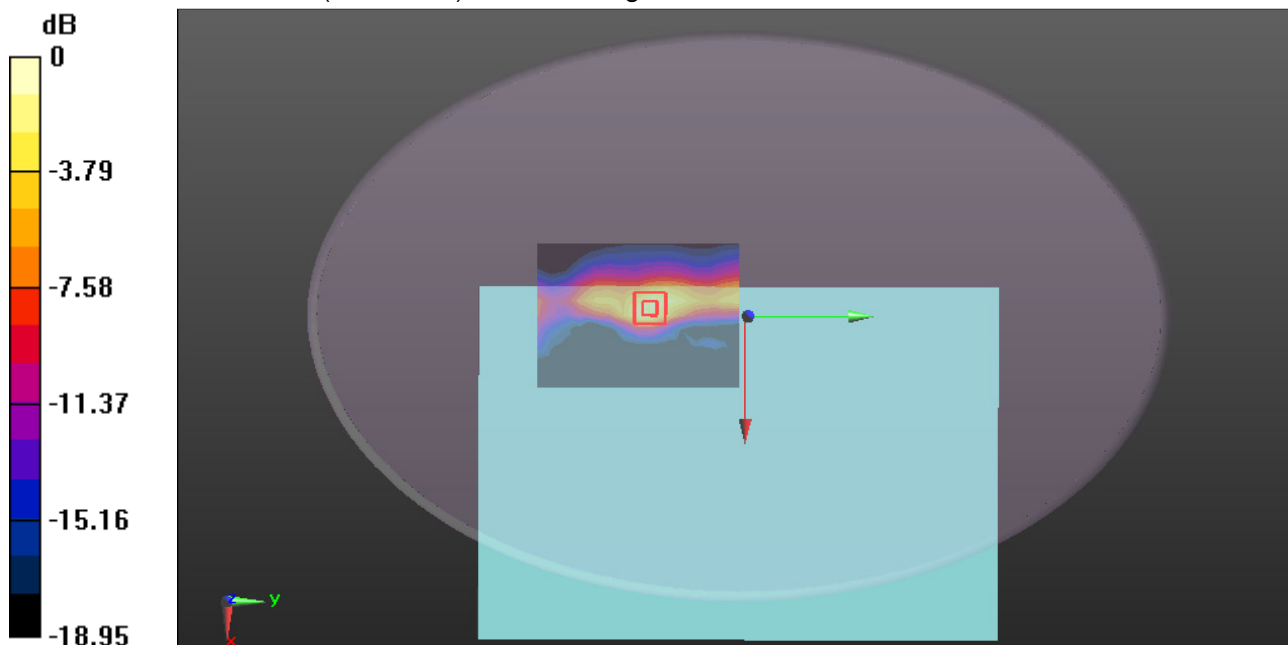
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 4.975 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.867 W/kg

**SAR(1 g) = 0.398 W/kg; SAR(10 g) = 0.181 W/kg**

Maximum value of SAR (measured) = 0.673 W/kg



0 dB = 0.673 W/kg = -1.72 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**WiFi 802.11 b-Body Bottom CH11 Aux Antenna LUXSHARE 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:  $f = 2462$  MHz;  $\sigma = 1.953$  S/m;  $\epsilon_r = 51.601$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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:xxxx
- 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=10mm, dy=10mm

Maximum value of SAR (measured) = 0.496 W/kg

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

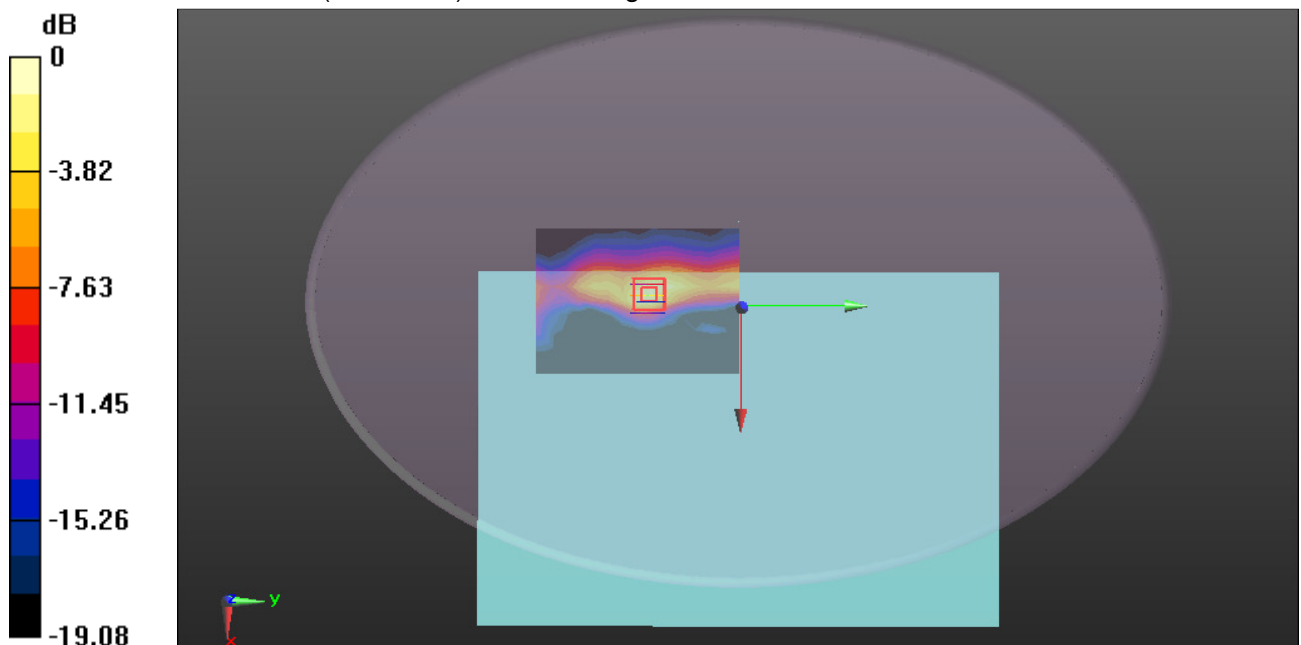
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 4.434 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.796 W/kg

**SAR(1 g) = 0.358 W/kg; SAR(10 g) = 0.163 W/kg**

Maximum value of SAR (measured) = 0.614 W/kg



0 dB = 0.614 W/kg = -2.12 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**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:  $f = 2462 \text{ MHz}$ ;  $\sigma = 1.953 \text{ S/m}$ ;  $\epsilon_r = 51.601$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- 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=10mm, dy=10mm

Maximum value of SAR (measured) = 0.333 W/kg

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

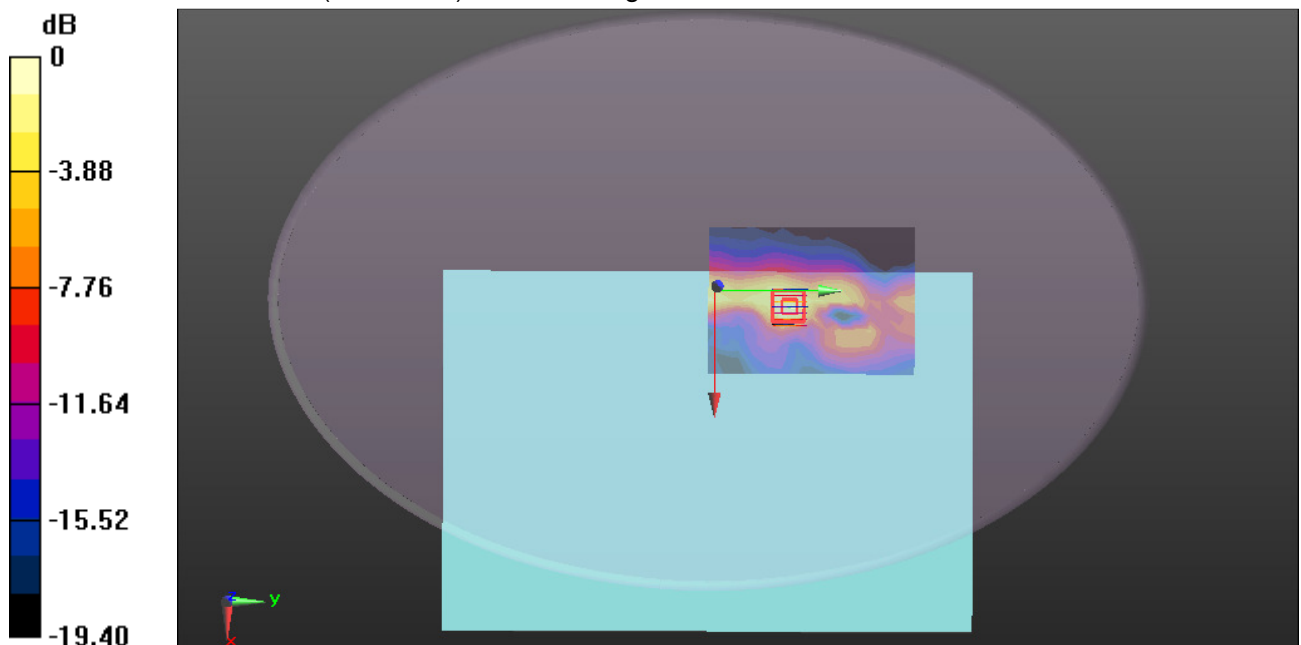
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 11.92 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.573 W/kg

**SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.100 W/kg**

Maximum value of SAR (measured) = 0.437 W/kg



0 dB = 0.437 W/kg = -3.60 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**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:  $f = 2412$  MHz;  $\sigma = 1.942$  S/m;  $\epsilon_r = 51.548$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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:xxxx
- 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=10mm, dy=10mm

Maximum value of SAR (measured) = 0.420 W/kg

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

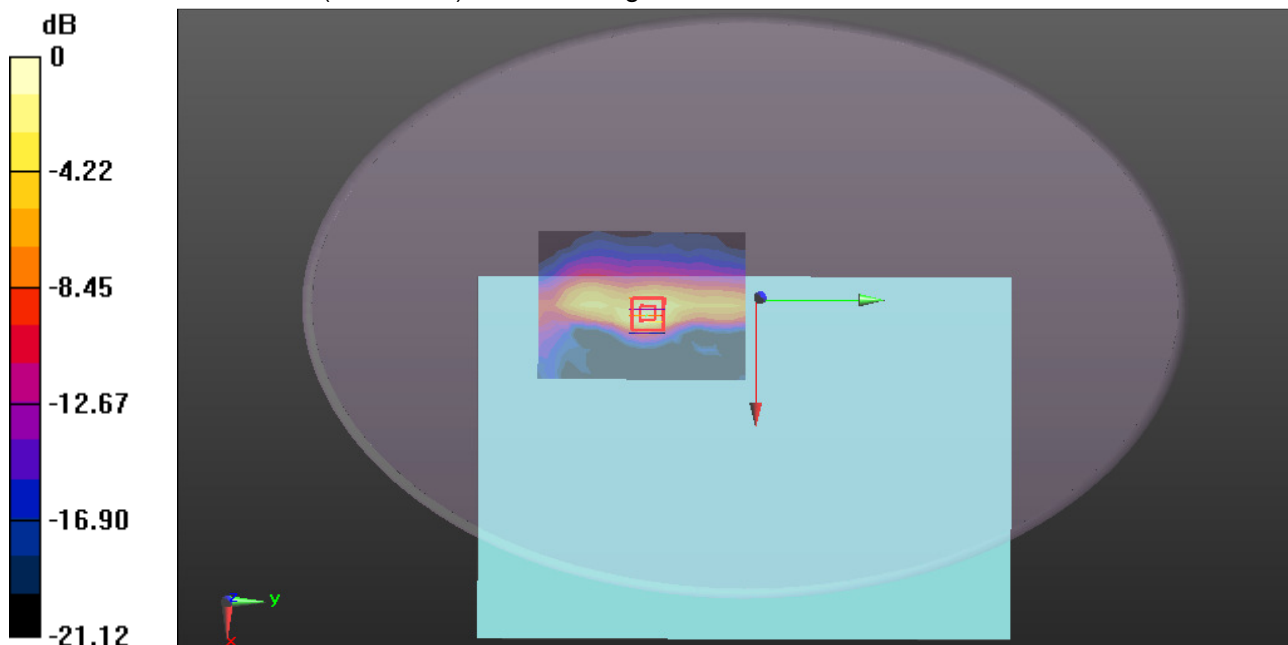
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 8.079 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.627 W/kg

**SAR(1 g) = 0.281 W/kg; SAR(10 g) = 0.125 W/kg**

Maximum value of SAR (measured) = 0.482 W/kg



0 dB = 0.482 W/kg = -3.17 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**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:  $f = 2462 \text{ MHz}$ ;  $\sigma = 1.953 \text{ S/m}$ ;  $\epsilon_r = 51.601$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASY52 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=10mm, dy=10mm

Maximum value of SAR (measured) = 0.370 W/kg

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

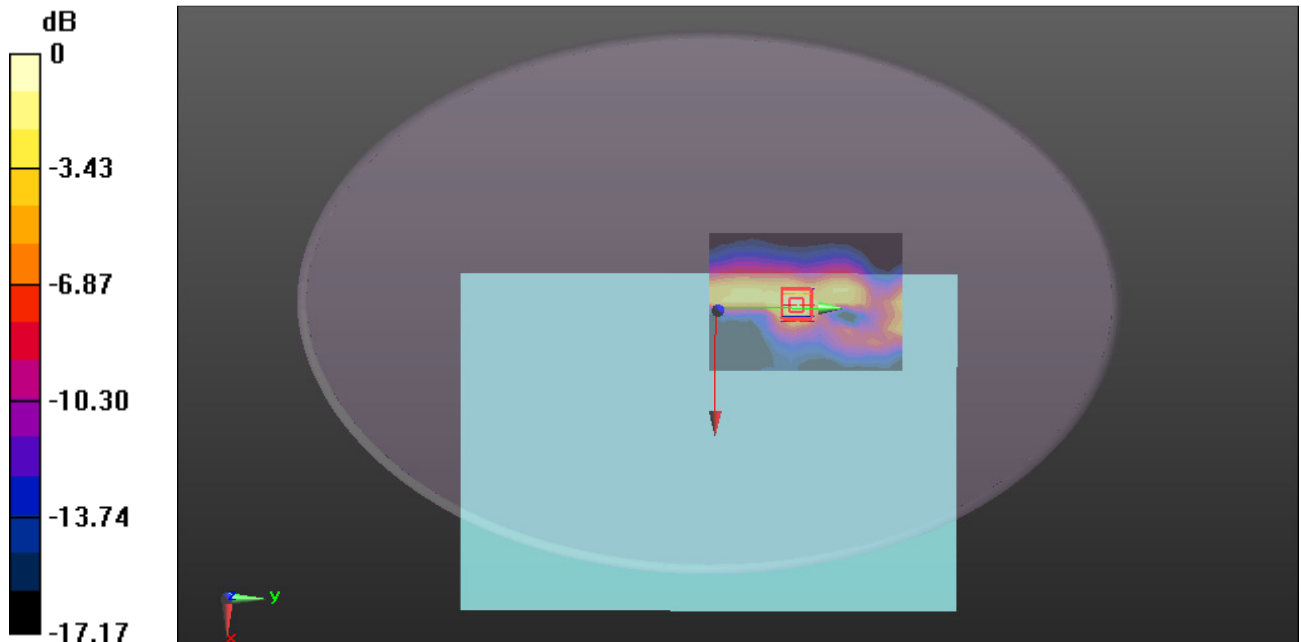
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 8.832 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.538 W/kg

**SAR(1 g) = 0.202 W/kg; SAR(10 g) = 0.092 W/kg**

Maximum value of SAR (measured) = 0.415 W/kg



0 dB = 0.415 W/kg = -3.82 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**WiFi 802.11 b-Body Bottom CH1 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: 2412 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.942$  S/m;  $\epsilon_r = 51.548$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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:xxxx
- DASYS 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=10mm, dy=10mm

Maximum value of SAR (measured) = 0.675 W/kg

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

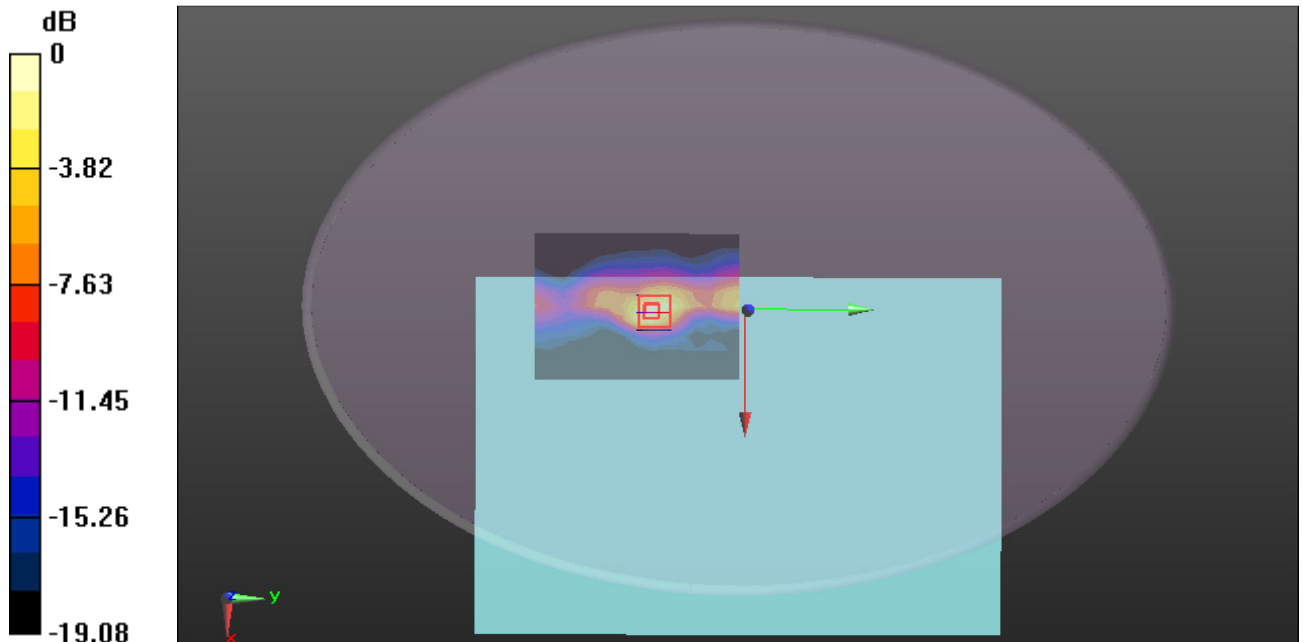
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 11.28 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.955 W/kg

**SAR(1 g) = 0.345 W/kg; SAR(10 g) = 0.154 W/kg**

Maximum value of SAR (measured) = 0.750 W/kg



0 dB = 0.750 W/kg = -1.25 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**2.4G-Body Bottom CH0 Main Antenna LUXSHARE 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 (extrapolated):  $f = 2402 \text{ MHz}$ ;  $\sigma = 1.94 \text{ S/m}$ ;  $\epsilon_r = 51.537$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

**WiFi 2.4GHz/2.4G Body Bottom CH0 Main Antenna/Area Scan (11x15x1):** Measurement grid:  
 dx=10mm, dy=10mm

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0146 W/kg

**WiFi 2.4GHz/2.4G Body Bottom CH0 Main Antenna/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

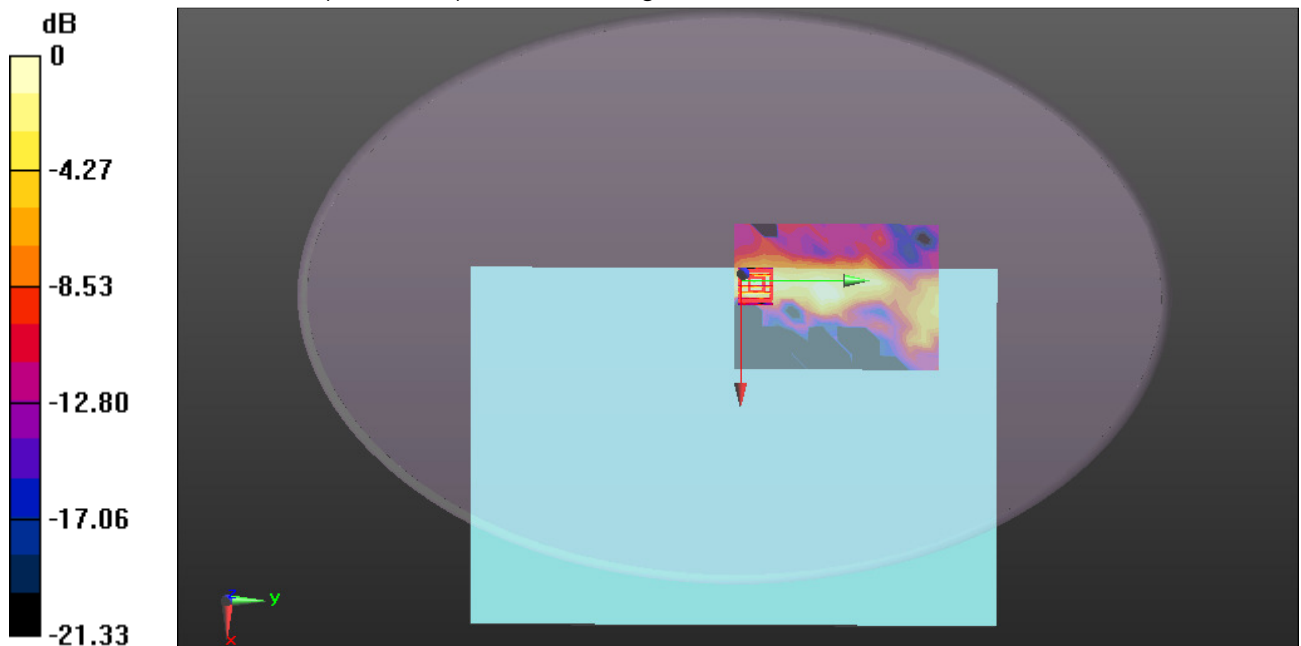
Reference Value = 1.941 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.0210 W/kg

**SAR(1 g) = 0.00983 W/kg; SAR(10 g) = 0.00438 W/kg**

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0154 W/kg



0 dB = 0.0154 W/kg = -18.12 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**2.4G-Body Bottom CH39 Main Antenna LUXSHARE 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;  $\sigma = 1.944$  S/m;  $\epsilon_r = 51.678$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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:xxxx
- DASYS 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:**

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

Maximum value of SAR (measured) = 0.0164 W/kg

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

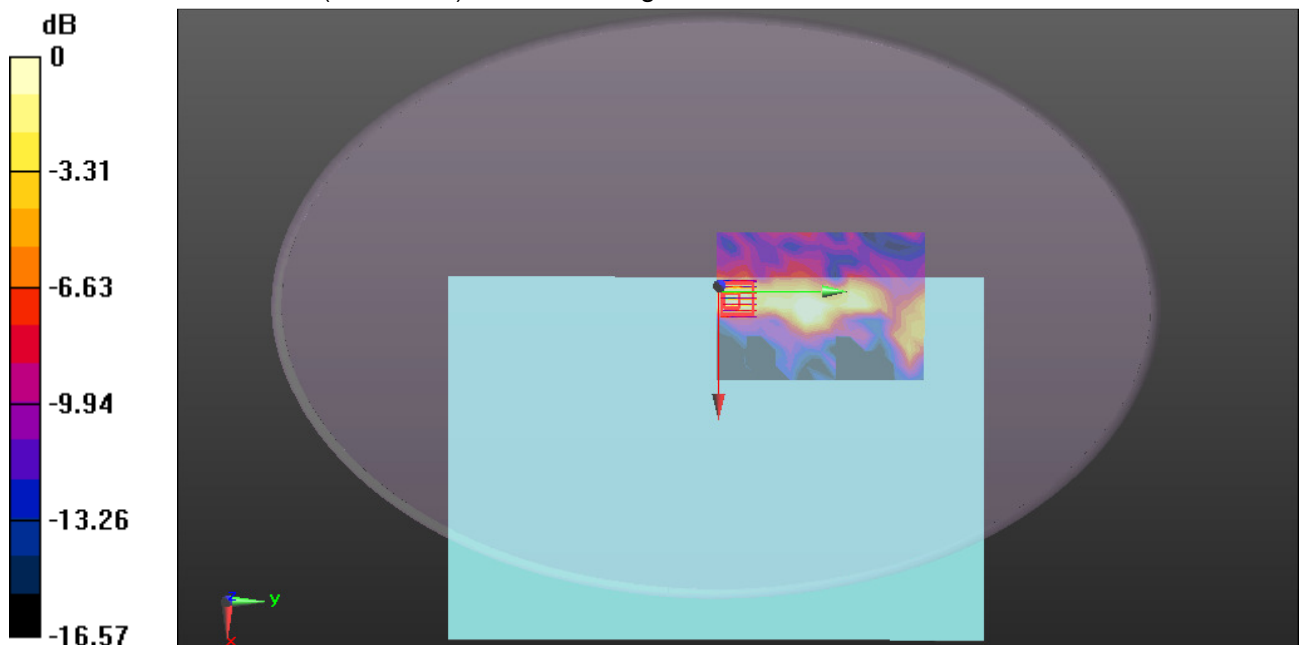
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 1.936 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.0190 W/kg

**SAR(1 g) = 0.00936 W/kg; SAR(10 g) = 0.00449 W/kg**

Maximum value of SAR (measured) = 0.0144 W/kg



0 dB = 0.0144 W/kg = -18.42 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**2.4G-Body Bottom CH78 Main Antenna LUXSHARE 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 (extrapolated):  $f = 2480 \text{ MHz}$ ;  $\sigma = 1.975 \text{ S/m}$ ;  $\epsilon_r = 51.521$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASYS 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=10mm, dy=10mm

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0180 W/kg

**WiFi 2.4GHz/2.4G Body Bottom CH78 Main Antenna/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

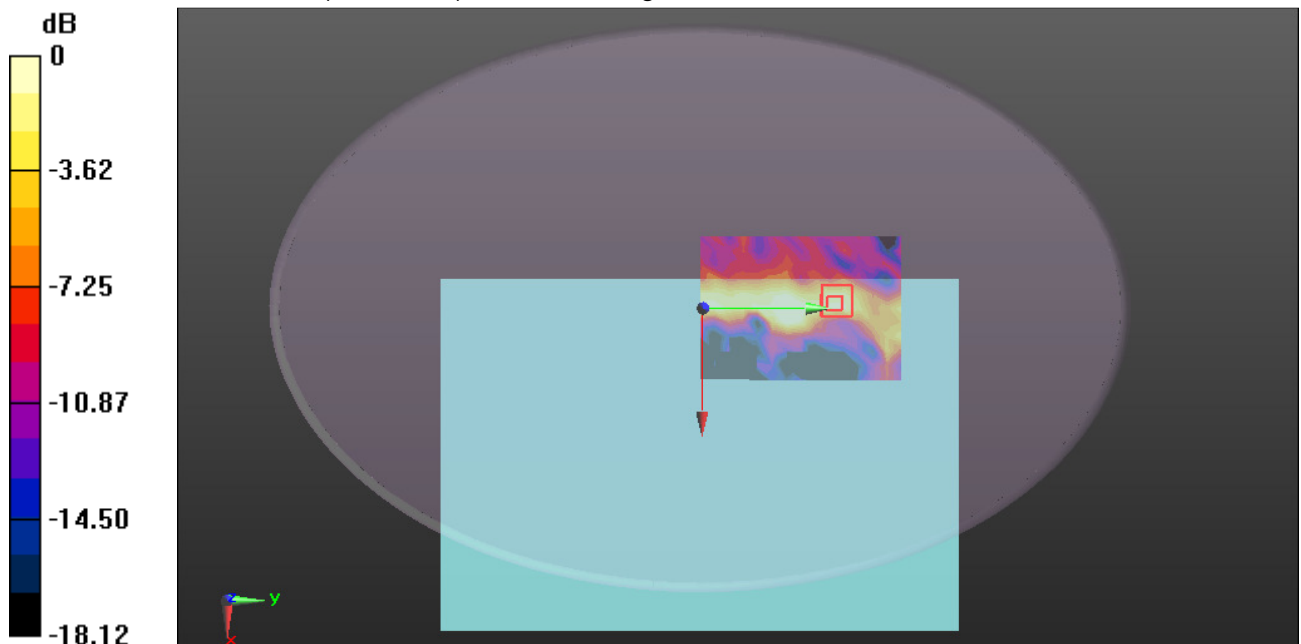
Reference Value = 1.839 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.0190 W/kg

**SAR(1 g) = 0.00809 W/kg; SAR(10 g) = 0.0039 W/kg**

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0126 W/kg



0 dB = 0.0126 W/kg = -19.00 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**2.4G-Body Bottom CH0 Aux Antenna LUXSHARE 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 (extrapolated):  $f = 2402 \text{ MHz}$ ;  $\sigma = 1.94 \text{ S/m}$ ;  $\epsilon_r = 51.537$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

**WiFi 2.4GHz/2.4G Body Bottom CH0 Aux Antenna/Area Scan (11x15x1):** Measurement grid:  
 dx=10mm, dy=10mm

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0327 W/kg

**WiFi 2.4GHz/2.4G Body Bottom CH0 Aux Antenna/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:

dx=4mm, dy=4mm, dz=1.4mm

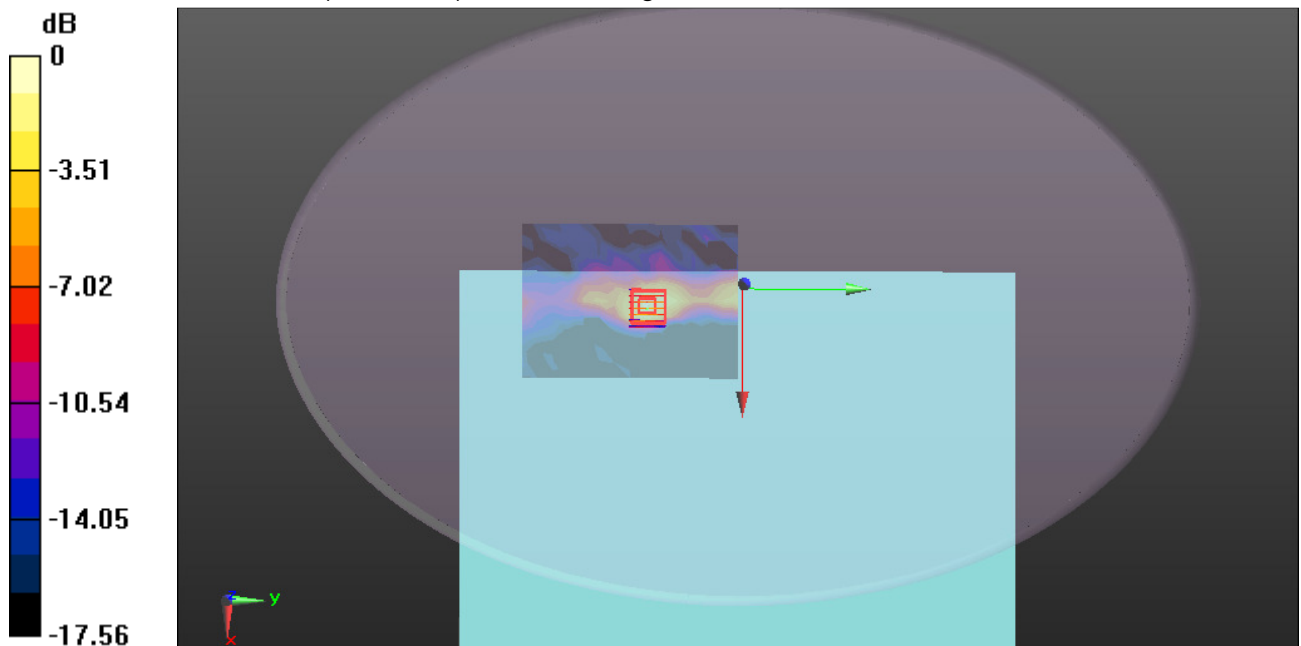
Reference Value = 2.547 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.0480 W/kg

**SAR(1 g) = 0.023 W/kg; SAR(10 g) = 0.010 W/kg**

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0369 W/kg



0 dB = 0.0369 W/kg = -14.33 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**2.4G-Body Bottom CH39 Aux Antenna LUXSHARE 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;  $\sigma = 1.944$  S/m;  $\epsilon_r = 51.678$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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:xxxx
- DASYS 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) = 0.0284 W/kg

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

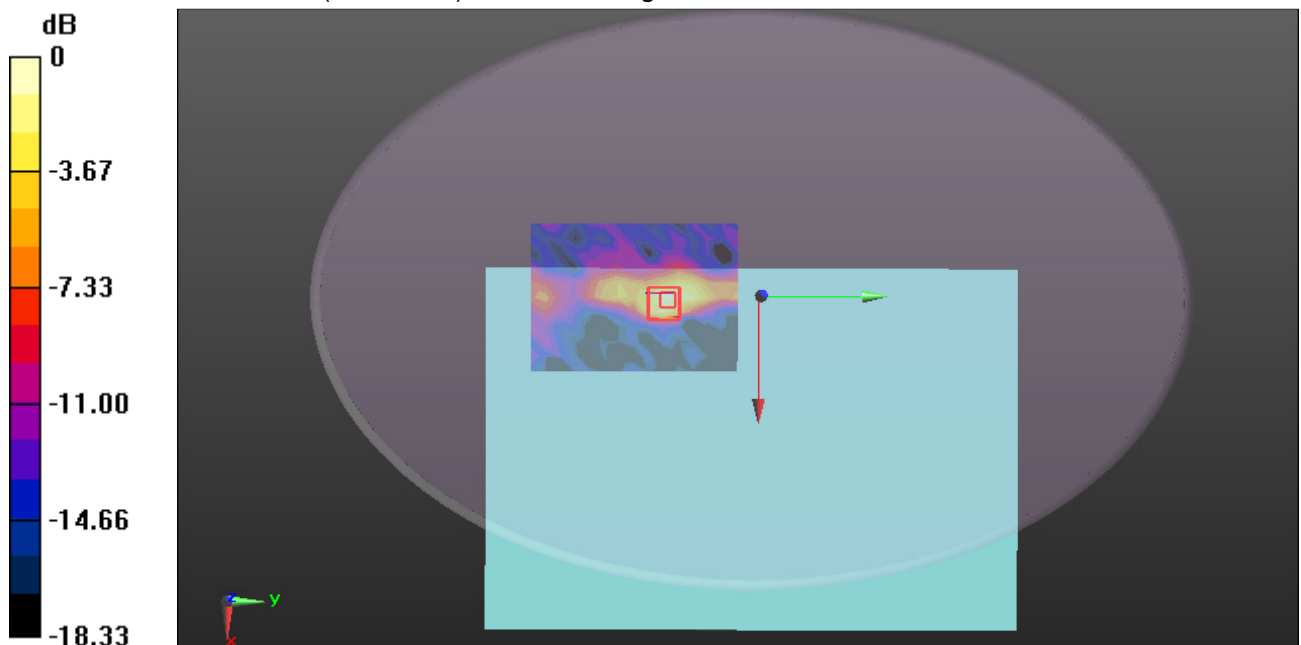
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 1.989 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.0400 W/kg

**SAR(1 g) = 0.018 W/kg; SAR(10 g) = 0.0079 W/kg**

Maximum value of SAR (measured) = 0.0292 W/kg



0 dB = 0.0292 W/kg = -15.35 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**2.4G-Body Bottom CH78 Aux Antenna LUXSHARE 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 (extrapolated):  $f = 2480 \text{ MHz}$ ;  $\sigma = 1.975 \text{ S/m}$ ;  $\epsilon_r = 51.521$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- 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=10mm, dy=10mm

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0222 W/kg

**WiFi 2.4GHz/2.4G Body Bottom CH78 Aux Antenna/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

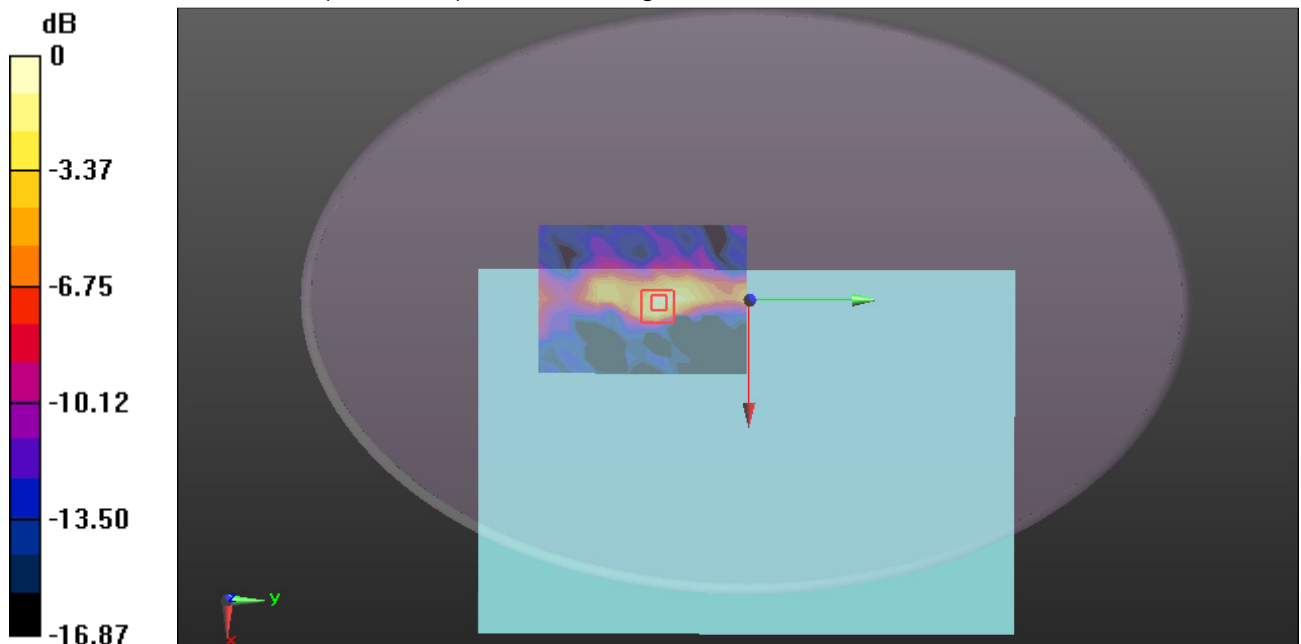
Reference Value = 1.441 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.0320 W/kg

**SAR(1 g) = 0.014 W/kg; SAR(10 g) = 0.00613 W/kg**

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0236 W/kg



0 dB = 0.0236 W/kg = -16.27 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**2.4G-Body Bottom CH0 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 (extrapolated):  $f = 2402 \text{ MHz}$ ;  $\sigma = 1.94 \text{ S/m}$ ;  $\epsilon_r = 51.537$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

**WiFi 2.4GHz/2.4G Body Bottom CH0 Main Antenna/Area Scan (11x15x1):** Measurement grid:  
 dx=10mm, dy=10mm

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0149 W/kg

**WiFi 2.4GHz/2.4G Body Bottom CH0 Main Antenna/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

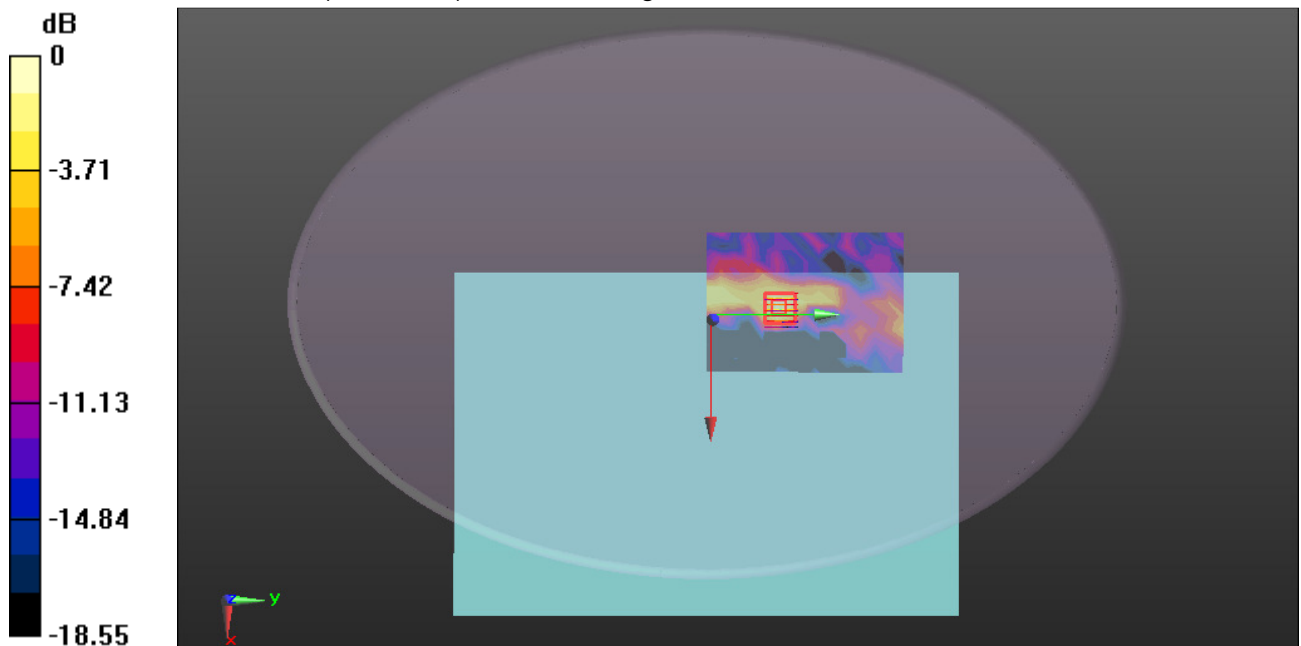
Reference Value = 1.901 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.0220 W/kg

**SAR(1 g) = 0.0087 W/kg; SAR(10 g) = 0.00392 W/kg**

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0168 W/kg



0 dB = 0.0168 W/kg = -17.75 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**2.4G-Body Bottom CH0 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 (extrapolated):  $f = 2402 \text{ MHz}$ ;  $\sigma = 1.94 \text{ S/m}$ ;  $\epsilon_r = 51.537$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

**WiFi 2.4GHz/2.4G Body Bottom CH0 Aux Antenna/Area Scan (11x15x1):** Measurement grid:  
 dx=10mm, dy=10mm

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0253 W/kg

**WiFi 2.4GHz/2.4G Body Bottom CH0 Aux Antenna/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:

dx=4mm, dy=4mm, dz=1.4mm

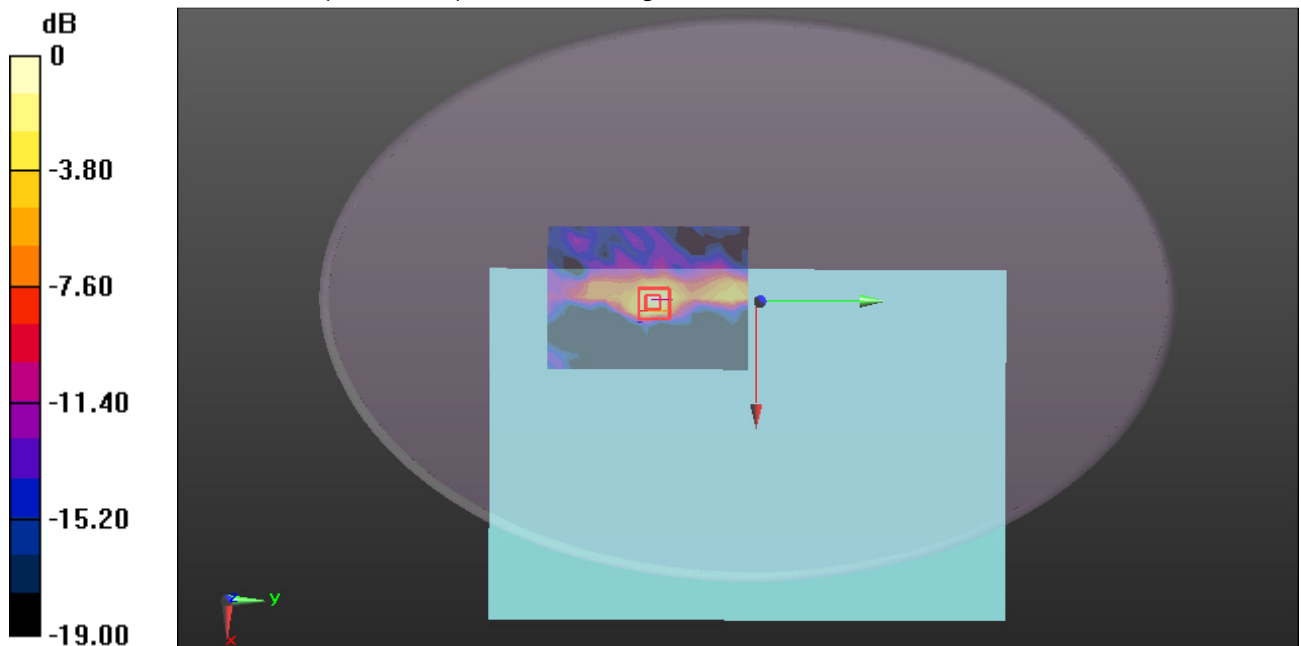
Reference Value = 2.000 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.0400 W/kg

**SAR(1 g) = 0.018 W/kg; SAR(10 g) = 0.00839 W/kg**

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0299 W/kg



0 dB = 0.0299 W/kg = -15.24 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**2.4G-Body Bottom CH0 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 (extrapolated):  $f = 2402 \text{ MHz}$ ;  $\sigma = 1.94 \text{ S/m}$ ;  $\epsilon_r = 51.537$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

**WiFi 2.4GHz/2.4G Body Bottom CH0 Main Antenna/Area Scan (11x15x1):** Measurement grid:  
 dx=10mm, dy=10mm

[Info: Extrapolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.0162 W/kg

**WiFi 2.4GHz/2.4G Body Bottom CH0 Main Antenna/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

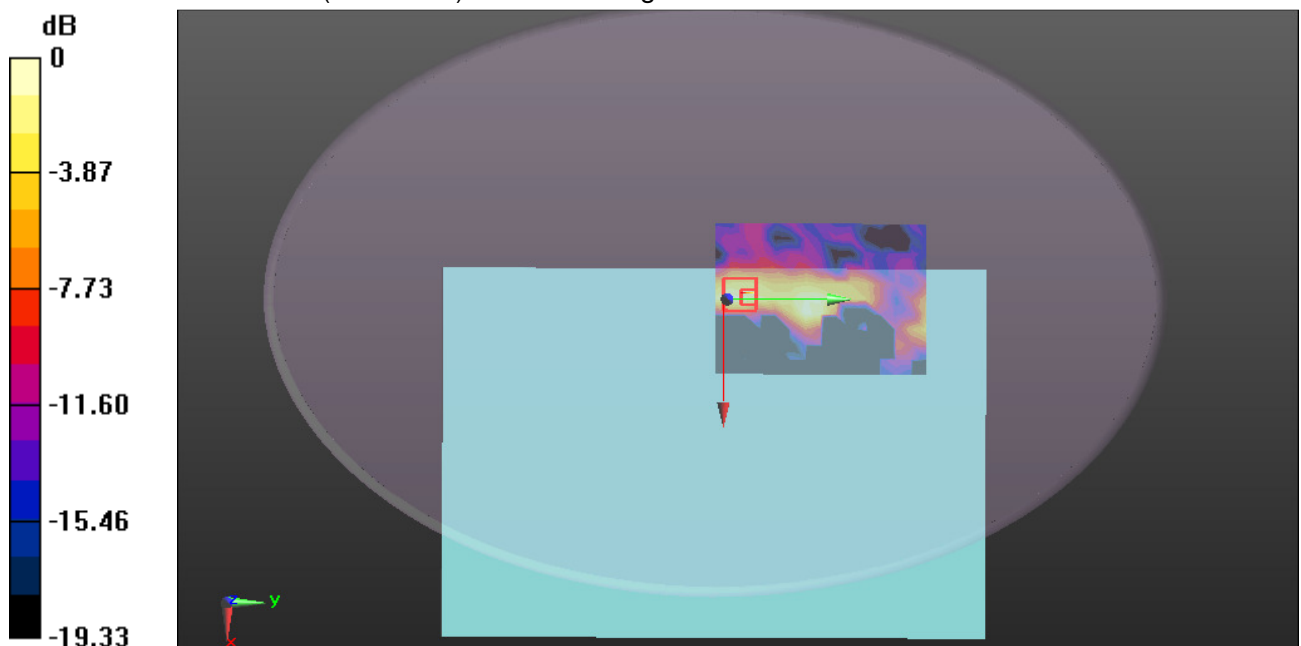
Reference Value = 1.967 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.0840 W/kg

**SAR(1 g) = 0.00853 W/kg; SAR(10 g) = 0.0032 W/kg**

[Info: Extrapolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.0175 W/kg



0 dB = 0.0175 W/kg = -17.57 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/20/2018

**2.4G-Body Bottom CH0 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 (extrapolated):  $f = 2402 \text{ MHz}$ ;  $\sigma = 1.94 \text{ S/m}$ ;  $\epsilon_r = 51.537$ ;  $\rho = 1000 \text{ kg/m}^3$

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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

**WiFi 2.4GHz/2.4G Body Bottom CH0 Aux Antenna/Area Scan (11x15x1):** Measurement grid:  
 dx=10mm, dy=10mm

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0393 W/kg

**WiFi 2.4GHz/2.4G Body Bottom CH0 Aux Antenna/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:

dx=4mm, dy=4mm, dz=1.4mm

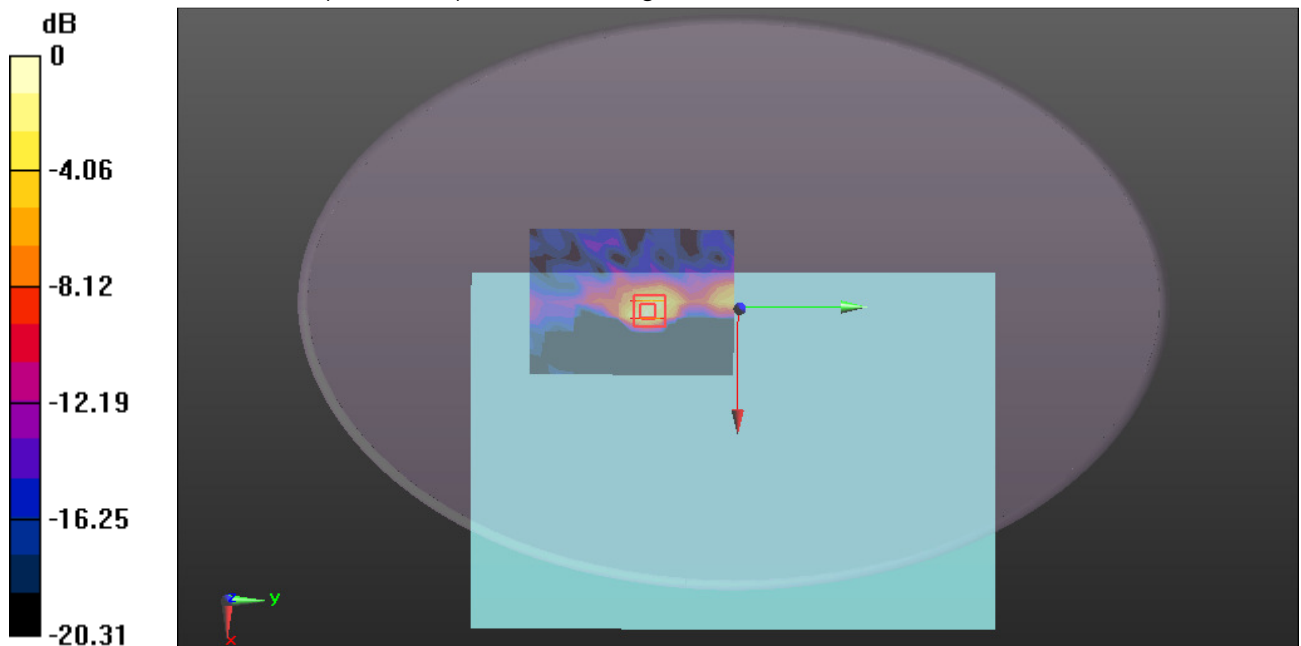
Reference Value = 2.657 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.0580 W/kg

**SAR(1 g) = 0.017 W/kg; SAR(10 g) = 0.00925 W/kg**

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0468 W/kg



0 dB = 0.0468 W/kg = -13.30 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH52 Main Antenna LUXSHARE 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;  $\sigma = 5.324$  S/m;  $\epsilon_r = 47.879$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.67, 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:xxxx
- DASYS 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) = 0.612 W/kg

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

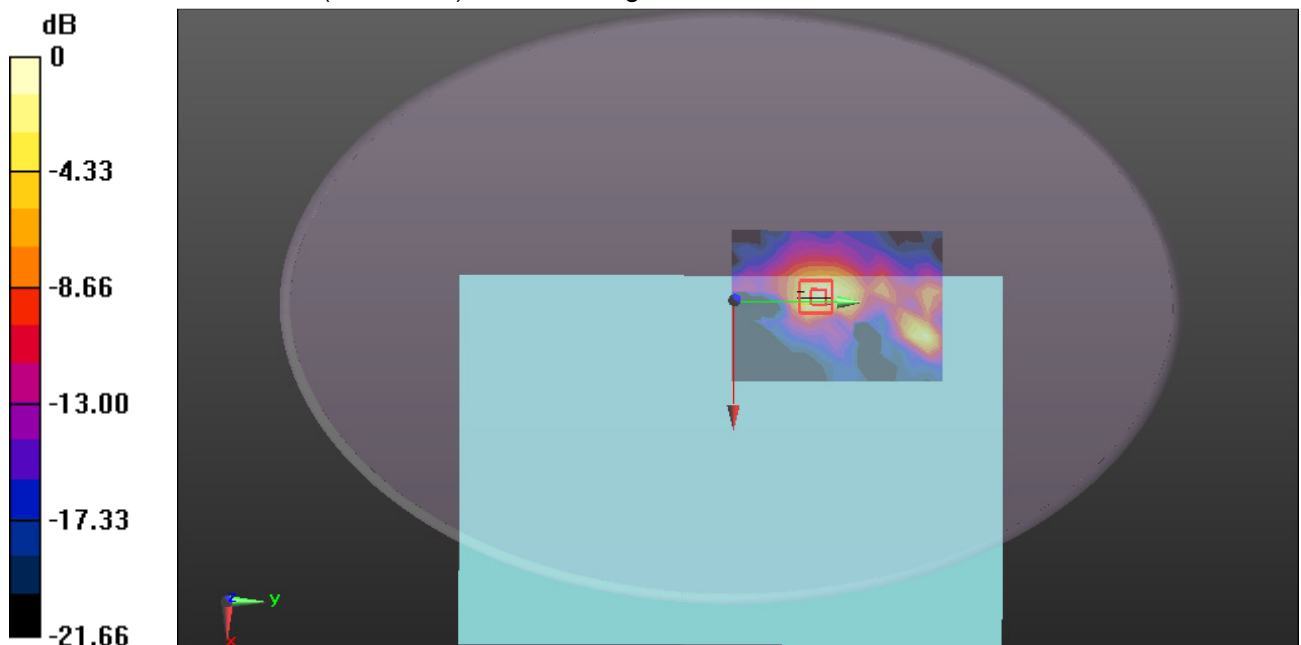
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 1.025 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.32 W/kg

**SAR(1 g) = 0.288 W/kg; SAR(10 g) = 0.094 W/kg**

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



0 dB = 0.683 W/kg = -1.66 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH56 Main Antenna LUXSHARE 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: 5280 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5280$  MHz;  $\sigma = 5.359$  S/m;  $\epsilon_r = 47.849$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.67, 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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

**WIFI/IEEE802.11a Body Bottom CH56 Main Antenna/Area Scan (11x15x1): Measurement grid:**

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

Maximum value of SAR (measured) = 0.656 W/kg

**WIFI/IEEE802.11a Body Bottom CH56 Main Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement**

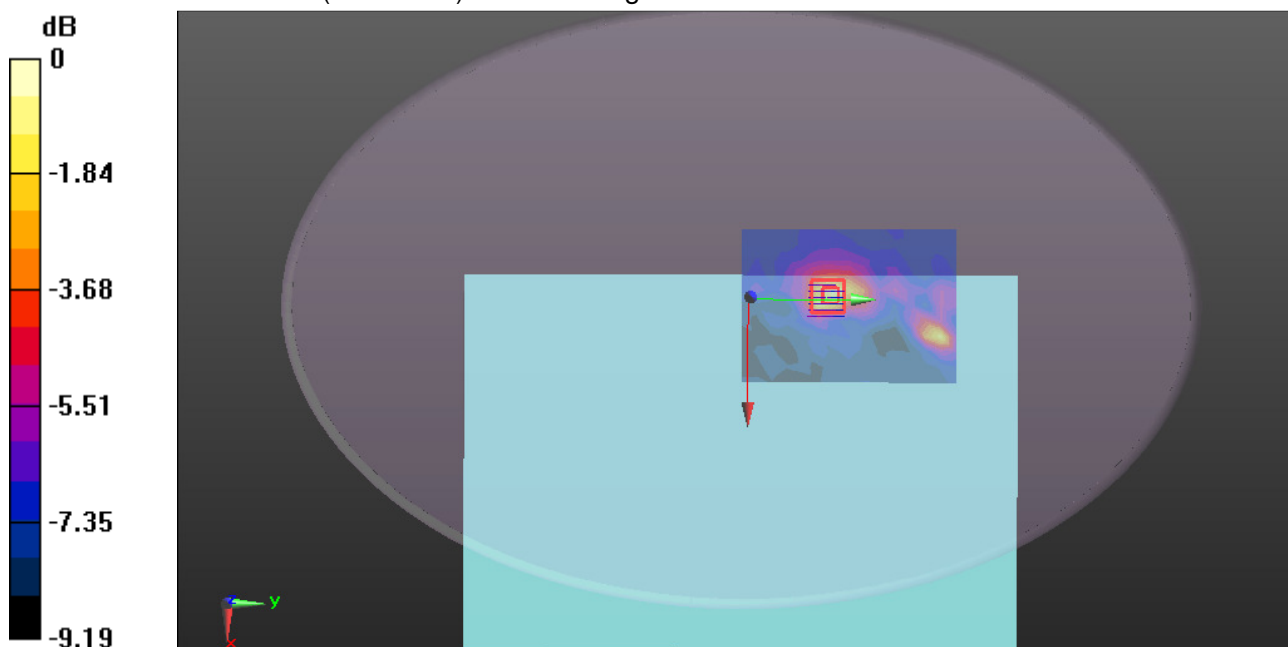
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 5.292 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.37 W/kg

**SAR(1 g) = 0.397 W/kg; SAR(10 g) = 0.232 W/kg**

Maximum value of SAR (measured) = 0.731 W/kg



0 dB = 0.731 W/kg = -1.36 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH64 Main Antenna LUXSHARE 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;  $\sigma = 5.406$  S/m;  $\epsilon_r = 47.79$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.67, 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:xxxx
- DASYS 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) = 0.700 W/kg

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

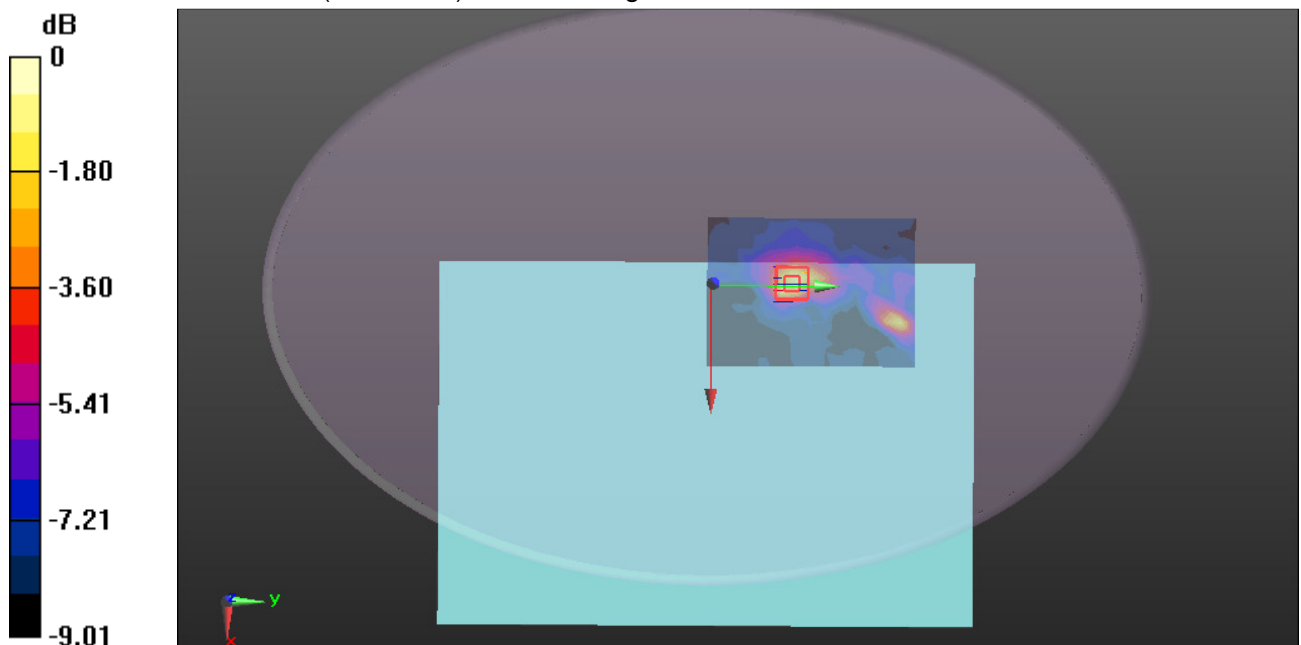
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 5.206 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.45 W/kg

**SAR(1 g) = 0.438 W/kg; SAR(10 g) = 0.152 W/kg**

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



0 dB = 0.768 W/kg = -1.15 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH100 Main Antenna LUXSHARE 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;  $\sigma = 5.656$  S/m;  $\epsilon_r = 47.372$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.26, 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:xxxx
- DASYS 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) = 0.554 W/kg

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

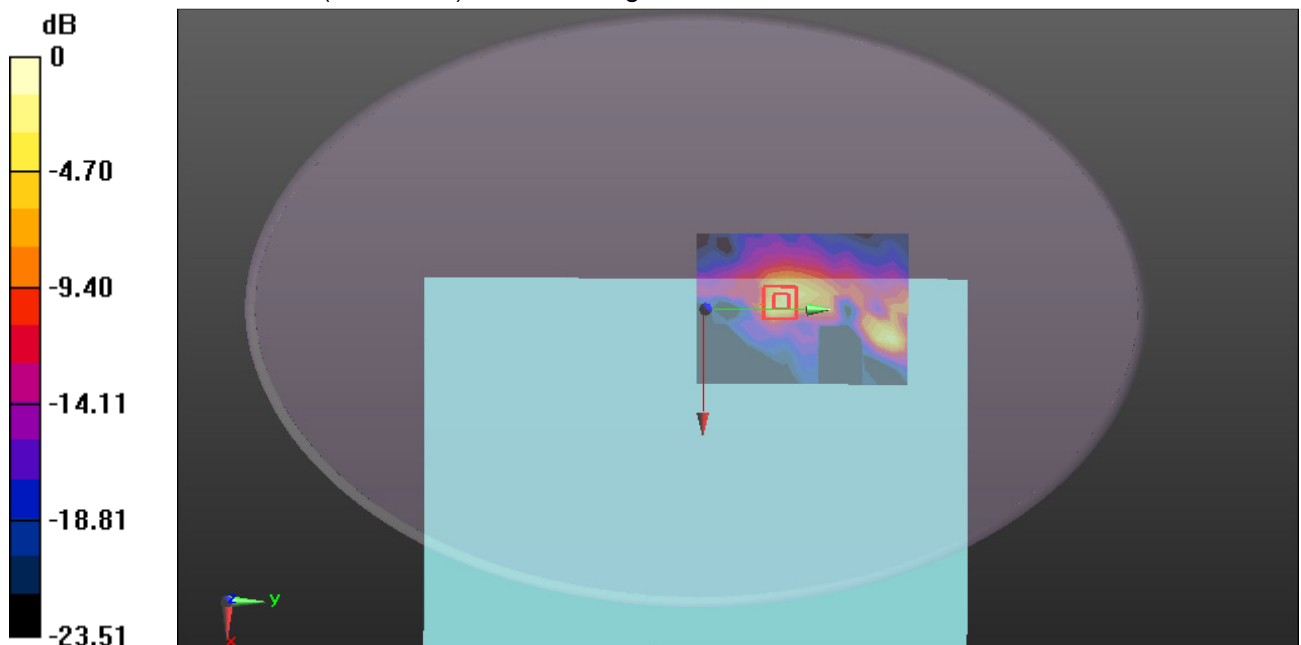
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 4.062 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.50 W/kg

**SAR(1 g) = 0.299 W/kg; SAR(10 g) = 0.087 W/kg**

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



0 dB = 0.791 W/kg = -1.02 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH136 Main Antenna LUXSHARE 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;  $\sigma = 5.921$  S/m;  $\epsilon_r = 46.954$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

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

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

Maximum value of SAR (measured) = 0.817 W/kg

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

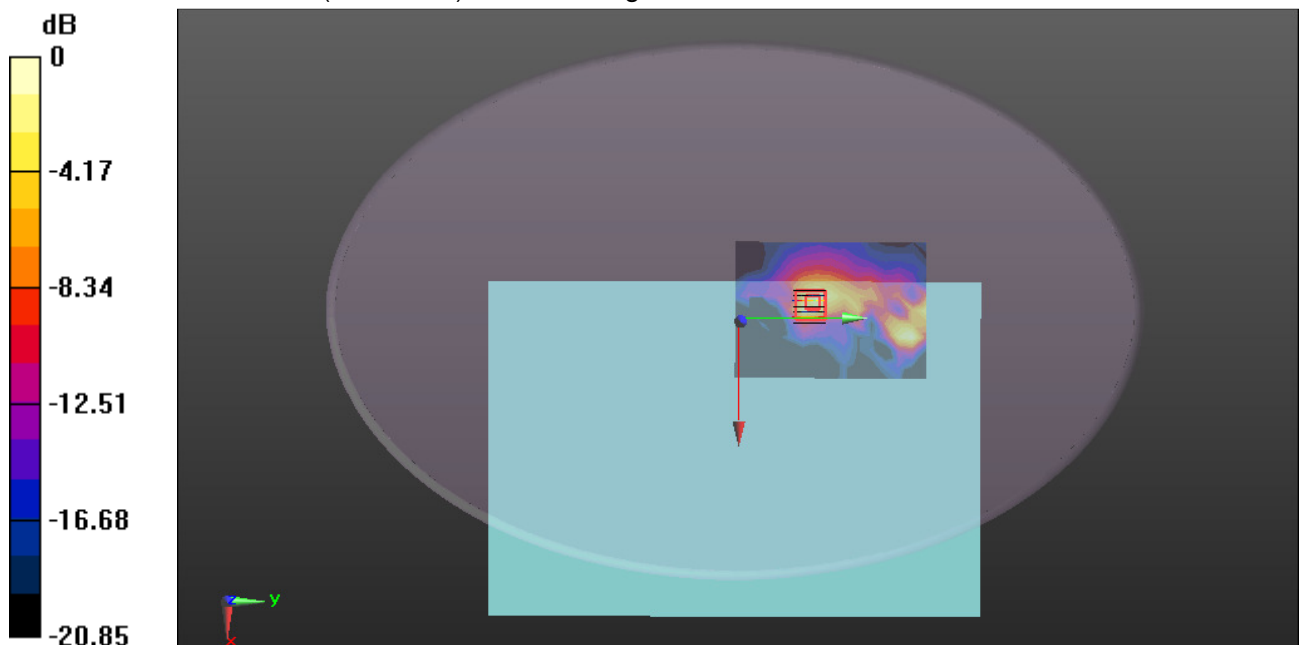
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 3.659 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.85 W/kg

**SAR(1 g) = 0.364 W/kg; SAR(10 g) = 0.110 W/kg**

Maximum value of SAR (measured) = 0.907 W/kg



0 dB = 0.907 W/kg = -0.42 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH144 Main Antenna LUXSHARE 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;  $\sigma = 5.976$  S/m;  $\epsilon_r = 46.888$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.45, 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:xxxx
- DASYS 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=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

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

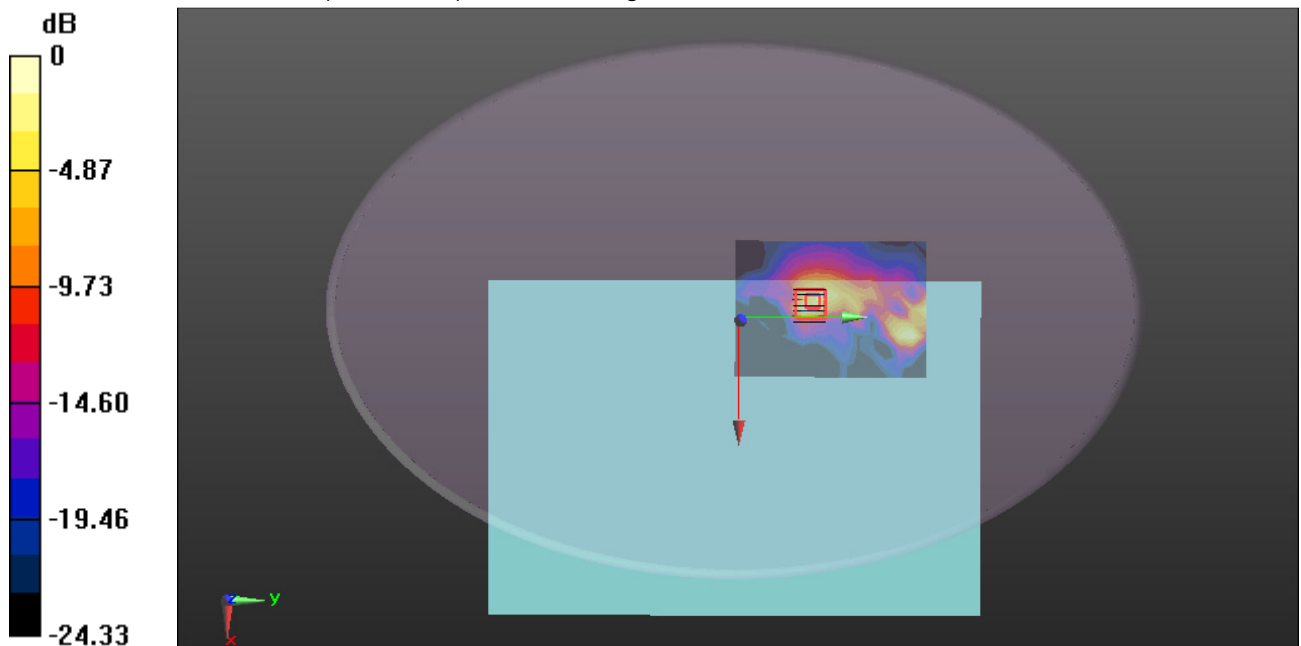
Reference Value = 4.256 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.86 W/kg

**SAR(1 g) = 0.304 W/kg; SAR(10 g) = 0.074 W/kg**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.914 W/kg



0 dB = 0.914 W/kg = -0.39 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH149 Main Antenna LUXSHARE 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:  $f = 5745 \text{ MHz}$ ;  $\sigma = 6.006 \text{ S/m}$ ;  $\epsilon_r = 46.826$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.45, 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:xxxx
- DASYS 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) = 0.782 W/kg

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

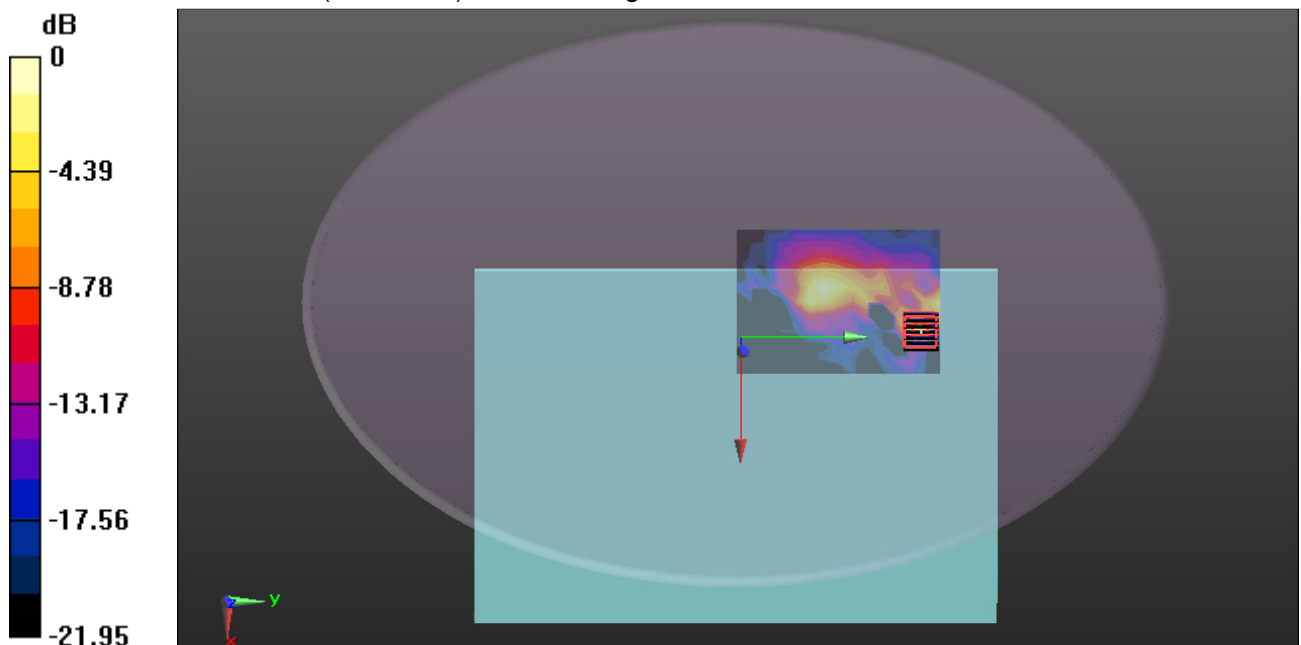
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 2.658 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.86 W/kg

**SAR(1 g) = 0.305 W/kg; SAR(10 g) = 0.073 W/kg**

Maximum value of SAR (measured) = 0.922 W/kg



0 dB = 0.922 W/kg = -0.35 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH157 Main Antenna LUXSHARE 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:  $f = 5785 \text{ MHz}$ ;  $\sigma = 6.07 \text{ S/m}$ ;  $\epsilon_r = 46.717$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.45, 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:xxxx
- DASYS 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) = 0.846 W/kg

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

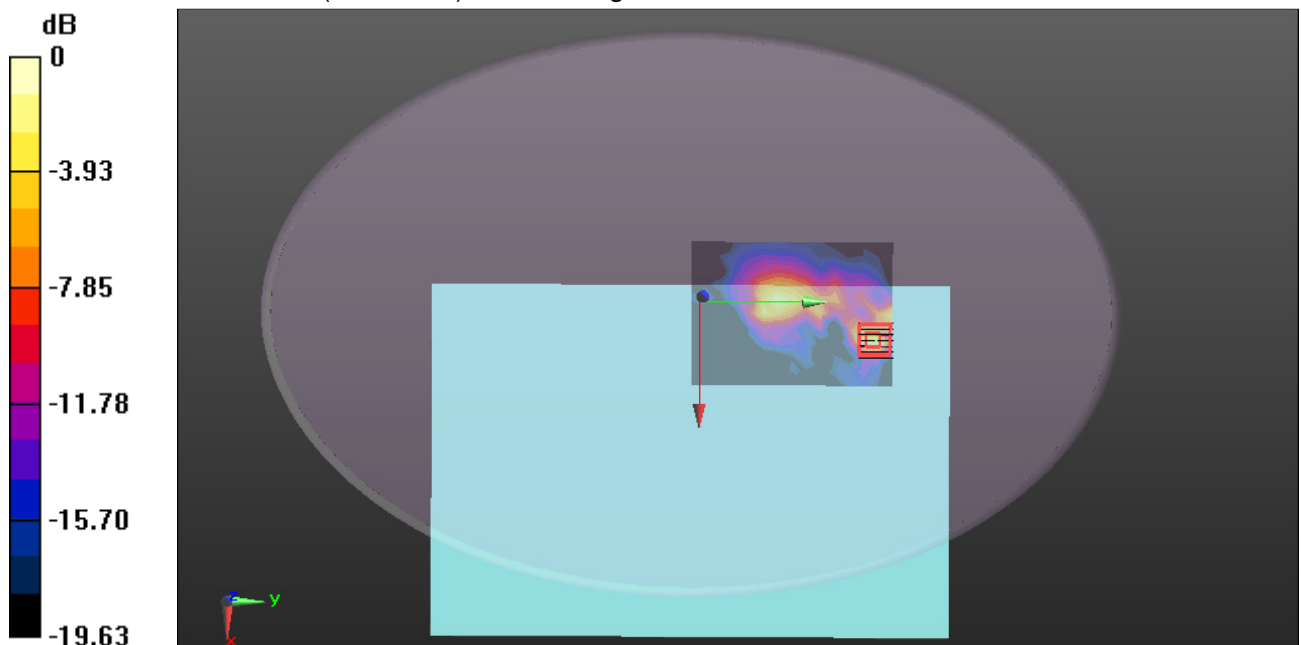
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 4.987 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 2.38 W/kg

**SAR(1 g) = 0.372 W/kg; SAR(10 g) = 0.088 W/kg**

Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.37 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH165 Main Antenna LUXSHARE 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:  $f = 5825 \text{ MHz}$ ;  $\sigma = 6.124 \text{ S/m}$ ;  $\epsilon_r = 46.662$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.45, 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:xxxx
- DASYS 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) = 0.839 W/kg

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

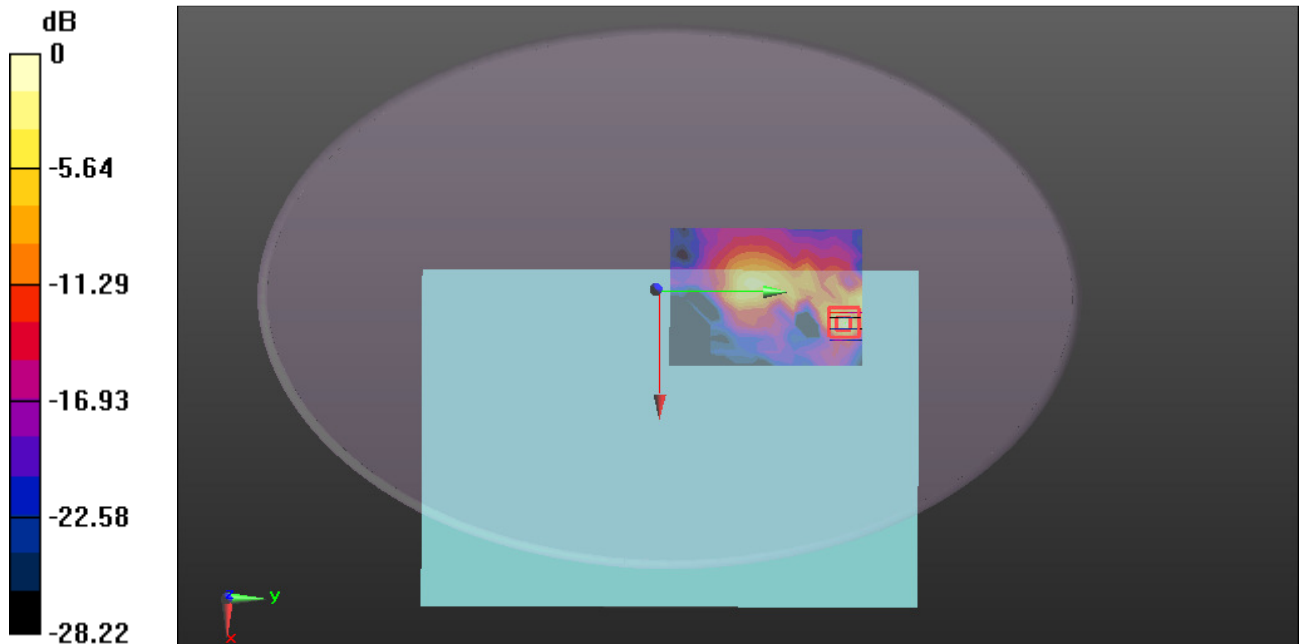
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 3.872 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 2.37 W/kg

**SAR(1 g) = 0.360 W/kg; SAR(10 g) = 0.082 W/kg**

Maximum value of SAR (measured) = 1.09 W/kg



0 dB = 1.09 W/kg = 0.37 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH52 Aux Antenna LUXSHARE 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;  $\sigma = 5.324$  S/m;  $\epsilon_r = 47.879$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.67, 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:xxxx
- DASYS 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) = 1.24 W/kg

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

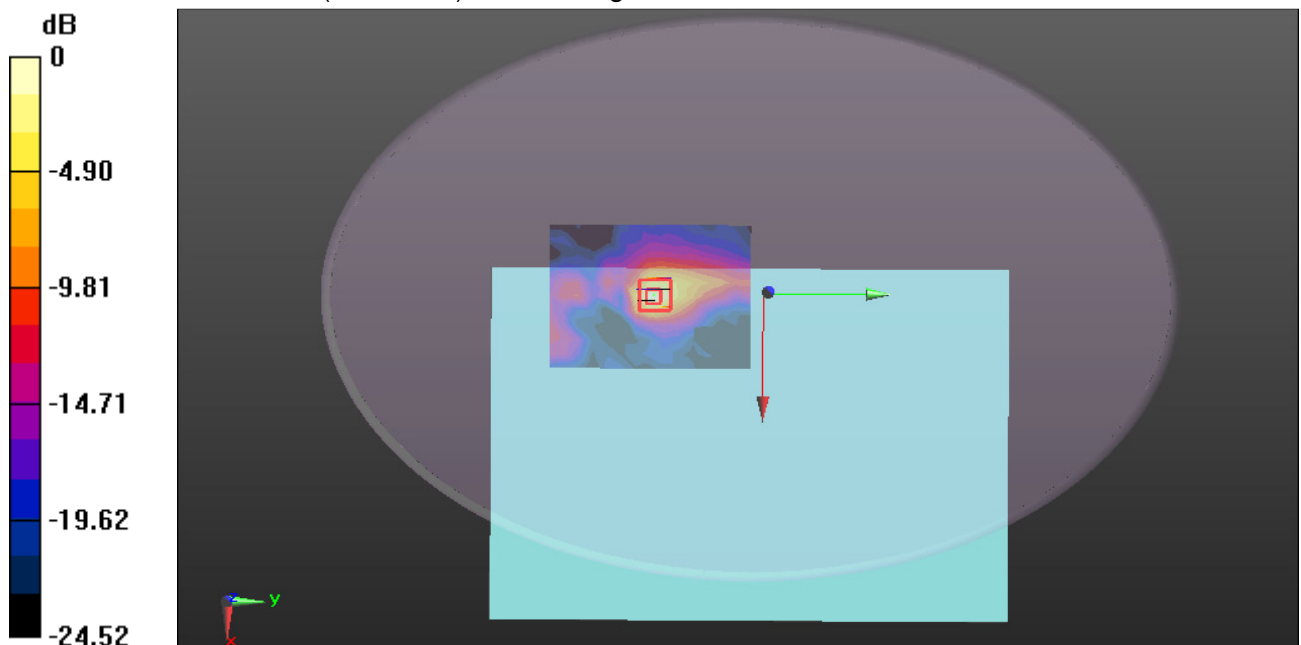
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 2.808 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 2.35 W/kg

**SAR(1 g) = 0.492 W/kg; SAR(10 g) = 0.156 W/kg**

Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.23 W/kg = 0.90 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH60 Aux Antenna LUXSHARE 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;  $\sigma = 5.384$  S/m;  $\epsilon_r = 47.825$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.67, 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:xxxx
- DASYS 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) = 1.40 W/kg

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

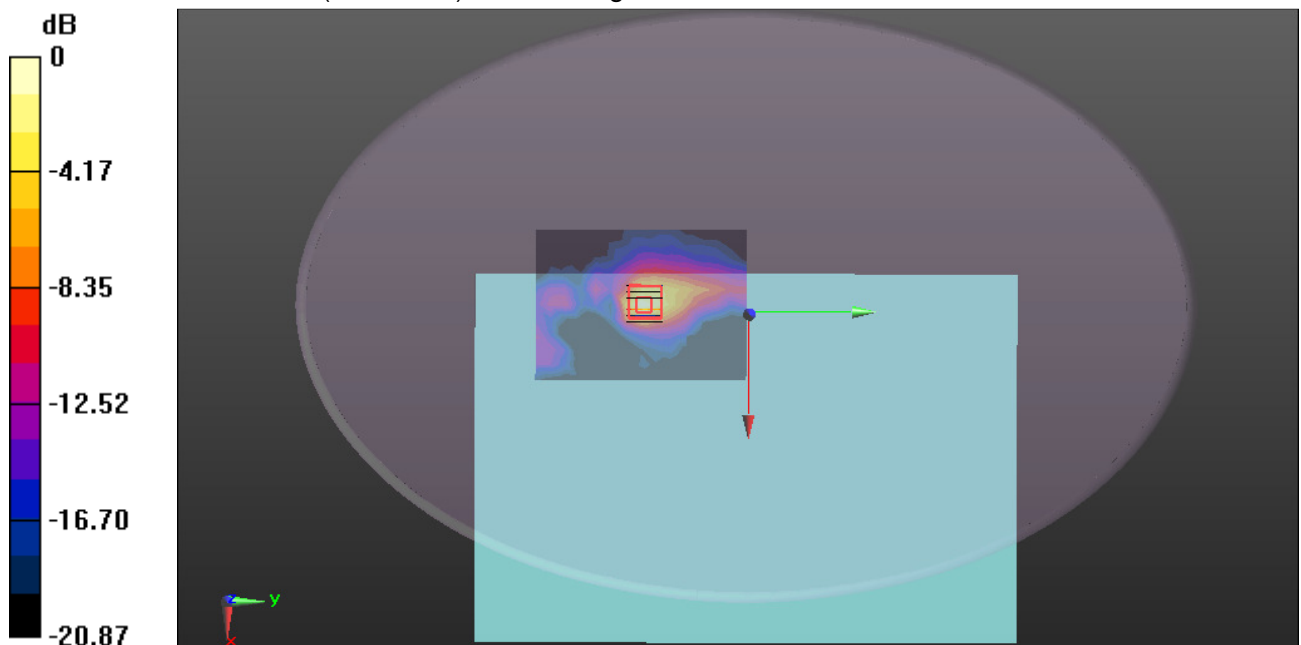
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 3.106 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.67 W/kg

**SAR(1 g) = 0.554 W/kg; SAR(10 g) = 0.179 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: 1/22/2018

**WIFI 802.11 a-Body Bottom CH64 Aux Antenna LUXSHARE 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;  $\sigma = 5.406$  S/m;  $\epsilon_r = 47.79$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.67, 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:xxxx
- DASYS 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) = 1.41 W/kg

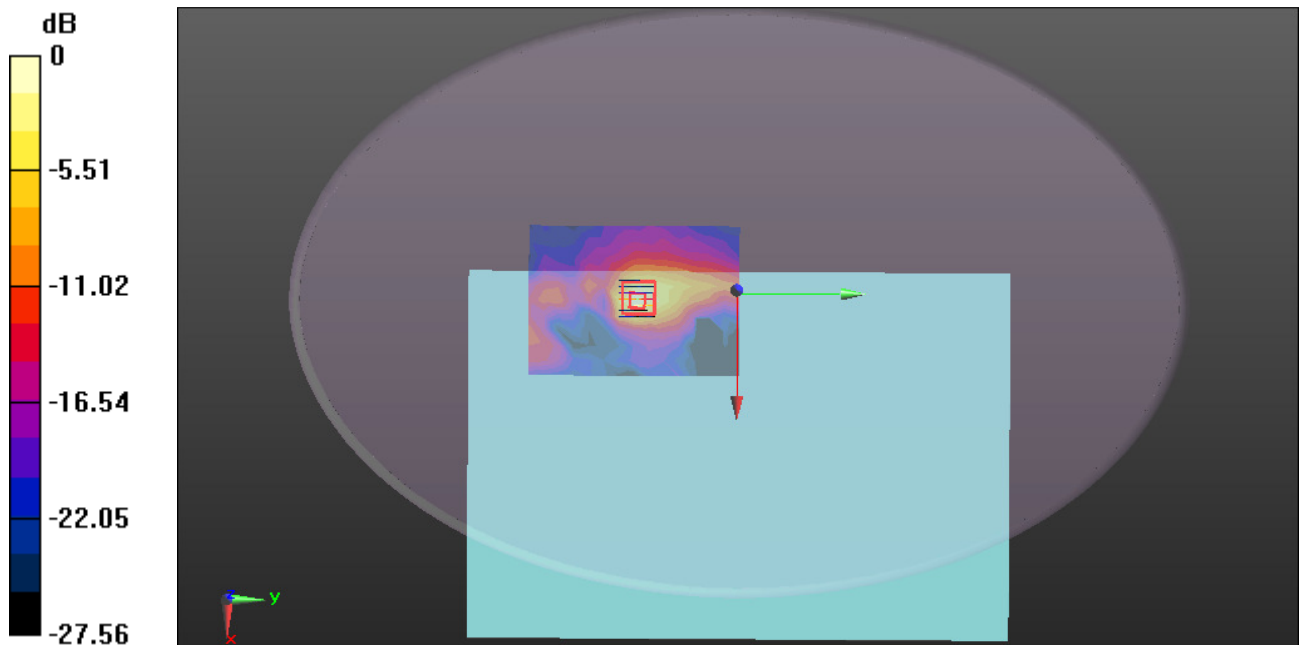
**WIFI/IEEE802.11a Body Bottom CH64 Aux Antenna/Zoom Scan (7x7x7)/Cube 0: Measurement**

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

Reference Value = 3.152 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 2.71 W/kg

**SAR(1 g) = 0.566 W/kg; SAR(10 g) = 0.183 W/kg**



0 dB = 1.41 W/kg = 1.49 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH100 Aux Antenna LUXSHARE 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;  $\sigma = 5.656$  S/m;  $\epsilon_r = 47.372$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.26, 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:xxxx
- DASYS 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) = 1.10 W/kg

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

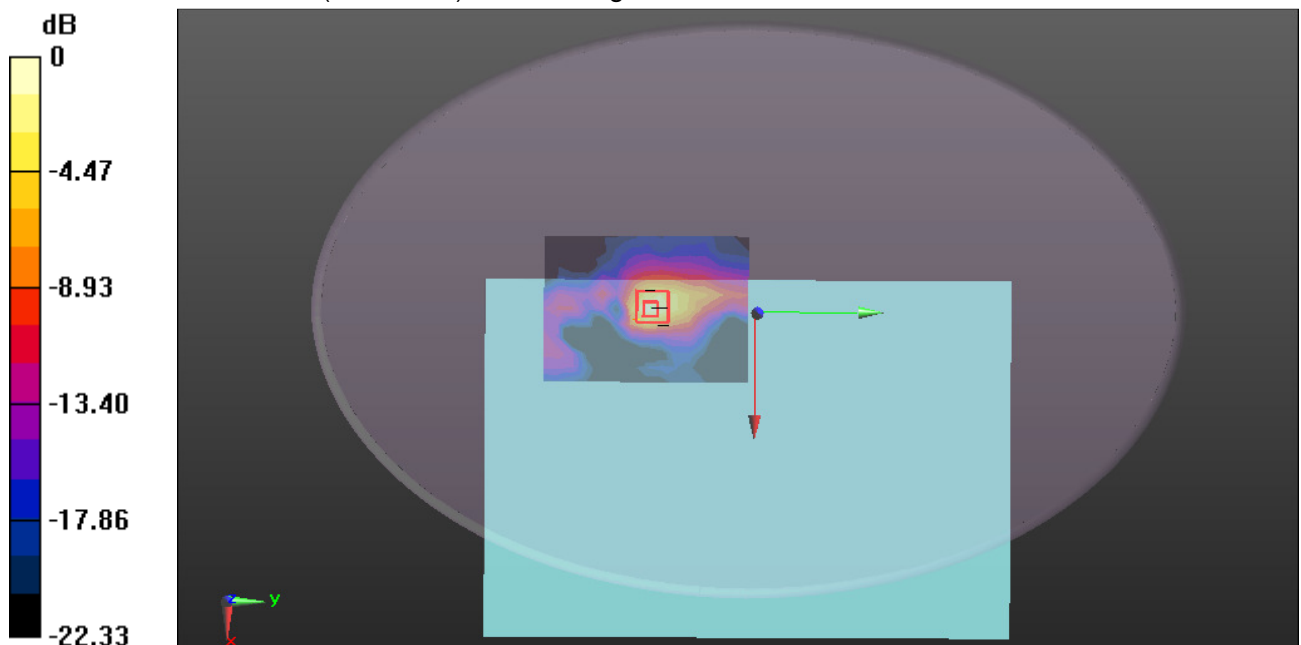
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 3.349 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 2.20 W/kg

**SAR(1 g) = 0.456 W/kg; SAR(10 g) = 0.151 W/kg**

Maximum value of SAR (measured) = 1.14 W/kg



0 dB = 1.14 W/kg = 0.57 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH128 Aux Antenna LUXSHARE 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;  $\sigma = 5.851$  S/m;  $\epsilon_r = 47.053$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

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

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

Maximum value of SAR (measured) = 1.36 W/kg

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

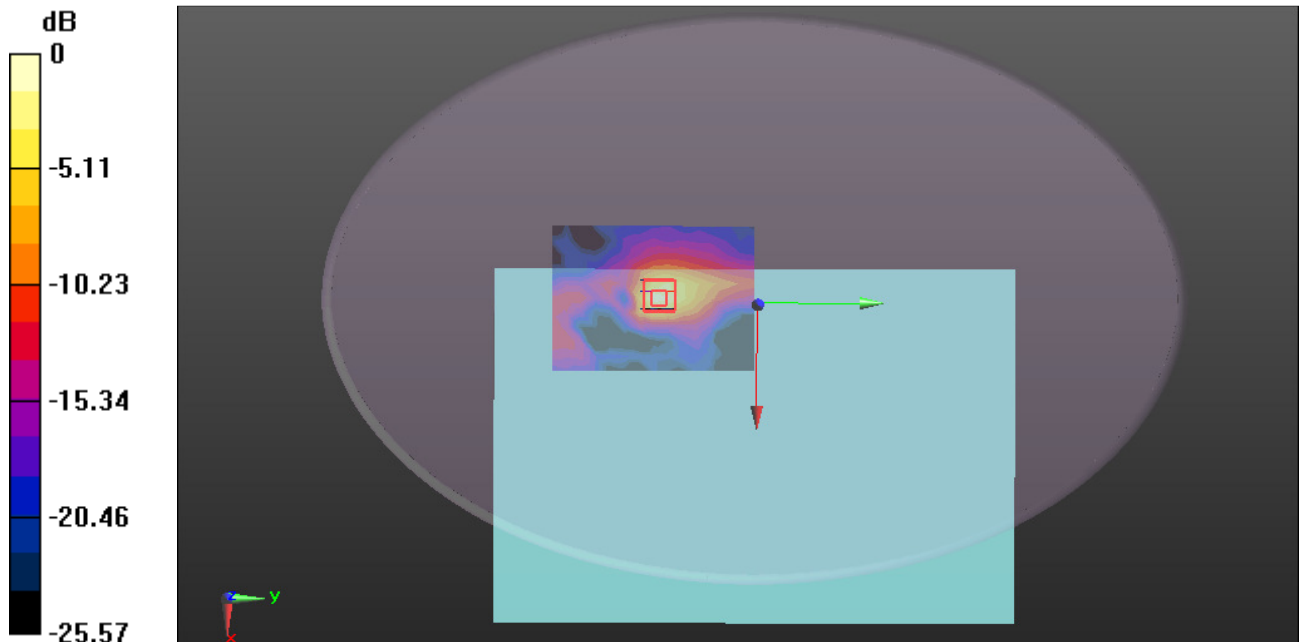
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 2.760 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 2.80 W/kg

**SAR(1 g) = 0.560 W/kg; SAR(10 g) = 0.179 W/kg**

Maximum value of SAR (measured) = 1.43 W/kg



0 dB = 1.43 W/kg = 1.55 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH144 Aux Antenna LUXSHARE 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;  $\sigma = 5.976$  S/m;  $\epsilon_r = 46.888$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.45, 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:xxxx
- DASYS 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) = 1.16 W/kg

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

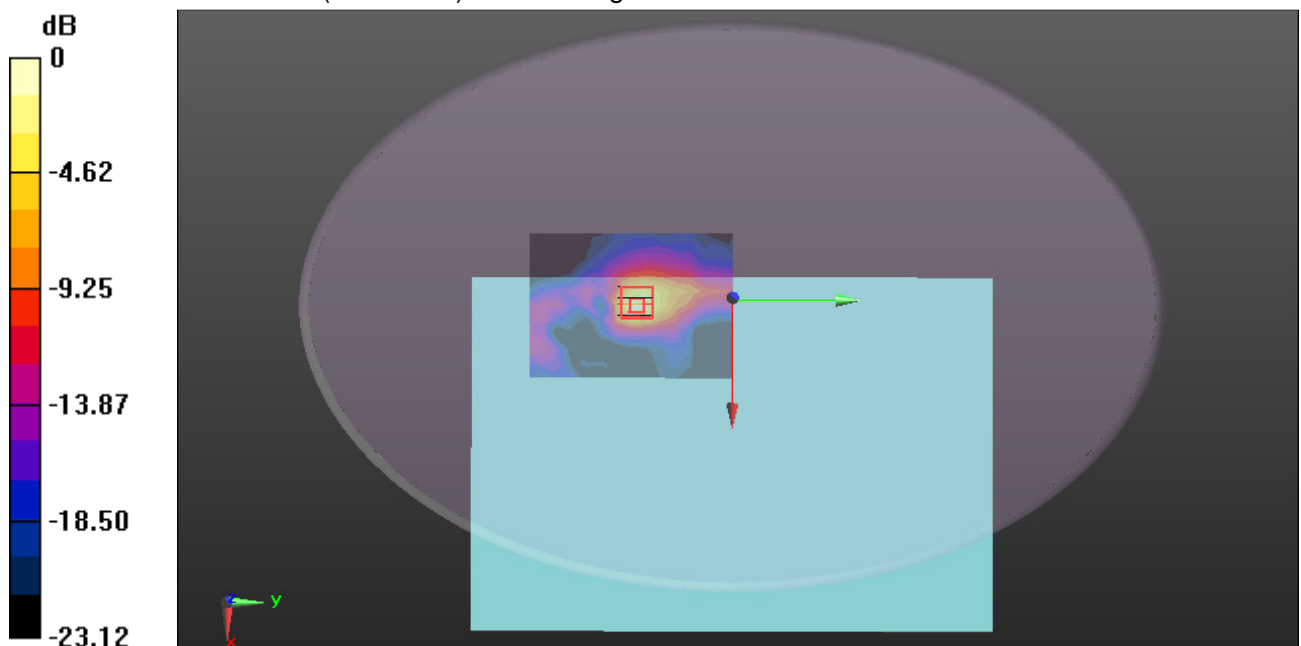
Reference Value = 2.727 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.46 W/kg

**SAR(1 g) = 0.484 W/kg; SAR(10 g) = 0.154 W/kg**

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.24 W/kg



0 dB = 1.24 W/kg = 0.93 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH157 Aux Antenna LUXSHARE 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:  $f = 5785 \text{ MHz}$ ;  $\sigma = 6.07 \text{ S/m}$ ;  $\epsilon_r = 46.717$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.45, 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:xxxx
- DASYS 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) = 1.30 W/kg

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

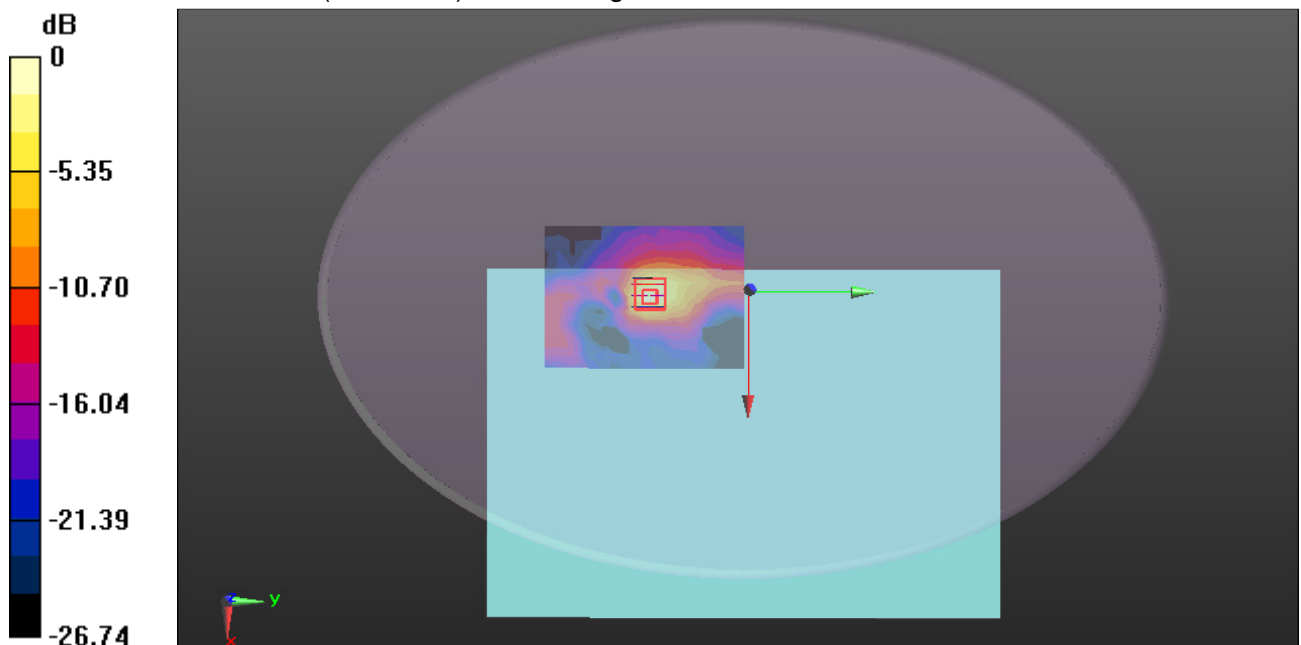
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 2.596 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 2.86 W/kg

**SAR(1 g) = 0.548 W/kg; SAR(10 g) = 0.175 W/kg**

Maximum value of SAR (measured) = 1.40 W/kg



0 dB = 1.40 W/kg = 1.46 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH149 Aux Antenna LUXSHARE 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:  $f = 5745 \text{ MHz}$ ;  $\sigma = 6.006 \text{ S/m}$ ;  $\epsilon_r = 46.826$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.45, 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:xxxx
- DASYS 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) = 1.11 W/kg

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

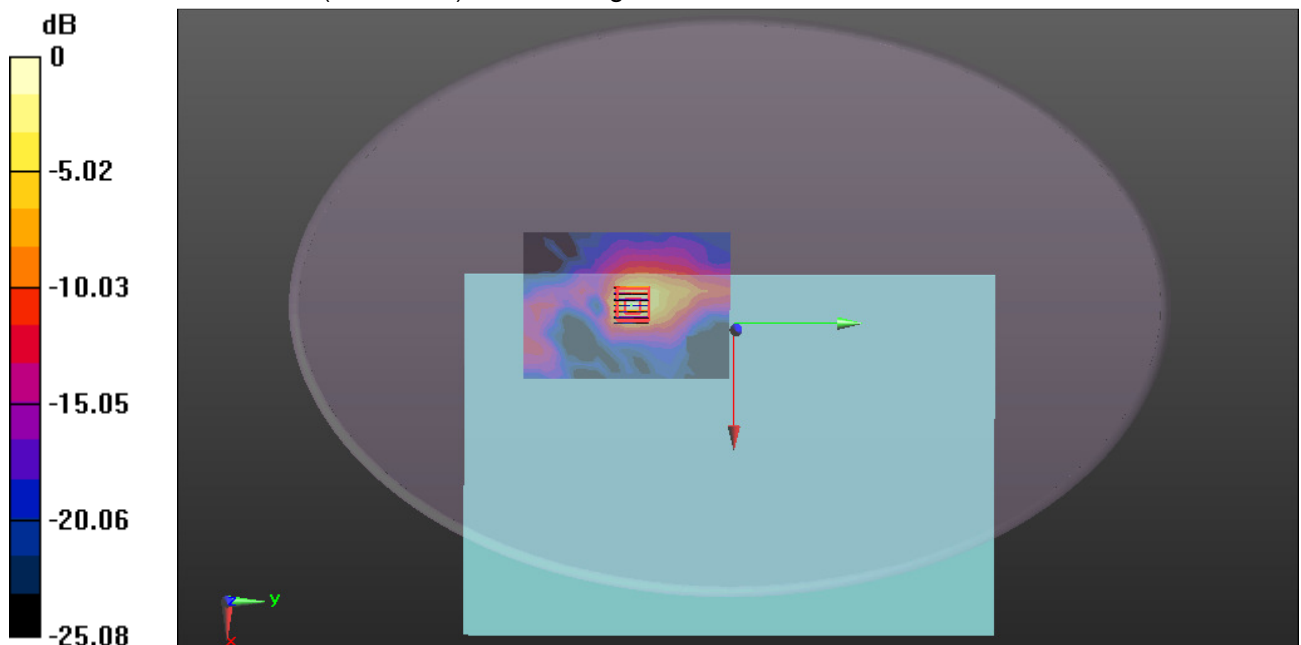
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 2.334 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 2.38 W/kg

**SAR(1 g) = 0.461 W/kg; SAR(10 g) = 0.147 W/kg**

Maximum value of SAR (measured) = 1.18 W/kg



0 dB = 1.18 W/kg = 0.72 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH165 Aux Antenna LUXSHARE 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;  $\sigma = 6.124$  S/m;  $\epsilon_r = 46.662$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.45, 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:xxxx
- DASYS 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

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

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

Maximum value of SAR (measured) = 1.38 W/kg

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

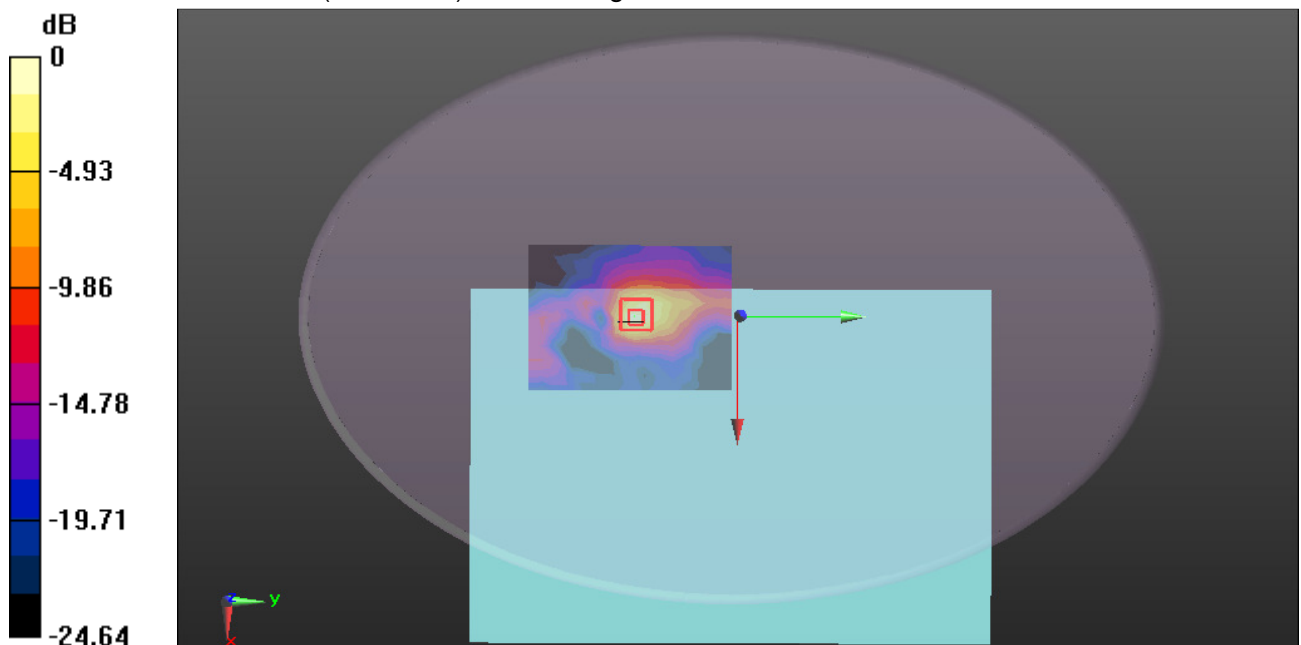
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 3.049 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 3.10 W/kg

**SAR(1 g) = 0.582 W/kg; SAR(10 g) = 0.187 W/kg**

Maximum value of SAR (measured) = 1.52 W/kg



0 dB = 1.52 W/kg = 1.82 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH64 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 II;

Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5320$  MHz;  $\sigma = 5.406$  S/m;  $\epsilon_r = 47.79$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.67, 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:xxxx
- DASYS 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) = 1.19 W/kg

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

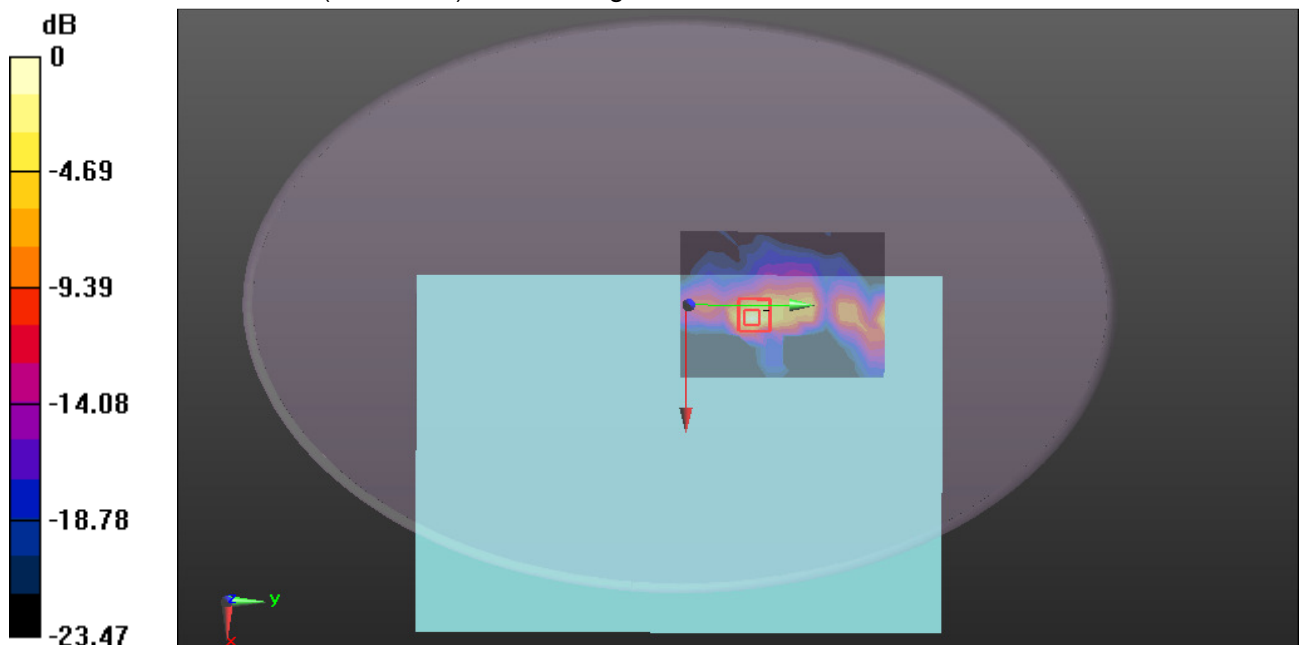
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 2.970 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 2.38 W/kg

**SAR(1 g) = 0.338 W/kg; SAR(10 g) = 0.105 W/kg**

Maximum value of SAR (measured) = 1.20 W/kg



0 dB = 1.20 W/kg = 0.79 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**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:  $f = 5825 \text{ MHz}$ ;  $\sigma = 6.124 \text{ S/m}$ ;  $\epsilon_r = 46.662$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.45, 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:xxxx
- DASYS 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) = 0.659 W/kg

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

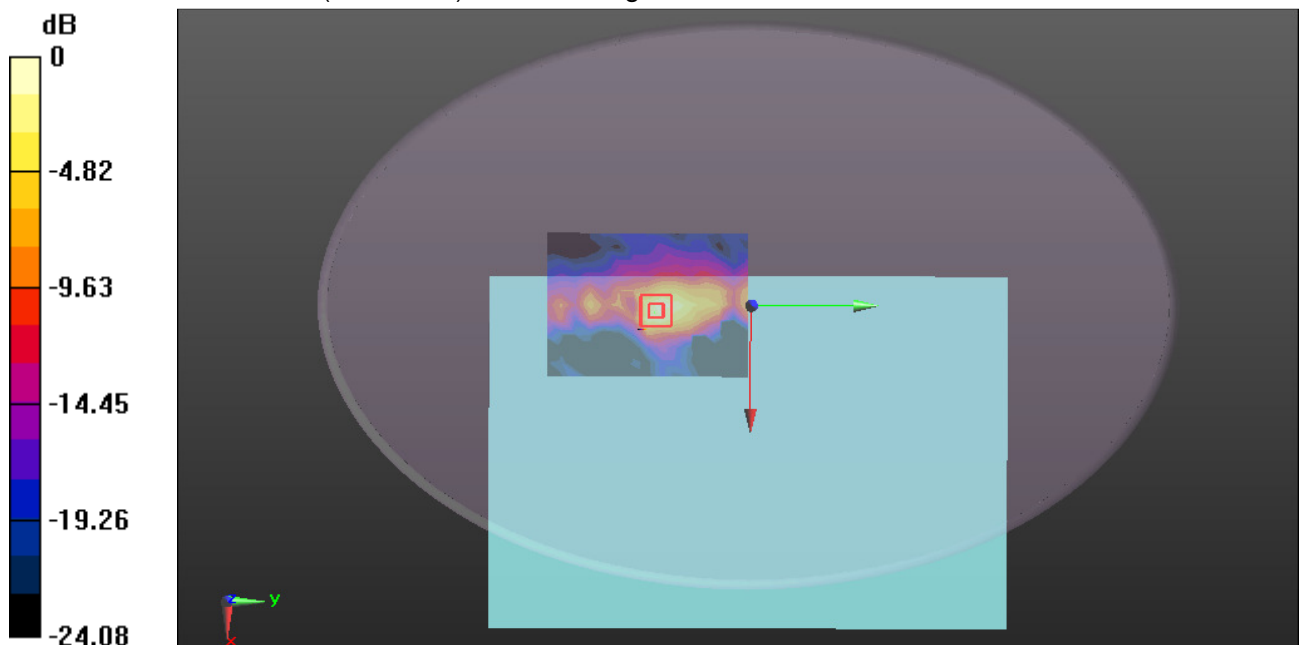
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 4.977 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 1.54 W/kg

**SAR(1 g) = 0.281 W/kg; SAR(10 g) = 0.087 W/kg**

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



0 dB = 0.742 W/kg = -1.30 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**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;  $\sigma = 5.406$  S/m;  $\epsilon_r = 47.79$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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(4.67, 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:xxxx
- DASYS 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) = 0.428 W/kg

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

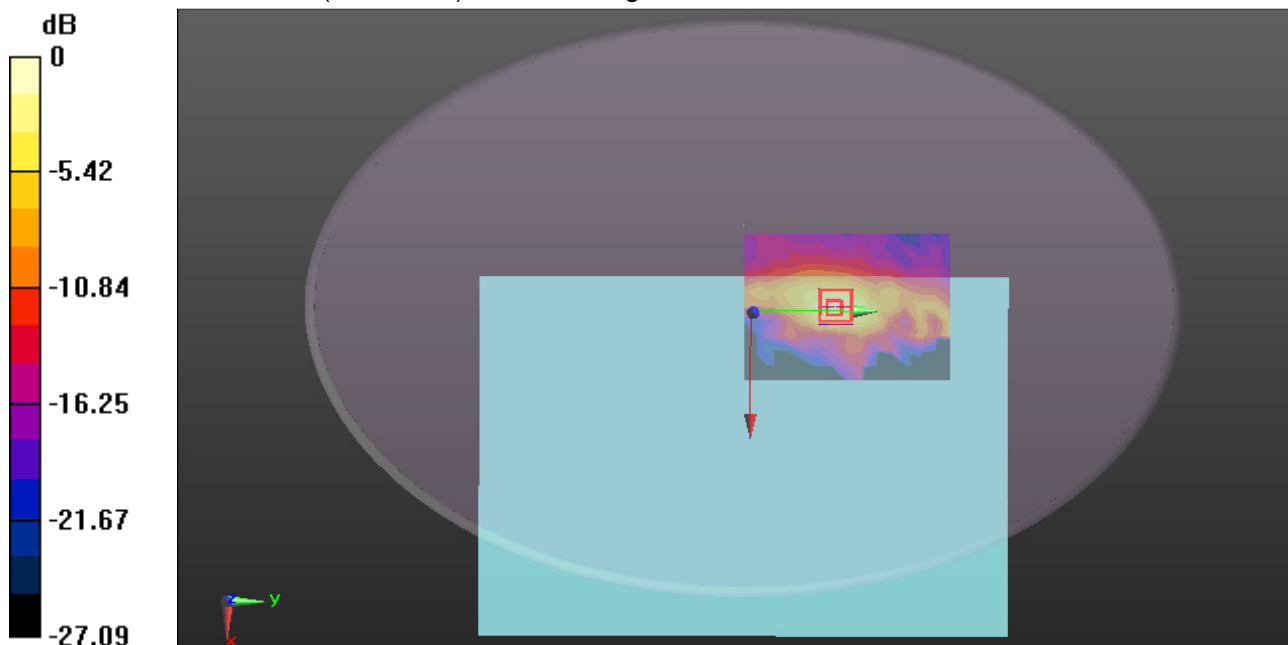
grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 2.706 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.862 W/kg

**SAR(1 g) = 0.183 W/kg; SAR(10 g) = 0.067 W/kg**

Maximum value of SAR (measured) = 0.438 W/kg



0 dB = 0.438 W/kg = -3.59 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 1/22/2018

**WIFI 802.11 a-Body Bottom CH165 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 IV;  
 Frequency: 5825 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5825 \text{ MHz}$ ;  $\sigma = 6.124 \text{ S/m}$ ;  $\epsilon_r = 46.662$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.45, 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:xxxx
- DASYS 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) = 0.965 W/kg

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

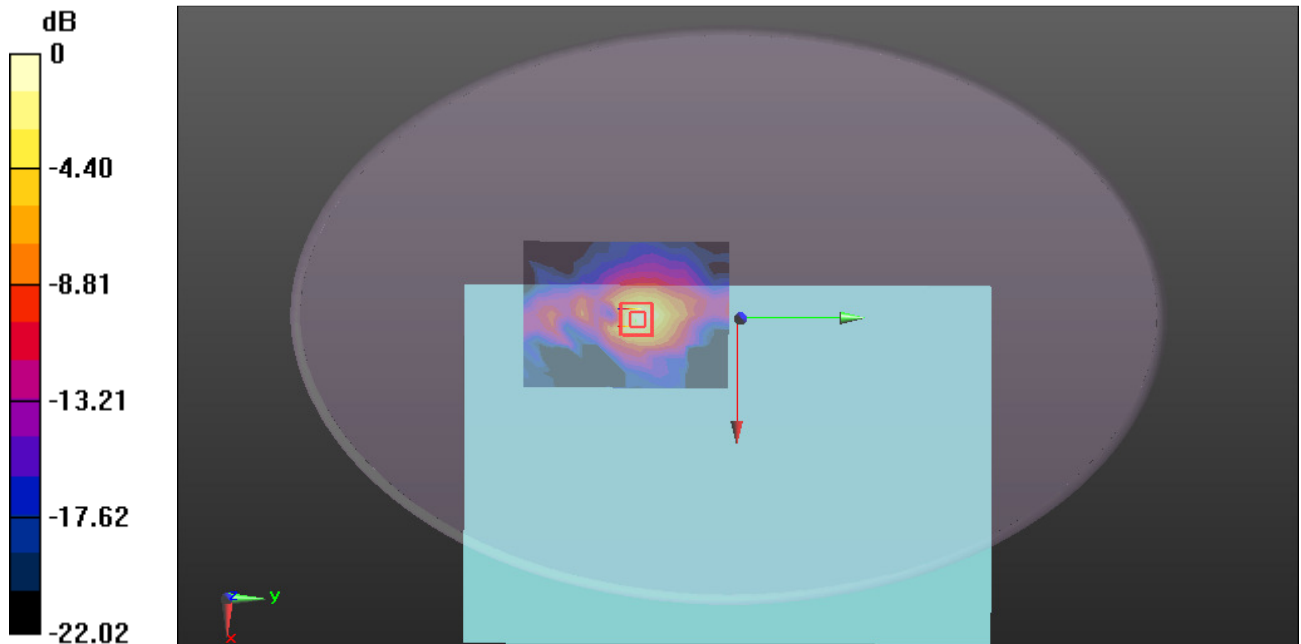
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 3.494 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 1.93 W/kg

**SAR(1 g) = 0.357 W/kg; SAR(10 g) = 0.116 W/kg**

Maximum value of SAR (measured) = 0.918 W/kg



0 dB = 0.918 W/kg = -0.37 dBW/kg