



# Appendix E

## Plots of SAR Test Result for SZEM1806004979CR



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Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**WIFI 802.11 b-Body Bottom CH1 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.878 \text{ S/m}$ ;  $\epsilon_r = 52.827$ ;  $\rho = 1000 \text{ kg/m}^3$

Room Ambient Temperature:  $22^\circ\text{C}$ ; Liquid Temperature:  $21.5^\circ\text{C}$

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), Sensor-Surface: 2mm (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/Area Scan (10x13x1):** Measurement grid:

$dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) =  $0.602 \text{ W/kg}$

**WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Main/Zoom Scan (7x7x5)/Cube 0:** Measurement grid:

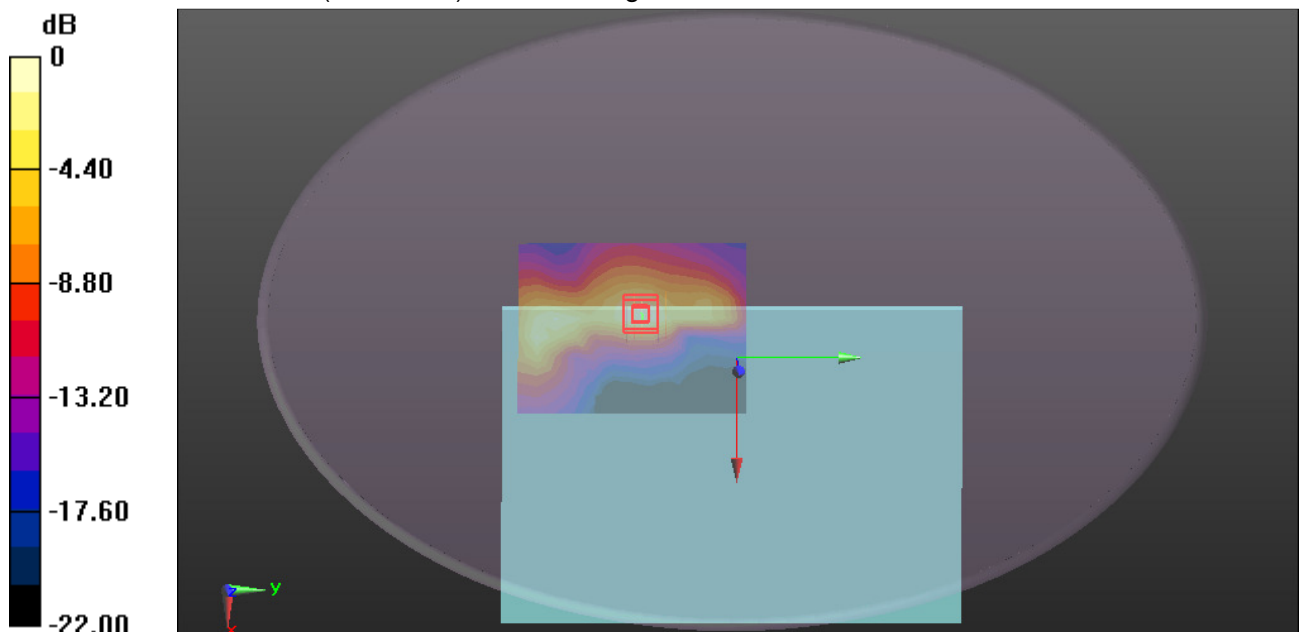
$dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $7.950 \text{ V/m}$ ; Power Drift =  $0.02 \text{ dB}$

Peak SAR (extrapolated) =  $0.754 \text{ W/kg}$

**SAR(1 g) =  $0.410 \text{ W/kg}$ ; SAR(10 g) =  $0.203 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.589 \text{ W/kg}$



$0 \text{ dB} = 0.589 \text{ W/kg} = -2.30 \text{ dBW/kg}$

Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**WIFI 802.11 b-Body Bottom CH6 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 2437 \text{ MHz}$ ;  $\sigma = 1.899 \text{ S/m}$ ;  $\epsilon_r = 52.69$ ;  $\rho = 1000 \text{ kg/m}^3$

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), Sensor-Surface: 2mm (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/Area Scan (10x13x1):** Measurement grid:

$dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.613 W/kg

**WiFi 2.4GHz/IEEE802.11b Body Bottom CH6 Main/Zoom Scan (7x7x5)/Cube 0:** Measurement grid:

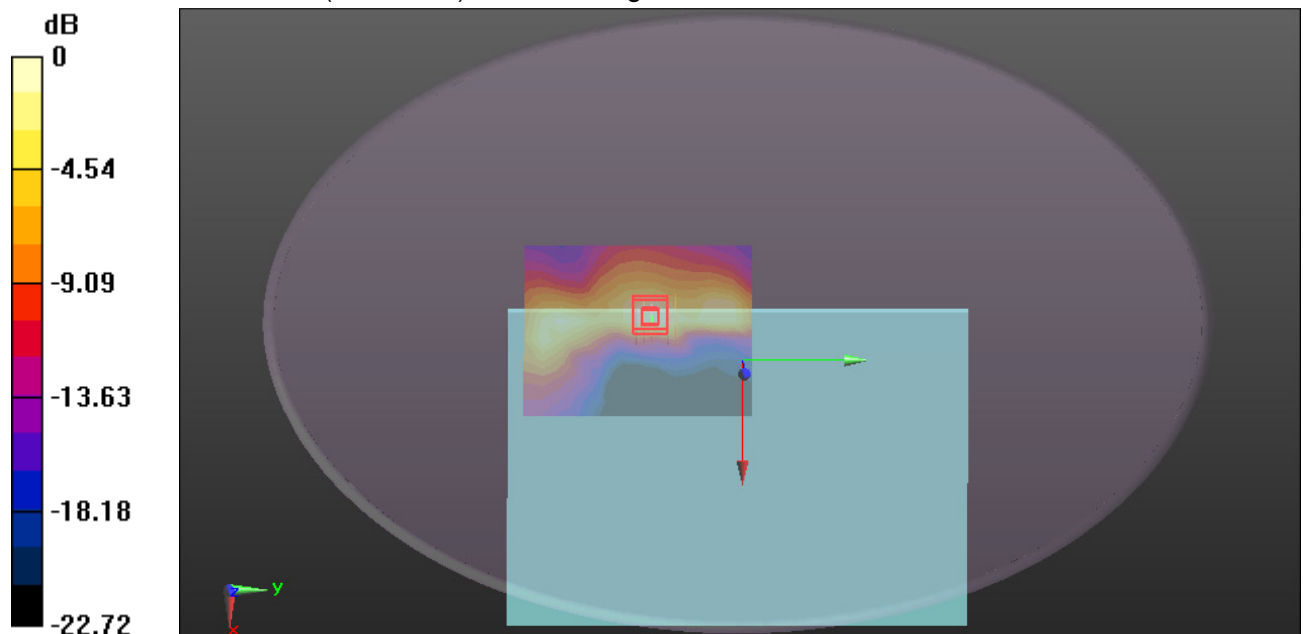
$dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 13.36 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.776 W/kg

**SAR(1 g) = 0.429 W/kg; SAR(10 g) = 0.212 W/kg**

Maximum value of SAR (measured) = 0.609 W/kg



0 dB = 0.609 W/kg = -2.15 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**WIFI 802.11 b-Body Bottom CH11 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 2462 \text{ MHz}$ ;  $\sigma = 1.904 \text{ S/m}$ ;  $\epsilon_r = 52.553$ ;  $\rho = 1000 \text{ kg/m}^3$

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), Sensor-Surface: 2mm (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/Area Scan (10x13x1):** Measurement grid:

$dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.354 W/kg

**WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Main/Zoom Scan (7x7x5)/Cube 0:** Measurement

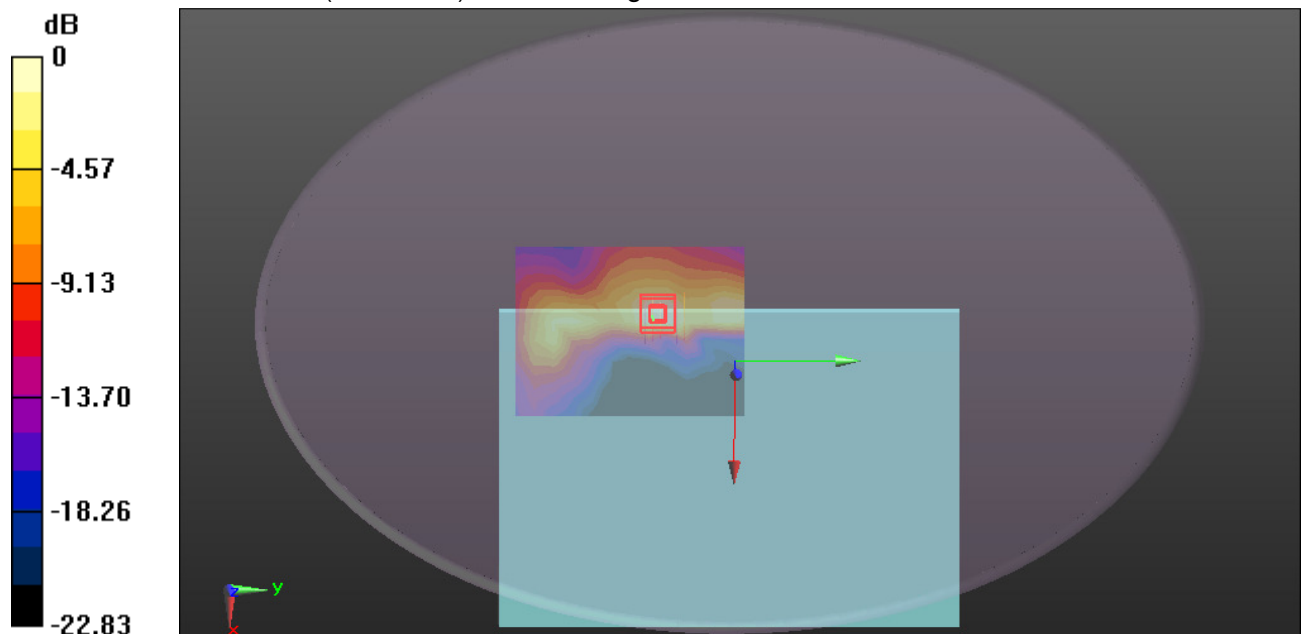
grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 11.33 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 0.477 W/kg

**SAR(1 g) = 0.263 W/kg; SAR(10 g) = 0.130 W/kg**

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



0 dB = 0.370 W/kg = -4.32 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**2.4GHz -Body Bottom CH00 Main Antenna INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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):  $f = 2402$  MHz;  $\sigma = 1.873$  S/m;  $\epsilon_r = 52.881$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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 CH0 Main Antenna/Area Scan (10x13x1):** Measurement grid:  
dx=12mm, dy=12mm

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0145 W/kg

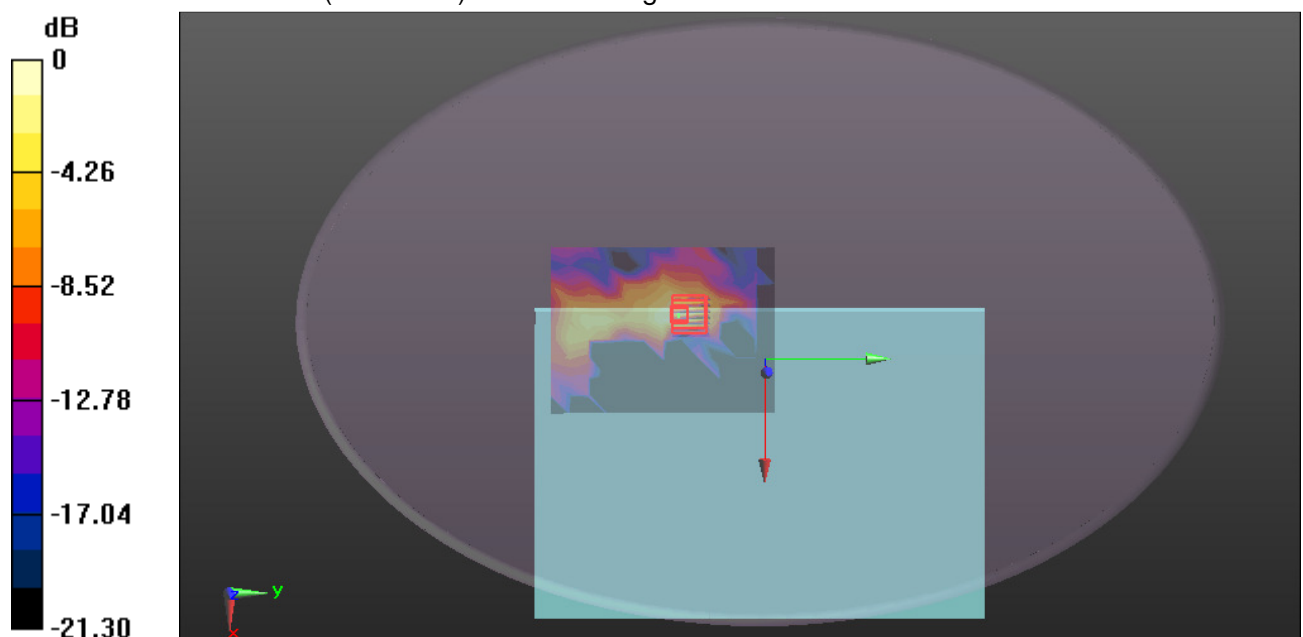
**WiFi 2.4GHz/2.4G Body Bottom CH0 Main Antenna/Zoom Scan (7x7x7)/Cube 0:** Measurement  
grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 0.4720 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.0210 W/kg

**SAR(1 g) = 0.011 W/kg; SAR(10 g) = 0.00366 W/kg**

Maximum value of SAR (measured) = 0.0171 W/kg



0 dB = 0.0171 W/kg = -17.67 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**2.4GHz -Body Bottom CH39 Main Antenna INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 2441 \text{ MHz}$ ;  $\sigma = 1.898 \text{ S/m}$ ;  $\epsilon_r = 52.685$ ;  $\rho = 1000 \text{ kg/m}^3$

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 (10x13x1):** Measurement grid:

$dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.0263 W/kg

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

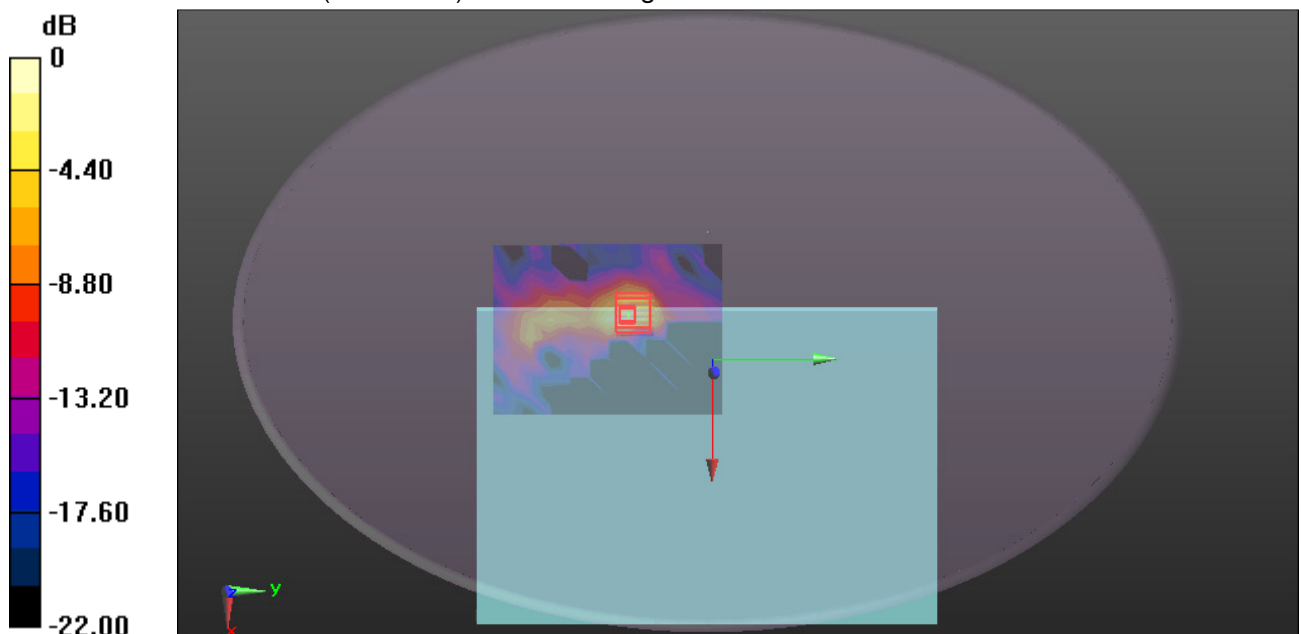
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 0.5230 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.0330 W/kg

**SAR(1 g) = 0.017 W/kg; SAR(10 g) = 0.00714 W/kg**

Maximum value of SAR (measured) = 0.0268 W/kg



0 dB = 0.0268 W/kg = -15.72 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**2.4GHz -Body Bottom CH79 Main Antenna INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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):  $f = 2480 \text{ MHz}$ ;  $\sigma = 1.925 \text{ S/m}$ ;  $\epsilon_r = 52.469$ ;  $\rho = 1000 \text{ kg/m}^3$

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 Main Antenna/Area Scan (10x13x1):** Measurement grid:  
 $dx=12\text{mm}$ ,  $dy=12\text{mm}$

Info: Extrapolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0153 W/kg

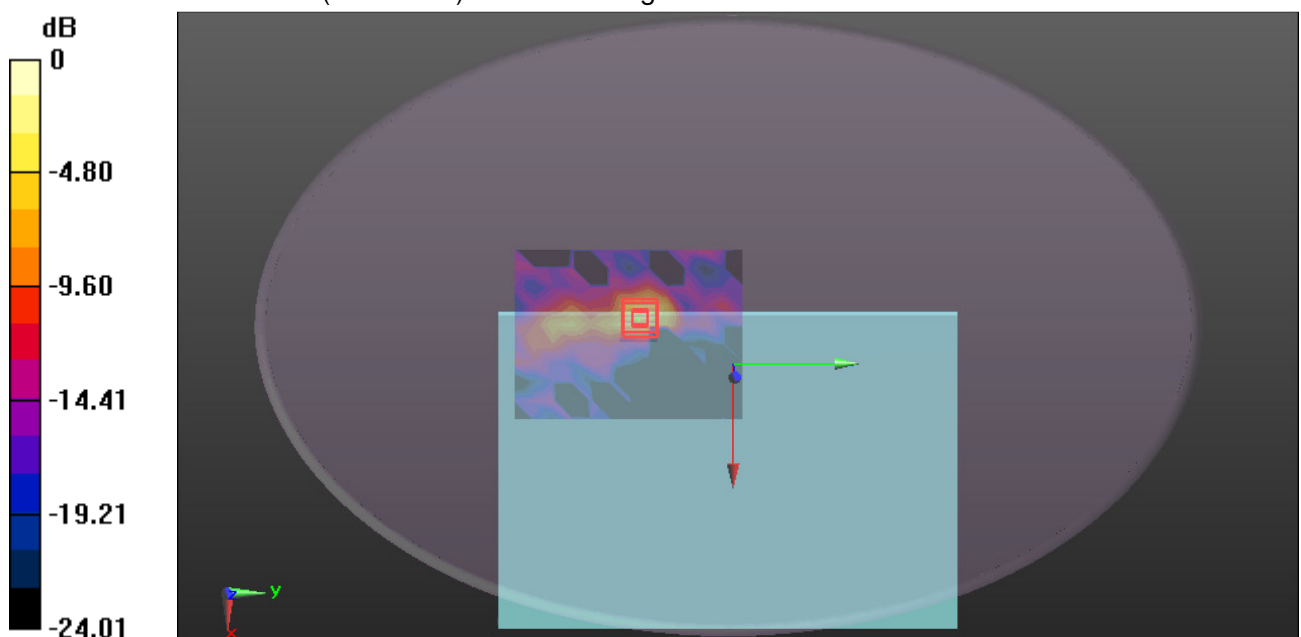
**WiFi 2.4GHz/2.4G Body Bottom CH78 Main Antenna/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 0.1660 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.0270 W/kg

**SAR(1 g) = 0.013 W/kg; SAR(10 g) = 0.00539 W/kg**

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



0 dB = 0.0222 W/kg = -16.54 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH52 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5260 \text{ MHz}$ ;  $\sigma = 5.423 \text{ S/m}$ ;  $\epsilon_r = 48.609$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.67, 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/Area Scan (11x13x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.89 W/kg

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

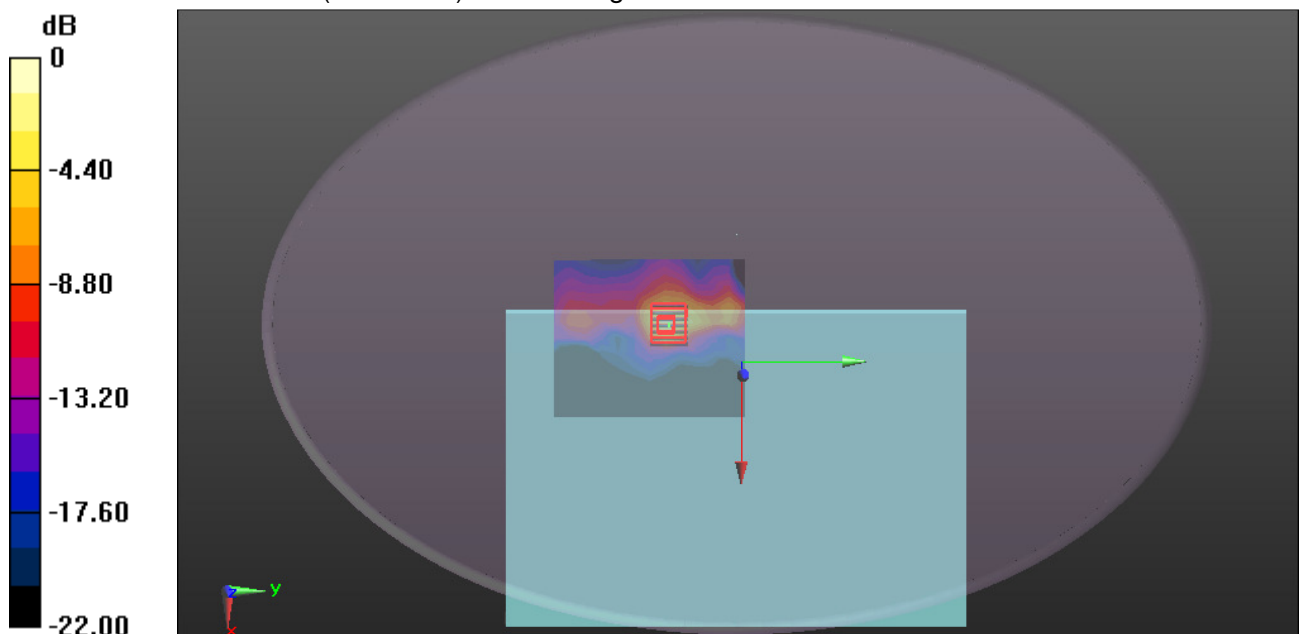
$dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 6.967 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 3.50 W/kg

**SAR(1 g) = 0.799 W/kg; SAR(10 g) = 0.252 W/kg**

Maximum value of SAR (measured) = 1.85 W/kg



0 dB = 1.85 W/kg = 2.67 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH56 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; Serial: N/A**

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

Frequency: 5280 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5280 \text{ MHz}$ ;  $\sigma = 5.459 \text{ S/m}$ ;  $\epsilon_r = 48.558$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.67, 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 CH56 Main/Area Scan (11x13x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.63 W/kg

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

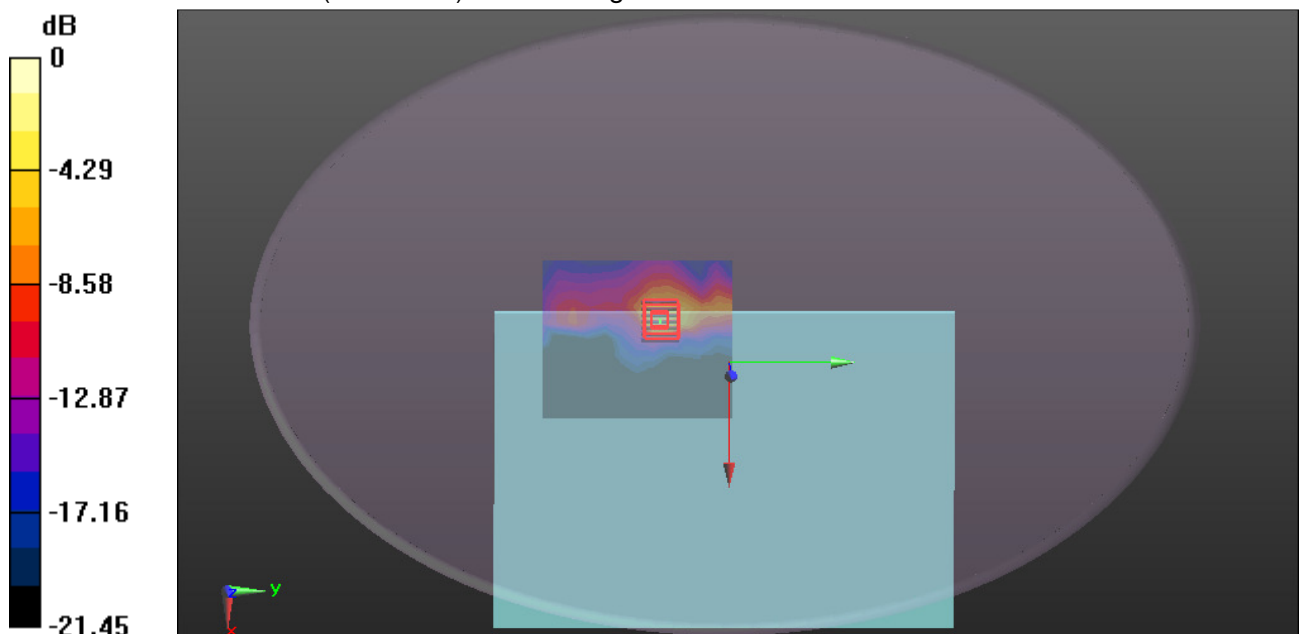
$dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 6.000 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 3.71 W/kg

**SAR(1 g) = 0.862 W/kg; SAR(10 g) = 0.269 W/kg**

Maximum value of SAR (measured) = 2.09 W/kg



0 dB = 2.09 W/kg = 3.20 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH64 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5320 \text{ MHz}$ ;  $\sigma = 5.519 \text{ S/m}$ ;  $\epsilon_r = 48.514$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.67, 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/Area Scan (11x13x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.93 W/kg

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

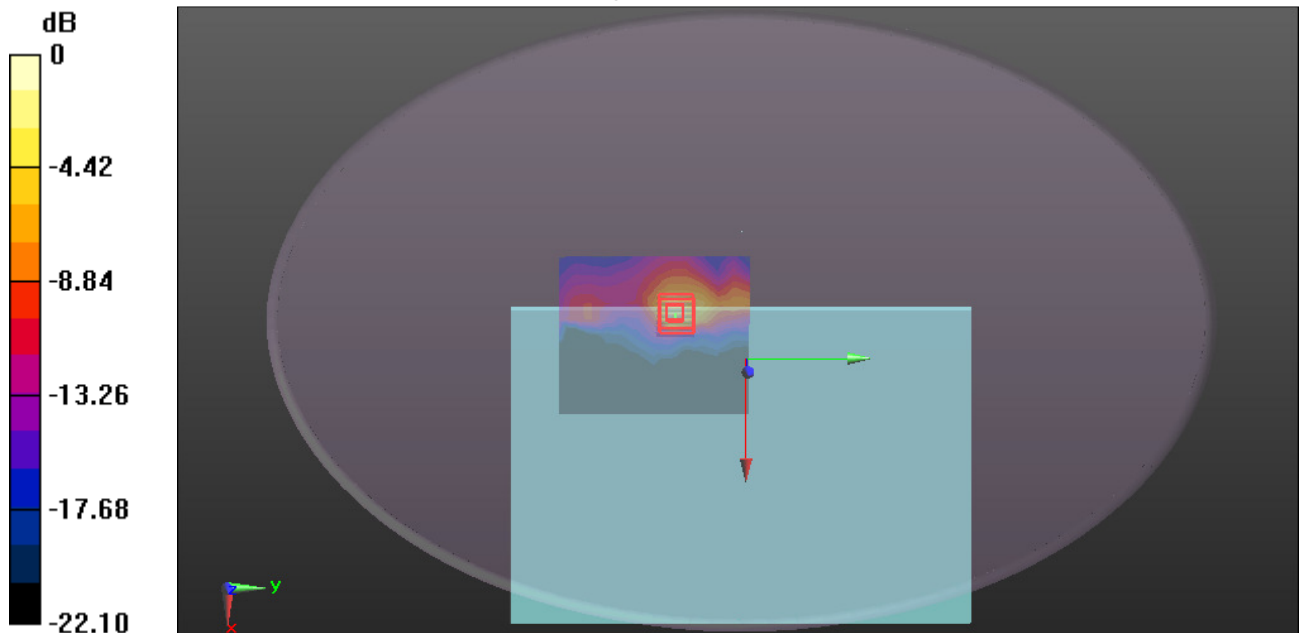
$dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 5.280 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 4.59 W/kg

**SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.326 W/kg**

Maximum value of SAR (measured) = 2.58 W/kg



0 dB = 2.58 W/kg = 4.12 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH100 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5500 \text{ MHz}$ ;  $\sigma = 5.787 \text{ S/m}$ ;  $\epsilon_r = 48.218$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.26, 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/Area Scan (11x13x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.33 W/kg

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

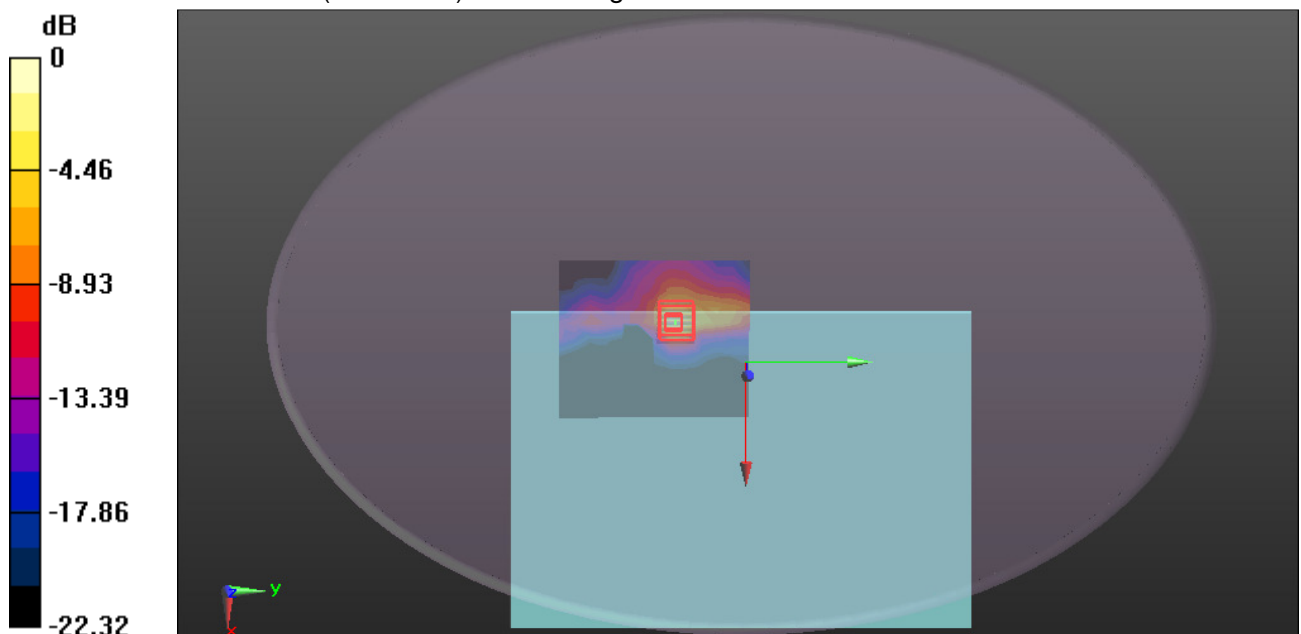
$dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 4.508 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 2.67 W/kg

**SAR(1 g) = 0.585 W/kg; SAR(10 g) = 0.177 W/kg**

Maximum value of SAR (measured) = 1.42 W/kg



0 dB = 1.42 W/kg = 1.52 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH116 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; Serial: N/A**

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

Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5580 \text{ MHz}$ ;  $\sigma = 5.902 \text{ S/m}$ ;  $\epsilon_r = 48.078$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.18, 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 CH116 Main/Area Scan (11x13x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

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

**WIFI/IEEE802.11a Body Bottom CH116 Main/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:

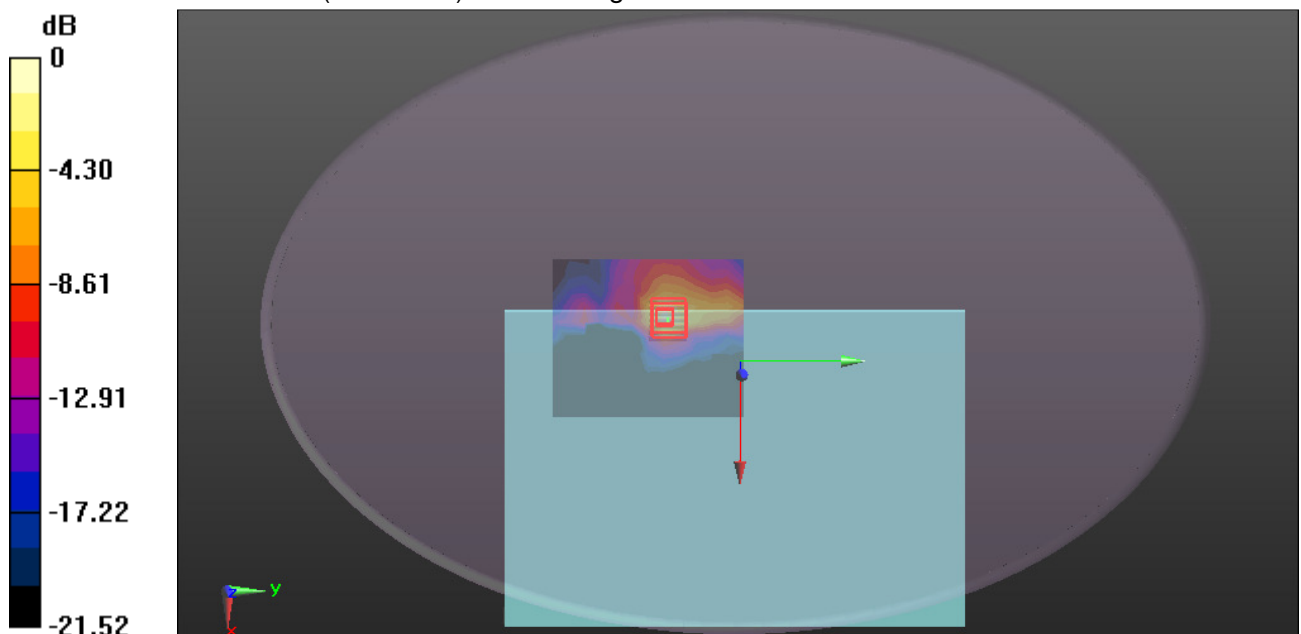
$dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 5.316 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.49 W/kg

**SAR(1 g) = 0.555 W/kg; SAR(10 g) = 0.176 W/kg**

Maximum value of SAR (measured) = 1.34 W/kg



0 dB = 1.34 W/kg = 1.27 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH144 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5720 \text{ MHz}$ ;  $\sigma = 6.107 \text{ S/m}$ ;  $\epsilon_r = 47.775$ ;  $\rho = 1000 \text{ kg/m}^3$

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 CH144 Main/Area Scan (11x13x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

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

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

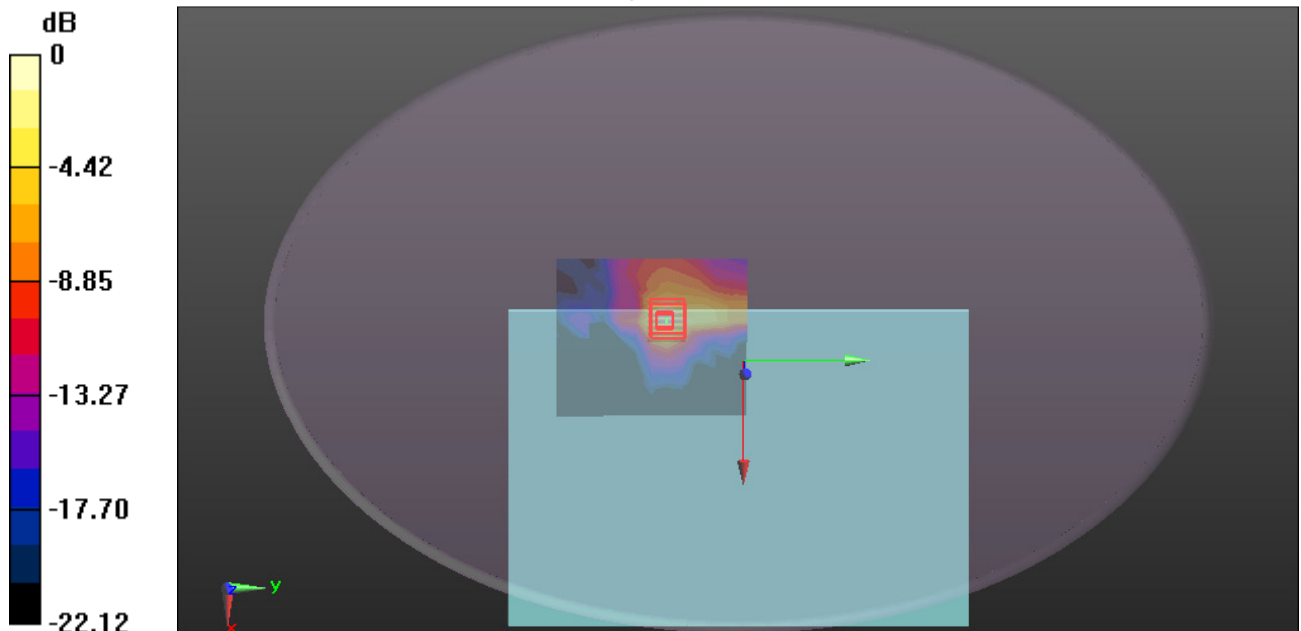
$dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 5.252 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.52 W/kg

**SAR(1 g) = 0.322 W/kg; SAR(10 g) = 0.105 W/kg**

Maximum value of SAR (measured) = 0.782 W/kg



0 dB = 0.782 W/kg = -1.07 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH149 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5745 \text{ MHz}$ ;  $\sigma = 6.155 \text{ S/m}$ ;  $\epsilon_r = 47.727$ ;  $\rho = 1000 \text{ kg/m}^3$

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/Area Scan (11x13x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.13 W/kg

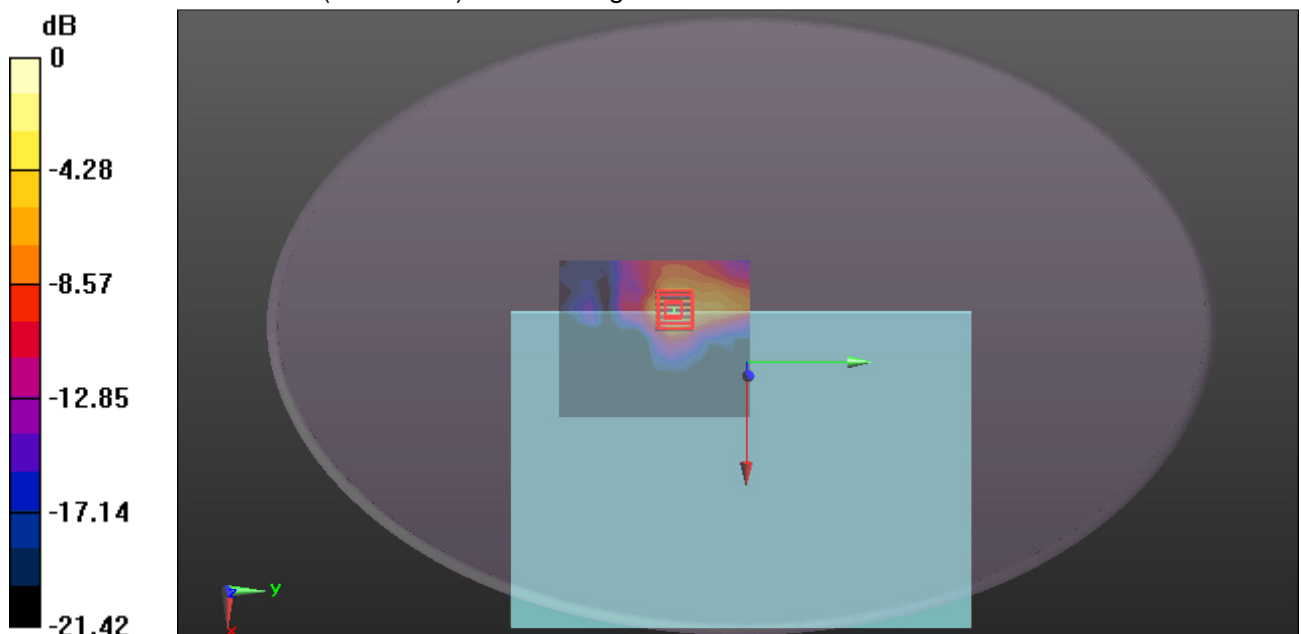
**WIFI/IEEE802.11a Body Bottom CH149 Main/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 3.433 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 2.18 W/kg

**SAR(1 g) = 0.460 W/kg; SAR(10 g) = 0.150 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: 5/31/2018

**WIFI 802.11 a-Body Bottom CH157 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5785 \text{ MHz}$ ;  $\sigma = 6.213 \text{ S/m}$ ;  $\epsilon_r = 47.614$ ;  $\rho = 1000 \text{ kg/m}^3$

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/Area Scan (11x13x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.15 W/kg

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

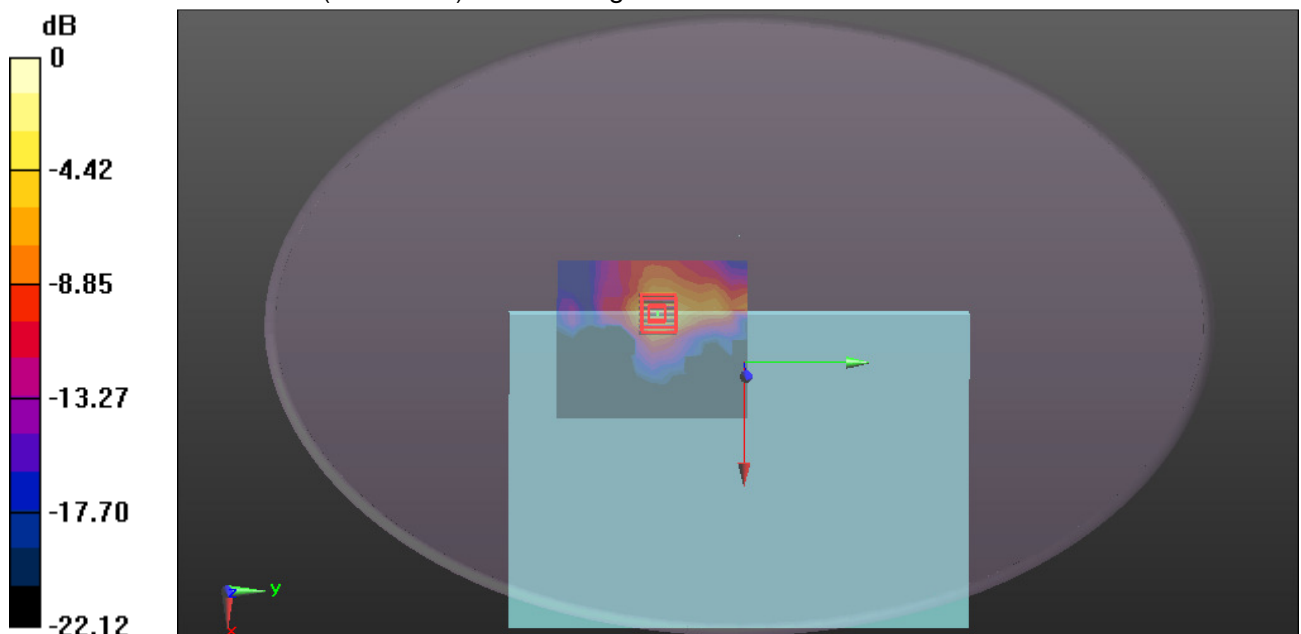
$dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 1.902 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.42 W/kg

**SAR(1 g) = 0.520 W/kg; SAR(10 g) = 0.172 W/kg**

Maximum value of SAR (measured) = 1.29 W/kg



0 dB = 1.29 W/kg = 1.11 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH165 Main Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5825 \text{ MHz}$ ;  $\sigma = 6.269 \text{ S/m}$ ;  $\epsilon_r = 47.429$ ;  $\rho = 1000 \text{ kg/m}^3$

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/Area Scan (11x13x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.22 W/kg

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

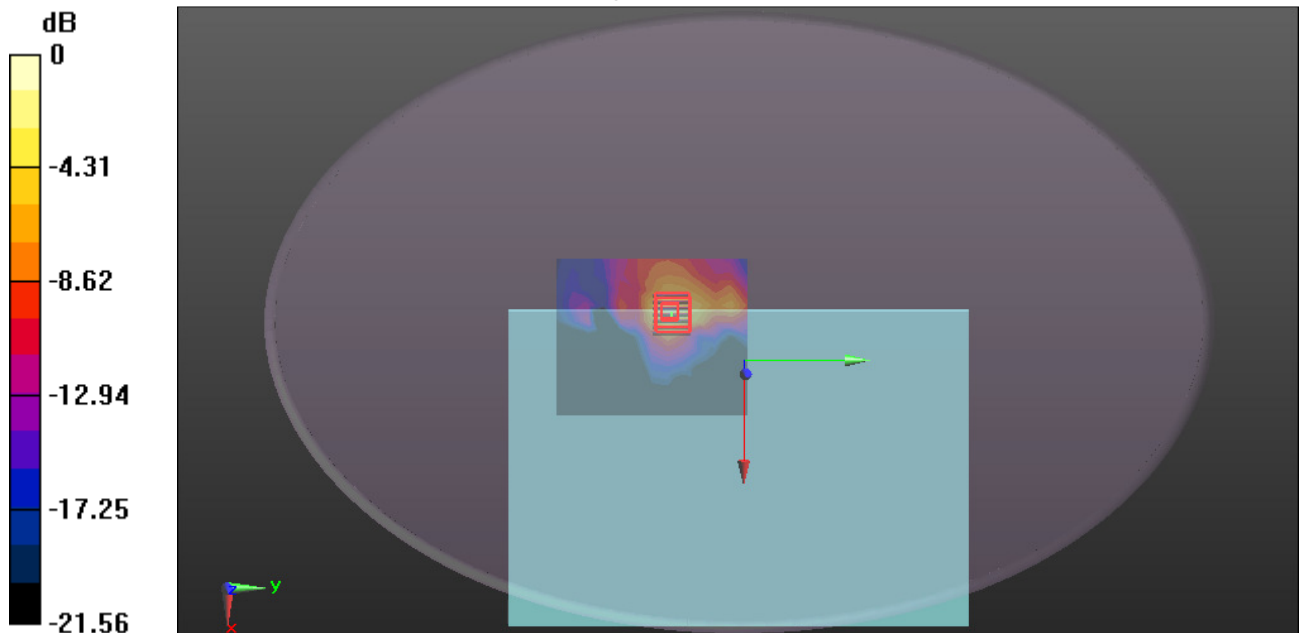
$dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 4.313 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 2.68 W/kg

**SAR(1 g) = 0.558 W/kg; SAR(10 g) = 0.189 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: 5/30/2018

**WIFI 802.11 b-Body Bottom CH1 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.878 \text{ S/m}$ ;  $\epsilon_r = 52.827$ ;  $\rho = 1000 \text{ kg/m}^3$

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), Sensor-Surface: 2mm (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/Area Scan (10x13x1):** Measurement grid:

$dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.696 W/kg

**WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Aux/Zoom Scan (7x7x5)/Cube 0:** Measurement grid:

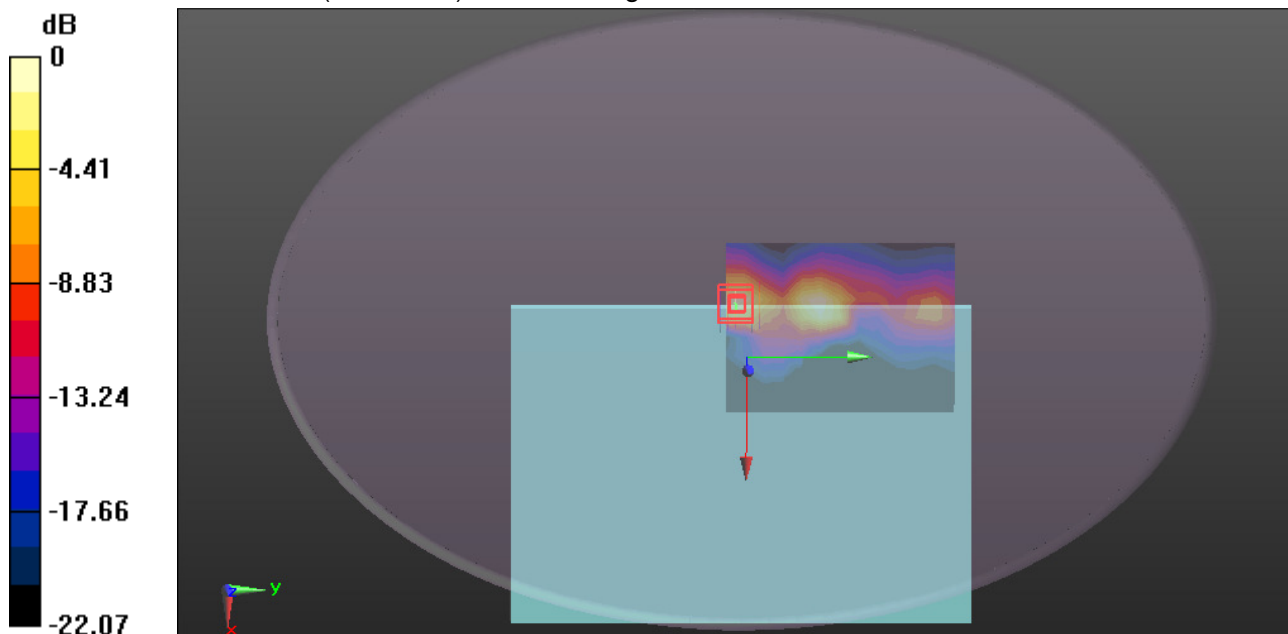
$dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 13.75 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.958 W/kg

**SAR(1 g) = 0.528 W/kg; SAR(10 g) = 0.247 W/kg**

Maximum value of SAR (measured) = 0.763 W/kg



0 dB = 0.763 W/kg = -1.17 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**WiFi 802.11 b-Body Bottom CH6 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 2437 \text{ MHz}$ ;  $\sigma = 1.899 \text{ S/m}$ ;  $\epsilon_r = 52.69$ ;  $\rho = 1000 \text{ kg/m}^3$

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), Sensor-Surface: 2mm (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 Aux/Area Scan (10x13x1): Measurement grid:**

$dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.676 W/kg

**WiFi 2.4GHz/IEEE802.11b Body Bottom CH6 Aux/Zoom Scan (7x7x5)/Cube 0: Measurement grid:**

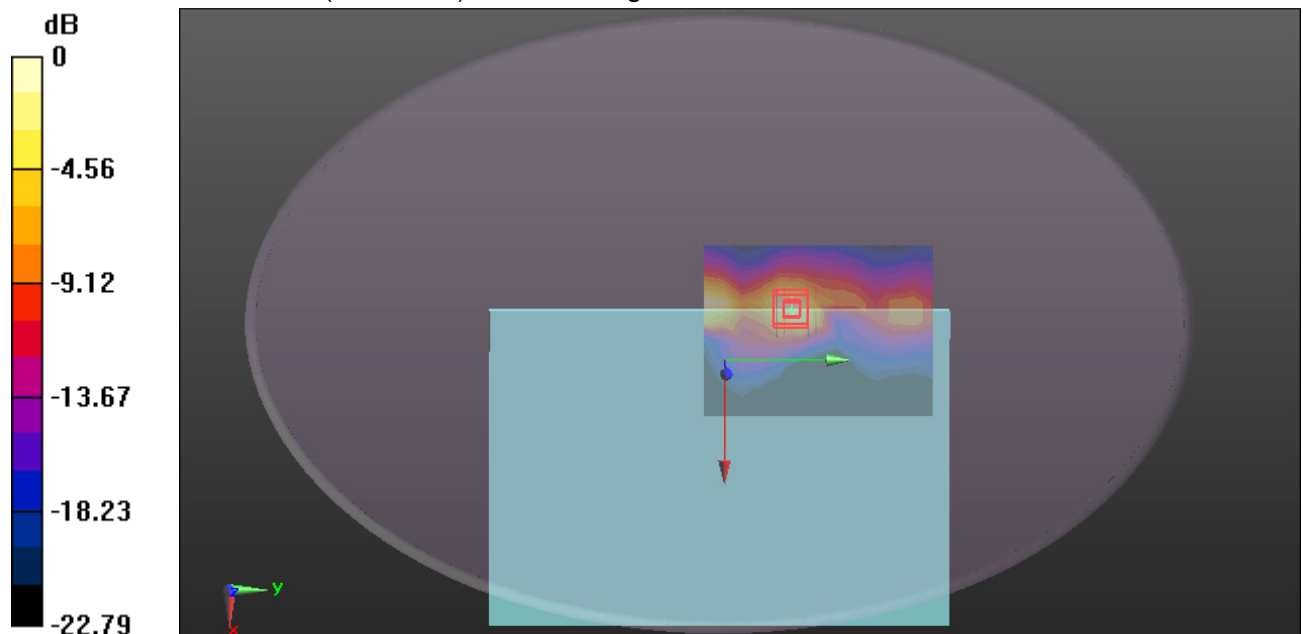
$dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 10.41 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.949 W/kg

**SAR(1 g) = 0.487 W/kg; SAR(10 g) = 0.220 W/kg**

Maximum value of SAR (measured) = 0.727 W/kg



0 dB = 0.727 W/kg = -1.38 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**WiFi 802.11 b-Body Bottom CH11 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 2462 \text{ MHz}$ ;  $\sigma = 1.904 \text{ S/m}$ ;  $\epsilon_r = 52.553$ ;  $\rho = 1000 \text{ kg/m}^3$

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), Sensor-Surface: 2mm (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/Area Scan (10x13x1): Measurement grid:**

$dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.583 W/kg

**WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Aux/Zoom Scan (7x7x5)/Cube 0: Measurement**

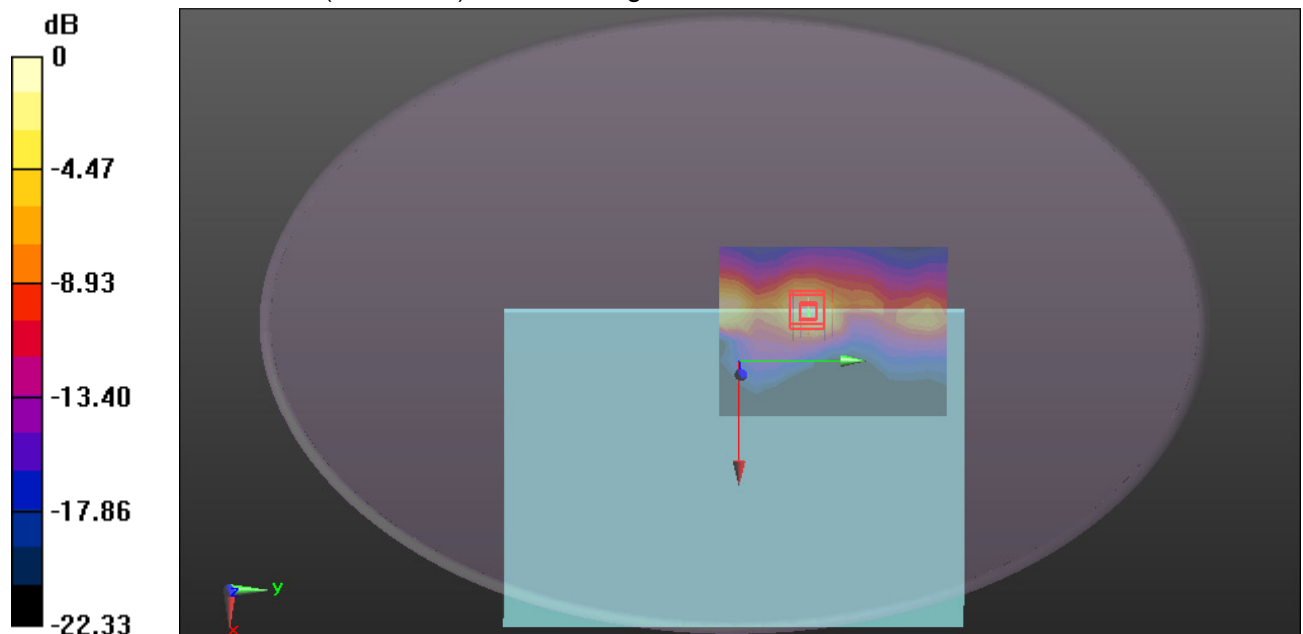
grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 11.11 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.892 W/kg

**SAR(1 g) = 0.462 W/kg; SAR(10 g) = 0.212 W/kg**

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



0 dB = 0.687 W/kg = -1.63 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH52 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5260 \text{ MHz}$ ;  $\sigma = 5.423 \text{ S/m}$ ;  $\epsilon_r = 48.609$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.67, 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/Area Scan (11x15x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.90 W/kg

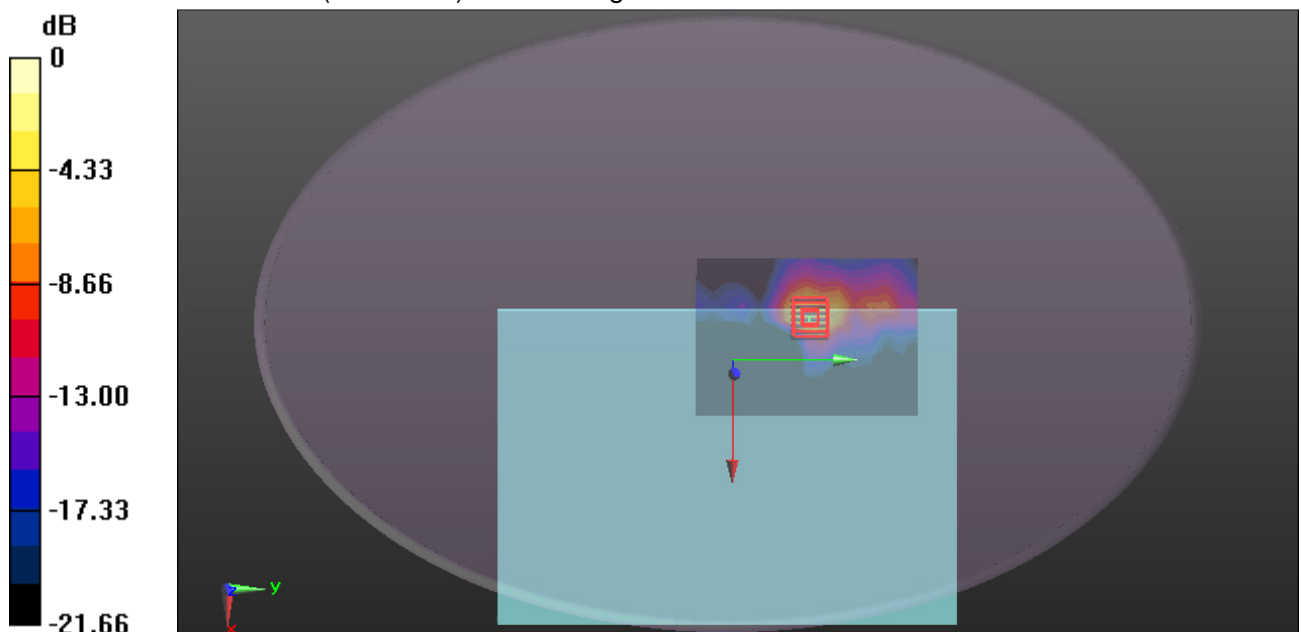
**WIFI/IEEE802.11a Body Bottom CH52 Aux/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 2.059 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 3.68 W/kg

**SAR(1 g) = 0.912 W/kg; SAR(10 g) = 0.276 W/kg**

Maximum value of SAR (measured) = 2.20 W/kg



0 dB = 2.20 W/kg = 3.42 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH60 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5300 \text{ MHz}$ ;  $\sigma = 5.491 \text{ S/m}$ ;  $\epsilon_r = 48.539$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.67, 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/Area Scan (11x15x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

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

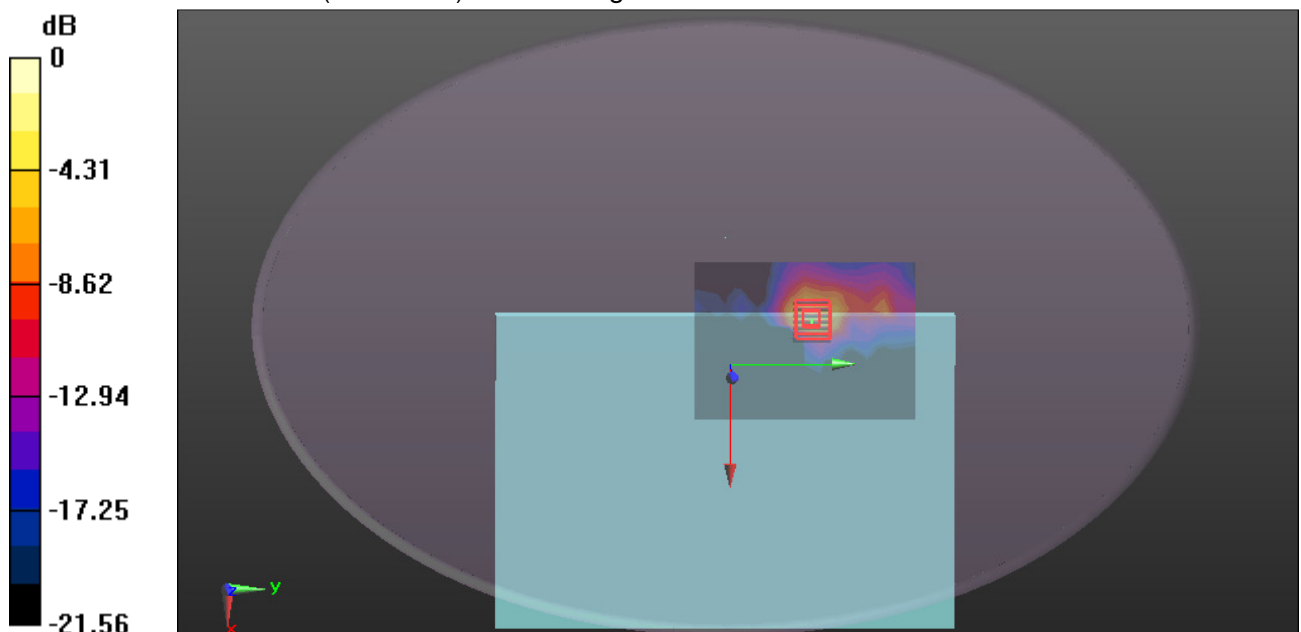
**WIFI/IEEE802.11a Body Bottom CH60 Aux/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 1.150 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.41 W/kg

**SAR(1 g) = 0.815 W/kg; SAR(10 g) = 0.242 W/kg**

Maximum value of SAR (measured) = 1.99 W/kg



0 dB = 1.99 W/kg = 2.99 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH64 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5320 \text{ MHz}$ ;  $\sigma = 5.519 \text{ S/m}$ ;  $\epsilon_r = 48.514$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.67, 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/Area Scan (11x15x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.65 W/kg

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

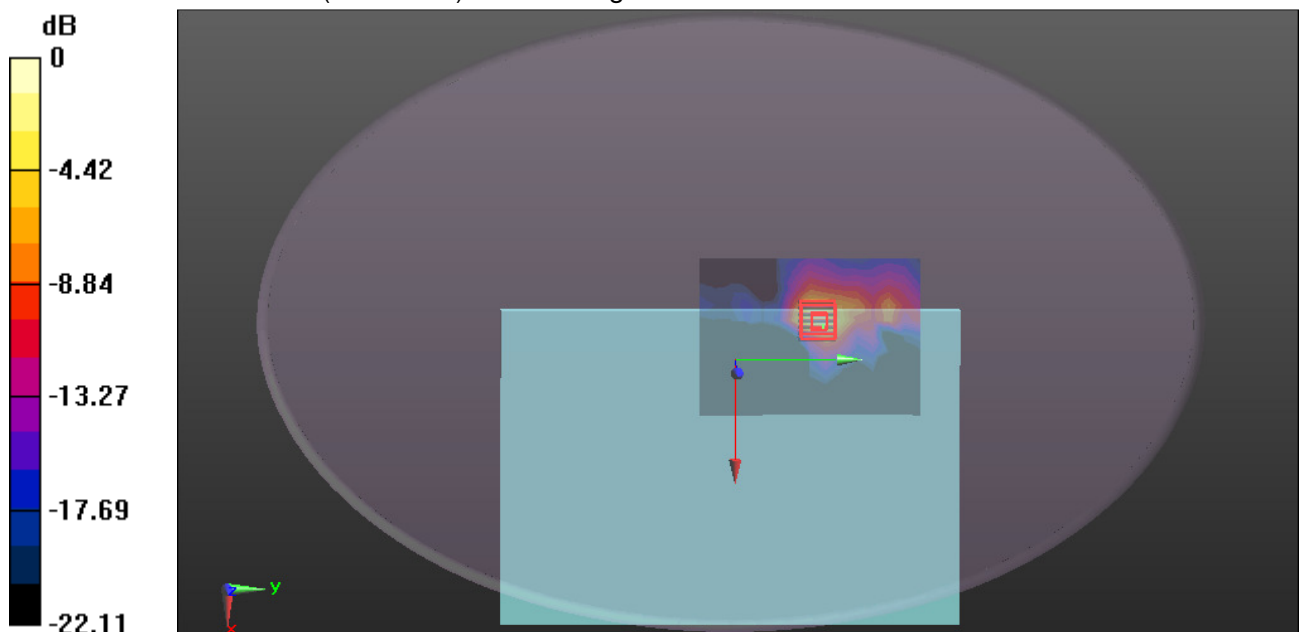
$dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 1.220 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 3.12 W/kg

**SAR(1 g) = 0.750 W/kg; SAR(10 g) = 0.224 W/kg**

Maximum value of SAR (measured) = 1.74 W/kg



0 dB = 1.74 W/kg = 2.41 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH100 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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;  $\sigma = 5.787$  S/m;  $\epsilon_r = 48.218$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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/Area Scan (11x15x1):** Measurement grid: dx=10mm, dy=10mm

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

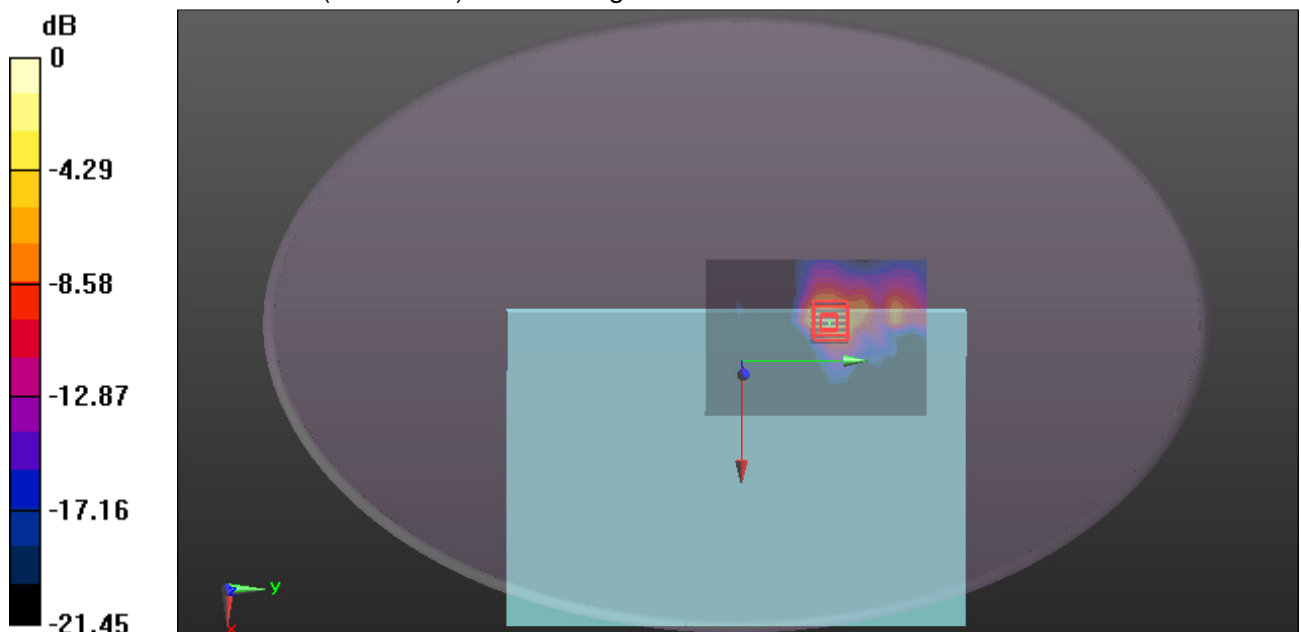
**WIFI/IEEE802.11a Body Bottom CH100 Aux/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 1.522 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 3.34 W/kg

**SAR(1 g) = 0.770 W/kg; SAR(10 g) = 0.224 W/kg**

Maximum value of SAR (measured) = 1.88 W/kg



0 dB = 1.88 W/kg = 2.74 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH112 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; Serial: N/A**

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

Frequency: 5560 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5560 \text{ MHz}$ ;  $\sigma = 5.872 \text{ S/m}$ ;  $\epsilon_r = 48.091$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.18, 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 CH112 Aux/Area Scan (11x15x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

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

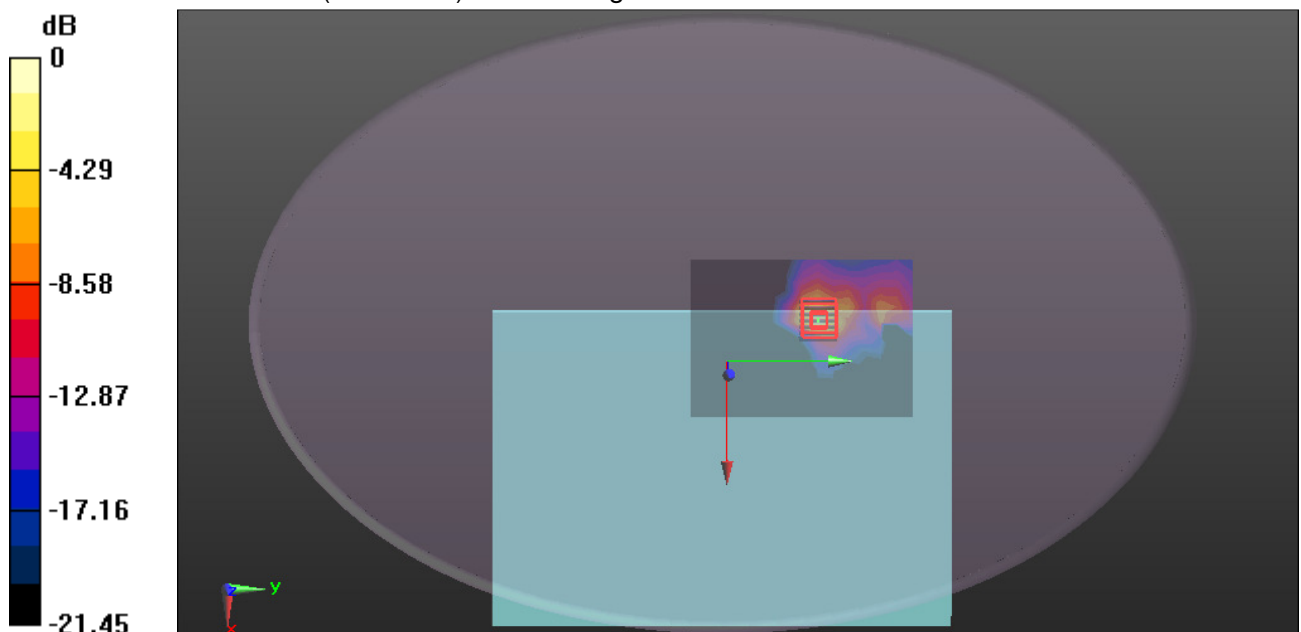
**WIFI/IEEE802.11a Body Bottom CH112 Aux/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 1.252 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 3.64 W/kg

**SAR(1 g) = 0.789 W/kg; SAR(10 g) = 0.225 W/kg**

Maximum value of SAR (measured) = 1.98 W/kg



0 dB = 1.98 W/kg = 2.97 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH144 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5720 \text{ MHz}$ ;  $\sigma = 6.107 \text{ S/m}$ ;  $\epsilon_r = 47.775$ ;  $\rho = 1000 \text{ kg/m}^3$

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 CH144 Aux/Area Scan (11x15x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

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

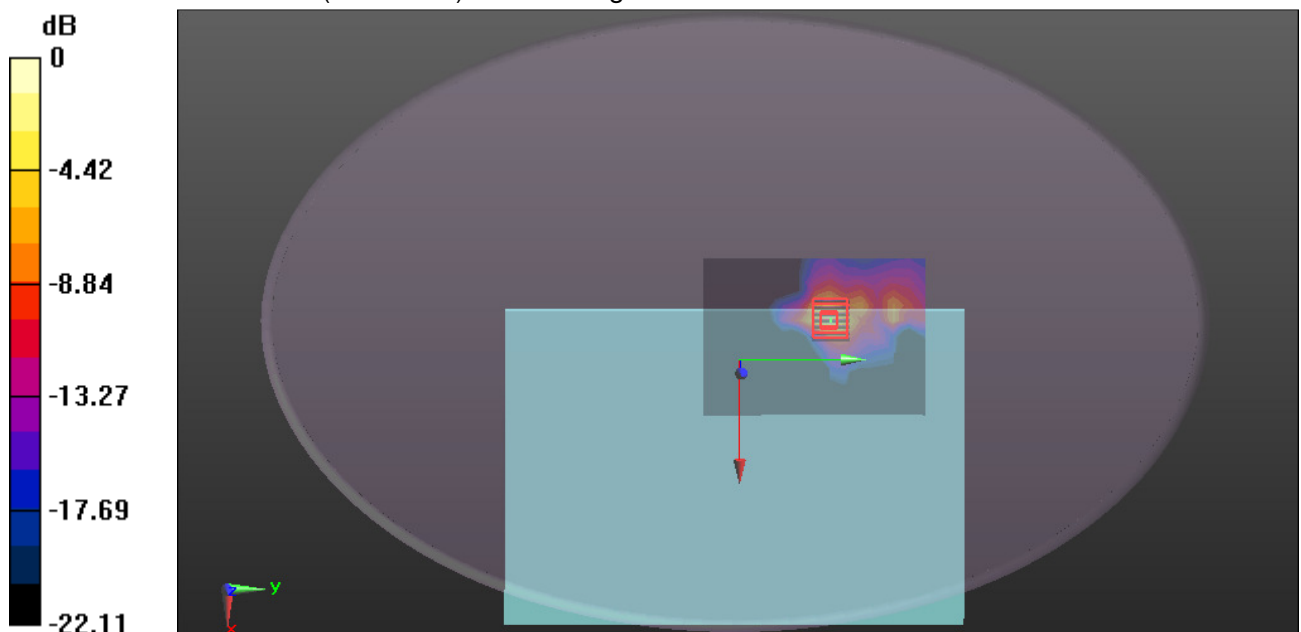
**WIFI/IEEE802.11a Body Bottom CH144 Aux/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 2.258 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 3.57 W/kg

**SAR(1 g) = 0.773 W/kg; SAR(10 g) = 0.213 W/kg**

Maximum value of SAR (measured) = 1.97 W/kg



0 dB = 1.97 W/kg = 2.94 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH149 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5745 \text{ MHz}$ ;  $\sigma = 6.155 \text{ S/m}$ ;  $\epsilon_r = 47.727$ ;  $\rho = 1000 \text{ kg/m}^3$

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/Area Scan (11x15x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.76 W/kg

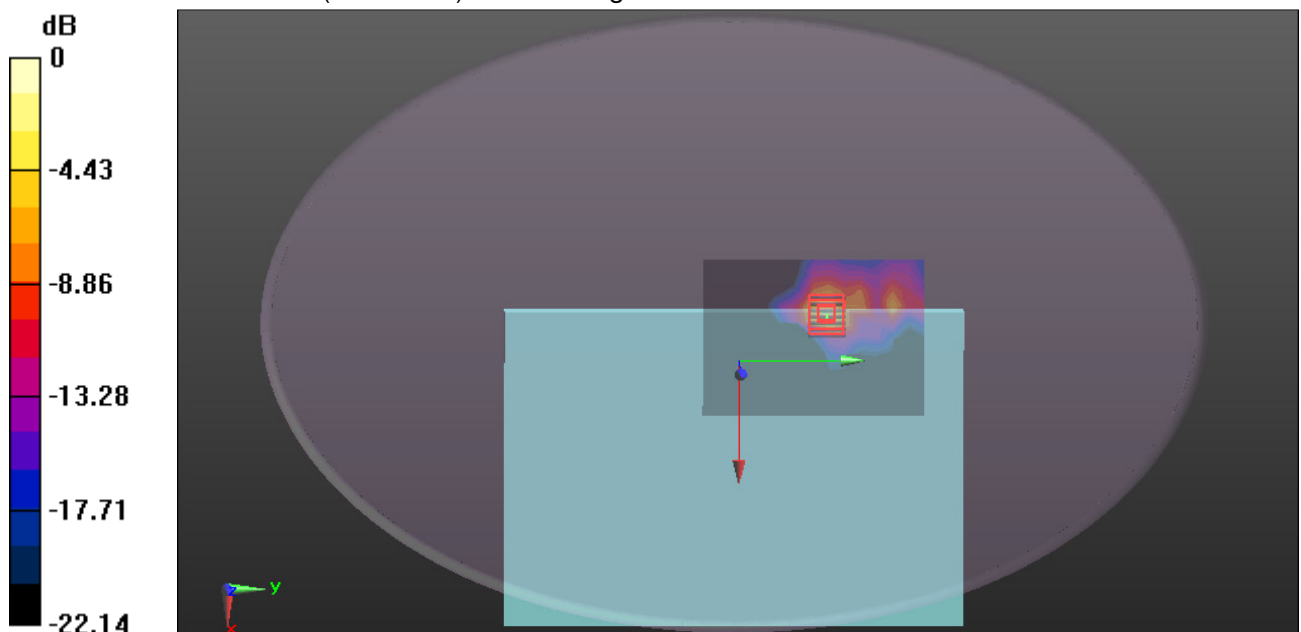
**WIFI/IEEE802.11a Body Bottom CH149 Aux/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 0.5480 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 4.65 W/kg

**SAR(1 g) = 0.942 W/kg; SAR(10 g) = 0.249 W/kg**

Maximum value of SAR (measured) = 2.53 W/kg



0 dB = 2.53 W/kg = 4.03 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH157 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5785 \text{ MHz}$ ;  $\sigma = 6.213 \text{ S/m}$ ;  $\epsilon_r = 47.614$ ;  $\rho = 1000 \text{ kg/m}^3$

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/Area Scan (11x15x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.09 W/kg

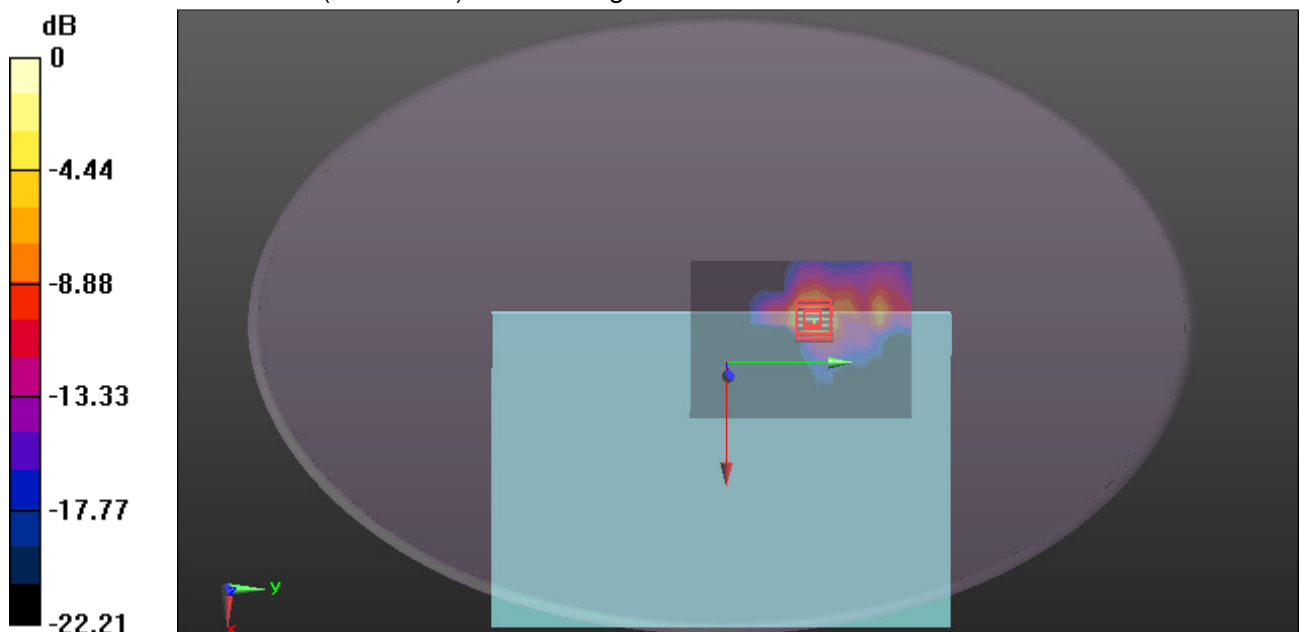
**WIFI/IEEE802.11a Body Bottom CH157 Aux/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 0.4420 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 4.47 W/kg

**SAR(1 g) = 0.945 W/kg; SAR(10 g) = 0.257 W/kg**

Maximum value of SAR (measured) = 2.48 W/kg



0 dB = 2.48 W/kg = 3.94 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH165 Aux Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5825 \text{ MHz}$ ;  $\sigma = 6.269 \text{ S/m}$ ;  $\epsilon_r = 47.429$ ;  $\rho = 1000 \text{ kg/m}^3$

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/Area Scan (11x15x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.51 W/kg

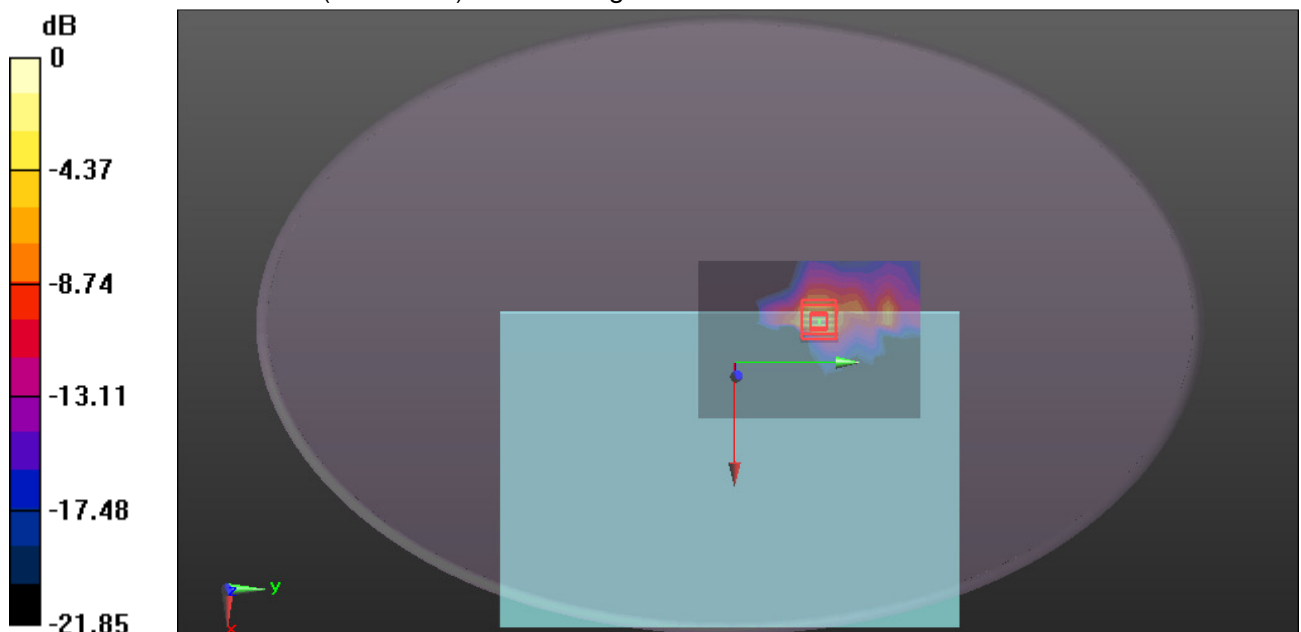
**WIFI/IEEE802.11a Body Bottom CH165 Aux/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 1.076 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 5.61 W/kg

**SAR(1 g) = 1.1 W/kg; SAR(10 g) = 0.292 W/kg**

Maximum value of SAR (measured) = 2.91 W/kg



0 dB = 2.91 W/kg = 4.64 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**WIFI 802.11 b-Body Bottom CH1 Aux Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 2412 \text{ MHz}$ ;  $\sigma = 1.878 \text{ S/m}$ ;  $\epsilon_r = 52.827$ ;  $\rho = 1000 \text{ kg/m}^3$

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), Sensor-Surface: 2mm (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/Area Scan (10x13x1):** Measurement grid:

$dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.554 W/kg

**WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Aux/Zoom Scan (7x7x5)/Cube 0:** Measurement grid:

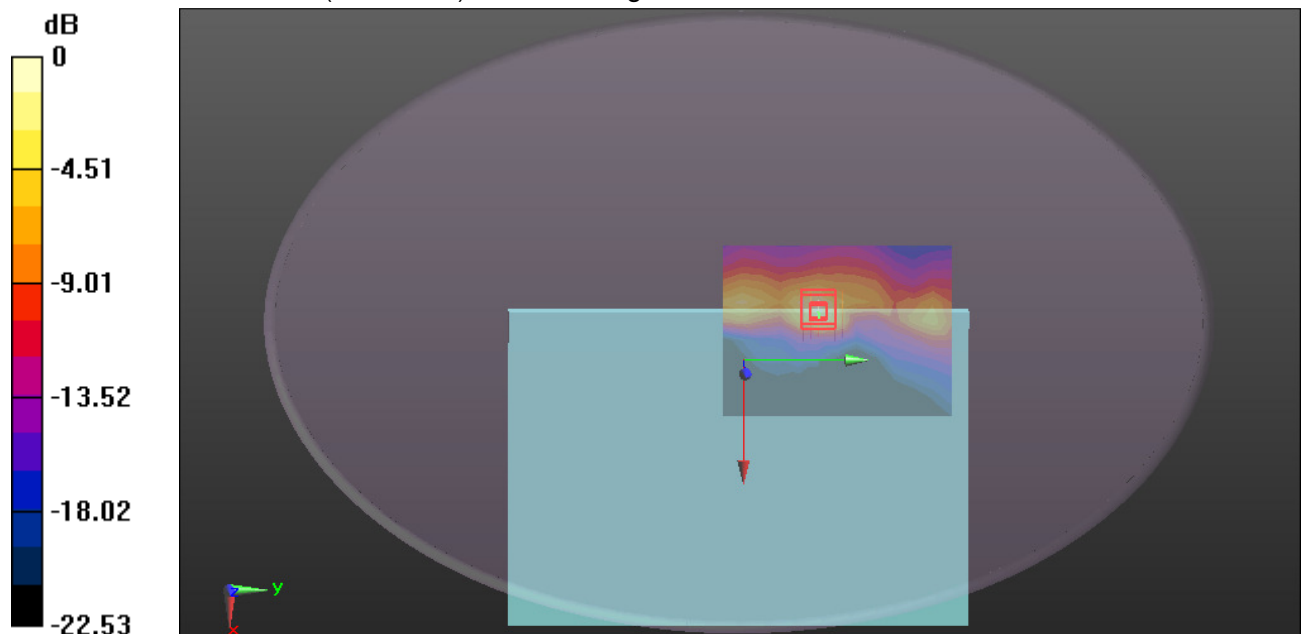
$dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 8.354 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.851 W/kg

**SAR(1 g) = 0.410 W/kg; SAR(10 g) = 0.181 W/kg**

Maximum value of SAR (measured) = 0.634 W/kg



0 dB = 0.634 W/kg = -1.98 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH165 Aux Antenna for INPAQ antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5825 \text{ MHz}$ ;  $\sigma = 6.269 \text{ S/m}$ ;  $\epsilon_r = 47.429$ ;  $\rho = 1000 \text{ kg/m}^3$

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/Area Scan (11x15x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 1.12 W/kg

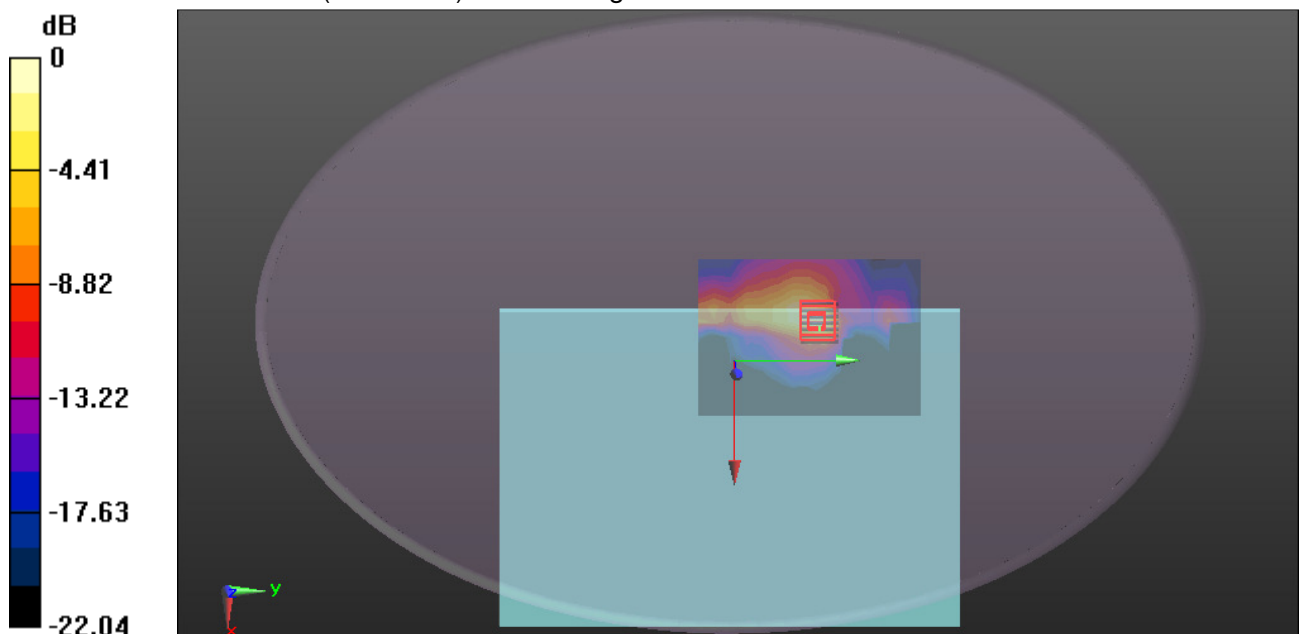
**WIFI/IEEE802.11a Body Bottom CH165 Aux/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 4.428 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 2.47 W/kg

**SAR(1 g) = 0.516 W/kg; SAR(10 g) = 0.169 W/kg**

Maximum value of SAR (measured) = 1.25 W/kg



0 dB = 1.25 W/kg = 0.97 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**WIFI 802.11 b-Body Bottom CH6 Main Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 2437 \text{ MHz}$ ;  $\sigma = 1.899 \text{ S/m}$ ;  $\epsilon_r = 52.69$ ;  $\rho = 1000 \text{ kg/m}^3$

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), Sensor-Surface: 2mm (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/Area Scan (10x13x1):** Measurement grid:

$dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.191 W/kg

**WiFi 2.4GHz/IEEE802.11b Body Bottom CH6 Main/Zoom Scan (7x7x5)/Cube 0:** Measurement grid:

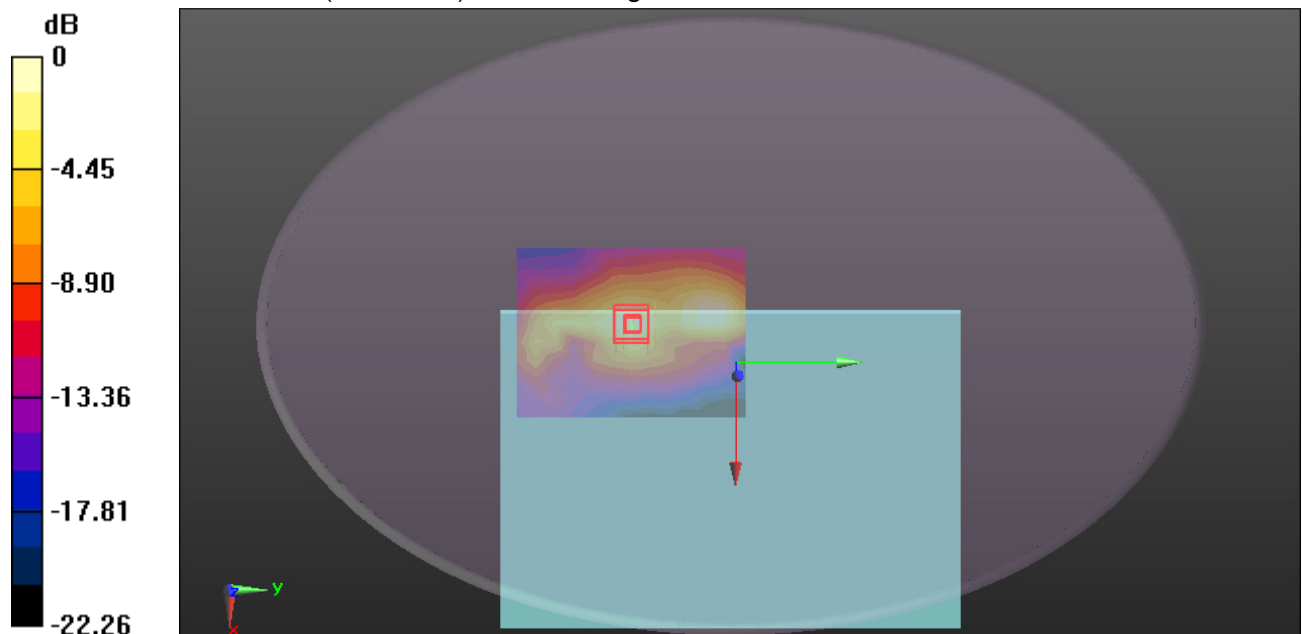
$dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 7.343 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.217 W/kg

**SAR(1 g) = 0.108 W/kg; SAR(10 g) = 0.053 W/kg**

Maximum value of SAR (measured) = 0.162 W/kg



0 dB = 0.162 W/kg = -7.90 dBW/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 5/30/2018

**2.4GHz -Body Bottom CH39 Main Antenna South Star antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 2441 \text{ MHz}$ ;  $\sigma = 1.898 \text{ S/m}$ ;  $\epsilon_r = 52.685$ ;  $\rho = 1000 \text{ kg/m}^3$

Room Ambient Temperature:  $22^\circ\text{C}$ ; Liquid Temperature:  $21.5^\circ\text{C}$

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 CH39 Main Antenna/Area Scan (10x13x1): Measurement grid:**

$dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) =  $0.0155 \text{ W/kg}$

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

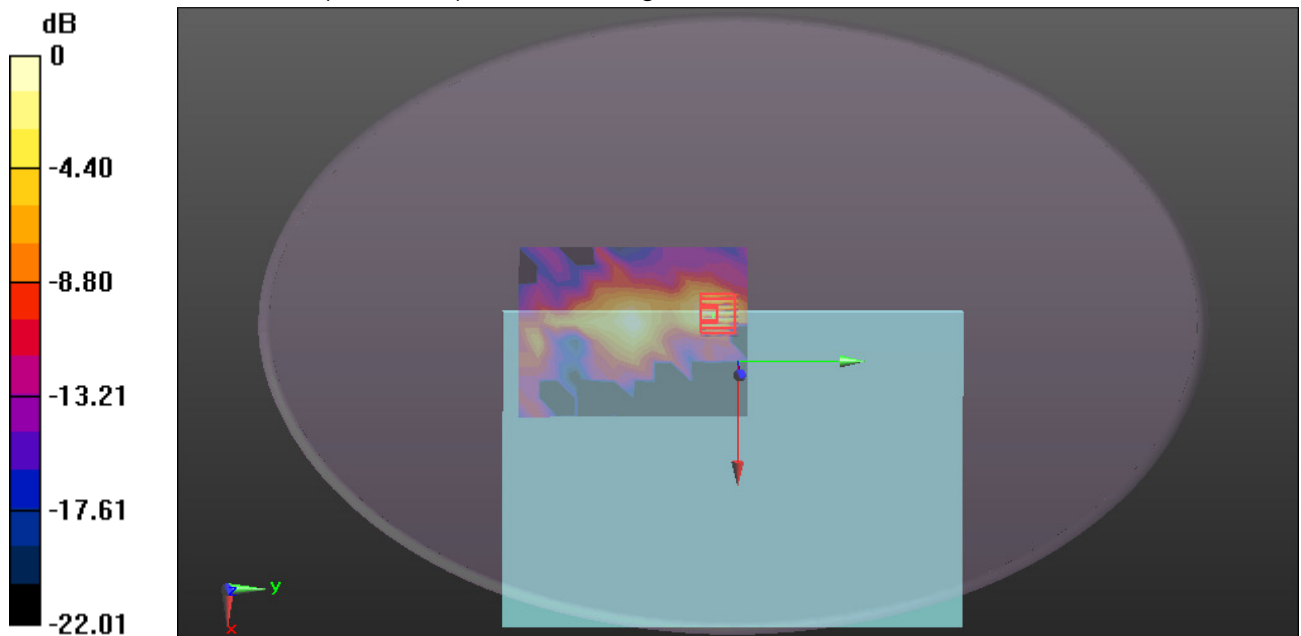
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value =  $1.425 \text{ V/m}$ ; Power Drift =  $0.12 \text{ dB}$

Peak SAR (extrapolated) =  $0.0170 \text{ W/kg}$

**SAR(1 g) =  $0.00825 \text{ W/kg}$ ; SAR(10 g) =  $0.00352 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.0136 \text{ W/kg}$



$0 \text{ dB} = 0.0136 \text{ W/kg} = -18.66 \text{ dBW/kg}$

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH64 Main Antenna for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5320 \text{ MHz}$ ;  $\sigma = 5.519 \text{ S/m}$ ;  $\epsilon_r = 48.514$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.67, 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/Area Scan (11x13x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.901 W/kg

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

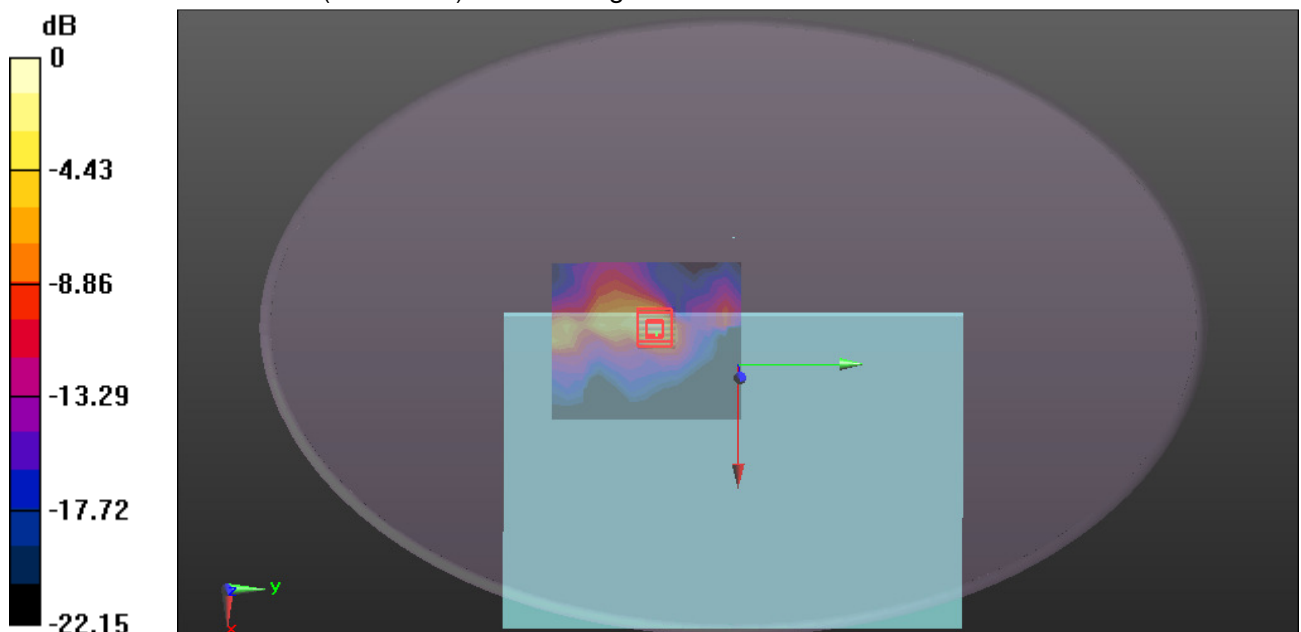
$dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 3.623 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.97 W/kg

**SAR(1 g) = 0.462 W/kg; SAR(10 g) = 0.135 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: 5/31/2018

**WIFI 802.11 a-Body Bottom CH64 Main Antenna repeat for INPAQ Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5320 \text{ MHz}$ ;  $\sigma = 5.519 \text{ S/m}$ ;  $\epsilon_r = 48.514$ ;  $\rho = 1000 \text{ kg/m}^3$

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(4.67, 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 repeat/Area Scan (11x13x1):** Measurement grid:

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

Maximum value of SAR (measured) = 1.76 W/kg

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

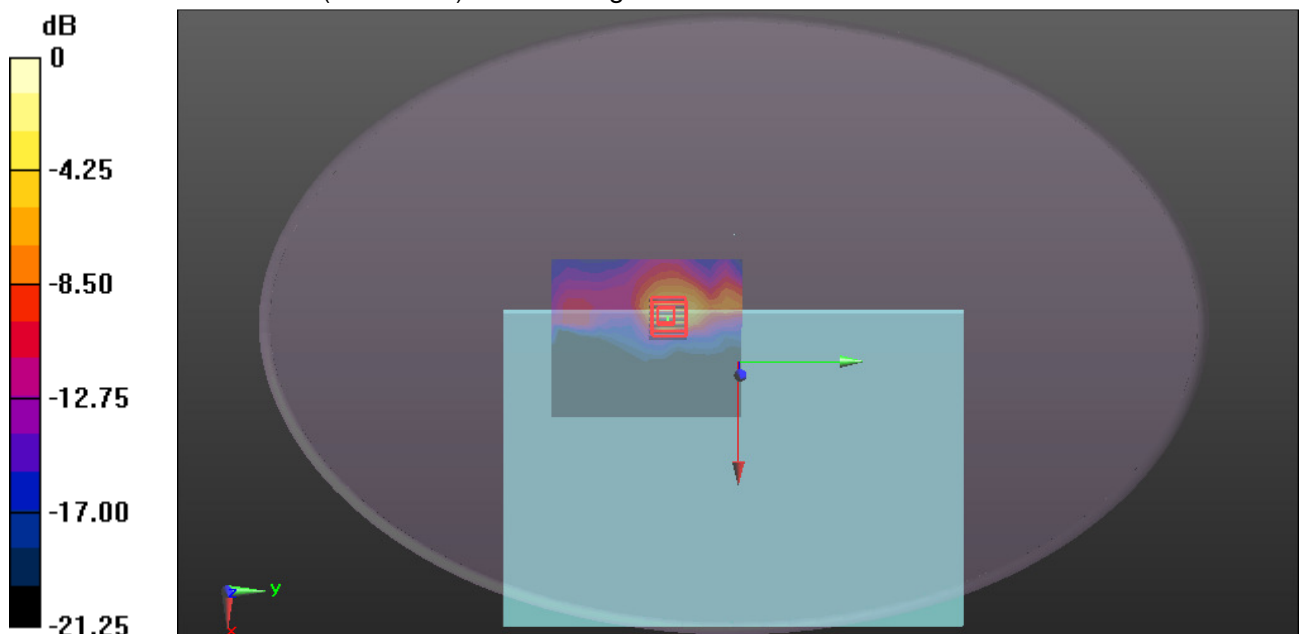
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 4.757 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 4.17 W/kg

**SAR(1 g) = 0.954 W/kg; SAR(10 g) = 0.301 W/kg**

Maximum value of SAR (measured) = 2.32 W/kg



0 dB = 2.32 W/kg = 3.65 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH52 Aux Antenna repeat for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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;  $\sigma = 5.423$  S/m;  $\epsilon_r = 48.609$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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 repeat/Area Scan (11x15x1): Measurement grid:**

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

Maximum value of SAR (measured) = 1.74 W/kg

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

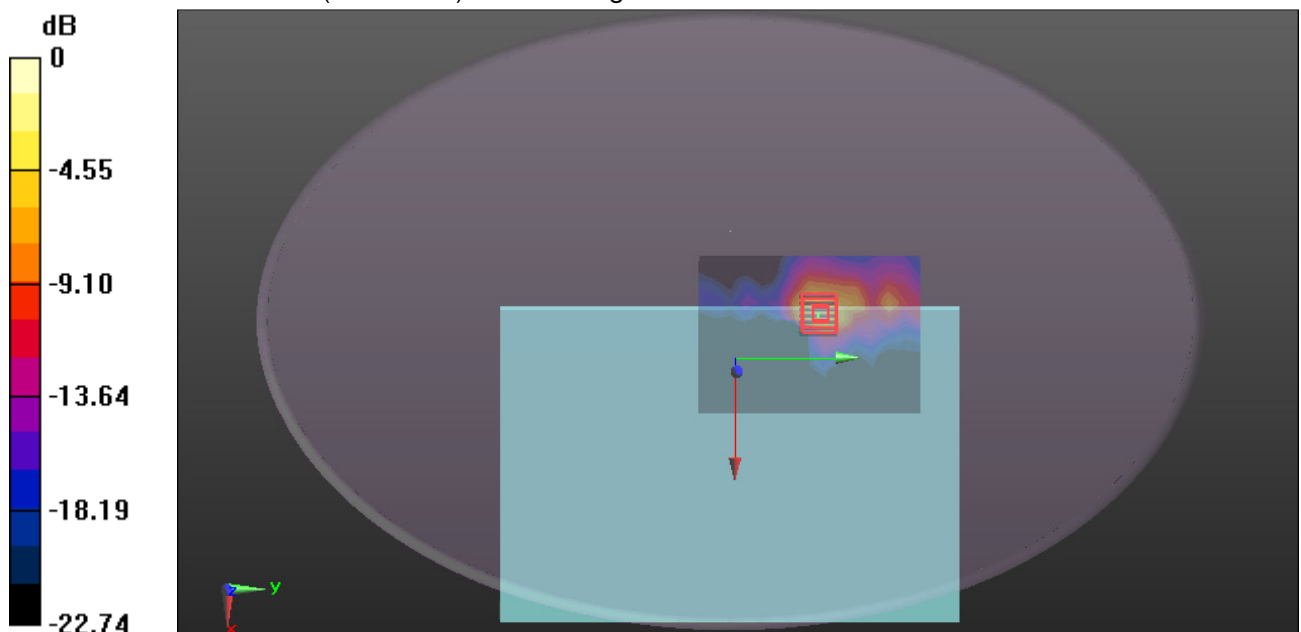
$dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 1.517 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 3.89 W/kg

**SAR(1 g) = 0.911 W/kg; SAR(10 g) = 0.272 W/kg**

Maximum value of SAR (measured) = 2.20 W/kg



0 dB = 2.20 W/kg = 3.42 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 5/31/2018

**WIFI 802.11 a-Body Bottom CH165 Aux Antenna repeat for South Star Antenna**

**DUT: Notebook Computer; Type: Lenovo ideapad 130S-11IGM;80KT; 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:  $f = 5825 \text{ MHz}$ ;  $\sigma = 6.269 \text{ S/m}$ ;  $\epsilon_r = 47.429$ ;  $\rho = 1000 \text{ kg/m}^3$

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 repeat/Area Scan (11x15x1):** Measurement grid:

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

Maximum value of SAR (measured) = 2.92 W/kg

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

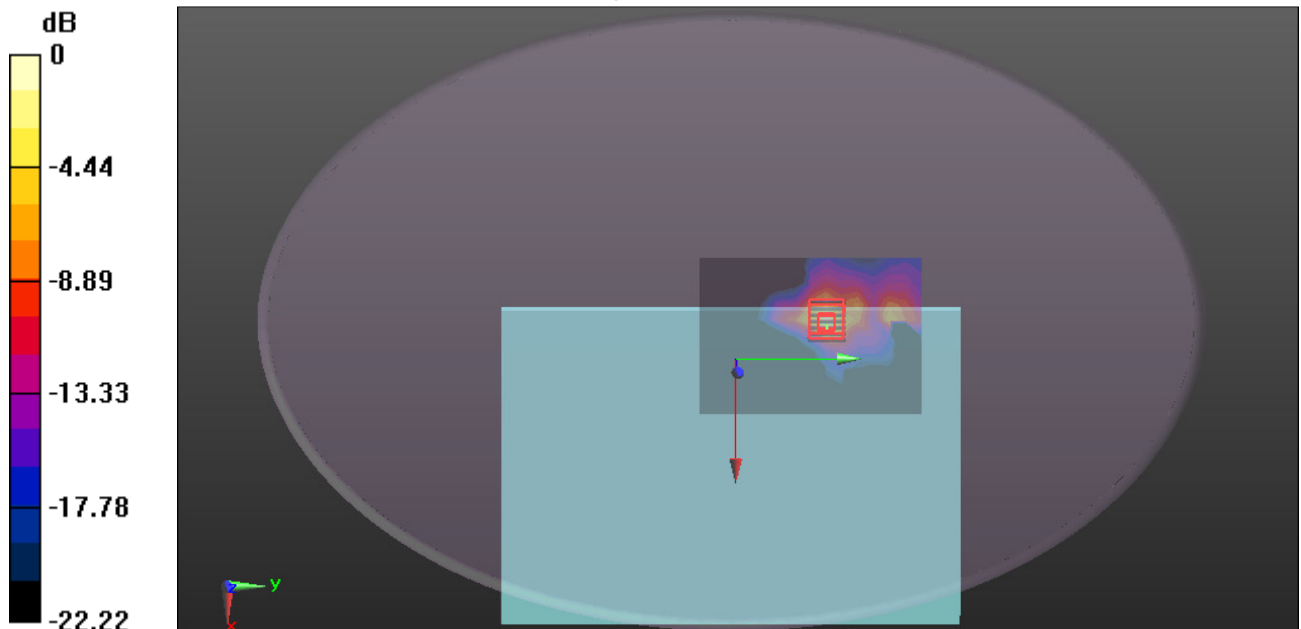
grid:  $dx=4\text{mm}$ ,  $dy=4\text{mm}$ ,  $dz=1.4\text{mm}$

Reference Value = 0.5180 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 5.71 W/kg

**SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.298 W/kg**

Maximum value of SAR (measured) = 2.88 W/kg



0 dB = 2.88 W/kg = 4.59 dBW/kg