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Test Laboratory: Compliance Certification Services Inc.

Date: 6/5/2017

WiFi 802.11 b-Body Bottom CH1 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11iAP; 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: $f = 2412 \text{ MHz}$; $\sigma = 1.913 \text{ S/m}$; $\epsilon_r = 52.36$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Flat Section

Measurement Standard: DASy5 (IEEE/IEC/ANSI C63.19-2007)

DASy Configuration:

- Probe: EX3DV4 - SN3798; ConvF(7.07, 7.07, 7.07); Calibrated: 7/27/2016;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1245; Calibrated: 7/26/2016
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- DASy52 52.8.8(1222);
- SEMCAD X Version 14.6.10 (7331)

WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Chain0 Southstar Antenna/Area Scan (10x13x1):Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.730 W/kg

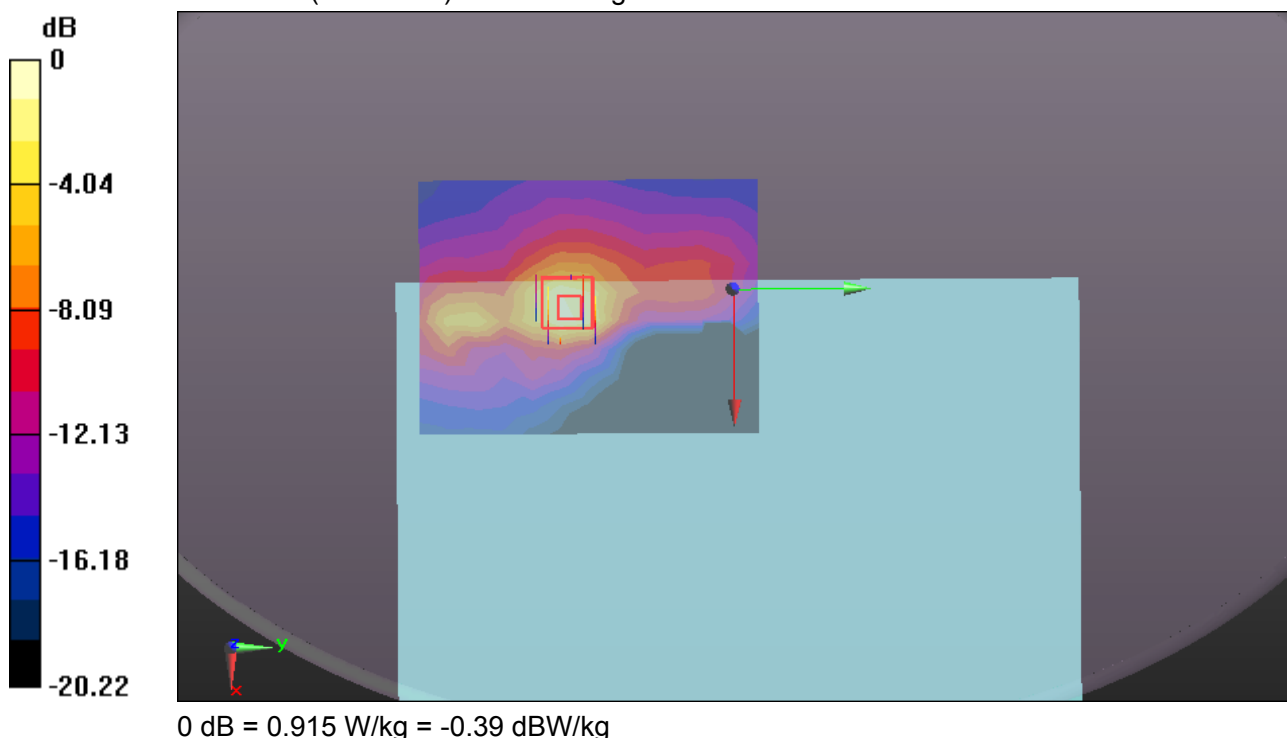
WiFi 2.4GHz/IEEE802.11b Body Bottom CH1 Chain0 Southstar Antenna/Zoom Scan (7x7x5)/Cube0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.175 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.611 W/kg; SAR(10 g) = 0.287 W/kg

Maximum value of SAR (measured) = 0.915 W/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 6/5/2017

WiFi 802.11 b-Body Bottom CH6 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11iAP; 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; $\sigma = 1.899$ S/m; $\epsilon_r = 52.47$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

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

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

Maximum value of SAR (measured) = 0.886 W/kg

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

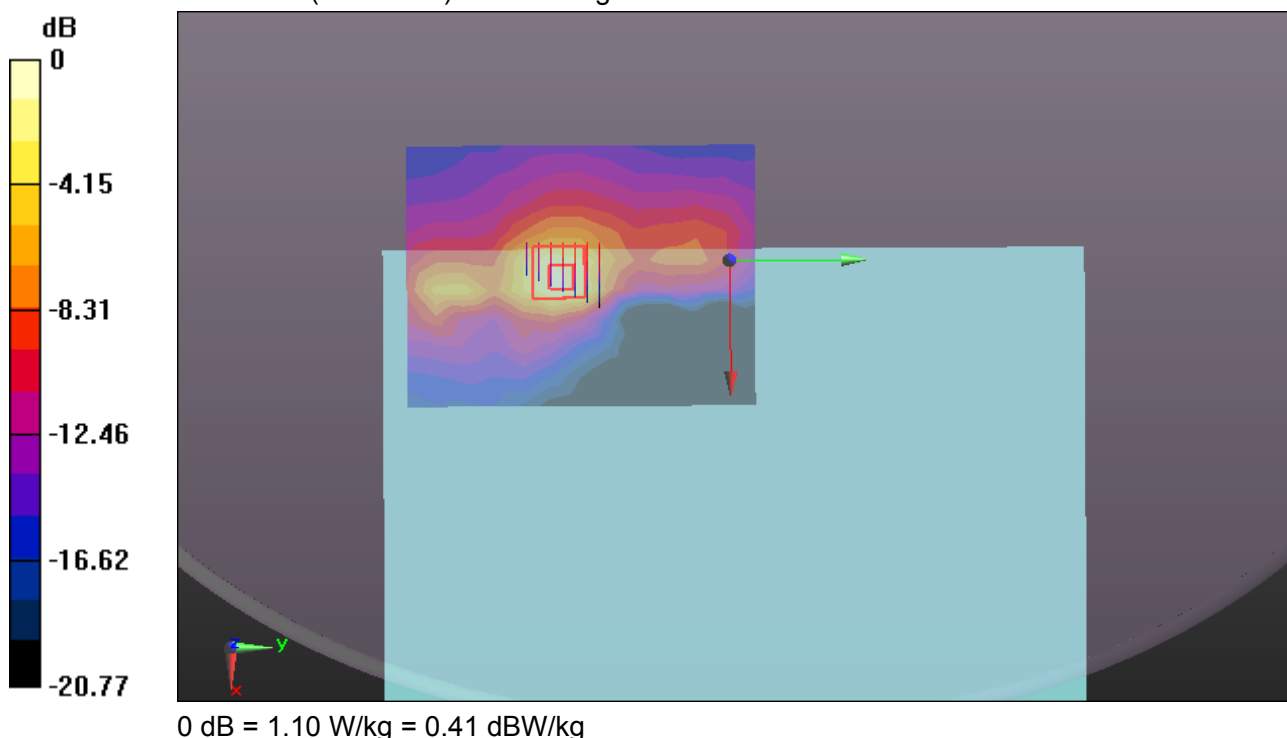
0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.516 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.691 W/kg; SAR(10 g) = 0.344 W/kg

Maximum value of SAR (measured) = 1.10 W/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 6/5/2017

WiFi 802.11 b-Body Bottom CH11 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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; $\sigma = 1.925$ S/m; $\epsilon_r = 52.341$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

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

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

Maximum value of SAR (measured) = 0.800 W/kg

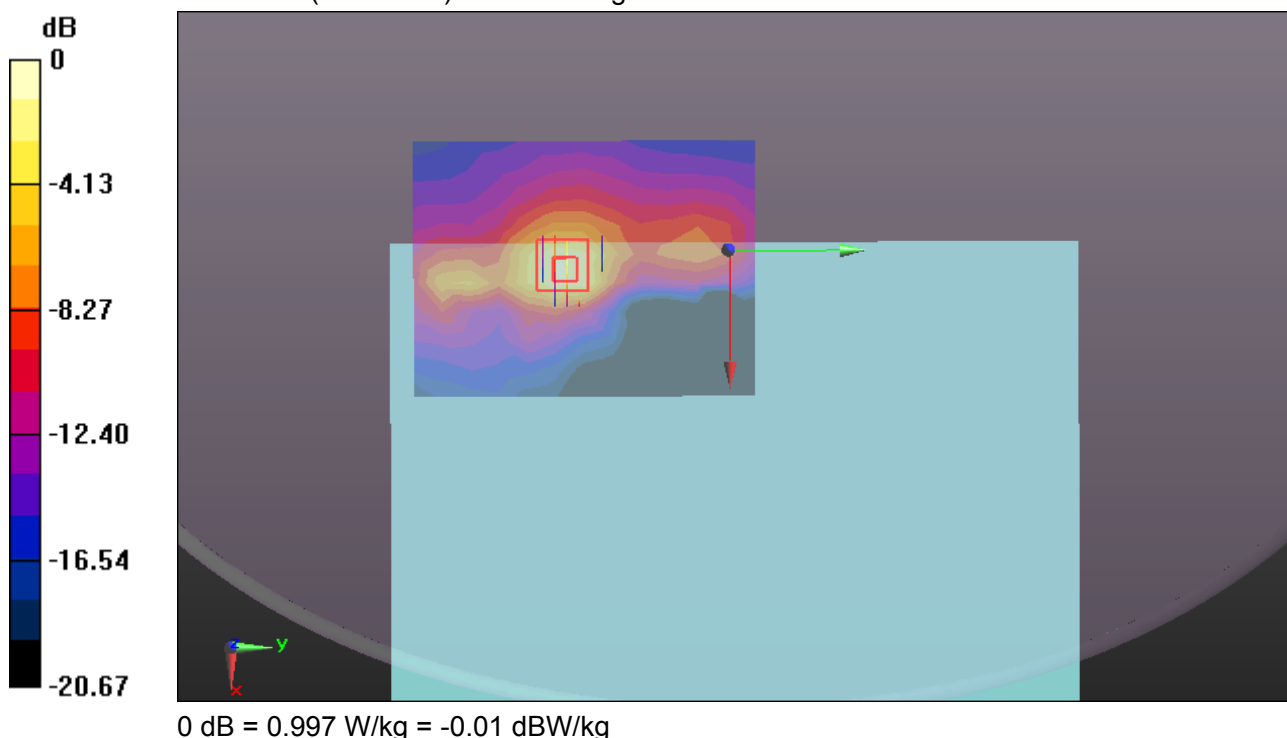
WiFi 2.4GHz/IEEE802.11b Body Bottom CH11 Chain0 Southstar Antenna/Zoom Scan**(7x7x5)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.250 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.659 W/kg; SAR(10 g) = 0.308 W/kg

Maximum value of SAR (measured) = 0.997 W/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 6/5/2017

2.4GHz -Body Bottom CH0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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; $\sigma = 1.911$ S/m; $\epsilon_r = 52.364$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

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

Maximum value of SAR (measured) = 0.103 W/kg

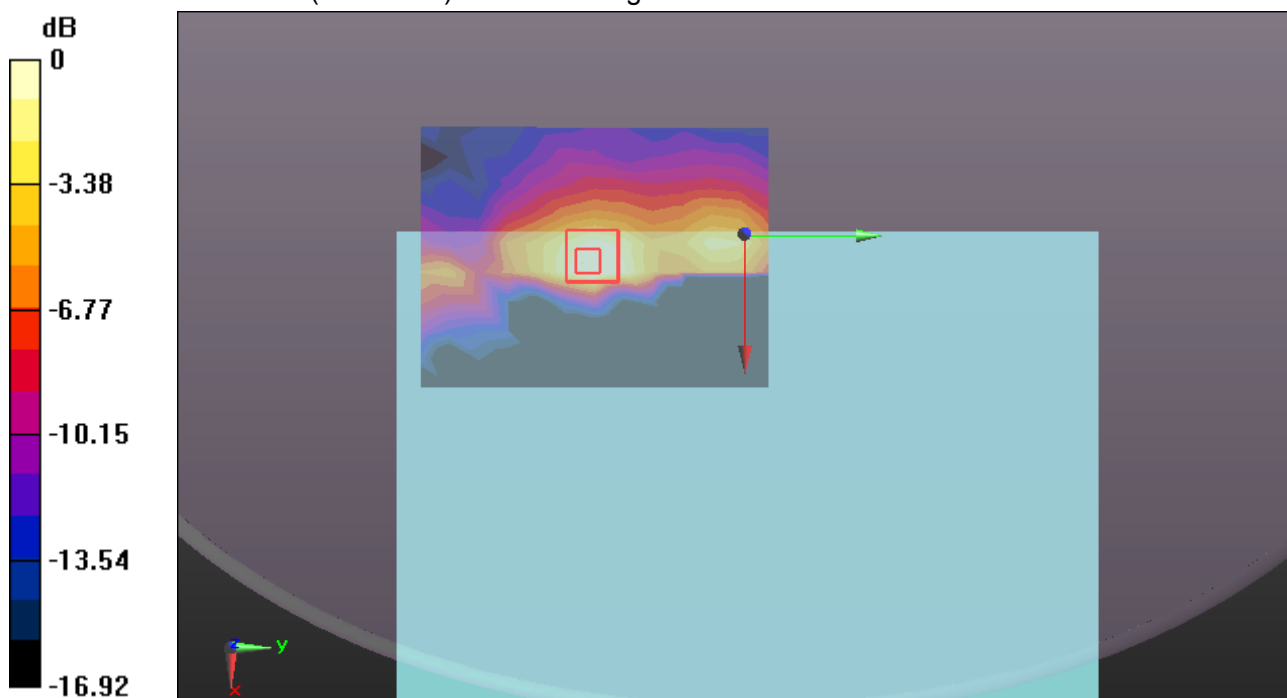
Bluetooth/Body Bottom CH0/Zoom Scan (7x7x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.151 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.128 W/kg

SAR(1 g) = 0.059 W/kg; SAR(10 g) = 0.031 W/kg

Maximum value of SAR (measured) = 0.0868 W/kg



0 dB = 0.0868 W/kg = -10.61 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/5/2017

2.4GHz -Body Bottom CH39 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; Serial: N/A**

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

Frequency: 2441 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.899$ S/m; $\epsilon_r = 52.462$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

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

Maximum value of SAR (measured) = 0.125 W/kg

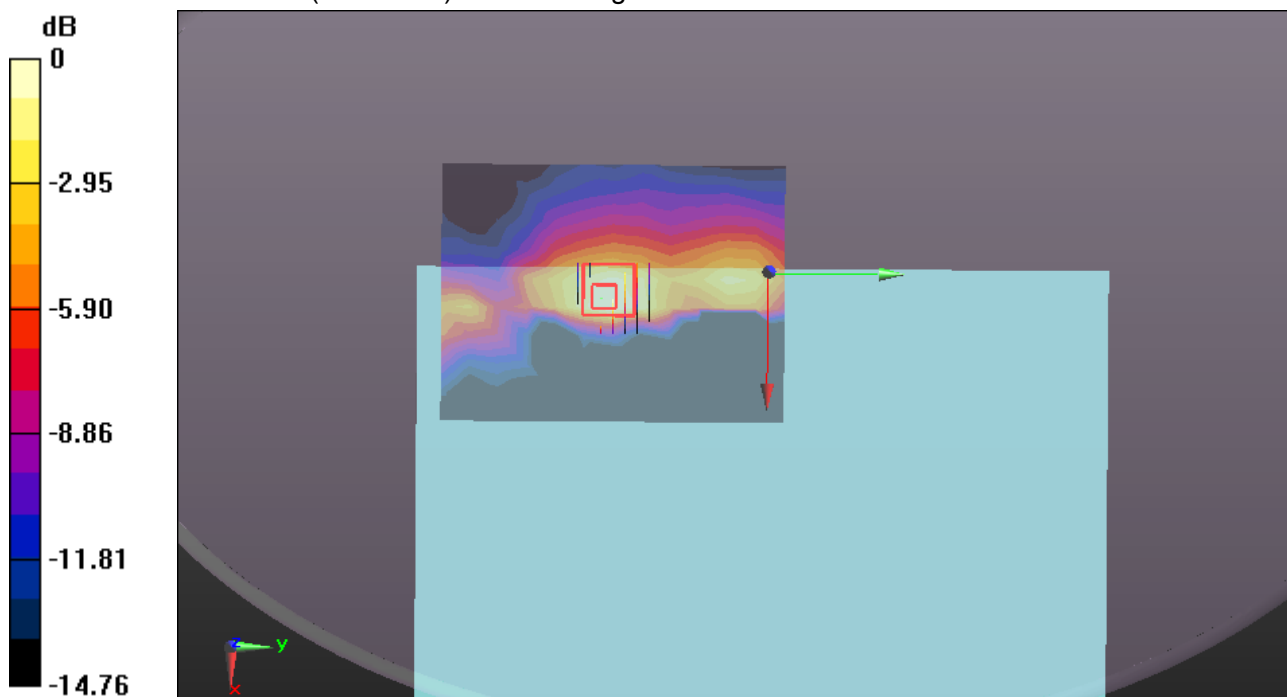
Bluetooth/Body Bottom CH39/Zoom Scan (7x7x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.677 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.154 W/kg

SAR(1 g) = 0.075 W/kg; SAR(10 g) = 0.039 W/kg

Maximum value of SAR (measured) = 0.110 W/kg



0 dB = 0.110 W/kg = -9.59 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/5/2017

2.4GHz -Body Bottom CH78 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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): $f = 2480$ MHz; $\sigma = 1.96$ S/m; $\epsilon_r = 52.251$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

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

Maximum value of SAR (measured) = 0.172 W/kg

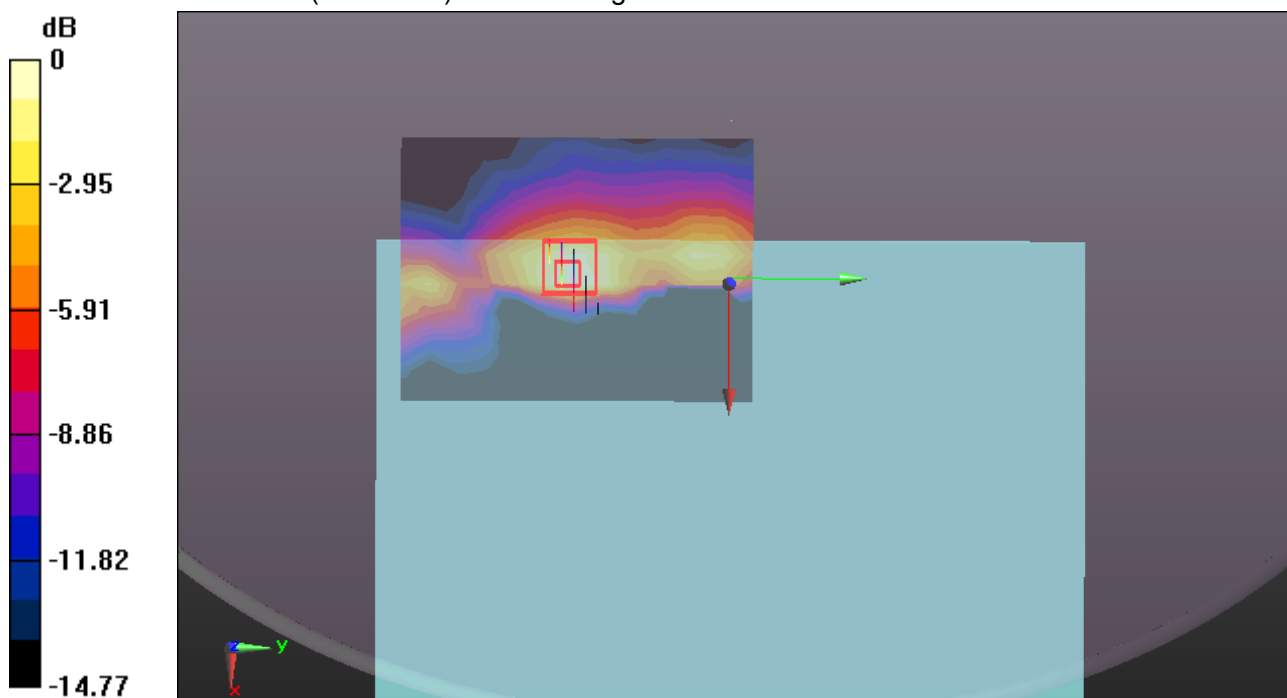
Bluetooth/Body Bottom CH78/Zoom Scan (7x7x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.759 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.211 W/kg

SAR(1 g) = 0.104 W/kg; SAR(10 g) = 0.054 W/kg

Maximum value of SAR (measured) = 0.152 W/kg



0 dB = 0.152 W/kg = -8.18 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/6/2017

WIFI 802.11 a-Body Bottom CH52 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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; $\sigma = 5.185$ S/m; $\epsilon_r = 47.385$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

WIFI/IEEE802.11a Body Bottom CH52 Chain0 Southstar Antenna /Area Scan (11x13x1):

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

Maximum value of SAR (measured) = 1.48 W/kg

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

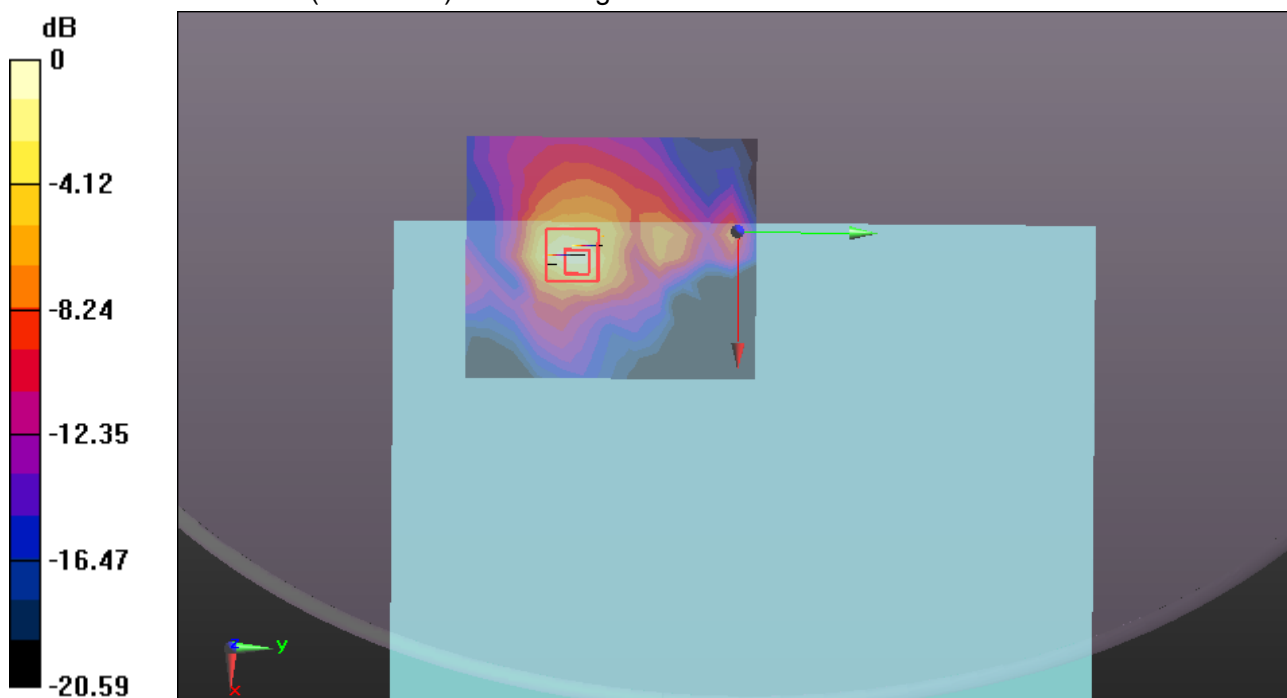
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 5.327 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 2.72 W/kg

SAR(1 g) = 0.718 W/kg; SAR(10 g) = 0.262 W/kg

Maximum value of SAR (measured) = 1.66 W/kg



0 dB = 1.66 W/kg = 2.20 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/6/2017

WIFI 802.11 a-Body Bottom CH56 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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; $\sigma = 5.209$ S/m; $\epsilon_r = 47.305$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

WIFI/IEEE802.11a Body Bottom CH56 Chain0 Southstar Antenna /Area Scan (11x13x1):

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

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

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

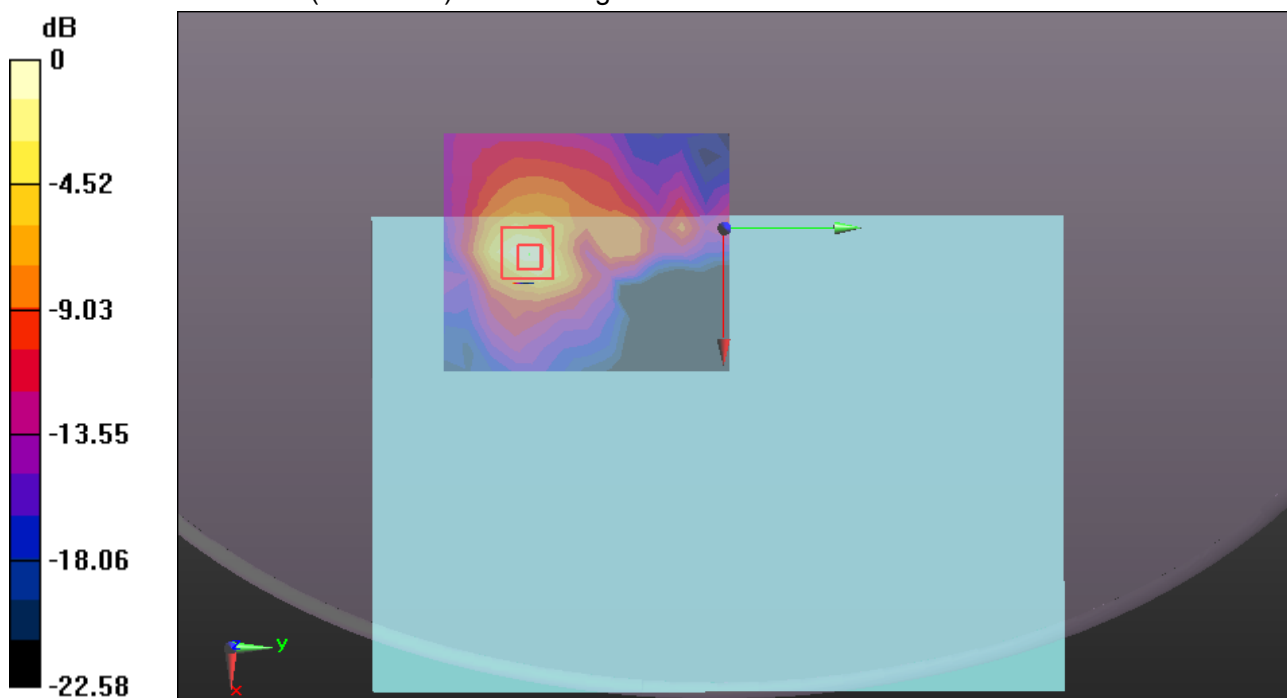
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 3.581 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 4.08 W/kg

SAR(1 g) = 1.07 W/kg; SAR(10 g) = 0.374 W/kg

Maximum value of SAR (measured) = 2.39 W/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 6/6/2017

WIFI 802.11 a-Body Bottom CH64 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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; $\sigma = 5.272$ S/m; $\epsilon_r = 47.153$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

WIFI/IEEE802.11a Body Bottom CH64 Chain0 Southstar Antenna /Area Scan (11x13x1):

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

Maximum value of SAR (measured) = 2.05 W/kg

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

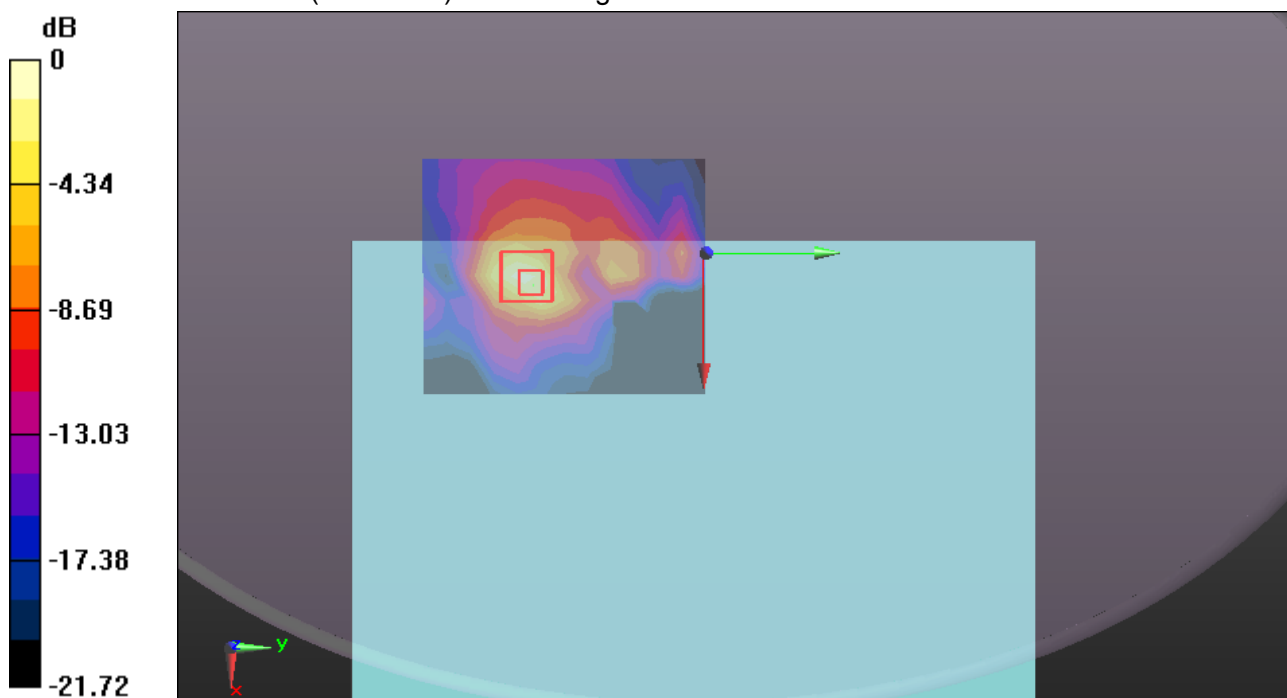
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 6.156 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 3.96 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.340 W/kg

Maximum value of SAR (measured) = 2.44 W/kg



0 dB = 2.44 W/kg = 3.87 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/6/2017

WIFI 802.11 a-Body Bottom CH116 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; Serial: N/A**

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

Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.615$ S/m; $\epsilon_r = 46.599$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

WIFI/IEEE802.11a Body Bottom CH116 Chain0 Southstar Antenna /Area Scan (11x13x1):

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

Maximum value of SAR (measured) = 2.45 W/kg

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

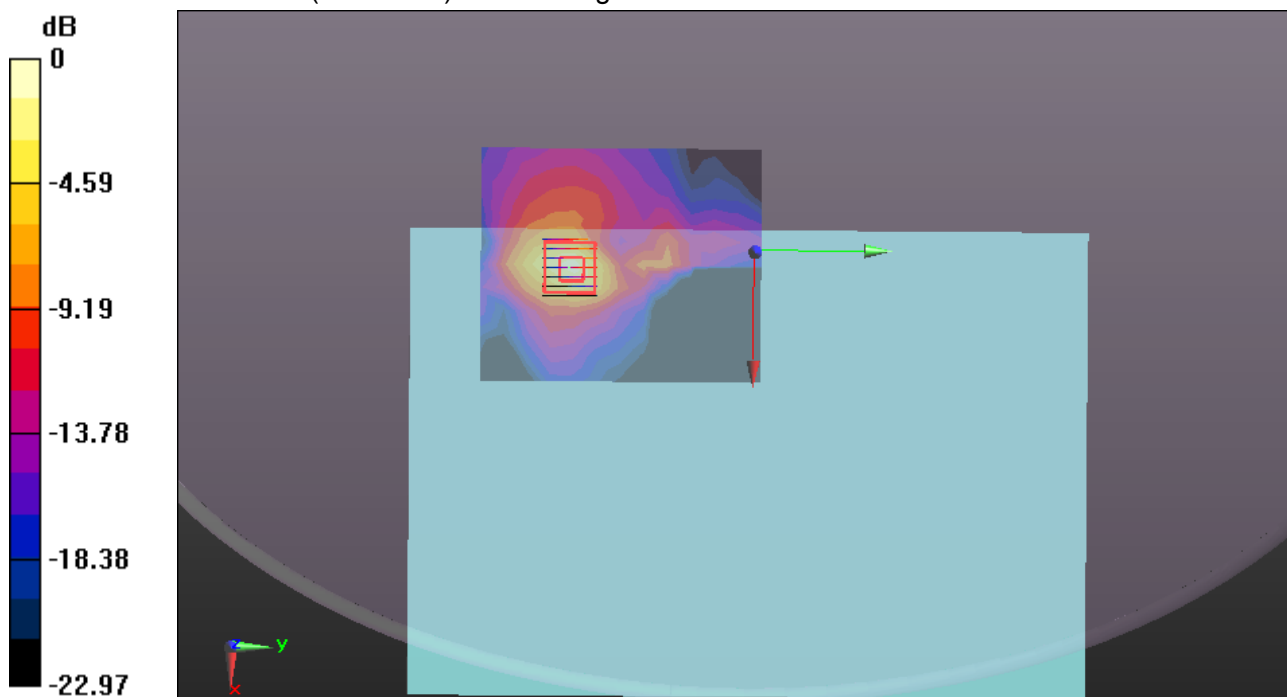
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.491 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 4.67 W/kg

SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.341 W/kg

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



0 dB = 2.61 W/kg = 4.17 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/6/2017

WIFI 802.11 a-Body Bottom CH128 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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; $\sigma = 5.694$ S/m; $\epsilon_r = 46.503$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

WIFI/IEEE802.11a Body Bottom CH128 Chain0 Southstar Antenna /Area Scan (11x13x1):

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

Maximum value of SAR (measured) = 2.47 W/kg

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

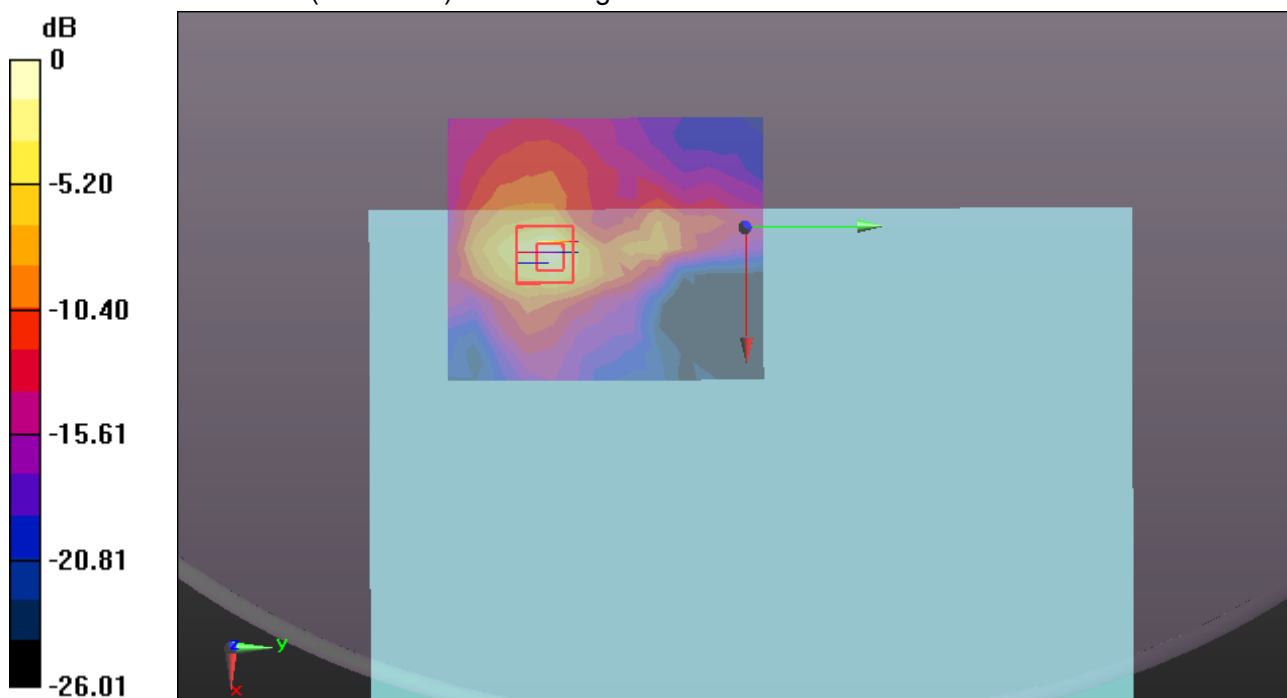
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 3.033 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 4.86 W/kg

SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.360 W/kg

Maximum value of SAR (measured) = 2.66 W/kg



0 dB = 2.66 W/kg = 4.25 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/6/2017

WIFI 802.11 a-Body Bottom CH149 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; Serial: N/A**

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

Frequency: 5745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 5.837$ S/m; $\epsilon_r = 46.273$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

WIFI/IEEE802.11a Body Bottom CH149 Chain0 Southstar Antenna /Area Scan (11x13x1):

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

Maximum value of SAR (measured) = 2.15 W/kg

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

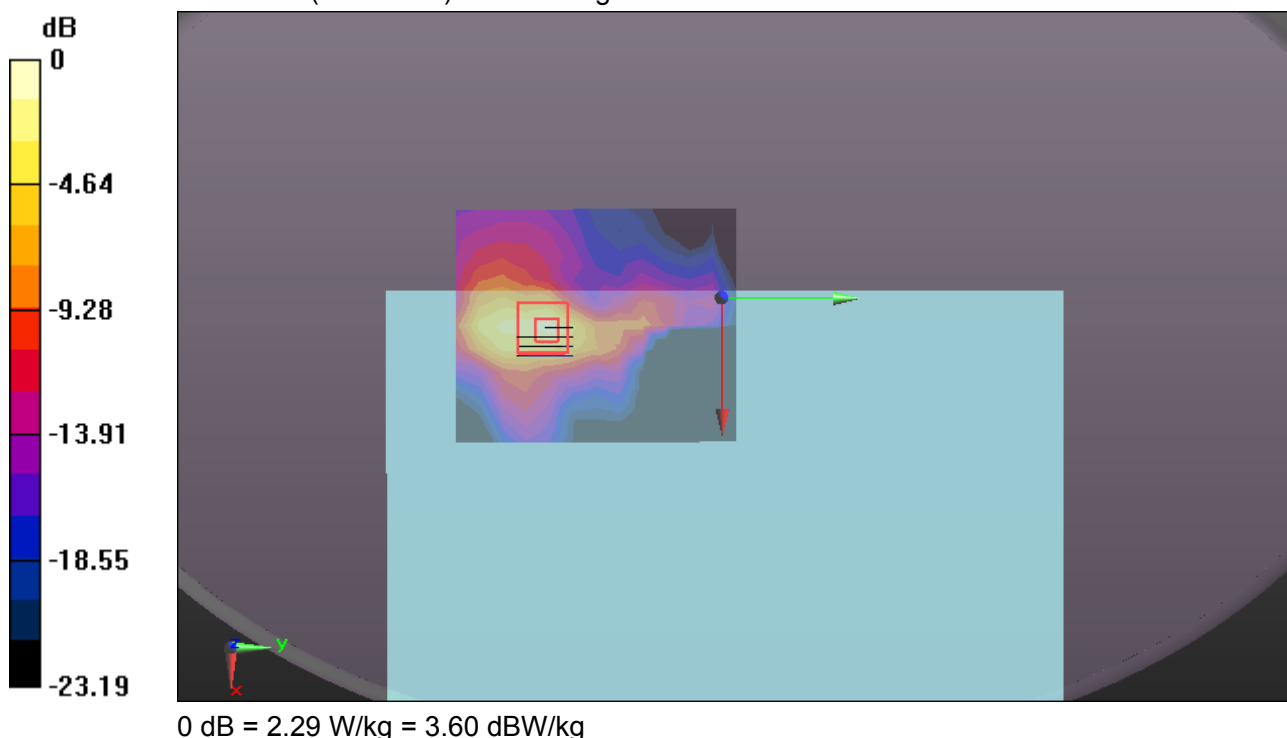
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.254 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 3.96 W/kg

SAR(1 g) = 0.927 W/kg; SAR(10 g) = 0.295 W/kg

Maximum value of SAR (measured) = 2.29 W/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 6/6/2017

WIFI 802.11 a-Body Bottom CH157 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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: $f = 5785 \text{ MHz}$; $\sigma = 5.899 \text{ S/m}$; $\epsilon_r = 46.17$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Flat Section

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

DASY Configuration:

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

WIFI/IEEE802.11a Body Bottom CH157 Chain0 Southstar Antenna /Area Scan (11x13x1):Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

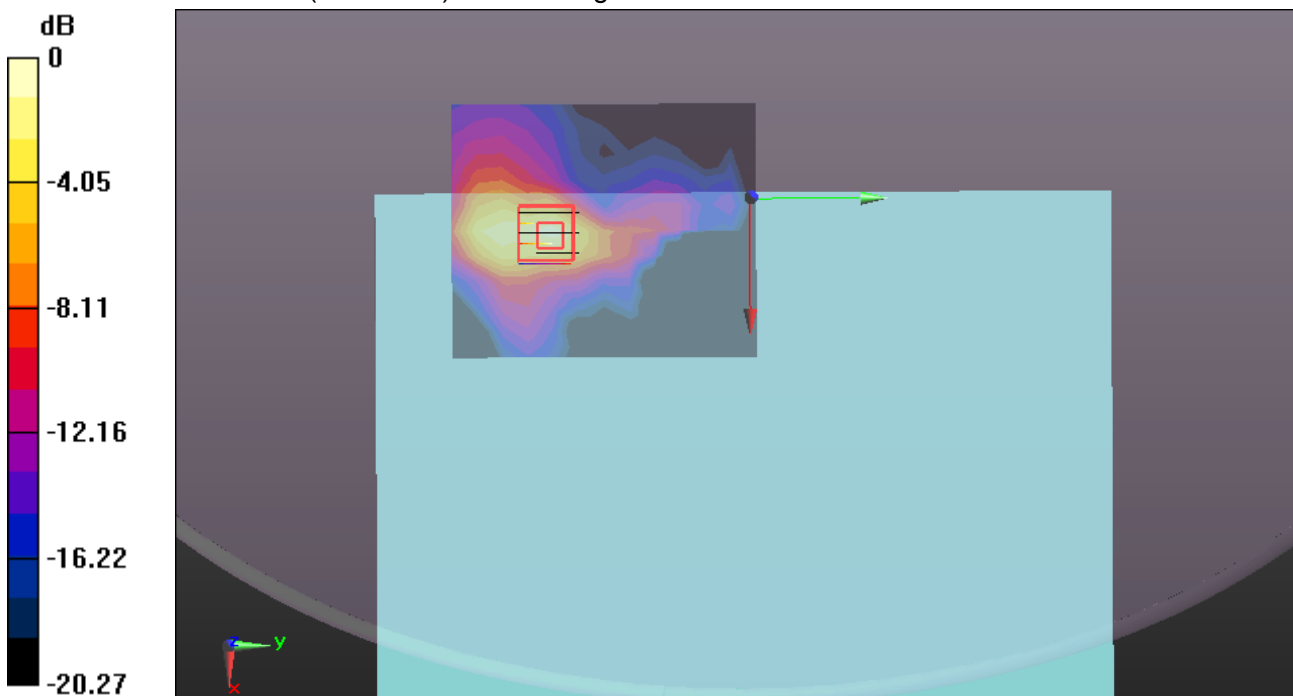
WIFI/IEEE802.11a Body Bottom CH157 Chain0 Southstar Antenna /Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 2.219 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 3.24 W/kg

SAR(1 g) = 0.753 W/kg; SAR(10 g) = 0.249 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: 6/6/2017

WIFI 802.11 a-Body Bottom CH165 Chain0 Southstar Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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; $\sigma = 5.968$ S/m; $\epsilon_r = 46.092$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

WIFI/IEEE802.11a Body Bottom CH165 Chain0 Southstar Antenna /Area Scan (11x13x1):

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

Maximum value of SAR (measured) = 1.54 W/kg

WIFI/IEEE802.11a Body Bottom CH165 Chain0 Southstar Antenna /Zoom Scan (7x7x7)/Cube 0:

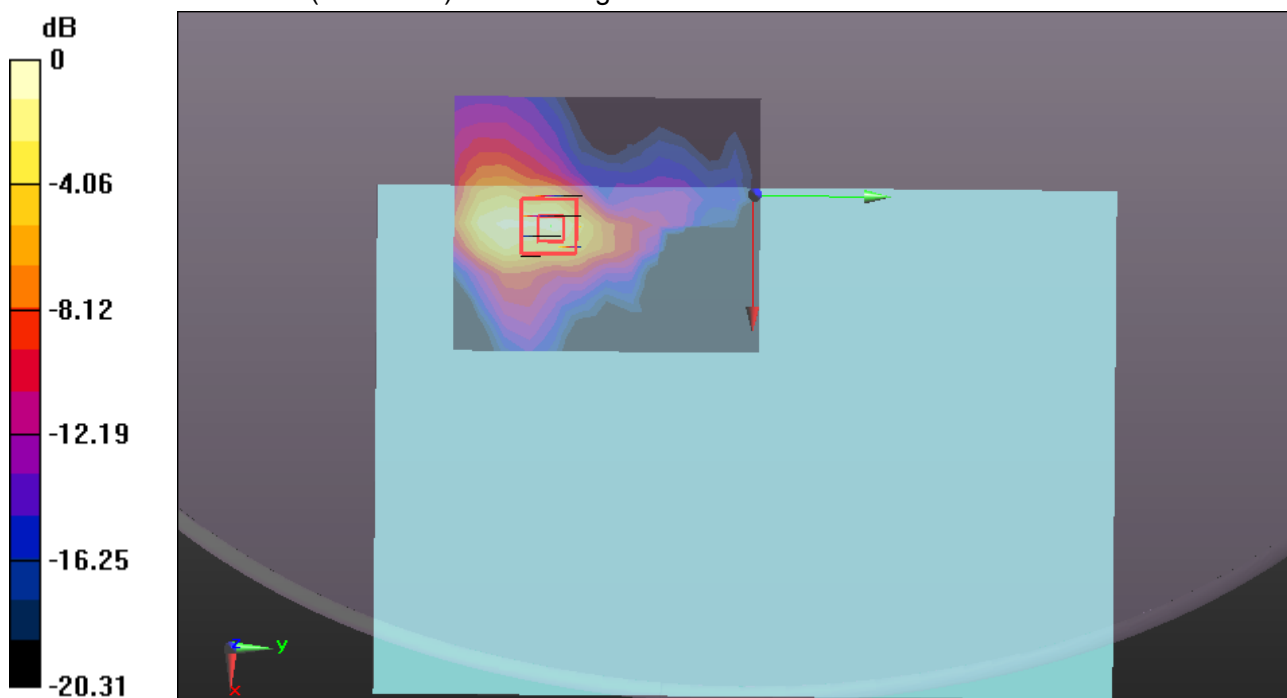
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.179 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 2.87 W/kg

SAR(1 g) = 0.670 W/kg; SAR(10 g) = 0.232 W/kg

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



0 dB = 1.63 W/kg = 2.12 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/6/2017

WIFI 802.11 a-Body Bottom CH56 Chain0 Southstar Antenna repeat**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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; $\sigma = 5.209$ S/m; $\epsilon_r = 47.305$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

WIFI/IEEE802.11a Body Bottom CH56 Chain0 Southstar Antenna repeat/Area Scan (11x13x1):

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

Maximum value of SAR (measured) = 2.05 W/kg

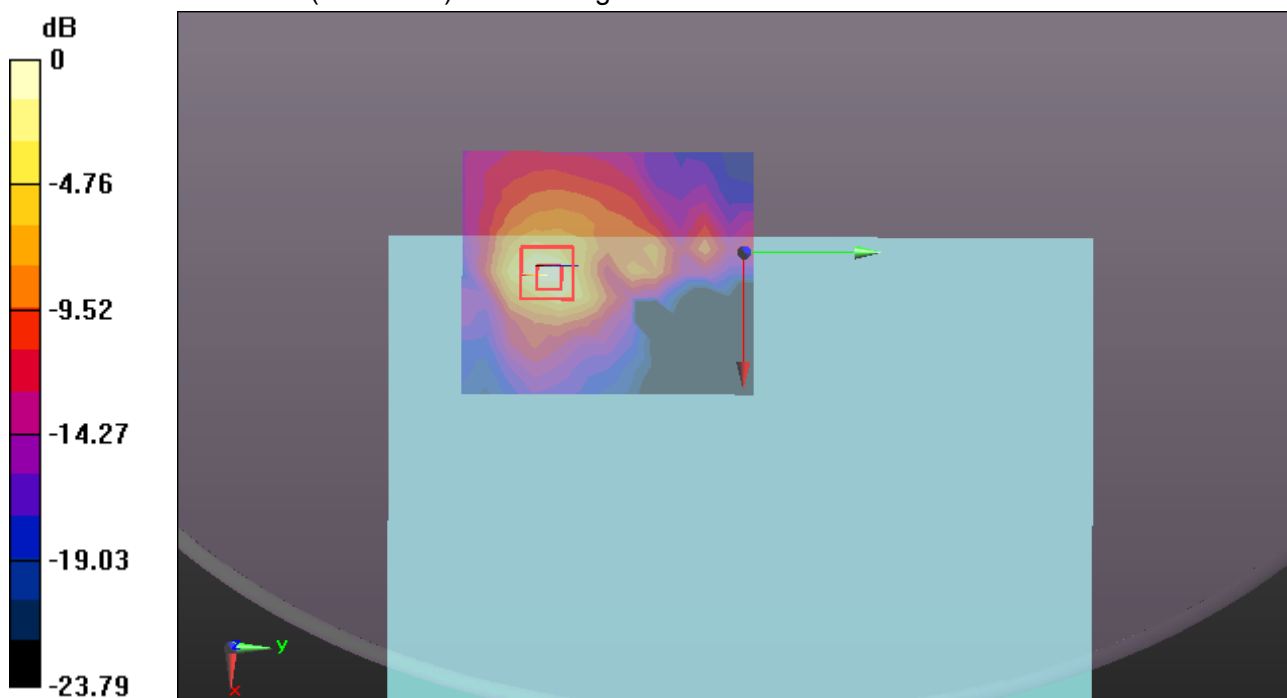
WIFI/IEEE802.11a Body Bottom CH56 Chain0 Southstar Antenna repeat/Zoom Scan (7x7x7)/Cube**0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 3.102 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 4.09 W/kg

SAR(1 g) = 1.07 W/kg; SAR(10 g) = 0.375 W/kg

Maximum value of SAR (measured) = 2.42 W/kg



0 dB = 2.42 W/kg = 3.84 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/6/2017

WIFI 802.11 a-Body Bottom CH149 Chain0 Southstar Antenna repeat**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; 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: $f = 5745 \text{ MHz}$; $\sigma = 5.837 \text{ S/m}$; $\epsilon_r = 46.273$; $\rho = 1000 \text{ kg/m}^3$

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

WIFI/IEEE802.11a Body Bottom CH149 Chain0 Southstar Antenna repeat/Area Scan (11x13x1):Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.17 W/kg

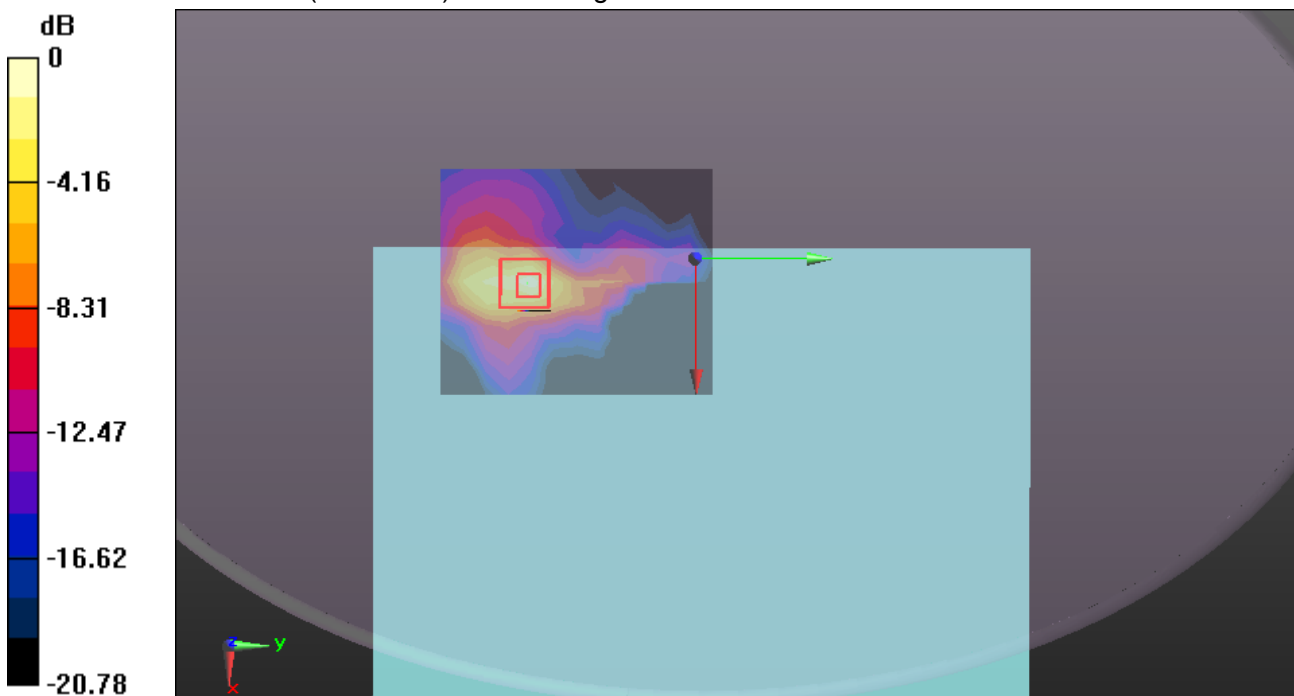
WIFI/IEEE802.11a Body Bottom CH149 Chain0 Southstar Antenna repeat/Zoom Scan**(7x7x7)/Cube 0:** Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 2.445 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.92 W/kg

SAR(1 g) = 0.919 W/kg; SAR(10 g) = 0.292 W/kg

Maximum value of SAR (measured) = 2.25 W/kg



0 dB = 2.25 W/kg = 3.52 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/15/2017

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

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

Frequency: 5500 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.691$ S/m; $\epsilon_r = 47.562$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

WIFI/IEEE802.11a Body Bottom CH100 Chain0/Area Scan (11x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 2.01 W/kg

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

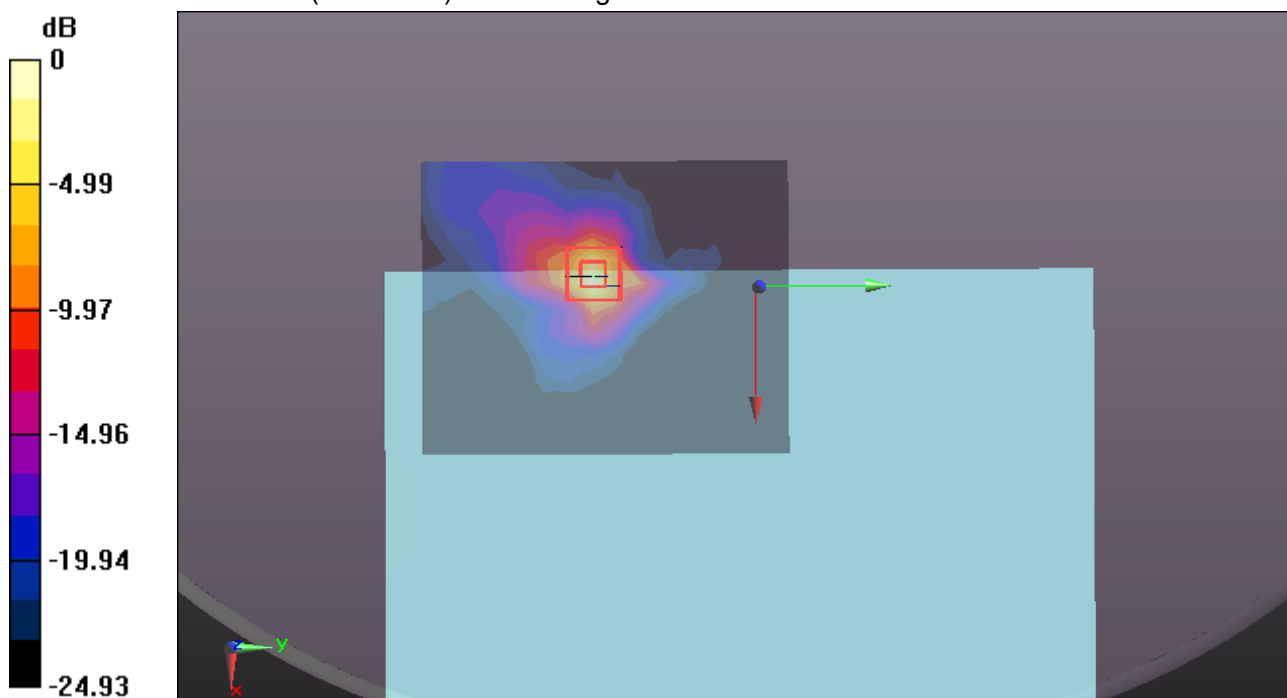
dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 0.9125 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 4.17 W/kg

SAR(1 g) = 0.864 W/kg; SAR(10 g) = 0.207 W/kg

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



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

Test Laboratory: Compliance Certification Services Inc.

Date: 6/15/2017

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

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

Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.821$ S/m; $\epsilon_r = 47.359$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

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

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

Maximum value of SAR (measured) = 2.38 W/kg

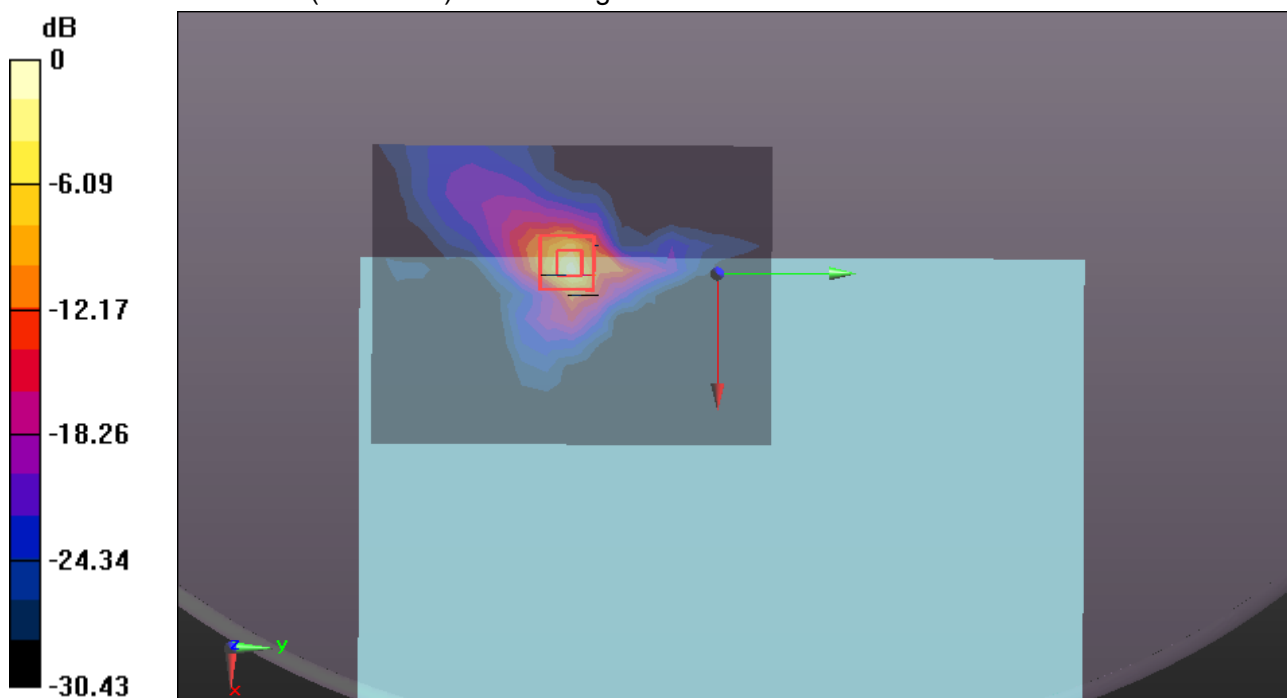
WIFI/IEEE802.11a Body Bottom CH116 Chain0 Southstar Antenna repeat/Zoom Scan**(7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.347 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 4.54 W/kg

SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.327 W/kg

Maximum value of SAR (measured) = 2.49 W/kg



0 dB = 2.49 W/kg = 3.96 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/5/2017

WiFi 802.11 b-Body Bottom CH6 Chain0 HONGBO Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11iAP; 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; $\sigma = 1.899$ S/m; $\epsilon_r = 52.47$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

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

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

Maximum value of SAR (measured) = 0.710 W/kg

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

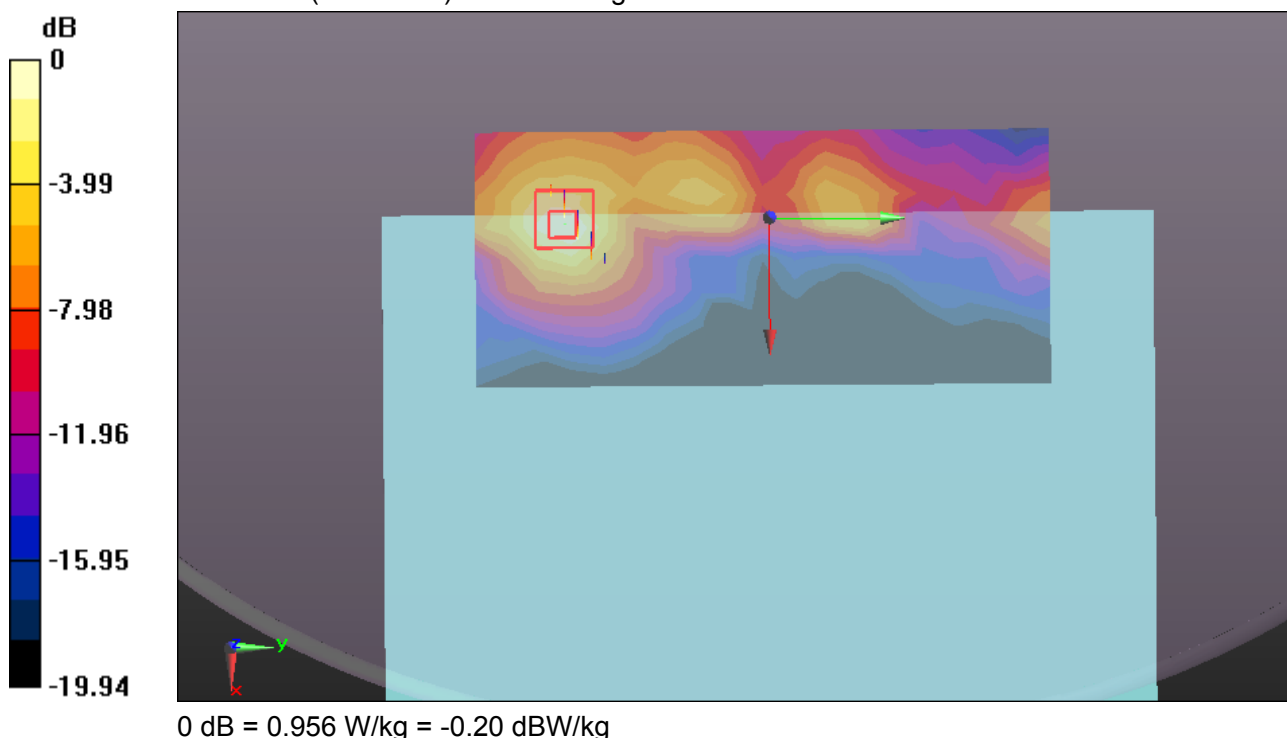
0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.492 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.519 W/kg; SAR(10 g) = 0.225 W/kg

Maximum value of SAR (measured) = 0.956 W/kg



Test Laboratory: Compliance Certification Services Inc.

Date: 6/26/2017

2.4GHz -Body Bottom CH78 HONGBO Antenna**DUT: Notebook Computer; Type: Lenovo ideapad 120S-11IAP; Serial: N/A**

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

Frequency: 2480 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2480 \text{ MHz}$; $\sigma = 1.987 \text{ S/m}$; $\epsilon_r = 51.504$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Flat Section

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

DASY Configuration:

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

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

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

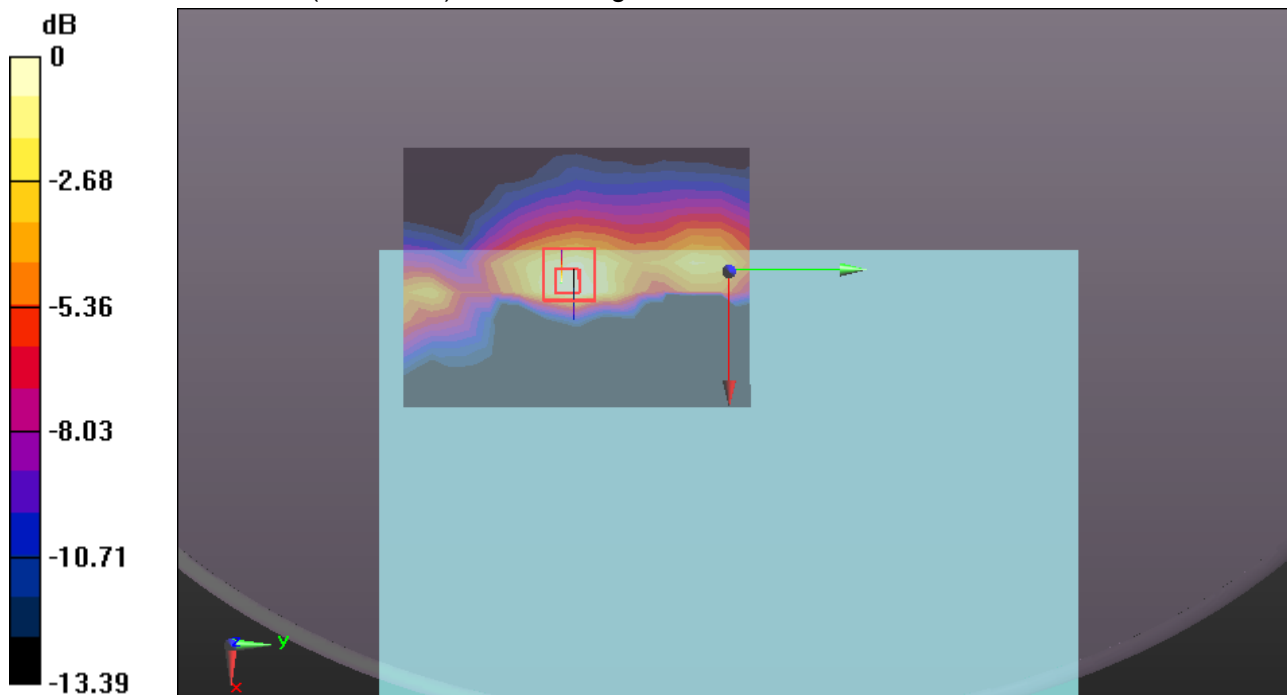
Bluetooth/Body Bottom CH78/Zoom Scan (7x7x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.162 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.198 W/kg

SAR(1 g) = 0.095 W/kg; SAR(10 g) = 0.044 W/kg

Maximum value of SAR (measured) = 0.160 W/kg



0 dB = 0.160 W/kg = -7.96 dBW/kg

Test Laboratory: Compliance Certification Services Inc.

Date: 6/15/2017

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

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

Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.821$ S/m; $\epsilon_r = 47.359$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

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

DASY Configuration:

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

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

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

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

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

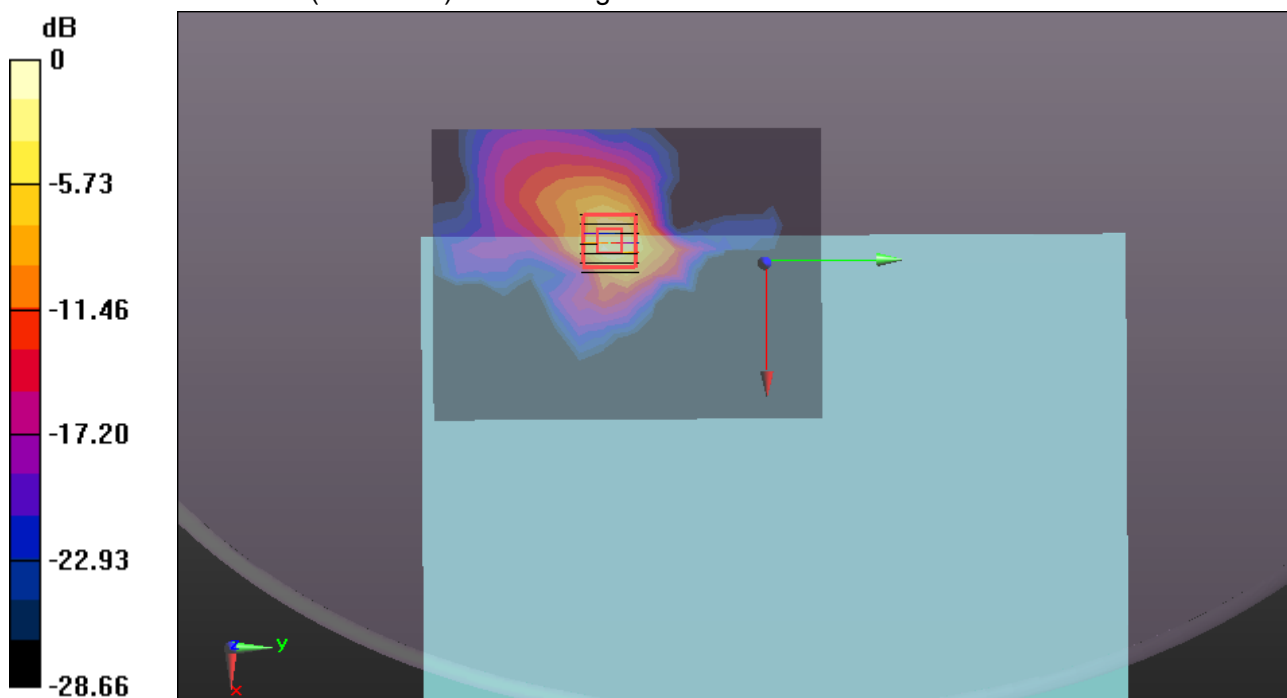
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 1.254 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 4.54 W/kg

SAR(1 g) = 0.912 W/kg; SAR(10 g) = 0.258 W/kg

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



0 dB = 2.26 W/kg = 3.54 dBW/kg