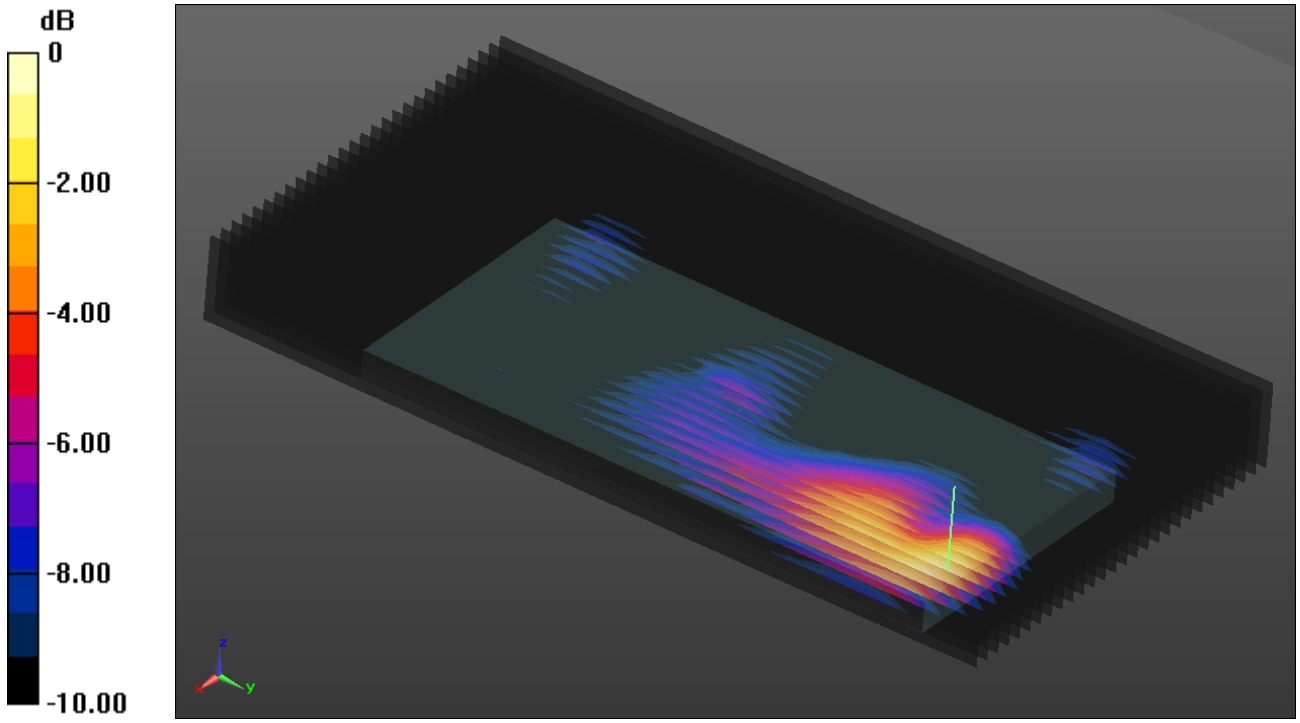
# Bluetooth

Frequency: 2441 MHz; Duty Cycle: 1:1.29033; Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 2441 MHz; $\sigma$ = 2.009 S/m; $\varepsilon_r$ = 51.419; $\rho$ = 1000 kg/m$^3$
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/23/2018
- Probe: EX3DV4 - SN7376; ConvF(7.5, 7.5, 7.5); Calibrated: 9/26/2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: ELI V6.0 (20deg); Type: QD OVA 003 AA; Serial: 2013

## BT/Bluetooth_DH5 Ch 39/Volume Scan (28x53x12): Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.329 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.195 W/kg
**SAR(1 g) = 0.090 W/kg; SAR(10 g) = 0.041 W/kg**
Total Absorbed Power = 0.00189 W
Maximum value of SAR (measured) = 0.151 W/kg



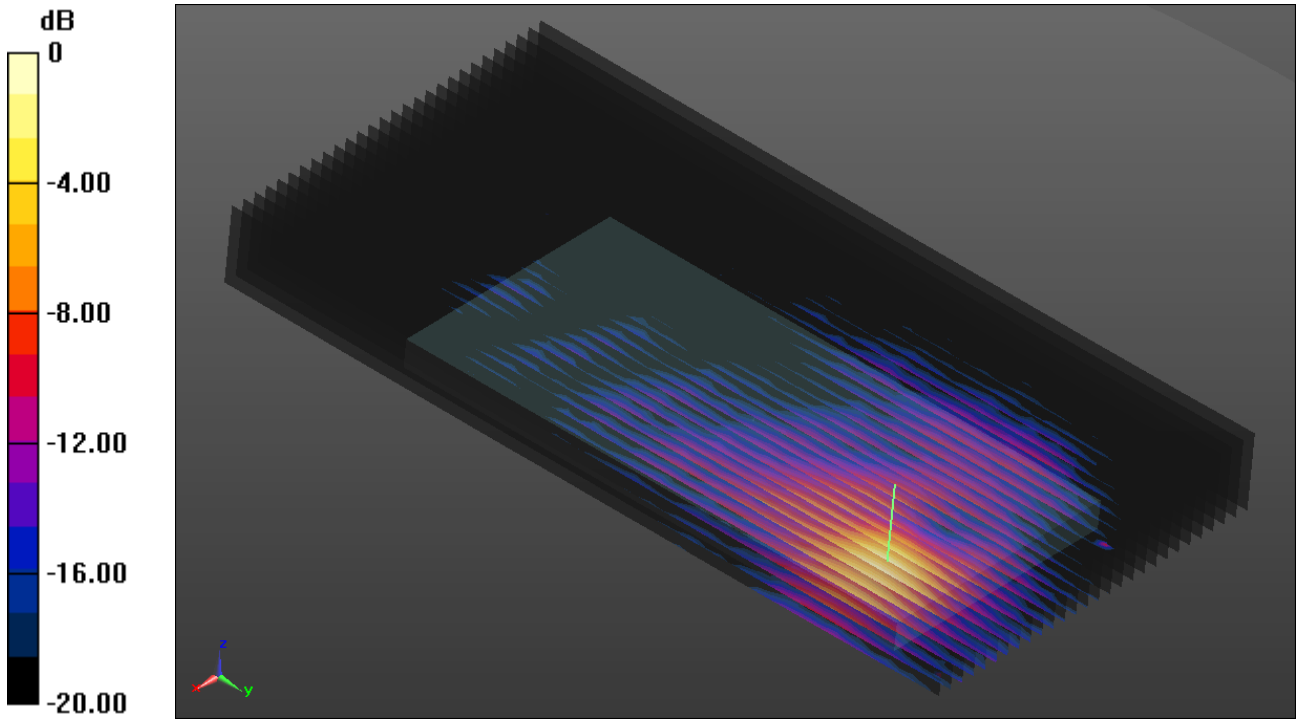

0 dB = 0.151 W/kg = -8.21 dBW/kg

# U-NII SISO Antenna 1

Frequency: 5745 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 5745 MHz; $\sigma$ = 5.855 S/m; $\varepsilon_r$ = 49.206; $\rho$ = 1000 kg/m$^3$
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/23/2018
- Probe: EX3DV4 - SN7376; ConvF(4.01, 4.01, 4.01); Calibrated: 9/26/2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: ELI V6.0 (20deg); Type: QD OVA 003 AA; Serial: 2013

## 20181227/802.11 a mode ch 149 SISO Ant.1 10mm/Volume Scan (56x28x12): Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.323 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.65 W/kg
**SAR(1 g) = 0.390 W/kg; SAR(10 g) = 0.127 W/kg**
Total Absorbed Power = 0.00499 W
Maximum value of SAR (measured) = 0.962 W/kg



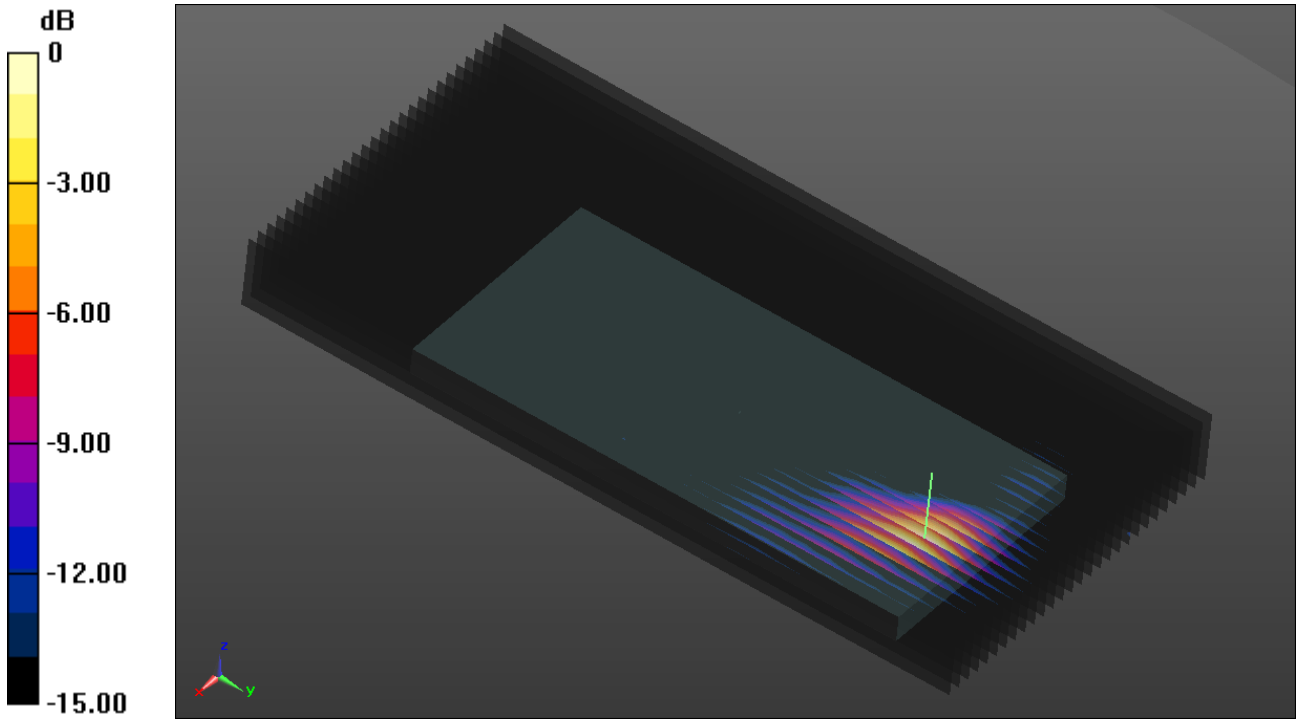

0 dB = 0.962 W/kg = -0.17 dBW/kg

# U-NII SISO Antenna2

Frequency: 5745 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 5745 MHz; $\sigma$ = 6.17 S/m; $\varepsilon_r$ = 46.172; $\rho$ = 1000 kg/m$^3$
DASY5 Configuration:
- Area Scan Setting: FAind Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/23/2018
- Probe: EX3DV4 - SN7376; ConvF(4.01, 4.01, 4.01); Calibrated: 9/26/2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: ELI V6.0 (20deg); Type: QD OVA 003 AA; Serial: 2013

## Wi-Fi_20181226/802.11 a mode ch 149 SISO Ant.2 10mm SN 1/Volume Scan (56x28x12):

Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 9.008 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.83 W/kg
**SAR(1 g) = 0.415 W/kg; SAR(10 g) = 0.123 W/kg**
Total Absorbed Power = 0.00283 W
Maximum value of SAR (measured) = 1.14 W/kg




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

# U-NII SISO Antenna 1 + U-NII SISO Antenna2

## Multi-Band Average SAR

**DASY Configuration for 20181227/802.11 a mode ch 149 SISO 0 10mm/Volume Scan:**

Date/Time: 12/27/2018, Test Laboratory: UL Korea Ltd. Suwon Laboratory
Communication System: UID 0, IEEE 802.11a/n/ac 5 GHz Band (0); Frequency: 5745 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL 3-6 GHz Medium parameters used (interpolated): f = 5745 MHz; $\sigma$ = 5.855 S/m; $\varepsilon_r$ = 49.206; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section , Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

- Probe: EX3DV4 - SN7376; ConvF(4.01, 4.01, 4.01); Calibrated: 9/26/2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1494; Calibrated: 7/23/2018
- Phantom: ELI V6.0 (20deg); Type: QD OVA 003 AA; Serial: 2013
- Measurement SW: DASY52, Version 52.8 (8)

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**DASY Configuration for Wi-Fi_20181226/802.11 a mode ch 149 SISO 1 10mm SN 1/Volume Scan:**

Date/Time: 12/26/2018 , Test Laboratory: UL Korea Ltd. Suwon Laboratory
Communication System: UID 0, IEEE 802.11a/n/ac 5 GHz Band (0); Frequency: 5745 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL 3-6 GHz Medium parameters used (interpolated): f = 5745 MHz; $\sigma$ = 6.17 S/m; $\varepsilon_r$ = 46.172; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section , Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

- Probe: EX3DV4 - SN7376; ConvF(4.01, 4.01, 4.01); Calibrated: 9/26/2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1494; Calibrated: 7/23/2018
- Phantom: ELI V6.0 (20deg); Type: QD OVA 003 AA; Serial: 2013
- Measurement SW: DASY52, Version 52.8 (8)

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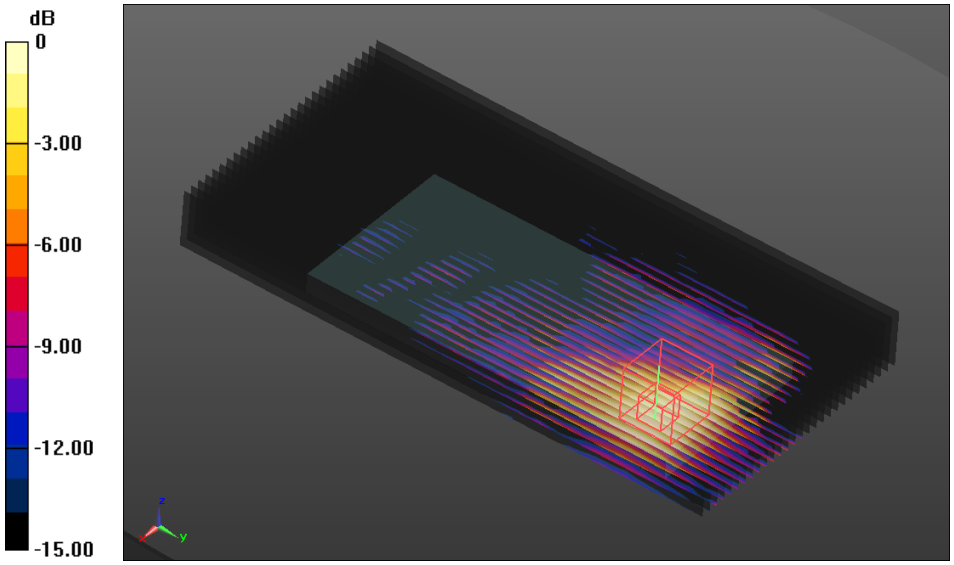
**Multi Band Result:**
**SAR(1 g) = 0.631 W/kg; SAR(10 g) = 0.234 W/kg**
Maximum value of SAR (interpolated) = 2.61 W/kg




0 dB = 1.00 W/kg = 0.00 dBW/kg

# U-NII SISO Antenna 1 + Bluetooth

## Multi-Band Average SAR

**DASY Configuration for BT/Bluetooth_DH5 Ch 39/Volume Scan:**

Date/Time: 12/20/2018 , Test Laboratory: UL Korea Ltd. Suwon Laboratory
Communication System: UID 0, Bluetooth (DH5) (0); Frequency: 2441 MHz; Duty Cycle: 1:1.29033; PMF: 1
Medium: MSL2450 Medium parameters used (interpolated): f = 2441 MHz; $\sigma$ = 2.009 S/m; $\varepsilon_r$ = 51.419; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section , Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

- Probe: EX3DV4 - SN7376; ConvF(7.5, 7.5, 7.5); Calibrated: 9/26/2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1494; Calibrated: 7/23/2018
- Phantom: ELI V6.0 (20deg); Type: QD OVA 003 AA; Serial: 2013
- Measurement SW: DASY52, Version 52.8 (8)

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**DASY Configuration for 20181227/802.11 a mode ch 149 SISO 0 10mm/Volume Scan:**

Date/Time: 12/27/2018 , Test Laboratory: UL Korea Ltd. Suwon Laboratory
Communication System: UID 0, IEEE 802.11a/n/ac 5 GHz Band (0); Frequency: 5745 MHz; Duty Cycle: 1:1; PMF: 1
Medium: MSL 3-6 GHz Medium parameters used (interpolated): f = 5745 MHz; $\sigma$ = 5.855 S/m; $\varepsilon_r$ = 49.206; $\rho$ = 1000 kg/m$^3$
Phantom section: Flat Section , Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

- Probe: EX3DV4 - SN7376; ConvF(4.01, 4.01, 4.01); Calibrated: 9/26/2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1494; Calibrated: 7/23/2018
- Phantom: ELI V6.0 (20deg); Type: QD OVA 003 AA; Serial: 2013
- Measurement SW: DASY52, Version 52.8 (8)

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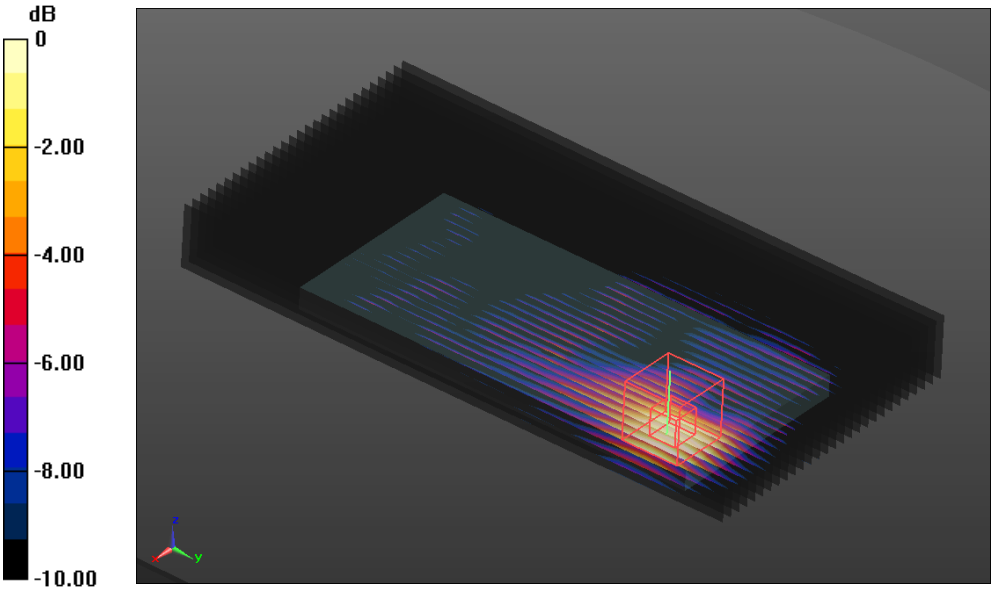
**Multi Band Result:**
**SAR(1 g) = 0.582 W/kg; SAR(10 g) = 0.215 W/kg**
Maximum value of SAR (interpolated) = 2.13 W/kg




0 dB = 1.00 W/kg = 0.00 dBW/kg