

Test Laboratory: Compliance Certification Services (UL CCS)

## 5.2GHz band\_Bottom face

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.29$  mho/m;  $\epsilon_r = 47.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg

- Probe: EX3DV4 - SN3749; ConvF(4.07, 4.07, 4.07); Calibrated: 12/13/2010

- Sensor-Surface: 2.5mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn427; Calibrated: 7/21/2010

- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_Ch 40/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.078 mW/g

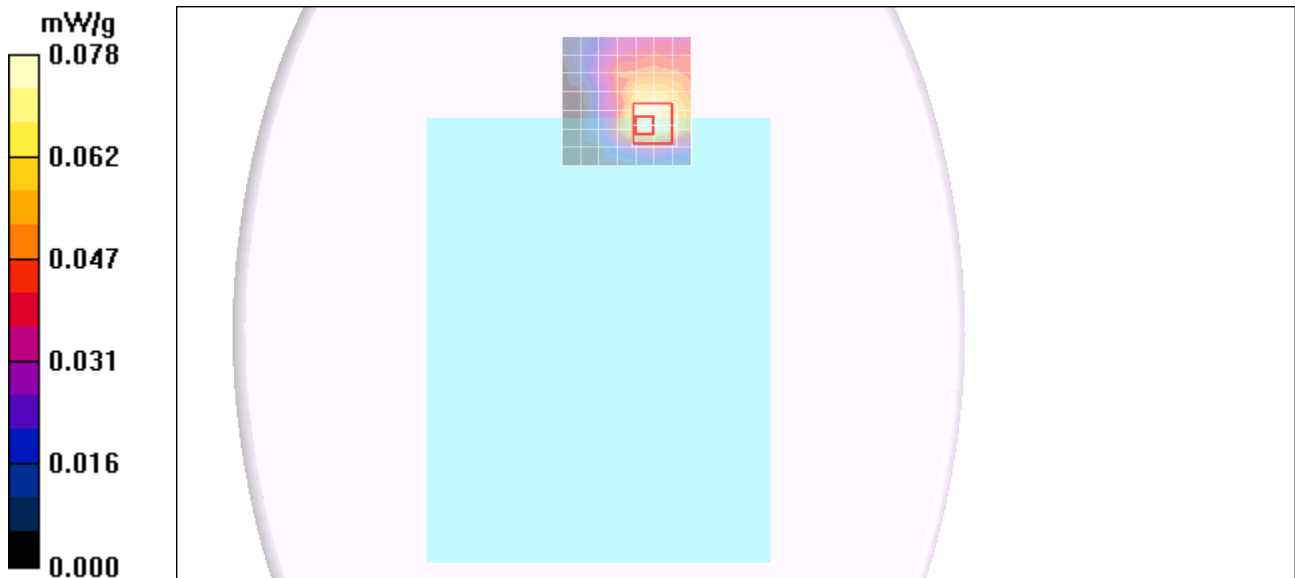
**802.11a\_Ch 40/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 4.17 V/m; Power Drift = 0.114 dB

Peak SAR (extrapolated) = 0.158 W/kg

**SAR(1 g) = 0.055 mW/g; SAR(10 g) = 0.023 mW/g**

Maximum value of SAR (measured) = 0.089 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

### 5.3GHz band\_Bottom face

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5300 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.36$  mho/m;  $\epsilon_r = 47.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

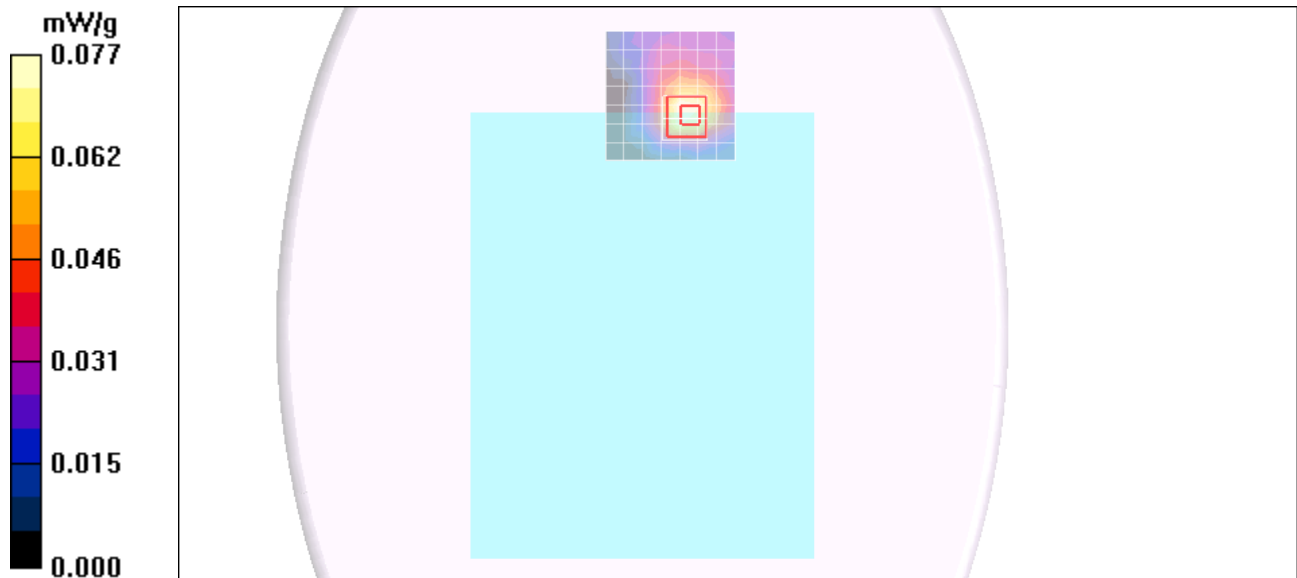
Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(3.88, 3.88, 3.88); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_Ch 60/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 0.077 mW/g

**802.11a\_Ch 60/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm  
Reference Value = 4.08 V/m; Power Drift = 0.222 dB  
Peak SAR (extrapolated) = 0.219 W/kg  
**SAR(1 g) = 0.053 mW/g; SAR(10 g) = 0.022 mW/g**  
Maximum value of SAR (measured) = 0.097 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

## 5.6GHz band\_Bottom face

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5600 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.89$  mho/m;  $\epsilon_r = 48.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

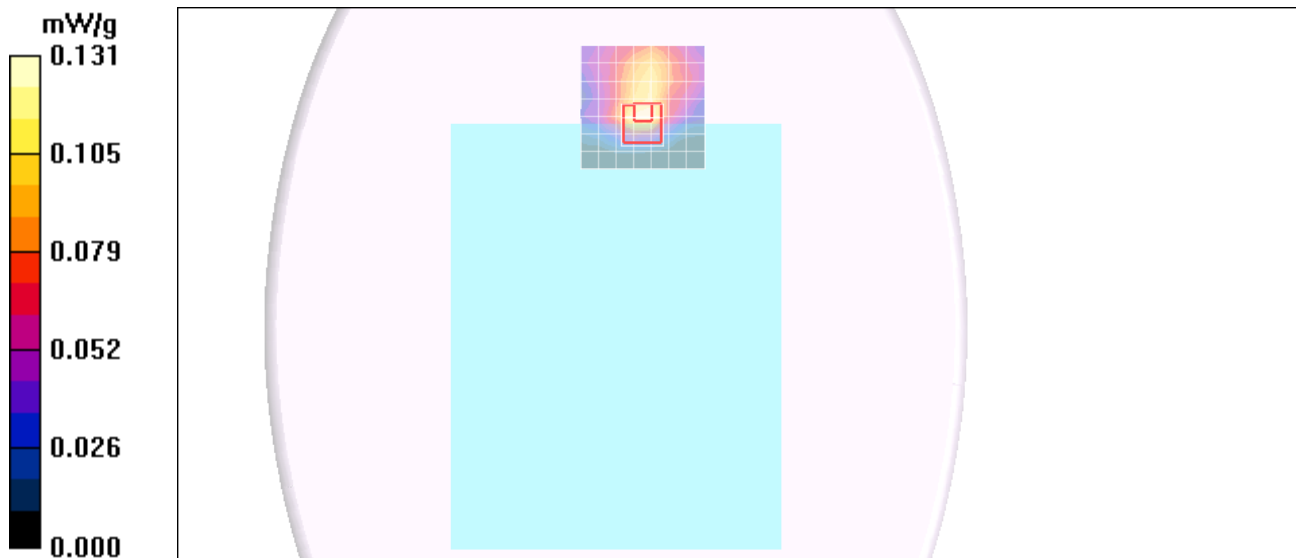
Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(3.36, 3.36, 3.36); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_Ch 120/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 0.131 mW/g

**802.11a\_Ch 120/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm  
Reference Value = 5.23 V/m; Power Drift = 0.226 dB  
Peak SAR (extrapolated) = 0.256 W/kg  
**SAR(1 g) = 0.088 mW/g; SAR(10 g) = 0.032 mW/g**  
Maximum value of SAR (measured) = 0.138 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

## 5.8GHz band\_Bottom face

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5785 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 5785$  MHz;  $\sigma = 6.01$  mho/m;  $\epsilon_r = 48.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(3.65, 3.65, 3.65); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_Ch 157/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.099 mW/g

**802.11a\_Ch 157/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

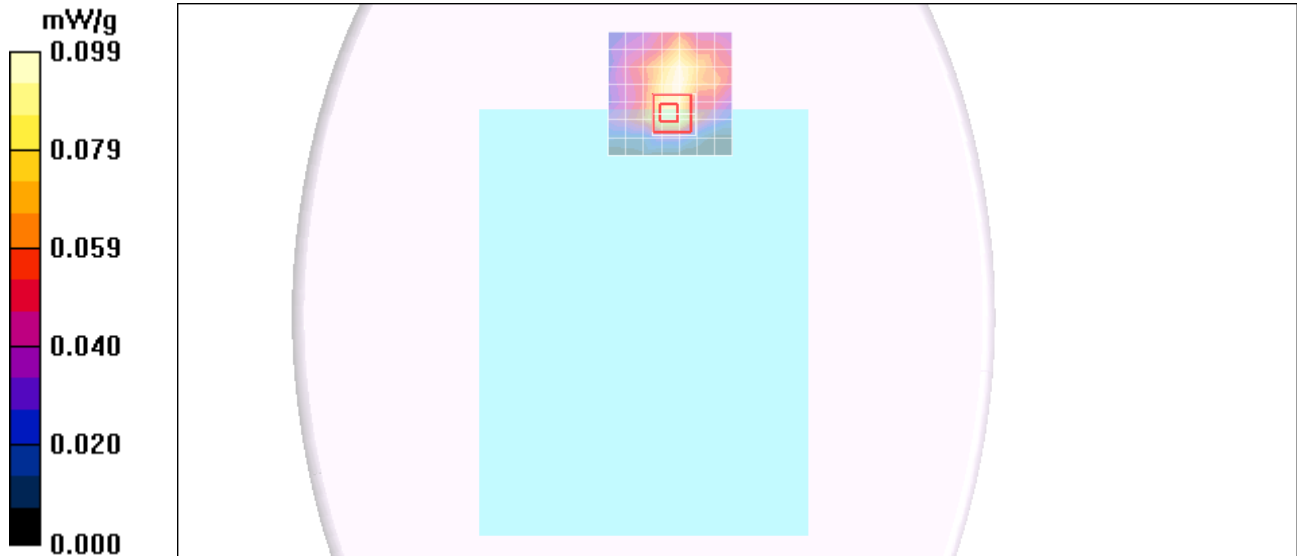
Reference Value = 4.51 V/m; Power Drift = -0.101 dB

Peak SAR (extrapolated) = 0.176 W/kg

**SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.027 mW/g**

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

Maximum value of SAR (measured) = 0.104 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

### 5.2GHz band\_Primary landscape

DUT: Apple; Type: NA; Serial: NA

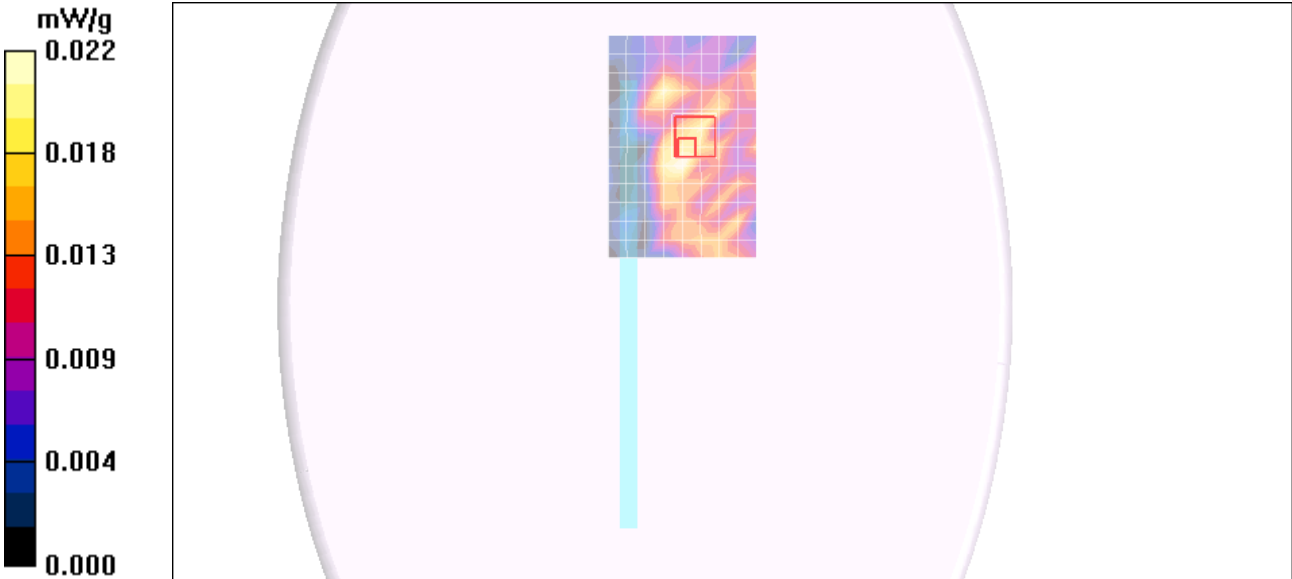
Communication System: 802.11abgn; Frequency: 5200 MHz;Duty Cycle: 1:1  
Medium parameters used: f = 5200 MHz;  $\sigma$  = 5.11 mho/m;  $\epsilon_r$  = 49.8;  $\rho$  = 1000 kg/m<sup>3</sup>  
Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

- DASY4 Configuration:
- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
  - Probe: EX3DV4 - SN3749; ConvF(4.07, 4.07, 4.07); Calibrated: 12/13/2010
  - Sensor-Surface: 2.5mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn427; Calibrated: 7/21/2010
  - Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
  - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_Ch 40/Area Scan (9x13x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 0.022 mW/g

**802.11a\_Ch 40/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm  
Reference Value = 2.19 V/m; Power Drift = 0.166 dB  
Peak SAR (extrapolated) = 0.054 W/kg  
**SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.00763 mW/g**  
Maximum value of SAR (measured) = 0.024 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

### 5.3GHz band\_Primary landscape

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5300 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.24$  mho/m;  $\epsilon_r = 49.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

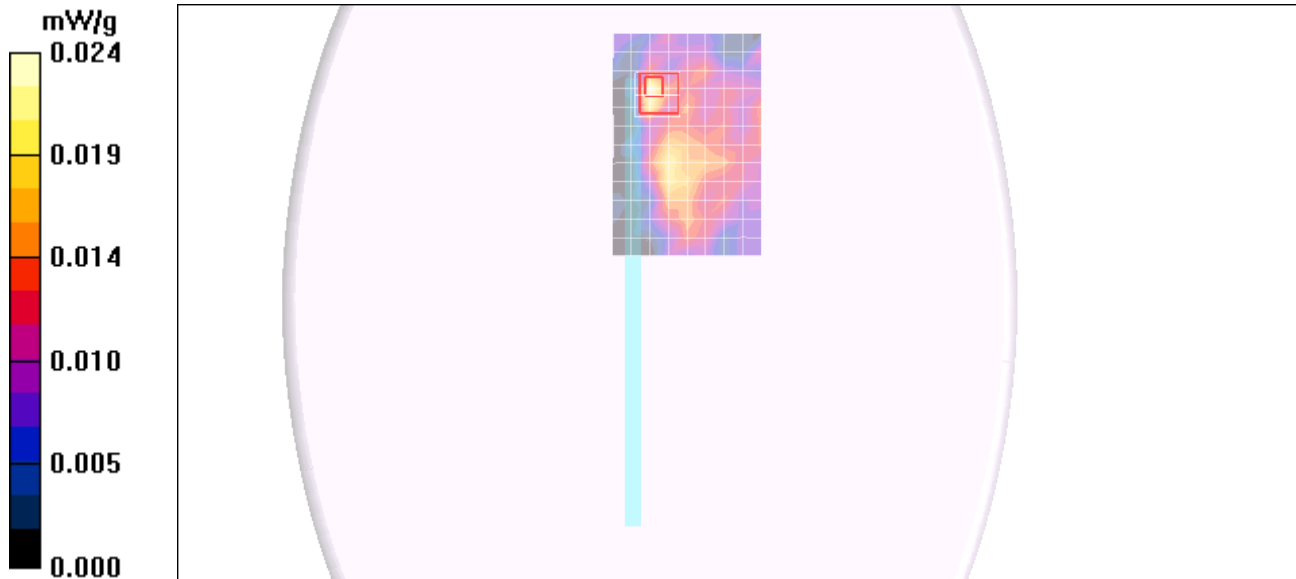
Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(3.88, 3.88, 3.88); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_Ch 60/Area Scan (9x13x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 0.024 mW/g

**802.11a\_Ch 60/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm  
Reference Value = 2.28 V/m; Power Drift = -0.140 dB  
Peak SAR (extrapolated) = 0.090 W/kg  
**SAR(1 g) = 0.012 mW/g; SAR(10 g) = 0.00575 mW/g**  
Maximum value of SAR (measured) = 0.025 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

### 5.6GHz band\_Primary landscape

DUT: Apple; Type: NA; Serial: NA

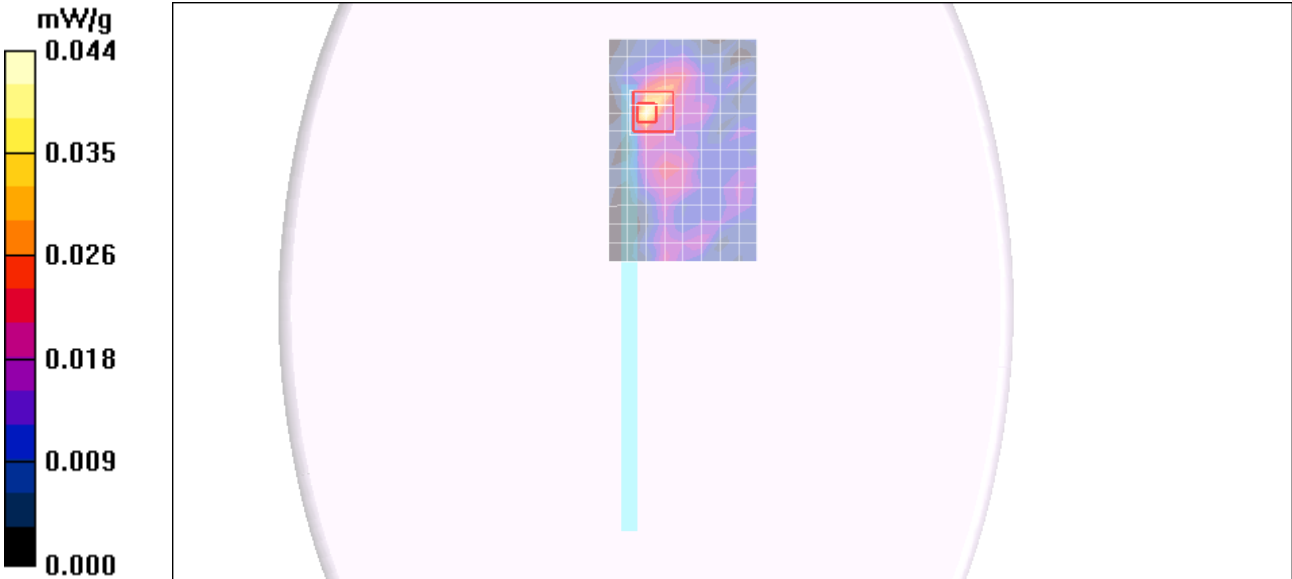
Communication System: 802.11abgn; Frequency: 5600 MHz;Duty Cycle: 1:1  
Medium parameters used: f = 5600 MHz;  $\sigma$  = 5.89 mho/m;  $\epsilon_r$  = 48.9;  $\rho$  = 1000 kg/m<sup>3</sup>  
Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

- DASY4 Configuration:
- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
  - Probe: EX3DV4 - SN3749; ConvF(3.36, 3.36, 3.36); Calibrated: 12/13/2010
  - Sensor-Surface: 2.5mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn427; Calibrated: 7/21/2010
  - Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
  - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_Ch 120/Area Scan (9x13x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 0.044 mW/g

**802.11a\_Ch 120/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm  
Reference Value = 3.41 V/m; Power Drift = 0.160 dB  
Peak SAR (extrapolated) = 0.284 W/kg  
**SAR(1 g) = 0.032 mW/g; SAR(10 g) = 0.012 mW/g**  
Maximum value of SAR (measured) = 0.050 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

### 5.3GHz band\_Primary landscape

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5300 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.24$  mho/m;  $\epsilon_r = 49.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

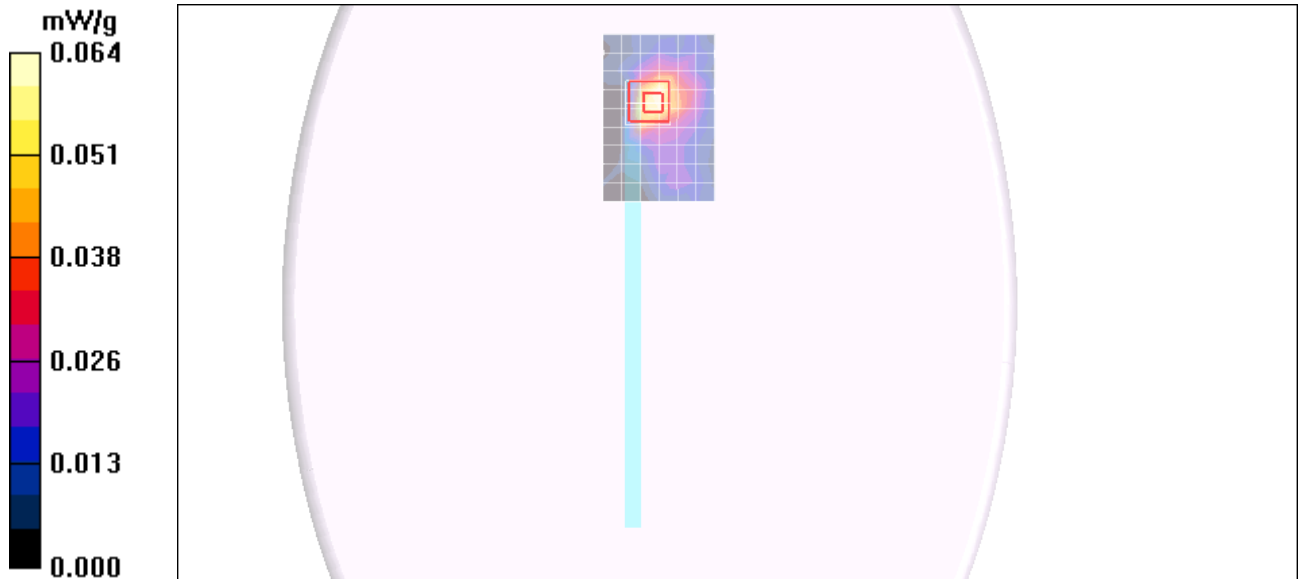
Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(3.88, 3.88, 3.88); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_Ch 60/Area Scan (7x10x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 0.064 mW/g

**802.11a\_Ch 60/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm  
Reference Value = 3.84 V/m; Power Drift = 0.144 dB  
Peak SAR (extrapolated) = 0.182 W/kg  
**SAR(1 g) = 0.052 mW/g; SAR(10 g) = 0.017 mW/g**  
Maximum value of SAR (measured) = 0.098 mW/g





Test Laboratory: Compliance Certification Services (UL CCS)

## 5.2GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.29$  mho/m;  $\epsilon_r = 47.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(4.07, 4.07, 4.07); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_ch 40/Area Scan (6x7x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.02 mW/g

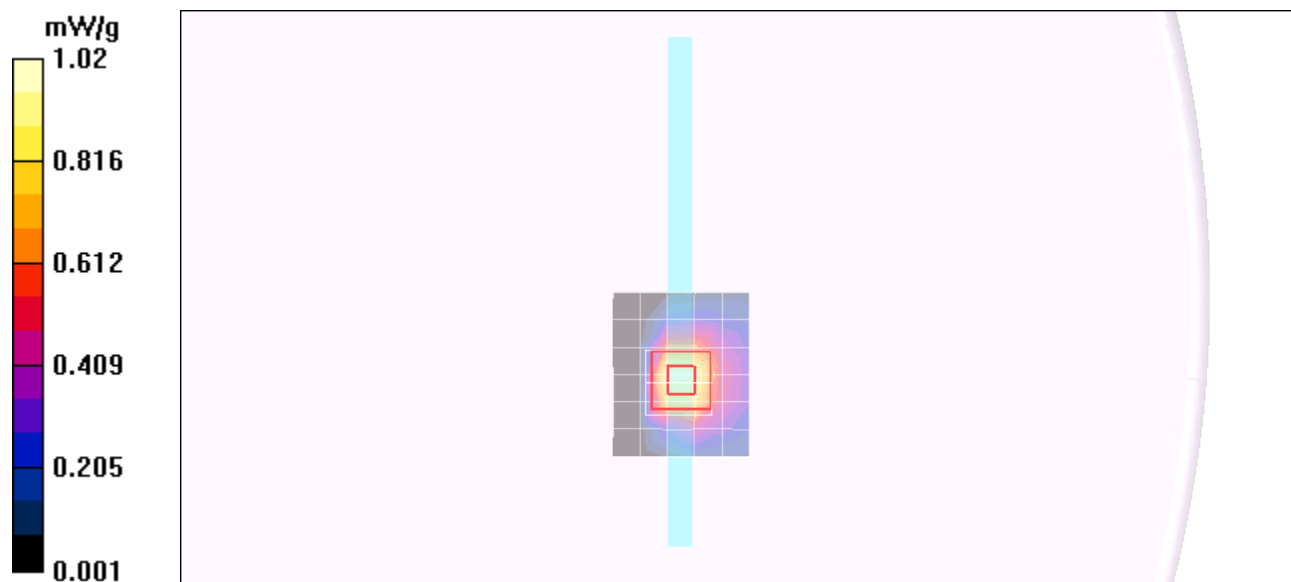
**802.11a\_ch 40/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 15.0 V/m; Power Drift = -0.145 dB

Peak SAR (extrapolated) = 2.43 W/kg

**SAR(1 g) = 0.787 mW/g; SAR(10 g) = 0.276 mW/g**

Maximum value of SAR (measured) = 1.33 mW/g



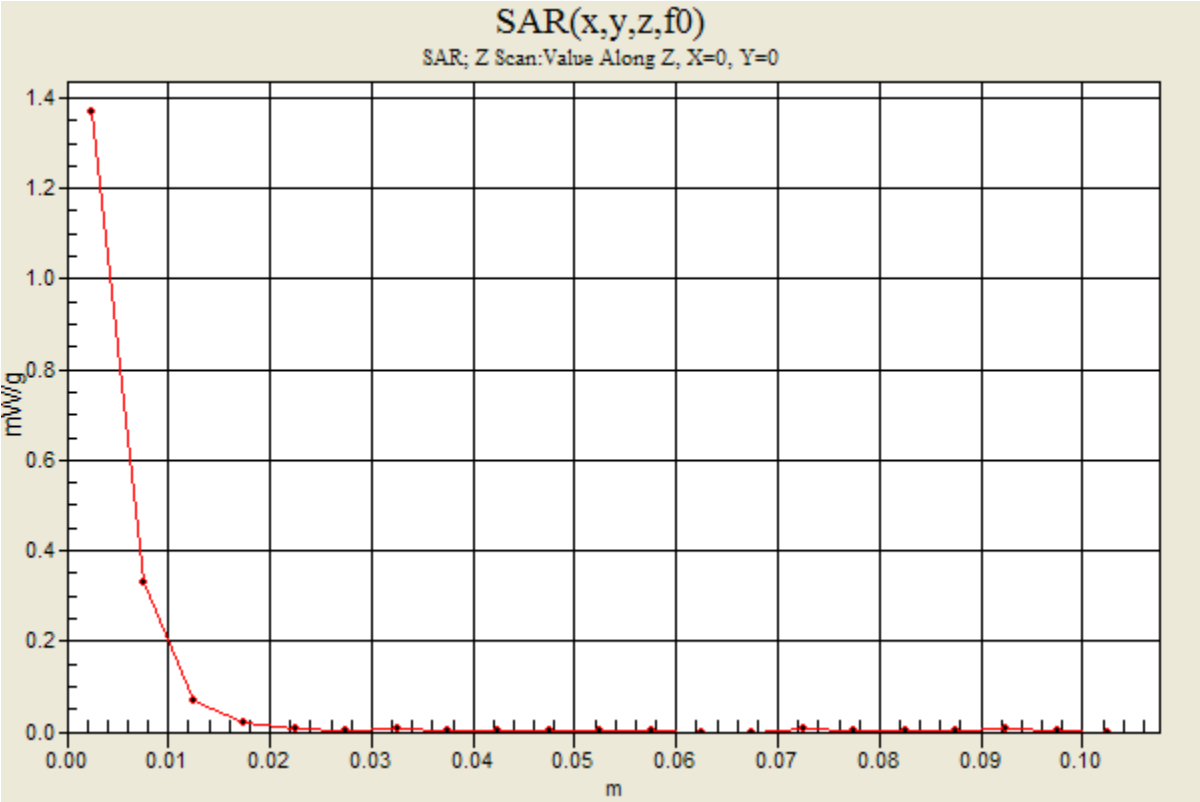
Test Laboratory: Compliance Certification Services (UL CCS)

### 5.2GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5200 MHz;Duty Cycle: 1:1

**802.11a\_ch 40/Z Scan (1x1x21):** Measurement grid: dx=20mm, dy=20mm, dz=5mm  
Maximum value of SAR (measured) = 1.37 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

### 5.3GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 5260$  MHz;  $\sigma = 5.14$  mho/m;  $\epsilon_r = 47.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg

- Probe: EX3DV4 - SN3749; ConvF(3.88, 3.88, 3.88); Calibrated: 12/13/2010

- Sensor-Surface: 2.5mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn427; Calibrated: 7/21/2010

- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_ch 52/Area Scan (6x7x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.16 mW/g

**802.11a\_ch 52/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

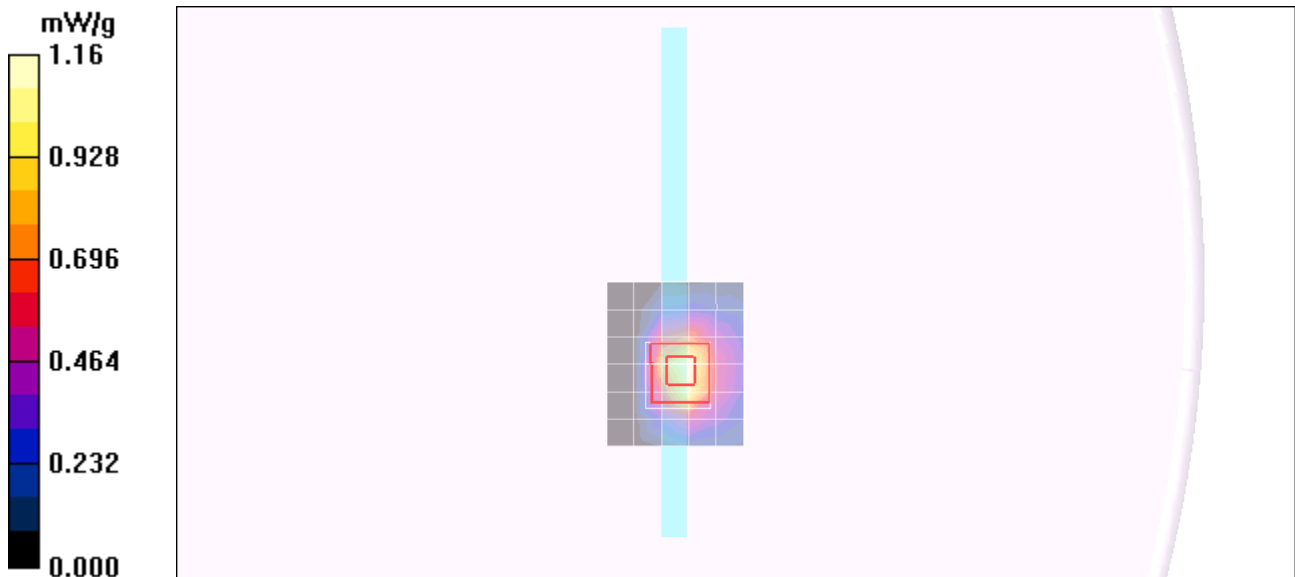
Reference Value = 16.5 V/m; Power Drift = 0.105 dB

Peak SAR (extrapolated) = 2.59 W/kg

**SAR(1 g) = 0.828 mW/g; SAR(10 g) = 0.291 mW/g**

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

Maximum value of SAR (measured) = 1.42 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

### 5.3GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

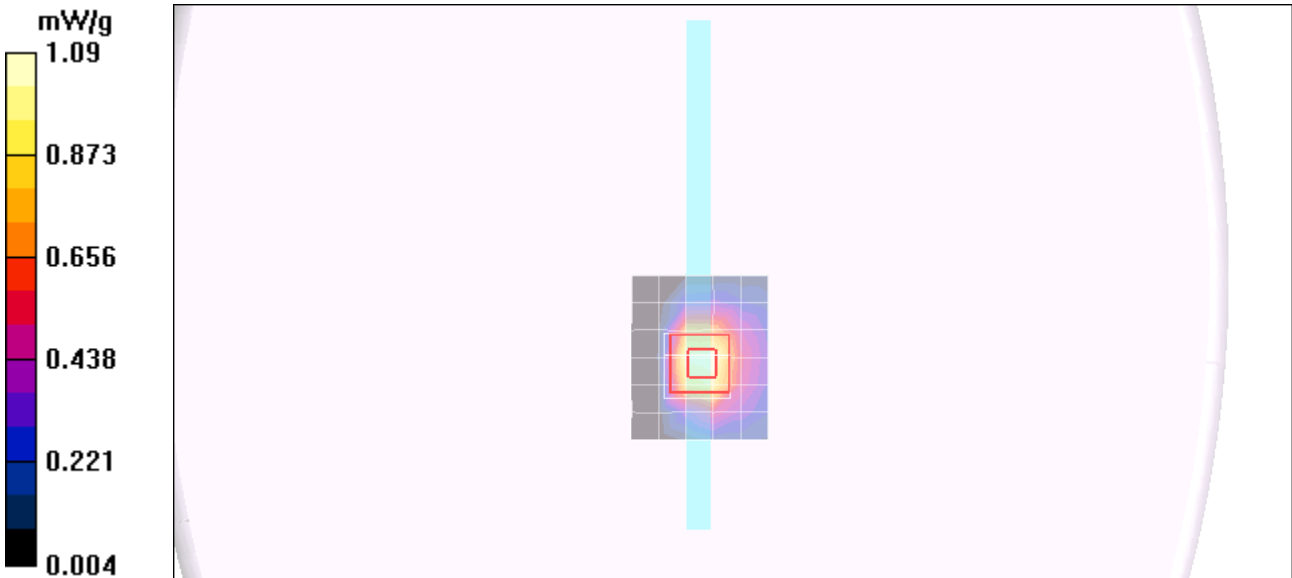
Communication System: 802.11abgn; Frequency: 5300 MHz;Duty Cycle: 1:1  
Medium parameters used: f = 5300 MHz;  $\sigma$  = 5.36 mho/m;  $\epsilon_r$  = 47.3;  $\rho$  = 1000 kg/m<sup>3</sup>  
Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

- DASY4 Configuration:
- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
  - Probe: EX3DV4 - SN3749; ConvF(3.88, 3.88, 3.88); Calibrated: 12/13/2010
  - Sensor-Surface: 2.5mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn427; Calibrated: 7/21/2010
  - Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
  - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_ch 60/Area Scan (6x7x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 1.09 mW/g

**802.11a\_ch 60/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm  
Reference Value = 15.4 V/m; Power Drift = 0.157 dB  
Peak SAR (extrapolated) = 2.61 W/kg  
**SAR(1 g) = 0.852 mW/g; SAR(10 g) = 0.302 mW/g**  
Maximum value of SAR (measured) = 1.43 mW/g



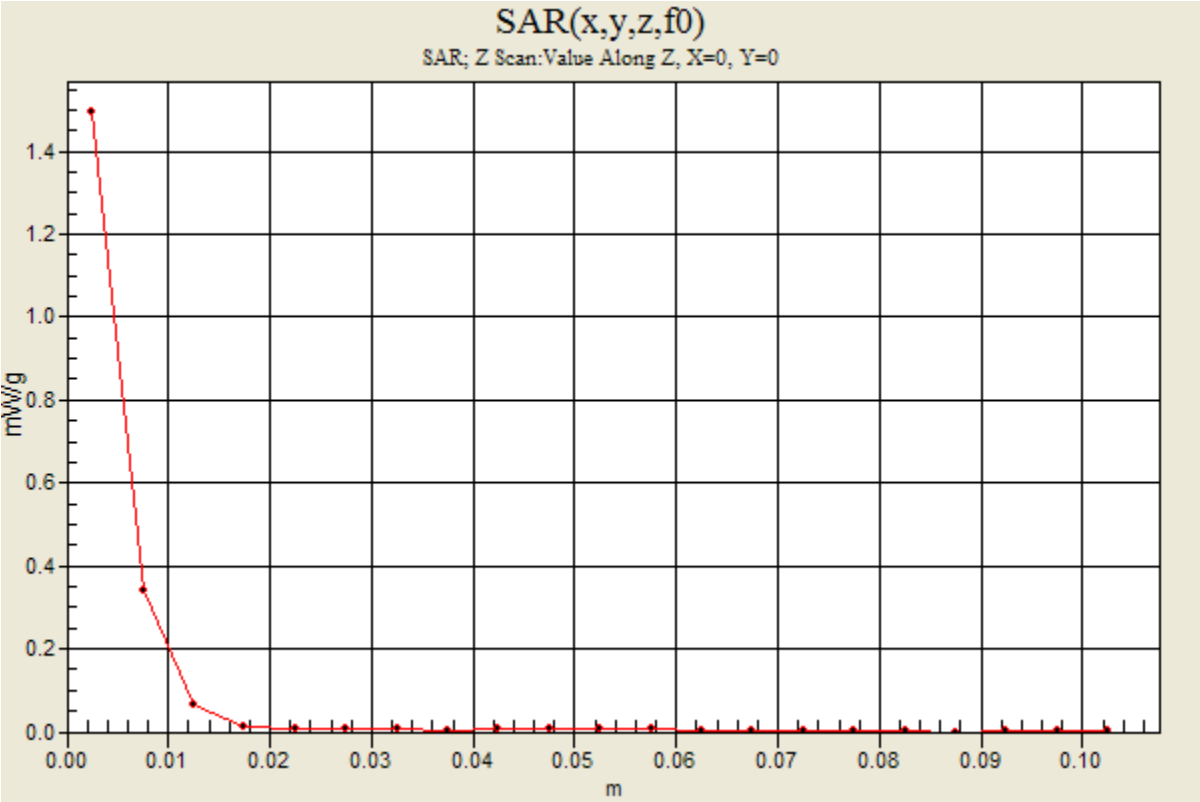
Test Laboratory: Compliance Certification Services (UL CCS)

### 5.3GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5300 MHz;Duty Cycle: 1:1

**802.11a\_ch 60/Z Scan (1x1x21):** Measurement grid: dx=20mm, dy=20mm, dz=5mm  
Maximum value of SAR (measured) = 1.49 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

### 5.3GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5320 MHz;Duty Cycle: 1:1  
Medium parameters used (interpolated): f = 5320 MHz;  $\sigma$  = 5.36 mho/m;  $\epsilon_r$  = 47.4;  $\rho$  = 1000 kg/m<sup>3</sup>  
Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

- DASY4 Configuration:
- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
  - Probe: EX3DV4 - SN3749; ConvF(3.88, 3.88, 3.88); Calibrated: 12/13/2010
  - Sensor-Surface: 2.5mm (Mechanical Surface Detection)
  - Electronics: DAE3 Sn427; Calibrated: 7/21/2010
  - Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
  - Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

#### 802.11a\_ch 64/Area Scan (6x7x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.04 mW/g

#### 802.11a\_ch 64/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

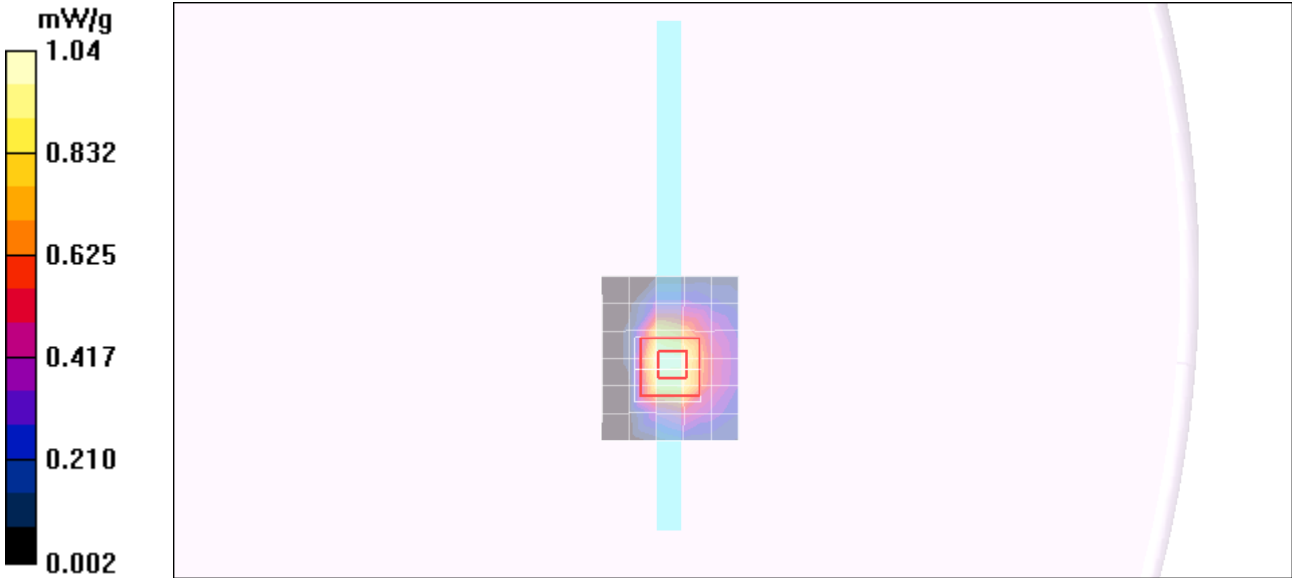
Reference Value = 15.7 V/m; Power Drift = -0.141 dB

Peak SAR (extrapolated) = 2.55 W/kg

**SAR(1 g) = 0.825 mW/g; SAR(10 g) = 0.294 mW/g**

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

Maximum value of SAR (measured) = 1.41 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

## 5.6GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5500 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5500$  MHz;  $\sigma = 5.39$  mho/m;  $\epsilon_r = 47.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

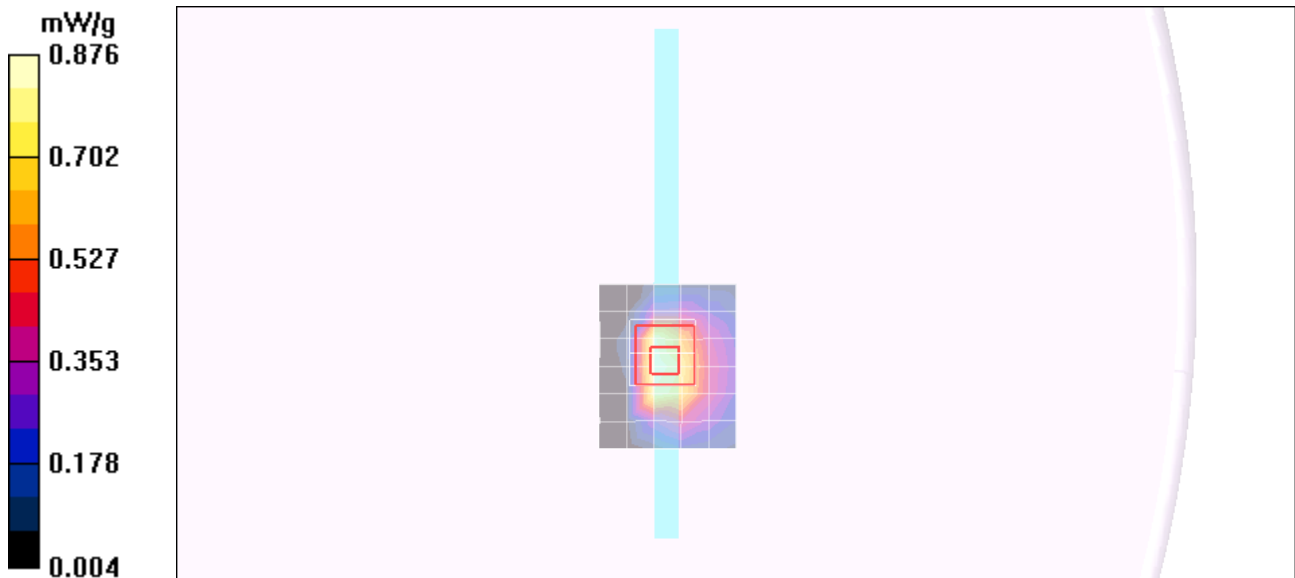
Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(3.53, 3.53, 3.53); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_ch 100/Area Scan (6x7x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 0.876 mW/g

**802.11a\_ch 100/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm  
Reference Value = 14.3 V/m; Power Drift = -0.20 dB  
Peak SAR (extrapolated) = 2.04 W/kg  
**SAR(1 g) = 0.628 mW/g; SAR(10 g) = 0.220 mW/g**  
Maximum value of SAR (measured) = 1.07 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

## 5.6GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.61$  mho/m;  $\epsilon_r = 47.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg

- Probe: EX3DV4 - SN3749; ConvF(3.36, 3.36, 3.36); Calibrated: 12/13/2010

- Sensor-Surface: 2.5mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn427; Calibrated: 7/21/2010

- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_ch 120/Area Scan (6x7x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.24 mW/g

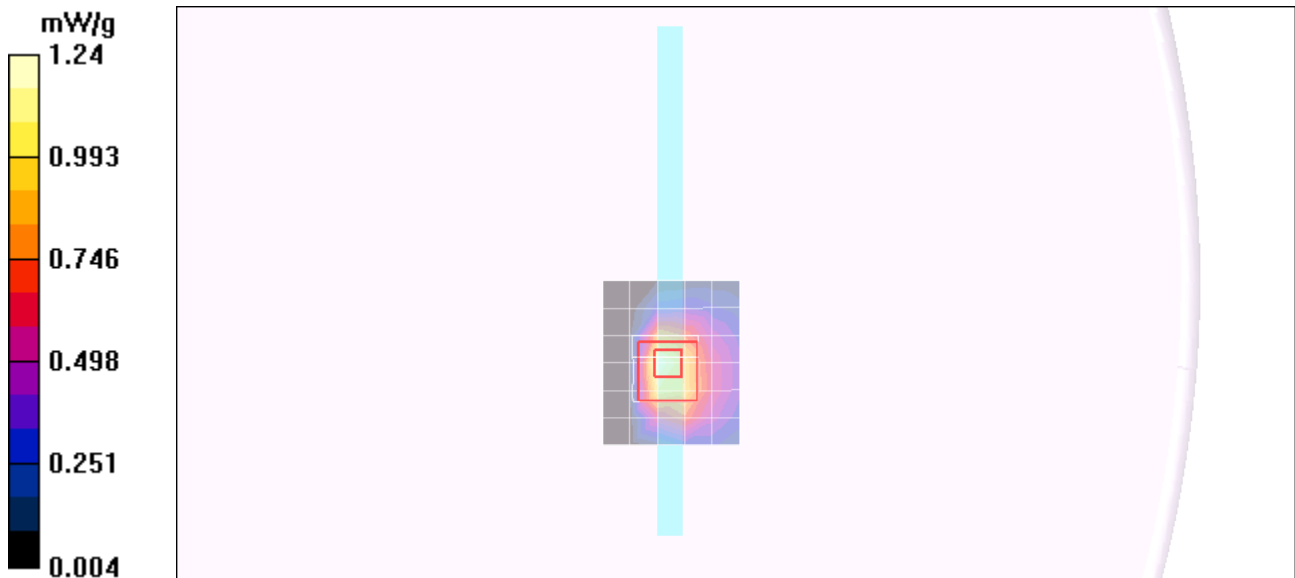
**802.11a\_ch 120/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 16.6 V/m; Power Drift = -0.135 dB

Peak SAR (extrapolated) = 2.62 W/kg

**SAR(1 g) = 0.816 mW/g; SAR(10 g) = 0.295 mW/g**

Maximum value of SAR (measured) = 1.44 mW/g





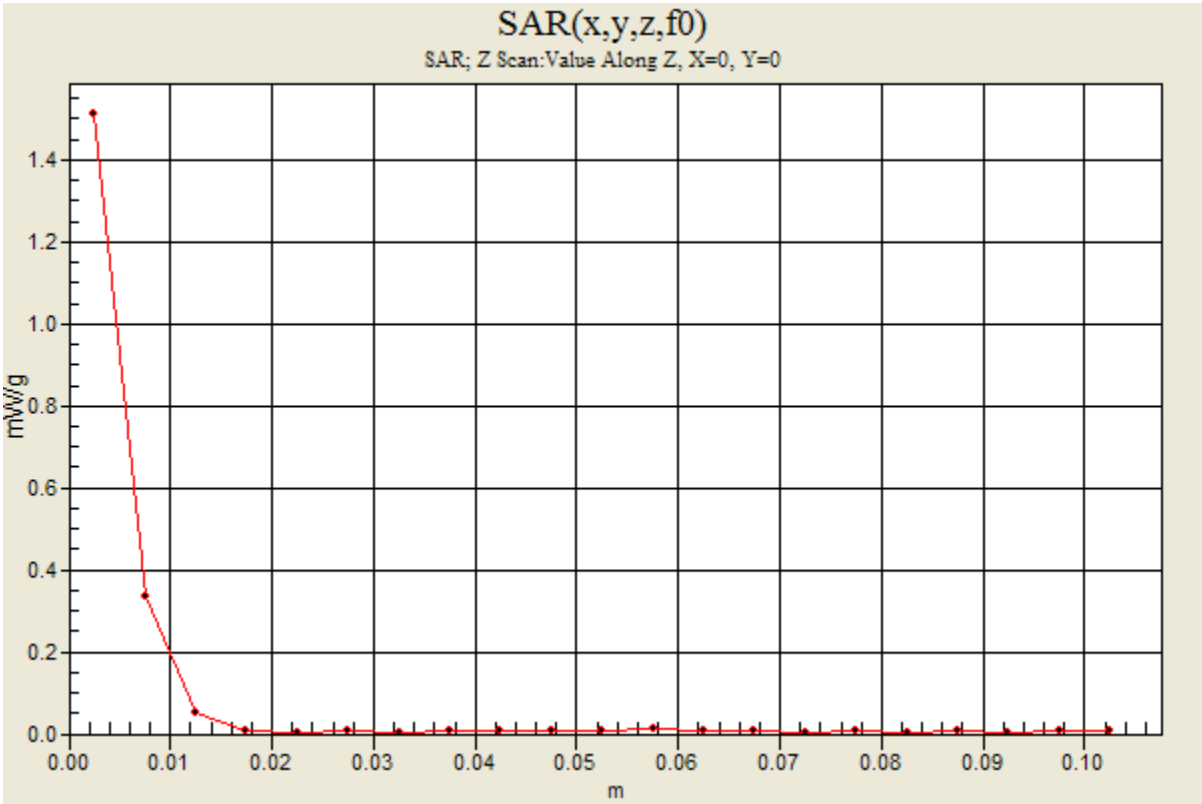
Test Laboratory: Compliance Certification Services (UL CCS)

### 5.6GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5600 MHz;Duty Cycle: 1:1

**802.11a\_ch 120/Z Scan (1x1x21):** Measurement grid: dx=20mm, dy=20mm, dz=5mm  
Maximum value of SAR (measured) = 1.51 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

## 5.6GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5700 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5700$  MHz;  $\sigma = 5.93$  mho/m;  $\epsilon_r = 47$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section

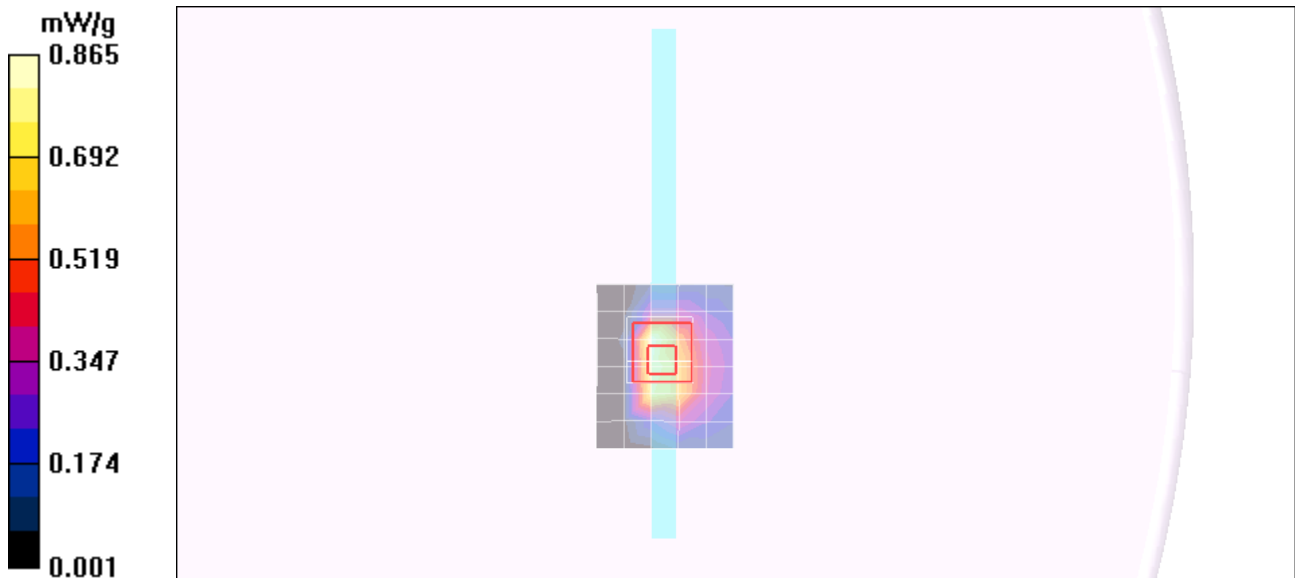
Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV4 - SN3749; ConvF(3.36, 3.36, 3.36); Calibrated: 12/13/2010
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_ch 140/Area Scan (6x7x1):** Measurement grid: dx=10mm, dy=10mm  
Maximum value of SAR (measured) = 0.865 mW/g

**802.11a\_ch 140/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm  
Reference Value = 13.4 V/m; Power Drift = -0.154 dB  
Peak SAR (extrapolated) = 2.10 W/kg  
**SAR(1 g) = 0.597 mW/g; SAR(10 g) = 0.201 mW/g**  
Maximum value of SAR (measured) = 1.06 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

## 5.8GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 5785$  MHz;  $\sigma = 6.06$  mho/m;  $\epsilon_r = 46.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg

- Probe: EX3DV4 - SN3749; ConvF(3.65, 3.65, 3.65); Calibrated: 12/13/2010

- Sensor-Surface: 2.5mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn427; Calibrated: 7/21/2010

- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a\_ch 157/Area Scan (6x7x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.00 mW/g

**802.11a\_ch 157/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

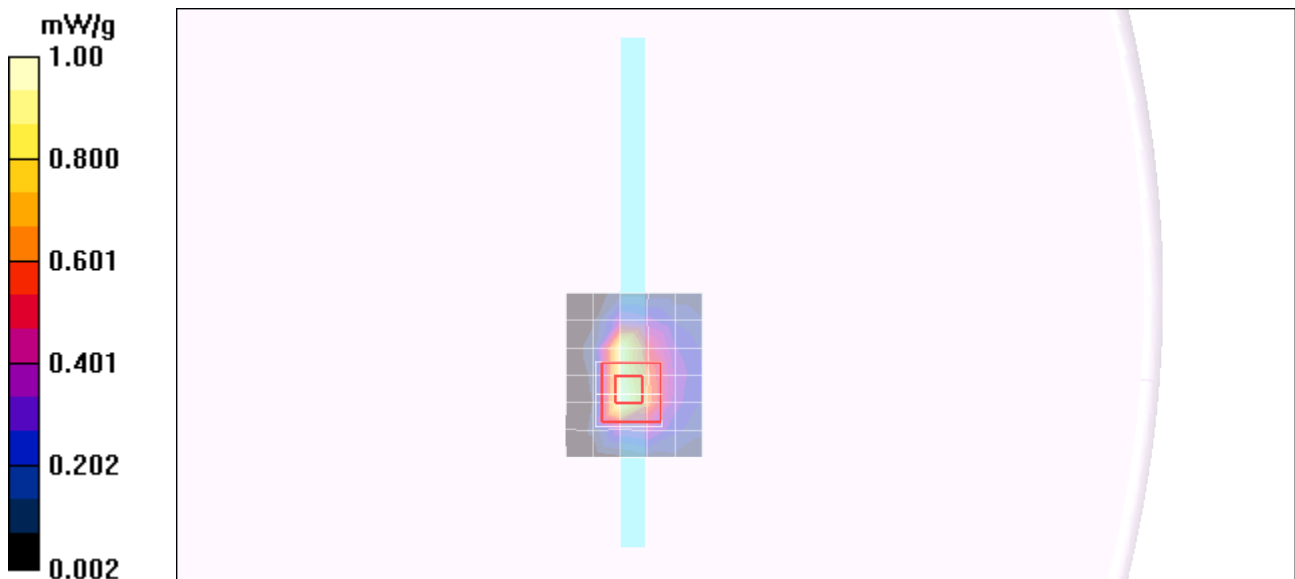
Reference Value = 14.4 V/m; Power Drift = -0.225 dB

Peak SAR (extrapolated) = 2.23 W/kg

**SAR(1 g) = 0.647 mW/g; SAR(10 g) = 0.226 mW/g**

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

Maximum value of SAR (measured) = 1.12 mW/g



Test Laboratory: Compliance Certification Services (UL CCS)

### 5.8GHz\_Primary portrait

DUT: Apple; Type: NA; Serial: NA

Communication System: 802.11abgn; Frequency: 5785 MHz;Duty Cycle: 1:1

### 802.11a\_ch 157/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

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

Maximum value of SAR (measured) = 1.11 mW/g

