# APPENDIX 2: SAR Measurement data

## Appendix 2-1: Evaluation procedure

The SAR evaluation was performed with the following procedure:

**Step 1:** Measurement of the E-field at a fixed location above the central position of flat phantom was used as a reference value for assessing the power drop.

**Step 2:** The SAR distribution at the exposed side of head or body position was measured at a distance of each device from the inner surface of the shell. The area covered the entire dimension of the antenna of EUT and suitable horizontal grid spacing of EUT. Based on these data, the area of the maximum absorption was determined by splines interpolation.

**Step 3:** Around this point found in the Step 2 (area scan), a volume of more than or equal to 30mm(X axis)×30mm(Y axis)×30mm(Z axis) was assessed by measuring 7×7×7 points (or more) under 3GHz and a volume of more than or equal to 28mm(X axis)×28mm(Y axis)×24mm (Z axis) was assessed by measuring 8×8×7 (ratio step method (*1)) points (or more) for 3-6GHz frequency band.
Any additional peaks found in the Step2 which are within 2dB of limit are repeated with this Step3 (Zoom scan).
On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:

(1) The data at the surface were extrapolated, since the center of the dipoles is 1mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 2mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

(2) The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one-dimensional splines with the "Not a knot"-condition (in x, y and z-directions). The volume was integrated with the trapezoidal-algorithm. One thousand points (10×10×10) were interpolated to calculate the average.

(3) All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

**Step 4**: Re-measurement of the E-field at the same location as in Step 1 for the assessment of the power drift.

**Step 5**: Repeat Step 1-Step 4 with other condition or/and setup of EUT.

*1. Ratio step method parameters used; the first measurement point: "1.4mm" from the phantom surface, the initial grid separation: "1.4mm", subsequent graded grid ratio: "1.4". These parameters comply with the requirement of the KDB 865664 D01 (v01) and recommended by Schmid & Partner Engineering AG (DASY5 manual).

## Appendix 2-2: Measurement data (2412-2462 MHz band)

### Step 1a: Change the positions, operation mode and channels

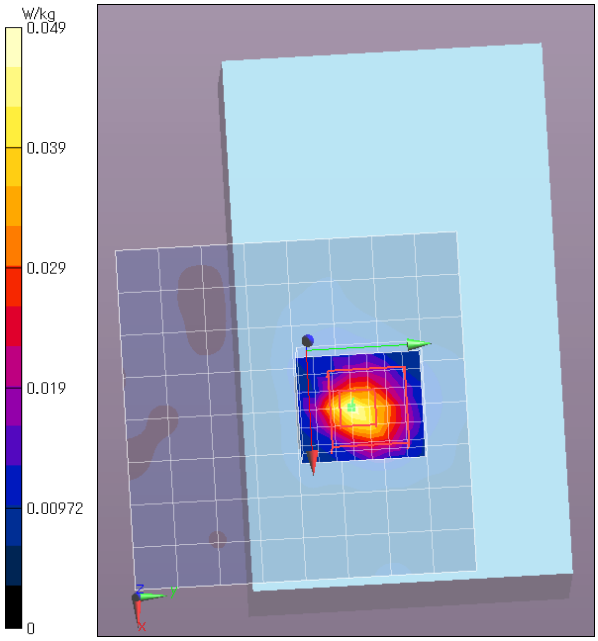
### Step 1a-1: Top-left (LCD position: reverse close) / touch / 11b (1Mbps) / 2437 MHz (6ch)

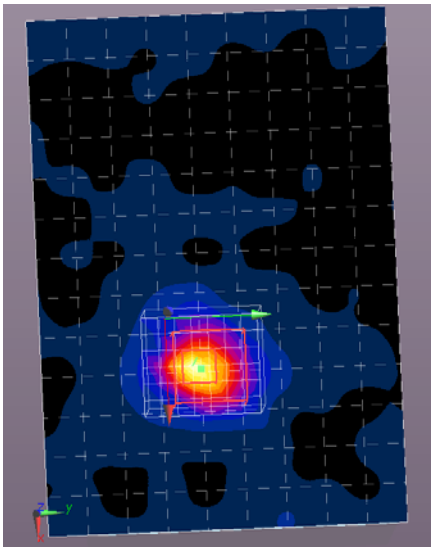
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11b(1Mbps, DBPSK/DSSS); Frequency: 2437 MHz; Crest Factor: 1.0**
**Medium: M2450; Medium parameters used: f = 2437 MHz; $\sigma$ = 1.993 S/m; $\varepsilon_r$ = 50.61; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(6.77, 6.77, 6.77); Calibrated: 2012/06/21;
-Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0, 161.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/f1,top-left(lcd=rev.close)&touch(d0mm),11b(1m),m2437/**
**Area Scan:96x96,12 (9x9x1):** Measurement grid: dx=12mm, dy=12mm; Maximum value of SAR (measured) = 0.0391 W/kg
**Area Scan:96x96,12 (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm; Maximum value of SAR (interpolated) = 0.0425 W/kg
**Area Scan(all):156x108,12 (14x10x1):** Measurement grid: dx=12mm, dy=12mm; Maximum value of SAR (measured) = 0.0467 W/kg
**Area Scan(all):156x108,12 (131x91x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm; Maximum value of SAR (interpolated) = 0.0470 W/kg
**Z Scan:160,5 (1x1x33):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.285 W/kg

**Zoom Scan:30x30x30,5 (7x8x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm;
Reference Value = 4.914 V/m; Power Drift = 0.17 dB, Maximum value of SAR (measured) = 0.0486 W/kg
Peak SAR (extrapolated) = 0.077 mW/g
**SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.017 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/23; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 156mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 40 ± 5 %RH,
*.liquid temperature: 21.5(start)/21.6(end)/22.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 2-2: Measurement data (2412-2462 MHz band) (cont'd)
Step 1a: Change the positions, operation mode and channels (cont'd)

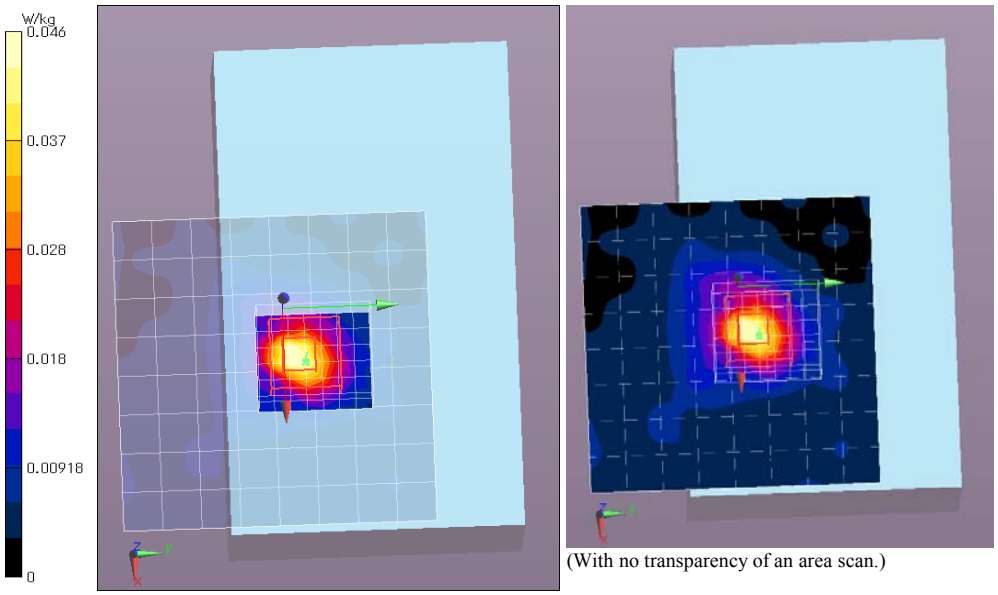
**Step 1a-2: Top-left (LCD position: normal close) / touch / 11b (1Mbps) / 2437 MHz (6ch)**
**->Highest SAR (1g) of 2412-2462MHz band**

**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11b(1Mbps, DBPSK/DSSS); Frequency: 2437 MHz; Crest Factor: 1.0**
**Medium: M2450; Medium parameters used: f = 2437 MHz; $\sigma$ = 1.993 S/m; $\varepsilon_r$ = 50.61; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

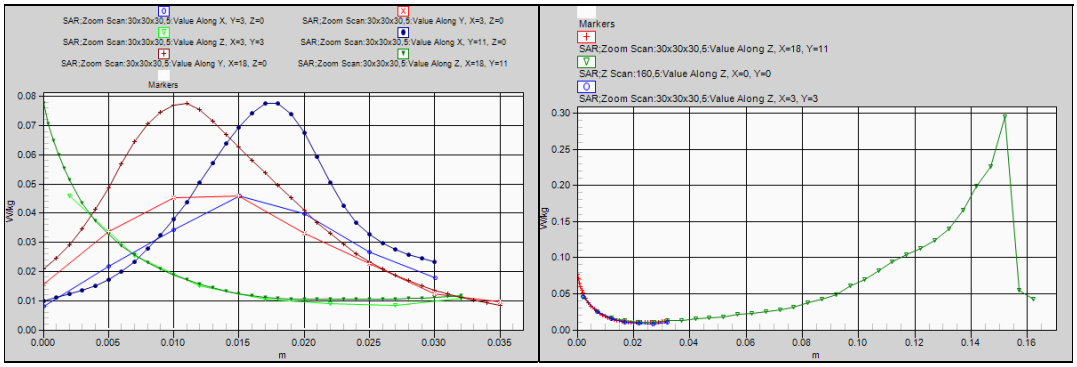
**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(6.77, 6.77, 6.77); Calibrated: 2012/06/21;
-Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0, 161.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/f2,top-left(lcd=nml.close)&touch(d0mm),11b(1m),m2437/**
**Area Scan:96x96,12 (9x9x1):** Measurement grid: dx=12mm, dy=12mm; Maximum value of SAR (measured) = 0.0400 W/kg
**Area Scan:96x96,12 (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm; Maximum value of SAR (interpolated) = 0.0429 W/kg
**Z Scan:160,5 (1x1x33):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.295 W/kg

**Zoom Scan:30x30x30,5 (7x8x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm;
Reference Value = 4.956 V/m; Power Drift = -0.20 dB, Maximum value of SAR (measured) = 0.0459 W/kg
Peak SAR (extrapolated) = 0.078 mW/g
**SAR(1 g) = 0.032 mW/g (*. Highest of 11b mode); SAR(10 g) = 0.017 mW/g**



(With no transparency of an area scan.)




Remarks: *. Date tested: 2013/01/23; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 156mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 40 ± 5 %RH,
*.liquid temperature: 21.6(start)/21.7(end)/22.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 2-2: Measurement data (2412-2462 MHz band) (cont'd)
Step 1a: Change the positions, operation mode and channels (cont'd)

## Step 1a-3: Top-left (LCD position: open) / touch / 11b (1Mbps) / 2437 MHz (6ch)

## Run f3: Worst Pos.: Top-left (LCD=OP)&touch / 11b(1Mbps, set=12dBm)<-Max.Out.pwr / 2437MHz (6ch)

Date/Time: 2013/01/23 11:10:19

**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**

**Communication System: IEEE 802.11b(1Mbps, DBPSK/DSSS); Frequency: 2437 MHz; Crest Factor: 1.0**

**Medium: M2450; Medium parameters used: f = 2437 MHz; $\sigma$ = 1.993 S/m; $\varepsilon_r$ = 50.61; $\rho$ = 1000 kg/m$^3$**

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

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(6.77, 6.77, 6.77); Calibrated: 2012/06/21;
-Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0, 161.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

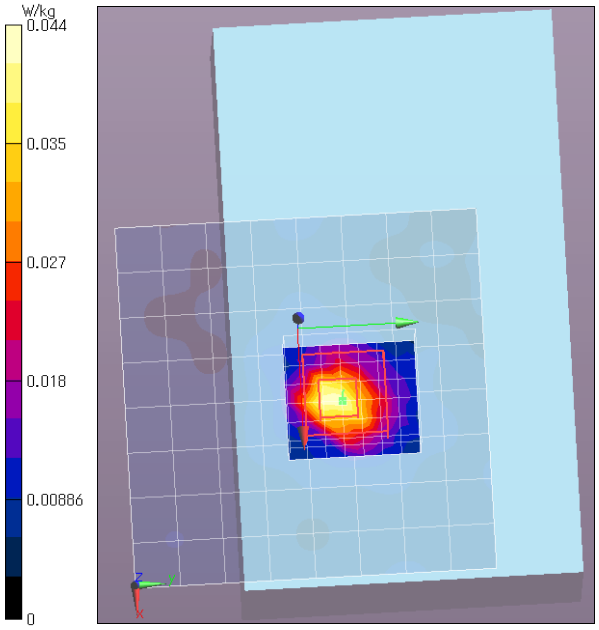
**desktop&handheld/f3,top-left(lcd=open)&touch(d0mm),11b(1m),m2437/**

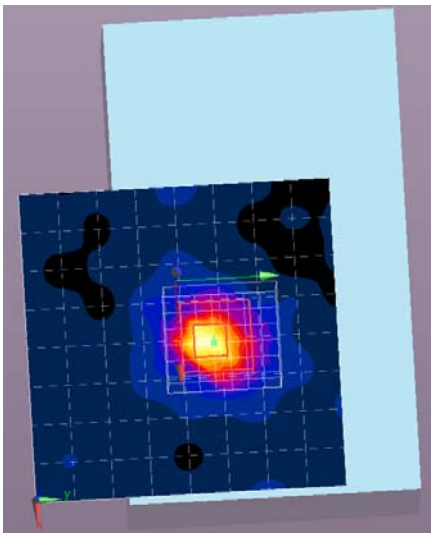
**Area Scan:96x96,12 (9x9x1):** Measurement grid: dx=12mm, dy=12mm; Maximum value of SAR (measured) = 0.0361 W/kg

**Area Scan:96x96,12 (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm; Maximum value of SAR (interpolated) = 0.0376 W/kg

**Z Scan:160,5 (1x1x33):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.337 W/kg

**Zoom Scan:30x30x30,5 (7x8x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm;
Reference Value = 4.802 V/m; Power Drift = 0.20 dB, Maximum value of SAR (measured) = 0.0443 W/kg
Peak SAR (extrapolated) = 0.063 mW/g
**SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.018 mW/g**



(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/23; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 156mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 40 ± 5 %RH,
*.liquid temperature: 21.7(start)/21.8(end)/22.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

**Appendix 2-2: Measurement data (2412-2462 MHz band) (cont'd)**
**Step 1a: Change the positions, operation mode and channels (cont'd)**

## Step 1a-4: Top (LCD position: normal close) / touch / 11b (1Mbps) / 2437 MHz (6ch)

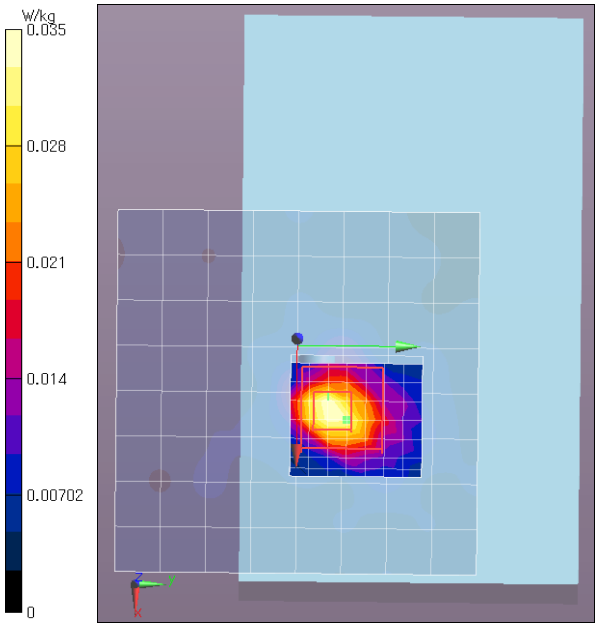
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**

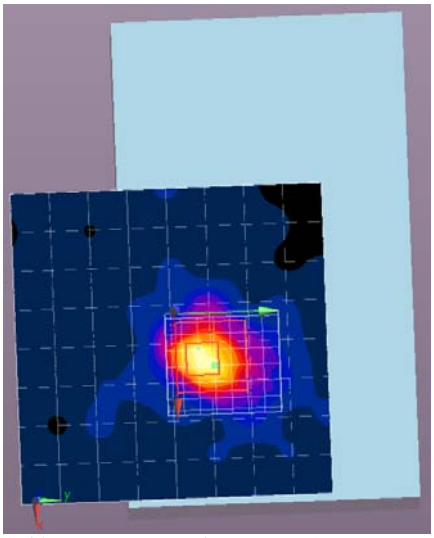
**Communication System: IEEE 802.11b(1Mbps, DBPSK/DSSS); Frequency: 2437 MHz; Crest Factor: 1.0**
**Medium: M2450; Medium parameters used: f = 2437 MHz; $\sigma$ = 1.993 S/m; $\varepsilon_r$ = 50.61; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(6.77, 6.77, 6.77); Calibrated: 2012/06/21;
-Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0, 161.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/f5,top(lcd=rev.close)&touch(d0mm),11b(1m),m2437/**
**Area Scan:96x96,12 (9x9x1):** Measurement grid: dx=12mm, dy=12mm; Maximum value of SAR (measured) = 0.0284 W/kg
**Area Scan:96x96,12 (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm; Maximum value of SAR (interpolated) = 0.0316 W/kg
**Z Scan:160,5 (1x1x33):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.305 W/kg

**Zoom Scan:30x30x30,5 (7x8x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm;
Reference Value = 4.172 V/m; Power Drift = 0.20 dB, Maximum value of SAR (measured) = 0.0351 W/kg
Peak SAR (extrapolated) = 0.062 mW/g
**SAR(1 g) = 0.025 mW/g; SAR(10 g) = 0.014 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/23; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 156mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 40 ± 5 %RH,
*.liquid temperature: 21.8(start)/21.9(end)/22.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 2-2: Measurement data (2412-2462 MHz band) (cont'd)
Step 1a: Change the positions, operation mode and channels (cont'd)

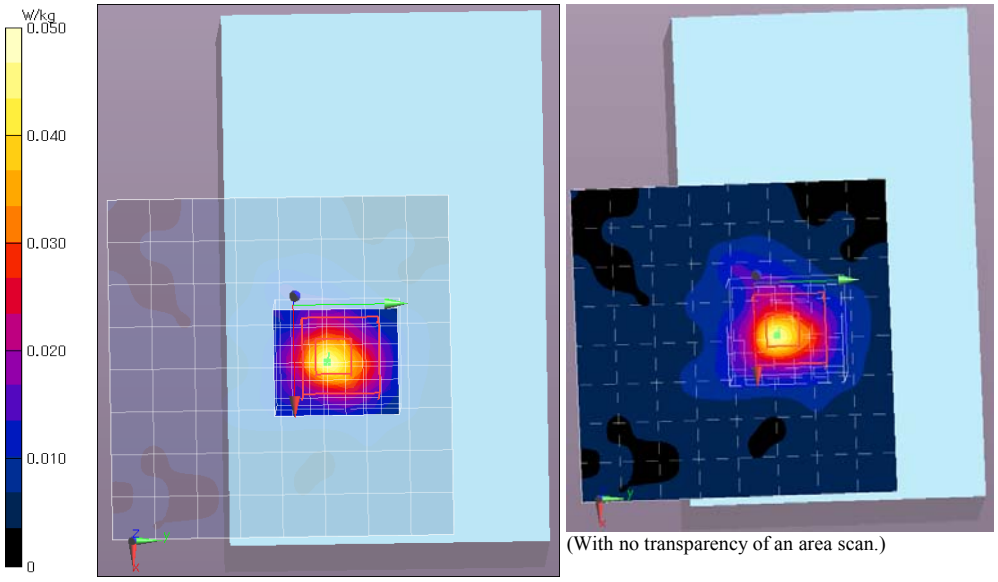
**Step 1a-5: Top-left (LCD position: normal close) / touch / 11n(40HT) (MCS0) / 2437 MHz (6ch)**
**->Highest SAR (1g) of 2412-2462MHz band**

**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11n(40HT)(MCS0, BPSK/OFDM); Frequency: 2437 MHz; Crest Factor: 1.0**
**Medium: M2450; Medium parameters used: f = 2437 MHz; $\sigma$ = 1.993 S/m; $\varepsilon_r$ = 50.61; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

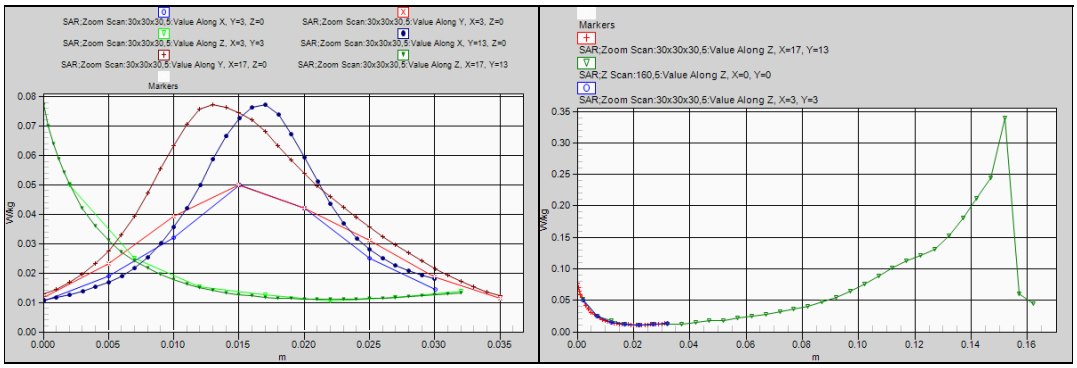
**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(6.77, 6.77, 6.77); Calibrated: 2012/06/21;
-Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0, 161.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/f4,Mode;top-left(lcd=nml.close)&touch(d0mm),11n40(mcs0),m2437/**
**Area Scan:96x96,12 (9x9x1):** Measurement grid: dx=12mm, dy=12mm; Maximum value of SAR (measured) = 0.0460 W/kg
**Area Scan:96x96,12 (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm; Maximum value of SAR (interpolated) = 0.0470 W/kg
**Z Scan:160,5 (1x1x33):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.339 W/kg

**Zoom Scan:30x30x30,5 (7x8x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm;
Reference Value = 5.160 V/m; Power Drift = 0.07 dB, Maximum value of SAR (measured) = 0.0500 W/kg
Peak SAR (extrapolated) = 0.077 mW/g
**SAR(1 g) = 0.032 mW/g (*. Highest of 11n(40HT) mode); SAR(10 g) = 0.018 mW/g**



(With no transparency of an area scan.)




Remarks: *. Date tested: 2013/01/23; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 156mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 40 ± 5 %RH,
*.liquid temperature: 21.8(start)/21.8(end)/22.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

## Appendix 2-3: Measurement data (5260-5320 MHz band)

### Step 1b: Change the positions, operation mode and channels

### Step 1b-1: Top-left (LCD position: normal close) / touch / 11a (6Mbps) / 5280 MHz (56ch)

**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**

**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5280 MHz; Crest Factor: 1.0**

**Medium: MSL5800; Medium parameters used: f = 5280 MHz; $\sigma$ = 5.563 S/m; $\varepsilon_r$ = 47.06; $\rho$ = 1000 kg/m$^3$**

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

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

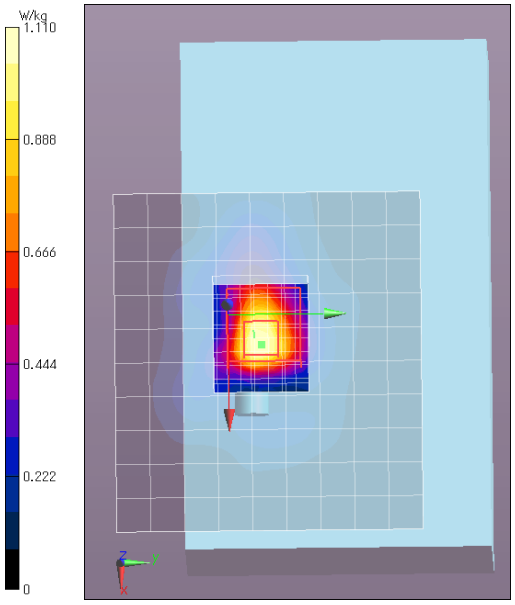
**desktop&handheld/b5-2,top-left(lcd=nml.close)&touch(d0mm),11a(6m),m5280(56)/**

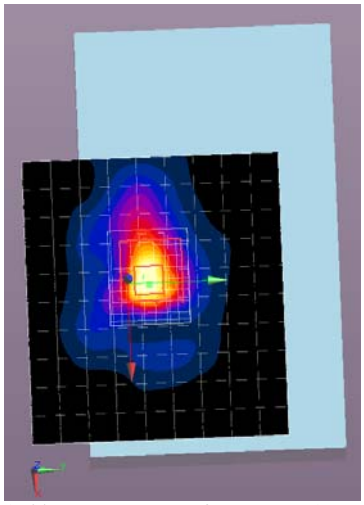
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 1.04 W/kg

**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.32 W/kg

**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 1.13 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (9x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 16.670 V/m; Power Drift = -0.16 dB, Maximum value of SAR (measured) = 1.11 W/kg
Peak SAR (extrapolated) = 1.792 mW/g
**SAR(1 g) = 0.532 mW/g; SAR(10 g) = 0.221 mW/g**



(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/25; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 130mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.1(start)/23.2(end)/24.3(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 2-3: Measurement data (5260-5320 MHz band) (cont'd)
Step 1b: Change the positions, operation mode and channels (cont'd)

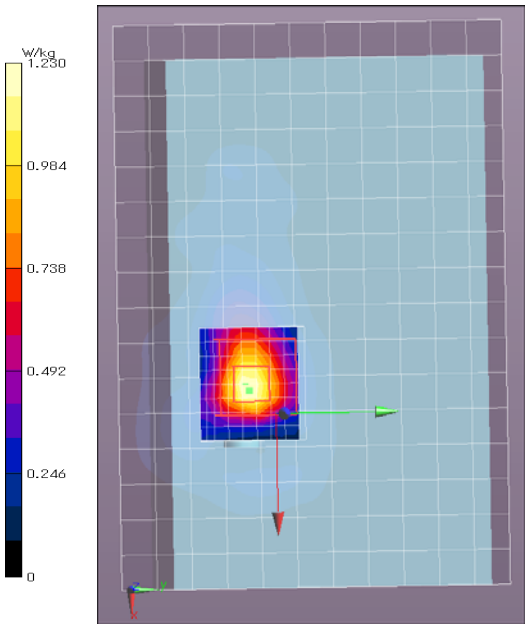
**Step 1b-2: Top-left (LCD position: reverse close) / touch / 11a (6Mbps) / 5280 MHz (56ch)**

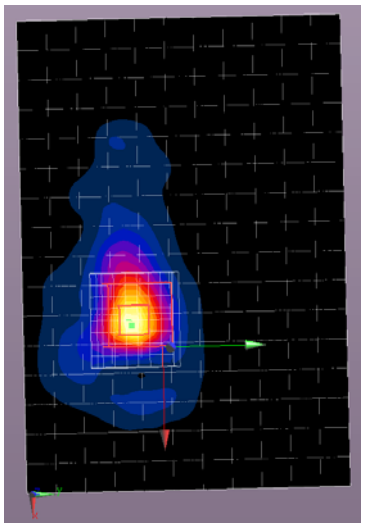
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5280 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5280 MHz; $\sigma$ = 5.563 S/m; $\varepsilon_r$ = 47.06; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/b5-1re,top-left(lcd=rev.close)&touch(d0mm),11a(6m),m5280(56)/**
**Area Scan(all):160x110,10 (17x12x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.987 W/kg
**Area Scan(all):160x110,10 (161x111x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.13 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 1.22 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (9x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 16.387 V/m; Power Drift = -0.01 dB, Maximum value of SAR (measured) = 1.23 W/kg
Peak SAR (extrapolated) = 1.988 mW/g
**SAR(1 g) = 0.575 mW/g; SAR(10 g) = 0.227 mW/g**



(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/24; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 130mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.2(start)/23.2(end)/24.3(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

**Appendix 2-3: Measurement data (5260-5320 MHz band) (cont'd)**
**Step 1b: Change the positions, operation mode and channels (cont'd)**

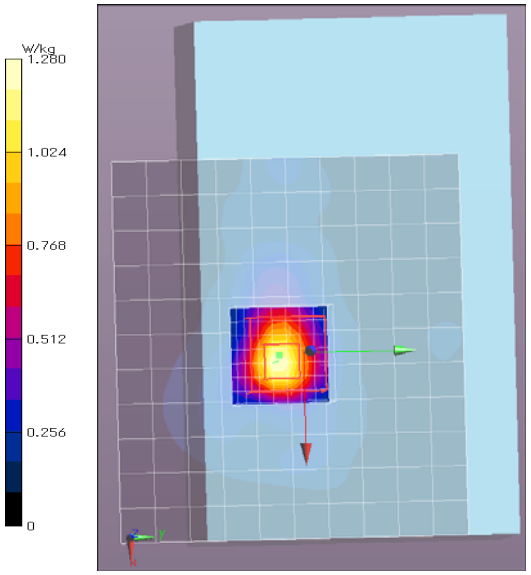
**Step 1b-3: Top-left (LCD position: open) / touch / 11a (6Mbps) / 5280 MHz (56ch)**
**->Highest SAR (1g) of 5260-5320MHz band**

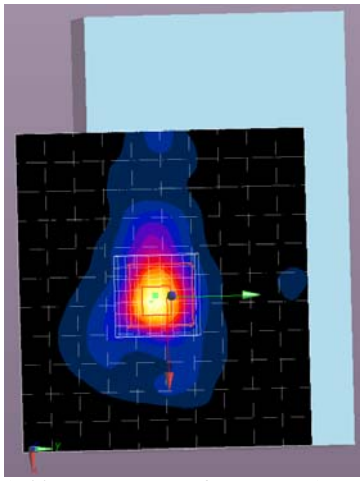
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5280 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5280 MHz; $\sigma$ = 5.563 S/m; $\varepsilon_r$ = 47.06; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

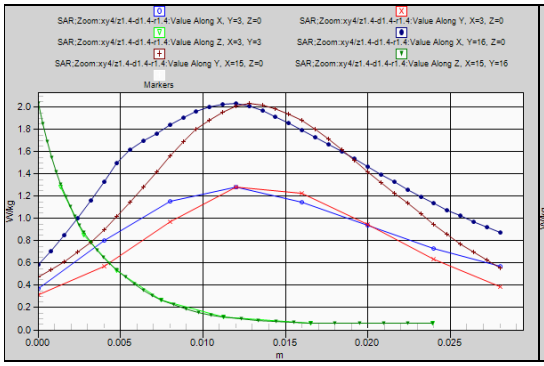
**desktop&handheld/b5-4,top-left(lcd=open)&touch(d0mm),11a(6m),m5280(56)/**
**Area Scan(all):110x100,10 (12x11x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 1.17 W/kg
**Area Scan(all):110x100,10 (111x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.33 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 1.26 W/kg

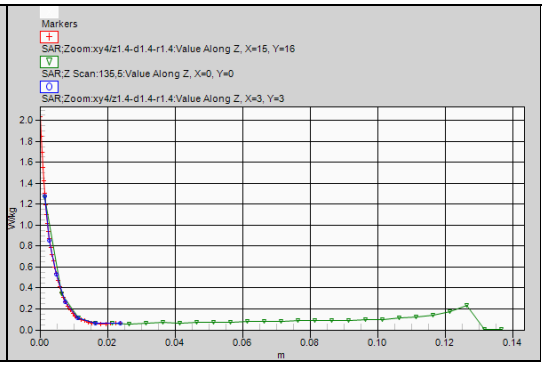
**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 17.281 V/m; Power Drift = -0.06 dB, Maximum value of SAR (measured) = 1.28 W/kg
Peak SAR (extrapolated) = 2.033 mW/g
**SAR(1 g) = 0.591 mW/g (*. Highest of 11a mode (W53)); SAR(10 g) = 0.241 mW/g**



(With no transparency of an area scan.)




Remarks: *. Date tested: 2013/01/25; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 130mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.3(start)/23.3(end)/24.3(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 2-3: Measurement data (5260-5320 MHz band) (cont'd)
Step 1b: Change the positions, operation mode and channels (cont'd)

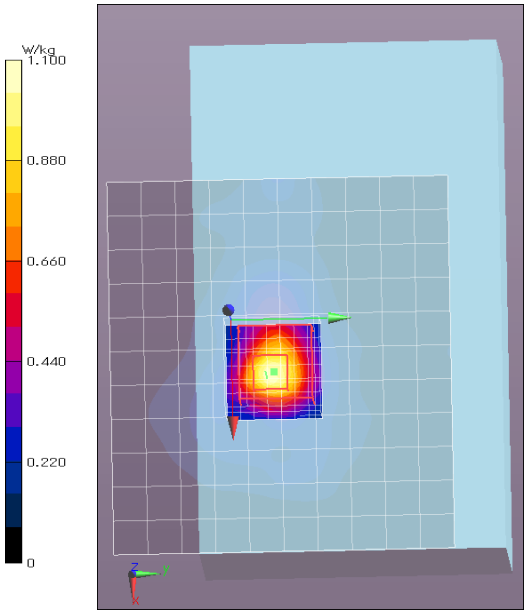
## Step 1b-4: Top-left (LCD position: open) / touch / 11a (6Mbps) / 5320 MHz (64ch)

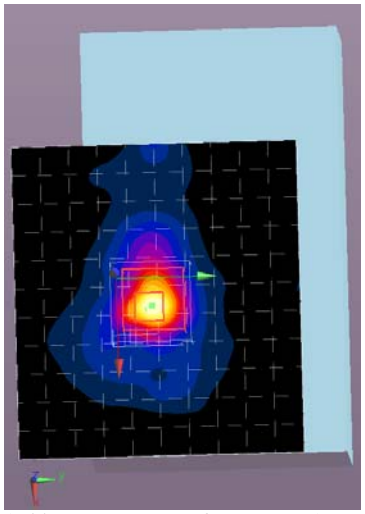
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5320 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5320 MHz; $\sigma$ = 5.54 S/m; $\varepsilon_r$ = 46.9; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/b5-5,CH;top-left(lcd=open)&touch(d0mm),11a(6m),m5320(64)/**
**Area Scan(all):110x100,10 (12x11x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 1.01 W/kg
**Area Scan(all):110x100,10 (111x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.14 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 1.22 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 16.249 V/m; Power Drift = 0.05 dB, Maximum value of SAR (measured) = 1.10 W/kg
Peak SAR (extrapolated) = 1.684 mW/g
**SAR(1 g) = 0.519 mW/g; SAR(10 g) = 0.217 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/25; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 130mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.3(start)/23.3(end)/24.3(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 2-3: Measurement data (5260-5320 MHz band) (cont'd)
Step 1b: Change the positions, operation mode and channels (cont'd)

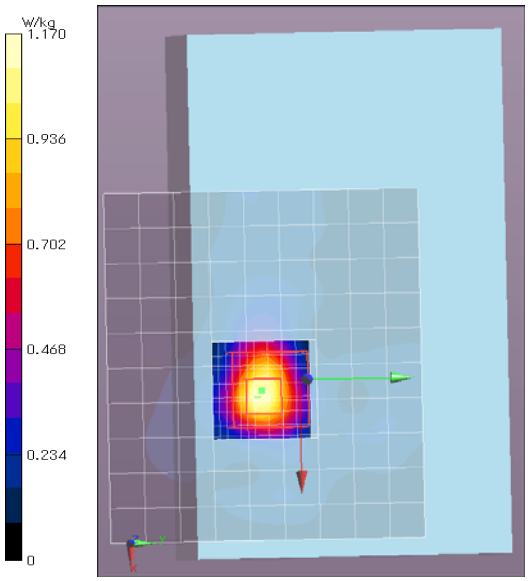
**Step 1b-5: Top (LCD position: reverse close) / touch / 11a (6Mbps) / 5280 MHz (56ch)**

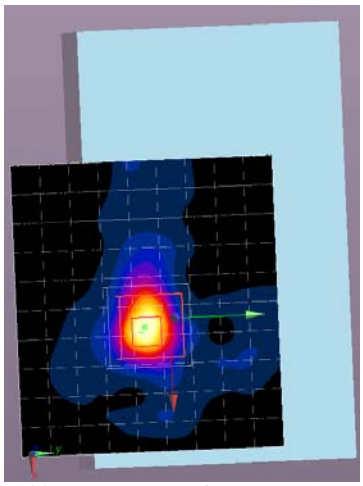
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5280 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5280 MHz; $\sigma$ = 5.563 S/m; $\varepsilon_r$ = 47.06; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/b5-6,top(lcd=open)&touch(d0mm),11a(6m),m5280(56)/**
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.996 W/kg
**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.31 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 1.17 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 16.651 V/m; Power Drift = -0.13 dB, Maximum value of SAR (measured) = 1.17 W/kg
Peak SAR (extrapolated) = 1.805 mW/g
**SAR(1 g) = 0.552 mW/g; SAR(10 g) = 0.219 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/25; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 130mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.3(start)/23.4(end)/24.3(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 2-3: Measurement data (5260-5320 MHz band) (cont'd)
Step 1b: Change the positions, operation mode and channels (cont'd)

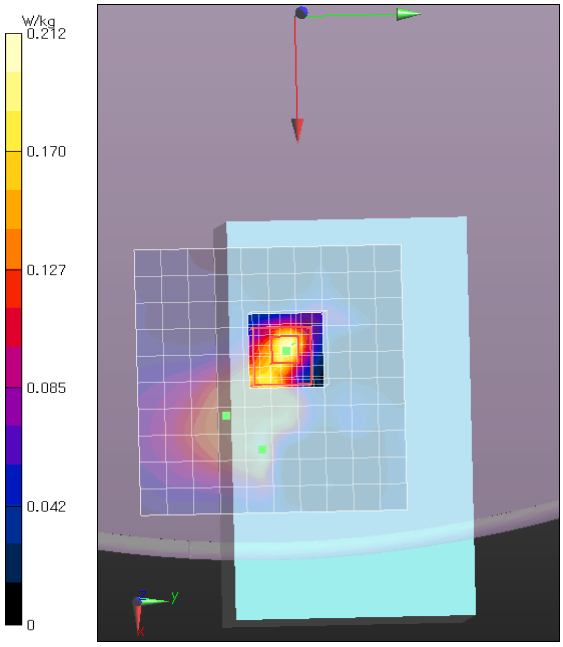
## Step 1b-6: Left (LCD position: open) / touch / 11a (6Mbps) / 5280 MHz (56ch)

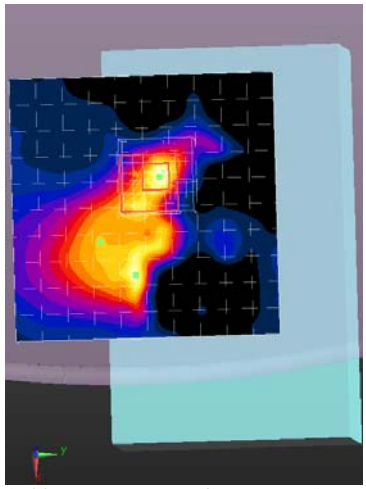
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5280 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5280 MHz; $\sigma$ = 5.504 S/m; $\varepsilon_r$ = 47.19; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 25.0, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/b5-21,left(lcd=open)&touch(d0mm),11a(6m),m5280(56)/**
**Area Scan(all):100x100,10 (11x11x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.173 W/kg
**Area Scan(all):100x100,10 (101x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 0.210 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.209 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 7.007 V/m; Power Drift = -0.20 dB, Maximum value of SAR (measured) = 0.212 W/kg
Peak SAR (extrapolated) = 0.455 mW/g
**SAR(1 g) = 0.072 mW/g; SAR(10 g) = 0.029 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/29; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 131mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.6(start)/23.6(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 2-3: Measurement data (5260-5320 MHz band) (cont'd)
Step 1b: Change the positions, operation mode and channels (cont'd)

## Step 1b-7: Top-left (LCD position: open) / touch / 11n(20HT) (MCS0) / 5270 MHz (54ch)

**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**

**Communication System: IEEE 802.11n(40HT)(MCS0, BPSK/OFDM); Frequency: 5270 MHz; Crest Factor: 1.0**

**Medium: MSL5800; Medium parameters used: f = 5270 MHz; $\sigma$ = 5.442 S/m; $\varepsilon_r$ = 47.22; $\rho$ = 1000 kg/m$^3$**

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

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

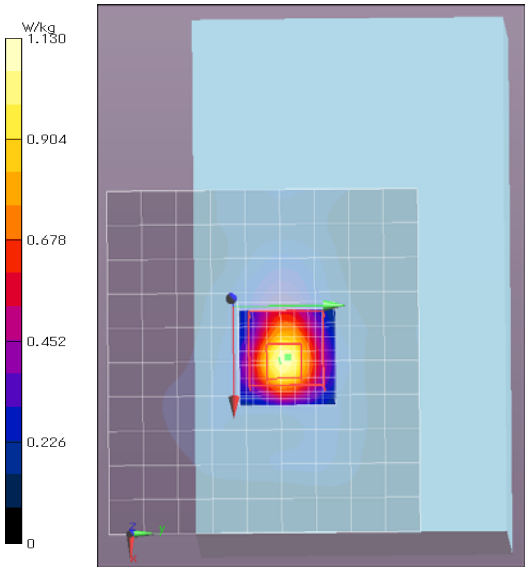
**desktop&handheld/b5-12,Mode;top-left(lcd=open)&touch(d0mm),11n40(mcs0),m5270(54)/**

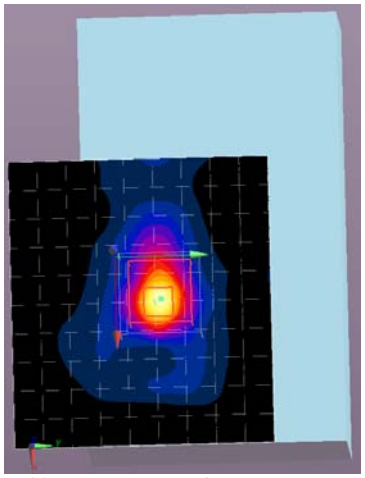
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 1.06 W/kg

**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.09 W/kg

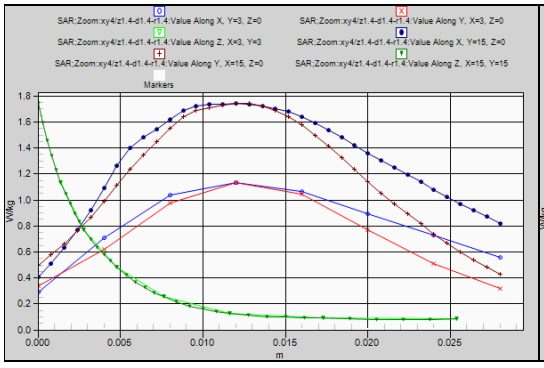
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 1.14 W/kg

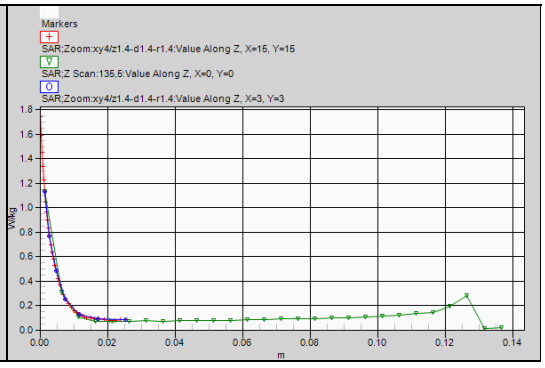
**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 16.399 V/m; Power Drift = -0.20 dB, Maximum value of SAR (measured) = 1.13 W/kg
Peak SAR (extrapolated) = 1.742 mW/g
**SAR(1 g) = 0.545 mW/g (*. Highest of 11n(40HT) mode (W53)); SAR(10 g) = 0.234 mW/g**



(With no transparency of an area scan.)




Remarks: *. Date tested: 2013/01/28; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 132mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.7(start)/23.6(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 2-3: Measurement data (5260-5320 MHz band) (cont'd)
Step 1b: Change the positions, operation mode and channels (cont'd)

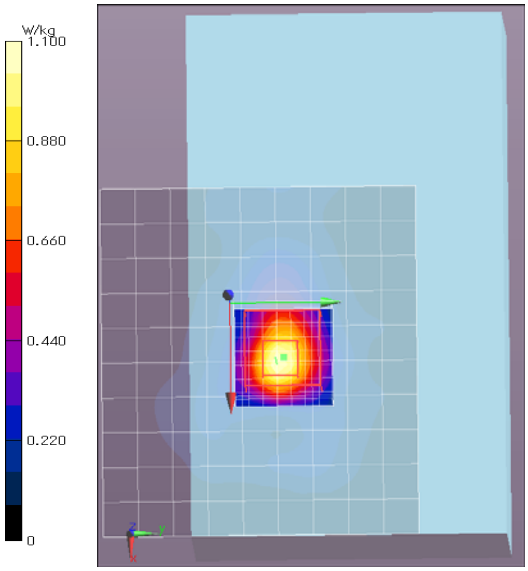
## Step 1b-8: Top-left (LCD position: open) / touch / 11n(20HT) (MCS0) / 5310 MHz (62ch)

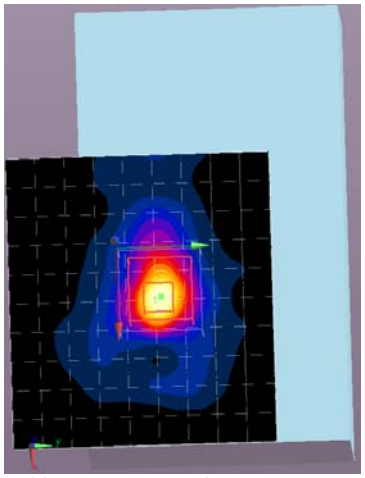
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11n(40HT)(MCS0, BPSK/OFDM); Frequency: 5310 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5310 MHz; $\sigma$ = 5.532 S/m; $\varepsilon_r$ = 46.96; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/b5-13,Mode&CH;top-left(lcd=open)&touch(d0mm),11n40(mcs0),m5310(62)/**
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 1.11 W/kg
**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.15 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 1.09 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 15.794 V/m; Power Drift = -0.11 dB, Maximum value of SAR (measured) = 1.10 W/kg
Peak SAR (extrapolated) = 1.704 mW/g
**SAR(1 g) = 0.525 mW/g; SAR(10 g) = 0.230 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/28; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 132mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.6(start)/23.6(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

**Appendix 2-3: Measurement data (5260-5320 MHz band) (cont'd)**

**Step 2b: Check the influence of metal accessory at left position**

**Step 2b-1: Left (LCD position: open) with Handle unit/ touch / 11a (6Mbps) / 5280 MHz (56ch)**

**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**

**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5280 MHz; Crest Factor: 1.0**

**Medium: MSL5800; Medium parameters used: f = 5280 MHz; $\sigma$ = 5.504 S/m; $\varepsilon_r$ = 47.19; $\rho$ = 1000 kg/m$^3$**

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

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 25.0, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

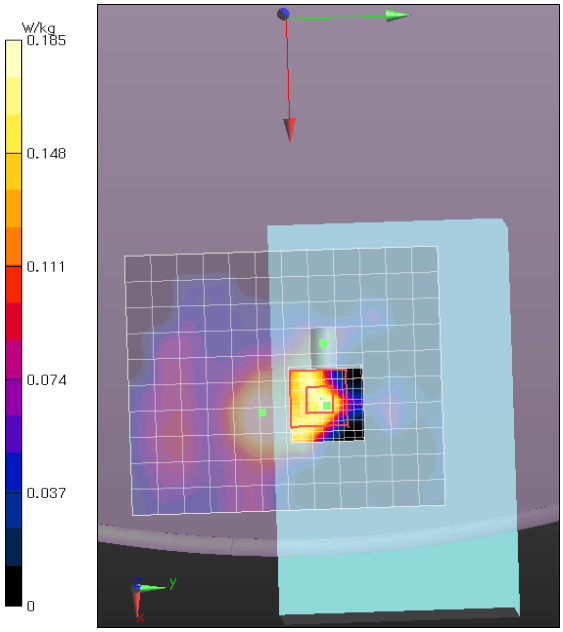
**desktop&handheld/b5-23,left(lcd=open)+handle&touch(d0mm),11a(6m),m5280(56)/**

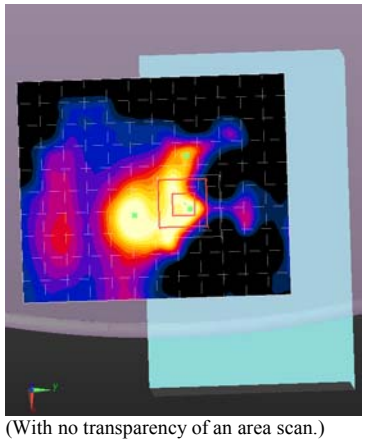
**Area Scan(all):100x120,10 (11x13x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.207 W/kg

**Area Scan(all):100x120,10 (101x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 0.216 W/kg

**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.188 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 6.797 V/m; Power Drift = -0.20 dB, Maximum value of SAR (measured) = 0.185 W/kg
Peak SAR (extrapolated) = 0.273 mW/g
**SAR(1 g) = 0.081 mW/g; SAR(10 g) = 0.029 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/29; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 131mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.6(start)/23.6(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

## Appendix 2-4: Measurement data (5745-5805 MHz band)

### Step 1c: Change the positions, operation mode and channels

### Step 1c-1: Top-left (LCD position: open) / touch / 11a (6Mbps) / 5765 MHz (153ch)

**->Highest SAR (1g) of 57450-5805MHz band**

**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**

**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5765 MHz; Crest Factor: 1.0**

**Medium: MSL5800; Medium parameters used: f = 5765 MHz; $\sigma$ = 6.126 S/m; $\varepsilon_r$ = 46.3; $\rho$ = 1000 kg/m$^3$**

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

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

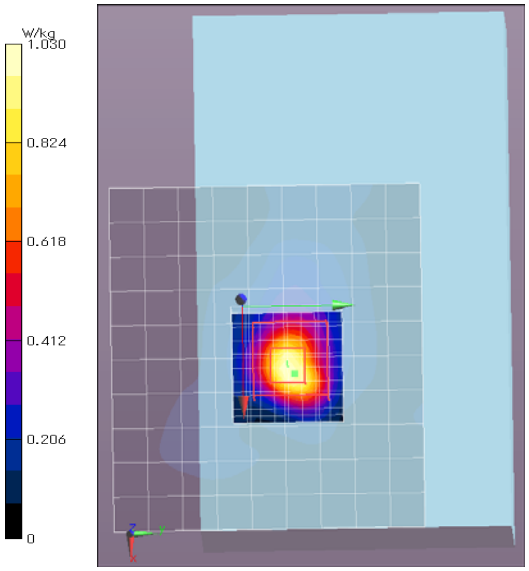
**desktop&handheld/b5-14,top-left(lcd=open)&touch(d0mm),11a(6m),m5765(153)/**

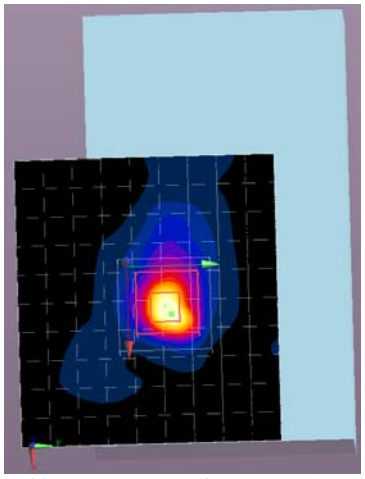
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.985 W/kg

**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.16 W/kg

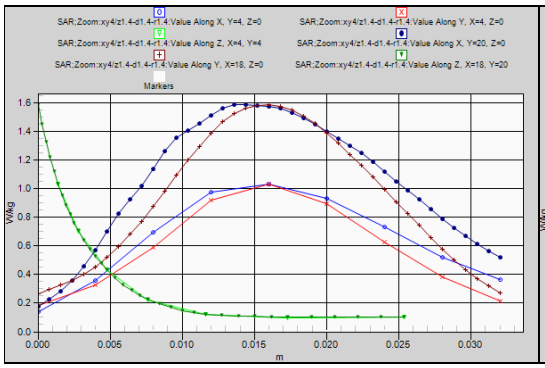
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.997 W/kg

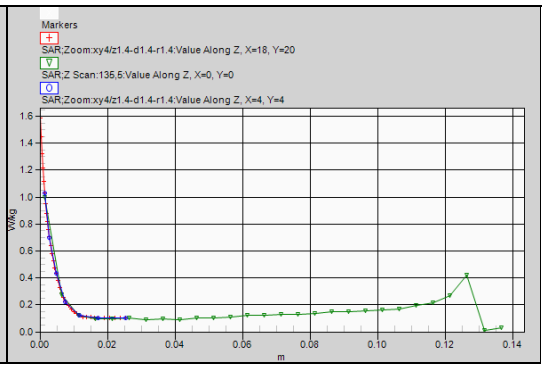
**Zoom:xy4/z1.4-d1.4-r1.4 (9x9x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 15.105 V/m; Power Drift = -0.11 dB, Maximum value of SAR (measured) = 1.03 W/kg
Peak SAR (extrapolated) = 1.584 mW/g
**SAR(1 g) = 0.492 mW/g (*. Highest of 11a mode (W58).); SAR(10 g) = 0.218 mW/g**



(With no transparency of an area scan.)




Remarks: *. Date tested: 2013/01/28; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 132mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.6(start)/23.6(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

**Appendix 2-4: Measurement data (5745-5805 MHz band) (cont'd)**
**Step 1c: Change the positions, operation mode and channels (cont'd)**

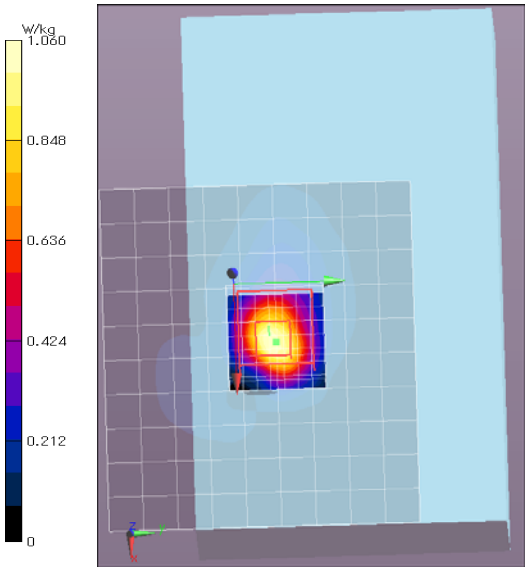
## Step 1c-2: Top-left (LCD position: reverse close) / touch / 11a (6Mbps) / 5765 MHz (153ch)

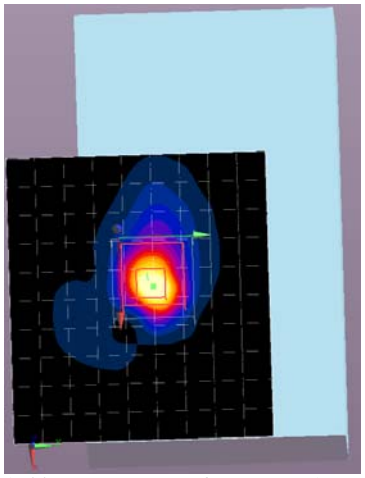
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5765 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5765 MHz; $\sigma$ = 6.126 S/m; $\varepsilon_r$ = 46.3; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/b5-15,top-left(lcd=rvs-cl)&touch(d0mm),11a(6m),m5765(153)/**
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 1.02 W/kg
**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.29 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 1.06 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 15.566 V/m; Power Drift = -0.18 dB, Maximum value of SAR (measured) = 1.06 W/kg
Peak SAR (extrapolated) = 1.674 mW/g
**SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.198 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/28; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 132mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.6(start)/23.5(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 2-4: Measurement data (5745-5805 MHz band) (cont'd)
Step 1c: Change the positions, operation mode and channels (cont'd)

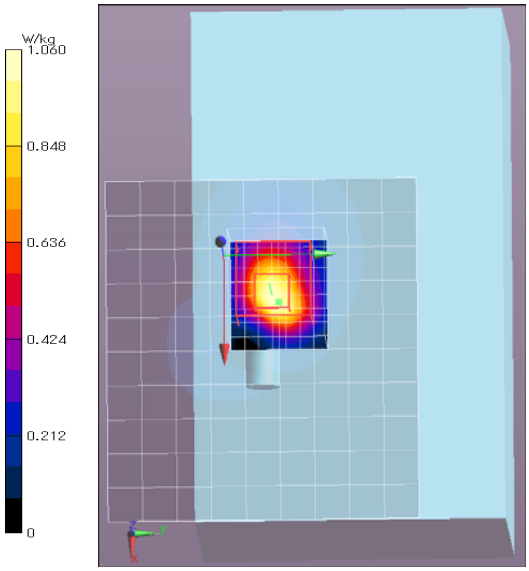
## Step 1c-3: Top-left (LCD position: normal close) / touch / 11a (6Mbps) / 5765 MHz (153ch)

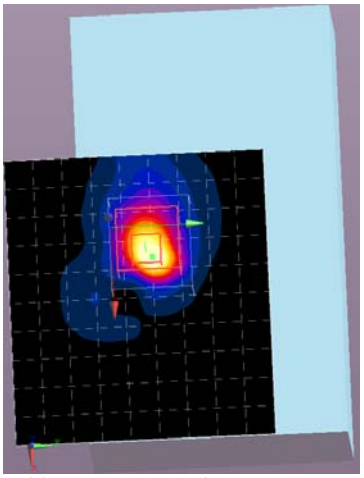
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5765 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5765 MHz; $\sigma$ = 6.126 S/m; $\varepsilon_r$ = 46.3; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

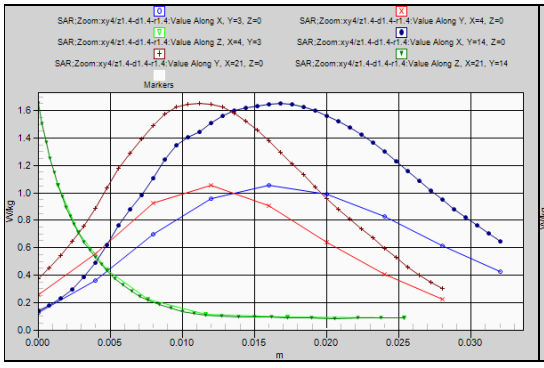
**desktop&handheld/b5-16,top-left(lcd=nml-cl)&touch(d0mm),11a(6m),m5765(153)/**
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.942 W/kg
**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.27 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 1.02 W/kg

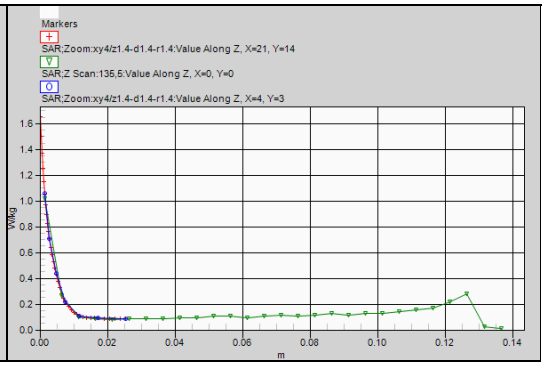
**Zoom:xy4/z1.4-d1.4-r1.4 (9x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 15.388 V/m; Power Drift = -0.20 dB, Maximum value of SAR (measured) = 1.06 W/kg
Peak SAR (extrapolated) = 1.651 mW/g
**SAR(1 g) = 0.491 mW/g; SAR(10 g) = 0.212 mW/g**



(With no transparency of an area scan.)




Remarks: *. Date tested: 2013/01/28; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 132mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.5(start)/23.5(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

**Appendix 2-4: Measurement data (5745-5805 MHz band) (cont'd)**
**Step 1c: Change the positions, operation mode and channels (cont'd)**

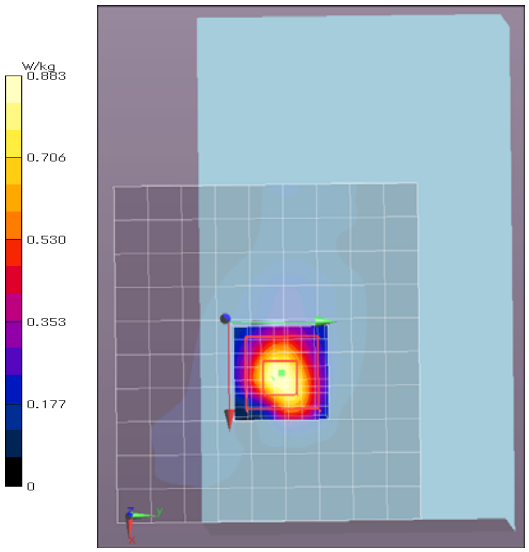
## Step 1c-4: Top-left (LCD position: open) / touch / 11a (6Mbps) / 5805 MHz (161ch)

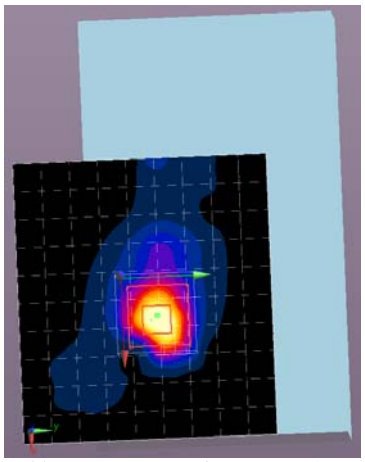
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5805 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5805 MHz; $\sigma$ = 6.198 S/m; $\varepsilon_r$ = 46.21; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/b5-17,CH;top-left(lcd=open)&touch(d0mm),11a(6m),m5805(161)/**
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.875 W/kg
**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.00 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.883 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 14.079 V/m; Power Drift = -0.20 dB, Maximum value of SAR (measured) = 0.883 W/kg
Peak SAR (extrapolated) = 1.409 mW/g
**SAR(1 g) = 0.416 mW/g; SAR(10 g) = 0.184 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/28; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 132mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.5(start)/23.4(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

**Appendix 2-4: Measurement data (5745-5805 MHz band) (cont'd)**
**Step 1c: Change the positions, operation mode and channels (cont'd)**

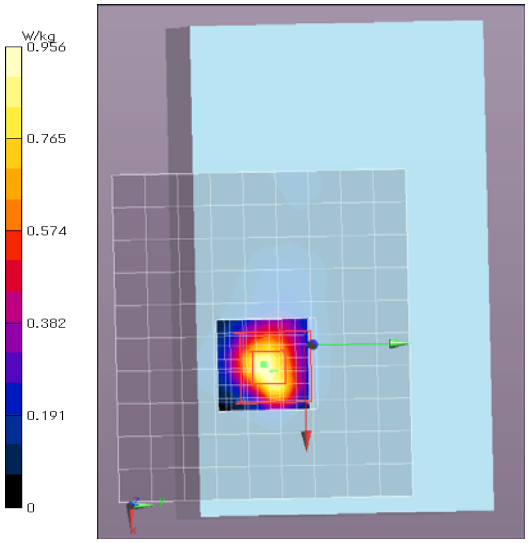
## Step 1c-5: Top (LCD position: reverse close) / touch / 11a (6Mbps) / 5765 MHz (153ch)

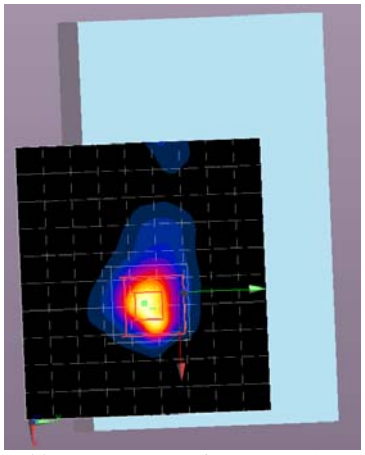
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5765 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5765 MHz; $\sigma$ = 6.163 S/m; $\varepsilon_r$ = 46.59; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 25.0, 136.0
-Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/b5-27,top(lcd=rvs-cl)&touch(d0mm),11a(6m),m5765(153)/**
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.763 W/kg
**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 0.965 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.924 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 14.951 V/m; Power Drift = -0.20 dB, Maximum value of SAR (measured) = 0.956 W/kg
Peak SAR (extrapolated) = 1.463 mW/g
**SAR(1 g) = 0.402 mW/g; SAR(10 g) = 0.128 mW/g** -R01





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/29; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 131mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.6(start)/23.6(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

**Appendix 2-4: Measurement data (5745-5805 MHz band) (cont'd)**
**Step 1c: Change the positions, operation mode and channels (cont'd)**

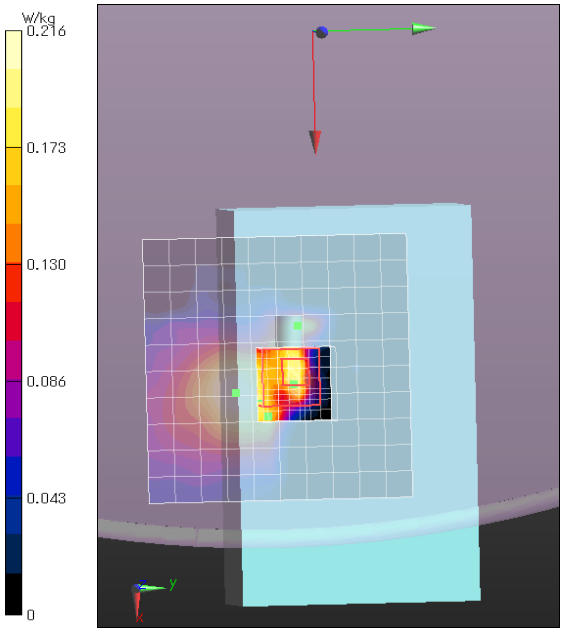
## Step 1c-6: Left (LCD position: open) / touch / 11a (6Mbps) / 5765 MHz (153ch)

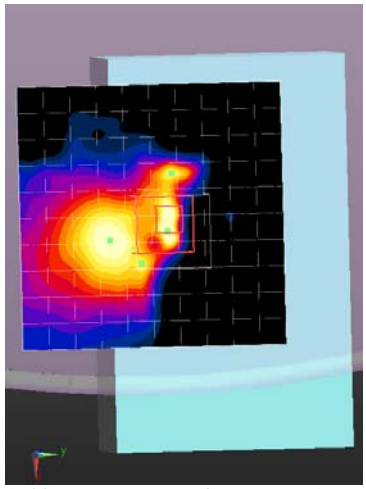
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5765 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5765 MHz; $\sigma$ = 6.163 S/m; $\varepsilon_r$ = 46.59; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 25.0, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/b5-22,left(lcd=open)&touch(d0mm),11a(6m),m5765(153)/**
**Area Scan(all):100x100,10 (11x11x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.209 W/kg
**Area Scan(all):100x100,10 (101x101x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 0.258 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.216 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 6.193 V/m; Power Drift = -0.05 dB, Maximum value of SAR (measured) = 0.216 W/kg
Peak SAR (extrapolated) = 0.345 mW/g
**SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.030 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/29; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 131mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.6(start)/23.6(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

**Appendix 2-4: Measurement data (5745-5805 MHz band) (cont'd)**
**Step 1c: Change the positions, operation mode and channels (cont'd)**

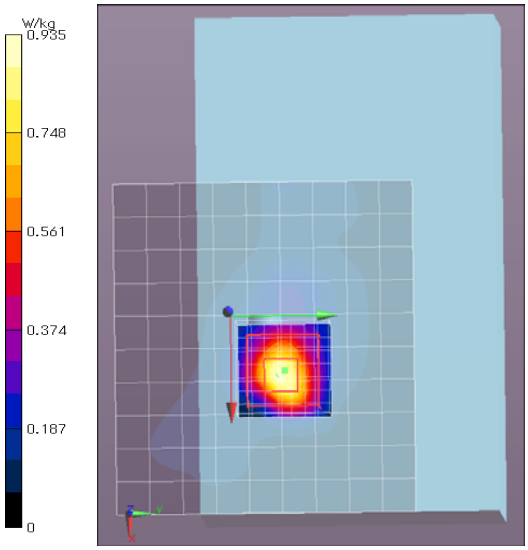
## Step 1c-7: Top-left (LCD position: open) / touch / 11n(40HT) (MCS0) / 5755 MHz (151ch)

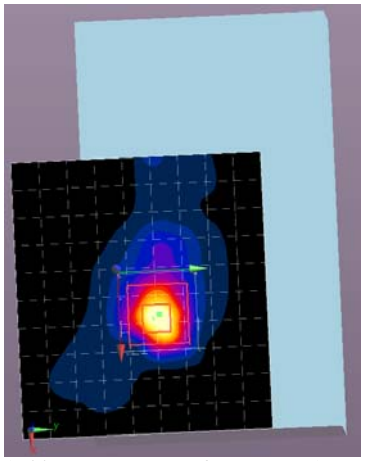
**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5755 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5755 MHz; $\sigma$ = 6.101 S/m; $\varepsilon_r$ = 46.35; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

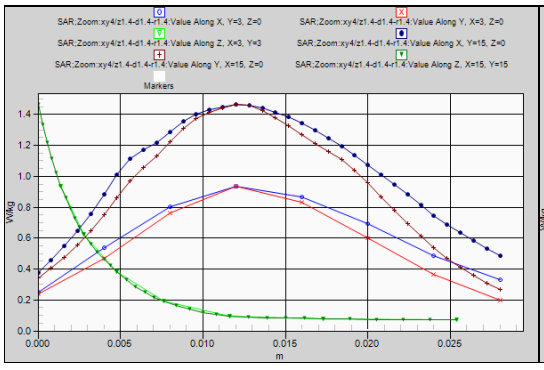
**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 25.0, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

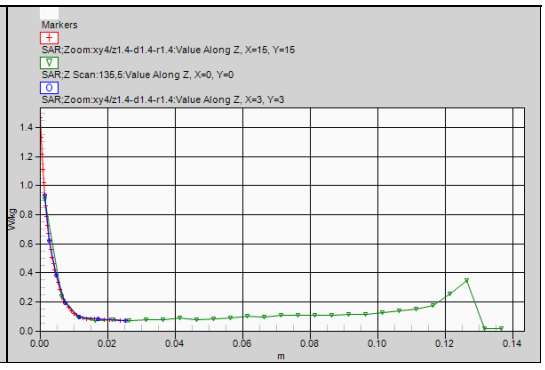
**desktop&handheld/b5-19,Mode;top-left(lcd=open)&touch(d0mm),11a(6m),m5755(151)/**
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.927 W/kg
**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.01 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.900 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 14.430 V/m; Power Drift = -0.12 dB, Maximum value of SAR (measured) = 0.935 W/kg
Peak SAR (extrapolated) = 1.464 mW/g
**SAR(1 g) = 0.432 mW/g (*. Highest of 11n(40HT) mode (W58)); SAR(10 g) = 0.185 mW/g**





(With no transparency of an area scan.)




Remarks: *. Date tested: 2013/01/28; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 132mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.4(start)/23.4(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

**Appendix 2-4: Measurement data (5745-5805 MHz band) (cont'd)**
**Step 1c: Change the positions, operation mode and channels (cont'd)**

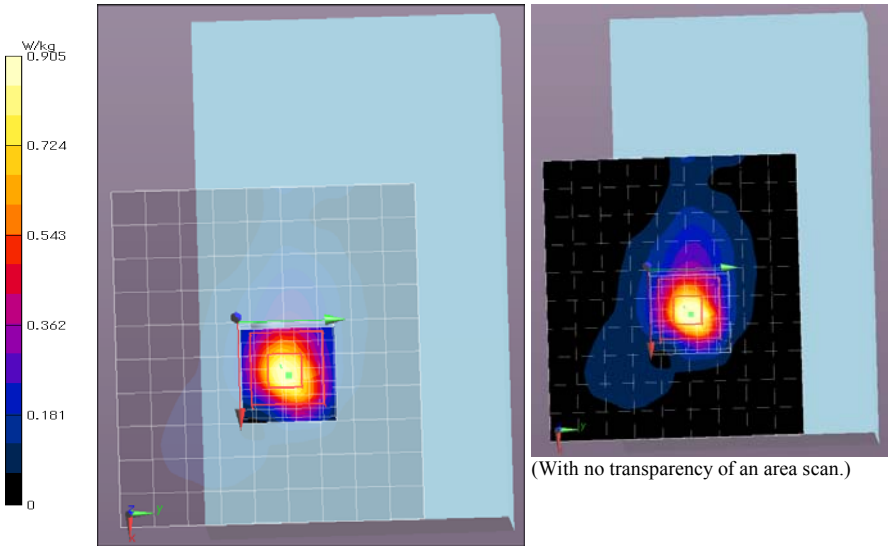
## Step 1c-8: Top-left (LCD position: reverse close) / touch / 11n(40HT) (MCS0) / 5795 MHz (159ch)

**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**
**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5795 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5795 MHz; $\sigma$ = 6.158 S/m; $\varepsilon_r$ = 46.15; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 25.0, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**desktop&handheld/b5-20,Mode&CH;top-left(lcd=open)&touch(d0mm),11a(6m),m5795(159)/**
**Area Scan(all):100x90,10 (11x10x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.806 W/kg
**Area Scan(all):100x90,10 (101x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 1.09 W/kg
**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.893 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 14.474 V/m; Power Drift = -0.11 dB, Maximum value of SAR (measured) = 0.905 W/kg
Peak SAR (extrapolated) = 1.442 mW/g
**SAR(1 g) = 0.426 mW/g; SAR(10 g) = 0.185 mW/g**



(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/28; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 132mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.4(start)/23.5(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

**Appendix 2-4: Measurement data (5745-5805 MHz band) (cont'd)**

**Step 2c: Check the influence of metal accessory at left position**

**Step 2c-1: Left (LCD position: open) with Handle unit/ touch / 11a (6Mbps) / 5765 MHz (153ch)**

**EUT: Wireless Module/Digital Video Camcorder; Type: RF400 / ID0025; Serial: 03 / 01**

**Communication System: IEEE 802.11a(6Mbps, BPSK/OFDM); Frequency: 5765 MHz; Crest Factor: 1.0**

**Medium: MSL5800; Medium parameters used: f = 5765 MHz; $\sigma$ = 6.163 S/m; $\varepsilon_r$ = 46.59; $\rho$ = 1000 kg/m$^3$**

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

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 25.0, 136.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

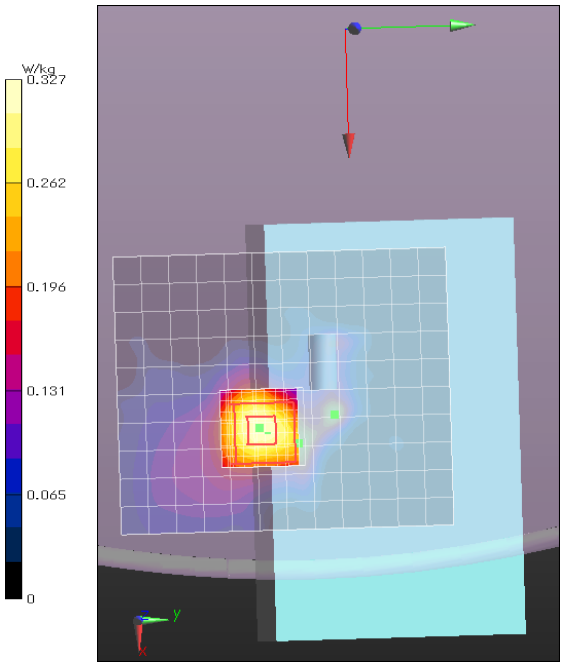
**desktop&handheld/b5-24,left(lcd=open)+handle&touch(d0mm),11a(6m),m5765(153)/**

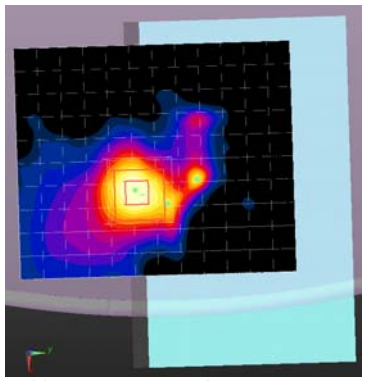
**Area Scan(all):100x120,10 (11x13x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.327 W/kg

**Area Scan(all):100x120,10 (101x121x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 0.341 W/kg

**Z Scan:135,5 (1x1x28):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 0.328 W/kg

**Zoom:xy4/z1.4-d1.4-r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 8.718 V/m; Power Drift = -0.14 dB, Maximum value of SAR (measured) = 0.327 W/kg
Peak SAR (extrapolated) = 0.517 mW/g
**SAR(1 g) = 0.157 mW/g; SAR(10 g) = 0.072 mW/g**





(With no transparency of an area scan.)

Remarks: *. Date tested: 2013/01/29; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 131mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.5 ± 0.5deg.C. / 35 ± 5 %RH,
*.liquid temperature: 23.6(start)/23.6(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

# APPENDIX 3: Test instruments

## Appendix 3-1: Equipment used

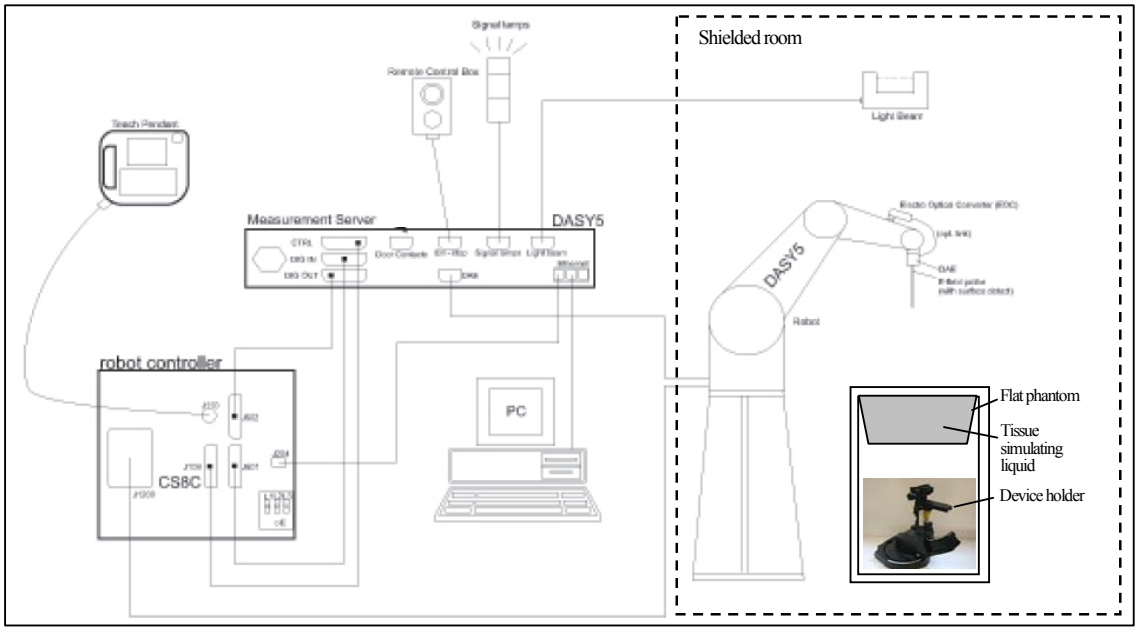
| Control No. | Instrument | Manufacturer | Model No | Serial No | Test Item | Calibration Date * Interval(month) |
|---|---|---|---|---|---|---|
| COTS-SSAR-02 | DASY52 | Schmid&Partner Engineering AG | DASY52 V8.2 B969 | - | SAR | - |
| COTS-KSEP-01 | Dielectric measurement | Agilent | 85070 | 1 | SAR | - |
| SSAR-02 | SAR measurement system | Schmid&Partner Engineering AG | DASY5 | 1324 | SAR | Pre Check |
| SSRBT-02 | SAR robot | Schmid&Partner Engineering AG | TX60 Lspeag | F12/5L2QA1/A/01 | SAR | 2012/09/24 * 12 |
| KDAE-01 | Data Acquisition Electronics | Schmid&Partner Engineering AG | DAE4 | 626 | SAR | 2012/02/15 * 12 |
| KPB-01 | Dosimetric E-Field Probe | Schmid&Partner Engineering AG | EX3DV4 | 3679 | SAR | 2012/06/21 * 12 |
| SSDA-R01 | Dipole Antenna | Schmid&Partner Engineering AG | D2450V2 | 894 | SAR(daily) | 2012/07/09 * 12 |
| KSDA-02 | Dipole Antenna | Schmid&Partner Engineering AG | D5GHzV2 | 1070 | SAR | 2012/02/16 * 12 |
| KPFL-01 | Flat Phantom | Schmid&Partner Engineering AG | Oval flat phantom ELI 4.0 | 1059 | SAR | 2012/10/31 * 12 |
| SSNA-01 | Network Analyzer | Agilent | 8753ES | US39171777 | SAR | 2012/12/29 * 12 |
| KEPP-01 | Dielectric probe | Agilent | 85070E/8710-2036 | 2540 | SAR | 2012/02/20 * 12 |
| KSG-08 | Signal Generator | Rohde & Schwarz | SMT06 | 100763 | SAR(daily) | 2012/06/26 * 12 |
| KPA-12 | RF Power Amplifier | MILMEGA | AS2560-50 | 1018582 | SAR(daily) | Pre Check |
| KCPL-07 | Directional Coupler | Pulsar Microwave Corp. | CCS30-B26 | 0621 | SAR(daily) | Pre Check |
| KPM-06 | Power Meter | Rohde & Schwarz | NRVD | 101599 | SAR(daily) | 2012/09/13 * 12 |
| KIU-08 | Power sensor | Rohde & Schwarz | NRV-Z4 | 100372 | SAR(daily) | 2012/09/13 * 12 |
| KIU-09 | Power sensor | Rohde & Schwarz | NRV-Z4 | 100371 | SAR(daily) | 2012/09/13 * 12 |
| KAT10-P1 | Attenuator | Weinschel | 24-10-34 | BY5927 | SAR(daily) | 2012/02/15 * 12 |
| KAT20-P1 | Attenuator | TME | SFA-01AXPJ | - | SAR(daily) | 2012/02/15 * 12 |
| KPM-05 | Power meter | Agilent | E4417A | GB41290718 | SAR(daily) | 2012/03/22 * 12 |
| KPSS-01 | Power sensor | Agilent | E9327A | US40440544 | SAR(daily) | 2012/03/22 * 12 |
| KAT10-CS1 | Attenuator | HUBER+SUHNER | 6810.17.A | 768898-1 | SAR(daily) | 2012/01/10 * 12 |
| KAT10-CS2 | Attenuator | HUBER+SUHNER | 6810.17.A | 768898-2 | SAR(daily) | 2012/01/10 * 12 |
| KRU-01 | Ruler(300mm) | Shinwa | 13134 | - | SAR | 2012/03/08 * 12 |
| KRU-02 | Ruler(150mm,L) | Shinwa | 12103 | - | SAR | 2012/03/08 * 12 |
| KRU-03 | Ruler(150mm,caliper) | Niigata Seiki | SK-M150 | 806164 | SAR | 2012/03/08 * 12 |
| KRU-05 | Ruler(100x50mm,L) | Shinwa | 12101 | - | SAR | 2012/05/29 * 12 |
| KOS-13 | Digtal thermometer | HANNA | Checktemp-2 | KOS-13 | SAR | 2012/01/06 * 12 |
| KOS-14 | Thermo-Hygrometer data logger | SATO KEIRYOKI | SK-L200THIIα / SK-LTHIIα-2 | 015246/08169 | SAR | 2012/01/06 * 12 |
| SOS-11 | Humidity Indicator | A&D | AD-5681 | 4063424 | SAR | 2012/02/06 * 12 |
| KPM-08 | Power meter | Anritsu | ML2495A | 6K00003356 | Ant.pwr | 2012/09/14 * 12 |
| KPSS-04 | Power sensor | Anritsu | MA2411B | 012088 | Ant.pwr | 2012/09/14 * 12 |
| KAT10-S3 | Attenuator | Agilent | 8490D 010 | 50924 | Ant.pwr | 2012/02/15 * 12 |
| SSA-04 | Spectrum Analyzer | Advantest | R3272 | 101100994 | SAR(moni.) | 2012/12/17 * 12 |
| SWTR-03 | DI water | MonotaRo | 34557433 | - | SAR | - * |
| KSLM245-01 | Tissue simulation liqud (2450MHz,body) | Schmid&Partner Engineering AG | SL AAM 245 | - | SAR | (Daily check) Target value ±5% |
| KSLM580-02 | Tissue simulation liqud (5800MHz,body) | Schmid&Partner Engineering AG | SL AAM 501 AB | 110520-3 | SAR | (Daily check) Target value ±5% |
| No.7 Shielded room | SAR shielded room (2.76m(W)x3.76m(D)x2.4m(H)) | TDK | - | - | SAR | *(Daily check) Ambient noise: < 12mW/kg* |

The expiration date of calibration is the end of the expired month.
As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.
All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

**[Test Item]** SAR: Specific Absorption Rate, Ant.pwr: Antenna terminal conducted power

## Appendix 3-2: Configuration and peripherals

These measurements were performed with the automated near-field scanning system DASY5 from Schmid & Partner Engineering AG (SPEAG). The system is based on a high precision robot), which positions the probes with a positional repeatability of better than ± 0.02 mm. Special E- and H-field probes have been developed for measurements close to material discontinuity, the sensors of which are directly loaded with a Schottky diode and connected via highly resistive lines to the data acquisition unit. The SAR measurements were conducted with the dosimetry probes EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.



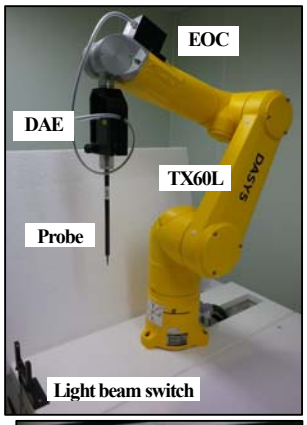

The DASY5 system for performing compliance tests consist of the following items:

| | |
|---|---|
| 1 | A standard high precision 6-axis robot (Stäubli TX/RX family) with controller, teach pendant and software.<br>An arm extension for accommodating the data acquisition electronics (DAE). |
| 2 | An isotropic field probe optimized and calibrated for the targeted measurement. |
| 3 | A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC. |
| 4 | The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server. |
| 5 | The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts. |
| 6 | The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning. |
| 7 | A computer running Win7 professional operating system and the DASY5 software. |
| 8 | R Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc. |
| 9 | The phantom. |
| 10 | The device holder for EUT. (low-loss dielectric palette) (*. when it was used.) |
| 11 | Tissue simulating liquid mixed according to the given recipes. |
| 12 | Validation dipole kits allowing to validate the proper functioning of the system. |

## Appendix 3-3: Test system specification

**TX60 Lsepag robot/CS8Csepag-TX60 robot controller**

•Number of Axes : 6 •Repeatability : ±0.02mm
•Manufacture : Stäubli Unimation Corp.




**DASY5 Measurement server**

•Features : The DASY5 measurement server is based on a PC/104 CPU board with a 400MHz intel ULV Celeron, 128MB chip-disk and 128MB RAM. The necessary circuits for communication with the DAE4 electronics box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY5 I/O board, which is directly connected to the PC/104 bus of the CPU board.
•Calibration : No calibration required.
•Manufacture : Schmid & Partner Engineering AG

**Data Acquisition Electronic (DAE)**

•Features : Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY5 embedded system (fully remote controlled). 2 step probe touch detector for mechanical surface detection and emergency robot stop (not in -R version)
•Measurement Range : 1µV to > 200mV (16bit resolution and 2 range settings: 4mV, 400mV)
•Input Offset voltage : < 1µV (with auto zero)
•Input Resistance : 200MΩ
•Battery Power : > 10hr of operation (with two 9V battery)
•Manufacture : Schmid & Partner Engineering AG


**Electro-Optical Converter (EOC61)**

•Manufacture : Schmid & Partner Engineering AG

**Light Beam Switch (LB5/80)**

•Manufacture : Schmid & Partner Engineering AG

**SAR measurement software**

•Item : Dosimetric Assessment System DASY5
•Software version : DASY52, V8.2 B969
•Manufacture : Schmid & Partner Engineering AG

**E-Field Probe**

•Model : **EX3DV4 (serial number: 3679)**
•Construction : Symmetrical design with triangular core.
Built-in shielding against static charges.
PEEK enclosure material (resistant to organic solvents, e.g., DGBE).
•Frequency : 10MHz to 6GHz, Linearity: ±0.2 dB (30MHz to 6GHz)
•Conversion Factors : 2450, 5200, 5300, 5500, 5600, 5800MHz (Head and Body)
•Directivity : ±0.3 dB in HSL (rotation around probe axis)
±0.5 dB in tissue material (rotation normal to probe axis)
•Dynamic Range : 10µW/g to > 100 mW/g; Linearity: ±0.2 dB (noise: typically < 1µW/g)
•Dimension : Overall length: 330mm (Tip: 20mm)
Tip diameter: 2.5mm (Body: 12mm)
Typical distance from probe tip to dipole centers: 1mm
•Application : High precision dosimetric measurement in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6GHz with precision of better 30%.
•Manufacture : Schmid & Partner Engineering AG


**Phantom**

•Type : **ELI 4.0 oval flat phantom**
•Shell Material : Fiberglass •Shell Thickness : Bottom plate: 2 ±0.2mm
•Dimensions : Bottom elliptical: 600×400mm, Depth: 190mm (Volume: Approx. 30 liters)
•Manufacture : Schmid & Partner Engineering AG


**Device Holder**

☒ Urethane foam
☐ KSDH-01: In combination with the ELI4, the Mounting Device enables the rotation of the mounted transmitter device in spherical coordinates. Transmitter devices can be easily and accurately positioned. The low-loss dielectric urethane foam was used for the mounting section of device holder.
•Material : POM •Manufacture : Schmid & Partner Engineering AG

## Appendix 3-4: Simulated tissue composition and parameter confirmation

| Liquid type | Body, MSL 2450 |
|---|---|
| M/N / Control No. | SL AAM 245 / KSLM245-01 |
| Ingredient | Mixture (%) |
| Water | 52-75 % |
| $C_8H_{18}O_3$ (DGBE) (Diethylene glycol monobutyl ether) | 25-48% |
| NaCl | <1.0% |
| Manufacture | Schmid&Partner Engineering AG |

| Liquid type | Body, MBBL 3500-5800V5 |
|---|---|
| M/N / Control No. | SL AAM 501 AB / KSLM580-02 |
| Ingredient | Mixture (%) |
| Water | 60-80 % |
| Esters, Emulsifiers, Inhibitors | 20-40 % |
| Sodium salt | 0-1.5 % |
| Manufacture | Schmid&Partner Engineering AG |

*. The dielectric parameters were checked prior to assessment using the 85070E dielectric probe kit. -R01

**Dielectric parameter measurement results (Body tissue)**

| Date | Freq. [MHz] | Ambient Temp [deg.C.] | Ambient Humidity [%RH] | Liq.T.[deg.C.] Before | Liq.T.[deg.C.] After | Liquid Depth [mm] | Parameters Relative permittivity: εr Conductivity: σ | Target value #1:Std. (*1) | Target value #2:Cal. (*2) | Measured | ΔSAR (1g) [%] (*3) | Deviation for #1 (Std.)[%] | Limit [%] | Deviation for #2 (Cal.)[%] | Limit [%] (*2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| January 23, 2013 | 2450 | 23.8 | 40 | 22.0 | 22.0 | (156) | εr [-] | **52.7** | **51.4** | 50.63 | (+2.61) | **-3.9** | ±5 | **-1.5** | ±5 |
| | | | | | | | σ [S/m] | **1.95** | **2.01** | 2.020 | | **+3.6** | ±5 | **+0.5** | ±5 |
| January 25, 2013 | 5200 | 24.9 | 37 | 24.3 | 24.3 | (130) | εr [-] | **49.01** | **48.6** | 47.07 | (+0.75) | **-4.0** | ±5 | **-3.1** | ±5 |
| | | | | | | | σ [S/m] | **5.299** | **5.48** | 5.391 | | **+1.7** | ±5 | **-1.6** | ±5 |
| January 28, 2013 | 5200 | 24.5 | 32 | 24.5 | 24.5 | (132) | εr [-] | **49.01** | **48.6** | 47.29 | (+0.70) | **-3.5** | ±5 | **-2.7** | ±5 |
| | | | | | | | σ [S/m] | **5.299** | **5.48** | 5.315 | | **+0.3** | ±5 | **-3.0** | ±5 |
| | 5800 | | | | | | εr [-] | **48.2** | **47.5** | 46.17 | (+0.69) | **-4.2** | ±5 | **-2.8** | ±5 |
| | | | | | | | σ [S/m] | **6.00** | **6.29** | 6.198 | | **+3.3** | ±5 | **-1.5** | ±5 |
| January 29, 2013 | 5200 | 24.4 | 34 | 24.5 | 24.5 | (131) | εr [-] | **49.01** | **48.6** | 47.60 | (+0.52) | **-2.9** | ±5 | **-2.1** | ±5 |
| | | | | | | | σ [S/m] | **5.299** | **5.48** | 5.432 | | **+2.5** | ±5 | **-0.9** | ±5 |
| | 5800 | | | | | | εr [-] | **48.2** | **47.5** | 46.44 | (+0.58) | **-3.7** | ±5 | **-2.2** | ±5 |
| | | | | | | | σ [S/m] | **6.00** | **6.29** | 6.190 | | **+3.2** | ±5 | **-1.6** | ±5 |

*1. The target value is a parameter defined in OET65, Supplement C.

*2. The target value is a parameter defined in the calibration data sheet of D2450V2 (sn:894)/ D5GHzV2 (sn:1070) dipole calibrated by Schmid & Partner Engineering AG (Certification No. D2450V2_894_Jul12 / D5GHzV2-1070_Feb12/2, the data sheet was filed in this report.).

*3. The number of ΔSAR(1g) of body simulated tissue was reference purpose only. ΔSAR correction was only applied to head simulated tissue. The coefficients are parameters defined in Annex F, IEC 62209-2:2010. In accordance with clause 6.1.1 of EN 62209-2; "If the correction ΔSAR has a negative sign, the measured SAR results shall not be corrected", the calculated ΔSAR values of the tested liquid had shown negative correction. Therefore the measured SAR was not ΔSAR corrected.

**$\Delta SAR(1g) = C\varepsilon r \times \Delta\varepsilon r + C\sigma \times \Delta\sigma$,** $C\varepsilon = -7.854E\text{-}4 \times f^3 + 9.402E\text{-}3 \times f^2 - 2.742E\text{-}2 \times f - 0.2026$ / $C\sigma = 9.804E\text{-}3 \times f^3 - 8.661E\text{-}2 \times f^2 + 2.981E\text{-}2 \times f + 0.7829$

Decision on Simulated Tissues of 2450/5800MHz; In the current standards (e.g., IEEE 1528, OET 65 Supplement C), the dielectric parameters suggested for head and body tissue simulating liquid are given at 2000, 2450, 3000 and 5800MHz. As an intermediate solution, dielectric parameters for the frequencies between 2000- 2450, 2450-3000 and 3000-5800MHz were obtained using linear interpolation. Furthermore, dielectric parameters for the frequencies above 5800MHz were obtained using linear extrapolation.

| Standard f(MHz) | Head Tissue εr | Head Tissue σ [S/m] | Body Tissue εr | Body Tissue σ [S/m] | *Interpolated* f(MHz) | Head Tissue εr | Head Tissue σ [S/m] | Body Tissue εr | Body Tissue σ [S/m] |
|---|---|---|---|---|---|---|---|---|---|
| (1800-)2000 | **40.0** | **1.40** | **53.3** | **1.52** | *5280* | *35.89* | *4.737* | *48.91* | *5.393* |
| 2450 | **39.2** | **1.80** | **52.7** | **1.95** | *5310* | *35.86* | *4.768* | *48.87* | *5.428* |
| 3000 | **38.5** | **2.40** | **52.0** | **2.73** | *5320* | *35.85* | *4.778* | *48.85* | *5.439* |
| 5800 | **35.3** | **5.27** | **48.2** | **6.00** | *5755* | *35.35* | *5.224* | *48.26* | *5.947* |
| ***Interpolated*** | | | | | *5765* | *35.34* | *5.234* | *48.25* | *5.959* |
| *2437* | *39.22* | *1.788* | *52.72* | *1.938* | *5785* | *35.32* | *5.255* | *48.22* | *5.982* |
| *5200* | *35.99* | *4.655* | *49.01* | *5.299* | *5795* | *35.31* | *5.265* | *48.21* | *5.994* |
| *5270* | *35.91* | *4.727* | *48.92* | *5.381* | *5805* | *35.27* | *5.296* | *48.19* | *6.006* |

## Appendix 3-5: Daily check data

Prior to the SAR assessment of EUT, the system validation kit was used to test whether the system was operating within its specifications of ±10%. The Daily check results are in the table below. (*. Refer to Appendix 3-7 of measurement data.) -R01

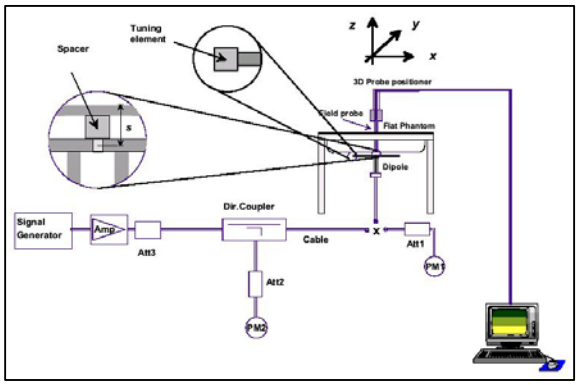
**Daily check results**

| Date | Freq. [MHz] | Liquid Type | Ambient Temp [deg.C.] | Ambient Humidity [%RH] | Liquid Temp. [deg.C.] Check | Before | After | Liquid Depth [mm] | εr [-] measured | σ [S/m] measured | Power drift [dB] | Daily check target & measured SAR 1g [W/kg] Target | Measured (*5) | Deviation [%] | Limit [%] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| January 23, 2013 | 2450 | Body | 24.0 | 41 | 21.5 | 21.5 | 22.0 | 156 | 50.63 | 2.020 | 0 | **13.3** (*4) | 13.4 (at 250mW) (ΔSAR corrected: -) | **+0.8** | ±10 |
| January 25, 2013 | 5200 | Body | 24.9 | 36 | 23.2 | 23.1 | 24.3 | 130 | 47.07 | 5.391 | -0.10 | **7.41**(*4) | 7.76 (at 100mW) (ΔSAR corrected: -) | **+4.7** | ±10 |
| January 28, 2013 | 5200 | Body | 24.9 | 33 | 24.1 | 24.0 | 24.5 | 132 | 47.29 | 5.315 | -0.04 | **7.41**(*4) | 7.85 (at 100mW) (ΔSAR corrected: -) | **+5.9** | ±10 |
| | 5800 | Body | 24.9 | 33 | 23.9 | 23.8 | 24.5 | 132 | 46.17 | 6.198 | -0.05 | **7.54**(*4) | 7.47 (at 100mW) (ΔSAR corrected: -) | **-0.9** | ±10 |
| January 29, 2013 | 5200 | Body | 24.9 | 38 | 23.9 | 23.8 | 24.5 | 131 | 47.60 | 5.432 | 0.03 | **7.41**(*4) | 7.91 (at 100mW) (ΔSAR corrected: -) | **+6.7** | ±10 |
| | 5800 | Body | 24.9 | 38 | 23.7 | 23.6 | 24.5 | 131 | 46.44 | 6.190 | 0.01 | **7.54**(*4) | 7.38 (at 100mW) (ΔSAR corrected: -) | **-2.1** | ±10 |

*4. The target value is a parameter defined in the calibration data sheet of D2450V2 (sn:894) and D5GHzV2 (sn:1070) dipole calibrated by Schmid & Partner Engineering AG (Certification No. D2450V2-894_Jul12 / D5GHzV2-1070_Feb12/2, the data sheet was filed in this report).

*5. Since the body SAR measured b body tissue, ΔSAR correction was not applied.

*. For 2.45GHz, we performed the Daily check based on FCC requirement, "The 1g or 10g SAR values measured using the required tissue dielectric parameters should be within 10% of manufacturer calibrated dipole SAR values. However these manufacturer calibrated dipole target SAR values should be substantially similar to those defined in IEEE Standard 1528." and FCC permits "SAR system verification with the actual liquid used for EUT's SAR measurement, should be the default operating procedures." We confirmed the this dipole manufacture's validation data for head is within 5% against IEEE Standard 1528 (manufacture's cal.: 52.1W/kg (-0.6%, vs. standard=52.4W/kg). so we can only use Body liquid validation data for our Daily check procedure






**Test setup for the system performance check**

## Appendix 3-6: Daily check uncertainty

| Uncertainty of system daily check (~6GHz) (Body liquid, 2.4-6GHz, ε', σ: ≤5%) (v06) | 1g SAR | 10g SAR |
|---|---|---|
| Combined measurement uncertainty of the measurement system (k=1) | ± 12.7 % | ± 12.4 % |
| Expanded uncertainty (k=2) | ± 25.4 % | ± 24.8 % |

| | Error Description | Uncertainty Value | Probability distribution | Divisor | ci (1g) | ci (10g) | ui (1g) | ui (10g) | Vi, veff |
|---|---|---|---|---|---|---|---|---|---|
| A | **Measurement System** (DASY5) | | | | | | (std. uncertainty) | (std. uncertainty) | |
| 1 | Probe Calibration Error (2.45,5.2,5.3,5.5,5.6,5.8GHz±100MHz) | ±6.55 % | Normal | 1 | 1 | 1 | ±6.55 % | ±6.55 % | ∞ |
| 2 | Axial isotropy | ±4.7 % | Rectangular | √3 | 0.7 | 0.7 | ±1.9 % | ±1.9 % | ∞ |
| 3 | Hemispherical isotropy (*flat phantom, <5°) | ±9.6 % | Rectangular | √3 | 0.7 | 0.7 | ±3.9 % | ±3.9 % | ∞ |
| 4 | Boundary effects | ±4.8 % | Rectangular | √3 | 1 | 1 | ±2.8 % | ±2.8 % | ∞ |
| 5 | Probe linearity | ±4.7 % | Rectangular | √3 | 1 | 1 | ±2.7 % | ±2.7 % | ∞ |
| 6 | Probe modulation response (CW) | ±0.0 % | Rectangular | √3 | 1 | 1 | ±0.0 % | ±0.0 % | ∞ |
| 7 | System detection limit | ±1.0 % | Rectangular | √3 | 1 | 1 | ±0.6 % | ±0.6 % | ∞ |
| 8 | Response Time Error (<5ms/100ms wait) | ±0.0 % | Rectangular | √3 | 1 | 1 | ±0.0 % | ±0.0 % | ∞ |
| 9 | Integration Time Error (CW) | ±0.0 % | Rectangular | √3 | 1 | 1 | ±0.0 % | ±0.0 % | ∞ |
| 10 | System readout electronics (DAE) | ±0.3 % | Normal | 1 | 1 | 1 | ±0.3 % | ±0.3 % | ∞ |
| 11 | RF ambient conditions-noise | ±3.0 % | Rectangular | √3 | 1 | 1 | ±1.7 % | ±1.7 % | ∞ |
| 12 | RF ambient conditions-reflections | ±3.0 % | Rectangular | √3 | 1 | 1 | ±1.7 % | ±1.7 % | ∞ |
| 13 | Probe positioner mechanical tolerance | ±3.3 % | Rectangular | √3 | 1 | 1 | ±1.9 % | ±1.9 % | ∞ |
| 14 | Probe positioning with respect to phantom shell | ±6.7 % | Rectangular | √3 | 1 | 1 | ±3.9 % | ±3.9 % | ∞ |
| 15 | Max.SAR evaluation | ±4.0 % | Rectangular | √3 | 1 | 1 | ±2.3 % | ±2.3 % | ∞ |
| B | **Test Sample Related** | | | | | | | | |
| 16 | Deviation of the experimental source | ±5.5 % | Normal | 1 | 1 | 1 | ±5.5 % | ±5.5 % | ∞ |
| 17 | Dipole to liquid distance (10mm±0.2mm,<2deg.) | ±2.0 % | Rectangular | √3 | 1 | 1 | ±1.2 % | ±1.2 % | ∞ |
| 18 | Drift of output power (measured, <0.2dB) | ±2.5 % | Rectangular | √3 | 1 | 1 | ±1.4 % | ±1.4 % | ∞ |
| C | **Phantom and Setup** | | | | | | | | |
| 19 | Phantom uncertainty | ±2.0 % | Rectangular | √3 | 1 | 1 | ±1.2 % | ±1.2% | ∞ |
| 20 | Liquid conductivity (target) (≤5%) | ±5.0 % | Rectangular | √3 | 0.64 | 0.43 | ±1.8 % | ±1.2 % | ∞ |
| 21 | Liquid conductivity (meas.) | ±3.0 % | Normal | 1 | 0.64 | 0.43 | ±1.9 % | ±1.3 % | ∞ |
| 22 | Liquid permittivity (target) (≤5%) | ±5.0 % | Rectangular | √3 | 0.6 | 0.49 | ±1.7 % | ±1.4 % | ∞ |
| 23 | Liquid permittivity (meas.) | ±3.0 % | Normal | 1 | 0.6 | 0.49 | ±1.8 % | ±1.5 % | ∞ |
| 24 | Liquid Conductivity-temp.uncertainty (≤2deg.C.) | ±5.2 % | Rectangular | √3 | 0.78 | 0.71 | ±2.3 % | ±2.1 % | ∞ |
| 25 | Liquid Permittivity-temp.uncertainty (≤2deg.C.) | ±0.8 % | Rectangular | √3 | 0.23 | 0.26 | ±0.1 % | ±0.1 % | ∞ |
| | **Combined Standard Uncertainty** | | | | | | **±12.7** % | **±12.4** % | |
| | **Expanded Uncertainty (k=2)** | | | | | | **±25.4** % | **±24.8** % | |

*. This measurement uncertainty budget is suggested by IEEE 1528, IEC 62209-2 and determined by Schmid & Partner Engineering AG (DASY5 Uncertainty Budget).

## Appendix 3-7: Daily check measurement data

### 2450MHz Daily check (Body tissue) / Forward conducted power: 250mW (January 23, 2013)

**EUT: Dipole(2.45GHz); Type: D2450V2; Serial: 894**

**Communication System: CW; Frequency: 2450 MHz; Crest Factor: 1.0**

**Medium: M2450; Medium parameters used: f = 2450 MHz; $\sigma$ = 2.02 S/m; $\varepsilon_r$ = 50.63; $\rho$ = 1000 kg/m$^3$**

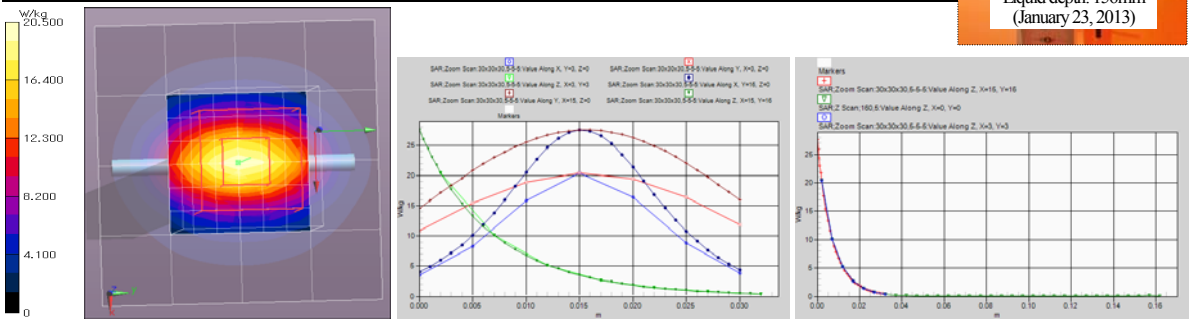
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(6.77, 6.77, 6.77); Calibrated: 2012/06/21;
-Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0, 161.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**daily-m245,130123/daily-m245,d10mm,pin=250mw/**

**Area Scan:60x60,15 (5x5x1):** Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 20.5 W/kg
**Area Scan:60x60,15 (41x41x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm; Maximum value of SAR (interpolated) = 20.5 W/kg
**Z Scan;160,5 (1x1x33):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 20.5 W/kg


**Zoom Scan:30x30x30,5-5-5 (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm;
Reference Value = 102.2 V/m; Power Drift = -0.00 dB, Maximum value of SAR (measured) = 20.5 W/kg
Peak SAR (extrapolated) = 27.577 mW/g (+0.7%, vs.speag-cal.=27.4 W/kg)
**SAR(1 g) = 13.4 mW/g** (+0.8%, vs.speag-cal.=13.3 mW/g)**; SAR(10 g) = 6.16 mW/g**




Remarks: *. Date tested: 2013/01/23; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 156mm; Position: distance of dipole to phantom: 8mm (10mm to liquid); ambient: 24.0 deg.C. / 41 %RH,
*.liquid temperature: 21.5(start)/21.5(end)/22.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

### 5200MHz Daily check (Body tissue) / Forward conducted power: 100mW (January 23, 2013)

**EUT: Dipole(5GHz); Type: D5GHzV2; Serial: 1070**

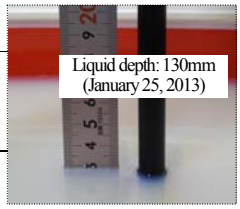
**Communication System: CW; Frequency: 5200 MHz; Crest Factor: 1.0**

**Medium: MSL5800; Medium parameters used: f = 5200 MHz; $\sigma$ = 5.391 S/m; $\varepsilon_r$ = 47.07; $\rho$ = 1000 kg/m$^3$**

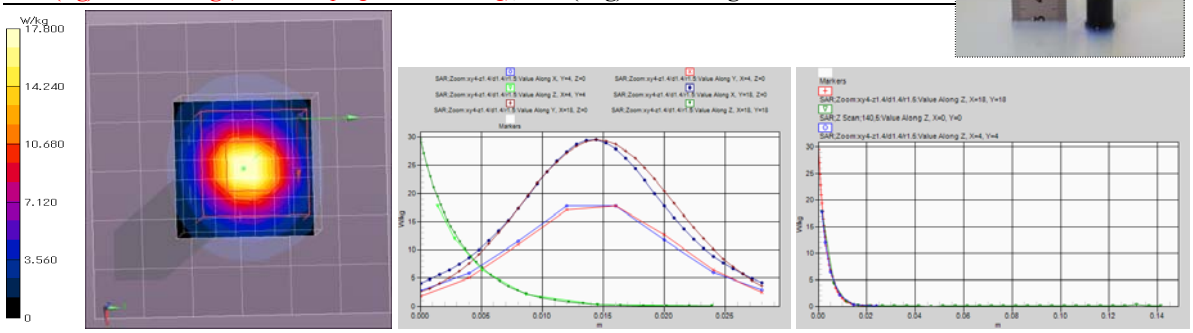
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 141.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**Area:60x60,10 (7x7x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 19.1 W/kg
**Area:60x60,10 (61x61x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 19.5 W/kg
**Z Scan;140,5 (1x1x29):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 17.8 W/kg




**Zoom:xy4-z1.4/d1.4/r1.4 (8x8x6)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 68.004 V/m; Power Drift = -0.10 dB, Maximum value of SAR (measured) = 17.8 W/kg
Peak SAR (extrapolated) = 29.461 mW/g (+1.4%, vs. speag-cal.=29.044 mW/g)
**SAR(1 g) = 7.76 mW/g** (+4.7%, vs. speag-cal.=7.41 mW/g)**; SAR(10 g) = 2.2 mW/g**




Remarks: *. Date tested: 2013/01/25; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 130mm; Position: distance of dipole to phantom: 8mm (10mm to liquid); ambient: 24.9 deg.C. / 36 %RH,
*.liquid temperature: 23.2(start)/23.1(end)/24.3(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 3-7: Daily check measurement data (cont'd)

## 5200MHz and 5800MHz Daily check (Body tissue) / Forward conducted power: 100mW (January 26, 2013)

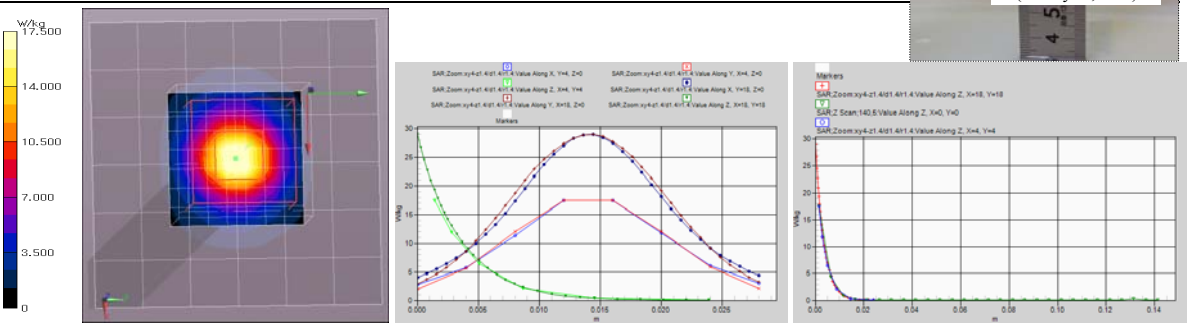
### EUT: Dipole(5GHz); Type: D5GHzV2; Serial: 1070

**Communication System: CW; Frequency: 5200 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5200 MHz; $\sigma$ = 5.315 S/m; $\varepsilon_r$ = 47.29; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 141.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**Area:60x60,10 (7x7x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 19.3 W/kg
**Area:60x60,10 (61x61x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 19.4 W/kg
**Z Scan;140,5 (1x1x29):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 17.5 W/kg

**Zoom:xy4-z1.4/d1.4/r1.4 (8x8x6)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 68.820 V/m; Power Drift = -0.04 dB, Maximum value of SAR (measured) = 17.5 W/kg
Peak SAR (extrapolated) = 28.980 mW/g (-0.2%, vs. speag-cal.=29.044 mW/g)
**SAR(1 g) = 7.85 mW/g** (+5.9%, vs. speag-cal.=7.41 mW/g); **SAR(10 g) = 2.24 mW/g**


Remarks: *. Date tested: 2013/01/28; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 132mm; Position: distance of dipole to phantom: 8mm (10mm to liquid); ambient: 24.9 deg.C. / 33 %RH,
*.liquid temperature: 24.1(start)/24.0(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

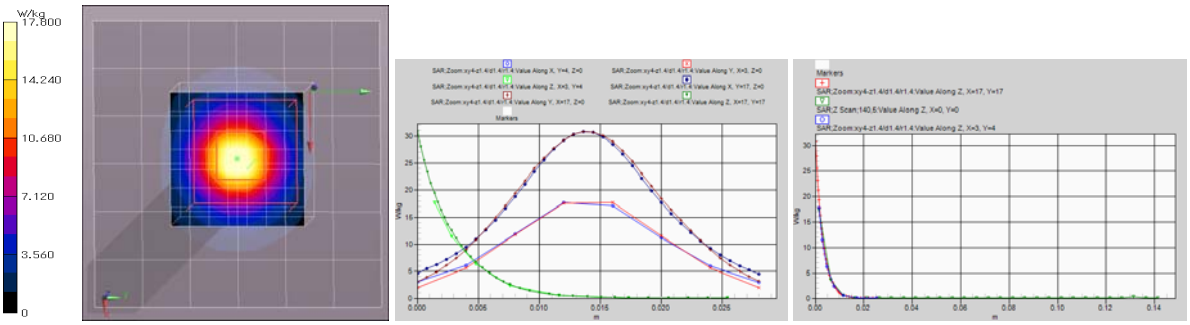
### EUT: Dipole(5GHz); Type: D5GHzV2; Serial: 1070

**Communication System: CW; Frequency: 5800 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5800 MHz; $\sigma$ = 6.198 S/m; $\varepsilon_r$ = 46.17; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 141.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**Area:60x60,10 (7x7x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 19.1 W/kg
**Area:60x60,10 (61x61x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 19.2 W/kg
**Z Scan;140,5 (1x1x29):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 17.5 W/kg

**Zoom:xy4-z1.4/d1.4/r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 65.462 V/m; Power Drift = -0.05 dB, Maximum value of SAR (measured) = 17.8 W/kg
Peak SAR (extrapolated) = 30.777 mW/g (-12.3%, vs. speag-cal.=35.083 mW/g)
**SAR(1 g) = 7.47 mW/g** (-0.9%, vs. speag-cal.=7.54 mW/g); **SAR(10 g) = 2.09 mW/g**




Remarks: *. Date tested: 2013/01/28; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 132mm; Position: distance of dipole to phantom: 8mm (10mm to liquid); ambient: 24.9 deg.C. / 33 %RH,
*.liquid temperature: 23.9(start)/23.8(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

Appendix 3-7: Daily check measurement data (cont'd)

## 5200MHz and 5800MHz Daily check (Body tissue) / Forward conducted power: 100mW (January 29, 2013)

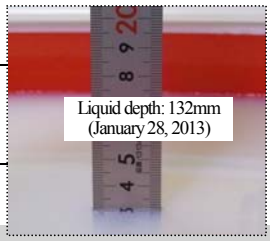
### EUT: Dipole(5GHz); Type: D5GHzV2; Serial: 1070

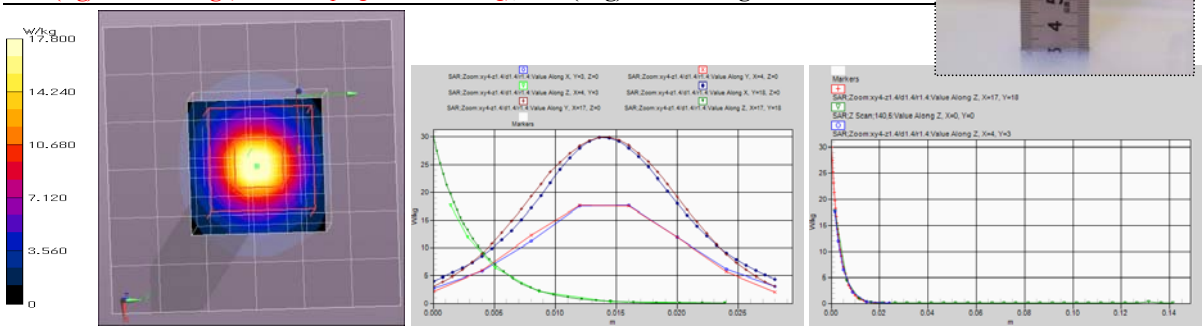
**Communication System: CW; Frequency: 5200 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5200 MHz; $\sigma$ = 5.432 S/m; $\varepsilon_r$ = 47.6; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 141.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**Area:60x60,10 (7x7x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 19.5 W/kg
**Area:60x60,10 (61x61x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 19.7 W/kg
**Z Scan;140,5 (1x1x29):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 17.7 W/kg

**Zoom:xy4-z1.4/d1.4/r1.4 (8x8x6)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 68.799 V/m; Power Drift = 0.03 dB, Maximum value of SAR (measured) = 17.8 W/kg
Peak SAR (extrapolated) = 29.909 mW/g (+0.7%, vs. speag-cal.=29.044 mW/g)
**SAR(1 g) = 7.91 mW/g** (+6.7%, vs. speag-cal.=7.41 mW/g); **SAR(10 g) = 2.25 mW/g**




Remarks: *. Date tested: 2013/01/29; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 131mm; Position: distance of dipole to phantom: 8mm (10mm to liquid); ambient: 24.9 deg.C. / 38 %RH,
*.liquid temperature: 23.9(start)/23.8(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)

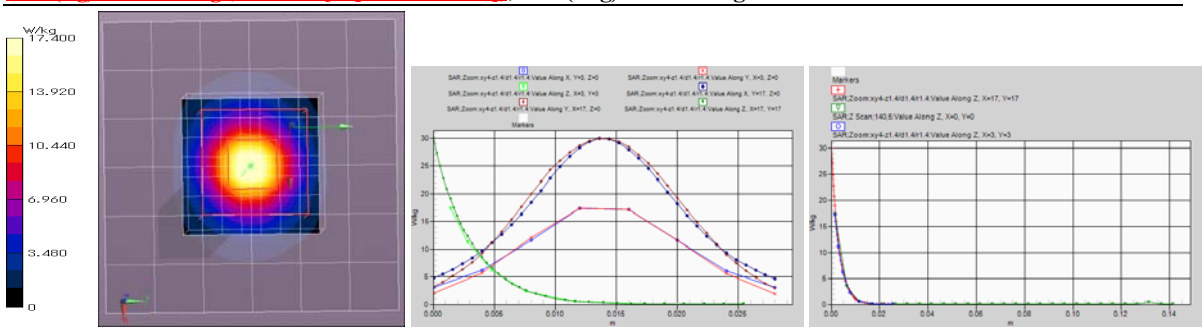
### EUT: Dipole(5GHz); Type: D5GHzV2; Serial: 1070

**Communication System: CW; Frequency: 5800 MHz; Crest Factor: 1.0**
**Medium: MSL5800; Medium parameters used: f = 5800 MHz; $\sigma$ = 6.19 S/m; $\varepsilon_r$ = 46.44; $\rho$ = 1000 kg/m$^3$**
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY Configuration:** -Probe: EX3DV4 - SN3679; ConvF(3.87, 3.87, 3.87); Calibrated: 2012/06/21;
-Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = 1.0, 23.5, 141.0 -Electronics: DAE4 Sn626; Calibrated: 2012/02/15
-Phantom: ELI v4.0; Type: QDOVA001BA; Serial: 1059; Phantom section: Flat Section
-DASY52 52.8.2(969); SEMCAD X 14.6.6(6824)

**Area:60x60,10 (7x7x1):** Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 19.1 W/kg
**Area:60x60,10 (61x61x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm; Maximum value of SAR (interpolated) = 19.1 W/kg
**Z Scan;140,5 (1x1x29):** Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 17.3 W/kg

**Zoom:xy4-z1.4/d1.4/r1.4 (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm;
Reference Value = 65.979 V/m; Power Drift = 0.01 dB, Maximum value of SAR (measured) = 17.4 W/kg
Peak SAR (extrapolated) = 29.970 mW/g (-14.6%, vs. speag-cal.=35.083 mW/g)
**SAR(1 g) = 7.38 mW/g** (-2.1%, vs. speag-cal.=7.54 mW/g); **SAR(10 g) = 2.08 mW/g**




Remarks: *. Date tested: 2013/01/29; Tested by: Hiroshi Naka; Tested place:No.7 shielded room,
*.liquid depth: 131mm; Position: distance of dipole to phantom: 8mm (10mm to liquid); ambient: 24.9 deg.C. / 38 %RH,
*.liquid temperature: 23.7(start)/23.6(end)/24.5(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g )/small=SAR(1g)