
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 30mm(X axis) × 30mm(Y axis) × 30mm(Z axis) was assessed by measuring 7×7×7 points under 3GHz and a volume of equal or more than 24mm(X axis) × 24mm(Y axis) × 22.5mm (Z axis) was assessed by measuring 8×8×6(ratio step method (*1)) points for 3-6GHz frequency band.

And for any secondary peaks found in the Step 2 which are within 2dB of maximum peak and not with this Step3 (Zoom scan) is repeated.

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 [4]. 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) [4], [5]. 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: 2mm from the phantom surface, the initial grid separation: 2mm, subsequent graded grid ratio: 1.5
These parameters comply with the requirement of the KDB 865664.

In the section of SAR Scan Procedures-Zoom Scan, in KDB 865664(October 2006 revised, publication date: April 16, 2007): SAR Measurement Requirements for 3-6GHz, the graded grids requirement is as follows;

"When graded grids are used (z), the first measurement point should be within 3mm of the phantom surface for measurements below 4.5GHz and within 2mm at or above 4.5GHz. The initial grid separation, closest to the phantom, should be ≤ 2.0mm. A subsequent graded ration of 1.5 is recommended and less than 2.0 is required. "

Appendix 2-2: Measurement data

SAR plots for 2.4GHz Band

EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 1.99$ S/m; $\epsilon_r = 50.263$; $\rho = 1000$ kg/m³

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)

Lap held(Bottom face)/Touch(0mm)_11b(1Mbps)_Mid-Ch_main-ant/

Area Scan:135x360,15 (10x25x1): Measurement grid: $dx=15$ mm, $dy=15$ mm, Maximum value of SAR (measured) = 0.209 W/kg

Area Scan:135x360,15 (91x241x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm, Maximum value of SAR (interpolated) = 0.213 W/kg

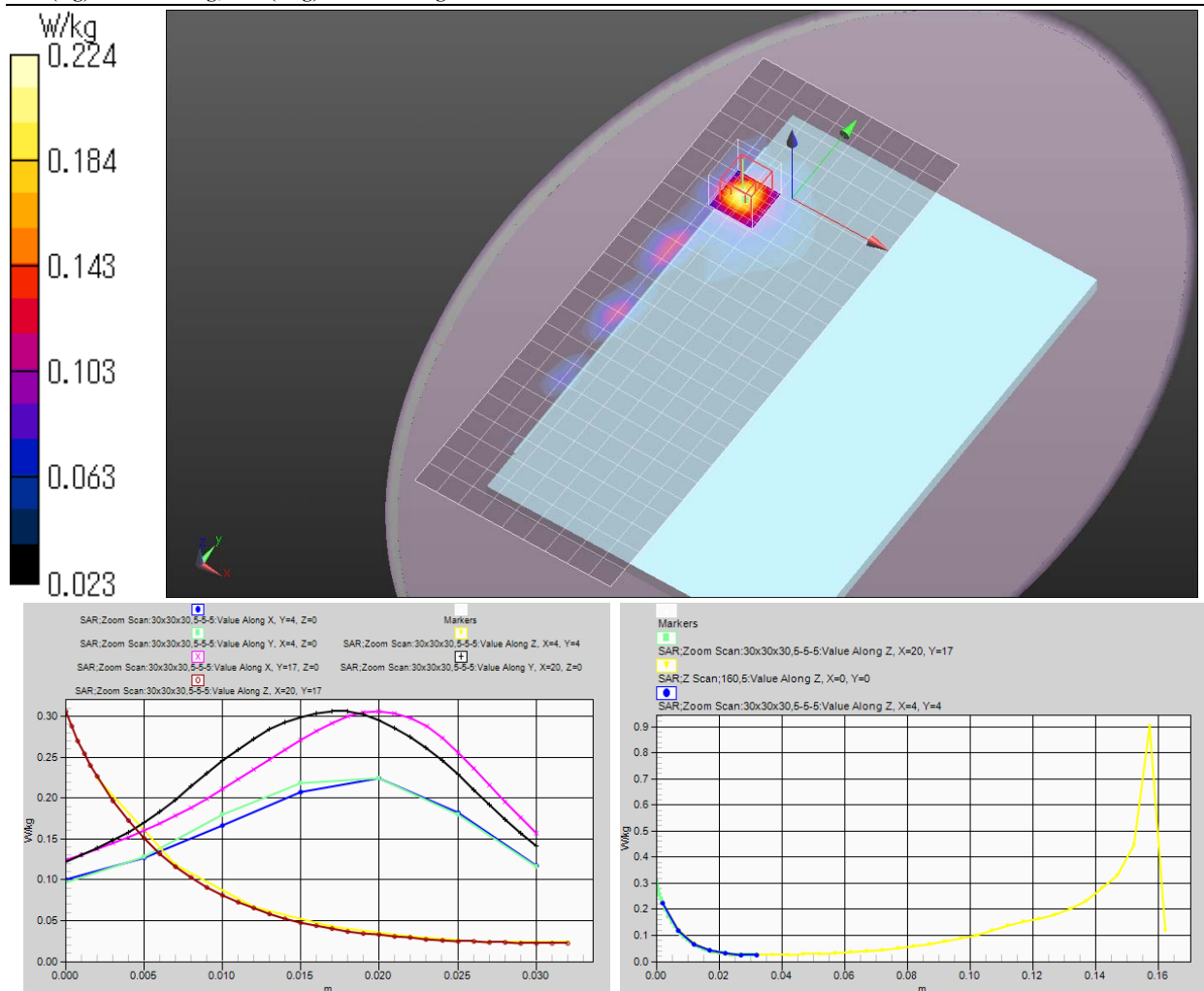
Z Scan:160,5 (1x1x33): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=5$ mm, Maximum value of SAR (measured) = 0.901 W/kg

Zoom Scan:30x30x30,5-5-5 (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 10.355 V/m; Power Drift = -0.05 dB, Maximum value of SAR (measured) = 0.224 W/kg

Peak SAR (extrapolated) = 0.306 mW/g

SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.084 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/19; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.4 deg.C. / 41 %RH,

*.liquid temperature: 20.6(start)/20.6(end)/20.6(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 2.022$ S/m; $\epsilon_r = 50.59$; $\rho = 1000$ kg/m³

Measurement Standard: DASYS (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)

Left side/Touch(0mm)_11b(1Mbps)_Mid-Ch_main-ant/

Area Scan:255x105,15 (8x18x1): Measurement grid: $dx=15$ mm, $dy=15$ mm, Maximum value of SAR (measured) = 0.159 W/kg

Area Scan:255x105,15 (71x171x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm, Maximum value of SAR (interpolated) = 0.194 W/kg

Z Scan:160,5 2 (1x1x33): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=5$ mm, Maximum value of SAR (measured) = 0.198 W/kg

Zoom Scan:30x30x30,5-5-5 (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 10.243 V/m; Power Drift = -0.14 dB, Maximum value of SAR (measured) = 0.203 W/kg

Peak SAR (extrapolated) = 0.303 mW/g

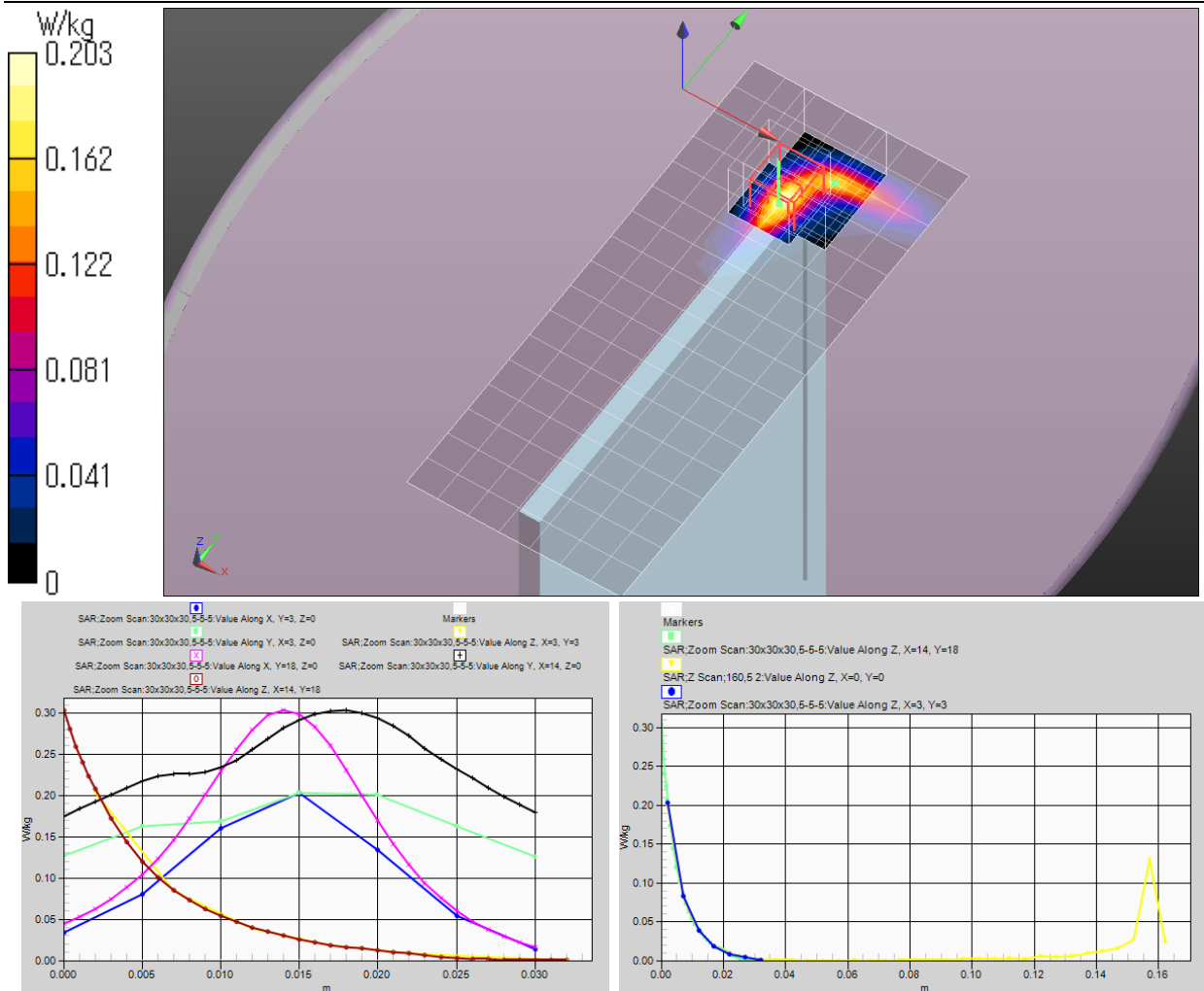
SAR(1 g) = 0.124 mW/g; SAR(10 g) = 0.054 mW/g

Zoom Scan(2nd):30x30x30,5-5-5 (9x10x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 10.243 V/m; Power Drift = -0.14 dB, Maximum value of SAR (measured) = 0.190 W/kg

Peak SAR (extrapolated) = 0.291 mW/g

SAR(1 g) = 0.121 mW/g; SAR(10 g) = 0.052 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/20; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.9 deg.C. / 44 %RH,

*.liquid temperature: 21.0(start)/21.0(end)/21.0(in check) deg.C.; *. White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 2.022$ S/m; $\epsilon_r = 50.59$; $\rho = 1000$ kg/m³

Measurement Standard: DASYS (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)

LCD back side(Nearby person)/Touch(0mm)_11b(1Mbps)_Mid-Ch_main-ant/

Area Scan:270x360,15 (19x25x1): Measurement grid: dx=15mm, dy=15mm, Maximum value of SAR (measured) = 0.0651 W/kg

Area Scan:270x360,15 (181x241x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm, Maximum value of SAR (interpolated) = 0.0733 W/kg

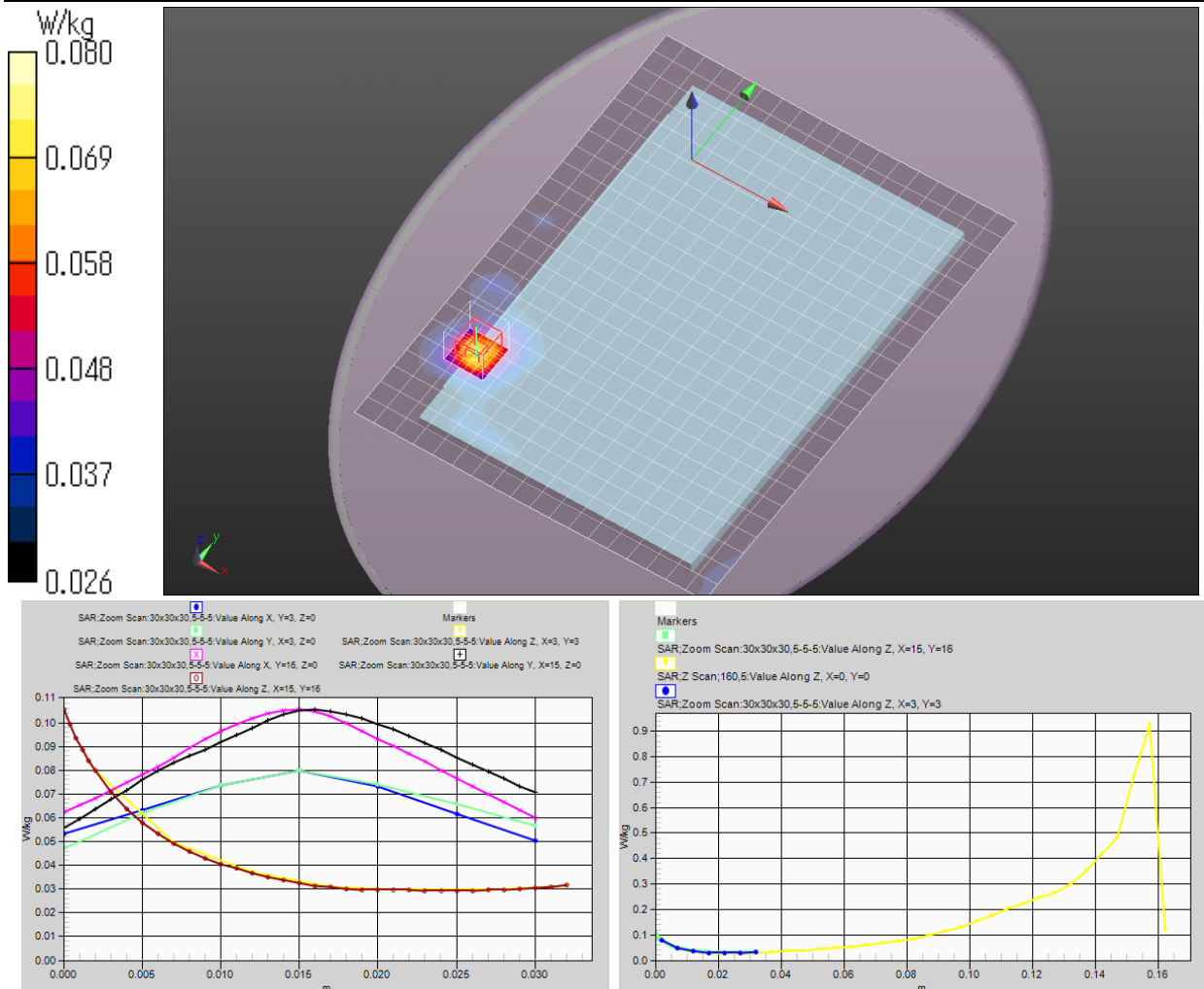
Z Scan:160,5 (1x1x33): Measurement grid: dx=20mm, dy=20mm, dz=5mm, Maximum value of SAR (measured) = 0.926 W/kg

Zoom Scan:30x30x30,5-5-5 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.386 V/m; Power Drift = -0.16 dB, Maximum value of SAR (measured) = 0.0798 W/kg

Peak SAR (extrapolated) = 0.106 mW/g

SAR(1 g) = 0.060 mW/g; SAR(10 g) = 0.042 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/20; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.9 deg.C. / 44 %RH,

*.liquid temperature: 21.0(start)/21.0(end)/21.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 1.99$ S/m; $\epsilon_r = 50.263$; $\rho = 1000$ kg/m³

Measurement Standard: DASYS (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)

Lap held(Bottom face)/Touch(0mm)_11g(6Mbps)_Mid-Ch_main-ant/

Area Scan:135x180,15 (10x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm, Maximum value of SAR (measured) = 0.283 W/kg

Area Scan:135x180,15 (91x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm, Maximum value of SAR (interpolated) = 0.284 W/kg

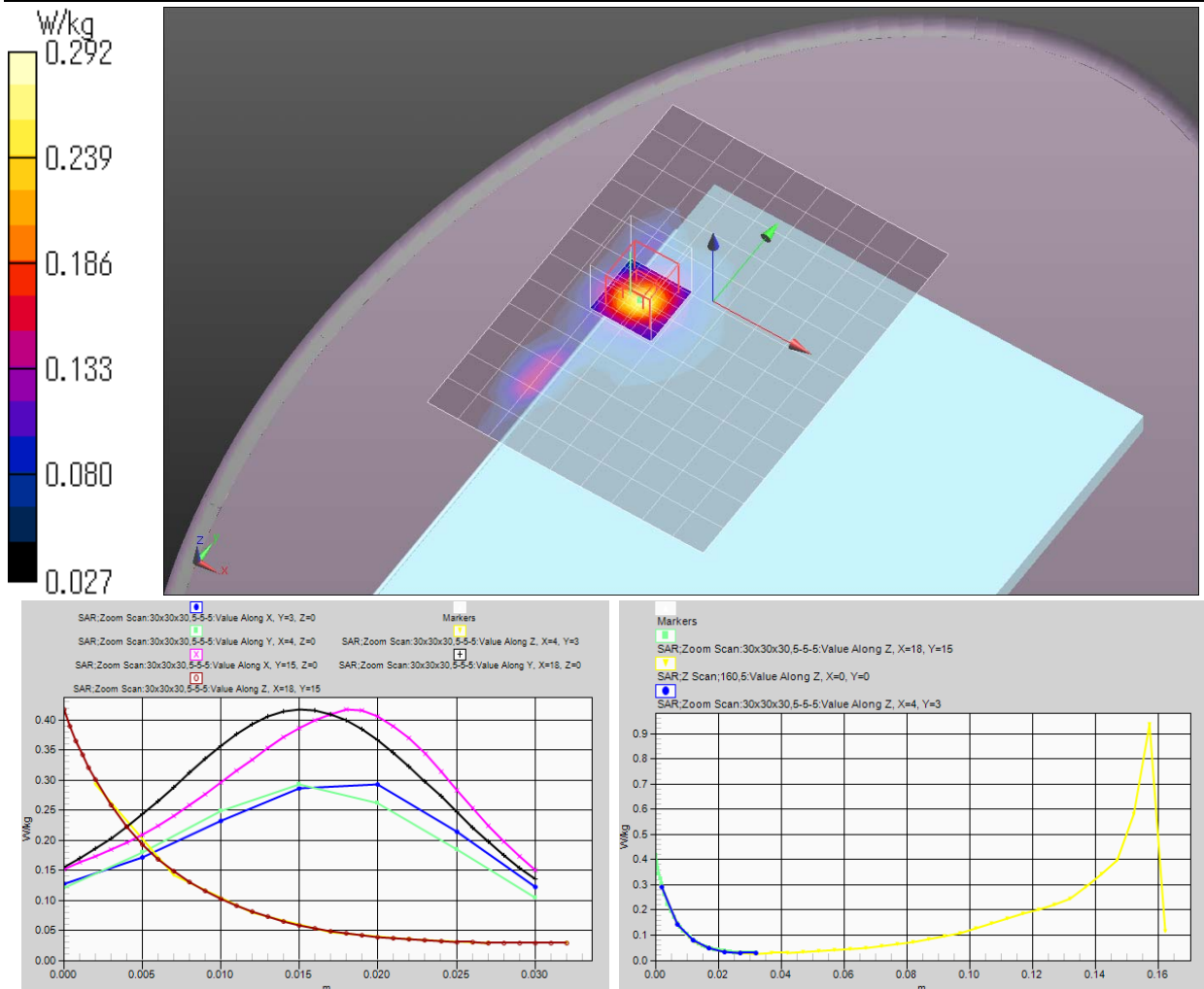
Z Scan:160,5 (1x1x33): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=5$ mm, Maximum value of SAR (measured) = 0.936 W/kg

Zoom Scan:30x30x30,5-5-5 (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 12.482 V/m; Power Drift = -0.19 dB, Maximum value of SAR (measured) = 0.292 W/kg

Peak SAR (extrapolated) = 0.417 mW/g

SAR(1 g) = 0.201 mW/g; SAR(10 g) = 0.104 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/19; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.4 deg.C. / 41 %RH,

*.liquid temperature: 20.6(start)/20.6(end)/20.6(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 1.99$ S/m; $\epsilon_r = 50.263$; $\rho = 1000$ kg/m³

Measurement Standard: DASYS (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)

Lap held(Bottom face)/Touch(0mm)_11n20(mcs0)_Mid-Ch_main-ant_SISO/

Area Scan:135x180,15 (10x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm, Maximum value of SAR (measured) = 0.267 W/kg

Area Scan:135x180,15 (91x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm, Maximum value of SAR (interpolated) = 0.270 W/kg

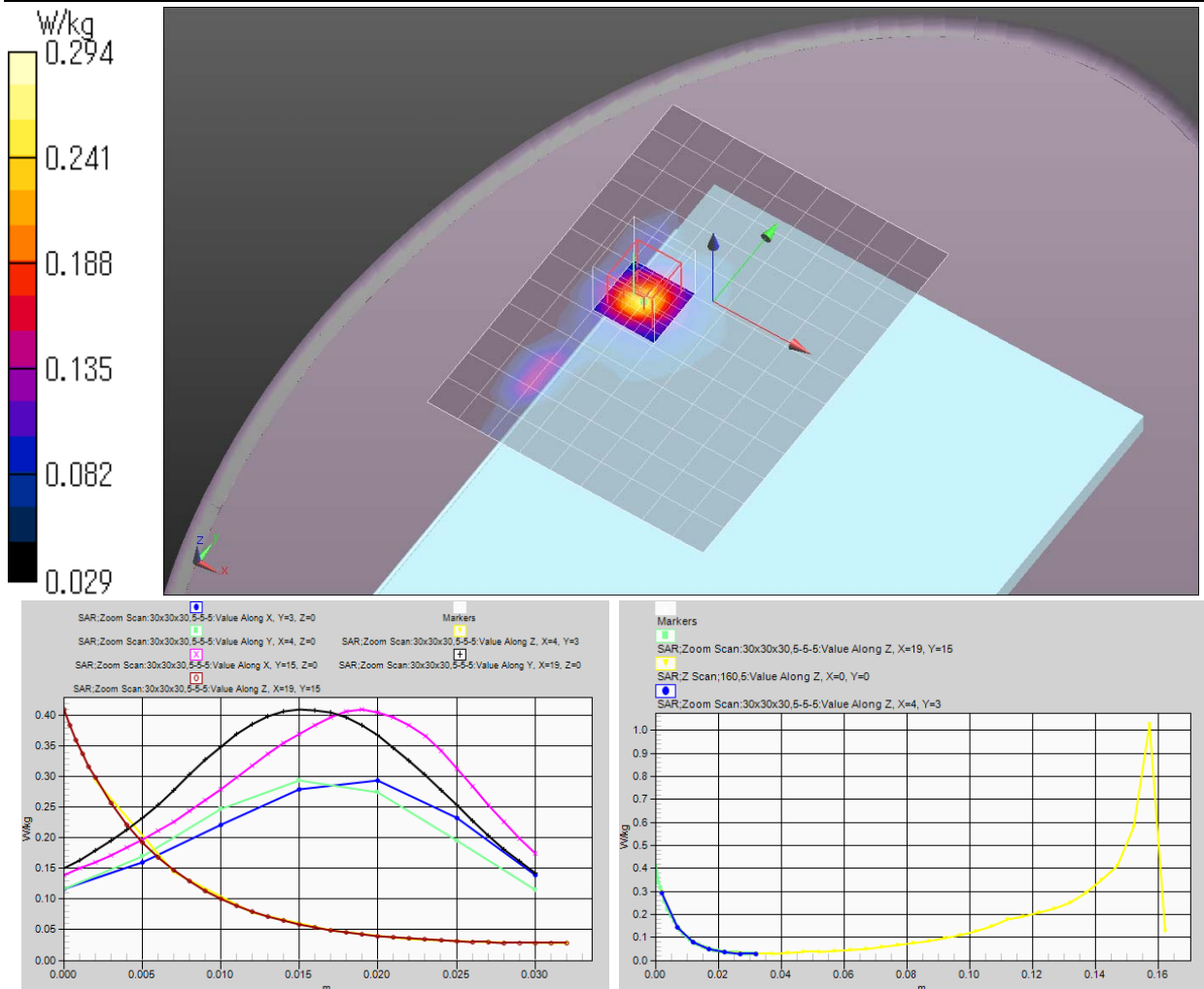
Z Scan:160,5 (1x1x33): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=5$ mm, Maximum value of SAR (measured) = 1.03 W/kg

Zoom Scan:30x30x30,5-5-5 (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 11.884 V/m; Power Drift = 0.10 dB, Maximum value of SAR (measured) = 0.294 W/kg

Peak SAR (extrapolated) = 0.410 mW/g

SAR(1 g) = 0.201 mW/g; SAR(10 g) = 0.104 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/19; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.4 deg.C. / 41 %RH,

*.liquid temperature: 20.6(start)/20.6(end)/20.6(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 1.99$ S/m; $\epsilon_r = 50.263$; $\rho = 1000$ kg/m³

Measurement Standard: DASYS (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)

Lap held(Bottom face)/Touch(0mm)_11b(1Mbps)_Mid-Ch_aux-ant/

Area Scan:135x360,15 (10x25x1): Measurement grid: $dx=15$ mm, $dy=15$ mm, Maximum value of SAR (measured) = 0.254 W/kg

Area Scan:135x360,15 (91x241x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm, Maximum value of SAR (interpolated) = 0.275 W/kg

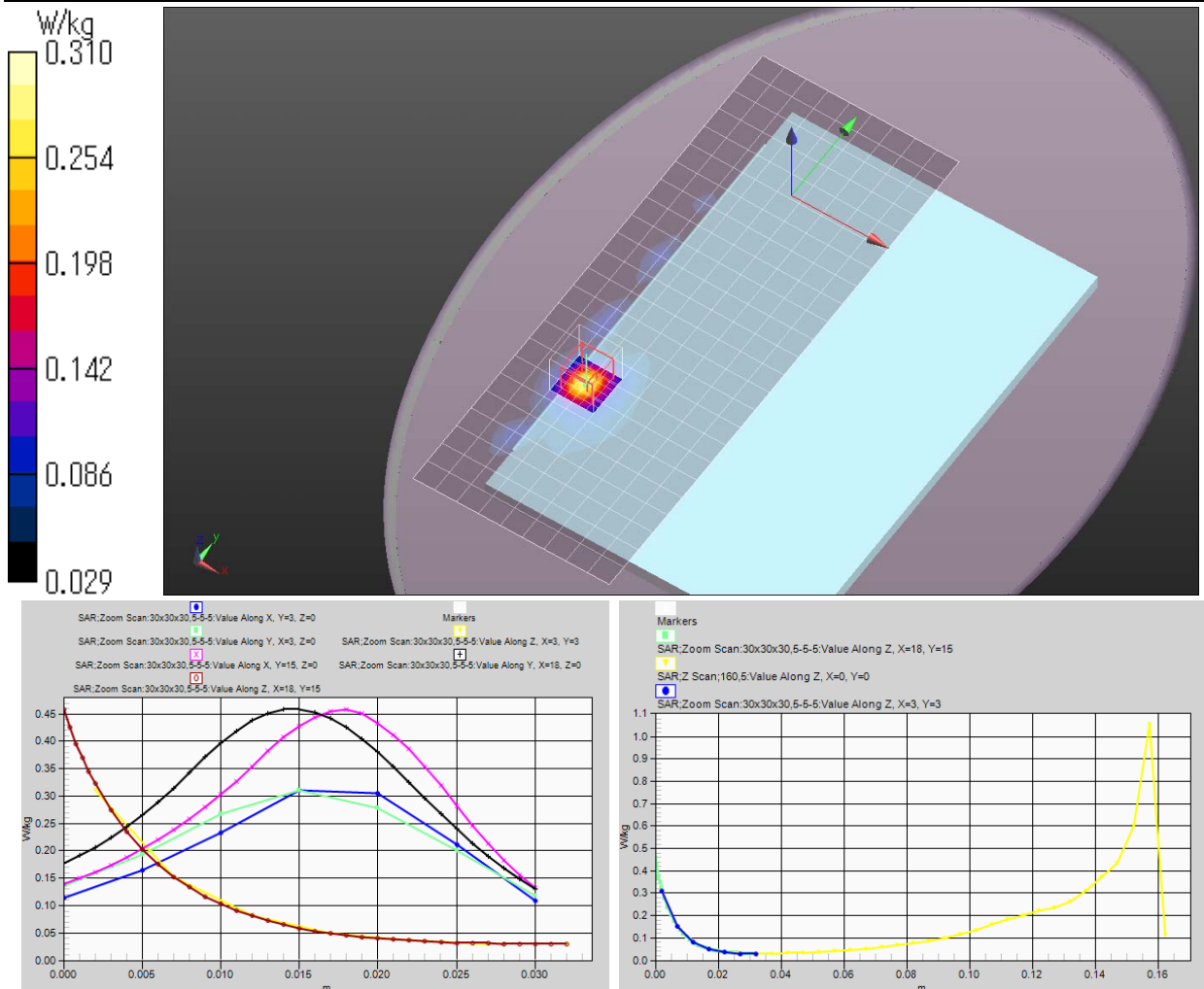
Z Scan:160,5 (1x1x33): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=5$ mm, Maximum value of SAR (measured) = 1.05 W/kg

Zoom Scan:30x30x30,5-5-5 (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 12.695 V/m; Power Drift = 0.04 dB, Maximum value of SAR (measured) = 0.310 W/kg

Peak SAR (extrapolated) = 0.458 mW/g

SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.105 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/19; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.4 deg.C. / 41 %RH,

*.liquid temperature: 20.6(start)/20.6(end)/20.6(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 2.022$ S/m; $\epsilon_r = 50.59$; $\rho = 1000$ kg/m³

Measurement Standard: DASYS (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)

Right side/Touch(0mm)_11b(1Mbps)_Mid-Ch_aux-ant/

Area Scan:255x105,15 (8x18x1): Measurement grid: $dx=15$ mm, $dy=15$ mm, Maximum value of SAR (measured) = 0.0913 W/kg

Area Scan:255x105,15 (71x171x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm, Maximum value of SAR (interpolated) = 0.173 W/kg

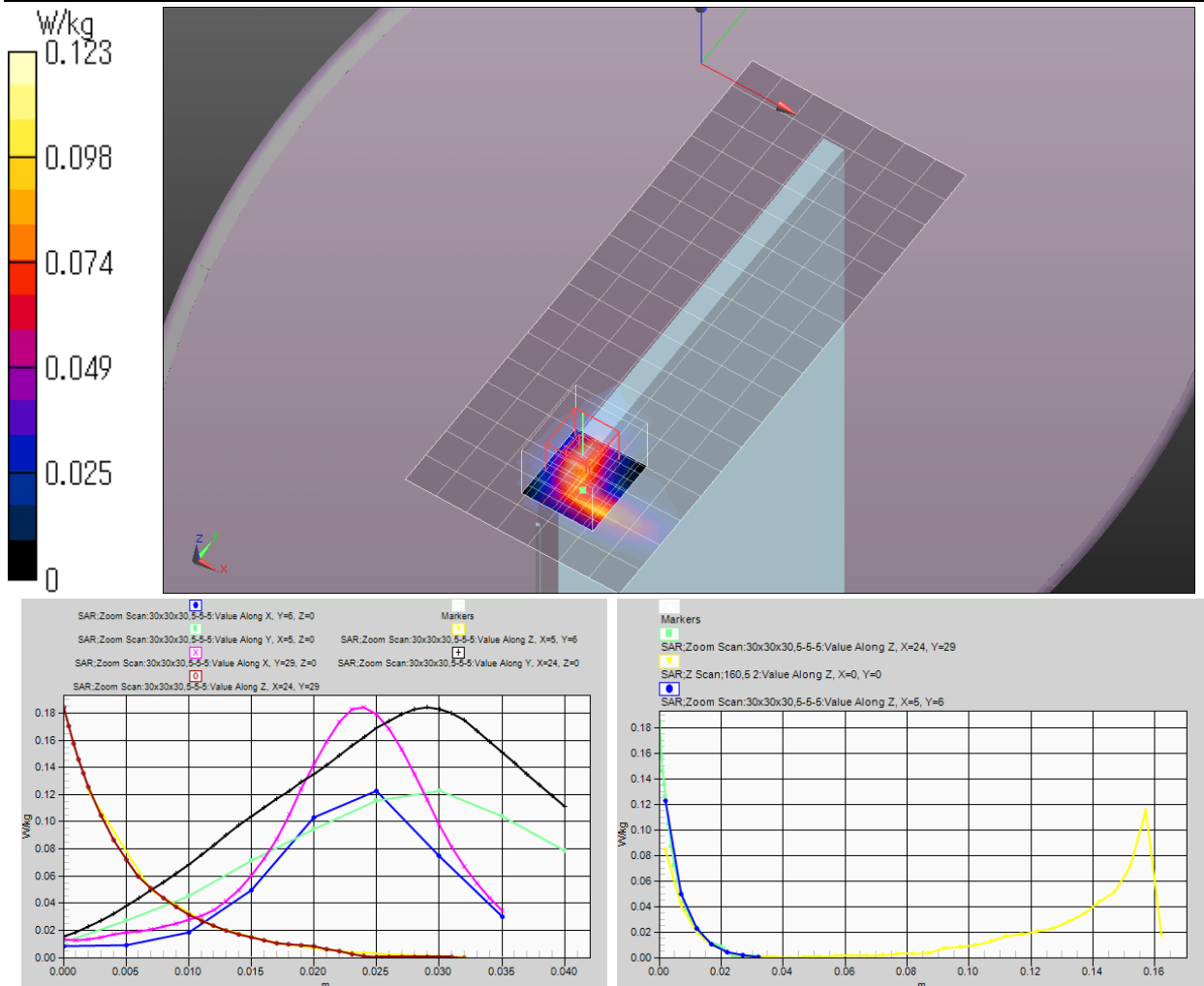
Z Scan:160,5 2 (1x1x33): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=5$ mm, Maximum value of SAR (measured) = 0.115 W/kg

Zoom Scan:30x30x30,5-5-5 (8x9x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 6.612 V/m; Power Drift = -0.07 dB, Maximum value of SAR (measured) = 0.123 W/kg

Peak SAR (extrapolated) = 0.184 mW/g

SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.032 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/20; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.9 deg.C. / 44 %RH,

*.liquid temperature: 21.0(start)/21.0(end)/21.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 2.022$ S/m; $\epsilon_r = 50.59$; $\rho = 1000$ kg/m³

Measurement Standard: DASYS (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)

LCD back side(Nearby person)/Touch(0mm)_11b(1Mbps)_Mid-Ch_aux-ant/

Area Scan:270x360,15 (19x25x1): Measurement grid: dx=15mm, dy=15mm, Maximum value of SAR (measured) = 0.0769 W/kg

Area Scan:270x360,15 (181x241x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm, Maximum value of SAR (interpolated) = 0.0965 W/kg

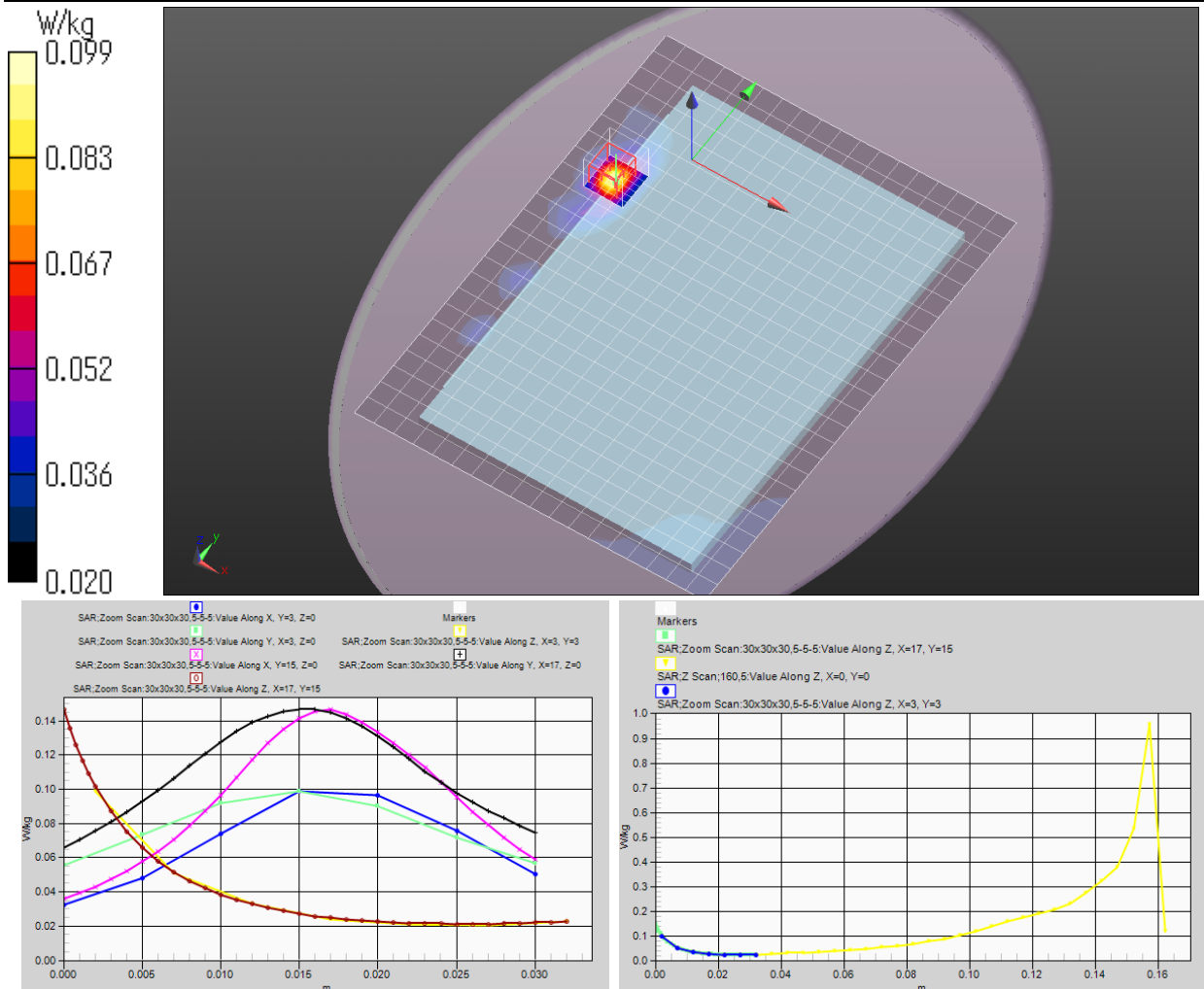
Z Scan:160,5 (1x1x33): Measurement grid: dx=20mm, dy=20mm, dz=5mm, Maximum value of SAR (measured) = 0.956 W/kg

Zoom Scan:30x30x30,5-5-5 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.056 V/m; Power Drift = 0.11 dB, Maximum value of SAR (measured) = 0.0988 W/kg

Peak SAR (extrapolated) = 0.147 mW/g

SAR(1 g) = 0.069 mW/g; SAR(10 g) = 0.041 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/20; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.9 deg.C. / 44 %RH,

*.liquid temperature: 21.0(start)/21.0(end)/21.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 1.99$ S/m; $\epsilon_r = 50.263$; $\rho = 1000$ kg/m³

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)

Lap held(Bottom face)/Touch(0mm)_11g(6Mbps)_Mid-Ch_aux-ant/

Area Scan:135x180,15 (10x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm, Maximum value of SAR (measured) = 0.304 W/kg

Area Scan:135x180,15 (91x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm, Maximum value of SAR (interpolated) = 0.313 W/kg

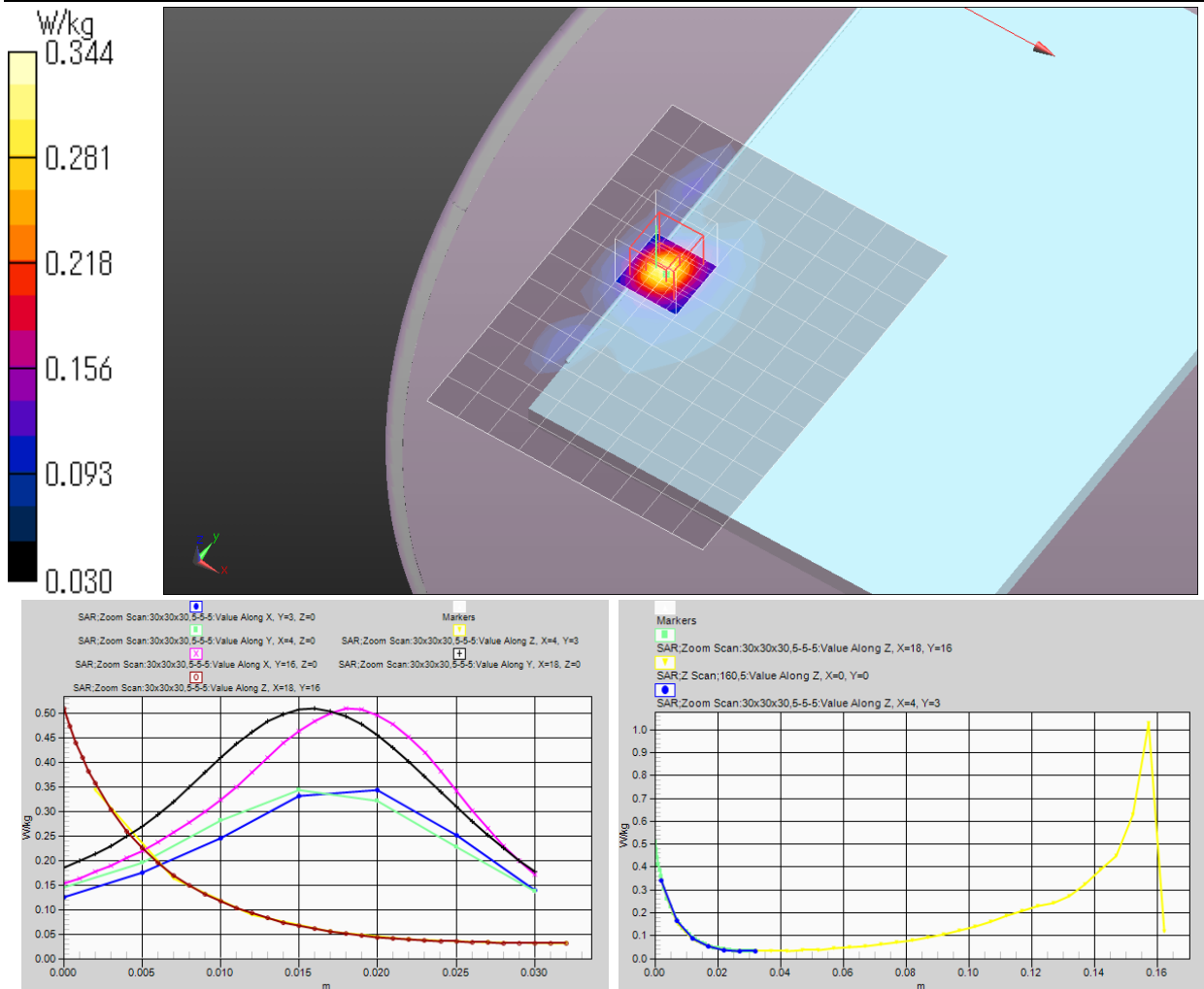
Z Scan:160,5 (1x1x33): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=5$ mm, Maximum value of SAR (measured) = 1.03 W/kg

Zoom Scan:30x30x30,5-5-5 (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 13.086 V/m; Power Drift = -0.05 dB, Maximum value of SAR (measured) = 0.344 W/kg

Peak SAR (extrapolated) = 0.510 mW/g

SAR(1 g) = 0.232 mW/g; SAR(10 g) = 0.116 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/19; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.4 deg.C. / 41 %RH,

*.liquid temperature: 20.6(start)/20.6(end)/20.6(in check) deg.C.; *. White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 1.99$ S/m; $\epsilon_r = 50.263$; $\rho = 1000$ kg/m³

Measurement Standard: DASYS (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)

Lap held(Bottom face)/Touch(0mm)_11n20(mcs0)_Mid-Ch_aux-ant_SISO/

Area Scan:135x180,15 (10x13x1): Measurement grid: $dx=15$ mm, $dy=15$ mm, Maximum value of SAR (measured) = 0.283 W/kg

Area Scan:135x180,15 (91x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm, Maximum value of SAR (interpolated) = 0.318 W/kg

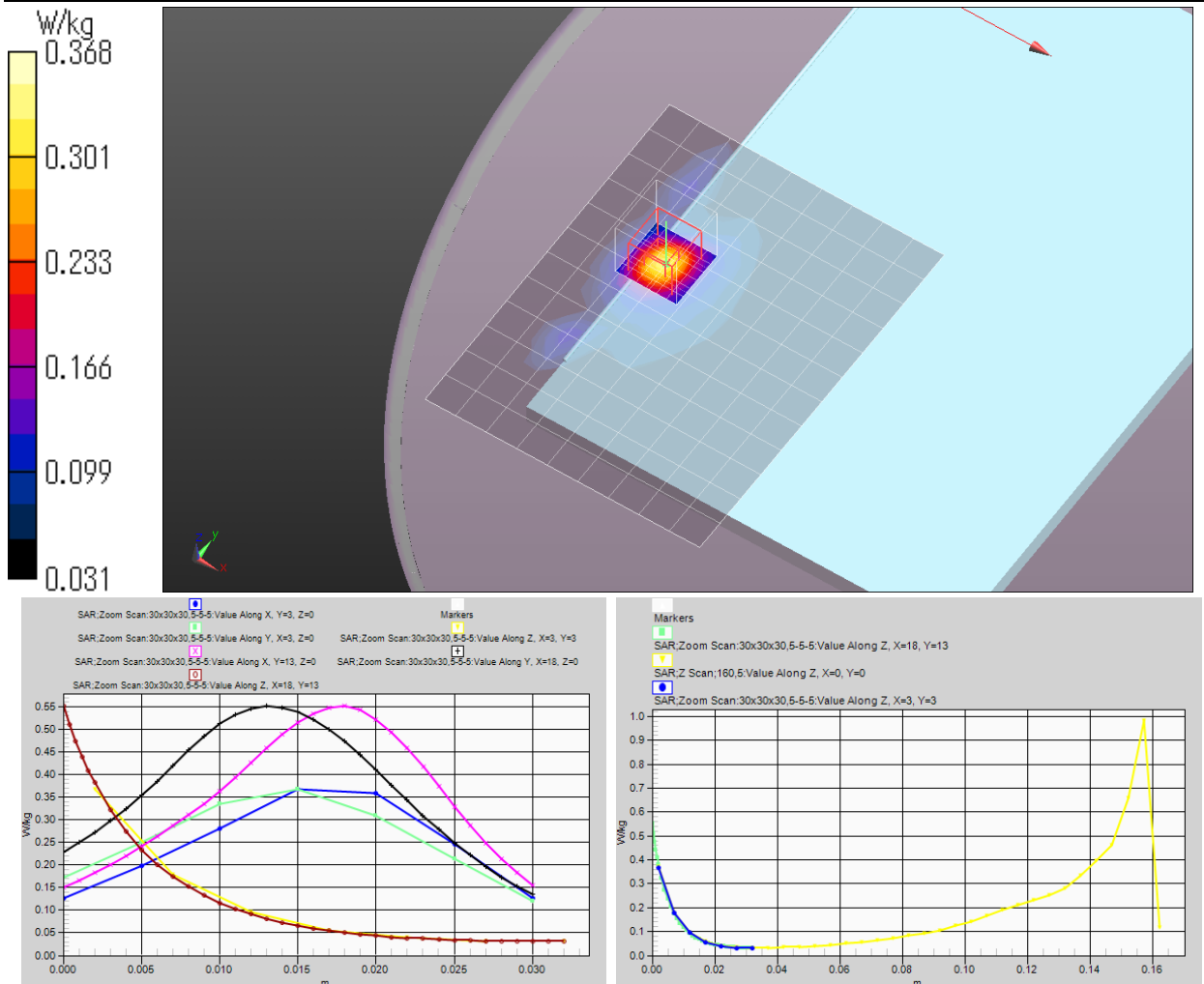
Z Scan:160,5 (1x1x33): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=5$ mm, Maximum value of SAR (measured) = 0.982 W/kg

Zoom Scan:30x30x30,5-5-5 (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 13.703 V/m; Power Drift = 0.10 dB, Maximum value of SAR (measured) = 0.368 W/kg

Peak SAR (extrapolated) = 0.552 mW/g

SAR(1 g) = 0.246 mW/g; SAR(10 g) = 0.122 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/19; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.4 deg.C. / 41 %RH,

*.liquid temperature: 20.6(start)/20.6(end)/20.6(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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Telephone: +81 463 50 6400 / Facsimile: +81 463 50 6401

EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 802.11bgn; Frequency: 2437 MHz; Crest factor: 1.0

Medium: MSL2450; Medium parameters used: $f = 2437$ MHz; $\sigma = 1.99$ S/m; $\epsilon_r = 50.263$; $\rho = 1000$ kg/m³

Measurement Standard: DASYS (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)

Lap held(Bottom face)/Touch(0mm)_11n20(mcs8)_Mid-Ch_MIMO/

Area Scan:270x360,15 (19x25x1): Measurement grid: $dx=15$ mm, $dy=15$ mm, Maximum value of SAR (measured) = 0.104 W/kg

Area Scan:270x360,15 (181x241x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm, Maximum value of SAR (interpolated) = 0.124 W/kg

Z Scan:160,5 (1x1x33): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=5$ mm, Maximum value of SAR (measured) = 0.993 W/kg

Zoom Scan:30x30x30,5-5-5 _aux-ant (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 9.346 V/m; Power Drift = -0.02 dB, Maximum value of SAR (measured) = 0.168 W/kg

Peak SAR (extrapolated) = 0.238 mW/g

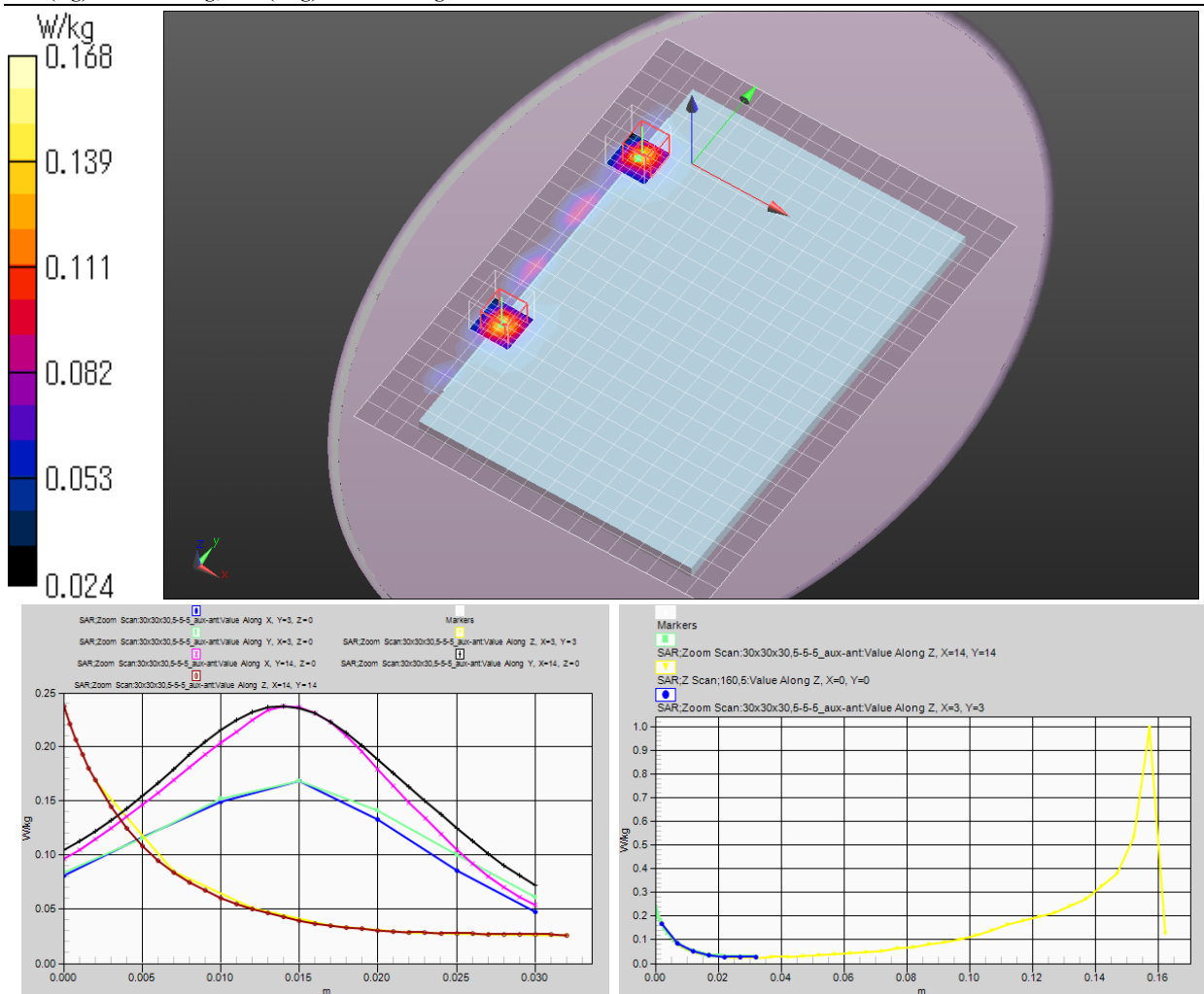
SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.062 mW/g

Zoom Scan(2nd):30x30x30,5-5-5 _main-ant (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 9.346 V/m; Power Drift = -0.02 dB, Maximum value of SAR (measured) = 0.138 W/kg

Peak SAR (extrapolated) = 0.193 mW/g

SAR(1 g) = 0.098 mW/g; SAR(10 g) = 0.055 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/19; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 153mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 21.4 deg.C. / 41 %RH,

*.liquid temperature: 20.6(start)/20.6(end)/20.6(in check) deg.C.; *. White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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SAR plots for W52-53 Band

EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5300 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5300$ MHz; $\sigma = 5.508$ S/m; $\epsilon_r = 47.316$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.5, 151.0$

-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)

Lap held(Bottom face)/Touch(0mm)_Main-Ant_W53_11a 6Mbps_5300MHz60ch/

Area Scan:100x135,10 (11x14x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.921 W/kg

Area Scan:100x135,10 (101x131x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.959 W/kg

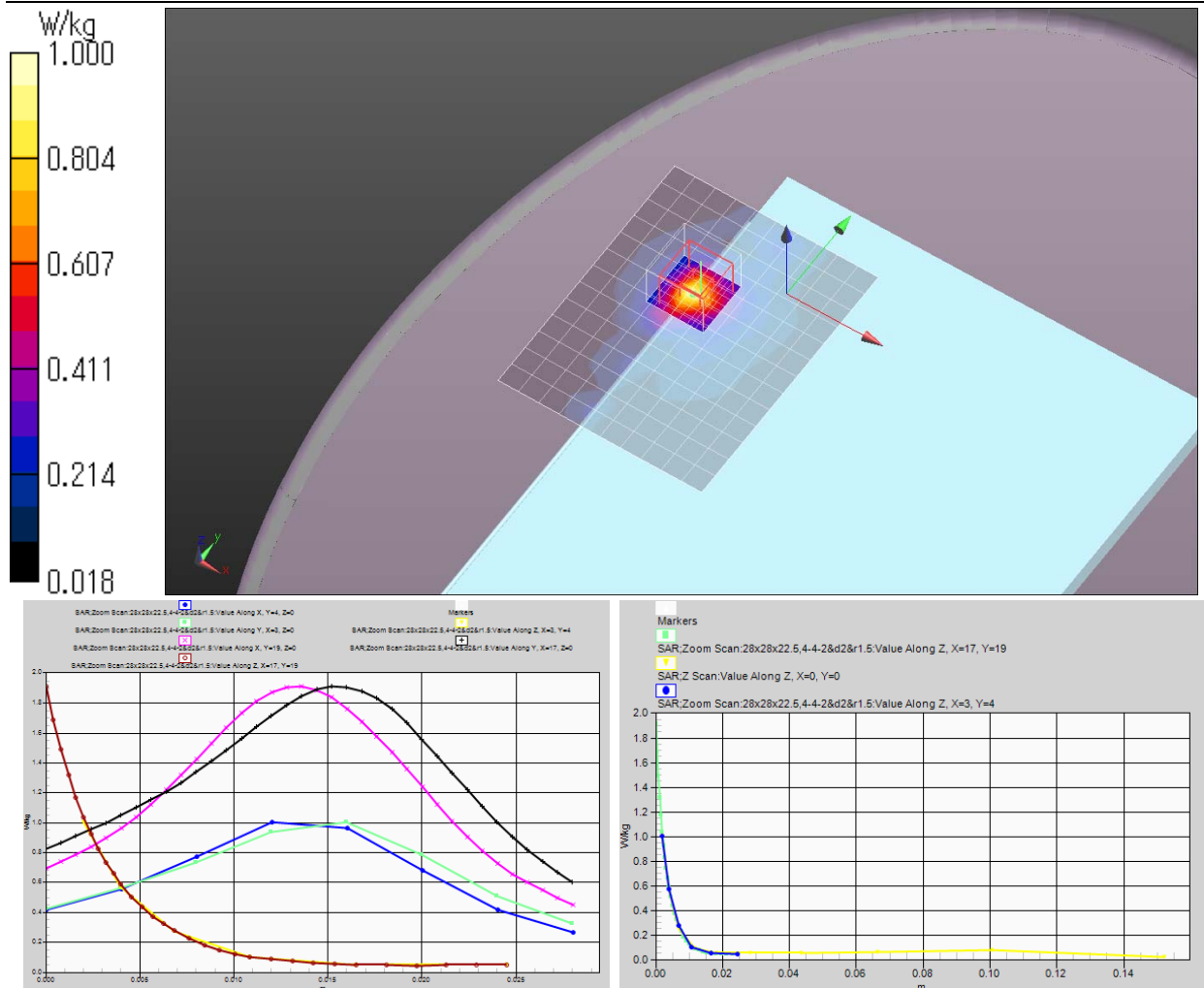
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 1.00 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 16.118 V/m; Power Drift = 0.00 dB, Maximum value of SAR (measured) = 1.00 W/kg

Peak SAR (extrapolated) = 1.914 mW/g

SAR(1 g) = 0.536 mW/g; SAR(10 g) = 0.212 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/29; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,
*.liquid depth: 151mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.8 deg.C. / 45 %RH,
*.liquid temperature: 24.4(start)/24.4(end)/24.4(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5300 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5300$ MHz; $\sigma = 5.545$ S/m; $\epsilon_r = 48.217$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Left side/Touch(0mm)_Main-Ant_W52&53_11a 6Mbps_5300MHz60ch/

Area Scan:80x130,10 (9x14x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.0572 W/kg

Area Scan:80x130,10 (81x131x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.0572 W/kg

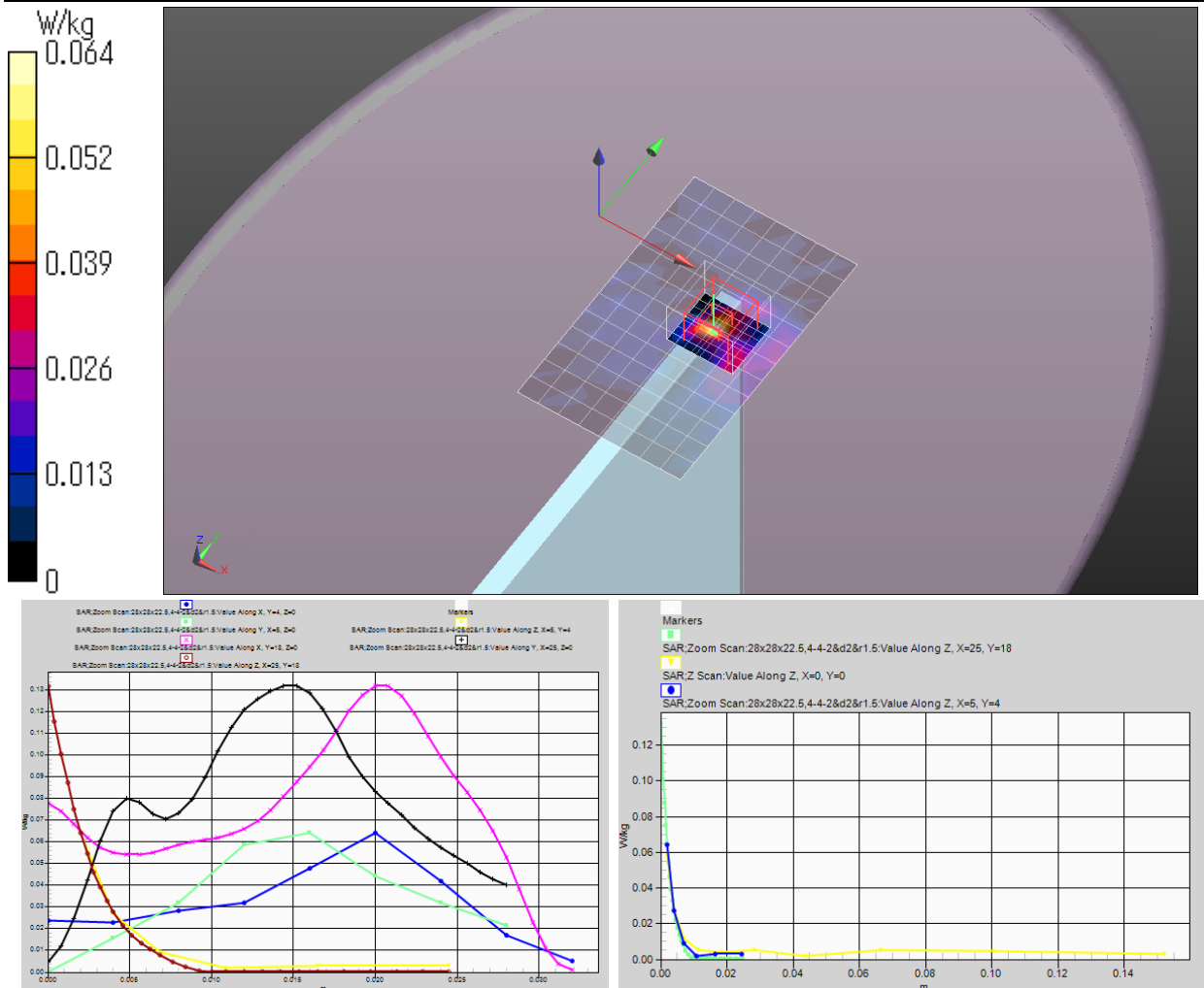
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.0584 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (9x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 4.183 V/m; Power Drift = 0.09 dB, Maximum value of SAR (measured) = 0.0644 W/kg

Peak SAR (extrapolated) = 0.132 mW/g

SAR(1 g) = 0.026 mW/g; SAR(10 g) = 0.00755 mW/g



Remarks:*. Date tested: Date/Time: 2012/12/1; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,

*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5300 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5300$ MHz; $\sigma = 5.508$ S/m; $\epsilon_r = 47.316$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

LCD back side(Nearby person)/Touch(0mm)_Main-Ant_W53_11a 6Mbps_5300MHz60ch/

Area Scan:110x150,10 (12x16x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.542 W/kg

Area Scan:110x150,10 (111x151x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.576 W/kg

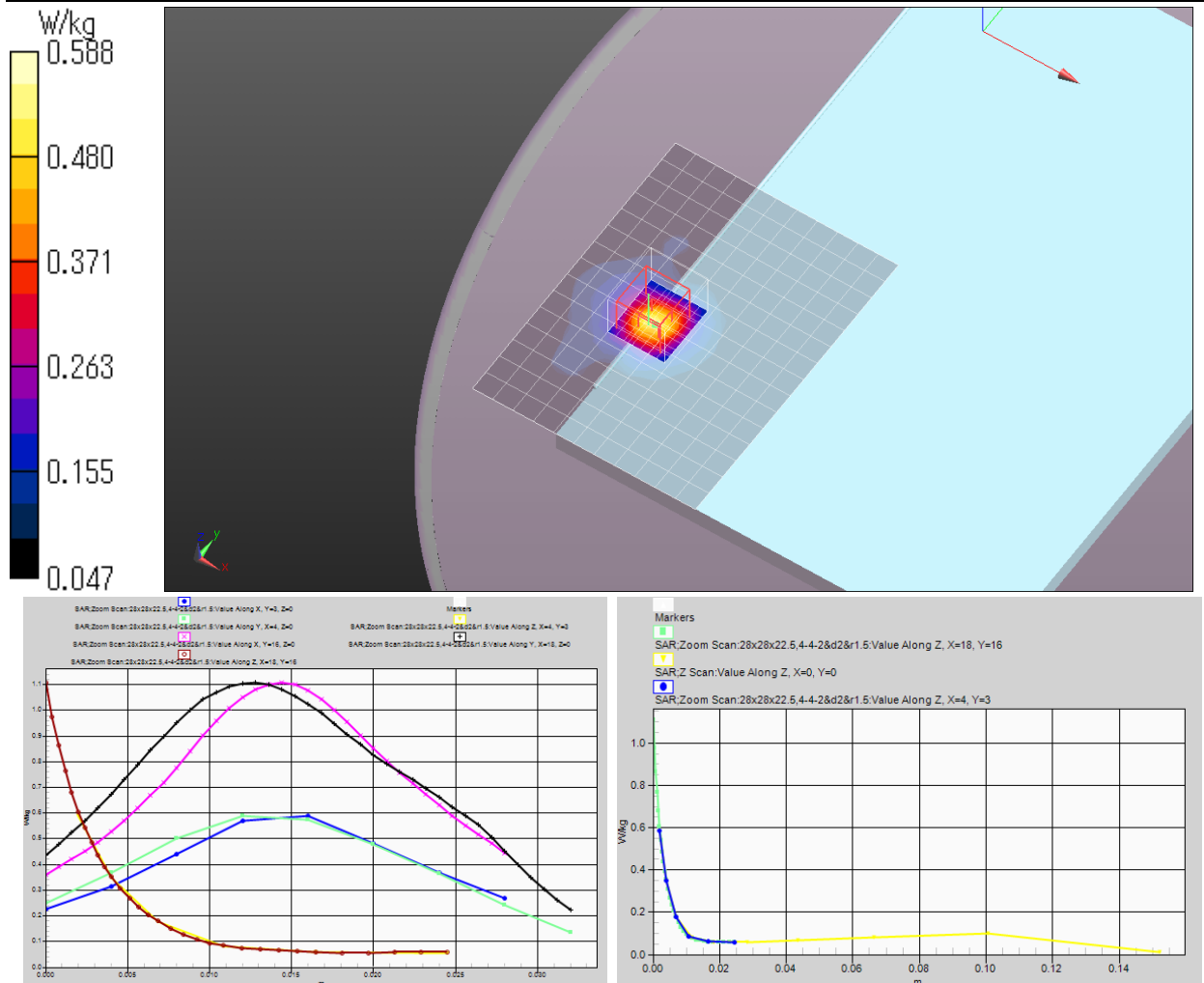
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.586 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (8x9x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 12.345 V/m; Power Drift = -0.06 dB, Maximum value of SAR (measured) = 0.588 W/kg

Peak SAR (extrapolated) = 1.108 mW/g

SAR(1 g) = 0.340 mW/g; SAR(10 g) = 0.159 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/29; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 151mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.8 deg.C. / 45 %RH,

*.liquid temperature: 24.4(start)/24.4(end)/24.4(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5180 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5180$ MHz; $\sigma = 5.295$ S/m; $\epsilon_r = 47.57$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.5, 151.0$

-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)

Lap held(Bottom face)/Touch(0mm)_Main-Ant_W52_11a 6Mbps_5180MHz36ch/

Area Scan:100x135,10 (11x14x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.562 W/kg

Area Scan:100x135,10 (101x131x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.643 W/kg

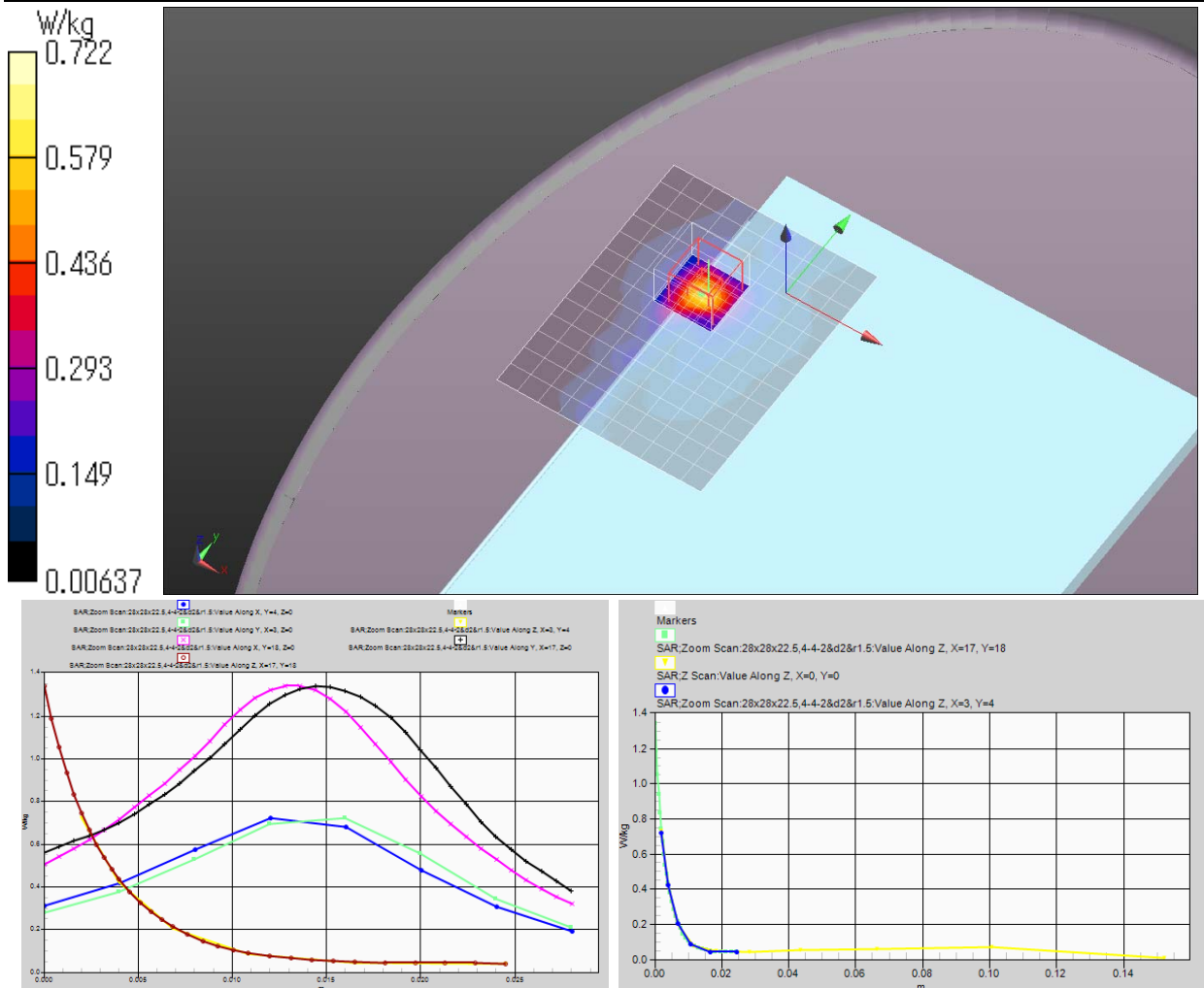
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.731 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 12.772 V/m; Power Drift = 0.09 dB, Maximum value of SAR (measured) = 0.722 W/kg

Peak SAR (extrapolated) = 1.342 mW/g

SAR(1 g) = 0.393 mW/g; SAR(10 g) = 0.160 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/29; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 151mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.8 deg.C. / 45 %RH,

*.liquid temperature: 24.4(start)/24.4(end)/24.4(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5240 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5240$ MHz; $\sigma = 5.412$ S/m; $\epsilon_r = 47.795$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face)/Touch(0mm)_Main-Ant_W52_11a6Mbps_5240MHz48ch/

Area Scan:80x90,10 (9x10x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.741 W/kg

Area Scan:80x90,10 (81x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.745 W/kg

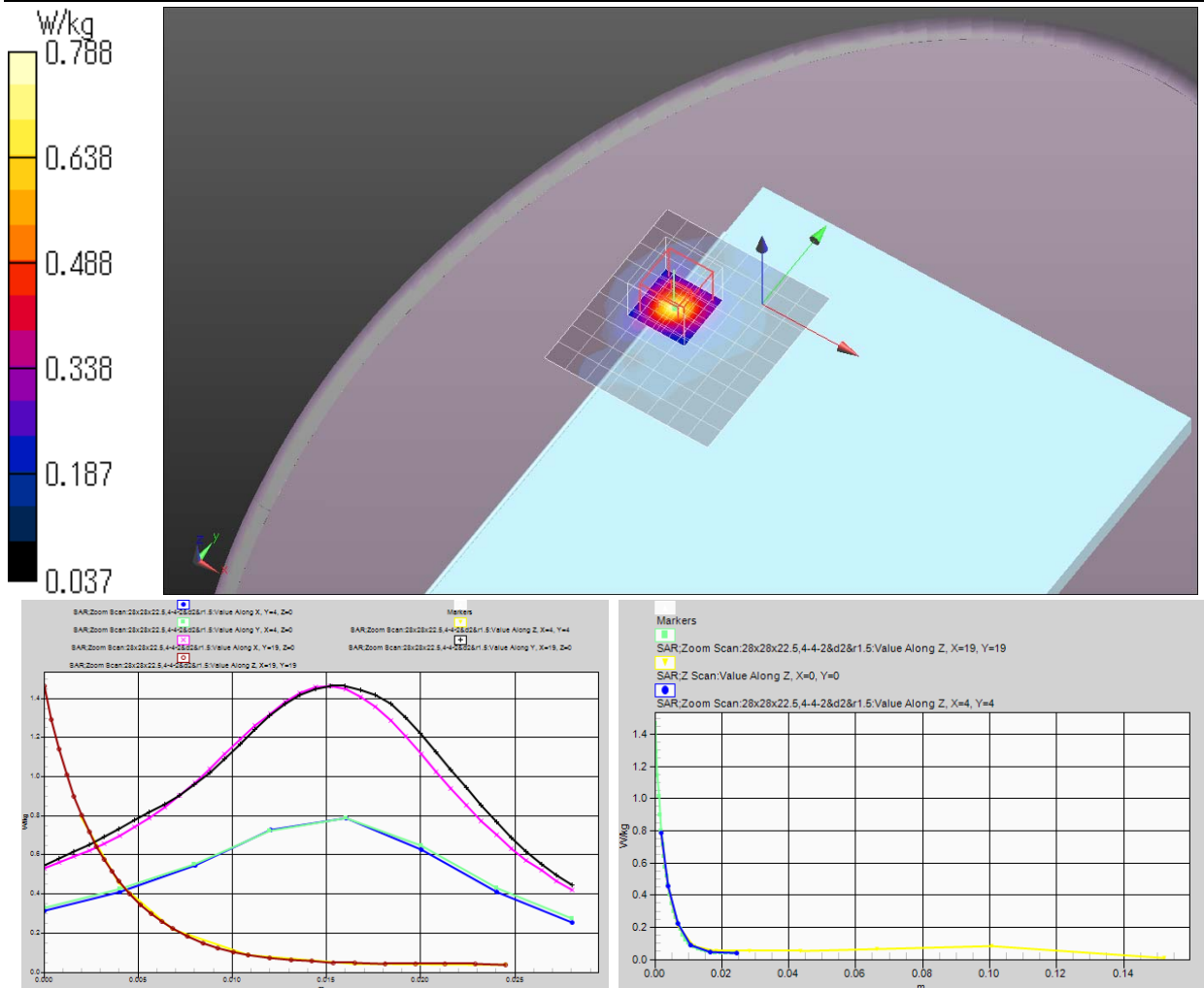
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.778 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 14.696 V/m; Power Drift = -0.03 dB, Maximum value of SAR (measured) = 0.788 W/kg

Peak SAR (extrapolated) = 1.464 mW/g

SAR(1 g) = 0.422 mW/g; SAR(10 g) = 0.171 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/29; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 151mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.8 deg.C. / 45 %RH,

*.liquid temperature: 24.4(start)/24.4(end)/24.4(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5280 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5280$ MHz; $\sigma = 5.418$ S/m; $\epsilon_r = 47.428$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face)/Touch(0mm)_Main-Ant_W52_11a6Mbps_5280MHz56ch/

Area Scan:80x90,10 (9x10x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.961 W/kg

Area Scan:80x90,10 (81x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.961 W/kg

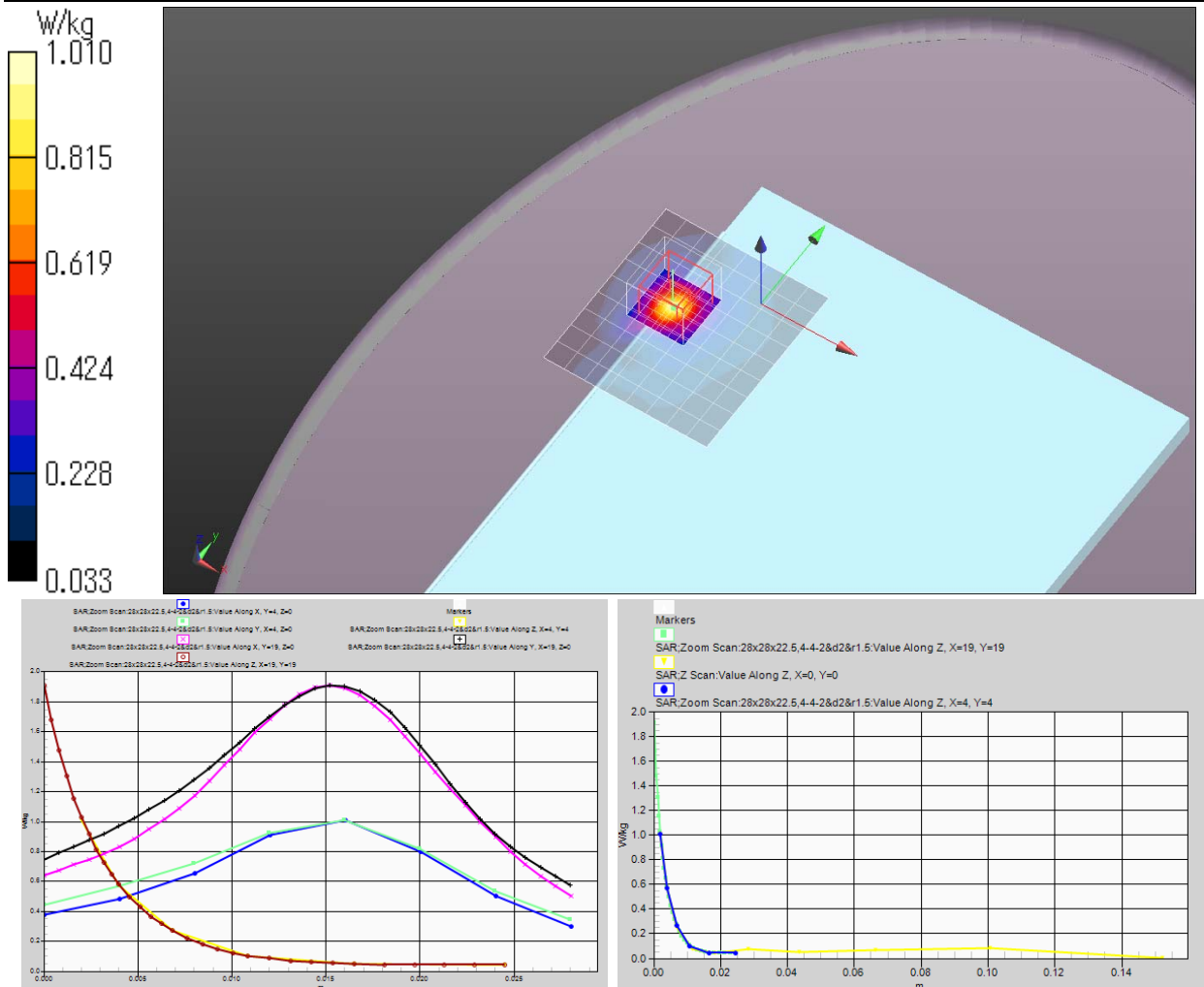
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 1.01 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 16.642 V/m; Power Drift = -0.03 dB, Maximum value of SAR (measured) = 1.01 W/kg

Peak SAR (extrapolated) = 1.912 mW/g

SAR(1 g) = 0.528 mW/g; SAR(10 g) = 0.206 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/29; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 151mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.8 deg.C. / 45 %RH,

*.liquid temperature: 24.4(start)/24.4(end)/24.4(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5200 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5200$ MHz; $\sigma = 5.448$ S/m; $\epsilon_r = 48.37$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face),121130/2,Touch(0mm)_Main-Ant_w52_11n(mcs0)_m5200(40)/

Area Scan:90x110,10 (10x12x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.816 W/kg

Area Scan:90x110,10 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.823 W/kg

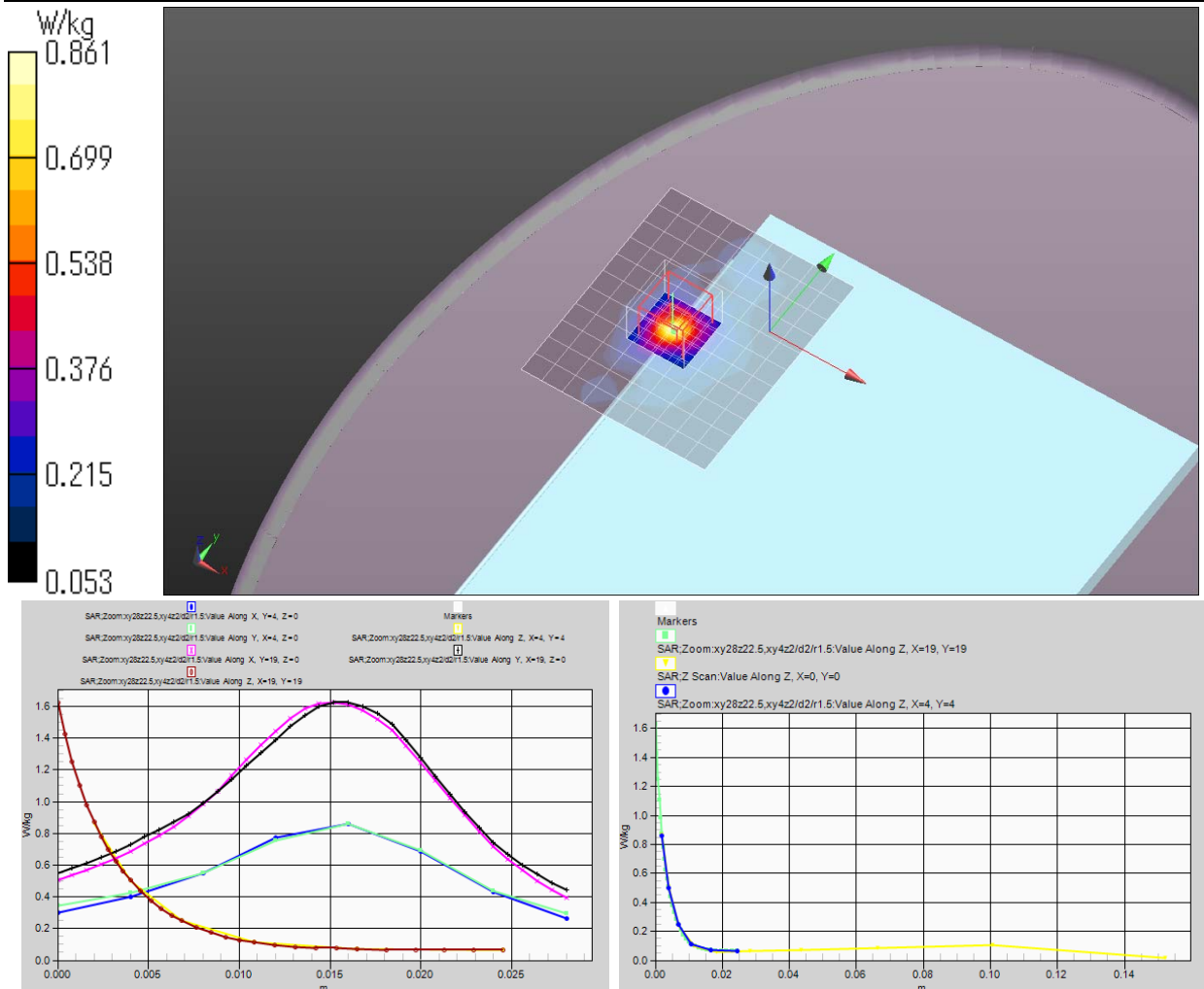
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.870 W/kg

Zoom:xy28z22.5,xy4z2/d2/r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 15.458 V/m; Power Drift = -0.03 dB, Maximum value of SAR (measured) = 0.861 W/kg

Peak SAR (extrapolated) = 1.627 mW/g

SAR(1 g) = 0.454 mW/g; SAR(10 g) = 0.187 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/30; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,

*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5240 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5240$ MHz; $\sigma = 5.453$ S/m; $\epsilon_r = 48.364$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face),121130/1,Touch(0mm)_Main-Ant_w52_11n(mcs0)_m5240(48)/

Area Scan:90x110,10 (10x12x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.871 W/kg

Area Scan:90x110,10 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.969 W/kg

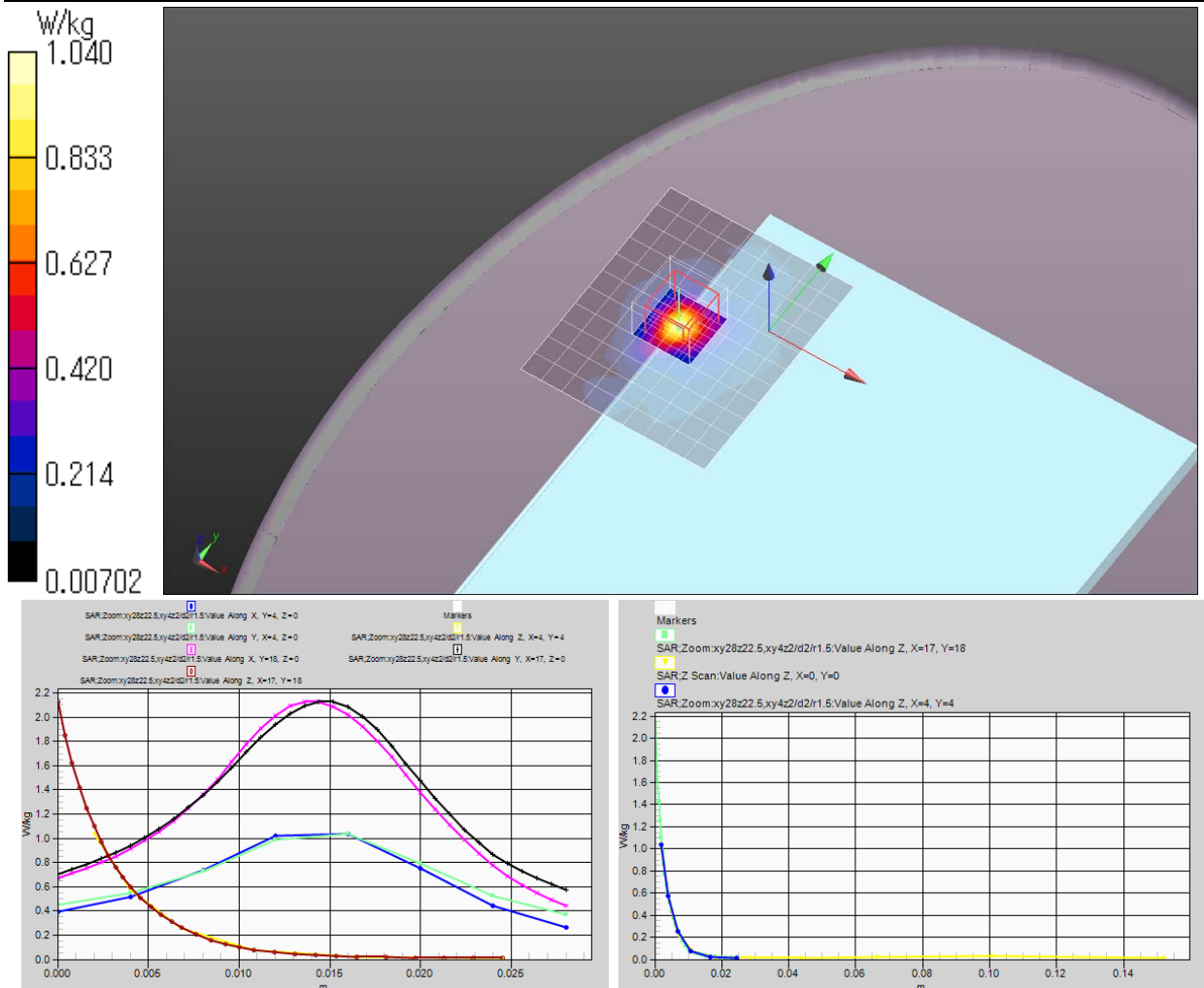
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 1.04 W/kg

Zoom:xy28z22.5,xy4z2/d2/r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 17.822 V/m; Power Drift = -0.03 dB, Maximum value of SAR (measured) = 1.04 W/kg

Peak SAR (extrapolated) = 2.131 mW/g

SAR(1 g) = 0.543 mW/g; SAR(10 g) = 0.186 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/30; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,
*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,
*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5280 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5280$ MHz; $\sigma = 5.538$ S/m; $\epsilon_r = 48.154$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face),121130/4,Touch(0mm)_Main-Ant_w53_11n(mcs0)_m5280(56)/

Area Scan:90x110,10 (10x12x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 1.14 W/kg

Area Scan:90x110,10 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 1.16 W/kg

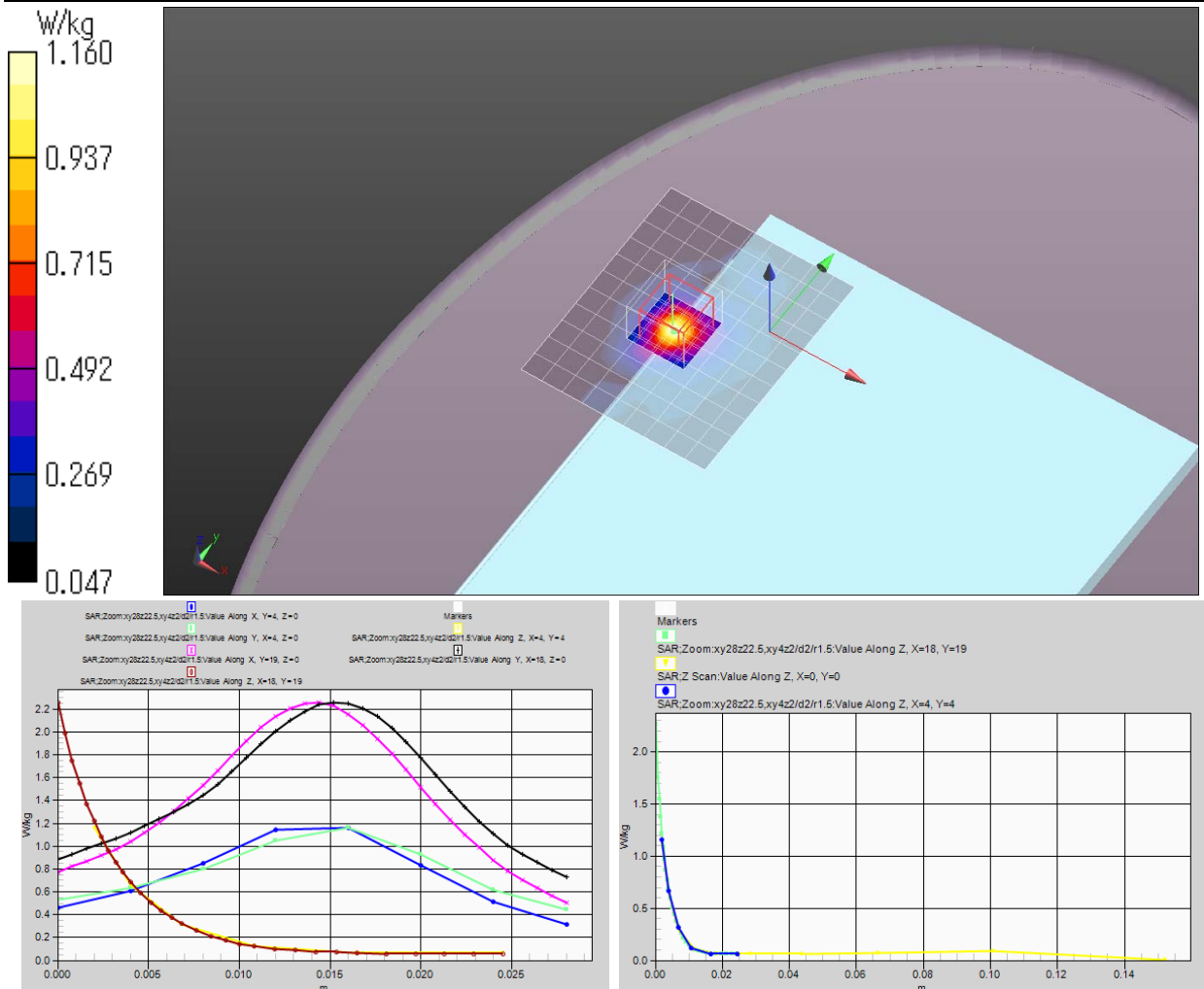
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 1.16 W/kg

Zoom:xy28z22.5,xy4z2/d2/r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 18.539 V/m; Power Drift = -0.02 dB, Maximum value of SAR (measured) = 1.16 W/kg

Peak SAR (extrapolated) = 2.261 mW/g

SAR(1 g) = 0.622 mW/g; SAR(10 g) = 0.242 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/30; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,

*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5320 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5320$ MHz; $\sigma = 5.576$ S/m; $\epsilon_r = 48.161$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face),121130/3,Touch(0mm)_Main-Ant_w53_11n(mcs0)_m5320(64)/

Area Scan:90x110,10 (10x12x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 1.33 W/kg

Area Scan:90x110,10 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 1.35 W/kg

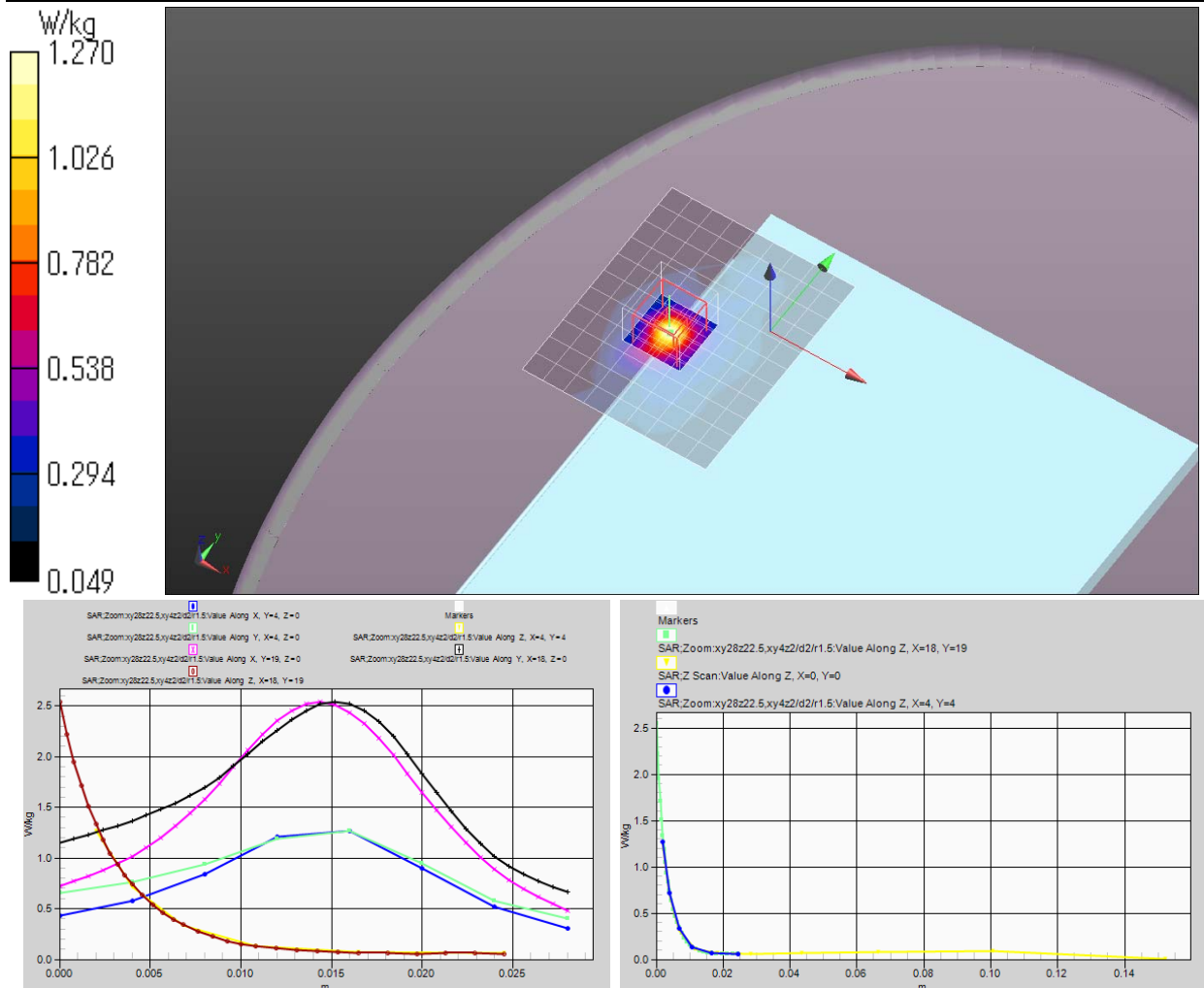
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 1.25 W/kg

Zoom:xy28z22.5,xy4z2/d2/r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 19.399 V/m; Power Drift = -0.07 dB, Maximum value of SAR (measured) = 1.27 W/kg

Peak SAR (extrapolated) = 2.546 mW/g

SAR(1 g) = 0.670 mW/g; SAR(10 g) = 0.256 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/30; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,

*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5180 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5180$ MHz; $\sigma = 5.295$ S/m; $\epsilon_r = 47.57$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face)/Touch(0mm)_Aux-Ant_W52&W53_11a6Mbps_5180MHz36ch/

Area Scan:100x135,10 (11x14x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.671 W/kg

Area Scan:100x135,10 (101x131x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.715 W/kg

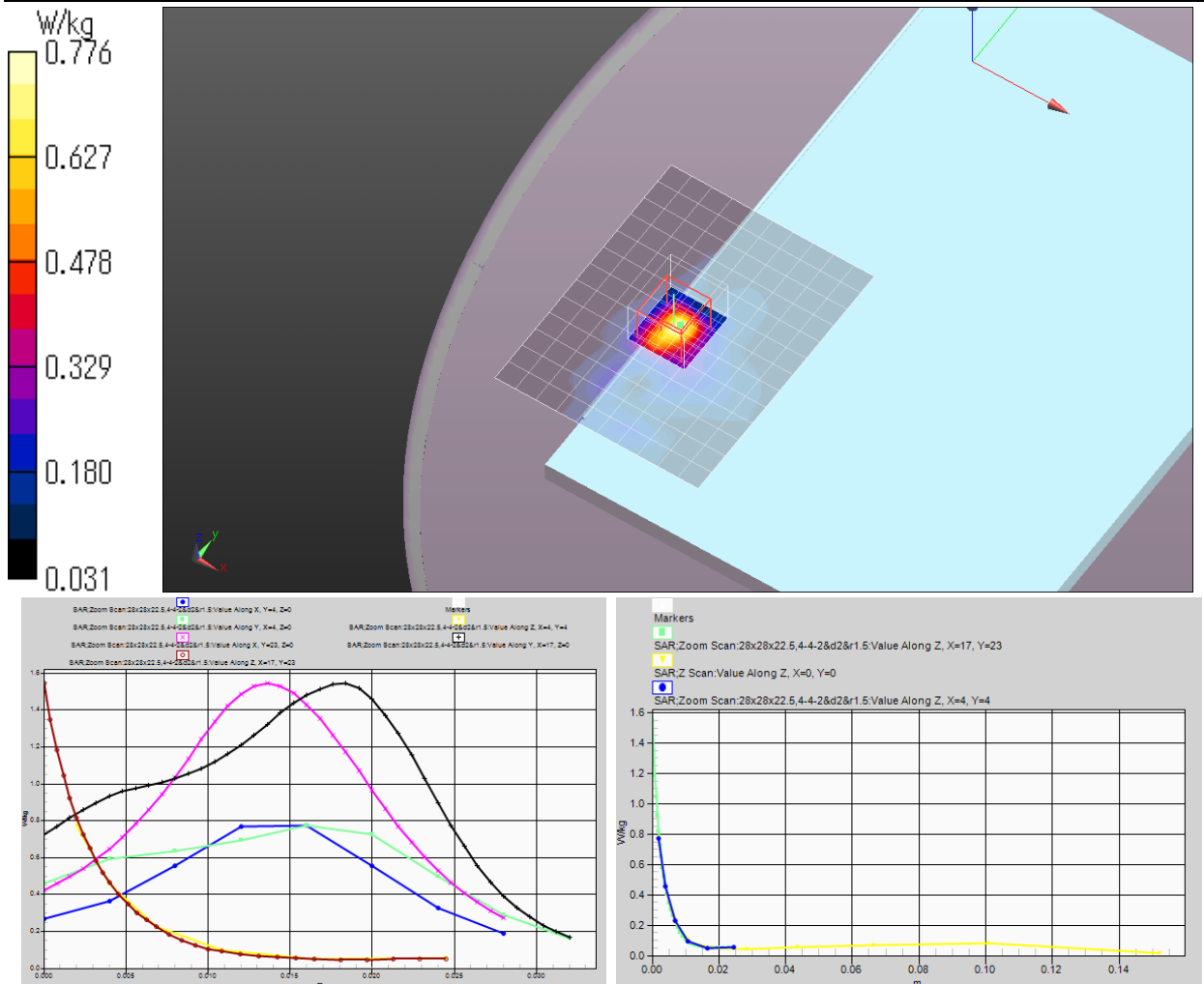
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.781 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (8x9x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 13.936 V/m; Power Drift = 0.06 dB, Maximum value of SAR (measured) = 0.776 W/kg

Peak SAR (extrapolated) = 1.546 mW/g

SAR(1 g) = 0.429 mW/g; SAR(10 g) = 0.177 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/29; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,
*.liquid depth: 151mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.8 deg.C. / 45 %RH,
*.liquid temperature: 24.4(start)/24.4(end)/24.4(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5180 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5180$ MHz; $\sigma = 5.385$ S/m; $\epsilon_r = 48.242$; $\rho = 1000$ kg/m³

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: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Right side/Touch(0mm)_Aux-Ant_W52&W53_11a6Mbps_5180MHz36ch/

Area Scan:80x130,10 (9x14x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.0380 W/kg

Area Scan:80x130,10 (81x131x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.0868 W/kg

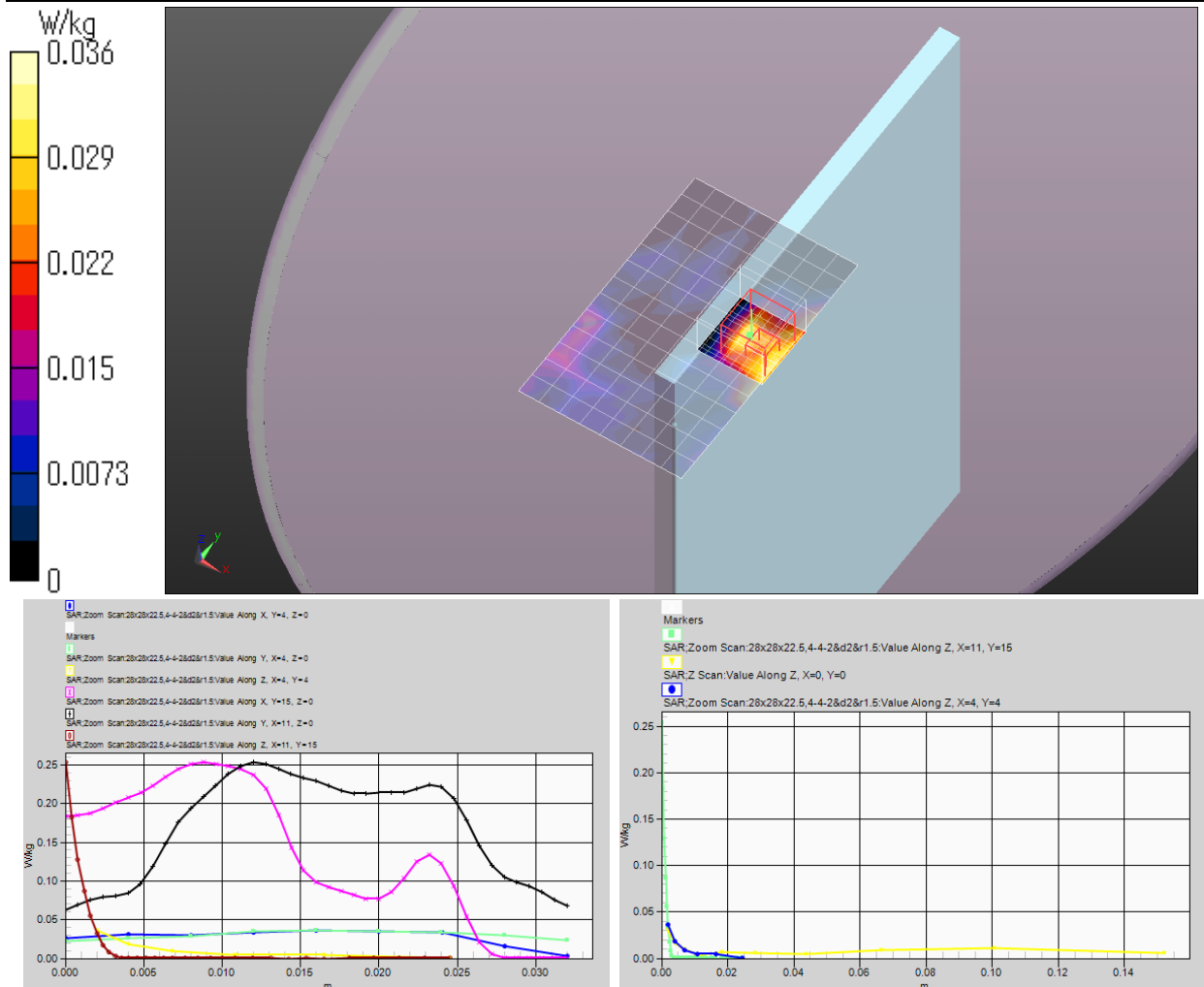
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.0299 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (9x9x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 2.977 V/m; Power Drift = -0.59 dB, Maximum value of SAR (measured) = 0.0365 W/kg

Peak SAR (extrapolated) = 0.253 mW/g

SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.009 mW/g



Remarks:*. Date tested: Date/Time: 2012/12/1; Tested by: Tomochika Sato; Tested place:No.7 shielded room,

*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,

*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5180 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5180$ MHz; $\sigma = 5.295$ S/m; $\epsilon_r = 47.57$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.5, 151.0$

-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)

LCD back side(Nearby person)/Touch(0mm)_Aux-Ant_W52&W53_11a6Mbps_5180MHz36ch/

Area Scan:110x150,10 (12x16x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.396 W/kg

Area Scan:110x150,10 (111x151x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.423 W/kg

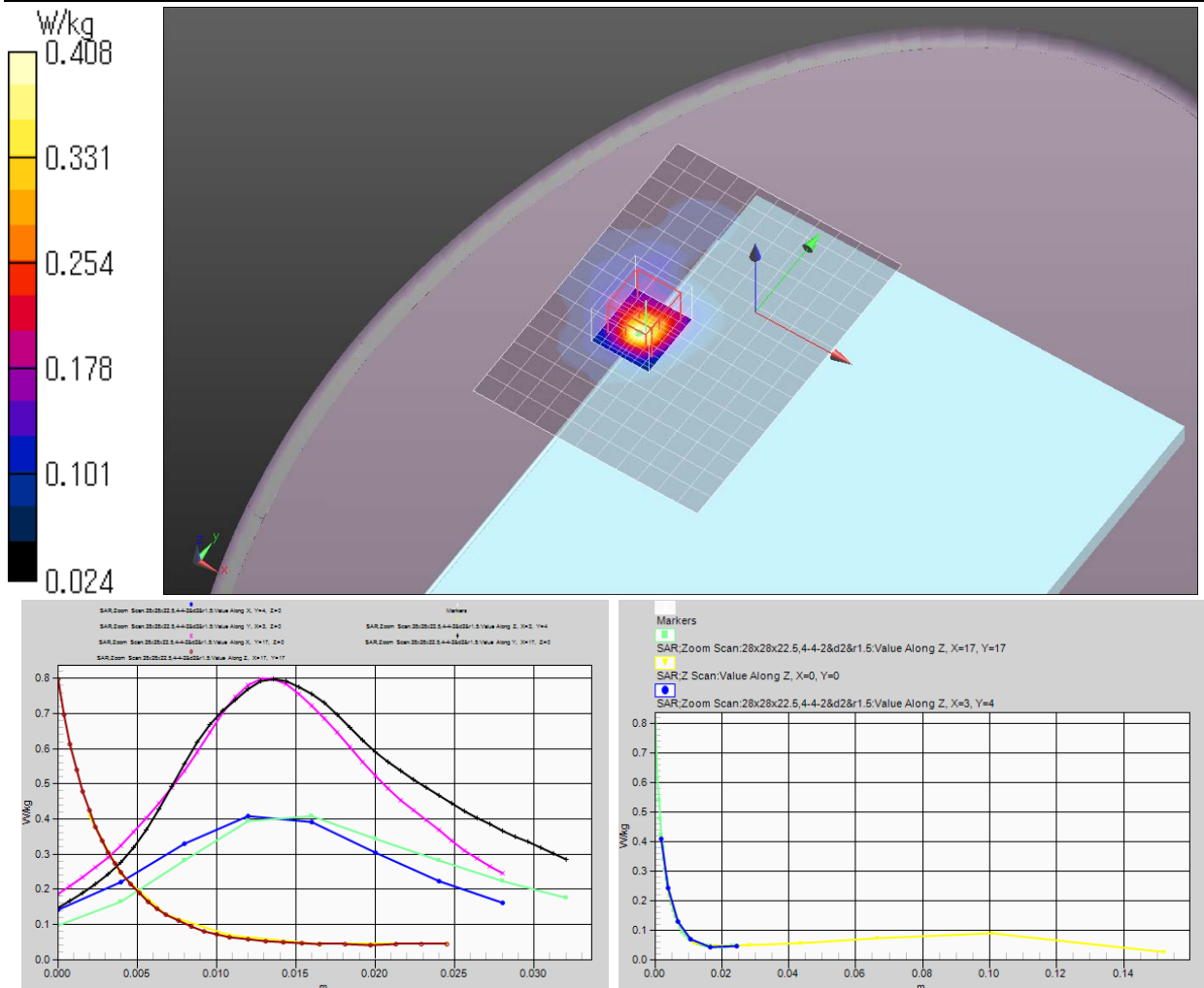
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.409 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (8x9x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 10.745 V/m; Power Drift = -0.07 dB, Maximum value of SAR (measured) = 0.408 W/kg

Peak SAR (extrapolated) = 0.799 mW/g

SAR(1 g) = 0.234 mW/g; SAR(10 g) = 0.109 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/29; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,
*.liquid depth: 151mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.8 deg.C. / 45 %RH,
*.liquid temperature: 24.4(start)/24.4(end)/24.4(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5220 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5220$ MHz; $\sigma = 5.369$ S/m; $\epsilon_r = 47.731$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face)/Touch(0mm)_Aux-Ant_W52&53_11a6Mbps_5220MHz44ch/

Area Scan:80x90,10 (9x10x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.672 W/kg

Area Scan:80x90,10 (81x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.732 W/kg

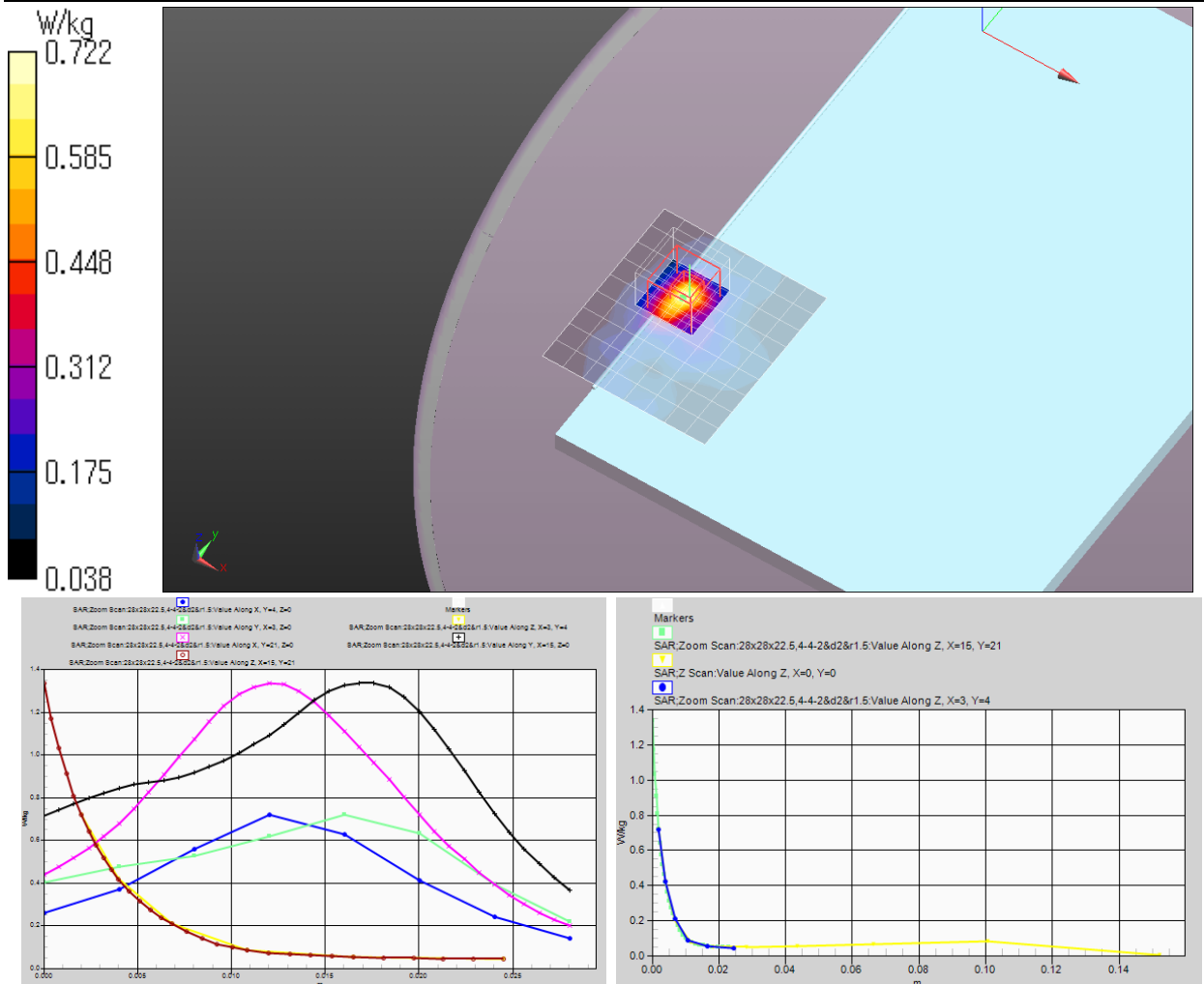
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.717 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 13.894 V/m; Power Drift = -0.00 dB, Maximum value of SAR (measured) = 0.722 W/kg

Peak SAR (extrapolated) = 1.338 mW/g

SAR(1 g) = 0.380 mW/g; SAR(10 g) = 0.160 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/29; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 151mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.8 deg.C. / 45 %RH,

*.liquid temperature: 24.4(start)/24.4(end)/24.4(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5280 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5280$ MHz; $\sigma = 5.418$ S/m; $\epsilon_r = 47.428$; $\rho = 1000$ kg/m³

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: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face)/Touch(0mm)_Aux-Ant_W52&53_11a6Mbps_5280MHz56ch/

Area Scan:80x90,10 (9x10x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.646 W/kg

Area Scan:80x90,10 (81x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.715 W/kg

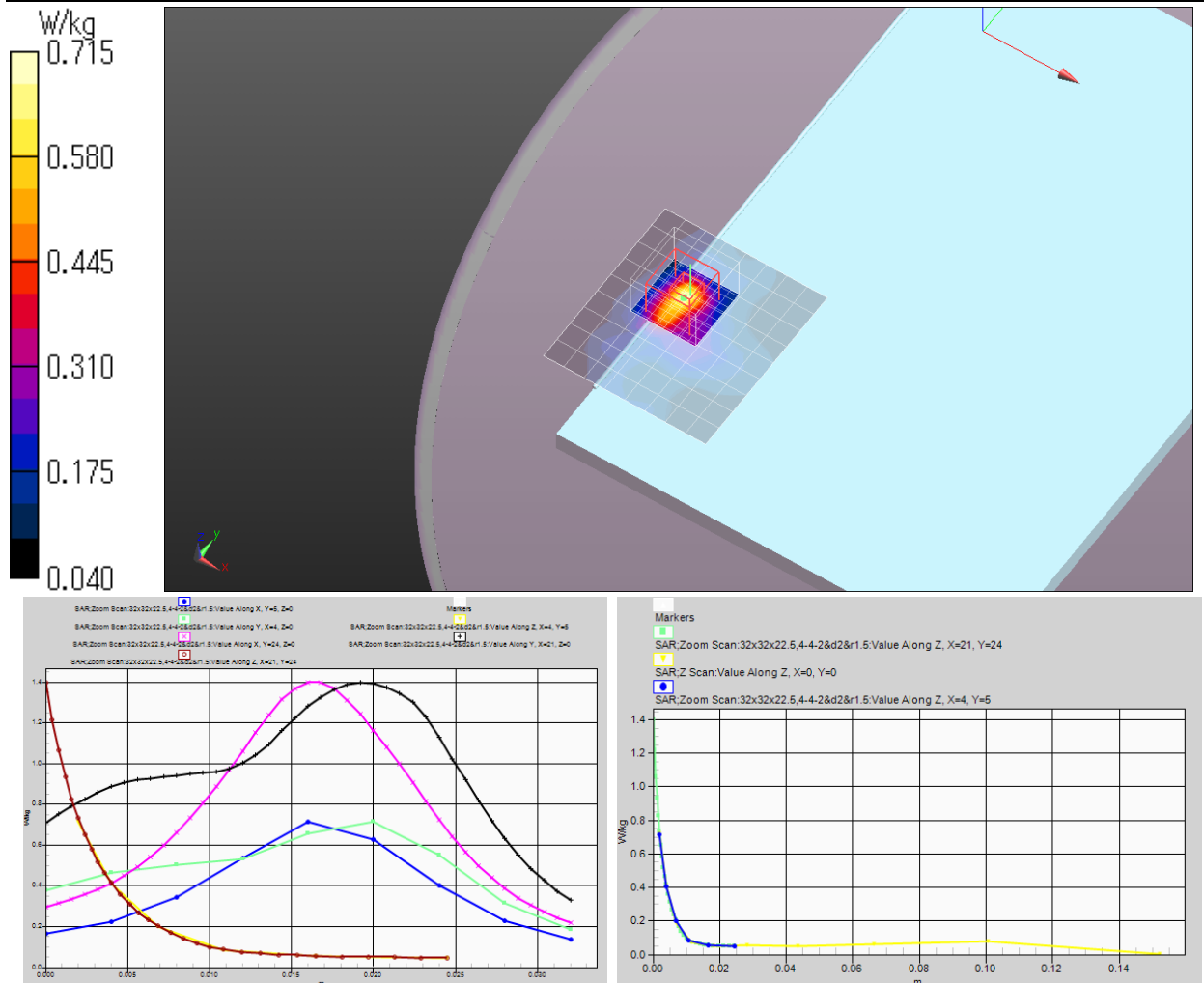
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.720 W/kg

Zoom Scan:32x32x22.5,4-4-2&d2&r1.5 (9x9x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 13.699 V/m; Power Drift = -0.03 dB, Maximum value of SAR (measured) = 0.715 W/kg

Peak SAR (extrapolated) = 1.398 mW/g

SAR(1 g) = 0.375 mW/g; SAR(10 g) = 0.160 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/29; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 151mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.8 deg.C. / 45 %RH,

*.liquid temperature: 24.4(start)/24.4(end)/24.4(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5300 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5300$ MHz; $\sigma = 5.508$ S/m; $\epsilon_r = 47.316$; $\rho = 1000$ kg/m³

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: 2mm (Mechanical Surface Detection), $z = 1.0, 23.5, 151.0$

-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)

Lap held(Bottom face)/Touch(0mm)_Aux-Ant_W52&53_11a6Mbps_5300MHz60ch/

Area Scan:80x90,10 (9x10x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.696 W/kg

Area Scan:80x90,10 (81x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.740 W/kg

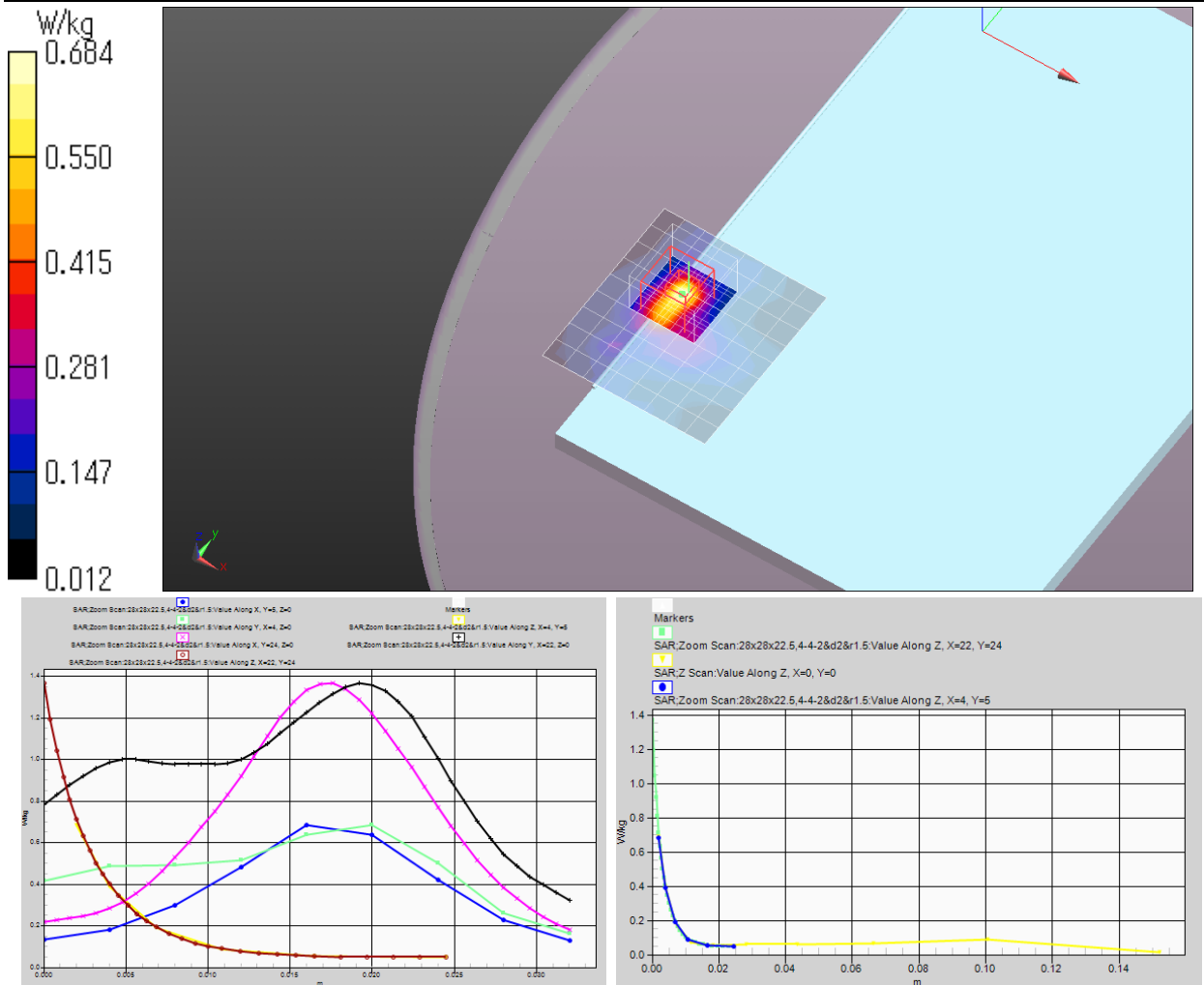
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.689 W/kg

Zoom Scan:28x28x22.5,4-4-2&d2&r1.5 (9x9x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 14.054 V/m; Power Drift = -0.05 dB, Maximum value of SAR (measured) = 0.684 W/kg

Peak SAR (extrapolated) = 1.367 mW/g

SAR(1 g) = 0.366 mW/g; SAR(10 g) = 0.158 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/29; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,
*.liquid depth: 151mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.8 deg.C. / 45 %RH,
*.liquid temperature: 24.4(start)/24.4(end)/24.4(in check) deg.C.; *. White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5180 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5180$ MHz; $\sigma = 5.42$ S/m; $\epsilon_r = 48.337$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face),121130/6,Touch(0mm)_Aux-Ant_W52_11n(mcs0)_m5180(36)/

Area Scan:90x110,10 (10x12x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.701 W/kg

Area Scan:90x110,10 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.837 W/kg

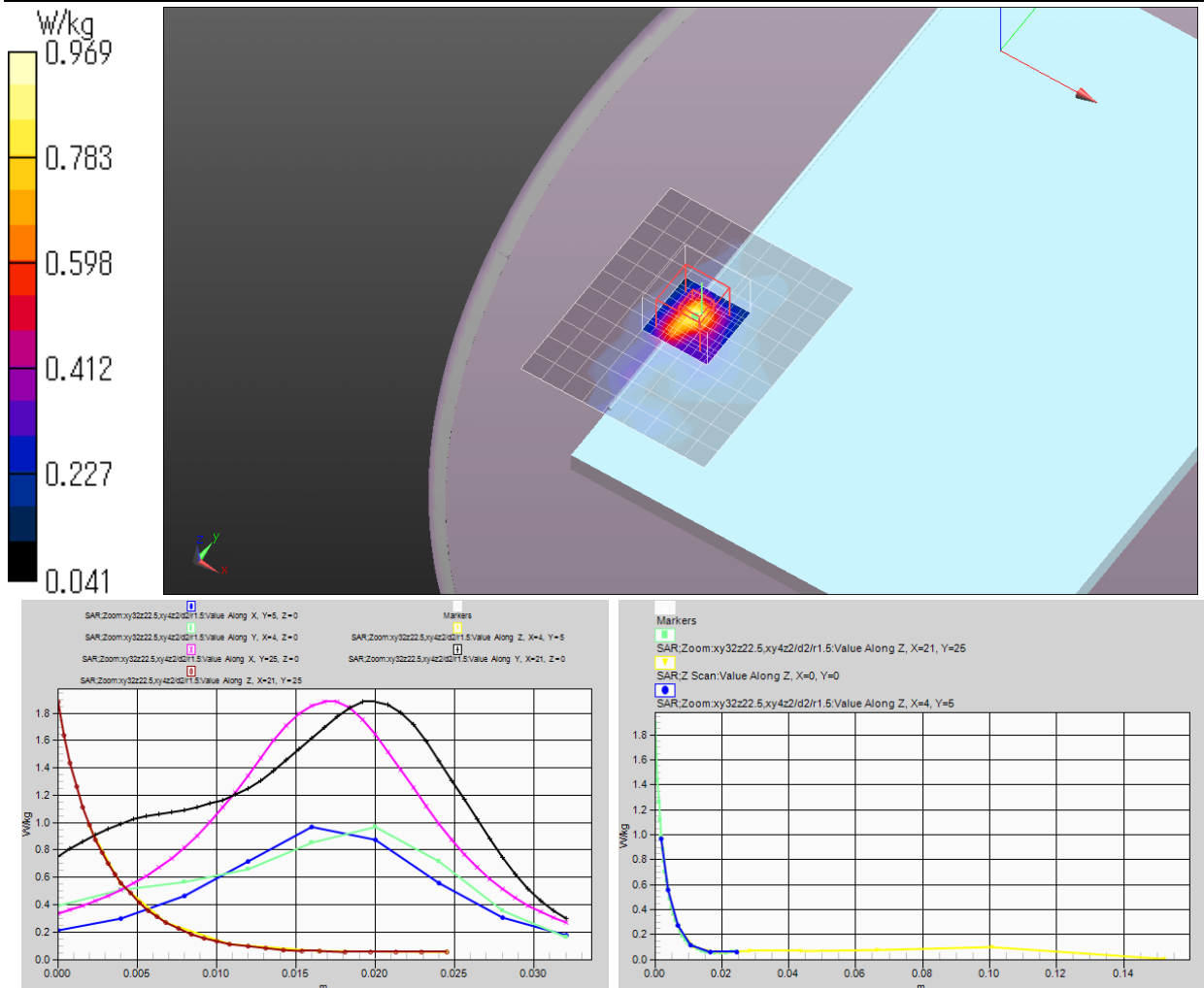
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.966 W/kg

Zoom:xy32z22.5,xy4z2/d2/r1.5 (9x9x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 14.532 V/m; Power Drift = -0.05 dB, Maximum value of SAR (measured) = 0.969 W/kg

Peak SAR (extrapolated) = 1.887 mW/g

SAR(1 g) = 0.505 mW/g; SAR(10 g) = 0.205 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/30; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,

*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5240 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5240$ MHz; $\sigma = 5.453$ S/m; $\epsilon_r = 48.364$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face),121130/5,Touch(0mm)_Aux-Ant_W52_11n(mcs0)_m5240(48)/

Area Scan:90x110,10 (10x12x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.614 W/kg

Area Scan:90x110,10 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.734 W/kg

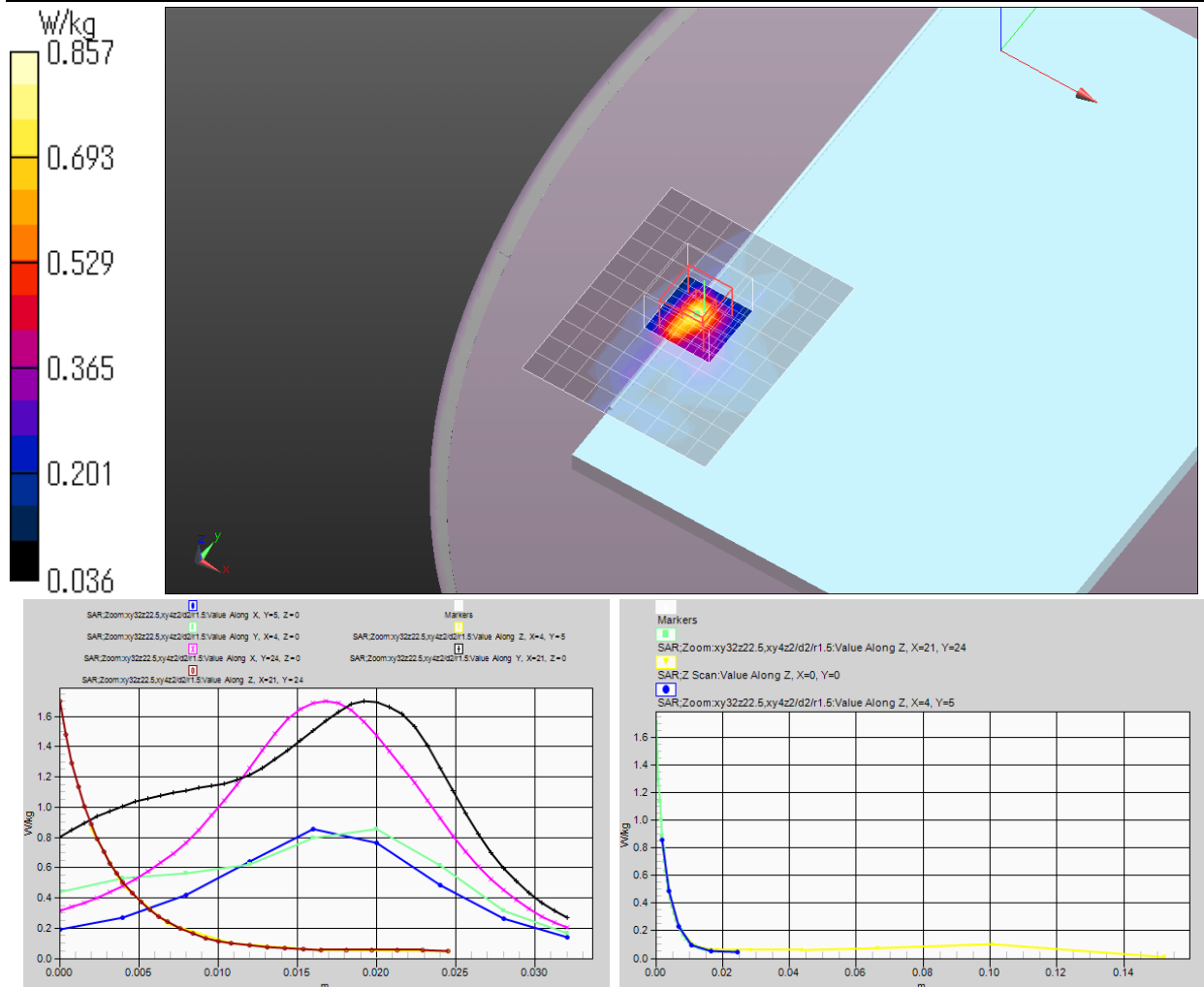
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.854 W/kg

Zoom:xy32z22.5,xy4z2/d2/r1.5 (9x9x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 13.850 V/m; Power Drift = -0.06 dB, Maximum value of SAR (measured) = 0.857 W/kg

Peak SAR (extrapolated) = 1.704 mW/g

SAR(1 g) = 0.452 mW/g; SAR(10 g) = 0.188 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/30; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,

*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5280 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5280$ MHz; $\sigma = 5.538$ S/m; $\epsilon_r = 48.154$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face),121130/7,Touch(0mm)_Aux-Ant_W53_11n(mcs0)_m5280(56)/

Area Scan:90x110,10 (10x12x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.744 W/kg

Area Scan:90x110,10 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.774 W/kg

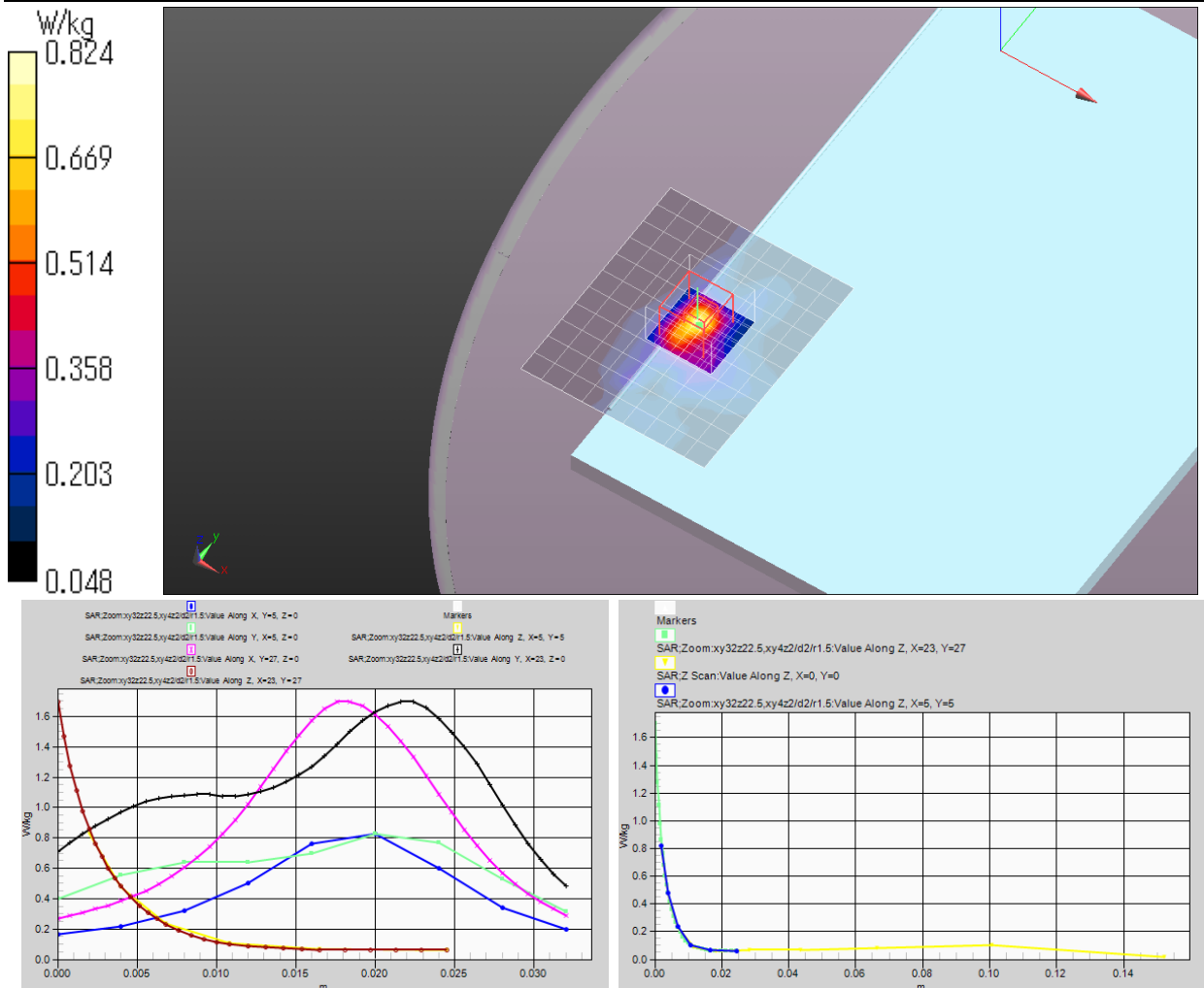
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.817 W/kg

Zoom:xy32z22.5,xy4z2/d2/r1.5 (9x9x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 12.960 V/m; Power Drift = -0.01 dB, Maximum value of SAR (measured) = 0.824 W/kg

Peak SAR (extrapolated) = 1.699 mW/g

SAR(1 g) = 0.439 mW/g; SAR(10 g) = 0.186 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/30; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,

*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5320 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5320$ MHz; $\sigma = 5.576$ S/m; $\epsilon_r = 48.161$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(3.98, 3.98, 3.98); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.5, 151.0$

-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)

Lap held(Bottom face),121130/8,Touch(0mm)_Aux-Ant_W53_11n(mcs0)_m5320(64)/

Area Scan:90x110,10 (10x12x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.813 W/kg

Area Scan:90x110,10 (91x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.847 W/kg

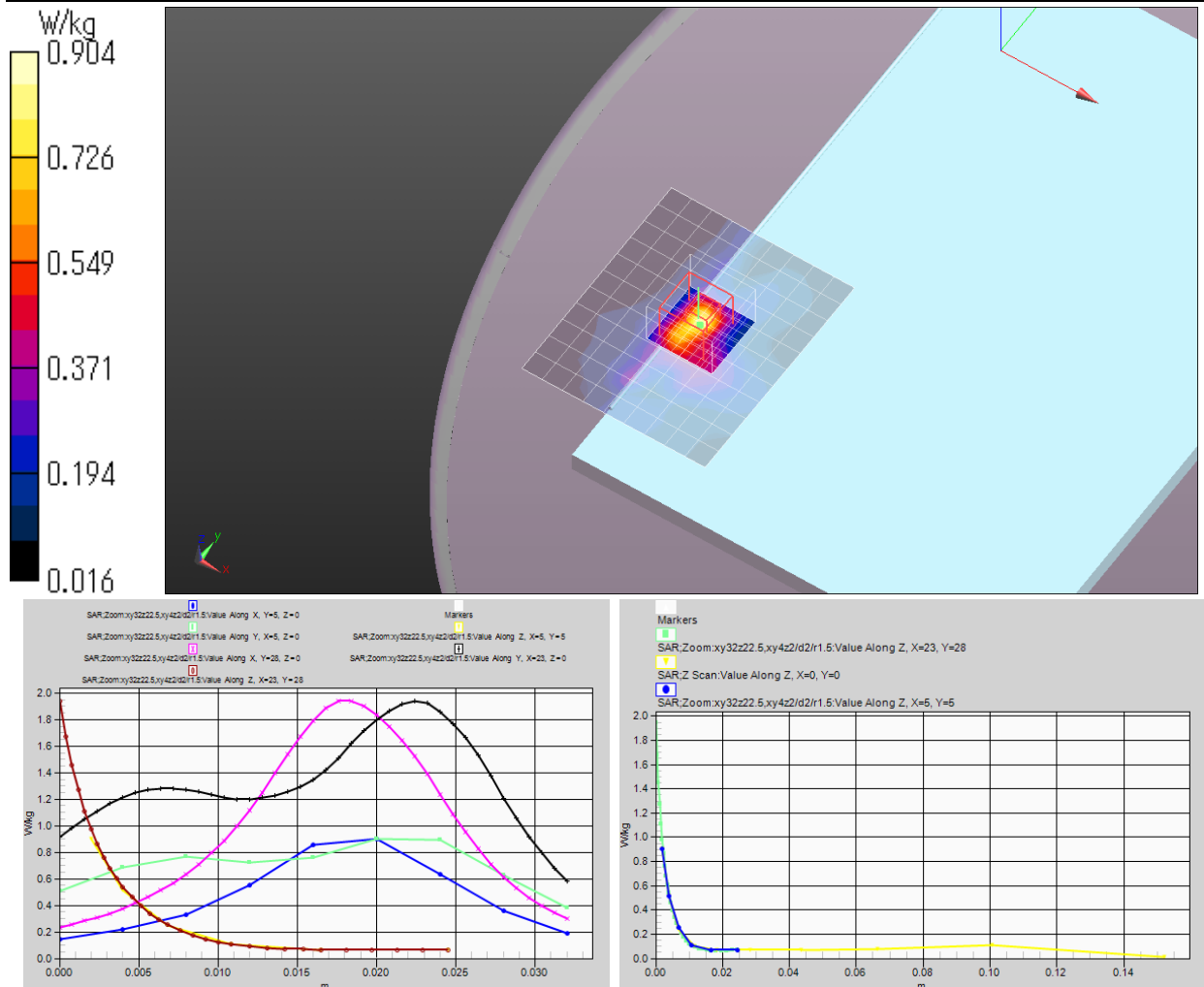
Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.903 W/kg

Zoom:xy32z22.5,xy4z2/d2/r1.5 (9x9x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 13.455 V/m; Power Drift = 0.01 dB, Maximum value of SAR (measured) = 0.904 W/kg

Peak SAR (extrapolated) = 1.943 mW/g

SAR(1 g) = 0.489 mW/g; SAR(10 g) = 0.205 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/30; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,

*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,

*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *.White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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EUT: Satellite_U930; Type: Laptop PC; Serial: XC134402H

Communication System: 5GHz_band_11a&n-20&40-all; Frequency: 5180 MHz; Crest factor: 1.0

Medium: MSL5800; Medium parameters used: $f = 5180$ MHz; $\sigma = 5.42$ S/m; $\epsilon_r = 48.337$; $\rho = 1000$ kg/m³

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

DASY Configuration:

-Probe: EX3DV4 - SN3679; ConvF(4.13, 4.13, 4.13); Calibrated: 2012/06/21; -Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 151.0, 23.5$

-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)

Lap held(Bottom face),121130/9,Touch(0mm)_MIMO_W52_11n(mcs8)_m5180(36)/

Area Scan:90x280,10 (10x29x1): Measurement grid: $dx=10$ mm, $dy=10$ mm, Maximum value of SAR (measured) = 0.411 W/kg

Area Scan:90x280,10 (91x281x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm, Maximum value of SAR (interpolated) = 0.429 W/kg

Z Scan (1x1x10): Measurement grid: $dx=20$ mm, $dy=20$ mm, $dz=2$ mm, Maximum value of SAR (measured) = 0.476 W/kg

Zoom(ant-main):stp:xy4z2/d2/r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 9.695 V/m; Power Drift = 0.08 dB, Maximum value of SAR (measured) = 0.466 W/kg

Peak SAR (extrapolated) = 0.918 mW/g

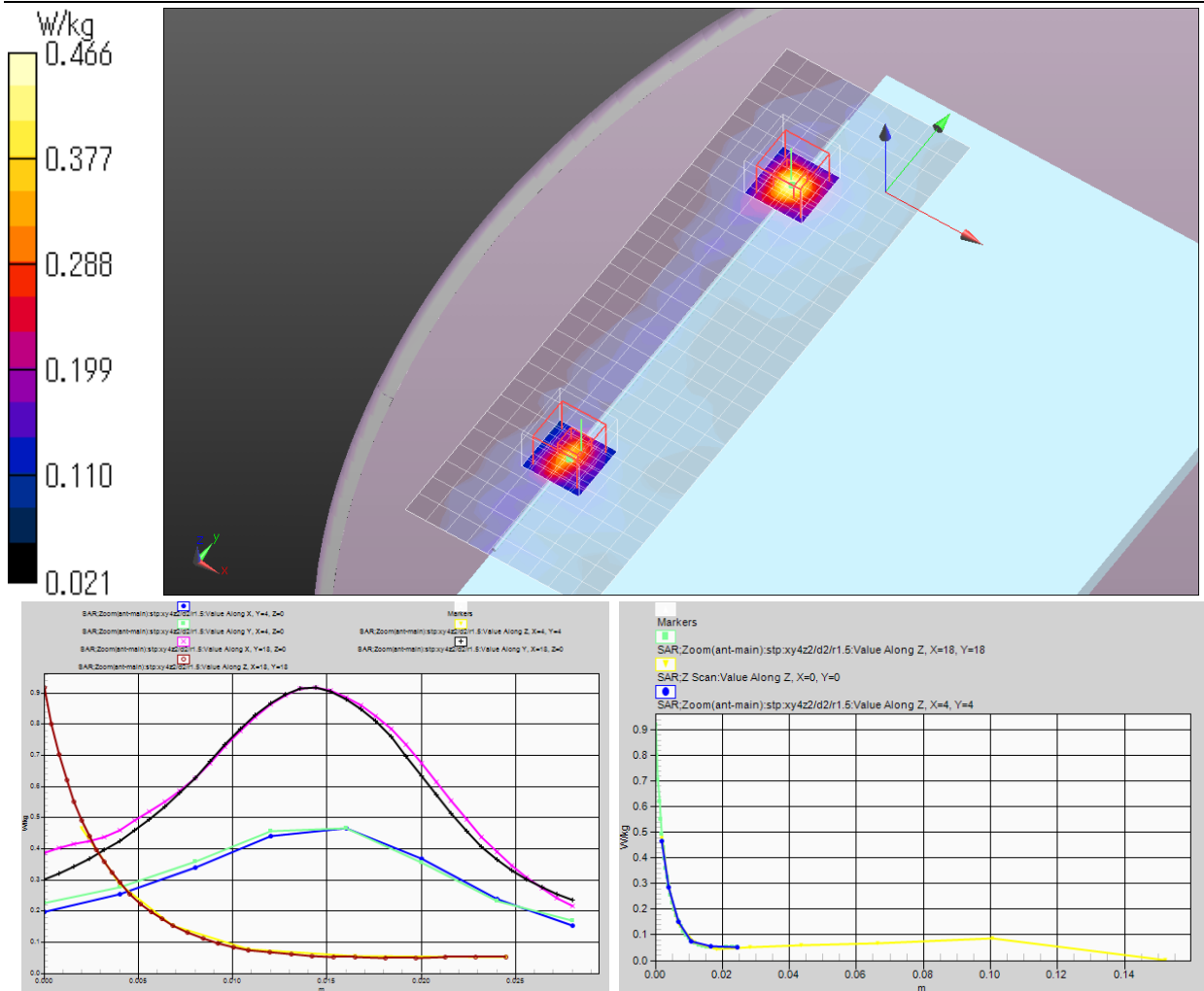
SAR(1 g) = 0.268 mW/g; SAR(10 g) = 0.122 mW/g

Zoom(ant-aux):stp:xy4z2/d2/r1.5 (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 9.695 V/m; Power Drift = 0.08 dB, Maximum value of SAR (measured) = 0.383 W/kg

Peak SAR (extrapolated) = 0.806 mW/g

SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.110 mW/g



Remarks:*. Date tested: Date/Time: 2012/11/30; Tested by: Kazutaka Takeyama; Tested place:No.7 shielded room,
*.liquid depth: 152mm; Position: distance of EUT to phantom: 0mm (2mm to liquid); ambient: 24.4 deg.C. / 43 %RH,
*.liquid temperature: 24.0(start)/24.0(end)/24.0(in check) deg.C.; *. White cubic: zoom scan area, Red cubic: big=SAR(10g)/small=SAR(1g)

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