

Appendix C SAR System Check Plots

20210204 835MHz System Check

Communication System: UID 0, _CW (0); Communication System Band: D835 (835.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.976 \text{ S/m}$; $\epsilon_r = 54.655$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(9.78, 9.78, 9.78) @ 835 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 0mm (Fix Surface)

Electronics: DAE4 Sn1369;

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA001BB;Serial: TP:1207

Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

Pin/250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 3.46 W/kg

Pin/250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 61.62 V/m ; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 3.98 W/kg

SAR(1 g) = 2.61 W/kg ; SAR(10 g) = 1.74 W/kg

Smallest distance from peaks to all points 3 dB below = 16.1 mm

Ratio of SAR at M2 to SAR at M1 = 66.3%

Maximum value of SAR (measured) = 3.49 W/kg

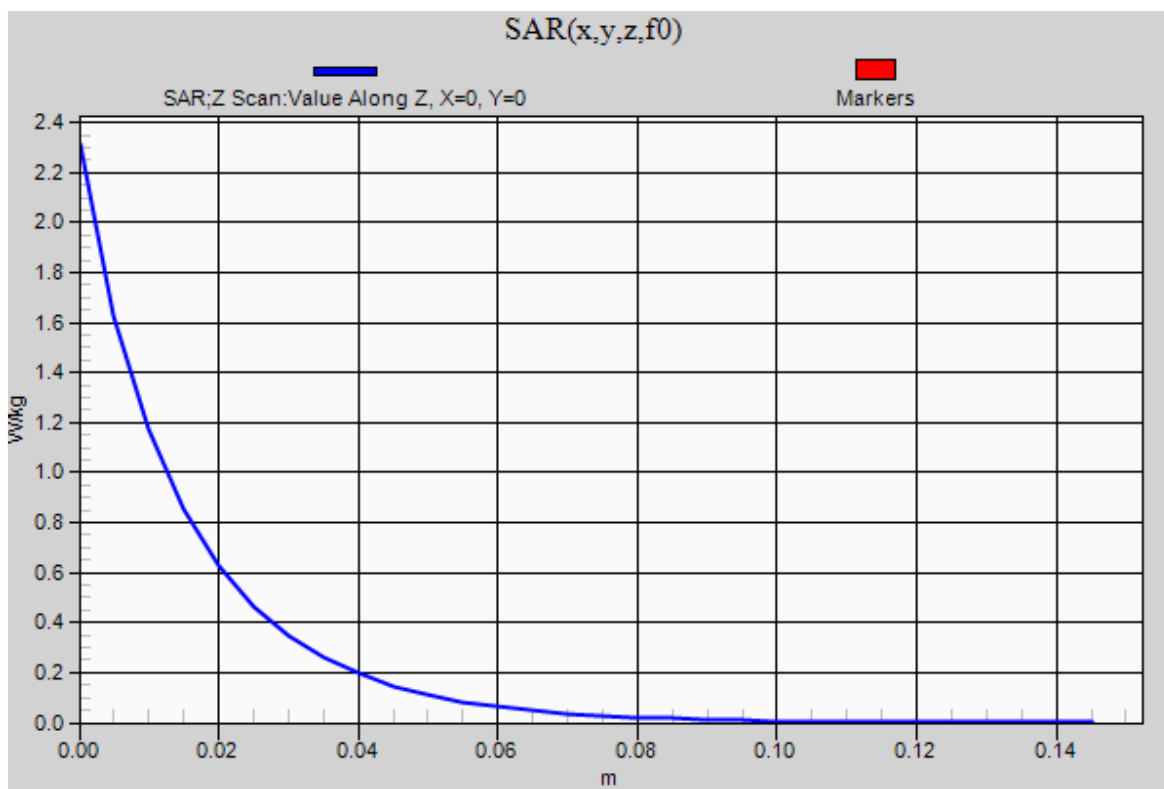
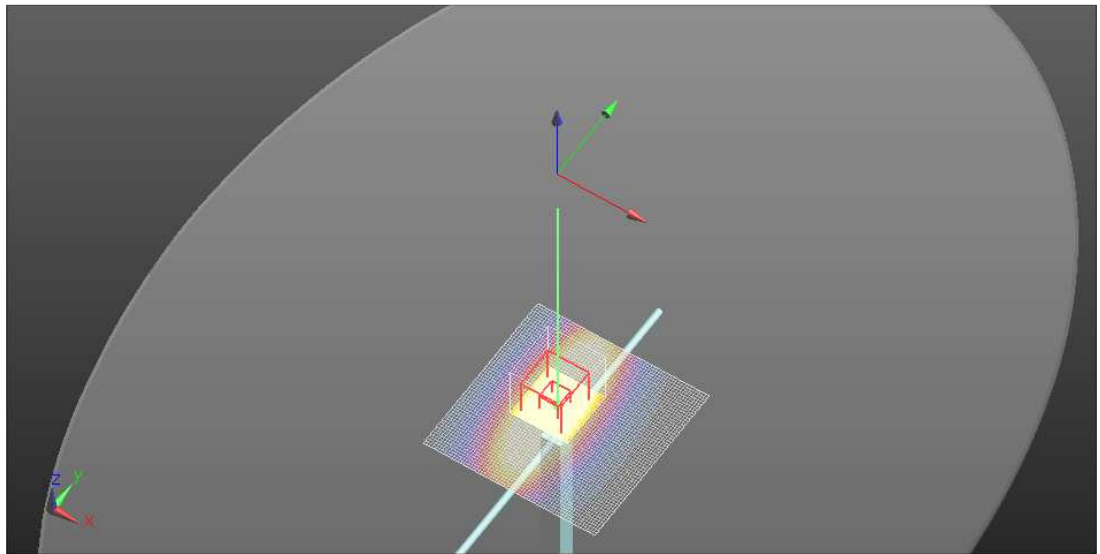
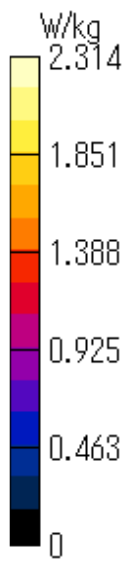
Pin/250mW/Z Scan (1x1x31): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$

Maximum value of SAR (measured) = 2.31 W/kg

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.3 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/02/04



20210222 1750MHz System check.

Communication System: UID 0, _CW (0); Communication System Band: D1750 (1750.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.491$ S/m; $\epsilon_r = 52.53$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(8.1, 8.1, 8.1) @ 1750 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA001BB;Serial: TP:1207

Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

Pin=250mW/1750MHz/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 14.5 W/kg

Pin=250mW/1750MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.2 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 16.6 W/kg

SAR(1 g) = 9.24 W/kg; SAR(10 g) = 4.92 W/kg

Smallest distance from peaks to all points 3 dB below = 10 mm

Ratio of SAR at M2 to SAR at M1 = 56.3%

Maximum value of SAR (measured) = 14.1 W/kg

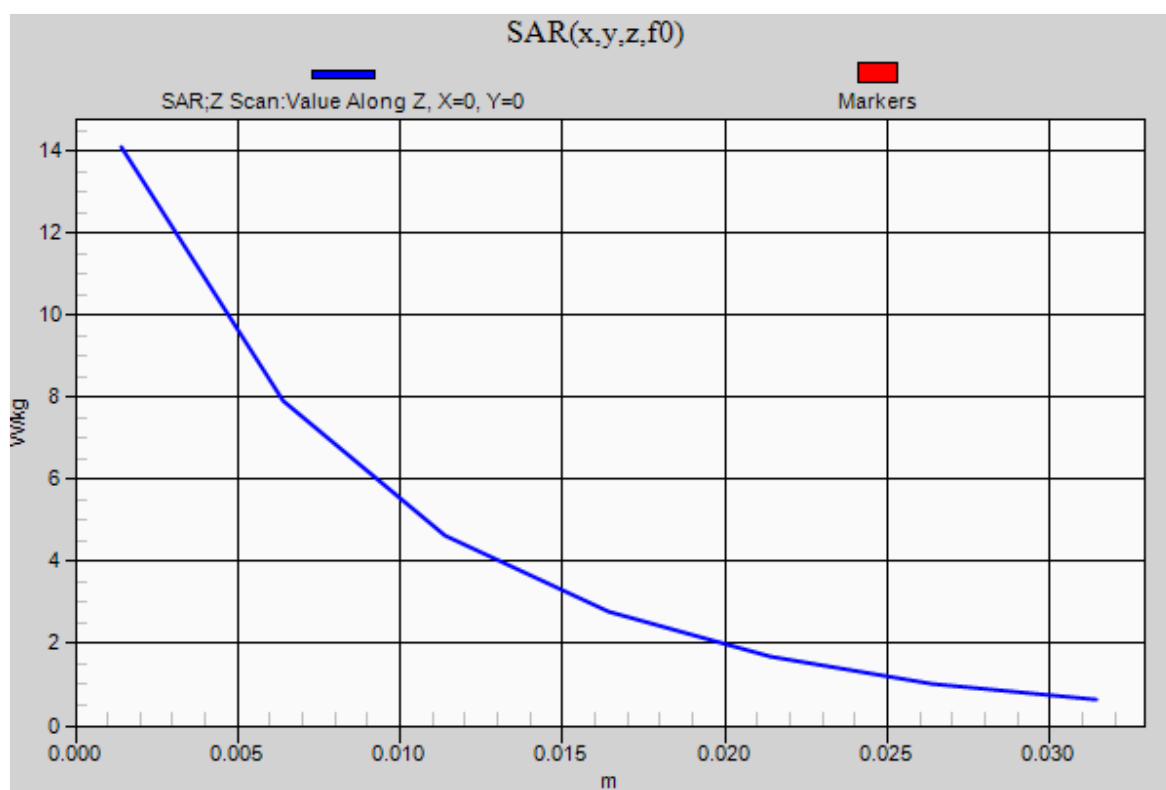
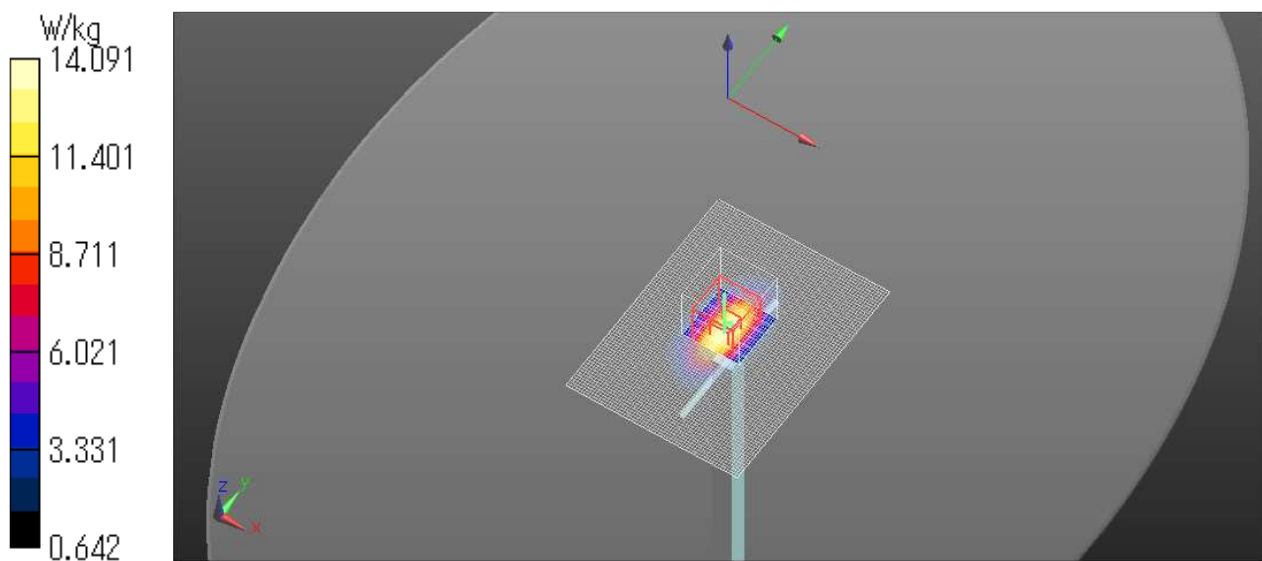
Pin=250mW/1750MHz/Z Scan (1x1x7): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 14.1 W/kg

Ambient Temp. : 25.0 degree.C. Liquid Temp.; 23.8 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/02/22



20210226 1750MHz System check.

Communication System: UID 0, _CW (0); Communication System Band: D1750 (1750.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.489$ S/m; $\epsilon_r = 52.409$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(8.1, 8.1, 8.1) @ 1750 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA001BB;Serial: TP:1207

Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

Pin=250mW/1750MHz/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 14.1 W/kg

Pin=250mW/1750MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 100.2 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 16.5 W/kg

SAR(1 g) = 9.26 W/kg; SAR(10 g) = 4.94 W/kg

Smallest distance from peaks to all points 3 dB below = 9.5 mm

Ratio of SAR at M2 to SAR at M1 = 56.8%

Maximum value of SAR (measured) = 14.1 W/kg

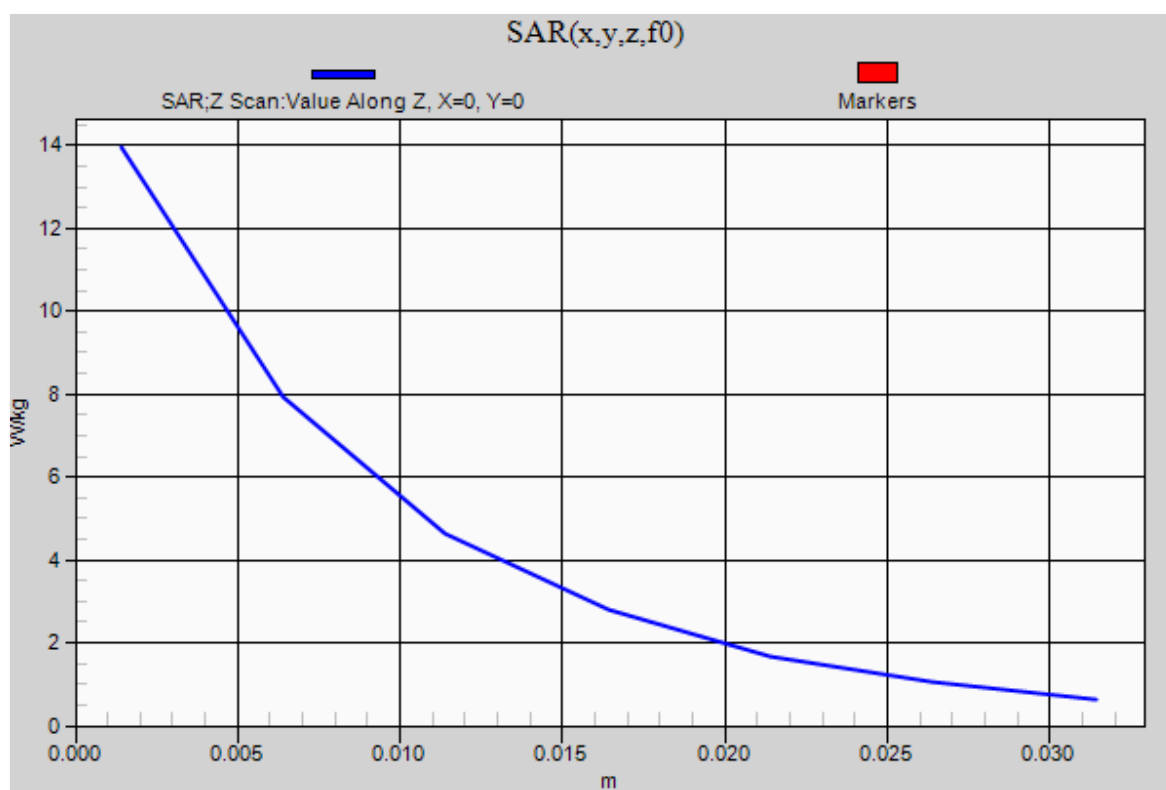
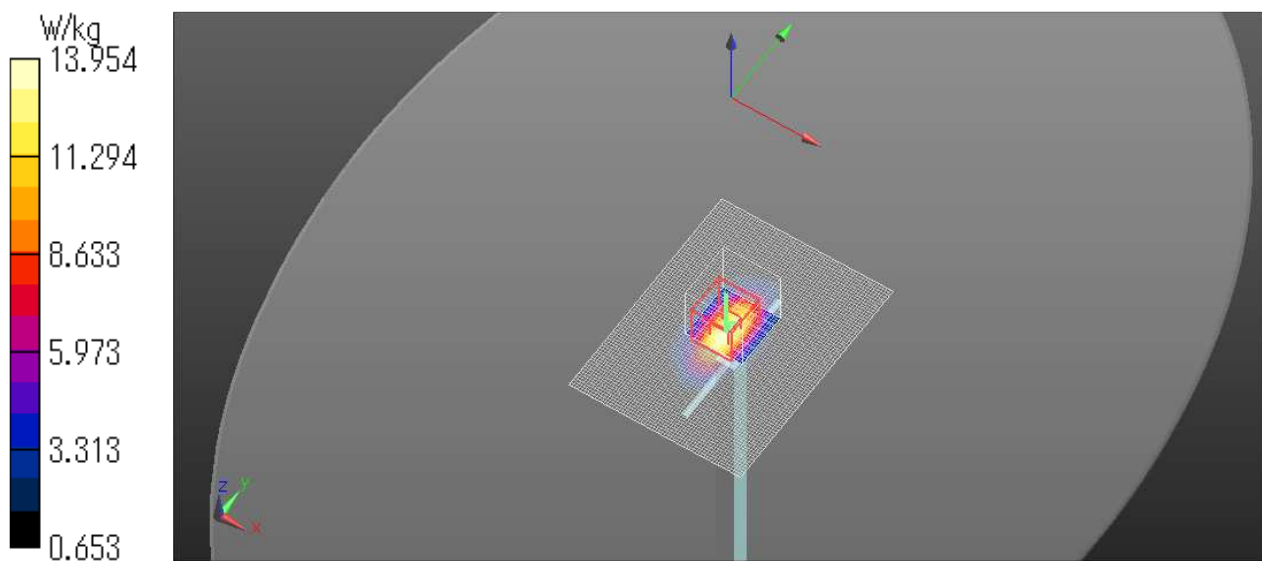
Pin=250mW/1750MHz/Z Scan (1x1x7): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 14.0 W/kg

Ambient Temp. : 23.0 degree.C. Liquid Temp.; 22.1 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/02/26



20210304 2600MHz System Check

Communication System: UID 0, _CW (0); Communication System Band: D2600 (2600.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 2600$ MHz; $\sigma = 2.147$ S/m; $\epsilon_r = 50.117$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(7.37, 7.37, 7.37) @ 2600 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA001BB;Serial: TP:1207

Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

Pin=250mW/2600MHz/Area Scan (71x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 24.4 W/kg

Pin=250mW/2600MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 108.1 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 30.0 W/kg

SAR(1 g) = 13.8 W/kg; SAR(10 g) = 6.09 W/kg

Smallest distance from peaks to all points 3 dB below = 8.9 mm

Ratio of SAR at M2 to SAR at M1 = 46.6%

Maximum value of SAR (measured) = 23.5 W/kg

Pin=250mW/2600MHz/Z Scan (1x1x18): Measurement grid: dx=20mm, dy=20mm, dz=5mm

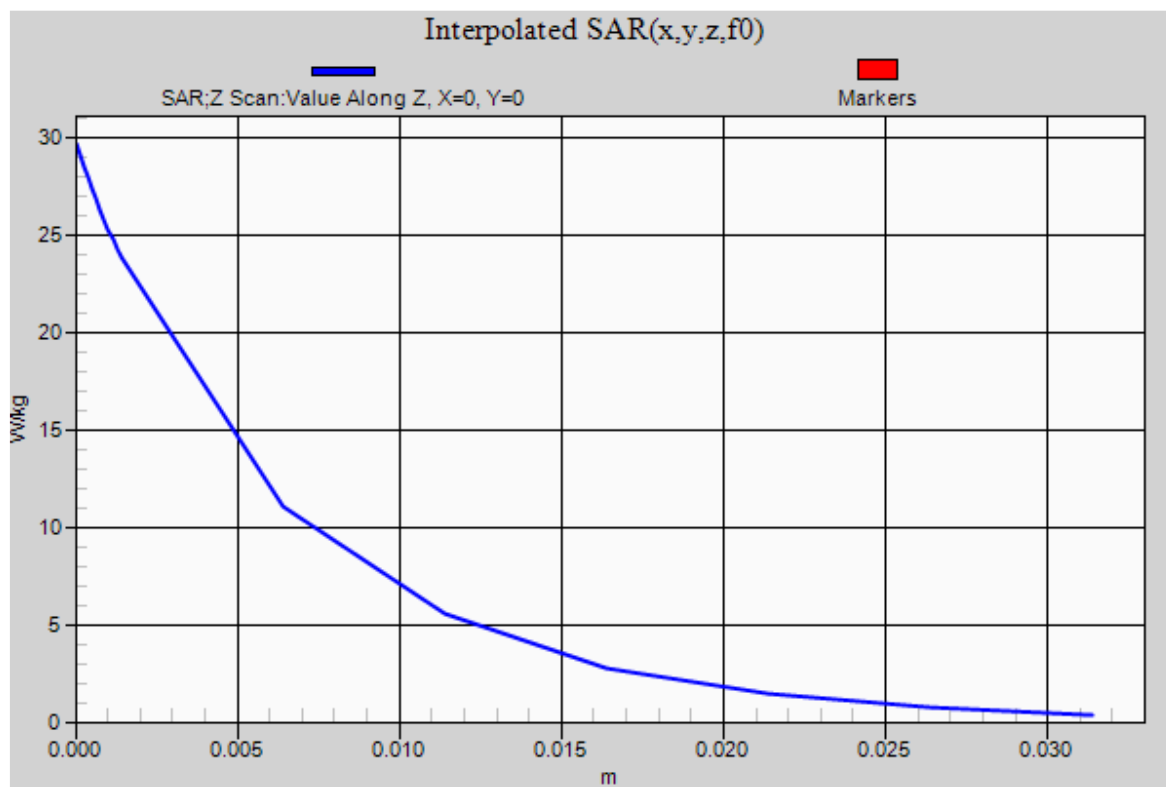
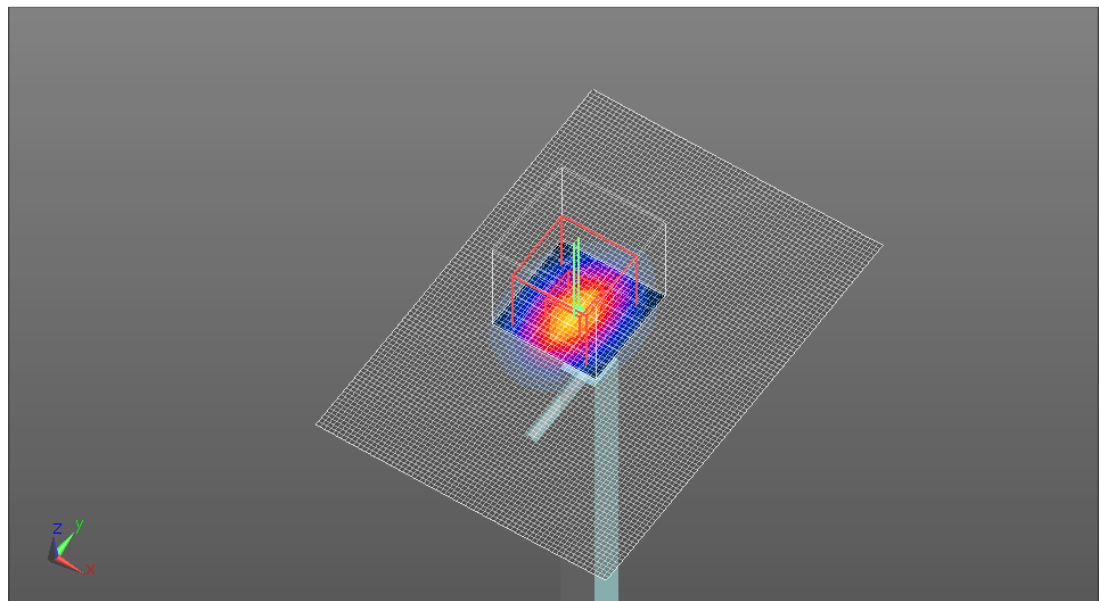
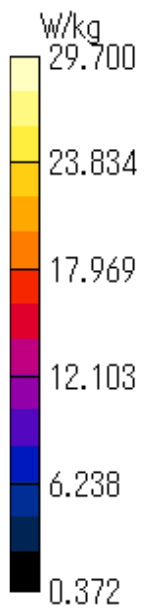
Penetration depth = 7.175 (6.516, 7.238) [mm]

Maximum value of SAR (interpolated) = 29.7 W/kg

Ambient Temp. : 22.5 degree.C. Liquid Temp.; 22.0 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/03/04



20210308 2600MHz System Check

Communication System: UID 0, _CW (0); Communication System Band: D2600 (2600.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 2600$ MHz; $\sigma = 2.158$ S/m; $\epsilon_r = 50.507$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(7.37, 7.37, 7.37) @ 2600 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA001BB;Serial: TP:1207

Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

Pin=250mW/2600MHz 2nd/Area Scan (71x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 24.5 W/kg

Pin=250mW/2600MHz 2nd/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 108.2 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 30.1 W/kg

SAR(1 g) = 13.8 W/kg; SAR(10 g) = 6.12 W/kg

Smallest distance from peaks to all points 3 dB below = 8.9 mm

Ratio of SAR at M2 to SAR at M1 = 46.6%

Maximum value of SAR (measured) = 23.6 W/kg

Pin=250mW/2600MHz 2nd/Z Scan (1x1x18): Measurement grid: dx=20mm, dy=20mm, dz=5mm

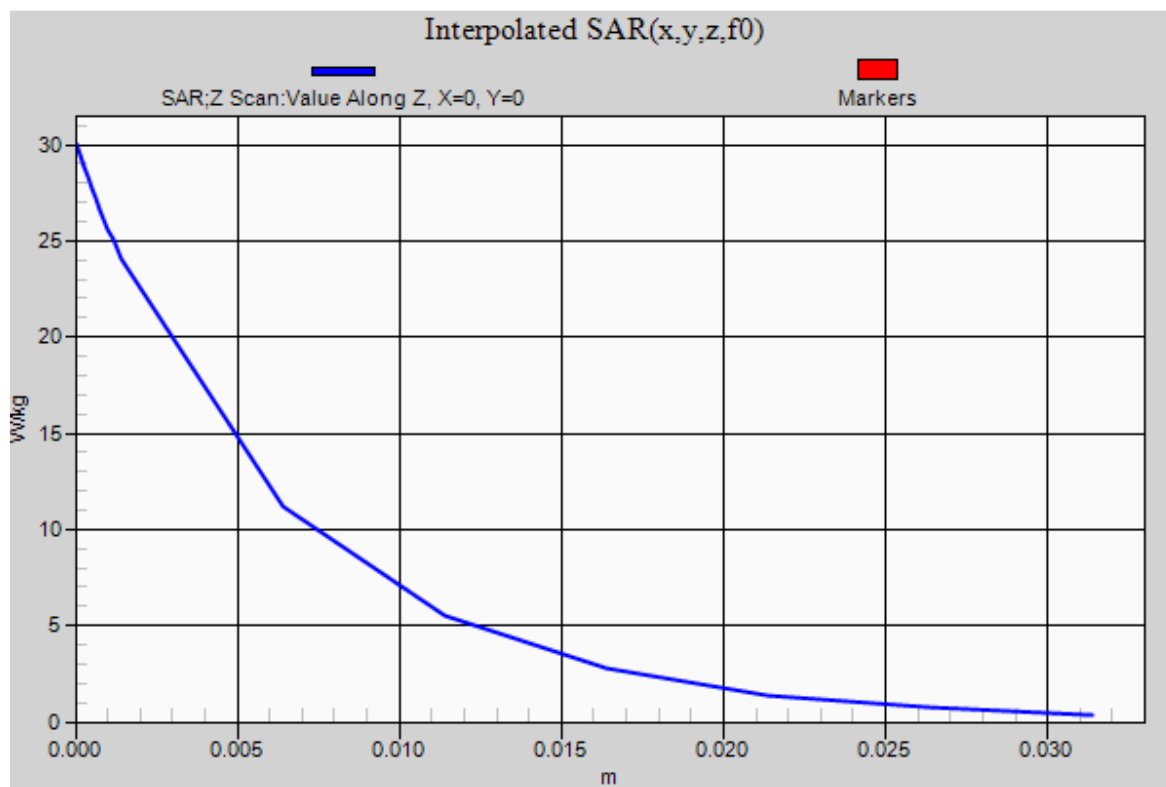
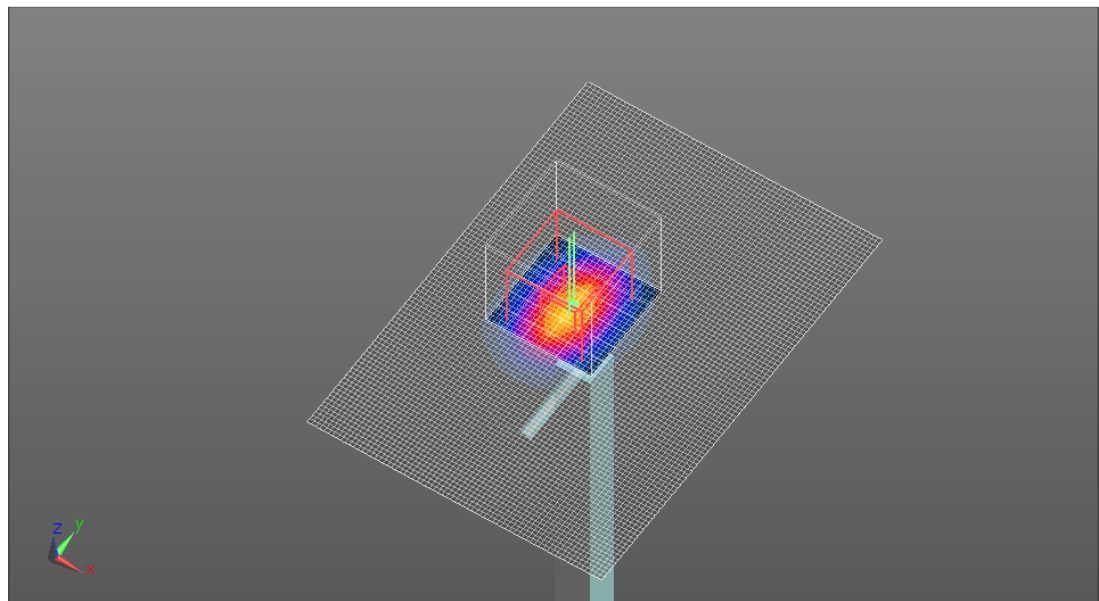
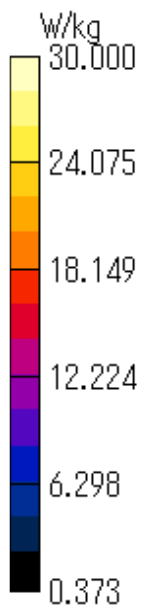
Penetration depth = 7.169 (6.491, 7.251) [mm]

Maximum value of SAR (interpolated) = 30.0 W/kg

Ambient Temp. : 22.5 degree.C. Liquid Temp.; 22.0 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/03/08



20210311 3500MHz System Check

Communication System: UID 0, #CW (0); Communication System Band: D3500 (3500.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 3500$ MHz; $\sigma = 3.173$ S/m; $\epsilon_r = 53.391$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(6.36, 6.36, 6.36) @ 3500 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA001BB;Serial: TP:1207

Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

Pin=100mW/3500MHz/Area Scan (71x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 12.1 W/kg

Pin=100mW/3500MHz/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.51 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 15.9 W/kg

SAR(1 g) = 6.41 W/kg; SAR(10 g) = 2.44 W/kg

Smallest distance from peaks to all points 3 dB below = 7.9 mm

Ratio of SAR at M2 to SAR at M1 = 78%

Maximum value of SAR (measured) = 11.8 W/kg

Pin=100mW/3500MHz/Z Scan (1x1x18): Measurement grid: dx=20mm, dy=20mm, dz=5mm

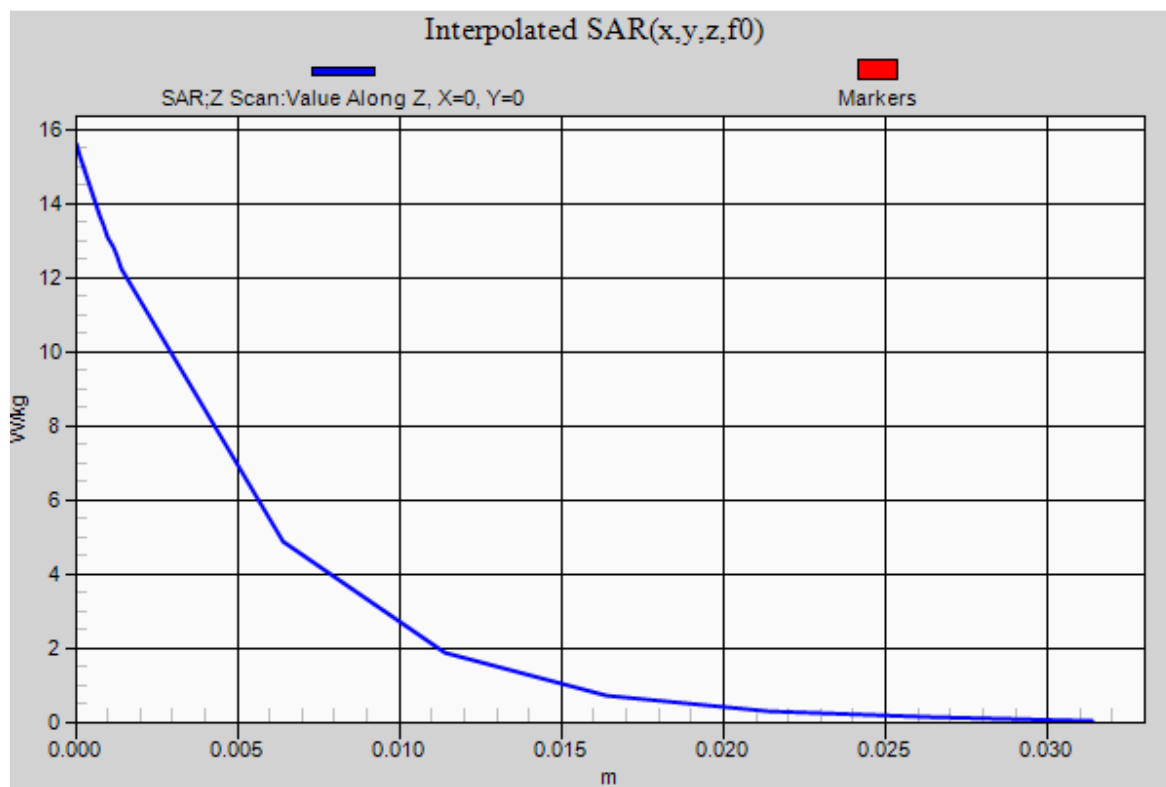
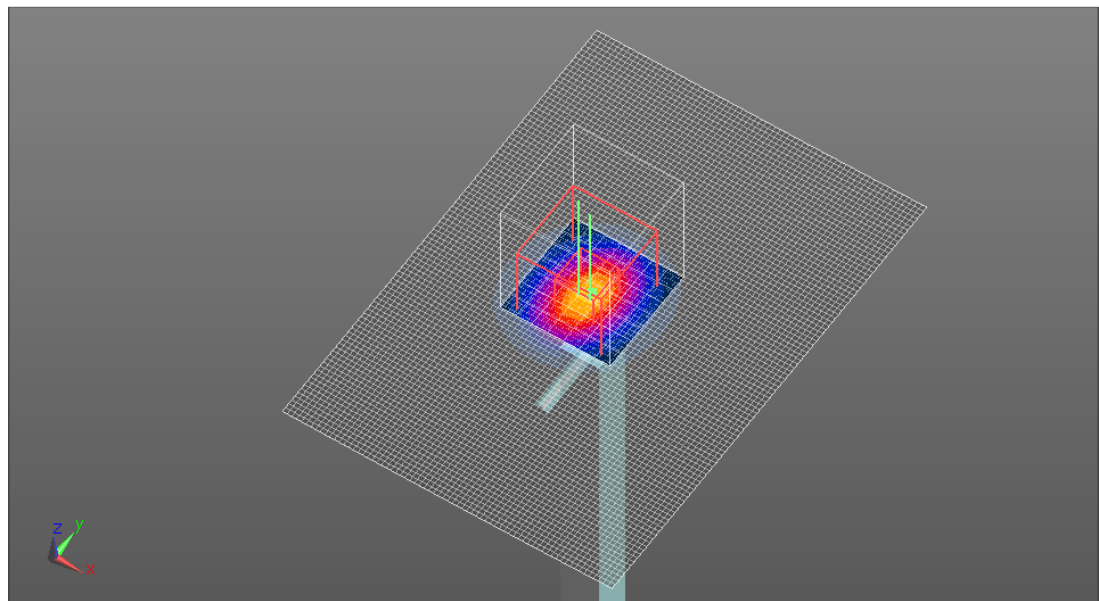
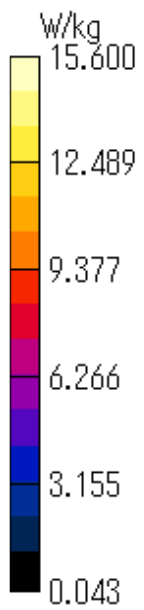
Penetration depth = 5.229 (5.392, 5.279) [mm]

Maximum value of SAR (interpolated) = 15.6 W/kg

Ambient Temp. : 22.5 degree.C. Liquid Temp.; 22.0 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/03/11



20210311 3700MHz System Check

Communication System: UID 0, _CW (0); Communication System Band: D3700 (3700.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 3700$ MHz; $\sigma = 3.398$ S/m; $\epsilon_r = 53.083$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(6.31, 6.31, 6.31) @ 3700 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA001BB;Serial: TP:1207

Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

Pin=100mW/3700MHz/Area Scan (71x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 12.5 W/kg

Pin=100mW/3700MHz/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 65.09 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 16.6 W/kg

SAR(1 g) = 6.31 W/kg; SAR(10 g) = 2.3 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 76.3%

Maximum value of SAR (measured) = 12.1 W/kg

Pin=100mW/3700MHz/Z Scan (1x1x18): Measurement grid: dx=20mm, dy=20mm, dz=5mm

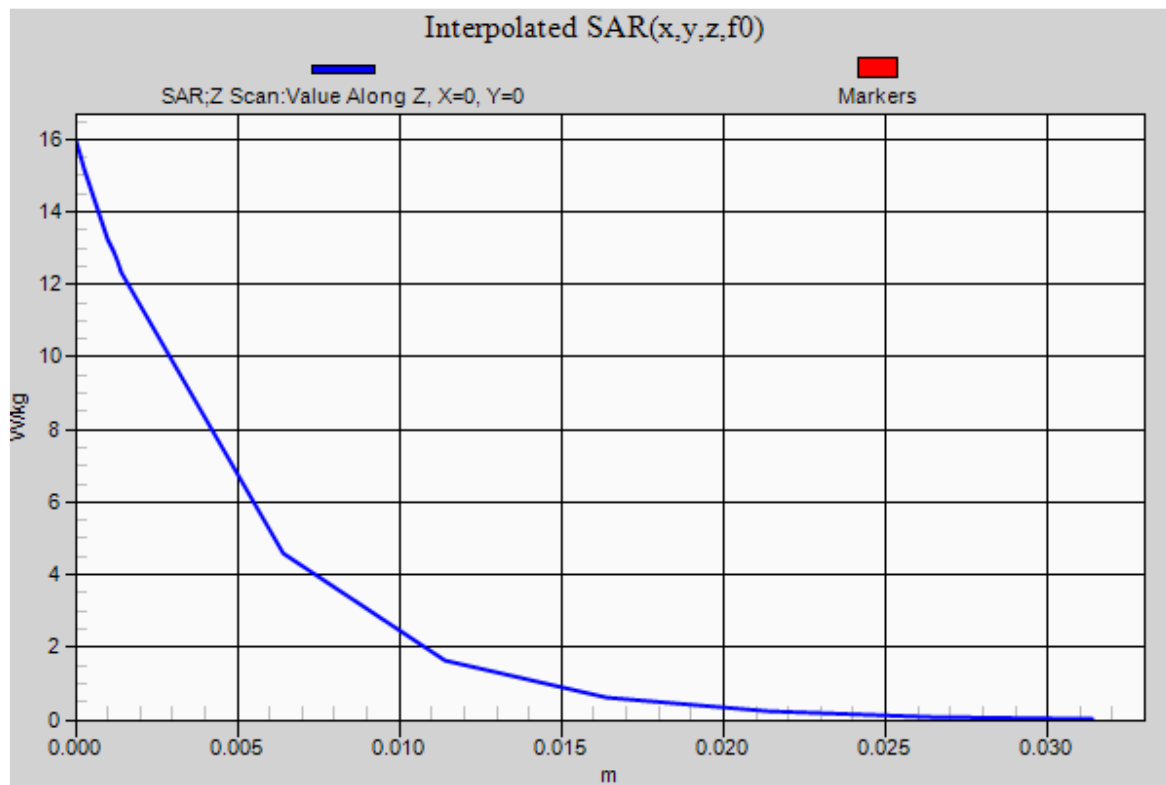
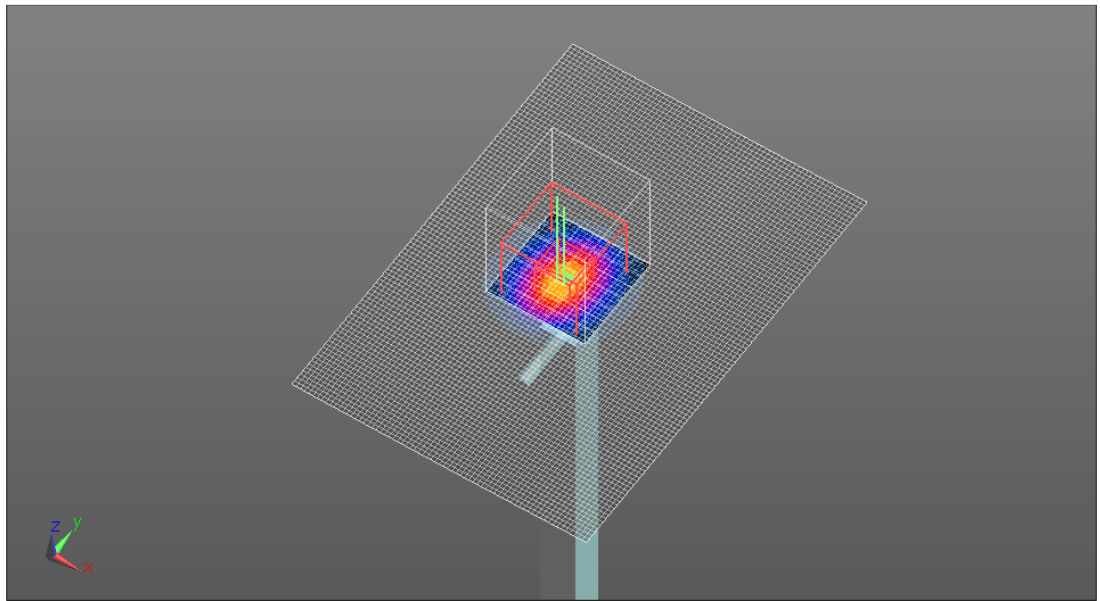
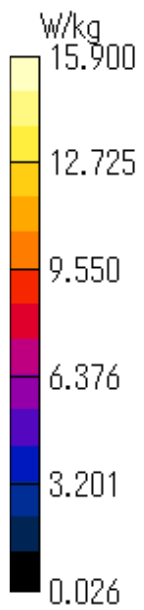
Penetration depth = 4.884 (5.050, 4.912) [mm]

Maximum value of SAR (interpolated) = 15.9 W/kg

Ambient Temp. : 22.5 degree.C. Liquid Temp.; 22.0 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/03/11



20210315 835MHz System Check

Communication System: UID 0, _CW (0); Communication System Band: D835 (835.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 835$ MHz; $\sigma = 1.008$ S/m; $\epsilon_r = 55.557$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(9.78, 9.78, 9.78) @ 835 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection), Sensor-Surface: 0mm (Fix Surface)

Electronics: DAE4 Sn1369;

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA001BB;Serial: TP:1207

Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

Pin/250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.49 W/kg

Pin/250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 60.88 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.94 W/kg

SAR(1 g) = 2.54 W/kg; SAR(10 g) = 1.65 W/kg

Smallest distance from peaks to all points 3 dB below = 16 mm

Ratio of SAR at M2 to SAR at M1 = 64.5%

Maximum value of SAR (measured) = 3.43 W/kg

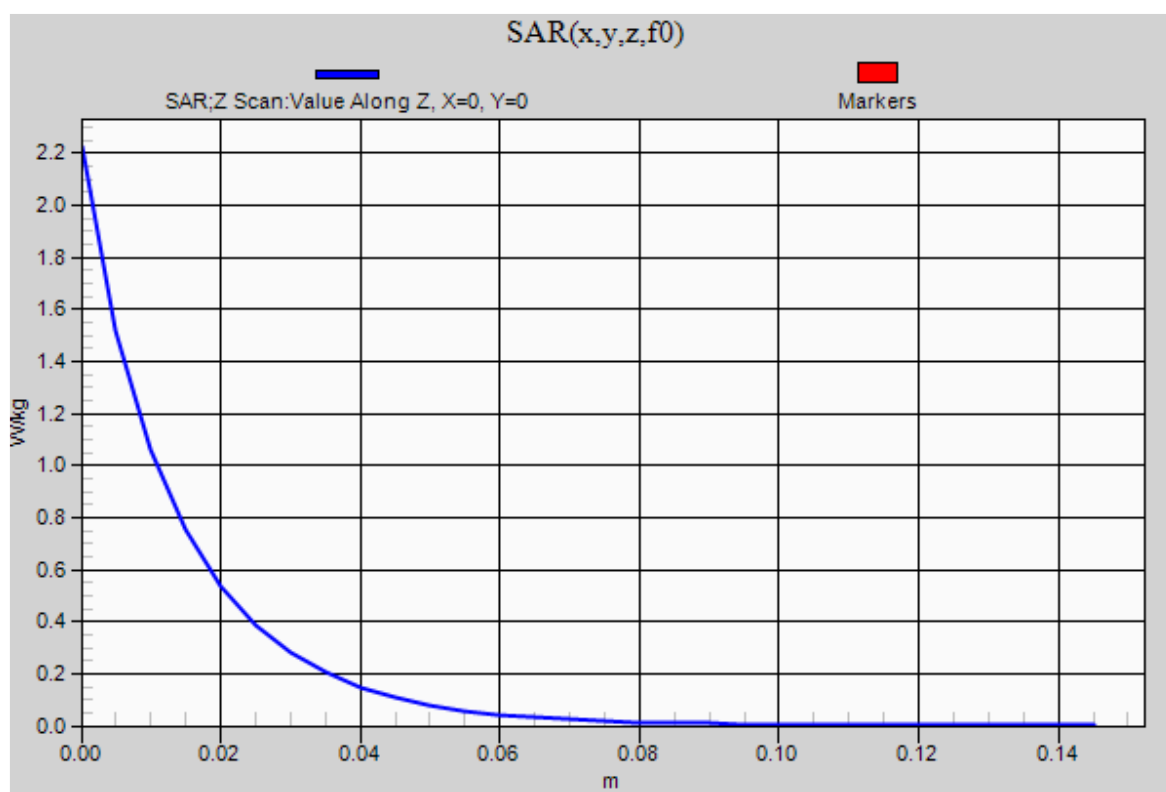
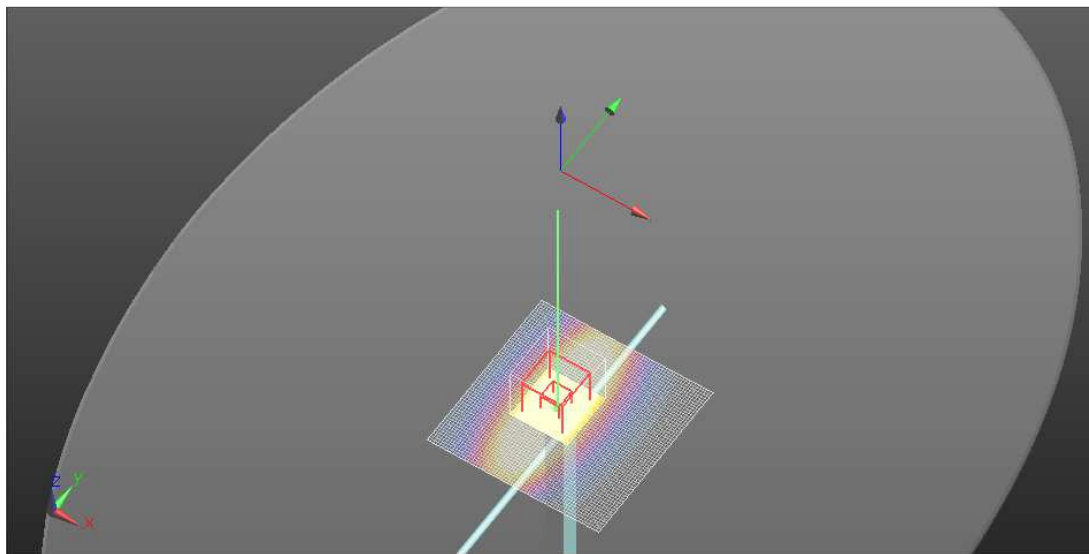
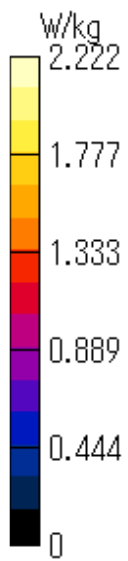
Pin/250mW/Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 2.22 W/kg

Ambient Temp. : 23.0 degree.C. Liquid Temp.; 22.3 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/03/15



20210317 750MHz System Check

Communication System: UID 0, #CW (0); Communication System Band: D750 (750.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 750$ MHz; $\sigma = 0.984$ S/m; $\epsilon_r = 54.887$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.94, 9.94, 9.94) @ 750 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509;

Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045

Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Pin=250mW/750MHz/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.93 W/kg

Pin=250mW/750MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 56.85 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 3.35 W/kg

SAR(1 g) = 2.2 W/kg; SAR(10 g) = 1.45 W/kg

Smallest distance from peaks to all points 3 dB below = 16.5 mm

Ratio of SAR at M2 to SAR at M1 = 65.8%

Maximum value of SAR (measured) = 2.95 W/kg

Pin=250mW/750MHz/Z Scan (1x1x18): Measurement grid: dx=20mm, dy=20mm, dz=5mm

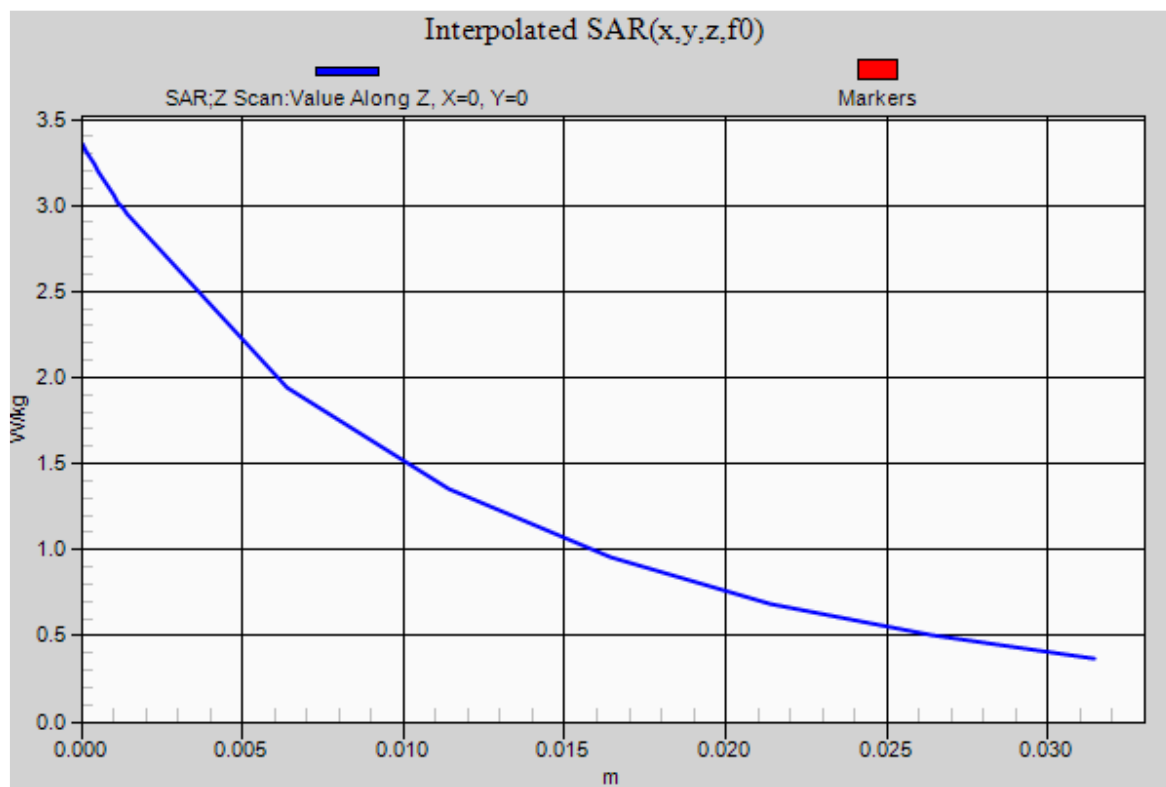
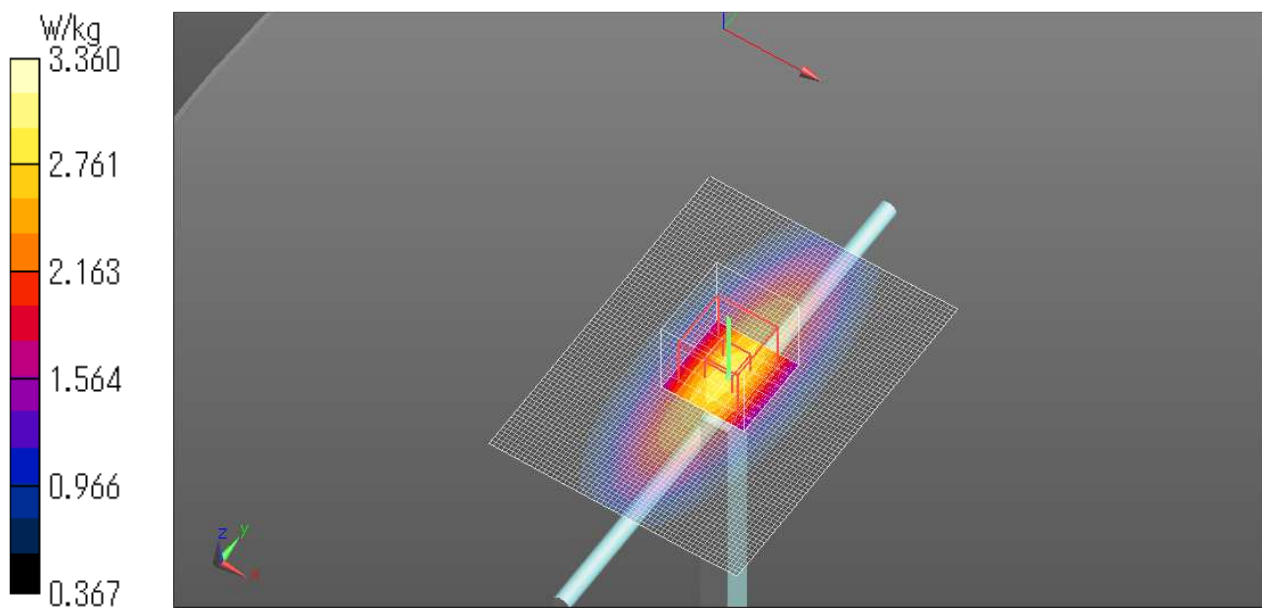
Penetration depth = 13.63 (11.99, 14.43) [mm]

Maximum value of SAR (interpolated) = 3.36 W/kg

Ambient Temp. : 22.5 degree.C. Liquid Temp.; 22.0 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/03/17



20210317 1900MHz System check

Communication System: UID 0, _CW (0); Communication System Band: D1900 (1900.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.513$ S/m; $\epsilon_r = 53.051$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(7.93, 7.93, 7.93) @ 1900 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA001BB;Serial: TP:1207

Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

Pin=250mW/1900MHz/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 16.0 W/kg

Pin=250mW/1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 105.2 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 19.0 W/kg

SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.41 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

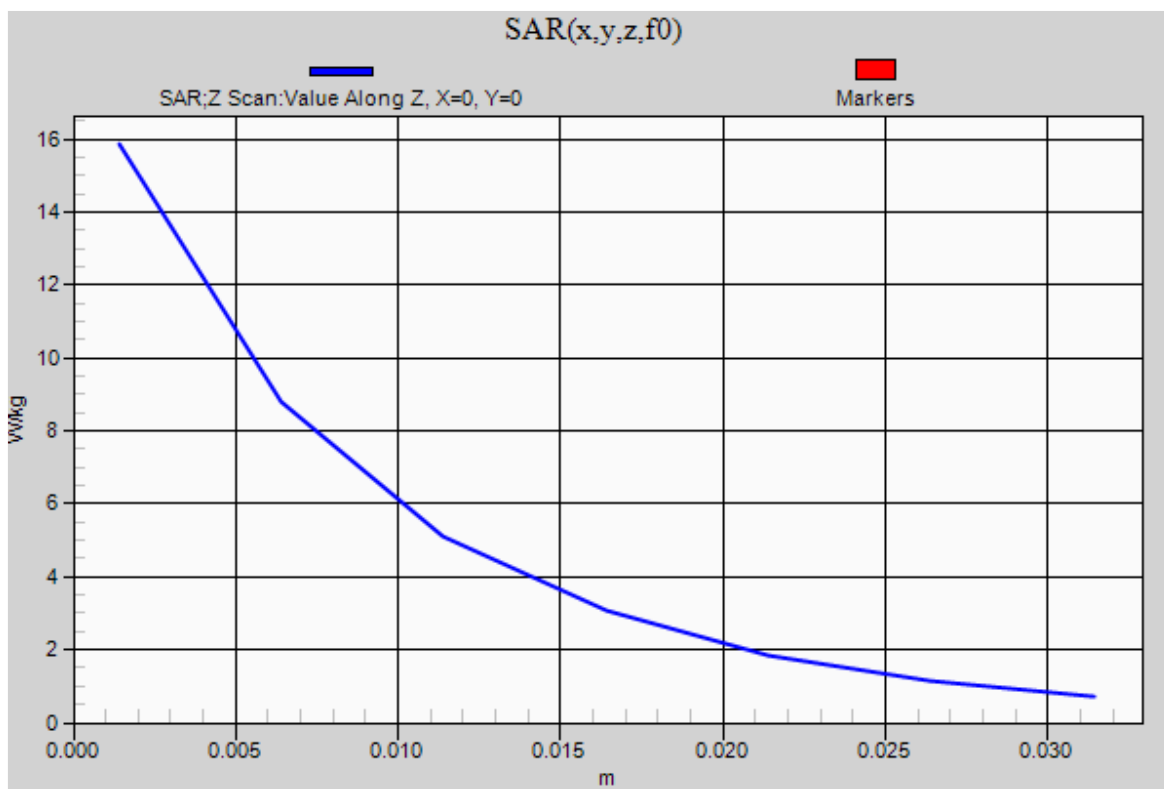
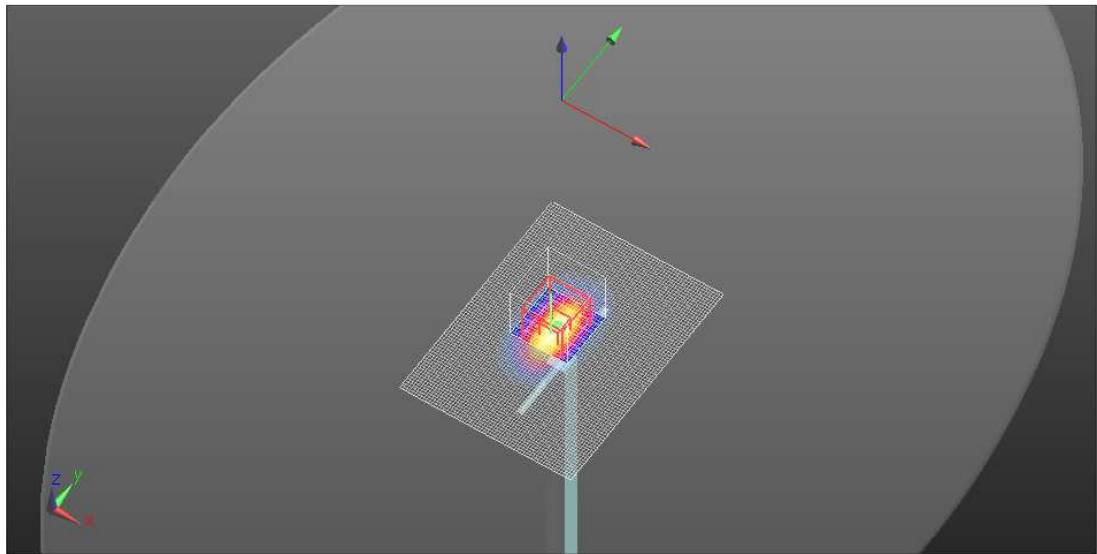
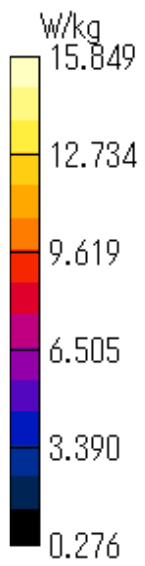
Ratio of SAR at M2 to SAR at M1 = 55.5%

Maximum value of SAR (measured) = 15.8 W/kg

Ambient Temp. : 23.5 degree.C. Liquid Temp.; 22.7 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/03/17



20210319 1750MHz System Check

Communication System: UID 0, #CW (0); Communication System Band: D1750 (1750.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.503$ S/m; $\epsilon_r = 52.518$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.98, 7.98, 7.98) @ 1750 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509;

Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB;Serial: TP:1045

Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

Pin=250mW/1750MHz 2nd/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.7 W/kg

Pin=250mW/1750MHz 2nd/Zoom Scan 2 (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 100.0 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 17.0 W/kg

SAR(1 g) = 9.42 W/kg; SAR(10 g) = 5 W/kg

Smallest distance from peaks to all points 3 dB below = 9.1 mm

Ratio of SAR at M2 to SAR at M1 = 56.3%

Maximum value of SAR (measured) = 14.4 W/kg

Pin=250mW/1750MHz 2nd/Z Scan (1x1x18): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Penetration depth = 9.324 (8.604, 9.911) [mm]

Maximum value of SAR (interpolated) = 17.2 W/kg

Ambient Temp. : 22.5 degree.C. Liquid Temp.; 22.0 degree.C.

Liquid temp. is kept within the 2 degree.C. during the test.

Date: 2021/03/19

