

Appendix C Repeat SAR Measurement data

C.1 Full/Repeat WCDMA B4 ch1312 1712.4MHz RMC,12.2 kbps Rear tilt Edge4 9mm

Communication System: UID 0, #WCDMA (0); Communication System Band: Band IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.463$ S/m; $\epsilon_r = 51.392$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(8.1, 8.1, 8.1) @ 1712.4 MHz; Calibrated: 2021/07/22

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2021/07/13

Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1203

Measurement SW: DASYS52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Full/Repeat WCDMA B4 ch1312 1712.4MHz RMC,12.2 kbps Rear tilt Edge4 9mm/Area Scan (101x61x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 1.44 W/kg

Full/Repeat WCDMA B4 ch1312 1712.4MHz RMC,12.2 kbps Rear tilt Edge4 9mm/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 32.25 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.62 W/kg

SAR(1 g) = 1 W/kg; SAR(10 g) = 0.598 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 14.9 mm

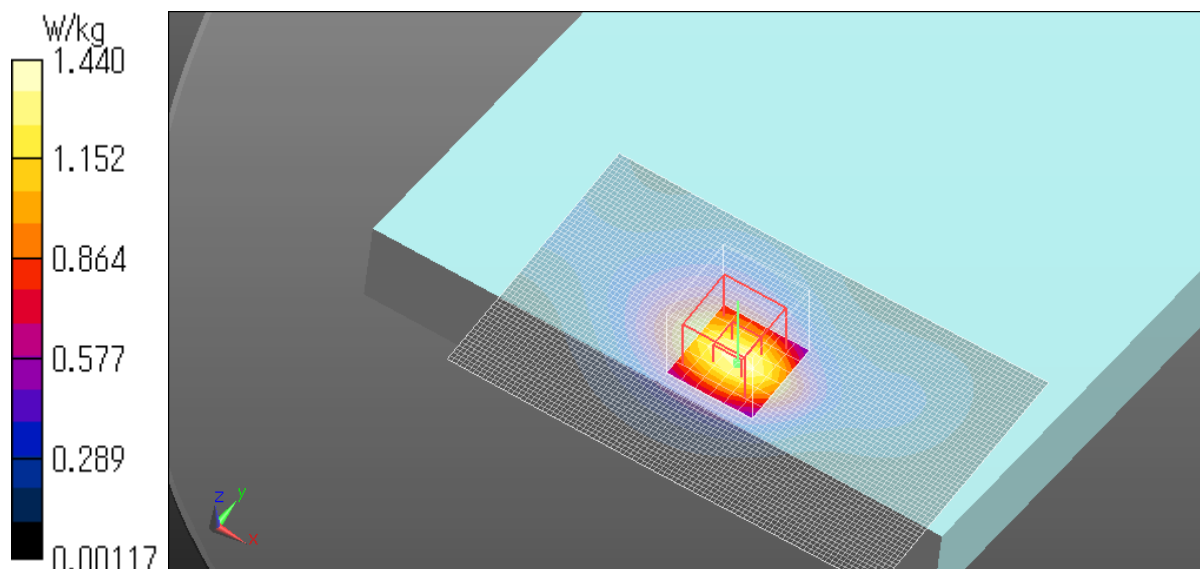
Ratio of SAR at M2 to SAR at M1 = 62%

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 1.41 W/kg

Date: 2021/08/12

Ambient Temp. : 23.0 degree.C. Liquid Temp.; 22.5 degree.C.



C.2 Full/Repeat LTE B4 ch20175ch 1732.5MHz QPSK Rear tilt Edge4 9mm 20MHz RBn1 RBp99

Communication System: UID 0, #Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); ; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.497$ S/m; $\epsilon_r = 51.112$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(7.95, 7.95, 7.95) @ 1732.5 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

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)

Full/Repeat LTE B4 ch20175ch 1732.5MHz QPSK Rear tilt Edge4 9mm 20MHz RBn1 RBp99/Area Scan (101x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 1.17 W/kg

Full/Repeat LTE B4 ch20175ch 1732.5MHz QPSK Rear tilt Edge4 9mm 20MHz RBn1 RBp99/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 29.12 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.813 W/kg; SAR(10 g) = 0.488 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 15.7 mm

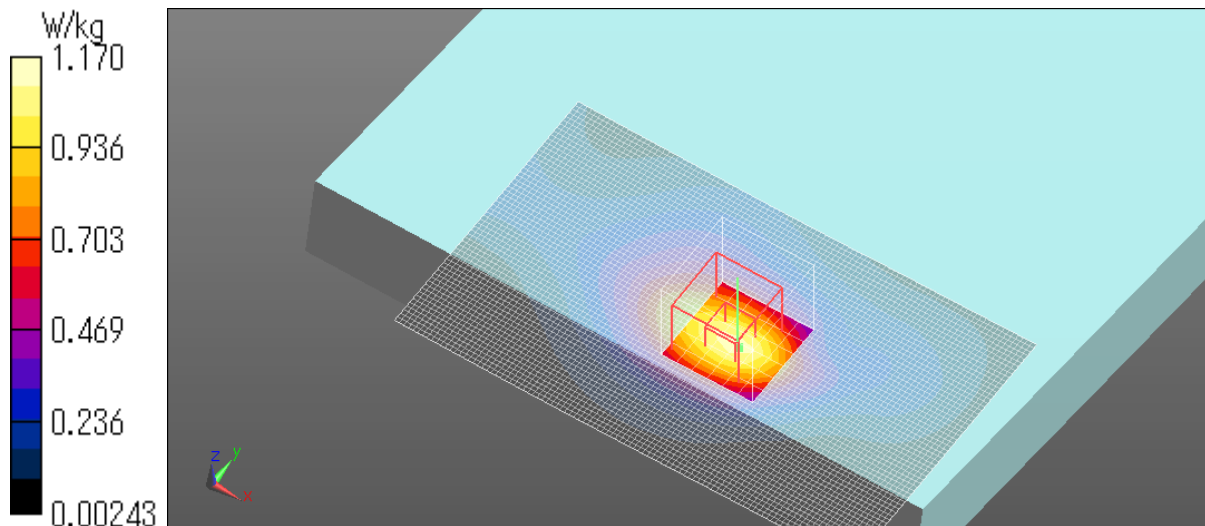
Ratio of SAR at M2 to SAR at M1 = 61.4%

Maximum value of SAR (measured) = 1.14 W/kg

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

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

Date: 2021/07/27



C.3 Full/Repeat LTE B7 ch21100 2535MHz QPSK NA Rear tilt edge1 0mm 20MHz RBn1 RBp0

Communication System: UID 0, #Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); ; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 2.1$ S/m; $\epsilon_r = 50.146$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(7.26, 7.26, 7.26) @ 2535 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

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)

Full/Repeat LTE B7 ch21100 2535MHz QPSK N/A rear tilt Edge1 0mm 20MHz RBn1 RBp0/Area Scan (111x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.27 W/kg

Full/Repeat LTE B7 ch21100 2535MHz QPSK N/A rear tilt Edge1 0mm 20MHz RBn1 RBp0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 25.20 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.814 W/kg; SAR(10 g) = 0.449 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 19.4 mm

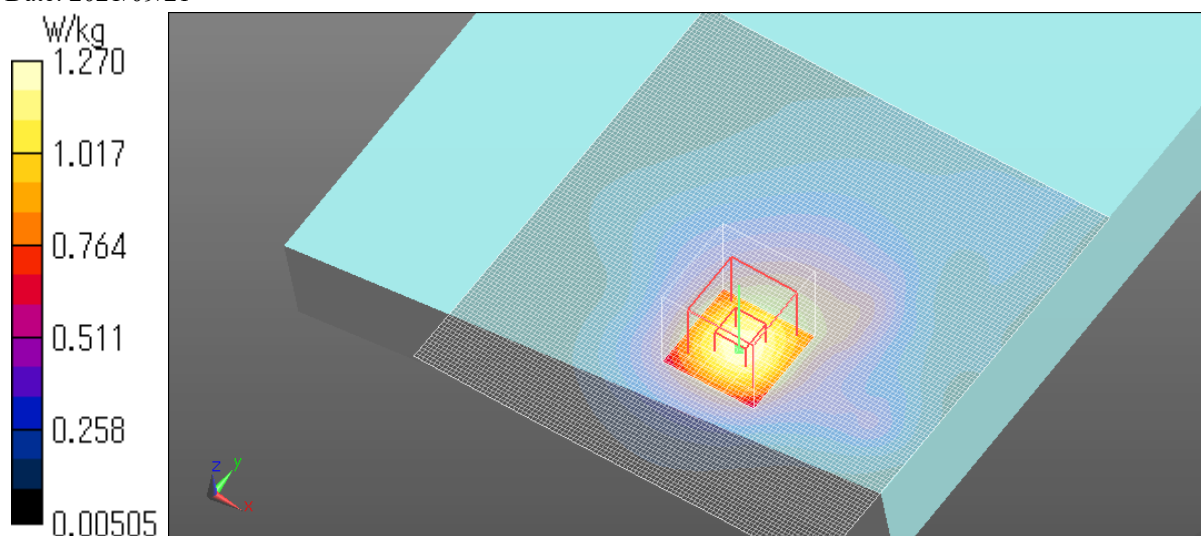
Ratio of SAR at M2 to SAR at M1 = 49.5%

Maximum value of SAR (measured) = 1.28 W/kg

Ambient Temp. : 20.0 degree.C. Liquid Temp.; 20.0 degree.C.

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

Date: 2021/09/21



C.4 Red/Repeat/LTE B12 ch23095 707.5MHz QPSK Edge4 0mm 10MHz RBn1 RBp49

Communication System: UID 0, _Generic LTE (0); Communication System Band: Band 12, E-UTRA/FDD (698.0 - 716.0 MHz); ; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.98$ S/m; $\epsilon_r = 53.224$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN7372; ConvF(10.03, 10.03, 10.03) @ 707.5 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn554;

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)

Red/Repeat/LTE B12 ch23095 707.5MHz QPSK Edge4 0mm 10MHz RBn1 RBp49/Area Scan (51x111x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 1.09 W/kg

Red/Repeat/LTE B12 ch23095 707.5MHz QPSK Edge4 0mm 10MHz RBn1 RBp49/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 37.35 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.73 W/kg

SAR(1 g) = 0.751 W/kg; SAR(10 g) = 0.391 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 7.3 mm

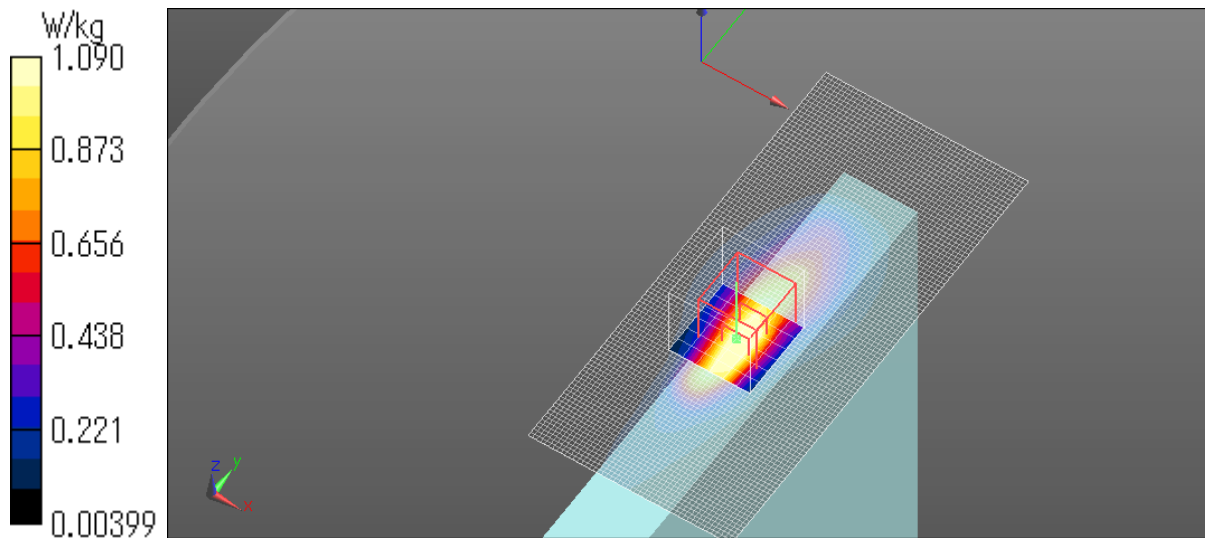
Ratio of SAR at M2 to SAR at M1 = 47.5%

Maximum value of SAR (measured) = 1.23 W/kg

Ambient Temp. : 21.1 degree.C. Liquid Temp.; 21.1 degree.C.

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

Date: 2021/08/12



C.5 Red/Repeat/LTE B41 ch40185 2549.5MHz QPSK Edge4 0mm 20MHz RBn50 RBp49

Communication System: UID 0, #Generic LTE (0); Communication System Band: Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz); ; Duty Cycle: 1:1.5787

Medium parameters used: $f = 2550$ MHz; $\sigma = 2.21$ S/m; $\epsilon_r = 54.166$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(7.26, 7.26, 7.26) @ 2549.5 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

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)

Red/Repeat/LTE B41 ch40185 2549.5MHz QPSK Edge4 0mm 20MHz RBn50 RBp49/Area Scan (71x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.65 W/kg

Red/Repeat/LTE B41 ch40185 2549.5MHz QPSK Edge4 0mm 20MHz RBn50 RBp49/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 28.13 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 2.12 W/kg

SAR(1 g) = 0.930 W/kg; SAR(10 g) = 0.406 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.1 mm

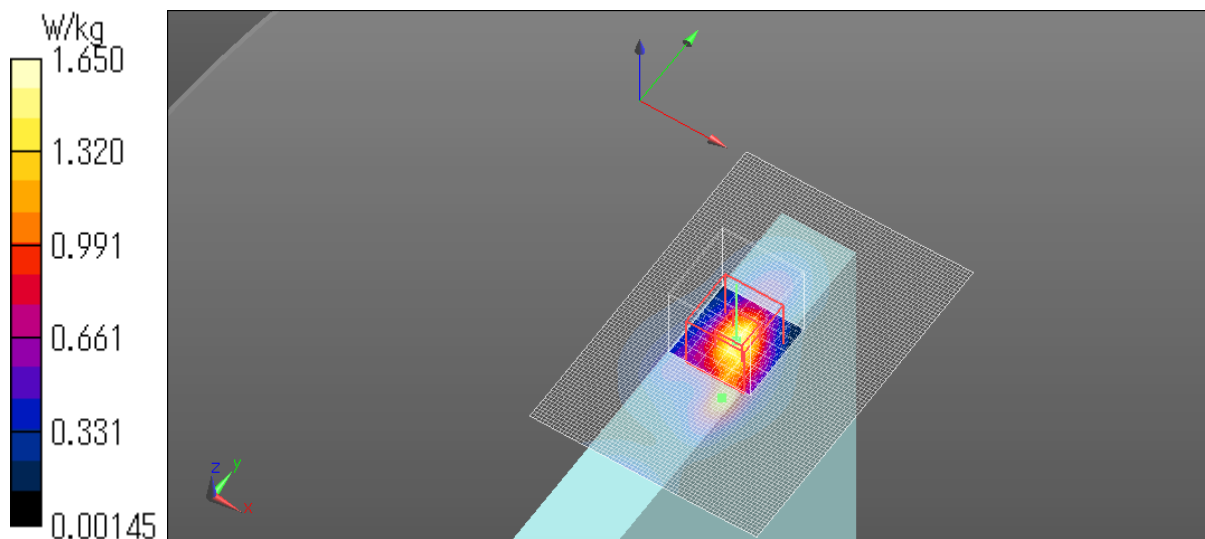
Ratio of SAR at M2 to SAR at M1 = 45.3%

Maximum value of SAR (measured) = 1.65 W/kg

Ambient Temp. : 20.0 degree.C. Liquid Temp.; 20.0 degree.C.

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

Date: 2021/08/18



C.6 Full/Repeat/LTE B66 ch132072 1720MHz QPSK Rear tilt Edge4 9mm 20MHz RBn1 RBp99

Communication System: UID 0, #Generic LTE (0); Communication System Band: Band 66; ; Duty Cycle: 1:1
Medium parameters used: $f = 1720$ MHz; $\sigma = 1.49$ S/m; $\epsilon_r = 51.134$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(7.95, 7.95, 7.95) @ 1720 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

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)

Full/Repeat/LTE B66 ch132072 1720MHz QPSK Rear tilt Edge4 9mm 20MHz RBn1 RBp99/Area Scan

(101x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.23 W/kg

Full/Repeat/LTE B66 ch132072 1720MHz QPSK Rear tilt Edge4 9mm 20MHz RBn1 RBp99/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 29.84 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.858 W/kg; SAR(10 g) = 0.515 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 15.1 mm

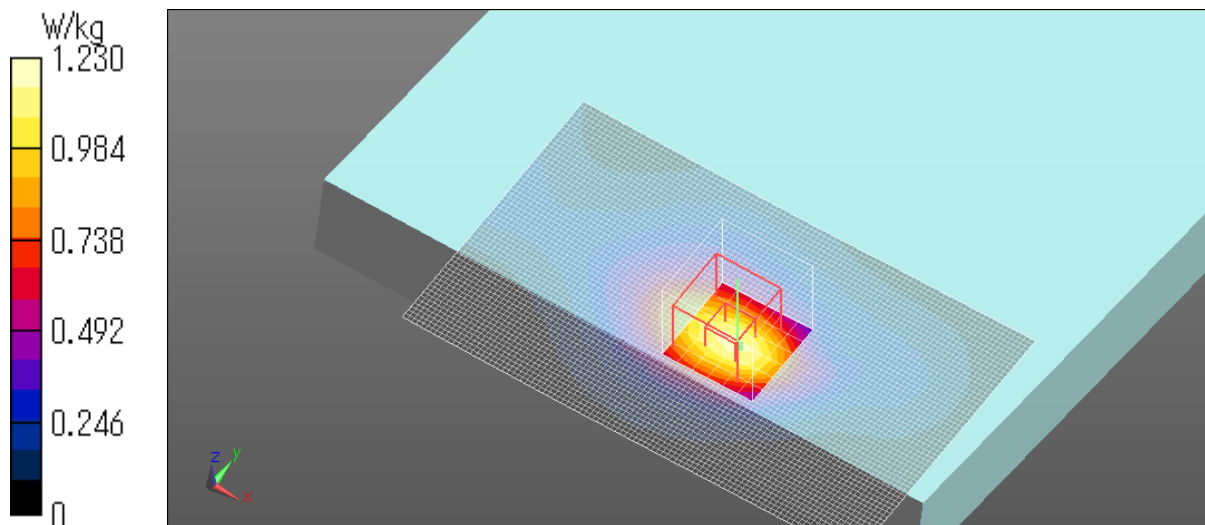
Ratio of SAR at M2 to SAR at M1 = 61.4%

Maximum value of SAR (measured) = 1.20 W/kg

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

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

Date: 2021/07/28



C.7 Full/Repeat/NR Bn5 ch167300 836.5MHz BPSK DFTsOFDM Rear tilt(Edge4 side) 0mm 20MHz RBn50 RBp28

Communication System: UID 0, #NR (0) (0); Communication System Band: Band 5; ; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 1.006$ S/m; $\epsilon_r = 54.279$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 DASY5 Configuration
 Probe: EX3DV4 - SN7372; ConvF(9.86, 9.86, 9.86) @ 836.5 MHz;
 Sensor-Surface: 1.4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface:
 1.4mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn554;
 Phantom: ELI V5.0 (20deg probe tilt)_SAR1_1207; Type: QD OVA 002 Ax;Serial: 1207
 Measurement SW: DASY52, Version 52.10 (3);SEMCAD X Version 14.6.13 (7474)

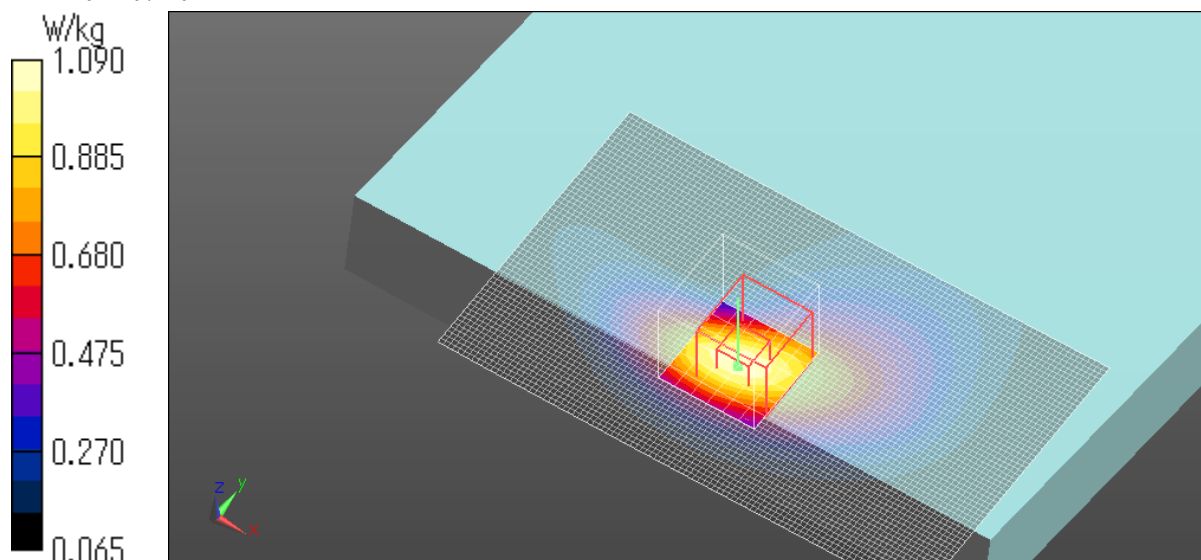
full Rear tilt(Edge4 side) 9mm 0720 sample5 NR2_5/NR Bn5 ch167300 836.5MHz BPSK DFTsOFDM Rear tilt(Edge4 side) 9mm 20MHz RBn50 RBp28 Repeat/Area Scan (101x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
 Maximum value of SAR (interpolated) = 1.10 W/kg

full Rear tilt(Edge4 side) 9mm 0720 sample5 NR2_5/NR Bn5 ch167300 836.5MHz BPSK DFTsOFDM Rear tilt(Edge4 side) 9mm 20MHz RBn50 RBp28 Repeat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 34.48 V/m; Power Drift = -0.00 dB
 Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.797 W/kg; SAR(10 g) = 0.516 W/kg (SAR corrected for target medium)
 Smallest distance from peaks to all points 3 dB below = 14.3 mm
 Ratio of SAR at M2 to SAR at M1 = 63.5%

Info: Interpolated medium parameters used for SAR evaluation.
 Maximum value of SAR (measured) = 1.09 W/kg

Ambient Temp. : 23.0 degree.C. Liquid Temp.; 22.0 degree.C.
 Liquid temp. is kept within the 2 degree.C. during the test.
 Date: 2021/07/20



C.8 Red/Repeat/NR Bn41 ch518600 2593MHz BPSK DFTsOFDM Edge2 0mm 100MHz RBn135 RBp69

Communication System: UID 0, #NR (0); Communication System Band: NR 41; ; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2593$ MHz; $\sigma = 2.224$ S/m; $\epsilon_r = 51.152$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(7.26, 7.26, 7.26) @ 2593 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

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)

NR 41 full red edge 2/Repeat2 NR Bn41 ch518600 2593MHz BPSK DFTsOFDM red Edge2 0mm 100MHz RBn135 RBp69/Area Scan (61x131x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 1.77 W/kg

NR 41 full red edge 2/Repeat2 NR Bn41 ch518600 2593MHz BPSK DFTsOFDM red Edge2 0mm 100MHz RBn135 RBp69/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 30.10 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 2.73 W/kg

SAR(1 g) = 0.978 W/kg; SAR(10 g) = 0.326 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 5.1 mm

Ratio of SAR at M2 to SAR at M1 = 42%

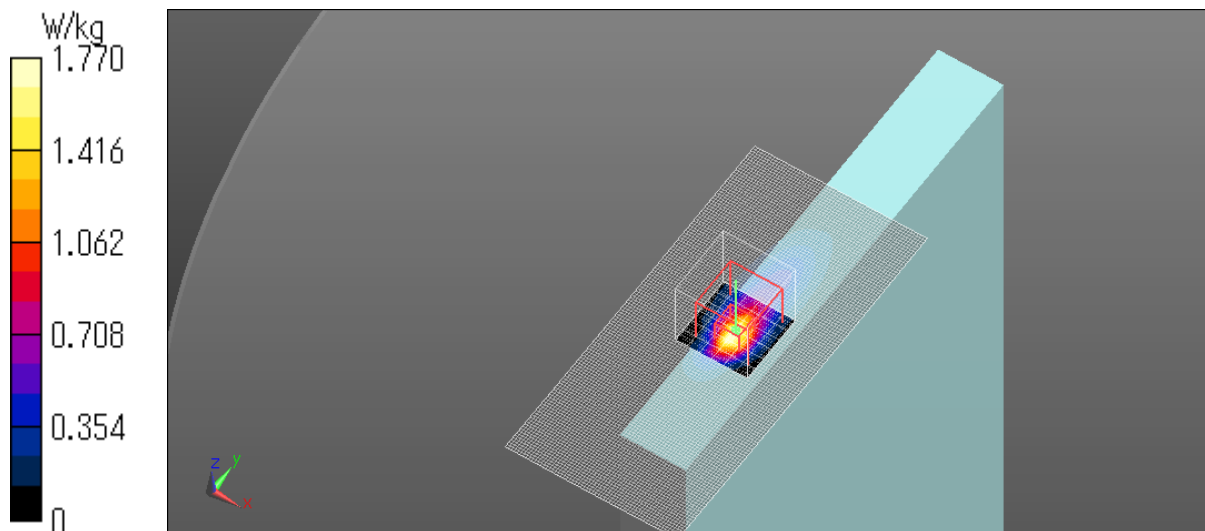
Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 1.89 W/kg

Ambient Temp. : 20.0 degree.C. Liquid Temp.; 20.0 degree.C.

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

Date: 2021/08/31



C.9 Full/Repeat/NR Bn66 ch344000 1720MHz BPSK DFTsOFDM Rear tilt Edge4 9mm 20MHz RBn50 RBp28

Communication System: UID 0, #NR (0); Communication System Band: NR 66; ; Duty Cycle: 1:1

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.49$ S/m; $\epsilon_r = 51.134$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration

Probe: EX3DV4 - SN3917; ConvF(7.95, 7.95, 7.95) @ 1720 MHz;

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1369;

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)

Full/Repeat/NR Bn66 ch344000 1720MHz BPSK DFTsOFDM Rear tilt Edge4 9mm 20MHz RBn50 RBp28/Area Scan (101x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.39 W/kg

Full/Repeat/NR Bn66 ch344000 1720MHz BPSK DFTsOFDM Rear tilt Edge4 9mm 20MHz RBn50 RBp28/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 31.44 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 0.965 W/kg; SAR(10 g) = 0.579 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 15.3 mm

Ratio of SAR at M2 to SAR at M1 = 61.7%

Maximum value of SAR (measured) = 1.36 W/kg

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

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

Date: 2021/07/27

