

SAR Test Report

Part 2 of 3

Project Number: 4659833 **Quotation Number:** 04192019TH-1.3
Report Number: 4659833EMC05.2 **Revision Level:** 0
Client: KCI USA, Inc.

Equipment Under Test: ActiV.A.C. Therapy System
Model Name: ActiVAC RTM
Model Number: 60511


Contains FCC ID: 2AHDZ-ACTIVAC4G and SQGBL652

Applicable Standards: IEC 62209-2 2010


Report issued on: 21 December 2020

Test Result: Compliant

Tested by:


Stephen C. Whalen, EMC/RF Exposure Manager

Reviewed by:


David Schramm, Operations Manager

Remarks: This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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APPENDIX A - PHOTOS OF EUT AND TEST POSITION(S)

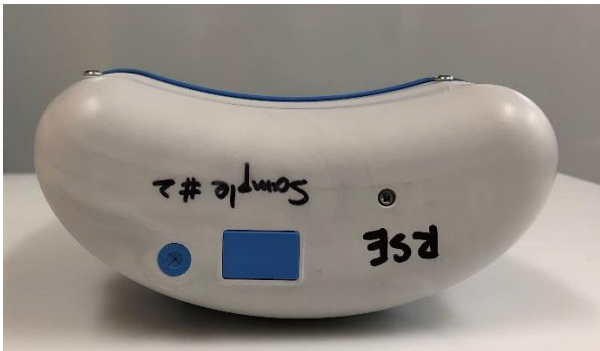
EUT Standalone



Front



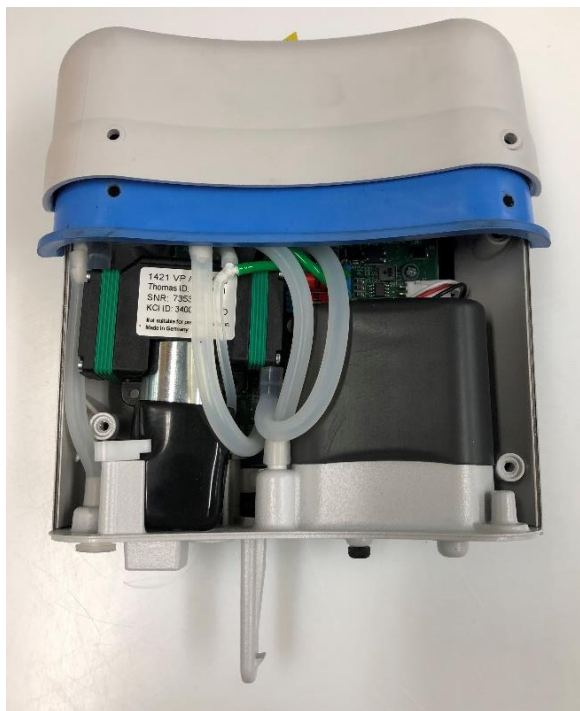
Back



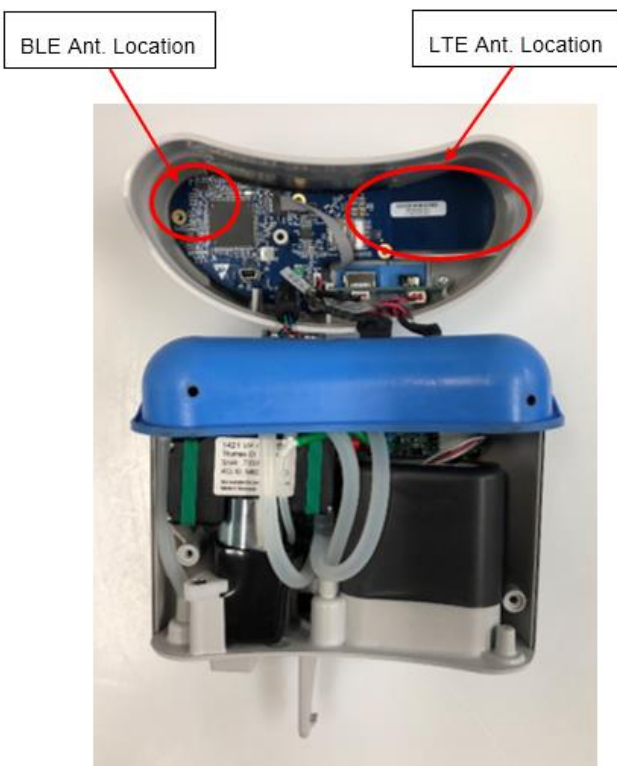
Top



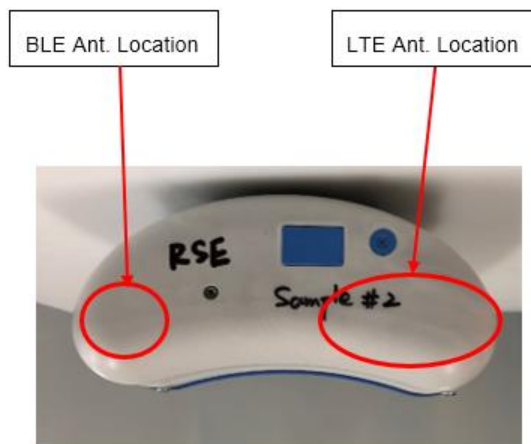
Bottom



Back (cover removed)



Back



Top



Front view of carry case (closed flap) with shoulder strap



Front of carry case (open flap to show display)

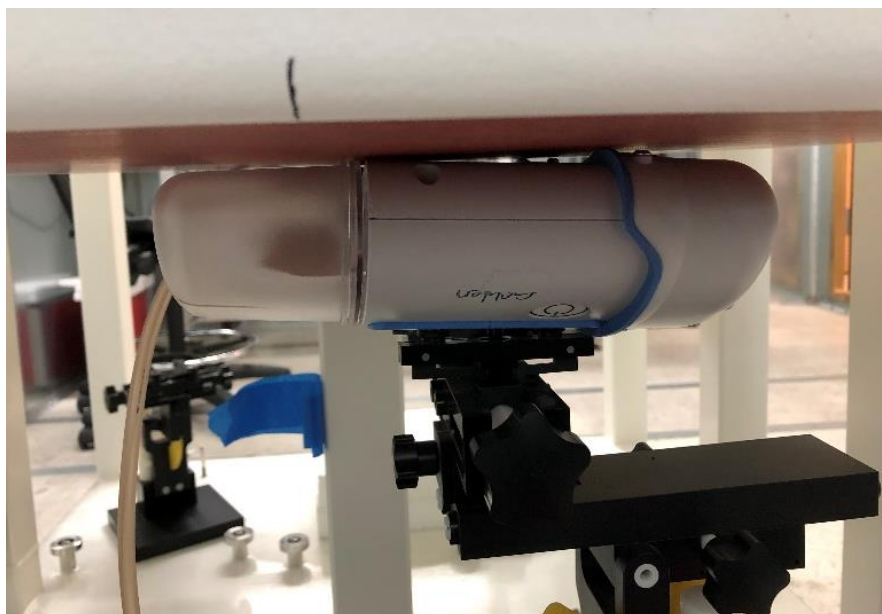


Back of carry case (showing optional belt loop strap)

EUT Test Position



Top view of EUT against flat area of phantom with 0mm spacing
Header added to allow control of BLE module.



Side view of EUT against flat area of phantom with 0mm spacing

APPENDIX B - LTE DATA

SGS North America SAR Laboratory
Date/Time: 12/16/2020 11:06:36 AM

Plot # 1

DASY5 Configuration:

- Communication System: UID 10169 - CAE, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1880 MHz;
- Probe: ES3DV3 - SN3272; ConvF(4.98, 4.98, 4.98) @ 1880 MHz; Calibrated: 2/19/2020
- Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.4 \text{ S/m}$; $\epsilon_r = 39.892$; $\rho = 1000 \text{ kg/m}^3$,
Medium parameters used: $\sigma = 0 \text{ S/m}$, $\epsilon_r = 1$; $\rho = 1000 \text{ kg/m}^3$; Phantom: ELI v5.0; Phantom section: Flat Section
- Electronics: DAE4 Sn1287; Calibrated: 2/18/2020
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

2-3GHz Body/Body Scan/Area Scan (15x8x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.166 W/kg

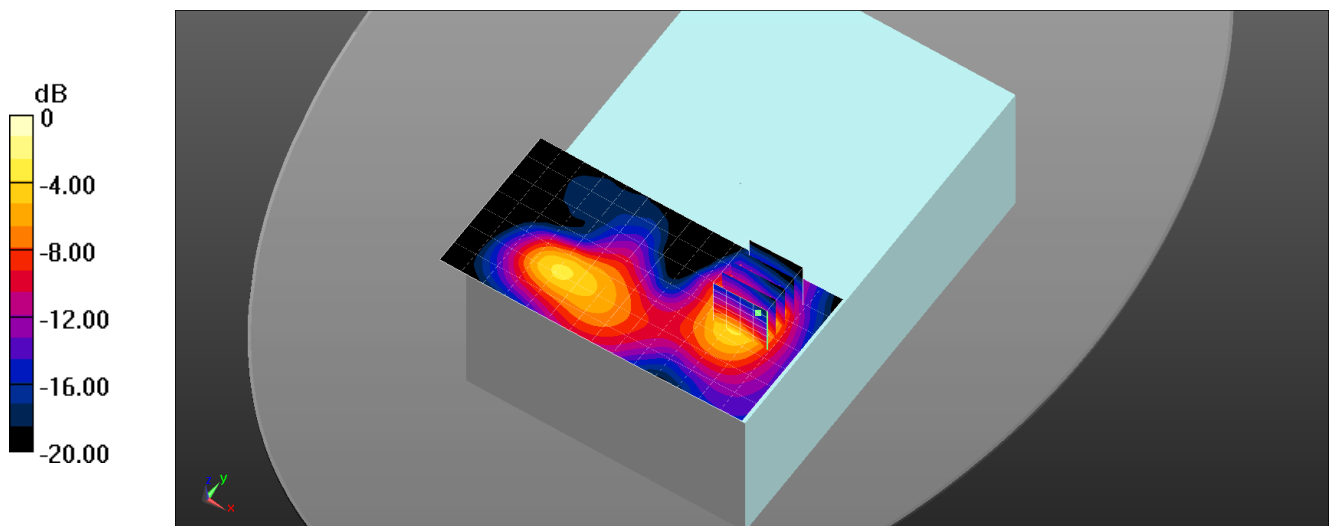
2-3GHz Body/Body Scan/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.042 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.548 W/kg

SAR(1 g) = 0.173 W/kg; SAR(10 g) = 0.084 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.343 W/kg



0 dB = 0.343 W/kg = -4.65 dBW/kg

SGS SAR Laboratory North America
Date/Time: 12/16/2020 6:30:06 PM

Plot # 2

DASY5 Configuration:

- Communication System: UID 10170 - CAE, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM); Frequency: 1732.5 MHz;
- Probe: ES3DV3 - SN3272; ConvF(5.07, 5.07, 5.07) @ 1732.5 MHz; Calibrated: 2/19/2020
- Medium parameters used (interpolated): $f = 1732.5$ MHz; $\sigma = 1.31$ S/m; $\epsilon_r = 40.074$; $\rho = 1000$ kg/m³,
Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³; Phantom: ELI v5.0; Phantom section: Flat Section
- Electronics: DAE4 Sn1287; Calibrated: 2/18/2020
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

2-3GHz Body/Body Scan/Area Scan (15x8x1): Measurement grid: dx=12mm, dy=12mm

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

Maximum value of SAR (measured) = 0.271 W/kg

2-3GHz Body/Body Scan/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

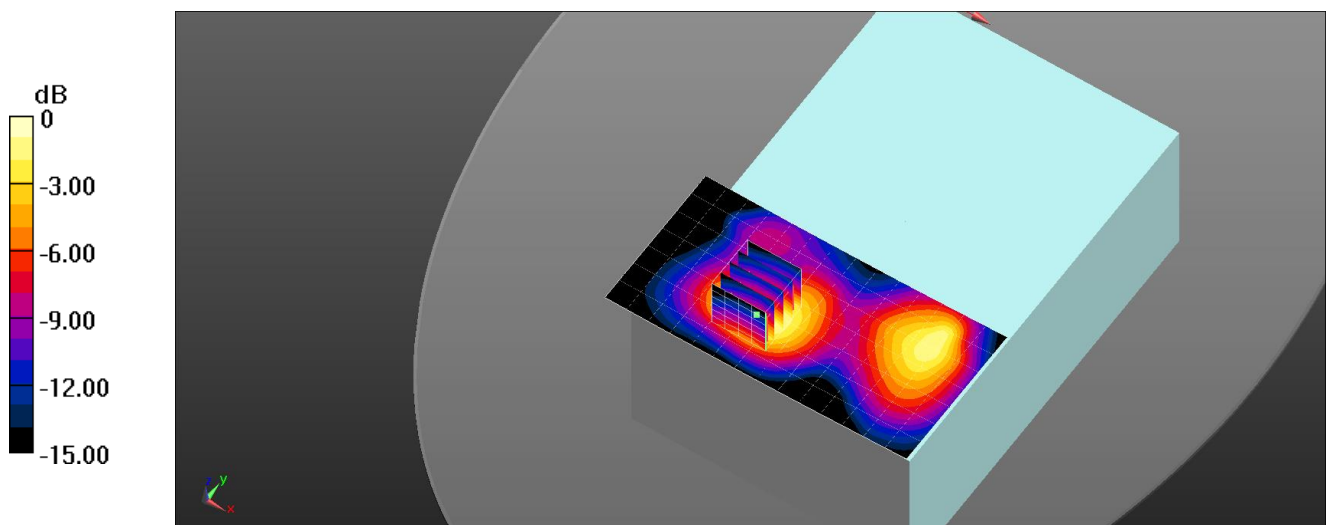
Reference Value = 4.357 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.409 W/kg

SAR(1 g) = 0.251 W/kg; SAR(10 g) = 0.138 W/kg (SAR corrected for target medium)

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

Maximum value of SAR (measured) = 0.303 W/kg



0 dB = 0.303 W/kg = -5.19 dBW/kg

SGS SAR Laboratory North America
Date/Time: 12/17/2020 1:39:31 PM

Plot # 3

DASY5 Configuration:

- Communication System: UID 10176 - CAG, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM); Frequency: 707.5 MHz;
- Probe: ES3DV3 - SN3272; ConvF(6.18, 6.18, 6.18) @ 707.5 MHz; Calibrated: 2/19/2020
- Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.827$ S/m; $\epsilon_r = 42.479$; $\rho = 1000$ kg/m³ ;
Phantom: ELI v5.0; Phantom section: Flat Section
- Electronics: DAE4 Sn1287; Calibrated: 2/18/2020
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Below 2GHz Body/Body Scan/Area Scan (12x7x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.275 W/kg

Below 2GHz Body/Body Scan/Zoom Scan 2 (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

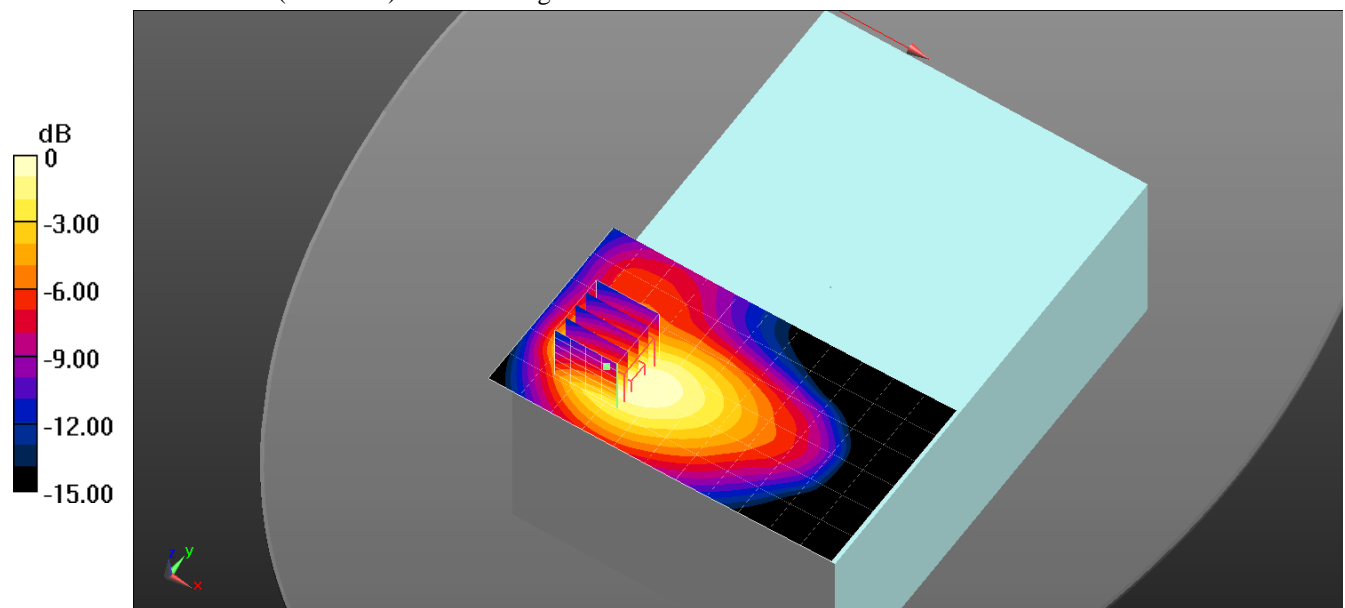
Reference Value = 10.74 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.422 W/kg

SAR(1 g) = 0.250 W/kg; SAR(10 g) = 0.159 W/kg (SAR corrected for target medium)

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

Maximum value of SAR (measured) = 0.276 W/kg



0 dB = 0.276 W/kg = -5.59 dBW/kg

APPENDIX D – SYSTEM VERIFICATIONS

Test Laboratory: SGS SAR Laboratory North America
Date/Time: 12/16/2020 9:28:21 AM

DUT: Dipole 1900 MHz D1900V2

DASY5 Configuration:

- Communication System: UID 0, CW (0); Frequency: 1900 MHz;
- Probe: ES3DV3 - SN3272; ConvF(4.98, 4.98, 4.98) @ 1900 MHz; Calibrated: 2/19/2020
- Medium parameters used: $f = 1900$ MHz; $\sigma = 1.412$ S/m; $\epsilon_r = 39.868$; $\rho = 1000$ kg/m³; Phantom: ELI v5.0; Phantom section: Flat Section
- Electronics: DAE4 Sn1287; Calibrated: 2/18/2020
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System validation below 2GHz/System verification/Dipole Area Scan 2 (4x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.864 W/kg

System validation below 2GHz/System verification/0 degree Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 30.54 V/m; Power Drift = 0.02 dB

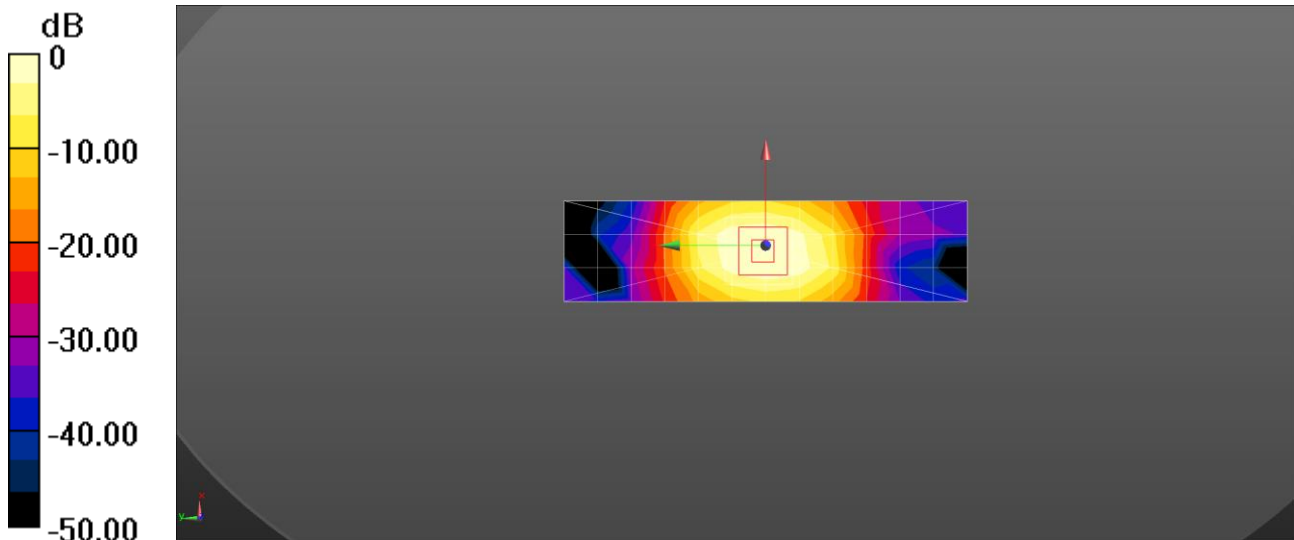
Peak SAR (extrapolated) = 1.78 W/kg

SAR(1 g) = 0.972 W/kg; SAR(10 g) = 0.505 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 10.5 mm

Ratio of SAR at M2 to SAR at M1 = 55.6%

Maximum value of SAR (measured) = 1.25 W/kg



0 dB = 0.864 W/kg = -0.63 dBW/kg

Test Laboratory: SGS SAR Laboratory North America
Date/Time: 12/16/2020 12:19:04 PM

DUT: Dipole 1750 MHz D1750V2

DASY5 Configuration:

- Communication System: UID 0, CW (0); Frequency: 1750 MHz;
- Probe: ES3DV3 - SN3272; ConvF(5.07, 5.07, 5.07) @ 1750 MHz; Calibrated: 2/19/2020
- Medium parameters used: $f = 1750$ MHz; $\sigma = 1.32$ S/m; $\epsilon_r = 40.05$; $\rho = 1000$ kg/m³; Phantom: ELI v5.0; Phantom section: Flat Section
- Electronics: DAE4 Sn1287; Calibrated: 2/18/2020
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System validation below 2GHz/System verification/Dipole Area Scan 2 (4x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.874 W/kg

System validation below 2GHz/System verification/0 degree Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 30.17 V/m; Power Drift = 0.01 dB

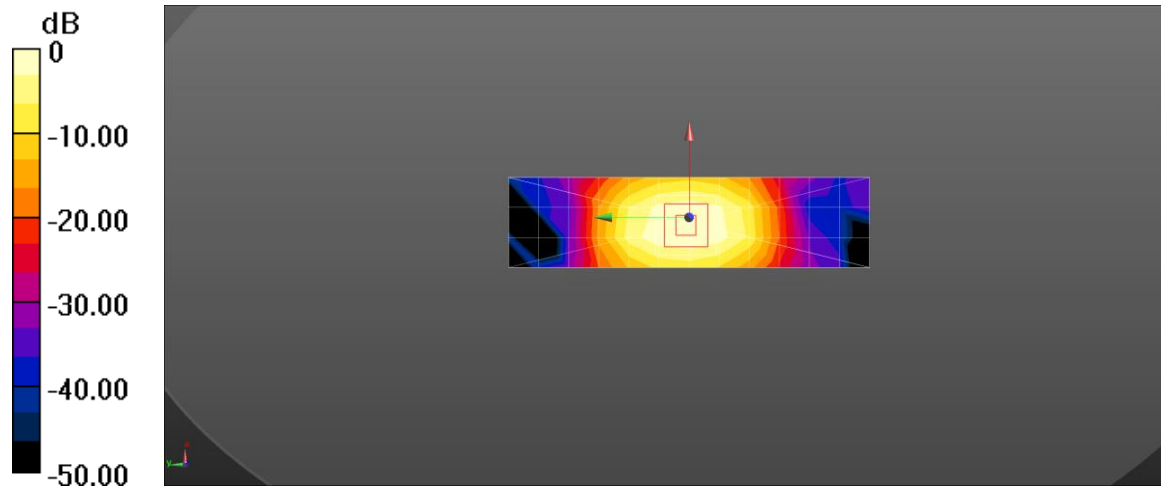
Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 0.910 W/kg; SAR(10 g) = 0.481 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 10.6 mm

Ratio of SAR at M2 to SAR at M1 = 57.3%

Maximum value of SAR (measured) = 1.13 W/kg



0 dB = 0.874 W/kg = -0.58 dBW/kg

Test Laboratory: SGS SAR Laboratory North America
Date/Time: 12/17/2020 9:00:38 AM

DUT: Dipole 750 MHz D750V3

DASY5 Configuration:

- Communication System: UID 0, CW (0); Frequency: 750 MHz;
- Probe: ES3DV3 - SN3272; ConvF(6.18, 6.18, 6.18) @ 750 MHz; Calibrated: 2/19/2020
- Medium parameters used: $f = 750$ MHz; $\sigma = 0.843$ S/m; $\epsilon_r = 42.412$; $\rho = 1000$ kg/m³; Phantom: ELI v5.0; Phantom section: Flat Section
- Electronics: DAE4 Sn1287; Calibrated: 2/18/2020
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

System validation below 2GHz/System verification/Dipole Area Scan 2 (4x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.419 W/kg

System validation below 2GHz/System verification/0 degree Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 24.32 V/m; Power Drift = 0.07 dB

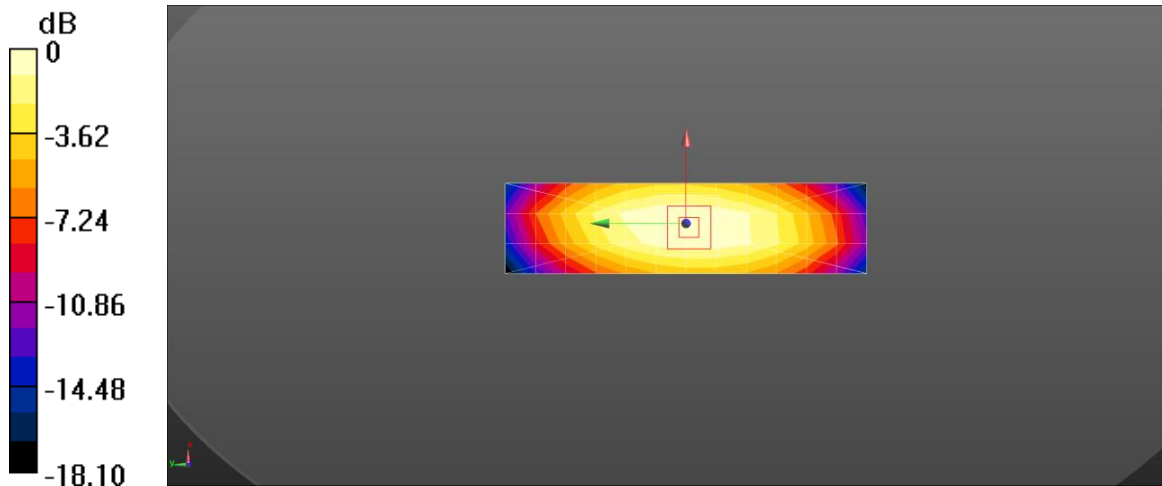
Peak SAR (extrapolated) = 0.593 W/kg

SAR(1 g) = 0.422 W/kg; SAR(10 g) = 0.277 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 67.9%

Maximum value of SAR (measured) = 0.473 W/kg



0 dB = 0.419 W/kg = -3.77 dBW/kg

REVISION HISTORY

Revision Level	Description of changes	Revision Date
DRAFT	--	20 December 2020
0	Initial release	21 December 2020