

12.2. System Performance Checks

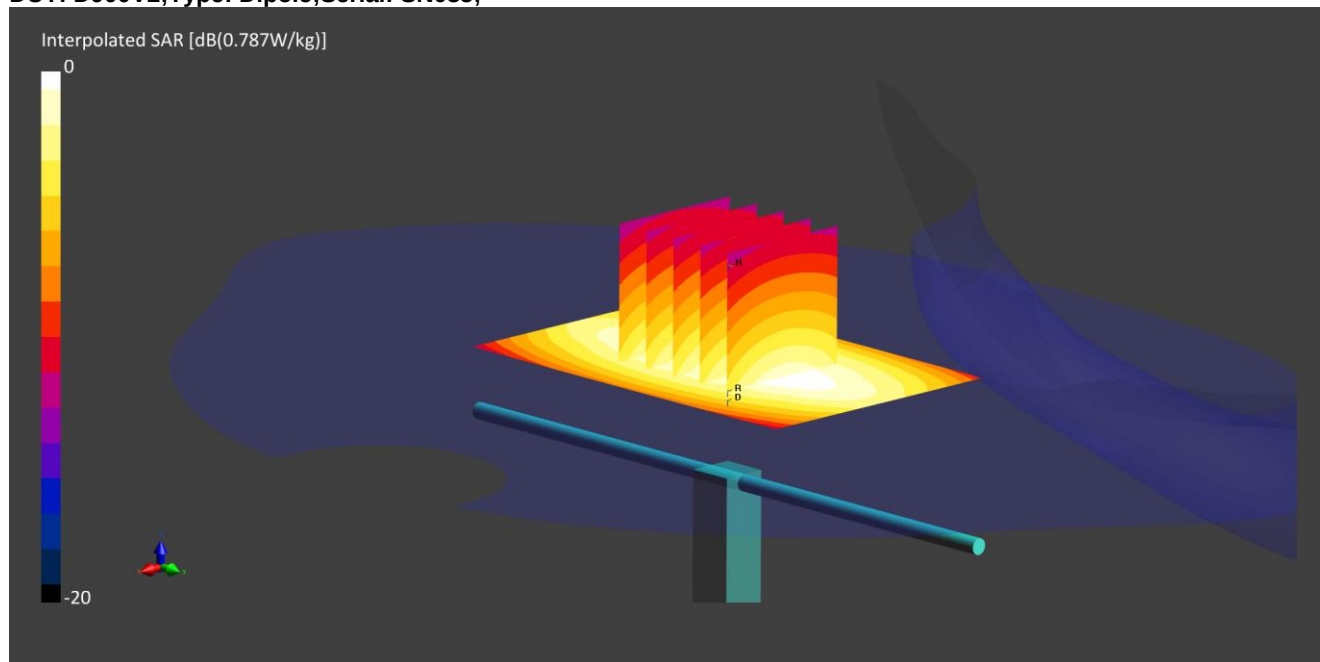
Note: As per FCC RF Exposure procedures - April 2019 presentation - Tissue Simulating Liquids (TSL), page 19, effective February 19, 2019, FCC has permitted the use of the head-tissue simulating liquid specified in IEC 62209-1 for all SAR tests – head and body and extremity.

Scan Reference Number	Title
SYS/001	System Check 900 MHz Head (Site 62) - 17 12 19
SYS/002	System Check 1900 MHz Head (Site 62) - 17 02 20
SYS/003	System Check 1900 MHz Head (Site 62) - 21 02 20
SYS/004	System Check 2450 MHz Head (Site 62) - 10 01 20

SYS/001: System Check 900 MHz Head (Site 62) - 17 12 19

Date: 17/12/2019

DUT: D900V2; Type: Dipole; Serial: SN035;



Communication System: CW UID: 0 Frequency: 900.0 MHz; Duty Cycle: 1

Medium: HSL 17 12 19 - 1900 10% , 900 1800 2450 5% Medium parameters used: $f = 900.0$ MHz; $\sigma = 0.93$ S/m; $\epsilon_r = 41.7$; $\rho = 1000$ kg/m³; No correction

Phantom section: Flat

DASY 6 Configuration:

-Probe: ES3DV3 - SN3358; ConvF (6.28, 6.28, 6.28); Calibrated:21/01/2019

-Sensor-Surface: 3.0mm Mother Scan

-Electronics:DAE4 - SN1543; Calibrated:11/03/2019

-Phantom Type: Twin-SAM V8.0 (30deg probe tilt); Serial: 1946

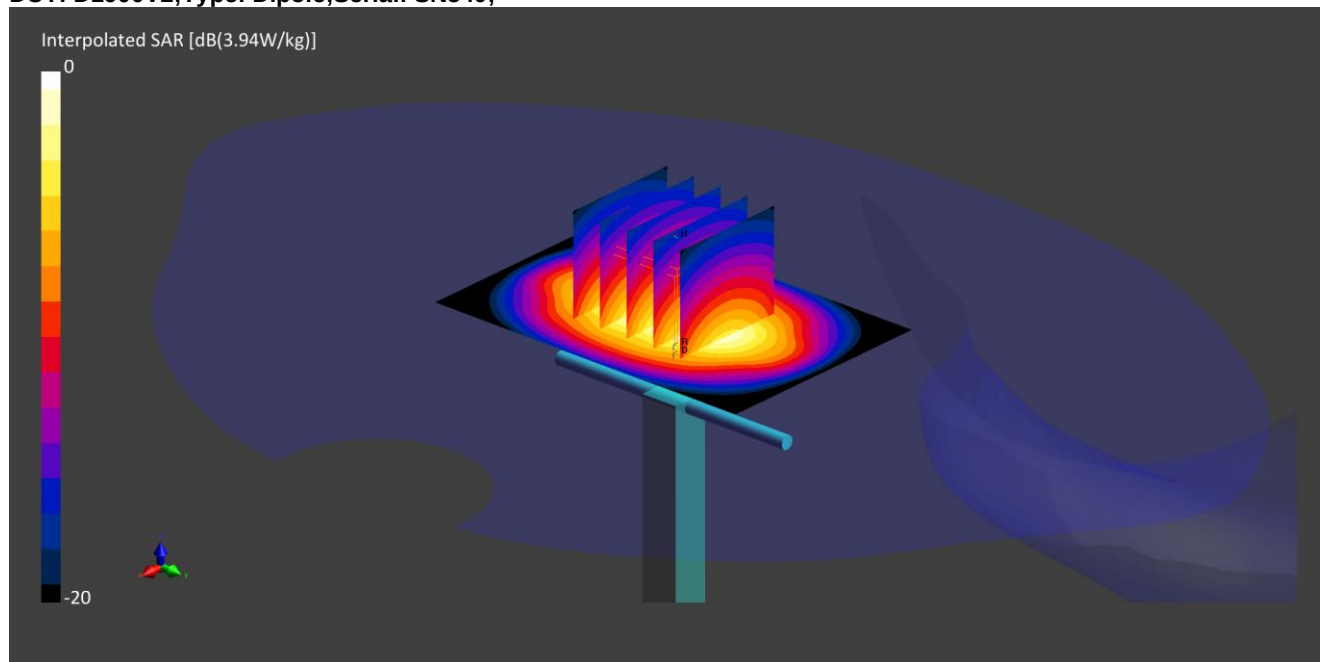
Area Scan (60 x90):Interpolated grid: dx=15.0 mm, dy=15.0 mm**Zoom Scan1(32x32x30):**Measurement grid: dx=8.0 mm, dy=8.0mm, dz=5.0mm

Reference Value = 0.6V/m; Power Drift = 0 dB

SAR(1 g) = 0.529 W/kg; SAR(10 g) = 0.341 W/kg

SYS/002: System Check 1900 MHz Site 62 Head - 17 02 2020

Date: 17/02/2020

DUT: D1900V2;Type: Dipole;Serial: SN540;

Communication System: CW UID: 0; Frequency: 1900.0 MHz; Duty Cycle: 1;
 Medium: HSL 17 02 19 - 900 5%, 1900 10%; Medium parameters used: $f = 1900.0$ MHz; $\sigma = 1.48$ S/m; $\epsilon_r = 39.8$; $\rho = 1000$ kg/m³; Positive only

Phantom section: Flat;

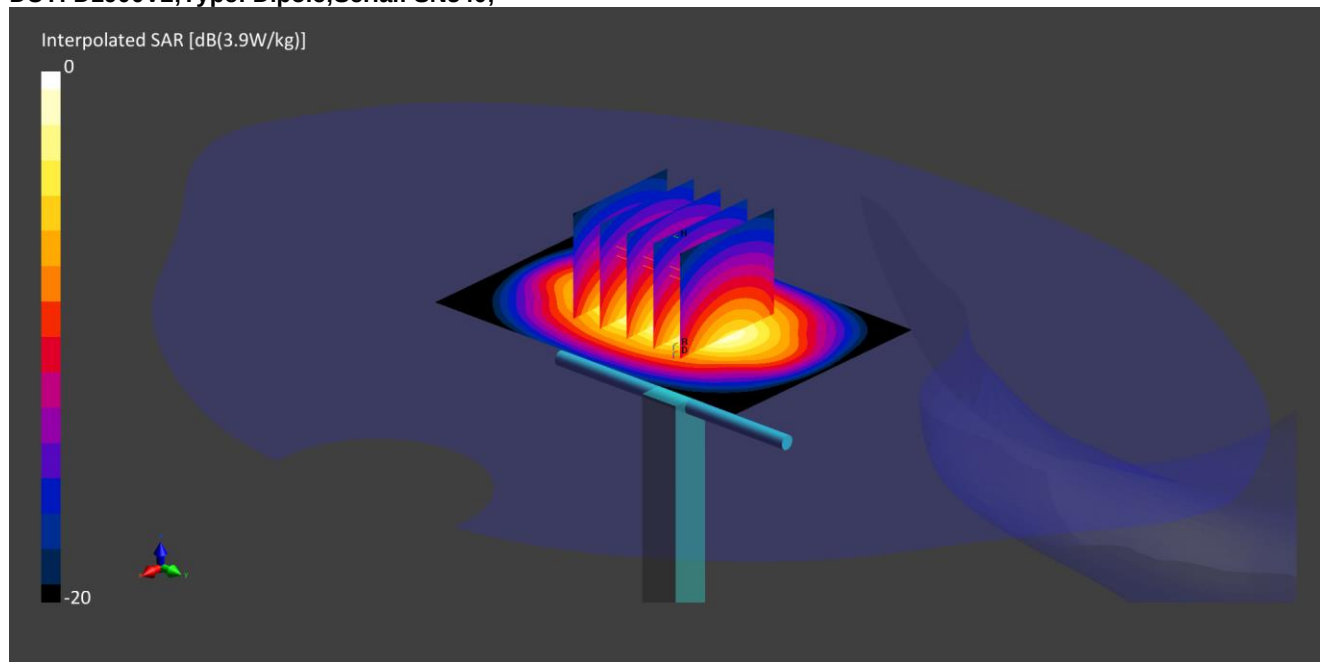
DASY 6 Configuration:

- Probe: EX3DV4 - SN7549; ConvF (8.05, 8.05, 8.05); Calibrated:05/08/2019
- Sensor-Surface: 1.4 mm; Mother Scan
- Electronics: DAE4 - SN431; Calibrated:23/05/2019
- Phantom Type: Twin-SAM V8.0 (30deg probe tilt); Serial: 1946
- DASY Software Version: 6.8.2.24

Area Scan (60x90):Interpolated grid: dx=15.0 mm, dy=15.0 mm**Zoom Scan1(32x32x30):**Measurement grid: dx=8.0 mm, dy=8.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value = 2.69 V/m; Power Drift = -0.02 dB**SAR(1 g) = 2.12 W/kg; SAR(10 g) = 1.09 W/kg**

SYS/003: System Check 1900 MHz Site 62 Head - 21 02 2020

Date: 21/02/2020

DUT: D1900V2;Type: Dipole;Serial: SN540;

Communication System: CW UID: 0; Frequency: 1900.0 MHz; Duty Cycle: 1;
 Medium: HSL Site62_21Feb2020_091619_Head; Medium parameters used: $f = 1900.0$ MHz; $\sigma = 1.51$ S/m; $\epsilon_r = 39.0$; $\rho = 1000$ kg/m³; Positive only

Phantom section: Flat;

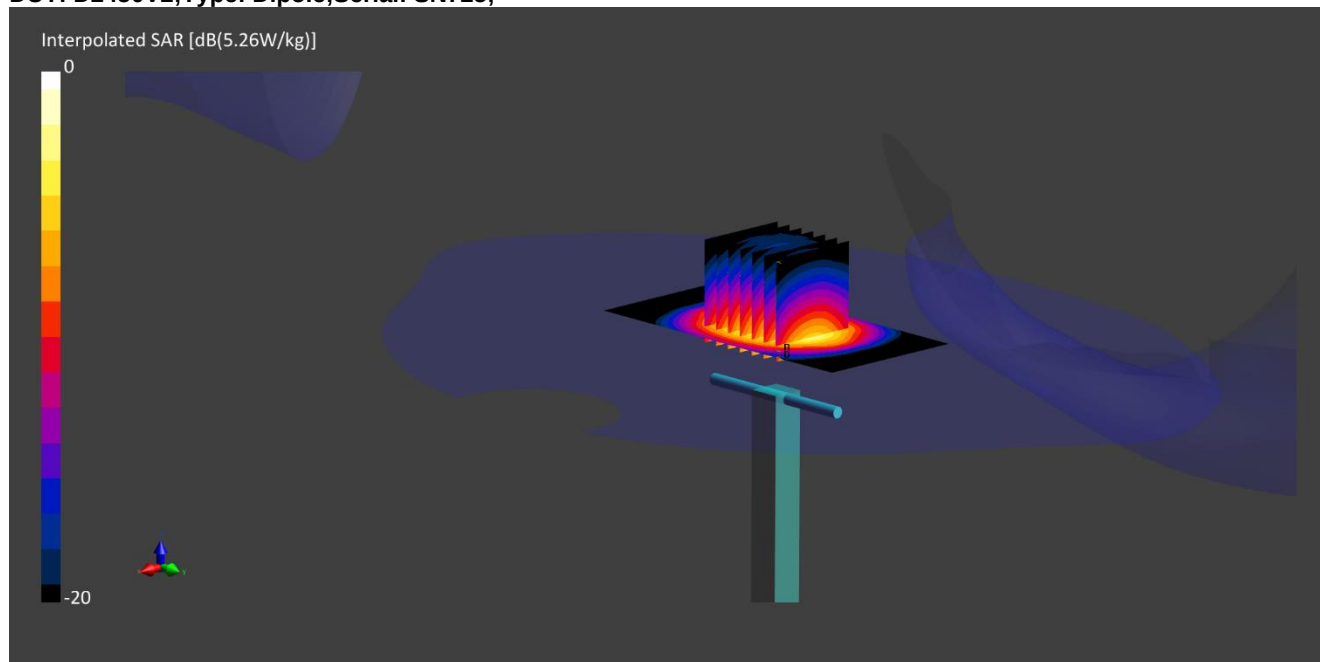
DASY 6 Configuration:

- Probe: EX3DV4 - SN7549; ConvF (8.05, 8.05, 8.05); Calibrated:05/08/2019
- Sensor-Surface: 1.4 mm; Mother Scan
- Electronics: DAE4 - SN431; Calibrated:23/05/2019
- Phantom Type: Twin-SAM V8.0 (30deg probe tilt); Serial: 1946
- DASY Software Version: 6.8.2.24

Area Scan (60x90):Interpolated grid: dx=15.0 mm, dy=15.0 mm**Zoom Scan1(32x32x30):**Measurement grid: dx=8.0 mm, dy=8.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value = 2.44 V/m; Power Drift = -0.01 dB**SAR(1 g) = 2.10 W/kg; SAR(10 g) = 1.09 W/kg**

SYS/004: System Check 2450 MHz Head (Site 62) - 10 01 20

Date: 10/01/2020

DUT: D2450V2;Type: Dipole;Serial: SN725;

Communication System: CW UID: 0; Frequency: 2450.0 MHz; Duty Cycle: 1;
Medium: HSL 10 01 20 - 2450 5%; Medium parameters used: $f = 2450.0$ MHz; $\sigma = 1.87$ S/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³; No correction

Phantom section: Flat;

DASY 6 Configuration:

- Probe: EX3DV4 - SN7549; ConvF (7.18, 7.18, 7.18); Calibrated:05/08/2019
- Sensor-Surface: 1.4 mm; Mother Scan
- Electronics: DAE4 - SN431; Calibrated:23/05/2019
- Phantom Type: Twin-SAM V8.0 (30deg probe tilt); Serial: 1946
- DASY Software Version: 6.8.2.24

Area Scan (48x96):Interpolated grid: dx=12.0 mm, dy=12.0 mm

Zoom Scan1(30x30x30):Measurement grid: dx=5.0 mm, dy=5.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value = 3.33 V/m; Power Drift = -0.01 dB

SAR(1 g) = 2.62 W/kg; SAR(10 g) = 1.22 W/kg

12.3. SAR Test Plots

This appendix contains the following SAR distribution scans.

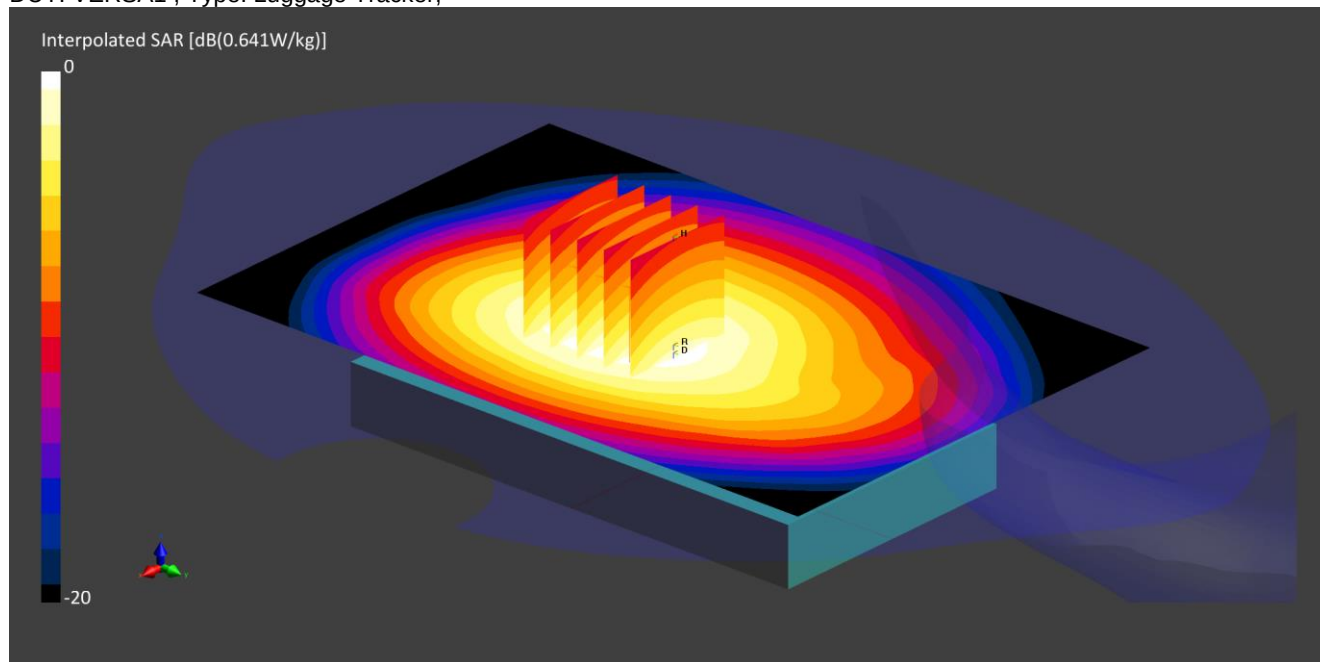
Note: As per FCC RF Exposure procedures - April 2019 presentation - Tissue Simulating Liquids (TSL), page 19, effective February 19, 2019, FCC has permitted the use of the head-tissue simulating liquid specified in IEC 62209-1 for all SAR tests – head and body and extremity.

Scan Reference Number	Title
SAR/001	Back 10mm GPRS 850 2TX CH251
SAR/002	Back 10mm GPRS 1900 2 TX Port1 CH512
SAR/003	Back 10mm WCDMA 2 Port1 CH9262
SAR/004	Back 10mm WCDMA 5 CH4233
SAR/005	Edge 4 10mm BT CH18

SAR/001: Back 10mm GPRS 850 2TX CH251

Date: 19/12/2019

DUT: VERSA1 ; Type: Luggage Tracker;



Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1) UID: 10024; Frequency: 848.8 MHz; Duty Cycle: 0.23;
 Medium: HSL 17 12 19 - 1900 10% , 900 1800 2450 5%; Medium parameters used: $f = 848.8$ MHz; $\sigma = 0.91$ S/m; $\epsilon_r = 41.9$
 ; $\rho = 1000$ kg/m³; No correction

Phantom section: Flat;

DASY 6 Configuration:

- Probe: ES3DV3 - SN3358; ConvF (6.28, 6.28, 6.28); Calibrated:21/01/2019

- Sensor-Surface: 3.0 mm; Mother Scan

- Electronics: DAE4 - SN1543; Calibrated:11/03/2019

- Phantom Type: Twin-SAM V8.0 (30deg probe tilt); Serial: 1946

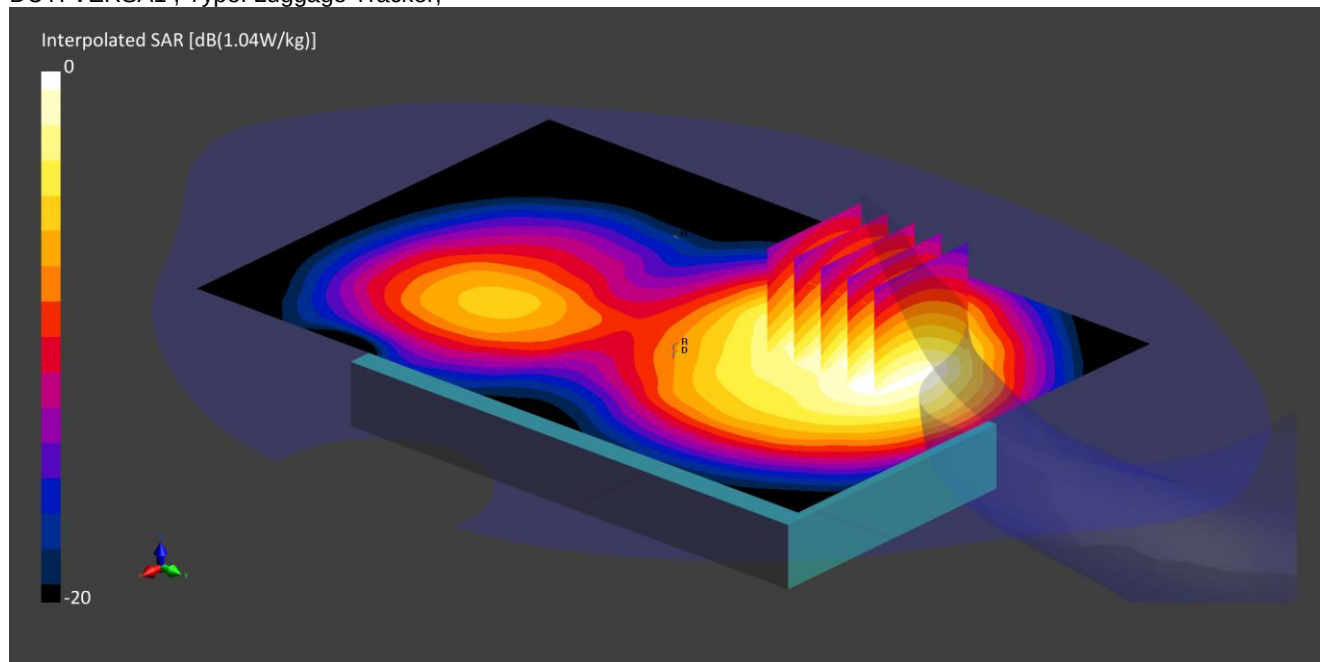
- DASY Software Version: 6.8.2.24

Area Scan (120x180):Interpolated grid: dx=15.0 mm, dy=15.0 mm**Zoom Scan1(32x32x30):**Measurement grid: dx=8.0 mm, dy=8.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value = 0.48 V/m; Power Drift = 0.01 dB**SAR(1 g) = 0.454 W/kg; SAR(10 g) = 0.311 W/kg**

SAR/002: Back 10mm GPRS 1900 2 TX Port1 CH512

Date: 21/02/2020

DUT: VERSA1 ; Type: Luggage Tracker;



Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1) UID: 10024; Frequency: 1850.2 MHz; Duty Cycle: 0.23;
 Medium: HSL Site62_21Feb2020_091619_Head; Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.48$ S/m; $\epsilon_r = 39.1$; $\rho = 1000$ kg/m³; Positive only

Phantom section: Flat;

DASY 6 Configuration:

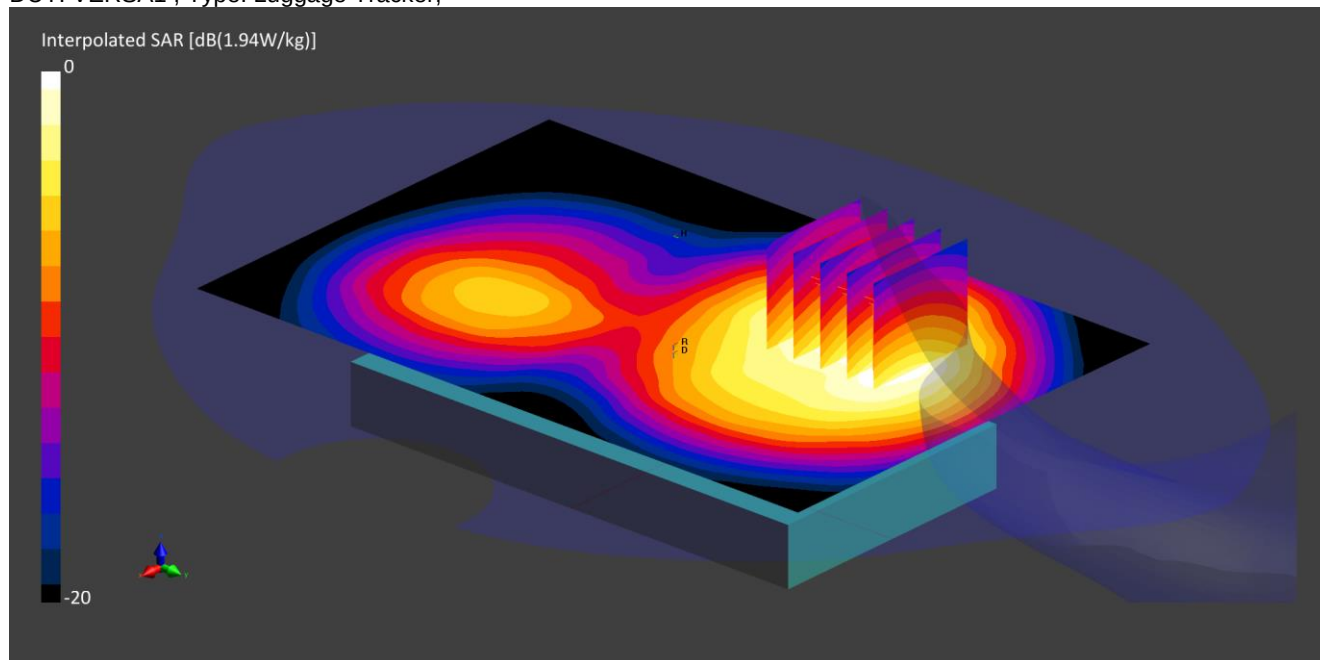
- Probe: EX3DV4 - SN7549; ConvF (8.05, 8.05, 8.05); Calibrated:05/08/2019
- Sensor-Surface: 1.4 mm; Mother Scan
- Electronics: DAE4 - SN431; Calibrated:23/05/2019
- Phantom Type: Twin-SAM V8.0 (30deg probe tilt); Serial: 1946
- DASY Software Version: 6.8.2.24

Area Scan (120x180):Interpolated grid: dx=15.0 mm, dy=15.0 mm**Zoom Scan1(32x32x30):**Measurement grid: dx=8.0 mm, dy=8.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value = 1.06 V/m; Power Drift = -0.00 dB**SAR(1 g) = 0.958 W/kg; SAR(10 g) = 0.569 W/kg**

SAR/003: Back 10mm WCDMA 2 Port1 CH9262

Date: 21/02/2020

DUT: VERSA1 ; Type: Luggage Tracker;



Communication System: UMTS-FDD (WCDMA) UID: 10011; Frequency: 1852.4 MHz; Duty Cycle: 1;
 Medium: HSL Site62_21Feb2020_091619_Head; Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.48$ S/m; $\epsilon_r = 39.0$; $\rho = 1000$ kg/m³; Positive only

Phantom section: Flat;

DASY 6 Configuration:

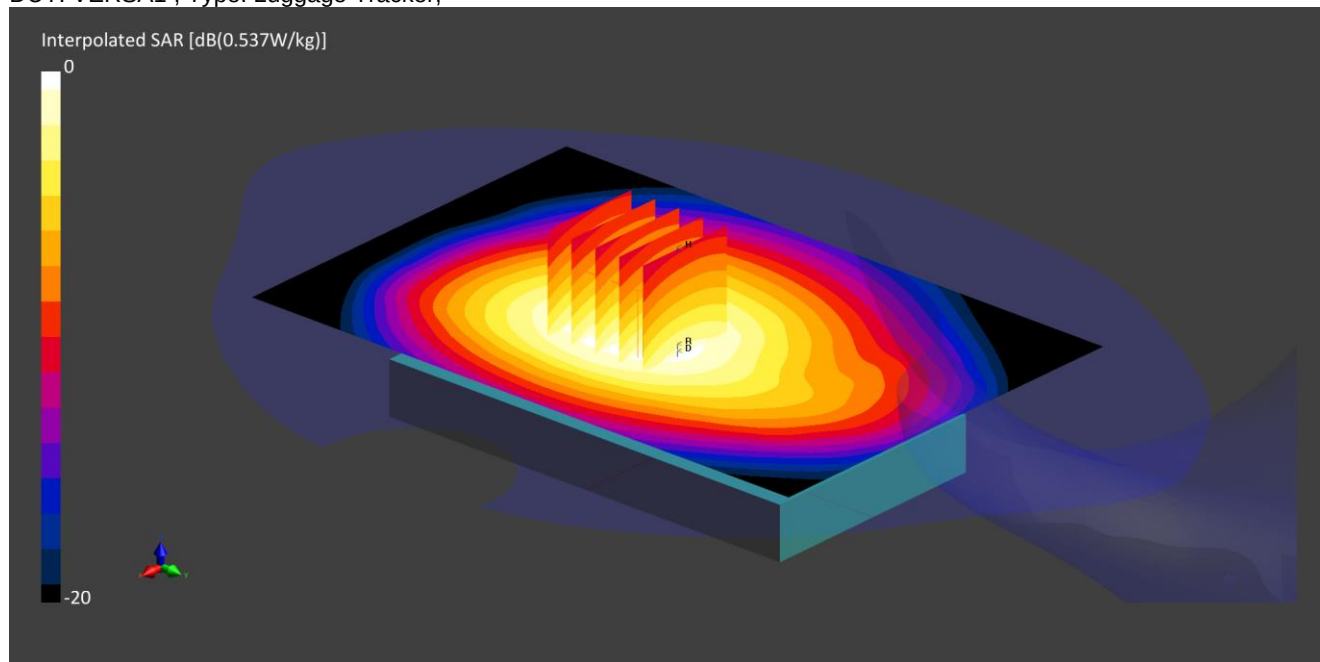
- Probe: EX3DV4 - SN7549; ConvF (8.05, 8.05, 8.05); Calibrated:05/08/2019
- Sensor-Surface: 1.4 mm; Mother Scan
- Electronics: DAE4 - SN431; Calibrated:23/05/2019
- Phantom Type: Twin-SAM V8.0 (30deg probe tilt); Serial: 1946
- DASY Software Version: 6.8.2.24

Area Scan (120x180):Interpolated grid: dx=15.0 mm, dy=15.0 mm**Zoom Scan1(32x32x30):**Measurement grid: dx=8.0 mm, dy=8.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value = 1.26 V/m; Power Drift = 0.06 dB**SAR(1 g) = 1.17 W/kg; SAR(10 g) = 0.703 W/kg**

SAR/004: Back 10mm WCDMA 5 CH4233

Date: 20/12/2019

DUT: VERSA1 ; Type: Luggage Tracker;



Communication System: UMTS-FDD (WCDMA) UID: 10011; Frequency: 846.6 MHz; Duty Cycle: 1;
 Medium: HSL 17 12 19 - 1900 10% , 900 1800 2450 5%; Medium parameters used: $f = 846.6$ MHz; $\sigma = 0.91$ S/m; $\epsilon_r = 41.9$
 ; $\rho = 1000$ kg/m³; No correction

Phantom section: Flat;

DASY 6 Configuration:

- Probe: ES3DV3 - SN3358; ConvF (6.28, 6.28, 6.28); Calibrated:21/01/2019
- Sensor-Surface: 3.0 mm; Mother Scan
- Electronics: DAE4 - SN1543; Calibrated:11/03/2019
- Phantom Type: Twin-SAM V8.0 (30deg probe tilt); Serial: 1946
- DASY Software Version: 6.8.2.24

Area Scan (120x180): Interpolated grid: $dx=15.0$ mm, $dy=15.0$ mm

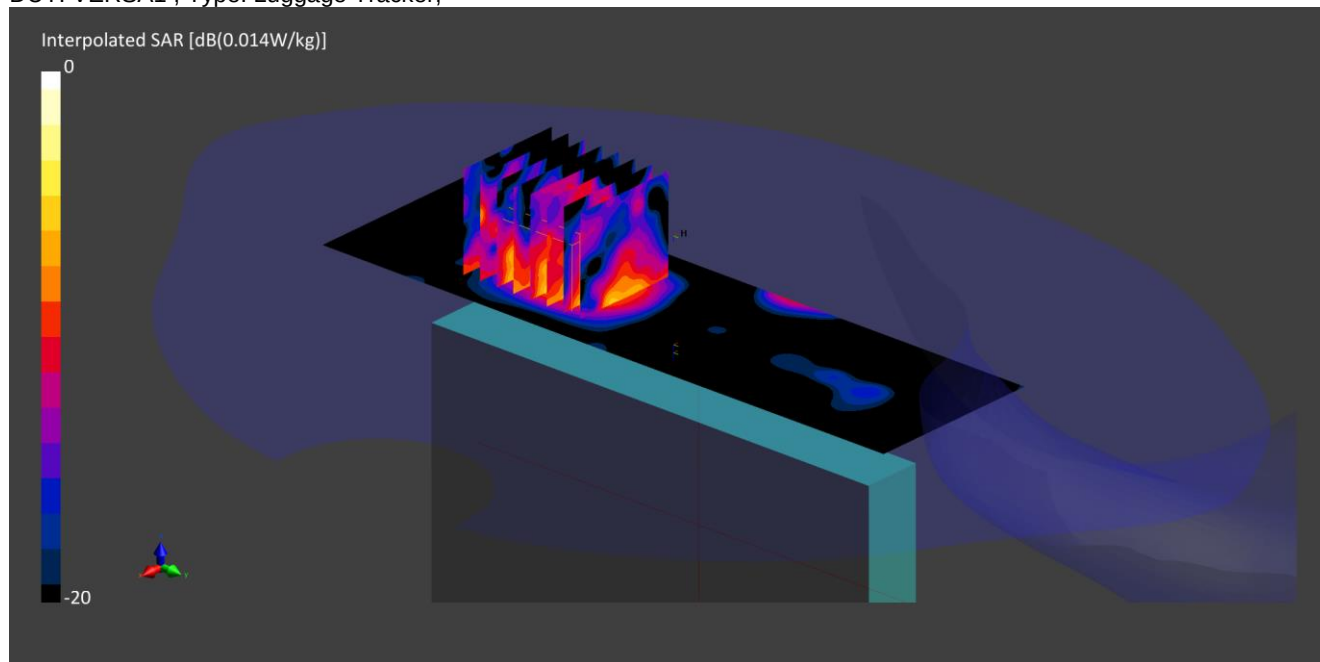
Zoom Scan1(32x32x30): Measurement grid: $dx=8.0$ mm, $dy=8.0$ mm, $dz=5.0$ mm; Grading Ratio: n/a; Reference Value = 0.41 V/m; Power Drift = -0.05 dB

SAR(1 g) = 0.378 W/kg; SAR(10 g) = 0.258 W/kg

SAR/005: Edge 4 10mm BT CH18

Date: 10/01/2020

DUT: VERSA1 ; Type: Luggage Tracker;



Communication System: Pulse Waveform (200Hz, 80%) UID: 10662; Frequency: 2442.0 MHz; Duty Cycle: 0.84;
 Medium: HSL 10 01 20 - 2450 5%; Medium parameters used: $f = 2442.0$ MHz; $\sigma = 1.87$ S/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³; No correction

Phantom section: Flat;

DASY 6 Configuration:

- Probe: EX3DV4 - SN7549; ConvF (7.18, 7.18, 7.18); Calibrated:05/08/2019
- Sensor-Surface: 1.4 mm; Mother Scan
- Electronics: DAE4 - SN431; Calibrated:23/05/2019
- Phantom Type: Twin-SAM V8.0 (30deg probe tilt); Serial: 1946
- DASY Software Version: 6.8.2.24

Area Scan (48x168): Interpolated grid: dx=12.0 mm, dy=12.0 mm**Zoom Scan1(30x30x30):** Measurement grid: dx=5.0 mm, dy=5.0mm, dz=5.0 mm; Grading Ratio: n/a; Reference Value = 0.01 V/m; Power Drift = 0.14 dB**SAR(1 g) = 0.007 W/kg; SAR(10 g) = 0.003 W/kg**